

**Tidal Current Tables 2018 – Atlantic Coast of North America**



Tidal Current Tables 2018

# Atlantic Coast of North America





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Issued 2017



## SOURCES OF ADDITIONAL INFORMATION

### *THE NATIONAL OCEAN SERVICE IS NO LONGER PRINTING AND DISTRIBUTING THE TIDE AND TIDAL CURRENT TABLES*

***Tide and Tidal current data continue to be updated, generated and published by the NOAA/ National Ocean Service; however, the printing and distribution in book-form is now done by several private companies working from information provided by NOS.***

NOS now offers two vehicles for obtaining predictions. First, the complete set of Tables as camera-ready page-images will be available on CD-ROM. The CD-ROM vehicle is primarily intended for use by federal or private printers who wish to print in book-form the full set of Tables for distribution to resellers and the general public. Second, for domestic tide stations, predictions are available on the NOS, Center for Operational Oceanographic Products and Services (CO-OPS), website, (<http://tidesandcurrents.noaa.gov/>).

In addition to predictions, the website provides updated information on the status of the Tables as they are finalized each year. Notices concerning the most recent Table updates and publication cut-off dates are included.

For the names of companies printing and distributing the Tables, please call or write to:

National Ocean Service  
Oceanographic Division, N/OPS3  
1305 East-West Highway  
Silver Spring, MD 20910  
(301) 713-2815, fax (301) 713-4500

*A list of authorized sales agents is published in the Nautical Chart Catalogs or may be obtained on request from the National Ocean Service.*

#### **TECHNICAL ASSISTANCE:**

Technical questions relating to ***tide and current predictions***, as well as requests for ***special predictions***, should be addressed to:

National Ocean Service  
Oceanographic Division, N/OPS3  
1305 East-West Highway  
Silver Spring, MD 20910  
(301) 713-2815

Technical questions relating to ***actual tide observations, tidal datums, and other information necessary for engineering projects*** should be addressed to:

National Ocean Service  
Oceanographic Division, N/OPS3  
1305 East-West Highway  
Silver Spring, MD 20910  
(301) 713-2815

Technical questions relating to ***other publications and nautical charts*** should be addressed to:

National Ocean Service  
Navigation Services Division  
1315 East-West Highway  
Silver Spring, MD 20910  
(888) 990-NOAA (6622)

## SOURCES OF ADDITIONAL INFORMATION

### **WEBSITES**

Center for Operational Oceanographic Products and Services  
(PORTS® \* Predictions \* Observations \* Bench Marks \* Tides Online \* Great Lakes Online)  
**<http://tidesandcurrents.noaa.gov>**

Marine Chart Division - <http://www.nauticalcharts.noaa.gov>

Office for Coastal Management - <http://www.coast.noaa.gov>

Ocean Predictions Center - <http://www.opc.ncep.noaa.gov>

National Center for Environmental Information - <https://www.ncei.noaa.gov>

National Centers for Environmental Predictions - <http://www.ncep.noaa.gov>

National Climatic Data Center - <http://www.ncdc.noaa.gov>

National Data Buoy Center - <http://www.ndbc.noaa.gov>

National Geodetic Survey - <http://www.ngs.noaa.gov>

National Geophysical Data Center - <http://www.ngdc.noaa.gov>

National Ocean Service - <http://www.oceanservice.noaa.gov>

National Oceanic and Atmospheric Administration - <http://www.noaa.gov>

National Oceanographic Data Center - <http://www.nodc.noaa.gov>

National Weather Service - <http://www.weather.gov>

U.S. Coast Guard - <http://www.uscg.mil>

U.S. Geological Survey - <http://www.usgs.gov>

U.S. Naval Observatory - <http://www.usno.navy.mil>

U.S. Naval Oceanographic Office - <http://www.usno.navy.mil/NAVO>

### **CORRECTIONS:**

Corrections to this publication, after the date of printing, may appear in the Notice to Mariners. They may also appear in the Local Notice to Mariners, published weekly, by the various United States Coast Guard Districts.

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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 on the inside back cover, it should be remembered that daylight saving time is based on a meridian 15° east of the normal standard meridian for a particular place.

NOS, in partnership with other agencies and institutions, has established a series of Physical Oceanographic Real Time Systems (PORTS®) in selected areas. These PORTS® sites provide constantly updated information on tide and tidal current conditions, water temperature, and weather conditions. This information is updated every six minutes. PORTS® sites are currently in operation at several major harbors with future sites to be added. The information is accessible through a computer data connection or by a voice response system at the following numbers:

<b>PORTS® SITES</b>	<b>VOICE ACCESS</b>	<b>INTERNET ACCESS</b>
CAPE COD	Not Available	<a href="http://www.tidesandcurrents.noaa.gov">www.tidesandcurrents.noaa.gov</a>
CHARLESTON HARBOR	855-216-2137	"
CHERRY POINT	888-817-7794	"
CHESAPEAKE BAY	866-CH-PORTS (866-247-6787)	"
CUYAHOGA	800-376-1192	"
DELAWARE RIVER & BAY	866-30-PORTS (866-307-6787)	"
HOUSTON/GALVESTON	866-HG-PORTS (866-447-6787)	"
HUMBOLDT BAY	855-876-5015	"
JACKSONVILLE	855-901-1549	"
LAKE CHARLES	888-817-7692	"
LOS ANGELES/ LONG BEACH	Not Available	"
LOWER COLUMBIA RIVER	888-53-PORTS (888-537-6787)	"
LOWER MISSISSIPPI RIVER	888-817-7767	"
MATAGORDA BAY	888-524-9765	"
MOBILE BAY	877-84-PORTS (877-847-6787)	"
MORGAN CITY	888-312-4113	"
NARRAGANSETT BAY	866-75-PORTS (866-757-6787)	"
NEW HAVEN	888-80-PORTS (888-807-6787)	"
NEW LONDON	855-626-0509	"
NEW YORK/NEW JERSEY	866-21-PORTS (866-217-6787)	"
PASCAGOULA	888-257-1857	"
PORT OF ANCHORAGE	866-AK-PORTS (866-257-6787)	"
PORT FOURCHON	855-687-2084	"
SABINE NECHES	888-257-1859	"
SAN FRANCISCO BAY	866-SB-PORTS (866-727-6787)	"
SOO LOCKS	301-713-9596	"
SAVANNAH	855-907-3136	"
TACOMA	888-60-PORTS (888-607-6787)	"
TAMPA BAY	866-TB-PORTS (866-827-6787)	"

## IMPORTANT NOTICES

### PUBLISHED CAUTIONARY NOTICES

Published in Local Notice to Mariners and United States Coast Pilot Notices

#### UPDATE TO THE 2012 EDITION OF THE NOS TIDAL CURRENT TABLES

The NOAA National Ocean Service's Center for Operational Oceanographic Products and Services (CO-OPS) is updating the tidal current predictions published for the Long Island Sound within the 2012 Tidal Current Tables – Atlantic Coast of North America. Reference stations in this area have been updated with new data; historic secondary stations have been updated; and a number of new stations have been added.

(Issued: October 1, 2011)

#### OBSERVED TIDAL CONDITIONS DIFFER FROM TIDAL PREDICTIONS IN THE HUDSON RIVER

The observed tides along the Hudson River have been reported to differ significantly from the Published tide predictions; particularly in the northern section of the river from Newburgh to Albany, New York. Based on limited reports and comparisons to USGS stream gauges, it appears that high tides are occurring approximately 1 hour earlier than predicted.

NOAA has no information on what may be causing the difference between predictions and observations. This could be the result of natural changes (shoaling, erosion, etc) or artificial changes (dredging, construction, etc.) in the Hudson River. Based on preliminary evidence, this does not appear to be a temporary condition and may indicate a long term change in the tidal conditions of the Hudson River.

NOAA does not have any water level stations operating along the length of the Hudson River, with the nearest operating station being located at The Battery, New York. Without observational data in the area, the extent of the difference between predictions and observations cannot be confirmed; neither can the areas affected by this change. Resources are not available for the installation and operation of water level stations along the Hudson River.

Mariners operating in this area are urged to use caution.

(Issued: May 24, 2010)

#### CHANGES TO 2008 EDITIONS OF THE NOS TIDAL CURRENT TABLES

Three new tidal current reference stations have been added to the National Ocean Service tidal Current Tables for 2008. Table 2 "time" and "velocity" correction factors at secondary stations which are affected by these changes have been updated based on the new reference station data.

##### Tidal Current Tables - 2008 - Atlantic Coast of North America

1. Bucksport, Penobscot Bay, Maine (new)
2. George Washington Bridge, Hudson River (new)
3. Kingston-Rhinecliff, Bridge, Hudson River (new)

(Issued October 1, 2006)

#### TIDAL CURRENT PREDICTIONS INSIDE U.S. ESTUARIES

At present there are several U.S. estuaries with operational Physical Oceanographic Real Time Systems (PORTS) installed. PORTS systems are presently being installed in several additional estuaries. Over the next ten years there are projected to be twenty or more additional systems installed. In the past, the tidal current reference station has always been located at the entrance to each estuary. All tidal current secondary stations both inside and outside (along the coast) have been referred to the reference station at the entrance to the estuary. This will no longer be the case in estuaries with an operational PORTS system.

Estuaries with an operational PORTS system will have at least two reference stations. One will be the historic station at the entrance to the estuary. All secondary stations along the coast will continue to be referred to this station. The second tidal current reference station will be the primary PORTS station within the estuary. All secondary locations within the estuary itself will be referred to this location. Depending on the circulation dynamics of the estuary, daily tidal current predictions may be provided for one or more additional stations within the estuary.

(Issued October 1, 1999)

ARANSAS PASS – CORPUS CHRISTI BAY, TX

## IMPORTANT NOTICES

The Aransas-Corpus Christi Pilots have reported that published tidal current predictions for Aransas Pass deviate from observations by as much as two (2) hours. The published predictions must be used with extreme caution. The Pilots should be consulted for critical transits. Tidal Current predictions of the National Ocean Service (NOS) are derived from analysis of observed data at tidal harmonic frequencies which in turn are based on predictable astronomic positions of the moon and sun. The problem in many areas of the Gulf of Mexico, including the south Texas coast, is that localized meteorological conditions can significantly effect and alter the times of maximum flood and ebb currents. Real-time observation and reporting systems, such as the Physical Oceanographic Real Time System (PORTS) installed in the Galveston-Houston area, are the only means of providing accurate tidal current data for areas such as this.

(Issued July 17, 1997)

### BISCAYNE BAY/PORT OF MIAMI, FL

The Biscayne Bay Pilots report that recent dredging and construction by the US Corps of Engineers (COE) supporting Miami port expansion has significantly effected the currents in Miami Harbor. Both flood and ebb currents should be expected to be stronger than indicated in official published predictions. The actual times for maximum and slack currents should be expected to deviate from the published predictions. Funding to support a survey to obtain new data for more accurate tidal current predictions is not available at this time. Installation of a Physical Oceanographic Real Time System (PORTS), like the one in operation in Tampa Bay, would be the best solution for long term marine safety.

(Issued July 17, 1997)

### CHARLESTON HARBOR, SC

The US Army Corps of Engineers (CEO) is planning dredging and construction projects for Charleston Harbor in 1996-1997. Such projects in the past in other areas have resulted in dramatic changes in the observed tidal currents of those areas. Once dredging and/or construction operations commence, the Tidal Current predictions for this region should be considered questionable and potentially dangerous to rely upon. Tide predictions will also be affected but to a lesser degree. Funding for a real time system to monitor the Tidal Currents and a resurvey of the area after COE operations are complete is presently not available. Therefore, once COE operations begin and until such time as a real-time system is installed or a resurvey of the area conducted, the National Oceanic and Atmospheric Administration, National Ocean Service will be unable to provide accurate Tidal Current predictions necessary for marine safety and navigation in this area.

(Issued June 5, 1996)

### CHESAPEAKE & DELAWARE CANAL AND BALTIMORE HARBOR CONNECTING CHANNELS

The US Army Corps of Engineers (COE) is planning a project involving the Chesapeake & Delaware Canal (C&D) and the channels in the upper Chesapeake Bay connecting the canal to Baltimore, MD in 1996-1997. Such projects in the past in other areas have resulted in dramatic changes in the observed tidal currents of those areas. Once the project begins, the Tidal Current predictions for the C&D Canal and the channels connecting the canal to Baltimore should be considered questionable and potentially dangerous to rely upon. Tide predictions will be affected but to a lesser degree. Funding for a real-time system to monitor the Tidal Currents and a resurvey of these areas after COE operations are complete is presently not available. Therefore, once COE operations begin and until such time as a real-time system is installed or a resurvey of the area conducted, the National Oceanic and Atmospheric Administration, National Ocean Service will be unable to provide accurate Tidal Current predictions necessary for marine safety and navigation in this area.

(Issued June 5, 1996)

### ST. AUGUSTINE, FL – ATLANTIC INTRACOASTAL WATERWAY

The US Coast Guard (USCG) has reported a problem involving the Tidal Currents in the Atlantic Intracoastal Waterway (AICW) in the St. Augustine, FL area. The specific location is the Bridge of Lions over the waterway. Numerous accidents have occurred at this site which are related to the currents in the waterway. There is no National Ocean Service (NOS) Tidal Current Station at or near the Bridge of Lions. Thus the NOS cannot, at this time, make Tidal Current predictions for this location. The USCG states that the cause of the accidents is loss of maneuverability (control) as a vessel passes under the

## IMPORTANT NOTICES

bridge. The loss of maneuverability results in the vessel striking the bridge supports. The USCG states in part:

"The affect of a 'fair' tide on a navigating vessel is to reduce the vessel's ability to maneuver. When a vessel is proceeding with a current (fair tide), less water flows across the vessel's rudders. This condition has the affect of reducing the vessel's maneuverability for a given speed over ground (all other things being equal).

The Bridge of Lions is a difficult bridge to navigate, even under ideal conditions. This circa 1926 Bascule bridge has a horizontal clearance of only 76' verses the 90' horizontal clearance of most of the other bridges on this section of the AICW."

In addition, according to the US Coast Pilot, Vol 4, Chapter 12, Tidal Currents in excess of 2 knots often run at right angles to the bridge opening. The Coast Pilot advises mariners to transit the bridge at minimal Tidal Current conditions. Funding for real-time monitoring of the Tidal Currents or a survey to obtain Tidal Current observations upon which to base Tidal Current predictions for this location is not presently available. A consortium of local, state, and federal officials in conjunction with the private sector and commercial shipping interests are presently studying various options to provide accurate Tidal Current predictions necessary for marine safety and navigation at this location.

(Issued June 5, 1996)

### WILMINGTON AND CAPE FEAR RIVER, NC

The US Army Corps of Engineers (COE) is due to begin dredging operations in the Wilmington and Cape Fear River area in 1997. The plans call for the deepening of the channel approaching Wilmington and extending up the Cape Fear River. Such actions in the past in other areas have resulted in dramatic changes in the observed tidal currents of those areas. Once dredging operations commence, the Tidal Current predictions for this region should be considered questionable at best and potentially dangerous to rely upon. Tide predictions will also be affected but to a lesser degree. Funding for a real-time system to monitor the Tidal Currents during the project and a resurvey of the area after COE operations are complete is presently not available. Therefore, once COE operations begin and until such time as a real-time system is installed or a resurvey of the area conducted, the National Oceanic and Atmospheric Administration, National Ocean Service will be unable to provide accurate Tidal Current predictions necessary for marine safety and navigation in this area.

(Issued June 5, 1996)

### HAMPTON ROADS, VA

Tidal currents in Hampton Roads and Elizabeth River have been significantly altered by dredging and construction of a new bridge/tunnel. Recent dredging by the U.S. Army Corps of Engineers has deepened the channels by 10 feet to a depth of 50 feet. Pilots and officials at the Norfolk Naval Base report hazardous conditions including significantly higher than predicted maximum current velocities, and significant deviation in the predicted times of maximum current. Mariners should exercise EXTREME CAUTION and DISCRETION in the use of published NOS tidal current predictions for this area. Funding for a Quality Assurance study and a full scale resurvey of the area is presently not available.

(Issued March 24, 1992)

### CHINCOTEAGUE CHANNEL, VA

United States Coast Guard (USCG) Personnel at the Chincoteague Coast Guard Station, VA report that the times of high and low water computed from differences in Table 2 of the East Coast Tide Tables are frequently off by as much as an hour. The channel is subject to shoaling and is frequently dredged. Exercise caution in using Table 2 Tide differences for this area.

(Issued May 17, 1991)

## INTRODUCTION

Current tables for the use of mariners have been published by the National Ocean Service (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 National Ocean Service, Oceanographic Division, 1305 East-West Highway, N/OPS3, Silver Spring, Maryland 20910, 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 speed 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.

## LIST OF REFERENCE STATIONS

Station Name	Page	Updated	Data Series
Aransas Pass (between jetties), Texas.....	188	1995	1 Month (4/9/1990-5/7/1990)
Baltimore Harbor Approach, Maryland.....	96	1965	29 Days Beginning 8/14/1963
Bath Iron Works, Kennebec River.....	16	2017	1 Month (6/20-8/1/2015)
Bay of Fundy Entrance (Grand Manan Channel).....	4		
Bergen Point Reach (Bayonne Bridge), New York ...	72	1999	4 Months (1/1/1998-4/30/1998)
Bolivar Roads, Galveston Bay, Texas .....	184	2000	453 Days (5/22/1997-9/9/1998)
Boston Harbor (Deer Island Light), Massachusetts ..	28	2013	2 Months (5/14/2011-7/1/2011)
Brandywine Shoal Light, Delaware Bay.....	80	2004	1 Month (11/22/2002-12/23/2002)
Bucksport, Penobscot Bay, Maine .....	12	2008	1 Months (7/14/2006-8/22/2006)
Calcasieu Pass, Louisiana.....	172	2016	5 months (9/18/2009-2/28/2010)
Cape Cod Canal (RR. Bridge), Massachusetts .....	36	2014	3 Months (6/19/2009-9/4/2009)
Charleston Harbor (off Ft. Sumter), South Carolina..	112	1997	2 Months (5/26/1987-7/28/1987)
Chesapeake & Delaware Canal (Chesapeake City)..	100	2016	5 months (1/1/2009-6/1/2009)
Chesapeake Bay Entrance, Virginia .....	92	2016	5 months (8/27/2009-1/13/2010)
Delaware Bay Entrance .....	76	2016	1 month (7/13/2000-8/16/2000)
Estes Head, Eastport, Maine .....	8	2000	16 Months (5/22/1997-9/9/1998)
Fort Pierce Inlet Entrance, Florida .....	128	2011	2 Months (11/14/2008-1/11/2009)
Galveston Bay Entrance (between jetties), Texas ....	180	1970	58 Days Beginning 4/5/1935
George Washington Bridge, Hudson River.....	64	2008	3 Months (8/14/2006-11/01/2006)
Hell Gate (off Mill Rock), East River, New York.....	56	1970	35 Days (1932)
Johns Pass Entrance, Florida .....	160	2013	1 Month (11/15/2011-12/13/2011)
Key West, Florida.....	144	2014	3 Months (1/26/2013-4/10/2013)
Kingston-Rhinecliff Bridge, Hudson River.....	68	2008	3 Months (8/14/2006-11/01/2006)
Lake Worth Inlet Entrance, Florida .....	132	2011	1 Month (12/17/2008-1/19/2009)
Miami Harbor Entrance, Florida .....	140	2011	4 Months (11/15/2008-3/18/2009)
Mobile Bay Entrance, Alabama.....	168	1944	29 Days (1935)
Old Tampa Bay Entrance (Port Tampa), Florida .....	156	2016	5 months (3/1/2009-8/26/2009)
Philadelphia (Penns Landing), Delaware River .....	88	2004	1 Month (3/25/2003-4/25/2003)
Pollock Rip Channel, Massachusetts.....	44	1965	2 Years (1934-1936)
Port Everglades Entrance, Florida .....	136	2011	4 Months (11/15/2008-3/18/3009)
Portland Harbor Entrance .....	20	2016	2 months (5/10/2014-7/30/2014)
Portsmouth Harbor Entrance, N.H.....	24	1953	15 Days beginning 9/16/1953
Quonset Point, Narragansett Bay, Rhode Island.....	40	2003	1 Year (7/1/2000-6/29/2001)
*Reedy Point, Delaware Bay.....	84	2018	6 months (4-9/2011)
Sabine Pass, Texas .....	176	2016	5 months (5/5/2010-11/5/2010)
Savannah River Entrance, Georgia .....	116	1999	2 Months (5/7/1997-7/20/1997)
*Southport, Cape Fear River, North Carolina .....	104	2018	2 months (3/17/2016 - 5/11/2016)
St. Andrew Bay Entrance, Florida.....	164	2010	2 Months (1/11/2008-3/6/2008)
St. Johns River Entrance, Florida .....	124	2000	3 Months (4/16/1998-7/21/1998)
St. Marys River Entrance, Georgia .....	120	2013	1 Month (11/3/2011-12/27/2011)
Tampa Bay (Sunshine Skyway Bridge), Florida .....	152	2016	5 months (3/11/2009-8/23/2009)
Tampa Bay Entrance (Egmont Channel), Florida.....	148	1994	13 Months (8/20/1990-9/25/1991)
The Narrows, New York Harbor, New York .....	60	2003	6 Months (10/19/2001-4/30/2002)
The Race, Long Island Sound .....	48	2012	4 Months (4/28/2010-9/2/2010)
Throgs Neck Bridge, Long Island Sound, New York.	52	2012	3 Months (5/27/2010-9/1/2010)
Vieques Passage, Puerto Rico .....	192	1967	15 Days Beginning 4/8/1965
*Wilmington (USS North Carolina), North Carolina...	108	2018	1 month (5/9/2016 - 6/16/2016)
Woods Hole, The Strait, Massachusetts.....	32	2011	2 Months (6/3/2009-8/20/2009)

\* New or updated station



# TABLE 1.— DAILY CURRENT PREDICTIONS

## EXPLANATION OF TABLE

This table gives the predicted times of slack water and the predicted times and speeds 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 speeds 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. **Daylight-saving time is not used in this publication.** If daylight-saving time is required, add one (1) hour to the predicted time.

**Slack water and maximum current.**— The columns headed "Slack" 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 speed until the strength or maximum speed of the flood current is reached; it then decreases until the following slack water, or slack before ebb. The ebb current then begins, increases to a maximum speed, and then decreases to the next slack. The predicted times and speeds of maximum current are given in the columns headed "Maximum." Flood speeds are marked with an "F," the ebb speeds with an "E." An entry in the "Slack" column will be slack, flood begins if the maximum current which follows it is marked "F." Otherwise the entry will be slack, ebb begins.

**Direction of set.**— The terms flood and ebb do not in all cases clearly indicate the direction of the current, the approximate direction 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. If one is missing in a given day, it will 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 speed throughout half the day giving only two slacks and two maximums on that particular day.

**Current and tide.**— It is important to note 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 speed 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 Service.

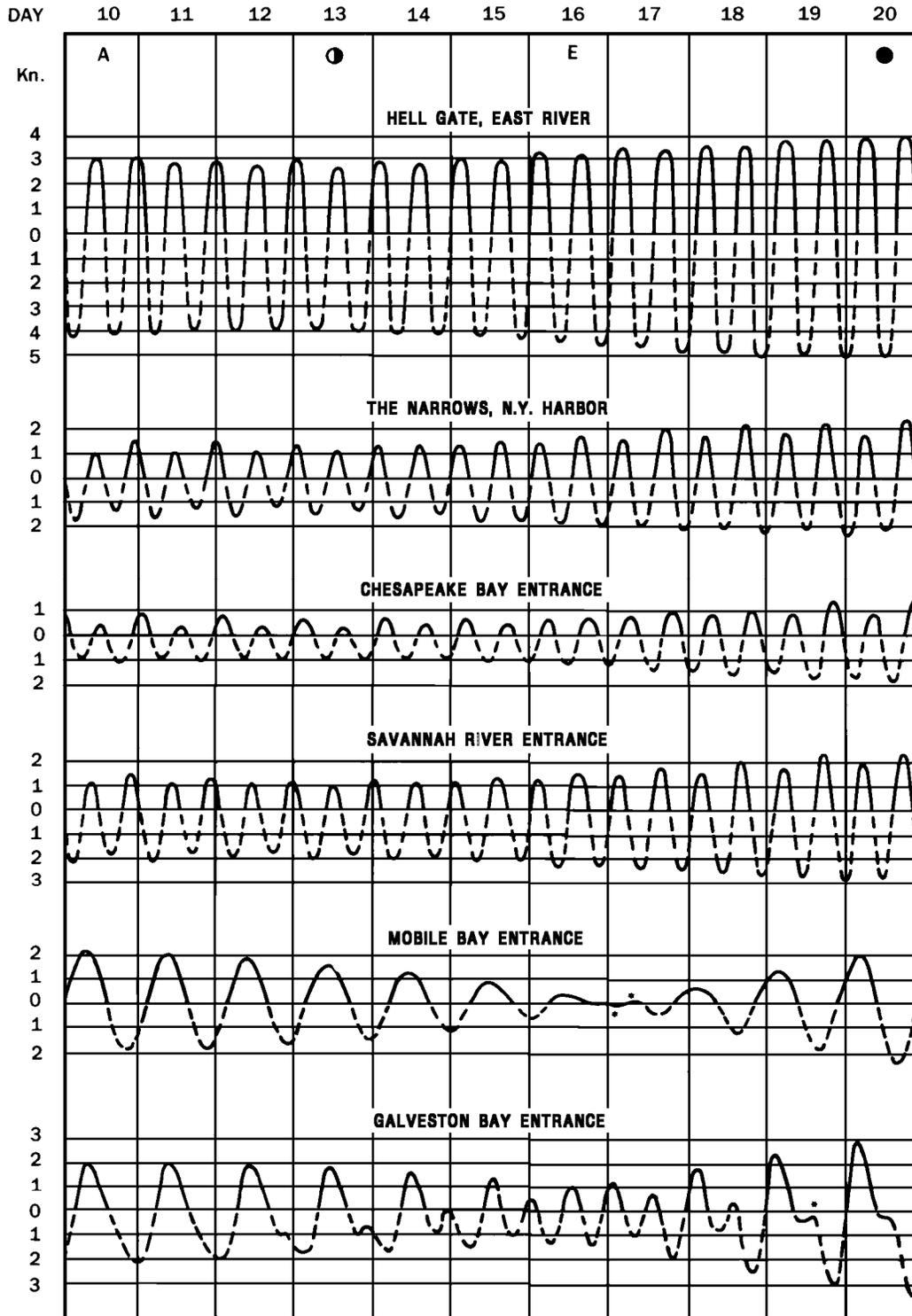
**Variations from predictions.**— In using this table, bear in mind that actual times of slack or maximum occasionally differ from the predicted times by as much as half an hour and in rare instances the difference may be as much as an hour. Comparisons of predicted with observed times of slack water 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 speeds will differ from those given in the table, but local knowledge will enable one to make proper allowance for these effects.

## TABLE 1.—DAILY CURRENT PREDICTIONS

**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 speed (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-diurnal (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 diurnal in character. Because the dominant factor is the change in the Moon's declination, the currents in the Gulf tend to become semi-diurnal when the Moon is near the Equator. By reference to the curves, it will be noted that with this diurnal 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 speeds as well as the times.

## TYPICAL CURRENT CURVES FOR REFERENCE STATIONS

(Flood: Solid Line, Ebb: Broken Line)



\*Current weak and variable.

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

- Lunar data:
- A—moon in apogee
  - ☉—last quarter
  - E—moon on equator
  - new moon





# Bay of Fundy Entrance (Grand Manan Channel), 2018

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

July				August				September															
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum									
h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m								
<b>1</b> Su	0120	0439	2.4E	<b>16</b> M	0149	0504	3.3E	<b>1</b> W	0214	0528	2.6E	<b>16</b> Th	0301	0610	2.9E	<b>1</b> Sa	0311	0605	3.0F	<b>16</b> Su	0355	0659	1.8E
	0739	1040	2.6F		0804	1108	3.5F		0826	1130	3.1F		0904	1207	3.2F		0915	1220	3.2F		0947	1248	2.3F
	1401	1705	2.1E		1428	1734	3.0E		1445	1755	2.6E		1526	1838	2.9E		1531	1845	2.8E		1603	1924	2.0E
	1954	2250	2.4F		2029	2326	3.1F		2054	2348	2.7F		2137				2153				2229		
<b>2</b> M	0154	0514	2.4E	<b>17</b> Tu	0235	0549	3.1E	<b>2</b> Th	0253	0605	2.5E	<b>17</b> F	0344	0652	2.5E	<b>2</b> Su	0358	0703	2.3E	<b>17</b> M	0443	0744	1.3E
	0814	1116	2.6F		0848	1151	3.4F		0903	1208	3.0F		0944	1247	2.8F		0959	1305	2.8F		1028	1328	1.7F
	1435	1741	2.0E		1512	1820	2.9E		1523	1833	2.5E		1606	1921	2.5E		1617	1933	2.5E		1644	2013	1.5E
	2033	2328	2.3F		2116				2136				2221				2243				2319		
<b>3</b> Tu	0231	0550	2.3E	<b>18</b> W	0322	0636	2.8E	<b>3</b> F	0336	0646	2.4E	<b>18</b> Sa	0430	0737	2.0E	<b>3</b> M	0454	0758	1.9E	<b>18</b> Tu	0547	0847	0.9E
	0851	1153	2.6F		0932	1235	3.1F		0944	1250	2.9F		1026	1328	2.4F		1052	1358	2.4F		1120	1419	1.3F
	1512	1820	2.0E		1558	1908	2.6E		1604	1917	2.4E		1649	2008	2.1E		1711	2034	2.2E		1738	2121	1.2E
	2115				2205				2222				2310				2344				2421		

Time meridian 60° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.



# Estes Head, Eastport, Maine, 2018

F—Flood, Dir. 263° True    E—Ebb, Dir. 088° True

January				February				March												
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum						
h	m	h	m	knots	h	m	h	m	knots	h	m	h	m	knots	h	m	h	m	knots	
<b>1</b>	M	0410	0643	2.7F	<b>16</b>	Tu	0456	0840	2.3F	<b>1</b>	Th	0433	0812	2.8F	<b>16</b>	F	0443	0827	2.3F	
	○	1019	1354	3.2E		●	1058	1441	2.6E		○	1042	1419	3.2E		○	1046	1422	2.6E	
		1645	1925	2.7F			1724	2105	2.3F			1704	2041	2.8F			1707	2049	2.3F	
		2252				2325					2313					2309				
<b>2</b>	Tu	0505	0743	2.8F	<b>17</b>	W	0538	0923	2.2F	<b>2</b>	F	0527	0903	2.9F	<b>17</b>	Sa	0525	0904	2.3F	
		1113	1448	3.3E			1139	1520	2.6E			1135	1511	3.3E		●	1127	1500	2.6E	
		1739	2048	2.8F			1805	2147	2.2F			1755	2132	2.9F			1747	2119	2.3F	
		2347														2350				
<b>3</b>	W	0559	0848	2.8F	<b>18</b>	Th	0618	1002	2.2F	<b>3</b>	Sa	0617	0954	2.9F	<b>18</b>	Su	0605	0831	2.3F	
		1207	1543	3.3E			1220	1558	2.5E			1224	1601	3.2E			1208	1536	2.6E	
		1833	2158	2.8F			1844	2225	2.1F			1843	2220	2.8F			1826	2048	2.4F	
<b>4</b>	Th	0041	0412	3.0E	<b>19</b>	F	0045	0417	2.2E	<b>4</b>	Su	0204	0539	2.9E	<b>19</b>	M	0030	0354	2.6E	
		0653	1013	2.8F			0658	0921	2.1F			0820	1156	2.6F			0645	0905	2.4F	
		1301	1638	3.3E			1300	1633	2.4E			1425	1802	2.9E			1248	1611	2.6E	
		1926	2257	2.8F			1923	2141	2.1F			2046					1905	2125	2.5F	
<b>5</b>	F	0134	0507	3.0E	<b>20</b>	Sa	0124	0450	2.2E	<b>5</b>	M	0254	0025	2.6F	<b>20</b>	Tu	0219	0524	2.4E	
		0747	1117	2.7F			0738	0955	2.2F			0912	0630	2.8E			0833	1052	2.4F	
		1355	1732	3.2E			1340	1705	2.4E			1515	1855	2.7E			1438	1735	2.5E	
		2019	2354	2.7F			2001	2217	2.2F			2136					2055	2315	2.5F	
<b>6</b>	Sa	0228	0601	2.9E	<b>21</b>	Su	0205	0520	2.2E	<b>6</b>	Tu	0344	0119	2.4F	<b>21</b>	W	0303	0557	2.4E	
		0843	1218	2.6F			0818	1034	2.2F			0724	0724	2.6E			0919	1138	2.4F	
		1449	1827	3.0E			1421	1732	2.3E			1004	1346	2.2F			1524	1812	2.3E	
		2112					2041	2258	2.3F			1606	1949	2.4E			2141			
<b>7</b>	Su	0322	0658	2.7E	<b>22</b>	M	0247	0548	2.2E	<b>7</b>	W	0215	0215	2.2F	<b>22</b>	Th	0351	0002	2.5F	
		0938	1319	2.4F			0900	1117	2.2F			0434	0819	2.4E			1010	0644	2.3E	
		1544	1924	2.8E			1504	1758	2.3E			1058	1443	2.0F			1616	1905	2.2E	
		2206					2123	2342	2.3F			1659	2046	2.2E			2233			
<b>8</b>	M	0417	0756	2.6E	<b>23</b>	Tu	0332	0620	2.2E	<b>8</b>	Th	0526	0311	2.1F	<b>23</b>	F	0444	0054	2.4F	
	○	1035	1419	2.3F			0946	1203	2.2F			1153	0915	2.3E		○	1107	0750	2.3E	
		1639	2022	2.6E			1550	1834	2.2E			1753	1539	2.0F			1713	1322	2.3F	
		2301					2209					2142	2.1E				2330	2022	2.1E	
<b>9</b>	Tu	0512	0854	2.5E	<b>24</b>	W	0419	0707	2.3F	<b>9</b>	F	0015	0405	2.0F	<b>24</b>	Sa	0541	0150	2.3F	
		1132	1516	2.2F			1036	1253	2.2F			0620	1010	2.2E			1208	0906	2.3E	
		1736	2121	2.4E			1641	1927	2.2E			1249	1634	1.9F		○	1814	1422	2.2F	
		2357					2300					1850	2238	2.0E			2141	2.1E		
<b>10</b>	W	0607	0951	2.4E	<b>25</b>	Th	0511	0812	2.2E	<b>10</b>	Sa	0110	0459	2.0F	<b>25</b>	Su	0032	0251	2.3F	
		1229	1612	2.1F			1132	1348	2.2F			0715	1105	2.3E			0643	1018	2.5E	
		1833	2217	2.3E			1736	2039	2.1E			1344	1728	2.0E			1312	1526	2.1F	
							2355					1946	2333	2.0E			1918	2253	2.2E	
<b>11</b>	Th	0052	0438	2.2F	<b>26</b>	F	0021	0216	2.3F	<b>11</b>	Su	0204	0552	2.1F	<b>26</b>	M	0136	0357	2.2F	
		0702	1046	2.4E			0607	0924	2.3E			0808	1158	2.3E			0745	1126	2.6E	
		1325	1706	2.1F			1231	1445	2.2F			1437	1819	2.1F			1414	1754	2.2F	
		1930	2313	2.2E			1836	2154	2.2E			2039					2021			
<b>12</b>	F	0146	0531	2.2E	<b>27</b>	Sa	0054	0314	2.3F	<b>12</b>	M	0255	0025	2.1E	<b>27</b>	Tu	0238	0000	2.5E	
		0755	1140	2.5E			0705	1034	2.4E			0859	0642	2.2F			0847	0618	2.4F	
		1419	1758	2.2F			1332	1546	2.2F			1526	1908	2.2F			1514	1856	2.5F	
		2024					1937	2306	2.3E			2129					2122			
<b>13</b>	Sa	0237	0621	2.3F	<b>28</b>	Su	0154	0415	2.4F	<b>13</b>	Tu	0343	0111	2.2E	<b>28</b>	W	0337	0059	2.7E	
		0844	1230	2.5E			0804	1141	2.7E			0947	0729	2.3F			0946	0718	2.6F	
		1509	1848	2.2F			1432	1652	2.3F			1613	1954	2.3F			1611	1950	2.7F	
		2113					2038					2215					2219			
<b>14</b>	Su	0326	0709	2.3F	<b>29</b>	M	0254	0522	2.5E	<b>14</b>	W	0429	0154	2.3E	<b>14</b>	W	0312	0038	2.2E	
		0931	1316	2.6E			0903	1242	2.9E			1032	0814	2.3F			0915	0700	2.2F	
		1556	1935	2.3F			1531	1858	2.4F			1657	1414	2.6E			1540	1300	2.5E	
		2200					2137					2258	2039	2.3F			2142	1925	2.2F	
<b>15</b>	M	0412	0755	2.3F	<b>30</b>	Tu	0352	0712	2.7E	<b>15</b>	Th	0512	0234	2.4E	<b>15</b>	Th	0359	0122	2.3E	
		1015	1400	2.6E			1001	1339	3.1E			1115	0857	2.3F			1002	0745	2.3F	
		1641	2021	2.3F			1628	2000	2.7F			1738	1453	2.6E			1625	1342	2.6E	
		2243					2235				●	2339	2120	2.3F			2227	2008	2.3F	
<b>16</b>	Tu	0456	0840	2.3F	<b>31</b>	W	0448	0208	2.9E						<b>31</b>	Sa	0509	0229	3.1E	
	○	1019	1354	3.2E			1057	0818	2.8F								1117	0846	2.8F	
		1645	1925	2.7F			1722	1434	3.3E								1733	1452	3.1E	
		2252					2330	2055	2.8F								2341	2111	2.8F	

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

# Estes Head, Eastport, Maine, 2018

F—Flood, Dir. 263° True E—Ebb, Dir. 088° True

April				May				June															
Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		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												
<b>1</b> Su	0557 1203 1819	0934 1539 2157	2.8F 3.0E 2.7F	<b>16</b> M	0536 1140 1756	0801 1505 2019	2.5F 2.7E 2.6F	<b>1</b> Tu	0619 1222 1836	0957 1600 2216	2.5F 2.6E 2.4F	<b>16</b> W	0554 1200 1813	0817 1523 2037	2.7F 2.7E 2.8F	<b>1</b> F	0718 1317 1932	1057 1655 2156	2.1F 2.1E 2.0F	<b>16</b> Sa	0715 1324 1936	0945 1652 2206	2.7F 2.8E 2.7F
<b>2</b> M	0025 0643 1247 1903	0402 1020 1624 2241	3.0E 2.6F 2.8E 2.5F	<b>17</b> Tu	0001 0619 1223 1838	0325 0839 1545 2100	2.8E 2.6F 2.7E 2.7F	<b>2</b> W	0038 0701 1302 1918	0420 1039 1642 2256	2.7E 2.3F 2.4E 2.2F	<b>17</b> Th	0020 0642 1249 1901	0346 0904 1611 2125	3.0E 2.7F 2.7E 2.8F	<b>2</b> Sa	0132 0759 1359 2015	0512 1019 1732 2231	2.3E 2.0F 2.0E 2.0F	<b>17</b> Su	0143 0809 1418 2031	0517 1044 1748 2304	3.2E 2.7F 2.8E 2.6F
<b>3</b> Tu	0107 0728 1329 1947	0447 1104 1708 2324	2.8E 2.4F 2.6E 2.3F	<b>18</b> W	0044 0703 1308 1922	0406 0923 1627 2144	2.8E 2.7F 2.6E 2.7F	<b>3</b> Th	0118 0744 1343 2000	0500 1118 1721 2224	2.5E 2.1F 2.2E 2.0F	<b>18</b> F	0108 0732 1339 1952	0436 0954 1703 2215	3.0E 2.7F 2.7E 2.7F	<b>3</b> Su	0215 0842 1443 2059	0549 1055 1809 2312	2.2E 2.0F 1.9E 1.9F	<b>18</b> M	0239 0904 1514 2129	0614 1227 1846 2312	3.0E 2.5F 2.7E
<b>4</b> W	0149 0812 1412 2031	0529 1146 1751	2.6E 2.2F 2.3E	<b>19</b> Th	0129 0750 1356 2010	0449 1010 1712 2232	2.8E 2.7F 2.6E 2.7F	<b>4</b> F	0159 0827 1426 2044	0540 1046 1801 2259	2.3E 2.0F 2.0E 1.9F	<b>19</b> Sa	0159 0825 1433 2047	0529 1046 1759 2308	3.0E 2.6F 2.6E 2.6F	<b>4</b> M	0300 0927 1529 2146	0628 1138 1851 2357	2.1E 1.9F 1.8E 1.9F	<b>19</b> Tu	0336 1001 1612 2228	0714 1343 1948	2.4F 2.9E 2.4F 2.6E
<b>5</b> Th	0232 0858 1457 2117	0613 1123 1836 2334	2.1F 2.4E 2.0F 1.9F	<b>20</b> F	0217 0840 1448 2102	0537 1059 1804 2322	2.8E 2.6F 2.4E 2.6F	<b>5</b> Sa	0244 0912 1512 2130	0621 1124 1845 2342	2.2E 1.9F 1.8E 1.8F	<b>20</b> Su	0254 0921 1530 2145	0626 1141 1900	2.9E 2.4F 2.5E	<b>5</b> Tu	0348 1014 1618 2236	0713 1224 1940	2.0E 1.9F 1.8E	<b>20</b> W	0435 1059 1710 2329	0816 1446 2050	2.7E 2.4F 2.6E
<b>6</b> F	0317 0945 1545 2205	0659 1158 1925	2.2E 1.8F 1.9E	<b>21</b> Sa	0310 0935 1543 2158	0634 1151 1907	2.7E 2.4F 2.3E	<b>6</b> Su	0331 1001 1601 2220	0708 1209 1935	2.0E 1.8F 1.7E	<b>21</b> M	0352 1019 1629 2246	0730 1247 2006	2.7E 2.2F 2.4E	<b>6</b> W	0438 1103 1709 2329	0804 1314 2035	1.8F 1.9E 1.8E	<b>21</b> Th	0536 1158 1810	0918 1545 2151	2.6E 2.4F 2.6E
<b>7</b> Sa	0406 1036 1635 2257	0751 1246 2020	1.8F 2.0E 1.7F 1.7E	<b>22</b> Su	0407 1034 1643 2259	0740 1249 2017	2.4F 2.6E 2.2E	<b>7</b> M	0422 1051 1653 2314	0801 1259 2031	1.7F 1.9E 1.7E	<b>22</b> Tu	0453 1120 1731 2349	0836 1508 2111	2.2F 2.6E 2.3F 2.5E	<b>7</b> Th	0530 1154 1801	0858 1408 2130	1.9E 1.9F 1.9E	<b>22</b> F	0638 1256 1910	1018 1641 2249	2.5E 2.4F 2.6E
<b>8</b> Su	0458 1130	0847 1357†	2.0E 1.6F	<b>23</b> M	0508 1137 1746	0849 1401 2125	2.5E 2.1F 2.3E	<b>8</b> Tu	0515 1145 1747	0857 1356 2127	1.9E 1.7F 1.8E	<b>23</b> W	0556 1221 1834	0940 1609 2214	2.2F 2.6E 2.6E	<b>8</b> F	0624 1247 1854	0952 1502 2224	2.0E 2.0F 2.1E	<b>23</b> Sa	0738 1352 2006	1117 1735 2346	2.5E 2.4F 2.7E
<b>9</b> M	0554 1226 1827	0944 1619 2214	1.7F 2.0E 1.8E	<b>24</b> Tu	0612 1240 1851	0956 1628 2231	2.6E 2.2F 2.4E	<b>9</b> W	0611 1239 1842	0952 1457 2222	2.0E 1.7F 1.9E	<b>24</b> Th	0700 1321 1935	1041 1706 2313	2.6E 2.5F 2.7E	<b>9</b> Sa	0718 1339 1946	1047 1556 2318	1.9F 2.1E 2.3E	<b>24</b> Su	0834 1445 2057	1212 1827	2.5E 2.5F
<b>10</b> Tu	0651 1321 1923	1040 1713 2309	2.0E 1.8F 1.9E	<b>25</b> W	0717 1342 1953	1100 1728 2333	2.7E 2.4F 2.6E	<b>10</b> Th	0706 1331 1936	1046 1723 2314	2.1E 1.9F 2.1E	<b>25</b> F	0802 1418 2031	1140 1801 2311	2.7E 2.6E	<b>10</b> Su	0811 1430 2037	1141 1650	2.3E 2.2F	<b>25</b> M	0925 1535 2143	1302 1916	2.5E 2.5F
<b>11</b> W	0747 1414 2016	1133 1804	2.2E 2.0F	<b>26</b> Th	0819 1440 2052	1200 1823	2.8E 2.6F	<b>11</b> F	0759 1421 2026	1137 1811	2.2E 2.0F	<b>26</b> Sa	0858 1511 2123	1235 1851	2.7E 2.6F	<b>11</b> M	0903 1520 2127	1233 1744	2.4E 2.4F	<b>26</b> Tu	1012 1621 2227	1349 2002	2.5E 2.4F
<b>12</b> Th	0839 1503 2105	1222 1851	2.3E 2.2F	<b>27</b> F	0917 1533 2144	1255 1914	2.9E 2.7F	<b>12</b> Sa	0849 1509 2114	1225 1851	2.4E 2.2F	<b>27</b> Su	0949 1600 2209	1324 1939	2.7E 2.6F	<b>12</b> Tu	0955 1610 2217	1323 1837	2.6E 2.6F	<b>27</b> W	1055 1705 2308	1432 2047	2.4E 2.3F
<b>13</b> F	0927 1548 2152	1306 1934	2.5E 2.3F	<b>28</b> Sa	1009 1623 2233	1345 2002	2.9E 2.7F	<b>13</b> Su	0937 1555 2201	1310 1829	2.5E 2.3F	<b>28</b> M	1035 1646 2252	1411 2025	2.6E 2.5F	<b>13</b> W	1047 1700 2308	1412 1927	2.7E 2.7F	<b>28</b> Th	1135 1747 2348	1514 2130	2.3E 2.3F
<b>14</b> Sa	1013 1632 2236	1347 2010	2.6E 2.3F	<b>29</b> Su	1057 1710 2317	1432 2048	2.9E 2.7F	<b>14</b> M	1025 1641 2247	1353 1909	2.6E 2.5F	<b>29</b> Tu	1118 1729 2332	1455 2110	2.5E 2.4F	<b>14</b> Th	1139 1751 2358	1504 2018	2.8E 2.8F	<b>29</b> F	1214 1827	1553 2211	2.2E 2.1F
<b>15</b> Su	1057 1714 2318	1426 1946	2.7E 2.4F	<b>30</b> M	1141 1754 2358	1517 2133	2.7E 2.6F	<b>15</b> Tu	1112 1727 2333	1437 1951	2.7E 2.7F	<b>30</b> W	1158 1811	1537 2153	2.4E 2.3F	<b>15</b> F	1231 1843	1557 2110	2.8E 2.8F	<b>30</b> Sa	1253 1908	1630 2246	2.2E 2.0F
												<b>31</b> Th	0011 0637 1237 1851	0355 1017 1617 2233	2.6E 2.2F 2.2E 2.1F								

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
† See page 196 for the remaining currents on this day.

# Estes Head, Eastport, Maine, 2018

F—Flood, Dir. 263° True    E—Ebb, Dir. 088° True

July				August				September															
Slack		Maximum																					
	h	m	knots																				
<b>1</b> Su	0108	0447	2.4E	<b>16</b> M	0127	0502	3.3E	<b>1</b> W	0204	0523	2.3E	<b>16</b> Th	0252	0628	2.8E	<b>1</b> Sa	0302	0546	2.3E	<b>16</b> Su	0403	0748	2.1E
	0734	0959	2.0F		0751	1119	2.8F		0825	1041	2.2F		0917	1139	2.4F		0403	0748	2.1E				
	1334	1706	2.1E		1400	1731	3.0E		1429	1739	2.2E		1526	1812	2.3E		1023	1413	2.0F				
	1948	2206	2.0F		2014	2339	2.7F		2043	2259	2.2F		1611	1954	2.6E		1627	2016	2.2E				
<b>2</b> M	0149	0522	2.3E	<b>17</b> Tu	0221	0557	3.1E	<b>2</b> Th	0246	0547	2.2E	<b>2</b> Su	0350	0627	2.2E	<b>17</b> M	0456	0845	2.0E				
	0814	1030	2.0F		0844	1218	2.7F		0905	1122	2.3F		1005	1227	2.4F		0456	0845	2.0E				
	1415	1739	2.0E		1454	1827	2.9E		1512	1805	2.1E		1616	1904	2.3E		1117	1510	1.9F				
	2030	2245	2.0F		2110				2127	2343	2.2F		2234				1720	2113	2.1E				
<b>3</b> Tu	0232	0554	2.2E	<b>18</b> W	0316	0653	2.9E	<b>3</b> F	0330	0614	2.2E	<b>3</b> M	0443	0727	2.1E	<b>18</b> Tu	0552	0943	1.9E				
	0856	1109	2.1F		0938	1319	2.5F		0948	1207	2.3F		1059	1320	2.3F		0552	0943	1.9E				
	1459	1812	2.0E		1548	1925	2.8E		1557	1841	2.1E		1710	2019	2.2E		1816	2209	2.1E				
	2114	2328	2.0F		2206				2214				2336				1816	2209	2.1E				
<b>4</b> W	0316	0626	2.1E	<b>19</b> Th	0412	0752	2.7E	<b>4</b> Sa	0417	0656	2.1E	<b>4</b> Tu	0542	0854	2.0E	<b>19</b> W	0650	1039	1.9E				
	0938	1152	2.1F		1033	1419	2.4F		1035	1256	2.3F		1159	1418	2.2F		0650	1039	1.9E				
	1544	1847	2.0E		1644	2024	2.6E		1646	1934	2.1E		1810	2137	2.3E		1310	1700	1.9F				
	2200				2304				2305				1800	2149	2.3E		1913	2305	2.2E				
<b>5</b> Th	0403	0701	2.0E	<b>20</b> F	0509	0852	2.5E	<b>5</b> Su	0510	0754	2.1E	<b>5</b> M	0631	1018	2.1E	<b>20</b> Th	0746	1134	2.0E				
	1024	1239	2.1F		1129	1517	2.3F		1127	1348	2.3F		1250	1638	2.0F		0746	1134	2.0E				
	1632	1933	2.0E		1740	2123	2.6E		1739	2044	2.2E		1856	2246	2.3E		1405	1753	2.1F				
	2249																2008	2357	2.3E				
<b>6</b> F	0452	0750	2.0E	<b>21</b> Sa	0608	0951	2.4E	<b>6</b> M	0607	0911	2.0E	<b>6</b> Tu	0729	1115	2.1E	<b>21</b> Th	0839	1223	2.2E				
	1112	1329	2.1F		1226	1613	2.3F		1225	1445	2.3F		1345	1732	2.1F		0839	1223	2.2E				
	1722	2031	2.0E		1838	2221	2.5E		1836	2156	2.3E		1952	2340	2.3E		1456	1842	2.2F				
	2341																2059						
<b>7</b> Sa	0544	0851	2.0E	<b>22</b> Su	0707	1049	2.3E	<b>7</b> Tu	0707	1028	2.1E	<b>7</b> W	0824	1208	2.1E	<b>22</b> Sa	0927	1308	2.3E				
	1204	1422	2.1F		1323	1708	2.3F		1324	1543	2.3F		1438	1823	2.2F		1543	1928	2.3F				
	1814	2131	2.1E		1934	2318	2.5E		1935	2306	2.5E		2043				2146						
																	2146						
<b>8</b> Su	0639	0954	2.1E	<b>23</b> M	0805	1145	2.3E	<b>8</b> W	0807	1138	2.3E	<b>8</b> Sa	0948	1323	2.9E	<b>23</b> Su	1011	1349	2.5E				
	1259	1517	2.2F		1417	1800	2.3F		1424	1645	2.4F		1603	1940	2.7F		1628	2012	2.4F				
	1909	2232	2.3E		2026				2033				2212				2231						
<b>9</b> M	0736	1059	2.2E	<b>24</b> Tu	0857	1237	2.3E	<b>9</b> Th	0907	1241	2.5E	<b>9</b> F	1001	1340	2.3E	<b>9</b> Su	1053	1428	2.5E				
	1354	1613	2.3F		1508	1850	2.3F		1522	1754	2.5F		1614	1957	2.4F		1658	2033	2.9F				
	2003	2333	2.5E		2115				2131				2217				2307						
<b>10</b> Tu	0833	1201	2.3E	<b>25</b> W	0945	1324	2.3E	<b>10</b> F	1005	1338	2.8E	<b>10</b> Sa	1043	1421	2.4E	<b>10</b> M	1135	1509	3.2E				
	1449	1711	2.4F		1555	1937	2.3F		1619	1923	2.7F		1657	2041	2.4F		1751	2125	2.9F				
	2058				2200				2228				2300				2358						
<b>11</b> W	0929	1259	2.5E	<b>26</b> Th	1030	1408	2.3E	<b>11</b> Sa	1101	1433	3.0E	<b>11</b> Su	1124	1500	2.4E	<b>11</b> Tu	1225	1559	3.2E				
	1544	1811	2.6F		1640	2023	2.3F		1715	2038	2.8F		1739	2122	2.3F		1841	2216	2.9F				
	2152				2243				2323				2340										
<b>12</b> Th	1025	1353	2.7E	<b>27</b> F	1111	1449	2.3E	<b>12</b> Su	1155	1526	3.1E	<b>12</b> M	1203	1537	2.4E	<b>12</b> W	1313	1649	3.1E				
	1638	1910	2.7F		1723	2107	2.3F		1808	2137	2.9F		1818	2158	2.2F		1931	2305	2.7F				
	2246				2325																		
<b>13</b> F	1119	1448	2.9E	<b>28</b> Sa	1151	1528	2.3E	<b>13</b> M	1247	1619	3.2E	<b>13</b> Tu	1242	1611	2.4E	<b>13</b> Th	1400	1737	2.9E				
	1732	2007	2.8F		1804	2148	2.2F		1901	2232	2.9F		1857	2118	2.2F		2021	2355	2.5F				
	2340																						
<b>14</b> Sa	1213	1543	3.0E	<b>29</b> Su	1229	1605	2.3E	<b>14</b> Tu	1338	1711	3.1E	<b>14</b> W	1320	1642	2.4E	<b>14</b> F	1448	1827	2.7E				
	1826	2108	2.8F		1844	2225	2.1F		1954	2326	2.8F		1935	2152	2.3F		2110						
<b>15</b> Su	1306	1637	3.0E	<b>30</b> M	1308	1639	2.2E	<b>15</b> W	1428	1803	3.0E	<b>15</b> Th	1400	1710	2.3E	<b>15</b> Sa	1536	1920	2.4E				
	1919	2228	2.8F		1923	2143	2.1F		2046				2015	2232	2.3F		2202						
<b>16</b> Su	0033	0408	3.3E	<b>31</b> Tu	0124	0454	2.4E	<b>16</b> Th	0218	0518	2.3E	<b>16</b> F	0834	1054	2.4F	<b>16</b> Su	0239	0533	2.3E				
	0658	1019	2.8F		0746	1004	2.2F		0834	1054	2.4F		1441	1736	2.3E		0853	1114	2.5F				
	1306	1637	3.0E		1348	1711	2.2E		2058	2316	2.4F		2058	2316	2.4F		1501	1759	2.5E				
	1919	2228	2.8F		2003	2219	2.2F										2123	2340	2.4F				

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.







Bucksport, Penobscot Bay, Maine, 2018

F—Flood, Dir. 292° True E—Ebb, Dir. 113° True

Table with columns for July, August, and September. Each month has sub-columns for Slack and Maximum (with h, m, knots). Rows represent days of the month from 1 to 31.

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. † See page 196 for the remaining currents on this day.





## Bath Iron Works, Kennebec River, 2018

F—Flood, Dir. 001° True    E—Ebb, Dir. 178° True

April				May				June									
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum			
h	m	h	m	knots	h	m	h	m	knots	h	m	h	m	knots	h	m	knots
<b>1</b>	0149	0432	2.5E		<b>16</b>	0106	0344	2.6E		<b>1</b>	0307	0549	2.1E	<b>16</b>	0250	0527	2.7E
Su	0817	1136	2.3F		M	0736	1012	2.2F		Tu	0953	1240	1.6F	Sa	0942	1222	2.1F
	1415	1653	2.3E			1329	1604	2.4E			1540	1804	1.7E		1530	1754	2.2E
	2037	2353	2.2F			1945	2233	2.5F			2144				2140		
<b>2</b>	0236	0518	2.4E		<b>17</b>	0149	0428	2.7E		<b>2</b>	0348	0629	2.0E	<b>17</b>	0346	0622	2.5E
M	0907	1222	2.1F		Tu	0823	1102	2.3F		Sa	1036	1304	1.6F	Su	1037	1320	2.1F
	1502	1737	2.2E			1416	1649	2.5E			1623	1847	1.7E		1626	1850	2.2E
	2122					2028	2320	2.5F			2228				2240		
<b>3</b>	0322	0603	2.3E		<b>18</b>	0234	0514	2.7E		<b>3</b>	0429	0710	2.0E	<b>18</b>	0443	0718	2.4E
Tu	0956	1306	2.0F		W	0914	1152	2.2F		Su	1120	1340	1.6F	M	1132	1418	2.0F
	1549	1821	2.0E			1506	1737	2.4E			1706	1930	1.7E		1722	1948	2.1E
	2206					2114					2314				2342		
<b>4</b>	0407	0648	2.2E		<b>19</b>	0322	0602	2.7E		<b>4</b>	0511	0752	1.9E	<b>19</b>	0541	0817	2.2E
W	1046	1346	1.8F		Th	1007	1245	2.1F		M	1203	1421	1.6F	Tu	1228	1517	2.0F
	1636	1906	1.9E			1558	1828	2.3E			1749	2014	1.7E		1819	2048	2.0E
	2250					2204											

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

















**Portsmouth Harbor Entrance, N.H., 2018**

F—Flood, Dir. 342° True      E—Ebb, Dir. 194° True

July				August				September															
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum									
	h	m	knots		h	m	knots		h	m	knots		h	m	knots								
1 Su	0244	0512	1.6E	16 M	0246	0522	1.8E	1 W	0332	0610	1.6E	16 Th	0423	0012	1.2F	1 Su	0551	0806	1.3E				
	0917	1120	1.1F		0914	1117	1.2F		1005	1209	1.2F		0423	0648	1.6E		0429	0715	1.6E	0551	0806	1.3E	
	1522	1734	1.4E		1526	1747	1.6E		1604	1833	1.5E		1035	1237	1.2F		1050	1305	1.3F	1152	1349	1.1F	
	2125	2326	1.1F		2127	2334	1.3F		2222	0028	1.2F		1649	1914	1.5E		1639	1939	1.6E	1807	2033	1.4E	
2 M	0325	0556	1.5E	17 Tu	0342	0615	1.8E	2 Th	0414	0656	1.6E	17 F	0519	0740	1.5E	2 Su	0520	0805	1.5E	17 M	0645	0857	1.2E
	1000	1201	1.1F		1006	1209	1.2F		1046	1252	1.2F		1127	1327	1.1F		1136	1353	1.3F		1245	1440	1.0F
	1604	1819	1.3E		1620	1841	1.6E		1643	1920	1.5E		1743	2008	1.5E		1727	2031	1.6E		1901	2126	1.3E
	2211	0012	1.1F		2225	0029	1.2F		2309	0115	1.2F		2306	0107	1.1F		2325	0135	1.2F		2307	0129	0327
3 Tu	0406	0641	1.5E	18 W	0439	0709	1.7E	3 F	0458	0744	1.5E	18 Sa	0615	0833	1.4E	3 M	0618	0857	1.5E	18 Tu	0738	0949	1.2E
	1043	1244	1.1F		1100	1301	1.2F		1128	1337	1.2F		1220	1417	1.1F		1228	1443	1.3F		1329	1533	0.9F
	1646	1905	1.3E		1715	1936	1.5E		1724	2009	1.5E		1838	2103	1.4E		1825	2124	1.6E		1954	2219	1.3E
	2257	0058	1.1F		2325	0124	1.1F		2357	0203	1.1F		0003	0201	1.0F		0618	0857	1.5E		1825	2124	1.6E
4 W	0448	0727	1.5E	19 Th	0539	0803	1.6E	4 Sa	0548	0833	1.5E	19 Su	0711	0927	1.3E	4 Tu	0719	0951	1.4E	19 W	0830	1042	1.2E
	1126	1327	1.1F		1153	1353	1.1F		1213	1424	1.2F		1313	1509	1.0F		1324	1537	1.2F		1432	1627	0.9F
	1729	1952	1.3E		1811	2032	1.5E		1809	2059	1.5E		1932	2200	1.4E		1929	2220	1.6E		2046	2310	1.3E
	2345	0145	1.1F		2002	0221	1.0F		2049	0253	1.1F		0100	0257	0.9F		0215	0414	1.1F		0222	0457	0.8F

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 If three consecutive entries are marked (F) the middle one is not a true maximum but an intermediate value to show the current pattern.  
 † See page 196 for the remaining currents on this day.















# Woods Hole, The Strait, Massachusetts, 2018

F—Flood, Dir. 079° True    E—Ebb, Dir. 267° True

July				August				September															
Slack	Maximum			Slack	Maximum			Slack	Maximum			Slack	Maximum										
	h m	h m	knots		h m	h m	knots		h m	h m	knots		h m	h m	knots								
<b>1</b> Su	0016	0228	3.0E	<b>16</b> M	0027	0240	3.8E	<b>1</b> W	0103	0321	3.3E	<b>16</b> Th	0155	0402	3.2E	<b>1</b> Sa	0203	0426	3.5E				
	0638	0924	1.9F		0647	1050	2.6F		0717	0957	2.1F		0811	1223	2.5F		0801	1055	2.3F	<b>16</b> Su	0317	0516	2.5E
	1253	1454	2.7E		1304	1509	3.4E		1338	1548	3.0E		1425	1630	3.0E		1427	1652	3.4E		0932	1343	1.9F
	1847	2114	2.0F		1902	2225	2.3F		1939	2217	2.2F		2041				2044	2333	2.2F		1539	1740	2.5E
<b>2</b> M	0057	0308	3.1E	<b>17</b> Tu	0121	0331	3.6E	<b>2</b> Th	0145	0406	3.4E	<b>17</b> F	0248	0452	2.9E	<b>2</b> Su	0254	0515	3.4E	<b>17</b> M	0411	0607	2.2E
	0718	0957	1.9F		0741	1149	2.6F		0757	1043	2.2F		0906	1316	2.3F		0853	1147	2.3F		0411	0607	2.2E
	1334	1536	2.7E		1357	1601	3.3E		1419	1633	3.1E		1517	1720	2.8E		1517	1742	3.3E		1027	1438	1.7F
	1931	2201	1.9F		2001				2026	2308	2.1F		2143				2145				1630	1831	2.3E
<b>3</b> Tu	0138	0351	3.1E	<b>18</b> W	0215	0423	3.3E	<b>3</b> F	0229	0453	3.3E	<b>18</b> Sa	0342	0542	2.6E	<b>3</b> M	0351	0607	3.2E	<b>18</b> Tu	0505	0702	2.0E
	0759	1039	1.9F		0838	1244	2.5F		0841	1130	2.2F		1003	1412	2.1F		0953	1240	2.3F		1120	1532	1.7F
	1416	1619	2.7E		1450	1653	3.1E		1503	1720	3.1E		1610	1812	2.5E		1613	1835	3.2E		1723	1957	2.1E
	2017	2250	1.9F		2104				2119	2359	2.1F		2243				2248						
<b>4</b> W	0219	0436	3.1E	<b>19</b> Th	0310	0515	3.0E	<b>4</b> Sa	0319	0541	3.2E	<b>19</b> Su	0438	0636	2.3E	<b>4</b> Tu	0453	0703	3.0E	<b>19</b> W	0559	0944	2.0E
	0842	1123	2.0F		0936	1340	2.4F		0930	1217	2.2F		1057	1508	2.0F		1056	1335	2.2F		1211	1624	1.6F
	1458	1704	2.7E		1544	1746	2.8E		1549	1809	3.1E		1703	1909	2.3E		1714	1933	3.1E		1816	2214	2.2E
	2107	2339	2.0F		2208				2216				2009†	2.3E	2350								
<b>5</b> Th	0303	0522	3.0E	<b>20</b> F	0407	0608	2.7E	<b>5</b> Su	0413	0633	3.1E	<b>20</b> M	0534	0757	2.1E	<b>5</b> W	0556	0803	2.9E	<b>20</b> Th	0652	1030	2.1E
	0927	1206	2.0F		1033	1438	2.3F		1024	1306	2.3F		1150	1604	1.9F		1158	1435	2.2F		1259	1557	1.6F
	1542	1751	2.8E		1639	1843	2.6E		1641	1902	3.1E		1757	2151	2.4E		1818	2034	3.1E		1907	2255	2.3E
	2159				2309				2314				2314				2314						

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 If three or more consecutive entries are marked (F) or (E) the middle ones are not true maximums but intermediate values to show the current pattern.  
 † See page 196 for the remaining currents on this day.



**Cape Cod Canal (RR. Bridge), Massachusetts, 2018**

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

January				February				March															
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum									
	h	m	knots		h	m	knots		h	m	knots		h	m	knots								
<b>1</b> M O	0209	0440	5.2F	<b>16</b> Tu ●	0301	0530	3.9F	<b>1</b> Th	0343	0615	4.9F	<b>16</b> F O	0235	0517	4.6F	<b>16</b> F O	0239	0500	4.3F				
	0829	1058	6.1E		0914	1153	4.6E		1003	1231	5.9E		0352	0612	4.5F		0855	1126	5.6E	0848	1111	4.9E	
	1443	1722	5.2F		1527	1928	4.2F		1614	1956	5.0F		1001	1224	5.1E		1506	1904	5.0F	1457	1723	4.5F	
	2113	2332	5.7E		2153		2243			2234			1610	1835	4.5F		2133			2119	2339	4.8E	
<b>2</b> Tu	0303	0533	5.2F	<b>17</b> W	0034	0604	4.1F	<b>2</b> F	0107	055E	5.5E	<b>17</b> Sa	0052	4.8E	<b>2</b> F	0002	5.5E	<b>17</b> Sa ●	0317	0541	4.8F		
	0923	1151	6.2E		0344	0604	4.1F		0435	0708	4.8F		0429	0653		4.8F	0327		0614	4.8F	0928	1152	5.4E
	1536	1817	5.2F		0955	1221	4.7E		1056	1324	5.8E		1039	1305		5.4E	0947		1219	5.7E	1534	1802	4.9F
	2207				1607	1838	4.1F		1704	2051	4.9F		1646	1915		4.9F	1556		1953	5.0F	2156		
<b>3</b> W	0357	0626	5.1F	<b>18</b> Th	0425	0642	4.2F	<b>3</b> Sa	0159	5.5E	<b>18</b> Su	0132	5.1E	<b>3</b> Sa	0053	5.6E	<b>18</b> Su	0018	5.2E				
	1016	1244	6.2E		1112	1336	5.0E		1148	1416		5.7E	1119		1348	5.8E		1039	1310	5.7E	1008	1235	5.8E
	1628	1912	5.1F		1645	1910	4.2F		1754	2143		4.7F	1723		1958	5.1F		1644	2038	4.9F	1611	1844	5.3F
	2301				2312							2349						2310			2234		

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

## Cape Cod Canal (RR. Bridge), Massachusetts, 2018

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

April				May				June							
Slack	Maximum														
h m	h m	h m	knots	h m	h m	h m	knots	h m	h m	h m	knots	h m	h m	h m	knots
<b>1</b> Su	0357 1020 1620 2245	0746 1256 2013	4.8F 5.5E 4.9F	<b>16</b> M	0323 0940 1539 2201	0556 1208 1814	5.4F 6.0E 5.6F	<b>1</b> Tu	0423 1049 1642 2304	0822 1328 1926	4.8F 5.1E 4.5F	<b>16</b> Sa	0506 1141 1729 2350	0745 1401 2000	5.3F 5.8E 5.1F
<b>2</b> M	0445 1109 1707 2331	0833 1343 2005	5.6E 4.7F 5.4E 4.6F	<b>17</b> Tu	0405 1027 1622 2244	0642 1256 1900	6.1E 5.6F 6.3E 5.8F	<b>2</b> W	0510 1138 1730 2350	0909 1413 1959	4.5F 4.9E 4.3F	<b>17</b> Su	0600 1237 1825	0840 1454 2054	5.0F 5.6E 4.8F
<b>3</b> Tu	0533 1159 1754	0920 1430 2029	5.5E 4.5F 4.4F	<b>18</b> W	0449 1116 1708 2331	0730 1345 1948	5.7F 6.3E 5.7F	<b>3</b> Th	0558 1227 1818	0958 1456 2040	4.2F 4.5E 4.0F	<b>3</b> Su	0702 1334 1927	0927 1547 2140	3.7F 3.9E 3.6F
<b>4</b> W	0622 1250 1843	0907 1516 2110	5.2E 4.2F 4.1F	<b>19</b> Th	0537 1210 1758	0819 1436 2038	5.6F 6.1E 5.5F	<b>4</b> F	0646 1317 1908	1052 1538 2125	3.9F 4.2E 3.7F	<b>4</b> M	0747 1418 2014	1009 1626 2226	3.6F 3.7E 3.5F
<b>5</b> Th	0713 1342 1935	0957 1602 2155	3.9F 4.3E 3.8F	<b>20</b> F	0628 1306 1854	0911 1528 2130	5.3F 5.8E 5.1F	<b>5</b> Sa	0735 1406 2021	1004 1621† 2215	3.6F 3.6F 3.8E	<b>5</b> Tu	0833 1501 2100	1054 1708 2315	3.5F 3.7E 3.5F
<b>6</b> F	0805 1434 2029	0415 1220 1852	4.4E 3.7F 3.9E 3.4F	<b>21</b> Sa	0117 0726 1406 1954	0348 1007 1622	6.0E 4.9F 5.4E 4.6F	<b>6</b> Su	0211 0824	0425 1051	4.1E 3.4F	<b>6</b> W	0305 0918 1544 2148	0519 1141 1752	4.1E 3.6F 3.7E
<b>7</b> Sa	0859 1527 2124	0501 1315 1745 2340	4.0E 3.5F 3.5E 3.2F	<b>22</b> Su	0216 0828 1506 2059	0442 1108 1719 2327	5.6E 4.5F 5.0E 4.2F	<b>7</b> M	0259 0915 1542 2142	0510 1139 1751 2354	3.8E 3.2F 3.3E 3.2F	<b>7</b> Th	0351 1004 1628 2235	0608 1229 1840	3.6F 4.2E 3.9E
<b>8</b> Su	0953 1619 2218	0550 1407 1845	3.7E 3.4F 3.2E	<b>23</b> M	0319 0934 1608 2205	0540 1217 1820	5.1E 4.2F 4.6E	<b>8</b> Tu	0347 1004 1629 2232	0557 1226 1837	3.6E 3.2F 3.3E	<b>8</b> F	0440 1050 1713 2322	0658 1316 1929	4.3E 4.1F 4.2E
<b>9</b> M	1045 1710 2310	0640 1457 2039	3.4E 3.3F 3.2E	<b>24</b> Tu	0423 1040 1710 2309	0642 1436 1926	4.0F 4.8E 4.5E	<b>9</b> W	0435 1051 1714 2319	0646 1311 1924	3.3F 3.4F 3.4E	<b>9</b> Sa	0530 1136 1758	0750 1404 2019	4.6E 4.5F 4.7E
<b>10</b> Tu	1134 1758 2358	0730 1542 2033	3.4E 3.3F 3.3E	<b>25</b> W	0527 1142 1809	0748 1549 2038	4.6E 4.3F 4.6E	<b>10</b> Th	0522 1136 1758	0736 1355 2011	3.5F 3.9E 3.8E	<b>10</b> Su	0622 1223 1845	0843 1454 2111	4.9E 4.8F 5.2E
<b>11</b> W	1219 1842	0820 1441 2105	3.6E 3.4F 3.5E	<b>26</b> Th	0009 0628 1239 1904	0401 0901 1646 2153	4.1F 4.7E 4.6F 4.9E	<b>11</b> F	0003 0609 1219 1840	0219 0826 1441 2058	3.9F 4.3E 4.1F 4.3E	<b>11</b> M	0056 0714 1311 1932	0326 0937 1544 2202	4.8F 5.3E 5.2F 5.7E
<b>12</b> Th	1301 1923	0256 0907 1523 2143	3.6F 4.0E 3.8F 4.0E	<b>27</b> F	0105 0725 1332 1956	0504 1015 1737 2251	4.4F 4.9E 4.8F 5.2E	<b>12</b> Sa	0046 0655 1301 1922	0307 0916 1527 2145	4.3F 4.8E 4.6F 4.9E	<b>12</b> Tu	0144 0807 1401 2021	0418 1030 1635 2252	5.1F 5.7E 5.4F 6.1E
<b>13</b> F	1341 2002	0342 0952 1605 2222	4.1F 4.5E 4.3F 4.6E	<b>28</b> Sa	0158 0819 1422 2045	0557 1111 1823 2338	4.7F 5.2E 4.9F 5.5E	<b>13</b> Su	0128 0742 1343 2004	0355 1005 1614 2231	4.7F 5.3E 5.1F 5.5E	<b>13</b> W	0233 0900 1451 2111	0510 1122 1725 2342	5.4F 5.9E 5.5F 6.4E
<b>14</b> Sa	1419 2041	0427 1037 1647 2303	4.6F 5.1E 4.8F 5.2E	<b>29</b> Su	0248 0910 1509 2132	0646 1158 1907	4.9F 5.3E 4.9F	<b>14</b> M	0212 0829 1427 2048	0443 1054 1701 2318	5.2F 5.7E 5.4F 6.0E	<b>14</b> Th	0323 0953 1543 2202	0601 1214 1815	5.5F 6.0E 5.5F
<b>15</b> Su	1459 2120	0511 1122 1730 2346	5.0F 5.7E 5.3F 5.7E	<b>30</b> M	0336 1000 1556 2218	0735 1243 1945	5.6E 5.2E 4.7F	<b>15</b> Tu	0256 0918 1512 2133	0531 1143 1748	5.5F 6.1E 5.7F	<b>15</b> F	0414 1047 1635 2255	0652 1307 1907	5.5F 5.9E 5.4F
								<b>16</b> W	0401 1028 1619 2237	0805 1317 1856	4.7F 4.8E 4.3F	<b>16</b> Sa	0505 1133 1725 2336	0745 1405 2054	5.3F 5.8E 5.1F
								<b>17</b> Th	0447 1115 1706 2322	0851 1357 1931	5.2E 4.5F 4.7E 4.1F	<b>17</b> Su	0600 1237 1825	0840 1454 2054	5.0F 5.6E 4.8F
								<b>18</b> F	0519 1156 1743	0800 1417 2017	5.5F 6.0E 5.3F	<b>18</b> M	0656 1333 1923	0936 1547 2150	4.7F 5.3E 4.4F
								<b>19</b> Sa	0613 1252 1839	0854 1510 2110	5.2F 5.7E 4.9F	<b>19</b> Tu	0754 1428 2023	1037 1642 2251	4.3F 4.9E 4.0F
								<b>20</b> Su	0711 1350 1939	0950 1605 2207	4.8F 5.3E 4.4F	<b>20</b> W	0854 1524 2125	1257 1740	4.1F 4.6E
								<b>21</b> M	0812 1449 2042	1052 1701 2309	4.4F 4.9E 4.1F	<b>21</b> Th	0953 1621 2226	1359 1844	4.1F 4.5E
								<b>22</b> Tu	0916 1548 2146	1210 1802	4.1F 4.6E	<b>22</b> F	1051 1716 2325	1458 1956	4.2F 4.5E
								<b>23</b> W	1019 1647 2249	1424 1907	4.2F 4.5E	<b>23</b> Sa	1147 1811	1553 2122	4.2F 4.6E
								<b>24</b> Th	1119 1744 2348	1526 2021	4.3F 4.5E	<b>24</b> Su	1240 1903	1645 2223	4.3F 4.9E
								<b>25</b> F	1214 1839	1621 2140	4.5F 4.8E	<b>25</b> M	1331 1952	1733 2311	4.4F 5.1E
								<b>26</b> Sa	1306 1930	1712 2238	4.6F 5.1E	<b>26</b> Tu	1421 2040	1818 2351	4.4F 5.1E
								<b>27</b> Su	1356 2019	1758 2324	4.7F 5.3E	<b>27</b> W	1509 2126	1857	4.2F
								<b>28</b> M	1445 2106	1841 2106	4.6F	<b>28</b> Th	1556 2210	1831	4.1F
								<b>29</b> Tu	1532 2152	1920 2152	4.5F	<b>29</b> F	1641 2254	1904	4.1F
								<b>30</b> W	1619 2237	1856	4.3F	<b>30</b> Sa	1725 2336	1943	4.0F
								<b>31</b> Th							

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

† See page 196 for the remaining currents on this day.

# Cape Cod Canal (RR. Bridge), Massachusetts, 2018

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

July				August				September															
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum									
h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m								
<b>1</b> Su	0546	0815	4.0F	<b>16</b> M	0545	0828	4.9F	<b>1</b> W	0022	0246	5.1E	<b>16</b> Th	0108	0329	5.3E	<b>1</b> Sa	0118	0347	5.7E	<b>16</b> Su	0237	0455	4.2E
	1216	1436	4.2E		1218	1438	5.6E		1255	1512	4.7E		1338	1558	5.1E		1338	1610	5.6E		0831	1059	3.6F
	1808	2024	4.0F		1809	2038	4.7F		1850	2118	4.5F		1938	2211	4.0F		1942	2225	4.8F		1453	1714	4.3E
<b>2</b> M	0018	0238	4.7E	<b>17</b> Tu	0031	0256	5.8E	<b>2</b> Th	0103	0329	5.2E	<b>17</b> F	0203	0421	4.8E	<b>2</b> Su	0210	0437	5.5E	<b>17</b> M	0333	0558	3.8E
	0627	0851	4.0F		0638	0921	4.6F		0705	0940	4.6F		0802	1039	4.0F		0802	1046	5.0F		0929	1203	3.4F
	1257	1510	4.2E		1312	1529	5.3E		1334	1555	4.9E		1430	1650	4.8E		1428	1700	5.5E		1547	1811	4.0E
<b>3</b> Tu	0059	0318	4.7E	<b>18</b> W	0128	0348	5.4E	<b>3</b> F	0147	0415	5.3E	<b>18</b> Sa	0259	0517	4.3E	<b>3</b> M	0308	0531	5.2E	<b>18</b> Tu	0430	0746	3.6E
	0708	0931	4.0F		0733	1017	4.3F		0747	1026	4.7F		0858	1157	3.8F		0900	1141	4.8F		1028	1425	3.3F
	1337	1548	4.2E		1405	1621	5.0E		1416	1640	5.0E		1522	1745	4.4E		1523	1754	5.4E		1642	1923	3.7E

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

## Cape Cod Canal (RR. Bridge), Massachusetts, 2018

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

October				November				December															
Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		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									
<b>1</b> M	0151 0739 1402 2012	0415 1020 1635 2256	5.6E 5.0F 5.8E 4.8F	<b>16</b> Tu	0307 0903 1516 2132	0532 1125 1734 2327	3.8F 3.7E 3.3F 3.9E	<b>1</b> Th	0930 1548 2204	1158 1809	4.2F 5.1E	<b>16</b> F	0415 1017 1622 2238	0632 1232 1834	3.3F 3.2F 3.6E	<b>1</b> Sa	0414 1015 1634 2245	0629 1247 1852	4.2F 4.7E 4.0F 4.7E	<b>16</b> Su	0415 1022 1626 2236	0624 1238 1840	3.6F 3.7E 3.5F 4.0E
<b>2</b> Tu	0250 0840 1502 2116	0509 1117 1730 2357	5.3E 4.7F 5.5E 4.5F	<b>17</b> W	0401 0959 1609 2227	0710 1257 1829	3.5E 3.1F 3.6E	<b>2</b> F	0436 1035 1653 2308	0650 1303 1912	4.2F 4.7E 4.1F 4.9E	<b>17</b> Sa	0501 1106 1710 2323	0716 1319 1922	3.3E 3.3F 3.7E	<b>2</b> Su	0512 1117 1736 2344	0734 1459 1959	4.2F 4.6E 3.9F 4.5E	<b>17</b> M	0458 1108 1714 2321	0710 1325 1930	3.9E 3.8F 4.1F 4.2E
<b>3</b> W	0352 0947 1605 2223	0607 1217 1829	5.0E 4.4F 5.2E	<b>18</b> Th	0453 1054 1702 2319	0826 1319 1924	3.5E 3.1F 3.5E	<b>3</b> Sa	0536 1137 1756	0755 1410 2018	4.2F 4.7E 4.8E	<b>18</b> Su	0545 1151 1757	0800 1404 2010	3.5E 3.6F 3.9E	<b>3</b> M	0608 1215 1835	0844 1616 2114	4.3F 4.7E 4.6E	<b>18</b> Tu	0541 1153 1804	0758 1413 2021	4.3E 4.1F 4.5E
<b>4</b> Th	0455 1053 1710 2328	0709 1319 1931	4.8E 4.3F 5.0E	<b>19</b> F	0543 1144 1752	0921 1404 2015	3.5E 3.2F 3.5E	<b>4</b> Su	0633 1235 1855	0903 1622 2128	4.8E 4.3F 4.9E	<b>19</b> M	0627 1234 1842	0843 1450 2058	3.9E 3.9F 4.3E	<b>4</b> Tu	0702 1310 1932	0955 1714 2226	5.0E 4.5F 4.7E	<b>19</b> W	0625 1238 1854	0848 1503 2114	4.7E 4.4F 4.8E
<b>5</b> F	0557 1155 1813	0813 1422 2036	4.7E 4.3F 5.0E	<b>20</b> Sa	0629 1230 1838	1001 1448 2100	3.6E 3.5F 3.8E	<b>5</b> M	0727 1330 1952	1009 1726 2232	5.1E 4.6F 5.1E	<b>20</b> Tu	0707 1315 1926	0927 1537 2146	4.4E 4.3F 4.8E	<b>5</b> W	0753 1402 2026	1051 1807 2321	5.2E 4.8F 4.9E	<b>20</b> Th	0710 1324 1944	0938 1554 2206	5.3E 4.8F 5.2E
<b>6</b> Sa	0656 1254 1913	0920 1530 2142	4.9E 4.4F 5.2E	<b>21</b> Su	0711 1312 1921	0948 1531 2142	3.8E 3.8F 4.2E	<b>6</b> Tu	0818 1422 2045	1103 1820 2326	5.4E 4.8F 5.2E	<b>21</b> W	0747 1356 2011	1011 1623 2234	5.0E 4.7F 5.2E	<b>6</b> Th	0842 1452 2118	1137 1857	5.4E 4.9F	<b>21</b> F	0756 1410 2036	1028 1645 2257	5.8E 5.2F 5.6E
<b>7</b> Su	0751 1349 2010	1022 1653 2243	5.2E 4.6F 5.4E	<b>22</b> M	0750 1352 2002	1013 1613 2223	4.2E 4.2F 4.7E	<b>7</b> W	0907 1512 2137	1150 1911	5.6E 4.9F	<b>22</b> Th	0828 1437 2058	1056 1710 2321	5.6E 5.2F 5.6E	<b>7</b> F	0930 1540 2207	1220 1947	5.4E 4.9F	<b>22</b> Sa	0845 1458 2127	1117 1735 2349	6.2E 5.4F 5.8E
<b>8</b> M	0842 1441 2103	1117 1816 2337	5.5E 4.8F 5.6E	<b>23</b> Tu	0828 1431 2043	1049 1655 2305	4.7E 4.6F 5.2E	<b>8</b> Th	0954 1600 2227	1235 2001	5.6E 4.8F	<b>23</b> F	0910 1521 2146	1142 1756	6.1E 5.5F	<b>8</b> Sa	0938 1547 2256	1301 2034	4.3E 4.8F	<b>23</b> Su	0935 1547 2219	1207 1826	6.4E 5.5F
<b>9</b> Tu	0931 1531 2155	1206 1912	5.7E 4.9F	<b>24</b> W	0904 1509 2124	1128 1738 2348	5.3E 5.0F 5.6E	<b>9</b> F	1041 1648 2317	1319 2051	5.5E 4.7F	<b>24</b> Sa	0955 1606 2235	1229 1845	6.4E 5.6F	<b>9</b> Su	1103 1713 2344	1342 2121	5.2E 4.5F	<b>24</b> M	1026 1638 2312	1259 1918	6.5E 5.5F
<b>10</b> W	1019 1620 2245	1253 2004	5.7E 4.8F	<b>25</b> Th	0942 1548 2208	1210 1821	5.8E 5.3F	<b>10</b> Sa	1128 1736	1403 2142	5.3E 4.5F	<b>25</b> Su	1043 1653 2328	1319 1934	6.5E 5.6F	<b>10</b> M	1150 1800	1422 2208	4.9E 4.2F	<b>25</b> Tu	1120 1730	1352 2010	6.4E 5.3F
<b>11</b> Th	1106 1709 2336	1339 2056	5.6E 4.6F	<b>26</b> F	1022 1629 2254	1255 1907	6.1E 5.5F	<b>11</b> Su	1216 1825	1446 2235	5.0E 4.2F	<b>26</b> M	1134 1744	1410 2026	6.5E 5.4F	<b>11</b> Tu	1237 1847	1501 2254	4.6E 3.9F	<b>26</b> W	1216 1825	1444 2104	6.2E 5.0F
<b>12</b> F	1154 1759	1425 2154	5.4E 4.4F	<b>27</b> Sa	1105 1713 2344	1342 1955	6.3E 5.5F	<b>12</b> M	1305 1915	1529 2331	4.6E 3.9F	<b>27</b> Tu	1230 1839	1502 2120	6.2E 5.1F	<b>12</b> W	1323 1933	1541 2201	4.4E 3.7F	<b>27</b> Th	1314 1922	1537 2200	5.9E 4.7F
<b>13</b> Sa	1243 1850	1510 2258	5.1E 4.1F	<b>28</b> Su	1153 1801	1431 2045	6.4E 5.4F	<b>13</b> Tu	1354 2006	1613	4.3E	<b>28</b> W	1329 1938	1555 2218	5.9E 4.7F	<b>13</b> Th	1409 2020	1622 2243	4.2E 3.5F	<b>28</b> F	1412 2020	1632 2301	5.4E 4.4F
<b>14</b> Su	1333 1942	1555 2359	4.7E 3.9F	<b>29</b> M	1246 1854	1521 2138	6.2E 5.1F	<b>14</b> W	1444 2058	1658	3.9E	<b>29</b> Th	1429 2040	1651 2321	5.5E 4.4F	<b>14</b> F	1454 2105	1706 2328	4.0E 3.5F	<b>29</b> Sa	1512 2120	1729	4.9E
<b>15</b> M	1424 2037	1643	4.3E	<b>30</b> Tu	1344 1954	1614 2236	5.9E 4.8F	<b>15</b> Th	1533 2149	1745	3.7E	<b>30</b> F	1531 2143	1749	5.0E	<b>15</b> Sa	1540 2151	1752	3.9E	<b>30</b> Su	1613 2219	1831	4.5E
				<b>31</b> W	1445 2058	1710 2338	5.5E 4.4F													<b>31</b> M	1715 2318	1938	4.3E

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

# Quonset Point, Narragansett Bay, Rhode Island, 2018

F—Flood, Dir. 021° True    E—Ebb, Dir. 200° True

January				February				March															
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum									
	h	m	knots		h	m	knots		h	m	knots		h	m	knots								
<b>1</b> M ○	0008	0449	0.4F	<b>16</b> Tu ●	0043	0510	0.3F	<b>1</b> Th	0136	0616	0.4F	<b>16</b> F	0149	0551	0.3F	<b>1</b> Th ○	0035	0509	0.4F	<b>16</b> F	0045	0448	0.3F
	0657	0941	0.5E		0727	1027	0.5E		0827	1104	0.6E		0811	1111	0.5E		0719	0958	0.6E		0703	1006	0.4E
	1314	1720	0.4F		1330	1731	0.3F		1502	1844	0.4F		1418	1811	0.3F		1350	1735	0.4F		1305	1706	0.3F
	1922	2157	0.5E		1944	2240	0.5E		2049	2321	0.6E		2028	2325	0.5E		1940	2215	0.6E		1920	2222	0.5E
<b>2</b> Tu	0057	0541	0.4F	<b>17</b> W	0127	0542	0.3F	<b>2</b> F	0229	0708	0.4F	<b>17</b> Sa	0232	0631	0.3F	<b>2</b> F	0126	0558	0.4F	<b>17</b> Sa ●	0126	0527	0.3F
	0750	1031	0.5E		0804	1106	0.5E		0918	1152	0.5E		0849	1143	0.5E		0808	1045	0.6E		0741	1036	0.5E
	1412	1811	0.4F		1412	1804	0.3F		1535	1938	0.4F		1453	1850	0.3F		1421	1823	0.4F		1340	1743	0.3F
	2014	2247	0.6E		2022	2318	0.5E		2141				2107	2359	0.5E		2029	2304	0.6E		1957	2254	0.5E
<b>3</b> W	0148	0632	0.4F	<b>18</b> Th	0212	0617	0.3F	<b>3</b> Sa		0012	0.5E	<b>18</b> Su	0314	0717	0.3F	<b>3</b> Sa	0218	0647	0.4F	<b>18</b> Su	0207	0608	0.3F
	0843	1120	0.5E		0841	1143	0.5E		0321	0803	0.4F		0930	1217	0.5E		0856	1130	0.5E		0820	1109	0.5E
	1511	1904	0.4F		1452	1841	0.3F		1008	1241	0.5E		1528	1936	0.3F		1451	1912	0.4F		1416	1822	0.3F
	2107	2337	0.6E		2100	2355	0.4E		1603	2033	0.3F		2148				2119	2353	0.6E		2038	2329	0.5E

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 \* Current weak and variable.  
 † See page 196 for the remaining currents on this day.

# Quonset Point, Narragansett Bay, Rhode Island, 2018

F—Flood, Dir. 021° True    E—Ebb, Dir. 200° True

April				May				June							
Slack	Maximum			Slack	Maximum			Slack	Maximum			Slack	Maximum		
	h	m	knots		h	m	knots		h	m	knots		h	m	knots
<b>1</b> Su	0203	0624	0.4F	<b>16</b> M	0141	0547	0.3F	<b>1</b> Tu	0225	0644	0.3F	<b>16</b> F	0201	0615	0.3F
	0832	1107	0.5E		0754	1039	0.5E		0850	1128	0.5E		0740	*	0.5E
	1410	1846	0.4F		1341	1800	0.3F		1419	1903	0.3F		1236	0.4E	0.4F
	2055	2333	0.6E		2012	2302	0.5E		2115	2358	0.5E		1958	*	0.3F
<b>2</b> M	0249	0712	0.3F	<b>17</b> Tu	0224	0632	0.3F	<b>2</b> W	0306	0729	0.3F	<b>17</b> Th	0249	0707	0.3F
	0917	1152	0.5E		0839	1120	0.5E		0933	1214	0.5E		0910	1144	0.5E
	1449	1934	0.3F		1424	1846	0.3F		1503	1951	0.3F		1447	1927	0.3F
	2142	*	*		2059	2344	0.5E		2159	*	*		2133	*	*
<b>3</b> Tu	0331	0803	0.3F	<b>18</b> W	0307	0725	0.3F	<b>3</b> Th	0046	05E	0.5E	<b>18</b> F	0039	0806	0.3F
	1002	1239	0.5E		0928	1205	0.5E		0818	*	0.4E		1003	1235	0.5E
	1529	2026	0.3F		1508	1942	0.3F		1302	0.4E	*		1536	2028	0.3F
	2228	*	*		2149	*	*		1720	*	*		2228	*	*
<b>4</b> W	0110	05E	0.5E	<b>19</b> Th	0352	0823	0.3F	<b>4</b> F	0135	0.4E	0.4E	<b>19</b> Sa	0429	0905	0.3F
	0854	*	*		1020	1254	0.5E		0907	*	*		1058	1329	0.5E
	1328	0.4E	0.4E		1741	*	*		1351	0.4E	*		1755	*	*
	1731	*	*		1837†	*	*		1754	*	*		1854†	*	*

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 \* Current weak and variable.  
 † See page 196 for the remaining currents on this day.

# Quonset Point, Narragansett Bay, Rhode Island, 2018

F—Flood, Dir. 021° True    E—Ebb, Dir. 200° True

July				August				September							
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum	
h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m
<b>1</b>				<b>16</b>		<b>1</b>		<b>16</b>		<b>1</b>		<b>16</b>		<b>16</b>	
Su		0039	0.5E	M	0408	0826	0.4F	W	0119	0419	0.4E	Th	0154	0514	0.5E
		0746	*		1025	1255	0.5E		0839	*			0550	*	
		1254	0.4E		1559	2052	0.3F		1338	0.4E			0653	*	
		2003	*		2253				2109	*			0953	0.3F	
<b>2</b>				<b>17</b>				<b>2</b>				<b>17</b>			
M		0121	0.4E	Tu	0448	0922	0.3F	Th	0928	*		F	0628	*	
		0833	0.4E		1119	1350	0.5E		1415	0.4E			0747	*	
		1337	0.4E		1754	*			2201	*			1047	0.3F	
		2053	*		1849†	*							1244	1513†	0.4E
<b>3</b>				<b>18</b>				<b>3</b>				<b>18</b>			
Tu		0158	0.4E	W		0218	0.5E	F	0233	0.4E		Sa	0332	0.4E	
		0919	0.4E		0612	*			0721	*		●	0716	*	
		1414	0.4E		0708	*			0813	*			0835	*	
		2142	*		1017	0.3F			1018	*			1141	0.3F	
<b>4</b>				<b>19</b>				<b>4</b>				<b>19</b>			
W		0232	0.4E	Th	0041	0307	0.4E	Sa	0313	0.4E		Su	0008	*	
		1005	*		0654	*			1110	*			0426	0.3E	
		1449	0.3E		0759	*			1536	0.4E			0817	*	
		2231	*		1112	0.3F			2347	*			0919	*	
<b>5</b>				<b>20</b>				<b>5</b>				<b>20</b>			
Th		0304	0.4E	F	0134	0358	0.4E	Su	0400	0.4E		M	0057	*	
		1052	0.3E		0749	*			1204	*			0538	0.3E	
		1523	0.3E		0844	*			1629	0.3E			1320	*	
		2322	*		1205	0.3F							1830	0.3E	
<b>6</b>				<b>21</b>				<b>6</b>				<b>21</b>			
F		0342	0.3E	Sa	0227	0458	0.3E	M	0039	*		Tu	0144	*	
		1140	0.3E		0955	1256	0.3F		0501	0.4E			0650	0.3E	
		1605	0.3E		1501	1746	0.4E		1257	*			1407	*	
									1745	0.3E			1929	0.4E	
<b>7</b>				<b>22</b>				<b>7</b>				<b>22</b>			
Sa		0012	*	Su	0122	*		Tu	0132	0.3F		W	0233	*	
		0430	0.3E		0612	0.3E			0330	0.6E			0746	0.4E	
		1228	*		0954	1345	0.3F		0938	1352	0.3F		1459	*	
		1704	0.3E		1600	1856	0.4E		1605	1908	0.4E		2018	0.4E	
<b>8</b>				<b>23</b>				<b>8</b>				<b>23</b>			
Su		0102	0.3E	M	0213	*		W	0231	0.3F		Th	0327	*	
		0537	0.3E		0715	0.4E			0437	0.725	0.4E		0834	0.4E	
		1316	*		1025	1438	0.3F		1035	1455	0.3F		1550	*	
		1831	0.3E		1659	1951	0.4E		1713	2007	0.4E		2103	0.5E	
<b>9</b>				<b>24</b>				<b>9</b>				<b>24</b>			
M		0153	*	Tu	0308	*		Th	0335	0.3F		F	0414	*	
		0651	0.4E		0806	0.4E			0541	0.821	0.5E		0919	0.4E	
		1410	*		1104	1535	0.3F		1128	1601	0.3F		1209	1631	0.3F
		1935	0.4E		1751	2039	0.5E		1813	2059	0.5E		1847	2145	0.5E
<b>10</b>				<b>25</b>				<b>10</b>				<b>25</b>			
Tu		0253	0.3F	W	0402	*		F	0042	0435	0.4F	Sa	0048	0451	0.3F
		0500	0.4E		0854	0.4E			0637	0914	0.5E		0705	1001	0.5E
		1055	1515		1145	1624	0.3F		1219	1658	0.4F		1251	1705	0.3F
		1732	2026		1835	2125	0.5E		1907	2149	0.5E		1923	2225	0.5E
<b>11</b>				<b>26</b>				<b>11</b>				<b>26</b>			
W		0356	0.3F	Th	0036	0446	0.3F	Sa	0132	0527	0.4F	Su	0124	0524	0.3F
		0840	0.5E		0652	0940	0.5E		0730	1005	0.6E		0741	1041	0.5E
		1144	1619		1227	1702	0.3F		1310	1748	0.4F		1334	1739	0.3F
		1828	2115		1915	2209	0.5E		1959	2238	0.6E		1959	2300	0.5E
<b>12</b>				<b>27</b>				<b>12</b>				<b>27</b>			
Th		0046	0453	F	0113	0521	0.3F	Su	0222	0617	0.4F	M	0201	0556	0.3F
		0653	0931		0732	1023	0.5E		0822	1055	0.6E		0817	1117	0.5E
		1232	1713		1310	1734	0.3F		1403	1839	0.4F		1418	1815	0.3F
		1921	2205		1953	2250	0.5E		2050	2325	0.6E		2036	2333	0.5E
<b>13</b>				<b>28</b>				<b>13</b>				<b>28</b>			
F		0138	0544	Sa	0154	0554	0.3F	M	0304	0709	0.4F	Tu	0238	0631	0.3F
		0746	1021		0811	1105	0.5E		0914	1145	0.6E		0853	1151	0.5E
		1322	1804		1355	1806	0.3F		1457	1933	0.4F		1501	1856	0.3F
		2014	2254		2030	2330	0.5E		2141				2114		
<b>14</b>				<b>29</b>				<b>14</b>				<b>29</b>			
Sa		0233	0635	Su	0235	0628	0.3F	Tu	0014	0514	0.5E	W	0006	0514	0.5E
		0838	1111		0849	1145	0.5E		0340	0803	0.4F		0313	0712	0.3F
		1415	1856		1441	1842	0.3F		1005	1237	0.5E		0931	1225	0.5E
		2106	2343		2107				1548	2030	0.3F		1542	1946	0.3F
<b>15</b>				<b>30</b>				<b>15</b>				<b>30</b>			
Su		0324	0729	M	0007	0514	0.5E	W	0104	0514	0.5E	Th	0042	0514	0.5E
		0932	1202		0313	0706	0.3F		0415	0859	0.3F		0801	*	
		1507	1953		0927	1223	0.4E		1057	1330	0.5E		1303	0.4E	
		2159			1525	1926	0.3F		1637	2126	0.3F		2040	*	
					2145				2323				0122	0.4E	
				<b>31</b>				<b>31</b>				<b>31</b>			
				Tu	0043	0514	0.5E	F	0614	*			0614	*	
					0750	*			0714	*			0714	*	
					1301	0.4E			0856	*			1345†	0.4E	
					2017	*									

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

\* Current weak and variable.

† See page 196 for the remaining currents on this day.

Quonset Point, Narragansett Bay, Rhode Island, 2018

F—Flood, Dir. 021° True E—Ebb, Dir. 200° True

Table with columns for October, November, and December, each subdivided into Slack and Maximum tide data with time (h:m) and height (knots) values. Includes moon phase icons and various symbols.

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

\* Current weak and variable.

† See page 196 for the remaining currents on this day.

# Pollock Rip Channel, Massachusetts, 2018

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

January				February				March															
Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		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									
<b>1</b> M ○	0143 0808 1404 2049	0458 1053 1730 2328	2.0F 2.0E 2.3F 1.9E	<b>16</b> Tu ●	0246 0900 1458 2136	0612 1153 1833 2136	1.9F 1.8E 2.2F	<b>1</b> Th	0320 0938 1537 2220	0639 1227 1908 2220	1.9E 2.0F 2.1E 2.4F	<b>16</b> F	0333 0951 1542 2221	0652 1235 1909 2221	1.8E 1.9E 2.3F	<b>1</b> Th ○	0216 0836 1436 2114	0542 1128 1810 2114	2.0F 1.9E 2.4F	<b>16</b> F	0225 0844 1436 2111	0548 1130 1805 2353	2.0F 1.9E 2.2F 1.9E
<b>2</b> Tu	0237 0858 1456 2141	0550 1144 1822	2.0F 2.1E 2.4F	<b>17</b> W	0325 0939 1534 2213	0648 1227 1907 2213	1.9F 1.8E 2.2F	<b>2</b> F	0411 1030 1628 2309	0730 1318 1958	1.9E 2.1F 2.1E 2.4F	<b>17</b> Sa	0407 1028 1618 2257	0721 1310 1938	1.9E 2.0F 2.0E 2.3F	<b>2</b> F	0308 0927 1526 2202	0632 1219 1858	1.9E 2.1F 2.0E 2.4F	<b>17</b> Sa ●	0300 0922 1513 2147	0619 1205 1835	2.1F 2.0E 2.3F
<b>3</b> W	0330 0950 1547 2233	0643 1236 1914	1.9E 2.0F 2.4F	<b>18</b> Th	0401 1017 1609 2251	0720 1301 1938	1.9F 1.9E 2.2F	<b>3</b> Sa	0501 1122 1719 2359	0821 1409 2049	2.0E 2.1F 2.4F	<b>18</b> Su	0442 1106 1654 2334	0751 1347 2010	1.9E 2.0F 2.3F	<b>3</b> Sa	0355 1016 1614 2249	0719 1307 1944	2.0E 2.2F 2.4F	<b>18</b> Su	0335 1000 1549 2224	0649 1241 1905	2.0E 2.1F 2.3F
<b>4</b> Th	0423 1042 1640 2326	0736 1328 2008	1.9E 2.0F 2.4F	<b>19</b> F	0437 1055 1645 2328	0750 1336 2008	1.9F 1.9E 2.2F	<b>4</b> Su	0552 1214 1810	0913 1500 2140	1.9E 2.1F 2.3F	<b>19</b> M	0519 1146 1733	0826 1427 2045	2.0E 2.1F 2.2F	<b>4</b> Su	0441 1105 1701 2334	0805 1353 2029	2.0E 2.2F 2.3F	<b>19</b> M	0410 1038 1627 2301	0721 1319 1938	2.0E 2.1F 2.2F 2.3F
<b>5</b> F	0517 1137 1734	0832 1422 2103	1.9E 2.0F 2.3F	<b>20</b> Sa	0513 1134 1722	0822 1415 2041	1.9F 1.9E 2.2F	<b>5</b> M	0643 1309 1903	1007 1554 2235	2.0F 1.8E 2.1F	<b>20</b> Tu	0558 1230 1815	0905 1511 2126	2.1F 2.0E 2.1F	<b>5</b> M	0527 1154 1748	0851 1439 2115	2.2F 1.9E 2.2F	<b>20</b> Tu	0447 1119 1706 2341	0756 1400 2015	2.2F 2.1E 2.2F
<b>6</b> Sa	0612 1233 1830	0930 1518 2202	1.9F 1.9E 2.3F	<b>21</b> Su	0552 1216 1802	0858 1456 2118	1.9F 1.9E 2.2F	<b>6</b> Tu	0737 1406 1959	1105 1650 2333	1.9F 1.7E 2.0F	<b>21</b> W	0641 1318 1902	0949 1558 2212	2.0F 1.9E 2.0F	<b>6</b> Tu	0613 1244 1837	0939 1527 2204	2.1F 1.8E 2.0F	<b>21</b> W	0526 1204 1750	0836 1444 2057	2.2F 2.0E 2.1F
<b>7</b> Su	0710 1333 1928	0358 1033 1618 2304	1.8E 1.9F 1.8E 2.1F	<b>22</b> M	0633 1301 1845	0938 1540 2200	1.9F 1.9E 2.1F	<b>7</b> W ○	0833 1505 2057	1206 1751	1.9F 1.5E	<b>22</b> Th	0730 1413 1955	1040 1650 2305	2.0F 1.8E 1.9F	<b>7</b> W	0702 1337 1928	1031 1618 2256	2.0F 1.7E 1.9F	<b>22</b> Th	0611 1254 1839	0922 1533 2146	2.2F 1.9E 2.0F
<b>8</b> M ○	0809 1434 2029	0458 1138 1721	1.7E 1.9F 1.7E	<b>23</b> Tu	0717 1349 1933	1023 1628 2247	1.9F 1.8E 2.0F	<b>8</b> Th	0931 1606 2158	1309 1855	1.9F 1.4E	<b>23</b> F ○	0824 1513 2055	1138 1747	1.9F 1.6E	<b>8</b> Th	0753 1432 2023	1127 1713 2354	1.9F 1.5E 1.7F	<b>23</b> F	0701 1350 1934	1014 1627 2241	2.1F 1.8E 1.8F
<b>9</b> Tu	0910 1537 2131	0601 1243 1827	1.7E 1.9F 1.6E	<b>24</b> W ○	0806 1443 2025	1114 1720 2338	1.8F 1.7E 1.9F	<b>9</b> F	1029 1707 2259	1409 1959	1.9F 1.4E	<b>24</b> Sa	0925 1618 2201	1245 1850	1.8F 1.5E	<b>9</b> F ○	0849 1531 2121	1228 1813	1.8F 1.4E	<b>24</b> Sa ○	0758 1453 2038	1116 1727 2348	1.9F 1.6E 1.6F
<b>10</b> W	1011 1640 2234	0705 1346 1934	1.6E 1.9F 1.5E	<b>25</b> Th	0859 1541 2122	1210 1815	1.8F 1.6E	<b>10</b> Sa	1126 1804 2356	1506 2100	2.0F 1.4E	<b>25</b> Su	1231 1725 2311	1401 1959	1.8F 1.5E	<b>10</b> Sa	0946 1630 2221	1330 1917	1.8F 1.4E	<b>25</b> Su	0904 1601 2148	1230 1834	1.8F 1.5E
<b>11</b> Th	1109 1740 2334	0806 1445 2038	1.6E 2.0F 1.5E	<b>26</b> F	0956 1642 2223	1312 1915	1.8F 1.6E	<b>11</b> Su	1219 1856	1558 2153	2.1F 1.5E	<b>26</b> M	1138 1829	1516 2108	1.9F 1.5E	<b>11</b> Su	1045 1727 2320	1428 2019	1.9F 1.4E	<b>26</b> M	1014 1709 2301	1352 1947	1.9F 1.5E
<b>12</b> F	1204 1836	0902 1539 2134	1.7E 2.1F 1.5E	<b>27</b> Sa	1056 1744 2327	1419 2017	1.9F 1.6E	<b>12</b> M	1307 1944	1645 2239	2.1F 1.6E	<b>27</b> Tu	1242 1929	1621 2213	2.1F 1.7E	<b>12</b> M	1140 1820	1522 2114	2.0F 1.5E	<b>27</b> Tu	1125 1814	1508 2101	2.0F 1.5E
<b>13</b> Sa	1253 1927	0650 1293 1827	1.9F 1.7E 1.6E	<b>28</b> Su	1156 1844	1525 2120	2.0F 1.6E	<b>13</b> Tu	1351 2027	1728 2319	2.2F 1.7E	<b>28</b> W	1341 2023	1718 2311	2.3F 1.8E	<b>13</b> Tu	1231 1909	1610 2202	2.1F 1.6E	<b>28</b> W	1231 1913	1611 2205	2.1F 1.7E
<b>14</b> Su	1339 2014	0736 1308 1915 2309	1.7E 2.2F 1.6E	<b>29</b> M	1255 1942	1627 2221	2.1F 1.7E	<b>14</b> W	1430 2107	1805 2354	2.2F 1.7E	<b>14</b> W	1316 1953	1653 2243	2.2F 1.7E	<b>14</b> W	1316 1953	1653 2243	2.2F 1.7E	<b>29</b> Th	1330 2007	1707 2301	2.3F 1.8E
<b>15</b> M	1420 2056	0820 1418 2056	1.8E 2.2F 1.7E	<b>30</b> Tu	1351 2037	1724 2318	2.3F 1.8E	<b>15</b> Th ●	1507 2144	1839	2.3F	<b>15</b> Th	1358 2033	1731 2320	2.2F 1.8E	<b>15</b> Th	1358 2033	1731 2320	2.2F 1.8E	<b>30</b> F	1423 2056	1756 2349	2.3F 1.9E
				<b>31</b> W ○	1445 2129	1817	2.4F													<b>31</b> Sa ○	1512 2141	1842	2.3F

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

# Pollock Rip Channel, Massachusetts, 2018

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

April				May				June													
Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		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							
<b>1</b> Su	0033 0336 1001 1558 2225	0704 1252 1926	1.9E 2.3F 2.0E 2.3F	<b>16</b> M	0301 0932 1520 2150	0617 1212 1832	2.2F 2.0E 2.2F	<b>1</b> Tu	0051 0356 1028 1621 2241	0727 1316 1946	1.9E 2.2F 1.8E 2.0F	<b>16</b> W	0001 0310 0950 1536 2202	0626 1228 1844	2.1E 2.3F 2.0E 2.1F	<b>1</b> F	0140 0449 1132 1719 2337	1.7E 2.1F 1.6E 1.7F	<b>16</b> Sa	0114 0424 1113 1701 2323	2.1E 2.4F 1.9E 2.0F
<b>2</b> M	0114 0419 1047 1642 2308	0747 1335 2008	1.9E 2.2F 1.9E 2.2F	<b>17</b> Tu	0338 1013 1600 2230	0651 1252 1909	2.3F 2.1E 2.2F	<b>2</b> W	0128 0435 1111 1702 2322	0807 1355 2025	1.8E 2.2F 1.7E 1.9F	<b>17</b> Th	0045 0353 1037 1623 2248	0709 1315 1929	2.1E 2.4F 2.0E 2.1F	<b>2</b> Sa	0219 0528 1214 1801 2118	1.7E 2.1F 1.6E 1.7F	<b>17</b> Su	0207 0517 1208 1757 2107	2.1E 2.3F 1.9E 1.9F
<b>3</b> Tu	0154 0501 1132 1725 2351	0829 1417 2050	1.9E 2.2F 1.8E 2.0F	<b>18</b> W	0417 1056 1643 2312	0730 1336 1949	2.3F 2.1E 2.2F	<b>3</b> Th	0206 0515 1155 1744 2105	0847 1435 2105	1.8E 2.1F 1.7E 1.8F	<b>18</b> F	0132 0439 1127 1714 2339	0756 1405 2040 2019	2.1E 2.4F 2.0E 2.0F	<b>3</b> Su	0300 0610 1259 1846 2201	1.7E 2.0F 1.6E 1.7F	<b>18</b> M	0303 0614 1305 1857 2212	2.0E 2.3F 1.8E 1.8F
<b>4</b> W	0235 0543 1219 1810	0912 1500 2133	1.8E 2.1F 1.9F	<b>19</b> Th	0500 1144 1730 2359	0813 1422 2035	2.3F 2.0E 2.1F	<b>4</b> F	0247 0556 1241 1829 2148	0928 1518 2148	1.7E 2.0F 1.6E 1.7F	<b>19</b> Sa	0222 0530 1222 1809 2115	0849 1458 2045 2115	2.0E 2.3F 1.9E	<b>4</b> M	0346 0655 1345 1934 2248	1.7E 2.0F 1.6E	<b>19</b> Tu	0403 0715 1405 2000 2322	1.8E 2.2F 1.7E 1.8F
<b>5</b> Th	0318 0628 1308 1857	0318 0958 1547 2221	1.7E 2.0F 1.6E 1.8F	<b>20</b> F	0547 1236 1822	0902 1513 2127	2.2F 1.9E 1.9F	<b>5</b> Sa	0331 0641 1329 1917 2237	1.6E 1.9F 1.5E 1.6F	<b>20</b> Su	0317 0626 1321 1910 2220	1.9E 2.2F 1.8E	<b>5</b> Tu	0434 0743 1434 2024 2339	1.6E 1.9F 1.6E	<b>20</b> W	0508 0819 1506 2105	1.7E 2.1F 1.7E		
<b>6</b> F	0404 0716 1400 1949	0404 1049 1638 2315	1.6E 1.9F 1.5E 1.6F	<b>21</b> Sa	0052 0641 1334 1921 2227	0334 0958 1610 2227	1.9E 2.1F 1.8E 1.7F	<b>6</b> Su	0419 0730 1420 2009 2331	1.6E 1.9F 1.5E 1.6F	<b>21</b> M	0417 0728 1423 2016 2335	1.8E 2.1F 1.7E	<b>6</b> W	0525 0833 1523 2115	1.6E 1.9F 1.6E	<b>21</b> Th	0034 0330 0925 1607 2209	1.8F 1.6E 2.1F 1.7E		
<b>7</b> Sa	0456 0808 1455 2045	0456 1146 1733 2045	1.5E 1.8F 1.4E	<b>22</b> Su	0151 0741 1438 2027 2340	0431 1104 1713 2340	1.8E 2.0F 1.6E 1.6F	<b>7</b> M	0512 0822 1513 2104	1.5E 1.9F 1.5E	<b>22</b> Tu	0523 0835 1528 2125	1.7E 2.0F 1.6E	<b>7</b> Th	0032 0342 0926 1613 2206 2206	1.7F 1.6E 1.9F 1.7E	<b>22</b> F	0142 0436 1031 1706 2310	1.9F 1.6E 2.0F 1.7E		
<b>8</b> Su	0552 0903 1551 2143	0552 1245 1833 2143	1.6F 1.5E 1.8F 1.4E	<b>23</b> M	0257 0849 1545 2139	0536 1222 1823	1.6E 1.9F 1.5E	<b>8</b> Tu	0029 0329 0916 1605 2159	1.6F 1.5E 1.9F 1.5E	<b>23</b> W	0053 0350 0945 1632 2233	1.7F 1.6E 2.0F 1.6E	<b>8</b> F	0125 0435 1018 1702 2256	1.7F 1.6E 1.9F 1.7E	<b>23</b> Sa	0244 0538 1134 1803 2105	2.0F 1.6E 2.1F 1.7E		
<b>9</b> M	0652 1001 1647 2241	0652 1344 1933 2241	1.6F 1.4E 1.8F 1.4E	<b>24</b> Tu	0407 1000 1652 2250	0648 1343 1938	1.5E 1.9F 1.5E	<b>9</b> W	0126 0424 1011 1657 2252	1.6F 1.5E 1.9F 1.6E	<b>24</b> Th	0205 0457 1053 1733 2336	1.8F 1.6E 2.1F 1.7E	<b>9</b> Sa	0216 0527 1110 1750 2343	1.8F 1.6E 1.9F 1.8E	<b>24</b> Su	0341 0637 1232 1855 2159	2.1F 1.6E 2.0F 1.8E		
<b>10</b> Tu	0750 1057 1740 2335	0750 1439 2029	1.6F 1.5E 1.9F 1.5E	<b>25</b> W	0515 1111 1756 2355	0803 1454 2050	1.7F 2.0F 1.6E	<b>10</b> Th	0219 0517 1104 1746 2341	1.7F 1.6E 2.0F 1.7E	<b>25</b> F	0308 0600 1157 1830 2131	2.0F 1.7E 2.1F 1.8E	<b>10</b> Su	0304 0618 1201 1836 2118	1.9F 1.7E 1.9F 1.8E	<b>25</b> M	0433 0731 1326 1944 2247	2.2F 1.7E 2.0F 1.8E		
<b>11</b> W	0844 1149 1829	0844 1528 2118	1.6E 2.0F 1.6E	<b>26</b> Th	0618 1216 1853	0914 1555 2151	1.7E 2.1F 1.7E	<b>11</b> F	0307 0607 1154 1832 2115	1.8F 1.6E 2.0F 1.8E	<b>26</b> Sa	0404 0659 1255 1922 2223	2.1F 1.7E 2.2F 1.8E	<b>11</b> M	0350 0707 1250 1921 2204	2.0F 1.8E 2.0F 1.9E	<b>26</b> Tu	0522 0821 1414 2029 2329	2.2F 1.7E 2.0F 1.8E		
<b>12</b> Th	0932 1237 1914	0932 1612 2201	1.7E 2.1F 1.7E	<b>27</b> F	0054 0716 1315 1946	0424 1014 1649 2244	2.1F 1.8E 2.2F 1.8E	<b>12</b> Sa	0351 0654 1241 1915 2158	1.9F 1.7E 2.0F 1.9E	<b>27</b> Su	0456 0752 1348 2009 2310	2.2F 1.8E 2.1F 1.9E	<b>12</b> Tu	0435 0755 1339 2007 2250	2.1F 1.8E 2.0F 2.0E	<b>27</b> W	0606 0906 1457 2111	2.2F 1.6E 1.9F		
<b>13</b> F	1015 0730 1321 1955	1015 1651 2240	1.8E 2.1F 1.8E	<b>28</b> Sa	0146 0809 1407 2034 2331	0516 1107 1738 2331	2.2F 1.8E 2.3F 1.9E	<b>13</b> Su	0430 0739 1325 1957 2239	2.0F 1.8E 2.1F 2.0E	<b>28</b> M	0543 0841 1435 2053 2351	2.3F 1.8E 2.1F 1.8E	<b>13</b> W	0520 0842 1427 2052 2336	2.2F 1.9E 2.0F 2.1E	<b>28</b> Th	0007 0310 0948 1538 2151	1.8E 2.2F 1.6E 1.9F		
<b>14</b> Sa	1055 1402 2034	1055 1726 2316	1.9E 2.2F 1.9E	<b>29</b> Su	0232 0858 1455 2118	0603 1154 1824	2.3F 1.9E 2.2F	<b>14</b> M	0508 0822 1409 2038 2319	2.2F 1.9E 2.1F 2.0E	<b>29</b> Tu	0627 0926 1519 2135	2.3F 1.7E 2.0F	<b>14</b> Th	0606 0931 1517 2140	2.3F 2.0E 2.0F	<b>29</b> F	0042 0347 1028 1616 2230	1.8E 2.2F 1.6E 1.8F		
<b>15</b> Su	1133 1441 2112	1133 1759 2353	2.0E 2.2F 2.0E	<b>30</b> M	0315 0944 1539 2200	0646 1236 1906	1.9E 1.9E 2.1F	<b>15</b> Tu	0546 0906 1452 2119	2.3F 2.0E 2.1F	<b>30</b> W	0029 0333 1009 1600 2215	1.8E 2.2F 1.7E 1.9F	<b>15</b> F	0024 0334 1021 1608 2229	2.1E 2.4F 2.0E 2.0F	<b>30</b> Sa	0116 0424 1107 1654 2310	1.8E 2.1F 1.7E 1.8F		
												<b>31</b> Th	0104 0411 1050 1639 2256	1.8E 2.2F 1.7E 1.8F							

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.





# The Race, Long Island Sound, 2018

F—Flood, Dir. 291° True    E—Ebb, Dir. 106° True

January				February				March							
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum	
h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m
<b>1</b>	M	0422	0721	0107	0158	0516	0810	0601	0859	0242	0518	0602	0850	0134	0127
	○	1025	1336	1101	1414	1101	1414	1159	1508	1147	1455	1147	1455	1401	1344
		1708	2003	1748	2042	1748	2042	1835	2135	1824	2115	1824	2115	1713	2006
		2303		2334		2334						1726	2029	1713	2006
<b>2</b>	Tu	0518	0816	0234	0234	0554	0843	0033	0335	0013	0317	0013	0317	0226	0206
		1119	1430	1137	1449	1137	1449	0656	0952	0641	0927	0641	0927	0848	0821
		1801	2057	1823	2114	1823	2114	1251	1600	1226	1533	1226	1533	1451	1424
		2357						1925	2225	1859	2151	1859	2151	1815	2042
<b>3</b>	W	0614	0911	0009	0310	0009	0310	0124	0428	0051	0357	0051	0357	0317	0247
		1213	1523	0632	0917	0632	0917	0750	1044	0721	1006	0721	1006	0937	0901
		1853	2151	1857	2146	1857	2146	1343	1651	1306	1614	1306	1614	1540	1505
								2016	2315	1936	2229	1936	2229	1902	2120
<b>4</b>	Th	0710	1005	0045	0347	0045	0347	0216	0521	0131	0439	0131	0439	0406	0329
		1307	1618	0709	0953	0709	0953	0846	1139	0804	1048	0804	1048	1025	0655
		1946	2245	1251	1601	1251	1601	1437	1744	1349	1657	1349	1657	1629	1548
				1931	2221	1931	2221	2107		2016	2310	2016	2310	1949	2201
<b>5</b>	F	0808	1102	0122	0426	0122	0426	0307	0614	0215	0524	0215	0524	0455	0413
		1402	1712	0749	1032	0749	1032	0944	1236	0850	1134	0850	1134	1114	1026
		2040	2340	1330	1641	1330	1641	1531	1838	1435	1743	1435	1743	1412	1329
				2007	2258	2007	2258	2201		2101	2356	2101	2356	2038	2245
<b>6</b>	Sa	0908	1201	0201	0507	0201	0507	0400	0710	0301	0613	0301	0613	0544	0500
		1459	1809	0831	1114	0831	1114	1043	1336	0941	1225	0941	1225	1205	1113
		2136		1412	1722	1412	1722	1628	1935	1526	1834	1526	1834	1502	1417
				2046	2339	2046	2339	2257		2151		2151		2128	2039
<b>7</b>	Su	1010	1304	0243	0551	0243	0551	0454	0808	0353	0706	0353	0706	0634	0551
		1559	1907	0917	1159	0917	1159	1144	1438	1038	1320	1038	1320	1259	1206
		2233		1457	1808	1457	1808	1727	2035	1622	1930	1622	1930	1554	1510
				2129		2129		2354		2248		2248		2221	2133
<b>8</b>	M	1114	1409	0329	0639	0329	0639	0548	0909	0450	0804	0450	0804	0726	0646
	○	1700	2009	1007	1249	1007	1249	1244	1539	1140	1422	1140	1422	1355	1304
		2331		1547	1857	1547	1857	1826	2136	1724	2032	1724	2032	1648	1608
				2217		2217				2351		2351		2317	2234
<b>9</b>	Tu	1218	1514	0419	0731	0419	0731	0051	0351	0553	0907	0553	0907	0822	0746
		1802	2113	1103	1343	1103	1343	0643	1008	1245	1528	1245	1528	1453	1409
	○			1642	1952	1642	1952	1340	1637	1831	2137	1831	2137	1743	1712
				2311		2311		1924	2234					2051	2017
<b>10</b>	W	0029	0334	0514	0828	0514	0828	0146	0445	0056	0350	0056	0350	0304	0232
		0628	0948	1202	1441	1202	1441	0736	1102	0658	1012	0658	1012	0920	0852
		1319	1617	1743	2052	1743	2052	1432	1730	1348	1637	1348	1637	1550	1519
		1904	2215					2016	2325	1937	2241	1937	2241	1838	2124
<b>11</b>	Th	0723	1047	0009	0304	0009	0304	0236	0536	0200	0457	0200	0457	0359	0342
		1415	1715	0612	0928	0612	0928	0826	1149	0802	1115	0802	1115	1015	0959
		2001	2311	1303	1544	1303	1544	1518	1817	1447	1744	1447	1744	1643	1630
				1847	2154	1847	2154	2103		2040	2343	2040	2343	1931	2231
<b>12</b>	F	0814	1138	0110	0405	0110	0405	0323	0621	0301	0602	0301	0602	0451	0452
		1506	1807	0714	1029	0714	1029	0911	1229	0903	1213	0903	1213	1104	1103
		2053		1403	1649	1403	1649	1600	1858	1544	1845	1544	1845	1731	1735
				1952	2256	1952	2256	2145		2138		2138		2019	2027
<b>13</b>	Sa	0901	1223	0211	0508	0211	0508	0406	0702	0400	0702	0400	0702	0539	0557
		1552	1853	0815	1129	0815	1129	0952	1306	1000	1308	1000	1308	1147	1202
		2139		1502	1754	1502	1754	1638	1935	1636	1939	1636	1939	1815	1832
				2054	2355	2054	2355	2223		2232		2232		2103	2124
<b>14</b>	Su	0354	0656	0311	0610	0311	0610	0446	0739	0331	0623	0331	0623	0609	0029
		0944	1303	0915	1226	0915	1226	1031	1342	0916	1227	0916	1227	0623	0655
		1634	1933	1558	1855	1558	1855	1714	2009	1558	1854	1558	1854	1854	1255
		2220		2152		2152		2300		2144		2144		2215	2040
<b>15</b>	M	0436	0734	0409	0710	0409	0710	0524	0814	0413	0704	0413	0704	0704	0747
		1024	1339	1011	1321	1011	1321	1109	1418	0958	1306	0958	1306	1306	1346
		1712	2009	1652	1951	1652	1951	1749	2042	1636	1930	1636	1930	1706	2011
		2258		2248		2248		2336		2223		2223		2303	2303
	○			0506	0806	0506	0806							0210	0210
				1106	1415	1106	1415							0836	0836
				1744	2044	1744	2044							1129	1434
				2341		2341								1753	2055
														2349	2349

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.



# The Race, Long Island Sound, 2018

F—Flood, Dir. 291° True    E—Ebb, Dir. 106° True

July				August				September																
Slack	Maximum		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										
<b>1</b> Su	0107 0752 1341 2007	0419 1040 1644 2247	4.1E 3.2F 3.8E 3.0F	<b>16</b> M	0133 0810 1410 2036	0442 1108 1713 2329	5.2E 4.2F 4.9E 3.8F	<b>1</b> W	0155 0829 1424 2058	0505 1121 1732 2340	4.1E 3.4F 4.3E 3.1F	<b>16</b> Th	0305 0933 1533 2215	0611 1233 1842	3.5F 4.3E 3.7F 4.5E	<b>1</b> Sa	0300 0925 1524 2208	0600 1220 1838	3.2F 4.0E 3.4F 4.4E	<b>16</b> Su	0430 1057 1647 2342	0735 1351 2004	2.7F 3.3E 2.7F 3.6E	
<b>2</b> M	0144 0828 1419 2048	0456 1116 1723 2327	4.0E 3.2F 3.9E 2.9F	<b>17</b> Tu	0229 0904 1506 2137	0538 1204 1810	4.9E 4.0F 4.7E	<b>2</b> Th	0237 0909 1507 2145	0547 1203 1817	4.0E 3.4F 4.3E	<b>17</b> F	0403 1030 1629 2317	0708 1331 1941	3.9E 3.3F 4.2E	<b>2</b> Su	0352 1018 1618 2306	0700 1313 1932	3.9E 3.3F 4.3E	<b>17</b> M	0527 1157 1743	0835 1450 2105	3.1E 2.5F 2.5F 3.4E	
<b>3</b> Tu	0224 0905 1459 2132	0536 1155 1805	3.9E 3.1F 3.9E	<b>18</b> W	0328 1001 1603 2241	0635 1303 1910	3.5F 4.4E 4.5E	<b>3</b> F	0324 0953 1553 2236	0633 1249 1905	3.9E 3.3F 4.2E	<b>18</b> Sa	0503 1130 1726	0809 1431 2044	3.5E 3.0F 3.9E	<b>3</b> M	0451 1118 1717	0759 1411 2033	3.7E 3.2F 4.2E	<b>18</b> Tu	0625 1255 1840	0936 1548 2204	3.0E 2.4F 3.3E	
<b>4</b> W	0306 0946 1541 2220	0618 1238 1850	2.8F 3.8E 3.1F 3.9E	<b>19</b> Th	0429 1100 1701 2346	0736 1404 2013	3.2F 4.0E 4.3E	<b>4</b> Sa	0415 1044 1644 2332	0725 1340 1959	2.9F 3.8E 4.2E	<b>19</b> Su	0605 1230 1824	0914 1531 2148	3.3E 2.8F 3.8E	<b>4</b> Tu	0554 1221 1821	0902 1513 2136	3.7E 3.2F 4.3E	<b>19</b> W	0719 1349 1933	1032 1643 2257	3.1E 2.4F 3.4E	
<b>5</b> Th	0353 1030 1628 2311	0705 1324 1939	3.7E 3.1F 3.9E	<b>20</b> F	0533 1200 1800	0841 1505 2118	3.7E 3.2F 4.1E	<b>5</b> Su	0512 1140 1741	0821 1434 2057	3.7E 3.3F 4.3E	<b>20</b> M	0705 1328 1920	1017 1630 2247	3.2E 2.7F 3.7E	<b>5</b> W	0700 1326 1926	1006 1619 2240	3.9E 3.3F 4.5E	<b>20</b> Th	0809 1438 2023	1120 1732 2341	3.3E 2.6F 3.5E	
<b>6</b> F	0445 1119 1718	0756 1413 2031	3.6E 3.1F 4.0E	<b>21</b> Sa	0637 1300 1858	0946 1606 2221	3.5E 3.1F 4.1E	<b>6</b> M	0613 1239 1841	0922 1533 2157	3.7E 3.3F 4.4E	<b>21</b> Tu	0801 1422 2013	1112 1724 2339	3.3E 2.7F 3.8E	<b>6</b> Th	0805 1428 2029	1109 1725 2340	4.2E 3.6F 4.7E	<b>21</b> F	0853 1522 2107	1201 1817	3.6E 2.8F	
<b>7</b> Sa	0541 1211 1811	0851 1505 2127	3.6E 3.1F 4.2E	<b>22</b> Su	0738 1357 1954	1048 1703 2319	3.4E 3.1F 4.2E	<b>7</b> Tu	0718 1340 1943	1024 1634 2257	3.9E 3.5F 4.6E	<b>22</b> W	0850 1511 2101	1200 1812	3.4E 2.8F	<b>7</b> F	0905 1528 2128	1208 1827	4.6E 3.8F	<b>22</b> Sa	0933 1603 2148	1239 1856	3.9E 3.0F	
<b>8</b> Su	0641 1306 1908	0949 1600 2223	3.7E 3.4F 4.5E	<b>23</b> M	0834 1450 2045	1143 1756	3.5E 3.1F	<b>8</b> W	0821 1440 2043	1124 1736 2355	4.2E 3.7F 4.9E	<b>23</b> Th	0934 1556 2143	1241 1855	3.6E 3.0F	<b>8</b> Sa	1001 1625 2223	1303 1925	5.0E 4.1F	<b>23</b> Su	1011 1643 2228	1316 1934	4.2E 3.3F	
<b>9</b> M	0742 1402 2005	1047 1657 2319	3.9E 3.6F 4.8E	<b>24</b> Tu	0924 1539 2132	1230 1844	3.6E 3.1F	<b>9</b> Th	0921 1539 2141	1222 1837	4.5E 4.0F	<b>24</b> F	1013 1636 2223	1317 1932	3.8E 3.1F	<b>9</b> Su	1053 1719 2316	1356 2018	5.2E 4.3F	<b>24</b> M	1048 1721 2307	1353 2010	4.5E 3.5F	
<b>10</b> Tu	0841 1458 2101	1144 1755	4.2E 3.8F	<b>25</b> W	1008 1624 2214	1312 1925	3.7E 3.2F	<b>10</b> F	1017 1636 2236	1318 1935	3.9E 4.2F	<b>25</b> Sa	1049 1715 2300	1353 2007	4.0E 3.3F	<b>10</b> M	1144 1812	1448 2109	5.4E 4.3F	<b>25</b> Tu	1125 1759 2346	1431 2047	4.7E 3.6F	
<b>11</b> W	0939 1554 2156	1239 1852	4.5E 4.1F	<b>26</b> Th	1047 1705 2252	1350 2003	3.8E 3.2F	<b>11</b> Sa	1111 1731 2330	1412 2029	5.1E 4.3F	<b>26</b> Su	1125 1752 2336	1428 2041	4.2E 3.4F	<b>11</b> Tu	1233 1904	1539 2159	5.3E 4.1F	<b>26</b> W	1202 1839	1511 2125	4.9E 3.7F	
<b>12</b> Th	1034 1650 2250	1334 1947	4.8E 4.3F	<b>27</b> F	1124 1744 2328	1425 2037	3.9E 3.2F	<b>12</b> Su	1204 1826	1505 2123	5.3E 4.3F	<b>27</b> M	1159 1829	1504 2115	4.4E 3.5F	<b>12</b> W	1322 1956	1629 2250	5.2E 3.8F	<b>27</b> Th	1242 1920	1552 2206	4.9E 3.7F	
<b>13</b> F	1128 1745 2344	1428 2042	5.0E 4.3F	<b>28</b> Sa	1159 1822	1500 2109	4.0E 3.3F	<b>13</b> M	1255 1921	1559 2216	5.2E 4.2F	<b>28</b> Tu	1235 1907	1541 2151	4.5E 3.5F	<b>13</b> Th	1411 2050	1720 2343	4.8E 3.4F	<b>28</b> F	1325 2004	1637 2250	4.9E 3.6F	
<b>14</b> Sa	1222 1841	1522 2136	5.1E 4.3F	<b>29</b> Su	1233 1859	1535 2143	4.1E 3.3F	<b>14</b> Tu	1347 2017	1652 2310	5.1E 3.9F	<b>29</b> W	1313 1946	1621 2230	4.6E 3.5F	<b>14</b> F	1501 2145	1812 2345	4.4E	<b>29</b> Sa	1411 2052	1724 2338	4.8E 3.4F	
<b>15</b> Su	1316 1937	1617 2231	5.0E 4.1F	<b>30</b> M	1308 1937	1612 2219	4.2E 3.3F	<b>15</b> W	1440 2115	1746 2415	4.8E 4.8E	<b>30</b> Th	1353 2029	1703 2313	4.6E 3.4F	<b>15</b> Sa	1553 2243	1906 2443	4.0E	<b>30</b> Su	1502 2147	1815 2447	4.6E	
				<b>31</b> Tu	0116 0753 1345 2016	0426 1043 1651 2257	4.2E 3.4F 4.2E 3.2F						<b>31</b> F	0213 0838 1436 2116	0521 1133 1748	4.2E 3.6F 4.6E								

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.



## Throgs Neck Bridge, Long Island Sound, New York, 2018

F—Flood, Dir. 106° True     E—Ebb, Dir. 262° True

January				February				March																		
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum												
h	m	h	m	knots	h	m	h	m	knots	h	m	h	m	knots	h	m	knots									
<b>1</b> M ○	0146	0505	1.8F	<b>16</b> Tu ●	0235	0526	1.7F	<b>1</b> Th	0339	0631	1.9F	<b>16</b> F	0311	0628	1.9F	<b>1</b> Th ○	0237	0519	1.9F	<b>16</b> F ●	0201	0513	1.9F			
	0803	1035	1.1E		0903	1112	1.1E		0954	1207	1.1E		0941	1215	1.2E		0851	1056	1.0E		0834	1100	1.2E	0834	1100	1.2E
	1430	1735	1.8F		1501	1751	1.7F		1625	1900	1.8F		1539	1851	1.8F		1520	1748	1.8F		1429	1736	1.8F	1429	1736	1.8F
	2037	2303	1.1E		2121	2336	1.1E		2219				2147				2113	2320	1.1E		2040	2319	1.3E	2040	2319	1.3E
<b>2</b> Tu	0243	0557	1.9F	<b>17</b> W	0308	0611	1.8F	<b>2</b> F	0033	1.1E	<b>17</b> Sa	0036	1.2E	<b>2</b> F ●	0331	0611	1.9F	<b>17</b> Sa ●	0240	0600	2.0F					
	0858	1127	1.1E		0940	1159	1.1E		0435	0723		1.9F	0350		0713	1.9F	0944		1151	1.1E	0907	1144	1.2E	0907	1144	1.2E
	1531	1827	1.8F		1535	1835	1.7F		1052	1304		1.0E	1014		1302	1.2E	1610		1839	1.8F	1506	1822	1.9F	1506	1822	1.9F
	2131	2355	1.1E		2154				1719	1951		1.8F	1616		1936	1.8F	2205				2112			2112		
<b>3</b> W	0340	0650	1.9F	<b>18</b> Th	0022	1.2E	<b>3</b> Sa	0128	1.1E	<b>18</b> Su	0122	1.2E	<b>3</b> Sa	0014	1.1E	<b>18</b> Su	0004	1.3E								
	0956	1222	1.1E		0343	0656		1.8F	0530		0814	1.8F		0428	0759		1.9F	0423	0702	1.9F	0319	0646	2.0F	0319	0646	2.0F
	1631	1920	1.8F		1016	1246		1.1E	1151		1359	1.0E		1050	1347		1.2E	1038	1246	1.0E	0940	1230	1.2E	0940	1230	1.2E
	2228				1611	1920		1.7F	1811		2041	1.7F		1654	2022		1.8F	1700	1928	1.8F	1544	1908	1.9F	1544	1908	1.9F

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.



# Throgs Neck Bridge, Long Island Sound, New York, 2018

F—Flood, Dir. 106° True    E—Ebb, Dir. 262° True

July				August				September															
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum									
	h	m	knots		h	m	knots		h	m	knots		h	m	knots								
<b>1</b> Su	0514	0817	1.6F	<b>16</b> M	0551	0836	1.7F	<b>1</b> W	0001	0247	1.1E	<b>16</b> Th	0115	0318	1.0E	<b>1</b> Sa	0043	0348	1.1E	<b>16</b> Su	0243	0439	0.9E
	1141	1408	1.1E		1152	1412	1.1E		1206	1508	1.2E		0725	0959	1.6F		0639	1028	1.6F		0844	1117	1.4F
	1723	2038	1.7F		1800	2100	1.8F		1807	2142	1.7F		1338	1541	1.0E		1300	1608	1.0E		1509	1701	0.8E
													1946	2227	1.6F		1854	2257	1.6F		2113	2345	1.3F
<b>2</b> M	0007	0232	1.1E	<b>17</b> Tu	0028	0242	1.0E	<b>2</b> Th	0041	0334	1.1E	<b>17</b> F	0213	0413	0.9E	<b>2</b> Su	0133	0437	1.1E	<b>17</b> M	0338	0530	0.8E
	0550	0901	1.6F		0649	0929	1.6F		0632	1006	1.6F		0821	1054	1.5F		0725	1121	1.6F		0938	1209	1.3F
	1218	1454	1.1E		1255	1507	1.0E		1249	1554	1.1E		1437	1635	0.9E		1354	1658	1.0E		1604	1752	0.8E
	1801	2124	1.7F		1902	2155	1.7F		1847	2233	1.7F		2047	2322	1.5F		1942	2351	1.5F		2209		
<b>3</b> Tu	0048	0319	1.1E	<b>18</b> W	0133	0339	0.9E	<b>3</b> F	0124	0421	1.1E	<b>18</b> Sa	0311	0507	0.9E	<b>3</b> M	0230	0528	1.0E	<b>18</b> Tu	0429	0620	0.8E
	0628	0949	1.6F		0748	1025	1.6F		0714	1057	1.6F		0919	1147	1.4F		0817	1216	1.5F		1028	1259	1.4F
	1256	1541	1.1E		1358	1603	1.0E		1336	1642	1.0E		1536	1729	0.8E		1455	1749	0.9E		1655	1843	0.8E
	1842	2213	1.7F		2006	2252	1.6F		1931	2325	1.6F		2148				2044				2300		

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

# Throgs Neck Bridge, Long Island Sound, New York, 2018

F—Flood, Dir. 106° True E—Ebb, Dir. 262° True

October				November				December															
Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		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									
<b>1</b> M	0105 0655 1328 1918	0407 1055 1630 2327	1.0E 1.6F 0.9E 1.5F	<b>16</b> Tu ○	0304 0850 1530 2124	0500 1136 1723 2124	0.9E 1.4F 0.8E	<b>1</b> Th	0307 0854 1546 2214	0532 1226 1801	1.5F 0.9E 1.6F 0.9E	<b>16</b> Sa	0358 0931 1628 2207	0605 1240 1831	1.4F 1.0E 1.5F 0.9E	<b>1</b> Sa	0404 1018 1643 2306	0608 1303 1840	1.5F 0.9E 1.6F 0.9E	<b>16</b> Su	0351 0931 1626 2202	0619 1257 1845	1.5F 1.0E 1.6F 1.0E
<b>2</b> Tu ○	0206 0749 1435 2030	0500 1152 1724 2030	1.0E 1.5F 1.5F 0.9E	<b>17</b> W	0354 0938 1621 2214	0549 1225 1813	0.9E 1.4F 0.8E	<b>2</b> F	0419 1027 1657 2325	0628 1324 1859	1.5F 0.9E 1.6F 0.9E	<b>17</b> Sa	0441 1020 1712 2252	0653 1330 1920	1.4F 1.0E 1.6F 1.0E	<b>2</b> Su	0506 1126 1743	0705 1400 1939	1.5F 0.9E 1.6F 0.9E	<b>17</b> M	0435 1024 1709 2251	0706 1347 1934	1.5F 1.1E 1.6F 1.1E
<b>3</b> W	0318 0900 1553 2217	0554 1248 1820	0.9E 1.5F 0.9E	<b>18</b> Th	0441 1025 1708 2300	0638 1314 1903	0.9E 1.4F 0.9E	<b>3</b> Sa	0523 1139 1800	0726 1422 2000	1.5F 0.9E 0.9E	<b>18</b> Su	0522 1108 1754 2336	0742 1419 2009	1.5F 1.1E 1.7F 1.0E	<b>3</b> M	0604 0605 1227 1840	0229 0804 1456 2039	1.6F 0.9E 1.7F 0.9E	<b>18</b> Tu	0518 1201 1750 2339	0755 1438 2023	1.1E 1.7F 1.1E
<b>4</b> Th	0432 1030 1707 2337	0650 1346 1919	0.9E 1.5F 0.9E	<b>19</b> F	0525 1109 1752 2342	0727 1403 1954	1.0E 1.5F 0.9E	<b>4</b> Su	0622 1242 1858	0826 1518 2100	1.0E 1.8F 1.0E	<b>19</b> M	0601 1153 1833	0830 1508 2057	1.1E 1.8F 1.1E	<b>4</b> Tu	0700 1322 1933	0902 1550 2134	1.0E 1.7F 1.0E	<b>19</b> W	0601 1322 1832	0843 1528 2110	1.1E 1.7F 1.2E
<b>5</b> F	0538 1147 1812	0747 1443 2019	0.9E 1.7F 0.9E	<b>20</b> Sa	0606 1151 1834	0817 1452 2044	1.0E 1.7F 1.0E	<b>5</b> M	0718 1339 1952	0922 1611 2154	1.0E 1.8F 1.0E	<b>20</b> Tu	0639 1237 1910	0916 1556 2142	1.2E 1.8F 1.2E	<b>5</b> W	0753 1414 2023	0954 1640 2223	1.0E 1.7F 1.0E	<b>20</b> Th	0644 1248 1914	0930 1617 2156	1.1E 1.8F 1.2E
<b>6</b> Sa	0638 1253 1912	0846 1538 2118	1.0E 1.8F 1.0E	<b>21</b> Su	0644 1232 1913	0904 1539 2130	1.1E 1.8F 1.1E	<b>6</b> Tu	0810 1432 2043	1014 1703 2244	1.1E 1.8F 1.1E	<b>21</b> W	0717 1319 1947	1000 1644 2225	1.2E 1.9F 1.2E	<b>6</b> Th	0842 1502 2111	1043 1729 2311	1.0E 1.7F 1.0E	<b>21</b> F	0729 1337 1958	1015 1707 2241	1.1E 1.8F 1.2E
<b>7</b> Su	0734 1352 2007	0941 1632 2211	1.1E 1.9F 1.0E	<b>22</b> M	0720 1313 1949	0948 1625 2213	1.2E 1.9F 1.2E	<b>7</b> W	0901 1522 2132	1104 1753 2334	1.1E 1.8F 1.1E	<b>22</b> Th	0755 1402 2024	1043 1732 2309	1.2E 1.9F 1.2E	<b>7</b> F	0930 1548 2157	1131 1817 2359	1.0E 1.7F 1.0E	<b>22</b> Sa	0814 1426 2042	1101 1757 2328	1.1E 1.8F 1.2E
<b>8</b> M	0826 1447 2059	1033 1724 2303	1.1E 1.9F 1.1E	<b>23</b> Tu	0754 1353 2023	1031 1712 2256	1.3E 1.9F 1.3E	<b>8</b> Th	0950 1610 2220	1154 1842	1.1E 1.8F	<b>23</b> F	0835 1444 2103	1127 1820 2355	1.2E 1.9F 1.2E	<b>8</b> Sa	1017 1631 2243	1220 1903	1.0E 1.6F	<b>23</b> Su	0900 1518 2129	1149 1848	1.1E 1.8F
<b>9</b> Tu	0917 1539 2150	1124 1815 2355	1.1E 1.9F 1.1E	<b>24</b> W	0827 1432 2055	1114 1758 2340	1.3E 1.9F 1.3E	<b>9</b> F	1040 1656 2310	1245 1929	1.0E 1.7F	<b>24</b> Sa	0917 1527 2146	1214 1910	1.2E 1.8F	<b>9</b> Su	1104 1711 2329	1309 1947	1.0E 1.6F	<b>24</b> M	0950 1612 2221	1241 1939	1.1E 1.8F
<b>10</b> W	1008 1629 2242	1217 1905	1.1E 1.9F	<b>25</b> Th	0902 1511 2130	1158 1846	1.2E 1.9F	<b>10</b> Sa	1131 1741	1335 2015	1.0E 1.6F	<b>25</b> Su	1161 2234	1959	1.8F	<b>10</b> M	1151 1749	1357 2031	1.0E 1.5F	<b>25</b> Tu	1171 1711 2318	2030	1.7F
<b>11</b> Th	1101 1719 2334	1309 1954	1.1E 1.8F	<b>26</b> F	0941 1549 2210	1244 1933	1.2E 1.9F	<b>11</b> Su	1223 1823	1424 2101	0.9E 1.5F	<b>26</b> M	1055 1707 2329	1356 2050	1.1E 1.7F	<b>11</b> Tu	1238 1825	1445 2117	1.0E 1.5F	<b>26</b> W	1149 1814	1430 2123	1.0E 1.6F
<b>12</b> F	1156 1807	1400 2042	1.0E 1.6F	<b>27</b> Sa	1025 0415 1025 1631 2255	0620 0755 1331 2021	1.9F 1.8F 1.1E 1.8F	<b>12</b> M	1313 1904	1513 2149	0.9E 1.4F	<b>27</b> Tu	1155 1808	1449 2145	1.0E 1.6F	<b>12</b> W	1324 1901	1533 2204	1.0E 1.4F	<b>27</b> Th	1300 1919	1526 2219	1.0E 1.6F
<b>13</b> Sa	1250 1854	1450 2131	0.9E 1.5F	<b>28</b> Su	1113 1716 2346	1420 2112	1.1E 1.7F	<b>13</b> Tu	1403 1946	1603 2238	0.9E 1.3F	<b>28</b> W	1304 1917	1545 2241	0.9E 1.5F	<b>13</b> Th	1410 1939	1622 2253	1.0E 1.4F	<b>28</b> F	1412 2028	1624 2316	0.9E 1.5F
<b>14</b> Su	1344 1942	1541 2221	0.9E 1.4F	<b>29</b> M	1208 1808	1511 2207	1.0E 1.6F	<b>14</b> W	2030	2328	1.3F	<b>29</b> Th	2040	2339	1.5F	<b>14</b> F	2023	2342	1.4F	<b>29</b> Sa	2139		0.9E
<b>15</b> M	1438 2031	1633 2313	0.8E 1.3F	<b>30</b> Tu	1311 1910	1606 2304	0.9E 1.5F	<b>15</b> Th	1541 2118	1742	0.9E	<b>30</b> F	1536 2200	1742	0.9E	<b>15</b> Sa	1542 2111	1758	1.0E	<b>30</b> Su	1624 2243	1819	0.9E
				<b>31</b> W	1425 2037	1703	0.9E													<b>31</b> M	1109 1724 2341	1337 1917	1.6F 0.9E

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

## Hell Gate (off Mill Rock), East River, New York, 2018

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

January				February				March															
Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		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												
<b>1</b> M	0248 0851 1526 2121	0546 1150 1819	3.9F 5.3E 3.8F	<b>16</b> Tu	0327 0921 1554 2142	0623 1217 1845	3.4F 4.8E 3.4F	<b>1</b> Th	0424 1028 1657 2254	0058 0725 1328 1954	5.1E 4.0F 5.2E 3.9F	<b>16</b> F	0412 1016 1637 2234	0709 1305 1929	3.7F 4.9E 3.6F	<b>1</b> Th	0316 0923 1546 2147	0621 1224 1848	4.0F 5.1E 3.9F	<b>16</b> F	0303 0911 1527 2128	0604 1158 1823	3.6F 4.8E 3.6F
<b>2</b> Tu	0343 0945 1620 2215	0641 1244 1913	5.1E 3.9F 5.3E 3.9F	<b>17</b> W	0404 1000 1632 2221	0659 1254 1921	3.5F 4.9E 3.4F	<b>2</b> F	0517 1120 1748 2344	0817 1419 2045	4.0F 5.2E 5.0E 3.8F	<b>17</b> Sa	0449 1055 1713 2311	0746 1344 2006	3.7F 4.9E 3.6F	<b>2</b> F	0407 1015 1635 2236	0712 1314 1936	4.1F 5.1E 4.0F	<b>17</b> Sa	0342 0951 1604 2207	0641 1237 1900	3.8F 4.9E 3.7F
<b>3</b> W	0437 1040 1714 2308	0735 1338 2007	4.0F 5.3E 3.8F	<b>18</b> Th	0441 1039 1709 2259	0735 1331 1957	3.5F 4.9E 3.4F	<b>3</b> Sa	0609 1212 1839	0909 1509 2135	3.9F 5.0E 3.7F	<b>18</b> Su	0526 1134 1749 2350	0825 1423 2044	3.7F 4.9E 3.6F	<b>3</b> Sa	0457 1104 1723 2324	0801 1400 2023	4.0F 5.1E 3.9F	<b>18</b> Su	0420 1031 1641 2246	0720 1317 1938	3.8F 5.0E 3.8F
<b>4</b> Th	0532 1134 1808	0830 1432 2101	3.9F 5.2E 3.7F	<b>19</b> F	0518 1118 1746 2337	0812 1410 2034	3.5F 4.9E 3.4F	<b>4</b> Su	0702 1303 1930	1000 1558 2226	3.7F 4.8E 3.5F	<b>19</b> M	0606 1215 1828	0905 1505 2125	3.7F 4.9E 3.5F	<b>4</b> Su	0545 1151 1809	0847 1445 2109	3.9F 5.0E 3.8F	<b>19</b> M	0459 1112 1718 2326	0800 1358 2018	3.9F 5.0E 3.8F
<b>5</b> F	0628 1228 1903	0925 1526	3.8F 5.1E 3.6F	<b>20</b> Sa	0556 1157 1823	0850 1450 2112	3.5F 4.9E 3.4F	<b>5</b> M	0755 1354 2022	1053 1648 2319	3.5F 4.6E 3.3F	<b>20</b> Tu	0648 1258 1909	0949 1549 2210	3.6F 4.8E 3.5F	<b>5</b> M	0633 1238 1856	0934 1529 2154	3.8F 4.8E 3.6F	<b>20</b> Tu	0540 1154 1758	0841 1440 2100	3.8F 4.9E 3.7F
<b>6</b> Sa	0726 1324 1959	1022 1622 2254	3.6F 4.8E 3.4F	<b>21</b> Su	0635 1238 1902	0931 1532 2154	3.4F 4.8E 3.3F	<b>6</b> Tu	0850 1447 2116	1148 1740	3.2F 4.4E	<b>21</b> W	0736 1346 1957	1036 1637 2259	3.4F 4.7E 3.4F	<b>6</b> Tu	0721 1326 1943	1020 1612 2241	3.5F 4.5E 3.4F	<b>21</b> W	0625 1239 1842	0926 1526 2146	3.7F 4.8E 3.6F
<b>7</b> Su	0825 1421 2057	1122 1720 2353	3.4F 4.6E 3.2F	<b>22</b> M	0718 1321 1944	1015 1616 2238	3.3F 4.7E 3.2F	<b>7</b> W	0946 1541 2211	1245 1834	3.0F 4.1E	<b>22</b> Th	0830 1441 2052	1130 1730 2355	3.3F 4.5E 3.3F	<b>7</b> W	0810 1414 2032	1108 1657 2330	3.3F 4.3E 3.1F	<b>22</b> Th	0714 1329 1932	1015 1615 2238	3.6F 4.7E 3.5F
<b>8</b> M	0926 1518 2156	1224 1821	3.2F 4.4E	<b>23</b> Tu	0806 1409 2032	1103 1705 2328	3.2F 4.6E 3.2F	<b>8</b> Th	1043 1636 2306	1344 1932	2.9F 4.0E	<b>23</b> F	0933 1542 2157	1230 1829	3.2F 4.4E	<b>8</b> Th	0902 1505 2125	1200 1746	3.0F 4.1E	<b>23</b> F	0811 1425 2031	1111 1709 2336	3.4F 4.5E 3.3F
<b>9</b> Tu	1026 1616 2253	1327 1925	3.1F 4.3E	<b>24</b> W	0901 1503 2126	1157 1757	3.2F 4.6E	<b>9</b> F	1139 1730	1441 2030	2.8F 4.0E	<b>24</b> Sa	1043 1649 2307	1337 1934	3.1F 4.4E	<b>9</b> F	0957 1559 2220	1255 1838	2.9F 3.9E	<b>24</b> Sa	0916 1529 2139	1213 1810	3.2F 4.3E
<b>10</b> W	1125 1712 2348	1426 2027	3.0F 4.2E	<b>25</b> Th	1002 1603 2226	1256 1855	3.1F 4.5E	<b>10</b> Sa	1231 1821	1533 2123	2.9F 4.0E	<b>25</b> Su	1153 1757	1449 2042	3.2F 4.4E	<b>10</b> Sa	1053 1653 2315	1354 1935	2.8F 3.8E	<b>25</b> Su	1027 1637 2253	1324 1918	3.2F 4.3E
<b>11</b> Th	1219 1805	1521 2121	3.0F 4.2E	<b>26</b> F	1108 1707 2331	1359 1956	3.1F 4.5E	<b>11</b> Su	1319 1910	1620 2209	3.0F 4.2E	<b>26</b> M	1259 1901	1558 2151	3.4F 4.6E	<b>11</b> Su	1148 1747	1450 2033	2.8F 3.9E	<b>26</b> M	1138 1745	1438 2032	3.2F 4.3E
<b>12</b> F	1309 1854	1609 2207	3.1F 4.3E	<b>27</b> Sa	1214 1811	1505 2100	3.3F 4.6E	<b>12</b> M	1403 1955	1702 2250	3.1F 4.3E	<b>27</b> Tu	1400 2001	1700 2256	3.6F 4.8E	<b>12</b> M	1239 1838	1542 2126	2.9F 4.0E	<b>27</b> Tu	1244 1849	1548 2144	3.4F 4.5E
<b>13</b> Sa	1354 1939	1653 2245	3.1F 4.4E	<b>28</b> Su	1317 1913	1610 2204	3.4F 4.8E	<b>13</b> Tu	1444 2037	1741 2328	3.3F 4.5E	<b>28</b> W	1455 2055	1756 2354	3.8F 5.0E	<b>13</b> Tu	1326 1925	1627 2213	3.1F 4.2E	<b>28</b> W	1343 1947	1649 2248	3.6F 4.7E
<b>14</b> Su	1436 2022	1732 2321	3.2F 4.5E	<b>29</b> M	1416 2012	1711 2305	3.6F 4.9E	<b>14</b> W	1523 2117	1818	3.4F	<b>29</b> Th	1409 2008	1708 2255	3.3F 4.4E	<b>14</b> W	1409 2008	1708 2255	3.3F 4.4E	<b>29</b> Th	1436 2039	1742 2343	3.8F 4.9E
<b>15</b> M	1515 2103	1809 2356	3.3F 4.6E	<b>30</b> Tu	1512 2108	1808	3.8F	<b>15</b> Th	1601 2156	1853	3.5F	<b>30</b> F	1449 2049	1746 2336	3.5F 4.7E	<b>15</b> Th	1449 2049	1746 2336	3.5F 4.7E	<b>30</b> F	1525 2128	1830	3.9F
<b>31</b> W				<b>31</b> W	0330 0935 1605 2202	0631 1234 1902	5.1E 4.0F 5.2E 3.9F													<b>31</b> Sa	0348 0956 1611 2215	0655 1255 1915	5.0E 4.0F 5.0E 4.0F

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

# Hell Gate (off Mill Rock), East River, New York, 2018

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

April				May				June																																		
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum																												
h	m	h	m	knots	h	m	h	m	knots	h	m	h	m	knots	h	m	h	m	knots																							
<b>1</b> Su	0435	0739	1656	2259	4.0F	5.1E	3.9F	5.0E	3.9F	<b>16</b> M	0354	0653	1004	1611	2219	3.9F	5.1E	3.9F	5.0E	3.9F	<b>1</b> F	0552	0844	1148	1804	2058	3.4F	4.8E	3.4F	4.6E	3.4F	<b>16</b> Sa	0550	0844	1151	1808	2107	3.7F	5.0E	3.7F	5.0E	3.7F
<b>2</b> M	0520	0822	1126	1739	2040	3.9F	4.9E	3.8F	<b>17</b> Tu	0437	0736	1048	1653	2303	3.9F	5.0E	3.9F	5.0E	3.9F	<b>2</b> Sa	0004	0253	0633	1229	1845	2139	4.7E	3.3F	4.5E	3.2F	<b>17</b> Su	0015	0309	0647	1247	1907	5.1E	3.6F	4.8E	3.6F	4.8E	3.6F
<b>3</b> Tu	0604	0904	1210	1822	2121	3.7F	4.7E	3.6F	<b>18</b> W	0522	0821	1133	1737	2350	3.9F	5.0E	3.8F	5.0E	3.8F	<b>3</b> Su	0046	0335	0715	1312	1929	2222	4.6E	3.1F	4.4E	3.1F	<b>18</b> M	0113	0406	0745	1345	2009	2308	4.9E	3.5F	4.7E	3.5F	
<b>4</b> W	0027	0316	0648	1254	1906	4.7E	3.5F	4.9E	<b>19</b> Th	0610	0908	1221	1825	2129	4.9E	3.7F	4.9E	3.7F	<b>4</b> M	0130	0418	0800	1357	2015	2308	4.5E	3.0F	4.7E	3.0F	<b>19</b> Tu	0214	0507	0846	1445	2114	4.7E	3.4F	4.5E	3.4F	4.5E	3.4F	
<b>5</b> Th	0111	0357	0733	1340	1952	4.5E	3.3F	4.3E	<b>20</b> F	0040	0333	0703	1314	1920	5.0E	3.6F	4.7E	3.5F	<b>5</b> Tu	0217	0505	0847	1445	2105	2358	4.4E	2.9F	4.2E	2.9F	<b>20</b> W	0014	0316	0648	1248	1926	2219	3.3F	4.5E	4.5E	3.3F		
<b>6</b> F	0158	0441	0821	1428	2041	4.3E	3.1F	4.1E	<b>21</b> Sa	0136	0427	0802	1412	2023	4.8E	3.4F	4.5E	3.4F	<b>6</b> W	0307	0555	0936	1534	2158	4.3E	2.9F	4.2E	2.9F	<b>21</b> Th	0122	0418	0721	1345	2012	2321	3.3F	4.4E	4.4E	3.3F			
<b>7</b> Sa	0248	0528	0913	1519	2134	4.1E	2.9F	3.9E	<b>22</b> Su	0239	0527	0908	1517	2133	4.6E	3.2F	4.3E	3.2F	<b>7</b> Th	0400	0646	1027	1626	2252	29F	4.3E	4.3E	4.3E	4.3E	<b>22</b> F	0226	0518	0829	1447	2144	2101	3.2F	4.4E	4.4E	3.3F		
<b>8</b> Su	0341	0621	1008	1613	2230	4.0E	2.8F	3.8E	<b>23</b> M	0347	0634	1017	1625	2246	3.2F	4.4E	4.3E	4.3E	<b>8</b> F	0453	0740	1118	1718	2346	3.0F	4.4E	4.4E	3.1F	4.5E	3.3F												
<b>9</b> M	0437	0717	1103	1707	2325	3.9E	2.8F	3.9E	<b>24</b> Tu	0457	0749	1126	1731	2355	3.2F	4.4E	4.3E	4.3E	<b>9</b> Sa	0547	0833	1208	1810	2101	4.6E	3.1F	4.5E	3.2F	4.6E	3.4F												
<b>10</b> Tu	0532	0814	1156	1759	2040	4.0E	2.9F	4.0E	<b>25</b> W	0602	0904	1229	1832	2137	4.4E	3.4F	4.5E	4.5E	<b>10</b> Su	0038	0332	0639	1258	1901	2154	3.3F	4.6E	4.6E	3.4F	4.7E	3.5F											
<b>11</b> W	0017	0318	0623	1245	1847	3.0F	4.1E	4.2E	<b>26</b> Th	0057	0406	0702	1325	1927	3.5F	4.6E	4.7E	4.7E	<b>11</b> M	0130	0424	0731	1347	1952	2246	3.5F	4.8E	4.8E	3.5F	4.7E	4.7E											
<b>12</b> Th	0104	0406	0711	1330	1932	3.2F	4.4E	4.5E	<b>27</b> F	0152	0500	0757	1416	2018	3.7F	4.7E	4.9E	4.9E	<b>12</b> Tu	0221	0515	0822	1436	2042	2338	3.7F	4.9E	4.9E	3.7F	4.9E	3.5F											
<b>13</b> F	0149	0449	0757	1412	2015	3.4F	4.6E	4.7E	<b>28</b> Sa	0242	0549	0846	1503	2104	3.8F	4.8E	4.8E	4.8E	<b>13</b> W	0312	0606	0913	1527	2134	3.8F	5.0E	3.9F	4.8E	3.9F	4.8E												
<b>14</b> Sa	0231	0531	0840	1452	2056	3.6F	4.8E	4.9E	<b>29</b> Su	0329	0634	0932	1547	2149	3.9F	5.0E	3.8F	4.8E	3.8F	<b>14</b> Th	0404	0657	1004	1618	2226	3.6F	5.1E	3.9F	4.8E	3.9F	4.8E											
<b>15</b> Su	0313	0612	0922	1531	2137	3.8F	4.9E	3.8F	<b>30</b> M	0011	0311	0413	1015	1629	5.0E	3.8F	4.8E	3.8F	<b>15</b> F	0121	0512	0822	1436	2056	2256	5.3E	3.8F	4.8E	3.8F	4.8E	3.4F											
									<b>31</b> Th	0001	0301	0401	1001	1629	5.0E	3.8F	4.8E	3.8F	<b>30</b> Sa	0524	0815	1118	1734	2336	5.1E	4.6E	4.6E	3.9F	4.6E	3.4F												

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.



## Hell Gate (off Mill Rock), East River, New York, 2018

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

October				November				December															
Slack	Maximum			Slack	Maximum			Slack	Maximum			Slack	Maximum										
	h	m	knots		h	m	knots		h	m	knots		h	m	knots								
1 M	0159	0440	4.4E	16 Tu O	0310	0543	3.8E	1 Th	0034	0102	2.8F	16 F	0408	0647	4.0E	1 Sa	0434	0730	4.4E	16 Su	0406	0654	4.3E
	0751	1104	3.4F		0919	1223	2.9F		0348	0629	4.3E		0408	0647	4.0E		0434	0730	4.4E		0406	0654	4.3E
	1422	1710	4.5E		1533	1811	3.9E		1004	1307	3.2F		1031	1326	2.8F		1107	1409	3.2F		1040	1328	2.9F
	2034	2339	3.3F		2153				1620	1907	4.4E		1632	1915	4.0E		1706	2007	4.4E		1633	1921	4.3E
2 Tu O	0259	0538	4.3E	17 W		0057	2.9F	2 F	0148	0215	3.2F	17 Sa	0156	0246	3.0F	2 Su	0241	0342	3.4F	17 M	0154	0245	2.9F
	0855	1207	3.3F		0405	0639	3.7E		0456	0742	4.3E		0500	0742	4.1E		0536	0844	4.5E		0458	0748	4.4E
	1527	1811	4.4E		1016	1322	2.9F		1116	1422	3.3F		1124	1420	2.9F		1211	1515	3.3F		1133	1421	3.0F
	2143				1628	1909	3.8E		1728	2020	4.4E		1725	2009	4.2E		1808	2116	4.5E		1726	2014	4.4E
3 W	0406	0642	4.2E	18 Th	0155	029F	3 Sa	0257	034F	18 Su	0246	030F	3 M	0342	0442	4.7E	18 Tu	0245	030F				
	1008	1317	3.3F		0459	0738		3.8E	0559		0855	4.5E		0549	0834	4.2E		0633	0948	4.7E	0549	0841	4.5E
	1637	1919	4.3E		1112	1419		2.9F	1222		1530	3.5F		1214	1510	3.1F		1309	1613	3.5F	1314	1604	3.3F
	2255				1723	2007		3.9E	1831		2130	4.6E		1815	2100	4.3E		1904	2215	4.6E	1818	2106	4.5E
31 W O	0242	0522	4.4E																				

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.













## George Washington Bridge, Hudson River, 2018

F—Flood, Dir. 010° True    E—Ebb, Dir. 203° True

July				August				September															
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum									
	h m	h m	knots		h m	h m	knots		h m	h m	knots		h m	h m	knots								
<b>1</b> Su	0121	0454	2.7E	<b>16</b> M	0133	0506	3.2E	<b>1</b> W	0201	0516	2.7E	<b>16</b> Th	0253	0628	2.6E	<b>1</b> Sa	0259	0600	2.5E				
	0811	1133	1.3F		0812	1127	1.8F		0836	1156	1.6F		0931	1254	2.0F		0918	1201	2.0F	<b>16</b> Su	0410	0759	1.8E
	1352	1651	1.8E		1403	1716	2.5E		1439	1730	2.1E		1538	1907	2.2E		1530	1840	2.4E		1040	1411	1.7F
	1931	2313	1.6F		1958	2325	2.2F		2037	2341	1.6F		2205	0115	1.5F		2210	0156	1.4F		1701	2053	2.1E
<b>2</b> M	0156	0525	2.6E	<b>17</b> Tu	0223	0558	3.0E	<b>2</b> Th	0242	0551	2.6E	<b>17</b> F	0343	0729	2.3E	<b>2</b> Su	0348	0652	2.3E		<b>17</b> M	0024	0254
	0847	1213	1.4F		0908	1224	1.8F		0918	1224	1.6F		1026	1348	1.9F		1009	1253	2.1F	0508		0902	1.6E
	1434	1724	1.7E		1501	1818	2.3E		1521	1815	2.0E		1636	2017	2.1E		1625	2002	2.3E	1135		1506	1.7F
	2016	2351	1.5F		2103				2134				2323	0215	1.3F		2315	0156	1.4F	1801		2150	2.2E
<b>3</b> Tu	0233	0555	2.5E	<b>18</b> W	0314	0657	2.7E	<b>3</b> F	0327	0636	2.4E	<b>18</b> Sa	0437	0833	2.1E	<b>3</b> M	0443	0802	2.1E	<b>18</b> Tu	0128	0353	1.0F
	0926	1251	1.4F		1005	1320	1.9F		1002	1256	1.7F		1120	1443	1.8F		1104	1352	2.1F		0612	0958	1.7E
	1518	1804	1.6E		1601	1930	2.1E		1607	1916	2.0E		1739	2121	2.2E		1727	2124	2.4E		1321	1602	1.6F
	2108				2216	0131	1.7F		2235				0121	1.4F	0040		0317	1.1F	1900		2241	2.3E	1900

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.









Kingston-Rhinecliff Bridge, Hudson River, 2018

F-Flood, Dir. 011° True E-Ebb, Dir. 191° True

Table with 3 main columns for October, November, and December. Each month's data is organized into sub-columns for Slack and Maximum, with time (h m) and knots per hour. Rows are numbered by day of the month, with specific day-of-week and moon phase icons provided for each entry.

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.





















# Brandywine Shoal Light, Delaware Bay, 2018

F—Flood, Dir. 330° True    E—Ebb, Dir. 153° True

July				August				September																			
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum													
h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m												
<b>1</b> Su	0547	0840	1.4F	<b>16</b> M	0608	0901	1.7F	<b>1</b> W	0017	0311	1.4E	<b>16</b> Th	0118	0414	1.4E	<b>1</b> Sa	0104	0403	1.4E	<b>16</b> Su	0238	0522	1.0E				
	1201	1445	1.3E		1218	1505	1.5E		1241	1533	1.3E		0723	1023	1.5F		1352	1643	1.3E		0701	1006	1.6F	0823	1132	1.4F	
	1744	2050	1.5F		1805	2112	1.8F		1843	2141	1.3F		1955	2248	1.3F		1959	2250	1.3F		1959	2250	1.3F	1507	1822	1.2E	
																								2130			
<b>2</b> M	0014	0309	1.5E	<b>17</b> Tu	0045	0348	1.7E	<b>2</b> Th	0054	0350	1.4E	<b>17</b> F	0212	0507	1.2E	<b>2</b> Su	0159	0456	1.3E	<b>17</b> M	0338	0627	0.9E	<b>17</b> Su	0020	0304	1.3F
	0625	0918	1.4F		0702	0954	1.6F		0654	0954	1.4F		0812	1116	1.4F		0755	1100	1.6F		0917	1230	1.3F		0338	0627	0.9E
	1240	1523	1.2E		1315	1559	1.4E		1323	1617	1.2E		1449	1754	1.2E		1433	1741	1.3E		1603	1922	1.3E		0917	1230	1.3F
	1827	2131	1.4F		1905	2208	1.6F		1933	2226	1.2F		2059	2351	1.1F		2101	2352	1.3F		2227				1603	1922	1.3E
<b>3</b> Tu	0054	0346	1.4E	<b>18</b> W	0141	0442	1.5E	<b>3</b> F	0138	0434	1.3E	<b>18</b> Sa	0312	0610	1.0E	<b>3</b> M	0302	0558	1.3E	<b>18</b> Tu	0440	0729	0.9E	<b>18</b> Su	0120	0404	1.4F
	0702	0955	1.3E		0756	1050	1.4F		0737	1039	1.4F		0904	1213	1.3F		0857	1202	1.5F		0440	0729	0.9E		0120	0404	1.4F
	1320	1604	1.1E		1415	1702	1.2E		1411	1710	1.1E		1547	1905	1.2E		1538	1850	1.3E		1015	1327	1.3F		0440	0729	0.9E
	1914	2214	1.3F		2010	2309	1.3F		2028	2320	1.2F		2204				2207				1658	2014	1.3E		1015	1327	1.3F

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.















## Philadelphia (Penns Landing), Delaware River, 2018

F—Flood, Dir. 017° True     E—Ebb, Dir. 201° True

July				August				September																								
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum																		
h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m																	
1 Su			0041	1.9F	16 M			0131	2.1F	1 W			0142	2.0F	16 Th			0049	0307	1.9F	1 Sa			0102	0305	1.7F	16 Su			0220	0502	1.4F
	0333	0650	2.4E	0422		0936	2.4E	0416	0745		2.5E	0556	0929	2.4E		0538	0857	2.2E	0721	1027		2.1E										
	1128	1315	1.3F	1220		1420	1.6F	1208	1408		1.6F	1331	1544	1.6F		1325	1524	1.6F	1435	1651		1.2F										
	1551	1902	2.0E	1653		1944	1.9E	1627	1952		2.1E	1826	2130	1.9E		1749	2101	1.8E	1940	2300		1.8E										
2 M			0121	1.9F	17 Tu			0223	2.0F	2 Th			0231	1.9F	17 F			0146	0410	1.7F	2 Su			0207	0401	1.4F	17 M			0316	0607	1.2F
	0401	0731	2.4E	0515		1010	2.3E	0501	0832		2.5E	0651	1016	2.3E		0635	0951	2.1E	0810	1116		2.0E										
	1202	1353	1.4F	1310		1513	1.6F	1256	1456		1.6F	1421	1649	1.5F		1424	1619	1.5F	1525	1739		1.0F										
	1621	1944	2.0E	1752		2042	1.8E	1717	2039		1.9E	1924	2257	1.8E		1853	2159	1.6E	2029	2345		1.7E										
3 Tu			0205	1.9F	18 W			0318	1.8F	3 F			0322	1.7F	18 Sa			0246	0527	1.4F	3 M			0316	0502	1.2F	18 Tu			0410	0703	1.0F
	0436	0812	2.5E	0612		1000	2.3E	0551	0921		2.4E	0746	1110	2.3E		0736	1054	1.9E	0858	1200		1.9E										
	1241	1435	1.4F	1401		1614	1.5F	1349	1547		1.6F	1513	1758	1.4F		1526	1719	1.4F	1613	1812		0.9F										
	1700	2026	1.9E	1853		2146	1.7E	1814	2130		1.8E	2021				2004	2317	1.4E	2118													

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

† See page 196 for the remaining currents on this day.







# Chesapeake Bay Entrance, Virginia, 2018

F—Flood, Dir. 297° True    E—Ebb, Dir. 112° True

July				August				September																				
Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		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														
<b>1</b> Su	0204 0839 1339 1946	0507 1100 1650 2316	1.0E 0.7F 0.8E 1.4F	<b>16</b> M	0206 0822 1400 2020	0503 1111 1707 2341	1.4E 1.3F 1.3E 1.6F	<b>1</b> W	0241 0904 1442 2050	0604 1156 1811	0.9E 0.9F 0.8E	<b>16</b> Th	0312 0935 1605 2155	0631 1237 1856	1.2F 1.2E 1.3F 0.9E	<b>1</b> Sa	0242 0921 1622 2159	0615 1251 1915	0.9F 1.0E 1.3F 0.8E	<b>16</b> Su	0419 1047 1743 2305	0736 1347 2006	0.7F 1.0E 0.9F 0.7E					
<b>2</b> M	0245 0919 1418 2030	0603 1144 1753 2359	1.0E 0.7F 0.8E 1.2F	<b>17</b> Tu	0257 0915 1508 2120	0607 1208 1820	1.3E 1.3F 1.2E	<b>2</b> Th	0302 0930 1545 2132	0636 1236 1857	1.1F 0.9E 1.0F 0.7E	<b>17</b> F	0400 1029 1720 2250	0718 1329 1947	1.1E 1.1F 0.8E	<b>2</b> Su	0322 1007 1724 2252	0703 1339 2002	1.1E 1.3F 0.8E	<b>17</b> M	0523 1143 1837	0826 1500 2102	0.9E 0.8F 0.6E					
<b>3</b> Tu	0326 0953 1507 2114	0645 1225 1842	0.9E 0.7F 0.7E	<b>18</b> W	0350 1008 1628 2223	0700 1302 1918	1.3E 1.2F 1.0E	<b>3</b> F	0323 1000 1654 2218	0702 1318 1938	1.0E 1.1F 0.7E	<b>18</b> Sa	0454 1125 1824 2347	0805 1436 2041	1.1E 1.0F 0.6E	<b>3</b> M	0417 1100 1822 2353	0747 1444 2059	1.2E 1.3F 0.8E	<b>18</b> Tu	0620 1241 1933	0926 1616 2206	0.8E 0.9F 0.6E					
<b>4</b> W	0400 1021 1614 2200	0717 1305 1924	1.1F 0.9E 0.7E	<b>19</b> Th	0444 1102 1744 2328	0747 1401 2014	1.2E 1.2F 0.9E	<b>4</b> Sa	0353 1038 1755 2311	0730 1409 2026	1.1E 1.1F 0.7E	<b>19</b> Su	0547 1222 1924	0858 1600 2144	1.0E 1.0F 0.6E	<b>4</b> Tu	0522 1200 1921	0844 1557 2204	1.2E 1.4F 0.9E	<b>19</b> W	0716 1241 2031	1024 1702 2305	0.8E 1.0F 0.7E					
<b>5</b> Th	0427 1047 1723 2250	0743 1350 2006	0.9E 0.8F 0.7E	<b>20</b> F	0534 1157 1852	0836 1522 2118	1.1E 1.1F 0.7E	<b>5</b> Su	0437 1124 1851	0808 1518 2126	1.1E 1.2F 0.7E	<b>20</b> M	0642 1324 2021	0958 1652 2244	0.9E 1.0F 0.6E	<b>5</b> W	0628 1309 2023	0954 1655 2304	1.2E 1.5F 1.0E	<b>20</b> Th	0811 1439 2124	1116 1742	0.9E 1.1F					
<b>6</b> F	0451 1118 1822 2345	0810 1450 2100	0.9E 1.0F 0.6E	<b>21</b> Sa	0621 1255 1958	0932 1631 2223	1.0E 1.2F 0.7E	<b>6</b> M	0532 1219 1948	0902 1619 2228	1.2E 1.4F 0.8E	<b>21</b> Tu	0741 1424 2113	1054 1733 2341	0.9E 1.1F 0.7E	<b>6</b> Th	0736 1422 2122	1058 1748	1.3E 1.7F	<b>21</b> F	0901 1523 2210	1207 1825	1.0E 1.2F					
<b>7</b> Sa	0521 1158 1919	0846 1554 2200	1.0E 1.2F 0.7E	<b>22</b> Su	0711 1356 2058	1028 1718 2320	1.0E 1.2F 0.7E	<b>7</b> Tu	0632 1321 2046	1006 1710 2325	1.3E 1.6F 1.0E	<b>22</b> W	0840 1510 2159	1147 1814	0.9E 1.2F	<b>7</b> F	0844 1525 2215	1201 1843	1.5E 1.7F	<b>22</b> Sa	0943 1603 2250	1258 1912	1.1E 1.3F					
<b>8</b> Su	0602 1247 2017	0936 1644 2256	1.1E 1.4F 0.8E	<b>23</b> M	0808 1451 2146	1121 1800	1.0E 1.3F	<b>8</b> W	0738 1427 2140	1107 1801	1.4E 1.8F	<b>23</b> Th	0930 1549 2242	1240 1900	1.0E 1.3F	<b>8</b> Sa	0947 1620 2304	1304 1941	1.6E 1.8F	<b>23</b> Su	1023 1642 2325	1342 1955	1.2E 1.4F					
<b>9</b> M	0653 1344 2110	1030 1730 2350	1.2E 1.7F 1.0E	<b>24</b> Tu	0906 1534 2227	1215 1844	1.0E 1.3F	<b>9</b> Th	0847 1526 2231	1209 1857	1.5E 1.9F	<b>24</b> F	1012 1624 2323	1328 1946	1.1E 1.4F	<b>9</b> Su	1044 1713 2350	1359 2033	1.7E 1.7F	<b>24</b> M	1103 1722 2354	1420 2034	1.3E 1.3F					
<b>10</b> Tu	0754 1441 2158	1124 1819	1.4E 1.8F	<b>25</b> W	0956 1610 2306	1308 1930	1.0E 1.4F	<b>10</b> F	0950 1620 2321	1312 1955	1.6E 2.0F	<b>25</b> Sa	1049 1700	1407 2027	1.2E 1.5F	<b>10</b> M	1141 1807	1446 2120	1.7E 1.6F	<b>25</b> Tu	1146 1805	1454 2110	1.3E 1.3F					
<b>11</b> W	0859 1534 2246	0631 1913	0.9F 2.0F	<b>26</b> Th	1039 1644 2345	1352 2013	1.1E 1.5F	<b>11</b> Sa	1049 1714	1407 2047	1.7E 2.0F	<b>26</b> Su	1126 1740	1441 2104	1.2E 1.5F	<b>11</b> Tu	1238 1902	1532 2204	1.5E 1.4F	<b>26</b> W	1231 1849	1529 2146	1.2E 1.2F					
<b>12</b> Th	1000 1625 2335	1323 2009	1.6E 2.0F	<b>27</b> F	1118 1719	1428 2051	1.1E 1.6F	<b>12</b> Su	1148 1811	1455 2136	1.7E 1.8F	<b>27</b> M	1206 1823	1514 2140	1.2E 1.4F	<b>12</b> W	1334 1953	1624 2251	1.3E 1.2F	<b>27</b> Th	1316 1933	1609 2225	1.1E 1.0F					
<b>13</b> F	1059 1718	1416 2101	1.7E 2.1F	<b>28</b> Sa	1155 1758	1501 2129	1.1E 1.6F	<b>13</b> M	1247 1910	1545 2226	1.5E 1.7F	<b>28</b> Tu	1249 1907	1550 2218	1.1E 1.3F	<b>13</b> Th	1431 2040	1729 2337	1.0E 1.0F	<b>28</b> F	1402 2015	1704 2308	1.0E 1.0F					
<b>14</b> Sa	1159 1817	1505 2152	1.6E 2.0F	<b>29</b> Su	1232 1841	1536 2208	1.1E 1.5F	<b>14</b> Tu	1347 2007	1645 2317	1.3E 1.4F	<b>29</b> W	1334 1950	1637 2256	1.0E 1.1F	<b>14</b> F	1533 2126	1829	0.9E	<b>29</b> Sa	1452 2100	1805 2354	1.0E 0.9F					
<b>15</b> Su	1259 1919	1558 2246	1.5E 1.8F	<b>30</b> M	1310 1925	1616 2248	1.0E 1.4F	<b>15</b> W	1451 2101	1757	1.1E	<b>30</b> Th	2031	2336	1.0F	<b>15</b> Sa	1641 2213	1918	0.8E	<b>30</b> Su	1550 2149	1855	1.0E					
				<b>31</b> Tu	0215 0837 1353 2008	0521 1113 1713 2329	0.9E 0.8F 0.9E 1.2F						<b>31</b> F	0214 0843 1518 2113	0543 1207 1831	1.0E 1.2F 0.8E												

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.



# Baltimore Harbor Approach, Maryland, 2018

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

January				February				March							
Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		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				
<b>1</b> M	0205	0420	0.5F	<b>16</b> Tu	0245	0509	0.5F	<b>1</b> Th	0300	0539	0.7F	<b>16</b> F	0314	0557	0.6F
	0643	0945	0.7E		0745	1033	0.6E		0827	1124	0.8E		0849	1141	0.6E
	1226	1615	1.3F		1307	1652	1.1F		1412	1740	1.2F		1426	1751	1.0F
	1948	2306	1.2E	●	2018	2340	1.0E		2100				2106		
<b>2</b> Tu	0250	0511	0.5F	<b>17</b> W	0324	0551	0.5F	<b>2</b> F	0340	0628	0.8F	<b>17</b> Sa	0345	0634	0.7F
	0740	1039	0.7E		0832	1117	0.5E		0924	1220	0.8E		0932	1225	0.7E
	1318	1704	1.3F		1349	1732	1.1F		1510	1831	1.1F		1514	1832	0.9F
	2034	2352	1.2E		2056				2144				2142		
<b>3</b> W	0333	0601	0.6F	<b>18</b> Th		0018	1.0E	<b>3</b> Sa	0421	0717	0.9F	<b>18</b> Su	0415	0711	0.7F
	0839	1134	0.7E		0400	0631	0.5F		1022	1316	0.8E		1016	1310	0.7E
	1413	1754	1.3F		0918	1201	0.5E		1610	1922	1.0F		1605	1914	0.8F
	2120				1433	1812	1.0F		2229				2218		
					2133										
<b>4</b> Th	0416	0652	0.7F	<b>19</b> F	0434	0711	0.6F	<b>4</b> Su	0502	0806	0.9F	<b>19</b> M	0445	0750	0.8F
	0939	1230	0.7E		1003	1245	0.5E		1119	1413	0.8E		1102	1358	0.7E
	1511	1845	1.2F		1519	1853	0.9F		1712	2015	0.8F		1659	1958	0.7F
	2206				2210				2314				2254		
<b>5</b> F	0458	0743	0.8F	<b>20</b> Sa	0506	0751	0.6F	<b>5</b> M	0544	0857	1.0F	<b>20</b> Tu	0516	0831	0.8F
	1041	1329	0.7E		1050	1332	0.5E		1218	1513	0.8E		1152	1450	0.7E
	1612	1938	1.1F		1609	1935	0.8F		1817	2110	0.7F		1759	2046	0.6F
	2252				2247								2332		
<b>6</b> Sa	0541	0836	0.8F	<b>21</b> Su	0538	0831	0.7F	<b>6</b> Tu	0628	0949	1.0F	<b>21</b> W	0550	0916	0.9F
	1144	1431	0.7E		1139	1422	0.5E		1317	1614	0.7E		1245	1546	0.7E
	1718	2034	0.9F		1705	2020	0.7F		1927	2208	0.5F		1906	2139	0.4F
	2340				2324										
<b>7</b> Su	0625	0930	0.9F	<b>22</b> M	0610	0913	0.7F	<b>7</b> W	0714	1043	1.0F	<b>22</b> Th	0630	1006	0.9F
	1247	1535	0.7E		1231	1516	0.5E	●	1416	1717	0.7E		1341	1646	0.7E
	1829	2132	0.7F		1807	2109	0.6F		2039	2311	0.4F		2018	2238	0.4F
<b>8</b> M	0029	0351	1.0E	<b>23</b> Tu	0003	0326	0.8E	<b>8</b> Th	0144	0502	0.7E	<b>23</b> F	0102	0420	0.6E
	0709	1025	0.9F		0642	0958	0.8F		0802	1138	1.0F		0716	1100	1.0F
	1351	1642	0.7E		1325	1615	0.6E		1514	1820	0.7E	●	1440	1749	0.7E
	1944	2234	0.6F		1917	2203	0.5F		2151				2130	2342	0.3F
<b>9</b> Tu	0120	0443	0.9E	<b>24</b> W	0044	0408	0.7E	<b>9</b> F		0015	0.4F	<b>24</b> Sa	0200	0518	0.6E
	0755	1120	1.0F		0718	1046	0.9F		0242	0557	0.6E		0809	1158	1.0F
	1452	1748	0.7E	●	1420	1717	0.6E		0851	1233	1.0F		1538	1851	0.8E
	2102	2339	0.5F		2034	2302	0.4F		1609	1920	0.8E		2235		
<b>10</b> W	0214	0536	0.8E	<b>25</b> Th	0129	0454	0.7E	<b>10</b> Sa		0118	0.4F	<b>25</b> Su	0306	0048	0.3F
	0841	1215	1.0F		0757	1136	0.9F		0344	0653	0.6E		0908	0620	0.6E
	1551	1852	0.8E		1516	1819	0.7E		0941	1326	1.0F		1635	1257	1.1F
	2217				2151				1700	2014	0.8E		2330	1949	0.9E
<b>11</b> Th	0311	0630	0.7E	<b>26</b> F	0221	0545	0.6E	<b>11</b> Su	0445	0748	0.6E	<b>26</b> M	0416	0724	0.6E
	0928	1307	1.1F		0841	1228	1.0F		1031	1416	1.0F		1011	1356	1.1F
	1644	1952	0.8E		1610	1919	0.8E		1747	2104	0.9E		1729	2043	1.0E
	2326				2302										
<b>12</b> F	0410	0723	0.7E	<b>27</b> Sa	0319	0640	0.6E	<b>12</b> M	0045	0309	0.4F	<b>27</b> Tu	0018	0247	0.5F
	1014	1358	1.1F		0930	1322	1.1F		0542	0840	0.6E		0522	0827	0.7E
	1733	2045	0.9E		1703	2016	0.9E		1120	1503	1.0F		1115	1452	1.1F
									1831	2148	0.9E		1819	2132	1.0E
<b>13</b> Sa	0026	0243	0.4F	<b>28</b> Su	0002	0210	0.3F	<b>13</b> Tu	0128	0356	0.5F	<b>28</b> W	0101	0339	0.6F
	0508	0814	0.6E		0423	0737	0.7E		0634	0928	0.6E		0623	0926	0.8E
	1059	1445	1.1F		1023	1415	1.2F		1207	1547	1.0F		1217	1546	1.1F
	1818	2134	0.9E		1753	2108	1.0E		1912	2230	1.0E		1907	2219	1.1E
<b>14</b> Su	0118	0336	0.4F	<b>29</b> M	0053	0307	0.4F	<b>14</b> W	0206	0439	0.5F	<b>14</b> W	0040	0322	0.6F
	0603	0903	0.6E		0527	0835	0.7E		0722	1014	0.6E		0613	0908	0.6E
	1142	1529	1.1F		1119	1507	1.3F		1253	1629	1.0F		1153	1521	0.9F
	1900	2219	1.0E		1842	2157	1.1E		1951	2308	1.0E		1838	2152	0.9E
<b>15</b> M	0204	0424	0.4F	<b>30</b> Tu	0138	0400	0.5F	<b>15</b> Th	0241	0519	0.6F	<b>15</b> Th	0116	0403	0.7F
	0655	0949	0.6E		0629	0932	0.7E	●	0806	1058	0.6E		0657	0954	0.7E
	1225	1611	1.1F		1216	1559	1.3F		1339	1710	1.0F		1244	1605	0.9F
	1940	2300	1.0E		1929	2244	1.1E		2029	2345	1.0E		1919	2231	0.9E
				<b>31</b> W	0220	0450	0.6F								
				○	0729	1029	0.8E								
					1314	1650	1.3F								
					2015	2330	1.2E								
				<b>31</b> Sa	0138	0449	1.0F								
				○	0800	1107	1.0E								
					1419	1715	0.9F								
					2014	2318	0.9E								

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.



# Baltimore Harbor Approach, Maryland, 2018

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

July				August				September							
Slack		Maximum													
h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m
<b>1</b>				<b>16</b>				<b>1</b>				<b>1</b>			
Su	0321	0701	0.9F	M	0346	0712	1.1F	W	0451	0804	0.7F	Th	0552	0844	0.7F
	1021	1347	1.0E		1027	1345	1.1E		1107	1427	0.8E		1136	1451	0.9E
	1729	2008	0.6F		1712	2006	0.8F		1749	2053	0.7F		1759	2119	1.0F
	2307				2311										
<b>2</b>				<b>17</b>				<b>2</b>				<b>17</b>			
M	0409	0744	0.8F	Tu	0450	0806	0.9F	Th	0549	0851	0.6F	F	0700	0942	0.6F
	1059	1426	0.9E		1113	1433	1.1E		1145	1506	0.8E		1226	1542	0.8E
	1805	2052	0.6F		1755	2058	0.9F		1821	2136	0.8F		1845	2214	1.0F
	2358														
<b>3</b>				<b>18</b>				<b>3</b>				<b>18</b>			
Tu	0502	0829	0.7F	W	0559	0903	0.8F	F	0655	0942	0.5F	Sa	0811	1044	0.5F
	1138	1506	0.9E		1201	1522	1.0E		1224	1546	0.7E		1321	1636	0.7E
	1840	2136	0.6F		1839	2153	1.0F		1855	2222	0.8F		1935	2311	1.0F
<b>4</b>				<b>19</b>				<b>4</b>				<b>19</b>			
W	0603	0919	0.6F	Th	0713	1004	0.6F	Sa	0808	1038	0.4F	Su	0924	1150	0.4F
	1219	1547	0.8E		1252	1613	0.9E		1308	1631	0.7E		1420	1733	0.6E
	1914	2221	0.7F		1925	2249	1.0F		1933	2311	0.9F		2027		
<b>5</b>				<b>20</b>				<b>5</b>				<b>20</b>			
Th	0712	1013	0.5F	F	0830	1108	0.5F	Su	0925	1140	0.3F	M	1031	1255	0.4F
	1302	1630	0.8E		1346	1707	0.8E		1357	1720	0.6E		1524	1832	0.6E
	1949	2307	0.8F		2012	2345	1.0F		2016				2121		
<b>6</b>				<b>21</b>				<b>6</b>				<b>21</b>			
F	0828	1111	0.4F	Sa	0948	1215	0.4F	M	1036	1243	0.3F	Tu	1131	1355	0.4F
	1348	1715	0.7E		1443	1803	0.7E		1453	1814	0.6E		1628	1930	0.6E
	2024	2354	0.9F		2101				2105				2215		
<b>7</b>				<b>22</b>				<b>7</b>				<b>22</b>			
Sa	0945	1211	0.4F	Su	1048	1320	0.4F	Tu	1138	1344	0.3F	W	1222	1450	0.5F
	1436	1801	0.7E		1544	1858	0.7E		1556	1911	0.6E		1727	2025	0.6E
	2102				2150				2158				2307		
<b>8</b>				<b>23</b>				<b>8</b>				<b>23</b>			
Su	1058	1312	0.3F	M	1203	1421	0.4F	W	1229	1441	0.4F	Th	1305	1538	0.5F
	1528	1849	0.6E		1645	1953	0.6E		1700	2009	0.7E		1820	2115	0.6E
	2142				2239				2254				2357		
<b>9</b>				<b>24</b>				<b>9</b>				<b>24</b>			
M	1202	1410	0.3F	Tu	1257	1516	0.4F	Th	1313	1534	0.5F	F	1344	1622	0.6F
	1623	1939	0.6E		1744	2045	0.6E		1802	2107	0.7E		1909	2202	0.6E
	2226				2326				2352				2202		
<b>10</b>				<b>25</b>				<b>10</b>				<b>25</b>			
Tu	1257	1505	0.4F	W	1344	1606	0.5F	F	1354	1624	0.6F	Sa	1420	1702	0.6F
	1720	2029	0.7E		1839	2134	0.6E		1902	2203	0.8E		1953	2246	0.6E
	2312														
<b>11</b>				<b>26</b>				<b>11</b>				<b>26</b>			
W	1345	1557	0.4F	Th	1426	1652	0.5F	Sa	1433	1712	0.7F	Su	1453	1740	0.7F
	1817	2121	0.7E		1930	2220	0.6E		1959	2259	0.8E		2035	2329	0.7E
<b>12</b>				<b>27</b>				<b>12</b>				<b>27</b>			
Th	1429	1647	0.5F	F	1504	1734	0.5F	Su	1512	1800	0.8F	M	1524	1816	0.7F
	1914	2214	0.7E		2017	2305	0.6E		2056	2354	0.9E		2117		
<b>13</b>				<b>28</b>				<b>13</b>				<b>28</b>			
F	1510	1736	0.6F	Sa	1539	1815	0.6F	M	1551	1848	0.9F	Tu	1554	1853	0.8F
	2012	2308	0.7E		2103	2348	0.6E		2152				2159		
<b>14</b>				<b>29</b>				<b>14</b>				<b>29</b>			
Sa	1550	1825	0.7F	Su	1613	1854	0.6F	Tu	1632	1937	1.0F	W	1624	1930	0.8F
	2110				2148				2248				2242		
<b>15</b>				<b>30</b>				<b>15</b>				<b>30</b>			
Su	1631	1915	0.8F	M	1646	1932	0.6F	W	1714	2027	1.0F	Th	1654	2010	0.8F
	2210				2233				2346				2329		
				<b>31</b>				<b>31</b>				<b>31</b>			
				Tu	1717	2012	0.7F	F	1727	2052	0.9F	Sa	1727	2052	0.9F
					2320										

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.



# Chesapeake & Delaware Canal (Chesapeake City), 2018

F—Flood, Dir. 097° True      E—Ebb, Dir. 278° True

January				February				March												
Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		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	h m					
<b>1</b> M ○	0234 0821 1549 2221	0533 1139 1846	2.2F 2.9E 2.6F	<b>16</b> Tu ●	0321 0854 1621 2305	0558 1216 1918	1.0E 1.6F 2.5E 2.2F	<b>1</b> Th	0427 1011 1721 2338	0710 1318 2011	1.6E 2.3F 2.7E 2.6F	<b>16</b> F	0429 1008 1711 2327	0708 1319 1949	1.3E 1.8F 2.3E 2.1F	<b>1</b> Th ○	0317 0913 1612 2218	0604 1215 1902	1.7E 2.3F 2.5E 2.4F	
<b>2</b> Tu	0338 0917 1644 2316	0629 1234 1939	1.5E 2.2F 2.9E 2.7F	<b>17</b> W	0406 0931 1700 2344	0642 1256 1947	1.0E 1.6F 2.5E 2.2F	<b>2</b> F	0524 1111 1808	0804 1412 2056	1.8E 2.3F 2.5E 2.5F	<b>17</b> Sa	0509 1054 1743 2347	0752 1359 2023	1.9F 2.1E 2.1F	<b>2</b> F	0414 1012 1700 2300	0700 1308 1944	1.9E 2.3F 2.4E 2.3F	
<b>3</b> W	0441 1014 1737	0724 1329 2031	1.5E 2.2F 2.7F	<b>18</b> Th	0448 1010 1736	0725 1336 2020	1.0E 1.6F 2.2F	<b>3</b> Sa	0618 1209 1852	0857 1505 2139	2.2F 2.3E 2.4F	<b>18</b> Su	0547 1140 1811	0837 1440 2100	1.6E 2.0F 2.1F	<b>3</b> Sa	0507 1109 1742 2338	0751 1356 2022	2.4F 2.0E 2.3F	
<b>4</b> Th	0540 1112 1828	0818 1424 2122	1.6E 2.1F 2.7F	<b>19</b> F	0527 1052 1808	0809 1416 2054	1.7F 2.3E 2.1F	<b>4</b> Su	0712 1307 1934	0951 1557 2221	2.1F 2.1E 2.2F	<b>19</b> M	0627 1227 1838	0924 1523 2140	2.0F 1.9E 2.1F	<b>4</b> Su	0557 1202 1820	0840 1443 2101	2.3F 2.0E 2.2F	
<b>5</b> F	0638 1213 1918	0914 1522 2212	1.8E 2.1F 2.6F	<b>20</b> Sa	0605 1137 1838	0854 1459 2131	1.7F 2.2E 2.1F	<b>5</b> M	0807 1406 2015	1044 1646 2302	2.0F 1.8E 2.1F	<b>20</b> Tu	0711 1317 1910	1012 1609 2223	2.0F 2.0F 2.2F	<b>5</b> M	0645 1253 1856	0928 1529 2139	2.2F 1.8E 2.1F	
<b>6</b> Sa	0736 1317 2007	1011 1619 2259	1.8E 2.0F 2.4F	<b>21</b> Su	0647 1226 1907	0942 1544 2211	1.8F 2.0E 2.1F	<b>6</b> Tu	0902 1505 2056	1137 1734 2345	1.9F 1.6E 2.0F	<b>21</b> W	0802 1413 1951	1103 1657 2310	2.0F 1.6E 2.2F	<b>6</b> Tu	0734 1344 1931	1016 1615 2220	2.0F 1.6E 2.0F	
<b>7</b> Su	0836 1423 2055	1108 1713 2344	1.9F 2.0E 2.3F	<b>22</b> M	0734 1320 1939	1032 1630 2252	1.8F 1.9E 2.2F	<b>7</b> W	0958 1605 2140	1232 1826	1.7F 1.4E	<b>22</b> Th	0859 1515 2041	1157 1750	2.0F 1.5E	<b>7</b> W	0823 1437 2010	1102 1701 2302	1.9F 1.5E 1.9F	
<b>8</b> M	0936 1530 2141	1207 1808	1.8F 1.8E	<b>23</b> Tu	0828 1419 2017	1124 1718 2337	1.8F 1.7E 2.2F	<b>8</b> Th	1053 1705 2228	1331 1924	1.7F 1.3E	<b>23</b> F	1002 1623 2140	1256 1849	2.0F 1.4E	<b>8</b> Th	0913 1532 2056	1151 1750 2348	1.8F 1.3E 1.8F	
<b>9</b> Tu	1035 1635 2227	1311 1906	1.8F 1.5E	<b>24</b> W	0926 1524 2102	1218 1810	1.8F 1.6E	<b>9</b> F	1432 1808 2321	1746 2023	1.7F 1.2E	<b>24</b> Sa	1108 1733 2246	1359 1954	2.0F 1.3E	<b>9</b> F	1005 1630 2149	1244 1846	1.7F 1.2E	
<b>10</b> W	1132 1740 2313	1416 2005	1.8F 1.3E	<b>25</b> Th	1026 1634 2155	1317 1909	1.9F 1.4E	<b>10</b> Sa	1241 1910	1532 2121	1.7F 1.1E	<b>25</b> Su	1216 1843 2358	1504 2059	2.1F 1.4E	<b>10</b> Sa	1058 1732 2247	1342 1948	2.1F 1.2E	
<b>11</b> Th	1228 1843	1519 2100	1.8F 1.2E	<b>26</b> F	1130 1746 2255	1419 2011	1.9F 1.4E	<b>11</b> Su	1332 2008	1633 2217	1.9F 1.1E	<b>26</b> M	1321 1946	1610 2202	2.1F 1.4E	<b>11</b> Su	1153 1834 2348	1441 2049	1.8F 1.1E	
<b>12</b> F	1320 1942	1622 2153	1.8F 1.2E	<b>27</b> Sa	1234 1858	1521 2113	2.0F 1.4E	<b>12</b> M	1421 2101	1731 2313	2.0F 1.1E	<b>27</b> Tu	1423 2042	1716 2303	2.3F 1.6E	<b>12</b> M	1248 1931	1537 2146	1.9F 1.2E	
<b>13</b> Sa	1409 2037	1723 2247	1.9F 1.1E	<b>28</b> Su	1337 2004	1626 2215	2.2F 1.4E	<b>13</b> Tu	1508 2148	1813	2.1F	<b>28</b> W	1519 2132	1814	2.4F	<b>13</b> Tu	1341 2020	1632 2239	1.9F 1.2E	
<b>14</b> Su	1455 2130	1812 2340	2.0F 1.1E	<b>29</b> M	1438 2104	1732 2318	2.3F 1.4E	<b>14</b> W	1553 2229	1846	2.1F	<b>29</b> Th	1553 2229	1846	2.1F	<b>14</b> W	1431 2103	1720 2327	2.0F 1.3E	
<b>15</b> M	1539 2220	1848	2.1F	<b>30</b> Tu	1535 2200	1832	2.5F	<b>15</b> Th	1634 2302	1917	2.1F	<b>30</b> F	1634 2302	1917	2.1F	<b>15</b> Th	1517 2138	1801	2.0F	
				<b>31</b> W	0326 0912 1630 2251	0614 1223 1924	1.5E 2.2F 2.8E 2.6F										<b>31</b> Sa	0401 1012 1631 2217	0652 1254 1911	2.2F 2.0E 2.1F

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.



Chesapeake & Delaware Canal (Chesapeake City), 2018

F—Flood, Dir. 097° True E—Ebb, Dir. 278° True

Table with columns for July, August, and September, containing tide data (Slack, Maximum, knots) for each day of the month.

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.



# Southport, Cape Fear River, North Carolina 2018

F--Flood, Dir. 048° True    E--Ebb, Dir. 235° True

January				February				March								
Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		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	h m	
1	0217	0427	2.4F	16	0256	0518	1.6F	1	0250	0524	2.3F	16	0238	0448	1.8F	
M	0830	1207	3.9E	Tu	0849	1225	3.3E	Th	0858	1230	4.1E	F	0816	1135	3.5E	
○	1512	1718	1.9F	●	1532	1737	1.5F	○	1527	1812	2.1F	●	1455	1659	2.0F	
	2049				2053				2120				2032	2357	3.3E	
2		0010	3.7E	17		0015	2.9E	2		0048	4.2E	17		0319	0528	2.0F
Tu	0311	0524	2.5F	W	0335	0551	1.7F	F	0343	0619	2.4F	Sa	0857	1215	3.7E	
	0927	1300	4.1E		0928	1252	3.4E		0948	1315	4.1E	●	1533	1738	2.2F	
	1606	1815	1.9F		1610	1810	1.6F		1614	1856	2.1F					
	2147				2134				2211							
3	0105	038E	3.8E	18	0050	031E	3.1E	3	0137	043E	4.3E	18	0040	036E	3.6E	
W	0405	0621	2.5F	Th	0414	0626	1.8F	Sa	0434	0708	2.3F	Su	0401	0609	2.2F	
	1023	1351	4.2E		1007	1323	3.5E		1035	1358	4.0E		0938	1256	3.8E	
	1658	1910	1.9F		1647	1845	1.7F		1659	1937	2.1F		1611	1818	2.4F	
	2244				2214				2259				2154			
4	0159	3.9E	3.9E	19	0129	3.2E	3.2E	4	0224	4.2E	4.2E	19	0123	3.7E	3.7E	
Th	0500	0717	2.4F	F	0454	0703	1.9F	Su	0525	0754	2.2F	M	0444	0651	2.3F	
	1117	1440	4.1E		1045	1358	3.6E		1119	1439	3.8E		1021	1339	3.9E	
	1750	2008	1.8F		1723	1921	1.8F		1743	2018	2.0F		1652	1900	2.5F	
	2338				2252				2345				2237			
5	0252	3.9E	3.9E	20	0210	3.3E	3.3E	5	0311	4.0E	4.0E	20	0209	3.8E	3.8E	
F	0555	0816	2.3F	Sa	0534	0743	2.0F	Tu	0614	0841	2.0F	Tu	0530	0735	2.2F	
	1208	1529	4.0E		1124	1437	3.7E		1201	1517	3.5E		1105	1425	3.9E	
	1841	2114	1.8F		1801	2000	1.9F		1828	2103	1.9F		1735	1945	2.6F	
					2331				1828				2322			
6	0030	0345	3.8E	21	0253	3.4E	3.4E	6	0031	0355	3.7E	21	0257	3.8E	3.8E	
Sa	0651	0922	2.1F	Su	0616	0827	2.0F	Tu	0705	0930	1.8F	W	0619	0824	2.1F	
	1258	1616	3.8E		1203	1518	3.7E		1242	1553	3.2E		1152	1512	3.8E	
	1933	2225	1.7F		1840	2043	2.0F		1915	2151	1.7F		1822	2033	2.5F	
7	0122	0438	3.6E	22	0011	0338	3.4E	7	0116	0439	3.4E	22	0012	0346	3.7E	
Su	0750	1030	2.0F	M	0703	0915	2.0F	W	0758	1021	1.5F	Th	0715	0918	1.9F	
	1346	1703	3.5E		1244	1602	3.7E		1323	1627	2.9E		1244	1602	3.6E	
	2027	2329	1.6F		1924	2131	2.0F		2006	2243	1.4F		1915	2127	2.3F	
8	0215	0536	3.4E	23	0055	0425	3.3E	8	0201	0524	3.0E	23	0108	0439	3.5E	
M	0852	1133	1.8F	Tu	0756	1007	1.9F	Th	0854	1114	1.3F	F	0817	1018	1.6F	
○	1434	1754	3.1E		1329	1648	3.6E		1407	1705	2.6E		1343	1655	3.3E	
	2123				2014	2222	1.9F		2102	2342	1.2F		2017	2227	2.0F	
9	0030	0630	1.6F	24	0147	0516	3.2E	9	0248	0619	2.7E	24	0213	0540	3.3E	
Tu	0309	0644	3.2E	W	0856	1104	1.7F	F	0952	1210	1.1F	Sa	0926	1126	1.4F	
	0954	1234	1.6F	○	1421	1739	3.4E		1454	1750	2.3E	●	1450	1756	3.0E	
	1522	1858	2.9E		2111	2317	1.9F		2201			○	2126	2334	1.8F	
	2219															
10	0128	1.6F	1.6F	25	0246	0615	3.0E	10	0049	1.1F	1.1F	25	0323	0657	3.2E	
W	0403	0755	3.1E	Th	1001	1205	1.6F	Sa	0336	0733	2.5E	Su	1035	1246	1.4F	
	1055	1329	1.5F		1518	1837	3.2E		1048	1307	1.0F		1601	1914	2.9E	
	1611	2008	2.7E		2211				1545	1847	2.1E		2237			
	2314								2258							
11	0219	1.5F	1.5F	26	0017	1.9F	1.9F	11	0146	1.1F	1.1F	26	0050	1.7F	1.7F	
Th	0459	0857	3.1E	F	0352	0726	3.0E	Su	0426	0835	2.5E	M	0435	0827	3.3E	
	1152	1418	1.4F		1107	1309	1.6F		1140	1357	1.1F		1140	1409	1.5F	
	1701	2107	2.7E		1622	1943	3.1E		1639	2008	2.1E		1711	2042	3.1E	
					2312				2351				2345			
12	0005	0305	1.5F	27	0119	1.9F	1.9F	12	0227	1.1F	1.1F	27	0208	1.8F	1.8F	
F	0553	0949	3.1E	Sa	0503	0847	3.1E	Tu	0517	0921	2.7E	Tu	0545	0935	3.6E	
	1243	1502	1.4F		1210	1412	1.6F		1226	1438	1.2F		1237	1517	1.7F	
	1751	2156	2.7E		1730	2053	3.2E		1733	2116	2.3E		1817	2153	3.4E	
13	0052	0345	1.5F	28	0012	0220	2.0F	13	0037	0301	1.2F	28	0046	0318	2.0F	
Sa	0643	1037	3.2E	Su	0614	1000	3.4E	Tu	0606	0956	2.8E	W	0648	1031	3.8E	
	1330	1544	1.4F		1309	1513	1.7F		1306	1513	1.3F		1329	1618	1.9F	
	1840	2239	2.7E		1838	2202	3.3E		1824	2156	2.5E		1917	2251	3.8E	
14	0135	0420	1.5F	29	0110	0319	2.2F	14	0119	0334	1.4F	29	0143	0421	2.1F	
Su	0728	1119	3.2E	M	0719	1102	3.7E	W	0652	1026	3.0E	Th	0744	1121	4.0E	
	1412	1624	1.4F		1405	1614	1.7F		1343	1547	1.5F		1416	1712	2.1F	
	1927	2314	2.8E		1941	2307	3.6E		1909	2235	2.8E		2011	2344	4.1E	
15	0216	0449	1.6F	30	0205	0420	2.3F	15	0158	0410	1.6F	30	0236	0518	2.2F	
M	0810	1155	3.2E	Tu	0819	1157	4.0E	Th	0735	1058	3.2E	F	0834	1208	4.0E	
	1453	1702	1.4F		1458	1716	1.8F		1419	1622	1.7F		1502	1758	2.2F	
	2011	2344	2.8E		2040				1951	2315	3.1E		2101			
				31	0005	3.8E	3.8E					31	0033	4.3E	4.3E	
				W	0301	0522	2.4F					○	0327	0607	2.2F	
				○	0916	1247	4.2E					○	0921	1251	3.9E	
					1549	1814	1.9F						1546	1836	2.2F	
					2136								2149			

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.











# Wilmington (USS North Carolina), North Carolina 2018

F—Flood, Dir. 000° True      E—Ebb, Dir. 179° True

July				August				September																
Slack	Maximum		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										
<b>1</b> Su	0037 0746 1244 1931	0334 0953 1521 2159	2.1E 1.1F 1.8E 1.7F	<b>16</b> M	0103 0818 1317 2010	0456 1102 1612 2305	2.3E 1.6F 2.3E 2.1F	<b>1</b> W	0118 0826 1324 2027	0353 1026 1609 2248	2.0E 1.1F 2.0E 1.6F	<b>16</b> Th	0220 0925 1451 2147	0615 1239 1834 2147	2.0E 1.7F 2.2E	<b>1</b> Sa	0219 0924 1443 2143	0500 1142 1723 2143	2.2E 1.4F 2.1E	<b>16</b> Su	0328 1033 1611 2304	0703 1359 1941 2304	1.3F 2.0E 1.7F 2.0E	
<b>2</b> M	0115 0825 1327 2014	0355 1024 1601 2235	2.0E 1.0F 1.8E 1.5F	<b>17</b> Tu	0154 0907 1417 2109	0552 1205 1745 2109	2.2E 1.6F 2.2E	<b>2</b> Th	0200 0910 1412 2113	0438 1113 1657 2337	2.0E 1.1F 1.9E 1.5F	<b>17</b> F	0308 1017 1548 2242	0659 1337 1926 2242	2.0E 1.7F 2.1E	<b>2</b> Su	0311 1019 1549 2248	0555 1244 1821 2248	2.2E 1.5F 2.0E	<b>17</b> M	0419 1126 1703 2357	0741 1452 2028 2357	1.2F 2.0E 1.9E	
<b>3</b> Tu	0153 0905 1410 2059	0431 1103 1645 2318	2.0E 1.0F 1.7E 1.4F	<b>18</b> W	0245 0958 1517 2211	0644 1308 1856 2211	1.9F 2.1E 2.2E	<b>3</b> F	0246 0958 1508 2205	0528 1208 1749 2205	2.1E 1.2F 1.9E	<b>18</b> Sa	0358 1111 1645 2338	0738 1433 2017 2338	2.0E 1.8F 2.0E	<b>3</b> M	0407 1115 1655 2357	0650 1350 1919 2357	2.3E 1.7F 2.0E	<b>18</b> Tu	0510 1216 1751	0821 1543 2121	2.0E 1.6F 1.8E	
<b>4</b> W	0233 0948 1457 2147	0513 1149 1733	2.0E 1.0F 1.7E	<b>19</b> Th	0336 1050 1616 2313	0728 1406 1954 2313	2.0E 1.8F 2.1E	<b>4</b> Sa	0336 1051 1611 2304	0620 1307 1843	2.2E 1.3F 1.9E	<b>19</b> Su	0447 1203 1739	0816 1527 2113	2.1E 1.8F 1.9E	<b>4</b> Tu	0506 1212 1759	0744 1500 2018	2.4E 1.9F 2.0E	<b>19</b> W	0600 1306 1837	0919 1629 2217	1.9E 1.5F 1.8E	
<b>5</b> Th	0317 1034 1547 2239	0600 1241 1822	1.3F 2.0E 1.8E	<b>20</b> F	0427 1143 1714	0810 1503 2052	2.0E 1.9F 2.0E	<b>5</b> Su	0430 1145 1715	0712 1410 1938	2.3E 1.4F 1.9E	<b>20</b> M	0536 1252 1829	0904 1618 2212	2.1E 1.9F 1.8E	<b>5</b> W	0605 1311 1859	0841 1612 2123	2.4E 2.1F 1.9E	<b>20</b> Th	0649 1355 1922	1029 1711 2303	1.9E 1.5F 1.8E	
<b>6</b> F	0405 1123 1642 2334	0647 1335 1911	1.3F 2.1E 1.8E	<b>21</b> Sa	0517 1234 1809	0857 1556 2153	2.0E 2.0F 2.0E	<b>6</b> M	0524 1238 1818	0804 1518 2035	2.4E 1.7F 1.9E	<b>21</b> Tu	0625 1339 1918	1006 1704 2305	2.1E 1.9F 1.9E	<b>6</b> Th	0704 1410 1958	0945 1715 2351	2.4E 2.2F 2.0E	<b>21</b> F	0736 1443 2006	1114 1747 2304	1.9E 1.4F 1.7E	
<b>7</b> Sa	0456 1213 1739	0736 1434 2002	1.3F 2.2E 1.9E	<b>22</b> Su	0605 1323 1902	0954 1646 2249	2.1E 2.1F 2.0E	<b>7</b> Tu	0619 1331 1919	0859 1625 2139	2.4E 2.0F 1.9E	<b>22</b> W	0713 1425 2004	1057 1746 2352	2.1E 1.8F 1.9E	<b>7</b> F	0804 1510 2055	1055 1814 2330	2.4E 2.3F	<b>22</b> Sa	0821 1528 2050	1121 1816 2322	1.9E 1.4F 1.7E	
<b>8</b> Su	0548 1303 1837	0826 1537 2057	2.3E 1.5F 1.9E	<b>23</b> M	0652 1410 1952	1044 1733 2340	2.1E 2.1F 2.0E	<b>8</b> W	0716 1426 2019	0958 1725 2250	2.5E 2.3F 2.0E	<b>23</b> Th	0802 1510 2049	1138 1826	2.0E 1.8F	<b>8</b> Sa	0904 1609 2150	1214 1913 2419	2.5E 2.4F	<b>23</b> Su	0903 1611 2132	1147 1843 2356	1.9E 1.4F 1.8E	
<b>9</b> M	0640 1354 1936	0920 1639 2157	2.4E 1.8F 1.9E	<b>24</b> Tu	0740 1455 2041	1126 1817	2.1E 2.1F	<b>9</b> Th	0815 1521 2117	1058 1823	2.5E 2.4F	<b>24</b> F	0850 1554 2132	1200 1902	2.0E 1.7F	<b>9</b> Su	0946 1706 2241	1250 2009 2241	2.6E 2.3F	<b>24</b> M	1000 1706 2213	1342 2009	2.6E 2.3F	
<b>10</b> Tu	0735 1445 2036	1016 1736 2301	1.3F 2.4E 2.0E	<b>25</b> W	0829 1538 2126	1202 1900 2126	1.2F 2.1E 2.1F	<b>10</b> F	0914 1616 2211	1158 1921 2211	2.5E 2.6F	<b>25</b> Sa	0934 1636 2212	1224 1929	2.0E 1.6F	<b>10</b> M	1000 1706 2241	1342 2009	2.6E 2.3F	<b>25</b> Tu	1021 1731 2253	1300 1955	2.2E 1.6F	
<b>11</b> W	0831 1536 2133	1112 1832	2.5E 2.4F	<b>26</b> Th	0917 1619 2209	1229 1939	2.1E 2.0F	<b>11</b> Sa	1012 1712 2303	1302 2018	2.5E 2.6F	<b>26</b> Su	1015 1717 2250	1257 1955	2.0E 1.6F	<b>11</b> Tu	1147 1853	1534 2149	2.6E 2.1F	<b>26</b> W	1059 1811 2334	1343 2035	2.3E 1.7F	
<b>12</b> Th	0928 1628 2228	1207 1929	2.5E 2.6F	<b>27</b> F	1003 1700 2248	1258 2011 2248	2.1E 1.9F	<b>12</b> Su	1108 1808 2353	1416 2110	2.5E 2.5F	<b>27</b> M	1052 1756 2328	1334 2026	2.1E 1.6F	<b>12</b> W	1239 1944	1622 2237	2.5E 1.9F	<b>27</b> Th	1142 1854	1428 2117	2.3E 1.7F	
<b>13</b> F	1024 1720 2320	1305 2024	2.5E 2.7F	<b>28</b> Sa	1046 1741 2326	1332 2032	2.0E 1.8F	<b>13</b> M	1203 1903	1525 2201	2.5E 2.3F	<b>28</b> Tu	1128 1836	1413 2101	2.1E 1.7F	<b>13</b> Th	1331 2032	1713 2329	2.4E 1.6F	<b>28</b> F	1230 1941	1515 2203	2.4E 1.7F	
<b>14</b> Sa	1121 1815	1405 2116	2.5E 2.6F	<b>29</b> Su	1126 1822	1408 2057	2.0E 1.7F	<b>14</b> Tu	1259 1958	1629 2254	2.4E 2.0F	<b>29</b> W	1206 1917	1455 2140	2.2E 1.7F	<b>14</b> F	1424 2121	1806	2.2E	<b>29</b> Sa	1326 2034	1606 2254	2.3E 1.6F	
<b>15</b> Su	1218 1911	1507 2208	2.4E 2.4F	<b>30</b> M	1205 1902	1446 2128	2.0E 1.7F	<b>15</b> W	1355 2053	1735 2353	2.3E 1.7F	<b>30</b> Th	1250 2000	1539 2223	2.2E 1.7F	<b>15</b> Sa	1518 2212	1855	2.1E	<b>30</b> Su	1427 2134	1703 2354	2.2E 1.4F	
				<b>31</b> Tu	0040 0745 1243 1944	0314 0947 1526 2205	2.0E 1.1F 2.0E 1.6F						<b>31</b> F	0131 0834 1342 2048	0408 1045 1628 2313	2.1E 1.4F 2.2E 1.6F								

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

# Wilmington (USS North Carolina), North Carolina 2018

F—Flood, Dir. 000° True    E—Ebb, Dir. 179° True

October					November					December																	
Slack		Maximum		knots	Slack		Maximum		knots	Slack		Maximum		knots	Slack		Maximum		knots								
<b>1</b> M	h m 0250	h m 0530	h m 1224	h m 1804	h m 0351	h m 0704	h m 1044	h m 1407	h m 1622	h m 0441	h m 0718	h m 1133	h m 1431	h m 1715	h m 0503	h m 0736	h m 1151	h m 1413	h m 1709	h m 0011	h m 0320	h m 0508	h m 0731	h m 1057	h m 1357	h m 1657	
<b>2</b> Tu	0947	1224	1804	2.2E	0351	0704	1044	1407	1622	0441	0718	1133	1431	1715	0503	0736	1151	1413	1709	0011	0320	0508	0731	1057	1357	1657	
<b>3</b> W	1531	1804	2240	2.2E	0444	0744	1044	1407	1622	0035	0336	0544	0829	1242	0020	0324	0549	0814	1243	0103	0417	0027	0246	0554	0814	1177	1497
<b>4</b> Th	1636	1904	2349	2.1E	0534	0823	1137	1456	1709	0544	0829	1242	1547	1813	0549	0814	1243	1501	1753	0628	1022	0554	0814	1177	1497	1711	1947
<b>5</b> F	0222	0222	0452	1.3F	0013	0333	0534	0823	1137	0129	0435	0643	1031	1349	0102	0344	0632	0856	1333	0153	0509	0112	0339	0641	0902	1341	1555
<b>6</b> Sa	0247	0544	0754	1.8F	0058	0418	0622	0907	1322	0220	0528	0741	1138	1453	0145	0419	0715	0942	1421	0243	0559	0158	0431	0732	0955	1345	1649
<b>7</b> Su	0557	0909	1219	1.8F	0142	0452	0706	0950	1411	0309	0619	0837	1236	1552	0229	0500	0759	1029	1508	0330	0649	0245	0522	0825	1049	1309	1743
<b>8</b> M	0852	1245	1603	2.1F	0224	0510	0749	1029	1458	0357	0711	0931	1330	1645	0314	0544	0847	1116	1555	0415	0737	0331	0613	0919	1143	1433	1839
<b>9</b> Tu	1603	1901	2125	2.1F	0224	0510	0749	1029	1458	0357	0711	0931	1330	1645	0314	0544	0847	1116	1555	0415	0737	0331	0613	0919	1143	1433	1839
<b>10</b> W	1603	1901	2125	2.1F	0306	0535	0831	1107	1542	0442	0800	1022	1419	1733	0358	0631	0936	1204	1643	0459	0823	0418	0706	1013	1238	1722	1938
<b>11</b> Th	1603	1901	2125	2.1F	0306	0535	0831	1107	1542	0442	0800	1022	1419	1733	0358	0631	0936	1204	1643	0459	0823	0418	0706	1013	1238	1722	1938
<b>12</b> F	0129	0731	1344	2.0E	0347	0612	0913	1147	1624	0527	0847	1111	1504	1819	0442	0722	1025	1255	1734	0541	0904	0505	0759	1105	1336	1819	2036
<b>13</b> Sa	0129	0731	1344	2.0E	0347	0612	0913	1147	1624	0527	0847	1111	1504	1819	0442	0722	1025	1255	1734	0541	0904	0505	0759	1105	1336	1819	2036
<b>14</b> Su	0218	0429	0511	1.9E	0429	0655	0955	1230	1706	0611	0930	1157	1545	1903	0527	0812	1116	1349	1828	0623	0939	0556	0850	1157	1433	1914	2132
<b>15</b> M	0218	0429	0511	1.9E	0429	0655	0955	1230	1706	0611	0930	1157	1545	1903	0527	0812	1116	1349	1828	0623	0939	0556	0850	1157	1433	1914	2132
<b>16</b> Tu	0300	0509	0719	2.0E	0511	0741	1039	1316	1750	0001	0317	0655	1010	1243	0202	0500	0812	1116	1349	0018	0312	0240	0522	0825	1049	1309	1743
<b>17</b> W	0300	0509	0719	2.0E	0511	0741	1039	1316	1750	0001	0317	0655	1010	1243	0202	0500	0812	1116	1349	0018	0312	0240	0522	0825	1049	1309	1743
<b>18</b> Th	0335	0555	0825	2.2E	0555	0829	1127	1406	1838	0048	0345	0739	1049	1327	0015	0256	0706	0952	1303	0106	0350	0059	0337	0748	1036	1343	1624
<b>19</b> F	0335	0555	0825	2.2E	0555	0829	1127	1406	1838	0048	0345	0739	1049	1327	0015	0256	0706	0952	1303	0106	0350	0059	0337	0748	1036	1343	1624
<b>20</b> Sa	0404	0744	1044	1.4F	0641	0917	1219	1457	1931	0137	0427	0824	1128	1412	0114	0351	0801	1047	1359	0155	0433	0202	0441	0850	1140	1438	1732
<b>21</b> Su	0404	0744	1044	1.4F	0641	0917	1219	1457	1931	0137	0427	0824	1128	1412	0114	0351	0801	1047	1359	0155	0433	0202	0441	0850	1140	1438	1732
<b>22</b> M	0444	0744	1044	1.8E	0731	1007	1315	1550	2028	0228	0519	0911	1209	1456	0217	0452	0902	1150	1456	0245	0521	0305	0604	0955	1255	1534	1910
<b>23</b> Tu	0444	0744	1044	1.8E	0731	1007	1315	1550	2028	0228	0519	0911	1209	1456	0217	0452	0902	1150	1456	0245	0521	0305	0604	0955	1255	1534	1910
<b>24</b> W	0452	0728	1044	1.9F	0823	1102	1414	1648	2129	0320	0615	1002	1250	1540	0322	0602	1008	1303	1554	0333	0607	0409	0735	1104	1407	1629	2005
<b>25</b> Th	0452	0728	1044	1.9F	0823	1102	1414	1648	2129	0320	0615	1002	1250	1540	0322	0602	1008	1303	1554	0333	0607	0409	0735	1104	1407	1629	2005
<b>26</b> F	0505	0829	1147	2.0E	0921	1205	1514	1750	2233	0413	0658	1056	1330	1625	0427	0719	1119	1420	1652	0421	0650	0510	0850	1211	1513	1722	2110
<b>27</b> Sa	0505	0829	1147	2.0E	0921	1205	1514	1750	2233	0413	0658	1056	1330	1625	0427	0719	1119	1420	1652	0421	0650	0510	0850	1211	1513	1722	2110
<b>28</b> Su	0536	0823	1137	1.9E	1005	1250	1540	1824	2203	0520	0803	1111	1399	1690	0520	0803	1111	1399	1690	0520	0803	0529	0814	1129	1415	1700	2008
<b>29</b> M	0536	0823	1137	1.9E	1005	1250	1540	1824	2203	0520	0803	1111	1399	1690	0520	0803	1111	1399	1690	0520	0803	0529	0814	1129	1415	1700	2008
<b>30</b> Tu	0536	0823	1137	1.9E	1005	1250	1540	1824	2203	0520	0803	1111	1399	1690	0520	0803	1111	1399	1690	0520	0803	0529	0814	1129	1415	1700	2008
<b>31</b> W	0536	0823	1137	1.9E	1005	1250	1540	1824	2203	0520	0803	1111	1399	1690	0520	0803	1111	1399	1690	0520	0803	0529	0814	1129	1415	1700	2008

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

### Charleston Harbor (off Ft. Sumter), South Carolina, 2018

F—Flood, Dir. 313° True E—Ebb, Dir. 127° True

January				February				March															
Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		knots												
<b>1</b> M O	h 0107 0741 1357 1953	m 0343 1051 1611 2306	2.4F 3.3E 1.9F 3.0E	<b>16</b> Tu ●	h 0142 0806 1418 1959	m 0410 1114 1624 2317	1.6F 2.5E 1.5F 2.1E	<b>1</b> Th	h 0241 0910 1521 2127	m 0515 1214 1742	knots 2.3F 3.3E 1.9F	<b>16</b> F	h 0237 0857 1508 2101	m 0511 1204 1728	knots 1.8F 2.5E 1.7F	<b>1</b> Th O	h 0136 0801 1411 2020	m 0406 1105 1633 2326	knots 2.1F 3.2E 1.9F 3.2E	<b>16</b> F	h 0136 0749 1359 1958	m 0402 1056 1619 2310	knots 1.7F 2.5E 1.8F 2.4E
<b>2</b> Tu	0201 0835 1449 2048	0438 1142 1705 2358	2.4F 3.4E 1.9F 3.1E	<b>17</b> W	0220 0845 1458 2040	0453 1153 1709 2354	1.7F 2.5E 1.6F 2.1E	<b>2</b> F	0033 0333 0957 1609 2218	0033 0604 1302 1831	3.1E 2.2F 3.1E 1.9F	<b>17</b> Sa	0011 0312 0933 1543 2140	023E 1.8F 2.5E 1.8F	<b>2</b> F	0227 0848 1457 2109	0456 1152 1722	2.1F 3.1E 1.9F	<b>17</b> Sa ●	0214 0827 1435 2039	0444 1135 1702 2350	1.8F 2.6E 1.9F 2.6E	
<b>3</b> W	0254 0927 1541 2142	0531 1233 1759	2.4F 3.4E 1.9F	<b>18</b> Th	0256 0922 1537 2120	0533 1231 1752	1.7F 2.5E 1.6F	<b>3</b> Sa	0123 0424 1043 1657 2308	0123 0651 1349 1919	3.0E 2.1F 2.9E 1.8F	<b>18</b> Su	0050 0349 1008 1617 2219	024E 1.8F 2.5E 1.8F	<b>3</b> Sa	0014 0316 0932 1542 2155	032E 2.1F 3.0E 1.9F	<b>18</b> Su	0253 0905 1510 2119	0525 1213 1743	1.9F 2.6E 2.0F		
<b>4</b> Th	0347 1018 1633 2236	0623 1323 1851	2.3F 3.2E 1.8F	<b>19</b> F	0331 0958 1613 2159	0614 1308 1835	1.7F 2.4E 1.6F	<b>4</b> Su	0213 0515 1127 1746 2358	0213 0737 1436 2006	2.7E 1.9F 2.5E 1.6F	<b>19</b> M	0131 0429 1044 1654 2301	023E 1.8F 2.4E 1.8F	<b>4</b> Su	0101 0403 1014 1625 2240	030E 2.0F 2.7E 1.8F	<b>19</b> M	0031 0332 0942 1547 2201	0031 0606 1251 1826	2.7E 1.9F 2.6E 2.0F		
<b>5</b> F	0442 1108 1726 2331	0714 1414 1944	2.9E 2.1F 1.7F	<b>20</b> Sa	0407 1034 1650 2238	0655 1345 1919	1.7F 2.3E 1.6F	<b>5</b> M	0305 0607 1210 1835	0305 0823 1525 2054	2.5E 1.7F 2.2E 1.5F	<b>20</b> Tu	0215 0514 1121 1736 2348	023E 1.7F 2.4E 1.8F	<b>5</b> M	0148 0450 1053 1709 2325	028E 1.9F 2.4E 1.7F	<b>20</b> Tu	0114 0414 1021 1626 2245	0114 0650 1332 1910	2.7E 1.9F 2.5E 2.0F		
<b>6</b> Sa	0538 1157 1820	0805 1506 2037	1.9F 2.6E 1.5F	<b>21</b> Su	0446 1109 1727 2320	0738 1424 2003	1.7F 2.2E 1.6F	<b>6</b> Tu	0048 0701 1253 1926	0358 0910 1614 2142	2.2E 1.5F 1.9E 1.3F	<b>21</b> W	0305 0606 1204 1824	022E 1.7F 2.2E 1.8F	<b>6</b> Tu	0235 0537 1131 1753	025E 1.7F 2.0E 1.5F	<b>21</b> W	0200 0501 1102 1710 2333	026E 1.8F 2.4E 2.0F			
<b>7</b> Su	0027 0636 1247 1914	0332 0855 1600 2130	2.4E 1.7F 2.3E 1.4F	<b>22</b> M	0531 1146 1809	0823 1505 2050	1.6F 2.1E 1.6F	<b>7</b> W O	0140 0756 1337 2019	0453 0959 1707 2232	2.0E 1.3F 1.6E 1.2F	<b>22</b> Th	0402 0705 1254 1920	040E 1.6F 2.1E 1.7F	<b>7</b> W	0324 0627 1209 1841	032E 1.5F 1.7E 1.4F	<b>22</b> Th	0251 0554 1149 1801	025E 1.7F 2.2E 1.9F			
<b>8</b> M O	0124 0735 1336 2008	0430 0946 1654	2.2F 1.5F 2.1E 1.3F	<b>23</b> Tu	0007 0624 1228 1857	0323 0912 1552 2140	1.9E 1.6F 2.0E 1.6F	<b>8</b> Th	0234 0852 1424 2113	0550 1049 1802 2324	1.8E 1.2F 1.5E 1.2F	<b>23</b> F O	0142 0811 1354 2024	0507 1035 1725 2304	2.1E 1.5F 2.0E 1.7F	<b>8</b> Th	0056 0719 1250 1932	0415 0924 1618 2153	1.9E 1.4F 1.5E 1.2F	<b>23</b> F	0027 0653 1243 1901	0348 0919 1604 2144	2.4E 1.6F 2.1E 1.8F
<b>9</b> Tu	0221 0833 1425 2101	0529 1035 1750 2314	2.0E 1.3F 1.9E 1.3F	<b>24</b> W O	0101 0724 1317 1950	0422 1005 1647 2233	1.9E 1.5F 2.0E 1.6F	<b>9</b> F	0330 0948 1516 2208	0647 1140 1859	1.8E 1.1F 1.4E	<b>24</b> Sa	0250 0920 1503 2132	0615 1134 1835	2.2E 1.4F 2.1E	<b>9</b> F O	0147 0813 1336 2029	0509 1015 1712 2246	1.7E 1.2F 1.3E 1.1F	<b>24</b> Sa O	0129 0759 1346 2008	0451 1016 1710 2244	2.3E 1.5F 2.0E 1.7F
<b>10</b> W	0318 0930 1514 2153	0627 1125 1845	2.0E 1.2F 1.7E	<b>25</b> Th	0203 0830 1414 2050	0527 1100 1749 2329	2.0E 1.5F 2.0E 1.7F	<b>10</b> Sa	0426 1042 1612 2301	0018 0742 1233 1954	1.1F 1.8E 1.1F 1.5E	<b>25</b> Su	0401 1027 1616 2239	0004 0721 1234 1942	1.7E 2.4E 1.4F 2.2E	<b>10</b> Sa	0242 0910 1431 2129	0607 1107 1813 2341	1.7E 1.2F 1.3E 1.1F	<b>25</b> Su	0236 0906 1456 2119	0557 1115 1820 2345	2.3E 1.4F 2.1E 1.6F
<b>11</b> Th	0414 1024 1604 2243	0723 1216 1939	2.0E 1.2F 1.7E	<b>26</b> F	0310 0939 1520 2152	0636 1157 1855	2.1E 1.5F 2.1E	<b>11</b> Su	0521 1134 1710 2351	0113 0834 1327 2045	1.2F 2.0E 1.2F 1.6E	<b>26</b> M	0510 1130 1726 2343	0106 0824 1336 2045	1.8F 2.6E 1.5F 2.5E	<b>11</b> Su	0340 1007 1532 2227	0704 1202 1914	1.7E 1.1F 1.3E	<b>26</b> M	0345 1011 1608 2228	0703 1217 1928	2.4E 1.4F 2.2E
<b>12</b> F	0507 1115 1655 2332	0816 1307 2029	1.3F 2.1E 1.7E	<b>27</b> Sa	0419 1045 1630 2255	0741 1256 2000	1.8F 2.4E 2.3E	<b>12</b> M	0611 1224 1804	0208 0922 2131	1.3F 2.1E 1.8E	<b>27</b> Tu	0613 1228 1830	0208 0922 2143	1.9F 2.8E 2.8E	<b>12</b> M	0439 1101 1635 2321	0038 0758 2011	1.1F 1.8E 1.2F 1.5E	<b>27</b> Tu	0452 1112 1717 2331	0805 1319 2030	1.6F 2.5E 2.5E
<b>13</b> Sa	0556 1205 1744	0905 1358 2115	1.3F 2.2E 1.8E	<b>28</b> Su	0527 1148 1738 2356	0843 1356 2100	2.7E 1.6F 2.6E	<b>13</b> Tu	0038 0658 1309 1854	0301 1006 1512 2214	1.4F 2.3E 1.4F 2.0E	<b>28</b> W	0042 0710 1321 1928	0309 1015 1538 2236	2.0F 3.0E 1.8F 3.0E	<b>13</b> Tu	0135 0533 1152 1734	0315 0848 1352 2101	1.2F 2.0E 1.3F 1.7E	<b>28</b> W	0150 0553 1208 1818	0150 0902 1422 2127	1.7F 2.7E 1.6F 2.8E
<b>14</b> Su	0018 0642 1251 1832	0238 0950 1448 2158	1.4F 2.3E 1.4F 1.9E	<b>29</b> M	0629 1246 1842	0940 1455 2157	3.0E 1.7F 2.8E	<b>14</b> W	0121 0740 1352 1939	0348 1047 1600 2254	1.6F 2.4E 1.5F 2.1E	<b>29</b> W	0010 0623 1238 1827	0229 0934 1444 2146	1.3F 2.2E 1.4F 2.0E	<b>14</b> W	0029 0649 1259 1913	0250 0954 1522 2219	1.8F 2.8E 1.7F 3.0E				
<b>15</b> M	0101 0725 1336 1917	0326 1033 1537 2239	1.5F 2.4E 1.5F 2.0E	<b>30</b> Tu	0053 0727 1340 1940	0326 1034 1554 2251	2.2F 3.2E 1.8F 3.0E	<b>15</b> Th ●	0200 0820 1431 2021	0431 1127 1646 2333	1.7F 2.5E 1.7F 2.3E	<b>30</b> Th	0055 0707 1321 1914	0318 1016 1533 2229	1.5F 2.4E 1.6F 2.2E	<b>15</b> Th	0021 0738 1346 2002	0344 1043 1613 2307	1.9F 2.9E 1.8F 3.1E				
<b>31</b> W O	0148 0820 1432 2035	0422 1125 1649 2343	2.3F 3.3E 1.9F 3.1E	<b>31</b> W O	0148 0820 1432 2035	0422 1125 1649 2343	2.3F 3.3E 1.9F 3.1E	<b>31</b> W O	0148 0820 1432 2035	0422 1125 1649 2343	2.3F 3.3E 1.9F 3.1E	<b>31</b> W O	0148 0820 1432 2035	0422 1125 1649 2343	2.3F 3.3E 1.9F 3.1E	<b>31</b> W O	0148 0820 1432 2035	0422 1125 1649 2343	2.3F 3.3E 1.9F 3.1E				

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.











# Savannah River Entrance, Georgia, 2018

F—Flood, Dir. 286° True    E—Ebb, Dir. 110° True

July				August				September							
Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		knots				
h m	h m	h m		h m	h m	h m		h m	h m	h m					
<b>1</b> Su	0515	0735	1.8F	<b>16</b> M	0530	0802	2.5F	<b>1</b> W	0555	0827	2.0F	<b>16</b> Th	0637	0916	2.4F
	1112	1347	1.5E		1148	1505	2.6E		1201	1441	1.8E		1310	1633	2.4E
	1711	1946	1.8F		1748	2026	2.7F		1808	2044	1.8F		1916	2147	2.1F
<b>2</b> M	0239	0816	1.8E	<b>17</b> Tu	0010	0324	2.7E	<b>2</b> Th	0024	0313	1.8E	<b>17</b> F	0124	0434	2.1E
	0552	0816	1.8F		0618	0853	2.4F		0636	0912	2.0F		0729	1011	2.2F
	1153	1425	1.5E		1243	1601	2.5E		1246	1527	1.8E		1406	1733	2.2E
	1751	2027	1.7F		1844	2120	2.5F		1858	2133	1.7F		2014	2243	1.9F
<b>3</b> Tu	0014	0306	1.7E	<b>18</b> W	0102	0415	2.5E	<b>3</b> F	0112	0358	1.7E	<b>18</b> Sa	0217	0531	1.9E
	0631	0859	1.8F		0709	0948	2.3F		0722	1003	1.9F	<b>18</b> Su	0824	1110	2.0F
	1236	1507	1.5E		1339	1700	2.4E		1338	1618	1.7E	<b>18</b> Mo	1502	1836	2.0E
	1836	2113	1.7F		1943	2219	2.2F		1955	2229	1.6F	<b>18</b> Tu	2113	2342	1.7F
<b>4</b> W	0057	0344	1.7E	<b>19</b> Th	0156	0509	2.3E	<b>4</b> Sa	0205	0448	1.7E	<b>19</b> Su	0311	0638	1.7E
	0713	0947	1.8F		0802	1047	2.2F		0814	1058	2.0F		0921	1209	1.9F
	1322	1554	1.6E	<b>19</b> Mo	1437	1803	2.3E	<b>19</b> Tu	1435	1713	1.7E		1559	1938	2.0E
	1927	2205	1.6F		2044	2319	2.0F	<b>19</b> W	2058	2327	1.5F		2211		
<b>5</b> Th	0145	0428	1.7E	<b>20</b> F	0250	0611	2.1E	<b>5</b> Su	0302	0542	1.6E	<b>20</b> M	0405	0745	1.7E
	0759	1038	1.8F		0858	1147	2.2F		0910	1155	2.0F		1017	1306	1.9F
	1412	1644	1.6E		1534	1907	2.2E		1536	1816	1.7E		1654	2036	2.0E
	2024	2301	1.6F		2145				2202				2306		
<b>6</b> F	0236	0517	1.6E	<b>21</b> Sa		0018	1.9F	<b>6</b> M	0027	0027	1.5F	<b>21</b> Tu	0131	0131	1.6F
	0849	1131	1.9F		0345	0716	1.9E		0401	0644	1.6E		0458	0844	1.6E
	1504	1739	1.7E		0954	1245	2.1F		1008	1253	2.2F		1111	1358	1.9F
<b>6</b> Su	2125	2358	1.6F		1631	2008	2.2E		1638	1930	1.8E		1747	2128	2.0E
					2243				2304				2356		
<b>7</b> Sa	0331	0611	1.6E	<b>22</b> Su	0439	0818	1.8E	<b>7</b> Tu	0502	0755	1.7E	<b>22</b> W	0550	0936	1.6E
	0941	1224	2.1F		1048	1339	2.0F		1106	1350	2.3F		1201	1446	1.9F
	1559	1838	1.8E		1726	2105	2.2E		1740	2058	2.0E		1835	2215	2.0E
	2224				2337										
<b>8</b> Su	0053	0426	1.7F	<b>23</b> M	0532	0914	1.8E	<b>8</b> W	0003	0224	1.7F	<b>23</b> Th	0044	0308	1.7F
	0710	1034	1.7E		1140	1429	2.0F		0602	0911	1.8E		0640	1022	1.6E
	1317	1656	1.9E		1819	2157	2.2E		1204	1448	2.5F		1248	1531	1.9F
	2323								1839	2204	2.2E		1920	2258	2.0E
<b>9</b> M	0148	0523	1.7F	<b>24</b> Tu	0028	0254	1.7F	<b>9</b> Th	0059	0322	1.8F	<b>24</b> F	0129	0354	1.7F
	0812	1128	1.8E		0624	1006	1.8E		0701	1017	2.0E		0727	1102	1.7E
	1411	1754	2.4F		1230	1518	1.9F		1300	1546	2.6F		1334	1615	1.9F
	2055				1909	2246	2.2E		1935	2300	2.4E		2002	2338	2.0E
<b>10</b> Tu	0020	0244	1.8F	<b>25</b> W	0117	0342	1.6F	<b>10</b> F	0152	0419	2.0F	<b>25</b> Sa	0211	0437	1.8F
	0620	0916	1.9E		0713	1053	1.7E		0757	1116	2.3E		0811	1135	1.7E
	1222	1506	2.5F		1318	1604	1.9F		1357	1642	2.8F		1417	1657	1.9F
	1853	2204	2.3E		1954	2332	2.1E		2029	2352	2.6E		2041		
<b>11</b> W	0116	0340	1.9F	<b>26</b> Th	0203	0428	1.7F	<b>11</b> Sa	0243	0513	2.2F	<b>26</b> Su	0013	0013	2.0E
	0717	1019	2.0E		0800	1137	1.6E		0851	1212	2.5E		0251	0519	2.0F
	1316	1602	2.7F		1403	1646	1.9F		1451	1736	2.9F		0852	1153	1.7E
	1949	2306	2.5E		2036				2119				1459	1736	2.0F
<b>12</b> Th	0210	0436	2.0F	<b>27</b> F		0015	2.1E	<b>12</b> Su	0041	0041	2.7E	<b>27</b> M	0040	0040	2.0E
	0812	1120	2.2E		0247	0510	1.7F		0331	0604	2.4F		0329	0558	2.1F
	1411	1658	2.9F		0843	1215	1.6E		0943	1305	2.6E		0930	1218	1.8E
<b>12</b> Mo	2044				1446	1726	1.9F		1545	1826	2.9F		1539	1815	2.1F
					2115				2208				2156		
<b>13</b> F	0003	0530	2.6E	<b>28</b> Sa	0327	0550	1.8F	<b>13</b> M	0417	0651	2.5F	<b>28</b> Tu	0100	0100	2.0E
	0906	1218	2.4E		0924	1239	1.6E		1034	1357	2.7E		0407	0637	2.2F
	1506	1751	3.0F		1527	1804	1.9F		1637	1915	2.8F		1008	1253	1.9E
	2136				2152				2256				1619	1854	2.1F
<b>14</b> Sa	0056	0622	2.8E	<b>29</b> Su	0405	0629	1.9F	<b>14</b> Tu	0214	0214	2.7E	<b>29</b> W	0128	0128	2.0E
	0353	0622	2.3F		1003	1250	1.6E		0503	0738	2.6F		0444	0716	2.2F
	1000	1315	2.5E		1606	1841	1.9F		1125	1447	2.7E		1047	1333	2.0E
	1600	1843	3.0F		2227				1729	2003	2.6F		1701	1935	2.0F
	2228								2344				2314		
<b>15</b> Su	0147	0712	2.8E	<b>30</b> M	0442	0707	2.0F	<b>15</b> W	0259	0259	2.6E	<b>30</b> Th	0205	0205	2.0E
	0534	0810	2.4F		1041	1320	1.7E		0549	0826	2.5F		0522	0757	2.2F
	1147	1410	2.6E		1645	1920	1.9F		1217	1539	2.6E		1129	1417	2.0E
	1654	1934	2.9F		2304				1822	2054	2.4F		1745	2018	1.9F
	2319												2357		
				<b>31</b> Tu	0202	0202	1.9E	<b>31</b> F	0247	0247	1.9E		0604	0842	2.2F
					0746	0746	2.0F		1217	1505	1.9E		1217	1505	1.9E
					1120	1358	1.7E		1835	2106	1.8F		1835	2106	1.8F
					1725	2000	1.9F								
					2342										

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.













St. Johns River Entrance, Florida, 2018

F-Flood, Dir. 262° True E-Ebb, Dir. 082° True

Table with columns for months (April, May, June) and sub-columns for Slack and Maximum tide levels (h, m, knots) for each day of the month.

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

## St. Johns River Entrance, Florida, 2018

F—Flood, Dir. 262° True      E—Ebb, Dir. 082° True

July				August				September															
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum									
	h	m	knots		h	m	knots		h	m	knots		h	m	knots								
<b>1</b> Su	0009	0247	2.0E	<b>16</b> M	0027	0308	2.4E	<b>1</b> W	0058	0334	2.1E	<b>16</b> Th	0149	0433	2.1E	<b>1</b> Sa	0145	0429	2.1E	<b>16</b> Su	0258	0539	1.8E
	0659	0915	1.6F		0715	0947	2.1F		0742	1014	2.0F		0828	1109	2.3F		0825	1118	2.4F		0935	1211	2.0F
	1220	1449	1.8E		1253	1531	2.1E		1316	1549	2.0E		1424	1752	2.0E		1419	1656	2.2E		1537	1927	1.7E
	1842	2129	2.1F		1928	2211	2.5F		1953	2234	2.0F		2111	2339	1.9F		2111	2342	1.8F		2227		
<b>2</b> M	0050	0324	2.0E	<b>17</b> Tu	0121	0406	2.3E	<b>2</b> Th	0136	0415	2.1E	<b>17</b> F	0240	0534	2.0E	<b>2</b> Su	0229	0518	2.1E	<b>17</b> M	0350	0651	1.7E
	0741	1000	1.6F		0810	1045	2.2F		0821	1100	2.1F		0920	1159	2.2F		0914	1207	2.4F		1028	1259	1.9F
	1303	1532	1.8E		1353	1644	2.0E		1401	1635	2.0E		1519	1908	1.9E		1513	1750	2.1E		1632	2025	1.6E
	1928	2215	2.1F		2031	2309	2.3F		2043	2320	1.9F		2207				2205				2318		
<b>3</b> Tu	0129	0405	2.0E	<b>18</b> W	0215	0511	2.2E	<b>3</b> F	0215	0500	2.1E	<b>18</b> Sa	0332	0650	1.9E	<b>3</b> M	0320	0613	2.1E	<b>18</b> Tu	0446	0811	1.6E
	0822	1045	1.7F		0903	1140	2.2F		0901	1146	2.3F		1011	1248	2.1F		1007	1259	2.5F		1121	1350	1.7F
	1347	1617	1.8E		1452	1829	2.0E		1448	1725	2.0E		1615	2009	1.9E		1612	1848	2.1E		1728	2114	1.6E
	2018	2301	2.0F		2133				2135				2301				2302						

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.







# Fort Pierce Inlet Entrance, Florida, 2018

F—Flood, Dir. 258° True    E—Ebb, Dir. 080° True

July				August				September							
Slack	Maximum														
h m	h m	knots		h m	h m	knots		h m	h m	knots		h m	h m	knots	
<b>1</b> Su	0026 0702 1226 1837	0308 0914 1452 2118	2.6E 2.1F 2.6E 3.0F	<b>16</b> M	0048 0720 1301 1927	0344 0955 1538 2217	3.5E 3.2F 3.3E 3.6F	<b>1</b> W	0101 0739 1329 1941	0334 1002 1555 2215	3.0E 2.7F 2.7E 3.0F	<b>16</b> Th	0201 0833 1442 2103	0502 1146 1811 2356	3.2E 3.3F 2.9E 2.7F
<b>2</b> M	0103 0742 1310 1920	0334 0950 1534 2158	2.6E 2.2F 2.6E 3.0F	<b>17</b> Tu	0138 0811 1401 2024	0438 1054 1644 2315	3.4E 3.2F 3.0E 3.3F	<b>2</b> Th	0137 0815 1417 2030	0413 1045 1646 2302	3.0E 2.7F 2.6E 2.7F	<b>17</b> F	0248 0920 1540 2200	0558 1247 1912 2200	3.0E 3.1F 2.7E 3.1F
<b>3</b> Tu	0139 0820 1356 2004	0409 1032 1620 2242	2.7E 2.3F 2.5E 2.9F	<b>18</b> W	0228 0901 1501 2121	0546 1204 1817 2321	3.3E 3.1F 2.9E 3.3F	<b>3</b> F	0214 0851 1510 2125	0459 1133 1744 2353	3.0E 2.8F 2.5E 2.5F	<b>18</b> Sa	0338 1009 1640 2300	0642 1347 2009 2300	2.3F 2.7E 2.8F 2.5E
<b>4</b> W	0216 0859 1445 2052	0452 1118 1714 2330	2.7E 2.3F 2.4E 2.7F	<b>19</b> Th	0319 0953 1604 2223	0642 1311 1925 2223	2.9F 3.2E 2.8E 3.0F	<b>4</b> Sa	0256 0933 1611 2228	0551 1224 1842 2228	2.9E 2.9F 2.4E 3.0F	<b>19</b> Su	0431 1101 1738 2359	0719 1500 2116 2359	2.4E 2.6F 2.4E 2.4E
<b>5</b> Th	0255 0939 1541 2148	0540 1206 1813 2348	2.7E 2.4F 2.3E 3.0F	<b>20</b> F	0413 1046 1708 2326	0726 1421 2032 2326	3.0E 3.0F 2.6E 3.0F	<b>5</b> Su	0348 1024 1715 2334	0642 1316 1938 2334	2.2F 2.9E 2.9F 2.4E	<b>20</b> M	0525 1151 1831 2218	0759 1604 2218 2218	2.2E 2.6F 2.4E 2.4E
<b>6</b> F	0339 1022 1643 2252	0628 1255 1907 2252	2.5F 2.7E 2.5F 2.3E	<b>21</b> Sa	0507 1139 1808 2145	0809 1533 2145 2145	2.7E 3.0F 2.6E 2.6E	<b>6</b> M	0450 1123 1816 2041	0734 1414 2041 2041	3.0E 2.9F 2.4E 2.4E	<b>21</b> Tu	0616 1241 1919 2306	0847 1653 2306 2306	2.1E 2.6F 2.4E 2.4E
<b>7</b> Sa	0431 1109 1743 2356	0715 1346 2002 2356	2.8E 2.6F 2.3E 2.3E	<b>22</b> Su	0559 1229 1902 2244	0901 1631 2244 2244	2.5E 3.1F 2.7E 2.7E	<b>7</b> Tu	0038 0554 1224 1914	0244 0830 1524 2156	2.0F 3.0E 3.1F 2.6E	<b>22</b> W	0146 0705 1328 2004	0506 0943 1733 2346	1.8F 2.1E 2.6F 2.4E
<b>8</b> Su	0525 1157 1840 2105	0803 1444 2105 2105	2.9E 2.8F 2.4E 2.4E	<b>23</b> M	0648 1317 1952 2333	0958 1718 2333 2333	2.4E 3.1F 2.7E 2.7E	<b>8</b> W	0139 0656 1327 2011	0356 0933 1636 2301	2.1F 3.1E 3.3F 2.8E	<b>23</b> Th	0233 0752 1414 2045	0542 1028 1801 2045	1.8F 2.3E 2.6F 2.6F
<b>9</b> M	0058 0619 1248 1935	0310 0856 1550 2212	2.0F 3.0E 3.1F 2.6E	<b>24</b> Tu	0219 0736 1404 2039	0531 1033 1759 2039	2.0F 2.4E 3.0F 3.0F	<b>9</b> Th	0238 0757 1430 2105	0459 1035 1734 2356	2.4F 3.3E 3.6F 3.1E	<b>24</b> F	0315 0839 1458 2123	0607 1107 1750 2123	2.4E 1.9F 2.4E 2.6F
<b>10</b> Tu	0159 0713 1343 2030	0414 0953 1647 2308	2.1F 3.1E 3.4E 2.8E	<b>25</b> W	0307 0822 1448 2121	0610 1102 1837 2121	2.7E 2.0F 2.4E 2.9F	<b>10</b> F	0332 0858 1529 2157	0556 1133 1832 2157	2.7F 3.4E 2.4E 3.7F	<b>25</b> Sa	0353 0923 1539 2200	0620 1147 1816 2200	2.0F 2.6E 2.7F 2.7F
<b>11</b> W	0257 0810 1440 2123	0509 1048 1739 2123	2.4F 3.3E 3.6F 3.6F	<b>26</b> Th	0349 0907 1528 2159	0645 1135 1903 2159	1.9F 2.5E 2.8F 2.8F	<b>11</b> Sa	0423 0957 1626 2247	0658 1233 1938 2247	3.0F 3.4E 3.8F 3.8F	<b>26</b> Su	0430 1006 1619 2235	0652 1230 1856 2235	2.2F 2.7E 2.9F 2.9F
<b>12</b> Th	0350 0908 1537 2214	0603 1141 1835 2214	3.0E 2.5F 3.5E 3.8F	<b>27</b> F	0428 0950 1607 2236	0711 1213 1858 2236	1.9F 2.6E 2.8F 2.8F	<b>12</b> Su	0514 1054 1721 2336	0805 1341 2035 2336	3.2F 3.5E 3.8F 3.8F	<b>27</b> M	0507 1049 1700 2310	0733 1318 1940 2310	2.4F 2.8E 3.0F 3.0F
<b>13</b> F	0441 1005 1632 2305	0703 1238 1938 2305	2.7F 3.5E 3.8F 3.8F	<b>28</b> Sa	0506 1032 1645 2312	0735 1258 1933 2312	2.0F 2.6E 2.9F 2.9F	<b>13</b> M	0605 1152 1818 2122	0900 1444 2122 2122	3.4F 3.5E 3.7F 3.7F	<b>28</b> Tu	0543 1132 1745 2346	0814 1405 2024 2346	2.6F 2.9E 3.1F 3.1F
<b>14</b> Sa	0533 1102 1730 2357	0806 1341 2036 2357	2.9F 3.5E 3.9F 3.9F	<b>29</b> Su	0545 1114 1726 2348	0809 1344 2012 2348	2.2F 2.7E 3.0F 3.0F	<b>14</b> Tu	0025 0656 1250 1914	0329 0950 1540 2207	3.6E 3.5F 3.3E 3.5F	<b>29</b> W	0619 1217 1833 2107	0853 1449 2107 2107	2.9F 2.9E 3.1F 3.1F
<b>15</b> Su	0627 1201 1829	0256 0902 1441 2127	3.4E 3.1F 3.5E 3.8F	<b>30</b> M	0625 1158 1809	0229 0845 1428 2051	2.7E 2.4F 2.8E 3.1F	<b>15</b> W	0114 0745 1346 2009	0411 1043 1647 2257	3.5E 3.4F 3.1E 3.1F	<b>30</b> Th	0023 0655 1304 1922	0301 0933 1532 2150	3.2E 3.1F 2.9E 2.9F
				<b>31</b> Tu	0025 0703 1243 1854	0259 0922 1511 2132	2.9E 2.5F 2.8E 3.1F					<b>31</b> F	0100 0731 1352 2013	0340 1015 1620 2236	3.3E 3.2F 2.8E 2.7F

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

# Fort Pierce Inlet Entrance, Florida, 2018

F—Flood, Dir. 258° True    E—Ebb, Dir. 080° True

October				November				December															
Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		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												
<b>1</b> M	0203 0831 1520 2150	0450 1132 1759	3.2E 3.3F 2.6E	<b>16</b> Tu	0319 0937 1617 2248	0549 1215 1949	1.6F 2.1E 2.2F 2.1E	<b>1</b> Th	0408 1036 1707 2335	0645 1320 1956	2.4F 2.9E 3.0F 2.8E	<b>16</b> F	0436 1039 1703 2341	0657 1304 1936	1.7F 2.0E 2.1F 2.2E	<b>1</b> Sa	0511 1132 1738	0756 1435 2045	2.8E 2.8F 3.1E	<b>16</b> Su	0458 1059 1657 2336	0717 1320 1931	2.1F 2.1E 2.2F 2.5E
<b>2</b> Tu	0303 0934 1626 2254	0552 1231 1903	2.3F 3.0E 3.1F 2.6E	<b>17</b> W	0414 1028 1707 2338	0640 1257 2026	1.5F 2.0E 2.1F 2.0E	<b>2</b> F	0522 1147 1806	0754 1449 2116	2.8E 2.8F 2.9E	<b>17</b> Sa	0533 1135 1748	0747 1354 2016	2.0E 2.1F 2.3E	<b>2</b> Su	0617 1238 1833	0937 1609 2159	2.8E 2.8F 3.2E	<b>17</b> M	0553 1159 1744	0809 1413 2016	2.1E 2.1F 2.6E
<b>3</b> W	0416 1047 1731 2357	0655 1333 2008	2.2F 2.9E 3.0F 2.6E	<b>18</b> Th	0511 1121 1754	0728 1343 2112	1.4F 1.9E 2.0F 2.0E	<b>3</b> Sa	0629 1254 1901	0924 1629 2228	2.8E 3.0F 3.2E	<b>18</b> Su	0625 1230 1831	0243 0841 2102	1.9F 2.1E 2.1F 2.4E	<b>3</b> M	0718 1342 1925	1051 1704 2251	3.1E 2.9F 3.2E	<b>18</b> Tu	0645 1258 1829	0908 1512 2105	2.2E 2.0F 2.8E
<b>4</b> Th	0530 1159 1831	0759 1455 2137	2.2F 2.9E 2.7E	<b>19</b> F	0605 1213 1837	0819 1438 2139	1.9E 2.0F 2.1E	<b>4</b> Su	0731 1358 1954	1053 1721 2316	3.1E 3.2F 3.4E	<b>19</b> M	0715 1325 1913	0344 0941 2148	2.2F 2.2E 2.2F 2.7E	<b>4</b> Tu	0816 1441 2016	1146 1752 2331	3.3E 2.9F 3.2E	<b>19</b> W	0736 1358 1915	1008 1611 2156	2.5E 2.1F 3.0E
<b>5</b> F	0638 1307 1927	0915 1642 2248	2.9E 3.2F 3.1E	<b>20</b> Sa	0655 1304 1918	0917 1540 2205	2.1E 2.1F 2.3E	<b>5</b> M	0831 1457 2044	1152 1809 2358	3.3E 3.3F 3.4E	<b>20</b> Tu	0803 1419 1955	1034 1641 2231	2.5E 2.3F 2.9E	<b>5</b> W	0909 1535 2104	1241 1840	3.3E 2.8F	<b>20</b> Th	0827 1451 2004	1059 1702 2244	2.7E 2.3F 3.2E
<b>6</b> Sa	0741 1411 2021	1038 1735 2337	3.1E 3.4F 3.3E	<b>21</b> Su	0743 1355 1958	1013 1629 2236	2.3E 2.4F 2.6E	<b>6</b> Tu	0926 1551 2132	1253 1900	3.4E 3.2F	<b>21</b> W	0851 1512 2037	1119 1726 2313	2.7E 2.5F 3.1E	<b>6</b> Th	0958 1625 2150	1337 1931	3.3E 2.6F	<b>21</b> F	0916 1543 2055	1146 1751 2332	2.9E 2.4F 3.4E
<b>7</b> Su	0842 1510 2112	1144 1825	3.3E 3.5F	<b>22</b> M	0830 1444 2038	1059 1711 2310	2.5E 2.6F 2.8E	<b>7</b> W	1017 1642 2218	1352 1952	3.5E 3.0F	<b>22</b> Th	0938 1601 2121	1205 1813 2356	2.9E 2.5F 3.3E	<b>7</b> F	1044 1712 2234	1426 2018	3.2E 2.4F	<b>22</b> Sa	1005 1633 2147	1237 1845	3.0E 2.5F
<b>8</b> M	0939 1605 2159	1252 1919	3.4E 3.5F	<b>23</b> Tu	0916 1532 2116	1142 1753 2346	2.7E 2.7F 3.0E	<b>8</b> Th	1105 1733 2302	1442 2039	3.4E 2.8F	<b>23</b> F	1024 1650 2206	1256 1905	3.0E 2.5F	<b>8</b> Sa	1127 1758 2317	1507 2057	3.1E 2.3F	<b>23</b> Su	1055 1723 2241	1334 1942	3.1E 2.6F
<b>9</b> Tu	1032 1657 2245	1359 2011	3.5E 3.4F	<b>24</b> W	1000 1619 2155	1227 1839	2.9E 2.7F	<b>9</b> F	1153 1822 2347	1525 2118	3.2E 2.5F	<b>24</b> Sa	1112 1741 2254	1349 1959	3.1E 2.6F	<b>9</b> Su	1210 1842	1541 2123	2.8E 2.1F	<b>24</b> M	1145 1815 2337	1428 2038	3.2E 2.8F
<b>10</b> W	1124 1750 2331	1451 2057	3.5E 3.2F	<b>25</b> Th	1045 1707 2234	1317 1930	3.0E 2.7F	<b>10</b> Sa	1239 1910	1607 2149	3.0E 2.3F	<b>25</b> Su	1202 1834 2347	1439 2051	3.2E 2.7F	<b>10</b> M	1251 1925	1605 2142	2.6E 2.0F	<b>25</b> Tu	1237 1908	1517 2130	3.3E 2.9F
<b>11</b> Th	1215 1843	1538 2136	3.3E 2.9F	<b>26</b> F	1131 1758 2316	1407 2020	3.1E 2.7F	<b>11</b> Su	1323 1955	1654 2214	2.7E 2.0F	<b>26</b> M	1254 1926	1527 2141	3.2E 2.7F	<b>11</b> Tu	1329 2005	1615 2212	2.4E 2.0F	<b>26</b> W	1329 2001	1608 2224	3.3E 3.0F
<b>12</b> F	1305 1933	1628 2213	3.1E 2.5F	<b>27</b> Sa	1220 1850	1454 2107	3.2E 2.7F	<b>12</b> M	1405 2038	1747 2247	2.4E 1.8F	<b>27</b> Tu	1347 2019	1620 2234	3.1E 2.7F	<b>12</b> W	1406 2044	1643 2251	2.4E 1.9F	<b>27</b> Th	1420 2053	1711 2326	3.2E 3.0F
<b>13</b> Sa	1353 2021	1730 2249	2.8E 2.2F	<b>28</b> Su	1311 1942	1541 2155	3.1E 2.7F	<b>13</b> Tu	1446 2121	1827 2328	2.2E 1.7F	<b>28</b> W	1441 2114	1728 2336	3.0E 2.7F	<b>13</b> Th	1444 2125	1724 2336	2.3E 1.9F	<b>28</b> F	1514 2148	1822	3.2E
<b>14</b> Su	1439 2108	1827 2329	2.5E 1.8F	<b>29</b> M	1404 2035	1635 2248	2.9E 2.5F	<b>14</b> W	1530 2207	1844	2.1E	<b>29</b> Th	1539 2212	1840	3.0E	<b>14</b> F	1524 2208	1808	2.4E	<b>29</b> Sa	1611 2245	1917	3.2E
<b>15</b> M	1527 2157	1911 2357	2.3E 2.3E	<b>30</b> Tu	1501 2132	1742 2348	2.8E 2.4F	<b>15</b> Th	1616 2255	1904	2.1E	<b>30</b> F	1640 2312	1940	3.0E	<b>15</b> Sa	1609 2253	1850	2.4E	<b>30</b> Su	1709 2342	2011	3.1E
				<b>31</b> W	0256 0924 1603 2233	0536 1215	3.0E 3.2F 2.8E													<b>31</b> M	0601 1220 1804	0930 1545 2118	2.8E 2.5F 3.0E

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.













# Port Everglades Entrance, Florida, 2018

F—Flood, Dir. 257° True    E—Ebb, Dir. 075° True

July				August				September																						
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum																
	h	m	knots		h	m	knots		h	m	knots		h	m	knots															
1 Su	0518	0734	0.4F	16 M	0552	0852	0.7F	1 W	0612	0840	0.5F	16 Th	0711	1028	0.6F	1 Sa	0710	0950	0.6F	16 Su	0134	0408	0.5E							
	1052	1331	0.6E		1142	1420	0.8E		1202	1436	0.7E		1313	1550	0.6E		1315	1548	0.7E		1425	1655	0.5E	0816	1129	0.5F				
	1723	2000	0.6F		1811	2115	0.8F		1829	2056	0.6F		1938	2236	0.5F		1940	2203	0.5F		2053	2309	0.3F	1425	1655	0.5E				
	2329																							2053	2309	0.3F				
2 M	0600	0816	0.5F	17 Tu	0648	0955	0.7F	2 Th	0654	0925	0.6F	17 F	0803	1126	0.6F	2 Su	0801	1043	0.6F	17 M	0910	1224	0.5F	17 M	0227	0505	0.5E			
	1135	1414	0.6E		1241	1518	0.7E		1247	1522	0.6E		1409	1705	0.6E		1410	1643	0.6E		1511	1740	0.6E		0910	1224	0.5F	0910	1224	0.5F
	1807	2039	0.6F		1908	2213	0.7F		1915	2140	0.5F		2034	2334	0.4F		2034	2334	0.4F		2035	2256	0.5F		1521	1757	0.4E	1521	1757	0.4E
3 Tu	0006	0238	0.6E	18 W	0107	0348	0.7E	3 F	0051	0339	0.7E	18 Sa	0216	0512	0.6E	3 M	0205	0501	0.7E	18 Tu	0325	0605	0.4E	18 Tu	0004	0304	0.3F			
	0643	0901	0.5F		0742	1059	0.7F		0738	1014	0.6F		0858	1224	0.6F		0900	1140	0.6F		1511	1740	0.6E		0325	0605	0.4E	0325	0605	0.4E
	1221	1459	0.6E		1340	1632	0.7E		1337	1614	0.6E		1506	1835	0.5E		1511	1740	0.6E		1618	2007	0.4E		1006	1333	0.5F	1006	1333	0.5F
	1853	2123	0.6F		2006	2314	0.6F		2004	2228	0.5F		2131				2137	2353	0.5F		2248				1618	2007	0.4E	1618	2007	0.4E

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.







# Miami Harbor Entrance, Florida, 2018

F—Flood, Dir. 293° True    E—Ebb, Dir. 113° True

July				August				September							
Slack		Maximum													
h	m	h	m	knots	h	m	h	m	knots	h	m	h	m	knots	
<b>1</b> Su	0545 1133 1756	0816 1423 2041	1.9F 2.4E 2.3F	<b>16</b> M	0615 1215 1836	0905 1527 2129	2.8F 3.0E 2.9F	<b>1</b> W	0014 0636 1233 1849	0256 0912 1512 2129	2.5E 2.2F 2.4E 2.2F	<b>16</b> Th	0103 0738 1342 2001	0425 1031 1659 2241	2.8E 2.6F 2.3E 2.2F
<b>2</b> M	0007 0625 1214 1838	0248 0857 1457 2119	2.2E 1.9F 2.3E 2.2F	<b>17</b> Tu	0043 0711 1312 1932	0400 1001 1624 2220	3.0E 2.7F 2.7E 2.6F	<b>2</b> Th	0050 0718 1316 1935	0332 0954 1553 2211	2.4E 2.2F 2.2E 2.2F	<b>17</b> F	0152 0832 1436 2057	0528 1126 1813 2334	2.5E 2.3F 2.0E 1.8F
<b>3</b> Tu	0045 0709 1258 1922	0321 0939 1535 2200	2.2E 1.9F 2.2E 2.1F	<b>18</b> W	0133 0808 1409 2030	0500 1100 1736 2314	2.8E 2.5F 2.3E 2.3F	<b>3</b> F	0128 0804 1405 2024	0414 1039 1642 2258	2.4E 2.2F 2.1E 2.0F	<b>18</b> Sa	0243 0927 1534 2154	0639 1229 1919	2.2E 2.0F 1.9E
<b>4</b> W	0125 0755 1346 2010	0401 1023 1621 2244	2.2E 1.9F 2.0E 2.0F	<b>19</b> Th	0225 0905 1509 2127	0612 1205 1849	2.6E 2.3F 2.2E	<b>4</b> Sa	0211 0854 1501 2119	0505 1130 1743 2349	2.3E 2.2F 1.9E 1.9F	<b>19</b> Su	0339 1023 1637 2254	0739 1339 2017	2.1E 1.9F 1.8E
<b>5</b> Th	0207 0843 1438 2101	0448 1111 1717 2332	2.1E 1.9F 1.9E 1.9F	<b>20</b> F	0320 1002 1613 2227	0715 1313 1950	2.0F 2.5E 2.1E	<b>5</b> Su	0303 0950 1606 2220	0606 1226 1852	2.3E 2.2F 1.9E	<b>20</b> M	0439 1120 1738 2353	0835 1451 2113	2.0E 1.8F 1.8E
<b>6</b> F	0253 0933 1538 2156	0546 1204 1823	2.1E 1.9F 1.8E	<b>21</b> Sa	0419 1059 1716 2327	0812 1422 2047	1.7F 2.4E 2.0E	<b>6</b> M	0405 1050 1715 2325	0046 0711 1326 1947	1.9F 2.3E 2.2F 1.9F	<b>21</b> Tu	0538 1216 1832	0930 1555 2208	2.0E 1.9F 1.9E
<b>7</b> Sa	0347 1027 1642 2255	0647 1300 1928	1.8F 2.2E 1.9E	<b>22</b> Su	0517 1154 1812	0906 1528 2143	2.3E 2.1F 2.0E	<b>7</b> Tu	0513 1153 1818	0815 1433 2114	2.5E 2.3F 2.1E	<b>22</b> W	0631 1308 1919	1022 1644 2256	2.1E 2.1F 2.0E
<b>8</b> Su	0446 1123 1745 2355	0744 1359 2030	1.8F 2.3E 2.0E	<b>23</b> M	0611 1247 1902	0350 1023 2236	1.6F 2.3E 2.1E	<b>8</b> W	0029 0618 1255 1916	0256 0926 1549 2228	2.0F 2.7E 2.6F 2.4E	<b>23</b> Th	0139 0720 1356 2003	0501 1108 1724 2338	1.7F 2.3E 2.2F 2.1E
<b>9</b> M	0545 1220 1843	0843 1504 2138	1.9F 2.5E 2.2E	<b>24</b> Tu	0118 0700 1336 1948	0441 1050 1707 2323	1.7F 2.3E 2.3F 2.2E	<b>9</b> Th	0130 0719 1354 2012	0409 1040 1654 2330	2.2F 2.9E 2.9F 2.7E	<b>24</b> F	0224 0806 1440 2044	0537 1148 1757	1.9F 2.4E 2.3F
<b>10</b> Tu	0054 0641 1317 1938	0324 0947 1611 2244	2.0F 2.7E 2.7E 2.5E	<b>25</b> W	0207 0745 1422 2031	0522 1134 1745	1.8F 2.4E 2.4F	<b>10</b> F	0228 0818 1451 2105	0510 1142 1745	2.6F 3.2E 3.1F	<b>25</b> Sa	0304 0851 1520 2123	0605 1224 1822	2.3E 2.0F 2.5E 2.4F
<b>11</b> W	0152 0736 1412 2032	0426 1051 1706 2343	2.3F 3.0E 3.0F 2.7E	<b>26</b> Th	0251 0829 1504 2112	0055 1212 1817	2.2E 2.4E 2.4F	<b>11</b> Sa	0321 0916 1543 2155	0604 1239 1835	2.8F 3.3E 3.2F	<b>26</b> Su	0342 0933 1557 2200	0628 1254 1843	2.2F 2.5E 2.4F
<b>12</b> Th	0246 0832 1506 2125	0521 1150 1756	2.5F 3.2E 3.2F	<b>27</b> F	0330 0912 1543 2151	0621 1246 1843	2.0F 2.5E 2.4F	<b>12</b> Su	0412 1012 1633 2243	0658 1333 1926	3.0F 3.4E 3.2F	<b>27</b> M	0417 1013 1632 2235	0655 1320 1910	2.3F 2.6E 2.4F
<b>13</b> F	0339 0929 1558 2216	0612 1247 1847	2.7F 3.3E 3.3F	<b>28</b> Sa	0407 0953 1619 2228	0646 1314 1908	2.0F 2.5E 2.4F	<b>13</b> M	0502 1105 1723 2330	0205 0754 1424 2018	3.4E 3.0F 3.3E 3.0F	<b>28</b> Tu	0452 1052 1706 2309	0728 1346 1944	2.3F 2.6E 2.4F
<b>14</b> Sa	0429 1024 1650 2305	0707 1342 1941	2.8F 3.4E 3.2F	<b>29</b> Su	0443 1033 1655 2303	0717 1339 1938	2.1F 2.5E 2.4F	<b>14</b> Tu	0553 1157 1814	0251 0850 1512 2107	3.3E 3.0F 3.0E 2.8F	<b>29</b> W	0527 1130 1742 2343	0806 1416 2021	2.4F 2.6E 2.4F
<b>15</b> Su	0521 1119 1742 2354	0806 1435 2037	2.8F 3.3E 3.1F	<b>30</b> M	0519 1113 1731 2339	0753 1405 2013	2.1F 2.5E 2.3F	<b>15</b> W	0016 0645 1249 1907	0336 0941 1600 2154	3.1E 2.8F 2.7E 2.5F	<b>30</b> Th	0604 1209 1822	0845 1451 2101	2.4F 2.5E 2.3F
				<b>31</b> Tu	0556 1152 1809	0832 1436 2050	2.4E 2.1F 2.3F					<b>31</b> F	0018 0645 1252 1906	0306 0927 1529 2144	2.7E 2.4F 2.4E 2.3F

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.







# Key West, Florida, 2018

F—Flood, Dir. 020° True      E—Ebb, Dir. 195° True

July				August				September																
Slack	Maximum		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										
<b>1</b> Su	0033 0651 1226 1850	0323 0928 1518 2140	1.8E 1.4F 2.0E 1.5F	<b>16</b> M	0053 0659 1254 1917	0337 0950 1546 2212	1.9E 1.5F 2.1E 1.5F	<b>1</b> W	0113 0746 1329 1945	0403 1020 1616 2226	1.7E 1.2F 1.6E 1.3F	<b>16</b> Th	0136 0812 1423 2027	0431 1056 1703 2325	1.8E 1.2F 1.4E 1.1F	<b>1</b> Sa	0141 0827 1438 2051	0449 1105 1726 2324	1.8E 1.2F 1.3E 1.1F	<b>16</b> Su	0212 0917 1546 2152	0523 1144 1837 2152	1.5E 0.9F 0.9E 0.9E	
<b>2</b> M	0113 0738 1312 1937	0401 1012 1601 2220	1.7E 1.3F 1.8E 1.4F	<b>17</b> Tu	0136 0751 1349 2010	0421 1040 1637 2252	1.8E 1.4F 1.8E 1.3F	<b>2</b> Th	0146 0829 1414 2030	0442 1059 1702 2308	1.6E 1.1F 1.4E 1.2F	<b>17</b> F	0211 0904 1520 2120	0515 1141 1801 2338	1.6E 1.0F 1.1E 0.9F	<b>2</b> Su	0224 0922 1549 2204	0541 1200 1832 2204	1.7E 1.1F 1.1E 1.1E	<b>17</b> M	0306 1019 1700 2306	0622 1249 2025 2306	1.3E 0.8F 0.8F 0.9E	
<b>3</b> Tu	0151 0825 1359 2025	0440 1056 1646 2302	1.5E 1.1F 1.5E 1.2F	<b>18</b> W	0217 0844 1447 2104	0508 1133 1734 2335	1.6E 1.2F 1.5E 1.1F	<b>3</b> F	0222 0916 1508 2124	0526 1145 1756 2357	1.5E 1.0F 1.2E 1.0F	<b>18</b> Sa	0251 1001 1630 2224	0606 1237 1921 2224	1.4E 0.9F 0.9E 0.9E	<b>3</b> M	0321 1029 1714 2325	0643 1308 1955 2325	1.6E 1.1F 1.0E 1.0E	<b>18</b> Tu	0420 1128 1812	0733 1509 2145	1.2E 0.8F 1.1E	
<b>4</b> W	0230 0915 1449 2116	0524 1143 1737 2348	1.4E 1.0F 1.3E 1.1F	<b>19</b> Th	0259 0942 1554 2202	0601 1235 1842 2202	1.5E 1.0F 1.2E 1.2E	<b>4</b> Sa	0305 1010 1619 2234	0618 1239 1901 2234	1.5E 1.0F 1.0E 1.0E	<b>19</b> Su	0345 1104 1746 2335	0706 1427 2105 2335	1.3E 0.8F 0.9E 1.1E	<b>4</b> Tu	0439 1142 1833	0754 1453 2137	1.6E 1.2F 1.2E	<b>19</b> W	0542 1232 1911	0904 1626 2240	1.3E 1.1F 1.4E	
<b>5</b> Th	0313 1009 1549 2213	0613 1234 1835	1.3E 0.9F 1.1E	<b>20</b> F	0346 1045 1709 2305	0700 1359 2010 2305	1.4E 0.9F 1.0E	<b>5</b> Su	0401 1111 1741 2349	0718 1345 2020 2349	1.5E 1.0F 1.0E	<b>20</b> M	0456 1206 1852	0818 1608 2214	1.3E 0.9F 1.1E	<b>5</b> W	0601 1249 1937	0912 1636 2246	1.7E 1.4F 1.5E	<b>20</b> Th	0651 1328 2000	1021 1711 2323	1.5E 1.3F 1.7E	
<b>6</b> F	0402 1105 1701 2317	0707 1332 1941 2317	0.9F 1.3E 0.8F 1.0E	<b>21</b> Sa	0442 1147 1823	0807 1538 2138	1.3E 0.9F 1.0E	<b>6</b> M	0511 1212 1854	0823 1521 2152	1.6E 1.1F 1.2E	<b>21</b> Tu	0609 1302 1945	0941 1659 2304	1.4E 1.2F 1.4E	<b>6</b> Th	0712 1349 2030	1025 1731 2334	2.0E 1.7F 1.8E	<b>21</b> F	0748 1417 2042	1109 1746 2359	1.8E 1.5F 1.8E	
<b>7</b> Sa	0500 1200 1812	0806 1444 2057	1.3E 0.9F 1.1E	<b>22</b> Su	0500 1244 1924	0806 1642 2237	0.7F 1.4E 1.2E	<b>7</b> Tu	0557 1309 1954	0822 1644 2257	0.9F 1.8E 1.5E	<b>22</b> W	0712 1352 2030	1040 1737 2346	1.6E 1.4F 1.7E	<b>7</b> F	0813 1443 2117	1123 1816 2117	2.3E 1.9F	<b>22</b> Sa	0837 1459 2119	1147 1816 2119	2.0E 1.6F	
<b>8</b> Su	0558 1250 1915	0906 1602 2211	1.5E 1.1F 1.3E	<b>23</b> M	0542 1333 2013	0855 1725 2324	0.8F 1.6E 1.5E	<b>8</b> W	0621 1402 2047	0932 1735 2345	0.9F 2.0E 1.8E	<b>23</b> Th	0806 1437 2111	1124 1809	1.9E 1.6F	<b>8</b> Sa	0908 1532 2159	1213 1858	2.5E 1.9F	<b>23</b> Su	0920 1538 2153	1221 1841 2153	2.1E 1.6F 1.6F	
<b>9</b> M	0652 1335 2010	1003 1654 2306	1.8E 1.4F 1.6E	<b>24</b> Tu	0735 1416 2055	1101 1759	1.8E 1.5F	<b>9</b> Th	0821 1453 2135	1129 1821	2.3E 1.9F	<b>24</b> F	0954 1519 2148	1202 1840	2.0E 1.7F	<b>9</b> Su	1055 1618 2238	1300 1937	2.5E 1.8F	<b>24</b> M	1000 1614 2224	1255 1906 2224	2.1E 1.6F 1.6F	
<b>10</b> Tu	0744 1420 2101	1053 1735 2353	2.1E 1.7F 1.8E	<b>25</b> W	0824 1457 2135	1139 1828	2.0E 1.6F	<b>10</b> F	0915 1542 2220	1219 1906	2.5E 2.0F	<b>25</b> Sa	1000 1600 2224	1203 1910	2.0E 1.7F	<b>10</b> M	1100 1701 2315	1300 2011	2.5E 1.7F	<b>25</b> Tu	1039 1649 2255	1329 1934 2255	2.1E 1.6F	
<b>11</b> W	0834 1505 2149	1141 1817	2.3E 1.9F	<b>26</b> Th	0910 1537 2213	1217 1857	2.1E 1.7F	<b>11</b> Sa	1008 1631 2304	1308 1952	2.6E 1.9F	<b>26</b> Su	1021 1639 2259	1317 1939	2.2E 1.7F	<b>11</b> Tu	1136 1744 2350	1427 2040	2.2E 1.6F	<b>26</b> W	1117 1724 2325	1406 2007 2325	2.0E 1.6F	
<b>12</b> Th	0924 1552 2236	1228 1903	2.5E 2.0F	<b>27</b> F	0955 1618 2251	1256 1929	2.2E 1.7F	<b>12</b> Su	1059 1719 2345	1357 2034	2.5E 1.8F	<b>27</b> M	1102 1717 2332	1354 2010	2.1E 1.7F	<b>12</b> W	1223 1825	1508 2108	1.9E 1.4F	<b>27</b> Th	1156 1802 2357	1444 2043	1.9E 1.6F	
<b>13</b> F	1015 1640 2322	0713 1317 1954 2322	1.5F 2.6E 2.0F	<b>28</b> Sa	1039 1700 2328	1336 2004	2.2E 1.7F	<b>13</b> M	1150 1807	1443 2111	2.3E 1.7F	<b>28</b> Tu	1142 1754	1431 2041	2.0E 1.6F	<b>13</b> Th	1309 1908	1549 2140	1.6E 1.3F	<b>28</b> F	1238 1844	1525 2124	1.8E 1.5F	
<b>14</b> Sa	1107 1731	0209 0807 1407 2044	2.1E 1.6F 2.5E 1.9F	<b>29</b> Su	1053 1123 1742	0825 1416 2039	1.5F 2.1E 1.6F	<b>14</b> Tu	1240 1853	1528 2143	2.1E 1.5F	<b>29</b> W	1221 1831	1509 2115	1.9E 1.5F	<b>14</b> F	1355 1954	1633 2219	1.3E 1.2F	<b>29</b> Sa	1325 1933	1611 2209	1.6E 1.3F	
<b>15</b> Su	1200 1824	0253 0900 1456 2130	2.0E 1.5F 2.4E 1.7F	<b>30</b> M	1205 1205 1823	0256 0905 2114	1.9E 1.5F 1.6F	<b>15</b> W	1331 1939	1614 2215	1.7E 1.3F	<b>30</b> Th	1301 1910	1548 2152	1.7E 1.4F	<b>15</b> Sa	1445 2047	1725 2306	1.1E 1.0F	<b>30</b> Su	1420 2033	1705 2301	1.4E 1.1F	
				<b>31</b> Tu	0040 0704 1247 1904	0329 0943 1535 2148	1.8E 1.4F 1.8E 1.5F					<b>31</b> F	0106 0743 1345 1955	0406 1020 1633 2234	1.9E 1.3F 1.5E 1.3F									

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.



# Tampa Bay Entrance (Egmont Channel), Florida, 2018

F—Flood, Dir. 120° True    E—Ebb, Dir. 298° True

January				February				March															
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum									
h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m								
1	0014	0403	2.7E	16	0042	0434	2.0E	1	0153	0538	2.4E	16	0154	0527	1.9E	1	0108	0444	2.2E	16	0110	0432	1.7E
M	0825	1140	2.1F	Tu	0851	1201	1.6F	Th	0939	1245	1.9F	F	0917	1224	1.6F	Th	0836	1138	1.9F	F	0814	1118	1.6F
○	1700	*		●	1701	1735	*		1626	1822	0.6E		1552	1809	0.7E	○	1501	1719	0.8E		1430	1704	0.9E
	2221	1.4F			2241	1.2F			2027	2358	1.5F		2033	2351	1.4F		1951	2312	1.6F		1953	2305	1.5F
2	0100	0452	2.7E	17	0118	0507	2.0E	2	0246	0624	2.2E	17	0237	0602	1.8E	2	0200	0527	2.0E	17	0152	0504	1.6E
Tu	0912	1225	2.0F	W	0919	1231	1.6F	F	1014	1322	1.8F	Sa	0941	1251	1.6F	F	0906	1208	1.8F	Sa	0835	1140	1.6F
	1750	*			1639	1808	0.3E		1652	1904	0.8E		1610	1838	0.9E		1522	1755	1.1E		1444	1730	1.2E
	2306	1.4F			1940	2318	1.2F		2129				2119				2043	2358	1.6F		2032	2344	1.5F
3	0148	0543	2.6E	18	0157	0543	2.0E	3		0051	1.3F	18		0035	1.4F	3	0251	0607	1.8E	18	0238	0540	1.5E
W	0958	1312	1.9F	Th	0947	1301	1.6F	Sa	0342	0709	1.9E	Su	0324	0639	1.7E	Sa	0932	1237	1.7F	Su	0857	1205	1.6F
	1841	*			1701	1842	0.3E		1045	1358	1.6F		1007	1320	1.6F		1545	1831	1.3E		1503	1759	1.4E
	2356	1.3F			2027	2358	1.2F		1719	1947	0.9E		1632	1911	1.1E		2134				2114		

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 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.





# Tampa Bay Entrance (Egmont Channel), Florida, 2018

F—Flood, Dir. 120° True     E—Ebb, Dir. 298° True

October				November				December															
Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		knots												
h m	h m	h m		h m	h m	h m		h m	h m	h m													
<b>1</b> M	0527 1344	0910 1716	0.9F 1.7E 1.2F*	<b>16</b> O	0558 1447	1002 1835	0.6F 1.1E 0.9F	<b>1</b> Th	0743 1554 2319	1156 1925	0.6F 1.4E 1.4F	<b>16</b> F	0253 0802 1534 2258	0532 1204 1916	0.4F 0.9E 1.1F	<b>1</b> Sa	0402 0941 1552 2238	0657 1248 1925	0.7F 0.9E 1.3F	<b>16</b> Su	0337 0906 1451 2153	0619 1207 1829	0.6F 0.7E 1.1F
<b>2</b> Tu	0628 1512	1033 1848	0.8F 1.5E 1.2F	<b>17</b> W	0713 1600	1149 1948	0.5F 1.0E 1.0F	<b>2</b> F	0348 0937 1653 2338	0700 1316 2018	0.7F 1.3E 1.4F	<b>17</b> Sa	0417 0950 1621 2315	0708 1310 1958	0.6F 0.9E 1.1F	<b>2</b> Su	0520 1121 1637 2306	0824 1352 2011	1.0F 0.8E 1.3F	<b>17</b> M	0446 1053 1532 2220	0749 1311 1916	0.8F 0.5E 1.1F
<b>3</b> W	0753 1633	1214 2005	0.7F 1.6E 1.3F	<b>18</b> Th	0858 1700	1311 2036	1.1E 1.1F	<b>3</b> Sa	0511 1108 1741 2359	0824 1417 2058	1.1F 1.3E 1.5F	<b>18</b> Su	0517 1111 1701 2330	0821 1400 2031	0.9F 0.9E 1.2F	<b>3</b> M	0618 1236 1714 2334	0924 1446 2049	1.4F 0.6E 1.3F	<b>18</b> Tu	0541 1218 1609 2248	0855 1405 2000	1.1F 0.4E 1.1F
<b>4</b> Th	0935 1737	1334 2058	0.8F 1.6E 1.5F	<b>19</b> F	1029 1745	1406 2108	1.1E 1.2F	<b>4</b> Su	0611 1217 1818	0923 1506 2130	1.4F 1.2E 1.5F	<b>19</b> M	0603 1213 1733 2346	0913 1443 2059	1.2F 0.8E 1.2F	<b>4</b> Tu	0704 1338 1744	1012 1532 2121	1.6F 0.5E 1.3F	<b>19</b> W	0627 1318 1643 2318	0944 1454 2039	1.5F 0.3E 1.2F
<b>5</b> F	0036 0442 1059 1827	0230 0819 1435 2137	0.4E 1.1F 1.8E 1.6F	<b>20</b> Sa	0025 0534 1132 1819	0249 0847 1447 2133	0.7E 1.0F 1.2E 1.3F	<b>5</b> M	0019 0659 1315 1846	0325 1010 1549 2158	1.6E 1.7F 1.1E 1.5F	<b>20</b> Tu	0642 1305 1800	0955 1521 2125	1.5F 0.8E 1.3F	<b>5</b> W	0000 0744 1432 1810	0337 1052 1614 2149	2.0E 1.8F 0.4E 1.3F	<b>20</b> Th	0710 1417 1713 2352	1027 1539 2116	1.7F 0.3E 1.3F
<b>6</b> Sa	0052 0552 1205 1907	0310 0919 1524 2209	0.8E 1.4F 1.8E 1.7F	<b>21</b> Su	0036 0617 1221 1846	0316 0929 1522 2153	0.9E 1.2F 1.2E 1.4F	<b>6</b> Tu	0040 0741 1408 1909	0357 1052 1629 2223	1.8E 1.8F 0.9E 1.5F	<b>21</b> W	0004 0719 1356 1823	0325 1033 1559 2151	1.9E 1.7F 0.7E 1.3F	<b>6</b> Th	0027 0820 1524 1834	0408 1130 1654 2216	2.1E 1.8F 0.3E 1.3F	<b>21</b> F	0752 1109 1624 2153	1091 1597 19* 1.4F	
<b>7</b> Su	0109 0646 1301 1938	0346 1008 1608 2237	1.1E 1.7F 1.7E 1.7F	<b>22</b> M	0046 0653 1304 1907	0339 1006 1553 2213	1.2E 1.5F 1.2E 1.4F	<b>7</b> W	0103 0820 1500 1929	0427 1132 1708 2247	2.0E 1.8F 0.7E 1.4F	<b>22</b> Th	0027 0756 1449 1844	0355 1113 1639 2219	2.1E 1.8F 0.5E 1.4F	<b>7</b> F	0054 0854 1734 2245	0439 1207 1734 2245	2.2E 1.7F 1.3F	<b>22</b> Sa	0029 0835 1711 2232	0415 1152 1711 2232	2.6E 2.0F 2.0*
<b>8</b> M	0128 0733 1353 2004	0419 1051 1648 2303	1.4E 1.9F 1.5E 1.6F	<b>23</b> Tu	0058 0727 1348 1927	0401 1042 1626 2234	1.5E 1.7F 1.1E 1.4F	<b>8</b> Th	0127 0857 1553 1949	0459 1212 1747 2313	2.1E 1.8F 0.5E 1.3F	<b>23</b> F	0055 0837 1548 1906	0430 1156 1722 2250	2.4E 1.9F 0.4E 1.4F	<b>8</b> Sa	0124 0927 1815 2317	0512 1245 1815 2317	2.2E 1.6F 1.6*	<b>23</b> Su	0111 0921 1801 2315	0501 1238 1801 2315	2.6E 1.9F 1.9*
<b>9</b> Tu	0149 0817 1445 2026	0453 1134 1728 2328	1.7E 1.9F 1.3E 1.5F	<b>24</b> W	0114 0802 1434 1947	0426 1119 1701 2257	1.7E 1.8F 1.0E 1.4F	<b>9</b> F	0154 0935 1650 2012	0532 1254 1828 2341	2.1E 1.6F 0.4E 1.2F	<b>24</b> Sa	0129 0922 1809 2326	0511 1244 1909 2326	2.5E 1.9F 1.8*	<b>9</b> Su	0158 1003 1858 2354	0549 1326 1858 2354	2.1E 1.5F 1.5*	<b>24</b> M	0158 1008 1852	0551 1328 1852	2.6E 1.9F 1.9*
<b>10</b> W	0212 0900 1538 2047	0526 1217 1807 2354	1.8E 1.8F 1.0E 1.4F	<b>25</b> Th	0136 0840 1526 2008	0456 1159 1739 2324	2.0E 1.8F 0.8E 1.4F	<b>10</b> Sa	0224 1016	0608 1341 1913	2.1E 1.5F	<b>25</b> Su	0208 1012	0557 1338 1901	2.5E 1.8F	<b>10</b> M	0236 1041	0628 1409 1944	2.0E 1.5F	<b>25</b> Tu	0251 1057	0643 1419 1946	1.3F 2.4E 1.8F*
<b>11</b> Th	0238 0945 1635 2108	0601 1303 1848	1.9E 1.6F 0.7E	<b>26</b> F	0203 0923 1626 2029	0532 1245 1822 2355	2.1E 1.7F 0.6E 1.3F	<b>11</b> Su	0300 1100	0016 1433 2002	1.1F 1.4F*	<b>26</b> M	0255 1107	0648 1438 1957	1.2F 1.7F*	<b>11</b> Tu	0319 1121	0038 1454 2032	1.0F 1.4F*	<b>26</b> W	0349 1145 1904 2238	0737 1509 2043	2.1E 1.7F 0.3E
<b>12</b> F	0308 1031 1738 2131	0638 1355 1931	1.9E 1.4F 0.5E	<b>27</b> Sa	0237 1012 1736 2051	0613 1340 1909 2051	2.2E 1.7F 0.3E	<b>12</b> M	0341 1149	0057 1528 2059	0.9F 1.7E 1.2F*	<b>27</b> Tu	0348 1206	0103 1538 2103	1.0F 1.6F*	<b>12</b> W	0407 1203	0130 1536 2127	0.8F 1.7E*	<b>27</b> Th	0454 1231 1938	0833 1556 2147	1.7E 1.5F 0.5E
<b>13</b> Sa	0342 1122	0717 1453 2019	1.1F 1.7E 1.2F*	<b>28</b> Su	0317 1109	0659 1443 2002	2.2E 1.5F*	<b>13</b> Tu	0427 1244	0148 1625 2213	0.8F 1.5E 1.2F*	<b>28</b> W	0450 1306	0212 1636 2225	0.8F 1.8E 1.5F*	<b>13</b> Th	0459 1245 2027	0843 1618 2228	0.7F 1.4E 0.3E	<b>28</b> F	0608 1315 2013	0936 1641 2259	1.3E 1.4F 0.8E
<b>14</b> Su	0420 1221	0133 0759 1558 2119	1.0F 1.6E 1.1F*	<b>29</b> M	0403 1215	0751 1551 2108	2.0E 1.4F*	<b>14</b> W	0520 1342	0251 0916 1723 2335	0.6F 1.3E 1.1F*	<b>29</b> Th	0604 1405 2138	0336 0959 1734 2350	0.7F 1.5E 1.4F 0.4E	<b>14</b> F	0040 0559 1327 2058	0336 0941 1659 2331	0.6F 1.1E 1.2F 0.5E	<b>29</b> Sa	0215 0504 1355 2052	0504 1051 1728	0.7F 0.8E 1.2F
<b>15</b> M	0504 1331	0219 0850 1711 2246	0.8F 1.3E 1.0F*	<b>30</b> Tu	0459 1329	0853 1704 2242	1.8E 1.3F*	<b>15</b> Th	0628 1440 2238	1037 1822	0.5F 1.0E 1.1F	<b>30</b> F	0216 0742 1501 2208	0512 1128 1831	0.6F 1.1E 1.3F	<b>15</b> Sa	0213 0718 1410 2126	0450 1052 1743	0.5F 0.9E 1.1F	<b>30</b> Su	0354 0950 1433 2132	0647 1213 1819	0.7F 0.5E 1.1F
				<b>31</b> W	0608 1444	0332 1016 1818	0.7F 1.5E 1.3F												<b>31</b> M	0514 1148 1510 2213	0820 1326 1913	1.0F 0.3E 1.0F	

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 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.







# Tampa Bay (Sunshine Skyway Bridge), Florida, 2018

F—Flood, Dir. 059° True    E—Ebb, Dir. 238° True

October				November				December											
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum					
h	m	h	m	knots	h	m	h	m	knots	h	m	h	m	h	m	knots			
1	M	0524	0923	1.5E	16	Tu	0536	0953	1.2E	1	Sa	0334	0624	0.6F	16	Su	0306	0548	0.6F
		1359	1727	1.0F			1448	1841	0.9F			0911	1245	1.0E			0831	1143	0.8E
			2241	*								1554	1920	1.2F			1457	1824	1.1F
2	Tu	0616	1037	1.4E	17	W	0632	1109	1.1E	2	Su	0459	0756	0.8F	17	M	0429	0719	0.7F
		1518	1858	1.1F			1552	1946	1.0F			1050	1354	0.8E			1011	1254	0.6E
												1638	2002	1.3F			1539	1909	1.1F
3	W	0729	1209	1.3E	18	Th	0755	1240	1.0E	3	M	0605	0904	1.0F	18	Tu	0537	0834	0.9F
		1629	2006	1.2F			1646	2029	1.1F			1216	1452	0.7E			1146	1402	0.5E
												1717	2039	1.3F			1618	1951	1.1F
4	Th	0904	1339	1.4E	19	F	0932	1352	1.1E	4	Tu	0659	1000	1.2F	19	W	0633	0935	1.1F
		1728	2053	1.3F			1730	2100	1.2F			1327	1541	0.6E			1310	1500	0.4E
												1752	2112	1.3F			1653	2030	1.2F
5	F	0103	0249	0.3E	20	Sa	0053	0309	0.4E	5	W	0016	0405	1.7E	20	Th	0723	1030	1.3F
		0435	0750	0.8F			0524	0817	0.7F			0745	1050	1.3F			1030	1330	1.3F
		1035	1442	1.5E			1055	1441	1.1E			1429	1626	0.4E			1551	*	
6	Sa	0110	0329	0.6E	21	Su	0057	0338	0.7E	6	Th	0044	0440	1.8E	21	F	0006	0406	1.9E
		0550	0857	1.1F			0618	0911	0.9F			0826	1135	1.4F			1120	1430	1.4F
		1151	1532	1.6E			1202	1522	1.1E			1527	1707	0.3E			1639	*	
7	Su	0125	0406	1.0E	22	M	0106	0405	1.0E	7	F	0110	0510	1.9E	22	Sa	0043	0447	2.1E
		0647	0953	1.3F			0703	0959	1.1F			0905	1217	1.4F			0855	1208	1.5F
		1255	1616	1.5E			1300	1559	1.1E			1745	*						
8	M	0142	0440	1.3E	23	Tu	0119	0431	1.3E	8	Sa	0138	0538	1.9E	23	Su	0124	0530	2.2E
		0737	1043	1.5F			0744	1044	1.3F			0943	1257	1.4F			0941	1254	1.5F
		1352	1657	1.4E			1352	1636	1.0E			1820	*						
9	Tu	0203	0514	1.5E	24	W	0137	0458	1.5E	9	Su	0207	0606	1.9E	24	M	0210	0615	2.2E
		0824	1132	1.6F			0825	1128	1.4F			1020	1336	1.3F			1028	1340	1.5F
		1447	1736	1.2E			1445	1713	0.8E			1856	*						
10	W	0226	0547	1.7E	25	Th	0158	0528	1.7E	10	M	0240	0638	1.8E	25	Tu	0300	0003	1.3F
		0911	1219	1.5F			0907	1213	1.4F			1057	1415	1.3F			1115	1426	1.4F
		1541	1814	0.9E			1541	1752	0.7E			1934	*						
11	Th	0250	0620	1.7E	26	F	0223	0600	1.8E	11	Tu	0317	0714	1.8E	26	W	0355	0058	1.2F
		0958	1306	1.5F			0953	1301	1.4F			1134	1456	1.2F			1201	1513	1.4F
		1640	1852	0.7E			1643	1832	0.4E			2019	*						
12	F	0317	0653	1.7E	27	Sa	0252	0637	1.9E	12	W	0401	0756	1.7E	27	Th	0457	0850	1.6E
		1047	1356	1.3F			1042	1353	1.3F			1213	1537	1.2F			1245	1559	1.3F
		1746	1932	0.4E			1917	*			2113	*							
13	Sa	0346	0728	1.6E	28	Su	0327	0718	1.8E	13	Th	0451	0845	1.5E	28	F	0002	0316	0.9F
		1139	1454	1.1F			1138	1455	1.2F			1253	1617	1.2F			1329	1644	1.2F
			2018	*			2009	*			2210	*							
14	Su	0418	0806	1.5E	29	M	0408	0807	1.7E	14	F	0549	0940	1.3E	29	Sa	0145	0441	0.7F
		1236	1602	1.0F			1239	1605	1.2F			1333	1658	1.1F			1412	1730	1.2F
			2117	*			2119	*			2108	2309	0.3E			2102			
15	M	0453	0853	1.4E	30	Tu	0457	0909	1.6E	15	Sa	0126	0425	0.6F	30	Su	0325	0010	0.9E
		1340	1718	0.9F			1345	1717	1.1F			0700	1039	1.1E			0920	1212	0.7E
			2237	*			2246	*			1415	1740	1.1F			1455	1820	1.1F	
					31	W	0558	0310	0.7F	15	Sa	0213			31	M	0451	0752	0.8F
						1452	1827	1.2F								1109	1330	0.4E	
																1538	1911	1.1F	

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 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.

## Old Tampa Bay Entrance (Port Tampa), Florida, 2018

F—Flood, Dir. 025° True    E—Ebb, Dir. 211° True

January				February				March															
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum									
h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m								
1 M	0053	0553	1.6E	16 Tu	0110	0631	1.3E	1 Th	0243	0716	1.6E	16 F	0242	0636	1.4E	1 Th	0155	0620	1.6E	16 F	0153	0546	1.3E
○	0940	1240	1.4F	●	1005	1307	1.2F	○	1047	1343	1.4F	○	1027	1326	1.2F	○	0939	1232	1.4F	○	0918	1214	1.2F
	1624	1805	0.3E		1638	1825	0.4E		1701	1927	0.7E		1640	1918	0.8E		1547	1825	0.9E		1526	1816	1.0E
	1950	2257	1.0F		2016	2310	0.9F		2147				2150				2059	2347	1.2F		2102	2345	1.2F
2 Tu	0143	0638	1.6E	17 W	0153	0634	1.3E	2 F	0039	0039	1.2F	17 Sa	0030	0038	1.1F	2 F	0252	0653	1.5E	17 Sa	0244	0613	1.3E
	1028	1329	1.4F		1036	1341	1.2F		0339	0752	1.6E		0330	0705	1.4E		1011	1303	1.4F		0943	1235	1.2F
	1708	1855	0.4E		1705	1903	0.4E		1123	1417	1.4F		1051	1348	1.2F		1611	1906	1.1E		1545	1850	1.1E
	2042	2346	1.1F		2100	2354	1.0F		1731	2011	0.9E		1702	1953	0.9E	●	2147						
3 W	0235	0724	1.6E	18 Th	0238	0644	1.4E	3 Sa	0134	0134	1.2F	18 Su	0127	0127	1.2F	3 Sa	0039	0039	1.3F	18 Su	0033	0033	1.2F
	1113	1414	1.4F		1104	1409	1.2F		0434	0827	1.4E		0418	0742	1.3E		0345	0726	1.4E		0334	0646	1.2E
	1748	1945	0.4E		1732	1941	0.5E		1156	1449	1.3F		1116	1411	1.2F		1040	1331	1.3F		1007	1257	1.2F
	2138				2147				1802	2054	1.0E		1724	2026	1.0E		1636	1945	1.2E		1603	1921	1.2E
4 Th	0330	0808	1.6E	19 F	0325	0715	1.4E	4 Su	0230	0230	1.1F	19 M	0217	0217	1.1F	4 Su	0131	0131	1.3F	19 M	0122	0122	1.2F
	1157	1456	1.3F		1131	1434	1.2F		0531	0904	1.2E		0511	0823	1.2E		0436	0758	1.2E		0424	0724	1.1E
	1826	2034	0.5E		1759	2020	0.6E		1228	1519	1.2F		1144	1437	1.1F		1107	1357	1.2F		1031	1323	1.2F
	2238				2237				1834	2139	1.0E		1745	2058	1.0E		1701	2022	1.2E		1621	1950	1.2E

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 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.



# Old Tampa Bay Entrance (Port Tampa), Florida, 2018

F–Flood, Dir. 025° True    E–Ebb, Dir. 211° True

July				August				September																					
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum															
h	m	h	m	knots	h	m	h	m	knots	h	m	h	m	knots	h	m	h	m	knots										
<b>1</b> Su	0631	0826	0.4	1.1F	<b>16</b> M	0014	0309	1.3	F	<b>1</b> W	0003	0300	1.1	F	<b>16</b> Th	0631	0957	1.1	E	<b>1</b> Sa	0015	0313	1.0	F	<b>16</b> Su	0035	0334	0.8	F
	1020	1322	1.0	F		1119	1412	1.1	F		1205	1456	1.0	F		0605	0934	1.1	E		0621	1019	1.0	E					
	1558	1946	1.4	E		1706	2109	1.3	E		1745	2101	1.2	E		1326	1611	0.9	F		1400	1658	0.8	F		1533	1845	0.8	F
																1923	2209	0.8	E		2015	2227	0.5	E		2341		*	
<b>2</b> M	0021	0326	1.1	F	<b>17</b> Tu	0052	0346	1.2	F	<b>2</b> Th	0032	0329	1.1	F	<b>17</b> F	0103	0354	0.9	F	<b>2</b> Su	0048	0351	0.9	F	<b>17</b> M	0416	0616	0.6	F
	0700	0905	0.5	E		0707	0947	0.8	E		0647	0947	0.9	E		0704	1052	1.0	E		0639	1015	1.1	E		0657	1246	0.8	E
	1112	1412	1.0	F		1228	1512	1.0	F		1305	1552	0.9	F		1440	1735	0.8	F		1523	1833	0.8	F		1652	1959	0.9	F
	1648	2030	1.4	E		1813	2154	1.1	E		1848	2150	1.0	E		2040	2306	0.5	E		2338		*						
<b>3</b> Tu	0050	0355	1.0	F	<b>18</b> W	0129	0424	1.1	F	<b>3</b> F	0104	0402	1.0	F	<b>18</b> Sa	0136	0432	0.8	F	<b>3</b> M	0439	0720	1.1	E	<b>18</b> Tu	0057	0513	0.5	F
	0729	0947	0.6	E		0743	1043	0.9	E		0715	1029	0.9	E		0739	1210	0.9	E		0720	1116	1.0	E		0743	1447	0.9	E
	1213	1505	0.9	F		1343	1622	0.8	F		1413	1703	0.8	F		1605	1903	0.8	F		1653	2003	0.8	F		1758	2105	1.0	F
	1745	2118	1.3	E		1926	2248	0.9	E		2002	2246	0.8	E		2215		*					*					*	

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 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.





# Johns Pass Entrance, Florida, 2018

F—Flood, Dir. 053° True    E—Ebb, Dir. 222° True

April				May				June																	
Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		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											
<b>1</b> Su	0029 0658 1230 2012	0353 0845 1653 2201	0.9E 0.5F 1.4E 0.4F	<b>16</b> M	0012 0621 1145 1951	0321 0831 1619 2147	0.9E 0.6F 1.5E 0.6F	<b>1</b> Tu	0124 0648 1159 2039	0407 0850 1707 2236	0.5E 0.5F 1.7E 0.5F	<b>16</b> W	0120 0616 1142 2021	0350 0842 1644 2223	0.6E 0.6F 1.9E 0.7F	<b>1</b> F	0242 0732 1223 2140	0504 0948 1755 2331	0.3E 0.3F 1.6E 0.4F	<b>16</b> Sa	0307 0745 1305 2137	0527 1000 1758 2326	0.5E 0.5F 1.8E 0.5F		
<b>2</b> M	0120 0727 1242 2102	0433 0919 1736 2251	0.7E 0.5F 1.5E 0.4F	<b>17</b> Tu	0111 0649 1208 2041	0407 0907 1706 2238	0.7E 0.6F 1.7E 0.6F	<b>2</b> W	0216 0712 1218 2127	0445 0927 1748 2324	0.3E 0.4F 1.6E 0.5F	<b>17</b> Th	0222 0652 1220 2113	0441 0924 1732 2313	0.5E 0.6F 2.0E 0.6F	<b>2</b> Sa	0314 0818 1248 2227	0541 1033 1831 2227	0.3E 0.3F 1.4E	<b>17</b> Su	0352 0853 1401 2229	0620 1056 1844	0.5E 0.4F 1.6E		
<b>3</b> Tu	0214 0750 1252 2157	0511 0954 1818 2349	0.5E 0.4F 1.5E 0.4F	<b>18</b> W	0215 0717 1237 2135	0455 0945 1754 2334	0.6E 0.6F 1.8E 0.6F	<b>3</b> Th		0522 1005 1828 2219	* 0.4F 1.6E	<b>18</b> F	0324 0734 1303 2208	0534 1010 1820 2208	0.4E 0.6F 1.9E	<b>3</b> Su		0012 0619 1127 1906	0.4F 0.3E *	<b>18</b> M		0433 1019 1503 2323	0010 0715 1201 1931	0.4F 0.5E 0.3F 1.3E	
<b>4</b> W	0314 0805 1306 2254	0545 1032 1900	0.3E 0.4F 1.5E	<b>19</b> Th	0324 0748 1314 2234	0544 1027 1842	0.5E 0.6F 1.8E	<b>4</b> F		0016 0555 1048 1303 2312	0.4F *	<b>19</b> Sa	0424 0826 1353 2305	0625 1103 1909	0.5F 0.3E 1.7E	<b>4</b> M		0055 0659 1232 1943	0.3F 0.3E *	<b>19</b> Tu		0056 0827 1318 2024	0.3F 0.6E *		
<b>5</b> Th		0056 0615 1113 1329 2353	0.4F *	<b>20</b> F	0434 0823 1358 2336	0632 1116 1933	0.3E 0.5F 1.8E	<b>5</b> Sa		0111 0627 1140 1949	0.3F *	<b>20</b> Su	0518 0947 1455	0721 1206 2001	0.3E 0.3F 1.5E	<b>5</b> Tu		0139 0756 1349 2027	0.3F 0.4E *	<b>20</b> W		0144 1006 1506 2132	* 0.7E *		
<b>6</b> F		0209 0641 1202 2038	0.3F *	<b>21</b> Sa	0203 0726 1216 1452 2031	0.5F *	<b>6</b> Su		0209 0703 0942 1052 1248†	0.3F *	<b>21</b> M	0005 0611	0208 0841 1322 2103	0.3F 0.3E 1.3E	<b>6</b> W		0225 1002 1508 2125	* 0.4E *	<b>21</b> Th		0234 1115 1629 2256	* 0.9E *			
<b>7</b> Sa	0050	0310 0706 0945 1134 1309†	0.3F *	<b>22</b> Su	0039 0848 1330 2138	0335 *	<b>7</b> M		0258 0804 0945 1142 1410†	0.3F *	<b>22</b> Tu	0104 0707	0401 1045 1449 2214	0.3F 0.5E 1.1E	<b>7</b> Th		0308 1126 1609 2230	* 0.6E *	<b>22</b> F		0322 1206 1736	* 1.2E *			
<b>8</b> Su	0143	0356 0752 0909 1221 1429†	0.3F *	<b>23</b> M	0138 0828 1114 1450 2246	0434 1114 1450 2246	0.4F 0.3E 1.4E	<b>8</b> Tu	0146 0642	0333 1216 1529 2234	0.3F 0.3E 0.9E	<b>23</b> W		0336 1149 1618 2323	* 0.7E *	<b>8</b> F		0217 0655 1204 1704 2331	0.3F 0.9E 0.6E	<b>23</b> Sa		0012 0407 1250 1856 2215	0.5E *		
<b>9</b> M	0231 0940	0435 1256 1543 2333	0.3F 0.3E 1.2E	<b>24</b> Tu	0232 0918 1217 1606 2347	0544 1217 1606 2347	0.3F 0.5E 1.3E	<b>9</b> W	0229 0739	0405 1240 1629 2325	0.3F 0.5E 0.9E	<b>24</b> Th		0411 1237 1759	* 1.0E *	<b>9</b> Sa		0254 0750 1611 2118	0.3F 1.2E 0.4F	<b>24</b> Su		0109 0452 1330 1655 2318	0.4E *		
<b>10</b> Tu	0312 0940	0507 1323 1645	0.3F 0.4E	<b>25</b> W	0320 0954 1302 1721	0716 1302 1721	0.3F 0.8E	<b>10</b> Th	0306 0831	0439 1255 1724	0.3F 0.7E	<b>25</b> F		0023 0450 1319 1631 2155	0.8E *	<b>10</b> Su		0024 0514 1322 1654 2231	0.6E 0.4F 1.5E 0.5F	<b>25</b> M		0153 0540 1409 1738 2030	0.4E *		
<b>11</b> W	0349 0954	0015 0537 1340 1745	1.1E 0.3F 0.6E	<b>26</b> Th	0402 1024 1643 2149	0041 0805 1343 1941 2149	1.2E 0.3F 1.0E 0.3F	<b>11</b> F	0340 0911 1640 2117	0516 1318 1827	0.3F 0.9E 0.3F	<b>26</b> Sa	0406	0113 0531 0718 0757 1358†	0.7E 0.3F *	<b>11</b> M		0114 0600 1404 1739 2333	0.6E 0.4F 1.7E 0.6F	<b>26</b> Tu		0006 0450 0958 1820 2059	0.3E 0.3F 1.8E 0.6F		
<b>12</b> Th	0423 1014	0051 0610 1353 1851	1.1E 0.4F 0.7E	<b>27</b> F	0441 1049 0211 0659 1109 1821 2343	0129 0620 0717 0833 1423† 0211 0659 1502 2054 2343	1.1E 0.3F 0.3F 1.2E 0.9E 0.4F	<b>12</b> Sa	0412 0943 1719 2222	0556 1350 1928	0.4F 1.2E 0.4F	<b>27</b> Su	0441 1016 1802 2354	0616 1436 2045	0.3F 1.6E 0.5F	<b>12</b> Tu		0201 0648 1005 1447 1825 2050	0.6E 0.5F 1.9E 0.7F	<b>27</b> W		0044 0531 1035 1902 2123	0.3E 0.3F 1.8E 0.6F		
<b>13</b> F	0454 1036 1744 2223	0645 1418 1939	1.1E 0.4F 0.9E 0.3F	<b>28</b> Sa	0516 1109 1821 2343	0659 1502 2054	0.4F	<b>13</b> Su	0442 1012 1801 2322	0135 0638 1428 2013 2322	0.8E 0.4F 1.4E 0.6F	<b>28</b> M	0516 1039 1845	0234 0702 1515 2114	0.5E 0.3F 1.7E 0.6F	<b>13</b> W		0031 0515 1046 1912 2127	0.5E 0.6F 2.0E 0.7F	<b>28</b> Th		0114 0615 1110 1941 2146	0.3E 0.3F 1.7E 0.6F		
<b>14</b> Sa	0524 1059 1823 2317	0202 0721 1453 2020	1.0E 0.5F 1.1E 0.5F	<b>29</b> Su	0550 1126 1906	0250 0737 1543 2121	0.8E 0.4F 1.5E 0.5F	<b>14</b> M	0512 1040 1845	0217 0720 1510 2054	0.8E 0.5F 1.7E 0.7F	<b>29</b> Tu	0042 0549 1104 1928	0310 0746 1556 2142	0.4E 0.4F 1.7E 0.6F	<b>14</b> Th		0125 0559 1129 2000	0.39 0.6F 2.0E 0.7F	<b>29</b> F		0138 0700 1145 2020 2214	0.3E 0.3F 1.6E 0.5F		
<b>15</b> Su	0553 1122 1905	0240 0756 1533 2102	1.0E 0.5F 1.3E 0.6F	<b>30</b> M	0034 0621 1142 1952	0328 0814 1625 2155	0.6E 0.4F 1.6E 0.5F	<b>15</b> Tu	0020 0543 1109 1932	0301 0801 1556 2137	0.7E 0.6F 1.8E 0.7F	<b>30</b> W	0126 1130 2011	0347 0827 1637 2215	0.3E 0.4F 1.7E 0.6F	<b>15</b> F		0217 0649 1215 2048	0.43 0.91 1.71 2.24	0.5E 0.6F 2.0E 0.6F	<b>30</b> Sa		0200 0748 1217 2059 2245	0.4E 0.3F 1.4E 0.5F	
												<b>31</b> Th	0206 0655 1157 2055	0425 0907 1717 2251	0.3E 0.4F 1.7E 0.5F										

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 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.  
 † See page 196 for the remaining currents on this day.

# Johns Pass Entrance, Florida, 2018

F—Flood, Dir. 053° True      E—Ebb, Dir. 222° True

July				August				September																
Slack	Maximum			Slack	Maximum			Slack	Maximum			Slack	Maximum											
h m	h m	h m	knots	h m	h m	h m	knots	h m	h m	h m	knots	h m	h m	h m	knots									
1 Su	0225	0528	0.4E	16 M	0307	0612	0.7E	1 W	0225	0634	0.9E	16 Th	0246	0739	1.1E	1 Sa	0216	0752	1.4E	16 Su	1300	1522	0.3F	
		1023	*		0909	1052	0.4F			1159	*			1309	*			1201	1358	0.4F			1926	*
		1754	1.3E		1405	1818	1.3E		2141	1824	0.9E		2211	1905	0.5E			1704	1921	0.4E			2152†	*
		2320	0.4F		2147	2324	0.4F			2348	0.4F							2137					0112	*
2 M	0253	0608	0.5E	17 Tu	0337	0705	0.8E	2 Th	0245	0721	0.9E	17 F	0244	0005	0.3F	2 Su		0034	0.4F	17 M	1355	1611	0.3F	
		1115	*		1025	1156	0.3F			1305	*			0839	1.2E			0258	0854	1.5E			1005	1.4E
		1826	1.1E		1504	1900	1.0E		2211	1901	0.7E			1451	*			1302	1516	0.4F			1012	*
		2358	0.4F		2233									1943	*			2023					1157	1.4E
3 Tu	0322	0650	0.6E	18 W	0403	0006	0.3F	3 F	0307	0030	0.3F	18 Sa		0054	*	3 M		0136	0.3F	18 Tu		0019	*	
		1217	*		0805	0905	0.9E		0307	0819	1.0E			0948	1.3E			0351	1002	1.6E			0225	*
		1900	1.0E		1315	*			1237	1420	0.3F			1551	0.3F			1400	1621	0.5F			1105	1.4E
					1944	0.7E			1656	1946	0.5E			2047	*			2207	*				1658	0.3F

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 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.  
 † See page 196 for the remaining currents on this day.







## St. Andrew Bay Entrance, Florida, 2018

F—Flood, Dir. 046° True     E—Ebb, Dir. 225° True

July				August				September																					
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum															
h	m	h	m	knots	h	m	h	m	knots	h	m	h	m	knots	h	m	h	m	knots										
1	Su	1122	1618	2.4E	16	M	1211	1704	2.3E	1	W	1206	1657	1.5E	16	Th	0848	1032	0.4F	1	Sa	1326	1612	0.5F	16	Su	0202	0622	1.6E
2	M	1151	1644	2.3E	17	Tu	1244	1727	1.7E	2	Th	0440	0555	0.3E	17	F	0258	0635	1.0E	2	Su	0253	0654	1.6E	17	M	0259	0717	1.4E
3	Tu	1218	1714	2.0E	18	W	1305	1744	1.1E	3	F	0441	0639	0.6E	18	Sa	0324	0835	1.2E	3	M	0342	0822	1.8E	18	Tu	0355	1050	1.5E
4	W	1243	1746	1.6E	19	Th	1305	1744	1.1E	4	Sa	0451	0749	0.9E	19	Su	0407	1015	1.5E	4	Tu	0439	1000	2.0E	19	W	0448	1135	1.6E
5	Th	1819	1819	1.1E	20	F	1820	0115	1.3F	5	Su	0509	0920	1.4E	20	M	0456	1116	1.8E	5	W	0545	1110	2.3E	20	Th	0543	1206	1.5E
6	F	2207	0246	1.1F	21	Sa	0540	1039	1.4E	6	M	0541	1027	1.9E	21	Tu	0550	1206	1.9E	6	Th	0701	1207	2.4E	21	F	0641	1224	1.5E
7	Sa	0656	0235	1.2F	22	Su	0606	1132	1.9E	7	Tu	0629	1127	2.3E	22	W	0648	1247	1.9E	7	F	0813	1258	2.3E	22	Sa	0739	1230	1.4E
8	Su	0705	1100	1.6E	23	M	0646	1220	2.1E	8	W	0726	1224	2.6E	23	Th	0741	1320	1.9E	8	Sa	0916	1344	2.1E	23	Su	0833	1250	1.3E
9	M	0724	1145	2.1E	24	Tu	0730	1305	2.3E	9	Th	0822	1316	2.7E	24	F	0826	1345	1.9E	9	Su	1017	1430	1.8E	24	M	0929	1327	1.1E
10	Tu	0755	1234	2.5E	25	W	0813	1347	2.3E	10	F	0916	1407	2.8E	25	Sa	0905	1400	1.8E	10	M	1122	1514	1.4E	25	Tu	1038	1413	0.9E
11	W	0834	1324	2.8E	26	Th	0852	1425	2.3E	11	Sa	1007	1457	2.6E	11	Su	0943	1419	1.8E	11	Tu	1235	1552	0.9E	26	W	1223	1509	0.6E
12	Th	0917	1417	3.0E	27	F	0929	1455	2.2E	12	Su	1057	1541	2.4E	12	M	1022	1450	1.7E	12	W	1758	2038	1.1F	27	Th	0649	0849	0.7F
13	F	1003	1511	3.1E	28	Sa	1003	1512	2.2E	13	M	1143	1616	2.0E	13	Tu	1103	1529	1.5E	13	Th	0759	0452	1.5E	28	F	0749	0418	1.2E
14	Sa	1049	1557	3.0E	29	Su	1035	1529	2.2E	14	Tu	1224	1643	1.4E	14	W	1103	1529	1.5E	14	F	0024	0521	1.7E	29	Sa	0920	0456	2.1E
15	Su	1133	1634	2.7E	30	M	1106	1554	2.1E	15	W	1251	1701	0.9E	15	Th	1236	1647	0.7E	15	Sa	0109	0549	1.7E	30	Su	1228	1607	1.3F
					31	Tu	1137	1625	1.9E						31	F	0828	0521	1.2E						31	F	1452	1452	*

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 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.  
 † See page 196 for the remaining currents on this day.

# St. Andrew Bay Entrance, Florida, 2018

F—Flood, Dir. 046° True    E—Ebb, Dir. 225° True

October				November				December																
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum										
1 M	h m 0140 1342	h m 0625 1720	knots 2.2E 1.6F	16 Tu	h m 0200 1408	h m 0614 1912	knots 1.7E 1.4F	1 Th	h m 0314 1437	h m 0843 1828	knots 1.9E 1.7F 0.5F	16 F	h m 0222 1302	h m 0654 1742	knots 1.4E 1.3F *	1 Sa	h m 0322 1247 2101	h m 0856 1804 2304	knots 1.0E 1.0F 0.6E	16 Su	h m 1114 2012	h m 0059 0646 1523 2309	knots * 1.0E 1.2F 0.6E	
2 Tu	0245 1439	0738 1827 2242	2.1E 1.8F 1.1F	17 W	0251 1431	0657 1844 2325	1.4E 1.3F 0.7F	2 F	0418 1454	0134 1901 2329	0.9F 1.6E 1.4F	17 Sa	0144 1301	* 0754 1804	* 1.1E 1.2F 0.3E	2 Su	0237 1221 2037	* 0955 1515 2344	* 0.5E 0.9F 1.2E	17 M	1100 2001	0236 0523 1524 2324	0.3E 0.6E 1.4F 1.1E	
3 W	0353 1534	0930 1910 2315	2.0E 1.8F 0.9F	18 Th	0340 1444	0104 0814 2350	0.7F 1.3E 0.4F	3 Sa	0527 1439 2212	0247 1054 1929	0.7F 1.3E 1.1F	18 Su	1259 2121	* 0904 1642	* 0.9E 1.1F	3 M	0347 0520 0804 1035 1531 <sup>†</sup>	* * * * 1.3F	* * * * 1.8E	18 Tu	0350 0504 0816 0921 1540 <sup>†</sup>	0.3E 0.4E * * 1.5F		
4 Th	0504 1626	0154 1042 1946 2350	1.2F 2.1E 1.7F 0.6F	19 F	0426 1450	0220 0934 1917	0.6F 1.2E 1.3F	4 Su	0159 0801 1419	0006 0350 1140 1635	0.6E 0.6F 0.8E 0.6F 1.1E	19 M	1252 2114	0007 0352 1001	0.8E 0.5E 0.5E 1.2F	4 Tu	0638 2023	0024 0929 1103 1600	1.8E 0.6F 0.6F 1.6F	19 W	0644 2017	0908 1037 1606	0.6F 0.5F 1.6F	
5 F	0628 1711	0259 1138 2020	1.2F 1.9E 1.4F	20 Sa	0513 1454 2301	0015 0315 1014 1935	* 0.5F 1.1E 1.1F	5 M	0333	0044 0508 0642 0815	1.1E 0.3F 0.3F 0.3F	20 Tu	2115	0026 0839 1059 1704	1.2E * * 1.3F	5 W	0709 2040	0106 1639	2.2E 1.9F	20 Th	0653 2039	1008 1221 1643	1.1F 1.0F 1.7F	
6 Sa	0802 1733 2347	0027 0358 1225 2050	* 1.2F 1.6E 1.0F	21 Su	0214 0613 1457 2237	0039 0409 1057 1940	0.3E 0.4F 1.0E 1.0F	6 Tu	0512 2120	0946 1304 1729	0.6F 0.3F 1.3F	21 W	0624	0053 0955 1214 1737	1.7E 0.5F 0.4F 1.4F	6 Th	0748 2110	0149 1730	2.5E 2.0F	21 F	0722 2111	1103 1348 1733	1.5F 1.3F 1.8F	
7 Su	0219 0924 1656 2323	0507 1309 2113	0.3E 1.2E 0.6F	22 M	0334 0752 1501 2231	0101 0521 1148 1844	0.6E 0.3F 0.7E 1.0F	7 W	0631 2133	1120 1348 1810	0.9F 0.7F 1.6F	22 Th	0649 2135	0127 1105 1337 1814	2.1E 1.0F 0.8F 1.6F	7 F	0830 2146	0236 1309 1431 1821	2.6E 1.5F 1.5F 2.1F	22 Sa	0803 2150	1153 1506 1825	1.8F 1.4F 2.0F	
8 M	0354 1055 1629 2300	0625 1351 1845	0.8E 0.9F 0.7E 0.6F	23 Tu	0448 1018 1500 2228	0125 0643 1244 1848	1.0E 0.4F 0.4E 1.1F	8 Th	0737 2204	1239 1451 1850	1.1F 1.1F 1.9F	23 F	0732 2203	0209 1203 1511 1850	2.5E 1.4F 1.1F 1.8F	8 Sa	0914 2224	0323 1333 1548 1906	2.7E 1.6F 1.5F 2.2F	23 Su	0853 2233	1241 1604 1910	2.0F 1.5F 2.1F	
9 Tu	0518 2223	0227 0726 1436 1902	1.3E 0.8F * 1.0F	24 W	0547 2226	0154 0744 1345 1906	1.5E 0.5F * 1.3F	9 F	0850 2240	0333 1346 1555 1927	2.5E 1.3F 1.3F 2.1F	24 Sa	0829 2238	0257 1259 1617 1925	2.9E 1.8F 1.3F 1.9F	9 Su	0955 2300	0400 1357 1635 1944	2.7E 1.6F 1.4F 2.1F	24 M	0946 2317	1329 1646 1950	2.1F 1.4F 2.1F	
10 W	0628	0311 0817 0955 1142 1523 <sup>†</sup>	1.7E 0.6F 0.5F 0.6F *	25 Th	0637 2235	0231 1150 1502 1928	1.9E 0.8F 0.4F 1.4F	10 Sa	1007 2318	0410 1429 1637 2000	2.6E 1.5F 1.4F 2.1F	25 Su	0940 2319	0347 1352 1702 1958	3.1E 2.0F 1.4F 2.0F	10 M	1030 2334	0423 1423 1710 2016	2.5E 1.6F 1.3F 1.9F	25 Tu	1037 2030	1413 1723 2030	2.0F 1.2F 2.0F	
11 Th	0734	0352 0912 1002 1310 1602 <sup>†</sup>	2.0E 0.4F 0.4F 0.8F 0.6F	26 F	0731 2259	0313 1300 1611 1952	2.3E 1.1F 0.7F 1.6F	11 Su	1107 2356	0437 1502 1708 2029	2.5E 1.5F 1.4F 1.9F	26 M	1050 2319	0432 1440 1743 2031	3.1E 2.1F 1.5F 1.9F	11 Tu	1056 2334	0437 1449 1741 2041	2.4E 1.6F 1.2F 1.6F	26 W	1122 2113	0504 1453 1802 2113	2.9E 1.8F 1.0F 1.7F	
12 F	0858	0427 1427 1630 2026	2.2E 1.0F 0.9F 1.8F	27 Sa	0842 2334	0357 1403 1700 2017	2.6E 1.5F 1.0F 1.7F	12 M	1154	0457 1533 1737 2051	2.3E 1.5F 1.4F 1.7F	27 Tu	1149	0513 1525 1832 2109	3.0E 2.1F 1.5F 1.7F	12 W	1111	0454 1515 1819 2051	2.2E 1.5F 1.1F 1.2F	27 Th	1150	0536 1528 1855 2208	2.4E 1.5F 0.7F 1.1F	
13 Sa	1134	0455 1526 1645 2054	2.2E 1.1F 1.1F 1.8F	28 Su	1039	0440 1457 1744 2043	2.7E 1.7F 1.3F 1.7F	13 Tu	1228	0517 1605	2.1E 1.5F	28 W	1238	0051 1608 2011 2202	2.6E 1.9F 1.3F 1.3F	13 Th	1117	0518 1540	2.0E 1.4F	28 F	1128	0606 1559 2031 2324	1.8E 1.1F 0.3F 0.6F	
14 Su	0025 1246	0519 2119	2.1E 1.7F	29 M	0016 1209	0522 1549 1845 2109	2.7E 1.9F 1.5F 1.6F	14 W	0110 1249	0543 1638	1.9E 1.4F	29 Th	0141 1311	0636 1651 2139 2333	2.2E 1.6F 0.7F 0.9F	14 F	0053 1118	0545 1602	1.8E 1.4F	29 Sa	0149 1055 1937	0633 1618 2144	1.1E 0.8F 0.4E	
15 M	0111 1333	0544 1956	1.9E 1.4F	30 Tu	0107 1311	0608 1644	2.5E 1.9F	15 Th	0146 1259	0614 1711	1.7E 1.4F	30 F	0233 1312	0732 1732 2224	1.6E 1.3F *	15 Sa	0106 1117	0615 1608 2305	1.4E 1.2F *	30 Su	1019 1907	0101 0640 1354 2236	* 0.4E 0.9F 1.1E	
				31 W	0208 1400	0706 1741 2223 2350	2.2E 1.9F 1.0F 1.1F														31 M	0623 1900	0240 0408 1418 2323	* 0.3E 1.4F 1.6E

Time meridian 75° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
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.  
† See page 196 for the remaining currents on this day.

## Mobile Bay Entrance, Alabama, 2018

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

January				February				March											
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum					
h m	h m	knots	h m	h m	knots	h m	h m	knots	h m	h m	knots	h m	h m	knots					
<b>1</b> M ○	0957 2215	0247 2.7E 2.7F	<b>16</b> Tu ●	1015 2227	0306 2.4E 2.3F	<b>1</b> Th ○	1123 2336	0410 2.1E 1.8F	<b>16</b> F ○	1129 2332	0428 1.6E 1.4F	<b>1</b> Th ○	1036 2250	0454 1.6E 1.4F	<b>16</b> F ○	1102 2320	0353 1.1E 0.9F		
<b>2</b> Tu ○	1046 2304	0332 2.8E 2.6F	<b>17</b> W ○	1056 2306	0350 2.3E 2.2F	<b>2</b> F ○	1157 2359	0435 1.6E 1.3F	<b>17</b> Sa ○	1157 2343	0508 1.3E 1.0F	<b>2</b> F ○	1116 2323	0609 1.1E 0.8F 1607 0.8F 1919 0.9F	<b>17</b> Sa ●	1158 1825	0444 0.8E 0.6F		
<b>3</b> W ○	1133 2349	0414 2.6E 2.4F	<b>18</b> Th ○	1134 2339	0431 2.2E 2.0F	<b>3</b> Sa ○	1215 2355	0438 1.2E 0.9F	<b>18</b> Su ○	1208 2326	0546 0.9E 0.6F	<b>3</b> Sa ○	1143 1703†	0426 0.6E 0.588 0.6E 0.736 0.7E 1430 0.5F 1703† 0.3F	<b>18</b> Su ○	0055 1422	0543 1927 2324	0.5E 0.3F *	
<b>4</b> Th ○	1215 1642	0451 2.3E 2.0F	<b>19</b> F ○	1205 1716	0510 1.9E 1.7F	<b>4</b> Su ○	1158 2234	0405 0.8E 0.7F	<b>19</b> M ○	1126 1436 1821 2023	0619 0.5E 0.3F * *	<b>4</b> Su ○	1551 1703†	0222 0.3E 0.645 *	<b>19</b> M ○	0231 0818 1015 1627 2029†	* * * 0.4E *		
<b>5</b> F ○	0027 1248	0516 1.9E 1.6F	<b>20</b> Sa ○	0002 1224	0545 1.6E 1.3F	<b>5</b> M ○	0743 1836	0342 0.6E 0.6F	<b>20</b> Tu ○	0608 1631	0114 0.3E 1347 0.4F 1920 0.3E 2122 0.3E	<b>5</b> M ○	1546 1839†	0059 *	<b>20</b> Tu ○	1248 1731	0423 0.5F 0.8E		
<b>6</b> Sa ○	0051 1305	0522 1.4E 1.2F	<b>21</b> Su ○	0008 1221 2349	0608 1.2E 0.9F	<b>6</b> Tu ○	0633 1807	0219 0.6E 0.6F 1143 0.5F 1501 0.7F	<b>21</b> W ○	0418 1636	0102 0.5E 0940 0.6F 1123 0.6F 1313 0.6F 2019† 0.8E	<b>6</b> Tu ○	0340 1551	0032 0.4E 0759 0.6F 1211 0.3F 1328 0.3F 1922 0.8E	<b>21</b> W ○	0133 1405	0548 1828	0.9F 1.2E	
<b>7</b> Su ○	0045 1237 2251	0515 1.0E 0.9F	<b>22</b> M ○	1146 2256	0540 0.7E 0.6F	<b>7</b> W ○	0621 1811	0133 0.8E 1022 0.9F 1258 0.8F 1420 0.8F	<b>22</b> Th ○	0442 1707	0943 1.1F 2123 1.3E 2320 1.2E	<b>7</b> W ○	0352 1614	0831 0.9F 2007 1.0E	<b>22</b> Th ○	0231 1507	0707 1927	1.3F 1.5E	
<b>8</b> M ○	0859 2014	0506 0.8E 0.8F	<b>23</b> Tu ○	0913 1859	0249 0.6E 0.6F	<b>8</b> Th ○	0629 1830	0003 1.0E 1049 1.2F 2310 1.3E	<b>23</b> F ○	0523 1750	0043 1.3E 1020 1.5F 2236 1.7E	<b>8</b> Th ○	0420 1646	0905 1.1F 2054 1.2E	<b>23</b> F ○	0330 1607	0819 2029	1.6F 1.7E	
<b>9</b> Tu ○	0759 1933	0350 0.7E 0.7F 1243 0.7F 1558 0.8F	<b>24</b> W ○	0648 1821	0222 0.7E 0.8F	<b>9</b> F ○	0649 1857	1120 1.5F 2350 1.6E	<b>24</b> Sa ○	0613 1839	1109 1.9F	<b>9</b> F ○	0458 1725	0943 2148	1.4F 1.4E	<b>24</b> Sa ○	0431 1707	0925 2138	1.8F 1.8E
<b>10</b> W ○	0743 1928	0109 1.1F 1413 1.0F 1501 1.0F	<b>25</b> Th ○	0630 1835	0151 1.0E 1130 1.1F 1335 1.1F 1443 1.1F	<b>10</b> Sa ○	0720 1932	1156 1.8F	<b>25</b> Su ○	0707 1931	0004 2.0E 1204 2.1F	<b>10</b> Sa ○	0544 1810	1027 1.5F 2250 1.5E	<b>25</b> Su ○	0534 1807	1027 2302	1.9F 1.8E	
<b>11</b> Th ○	0746 1940	0057 1.3E 1207 1.4F	<b>26</b> F ○	0652 1907	0144 1.4E 1143 1.7F	<b>11</b> Su ○	0759 2013	0036 1.8E 1237 1.9F	<b>26</b> M ○	0802 2024	0157 2.2E 1306 2.2F	<b>11</b> Su ○	0636 1859	1116 1.6F 2358 1.6E	<b>26</b> M ○	0637 1906	0026 0118 1128	1.8E 1.8E 1.8F	
<b>12</b> F ○	0759 2002	0044 1.6E 1232 1.7F	<b>27</b> Sa ○	0730 1948	0035 1.9E 1219 2.1F	<b>12</b> M ○	0842 2057	0125 2.0E 1324 2.0F	<b>27</b> Tu ○	0856 2116	0257 2.2E 1510 2.0F	<b>12</b> M ○	0730 1950	1208 1.7F	<b>27</b> Tu ○	0740 2004	0228 1232 1412 1.5F 1551 1.5F		
<b>13</b> Sa ○	0823 2031	0107 1.9E 1302 2.0F	<b>28</b> Su ○	0816 2035	0117 2.3E 1306 2.4F	<b>13</b> Tu ○	0927 2141	0214 2.1E 1415 2.0F	<b>28</b> W ○	0949 2206	0355 2.0E 1725 1.8F	<b>13</b> Tu ○	0825 2042	0106 1.6E 1303 1.6F	<b>28</b> W ○	0842 2101	0334 1702	1.5E 1.3F	
<b>14</b> Su ○	0856 2106	0143 2.1E 1339 2.2F	<b>29</b> M ○	0905 2124	0205 2.5E 1356 2.5F	<b>14</b> W ○	1012 2224	0301 2.0E 1509 1.9F	<b>14</b> W ○	0918 2133	0208 1.6E 1408 1.4F	<b>14</b> W ○	0918 2133	0208 1.6E 1408 1.4F	<b>29</b> Th ○	0944 2200	0442 1255 1402 1805	1.1E 0.6F 0.6F 0.9F	
<b>15</b> M ○	0934 2146	0223 2.3E 1421 2.3F	<b>30</b> Tu ○	0954 2212	0252 2.6E 1447 2.4F	<b>15</b> Th ○	1053 2303	0346 1.9E 1609 1.7F	<b>15</b> Th ○	1010 2225	0303 1.4E 1543 1.2F	<b>15</b> Th ○	1010 2225	0303 1.4E 1543 1.2F	<b>30</b> F ○	0606 1255 1453 1906 2357 0.6F *	<b>31</b> Sa ○	0826 1218 1540 2007†	0.3E * 0.3E *
			<b>31</b> W ○	1041 2258	0335 2.4E 1529 2.2F														

Time meridian 90° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 If three consecutive entries are marked (F) or (E) the middle one is not a true maximum but an intermediate value to show the current pattern.  
 \* Current weak and variable.  
 † See page 196 for the remaining currents on this day.

Mobile Bay Entrance, Alabama, 2018

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

Table with columns for April, May, and June. Each month has sub-columns for Slack and Maximum with time and current speed data. Includes circled day markers (O and ●).

Time meridian 90° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. If three consecutive entries are marked (F) or (E) the middle one is not a true maximum but an intermediate value to show the current pattern. \* Current weak and variable. † See page 196 for the remaining currents on this day.

# Mobile Bay Entrance, Alabama, 2018

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

July				August				September								
Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		knots					
<b>1</b> Su	h m 0003 1208	h m 0511 1743	knots 2.0F 1.9E	<b>16</b> M	h m 0034 1241	h m 0449 1717	knots 1.6F 1.4E	<b>1</b> W	h m 0014 1135 2327	h m 0533 1728	knots 0.7F 0.6E	<b>16</b> Th	h m 0531	h m 0815 0907 1336 1735	h m 0241 0408 0407 0507 2122†	knots 0.5F 0.4E 0.4E 0.5E 0.7F
<b>2</b> M	0035 1234	0552 1815	1.7F 1.6E	<b>17</b> Tu	0057 1244	0451 1701	1.1F 1.0E	<b>2</b> Th	1032 2027	0323 1415	0.5F 0.5E	<b>17</b> F	0522	0225 0911 0957 1149 1739 2155	0.6F 0.8E 0.8E 0.8E 1.0F 1.1E	
<b>3</b> Tu	0055 1239	0624 1828	1.3F 1.1E	<b>18</b> W	0042 1100 2031	0417 1643	0.8F 0.7E	<b>3</b> F	0617 1816	0248 1401	0.6F 0.7E	<b>18</b> Sa	0540 1800	0958 2228	1.1E 1.3F	
<b>4</b> W	0048 1209	0626 1807	0.8F 0.8E	<b>19</b> Th	0733 1924	0356 2256	0.7F 0.7E	<b>4</b> Sa	0559 1809	0227 1341 2311	0.8F 1.0E 1.1F	<b>19</b> Su	0607 1828	1041 2301	1.3E 1.5F	
<b>5</b> Th	0002 1107 2121	0427 1535	0.6F 0.6E	<b>20</b> F	0659 1915	0032 0330 1250 2324	0.7F 0.8F 1.0E 1.2F	<b>5</b> Su	0617 1834	0105 0232 1340 2322	1.0F 1.1F 1.3E 1.5F	<b>20</b> M	0639 1902	1126 2337	1.6E 1.7F	
<b>6</b> F	0747 1942	0345 1449	0.7F 0.8E	<b>21</b> Sa	0705 1926	1248 2352	1.3E 1.5F	<b>6</b> M	0649 1911	1210 2357	1.7E 1.9F	<b>21</b> Tu	0715 1941	1214	1.7E	
<b>7</b> Sa	0713 1926	0331 1424	0.9F 1.0E	<b>22</b> Su	0725 1947	1238	1.6E	<b>7</b> Tu	0729 1955	1255	2.1E	<b>22</b> W	0755 2024	0017 1304	1.8F 1.9E	
<b>8</b> Su	0725 1942	0014 0225 0330 1402	1.1F 1.1F 1.1F 1.4E	<b>23</b> M	0751 2013	0020 1257	1.7F 1.8E	<b>8</b> W	0814 2043	0042 1345	2.2F 2.4E	<b>23</b> Th	0838 2109	0102 1355	1.9F 1.9E	
<b>9</b> M	0752 2014	0018 1310	1.6F 1.8E	<b>24</b> Tu	0821 2045	0050 1329	1.9F 2.0E	<b>9</b> Th	0902 2133	0132 1435	2.4F 2.5E	<b>24</b> F	0924 2156	0153 1445	1.9F 1.9E	
<b>10</b> Tu	0827 2054	0051 1346	2.1F 2.3E	<b>25</b> W	0855 2121	0125 1408	2.1F 2.2E	<b>10</b> F	0951 2222	0226 1522	2.4F 2.4E	<b>25</b> Sa	1010 2242	0251 1533	1.7F 1.7E	
<b>11</b> W	0909 2138	0133 1429	2.4F 2.6E	<b>26</b> Th	0932 2200	0205 1450	2.2F 2.3E	<b>11</b> Sa	1039 2308	0328 1602	2.1F 2.1E	<b>26</b> Su	1055 2324	0408 1619	1.5F 1.5E	
<b>12</b> Th	0955 2225	0219 1514	2.6F 2.7E	<b>27</b> F	1012 2241	0249 1534	2.2F 2.2E	<b>12</b> Su	1123 2348	0545 1633	1.7F 1.6E	<b>27</b> M	1133	0529 1702	1.2F 1.1E	
<b>13</b> F	1043 2312	0307 1558	2.6F 2.7E	<b>28</b> Sa	1052 2320	0336 1617	2.1F 2.1E	<b>13</b> M	1156 1645	0345 0513 0649	1.2F 1.2F 1.2F 1.1E	<b>28</b> Tu	0000 1153	0633 1745	0.9F 0.7E	
<b>14</b> Sa	1129 2357	0352 1637	2.5F 2.4E	<b>29</b> Su	1128 2354	0423 1658	1.9F 1.8E	<b>14</b> Tu	0015 1201	0338 0614 0741 1550	0.8F 0.7F 0.7F 0.6E	<b>29</b> W	0018	0730 1305 1343 1826	0.5F * * 0.3E	
<b>15</b> Su	1211	0428 1707	2.1F 2.0E	<b>30</b> M	1154	0507 1734	1.5F 1.5E	<b>15</b> W	0008	0259 0715 0825 1504 2049†	0.5F * * 0.4E *	<b>30</b> Th	0159 0543 0825 1238 1758†	* * * 0.3E *		
				<b>31</b> Tu	0017 1200	0537 1802	1.2F 1.0E					<b>31</b> F	0339	0051 0645 0919 1234 1531	0.3F 0.4E 0.3E 0.5E 0.6F	
<b>16</b> Su	0415 1627	0826 2117	1.3E 1.4F	<b>1</b> Sa	0402	0037 0741 1015 1222 1608 2055	0.5F 0.8E 0.7E 0.8E 1.0F 1.2E	<b>16</b> Su	0415 1627	0826 2117	1.3E 1.4F	<b>1</b> Sa	0402	0037 0741 1015 1222 1608 2055	0.5F 0.8E 0.7E 0.8E 1.0F 1.2E	
<b>17</b> M	0457 1713	0916 2200	1.4E 1.5F	<b>2</b> Su	0439	0841 1112 1226 2141	1.2E 1.1E 1.1E 1.4F	<b>2</b> Su	0439	0841 1112 1226 2141	1.2E 1.1E 1.1E 1.4F	<b>2</b> Su	0439	0841 1112 1226 2141	1.2E 1.1E 1.1E 1.4F	
<b>18</b> Tu	0542 1805	1014 2247	1.5E 1.5F	<b>3</b> M	0523 1743	0948 2233	1.6E 1.8F	<b>3</b> M	0523 1743	0948 2233	1.6E 1.8F	<b>3</b> M	0523 1743	0948 2233	1.6E 1.8F	
<b>19</b> W	0631 1900	1119 2337	1.5E 1.5F	<b>4</b> Tu	0611 1837	1104 2327	1.8E 2.0F	<b>4</b> Tu	0611 1837	1104 2327	1.8E 2.0F	<b>4</b> Tu	0611 1837	1104 2327	1.8E 2.0F	
<b>20</b> Th	0723 1958	1231	1.5E	<b>5</b> W	0703 1933	1245	2.0E	<b>5</b> W	0703 1933	1245	2.0E	<b>5</b> W	0703 1933	1245	2.0E	
<b>21</b> F	0817 2058	0032 1343	1.4F 1.4E	<b>6</b> Th	0757 2030	0026 1440	2.0F 2.0E	<b>6</b> Th	0757 2030	0026 1440	2.0F 2.0E	<b>6</b> Th	0757 2030	0026 1440	2.0F 2.0E	
<b>22</b> Sa	0915 2200	0137 1451	1.2F 1.2E	<b>7</b> F	0851 2126	0149 1546	1.9F 1.9E	<b>7</b> F	0851 2126	0149 1546	1.9F 1.9E	<b>7</b> F	0851 2126	0149 1546	1.9F 1.9E	
<b>23</b> Su	1019 2309	0335 1554	1.0F 0.9E	<b>8</b> Sa	0946 2221	0514 1655	1.7F 1.6E	<b>8</b> Sa	0946 2221	0514 1655	1.7F 1.6E	<b>8</b> Sa	0946 2221	0514 1655	1.7F 1.6E	
<b>24</b> M	1150	0542 1703	0.7F 0.6E	<b>9</b> Su	1040 2312	0620 1814	1.4F 1.1E	<b>9</b> Su	1040 2312	0620 1814	1.4F 1.1E	<b>9</b> Su	1040 2312	0620 1814	1.4F 1.1E	
<b>25</b> Tu	0051 1503 2054 2222	0655 1849 2054 2222	0.5F 0.3E * 0.3E	<b>10</b> M	1130	0720 1947	0.9F 0.6E	<b>10</b> M	1130	0720 1947	0.9F 0.6E	<b>10</b> M	1130	0720 1947	0.9F 0.6E	
<b>26</b> W	0756 1035 1440 2028	* * 0.4F *	* * 0.4F *	<b>11</b> Tu	1207 2312	* 1724†	* *	<b>11</b> Tu	1207 2312	* 1724†	* *	<b>11</b> Tu	1207 2312	* 1724†	* *	
<b>27</b> Th	0408 0911 1020 1602	0.6E * * 0.7F	<b>27</b> Th	0408 0911 1020 1602	0.6E * * 0.7F	<b>27</b> Th	0408 0911 1020 1602	0.6E * * 0.7F	<b>27</b> Th	0408 0911 1020 1602	0.6E * * 0.7F	<b>27</b> Th	0408 0911 1020 1602	0.6E * * 0.7F		
<b>28</b> F	0507 1259	0.9E 1.0F	<b>28</b> F	0507 1259	0.9E 1.0F	<b>28</b> F	0507 1259	0.9E 1.0F	<b>28</b> F	0507 1259	0.9E 1.0F	<b>28</b> F	0507 1259	0.9E 1.0F		
<b>29</b> Sa	0123 1356	0601 1827	1.2E 1.3F	<b>29</b> Sa	0123 1356	0601 1827	1.2E 1.3F	<b>29</b> Sa	0123 1356	0601 1827	1.2E 1.3F	<b>29</b> Sa	0123 1356	0601 1827	1.2E 1.3F	
<b>30</b> Su	0229 1454	0655 1936	1.5E 1.6F	<b>30</b> Su	0229 1454	0655 1936	1.5E 1.6F	<b>30</b> Su	0229 1454	0655 1936	1.5E 1.6F	<b>30</b> Su	0229 1454	0655 1936	1.5E 1.6F	

Time meridian 90° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 If three consecutive entries are marked (F) or (E) the middle one is not a true maximum but an intermediate value to show the current pattern.  
 \* Current weak and variable.  
 † See page 196 for the remaining currents on this day.

# Mobile Bay Entrance, Alabama, 2018

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

October				November				December															
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum									
	h	m	knots		h	m	knots		h	m	knots		h	m	knots								
<b>1</b> M	0330	0751	1.7E	<b>16</b> Tu	0333	0815	1.5E	<b>1</b> Th	0443	0844	1.5E	<b>16</b> F	0345	0834	0.9E	<b>1</b> Sa	0336	0717	0.6E	<b>16</b> Su	0920	1608	0.6F
	1553	2042	1.8F	<b>17</b> W	0431	0909	1.4E	<b>2</b> F	0543	0906	1.0E	<b>17</b> Sa	0405	0832	0.5E	<b>2</b> Su	2143	0121	0.4E	<b>17</b> M	0805	0245	0.7E
				<b>18</b> Th	0531	1011	1.2E	<b>3</b> Sa	0640	0146	0.5F	<b>18</b> Su	0739	*	*	<b>3</b> M	0900	0121	0.4E	<b>17</b> M	0805	1256	0.7F
				<b>19</b> F	0633	1131	0.9E	<b>4</b> Su	0119	0119	*	<b>19</b> M	0814	0300	0.4E	<b>4</b> Tu	0844	0134	1.4E	<b>18</b> Tu	0759	1226	1.2F
				<b>20</b> Sa	0740	1327	0.6E	<b>5</b> M	0802	0143	0.6E	<b>20</b> Tu	0826	0131	0.8E	<b>5</b> W	0912	0204	1.8E	<b>19</b> W	0821	1246	1.6F
				<b>21</b> Su	0835	1623	1.0E	<b>6</b> Tu	0906	0219	1.1E	<b>21</b> W	0859	0153	1.2E	<b>6</b> Th	0944	0237	2.0E	<b>20</b> Th	0853	1322	2.0F
				<b>22</b> M	0917	1533	0.4E	<b>7</b> W	0952	0257	1.5E	<b>22</b> Th	0937	0227	1.6E	<b>7</b> F	1016	0311	2.2E	<b>21</b> F	0931	1404	2.3F
				<b>23</b> Tu	0613	1310	0.6F	<b>8</b> Th	1033	0334	1.7E	<b>23</b> F	1020	0306	1.9E	<b>8</b> Sa	1048	0346	2.3E	<b>22</b> Sa	1013	1450	2.5F
				<b>24</b> W	0915	1406	1.0F	<b>9</b> F	1111	0411	1.9E	<b>24</b> Sa	1106	0349	2.2E	<b>9</b> Su	1123	0423	2.3E	<b>23</b> Su	1058	1537	2.6F
				<b>25</b> Th	1024	1500	1.3F	<b>10</b> Sa	1149	0447	2.0E	<b>25</b> Su	1155	0433	2.4E	<b>10</b> M	1159	0501	2.3E	<b>24</b> M	1144	1625	2.5F
				<b>26</b> F	1120	1555	1.6F	<b>11</b> Su	1227	0525	2.0E	<b>26</b> M	0013	0518	2.5E	<b>11</b> Tu	0005	0541	2.1E	<b>25</b> Tu	0001	0506	2.5E
				<b>27</b> Sa	1215	1653	1.8F	<b>12</b> M	0035	0605	2.0E	<b>27</b> Tu	0107	0602	2.4E	<b>12</b> W	0042	0618	1.8E	<b>26</b> W	0047	0540	2.1E
				<b>28</b> Su	0033	0535	2.0E	<b>13</b> Tu	0122	0646	1.8E	<b>28</b> W	0201	0640	2.0E	<b>13</b> Th	0112	0650	1.5E	<b>27</b> Th	0125	0559	1.6E
				<b>29</b> M	0136	0625	2.1E	<b>14</b> W	0211	0728	1.6E	<b>29</b> Th	0251	0707	1.6E	<b>14</b> F	0122	0703	1.1E	<b>28</b> F	0144	0558	1.1E
				<b>30</b> Tu	0239	0715	2.1E	<b>15</b> Th	0301	0807	1.3E	<b>30</b> F	0331	0718	1.1E	<b>15</b> Sa	0046	0652	0.6E	<b>29</b> Sa	0021	0548	0.7E
				<b>31</b> W	0342	0803	1.8E	<b>16</b> F	0443	0844	1.5E	<b>31</b> M	0536	0718	0.7F	<b>16</b> Su	0239	0705	0.5F	<b>30</b> Su	0120	0616	0.6E
					1606	2048	1.7F												<b>31</b> M	0802	1136	0.8F	
																				1342†	0100	1.1E	
																				1649	1207	1.3F	
																				1940			

Time meridian 90° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 If three consecutive entries are marked (F) or (E) the middle one is not a true maximum but an intermediate value to show the current pattern.  
 \* Current weak and variable.  
 † See page 196 for the remaining currents on this day.





# Calcasieu Pass, Louisiana 2018

F—Flood, Dir. 356° True    E—Ebb, Dir. 175° True

July				August				September							
Slack		Maximum													
h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m
<b>1</b>	0312	0704	1.9F	<b>16</b>	0326	0639	2.3F	<b>1</b>	0343	0657	1.2F	<b>16</b>	0456	0712	1.3E
Su	1129	1424	0.6E	M	1035	1303	0.9E	W	1028	1410	1.2E	Th	0922	1324	1.9E
		1614	0.6E			1739	0.1F			1925	0.2E		1758	2038	1.0F
		2309	2.3E										2351		
<b>2</b>	0349	0739	1.8F	<b>17</b>	0423	0727	2.0F	<b>2</b>	0416	0713	0.9F	<b>17</b>	0603	0742	0.3F
M	1151	1503	0.9E	Tu	1055	1354	1.2E	Th	1003	1429	1.4E	F	0908	1404	2.1E
		1755	0.7E			1914	0.2F			2032	0.1F		1902	2212	1.1F
		2353	2.0E										2351		
<b>3</b>	0423	0805	1.6F	<b>18</b>	0520	0809	1.5F	<b>3</b>	0447	0719	0.5F	<b>18</b>	0222	0433	0.3E
Tu	1209	1533	1.1E	W	1110	1440	1.5E	F	0921	1435	1.6E	Sa	0800	0800	0.1E
		1928	0.7E			1903	0.4F		1933	2145	0.5F	☉	1447	1447	2.2E
						2242						☉	2007	2350	1.4F
<b>4</b>	0457	0825	1.3F	<b>19</b>	0620	0845	0.9F	<b>4</b>	0717	1701	3.1E	<b>19</b>	0451	1538	2.2E
W	1217	1558	1.3E	Th	1116	1522	1.8E	Sa	2208			Su	2111		
		2045	0.5E	☉	1958	2232	0.7F	☉	1955	2322	1.0F				
<b>5</b>	0532	0842	1.0F	<b>20</b>	0733	0920	0.4F	<b>5</b>	0717	1701	3.1E	<b>20</b>	0615	1639	2.3E
Th	1206	1617	1.4E	F	1106	1603	2.0E	Su	2032			W	2208		
		2221	0.1E			2053							2155		
													2155		
<b>6</b>	0612	0856	0.6F	<b>21</b>	0834	1041	0.3E	<b>6</b>	0714	1759	3.5E	<b>21</b>	0658	1739	2.5E
F	1129	1630	1.7E	Sa	1219	1504	0.8E	M	2256			Tu	2253		
☉	2124	2354	0.5F			1725	2.5E								
<b>7</b>	0701	0905	0.3F	<b>22</b>	0934	1219	0.3E	<b>7</b>	0717	1701	3.1E	<b>22</b>	0715	1007	0.4E
Sa	1053	1641	2.1E	Su	1219	1504	0.8E	Tu	2208			W	2330	1201	0.3E
						1725	2.5E							1829	2.6E
<b>8</b>	0709	0912	0.2E	<b>23</b>	1024	1311	0.1F	<b>8</b>	0714	1759	3.5E	<b>23</b>	0719	1254	0.1E
Su	0949	1309	0.2F	M	1220	1507	0.7E	W	2256			Th	2330	1913	2.7E
		1732	3.1E			2003	2.9E								
		2153													
<b>9</b>	0709	0912	0.2E	<b>24</b>	1024	1311	0.1F	<b>9</b>	0714	1759	3.5E	<b>24</b>	0726	1338	0.1F
M	0949	1309	0.2F	Tu	1220	1507	0.7E	Th	2256			F	1955	1955	2.7E
		1732	3.1E			2003	2.9E								
		2226													
<b>10</b>	0712	0915	0.3E	<b>25</b>	1027	1314	0.2F	<b>10</b>	0726	1702	3.1E	<b>25</b>	0726	1338	0.1F
Tu	0949	1309	0.2F	W	1220	1507	0.7E	F	2344			Sa	1955	1955	2.7E
		1732	3.1E			2003	2.9E								
		2306													
<b>11</b>	0712	0915	0.3E	<b>26</b>	1027	1314	0.2F	<b>11</b>	0726	1702	3.1E	<b>26</b>	0726	1338	0.1F
W	0949	1309	0.2F	Th	1220	1507	0.7E	Sa	2344			Su	1955	1955	2.7E
		1732	3.1E			2003	2.9E	☉	1553	2103	3.5E				
		2352													
<b>12</b>	0712	0915	0.3E	<b>27</b>	1027	1314	0.2F	<b>12</b>	0726	1702	3.1E	<b>27</b>	0726	1338	0.1F
Th	0949	1309	0.2F	F	1220	1507	0.7E	Su	2344			M	2208	2208	2.0E
☉		1732	3.1E	☉		2003	2.9E								
		2352													
<b>13</b>	0712	0915	0.3E	<b>28</b>	1027	1314	0.2F	<b>13</b>	0726	1702	3.1E	<b>28</b>	0726	1338	0.1F
F	0949	1309	0.2F	Sa	1220	1507	0.7E	M	2344			Tu	2208	2208	2.0E
		1732	3.1E			2003	2.9E								
		2352													
<b>14</b>	0712	0915	0.3E	<b>29</b>	1027	1314	0.2F	<b>14</b>	0726	1702	3.1E	<b>29</b>	0726	1338	0.1F
Sa	0949	1309	0.2F	Su	1220	1507	0.7E	Tu	2344			W	2208	2208	2.0E
		1732	3.1E			2003	2.9E								
		2352													
<b>15</b>	0712	0915	0.3E	<b>30</b>	1027	1314	0.2F	<b>15</b>	0726	1702	3.1E	<b>30</b>	0726	1338	0.1F
Su	0949	1309	0.2F	M	1220	1507	0.7E	W	2344			Th	2208	2208	2.0E
		1732	3.1E			2003	2.9E								
		2352													
<b>16</b>	0712	0915	0.3E	<b>31</b>	1027	1314	0.2F	<b>16</b>	0726	1702	3.1E	<b>31</b>	0726	1338	0.1F
		1732	3.1E	Tu	1220	1507	0.7E	Th	2344			F	2208	2208	2.0E
		2352				2003	2.9E								
		2306													

Time meridian 90° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.



### Sabine Pass, Texas, 2018

F—Flood, Dir. 321° True E—Ebb, Dir. 143° True

January				February				March																					
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum															
	h m	h m	knots		h m	h m	knots		h m	h m	knots		h m	h m	knots														
<b>1</b>	M	0324 1213	0807 1549 2232	0.5F 2.2E 2.3F	<b>16</b>	Tu	0409 1242	0842 1627 2255	1.6E 1.5F	<b>1</b>	Th	0459 1340	0928 1700 2248	1.9E 1.6F	<b>16</b>	F	0507 1314	0915 1645 2254	1.1E 0.9F	<b>1</b>	Th	0427 1239	0845 1545 2143	1.6E 1.4F	<b>16</b>	F	0504 1220 1911 2353	0847 1525 2152 2353	0.9E 0.8F 0.3E
<b>2</b>	Tu	0402 1301	0849 1639 2310	0.5F 2.3E 2.2F	<b>17</b>	W	0426 1312	0905 1702 2328	1.6E 1.3F	<b>2</b>	F	0553 1429	1009 1741 2258	1.6E 1.2F	<b>17</b>	Sa	0541 1329	0935 1658 2231	0.9E 0.7F	<b>2</b>	F	0530 1323 1949 2345	0932 1621 2147 2345	1.3E 1.0F 0.3E	<b>17</b>	Sa	0555 1236 1837	0915 1539 2142	0.7E 0.6F 0.4E
<b>3</b>	W	0442 1352	0933 1729 2349	2.2E 2.0F 0.3F	<b>18</b>	Th	0439 1340	0926 1733	1.5E 1.1F	<b>3</b>	Sa	0653 1519	1045 1822 2314	1.1E 0.8F	<b>18</b>	Su	0624 1338	0959 1658 2223	0.7E 0.5F	<b>3</b>	Sa	0638 1406 1932	1015 1652 2158	1.0E 0.7F 0.5E	<b>18</b>	Su	0654 1246 1812	0946 1544 2134	0.5E 0.4F 0.5E
<b>4</b>	Th	0524 1446	1014 1821	1.9E 1.7F	<b>19</b>	F	0452 1405	0945 1800	1.3E 0.9F	<b>4</b>	Su	0813 1608	1121 1908 2344	0.6E 0.4F	<b>19</b>	M	0729 1336 1959	1029 1645 2238	0.4E 0.3F 0.3E	<b>4</b>	Su	0759 1448 1916	1053 1718 2221	0.5E 0.3F 0.6E	<b>19</b>	M	0816 1249 1800	1023 1535 2150	0.3E 0.3F 0.7E
<b>5</b>	F	0605 1542	1052 1920	1.5E 1.3F	<b>20</b>	Sa	0507 1424	1003 1822	1.1E 0.7F	<b>5</b>	M	0723 1216 1304 1452 2003 0049	0.4F * * * *	<b>20</b>	Tu	0150 1112 1645 2310	0.3F * * 0.4E	<b>5</b>	M	0125 1136 1736 2252	0.8F * * 0.7E	<b>20</b>	Tu	0139 1112 1533 2219	0.8F * * 0.8E				
<b>6</b>	Sa	0644 1639	1128 2019	1.0E 0.9F	<b>21</b>	Su	0524 1437	1022 1834 2318	0.9E 0.5F 0.3F	<b>6</b>	Tu	0540 0940 1827 2101	0.3E 0.5F * *	<b>21</b>	W	0412 1828	0.837 0.5F	<b>6</b>	Tu	0236 1532	0.708 2333	0.8F 0.8E	<b>21</b>	W	0241 1640	0.700 2256	0.9F 0.9E		
<b>7</b>	Su	0726 1215 1748	2113	0.4E 0.7F	<b>22</b>	M	0535 1442	1046 1801	0.5E 0.4F	<b>7</b>	W	0731 1144 1914 2208	0.5E 0.8F * *	<b>22</b>	Th	0559 1112 2002 2044	0.5E 0.8F * *	<b>7</b>	W	0359 1603	0.851 0.8F	<b>22</b>	Th	0354 1521	0.825 2352	1.1F 0.9E			
<b>8</b>	M	0718 1718 2207	2207	0.5F	<b>23</b>	Tu	0535 1442	1046 1801	0.5E 0.4F	<b>8</b>	Th	0831 1227 1943 2318	0.7E 1.1F * *	<b>23</b>	F	0718 1700 2219	0.308 1.124 1.944 2.219	0.7E 1.2F 0.3E *	<b>8</b>	Th	0535 1621	0044 1022 1912 2114	0.7E 0.9F 0.3E *	<b>23</b>	F	0513 1546	0.938 1.3F		
<b>9</b>	Tu	0854 1904 2304	0543 1227 1904 2304	0.5E 0.6F 0.4F	<b>24</b>	W	0758 1917 2133	0435 1100 1917 2133	0.3E 0.3F *	<b>9</b>	F	0920 1759 2215	0.527 1.300 2.005 0.3E	<b>24</b>	Sa	0821 1734	0421 1216 1.953 2.327	1.0E 1.6F 0.3E *	<b>9</b>	F	0710 1643	0.245 1.138 1.926 2.235	0.7E 1.1F 0.3E *	<b>24</b>	Sa	0636 1623 2157	0.213 1.051 1.934 2.157	0.9E 1.6F 0.4E 0.3E	
<b>10</b>	W	0931 1952 2351	0600 1300 1952 2351	0.8E 1.0F 0.4F	<b>25</b>	Th	0822 1914 2248	0452 1159 1914 2248	0.6E 0.9F *	<b>10</b>	Sa	0142 1003 1826 2238	0.006 0.618 1.132 2.026 0.3E	<b>25</b>	Su	0918 1815	0534 1258 2017	1.3E 1.9F 0.3E	<b>10</b>	Sa	0818 1710	0406 1224 1.940 2.340	0.8E 1.3F 0.4E *	<b>25</b>	Su	0749 1703	0343 1.152 1.944 2.315	1.1E 1.8F 0.5E *	
<b>11</b>	Th	1007 2029	0626 1330 2029	1.1E 1.3F	<b>26</b>	F	0900 1943 2343	0525 1237 1943 2343	0.9E 1.4F *	<b>11</b>	Su	0228 1043 1900 2258	0.040 0.657 1.406 2.052 0.3E	<b>26</b>	M	1013 1858 2252	0.1340 2.1F 0.3E	<b>11</b>	Su	0915 1742 2236	0.526 1.301 1.957 0.4E	<b>26</b>	M	0854 1740	0509 1.238 2.001 0.4E	1.2E 1.9F 0.4E			
<b>12</b>	F	1040 2057	0026 0653 1400 2057	0.4F 1.3E 1.4F	<b>27</b>	Sa	0944 1315 2020	0603 1315 2020	1.3E 1.8F	<b>12</b>	M	0307 1120	0.110 0.731 1.4E 1.5F *	<b>27</b>	Tu	0224 1104	0.051 0.714 1.421 2.0F 2.111	0.4F 1.8E 2.0F *	<b>12</b>	M	0155 1005 1816 2250	0.020 0.623 1.336 2.021 0.4E	<b>27</b>	Tu	0953 1806 2254	0.138 1.8F 2.020 0.4E			
<b>13</b>	Sa	1112 2124	0057 0720 1433 2124	0.5F 1.4E 1.5F	<b>28</b>	Su	1030 1357 2059	0022 0641 1357 2059	0.3F 1.7E 2.1F	<b>13</b>	Tu	0340 1155	0.137 0.803 1.521 2.155	0.5F 1.5E 1.4F	<b>28</b>	W	0325 1153	0.127 0.758 1.504 2.132	0.6F 1.8E 1.8F	<b>13</b>	Tu	0246 1049 1849 2304	0.053 0.706 1.408 2.049 0.3E	<b>28</b>	W	0240 1048 1817 2300	0.526 1.301 1.957 0.4E	0.4F 1.2E 1.6F 0.4E	
<b>14</b>	Su	1142 2152	0125 0748 1509 2152	0.5F 1.5E 1.6F	<b>29</b>	M	1117 1442 2136	0056 0719 1442 2136	0.4F 2.0E 2.2F	<b>14</b>	W	0409 1226	0.201 0.832 1.556 2.223	0.5F 1.4E 1.3F	<b>14</b>	W	0331 1126 1915 2317	0.123 0.742 1.439 2.117 0.3E	<b>14</b>	W	0417 1157 1926 2333	0.154 0.816 1.505 2.140 0.3E	<b>29</b>	Th	0357 1137 1811 2315	0.133 1.2E 2.045 0.5E	0.7F 1.2E 1.2F 0.5E		
<b>15</b>	M	1212 2223	0150 0816 1549 2223	0.5F 1.6E 1.5F	<b>30</b>	Tu	1204 1530 2207	0128 0800 1530 2207	0.5F 2.1E 2.1F	<b>15</b>	Th	0438 1253	0.223 0.856 1.625 2.246	0.5F 1.3E 1.1F	<b>15</b>	Th	0417 1157 1926 2333	0.154 0.816 1.505 2.140 0.3E	<b>30</b>	F	0515 1221 1758 2339	0.904 1.501 2.044 0.6E	0.9E 0.9F 0.6E						
					<b>31</b>	W	1251 2232	0159 0843 1617 2232	0.6F 2.1E 1.9F											<b>31</b>	Sa	1743 2050	0306 0.959 1.530 2.050	1.0F 0.7E 0.5F 0.8E					

Time meridian 90° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

\* Current weak and variable.

† See page 196 for the remaining currents on this day.

# Sabine Pass, Texas, 2018

F—Flood, Dir. 321° True    E—Ebb, Dir. 143° True

April				May				June																
Slack	Maximum			Slack	Maximum			Slack	Maximum			Slack	Maximum											
	h	m	knots		h	m	knots		h	m	knots		h	m	knots									
<b>1</b> Su	0010 0803 1332 1729	0400 1046 1553 2112	1.1F 0.4E 0.3F 1.0E	<b>16</b> M	0026 1034 1419 2058	0405 1034 1419 2058	1.1F * 0.3F 1.1E	<b>1</b> Tu	0050 1423	0500 2118	1.3F 1.3E	<b>16</b> W	0100 0456 1216 1332 2124	0456 1216 * * 1.7E	1.8F * * * 1.7E	<b>1</b> F	0206 1358	0636 2230	1.5F 1.4E	<b>16</b> Sa	0242 1343	0638 2308	2.1F 1.7E	
<b>2</b> M	0046 1133 1603 2144	0452 * * 1.1E	1.1F * * 1.1E	<b>17</b> Tu	0103 1132 1418 2132	0457 1132 * 2132	1.3F * * 1.2E	<b>2</b> W	0126 1416	0547 2159	1.4F 1.3E	<b>17</b> Th	0149 1346	0551 2214	1.9F 1.7E	1.9F 1.7E	<b>2</b> Sa	0251 1416	0733 2309	1.5F 1.3E	<b>17</b> Su	0339 1546 1747	0735 * *	2.0F * *
<b>3</b> Tu	0129 1455	0546 2220	1.1F 1.1E	<b>18</b> W	0149 1515	0553 2212	1.4F 1.3E	<b>3</b> Th	0209 1419	0643 2241	1.4F 1.3E	<b>18</b> F	0245 1349	0653 2302	2.0F 1.6E	<b>3</b> Su	0338 1439	0824 2351	1.4F 1.1E	<b>18</b> M	0435 1359	0004 0827 1606 1943	1.4E 1.8F 0.3E *	
<b>4</b> W	0220 1457	0653 2300	1.1F 1.1E	<b>19</b> Th	0245 1414	0701 2256	1.5F 1.3E	<b>4</b> F	0301 1432	0750 2326	1.4F 1.1E	<b>19</b> Sa	0345 1416	0757 2359	2.0F 1.4E	<b>4</b> M	0422 1459	0906	1.3F	<b>19</b> Tu	0530 1359	0138 0913 1632 2115	1.0E 1.5F 0.4E *	
<b>5</b> Th	0320 1506	0814 2351	1.1F 0.9E	<b>20</b> F	0348 1438	0813 2352	1.7F 1.2E	<b>5</b> Sa	0357 1456	0851	1.4F	<b>20</b> Su	0446 1444	0855 1814 1952	1.9F 0.4E 0.4E	<b>5</b> Tu	0503 1508	0048 0943 1853 2107	0.9E 1.2F 0.3E 0.3E	<b>20</b> W	0624 1350 2039	0309 0956 1701 2257	0.6E 1.1F 0.6E 0.4F	
<b>6</b> F	0428 1526	0925 1915 2015	1.2F 0.4E 0.3E	<b>21</b> Sa	0457 1513	0917 1914 2003	1.8F 0.5E 0.5E	<b>6</b> Su	0457 1525	0026 0947 1918 2038	1.0E 1.3F 0.4E 0.4E	<b>21</b> M	0550 1506	0137 0949 1816 2125	1.2E 1.8F 0.5E *	<b>6</b> W	0538 1459	0203 1016 1801 2235	0.6E 1.0F 0.4E *	<b>21</b> Th	0714 1343 2118	0443 1039 1729	0.3E 0.8F 0.8E	
<b>7</b> Sa	0547 1555	0126 1037 1915 2138	0.8E 1.2F 0.4E 0.3E	<b>22</b> Su	0610 1550	0146 1020 1906 2139	1.1E 1.8F 0.5E 0.4E	<b>7</b> M	0559 1552	0157 1046 1913 2157	0.9E 1.3F 0.4E 0.3E	<b>22</b> Tu	0654 1518	0310 1043 1828 2303	0.9E 1.5F 0.6E *	<b>7</b> Th	0605 1432 2143	0301 1044 1803 2355	0.4E 0.7F 0.5E 0.3F	<b>22</b> F	1340 2158	0023 0652 1121 1755	0.7F * 0.5F 1.0E	
<b>8</b> Su	0707 1629	0300 1141 1923 2257	0.8E 1.3F 0.4E *	<b>23</b> M	0721 1621	0321 1122 1917 2307	1.1E 1.8F 0.5E *	<b>8</b> Tu	0659 1609	0304 1136 1901 2321	0.8E 1.2F 0.4E *	<b>23</b> W	0755 1517 2203	0439 1131 1842	0.6E 1.2F 0.7E	<b>8</b> F	1405 2150	0356 1109 1809	* 0.6F 0.7E	<b>23</b> Sa	1344 2237	0115 0837 1158 1819	1.0F * 0.3F 1.2E	
<b>9</b> M	0814 1700	0410 1226 1932 2355	0.9E 1.4F 0.4E *	<b>24</b> Tu	0827 1642	0449 1210 1930	1.0E 1.6F 0.6E	<b>9</b> W	0750 1611	0401 1208 1905	0.6E 1.0F 0.5E	<b>24</b> Th	0300 0854 1508 2227	0021 0628 1210 1855	0.4F 0.4E 0.9F 0.8E	<b>9</b> Sa	1352 2214	0042 0540 1133 1812	0.7F * 0.4F 1.0E	<b>24</b> Su	2313	0200 1001 1230 1843	1.2F * * 1.3E	
<b>10</b> Tu	0910 1725 2244	0526 1259 1947	0.9E 1.3F 0.4E	<b>25</b> W	0929 1646 2246	0013 0619 1248 1942	* 0.9E 1.4F 0.6E	<b>10</b> Th	0832 1555 2232	0017 0515 1229 1916	* 0.4E 0.8F 0.6E	<b>25</b> F	1500 2256	0112 0751 1240 1906	0.8F * 0.7F 1.0E	<b>10</b> Su	1357 2246	0122 0738 1158 1828	1.0F * 0.4F 1.3E	<b>25</b> M	2346	0246 1049 1259 1911	1.3F * * 1.3E	
<b>11</b> W	0221 0959 1738 2254	0627 1325 2007	0.8E 1.1F 0.5E	<b>26</b> Th	0332 1026 1637 2304	0726 1320 1952	0.7E 1.1F 0.7E	<b>11</b> F	0351 0904 1531 2248	0058 0635 1246 1925	0.5F 0.3E 0.7F 0.8E	<b>26</b> Sa	1455 2325	0158 0924 1305 1913	1.0F * 0.4F 1.2E	<b>11</b> M	1413 2324	0206 0922 1224 1858	1.3F * 0.3F 1.5E	<b>26</b> Tu	1944	0335 1125 1323 1944	1.4F * * 1.4E	
<b>12</b> Th	0330 1038 1733 2310	0713 1345 2026	0.5F 0.8E 0.9F 0.5E	<b>27</b> F	0519 1116 1625 2326	0833 1347 1955	0.5E 0.8F 0.9E	<b>12</b> Sa	1514 2312	0137 0739 1300 1926	0.8F * 0.5F 1.0E	<b>27</b> Su	2353	0246 1034 1327 1926	1.2F * * 1.3E	<b>12</b> Tu	0257 1027 1249 1938	1.6F * * 1.7E	<b>27</b> W	0018 1203 1334 2023	0420 1203 1334 2023	1.4F * * 1.4E		
<b>13</b> F	0442 1108 1712 2330	0756 1401 2037	0.6E 0.7F 0.6E	<b>28</b> Sa	0704 1157 1612 2351	0232 0944 1411 1956	1.1F 0.3E 0.5F 1.0E	<b>13</b> Su	1512 2343	0220 0859 1312 1935	1.1F * 0.4F 1.2E	<b>28</b> M	0336 1124 1340 1950	1.3F * * 1.4E	<b>13</b> W	0006 ●	0353 1115 1311 2027	1.9F * * 1.9E	<b>28</b> Th	0050 1343	0500 2107	1.5F 1.4E		
<b>14</b> Sa	0555 1129 1648 2356	0845 1414 2034	0.4E 0.5F 0.8E	<b>29</b> Su	0323 1040 1429 2011	1.2F * * 1.2E	<b>14</b> M	1519	0309 1011 1322 1959	1.3F * 0.3F 1.4E	<b>29</b> Tu	0021 1427	0422 2024	1.4F 1.4E	<b>14</b> Th	0054	0448 1214 1324 2124	2.1F * * 1.9E	<b>29</b> F	0125 1331	0541 2148	1.5F 1.4E		
<b>15</b> Su	● 1637	0314 0941 1420 2036	1.0F * 0.4F 0.9E	<b>30</b> M	0019 0413 1127 1422 2040	1.3F * * * 1.3E	<b>15</b> Tu	●	0018 0403 1107 1331 2037	1.6F * * * 1.6E	<b>30</b> W	0051 1348	0503 2106	1.5F 1.4E	<b>15</b> F	0146 1437	0541 2218	2.2F 1.9E	<b>30</b> Sa	0203 1346	0624 2223	1.5F 1.3E		
								<b>31</b> Th	0125 1348	0546 2150	1.5F 1.4E													

Time meridian 90° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
\* Current weak and variable.





# Galveston Bay Entrance (between jetties), Texas, 2018

F—Flood, Dir. 277° True    E—Ebb, Dir. 088° True

January				February				March								
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum		
h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	
<b>1</b>				<b>16</b>				<b>1</b>				<b>16</b>				
M	1227	1607	2.7F	Tu	0007	0859	1.7E	Th	0120	*		F	0049	0.3E		
○	2344			●	1318	1649	2.1F		0343	*			0356	*		
									1000	1.8E		Th	0423	0956	1.7E	
<b>2</b>		0824	2.3E						1437	1.75E		○	1339	1646	1.8F	
Tu	1330	1702	2.6F	<b>17</b>		0210	*	<b>2</b>				F	2224			
				W		0256	*		0143	*		<b>2</b>		0008	0.3E	
						0939	1.7E	F	0608	0.4F		F	0141	0351	0.6F	
						1730	2.0F		1533	1.5E			0600	1103	1.4E	
<b>3</b>		0215	*			0228	*	<b>3</b>					1434	1721	1.4F	
W		0331	2.2E	<b>18</b>		0344	*	Sa	0202	*		<b>3</b>		2214		
		0920	2.4F	Th		1008	1.5E		0737	0.5F		Sa	0217	0443	0.9F	
		1432	1.801			1808	1.9F	Sa	1626	1.1F			0729	1210	1.1E	
<b>4</b>		0251	*			0238	*	<b>4</b>				<b>3</b>		1523	1748	0.9F
Th		0424	*	<b>19</b>		0427	*		0022	0.3E			2128			
		1017	1.9E	F		1033	1.3E	Su	0426	0.6F		<b>4</b>		0044	0.5E	
		1533	2.1F			1842	1.7F		0927	0.7E		Su	0257	0536	1.0F	
<b>5</b>		0331	*			0234	0.3E	<b>5</b>					0858	1310	0.6E	
F		0525	1.5E	<b>20</b>		0519	1.0E	M	0530	0.5E			1607	1808	0.5F	
		1128	1.7F	Sa		1102	1.0E		1502	0.7F		<b>5</b>		2053		
		1636	2.012			1912	1.4F		2019	0.3F		M	0341	0633	1.1F	
<b>6</b>		0414	*			0251	0.4E	<b>6</b>					1401	1715	0.4F	
Sa		0643	1.1E	<b>21</b>		0630	0.7E	Tu	0632	0.8F			1825	*		
		1349	1.3F	Su		1149	0.7E		2042	*		<b>6</b>		0112	0.8E	
		1742	2.119			1940	1.1F		0307	0.7E		Tu	0431	0736	1.1F	
<b>7</b>		0225	0.447			0313	0.5E	<b>7</b>					1853			
Su		0811	0.7E	<b>22</b>		0745	*		0726	0.9E		<b>7</b>		0116	1.0E	
		1511	0.9F	M		1255	0.4E		2009	1.1F		W	0527	0847	1.1F	
		1848	2.214			2010	0.8F		2105	*			1811			
<b>8</b>		0156	0.507			0331	0.7E	<b>8</b>				<b>8</b>		0145	1.1E	
M		0740	0.5F	<b>23</b>		0859	0.4F	Th	0815	1.1E		Th	0626	1015	1.3F	
○		1306	0.3E	Tu		1358	*		2004	1.3F			1844			
		1951	0.6F			2041	0.6F		0405	1.1E		<b>8</b>		0213	1.6E	
<b>9</b>		0120	0.520			0319	0.9E	<b>9</b>						1046	1.8F	
Tu		0823	0.8F	<b>24</b>		1010	0.8F		0901	1.2E		<b>9</b>		0302	1.7E	
		1923	0.8F	W		1513	0.8F		2050	1.5F		F	0802	1150	2.1F	
		2257	0.3F	○		2113	0.4F					○	1927			
<b>10</b>		0101	0.537			0321	1.2E	<b>10</b>						0302	1.7E	
W		0903	1.1F	<b>25</b>		1109	1.4F	Sa	0948	1.318E		<b>10</b>		1150	2.1F	
		2045	*	Th		2040	*		2129	1.6F		Sa	0822	1209	1.6F	
		2308	*			2149	*						1944			
<b>11</b>		0556	1.2E			0353	1.5E	<b>11</b>				<b>11</b>		0518	1.3E	
Th		1253	1.4F	<b>26</b>		1202	1.8F	Su	1035	1.415E		Su	0917	1300	1.7F	
		2153	*	F		2105	*		2200	1.8F			2006	2220	0.3E	
		2325	*											2303	0.3E	
<b>12</b>		0616	1.4E			0438	1.8E	<b>12</b>				<b>12</b>		0518	1.3E	
F		1341	1.6F	<b>27</b>		1300	2.2F	M	1124	1.509E		M	1010	1354	1.8F	
				Sa		2101			2220	1.9F			2017	2236	0.3E	
<b>13</b>		0642	1.5E			0529	2.0E	<b>13</b>				<b>13</b>		0622	1.3E	
Sa		1433	1.7F	<b>28</b>		1405	2.4F	Tu	1212	1.554E		Tu	0720	1145	1.9F	
				Su		2140							2023	2255	0.3E	
<b>14</b>		0720	1.6E			0625	2.1E	<b>14</b>				<b>14</b>		0817	1.3E	
Su		1522	1.9F	<b>29</b>		1510	2.5F	W				W	1145	1525	1.8F	
				M					0038	*			2032	2300	0.4E	
<b>15</b>		0810	1.7E			0024	*	<b>15</b>				<b>15</b>		0218	*	
M		1231	2.0F	<b>30</b>		0128	*	Th				Th		0906	1.2E	
				Tu		0728	2.1E		0309	*			1227	1552	1.7F	
						1608	2.5F		0952	1.4E			2037	2258	0.5E	
									1338	1.659E		<b>15</b>		0218	*	
				<b>31</b>		0053	*		2238	1.8F		○		0906	1.2E	
				W		0243	*							1552	1.7F	
				○		0842	2.0E							2258	0.5E	
						1701	2.3F					<b>31</b>		0111	0.354E	
												○		0710	1.122E	
														1425	1.631E	
														1916	2.302E	

Time meridian 90° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 If three consecutive entries are marked (E) 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, 2018

F—Flood, Dir. 277° True    E—Ebb, Dir. 088° True

April				May				June															
Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		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												
<b>1</b> Su	0150 0841 1509 1845	0441 1234 1646 2303	1.4F 0.5E 0.4F 1.0E	<b>16</b> M	0121 0419 1102 1552 1732	0419 1102 1552 2126	1.4F * 0.5F 1.4E	<b>1</b> Tu	0201 0511 1444 1552 2151	0511 1444 1552 2151	1.8F * * 1.5E	<b>16</b> W	0112 0446 1408 1506 2110	0446 1408 1506 2110	2.3F * * 2.2E	<b>1</b> F	0259 0631 1543 2243	0631 1543 2243	1.9F 1.6E	<b>16</b> Sa	0252 0630 1430 2238	0630 1430 2238	2.5F 2.0E
<b>2</b> M	0228 1342 1659 2241	0526 * 1659 2241	1.5F * 1.1E	<b>17</b> Tu	0145 0500 1223 1608 1731	0500 1223 1608 2146	1.8F * 0.3F 1.7E	<b>2</b> W	0238 0555 1606 2222	0555 1606 2222	1.8F 1.5E	<b>17</b> Th	0156 0535 1418 2148	0535 1418 2148	2.5F 2.3E	<b>2</b> Sa	0345 0733 1555 2342	0733 1555 2342	1.8F 1.4E	<b>17</b> Su	0356 0739 1508 2354	0739 1508 2354	2.2F 1.7E
<b>3</b> Tu	0306 1734	0615 2305	1.5F 1.3E	<b>18</b> W	0217 0547 1341 1554 2215	0547 1341 1554 2215	2.0F * * 1.9E	<b>3</b> Th	0317 0646 1632 2302	0646 1632 2302	1.7F 1.5E	<b>18</b> F	0248 0634 1509 2236	0634 1509 2236	2.4F 2.2E	<b>3</b> Su	0436 0847 1542	0847	1.7F	<b>18</b> M	0508 0857 1522 1735 1930	0857 1522 1735 1930	1.9F 0.3E *
<b>4</b> W	0347 1715	0708 2347	1.4F 1.3E	<b>19</b> Th	0258 0643 1632 2254	0643 1632 2254	2.1F 2.0E	<b>4</b> F	0404 0749 1652	0749 1652	1.6F	<b>19</b> Sa	0349 0743 1550 2343	0743 1550 2343	2.3F 1.9E	<b>4</b> M	0531 1000 1528 2217 2309	1000 1528 2217 2309	1.1E 1.7F 0.7E	<b>19</b> Tu	0625 1523 2112	0142 1014 1752 2112	1.2E 1.6F 0.4E *
<b>5</b> Th	0435 1736	0812	1.4F	<b>20</b> F	0352 0748 1629 2353	0748 1629 2353	2.2F 1.9E	<b>5</b> Sa	0501 0914 1703	0914 1703	1.3E 1.6F	<b>20</b> Su	0504 0906 1619	0906	2.2F	<b>5</b> Tu	0624 1049 1529 2352	1049 1906 2352	0.9E 1.6F 0.6E 0.4E	<b>20</b> W	0740 1508 2036	0413 1106 2259	0.9E 1.2F 0.6E 0.6F
<b>6</b> F	0535 1757	0045 0938	1.2E 1.4F	<b>21</b> Sa	0501 0906 1654	0906	2.2F	<b>6</b> Su	0607 1036 1659	1036	1.2E 1.7F	<b>21</b> M	0628 1035 1905 2102	1035 1905 2102	1.6E 2.0F 0.4E 0.3E	<b>6</b> W	0710 1526 1843	0344 1115 1843	0.6E 1.4F 0.7E	<b>21</b> Th	0850 1435 2113	0608 1139 1821	0.6E 0.8F 0.9E
<b>7</b> Sa	0642 1814	0147 1058	1.2E 1.6F	<b>22</b> Su	0626 1037 1725	1037	1.8E 2.2F	<b>7</b> M	0710 1128 1652	1128 2022 2212 2259†	1.1E 1.8F 0.6E 0.5E	<b>22</b> Tu	0748 1648 2247	0247 1134 1918 2247	1.3E 1.8F 0.5E *	<b>7</b> Th	0745 1515 1842 2220	0016 0517 1127 1842 2220	* 0.4E 1.1F 0.9E	<b>22</b> F	0443 0955 1413 1839 2153	0003 0753 1158 1839 2153	1.0F 0.4E 0.5F 1.1E
<b>8</b> Su	0747 1820	0257 1151	1.1E 1.7F	<b>23</b> M	0750 1147 2020 2231	1147 2020 2231	1.6E 2.2F 0.5E 0.3E	<b>8</b> Tu	0805 1206 1655 2020	1206 2020	0.9E 1.7F 0.6E	<b>23</b> W	0900 1644 2155	0545 1217 1930	1.1E 1.5F 0.7E	<b>8</b> F	1457 1853 2224	0022 0617 1142 1853	0.4F * 0.9F 1.0E	<b>23</b> Sa	0711 1211 1857	0056 0918 1211 1857	1.3F 0.3E * 1.3E
<b>9</b> M	0845 1821	0504 1238 2123 2323	1.1E 1.8F 0.5E 0.4E	<b>24</b> Tu	0908 1814 2348	0512 1242 2036 2348	1.4E 2.0F 0.5E *	<b>9</b> W	0852 1658	0013 0547 1233 2008	0.3E 0.8E 1.5F 0.7E	<b>24</b> Th	0238 1006 1619 2225	0001 0710 1252 1943	0.6F 0.9E 1.1F 0.8E	<b>9</b> Sa	1426 1853 2238	0049 0719 1203 1853	0.8F * 0.6F 1.2E	<b>24</b> Su	1910 2313	0150 1032 1227 1910	1.5F * * 1.5E
<b>10</b> Tu	0937 1829	0610 1322 2133	1.1E 1.8F 0.5E	<b>25</b> W	1017 1823 2259	0652 1333 2053	1.3E 1.7F 0.5E	<b>10</b> Th	0933 1652 2329	0038 0642 1252 2006	* 0.6E 1.3F 0.8E	<b>25</b> F	0452 1106 1556 2301	0102 0842 1319 2000	1.0F 0.6E 0.6F 1.0E	<b>10</b> Su	1406 2259	0129 0838 1225 1836	1.2F * 0.4F 1.5E	<b>25</b> M	1047 2355	0241 1922	1.7F 1.6E
<b>11</b> W	1024 1838	0023 0705 1401 2131	* 1.1E 1.6F 0.6E	<b>26</b> Th	0325 1120 1808 2329	0814 1418 2107	1.1E 1.3F 0.7E	<b>11</b> F	0413 1006 1641 2337	0117 0736 1311 2019	0.3F 0.4E 1.0F 1.0E	<b>26</b> Sa	0711 1207 1533 2340	0203 1003 1341 2017	1.3F 0.4E 0.3F 1.2E	<b>11</b> M	2330	0215 1005 1245 1853	1.6F * * 1.8E	<b>26</b> Tu	1158 1953	0325 1953	1.8F 1.7E
<b>12</b> Th	1105 1838	0122 0759 1430 2131	0.9E * 1.4F 0.7E	<b>27</b> F	0514 1222 1742	0930 1453 2123	0.9E 0.9E 0.8F 0.9E	<b>12</b> Sa	0550 1033 1620 2351	0201 0835 1335 2025	0.7F 0.3E 0.7F 1.1E	<b>27</b> Su	0256 1124 1402 2026	0256 1124 1402 2026	1.6F * * 1.4E	<b>12</b> Tu	1328 1925	0302 1925	2.0F 2.1E	<b>27</b> W	1248 2034	0405 2034	1.9F 1.7E
<b>13</b> F	0037 0439 1142 1827	0218 0850 1449 2144	0.3F 0.7E 1.2F 0.8E	<b>28</b> Sa	0006 0700 1321 1723	0303 1042 1515 2137	1.3F 0.6E 0.5F 1.1E	<b>13</b> Su	1557 2001	0242 0932 1402 2001	1.1F * 0.5F 1.4E	<b>28</b> M	0019 1247 1425 2027	0340 1247 1425 2027	1.8F * * 1.6E	<b>13</b> W	0009 1217	0348 2006	2.4F 2.3E	<b>28</b> Th	0120 1329	0446 2116	2.0F 1.7E
<b>14</b> Sa	0048 0602 1214 1810	0303 0934 1509 2152	0.6F 0.5E 1.0F 0.9E	<b>29</b> Su	0045 0901	0350 1208 1532 2138	1.6F 0.4E * 1.2E	<b>14</b> M	0011 1552	0322 1031 1431 2011	1.6F * 0.3F 1.7E	<b>29</b> Tu	0059 1402 1441 2051	0418 1402 1441 2051	1.9F * * 1.7E	<b>14</b> Th	0058 1249	0437 2052	2.6F 2.4E	<b>29</b> F	0203 1402	0529 2158	2.0F 1.7E
<b>15</b> Su	0103 0719 1241 1745	0341 1014 1531 2128	1.0F 0.4E 0.7F 1.1E	<b>30</b> M	0124 0431 1326 1547 2130	0431 1326 1547 2130	1.7F * * 1.4E	<b>15</b> Tu	0037 2036	0402 1154 1457 2036	2.0F * * 2.0E	<b>30</b> W	0138 1409	0457 2124	1.9F 1.7E	<b>15</b> F	0153 1338	0530 2142	2.6F 2.3E	<b>30</b> Sa	0245 1411	0617 2242	2.0F 1.5E
												<b>31</b> Th	0217 1511	0540 2201	1.9F 1.7E								

Time meridian 90° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 If three consecutive entries are marked (E) the middle one is not a true maximum but an intermediate value to show the current pattern.  
 \* Current weak and variable.  
 † See page 196 for the remaining currents on this day.

# Galveston Bay Entrance (between jetties), Texas, 2018

F—Flood, Dir. 277° True    E—Ebb, Dir. 088° True

July				August				September															
Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		knots												
<b>1</b> Su	h m 0327 1352	h m 0709 2336	1.8F 1.3E	<b>16</b> M	h m 0401 1502 1815	h m 0723 1502 1815	1.8F * *	<b>1</b> W	h m 0356 1152	h m 0722 1444 1933	1.1F 0.6E *	<b>16</b> Th	h m 0257 0748 1435 2054	h m 0429 0505 1304 2110	knots * 0.3F 1.3E 1.3F	<b>16</b> Su	h m 0610 1904	h m 1351 2306	knots 1.2E 1.4F				
<b>2</b> M	0408 1351	0759 2336	1.7F	<b>17</b> Tu	0506 1340 1746 2147	0822 1533 1937 2147	1.3F 0.3E 0.4F	<b>2</b> Th	0405 1129 1836	0747 1506 2044	0.7F 0.7E 0.4F	<b>17</b> F	0616 0813 1456 2230	* * 0.9E 1.2F	<b>2</b> Su	0721 1828	1340 2219	1.5E 1.7F	<b>17</b> M	0652 2004	1447 2356	1.2E 1.5F	
<b>3</b> Tu	0448 1355	0843 1719 1950	1.4F 0.4E 0.3E	<b>18</b> W	0617 1315 1848	0920 1608 2112	0.9F 0.5E 0.6F	<b>3</b> F	0204 0811 1038 1903	* 0.5F 0.9E 0.8F	<b>18</b> Sa	0612 1950	1513 2331	1.1E 1.4F	<b>3</b> M	0709 1928	1425 2323	1.7E 2.0F	<b>18</b> Tu	0727 2100	1644	1.2E	
<b>4</b> W	0523 1350	0917 1654 2157	1.2F 0.6E *	<b>19</b> Th	0733 1245 1943	1009 1642 2253	0.5F 0.8E 1.0F	<b>4</b> Sa	0447 0820 1017 1934	* 0.3F 1.1E 1.2F	<b>19</b> Su	0719 2043	1601	1.2E	<b>4</b> Tu	0723 2034	1523	1.8E	<b>19</b> W	0752	0042 1005 1048 1803	1.7F 0.3E 0.3E 1.3E	
<b>5</b> Th	0547 1334 2051	0943 1711 2320	0.9F 0.8E 0.3F	<b>20</b> F	0429 1033 1712 2033	0704 1033 1712 2351	0.3E 1.0E 1.0E 1.3F	<b>5</b> Su	1007 2012	1521 2343	1.4E 1.6F	<b>20</b> M	0815 2133	0017 1714	1.5F 1.3E	<b>5</b> W	0752 2144	1637	1.8E	<b>20</b> Th	0757	0131 1013 1159 1900	1.7F 0.3E * 1.3E
<b>6</b> F	1309 2058	1008 1726 2338	0.7F 1.0E 0.8F	<b>21</b> Sa	0831 1048 1739 2119	* * 1.2E	<b>6</b> M	0911 2058	1603	1.7E	<b>21</b> Tu	0904 2221	0105 1808	1.6F 1.4E	<b>6</b> Th	0828	0125 1027 1158 1754	2.3F 0.3E * 1.8E	<b>21</b> F	0749	0221 1025 1302 1958	1.8F 0.3E * 1.3E	
<b>7</b> Sa	1233 2116	0608 1032 1720	* 0.4F 1.2E	<b>22</b> Su	0039 0945 1105 1801	1.5F * * 1.4E	<b>7</b> Tu	0911 2153	0035 1655	2.0F 1.9E	<b>22</b> W	0944 2309	0158 1904	1.7F 1.5E	<b>7</b> F	0231 1044 1312 1925	2.3F * * 1.8E	<b>22</b> Sa	0750	0303 1020 1410 2052	1.7F 0.4E * 1.2E		
<b>8</b> Su	1222 2142	0014 0745 1055 1709	1.2F * 0.3F 1.5E	<b>23</b> M	0941 2247	0128 1824	1.6F 1.5E	<b>8</b> W	0934 2254	0134 1753	2.2F 2.0E	<b>23</b> Th	0250 1147 1241 2004	1.8F * * 1.5E	<b>8</b> Sa	0000 1559	0327 2118	2.1F * 0.4F 1.7E	<b>23</b> Su	0011 0752 1320 1715	0335 1024 1506 2140	1.6F 0.5E 0.4F 1.0E	
<b>9</b> M	1217 2218	0058 1735	1.6F 1.8E	<b>24</b> Tu	1042 2332	0220 1859	1.7F 1.6E	<b>9</b> Th	1009 2359	0238 1854	2.4F 2.1E	<b>24</b> F	0335 1205 1358 2059	1.9F * * 1.5E	<b>9</b> Su	0105 0931 1311 1743	0412 1122 1528 2231	1.9F 0.3E 0.7F 1.5E	<b>24</b> M	0051 0749 1341 1834	0356 1043 1549 2223	1.4F 0.7E 0.6F 0.8E	
<b>10</b> Tu	1107 2304	0150 1813	2.0F 2.0E	<b>25</b> W	1129 1950	0309 1950	1.8F 1.6E	<b>10</b> F	0337 1223 1413 2005	2.5F * * 2.0E	<b>25</b> Sa	0042 1211 1501 2146	0413 1211 * 1.4E	<b>10</b> M	0205 0916 1348 1916	0449 1144 1624 2344	1.4F 0.5E 1.1F 1.1E	<b>25</b> Tu	0125 0739 1402 1950	0413 1103 1628 2307	1.1F 0.8E 0.9F 0.5E		
<b>11</b> W	1106 2358	0246 1900	2.3F 2.2E	<b>26</b> Th	0018 1202	0354 2047	1.9F 1.7E	<b>11</b> Sa	0103 1242 1520 2123	0428 * * 1.9E	<b>26</b> Su	0124 0951	0443 1203 1551 2227	1.8F 0.3E * 1.2E	<b>11</b> Tu	0301 0843 1430 2050	0519 1209 1717 2301	1.0F 0.6E 1.3F	<b>26</b> W	0150 0713 1423	0430 1103 1707	0.8F 0.9E 1.1F	
<b>12</b> Th	1137	0341 1954	2.5F 2.3E	<b>27</b> F	0104 1342 1450 2135	0434 * * 1.6E	2.0F * * 1.6E	<b>12</b> Su	0205 1757	0516 2252	2.1F 1.6E	<b>27</b> M	0201 0951 1454 1826	0507 1220 1635 2304	1.6F 0.5E 0.4F 1.0E	<b>12</b> W	0354 0812 1514 2301	0057 0544 1230 1813	0.7E 0.5F 0.8E 1.4F	<b>27</b> Th	0642 1446	1034 1750	1.1E 1.3F
<b>13</b> F	0058	0433 1351 1505 2053	2.6F * * 2.2E	<b>28</b> Sa	0147 1352 1543 2215	0513 * * 1.5E	2.0F * * 1.5E	<b>13</b> M	0303 1143 1457 1930	0601 1321 1716	1.7F 0.3E 0.7F	<b>28</b> Tu	0231 0941 1519 1946	0528 1243 1721 2338	1.3F 0.6E 0.5F 0.6E	<b>13</b> Th	0209 0603 1237 1915	030E * 0.9E 1.3F	<b>28</b> F	0630 1514	1043 1840	1.4E 1.5F	
<b>14</b> Sa	0159	0527 1411 1605 2152	2.5F * * 2.0E	<b>29</b> Su	0227 1348 1630 2252	0551 * * 1.3E	1.9F * * 1.3E	<b>14</b> Tu	0359 1123 1545 2116	0642 1345 1820	1.2E 0.4E 0.8F	<b>29</b> W	0251 0922 1545 2126	0548 1304 1811	1.0F 0.7E 0.7F	<b>14</b> F	0324 1658	1226 2024	1.1E 1.3F	<b>29</b> Sa	0211 0406 1106 1552	* * 1.6E 1.7F	
<b>15</b> Su	0300	0624 1434 1704 2257	2.2F * * 1.7E	<b>30</b> M	0303 1202	0625 1355 1722 2333	1.7F 0.3E * 1.0E	<b>15</b> W	0458 1043 1644 2338	0718 1410 1931	0.7F 0.6E 0.9F	<b>30</b> Th	0258 0839 1615	0607 1304 1906	0.7F 0.8E 0.9F	<b>15</b> Sa	0520 1801	1304 2154	1.1E 1.3F	<b>30</b> Su	0548 1643	1147 2042	1.7E 1.8F
				<b>31</b> Tu	0333 1203	0655 1418 1824	1.4F 0.4E *					<b>31</b> F	0129 0612 0814 1651	* 0.4F 1.0E 1.1F									

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



## Bolivar Roads, Galveston Bay, Texas, 2018

F—Flood, Dir. 306° True     E—Ebb, Dir. 116° True

January				February				March										
Slack		Maximum		Slack		Maximum		Slack		Maximum		Slack		Maximum				
h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m			
<b>1</b> M	0032	05E	●	<b>16</b> Tu	0131	07E	<b>1</b> Th	0156	*	<b>16</b> F	0142	06E	<b>1</b> Th	0027	03E			
	0159	05E			0241	07E		0324	*		0412	04E		0249	*	0342	*	
○	1240	1611	2.8F	●	1323	1704	1440	1017	2.4E	1419	1017	1.4E	○	1342	1626			
	2311	1611	2.8F		2321	1704		2.0F	1754		2.1F	1737		1.6F	1646	1.8F	2052	1626
<b>2</b> Tu	0901	2.7E	<b>17</b> W	0937	1.8E	<b>2</b> F	0224	*	<b>17</b> Sa	0151	0.7E	<b>2</b> F	0046	0.3E	<b>17</b> Sa	0006	0.8E	
	1341	2.7F		1403	1.9F		0430	2.1E		0459	0.3E		0350	*		0417	*	
<b>3</b> W	0033	1002	2.6E	<b>18</b> Th	1006	1.7E	<b>3</b> Sa	1117	2.1E	<b>18</b> Su	1047	1.2E	<b>3</b> Sa	0301	0451	<b>18</b> Su	0259	0456
	1442	1806	2.4F		1439	1.8F		1219	1.6E		1522	1.2F		0643	1129		1.4E	1508
<b>4</b> Th	0139	1106	2.4E	<b>19</b> F	1031	1.5E	<b>4</b> Su	1614	1.4F	<b>19</b> M	0153	0.9E	<b>4</b> Su	0052	0.7E	<b>19</b> M	0000	1.1E
	1542	1905	2.1F		1512	1.7F		0256	0.6E		1927	*		0507	0645		0.4F	0339
<b>5</b> F	0214	1216	2.0E	<b>20</b> Sa	0359	0.7E	<b>5</b> M	2348	1.0F	<b>20</b> Tu	0839	1238	<b>5</b> M	0825	1228	<b>20</b> Tu	0842	1214
	1638	2001	1.8F		0533	0.6E		1122	1.0E		1605	1854		09F	0825		1228	10E
<b>6</b> Sa	0217	0446	0.5E	<b>21</b> Su	0358	0.7E	<b>6</b> Tu	1735	2012	<b>21</b> W	0210	1.3E	<b>6</b> Tu	0054	1.1E	<b>21</b> W	0002	1.3E
	0649	1329	1.5E		0647	0.5E		0712	1012		0546	0840		1.2F	0420		0656	09F
<b>7</b> Su	0154	0506	0.7E	<b>22</b> M	0351	0.8E	<b>7</b> W	2252	0.3F	<b>22</b> Th	1241	1525	<b>7</b> W	0109	1.4E	<b>22</b> Th	0047	1.7E
	0902	0.9E	0803		*	0339		1.6E	2003		*	0625		0232	1.5E		0544	0136
<b>8</b> M	0119	0520	1.0E	<b>23</b> Tu	0352	1.0E	<b>8</b> Th	0752	1.2F	<b>23</b> F	0308	1.7E	<b>8</b> Th	0214	1.7E	<b>23</b> F	0131	1.8E
	1625	0.4E	0916		0.3F	0411		1.7E	0717		1049	1645		0308	1.7E		0631	0214
○	1906	2206	0.7F	○	1746	2052	<b>9</b> F	2109	*	<b>9</b> Sa	0357	1.9E	<b>9</b> F	0726	1128	<b>9</b> F	0229	1.8E
	0056	0528	1.3E		2338	0.7F		0451	1.8E		0820	1200		2.0F	0357		1.9E	0726
<b>9</b> Tu	0922	1214	0.8F	<b>24</b> W	0743	1.2E	<b>10</b> Sa	0919	1310	<b>24</b> Sa	0459	2.0E	<b>10</b> Sa	0829	1237	<b>24</b> Sa	0653	1.8E
	1844	1844	0.4F		1022	0.8F		1008	1401		0820	1200		2.0F	0459		2.0E	0829
<b>10</b> W	0043	0539	1.6E	<b>25</b> Th	0411	1.5E	<b>11</b> Su	2006	2305	<b>25</b> Su	0932	1311	<b>11</b> Su	0829	1237	<b>25</b> Su	0814	1158
	0946	1305	1.3F		1122	1.4F		0034	0.7E		1044	1418		2.2E	0935		1340	1.7F
<b>11</b> Th	1015	1347	1.7F	●	1220	1.9F	<b>12</b> M	1059	1450	<b>26</b> M	2119	2333	<b>12</b> M	0930	2245	<b>26</b> M	1948	2218
	1955	2158	0.3E		2258	0.4E		1450	1.9F		0040	04E		0610	2.2E		1930	2245
<b>12</b> F	0625	1426	1.9E	<b>27</b> Sa	0518	2.1E	<b>13</b> Tu	1149	1537	<b>27</b> Tu	1151	1517	<b>13</b> Tu	0116	0.7E	<b>27</b> Tu	1047	1416
	2034	2300	0.5E		2348	0.5E		0137	0.7E		2133	2216		0040	0.4E		1038	1436
<b>13</b> Sa	0046	0700	2.0E	<b>28</b> Su	1416	2.5F	<b>14</b> W	1235	1619	<b>28</b> W	1250	1606	<b>14</b> W	0209	0.6E	<b>28</b> W	1148	1503
	1123	1505	2.1F		2353	0.5E		0018	0.7E		2211	2254		0147	*		1132	1521
<b>14</b> Su	0131	0739	2.0E	<b>29</b> M	0039	0.5E	<b>15</b> Th	1314	1653	<b>29</b> M	0001	0.3E	<b>15</b> Th	0245	0.5E	<b>29</b> Th	0220	*
	2153	1544	2.1F		0707	2.5E		0122	0.7E		0122	0.7E		0829	1.4E		1216	1553
<b>15</b> M	0040	07E	○	<b>30</b> Tu	0810	2.6E	<b>16</b> Fr	0949	1.6E	<b>30</b> F	0913	1.3E	<b>15</b> Th	0313	0.4E	<b>30</b> F	0130	0317
	1242	1624			2.1F	2338		2.5F	1718		1.7F	1252		1613	1.5F		0913	1.3E
<b>16</b> M	0040	07E	○	<b>31</b> W	0122	0.3E	<b>17</b> Sa	1349	1718	<b>31</b> Sa	0913	1.3E	<b>15</b> Th	0313	0.4E	<b>31</b> Sa	0149	0409
	2237	2.1F			0224	*		2257	1.7F		2111	1613		1.5F	0641		1056	1.1E

Time meridian 90° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
\* Current weak and variable.

# Bolivar Roads, Galveston Bay, Texas, 2018

F—Flood, Dir. 306° True    E—Ebb, Dir. 116° True

April				May				June															
Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		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												
<b>1</b> Su	0216 0814 1453 1851	0457 1153 1649 2302	1.1F 0.8E 0.6F 1.4E	<b>16</b> M	0141 0826 1451 1739	0437 1144 1617 2212	1.6F 0.7E 0.3F 1.6E	<b>1</b> Tu	0203 1058	0524 1347 1618 2214	2.0F 0.4E * 2.0E	<b>16</b> W	0128 1019	0458 1331 1604 2150	2.7F 0.6E 0.4E 2.3E	<b>1</b> F	0250 1309	0631 2256	2.1F 1.8E	<b>16</b> Sa	0317 1359	0645 2347	2.5F 2.3E
<b>2</b> M	0246 0950 1546 1836	0544 1255 1712 2316	1.4F 0.5E 0.3F 1.6E	<b>17</b> Tu	0205 0936	0518 1248 1650 2235	2.0F 0.7E * 1.8E	<b>2</b> W	0235 1202	0604 1515 1634 2248	2.1F 0.4E 0.4E 2.0E	<b>17</b> Th	0216 1144	0548 1459 1636 2239	2.7F 0.6E 0.5E 2.3E	<b>2</b> Sa	0338 1401	0726 2340	1.9F 1.6E	<b>17</b> Su	0423 1445	0754 2245	2.2F
<b>3</b> Tu	0319 1129	0631 1411 1736 2344	1.6F 0.4E * 1.8E	<b>18</b> W	0240 1051	0604 1402 1725 2310	2.3F 0.6E 0.3E 2.0E	<b>3</b> Th	0312 1307	0648 2328	2.1F 1.9E	<b>18</b> F	0313 1319	0646 2340	2.6F 2.2E	<b>3</b> Su	0428 1444	0830	1.8F	<b>18</b> M	0528 1507	0904 1752 1955	2.0E 1.9F 0.6E 0.5E
<b>4</b> W	0356 1305	0719 1610 1750	1.8F 0.3E 0.3E	<b>19</b> Th	0325 1219	0656 1541 1757 2357	2.4F 0.6E 0.5E 2.0E	<b>4</b> F	0358 1416	0741	1.9F	<b>19</b> Sa	0420 1446	0753	2.4F	<b>4</b> M	0519 1514	0027 0937 2137 2347	1.3E 1.6F 1.1E 1.0E	<b>19</b> Tu	0630 1506	0239 1004 1815 2230	1.5E 1.6F 0.8E *
<b>5</b> Th	0438 1434	0021 0814	1.8E 1.8F	<b>20</b> F	0422 1403	0757	2.3F	<b>5</b> Sa	0452 1520	0015 0849	1.7E 1.7F	<b>20</b> Su	0532 1551	0059 0912	2.0E 2.1F	<b>5</b> Tu	0606 1529	0126 1030 1940	1.1E 1.4F 1.0E	<b>20</b> W	0731 1446 2213	0406 1050 1834	1.1E 1.3F 1.1E
<b>6</b> F	0530 1553	0107 0921	1.7E 1.7F	<b>21</b> Sa	0531 1549	0100 0909	1.9E 2.1F	<b>6</b> Su	0553 1613	0114 1016 2220 2335	1.4E 1.6F 1.1E 1.1E	<b>21</b> M	0647 1631	0234 1035 1931 2146	1.8E 1.9F 0.7E 0.6E	<b>6</b> W	0649 1527	0043 0245 1104 1934	0.7E 0.7E 1.2F 1.0E	<b>21</b> Th	0831 1419 2219	0003 0545 1127 1847 2219	0.3F 0.6E 0.9F 1.3E
<b>7</b> Sa	0632 1700	0204 1045	1.5E 1.6F	<b>22</b> Su	0650 1712	0221 1036	1.8E 2.0F	<b>7</b> M	0659 1652	0229 1134 2111	1.2E 1.5F 1.0E	<b>22</b> Tu	0759 1647	0407 1140 1952	1.5E 1.7F 0.8E	<b>7</b> Th	0732 1506	0108 0414 1125 1916	0.3E 0.5E 0.9F 1.1E	<b>22</b> F	0506 0940 1400 2241	0104 0740 1157 1853	0.9F 0.3E 0.5F 1.6E
<b>8</b> Su	0744 1754	0315 1209 2212	1.4E 1.5F 0.9E	<b>23</b> M	0813 1807	0356 1200 2057 2312	1.7E 1.8F 0.7E 0.6E	<b>8</b> Tu	0803 1715	0051 0352 1228 2105	0.8E 1.0E 1.4F 1.0E	<b>23</b> W	0906 1639 2335	0001 0537 1226 2013	* 1.2E 1.4F 1.0E	<b>8</b> F	1438 2252	0119 0550 1148 1858	* * 0.6F 1.2E	<b>23</b> Sa	0718 1225 1859	0151 0914 1225 1859	1.3F 0.3E * 1.8E
<b>9</b> M	0858 1837	0037 0438 1315 2205	0.9E 1.2E 1.5F 0.9E	<b>24</b> Tu	0929 1839	0529 1304 2119	1.6E 1.7F 0.7E	<b>9</b> W	0900 1719	0137 0513 1302 2110	0.5E 0.8E 1.2F 1.0E	<b>24</b> Th	1608 2334	0111 0712 1300 2026	0.3F 0.9E 1.0F 1.2E	<b>9</b> Sa	1407 2251	0130 0739 1216 1851	0.7F * 0.3F 1.5E	<b>24</b> Su	0833 1254 1912	0230 1030 1254 1912	1.7F 0.3E 0.3E 2.0E
<b>10</b> Tu	1003 1906	0137 0600 1404 2220	0.7E 1.1E 1.5F 0.9E	<b>25</b> W	1034 1844	0050 0656 1350 2140	* 1.5E 1.5F 0.8E	<b>10</b> Th	0953 1659	0207 0632 1321 2104	* 0.6E 1.0F 1.0E	<b>25</b> F	1544 2351	0205 0843 1327 2027	0.8F 0.6E 0.7F 1.4E	<b>10</b> Su	0646 2308	0154 0930 1249 1857	1.4F 0.3E * 1.8E	<b>25</b> M	0923 1325 1935	0305 1135 1325 1935	2.0F 0.4E 0.3E 2.1E
<b>11</b> W	1055 1919	0219 0712 1437 2233	0.5E 1.1E 1.4F 0.9E	<b>26</b> Th	1131 1813	0154 0815 1423 2154	* 1.3E 1.2F 0.9E	<b>11</b> F	1045 1629	0223 0749 1335 2044	* 0.5E 0.8F 1.1E	<b>26</b> Sa	1524 2019	0248 1001 1350 2019	1.3F 0.5E 0.3F 1.7E	<b>11</b> M	0747 2339	0228 1049 1326 1920	2.0F 0.4E * 2.2E	<b>26</b> Tu	1004 2006	0005 1234 1358 2006	2.1F 0.5E 0.5E 2.1E
<b>12</b> Th	1138 1908	0249 0812 1456 2237	* 1.0E 1.2F 0.9E	<b>27</b> F	1222 1733	0246 0927 1448 2152	0.6F 1.0E 0.9F 1.1E	<b>12</b> Sa	1145 1603	0238 0902 1355 2029	0.7F 0.5E 0.5F 1.3E	<b>27</b> Su	1414 2020	0324 1109 1414 2020	1.7F 0.4E * 1.9E	<b>12</b> Tu	0848 1956	0308 1156 1404 1956	2.5F 0.5E 0.3E 2.4E	<b>27</b> W	1044 2043	0039 0414 2043	2.2F 2.1E
<b>13</b> F	1217 1834	0309 0904 1507 2227	* 0.9E 1.0F 0.9E	<b>28</b> Sa	1312 1712	0051 0654 1510 2138	1.1F 0.8E 0.6F 1.4E	<b>13</b> Su	1255 1544	0301 1009 1422 2025	1.3F 0.5E 0.3F 1.7E	<b>28</b> M	2036	0357 1213 1439 2036	2.0F 0.4E * 2.1E	<b>13</b> W	0022 1000	0354 1302 1441 2040	2.7F 0.5E 0.4E 2.6E	<b>28</b> Th	1127 2123	0454 2123	2.2F 2.0E
<b>14</b> Sa	1258 1807	0331 0954 1524 2214	0.5F 0.8E 0.8F 1.1E	<b>29</b> Su	1406 1655	0410 1134 1531 2133	1.5F 0.6E 0.3F 1.7E	<b>14</b> M	0807	0023 0334 1114 1454 2040	1.9F 0.5E * 2.0E	<b>29</b> Tu	2103	0102 1039 1316 1505 2103	2.2F 0.5E 0.5E 0.4E 2.2E	<b>14</b> Th	0114 1123	0445 1415 1514 2133	2.8F 0.5E 0.4E 2.6E	<b>29</b> F	1212 2204	0158 0538 2204	2.1F 1.9E
<b>15</b> Su	0715 1347 1750	0401 1046 1548 2207	1.0F 0.7E 0.6F 1.4E	<b>30</b> M	0949	0136 0447 1238 1554 2147	1.8F 0.5E * 1.9E	<b>15</b> Tu	0909	0050 0413 1219 1529 2110	2.4F 0.6E * 2.2E	<b>30</b> W	1125	0132 0504 2136	2.2F 2.1E	<b>15</b> F	0213 1248	0542 2234	2.7F 2.5E	<b>30</b> Sa	0242 1253	0625 2244	2.0F 1.7E
												<b>31</b> Th	1215	0208 0544 2214	2.2F 2.0E								

Time meridian 90° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
\* Current weak and variable.



# Bolivar Roads, Galveston Bay, Texas, 2018

F—Flood, Dir. 306° True    E—Ebb, Dir. 116° True

October				November				December																
Slack	Maximum																							
	h	m	knots																					
<b>1</b> M	0227	1344	1.8E	<b>16</b> Tu	0439	1450	1.4E	<b>1</b> Th	0526	0831	0.7E	<b>16</b> F	0439	0006	1.4F	<b>1</b> Sa	0405	0738	1.0E	<b>16</b> Su	0240	0656	1.2E	
	1812	2151	2.0F		1920	2342	1.5F		2048	1017	0.6E			0831	1.1E		1103	1241	0.3F		1119	1329	0.3F	
				<b>17</b> W	0526	0931	0.9E	<b>2</b> F	0557	0848	0.7E	<b>17</b> Sa	2044	0046	1.2F	<b>2</b> Su	0339	0752	1.2E	<b>17</b> M	0208	0646	1.3E	
					1213	1619	1.2E		2159	1216	0.3E		2044	0841	1.1E		1103	1339	0.8F		1045	1343	0.8F	
<b>2</b> Tu	0425	1458	1.8E	<b>18</b> Th	0602	0050	1.5F	<b>3</b> Sa	0602	0117	1.6F	<b>18</b> Su	2142	0112	0.9F	<b>3</b> M	0314	0756	1.5E	<b>18</b> Tu	1043	0640	1.5E	
	1931	2314	1.9F		0929	0929	0.9E		2303	0907	0.8E		2241	0841	1.2E		1122	1425	1.4F		0245	0455	0.8F	
<b>3</b> W	0601	1625	1.8E	<b>19</b> F	0626	0141	1.5F	<b>4</b> Su	0535	0919	1.0E	<b>19</b> M	2142	0125	0.6F	<b>4</b> Tu	0129	*	*	<b>19</b> W	0017	*	*	
	2053				1411	1908	1.0E		1203	1423	0.7F		2347	0402	0.830		1147	1504	1.8F		1057	1419	1.8F	
<b>4</b> Th	0708	0035	1.9F	<b>20</b> Sa	0636	0219	1.4F	<b>5</b> M	0003	0224	0.9F	<b>20</b> Tu	2347	0204	0.830	<b>5</b> W	0153	*	*	<b>20</b> Th	0050	0.3E		
	1119	0952	0.6E		1452	2018	0.9E		0500	0919	1.2E			1204	1450	0.8F		1214	1539	2.1F		0700	2.1E	
<b>5</b> F	0752	1119	0.5E	<b>21</b> Su	0627	0244	1.1F	<b>6</b> Tu	0102	0248	0.5F	<b>21</b> W	2347	0138	0.3F	<b>6</b> Th	0756	2.0E		<b>21</b> F	1124	1453	2.3F	
	1249	0952	0.6E		1333	1011	1.0E		1221	1509	1.2F			0327	0819	1.4E		2142	0003	0.5E		0700	2.1E	
<b>6</b> Sa	0811	1119	0.5E	<b>22</b> M	0602	0257	0.9F	<b>7</b> W	0436	0907	1.5E	<b>22</b> Th	2347	0811	1.7E	<b>7</b> F	0840	2.2E		<b>22</b> Sa	1202	1534	2.6F	
	2034	1755	1.9E		1318	1541	0.7F		1244	1550	1.7F			1526	1.8F		1242	1612	2.2F	<b>22</b> Su	1202	1534	2.6F	
<b>7</b> Su	0015	0310	1.5F	<b>23</b> Tu	0553	0308	0.6F	<b>8</b> Th	0309	*	*	<b>23</b> F	2347	0819	2.0E	<b>8</b> Sa	0840	2.2E		<b>23</b> Su	1202	1534	2.6F	
	0754	1042	0.6E		1318	1601	1.1F		1628	2.0F			1557	2.3F		1315	1647	2.3F	<b>23</b> M	0058	0.4E			
<b>8</b> M	0108	0340	1.2F	<b>24</b> W	0506	0326	0.4F	<b>9</b> F	1311	1628	2.0F	<b>24</b> Sa	2347	0226	*	<b>9</b> Su	0840	2.2E		<b>24</b> M	0207	0.4E		
	1316	1548	1.0F		1328	1627	1.6F		2149				2120	0819	2.0E		0840	2.2E		<b>24</b> Tu	0817	2.5E		
<b>9</b> Tu	0158	0404	0.8F	<b>25</b> Th	0506	0326	0.4F	<b>10</b> Sa	0004	0313	0.4E	<b>25</b> Su	2347	0226	*	<b>10</b> M	1315	1647	2.3F	<b>10</b> Tu	1251	1621	2.7F	
	0629	1031	1.1E		1328	1627	1.6F		1413	1743	2.2F			1557	2.3F		2324	0216	0.5E	<b>10</b> W	1251	1621	2.7F	
<b>10</b> W	0250	0427	0.4F	<b>26</b> F	0418	0418	*	<b>11</b> Su	0108	1101	2.0E	<b>26</b> M	2347	0226	*	<b>11</b> Tu	0840	2.2E		<b>11</b> W	1251	1621	2.7F	
	0608	1025	1.5E		1002	1992	2.3F		1537	1918	2.0F			1557	2.3F		2324	0216	0.5E	<b>11</b> Th	1251	1621	2.7F	
<b>11</b> Th	0449	*	*	<b>27</b> Sa	0449	0449	0.3E	<b>12</b> M	0209	1150	1.8E	<b>27</b> Tu	2347	0226	*	<b>12</b> W	0840	2.2E		<b>12</b> Th	1251	1621	2.7F	
	1451	1808	1.9F		1033	1827	2.4F		1631	2022	1.8F			1557	2.3F		2324	0216	0.5E	<b>12</b> F	1251	1621	2.7F	
<b>12</b> F	0510	0219	0.4E	<b>28</b> Su	0321	0516	0.5E	<b>13</b> Tu	0304	1251	1.5E	<b>28</b> W	2347	0226	*	<b>13</b> Th	0840	2.2E		<b>13</b> M	1251	1621	2.7F	
	1107	1529	1.9F		1116	1923	2.3F		1732	2146	1.6F			1557	2.3F		2324	0216	0.5E	<b>13</b> Tu	1251	1621	2.7F	
<b>13</b> Sa	0103	0414	0.3E	<b>29</b> M	0128	1214	2.0E	<b>14</b> W	0348	1410	1.2E	<b>29</b> Th	2347	0226	*	<b>14</b> F	0840	2.2E		<b>14</b> W	1251	1621	2.7F	
	1613	1948	1.9F		1652	2029	2.2F		1837	2307	1.5F			1557	2.3F		2324	0216	0.5E	<b>14</b> Th	1251	1621	2.7F	
<b>14</b> Su	0228	1232	1.8E	<b>30</b> Tu	0309	1330	1.9E	<b>15</b> Th	0420	0828	1.0E	<b>30</b> F	2347	0226	*	<b>15</b> Sa	0840	2.2E		<b>15</b> Th	1251	1621	2.7F	
	1705	2051	1.7F		1808	2150	2.0F		1942	1227	0.8E			1557	2.3F		2324	0216	0.5E	<b>15</b> F	1251	1621	2.7F	
<b>15</b> M	0340	1332	1.6E	<b>31</b> W	0431	1505	1.7E			1542	1.0E			1557	2.3F		2324	0216	0.5E	<b>15</b> Sa	1251	1621	2.7F	
	1807	2215	1.6F		1929	2316	1.9F							1557	2.3F		2324	0216	0.5E	<b>15</b> Su	1251	1621	2.7F	
														1557	2.3F		2324	0216	0.5E	<b>16</b> M	1251	1621	2.7F	

Time meridian 90° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 \* Current weak and variable.

## Aransas Pass (between jetties), Texas, 2018

F—Flood, Dir. 300° True    E—Ebb, Dir. 120° True

January				February				March															
Slack		Maximum																					
h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m								
<b>1</b> M	1207	0652	2.4E	<b>16</b> Tu	1238	0027	1.8E	<b>1</b> Th	1335	0215	2.0E	<b>16</b> F	1330	0252	1.4E	<b>1</b> Th	1239	0215	1.6E	<b>16</b> F	1240	0749	1.0E
○				●												○							
<b>2</b> Tu	0036 1255	0738 1728	2.5E 2.4F	<b>17</b> W	0112 1311	0748 1733	1.7E 1.6F	<b>2</b> F	0319 1417	0927 1808	1.6E 1.4F	<b>17</b> Sa	0342 1359	0857 1739	1.1E 1.0F	<b>2</b> F		0017 0204	* 0.3F	<b>17</b> Sa	0424 1318	0227 1600	0.3F 0.8E
																				●			
<b>3</b> W	0136 1342	0825 1815	2.4E 2.2F	<b>18</b> Th	0154 1343	0819 1801	1.7E 1.6F	<b>3</b> Sa	0415 1455	1033 1832	1.2E 1.1F	<b>18</b> Su	0451 1427	0951 1806	0.9E 0.8F	<b>3</b> Sa		0004 0307	* 0.4F	<b>18</b> Su	0555 1356	0319 1627	0.5F 0.5E
<b>4</b> Th	0227 1429	0917 1855	2.1E 2.0F	<b>19</b> F	0228 1413	0853 1830	1.5E 1.5F	<b>4</b> Su		0335 0534	* *	<b>19</b> M		0035 0223	* *	<b>4</b> Su	0709	0429 1126	0.4F 0.5E	<b>19</b> M	0803	0433 1134	0.6F 0.3E
<b>5</b> F	0300 1515	1017 1928	1.7E 1.7F	<b>20</b> Sa	0254 1441	0934 1859	1.3E 1.3F	<b>5</b> M		0319 0715	* *	<b>20</b> Tu		0001 0658	* 0.3F	<b>5</b> M	0229	0554 1222	0.6F *	<b>20</b> Tu	0131 1218	0551 2229	0.8F 0.8E
<b>6</b> Sa	0306 1555	1105 1957	1.3E 1.3F	<b>21</b> Su	0310 1506	1022 1929	1.1E 1.1F	<b>6</b> Tu		0326 0903	0.5E 0.4F	<b>21</b> W	0502	0004 0830	0.5E 0.6F	<b>6</b> Tu	0350	0713 1636	0.7F *	<b>21</b> W	0238 1534	0705 2305	1.1F 1.2E
<b>7</b> Su	0239 1620	0512 2022	0.3E 1.0F	<b>22</b> M	0305 1514	1103 1958	0.7E 0.8F	<b>7</b> W		0342 0717	0.8E 0.7F	<b>22</b> Th		0027 0603	0.9E 1.0F	<b>7</b> W	0458 1727	0842 0946	0.9F 1.0F	<b>22</b> Th	0355 1627	0824 2343	1.3F 1.4E
<b>8</b> M	0139 0902	0500 1138	0.5E 0.7F	<b>23</b> Tu	0108 1403	0501 2020	0.3E 0.5F	<b>8</b> Th		0402 0802	1.0E 1.1F	<b>23</b> F		0107 0701	1.2E 1.3F	<b>8</b> Th	0557 1804	0016 0951	1.0E 1.0F	<b>23</b> F	0508 1724	0933 1036	1.5F 1.6F
<b>9</b> Tu	0017 0835	0502 1426	0.8E 0.4F	<b>24</b> W	0739	0417 0954	0.5E 0.4F	<b>9</b> F		0425 0846	1.2E 1.3F	<b>24</b> Sa		0240 0759	1.5E 1.6F	<b>9</b> F		0044 0654	1.0E 1.1F	<b>24</b> Sa		0024 0617	1.6E 1.6F
<b>10</b> W	0859	0510 1425	1.0E 0.9F	<b>25</b> Th	0800 2153	0344 1405	0.8E 0.9F	<b>10</b> Sa		0452 0930	1.3E 1.4F	<b>25</b> Su		0357 0857	1.8E 1.9F	<b>10</b> Sa		0150 0750	1.1E 1.3F	<b>25</b> Su		0124 0724	1.6E 1.7F
<b>11</b> Th	0932 2316	0521 1441	1.2E 1.2F	<b>26</b> F	0837 2138	0356 1400	1.3E 1.4F	<b>11</b> Su		0524 1016	1.5E 1.5F	<b>26</b> M		0453 0955	1.9E 2.0F	<b>11</b> Su		0402 0843	1.2E 1.3F	<b>26</b> M		0329 0828	1.6E 1.7F
<b>12</b> F	1008 2315	0535 1502	1.4E 1.4F	<b>27</b> Sa	0923 2207	0428 1420	1.7E 1.8F	<b>12</b> M		0601 1102	1.5E 1.5F	<b>27</b> Tu		0551 1054	1.9E 1.9F	<b>12</b> M		0449 0935	1.2E 1.3F	<b>27</b> Tu		0443 0929	1.5E 1.6F
<b>13</b> Sa	1046 2324	0555 1526	1.6E 1.6F	<b>28</b> Su	1014 2252	0508 1451	2.0E 2.1F	<b>13</b> Tu		0639 1145	1.6E 1.5F	<b>28</b> W		0653 1150	1.8E 1.7F	<b>13</b> Tu		0535 1026	1.3E 1.3F	<b>28</b> W		0552 1030	1.4E 1.3F
<b>14</b> Su	1125 2349	0620 1553	1.7E 1.7F	<b>29</b> M	1108 2346	0556 1530	2.2E 2.2F	<b>14</b> W		0714 1223	1.6E 1.4F	<b>29</b> Th		0623 1115	1.2E 1.2F	<b>14</b> W		0623 1451	1.2E 1.2F	<b>29</b> Th		0038 0707	* 1.1E
<b>15</b> M	1203	0649 1628	1.7E 1.7F	<b>30</b> Tu	1201	0649 1617	2.3E 2.2F	<b>15</b> Th		0747 1258	1.5E 1.3F	<b>30</b> F		0708 1159	1.2E 1.1F	<b>15</b> Th		0708 1509	1.2E *	<b>30</b> F		0150 1222	0.4F 0.8E
				<b>31</b> W	0055 1250	0740 1704	2.2E 2.0F	●												<b>31</b> Sa		0245 1008	0.6F 0.5E
				○																○		1311 1756	0.4F 0.4E

Time meridian 90° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 If three or more consecutive entries are marked (F) or (E) the middle ones are not true maximums but intermediate values to show the current pattern.  
 \* Current weak and variable.  
 † See page 196 for the remaining currents on this day.

# Aransas Pass (between jetties), Texas, 2018

F—Flood, Dir. 300° True    E—Ebb, Dir. 120° True

April				May				June																	
Slack	Maximum																								
	h	m	knots																						
<b>1</b> Su	0033 0838	0343 1138	0.8F 0.3E	<b>16</b> M	0004 0347	0347 1225	1.1F *	<b>1</b> Tu	0105 0504	0504 1249	1.4F 1.4E	<b>16</b> W	0044 1256	0505 2015	1.9F 2.0E	<b>1</b> F	0158 0636	0636 2105	1.7F 1.7E	<b>16</b> Sa	0216 0656	0656 2153	2.3F 2.1E		
<b>2</b> M	0117 1251	0452 1534	1.0F *	<b>17</b> Tu	0046 1219	0454 2039	1.3F 1.3E	<b>2</b> W	0139 1347	0558 2056	1.5F 1.5E	<b>17</b> Th	0129 1357	0606 2101	2.1F 2.1E	<b>2</b> Sa	0236 1453	0718 2154	1.7F 1.6E	<b>17</b> Su	0307 1518	0743 2250	2.1F 1.8E		
<b>3</b> Tu	0200 1403	0559 2212	1.1F 1.0E	<b>18</b> W	0133 1401	0601 2126	1.6F 1.6E	<b>3</b> Th	0217 1433	0649 2139	1.6F 1.5E	<b>18</b> F	0220 1448	0705 2200	2.2F 2.1E	<b>3</b> Su	0317 1524	0801 2241	1.6F 1.4E	<b>18</b> M	0357 1531	0821 2332	1.8F 1.3E		
<b>4</b> W	0249 1507	0702 2245	1.2F 1.2E	<b>19</b> Th	0227 1501	0706 2223	1.7F 1.8E	<b>4</b> F	0300 1514	0742 2229	1.6F 1.4E	<b>19</b> Sa	0317 1532	0805 2257	2.2F 2.0E	<b>4</b> M	0400 1550	0840 2319	1.5F 1.2E	<b>19</b> Tu	0443 1518	0851 1802	1.5F 0.5E		
<b>5</b> Th	0345 1551	0810 2317	1.3F 1.2E	<b>20</b> F	0330 1552	0816 2314	1.9F 1.8E	<b>5</b> Sa	0351 1552	0835 2312	1.5F 1.4E	<b>20</b> Su	0417 1608	0855 2342	2.0F 1.7E	<b>5</b> Tu	0440 1605	0912 2351	1.4F 0.9E	<b>20</b> W	0514 1434	0915 1746	1.1F 0.6E		
<b>6</b> F	0444 1636	0910 2350	1.3F 1.2E	<b>21</b> Sa	0437 1641	0917 2359	1.9F 1.7E	<b>6</b> Su	0445 1628	0917 2348	1.5F 1.2E	<b>21</b> M	0514 1630	0933	1.8F	<b>6</b> W	0515 1601	0942 1914	1.1F 0.5E	<b>21</b> Th		0001 0935	* 0.8F		
<b>7</b> Sa	0544 1723	0957	1.3F	<b>22</b> Su	0544 1728	1007	1.8F	<b>7</b> M	0539 1701	0954	1.3F	<b>22</b> Tu		0019 1004	1.2E 1.4F	<b>7</b> Th		0020 1008	0.6E 0.9F	<b>22</b> F		0225 0621	0.5F 0.3F		
<b>8</b> Su	0644 1813	0025 1046	1.1E 1.2F	<b>23</b> M	0648 1807	0046 1055	1.5E 1.6F	<b>8</b> Tu	0631 1726	0023 1031	1.0E 1.2F	<b>23</b> W	0653 1600	0051 1032	0.7E 1.1F	<b>8</b> F		0048 1030	* 0.6F	<b>23</b> Sa		0235 1759	0.9F 1.3E		
<b>9</b> M	0743 1902	0117 1258	1.0E 1.2F	<b>24</b> Tu	0750	0246 1151	1.2E 1.4F	<b>9</b> W	0721 1730	0107 1110	0.7E 1.0F	<b>24</b> Th		0453 1059	* 0.7F	<b>9</b> Sa		0129 0733	0.4F *	<b>24</b> Su		0258 1812	1.3F 1.5E		
<b>10</b> Tu	0838 1949	0358 1321	0.9E 1.1F	<b>25</b> W	0847	0437 1239	0.9E 1.1F	<b>10</b> Th	0808 1653	0407 1153	0.5E 0.8F	<b>25</b> F		0156 0717	0.4F *	<b>10</b> Su		0156 1746	0.9F 1.3E	<b>25</b> M		0324 1831	1.5F 1.7E		
<b>11</b> W	0930	0456 1334	0.9E 1.0F	<b>26</b> Th	0942 1717	0609 2008	0.6E 0.4E	<b>11</b> F		0024 0533	* *	<b>26</b> Sa		0226 0957	0.9F *	<b>11</b> M		0231 1808	1.4F 1.7E	<b>26</b> Tu		0357 1853	1.7F 1.8E		
<b>12</b> Th	1024	0557 1351	0.8E 0.9F	<b>27</b> F	0942 1717	0609 2008	0.6E 0.4E	<b>12</b> Sa		0134 0803	0.5F *	<b>27</b> Su		0258 1251	1.2F 1.903	<b>12</b> Tu		0314 1842	1.8F 2.0E	<b>27</b> W		0005 1216	0.437 1.918		
<b>13</b> F	1122	0707 1411	* 0.6E	<b>28</b> Sa	0942 1717	0609 2008	0.6E 0.4E	<b>13</b> Su		0220 1131	1.0F *	<b>28</b> M		0336 1150	1.5F 1.6E	<b>13</b> W		0408 1922	2.1F 2.3E	<b>28</b> Th		0040 1253	0.517 1.946		
<b>14</b> Sa	1221	0819 1431	0.4E 0.4F	<b>29</b> Su	0942 1717	0609 2008	0.6E 0.4E	<b>14</b> M		0306 1101	1.3F 1.4E	<b>29</b> Tu		0423 1215	1.6F 1.7E	<b>14</b> Th		0510 2005	2.3F 2.4E	<b>29</b> F		0113 1335	0.549 2.016		
<b>15</b> Su	1322	0951 1653	0.3E *	<b>30</b> M	0942 1717	0609 2008	0.6E 0.4E	<b>15</b> Tu		0400 1154	1.7F 1.8E	<b>30</b> W		0513 1253	1.7F 1.7E	<b>15</b> F		0606 2054	2.4F 2.3E	<b>30</b> Sa		0146 1413	0.620 2.050		
<b>16</b> Mo	1426	1132 1813	0.6E *	<b>31</b> Tu	0942 1717	0609 2008	0.6E 0.4E	<b>16</b> W		0400 1154	1.7F 1.8E	<b>31</b> Th		0556 1336	1.8F 1.7E										

Time meridian 90° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 If three or more consecutive entries are marked (F) or (E) the middle ones are not true maximums but intermediate values to show the current pattern.  
 \* Current weak and variable.

# Aransas Pass (between jetties), Texas, 2018

F—Flood, Dir. 300° True    E—Ebb, Dir. 120° True

July				August				September														
Slack	Maximum		knots	Slack	Maximum		knots	Slack	Maximum		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											
<b>1</b> Su	0219 1443	0651 2132	1.6F 1.5E	<b>16</b> M	0255 1510	0703 2256	1.6F 1.3E	<b>1</b> W	0254 0707 1719 1811 2255	0707 1.0F * * 0.6E	<b>16</b> Th	0012 0652 1311 2038	* 0.4F 0.5E 0.5F	<b>1</b> Sa	0530 1721	1159 2118	0.9E 1.0F	<b>16</b> Su	0514 1824	1226 2235	1.1E 1.2F	
<b>2</b> M	0252 1507	0724 2219	1.5F 1.3E	<b>17</b> Tu	0337 0731 1647 1829 2335	0731 1.3F * * 0.7E	<b>2</b> Th	0300 0734 1638 2006 2329	0.7F * * * *	<b>17</b> F	0451 0710 1343 2210	* * 0.8E 0.8F	<b>2</b> Su	0553 1822	1233 2223	1.2E 1.3F	<b>17</b> M	0606 1922	1308 *	1.1E *		
<b>3</b> Tu	0324 1520	0757 2258	1.4F 1.0E	<b>18</b> W	0406 1259	0757 1629 2031 2352	1.0F 0.4E * *	<b>3</b> F	0758 1035 1904	0.5F 0.4E 0.4F	<b>18</b> Sa	0857 1929	1520 *	1.0E	<b>3</b> M	0642 1923	1328 *	1.4E	<b>18</b> Tu	0700 2018	0109 1541	1.3F 1.1E
<b>4</b> W	0349 1513	0828 1825 2005 2330	1.2F 0.4E 0.4E 0.7E	<b>19</b> Th	0820 1135 1954	0.7F 0.7E 0.4F 0.3F	<b>4</b> Sa	0244 0646 0758 1438 1931	0.4F * * 0.7E 0.8F	<b>19</b> Su	0127 0902 2019	1.1F 1.2E	<b>4</b> Tu	0742 2023	0049 1516	1.5F 1.6E	<b>19</b> W	0801 2111	0145 1637	1.3F 1.1E		
<b>5</b> Th	0356 1415	0855 1751 2136 2356	0.9F 0.4E * *	<b>20</b> F	0209 0522 0838 1059 2027	0.4F 0.3F 0.5F 1.0E	<b>5</b> Su	0910 0201 0925 2010	0.7F 0.8F 1.1E	<b>20</b> M	0157 0924 2107	1.3F 1.3E	<b>5</b> W	0851 2122	0138 1623	1.8F 1.8E	<b>20</b> Th	0924 2202	0208 1724	1.3F 1.1E		
<b>6</b> F	0915 1218 2053	06F 0.6E 0.3F	<b>21</b> Sa	0207 1050 2106	0.9F 1.3E	<b>6</b> M	0150 0908 2055	1.2F 1.5E	<b>21</b> Tu	0223 1001 2155	1.5F 1.4E	<b>6</b> Th	0209 1007 2222	1.9F 1.9E	<b>21</b> F	0220 1111 2253	1.2F 1.1E					
<b>7</b> Sa	0012 0304 0658 0918 1644†	0.3F 0.4F 0.3F 0.4F 0.9E	<b>22</b> Su	0225 1051 2146	1.3F 1.5E	<b>7</b> Tu	0204 0942 2146	1.7F 1.9E	<b>22</b> W	0248 1044 2243	1.5F 1.5E	<b>7</b> F	0237 1130 2321	1.8F 1.8E	<b>22</b> Sa	0229 1122 1244 1902	1.1F * * 1.0E					
<b>8</b> Su	0215 1100 2130	0.8F 1.3E	<b>23</b> M	0249 1058 2228	1.5F 1.6E	<b>8</b> W	0231 1030 2241	2.0F 2.1E	<b>23</b> Th	0310 1134 2329	1.5F 1.5E	<b>8</b> Sa	0304 1401	1.6F 1.6E	<b>23</b> Su	0245 1115 1341 1519 1945	0.9F * 0.3F 0.8E					
<b>9</b> M	0212 1030 2209	1.4F 1.7E	<b>24</b> Tu	0315 1114 2310	1.6F 1.7E	<b>9</b> Th	0306 1125 2336	2.1F 2.2E	<b>24</b> F	0328 1250	1.4F 1.4E	<b>9</b> Su	0016 1541	0330 2028	1.3F 1.2E	<b>24</b> M	0305 1104 1426 1636 2032	0.7F * 0.4F 0.6E				
<b>10</b> Tu	0238 1047 2256	1.8F 2.1E	<b>25</b> W	0345 1141 2350	1.7F 1.7E	<b>10</b> F	0347 1235	2.1F 2.2E	<b>25</b> Sa	0347 0010 1414	1.3F 1.3E	<b>10</b> M	0105 1721	0357 2201	0.9F 0.8E	<b>25</b> Tu	0104 1813	0328 2236	0.5F 0.4E			
<b>11</b> W	0316 1126 2346	2.1F 2.3E	<b>26</b> Th	0420 1219	1.7F 1.7E	<b>11</b> Sa	0028 1410	0.432 2.0E	<b>26</b> Su	0046 1511	0.412 1.2E	<b>11</b> Tu	0150 1934	0424 2332	0.6F 0.5E	<b>26</b> W	0145 1224	0350 1619 2355	0.3F 0.3E 0.7F *			
<b>12</b> Th	0407 1217	2.3F 2.4E	<b>27</b> F	0028 1307	0.456 1.7E	<b>12</b> Su	0116 1529	0.512 1.6E	<b>27</b> M	0119 1608	0.442 1.0E	<b>12</b> W	0234 0703 1358	0.449 1.111 1.738	0.3F 0.4E 0.8F	<b>27</b> Th	0402 1315	0859 1732	* 0.6E 0.9F			
<b>13</b> F	0035 1318	0505 2005	2.3F 2.4E	<b>28</b> Sa	0102 1354	0.523 1.6E	<b>13</b> M	0200 1654	0.542 1.1E	<b>28</b> Tu	0149 1250 1439 2145	0.512 * * 0.7E	<b>13</b> Th	0046 1510	* 1856	* 0.9F	<b>28</b> F	0058 1408	0939 1841	0.9E 1.1F		
<b>14</b> Sa	0123 1416	0553 2056	2.2F 2.1E	<b>29</b> Su	0134 1429	0.546 1.4E	<b>14</b> Tu	0241 0607 1322 1713 2326	1.0F * * * 0.7E	<b>29</b> W	0217 0541 1202 1709 2255	0.6F * * 0.4E	<b>14</b> F	0331 1622	1135 2025	1.0E 1.1F	<b>29</b> Sa	0300 1514	1028 1955	1.2E 1.3F		
<b>15</b> Su	0209 1458	0631 2158	2.0F 1.8E	<b>30</b> M	0204 1454	0.611 1.2E	<b>15</b> W	0316 0630 1308 1852	0.7F * 0.3F	<b>30</b> Th	0236 0606 1134 1836 2343	0.4F * 0.4F *	<b>15</b> Sa	0424 1725	1157 2137	1.1E 1.2F	<b>30</b> Su	0351 1627	1113 2105	1.4E 1.5F		
				<b>31</b> Tu	0232 1508	0.639 1.0E				<b>31</b> F	0258 0354 0622 1138 1610	* * * 0.5E 0.7F										

Time meridian 90° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 If three or more consecutive entries are marked (F) or (E) the middle ones are not true maximums but intermediate values to show the current pattern.  
 \* Current weak and variable.  
 † See page 196 for the remaining currents on this day.

# Aransas Pass (between jetties), Texas, 2018

F—Flood, Dir. 300° True    E—Ebb, Dir. 120° True

October				November				December															
Slack	Maximum			Slack	Maximum			Slack	Maximum			Slack	Maximum										
	h	m	knots		h	m	knots		h	m	knots		h	m	knots								
<b>1</b> M	0443	1155	1.6E	<b>16</b> Tu	0452	1208	1.2E	<b>1</b> Th	0531	1309	1.2E	<b>16</b> F	0450	0746	0.4E	<b>1</b> Sa	0339	0641	0.5E	<b>16</b> Su	0252	0633	0.5E
	1736	2203	1.7F		1819	2225	1.3F		1910	2305	1.4F		1851	2242	1.0F		1028	*			1040	*	
				<b>17</b> W	0535	1249	1.0E	<b>2</b> F	0549	0814	0.3E	<b>17</b> Sa	0445	0739	0.4E		1245	*			1219	*	
					1917	2314	1.2F		0945	0.3E		1035	*			1419	*			2207	0.6F		
<b>2</b> Tu	0540	1243	1.6E	<b>18</b> Th	0615	1540	0.8E	<b>3</b> Sa	0530	0753	0.3E	<b>18</b> Su	0406	0727	0.4E	<b>2</b> Su	0240	0632	0.7E	<b>17</b> M	0128	0605	0.7E
	1844	2304	1.7F		2011				1125	*		1220	*			0957	1401	0.4F		0946	1430	0.4F	
				<b>19</b> F	0626	1.1F			1729	0.5E		1731	*			1853	*			1942	0.3F		
<b>3</b> W	0638	1413	1.5E		1646	0.7E	<b>4</b> Su	0432	0740	0.5E	<b>19</b> M	0302	0702	0.6E	<b>3</b> M	0138	0630	1.0E	<b>18</b> Tu	0038	0536	0.9E	
	1949			<b>20</b> Sa	0101	0.9F		1033	1314	0.4F		1031	1334	0.5F		1019	1423	0.9F		0956	1406	0.9F	
					1148	*	<b>5</b> M	0327	0730	0.7E	<b>20</b> Tu	0025	*	<b>4</b> Tu	0103	0634	1.3E	<b>19</b> W	1021	1427	1.4F		
<b>4</b> Th	0738	1607	1.7F		1749	0.6E		1101	1411	0.9F	<b>20</b> W	0634	0.8E		1052	1453	1.3F		2302				
	2051			<b>21</b> Su	0124	0.8F	<b>6</b> Tu	0118	*			1415	1.0F	<b>5</b> W	0025	0646	1.6E	<b>20</b> Th	1057	1502	1.8F		
<b>5</b> F	0845	1717	1.3E		0835	*		0727	1.0E	<b>21</b> W	0040	*		1128	1529	1.6F		2318					
	2152			<b>22</b> M	0145	0.6F	<b>7</b> W	0132	*	<b>21</b> Th	0650	1.5E	<b>6</b> Th	1204	1615	1.8F	<b>21</b> F	1138	1548	2.0F			
<b>6</b> Sa	0952	*	1.3F		0802	0.6F		0735	1.3E	<b>22</b> Th	1149	1544	1.6F		0010	0725	1.8E	<b>22</b> Sa	1221	1646	2.2F		
	1212	*	1.0E	<b>23</b> Tu	0205	0.3F	<b>8</b> Th	1214	1552	1.5F	<b>22</b> F	2351		<b>7</b> F	1239	1705	1.8F						
	1836	1.0E			0730	0.5E		2350		<b>23</b> F	0718	1.8E	<b>8</b> Sa	0046	0750	1.9E	<b>23</b> Su	0048	0746	2.4E			
<b>7</b> Su	0208	1.0F		<b>24</b> W	0219	*	<b>9</b> F	0044	0812	1.6E	<b>23</b> Sa	1228	1643	1.9F		1314	1748	1.9F		1307	1742	2.3F	
	0914	0.4F			0729	0.8E		1327	1750	1.7F	<b>24</b> Sa	0042	0753	2.0E	<b>9</b> Su	0128	0819	1.8E	<b>24</b> M	0144	0831	2.3E	
	1336	0.4F		<b>25</b> Th	0040	*	<b>10</b> Sa	0136	0840	1.6E	<b>24</b> Su	1310	1744	2.1F		1348	1826	1.8F		1353	1830	2.2F	
	1545	0.7E			0211	*		1405	1840	1.7F	<b>25</b> Su	0139	0834	2.2E	<b>10</b> M	0208	0853	1.7E	<b>25</b> Tu	0233	0924	2.2E	
<b>8</b> M	0227	0.7F		<b>26</b> F	0021	1.4E	<b>11</b> Su	0221	0918	1.6E	<b>25</b> Tu	1356	1840	2.2F		1425	1905	1.7F		1441	1914	2.1F	
	0848	*	1.2F		1314	1.6F		1447	1931	1.7F	<b>26</b> M	0230	0926	2.1E	<b>11</b> Tu	0243	0936	1.6E	<b>26</b> W	0309	1024	1.8E	
	1432	0.7F		<b>27</b> Sa	0140	1.6E	<b>12</b> M	0259	1008	1.5E	<b>26</b> Th	1448	1936	2.2F		1504	1945	1.6F		1530	1954	1.8F	
<b>9</b> Tu	0052	0.4F			1400	1.8F	<b>13</b> Tu	0259	1008	1.5E	<b>27</b> Tu	0313	1026	2.0E	<b>12</b> W	0313	1024	1.4E	<b>27</b> Th	0326	1112	1.4E	
	0447	0.5E		<b>28</b> Su	0237	1.8E	<b>13</b> Tu	1535	2022	1.6F	<b>27</b> W	1544	2028	2.0F		1544	2022	1.5F		1615	2026	1.5F	
	1213	1.0F			1456	1.9F		1626	2104	1.5F	<b>28</b> W	0349	1117	1.7E	<b>13</b> Th	0335	1103	1.2E	<b>28</b> F	0311	0554	0.4E	
<b>10</b> W	0259	*	1.2F	<b>29</b> M	0326	1.8E	<b>14</b> W	0407	1131	1.2E	<b>28</b> Th	1640	2109	1.8F		1621	2054	1.3F		1648	2051	1.1F	
	1258	1.6F			1600	1.9F	<b>15</b> Th	1717	2138	1.4F	<b>29</b> Th	0411	1156	1.3E	<b>14</b> F	0346	1134	0.9E	<b>29</b> Sa	0216	0526	0.5E	
<b>11</b> Th	0108	*	1.3F	<b>30</b> Tu	0412	1.8E	<b>15</b> Th	0434	1204	1.0E	<b>29</b> F	1732	2140	1.5F		1651	2122	1.1F		0924	*		
	0243	*			1706	1.9F		1805	2210	1.2F	<b>30</b> F	0410	0705	0.5E	<b>15</b> Sa	0337	0651	0.5E	<b>30</b> Su	0854	1420	0.5F	
	0900	1.1E		<b>31</b> W	0455	1.6E	<b>15</b> Th					1228	0.8E		1200	0.5E			1800	0.3F			
<b>12</b> F	0142	0.934	1.2E		1809	1.7F	<b>16</b> F					2207	1.1F		1200	0.5E			2127	0.5F			
	1430	1.4F		<b>16</b> Su			<b>16</b> Sa							<b>16</b> Su	1659	2147	0.9F		2356				
<b>13</b> Sa	0245	1018	1.3E				<b>17</b> Su													2338			
	1523	1.5F																					
<b>14</b> Su	0329	1058	1.3E																				
	1622	1.5F																					
<b>15</b> M	0410	1134	1.3E																				
	1721	1.4F																					

Time meridian 90° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.  
 If three or more consecutive entries are marked (F) or (E) the middle ones are not true maximums but intermediate values to show the current pattern.  
 \* Current weak and variable.  
 † See page 196 for the remaining currents on this day.









## EXTRA CURRENTS, 2018

<b>Estes Head, Maine</b>  April Slack Maximum h m h m knots 8 1730 2117 1.7E 2353  November Slack Maximum h m h m knots 15 1657 2043 2.0E 2327	May Slack Maximum h m h m knots 7 1606 1716 0.8E 1810 0.7E 2031 1.6E  2300 8 1657 1804 0.7E 1900 0.6E 2124 1.6E  2355 9 2214 1.7E	September Slack Maximum h m h m knots 1 1453 1911 1.8E 2139  2 1544 1717 1.4E 1807 1.3E 2007 1.9E  2235 3 1638 1808 1.3E 1853 1.3E 2103 2.0E  2334	August Slack Maximum h m h m knots 20 2026 2259 1.3E	<b>Quonset Point, Massachusetts</b>  January Slack Maximum h m h m knots 6 2348 2152 0.3F  7 1829 * 1934 * 2246 0.3F 8 1918 * 2021 * 2339 0.3F  9 2139 22 2152 *									
	<b>Bucksport, Maine</b>  January Slack Maximum h m h m knots 21 2026 22 2112 1846 1.8E 23 1937 1.7E  2200 24 1609 1737 1.3E 1836 1.2E 2032 1.7E  2252 25 1703 2126 1.8E 2346	June Slack Maximum h m h m knots 3 2041 4 1904 1.6E 2131 5 1957 1.6E  2223 6 1625 1739 0.9E 1837 0.8E 2051 1.6E  2316 7 1716 2142 1.7E 8 1808 2231 1.9E	October Slack Maximum h m h m knots 18 1737 2202 1.9E 19 1832 2251 1.9E		September Slack Maximum h m h m knots 15 1607 1722 0.8E 1807 0.8E 2036 1.8E  2321 16 2129 1.8E 17 2219 1.8E	February Slack Maximum h m h m knots 5 1808 * 1920 * 2219 0.3F 6 1851 * 2010 * 2312 0.3F 7 1945 * 2055 * 8 1657 0.3E 21 2219 * 22 2316 *							
		February Slack Maximum h m h m knots 22 2225 2003 1.8E 23 2100 1.9E 2321	July Slack Maximum h m h m knots 3 1416 1834 1.7E 2058 4 1504 1924 1.6E 2148 5 1553 1715 1.1E 1812 1.0E 2017 1.6E  2240 6 1643 1804 1.1E 1901 1.0E 2109 1.7E  2333 7 2159 1.9E		November Slack Maximum h m h m knots 15 1607 1722 0.8E 1807 0.8E 2036 1.8E  2321 16 2129 1.8E 17 2219 1.8E		January Slack Maximum h m h m knots 16 2228  February Slack Maximum h m h m knots 12 2030 2249 2.3E 13 2115 2323 2.4E	March Slack Maximum h m h m knots 11 945 2.1E 1218 1628 1.7F 1817 2057 1.9E					
			March Slack Maximum h m h m knots 10 2135 1.7E 11 2226 1.7E		August Slack Maximum h m h m knots 1 2027 2 1851 1.7E 2115 3 1943 1.7E  2207 4 1612 1740 1.3E 1837 1.2E 2037 1.8E  2301 5 1705 2130 1.9E 2358 6 1800 2221 2.1E 31 2046		December Slack Maximum h m h m knots 13 2147 1907 1.8E 14 2000 1.7E 2235 15 1624 1742 1.0E 1838 0.9E 2054 1.7E  2324 16 1717 2145 1.7E 17 1811 2234 1.8E		March Slack Maximum h m h m knots 5 2058 0.3F 2257 6 2150 0.3F 2346 7 1828 * 1955 * 2241 * 8 1916 * 2040 * 2332 * 9 2018 * 2120 * 21 2102 0.3F 2259 22 2200 0.3F 2355 23 1757 2259 0.3F				
					April Slack Maximum h m h m knots 9 1731 2156 1.7E 10 1826 2246 1.7E		Portsmouth <b>Harbor Entrance</b>  January Slack Maximum h m h m knots 11 2058 2318 1.3E		February Slack Maximum h m h m knots 10 2120 2333 1.2E 11 1859 0.8F 1955 0.9F  2210	August Slack Maximum h m h m knots 18 2140 2.0E	March Slack Maximum h m h m knots 21 2102 0.3F 2259 22 2200 0.3F 2355 23 1757 2259 0.3F		
							Cape Cod Canal, Massachusetts  May Slack Maximum h m h m knots 5 1959 2212 3.4F 6 2051 2303 3.2F		October Slack Maximum h m h m knots 18 2140 2.0E	September Slack Maximum h m h m knots 21 1954 2213 2.4E		October Slack Maximum h m h m knots 18 2140 2.0E	March Slack Maximum h m h m knots 21 2102 0.3F 2259 22 2200 0.3F 2355 23 1757 2259 0.3F

## EXTRA CURRENTS, 2018

<b>Quonset Point, Massachusetts</b>			August			November			July			May		
(Continued)			Slack	Maximum		Slack	Maximum		Slack	Maximum		Slack	Maximum	
			h m	h m knots		h m	h m knots		h m	h m knots		h m	h m knots	
April			3	2253 *		12	1759 *		10	1901 2115 1.7F		6	2037 1.1E	
Slack			16	1809 *			1859 *		August			7	2135 1.0E	
Maximum				1920 *			2142 *		Slack	Maximum		26	1717 2011 0.4F	
4	2117 *	0.3F		2221 0.3F		13	1840 *		h m	h m knots		2259		
5	1809 *			1852 *			1943 *		7	1748 1948 1.4F		August		
	1937 *			2008 *		14	2229 *		2258			Slack	Maximum	
	2207 *		17	2315 *		15	2358 *		October			h m	h m knots	
6	1852 *		18	1946 *		28	1753 2228 0.3F		Slack	Maximum		18	2309 *	
	2020 *		19	2052 *		29	2020 2324 0.3F		h m	h m knots		September		
	2256 *		31	1713 0.3E					3	2054		Slack	Maximum	
7	1948 *		September						6	1915 2150 1.7F		h m	h m knots	
	2057 *		Slack	Maximum		12	2147 *		31	2335 1.6E		16	2318 *	
	2343 *		h m	h m knots		13	2231 *		November			October		
19	2044 0.3F		1	2228 *		27	1731 2208 0.3F		Slack	Maximum		Slack	Maximum	
20	2242	0.3F	2	2324 *		28	2304 0.3F		h m	h m knots		h m	h m knots	
21	2339		14	1749 *		<b>Philadelphia, Pennsylvania</b>			27	2249 1.9E		16	2353 *	
	2242 0.3F			1900 *		January			28	2351 1.9E		November		
May			15	2155 *		Slack			Maximum			Slack	Maximum	
Slack	Maximum			1828 *		h m			h m knots			h m	h m knots	
h m	h m knots			1950 *		26			2133			3	1936 0.3F	
3	2040 *		16	2248 *		Slack			Maximum			4	2016 0.3F	
4	2128 *			1917 *		h m			h m knots			14	2309 *	
5	1834 *			2034 *		March						December		
	1954 *		17	2340 *		Slack			Maximum			Slack	Maximum	
	2214 *			2023 *		h m			h m knots			h m	h m knots	
6	1923 *		29	2110 *		24			2001 2307 1.7E			3	1940 *	
	2029 *			1636 2111 0.3F		April						<b>St. Andrew Bay, Florida</b>		
	2300 *		30	1723 2207 0.3F		Slack			Maximum			Slack	Maximum	
19	2128 0.3F			2357		h m			h m knots			h m	h m knots	
20	2326	0.3F	October			24			2019 2248 2.0F			4	2151 0.8F	
21	1825 2324 0.3F		Slack	Maximum		April						March		
			h m	h m knots		Slack			Maximum			Slack	Maximum	
June			1	1825 2304 0.3F		h m			h m knots			3	1745 2017 1.3F	
Slack	Maximum		2	2005		21			1846 2133 1.7E			6	2259 *	
h m	h m knots					22			1950 2244 1.6E			April		
3	2132 *		13	1733 *		Slack			Maximum			Slack	Maximum	
4	2219 *			1835 *		h m			h m knots			h m	h m knots	
18	2208 0.3F			2126 *		May						March		
19	2305 0.3F		14	1810 *		Slack			Maximum			Slack	Maximum	
				1928 *		h m			h m knots			h m	h m knots	
				2217 *		16			2210			3	1745 2017 1.3F	
July			15	1855 *		March						6	2259 *	
Slack	Maximum			2011 *		Slack			Maximum			April		
h m	h m knots			2307 *		h m			h m knots			Slack	Maximum	
17	2148 0.3F		16	1956 *		9			2235 1.4E			h m	h m knots	
2346				2044 *		March						Slack	Maximum	
18	1832 *			2355 *		Slack			Maximum			h m	h m knots	
	1939 *			2044 *		h m			h m knots			3	1745 2017 1.3F	
	2244 0.3F		29	1706 2149 0.3F		17			1538 1824 1.9E			6	2259 *	
19	1921 *			2340		Slack			Maximum			April		
	2024 *		30	1808 2246 0.3F		h m			h m knots			Slack	Maximum	
20	2339 0.3F					21			1936 2223 1.6E			h m	h m knots	
2209			June			June						1	2343 0.5F	
			Slack	Maximum		Slack			Maximum			27	1545 1736 0.5F	
			h m	h m knots		h m			h m knots			2231		
			12	2013 2225 2.0F		7			2140 1.3E			August		
			13	2103 2314 2.2F		8			2241 1.2E			Slack	Maximum	
			14	2152		27			1734 2024 0.4F			h m	h m knots	
						2250						September		

## EXTRA CURRENTS, 2018

<p><b>St. Andrew Bay, Florida</b> (Continued)</p> <p>May</p> <p>Slack Maximum h m h m knots</p> <p>24 2224 0.5E 25 2256 *</p> <p>June</p> <p>Slack Maximum h m h m knots</p> <p>8 2110 0.5E 2355 9 2217 *</p> <p>July</p> <p>Slack Maximum h m h m knots</p> <p>7 2038 * 19 2031</p> <p>August</p> <p>Slack Maximum h m h m knots</p> <p>14 2340 0.3F 16 1851 2234 1.1F 31 2220 1.0F</p> <p>September</p> <p>Slack Maximum h m h m knots</p> <p>10 2324 0.4F 13 2104 1.4F 14 2135 1.5F 28 2053 1.3F</p> <p>October</p> <p>Slack Maximum h m h m knots</p> <p>10 1928 1.4F 2232 11 1957 1.7F 2305</p> <p>November</p> <p>Slack Maximum h m h m knots</p> <p>4 1942 0.7F 2150 5 1653 0.9F 2133</p> <p>December</p> <p>Slack Maximum h m h m knots</p> <p>3 2024 18 2005 2350 1.7E</p>	<p><b>Mobile Bay, Alabama</b></p> <p>February</p> <p>Slack Maximum h m h m knots</p> <p>21 2221 0.8E</p> <p>March</p> <p>Slack Maximum h m h m knots</p> <p>3 2011 0.5F 2324</p> <p>4 2104 * 5 2211 0.3E 19 2316 * 31 2251 *</p> <p>April</p> <p>Slack Maximum h m h m knots</p> <p>1 2218 * 25 1918 2140 0.4E 26 2132 * 27 2037 *</p> <p>May</p> <p>Slack Maximum h m h m knots</p> <p>24 1912 0.3E 2123</p> <p>August</p> <p>Slack Maximum h m h m knots</p> <p>15 2234 * 16 2348 0.5F 30 1903 * 31 2320 0.5F</p> <p>September</p> <p>Slack Maximum h m h m knots</p> <p>11 2138 * 12 2323 *</p> <p>October</p> <p>Slack Maximum h m h m knots</p> <p>8 1656 2046 0.3E 2310 * 22 2337 0.4E</p> <p>November</p> <p>Slack Maximum h m h m knots</p> <p>3 2158 * 4 1943 *</p>	<p>December</p> <p>Slack Maximum h m h m knots</p> <p>30 1543 0.7F 1933</p> <p><b>Sabine Pass, Texas</b></p> <p>January</p> <p>Slack Maximum h m h m knots</p> <p>23 1804 *</p> <p><b>Galveston Bay Entrance</b></p> <p>May</p> <p>Slack Maximum h m h m knots</p> <p>7 2354 0.5E</p> <p><b>Aransas Pass, Texas</b></p> <p>January</p> <p>Slack Maximum h m h m knots</p> <p>24 2020 0.3F 2227</p> <p>February</p> <p>Slack Maximum h m h m knots</p> <p>6 1939 0.3F 2152 19 1442 1831 0.5F</p> <p>July</p> <p>Slack Maximum h m h m knots</p> <p>7 2102</p> <p>December</p> <p>Slack Maximum h m h m knots</p> <p>1 2230 0.8F</p>	

## 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 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 noted, 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 opposite 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 current flows.

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

**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, the 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**

Table 5 contains listings of data for those stations which exhibit 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 hourly increments as referred to the predicted times of a particular current phase at a reference station in Table 1. The Moon, at times of new, full, or perigee may increase 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 directions toward which the current flows.

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

## 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 in Table 2 as Winthrop Head, 1.1 n. mi. east of. From Table 2 we learn that the reference station is Boston Harbor whose morning currents are listed below. Currents for Winthrop Head can be approximated by using the Table 2 corrections as indicated.

	<i>Minimum before Flood</i>			<i>Minimum before ebb</i>		
	<i>h.m.</i>	<i>h.m.</i>	<i>kn.</i>	<i>h.m.</i>	<i>h.m.</i>	<i>kn.</i>
Boston Harbor .....	0052	0419	1.2	0645	1109	1.4
Table 2 corrections .....	-0112	+0019	x0.4 ratio	+0031	-0146	x0.3 ratio
Winthrop Point .....	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**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS							
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb	
											h m	h m	h m	h m	knots	Dir.	knots	Dir.
	BAY OF FUNDY Time meridian, 60°W	ft	North	West														
	<b>on Portland Harbor Entrance, p.20</b>																	
1	Brazil Rock, 6 miles east of		43° 22'	65° 18'	-2 12	-1 36	-0 27	-1 31	1.5	0.9	--	--	1.0	275°	--	--	1.0	050°
3	Cape Sable, 3 miles south of		43° 20'	65° 38'	-3 12	-1 46	-0 58	-1 41	3.3	1.8	--	--	2.2	275°	--	--	2.0	095°
5	Cape Sable, 12 miles south of		43° 11'	65° 37'	-1 22	-0 36	-0 23	-0 37	2.5	1.5	--	--	1.7	285°	--	--	1.6	090°
7	Blonde Rock, 5 miles south of		43° 15'	65° 59'	-1 12	-0 26	-0 13	-0 21	3.0	1.8	--	--	2.0	310°	--	--	2.0	125°
9	Seal Island, 13 miles southwest of		43° 16'	66° 15'	-0 27	+0 34	+1 02	+0 39	3.8	1.5	--	--	2.6	325°	--	--	1.6	140°
11	Cape Fourchu, 17 miles southwest of		43° 34'	66° 24'	+0 28	+1 09	+1 07	+1 14	1.8	1.1	--	--	1.2	355°	--	--	1.2	145°
13	Cape Fourchu, 4 miles west of		43° 47'	66° 15'	-0 22	+0 24	+0 32	+0 29	3.0	1.6	--	--	2.0	000°	--	--	1.7	175°
15	Lurcher Shoal, 6 miles east of		43° 52'	66° 21'	-0 02	+0 54	+1 02	+0 59	3.0	1.7	--	--	2.0	355°	--	--	1.8	175°
17	Lurcher Shoal, 10 miles east of		43° 46'	66° 42'	+0 13	+0 54	-0 11	+0 59	2.1	1.5	--	--	1.4	000°	--	--	1.6	160°
19	Lurcher Shoal, 10 miles northwest of		43° 59'	66° 37'	-0 12	+0 54	+1 12	+0 59	2.7	1.1	--	--	1.8	005°	--	--	1.2	175°
21	Brier Island, 5 miles west of		44° 13'	66° 30'	+0 33	+1 14	+1 17	+1 19	4.0	2.3	--	--	2.7	005°	--	--	2.5	185°
23	Brier Island, 15 miles west of		44° 17'	66° 44'	-0 52	+0 09	+0 37	+0 14	2.1	1.1	--	--	1.4	060°	--	--	1.2	250°
25	Gannet Rock, 5 miles southeast of		44° 29'	66° 41'	+0 28	+0 54	+0 32	+0 59	3.8	3.6	--	--	2.6	040°	--	--	3.9	230°
27	Boars Head, 10 miles northwest of		44° 31'	66° 23'	+0 38	+1 19	+1 22	+1 24	2.8	1.8	--	--	1.9	020°	--	--	2.0	205°
29	Prim Point, 20 miles west of		44° 44'	66° 15'	+0 28	+1 09	+1 17	+1 14	2.4	1.3	--	--	1.6	040°	--	--	1.4	235°
31	Cape Spencer, 14 miles south of		44° 58'	65° 57'	+0 41	+1 19	+1 20	+1 24	2.5	1.5	--	--	1.7	050°	--	--	1.6	245°
33	BAY OF FUNDY ENTRANCE		44° 45.2'	66° 55.9'	<b>Daily predictions</b>						--	--	2.3	032°	--	--	2.4	212°
	MAINE COAST Time meridian, 75°W		<b>on Estes Head, p.8</b>															
	<b>Daily predictions</b>																	
35	ESTES HEAD, EASTPORT	32d	44° 53.28'	66° 59.74'	+0 00	+0 00	+0 00	-0 04	1.0	1.1	0.1	175°	2.2	263°	--	--	2.4	088°
	do.	13d	44° 53.28'	66° 59.74'	-0 03	-0 02	+0 01	+0 01	1.0	0.9	--	--	2.3	260°	--	--	2.6	090°
	do.	52d	44° 53.28'	66° 59.74'	-0 06	-0 01	+0 01	+0 01	0.9	0.8	--	--	2.1	266°	0.1	354°	2.3	085°
	do.	78d	44° 53.28'	66° 59.74'	-0 06	-0 01	+0 01	+0 00	0.9	0.8	--	--	2.0	271°	0.1	355°	2.0	079°
37	Eastport, Friar Roads		44° 54'	66° 59'	+0 00	+0 00	+0 00	+0 00	1.2	1.2	--	--	3.0	210°	--	--	3.0	040°
39	Robbinston, St. Croix River	12d	45° 04.58'	67° 06.06'	-0 27	-0 10	-0 17	-0 13	0.5	0.5	--	--	1.0	349°	--	--	1.1	165°
	do.	32d	45° 04.58'	67° 06.06'	-0 19	-0 07	-0 07	+0 00	0.5	0.4	--	--	1.1	344°	--	--	0.9	166°
	do.	58d	45° 04.58'	67° 06.06'	-0 54	-0 24	-0 21	-1 06	0.4	0.3	--	--	0.9	340°	--	--	0.6	171°
41	Western Passage, off Kendall Head		44° 55.9'	67° 00.0'	+0 27	+0 11	+0 13	+0 40	1.4	1.3	--	--	3.2	319°	--	--	3.1	142°
43	Western Passage, off Frost Ledge		44° 57.9'	67° 01.9'	+0 33	+0 04	-0 16	+0 15	0.9	0.7	--	--	2.1	330°	--	--	1.7	150°
	<b>on Portland Harbor Entrance, p.20</b>																	
45	Pond Point, 7.6 miles SSE of		44° 20.1'	67° 30.2'	+0 03	+0 04	-1 10	+0 24	0.7	1.1	--	--	0.5	015°	--	--	1.2	215°
47	Moosabec Reach, east end		44° 31.71'	67° 34.36'	-2 55	-2 44	-2 50	-3 10	1.5	0.9	--	--	1.0	110°	--	--	1.0	258°
49	Moosabec Reach, west end		44° 31.25'	67° 39.00'	-1 53	-1 19	-1 37	-1 15	1.5	1.1	--	--	1.0	092°	--	--	1.2	253°
51	Bar Harbor, 1.2 miles east of <1>		44° 23.0'	68° 10.0'	--	+0 54	--	+1 17	0.3	0.6	--	--	0.2	328°	--	--	0.7	148°
53	Casco Passage, east end, Blue Hill Bay		44° 11.7'	68° 27.9'	-1 59	-1 20	-0 39	-1 29	1.0	0.6	--	--	0.7	086°	--	--	0.7	284°
55	Hat Island, SE of, Jericho Bay		44° 08.0'	68° 29.7'	-1 12	-0 11	-0 27	-0 51	1.3	1.2	--	--	0.9	318°	--	--	1.3	124°
57	Clam I., NW of, Deer I. Thorofare	14	44° 09.87'	68° 36.23'	-2 24	+0 09	-0 34	-2 17	0.3	0.2	--	--	0.2	004°	--	--	0.2	199°
59	Grog Island, E of, Deer Island Thorofare	14	44° 09.72'	68° 37.23'	-2 26	-1 58	-2 04	-3 02	0.3	0.3	--	--	0.2	020°	0.1	302°	0.3	235°
61	Russ Island, N of, Deer Island Thorofare	14	44° 09.18'	68° 38.78'	-2 22	-1 46	-2 06	-2 47	0.6	0.6	--	--	0.4	074°	--	--	0.6	265°
63	Crotch Island-Moose Island, between <49>	14	44° 08.85'	68° 40.58'	Currents are unidirectional													
65	Isle au Haut, 0.8 mile E of Rich's Pt	11	44° 05'	68° 35'	-1 03	-0 43	-0 44	-0 50	2.1	1.4	--	--	1.4	336°	--	--	1.5	139°
	<i>East Penobscot Bay</i>		<b>Daily predictions</b>															
67	Mark Island, north of	14	44° 08.20'	68° 42.17'	-0 28	-0 37	-2 04	+0 07	0.4	0.4	--	--	0.3	013°	0.1	300°	0.4	164°
69	Widow Island-Stimpson Island, between	14	44° 07.95'	68° 49.50'	-0 53	-0 25	+0 27	-0 39	0.9	0.5	--	--	0.6	302°	--	--	0.5	118°
71	Eagle Island, 0.4 nautical mile S of	14	44° 11.63'	68° 46.93'	-0 28	-0 31	-1 57	-1 17	1.3	0.9	0.2	030°	0.9	336°	0.3	050°	1.0	147°
73	Burnt Island-Oak Island, between	14	44° 11.47'	68° 49.13'	-0 28	-0 55	-1 59	-0 28	0.3	0.5	0.1	347°	0.7	290°	--	--	1.3	098°
75	Butter I., 0.3 nautical mile SE of	14	44° 13.33'	68° 46.67'	-2 53	-1 50	-0 02	-1 07	0.4	0.6	--	--	0.3	050°	0.1	150°	0.6	194°
77	Bradbury Island, ESE of	14	44° 14.03'	68° 44.07'	+0 01	+0 07	-0 30	-0 27	0.7	0.6	0.2	305°	0.5	025°	0.1	304°	0.7	225°
79	Compass Island, 0.4 nmi. ENE of	14	44° 13.00'	68° 51.33'	-1 54	-0 58	-1 02	-0 32	0.4	0.3	0.2	092°	0.3	015°	--	--	0.3	175°
81	Scrag Island, 0.3 nautical mile SW of	14	44° 13.33'	68° 50.62'	-0 55	-0 03	-0 32	-0 26	0.6	0.3	--	--	0.4	010°	0.1	078°	0.3	197°
83	Great Spruce Head Island, west of	14	44° 14.30'	68° 50.18'	-1 24	-0 30	-0 03	-0 50	0.4	0.3	--	--	0.3	003°	--	--	0.3	174°
85	Horse Head Island, 0.2 nmi. ENE of	14	44° 15.07'	68° 50.67'	Current weak and variable													
87	Pickering Island, south of	14	44° 15.63'	68° 45.38'	-2 55	-1 13	-1 33	-2 08	0.9	0.6	0.2	203°	0.6	300°	0.3	201°	0.6	150°

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS							
			Latitude	Longitude	Min. before Flood	Flood		Min. before Ebb	Ebb		Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb	
						h m	h m		h m	h m	Flood	Ebb	knots	Dir.	knots	Dir.	knots	Dir.
	<b>MAINE COAST</b> Time meridian, 75°W	ft	<b>North</b>	<b>West</b>														
					<b>on Portland Harbor Entrance, p.20</b>													
	<i>East Penobscot Bay-cont.</i>																	
89	Little Eaton Island, NNE of .....	14	44° 16.45'	68° 43.87'	-0 53	+0 36	+0 25	+0 10	0.6	0.3	--	--	0.4	300°	0.2	224°	0.3	106°
91	Pickering Island, north of .....	14	44° 16.48'	68° 45.28'	See Table 5.						--	--	0.3	024°	0.2	105°	0.5	180°
93	Hog Island, ESE of .....	14	44° 16.52'	68° 46.87'	-0 23	+0 22	-0 10	-0 22	0.4	0.5	--	--	0.3	024°	0.2	105°	0.5	180°
95	Little Deer I.-Sheep I., between .....	14	44° 16.78'	68° 43.43'	-0 23	-0 13	+0 56	-0 23	0.9	0.6	0.1	231°	0.6	310°	--	--	0.6	124°
97	Swains Ledge, WSW of .....	14	44° 16.97'	68° 45.28'	See Table 5.													
99	Swains Ledge, 0.3 nautical mile SW of .....	14	44° 17.13'	68° 43.87'	-0 56	+0 02	-0 32	-0 38	0.7	0.4	--	--	0.5	358°	--	--	0.4	170°
101	Pond Island-Western Island, between .....	14	44° 17.58'	68° 49.00'	-1 54	-0 49	-1 33	-1 05	0.6	0.6	--	--	0.4	356°	--	--	0.6	172°
103	Birch Island, northwest of .....	14	44° 18.17'	68° 45.35'	-1 54	-1 07	-0 33	-1 01	0.4	0.2	--	--	0.3	022°	--	--	0.2	200°
105	Pond Island, north of .....	14	44° 18.17'	68° 48.60'	Current weak and variable													
107	Howard Ledges, ENE of, Eggemoggin Reach .....	14	44° 18.28'	68° 42.63'	Current weak and variable													
109	Howard Ledges, NE of, Eggemoggin Reach .....	14	44° 18.30'	68° 42.08'	Current weak and variable													
111	Spectacle Island, 0.2 nmi. NW of .....	14	44° 18.47'	68° 47.33'	Current weak and variable													
113	Pumpkin Island, north of .....	14	44° 18.80'	68° 44.42'	-3 24	-1 46	-1 31	-2 14	0.4	0.3	--	--	0.3	290°	0.1	340°	0.3	090°
115	Islesboro Harbor, Penobscot Bay .....	14	44° 18.86'	68° 53.35'	See Table 5.													
117	Islesboro Harbor, NE of, Penobscot Bay .....	75	44° 18.97'	68° 52.78'	-1 14	-0 36	-1 13	-0 56	0.4	0.3	--	--	0.3	004°	--	--	0.3	166°
119	Islesboro Harbor, NE of, Penobscot Bay .....	15	44° 19.03'	68° 52.67'	+0 16	-0 30	-0 59	-0 54	0.1	0.3	--	--	0.1	334°	0.1	248°	0.3	154°
121	Islesboro Ledge .....	14	44° 21.00'	68° 50.57'	See Table 5.													
123	Thrum Cap I., E of, East Penobscot Bay .....	14	44° 19.40'	68° 44.80'	Current weak and variable													
					<b>on Bucksport, p.12</b>													
125	Turtle Head Pt., ESE of, Penobscot Bay .....	15	44° 22.57'	68° 51.28'	-0 36	-1 10	+0 24	-1 02	0.3	0.4	--	--	0.7	338°	--	--	0.8	171°
...	do.	40	44° 22.57'	68° 51.28'	-0 55	-1 18	-0 31	-0 32	0.2	0.4	--	--	0.4	319°	--	--	0.8	155°
127	Hosmer Ledge, Castine Harbor .....	13d	44° 23.01'	68° 47.40'	+0 15	-0 10	+0 37	-0 08	0.5	0.6	--	--	1.2	061°	--	--	1.2	240°
...	do.	33d	44° 23.01'	68° 47.40'	+0 02	-0 17	+0 41	-0 03	0.5	0.6	0.1	330°	1.3	060°	--	--	1.2	241°
...	do.	52d	44° 23.01'	68° 47.40'	-0 12	-0 31	+0 38	-0 14	0.5	0.5	0.1	332°	1.2	052°	--	--	1.1	245°
129	Dice Head, west of, Penobscot Bay .....	15	44° 22.77'	68° 50.72'	-1 52	-1 23	-0 27	-0 48	0.2	0.3	--	--	0.4	028°	--	--	0.5	198°
...	do.	58	44° 22.77'	68° 50.72'	-0 09	-0 39	+0 25	+0 34	0.2	0.3	--	--	0.5	334°	--	--	0.5	178°
...	do.	96	44° 22.77'	68° 50.72'	+0 37	-0 32	+0 34	+0 24	0.3	0.3	--	--	0.6	312°	--	--	0.6	135°
131	Sears Island, S of, Penobscot Bay <53> .....	15	44° 25.12'	68° 53.25'	--	+0 04	--	+0 27	0.2	0.2	--	--	0.4	012°	--	--	0.4	237°
...	do.	40	44° 25.12'	68° 53.25'	--	-1 50	--	-0 15	0.2	0.2	--	--	0.4	080°	--	--	0.4	270°
133	Jones Point, Bagaduce River <51> .....	15	44° 25.55'	68° 45.50'	-0 13	-0 03	+0 21	+0 21	1.8	2.1	--	--	4.2	053°	--	--	4.2	237°
135	Fort Point Ledge, Penobscot Bay .....	25d	44° 27.85'	68° 48.69'	-0 44	-0 35	+0 28	-0 15	0.5	0.4	0.1	323°	1.2	053°	0.1	332°	0.9	248°
...	do.	45d	44° 27.86'	68° 48.69'	-1 26	-0 46	+0 25	-0 06	0.5	0.4	0.1	346°	1.2	052°	0.1	330°	0.8	258°
...	do.	71d	44° 27.85'	68° 48.69'	-1 46	-0 55	+0 46	+0 01	0.5	0.4	0.1	349°	1.3	062°	0.1	342°	0.7	273°
137	Odom Ledge, Penobscot River .....	16d	44° 31.00'	68° 48.19'	-0 21	-0 10	-0 12	-0 41	0.4	0.4	0.1	276°	1.1	358°	--	--	0.8	177°
...	do.	29d	44° 31.00'	68° 48.19'	-1 22	-0 44	+0 33	-0 05	0.5	0.2	0.2	282°	1.3	007°	--	--	0.4	193°
139	Verona I., N of, Easter Ch., Penobscot R <52> .....	10	44° 34.07'	68° 46.87'	+2 18	+0 07	-0 54	+0 18	0.3	0.9	--	--	0.7	273°	--	--	1.8	116°
141	Penobscot Narrows Bridge .....	13d	44° 33.74'	68° 48.03'	+0 27	-0 01	+0 10	+0 22	1.2	1.2	--	--	2.8	034°	--	--	2.4	210°
...	do.	26d	44° 33.74'	68° 48.03'	-0 17	-0 20	+0 13	+0 03	1.1	1.0	0.1	106°	2.7	033°	--	--	2.1	201°
...	do.	36d	44° 33.74'	68° 48.03'	-0 44	-0 37	+0 17	+0 04	1.0	0.9	0.1	113°	2.5	029°	--	--	1.9	201°
143	BUCKSPORT, Penobscot River .....	12d	44° 34.28'	68° 48.46'	<b>Daily Predictions</b>								2.4	292°	0.1	202°	2.0	113°
...	do.	32d	44° 34.28'	68° 48.46'	-0 23	-0 04	-0 05	-0 21	1.1	0.9	--	--	2.5	290°	0.2	204°	1.8	118°
...	do.	45d	44° 34.28'	68° 48.46'	-0 34	-0 01	-0 03	-0 23	1.0	0.9	--	--	2.4	300°	--	--	1.8	123°
145	Frankfort Flats at Marsh River, Penobscot River .....	11d	44° 36.29'	68° 50.80'	-0 25	+0 04	-0 06	+0 42	0.3	0.5	0.1	015°	0.7	273°	--	--	1.0	109°
147	Winterport, Penobscot River <51> .....	7d	44° 37.88'	68° 50.54'	+0 15	+0 10	+0 16	-0 06	0.7	0.8	--	--	1.6	033°	--	--	1.6	212°
...	do.	14d	44° 37.88'	68° 50.54'	-0 27	+0 10	+0 43	+0 04	0.7	0.5	--	--	1.6	036°	--	--	1.0	210°
149	Oak Point, Penobscot River <51> .....	15	44° 40.10'	68° 48.78'	+0 05	+0 16	+0 21	+1 09	0.6	0.9	--	--	1.5	026°	--	--	1.8	219°
...	do.	35	44° 40.10'	68° 48.78'	-0 53	+0 10	+0 01	-0 50	0.7	0.9	--	--	1.6	337°	--	--	1.7	258°
151	Snub Point, Penobscot River <51> .....	7d	44° 42.57'	68° 50.46'	+0 31	+0 22	-0 06	-0 26	0.5	0.7	--	--	1.3	002°	--	--	1.3	182°
...	do.	17d	44° 42.57'	68° 50.46'	+0 18	+0 17	-0 05	-0 47	0.5	0.5	--	--	1.3	003°	--	--	1.0	179°
...	do.	26d	44° 42.57'	68° 50.46'	+0 04	+0 22	+0 53	-0 08	0.3	0.4	--	--	0.8	003°	--	--	0.9	176°

Endnotes can be found at the end of table 2.

TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS							
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb	
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.
	MAINE COAST Time meridian, 75°W	ft	North	West	h m	h m	h m	h m										
					on Portland Harbor Entrance, p.20													
	West Penobscot Bay																	
153	Andrews Island, ESE of	15	43° 59.65'	69° 00.78'	-0 30	-0 20	-0 32	-0 45	0.6	0.6	--	--	0.4	011°	--	--	0.7	155°
	do.	75	43° 59.65'	69° 00.78'	-1 25	-0 32	+0 03	-0 38	1.2	0.6	--	--	0.8	342°	--	--	0.6	188°
155	Little Hurricane Island, southwest of	15	44° 01.38'	68° 55.07'	-0 15	-0 26	+0 05	+0 16	0.7	0.7	--	--	0.5	331°	--	--	0.8	157°
	do.	40	44° 01.38'	68° 55.07'	-0 28	-0 11	-0 04	-0 06	0.9	0.6	--	--	0.6	300°	--	--	0.7	125°
157	Heron Neck, Green Island	14	44° 01.78'	68° 52.38'	-1 57	-0 35	-0 35	-1 14	1.5	0.6	--	--	1.0	344°	0.2	218°	0.6	165°
159	The Reach, Norton Point	14	44° 02.25'	68° 50.90'														
					Current weak and variable													
	Isle au Haut Bay																	
161	Triangle Ledge, SSE of	15	44° 02.47'	68° 45.48'	+0 04	+0 07	-0 03	+0 12	1.0	0.9	--	--	0.7	354°	--	--	1.0	197°
	do.	40	44° 02.47'	68° 45.48'	-1 30	-0 15	-0 09	-0 46	0.9	0.6	--	--	0.6	317°	--	--	0.6	180°
163	Moore Harbor, W of	15	44° 02.53'	68° 41.55'	-0 10	+0 44	+0 07	-0 09	0.6	1.0	--	--	0.4	344°	0.1	063°	1.1	135°
	do.	75	44° 02.53'	68° 41.55'	-1 43	-0 31	-0 17	-0 25	0.9	0.5	--	--	0.6	337°	--	--	0.5	165°
	do.	120	44° 02.53'	68° 41.55'	-2 44	-0 19	-1 02	-0 50	1.0	0.3	--	--	0.7	345°	--	--	0.3	215°
	West Penobscot Bay																	
165	The Reach, NNE of, Green Island	14	44° 02.57'	68° 51.58'	-3 33	-0 46	-1 32	-2 26	0.6	0.4	--	--	0.4	284°	0.1	150°	0.4	111°
167	White Islands, northeast of	14	44° 03.00'	68° 54.40'	-1 58	-1 54	-1 32	-1 39	0.6	0.6	0.2	262°	0.4	322°	0.3	258°	0.6	165°
169	Fisherman Island Passage	14	44° 03.12'	69° 02.70'	-2 54	-2 13	-2 03	-1 59	0.9	0.6	0.1	136°	0.6	053°	0.2	312°	0.7	240°
171	Crotch Island, east of	14	44° 03.62'	68° 54.43'	-0 59	-0 31	-0 58	-0 40	1.8	1.8	--	--	1.9	343°	--	--	2.0	163°
173	Laireys Island, south of	14	44° 03.62'	68° 53.78'	-0 58	+0 06	-0 28	-1 22	0.6	0.8	0.1	073°	0.4	335°	--	--	0.9	155°
175	Sheep Island	14	44° 03.88'	69° 03.47'	-2 54	-0 55	-1 34	-1 47	0.7	0.7	--	--	0.5	023°	--	--	0.8	220°
177	Leadbetter I., SSW of southern tip	14	44° 04.07'	68° 53.90'	-0 53	-0 15	-0 05	-1 03	2.1	1.2	--	--	1.4	320°	--	--	1.3	126°
179	Leadbetter Island, E of southern tip	14	44° 04.15'	68° 53.62'	-0 28	-0 19	+1 00	+0 16	0.6	0.6	0.1	214°	0.4	360°	0.1	105°	0.6	175°
181	Leadbetter Island, northwest tip of	14	44° 05.03'	68° 54.67'	-0 58	-0 17	-0 30	-0 43	1.2	0.9	--	--	0.8	016°	0.1	135°	1.0	214°
183	Dodge Point-Monroe Island, between	14	44° 05.12'	69° 02.62'	-3 53	-1 19	-2 32	-2 38	0.6	0.5	0.2	267°	0.4	015°	0.1	092°	0.5	205°
185	Dogfish Island, NNE of	14	44° 05.52'	68° 54.80'	-2 24	-2 03	-2 32	-1 37	0.7	0.4	0.1	244°	0.5	325°	--	--	0.4	147°
187	Rockland Harbor Breakwater	14	44° 06.13'	69° 04.67'	-1 28	-0 06	-0 41	-0 10	0.4	0.4	0.1	215°	0.3	315°	--	--	0.4	097°
189	Browns Head, Vinalhaven Island, NNW of	14	44° 06.78'	68° 54.73'	-1 58	-0 58	-0 32	-0 27	0.3	0.2	0.1	325°	0.2	016°	0.2	100°	0.2	221°
191	Crabtree Pt., North Haven I., NNE of	14	44° 06.90'	68° 55.42'	-0 53	-0 54	-0 32	-0 32	0.4	0.2	0.2	287°	0.3	003°	0.1	150°	0.2	228°
193	Fox Island Thorofare	14	44° 07.62'	68° 53.58'	-3 23	-2 17	-3 02	-2 56	0.3	0.4	--	--	0.2	070°	--	--	0.4	278°
195	Mark Island, 0.3 nmi., SSE of	14	44° 10.00'	68° 58.83'	-1 51	-1 07	-1 36	-0 57	0.6	0.5	0.2	331°	0.4	044°	0.1	163°	0.5	246°
197	Saddle Island, northwest of	14	44° 10.85'	68° 57.30'	-3 53	-2 07	-3 33	-1 44	0.4	0.4	0.2	272°	0.3	010°	0.1	101°	0.4	225°
199	Mark Island, 0.3 nautical mile, N of	14	44° 10.87'	68° 58.92'														
					See Table 5.													
201	Lasell Island, SSW of	14	44° 11.20'	68° 56.82'	-1 57	-1 07	-2 31	-1 17	0.6	0.4	--	--	0.4	022°	--	--	0.4	217°
203	East Goose Rock, NNE of	14	44° 11.37'	68° 58.08'	-3 55	-2 19	-3 34	-2 44	0.6	0.4	--	--	0.4	000°	0.2	112°	0.4	210°
205	Camden Harbor Entrance	14	44° 12.17'	69° 02.80'	-2 54	-3 42	-2 03	-1 27	0.3	0.3	--	--	0.2	354°	0.1	325°	0.3	190°
207	Ensign Island, SSE of	14	44° 13.40'	68° 57.52'	-1 40	-0 36	+0 55	-0 56	0.4	0.3	--	--	0.3	022°	--	--	0.3	220°
209	Warren Island, northwest of	14	44° 16.55'	68° 57.22'	-2 27	-0 28	-1 00	-0 44	0.7	0.3	--	--	0.5	036°	--	--	0.3	248°
211	Ducktrap Harbor, northeast of	15	44° 18.00'	68° 56.38'	-1 17	-0 34	-1 00	-0 12	0.7	0.4	--	--	0.5	355°	--	--	0.4	185°
	do.	40	44° 18.00'	68° 56.38'	-2 39	-0 56	-1 24	-1 20	0.6	0.3	--	--	0.4	014°	--	--	0.3	237°
213	Ducktrap Harbor, NNE of	90	44° 18.27'	68° 57.35'	-1 09	-0 04	+0 04	-0 04	0.6	0.3	--	--	0.4	014°	--	--	0.3	203°
	do.	160	44° 18.27'	68° 57.35'	-1 12	-0 05	+0 13	+0 02	0.7	0.3	--	--	0.5	038°	--	--	0.3	233°
215	Ducktrap Harbor, NNE of	15	44° 18.30'	68° 57.55'	+0 23	+0 11	-0 33	-0 06	0.6	0.5	--	--	0.4	058°	--	--	0.5	202°
	do.	130	44° 18.30'	68° 57.55'	-1 24	-0 28	-0 25	-0 42	0.9	0.5	--	--	0.6	013°	--	--	0.5	193°
217	Flat Island, SSW of	14	44° 18.83'	68° 55.45'	-1 23	+0 01	-0 32	-1 38	0.6	0.4	--	--	0.4	045°	0.1	135°	0.4	230°
219	Head of the Cape, 0.8 nmi. W, of Penobscot Bay	15	44° 19.25'	68° 50.80'	-0 34	+0 10	-0 01	+0 01	0.6	0.4	--	--	0.4	325°	--	--	0.4	125°
	do.	130	44° 19.25'	68° 50.80'	-1 24	-0 35	-0 18	-0 22	0.6	0.3	--	--	0.4	015°	--	--	0.3	166°
221	Head of the Cape, NNW of, Penobscot Bay	15	44° 19.07'	68° 50.17'	-0 56	-0 15	+0 05	-0 24	0.9	0.4	--	--	0.6	332°	--	--	0.4	163°
	do.	30	44° 19.07'	68° 50.17'	-1 32	-0 23	-0 01	-0 30	0.7	0.3	--	--	0.5	356°	--	--	0.3	176°
	do.	130	44° 19.07'	68° 50.17'	-1 09	-0 56	-0 48	-0 30	0.4	0.4	--	--	0.3	353°	--	--	0.4	172°
223	Ram Island, west of, West Penobscot Bay	14	44° 21.28'	68° 54.95'	-3 53	-1 31	-2 30	-1 47	0.6	0.3	--	--	0.4	004°	--	--	0.3	189°
225	Temple Heights, NE of, W Penobscot Bay	15	44° 21.38'	68° 55.33'	-1 12	-0 59	-1 40	-0 49	0.6	0.4	--	--	0.4	000°	--	--	0.4	189°
	do.	65	44° 21.38'	68° 55.33'	-1 56	-0 48	-1 13	-1 04	0.6	0.3	--	--	0.4	354°	--	--	0.3	175°
227	Temple Heights, NNE of, W Penobscot Bay	15	44° 21.45'	68° 56.62'	-0 44	+0 03	-0 12	-0 36	0.9	0.6	--	--	0.6	005°	--	--	0.7	175°
	do.	30	44° 21.45'	68° 56.62'	-1 01	-0 02	+0 08	-0 14	0.9	0.4	--	--	0.6	344°	--	--	0.4	188°
	do.	50	44° 21.45'	68° 56.62'	-0 38	-0 06	-0 24	-0 10	0.7	0.5	--	--	0.5	333°	0.0	--	0.5	164°
229	Muscongus Sound		43° 56.5'	69° 26.9'														
					Current weak and variable													

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS							
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb	
					h m	h m	h m	h m			knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.
	MAINE COAST Time meridian, 75°W	ft	<b>North</b>	<b>West</b>														
					<b>on Bath Iron Works, p.16</b>													
231	Damariscotta River, off Cavis Point		43° 52.5'	69° 35.0'	-1 27	-1 55	-2 10	-1 58	0.3	0.5	--	--	0.6	350°	--	--	1.0	215°
233	Sheepscot River, off Barter Island		43° 54.0'	69° 41.5'	-1 26	-2 13	-2 01	-1 13	0.4	0.5	--	--	0.8	005°	--	--	1.1	200°
235	Lowe Point, NE of, Sasanoa River		43° 51.1'	69° 43.3'	-1 26	-1 02	-1 32	-1 07	0.9	0.9	--	--	1.7	327°	--	--	1.8	152°
237	Lower Hell Gate, Knubble Bay <2>		43° 52.6'	69° 43.8'	-1 01	-0 34	-1 32	-0 34	1.6	1.7	--	--	3.0	290°	--	--	3.5	155°
239	Upper Hell Gate, Sasanoa River		43° 53.7'	69° 46.3'	+2 53	+1 37	+0 34	+1 23	0.5	0.4	--	--	1.0	307°	--	--	0.8	142°
	KENNEBEC RIVER																	
241	Hunniwell Point, northeast of		43° 45.4'	69° 46.9'	-0 33	-0 59	-0 41	-0 16	1.3	1.4	--	--	2.4	332°	--	--	2.9	151°
243	Bald Head, 0.3 mile southwest of		43° 48.1'	69° 47.6'	-0 15	-0 43	-0 50	-0 17	0.8	1.1	--	--	1.6	321°	--	--	2.3	153°
245	Bluff Head, west of		43° 51.3'	69° 47.8'	-0 05	-0 18	-0 20	-0 16	1.2	1.7	--	--	2.3	014°	--	--	3.4	184°
247	Fiddler Ledge, north of		43° 52.8'	69° 47.8'	+0 09	+0 01	-0 24	+0 08	1.0	1.3	--	--	1.9	267°	--	--	2.6	113°
249	Doubling Point, south of		43° 52.8'	69° 48.4'	-0 10	-0 22	-0 23	+0 13	1.4	1.5	--	--	2.6	300°	--	--	3.0	127°
251	Bath Iron Works	16d	43° 54.23'	69° 48.56'	<b>Daily Predictions</b>				--	--	1.9	001°	0.1	085°	2.1	178°		
	do.	3d	43° 54.23'	69° 48.56'	+0 02	-0 01	-0 11	-0 14	1.0	1.2	--	--	1.9	004°	0.1	090°	2.5	178°
	do.	39d	43° 54.23'	69° 48.56'	+0 01	-0 05	-0 06	+0 35	0.7	0.6	--	--	1.3	354°	0.2	274°	1.3	176°
253	Goose Cove, south of Chops Passage	4d	43° 58.51'	69° 49.60'	+0 31	+0 17	+0 05	+0 41	1.3	1.5	0.1	072°	2.4	343°	0.1	252°	3.0	154°
	do.	14d	43° 58.51'	69° 49.60'	+0 31	+0 17	+0 07	+0 41	1.2	1.5	0.1	070°	2.3	342°	0.1	252°	3.0	154°
	do.	27d	43° 58.51'	69° 49.60'	+0 32	+0 19	+0 08	+0 39	1.0	1.3	--	--	2.0	338°	0.1	252°	2.6	158°
255	Merrymeeting Bay, north of Chops Passage	4d	43° 59.06'	69° 50.17'	+0 22	+0 48	+0 22	+0 09	1.0	0.4	--	--	2.0	306°	0.1	031°	0.9	108°
	do.	20d	43° 59.06'	69° 50.17'	+0 23	+0 51	+0 26	+0 09	0.9	0.4	--	--	1.7	306°	--	--	0.9	120°
	do.	40d	43° 59.06'	69° 50.17'	+0 26	+0 52	+0 26	+0 23	0.7	0.4	0.1	219°	1.3	307°	--	--	0.9	137°
257	Maine Kennebec Bridge, 0.2nm south of	4d	44° 05.28'	69° 47.11'	+1 40	+1 01	+0 24	+2 01	0.6	0.7	0.1	292°	1.2	016°	0.1	291°	1.5	208°
	do.	19d	44° 05.28'	69° 47.11'	+1 40	+1 04	+0 23	+2 02	0.5	0.6	--	--	0.9	025°	--	--	1.2	202°
	CASCO BAY																	
					<b>on Portland Harbor Entrance, p.20</b>													
259	Broad Sound, west of Eagle Island	19d	43° 42.60'	70° 03.77'	-0 45	-0 37	-0 21	-0 16	1.6	1.0	0.1	263°	1.0	351°	--	--	1.1	187°
	do.	39d	43° 42.60'	70° 03.77'	-0 33	-0 22	-0 22	-0 10	1.4	1.0	0.1	271°	1.0	356°	--	--	1.0	187°
	do.	91d	43° 42.60'	70° 03.77'	-1 38	-0 28	+0 12	-0 14	1.9	0.6	0.1	271°	1.3	340°	--	--	0.6	191°
261	Littlejohn Island, S. of Town Ledge	6d	43° 45.25'	70° 07.66'	-2 19	-0 48	+0 00	-0 58	0.6	0.3	0.1	296°	0.4	025°	0.1	299°	0.3	221°
	do.	20d	43° 45.25'	70° 07.66'	-2 51	-0 25	+0 03	-1 03	0.5	0.3	--	--	0.3	025°	--	--	0.3	214°
	do.	36d	43° 45.25'	70° 07.66'	-3 09	-1 09	-0 24	-1 15	0.4	0.2	--	--	0.3	033°	--	--	0.3	210°
263	Lucksee Sound, between Hope & Cliff Is.	14d	43° 41.90'	70° 06.94'	+0 48	+0 44	+0 01	+1 12	0.6	0.5	0.1	322°	0.4	050°	--	--	0.5	227°
	do.	27d	43° 41.90'	70° 06.94'	+0 48	+0 53	+0 59	+1 13	0.6	0.5	--	--	0.4	052°	--	--	0.5	228°
	do.	40d	43° 41.90'	70° 06.94'	+0 09	+0 34	+0 58	+0 56	0.7	0.5	--	--	0.5	051°	--	--	0.5	227°
265	Stepping Stones	6d	43° 41.75'	70° 07.96'	+0 13	+0 02	-0 03	-0 21	0.7	0.7	--	--	0.5	018°	--	--	0.8	197°
	do.	19d	43° 41.75'	70° 07.96'	+0 09	+0 01	+0 02	-0 10	0.7	0.7	--	--	0.5	013°	--	--	0.8	191°
	do.	42d	43° 41.75'	70° 07.96'	-0 53	-0 46	-1 23	-0 14	0.5	0.4	--	--	0.4	355°	--	--	0.4	169°
267	Chandler Cove, south entrance	4d	43° 42.42'	70° 07.94'	-1 26	-0 02	-0 38	-1 18	1.0	0.8	--	--	0.7	354°	0.1	264°	0.8	179°
	do.	17d	43° 42.42'	70° 07.94'	-1 19	-0 26	-0 37	-1 08	0.9	0.8	--	--	0.6	357°	0.1	271°	0.8	180°
	do.	37d	43° 42.42'	70° 07.94'	-1 27	-0 58	-0 19	-0 43	0.7	0.7	--	--	0.5	001°	--	--	0.7	187°
269	Long Island, Mariner Ledge	9d	43° 42.12'	70° 09.85'	-0 51	-0 45	+1 53	+0 45	0.4	0.3	--	--	0.3	017°	--	--	0.3	182°
	do.	26d	43° 42.12'	70° 09.85'	-0 54	+0 15	+2 08	+0 29	0.4	0.2	--	--	0.3	026°	0.1	133°	0.3	194°
271	Cow Island, northeast of	13d	43° 41.65'	70° 10.86'	-1 27	-1 21	-0 35	-0 30	0.6	0.8	0.1	067°	0.4	000°	--	--	0.9	144°
	do.	39d	43° 41.65'	70° 10.86'	-1 23	-1 27	-1 07	-0 14	0.8	0.9	--	--	0.5	002°	--	--	0.9	152°
273	Hussey Sound, Cow Island	11d	43° 41.39'	70° 10.70'	-1 19	+0 15	+0 16	-0 25	1.6	0.8	0.1	087°	1.1	012°	0.1	283°	0.8	178°
	do.	30d	43° 41.39'	70° 10.70'	-1 02	+0 05	+0 10	-0 21	1.2	0.9	0.1	098°	0.8	012°	0.1	281°	0.9	185°
	do.	57d	43° 41.39'	70° 10.70'	-0 44	-0 34	-0 03	-0 12	1.0	1.0	0.1	097°	0.7	018°	--	--	1.1	195°
275	Hussey Sound, between Long & Peaks Islands	11d	43° 40.25'	70° 10.58'	-0 29	-0 08	+0 16	-0 06	1.5	1.1	--	--	1.0	325°	0.1	226°	1.2	145°
	do.	31d	43° 40.25'	70° 10.58'	-0 26	-0 03	+0 00	-0 07	1.4	1.0	--	--	0.9	325°	0.2	229°	1.1	147°
	do.	70d	43° 40.25'	70° 10.58'	-1 14	+0 08	+0 14	-0 06	1.5	0.6	0.1	230°	1.0	311°	--	--	0.7	140°
277	Diamond Island Roads	7d	43° 39.75'	70° 12.94'	-0 51	-0 55	-1 17	-0 28	0.6	0.8	0.1	250°	0.4	327°	0.1	065°	0.8	164°
	do.	17d	43° 39.75'	70° 12.94'	-0 46	-0 23	-0 58	-0 34	0.5	0.7	0.1	233°	0.3	342°	0.2	070°	0.7	165°
	do.	34d	43° 39.75'	70° 12.94'	-1 00	+0 08	+0 06	-0 28	0.5	0.5	--	--	0.3	023°	0.1	108°	0.5	168°
279	PORTLAND HARBOR ENTRANCE	9d	43° 37.68'	70° 12.57'	<b>Daily Predictions</b>				--	--	0.7	310°	0.1	226°	1.1	138°		
	do.	19d	43° 37.68'	70° 12.57'	-0 18	-0 02	-0 09	+0 03	1.0	1.0	--	--	0.7	313°	--	--	1.1	137°
	do.	38d	43° 37.68'	70° 12.57'	-0 39	-0 07	-0 39	+0 03	0.8	0.9	0.1	234°	0.5	308°	--	--	0.9	140°

Endnotes can be found at the end of table 2.

TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS									
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb			
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.		
CASCO BAY Time meridian, 75°W			North	West	h	m	h	m	h	m	h	m	knots Dir.		knots Dir.		knots Dir.			
<b>on Portland Harbor Entrance, p.20</b>																				
281	Spring Point, east of	7d	43° 39.22'	70° 13.36'	-0 38	-0 22	-0 37	-0 22	1.5	0.8	--	--	1.0	343°	0.1	060°	0.9	124°		
	do.	20d	43° 39.22'	70° 13.36'	-0 57	-0 03	-0 19	-0 32	1.7	0.7	--	--	1.1	344°	0.1	056°	0.8	123°		
	do.	36d	43° 39.22'	70° 13.36'	-1 15	-0 05	-0 06	-0 36	1.4	0.6	--	--	1.0	337°	0.1	053°	0.6	113°		
283	Portland Breakwater Light, 0.3nm east of	6d	43° 39.32'	70° 13.67'	---	---	---	-0 45	--	0.5	--	--	--	--	--	--	0.5	114°		
	do.	20d	43° 39.32'	70° 13.67'	---	---	---	-1 00	--	0.4	--	--	--	--	--	--	0.4	121°		
	do.	36d	43° 39.32'	70° 13.67'	cCurre	nt weak	and va	riable												
285	Ocean Gate Terminal	3d	43° 39.66'	70° 14.40'	-2 11	+1 01	+0 40	-0 28	0.5	0.3	--	--	0.4	230°	--	--	0.3	050°		
	do.	21d	43° 39.66'	70° 14.40'	---	+1 15	---	---	0.6	--	--	--	0.4	209°	--	--	--	--		
287	Portland Harbor, State Pier	3d	43° 39.28'	70° 14.70'	-0 06	+0 05	-0 09	+0 26	0.6	0.6	--	--	0.4	214°	0.1	127°	0.6	054°		
	do.	17d	43° 39.28'	70° 14.70'	-0 49	+0 14	+0 21	+0 03	0.6	0.2	--	--	0.4	221°	--	--	0.3	056°		
	do.	30d	43° 39.28'	70° 14.70'	---	-0 01	---	---	0.6	--	--	--	0.4	221°	--	--	--	--		
289	Fore River, Portland River Bridge	5d	43° 38.75'	70° 15.44'	-0 12	-0 14	-0 15	-0 13	0.8	0.4	--	--	0.5	229°	--	--	0.4	065°		
	do.	21d	43° 38.75'	70° 15.44'	-1 57	-0 16	-0 04	-0 46	0.7	0.4	0.1	149°	0.5	227°	--	--	0.5	064°		
291	Seal Cove, Cape Elizabeth	3d	43° 33.14'	70° 13.06'	+1 28	+2 10	+2 35	+2 03	0.4	0.2	0.1	021°	0.3	286°	0.1	196°	0.3	112°		
	do.	19d	43° 33.14'	70° 13.06'	cCurre	nt weak	and va	riable												
293	Saco River Entrance	1d	43° 27.73'	70° 21.07'	+0 00	-0 26	-0 14	+0 51	0.4	0.5	--	--	0.3	262°	--	--	0.5	078°		
	do.	13d	43° 27.73'	70° 21.07'	cCurre	nt weak	and va	riable												
PORTSMOUTH HARBOR			<b>on Portsmouth Harbor Entrance, p.24</b>																	
295	Odiornes Point, NNE of	15	43° 02.60'	70° 42.30'	+1 23	+1 54	+0 41	+2 13	0.4	0.6	--	--	0.5	339°	--	--	0.8	183°		
297	Odiornes Point, northeast of	15	43° 03.00'	70° 42.10'	+0 09	+0 14	+0 29	+1 03	0.5	0.7	0.1	238°	0.6	320°	--	--	1.0	156°		
299	Kitts Rocks, WSW of <55>	15	43° 03.10'	70° 41.80'	---	-0 04	+0 00	-0 04	0.6	0.5	0.2	191°	0.7	314°	0.1	058°	0.8	133°		
301	Little Harbor entrance	3d	43° 03.32'	70° 42.94'	-1 05	-0 30	-1 04	-1 19	0.7	0.8	--	--	0.8	321°	--	--	1.2	107°		
	do.	12d	43° 03.32'	70° 42.94'	-1 58	-0 36	-1 09	-1 23	0.6	0.7	--	--	0.7	316°	--	--	1.0	122°		
303	Whaleback Reef, west of	15	43° 03.50'	70° 42.27'	+0 09	+0 27	+0 03	+0 10	0.6	1.0	--	--	0.7	340°	--	--	1.5	144°		
305	PORTSMOUTH HARBOR ENTRANCE	8d	43° 03.74'	70° 42.32'	<b>Daily predictions</b>								0.1	282°	1.2	342°	--	--	1.5	194°
	do.	25d	43° 03.74'	70° 42.32'	-0 34	-0 30	+0 03	+0 07	1.0	0.9	0.1	282°	1.2	346°	0.1	092°	1.3	196°		
	do.	44d	43° 03.74'	70° 42.32'	-1 03	-0 49	-0 03	+0 04	0.9	0.6	0.1	082°	1.0	007°	--	--	0.9	178°		
307	Wood Island, northwest of	15	43° 03.95'	70° 42.30'	+0 12	+0 09	+0 23	-0 44	1.0	0.8	0.2	291°	1.2	358°	0.1	278°	1.3	199°		
309	Fort Point	6d	43° 04.47'	70° 42.40'	+0 24	+0 43	-0 01	+0 20	1.3	1.3	0.1	213°	1.6	328°	0.2	043°	2.0	098°		
	do.	19d	43° 04.47'	70° 42.40'	-0 14	+0 19	+0 00	+0 15	1.4	1.1	0.2	221°	1.7	328°	0.2	052°	1.6	104°		
	do.	39d	43° 04.47'	60° 42.40'	-0 44	-0 29	+0 09	+0 07	1.4	0.5	0.1	255°	1.6	323°	0.1	047°	0.7	138°		
311	Salamander Point, north of	15	43° 04.58'	70° 43.02'	+0 24	+0 44	+0 26	+0 45	1.2	0.6	--	--	1.4	257°	0.2	167°	0.8	091°		
313	Clark Island, south of	15	43° 04.43'	70° 43.48'	+0 33	+0 31	+0 28	+0 31	1.4	1.5	--	--	1.6	270°	--	--	2.3	085°		
315	Clark Island, southwest of	15	43° 04.50'	70° 43.67'	+0 31	-0 05	+0 26	-0 06	0.6	0.6	--	--	0.7	263°	--	--	0.8	070°		
317	Henderson Point, SSW of	15	43° 04.40'	70° 44.32'	+0 14	+1 20	+0 07	+0 36	1.4	1.2	0.1	228°	1.6	306°	--	--	1.8	133°		
319	Henderson Point, west of	10d	43° 04.49'	70° 44.30'	+0 11	+1 13	+0 05	+0 08	2.1	1.9	--	--	2.4	285°	0.2	218°	2.8	138°		
	do.	32d	43° 04.49'	70° 44.30'	+0 03	+0 30	+0 06	+0 00	2.2	1.7	--	--	2.6	293°	0.2	219°	2.5	147°		
	do.	59d	43° 04.49'	70° 44.30'	-0 14	+0 21	+0 08	+0 04	1.5	1.1	0.1	244°	1.8	340°	0.2	240°	1.7	160°		
321	Shapleigh Island Bridge, south of	15	43° 04.18'	70° 44.30'	-0 40	-0 18	-1 01	-0 37	0.7	0.4	--	--	0.8	178°	--	--	0.7	348°		
323	Pierces Island, northeast of	15	43° 04.55'	70° 44.48'	-0 08	+0 34	+0 31	-0 21	2.4	0.8	0.1	243°	2.8	325°	--	--	1.3	144°		
PISCATAQUA RIVER and tributaries																				
325	Memorial Bridge	8d	43° 04.76'	70° 45.12'	+0 06	+0 28	+0 09	+0 03	2.3	2.2	--	--	2.6	277°	--	--	3.2	105°		
	do.	31d	43° 04.76'	70° 45.12'	+0 04	+0 39	+0 15	+0 03	2.4	2.1	--	--	2.8	275°	--	--	3.1	101°		
	do.	58d	43° 04.76'	70° 45.12'	+0 01	+0 46	+0 16	+0 03	2.1	1.6	--	--	2.4	275°	--	--	2.4	093°		
327	Sara Long Bridge	6d	43° 05.32'	70° 45.72'	+0 11	+0 40	+0 08	+0 18	1.9	2.1	--	--	2.2	331°	0.1	242°	3.1	153°		
	do.	19d	43° 05.32'	70° 45.72'	+0 07	+0 41	+0 11	+0 15	1.9	1.9	0.1	244°	2.2	332°	0.1	245°	2.9	155°		
	do.	33d	43° 05.32'	70° 45.72'	+0 04	+0 41	+0 13	+0 16	1.8	1.7	--	--	2.1	333°	--	--	2.6	158°		
329	I-95 Bridge	6d	43° 05.57'	70° 46.02'	+0 13	+0 42	+0 08	+0 14	2.8	2.9	0.2	033°	3.3	309°	--	--	4.3	123°		
	do.	29d	43° 05.57'	70° 46.02'	+0 06	+0 41	+0 11	+0 13	2.9	2.3	0.1	042°	3.4	317°	--	--	3.5	129°		
	do.	48d	43° 05.57'	70° 46.02'	+0 01	+0 37	+0 12	+0 10	2.2	1.6	0.1	233°	2.6	313°	0.1	226°	2.5	142°		
331	Schiller Station	9d	43° 05.84'	70° 46.86'	+0 13	+1 00	+0 17	+0 19	3.4	2.4	--	--	4.0	329°	0.1	243°	3.6	157°		
	do.	29d	43° 05.84'	70° 46.86'	+0 10	+0 55	+0 20	+0 15	3.3	2.3	0.1	--	3.8	337°	0.1	249°	3.5	162°		
	do.	52d	43° 05.84'	70° 46.86'	+0 10	+0 51	+0 23	+0 19	3.0	1.9	--	--	3.5	353°	--	--	2.9	168°		

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS											
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb					
		ft	North	West	h	m	h	m	h	m	h	m	knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.		
<b>PISCATAQUA RIVER and tributaries</b>																						
Time meridian, 75°W																						
<b>on Portsmouth Harbor Entrance, p.24</b>																						
333	Frankfort Island, south of	7d	43° 06.85'	70° 48.32'	+0 15	+0 56	+0 21	+0 43	2.5	2.3	0.1	218°	2.9	304°	0.1	219°	3.4	130°				
	do.	24d	43° 06.85'	70° 48.32'	+0 15	+0 55	+0 26	+0 42	2.4	2.2	--	--	2.8	305°	0.1	218°	3.2	130°				
	do.	37d	43° 06.85'	70° 48.32'	+0 15	+0 58	+0 24	+0 42	2.0	1.9	--	--	2.3	303°	--	--	2.8	129°				
335	General Sullivan Bridge	3d	43° 07.07'	70° 49.56'	+0 19	+0 42	+0 24	+1 06	3.6	2.8	0.2	158°	4.2	238°	0.1	159°	4.2	078°				
	do.	8d	43° 07.07'	70° 49.56'	+0 19	+0 39	+0 24	+1 09	3.4	2.6	0.2	157°	4.0	238°	--	--	3.9	075°				
	do.	15d	43° 07.07'	60° 49.56'	+0 19	+0 40	+0 25	+1 11	2.8	2.1	0.1	156°	3.2	243°	--	--	3.2	071°				
337	Dover Point, west of	15	43° 07.15'	70° 50.23'	+0 07	+0 18	+0 23	-0 02	1.2	0.4	0.1	191°	1.4	283°	--	--	0.6	119°				
339	Goat Island, north of	15	43° 07.62'	70° 51.37'	+0 52	+1 05	+0 20	+0 49	1.0	0.8	0.1	352°	1.2	272°	--	--	1.3	077°				
341	Goat Island and Fox Point, between	15	43° 07.37'	70° 51.42'	+0 34	+1 39	+0 51	+2 30	1.0	0.4	0.1	219°	1.1	303°	--	--	0.6	142°				
343	Knight Hill Township, west of	15	43° 06.47'	70° 51.50'	+0 39	+0 41	+0 54	+0 21	0.6	0.5	--	--	0.7	205°	0.1	286°	0.8	015°				
345	Furber Strait	4d	43° 05.47'	70° 51.68'	+0 30	+1 10	+0 24	+1 05	1.8	1.4	0.1	289°	2.0	201°	0.1	288°	2.1	015°				
	do.	14d	43° 05.47'	70° 51.68'	+0 27	+1 06	+0 27	+0 58	1.8	1.4	0.1	285°	2.0	200°	0.1	285°	2.1	007°				
	do.	25d	43° 05.47'	70° 51.68'	+0 27	+1 00	+0 30	+0 55	1.6	1.3	0.2	279°	1.8	198°	--	--	1.9	001°				
<b>MASSACHUSETTS COAST</b>																						
<b>on Boston Harbor, p.28</b>																						
347	Merrimack River entrance		42° 49.1'	70° 48.6'	+0 55	+1 20	+1 08	-0 46	1.7	1.1	--	--	2.2	285°	--	--	1.4	105°				
349	Newburyport, Merrimack River		42° 48.8'	70° 52.1'	+1 19	+1 53	+1 42	+0 23	1.2	1.1	--	--	1.5	288°	--	--	1.4	098°				
351	Plum Island Sound entrance		42° 42.3'	70° 47.3'	+0 27	+0 55	+0 43	-0 19	1.2	1.2	--	--	1.6	316°	--	--	1.5	184°				
353	Annisquam Harbor Light		42° 40.1'	70° 41.1'	+0 33	+0 54	+0 53	-0 09	0.8	1.1	--	--	1.0	200°	--	--	1.3	013°				
355	Gloucester Harbor entrance		42° 34.9'	70° 40.5'	-0 37	+0 06	-0 34	-0 48	0.2	0.2	--	--	0.3	340°	--	--	0.3	195°				
357	Blyman Canal ent., Gloucester Harbor		42° 36.6'	70° 40.4'	-0 15	+0 10	-0 20	-0 51	2.3	2.7	--	--	3.0	310°	--	--	3.3	130°				
<b>Salem Sound</b>																						
359	Little Misery Island	5d	42° 32.53'	70° 48.01'	-0 49	-0 19	+0 18	-0 32	0.4	0.3	0.1	185°	0.5	249°	0.1	169°	0.4	105°				
	do.	18d	42° 32.53'	70° 48.01'	-0 32	-0 05	+0 27	-0 17	0.4	0.3	0.1	185°	0.5	258°	0.1	174°	0.4	102°				
	do.	50d	42° 32.53'	70° 48.01'	-0 33	-1 03	-0 29	-0 38	0.2	0.3	--	--	0.3	275°	--	--	0.4	090°				
361	Haste Shoal	4d	42° 32.36'	70° 50.70'	+0 34	+0 29	+0 57	+0 39	0.3	0.3	--	--	0.4	273°	--	--	0.4	093°				
	do.	15d	42° 32.36'	70° 50.70'	-0 12	-0 17	+0 43	+0 04	0.3	0.3	0.1	345°	0.3	268°	--	--	0.3	067°				
363	Abbot Rock		42° 31.78'	70° 51.60'	Current weak and variable																	
365	Fort Pickering, 0.2nm south of	6d	42° 31.34'	70° 52.08'	+0 05	+0 06	+0 50	+0 03	0.2	0.2	--	--	0.3	264°	--	--	0.3	080°				
	do.	16d	42° 31.34'	70° 52.08'	-0 31	-0 50	+0 07	-0 11	0.2	0.2	--	--	0.3	268°	--	--	0.3	081°				
	do.	29d	42° 31.34'	70° 52.08'	Current weak and variable																	
367	Marblehead Channel	4d	42° 30.04'	70° 49.21'	+0 41	+0 10	+0 26	+1 31	0.2	0.3	0.2	228°	0.3	280°	0.1	005°	0.3	171°				
	do.	17d	42° 30.04'	70° 49.21'	Current weak and variable																	
	do.	30d	42° 30.04'	70° 49.21'	Current weak and variable																	
369	Ram Island, 0.2 n.mi. NNE of	10	42° 28.75'	70° 51.68'	See Table 5.																	
371	Ram Island, 0.2 n.mi. southeast of	10	42° 28.45'	70° 51.55'	See Table 5.																	
373	Great Pig Rocks, southeast of	10	42° 27.53'	70° 50.70'	See Table 5.																	
375	Galloupes Point, 0.4 n.mi. south of	10	42° 27.24'	70° 53.70'	See Table 5.																	
377	Little Nahant, 0.9 n.mi. northeast of	10	42° 26.85'	70° 54.84'	See Table 5.																	
379	Egg Rock, 0.2 n.mi. north of	10	42° 26.25'	70° 53.93'	See Table 5.																	
381	Egg Rock, southwest of	10	42° 25.85'	70° 54.20'	See Table 5.																	
383	Nahant, 1.8 n.mi. NE of East Point	10	42° 26.00'	70° 52.02'	+0 23	+0 54	+0 10	+0 48	0.5	0.1	--	--	0.7	252°	0.1	291°	0.7	144°				
	do.	45	42° 26.00'	70° 52.02'	-0 30	+1 09	+1 09	-0 43	0.2	0.2	--	--	0.3	250°	--	--	0.2	070°				
	do.	80	42° 26.00'	70° 52.02'	-0 34	+1 09	+1 10	-0 43	0.2	0.2	0.1	329°	0.2	238°	--	--	0.2	077°				
385	Nahant, 0.4 n.mi. east of East Point	15	42° 25.23'	70° 53.63'	-0 05	-0 36	+0 10	+0 10	0.4	0.5	0.2	118°	0.5	205°	--	--	0.6	045°				
	do.	25	42° 25.23'	70° 53.63'	-0 06	-0 21	+0 03	+0 17	0.3	0.4	0.1	102°	0.4	198°	0.1	282°	0.5	027°				
	do.	45	42° 23.83'	70° 51.17'	-0 31	+0 01	+0 14	-1 13	0.2	0.2	--	--	0.3	253°	--	--	0.3	074°				
387	Nahant, 1 n.mi. SE of East Point	70	42° 23.83'	70° 51.17'	-0 05	+1 09	+1 08	+0 02	0.2	0.2	--	--	0.2	261°	--	--	0.2	090°				
389	Pea Island, 0.4 n.mi. southeast of	15	42° 24.63'	70° 54.13'	+0 44	+1 00	+0 37	-0 13	0.4	0.4	--	--	0.5	239°	0.1	161°	0.5	063°				
	do.	25	42° 24.63'	70° 54.13'	+0 25	+0 39	+0 52	+0 17	0.4	0.3	--	--	0.5	224°	--	--	0.4	048°				
	do.	65	42° 24.63'	70° 54.13'	-0 46	-0 54	+0 09	-0 43	0.3	0.3	0.1	332°	0.4	271°	--	--	0.3	035°				
391	Bass Point, 1.2 n.mi. southeast of	10	42° 24.12'	70° 55.07'	-0 31	+1 25	+0 53	-0 26	0.6	0.6	0.1	351°	0.7	259°	--	--	0.7	066°				
	do.	45	42° 24.12'	70° 55.07'	-0 38	-0 05	+0 47	-0 41	0.3	0.2	--	--	0.4	251°	--	--	0.3	086°				
	do.	60	42° 24.12'	70° 55.07'	-0 38	-0 05	+0 26	-1 11	0.2	0.2	--	--	0.3	250°	--	--	0.2	091°				
393	Bass Point, 0.5 n.mi. SSW of	15	42° 24.57'	70° 56.53'	See Table 5.																	
395	Bass Point, 0.7 n.mi. west of	10	42° 25.13'	70° 57.25'	See Table 5.																	

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS									
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb			
											h m	h m	h m	h m	knots	Dir.	knots	Dir.	knots	Dir.
MASSACHUSETTS COAST Time meridian, 75°W			ft	North	West	h m	h m	h m	h m			knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.	
<b>on Boston Harbor, p.28</b>																				
397	Little Nahant Cupola, 0.6 n.mi. west of	10	42° 25.87'	70° 56.83'	-0 11	-0 21	+1 27	+0 34	0.3	0.4	--	--	0.4	033°	0.1	137°	0.5	219°		
399	Sand Point, Black Marsh Channel	10	42° 26.58'	70° 56.52'	-0 05	-0 12	+1 15	+0 15	0.4	0.4	--	--	0.5	013°	--	--	0.5	203°		
401	Lynn Harbor	10	42° 27.27'	70° 56.78'	+0 20	-0 21	+2 30	+1 12	0.2	0.2	--	--	0.3	274°	--	--	0.2	090°		
403	Point of Pines, 0.5 n.mi. south of	6	42° 25.97'	70° 57.53'	-0 04	+0 24	+1 03	+0 29	0.4	0.5	--	--	0.5	009°	--	--	0.6	198°		
405	Point of Pines, 0.1 n.mi. northeast of	6	42° 26.52'	70° 57.62'	+0 34	+0 24	+0 45	+0 22	0.7	1.0	--	--	0.9	296°	--	--	1.2	131°		
407	Finn's Ledge Bell, 0.2 n.mi. west of	10	42° 22.17'	70° 55.42'	-0 10	+1 10	+0 21	-0 14	0.4	0.6	--	--	0.6	226°	0.2	295°	0.8	035°		
	do.	25	42° 22.17'	70° 55.42'	-0 20	+0 55	+0 31	+0 16	0.3	0.4	--	--	0.3	229°	--	--	0.5	033°		
409	Winthrop Head, 1.1 n.mi. east of	10	42° 21.93'	70° 56.52'	-1 21	+0 24	+0 26	-1 58	0.4	0.3	0.3	103°	0.5	205°	0.2	297°	0.4	019°		
411	Lovell Island, 1.3nm north of	4d	42° 21.30'	70° 55.91'	+0 01	+0 02	+0 38	+0 19	0.8	1.1	0.2	110°	1.0	198°	0.1	298°	1.4	029°		
	do.	20d	42° 21.30'	70° 55.91'	-0 16	-0 17	+0 43	+0 26	0.7	0.9	0.2	108°	0.9	192°	0.1	111°	1.1	027°		
	do.	30d	42° 21.30'	70° 55.91'	-0 23	-0 19	+0 45	+0 22	0.6	0.6	0.2	107°	0.8	187°	--	--	0.8	027°		
<b>BOSTON HARBOR APPROACHES</b>																				
413	Stellwagen Bank, 15nm NNE of Race Point	27d	42° 18.73'	70° 06.72'	+0 55	+0 07	-0 18	+0 16	0.3	0.4	0.3	197°	0.4	254°	0.1	201°	0.5	121°		
	do.	105d	42° 18.73'	70° 06.72'	+0 01	+0 07	-0 01	-0 48	0.4	0.6	0.3	199°	0.5	265°	0.1	193°	0.7	125°		
	do.	210d	42° 18.73'	70° 06.72'	-0 05	-0 07	-0 11	-0 53	0.3	0.6	0.2	214°	0.4	275°	0.1	193°	0.8	121°		
415	Stellwagen Bank, 16nm North of Race Point	8d	42° 19.44'	70° 17.64'	-0 12	-0 33	-0 38	-0 32	0.4	0.8	0.3	178°	0.5	253°	0.1	352°	0.9	100°		
	do.	51d	42° 19.44'	70° 17.64'	+0 16	+0 13	+0 09	-0 29	0.5	0.8	0.2	171°	0.7	262°	0.2	353°	1.0	086°		
	do.	90d	42° 19.44'	70° 17.64'	-0 26	-0 42	-0 14	-0 54	0.3	0.4	--	--	0.4	268°	--	--	0.5	092°		
417	Stellwagen Bank, 17nm ESE of Eastern Pt. Light	52d	42° 28.38'	70° 18.72'	+0 35	+0 28	+0 21	+0 06	0.2	0.4	0.1	184°	0.3	269°	--	--	0.5	091°		
	do.	150d	42° 28.38'	70° 18.72'	--	--	--	-0 50	--	0.3	--	--	--	--	--	--	0.4	095°		
	do.	308d	42° 28.38'	70° 18.72'	-0 54	-0 59	-1 11	-1 04	0.2	0.3	--	--	0.3	311°	--	--	0.3	108°		
419	Stellwagen Bank, 13.4nm SE of Eastern Pt. Light	12d	42° 25.34'	70° 26.99'	-0 03	-0 22	+0 19	-0 18	0.3	0.3	0.1	170°	0.3	252°	--	--	0.3	093°		
	do.	38d	42° 25.34'	70° 26.99'	-0 03	+1 15	+1 03	-0 25	0.3	0.3	0.1	158°	0.4	236°	--	--	0.4	070°		
	do.	71d	42° 25.34'	70° 26.99'	+0 19	+1 15	+1 34	+0 32	0.3	0.4	0.1	140°	0.4	223°	--	--	0.5	049°		
421	Stellwagen Basin, 13.8nm SE of Eastern Pt. Light	35d	42° 23.29'	70° 28.98'	-4 51	-4 20	-4 42	-5 21	0.2	0.2	0.1	131°	0.2	059°	0.1	130°	0.3	195°		
	do.	100d	42° 23.29'	70° 28.98'	--	-0 30	--	--	0.2	--	--	--	0.3	305°	--	--	--	--		
	do.	245d	42° 23.29'	70° 28.98'	--	-0 23	--	--	0.2	--	--	--	0.3	296°	--	--	--	--		
423	Stellwagen Basin, east end	30d	42° 20.29'	70° 31.92'	-2 23	-3 16	-3 23	-3 59	0.2	0.3	0.1	081°	0.2	033°	0.1	084°	0.4	147°		
	do.	122d	42° 20.29'	70° 31.92'	--	--	--	-0 44	--	0.3	--	--	--	--	--	--	0.3	093°		
	do.	240d	42° 20.29'	70° 31.92'	--	--	--	-0 59	--	0.2	--	--	--	--	--	--	0.3	097°		
425	Minots Ledge Light, 6.5 miles north of		42° 21.80'	70° 44.28'	Current weak and variable															
427	Minots Ledge Light, 3.3 miles north of		42° 19.21'	70° 45.05'	Current weak and variable															
429	Northeast Grave	8d	42° 22.31'	70° 51.71'	+1 14	+0 50	+0 42	+1 06	0.2	0.3	0.1	175°	0.3	251°	--	--	0.4	086°		
	do.	25d	42° 22.31'	70° 51.71'	+0 21	+0 15	-0 01	+0 25	0.2	0.3	--	--	0.3	266°	--	--	0.4	090°		
	do.	45d	42° 22.31'	70° 51.71'	-1 12	-1 17	-1 02	-1 41	0.2	0.4	--	--	0.3	301°	--	--	0.5	114°		
431	The Graves, 0.3 n.mi. SSE of	10	42° 21.60'	70° 52.00'	+0 07	+1 13	+1 16	+0 07	0.5	0.5	0.3	171°	0.6	227°	0.1	135°	0.6	103°		
	do.	45	42° 21.60'	70° 52.00'	-0 46	-0 47	-0 15	-1 10	0.3	0.4	0.1	186°	0.4	262°	--	--	0.5	085°		
	do.	60	42° 21.60'	70° 52.00'	-0 58	-0 47	-0 21	-1 35	0.2	0.3	--	--	0.3	252°	--	--	0.4	070°		
433	Thieves Ledge	45	42° 19.28'	70° 50.28'	-0 24	-0 01	-0 45	-1 49	0.2	0.2	0.1	030°	0.2	304°	--	--	0.3	128°		
435	Little Brewster Island, 1.5 n.mi. E of	10	42° 19.68'	70° 51.43'	+2 10	+0 46	-0 45	+0 43	0.5	0.9	0.4	028°	0.6	285°	0.6	337°	1.2	080°		
	do.	35	42° 19.68'	70° 51.43'	+0 44	-0 44	-0 02	+1 15	0.3	0.4	--	--	0.3	236°	0.2	212°	0.5	076°		
	do.	60	42° 19.68'	70° 51.43'	-1 23	-1 18	+1 26	-0 57	0.2	0.2	0.2	265°	0.3	225°	--	--	0.2	047°		
437	Hypocrite Channel	10	42° 20.95'	70° 53.63'	+0 04	+0 24	+0 44	-0 43	0.7	0.8	0.1	345°	0.9	262°	0.1	351°	1.0	070°		
439	Little Calf Island, 0.4 n.mi. NW of	10	42° 21.05'	70° 54.00'	+0 14	+0 09	-0 20	-0 30	0.4	0.6	--	--	0.5	220°	0.1	290°	0.7	048°		
441	Boston Light, 0.2 n.mi. south of	10	42° 19.52'	70° 53.40'	+0 05	+0 24	+0 36	+0 28	0.8	1.1	0.1	203°	1.0	267°	--	--	1.4	100°		
443	Point Allerton, 0.65 n.mi. NNW of	4d	42° 19.16'	70° 53.22'	+0 03	-0 04	+0 47	-0 03	1.0	1.3	--	--	1.3	266°	--	--	1.6	072°		
	do.	17d	42° 19.16'	70° 53.22'	-0 03	+0 39	+0 39	+0 21	1.0	1.1	--	--	1.3	253°	--	--	1.3	071°		
	do.	30d	42° 19.16'	70° 53.22'	-0 09	-0 10	+0 19	+0 33	0.8	0.8	--	--	1.0	236°	--	--	0.9	071°		
445	Point Allerton, 0.4 n.mi. northwest of	10	42° 18.88'	70° 53.23'	-0 18	+0 58	+0 12	-1 23	0.5	0.7	--	--	0.7	265°	0.2	353°	0.8	080°		
447	Calf Island, 0.4 n.mi. west of	10	42° 20.33'	70° 54.38'	+0 07	+0 28	+0 05	+0 01	0.4	0.5	--	--	0.6	198°	--	--	0.6	037°		
	do.	25	42° 20.33'	70° 54.38'	-0 37	+0 05	+0 11	-1 48	0.4	0.3	--	--	0.5	203°	--	--	0.3	052°		
	do.	45	42° 20.33'	70° 54.38'	-1 37	+0 09	+0 00	-2 27	0.3	0.3	--	--	0.4	209°	--	--	0.3	020°		
449	South Channel Aldridge Ledge	4d	42° 20.97'	70° 54.77'	+0 28	+0 58	+0 55	+0 22	0.6	1.0	0.1	143°	0.8	229°	0.1	324°	1.2	057°		
	do.	20d	42° 20.97'	70° 54.77'	+0 15	+0 32	+0 57	+0 34	0.5	0.7	--	--	0.7	222°	0.1	130°	0.8	045°		
	do.	30d	42° 20.97'	70° 54.77'	+0 03	+0 20	+1 01	+0 36	0.4	0.5	--	--	0.5	219°	--	--	0.6	039°		

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS								
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb		
			North	West	h	m	h	m	h	m	h	m	knots	Dir.	knots	Dir.	knots	Dir.	knots
BOSTON HARBOR APPROACHES Time meridian, 75°W		ft	North	West	on Boston Harbor, p.28														
451	Commissioners Ledge	6d	42° 20.15'	70° 54.78'	+0 18	+0 48	+0 57	+0 26	0.5	0.7	0.1	129°	0.7	222°	0.1	310°	0.8	037°	
	do.	16d	42° 20.15'	70° 54.78'	-0 07	+0 05	+0 31	+0 19	0.4	0.4	--	--	0.5	215°	0.1	123°	0.5	029°	
453	Black Rock Channel	10	42° 19.73'	70° 54.93'	-0 17	-0 06	+0 19	-0 13	0.5	0.8	0.1	325°	0.6	247°	0.2	122°	0.9	046°	
455	Deer Island Light, 0.4 n.mi. NW of	35	42° 20.58'	70° 55.70'	-0 24	-2 05	-4 16	-1 58	0.2	0.5	--	--	0.2	307°	--	--	0.6	116°	
457	Lovell Island, 0.4 n.mi. north of	10	42° 20.45'	70° 55.80'	+0 00	-0 06	+0 17	-0 41	0.9	1.0	0.1	330°	1.2	259°	0.1	337°	1.2	064°	
	do.	25	42° 20.45'	70° 55.80'	-0 17	-0 09	+0 21	-0 23	0.9	0.8	--	--	1.2	264°	--	--	0.9	074°	
459	Deer Island, 0.7 nm ESE of	7d	42° 20.65'	70° 56.33'	+0 18	+0 17	+0 37	+0 04	1.1	1.3	--	--	1.4	220°	0.1	320°	1.6	046°	
	do.	16d	42° 20.65'	70° 56.33'	+0 06	+0 13	+0 39	+0 08	1.1	1.2	--	--	1.4	220°	0.1	313°	1.5	047°	
	do.	36d	42° 20.65'	70° 56.33'	-0 24	-0 07	+1 06	+0 23	0.8	0.8	0.1	126°	1.1	219°	0.1	109°	1.0	035°	
461	Deer Island Light, 0.8 n.mi. ESE of	10	42° 20.22'	70° 56.28'	-0 13	-0 15	+0 15	-1 35	0.7	0.8	0.2	138°	0.9	233°	--	--	0.9	066°	
463	Deer Island Light, 0.4 n.mi. east of	10	42° 20.45'	70° 56.77'	-0 01	-1 08	+0 12	-0 28	0.7	0.8	0.3	319°	0.9	240°	0.2	138°	1.0	057°	
	do.	35	42° 20.45'	70° 56.77'	-0 41	+0 57	+0 39	+0 04	0.9	0.6	--	--	1.1	264°	--	--	0.8	053°	
465	Deer Island Light, 0.7 n.mi. ESE of	35	42° 20.25'	70° 56.38'	-0 32	-0 05	+0 20	-1 13	0.7	0.5	0.1	312°	1.0	233°	--	--	0.6	062°	
BOSTON HARBOR-PRESIDENT ROADS					Daily predictions														
467	BOSTON HARBOR (Deer Island Light)	8d	42° 20.27'	70° 57.35'	-0 11	-0 02	+0 20	+0 05	1.0	1.0	0.1	008°	1.3	264°	0.2	188°	1.2	112°	
	do.	28d	42° 20.27'	70° 57.35'	-0 07	+0 05	+0 31	+0 19	0.8	0.9	0.1	187°	1.3	265°	0.1	187°	1.2	100°	
	do.	51d	42° 20.27'	70° 57.35'	-0 15	+0 05	+0 42	-0 03	1.1	0.9	0.1	189°	1.0	273°	0.1	010°	1.1	102°	
469	Deer Island Light, 0.3 n.mi. SSE of	10	42° 20.12'	70° 57.42'	-0 07	+0 49	+0 10	+0 16	1.1	0.9	--	--	1.4	265°	0.4	199°	1.0	082°	
	do.	35	42° 20.12'	70° 57.42'	-0 20	+0 51	+0 44	+0 16	1.1	0.8	--	--	1.4	261°	--	--	1.0	090°	
471	Deer Island Light, 0.4 n.mi. SSE of	10	42° 19.97'	70° 57.42'	-0 03	+0 58	+0 38	+0 18	1.2	0.9	--	--	1.5	265°	0.2	178°	1.2	073°	
	do.	25	42° 19.97'	70° 57.42'	-0 11	+0 52	+0 47	+0 21	1.1	0.9	--	--	1.4	269°	--	--	1.0	081°	
473	Deer Island, southwest of	10	42° 20.63'	70° 57.78'	-0 05	-0 21	-2 03	-1 20	0.3	0.5	--	--	0.4	351°	0.3	065°	0.6	137°	
475	Long Island Head, 0.9 n.mi. NW of	10	42° 20.40'	70° 58.43'	-0 17	+0 35	-0 04	-0 56	0.5	0.5	0.1	175°	0.6	302°	--	--	0.6	103°	
	do.	35	42° 20.40'	70° 58.43'	-0 10	+1 26	+0 45	+0 21	0.4	0.3	--	--	0.4	304°	--	--	0.4	079°	
477	Deer Island Flats	10	42° 20.83'	70° 58.65'	-0 36	-1 06	-1 37	-3 16	0.4	0.4	--	--	0.4	327°	0.4	049°	0.5	107°	
479	Deer Island Light, 1.3 n.mi. NW of	10	42° 21.12'	70° 58.74'	See Table 5.														
481	Snake Island, southwest of	10	42° 21.77'	70° 59.22'	-0 14	+0 24	+0 26	+0 01	0.3	0.4	--	--	0.4	312°	--	--	0.5	134°	
483	Deer Island Light, 1.0 n.mi. WSW of	10	42° 19.97'	70° 58.43'	+0 43	+1 13	+0 05	+0 53	1.0	0.7	--	--	1.3	254°	--	--	0.8	086°	
	do.	35	42° 19.97'	70° 58.43'	-0 05	+1 38	+1 41	+0 11	1.0	0.3	--	--	1.2	273°	--	--	0.4	082°	
485	Spectacle I. and Long I., between	10	42° 19.35'	70° 58.45'	-0 13	+0 09	-0 39	-0 34	0.4	0.5	--	--	0.5	217°	0.4	121°	0.6	038°	
487	Spectacle Island, 0.2 n.mi. south of	10	42° 18.98'	70° 59.15'	-0 22	-1 00	-0 57	-1 58	0.4	0.4	0.1	349°	0.5	244°	0.1	180°	0.4	098°	
489	Spectacle Island, 0.4nm north of	3d	42° 20.05'	70° 59.16'	+0 42	+1 29	+1 40	+0 26	0.7	0.6	--	--	0.9	284°	0.2	008°	0.8	091°	
	do.	16d	42° 20.05'	70° 59.16'	+0 11	+0 59	+1 37	+0 27	0.6	0.6	--	--	0.8	283°	0.1	000°	0.7	086°	
	do.	33d	42° 20.05'	70° 59.16'	-0 26	+0 25	+1 16	+0 13	0.4	0.3	--	--	0.5	275°	0.1	181°	0.4	099°	
491	Spectacle I. and Thompson I., between	10	42° 19.25'	70° 59.57'	-1 49	-3 49	-2 35	-3 08	0.2	0.3	0.2	227°	0.2	306°	0.2	045°	0.4	127°	
493	Thompson Island, 0.7 n.mi. NNE of	10	42° 19.97'	70° 59.90'	-0 37	+1 36	+1 05	-0 32	0.6	0.5	--	--	0.8	281°	0.2	003°	0.6	086°	
	do.	35	42° 19.97'	70° 59.90'	-1 13	+1 36	+0 43	-0 52	0.4	0.2	--	--	0.5	277°	--	--	0.3	091°	
495	Boston Channel Light No.5	3d	42° 20.15'	71° 00.02'	+0 20	+1 21	+1 48	+0 12	0.4	0.4	0.1	190°	0.6	283°	--	--	0.5	104°	
	do.	15d	42° 20.15'	71° 00.02'	-0 04	+0 40	+1 57	+0 10	0.4	0.3	--	--	0.5	276°	0.1	009°	0.4	095°	
	do.	33d	42° 20.15'	71° 00.02'	-0 15	+1 23	+2 42	+0 41	0.3	0.2	0.1	213°	0.3	297°	0.1	034°	0.3	119°	
497	Fort Independence, 0.3 n.mi. east of	10	42° 20.33'	71° 00.22'	+0 27	+1 36	+1 25	+1 00	0.5	0.5	--	--	0.6	303°	0.2	061°	0.6	125°	
499	Fort Independence, 0.1nm north of	6d	42° 20.51'	71° 00.54'	+0 43	+1 02	+0 58	+0 27	0.3	0.5	--	--	0.4	294°	0.1	294°	0.6	108°	
	do.	16d	42° 20.51'	71° 00.54'	+0 04	+1 28	+2 01	+0 38	0.4	0.4	0.1	192°	0.5	297°	0.1	034°	0.4	108°	
	do.	26d	42° 20.51'	71° 00.54'	-0 21	+1 02	+2 01	+0 32	0.4	0.3	--	--	0.5	300°	0.1	030°	0.3	103°	
501	Ted William Tunnel	7d	42° 20.57'	71° 01.57'	+0 25	+1 07	+1 17	+0 33	0.3	0.3	--	--	0.4	312°	--	--	0.4	124°	
	do.	16d	42° 20.57'	71° 01.57'	-0 19	+0 44	+1 34	+0 23	0.4	0.2	--	--	0.5	315°	--	--	0.3	136°	
	do.	26d	42° 20.57'	71° 01.57'	-0 34	-0 11	+1 22	+0 08	0.3	0.2	--	--	0.4	309°	--	--	0.3	125°	
503	South Boston, Pier 4, 0.2 n.mi. NNE of	10	42° 21.13'	71° 01.85'	+0 29	+1 01	+0 11	+1 01	0.2	0.3	--	--	0.3	299°	--	--	0.3	118°	
	do.	25	42° 21.13'	71° 01.85'	-0 23	+0 24	+1 37	+0 03	0.3	0.1	--	--	0.4	030°	--	--	0.2	120°	
505	Charles River Entrance					Current weak and variable													
507	East Boston, Pier 10, southeast of	10	42° 22.55'	71° 02.80'	+1 26	+0 55	+0 23	+0 04	0.2	0.3	--	--	0.2	017°	--	--	0.4	194°	
	do.	25	42° 22.55'	71° 02.80'	-0 08	+1 10	+1 18	+0 39	0.3	0.2	--	--	0.3	030°	--	--	0.2	193°	
509	Charlestown Pier 1	8d	42° 22.80'	71° 02.70'	+0 27	+1 20	+0 36	+0 15	0.1	0.3	--	--	0.1	356°	--	--	0.3	188°	
	do.	31d	42° 22.80'	71° 02.70'	Current weak and variable														
	do.	57d	42° 22.80'	71° 02.70'	Current weak and variable														

Endnotes can be found at the end of table 2.

TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS								
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood	Maximum Flood	Minimum before Ebb	Maximum Ebb					
		ft	North	West	h	m	h	m	h	m	knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.	
	<b>BOSTON HARBOR–PRESIDENT ROADS</b>																		
	Time meridian, 75°W																		
	<b>on Boston Harbor, p.28</b>																		
511	Chelsea River, west of bascule bridge	10	42° 23.07'	71° 02.53'	-0 07	-0 21	+0 38	-0 58	0.2	0.2	--	--	0.2	048°	--	--	0.2	240°	
513	Chelsea River, below bascule bridge	10	42° 23.03'	71° 01.70'	+0 20	-0 10	+0 32	-0 16	0.2	0.2	--	--	0.2	088°	--	--	0.3	272°	
515	Mystic River Bridge, 0.1 n.mi. west of	10	42° 23.15'	71° 03.02'	+0 22	-0 05	-0 51	-0 28	0.1	0.1	--	--	0.1	267°	--	--	0.1	093°	
517	Mystic River Bridge, northwest of	10	42° 23.15'	71° 02.95'	-0 29	+1 09	+0 17	-0 56	0.1	0.1	--	--	0.1	300°	--	--	0.1	098°	
519	City Point, 0.8 n.mi. SSE of	10	42° 19.22'	71° 00.88'	+0 04	+0 39	+1 14	+0 51	0.5	0.5	--	--	0.6	248°	0.1	170°	0.6	069°	
521	Squantum Point, 0.8 n.mi. northeast of	10	42° 18.63'	71° 01.70'	+0 09	+0 40	+1 11	+0 39	0.3	0.4	--	--	0.4	216°	--	--	0.5	036°	
523	Squantum Point, 0.4 n.mi. NNE of	10	42° 18.38'	71° 02.23'	+0 05	-0 01	+0 36	+0 40	0.3	0.4	--	--	0.4	266°	--	--	0.5	091°	
525	Neponset River	10	42° 18.25'	71° 02.58'	-0 34	-0 27	+0 40	+0 23	0.3	0.4	--	--	0.4	218°	--	--	0.4	025°	
	<b>BOSTON HARBOR–NANTASKET ROADS</b>																		
527	Nixes Mate	4d	42° 19.95'	70° 56.36'	-0 18	+0 05	+0 48	-0 18	0.4	0.4	0.1	285°	0.5	180°	0.1	107°	0.5	023°	
	do.	14d	42° 19.95'	70° 56.36'	-0 06	+0 18	+0 49	-0 24	0.4	0.4	0.2	277°	0.5	176°	0.1	100°	0.5	012°	
	do.	27d	42° 19.95'	70° 56.36'	+0 27	+0 49	+0 55	-0 32	0.4	0.4	0.1	246°	0.5	147°	0.1	051°	0.5	352°	
529	Lovell Island, 0.1 n.mi. south of	10	42° 19.40'	70° 55.48'	-0 01	-1 49	-0 35	+0 05	0.6	0.9	0.2	205°	0.7	275°	0.2	169°	1.0	092°	
	do.	24	42° 19.40'	70° 55.48'	-0 34	-2 12	-0 25	-1 13	0.6	0.7	--	--	0.7	294°	--	--	0.9	095°	
531	Georges Island, northeast of	10	42° 19.37'	70° 55.53'	-0 22	-1 42	-0 34	-2 22	0.6	0.6	0.2	191°	0.7	279°	0.2	183°	0.8	100°	
533	Georges Island, north of	25	42° 19.42'	70° 55.67'	-1 34	-1 36	-0 06	-1 58	0.6	0.8	--	--	0.8	298°	--	--	0.9	112°	
535	Gallops Island, 0.2 n.mi. SSE of	10	42° 19.38'	70° 55.93'	-0 08	+0 21	-0 04	+0 09	0.9	0.8	--	--	1.1	243°	--	--	1.0	062°	
537	Gallops Island, 0.1 n.mi. southeast of	10	42° 19.45'	70° 55.90'	-0 10	-0 33	-0 01	+0 15	0.7	0.9	--	--	0.9	225°	0.2	130°	1.0	063°	
	do.	35	42° 19.45'	70° 55.90'	-0 07	-0 38	+0 17	+0 15	0.8	0.7	--	--	0.9	255°	--	--	0.9	052°	
539	Gallops Island, The Narrows	20	42° 19.62'	70° 56.03'	-1 34	-0 06	+1 08	-0 58	0.4	0.1	--	--	0.5	135°	--	--	0.2	262°	
541	Lovell Island Narrows	2d	42° 19.69'	70° 55.99'	+0 28	-0 13	+1 03	+0 14	0.3	0.7	0.1	233°	0.5	142°	--	--	0.8	326°	
	do.	14d	42° 19.69'	70° 55.99'	+0 23	+0 19	+1 34	+0 17	0.4	0.8	--	--	0.5	139°	--	--	1.0	320°	
	do.	25d	42° 19.69'	70° 55.99'	+0 10	+0 33	+1 37	+0 19	0.3	0.8	0.1	062°	0.4	149°	--	--	0.9	320°	
543	Lovell Island, west of	10	42° 19.72'	70° 55.97'	+0 07	-0 21	+0 44	+0 17	0.4	1.0	0.2	232°	0.4	134°	--	--	1.2	299°	
	do.	24	42° 19.72'	70° 55.97'	-0 13	+0 19	+1 17	-0 10	0.3	1.0	--	--	0.4	136°	--	--	1.2	313°	
545	Fort Warren, Georges Island, 0.2nm east of		42° 19.31'	70° 55.26'	Current weak and variable														
547	Georges Island, 0.5 n.mi. ESE of	10	42° 19.17'	70° 54.97'	+0 23	+0 51	+0 55	+0 01	0.8	1.0	0.2	165°	1.0	244°	--	--	1.2	065°	
549	Georges Island, 0.4 n.mi. east of	10	42° 19.12'	70° 54.97'	-0 26	+0 09	+0 03	-0 23	0.8	0.9	0.3	180°	1.0	248°	--	--	1.1	057°	
551	Georges Island, 0.4nm southeast of	7d	42° 18.78'	70° 55.20'	+0 10	+0 43	+0 39	+0 16	1.1	1.3	0.1	145°	1.5	233°	0.2	137°	1.6	051°	
	do.	33d	42° 18.78'	70° 55.20'	+0 04	+0 27	+0 46	+0 29	1.0	1.2	--	--	1.4	234°	0.1	331°	1.5	056°	
	do.	72d	42° 18.78'	70° 55.20'	-0 02	+0 14	+0 57	+0 17	0.8	1.0	0.1	159°	1.1	235°	--	--	1.2	076°	
553	Georges Island, 0.3 n.mi. SSE of	10	42° 18.78'	70° 55.55'	+0 12	+0 29	+0 29	+0 29	0.9	1.0	0.1	159°	1.1	234°	0.4	126°	1.2	069°	
	do.	35	42° 18.78'	70° 55.55'	-0 01	+0 40	+0 53	-0 10	0.8	0.7	--	--	1.1	237°	0.2	346°	0.8	073°	
555	Georges Island, 0.4 n.mi. SSE of	10	42° 18.67'	70° 55.53'	+0 07	+0 58	+0 27	-2 15	1.0	0.8	0.2	145°	1.3	236°	0.3	161°	0.9	046°	
	do.	35	42° 18.67'	70° 55.53'	+0 05	+1 01	+0 51	-0 12	1.0	0.8	--	--	1.2	240°	0.1	347°	1.0	065°	
557	Nubble Channel	10	42° 19.73'	70° 56.93'	-0 21	+0 50	+0 40	+0 31	0.6	0.6	0.1	282°	0.8	187°	0.2	139°	0.8	006°	
559	Georges Island, 0.2 n.mi. WSW of	10	42° 19.02'	70° 56.10'	See Table 5.														
	do.	20	42° 19.02'	70° 56.10'	See Table 5.														
561	Hull Gut	9d	42° 18.20'	70° 55.50'	-0 21	-0 28	-0 16	-0 02	1.4	2.0	0.1	068°	1.9	162°	--	--	2.5	340°	
	do.	22d	42° 18.20'	70° 55.50'	-0 23	-0 30	-0 06	-0 05	1.4	2.0	--	--	1.9	159°	0.1	062°	2.5	341°	
	do.	35d	42° 18.20'	70° 55.50'	+0 36	-0 25	+0 01	-0 04	1.4	1.8	--	--	1.8	152°	0.1	064°	2.2	343°	
563	Peddocks Island, 0.2 n.mi. north of	10	42° 18.32'	70° 56.00'	+0 28	+1 27	+1 15	-0 41	0.8	0.6	--	--	1.0	246°	--	--	0.7	257°	
	do.	25	42° 18.32'	70° 56.00'	-0 02	+1 09	+1 25	-1 05	0.8	0.5	0.1	337°	1.0	255°	0.1	178°	0.6	060°	
565	Peddocks Island, 0.3 n.mi. northwest of	10	42° 18.40'	70° 56.13'	+0 42	+1 30	+1 20	+0 44	0.9	0.8	--	--	1.1	245°	--	--	1.0	060°	
	do.	25	42° 18.40'	70° 56.13'	+0 12	+1 14	+1 27	+0 03	0.8	0.5	0.2	342°	1.0	250°	--	--	0.6	055°	
	do.	40	42° 18.40'	70° 56.13'	-0 17	+1 11	+1 40	-0 59	0.8	0.4	--	--	1.0	261°	--	--	1.5	060°	
567	Rainsford I. and Windmill Pt., between	10	42° 18.52'	70° 56.32'	+0 28	+0 59	+0 29	+0 34	0.6	0.8	--	--	0.8	251°	0.3	168°	1.0	056°	
	do.	25	42° 18.52'	70° 56.32'	+0 13	+1 24	+1 31	-0 07	0.6	0.4	--	--	0.8	256°	0.2	329°	0.5	053°	
569	Gallops Island, 0.5 n.mi. southwest of	10	42° 19.13'	70° 56.82'	+0 41	+0 19	-1 02	+0 35	0.5	0.6	0.2	165°	0.6	238°	0.3	204°	0.7	074°	
	do.	25	42° 19.13'	70° 56.82'	+0 08	+0 22	-0 33	+0 58	0.4	0.3	--	--	0.5	237°	--	--	0.4	072°	
571	Rainsford Island, 0.2 n.mi. NE of	10	42° 18.90'	70° 56.95'	-0 26	+0 23	+0 14	-1 13	0.4	0.4	--	--	0.6	239°	0.1	143°	0.5	084°	
	do.	20	42° 18.90'	70° 56.95'	-2 01	+0 46	+0 12	-1 24	0.4	0.2	--	--	0.5	237°	--	--	0.3	086°	
573	Rainsford Island, 0.4 n.mi. SE of	10	42° 18.50'	70° 56.62'	-0 08	-0 44	+0 37	-0 11	0.5	0.6	--	--	0.6	225°	0.2	127°	0.8	055°	
575	Long I. and Rainsford I., between	10	42° 18.70'	70° 57.78'	+0 22	+0 18	+0 34	+0 43	0.6	0.7	--	--	0.7	226°	--	--	0.9	049°	
	do.	25	42° 18.70'	70° 57.78'	+0 13	+0 43	+0 38	-0 13	0.5	0.6	--	--	0.6	229°	0.1	322°	0.8	033°	

Endnotes can be found at the end of table 2.

TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS									
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb			
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.		
<b>BOSTON HARBOR–NANTASKET ROADS</b>		ft	<b>North</b>	<b>West</b>	h	m	h	m	h	m	h	m	<b>on Boston Harbor, p.28</b>							
Time meridian, 75°W																				
577	West Head, Peddocks I., 0.1 n.mi. W of	10	42° 17.45'	70° 57.22'	-1 30	+1 02	+1 24	-1 16	0.8	0.7	--	--	1.1	208°	--	--	0.9	018°		
	do.	30	42° 17.45'	70° 57.22'	-1 35	+1 08	+1 15	-1 00	0.7	0.5	--	--	0.9	198°	--	--	0.6	038°		
579	Sunken Ledge, 0.2 n.mi. northwest of	10	42° 17.87'	70° 57.87'	+0 17	-0 31	+0 28	+0 44	0.3	0.5	0.3	304°	0.4	223°	0.1	307°	0.7	016°		
	do.	20	42° 17.87'	70° 57.87'	+0 19	+0 29	+0 33	-0 14	0.3	0.4	0.2	299°	0.3	236°	0.2	335°	0.5	030°		
581	West Head, Long I., 0.4 n.mi. south of	10	42° 18.32'	70° 58.28'	+0 24	+0 51	+1 00	+0 17	0.5	0.5	--	--	0.7	231°	--	--	0.6	060°		
	do.	20	42° 18.32'	70° 58.28'	+0 06	+1 05	+0 55	+0 13	0.4	0.4	--	--	0.5	231°	--	--	0.5	043°		
583	Moon Head, 0.4 n.mi. east of	10	42° 18.38'	70° 58.73'	-0 18	-1 49	-0 30	-1 43	0.3	0.3	0.3	310°	0.3	259°	--	--	0.4	080°		
585	West Head, 0.2 n.mi. southwest of	10	42° 17.15'	70° 57.18'	-0 13	+0 26	+1 00	-0 03	1.1	1.2	--	--	1.4	167°	--	--	1.4	322°		
587	Nut Island, 0.4 n.mi. NNE of	10	42° 17.08'	70° 57.22'	+0 11	+0 30	+1 01	+0 31	1.0	1.2	0.2	223°	1.3	158°	--	--	1.4	312°		
	do.	20	42° 17.08'	70° 57.22'	+0 11	+0 34	+1 08	+0 29	0.9	1.2	0.1	220°	1.2	155°	--	--	1.4	321°		
589	Nut Island, 0.2 n.mi. NNE of	10	42° 16.98'	70° 57.32'	+0 31	+0 40	+1 15	+0 31	0.9	1.0	0.1	245°	1.2	146°	--	--	1.2	309°		
	do.	20	42° 16.98'	70° 57.32'	+0 30	+0 43	+1 25	+0 16	0.8	0.8	0.1	216°	1.0	131°	--	--	1.0	303°		
591	Peddocks Island, west of	10	42° 17.23'	70° 57.92'	-0 42	+0 20	-0 04	-0 43	0.4	0.3	0.2	305°	0.5	187°	--	--	0.4	358°		
593	Moon Head, 0.9 n.mi. southeast of	10	42° 17.50'	70° 58.93'	+0 30	+1 09	+1 27	+0 32	0.3	0.3	0.2	314°	0.3	227°	0.2	112°	0.3	033°		
595	Squantum, 0.3 n.mi. southeast of	8	42° 17.40'	71° 00.10'	Current weak and variable															
<b>BOSTON HARBOR–HINGHAM BAY</b>																				
597	Weir River entrance	10	42° 16.53'	70° 52.83'	+0 09	+0 39	+0 42	+0 30	0.6	0.6	--	--	0.7	076°	--	--	0.8	272°		
599	Strawberry Hill, 0.4 n.mi. west of	6	42° 17.40'	70° 53.60'	Current weak and variable															
601	Crow Point, 0.2 n.mi. north of	10	42° 15.97'	70° 53.70'	+0 05	-0 36	+0 04	+1 30	0.2	0.2	--	--	0.3	146°	--	--	0.3	319°		
603	Bumkin Island, 0.1 n.mi. west of	10	42° 16.85'	70° 54.37'	-0 02	+1 18	+0 37	+0 52	0.5	0.6	--	--	0.6	166°	0.2	241°	0.8	320°		
	do.	20	42° 16.85'	70° 54.37'	-0 23	+1 16	+0 57	+0 41	0.4	0.5	0.1	248°	0.5	161°	0.1	274°	0.6	316°		
605	Windmill Point, 0.7 n.mi. SSE of	10	42° 17.55'	70° 54.97'	-0 02	+0 40	+0 11	-1 41	0.8	0.4	--	--	1.1	128°	0.4	083°	0.4	350°		
	do.	25	42° 17.55'	70° 54.97'	-0 07	+0 55	+1 41	+0 49	0.8	0.2	--	--	1.0	136°	0.1	015°	0.2	315°		
607	Bumkin Island, 0.4 n.mi. west of	10	42° 16.83'	70° 54.75'	-0 23	+0 51	+0 23	-2 58	0.4	0.2	--	--	0.5	195°	0.2	263°	0.3	303°		
609	Peddocks Island, east of	10	42° 17.50'	70° 55.52'	See Table 5.															
	do.	20	42° 17.50'	70° 55.52'	See Table 5.															
611	Sheep Island, 0.3 n.mi. west of	10	42° 16.87'	70° 55.98'	+0 11	+1 14	+1 15	+0 49	0.8	0.4	0.2	245°	1.0	075°	0.3	328°	0.4	305°		
	do.	25	42° 16.87'	70° 55.98'	+1 10	+1 14	+1 32	-0 22	0.7	0.3	0.2	150°	0.8	082°	--	--	0.3	300°		
613	The Piglets, 0.4 n.mi. northeast of	7d	42° 17.00'	70° 55.86'	-3 15	-3 59	-5 02	-4 21	0.1	0.3	0.1	298°	0.2	224°	0.1	132°	0.3	041°		
	do.	17d	42° 17.00'	70° 55.86'	-4 23	-3 54	-4 03	-5 31	0.2	0.4	--	--	0.3	213°	0.1	121°	0.5	041°		
	do.	30d	42° 17.00'	70° 55.86'	-4 48	-3 21	-4 03	-5 22	0.3	0.4	--	--	0.4	207°	--	--	0.5	036°		
615	Pig Rock, north of	10	42° 16.93'	70° 56.45'	+0 40	-0 36	-0 15	+0 47	0.5	0.8	--	--	0.7	078°	--	--	1.0	290°		
	do.	25	42° 16.93'	70° 56.45'	+0 35	+0 24	+1 21	+0 22	0.5	0.6	--	--	0.6	082°	0.1	019°	0.8	293°		
617	Pig Rock, northwest of	20	42° 16.88'	70° 56.55'	+1 04	+0 52	+1 03	+1 00	0.8	0.7	--	--	1.0	085°	--	--	0.8	283°		
619	Grape Island and Lower Neck, between	10	42° 15.87'	70° 55.50'	-0 23	-1 16	+0 56	+0 11	0.6	0.7	--	--	0.7	094°	--	--	0.9	281°		
621	Grape Island	10	42° 16.08'	70° 55.88'	-0 47	+0 13	+0 38	-0 18	0.4	0.3	--	--	0.4	203°	--	--	0.4	345°		
623	Stodders Neck, Weymouth Back River	10	42° 15.20'	70° 55.65'	-0 32	+0 54	+0 34	-0 43	0.4	0.2	--	--	0.5	268°	--	--	0.3	093°		
625	Jacknife Ledge	6d	42° 15.53'	70° 56.46'	-0 03	+0 29	+0 59	+0 23	0.4	0.4	0.1	294°	0.5	219°	--	--	0.5	024°		
	do.	16d	42° 15.53'	70° 56.46'	-0 13	+0 05	+1 09	+0 43	0.4	0.4	--	--	0.5	216°	--	--	0.5	017°		
	do.	32d	42° 15.53'	70° 56.46'	-0 51	-0 19	+0 59	+0 01	0.4	0.3	--	--	0.5	203°	--	--	0.4	030°		
627	Gull Point, 0.4 n.mi. ESE of	10	42° 15.18'	70° 56.82'	-0 19	-0 32	+0 08	-0 05	0.3	0.4	--	--	0.4	229°	--	--	0.4	069°		
	do.	25	42° 15.18'	70° 56.82'	-0 49	-0 42	+0 42	+0 07	0.3	0.2	--	--	0.4	235°	--	--	0.2	042°		
629	Weymouth Harbor Entrance	6d	42° 14.89'	70° 57.64'	+0 22	+0 44	+0 55	+0 07	0.4	0.5	--	--	0.5	250°	--	--	0.6	076°		
	do.	16d	42° 14.89'	70° 57.64'	+0 01	+0 32	+1 06	+0 10	0.6	0.4	--	--	0.7	250°	--	--	0.5	073°		
	do.	29d	42° 14.89'	70° 57.64'	-0 24	+0 24	+1 13	+0 29	0.6	0.3	--	--	0.7	249°	--	--	0.4	065°		
631	Germantown Point	20	42° 14.78'	70° 57.88'	+0 05	+0 54	+0 49	+0 01	0.3	0.3	--	--	0.3	269°	--	--	0.4	070°		
633	Pine Point, southeast of	10	42° 14.28'	70° 58.08'	Current weak and variable															
635	Philip Head, Town River Bay	10	42° 15.00'	70° 58.22'	+0 11	+1 33	+1 11	+0 17	0.3	0.2	--	--	0.4	289°	--	--	0.3	095°		
637	Hole Point Reach, Town River	10	42° 15.23'	70° 58.78'	Negligible current															
<b>CAPE COD BAY</b>																				
639	Barnstable Harbor	7	41° 43.6'	70° 16.4'	+0 10	+1 03	+0 17	+0 17	0.9	1.1	--	--	1.2	192°	--	--	1.4	004°		
641	Sandwich Harbor		41° 46'	70° 29'	Current weak and variable															

Endnotes can be found at the end of table 2.

TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS									
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb			
											h	m	h	m	h	m	h	m	knots	Dir.
	CAPE COD BAY Time meridian, 75°W	ft	North	West	h	m	h	m	h	m			knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.
643	Sagamore Beach . . . . .		41° 48'	70° 31'																
	MASSACHUSETTS COAST–cont.																			
645	Nauset Beach Light, 5 miles northeast of . . . . .		41° 56'	69° 54'																
647	Georges Bank and vicinity . . . . .		-- --	-- --																
649	Davis Bank . . . . .		-- --	-- --																
651	Monomoy Point, 23 miles east of . . . . .		41° 35'	69° 30'																
653	Nantucket Shoals . . . . .		40° 37'	69° 37'																
655	Nantucket Island, 28 miles east of . . . . .		41° 20'	69° 21'																
657	Old Man Shoal, Nantucket Shoals . . . . .		41° 13.6'	69° 59.0'	+1 23	+1 03	+1 17	+1 14	0.9	0.9	--	--	1.9	080°	--	--	1.6	225°		
659	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	--	--	1.3	080°	--	--	1.4	280°		
661	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	--	--	0.5	090°	--	--	1.0	280°		
663	Martha's Vineyard, 1.4 miles S of <1> . . . . .		41° 19.50'	70° 39.90'	-- --	-- 53	-- --	-- 47	0.1	0.1	--	--	0.3	230°	--	--	0.3	095°		
	NANTUCKET SOUND ENTRANCE																			
665	Pollock Rip Channel, east end . . . . .		41° 33.9'	69° 55.4'	-0 14	-0 39	-0 23	-0 38	1.0	1.1	--	--	2.0	053°	--	--	1.8	212°		
667	POLLOCK RIP CHANNEL (Butler Hole) . . . . .		41° 33'	69° 59'							--	--	2.0	037°	--	--	1.8	226°		
669	Great Round Shoal Channel . . . . .		-- --	-- --																
	NANTUCKET SOUND																			
671	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	--	--	1.7	170°	--	--	2.0	346°		
673	Chatham Roads . . . . .		41° 38.6'	70° 01.7'																
675	Stage Harbor, west of Morris Island . . . . .		41° 39.4'	69° 58.5'	+3 07	+1 29	+2 24	+4 28	0.3	0.6	--	--	0.5	335°	--	--	1.0	144°		
677	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°		
679	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°		
681	Handkerchief Lighted Whistle Buoy 'H' . . . . .		41° 29.3'	70° 04.0'	+1 08	+1 10	+0 49	+0 59	0.6	0.8	--	--	1.3	080°	--	--	1.3	251°		
683	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	--	--	0.8	110°	--	--	0.6	265°		
685	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	--	--	1.1	088°	--	--	1.0	295°		
687	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	--	--	1.1	029°	--	--	1.2	195°		
689	Great Point, 3 miles west of . . . . .		41° 23.4'	70° 06.8'	+1 15	+1 23	+0 51	+1 08	0.4	0.5	--	--	0.8	066°	--	--	0.8	248°		
691	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°		
693	Brant Point, 2 miles NNW of <1> . . . . .		41° 19.25'	70° 06.30'	-- --	+1 43	-- --	+2 36	0.2	0.2	--	--	0.3	090°	--	--	0.3	275°		
695	Nantucket Harbor entrance channel . . . . .		41° 18.4'	70° 06.0'	+3 22	+1 55	+2 44	+3 58	0.6	0.9	--	--	1.2	171°	--	--	1.5	350°		
697	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	--	--	0.6	094°	--	--	0.4	284°		
699	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	--	--	1.1	108°	--	--	1.5	295°		
701	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	--	--	1.3	024°	--	--	1.0	192°		
703	Muskeget Channel . . . . .		41° 20.9'	70° 25.2'	+1 40	+0 38	+1 29	+1 02	1.9	1.9	--	--	3.8	021°	--	--	3.3	200°		
705	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	--	--	1.3	075°	--	--	1.2	280°		
707	Long Shoal–Norton Shoal, between . . . . .		41° 24.50'	70° 20.00'	+1 31	+1 12	+1 26	+1 13	0.7	0.6	--	--	1.4	100°	--	--	1.1	260°		
709	Cape Poge Lt., 1.7 miles SSE of . . . . .		41° 24.0'	70° 25.6'	+0 58	-0 07	+0 49	+0 48	0.8	0.7	--	--	1.6	025°	--	--	1.3	215°		
711	Cross Rip Channel . . . . .		41° 26.9'	70° 17.5'	+1 48	+1 48	+1 55	+1 59	0.6	0.5	--	--	1.3	091°	--	--	0.9	272°		
713	Cape Poge Lt., 3.2 miles northeast of . . . . .		41° 27.5'	70° 24.0'	+2 42	+2 03	+2 33	+2 37	0.8	0.7	--	--	1.6	095°	--	--	1.2	300°		
715	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°		
717	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	--	--	1.1	105°	--	--	1.0	260°		
719	Hyannis Harbor, entrance off breakwater . . . . .		41° 37.4'	70° 17.5'																
721	Lewis Bay entrance channel . . . . .		41° 37.9'	70° 16.4'	+2 46	+0 53	+2 44	+4 22	0.5	0.8	--	--	0.9	004°	--	--	1.3	184°		
723	Cotuit Bay entrance (Bluff Point) . . . . .		41° 36.6'	70° 25.8'	+2 44	+2 33	+2 51	+3 35	0.3	0.4	--	--	0.5	035°	--	--	0.7	218°		
725	Wreck Shoal–Eldridge Shoal, between . . . . .		41° 32.0'	70° 25.7'	+1 47	+1 32	+1 44	+1 45	0.8	0.8	--	--	1.7	062°	--	--	1.4	245°		
727	Hedge Fence Lighted Gong Buoy 22 . . . . .		41° 28.3'	70° 29.0'	+2 48	+2 34	+2 38	+2 44	0.7	0.7	--	--	1.4	108°	--	--	1.2	268°		
729	Cape Poge Light, 1.4 miles west of . . . . .		41° 25.45'	70° 29.00'	+2 13	+1 54	+1 26	+1 39	0.2	0.1	--	--	0.3	095°	--	--	0.2	250°		
731	Edgartown, Inner Harbor . . . . .		41° 23.4'	70° 30.5'	+0 25	-1 04	+0 35	-0 20	0.6	0.6	--	--	1.1	075°	--	--	1.1	270°		

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS							
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb	
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.
	NANTUCKET SOUND Time meridian, 75°W	ft	<b>North</b>	<b>West</b>	h	m	h	m	h	m								
					<b>on Pollock Rip Channel, p.44</b>													
733	Katama Pt., 0.6 mi. NNW of, Katama Bay		41° 21.9'	70° 30.3'	+0 12	-0 43	+0 20	-0 31	0.3	0.3	--	--	0.6	325°	--	--	0.5	180°
									0.2	0.1			0.3	325°			0.2	195°
									0.2	0.2			0.4	325°			0.3	175°
735	East Chop–Squash Meadow, between		41° 27.9'	70° 32.2'	+2 07	+0 55	+1 43	+2 04	0.7	1.1	--	--	1.4	131°	--	--	1.8	329°
737	East Chop, 1 mile north of		41° 29.1'	70° 33.5'	+2 40	+1 52	+2 17	+2 11	1.1	1.3	--	--	2.2	116°	--	--	2.2	297°
739	Vineyard Haven		41° 28.1'	70° 35.2'	Current weak and variable													
741	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	--	--	3.1	096°	--	--	3.0	282°
743	Hedge Fence–L'Hommedieu Shoal, between		41° 30.3'	70° 32.2'	+2 27	+1 38	+2 01	+1 52	1.0	1.3	--	--	2.1	106°	--	--	2.2	276°
745	Waquoit Bay entrance		41° 32.9'	70° 31.8'	+3 21	+2 14	+3 40	+4 01	0.8	0.8	--	--	1.5	348°	--	--	1.4	203°
747	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	--	--	2.3	080°	--	--	2.3	268°
749	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	--	--	2.3	063°	--	--	1.7	240°
	VINEYARD SOUND																	
751	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	--	--	2.7	059°	--	--	1.4	241°
753	Nobska Point, 1 mile southeast of		41° 30.1'	70° 38.6'	+2 33	+2 15	+2 25	+2 19	1.3	1.4	--	--	2.6	071°	--	--	2.4	259°
755	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	--	--	3.4	050°	--	--	2.4	240°
757	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	--	--	1.9	055°	--	--	2.3	232°
759	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	--	--	1.9	060°	--	--	2.1	240°
761	Gay Head, 3 miles northeast of		41° 23.1'	70° 47.0'	+2 25	+1 50	+1 42	+2 11	0.5	0.8	--	--	0.9	081°	--	--	1.3	238°
763	Menemsha Bight <6>		41° 21.3'	70° 46.3'														
765	Gay Head, 3 miles north of		41° 24.1'	70° 51.2'	+2 13	+1 24	+1 55	+1 17	0.6	0.7	--	--	1.1	074°	--	--	1.2	255°
767	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	--	--	2.0	012°	--	--	2.0	249°
769	Cuttyhunk Island, 3.2 miles southwest of		41° 23'	71° 00'	See table 5.													
771	Browns Ledge		41° 19.8'	71° 05.9'	See table 5.													
	VINEYARD SOUND–BUZZARDS BAY <59>				<b>on Woods Hole, p.32</b>													
	<i>Woods Hole</i>																	
773	Juniper Point	5d	41° 30.95'	70° 40.30'	+0 10	+0 10	+0 06	+0 26	0.8	0.4	0.1	074°	1.6	165°	0.1	247°	1.2	331°
	do.	15d	41° 30.95'	70° 40.30'	+0 10	+0 10	+0 06	+0 28	0.7	0.4	0.1	076°	1.6	166°	0.1	247°	1.2	333°
	do.	29d	41° 30.95'	70° 40.30'	+0 06	+0 10	+0 06	+0 12	0.7	0.4	--	--	1.6	169°	0.1	249°	1.1	333°
775	WOODS HOLE, THE STRAIT	14d	41° 31.16'	70° 40.97'	<b>Daily predictions</b>								2.2	079°	0.1	354°	2.9	267°
	do.	5d	41° 31.16'	70° 40.97'	-0 06	-0 03	+0 06	+0 00	1.6	1.2	--	--	3.4	077°	0.1	350°	3.4	261°
	do.	21d	41° 31.16'	70° 40.97'	+0 18	+0 14	-0 17	+0 01	0.3	0.8	--	--	0.7	096°	--	--	2.4	274°
777	North end	4d	41° 31.38'	70° 41.58'	-0 21	-0 02	+0 08	-0 05	0.6	0.5	0.1	277°	1.2	195°	--	--	1.3	004°
	do.	17d	41° 31.38'	70° 41.58'	-0 17	-0 09	+0 01	-0 05	0.4	0.4	0.1	283°	0.9	197°	--	--	1.1	013°
779	Robinsons Hole, Nashuon Point	4d	41° 26.98'	70° 48.40'	+0 39	+0 15	+0 40	+0 26	1.4	1.0	--	--	3.0	151°	--	--	2.9	332°
	do.	14d	41° 26.98'	70° 48.40'	+0 36	+0 16	+0 40	+0 24	1.3	1.0	--	--	2.8	153°	--	--	2.9	330°
	do.	24d	41° 26.98'	70° 48.40'	+0 31	+0 16	+0 40	+0 25	1.1	0.9	--	--	2.4	157°	--	--	2.6	329°
	<i>Quicks Hole</i>																	
781	South end		41° 26.3'	70° 50.5'	+1 17	+0 12	+0 29	+0 09	0.9	0.7	--	--	1.9	140°	--	--	2.0	300°
783	Middle	7d	41° 26.56'	70° 50.89'	+1 29	+1 07	+0 59	+0 52	1.1	0.6	0.1	242°	2.3	157°	0.2	244°	1.8	327°
	do.	17d	41° 26.56'	70° 50.89'	+1 27	+1 05	+0 58	+0 51	1.0	0.6	0.1	244°	2.1	156°	0.1	243°	1.7	329°
	do.	40d	41° 26.56'	70° 50.89'	+1 20	+1 02	+0 57	+0 47	0.7	0.4	--	--	1.6	153°	--	--	1.2	336°
785	North end		41° 27.1'	70° 51.0'	+1 41	+0 36	+0 56	-0 21	0.9	0.9	--	--	2.0	165°	--	--	2.6	002°
787	Canapitsit Channel	4d	41° 25.45'	70° 54.47'	+1 02	+0 57	+0 14	-0 18	0.8	0.5	--	--	1.7	131°	--	--	1.6	312°
	BUZZARDS BAY <7>																	
789	Westport River entrance		41° 30.5'	71° 05.3'	-1 15	-1 23	-1 26	-1 49	1.0	0.9	--	--	2.2	290°	--	--	2.5	108°
791	Gooseberry Neck, 2 miles SSE of		41° 27'	71° 01'	See table 5.													
793	Ribbon Reef–Sow & Pigs Reef, between		41° 25.3'	70° 58.2'	-1 43	-2 49	-3 44	-2 30	0.4	0.4	--	--	0.8	062°	--	--	1.2	237°
795	Penikese Island, 0.8 mile northwest of		41° 27.9'	70° 56.2'	-3 01	-1 43	-1 55	-1 33	0.6	0.4	--	--	1.2	050°	--	--	1.1	254°
797	Penikese Island, 0.2 mile south of		41° 26.6'	70° 55.5'	-3 07	-1 33	-2 30	-3 15	0.3	0.3	--	--	0.7	093°	--	--	0.9	287°
799	Gull I. and Nashawena I., between		41° 26.2'	70° 54.2'	-3 39	-2 15	-3 01	-3 17	0.4	0.4	--	--	0.9	091°	--	--	1.1	247°
801	Weepeeket Island, south of		41° 30.4'	70° 44.3'	-4 40	-2 25	-2 28	-3 03	0.4	0.2	--	--	0.8	069°	--	--	0.6	255°

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS									
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb			
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.		
	<b>BUZZARDS BAY &lt;7&gt;</b> Time meridian, 75°W	ft	<b>North</b>	<b>West</b>	h	m	h	m	h	m	h	m								
<b>on Woods Hole, p.32</b>																				
803	Quamisset Harbor entrance		41° 32.4'	70° 39.8'	Current weak and variable				--	--	0.4	--	--	--	--	0.3	--			
805	West Falmouth Harbor entrance		41° 36.5'	70° 39.3'	Current weak and variable															
807	Dumpling Rocks, 0.2 mile southeast of		41° 32.0'	70° 55.1'	-3 07	-2 21	-2 32	-2 45	0.4	0.4	--	--	0.8	066°	--	--	1.1	190°		
809	Apponaganset Bay		41° 35'	70° 57'	Current weak and variable															
811	Clarks Cove		41° 36'	70° 55'	Current weak and variable															
813	New Bedford Hurricane Barrier <65>	4d	41° 37.39'	70° 54.31'	-2 08	-2 00	-2 46	-2 22	0.2	0.4	--	--	0.3	320°	--	--	1.2	134°		
	do.	14d	41° 37.39'	70° 54.31'	-2 40	-2 15	-2 17	-2 17	0.2	0.3	--	--	0.4	319°	--	--	1.0	134°		
	do.	24d	41° 37.39'	70° 54.31'	-3 15	-2 34	-1 51	-2 10	0.2	0.3	--	--	0.4	318°	--	--	0.8	134°		
815	West Island and Long Island, between		41° 35.6'	70° 50.4'	Current weak and variable								0.3	--	--	--	0.4	--		
817	West Island, 1 mile Southeast of	4d	41° 33.94'	70° 48.66'	-1 48	-1 55	-2 26	-2 11	0.3	0.3	0.1	139°	0.6	072°	0.2	149°	0.9	225°		
	do.	15d	41° 33.94'	70° 48.66'	-2 05	-2 03	-2 26	-2 19	0.3	0.2	0.1	147°	0.6	069°	0.1	152°	0.7	233°		
	do.	27d	41° 33.94'	70° 48.66'	-3 12	-2 17	-2 39	-2 28	0.2	0.1	--	--	0.4	066°	--	--	0.4	243°		
819	Nasketucket Bay		41° 37.1'	70° 50.2'	Current weak and variable								0.3	--	--	--	0.3	--		
821	Mattapoisett Harbor		41° 38'	70° 47'	Current weak and variable															
<b>on Cape Cod Canal, p.36</b>																				
823	Cleveland Ledge	8d	41° 37.93'	70° 41.81'	-0 19	-0 25	-1 06	+0 05	0.1	0.1	--	--	0.4	037°	--	--	0.4	212°		
	do.	15d	41° 37.93'	70° 41.81'	-0 36	-0 30	-1 12	-1 03	0.1	0.1	--	--	0.4	041°	--	--	0.4	213°		
	do.	34d	41° 37.93'	70° 41.81'	-2 01	-1 04	-1 43	-1 47	0.1	0.1	--	--	0.3	033°	--	--	0.3	217°		
825	Megansett Harbor		41° 38.8'	70° 39.2'	Current weak and variable															
827	Abiels ledge	3d	41° 41.38'	70° 40.25'	+0 08	-0 14	-0 20	+0 02	0.3	0.4	0.2	155°	1.3	069°	0.1	159°	1.8	236°		
	do.	15d	41° 41.38'	70° 40.25'	+0 15	-0 16	-0 19	+0 02	0.3	0.4	--	--	1.3	063°	0.1	155°	1.7	235°		
	do.	31d	41° 41.38'	70° 40.25'	+0 17	-0 10	-0 15	+0 03	0.2	0.3	--	--	1.0	059°	0.1	326°	1.4	235°		
829	Sippican Harbor		41° 41'	70° 44'	Current weak and variable								0.3	--	--	--	0.4	--		
831	Wareham River, off Long Beach Point		41° 44.0'	70° 43.0'	-2 09	-0 33	-1 38	-1 24	0.1	0.1	--	--	0.6	022°	--	--	0.6	202°		
833	Wareham River, off Barneys Point		41° 44.7'	70° 42.4'	-2 17	-0 29	-1 38	-1 32	0.2	0.1	--	--	0.7	010°	--	--	0.6	185°		
835	Hog Neck	2d	41° 43.43'	70° 38.36'	-0 03	-0 04	-0 08	-0 11	0.8	0.6	--	--	3.4	035°	0.2	123°	3.0	210°		
	do.	15d	41° 43.43'	70° 38.36'	+0 00	-0 07	-0 10	-0 03	0.8	0.6	--	--	3.2	038°	0.2	122°	2.9	209°		
	do.	28d	41° 43.43'	70° 38.36'	+0 02	-0 05	-0 12	-0 05	0.6	0.5	--	--	2.6	038°	0.2	120°	2.4	208°		
<b>CAPE COD CANAL</b>																				
837	CAPE COD CANAL, Railroad Bridge, midchannel	13d	41° 44.52'	70° 36.83'	<b>Daily predictions</b>						0.1	336°	4.3	066°	0.1	337°	4.9	248°		
	Cape Cod Canal, RR Bridge, 70ft from N shore	13d	41° 44.55'	70° 36.84'	-0 03	+0 11	-0 02	-0 05	0.8	0.8	--	--	3.4	068°	--	--	3.9	248°		
	Cape Cod Canal, RR Bridge, 400ft from N shore	13d	41° 44.50'	70° 36.81'	-0 01	+0 38	+0 02	-0 14	0.7	0.8	--	--	3.2	060°	0.1	332°	4.1	244°		
839	Bourne Highway bridge		41° 45'	70° 35'	-0 08	-0 15	-0 07	-0 13	0.8	0.8	--	--	3.3	065°	--	--	4.0	245°		
841	Bourne dale	13d	41° 45.99'	70° 34.02'	-0 01	+0 00	-0 07	+0 01	0.7	0.8	--	--	3.2	037°	--	--	3.7	219°		
	do.	30d	41° 45.99'	70° 34.02'	+0 00	+0 01	-0 08	+0 00	0.7	0.7	--	--	2.9	037°	--	--	3.5	217°		
	do.	46d	41° 45.99'	70° 34.02'	+0 00	+0 02	-0 09	-0 01	0.6	0.6	--	--	2.4	037°	--	--	2.9	214°		
843	Sagamore Bridge	6d	41° 46.57'	70° 32.60'	-0 05	+0 05	-0 06	+0 00	0.8	0.8	--	--	3.6	077°	--	--	3.7	260°		
	do.	26d	41° 46.57'	70° 32.60'	-0 05	+0 01	-0 07	+0 02	0.7	0.7	--	--	3.1	079°	--	--	3.2	259°		
	do.	42d	41° 46.57'	70° 32.60'	-0 06	+0 00	-0 07	+0 03	0.6	0.6	0.1	169°	2.7	082°	--	--	2.8	256°		
845	Cape Cod Canal, east end	8d	41° 46.53'	70° 29.96'	-0 13	-0 14	-0 12	-0 05	0.8	0.7	--	--	3.4	053°	--	--	3.3	233°		
	do.	15d	41° 46.53'	70° 29.96'	-0 14	-0 16	-0 13	-0 06	0.8	0.7	--	--	3.3	053°	--	--	3.3	232°		
	do.	34d	41° 46.53'	70° 29.96'	-0 10	-0 08	-0 18	-0 06	0.5	0.6	--	--	2.0	048°	--	--	2.7	231°		
<b>NARRAGANSETT BAY &lt;8&gt;</b>																				
<b>on Pollock Rip Channel, p.44</b>																				
Current weak and variable																				
847	Sakonnet River (except Narrows)		-- --	-- --																
849	Black Point, SW of, Sakonnet River	15	41° 30.4'	71° 13.2'	-2 54	-1 55	-2 13	-2 26	0.2	0.2	--	--	0.4	012°	--	--	0.4	194°		
851	Almy Point Bridge, south of, Sakonnet River	15	41° 37.3'	71° 13.2'	-3 00	-2 10	-2 30	-3 13	0.2	0.8	--	--	0.4	034°	--	--	1.5	180°		
853	Tiverton, Stone bridge, Sakonnet R. <9>		41° 37.5'	71° 13.0'	-2 58	-5 02	-2 26	-3 06	1.4	1.6	--	--	2.7	010°	--	--	2.7	190°		
						-2 54			0.3				0.6	010°						
						-0 36			1.3				2.5	010°						
855	Tiverton, RR. bridge, Sakonnet R. <10>		41° 38.3'	71° 12.9'	-3 26	-5 06	-2 48	-3 41	1.2	1.4	--	--	2.3	000°	--	--	2.4	180°		

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS										
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb				
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.			
			ft	<b>North</b>	<b>West</b>	h	m	h	m	h	m	h	m								
			<b>on Pollock Rip Channel, p.44</b>																		
857	Common Fence Point, northeast of	10	41° 39.5'	71° 12.5'	-2 38	-4 50	-2 32	-2 41	0.1	0.2	--	--	0.2	026°	--	--	0.3	210°			
859	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	--	--	0.1	058°	--	--	0.6	170°			
861	Castle Hill, west of, East Passage	15	41° 27.4'	71° 22.7'	-0 06	-0 42	-1 07	-0 29	0.4	0.7	--	--	0.4	347°	--	--	1.2	237°			
863	Bull Point, east of	10	41° 28.8'	71° 21.0'	-1 10	-0 47	-1 10	-1 33	0.6	0.8	--	--	1.2	001°	--	--	1.5	206°			
865	Mackerel Cove		41° 28.5'	71° 22.8'	Current weak and variable																
867	Newport Harbor, S and E of Goat Island		41° 29'	71° 20'	Current weak and variable																
869	Rose Island, northeast of	15	41° 30.2'	71° 19.9'	-1 57	-0 07	-1 17	-2 08	0.4	0.5	--	--	0.8	310°	--	--	1.0	124°			
871	Rose Island, northwest of	15	41° 30.4'	71° 21.1'	-1 38	-0 26	-1 38	-1 39	0.4	0.5	0.1	105°	0.7	007°	0.1	102°	1.0	190°			
873	Rose Island, west of		41° 29.8'	71° 21.0'	-0 42	-0 34	-1 20	-1 28	0.4	0.6	--	--	0.7	001°	--	--	1.0	172°			
875	Gould Island, southeast of	7	41° 31.5'	71° 20.2'	-1 40	-1 28	-1 14	-1 16	0.3	0.4	--	--	0.5	033°	--	--	0.7	217°			
877	Gould Island, west of	15	41° 31.9'	71° 21.5'	-0 16	-0 32	-1 13	-1 07	0.3	0.4	--	--	0.6	351°	0.1	279°	0.8	193°			
879	Dyer Island-Carrs Point (between)		41° 34.5'	71° 17.8'	-1 56	-1 13	-0 50	-1 37	0.4	0.4	--	--	0.8	040°	--	--	0.6	236°			
881	Conanicut Point, ENE of	15	41° 34.5'	71° 20.5'	-2 05	-0 24	-1 18	-1 13	0.2	0.2	0.1	111°	0.4	018°	0.1	106°	0.4	183°			
883	Dyer Island, west of	7	41° 35.2'	71° 18.5'	-1 04	-0 46	-0 53	-1 34	0.4	0.6	--	--	0.8	023°	--	--	1.0	216°			
885	QUONSET POINT	16	41° 35.01'	71° 23.74'	<b>Daily Predictions, p.40</b>																
887	Mount Hope Bridge	7	41° 38.4'	71° 15.5'	-1 22	-1 34	-1 08	-0 58	0.6	0.8	--	--	1.1	047°	--	--	1.4	230°			
889	Hog Island, northwest of	10	41° 38.8'	71° 17.7'	-2 16	-0 04	-0 30	-1 04	0.2	0.2	0.1	282°	0.4	011°	--	--	0.4	199°			
891	Common Fence Point, west of	10	41° 39.0'	71° 14.7'	-1 13	+0 08	-1 00	-0 37	0.2	0.4	--	--	0.5	050°	0.1	133°	0.7	224°			
893	Mount Hope Point, northeast of	10	41° 40.8'	71° 12.7'	-2 01	-0 20	-1 03	-0 57	0.2	0.2	--	--	0.4	038°	0.1	121°	0.4	217°			
895	Kickamuit R. (Narrows), Mt. Hope Bay		41° 41.9'	71° 14.7'	-2 04	-3 34	-1 19	-0 48	0.7	1.0	--	--	1.4	000°	--	--	1.7	191°			
897	Warren River entrance		41° 42.7'	71° 17.8'	Current weak and variable																
899	Warren, Warren River		41° 43.7'	71° 17.3'	-0 14	+0 11	-0 22	-1 05	0.5	0.5	--	--	1.0	358°	--	--	0.9	171°			
901	Beavertail Point, 0.8 mile northwest of		41° 27.5'	71° 24.7'	-0 11	-0 54	-1 31	-0 19	0.3	0.6	--	--	0.5	003°	--	--	1.0	188°			
903	Dutch Island, east of, West Passage	15	41° 30.2'	71° 23.7'	-3 02	-5 10	-2 37	-2 46	0.2	0.5	0.1	103°	0.4	035°	0.2	126°	0.9	186°			
905	Dutch Island and Beaver Head, between		41° 29.8'	71° 24.2'	-1 56	-1 32	-1 58	-1 47	0.5	0.6	--	--	1.0	030°	--	--	1.0	233°			
907	Dutch Island, west of	7	41° 30.3'	71° 24.6'	-1 33	-1 49	-1 21	-1 16	0.7	0.7	--	--	1.3	014°	--	--	1.2	206°			
909	Jamestown-North Kingstown Bridge	15	41° 31.8'	71° 23.8'	-2 16	-4 10	-1 22	-1 33	0.2	0.7	0.1	112°	0.5	012°	0.1	097°	1.3	176°			
911	Wickford Harbor		41° 34'	71° 26'	Current weak and variable																
913	Greenwich Bay entrance		41° 40.0'	71° 23.6'	Current weak and variable																
915	Patience Island, narrows east of		41° 39.5'	71° 21.2'	-2 41	-2 29	-2 44	-2 37	0.4	0.5	--	--	0.7	354°	--	--	0.9	157°			
917	Patience I. and Warwick Neck, between		41° 39.8'	71° 22.4'	-1 40	-1 21	-1 18	-1 13	0.3	0.5	--	--	0.6	040°	--	--	0.8	224°			
919	Nayatt Point, WNW of	10	41° 43.7'	71° 21.6'	-2 24	+0 47	-1 00	-1 11	0.1	0.1	--	--	0.2	325°	--	--	0.2	128°			
921	India Point RR. bridge, Seekonk River <9>		41° 49.0'	71° 23.3'	-1 48	-4 02	-1 31	-1 06	0.5	0.8	--	--	1.0	020°	--	--	1.4	180°			
923	Fox Point, south of, Providence River	10	41° 48.8'	71° 24.0'	-3 02	+0 08	-0 27	-1 34	0.1	0.1	--	--	0.2	343°	--	--	0.1	166°			
925	Cold Spring Pt., Seekonk River <10>		41° 49.6'	71° 22.8'	-1 48	-4 14	-1 31	-1 02	0.4	0.8	--	--	0.8	030°	--	--	1.4	210°			
			<b>on The Race, p.48</b>																		
			<b>BLOCK ISLAND SOUND</b>																		
			<i>Point Judith</i>																		
927	Harbor of Refuge, south entrance		41° 21.48'	71° 29.75'	-2 25	-2 53	-2 47	-3 02	0.2	0.2	--	--	0.6	335°	--	--	0.7	181°			
929	Harbor of Refuge, west entrance		41° 22'	71° 31'	See table 5.																
931	Pond entrance - Point Judith		41° 23'	71° 31'	-3 15	-3 06	-3 06	-4 04	0.6	0.4	--	--	1.8	351°	--	--	1.5	186°			
933	2.4 miles southwest of		41° 19.87'	71° 30.65'	-0 40	+0 06	+0 28	-0 36	0.2	0.1	--	--	0.7	258°	--	--	0.6	090°			
935	4.5 miles southwest of		41° 18'	71° 33'	See table 5.																

Endnotes can be found at the end of table 2.

TABLE 2. - CURRENT DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS							
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood	Maximum Flood	Minimum before Ebb	Maximum Ebb				
	BLOCK ISLAND SOUND Time meridian, 75°W	ft	North	West	h m	h m	h m	h m			knots Dir.	knots Dir.	knots Dir.	knots Dir.				
			<b>on The Race, p.48</b>															
	<i>Block Island</i>																	
937	4 miles north of		41° 18'	71° 32'	-0 32	-0 05	+0 31	+0 06	0.2	0.2	-- --	0.8 285°	-- --	0.8 076°				
939	Sandy Point, 2.1 miles NNE of	15	41° 15.85'	71° 34.00'	+0 17	-0 58	-0 20	-0 55	0.3	0.4	-- --	1.0 296°	-- --	1.7 066°				
941	Sandy Pt., 1.5 miles north of	7	41° 15'	71° 34'	-0 24	-0 38	-1 07	-1 05	0.6	0.5	-- --	1.9 315°	-- --	2.1 063°				
943	Clay Head, 1.2 miles ENE of	15	41° 13.35'	71° 31.85'	-2 20	-1 37	+0 49	-1 07	0.2	0.1	-- --	0.7 298°	-- --	0.5 164°				
945	Old Harbor Pt., 0.5 mile southeast of		41° 09'	71° 32'	-0 12	-0 37	-0 38	-0 06	0.1	0.1	-- --	0.2 336°	-- --	0.6 175°				
947	Lewis Pt., 1.0 mile southwest of		41° 08.20'	71° 37.30'	-1 29	-1 13	-0 24	-1 25	0.6	0.4	-- --	1.9 298°	-- --	1.8 136°				
949	Lewis Pt., 1.5 miles west of		41° 09'	71° 38'	-1 33	-1 23	-0 48	-1 12	0.4	0.4	-- --	1.4 318°	-- --	1.7 170°				
951	Great Salt Pond entrance		41° 11.97'	71° 35.50'	-4 10	-3 40	-3 24	-4 34	0.1	0.1	-- --	0.3 165°	-- --	0.3 326°				
953	Great Salt Pond ent., 1 mile NW of	7	41° 12'	71° 36'	-0 54	-1 06	-1 54	-0 47	0.1	0.1	-- --	0.4 158°	-- --	0.4 035°				
955	Sandy Point, 0.4 mile west of <11>		41° 13.80'	71° 35.13'	-- --	-1 29	-- --	-1 47	--	0.2	-- --	-- --	-- --	0.7 011°				
957	Green Hill Point, 1.1 miles south of		41° 20.90'	71° 35.77'	-0 58	-0 52	-0 24	-1 07	0.2	0.1	-- --	0.6 258°	-- --	0.4 070°				
959	Sandy Point, 4.1 miles northwest of	15	41° 17.60'	71° 38.00'	+0 04	+0 06	+0 32	-0 08	0.2	0.2	-- --	0.7 270°	-- --	0.6 084°				
961	Grace Point, 2.0 miles northwest of		41° 12'	71° 38'	See table 5.													
963	Quonochontaug Beach, 1.1 miles S of		41° 18.80'	71° 42.82'	-0 43	+0 01	+0 47	-0 32	0.3	0.1	-- --	1.1 248°	-- --	0.4 078°				
965	Quonochontaug Beach, 3.8 miles S of	15	41° 16.35'	71° 43.00'	+0 03	-0 11	+0 39	-0 04	0.2	0.2	-- --	0.7 243°	-- --	0.6 058°				
967	Lewis Point, 6.0 miles WNW of	15	41° 11.60'	71° 44.20'	+0 59	+0 35	+0 16	+0 23	0.2	0.3	-- --	0.6 286°	-- --	1.2 097°				
969	Southwest Ledge		41° 07'	71° 42'	-0 35	-0 41	-0 14	-0 23	0.5	0.5	-- --	1.5 321°	-- --	2.1 141°				
971	Southwest Ledge, 2.0 miles west of	15	41° 06.80'	71° 43.00'	+0 10	+0 05	+0 11	-0 53	0.4	0.5	-- --	1.5 354°	-- --	1.9 168°				
973	Watch Hill Point, 2.2 miles east of		41° 18.16'	71° 48.60'	-0 29	-0 13	+0 45	-0 33	0.4	0.2	-- --	1.2 260°	-- --	0.7 086°				
975	Watch Hill Point, 5.2 miles SSE of	15	41° 13.20'	71° 49.00'	+0 35	+0 13	+0 39	+0 00	0.4	0.3	-- --	1.2 265°	-- --	1.2 064°				
977	Watch Hill Point, 5.3 n.mi. SE of	15d	41° 14.65'	71° 46.43'	-0 08	-0 11	-0 17	-0 03	0.2	0.2	0.1 176°	0.7 263°	-- --	0.9 092°				
979	Montauk Point, 5.4 miles NNE of	15	41° 09.55'	71° 49.48'	+0 33	-0 08	-0 38	-0 04	0.3	0.4	-- --	1.1 279°	-- --	1.6 079°				
981	Montauk Point, 1.2 miles east of		41° 04.50'	71° 49.80'	-1 22	-1 14	-0 38	-2 05	0.8	0.7	-- --	2.8 346°	-- --	2.8 162°				
983	Montauk Point, 1 mile northeast of		41° 05'	71° 51'	-2 04	-1 37	-1 14	-1 56	0.7	0.5	-- --	2.4 356°	-- --	1.9 145°				
985	Wicopesset island, NE of	8d	41° 17.90'	71° 54.06'	-0 55	-1 18	-0 58	-1 15	0.5	0.6	0.1 036°	1.7 321°	-- --	2.4 125°				
	do.	25d	41° 17.90'	71° 54.06'	-1 13	-1 20	-0 59	-1 24	0.5	0.5	0.1 225°	1.6 342°	0.1 048°	1.9 132°				
	do.	44d	41° 17.90'	71° 54.06'	-1 27	-1 08	-1 03	-1 26	0.4	0.3	0.1 238°	1.2 327°	0.2 048°	1.4 141°				
987	East Pt., 4.1 miles S of Fishers Island	15	41° 13.40'	71° 55.50'	+0 50	+0 27	+0 19	+0 00	0.3	0.4	-- --	0.9 236°	-- --	1.8 073°				
989	Cerberus Shoal, 1.5 miles east of	15	41° 10.45'	71° 55.17'	-0 15	+0 20	-0 23	-1 04	0.3	0.4	-- --	1.1 256°	-- --	1.8 092°				
991	Shagwong Reef & Cerberus Shoal, between		41° 07.90'	71° 55.50'	-0 30	-0 52	-0 25	-1 10	0.6	0.4	-- --	1.9 241°	-- --	1.8 056°				
993	Montauk Harbor entrance	6	41° 04.78'	71° 56.35'	-2 17	-2 52	-3 02	-5 01	0.4	0.1	-- --	1.2 226°	-- --	0.6 033°				
														0.2 024°				
														0.5 353°				
995	Mt. Prospect, 0.6 mile SSE of	15	41° 14.75'	71° 59.80'	-0 34	-0 11	+0 10	-1 11	0.5	0.4	-- --	1.7 275°	-- --	1.6 054°				
997	Cerberus Shoal and Fishers I., between	7	41° 13'	71° 58'	-0 59	-0 13	+0 07	-0 21	0.4	0.3	-- --	1.3 264°	-- --	1.3 096°				
999	Little Gull Island, 3.7 miles ESE of		41° 10.7'	72° 02.1'	See table 5.													
1001	Gardiners Island, 3 miles northeast of	10	41° 07.9'	72° 02.0'	-0 47	-1 04	-0 25	-0 41	0.3	0.2	-- --	0.9 305°	-- --	1.0 138°				
1003	Eastern Plain Pt., 3.9 miles ENE of		41° 07.05'	71° 59.80'	-1 01	-1 30	-0 22	-1 13	0.3	0.2	-- --	1.0 246°	-- --	1.0 096°				
1005	Little Gull Island, 0.8 mile SSE of <43>		41° 11.67'	72° 06.23'	-2 10	-0 55	-0 23	-3 14	0.4	0.1	-- --	1.3 331°	-- --	0.6 105°				
														0.1 252°				
														0.6 174°				
1007	Rocky Point, 2 miles WNW of	15	41° 03.55'	72° 01.80'	-1 22	-1 06	-0 49	-1 11	0.1	0.1	0.1 192°	0.3 255°	0.2 340°	0.3 065°				
	GARDINERS BAY, etc.																	
1009	Goff Point, 0.4 mile northwest of		41° 01.49'	72° 03.75'	-1 46	-2 30	-1 25	-2 43	0.4	0.4	-- --	1.2 225°	-- --	1.6 010°				
1011	Acabonack Hbr. ent., 0.6 mile ESE of		41° 01.30'	72° 07.40'	-1 34	-2 15	-1 05	-2 42	0.4	0.3	-- --	1.4 345°	-- --	1.2 140°				
1013	Hog Creek Point, north of		41° 04.10'	72° 09.70'	-0 56	-0 54	-1 21	-2 04	0.1	0.1	-- --	0.3 281°	-- --	0.3 067°				
1015	Ram Island, 2.2 miles east of		41° 04.70'	72° 13.80'	-0 19	-0 29	-0 14	-0 24	0.1	0.1	-- --	0.2 250°	-- --	0.3 090°				
1017	Orient Point, 2.4 miles SSE of		41° 07.50'	72° 12.30'	+0 19	-0 39	+1 11	-0 43	0.1	0.1	-- --	0.4 250°	-- --	0.3 025°				
1019	Gardiners Pt. Ruins, 1.1 miles N of		41° 09.50'	72° 08.83'	-0 12	-0 22	-0 09	-0 09	0.4	0.4	-- --	1.2 270°	-- --	1.8 066°				
1021	Gardiners Point & Plum Island, between	15	41° 09.33'	72° 09.52'	-0 18	-0 36	-0 32	-0 42	0.4	0.4	-- --	1.4 288°	-- --	1.6 100°				
1023	Ram Island, 1.4 miles NNE of		41° 05.8'	72° 15.8'	+0 01	-0 07	+0 07	+0 05	0.1	0.1	-- --	0.4 240°	-- --	0.6 075°				
1025	Long Beach Pt., 0.7 mile southwest of	15	41° 06.25'	72° 18.40'	+0 33	-0 16	+0 44	-0 12	0.4	0.4	-- --	1.3 307°	-- --	1.8 101°				
1027	Hay Beach Point, 0.3 mile NW of <44>		41° 06.65'	72° 20.43'	+0 40	+0 15	+1 01	-1 03	0.5	0.3	-- --	1.5 210°	-- --	1.2 025°				

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS								
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb		
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.	
	GARDINERS BAY, etc. Time meridian, 75°W	ft	<b>North</b>	<b>West</b>	h	m	h	m	h	m	h	m							
			<b>on The Race, p.48</b>																
1029	Jennings Point, 0.2 mile NNW of .....	13	41° 04.48'	72° 22.95'	+0 32	+0 04	+0 37	-0 09	0.5	0.4	--	--	1.6	290°	--	--	1.5	055°	
1031	Cedar Point, 0.2 mile west of .....		41° 02.38'	72° 16.07'	-0 11	-0 21	+0 29	-0 53	0.7	0.5	--	--	1.8	195°	--	--	1.6	005°	
1033	North Haven Peninsula, north of .....		41° 02.47'	72° 19.25'	+0 12	-0 35	+0 39	-0 46	0.7	0.5	--	--	2.4	230°	--	--	2.1	035°	
1035	Paradise Point, 0.4 mile east of .....	13	41° 02.88'	72° 22.57'	+0 26	-0 02	+0 45	-0 06	0.5	0.4	--	--	1.5	145°	--	--	1.5	345°	
1037	Little Peconic Bay entrance .....	19	41° 01.58'	72° 23.08'	+0 35	-0 04	+0 53	+0 09	0.5	0.4	--	--	1.6	240°	--	--	1.5	015°	
1039	Robins Island, 0.5 mile south of .....		40° 56.98'	72° 27.18'	+0 32	-0 17	+0 56	+0 23	0.3	0.1	--	--	1.7	245°	--	--	0.6	065°	
	FISHERS ISLAND SOUND																		
1041	Edwards Pt. and Sandy Pt., between .....	4	41° 19.90'	71° 53.88'	-2 26	-3 22	-2 15	-3 53	0.3	0.3	--	--	1.1	035°	--	--	1.0	227°	
								-1 44									0.2	243°	
								-0 19									0.5	234°	
1043	Napatree Point, 0.7 mile southwest of .....		41° 17.92'	71° 54.00'	-0 48	-1 12	-0 47	-1 30	0.5	0.5	--	--	1.7	284°	--	--	2.2	113°	
1045	Little Narragansett Bay entrance .....		41° 20'	71° 53'	-1 58	-2 07	-2 13	-2 50	0.4	0.3	--	--	1.3	092°	--	--	1.3	268°	
1047	Avondale, Pawcatuck River <43> .....	6	41° 19.90'	71° 50.73'	-1 48	-2 47	-2 07	-3 52	0.2	0.1	--	--	0.6	058°	--	--	0.5	265°	
								-1 20									0.1	243°	
								-0 08									0.2	263°	
1049	Ram Island Reef, south of .....	7	41° 18.1'	71° 58.5'	-0 54	-0 55	-0 45	-1 05	0.4	0.4	--	--	1.3	255°	--	--	1.6	088°	
1051	Noank <43> .....	4	41° 19.12'	71° 59.30'	-1 28	-3 21	-4 00	-4 42	0.2	0.1	--	--	0.5	340°	--	--	0.3	173°	
								+0 07									--	--	
1053	Mystic, Highway Bridge, Mystic River .....	6	41° 21.25'	71° 58.18'	-1 54	-2 55	-1 57	-3 51	0.2	0.1	--	--	0.5	039°	--	--	0.5	162°	
								-1 52									0.4	231°	
								-0 32									0.2	234°	
								-0 32									0.3	232°	
1055	Clay Point, 1.3 miles NNE of .....	15	41° 17.88'	71° 58.53'	-0 34	-0 54	-0 30	-1 27	0.4	0.4	--	--	1.4	264°	--	--	1.9	035°	
1057	North Hill Point, 1.1 miles NNW of .....		41° 17.57'	72° 01.68'	-0 57	-0 31	-0 08	-1 49	0.5	0.3	--	--	1.5	258°	--	--	1.2	082°	
	LONG ISLAND SOUND																		
	<i>The Race</i>																		
1059	Race Point, 0.4 mile southwest of .....	6d	41° 14.70'	72° 02.60'	-0 16	-0 40	-0 33	-0 57	0.8	0.8	--	--	2.6	288°	--	--	3.5	135°	
1061	THE RACE .....	25d	41° 13.69'	72° 03.75'	<b>Daily predictions</b>				0.3	0.24°	0.3	024°	3.3	291°	0.2	195°	4.2	106°	
	... do. ....	45d	41° 13.69'	72° 03.75'	-0 12	-0 10	+0 00	+0 02	1.0	0.8	0.1	016°	3.3	292°	0.2	200°	3.2	108°	
	... do. ....		41° 13.69'	72° 03.75'	-0 24	-0 14	+0 00	+0 05	0.9	0.4	--	--	2.9	295°	0.1	205°	1.9	105°	
1063	Little Gull Island, 1.4 n.mi. NNE of .....	45d	41° 13.53'	72° 05.52'	+0 02	+0 12	+0 08	-0 34	0.4	0.4	0.1	011°	1.5	304°	0.5	036°	1.6	100°	
1065	Little Gull Island, 1.1 miles ENE of .....		41° 13.10'	72° 05.10'	+0 01	-0 16	+0 11	-0 57	1.2	1.1	--	--	4.0	301°	--	--	4.7	130°	
1067	Little Gull Island, 0.8 mile NNW of .....	15	41° 13.10'	72° 06.93'	+0 25	-1 24	-2 19	-0 58	0.6	0.7	--	--	1.9	258°	--	--	2.9	043°	
1069	Great Gull Island, SW of .....	3d	41° 11.67'	72° 08.02'	-0 40	-0 39	-0 36	-1 33	0.7	0.8	0.2	226°	2.3	320°	0.3	055°	3.3	147°	
	... do. ....	16d	41° 11.67'	72° 08.02'	-0 46	-0 25	-0 34	-1 23	0.6	0.6	0.3	236°	2.0	326°	0.3	061°	2.5	157°	
	... do. ....	29d	41° 11.67'	72° 08.02'	-0 54	-0 18	-0 33	-1 19	0.5	0.4	0.3	241°	1.6	332°	0.2	067°	1.6	164°	
1071	New London Harbor entrance .....	2d	41° 19.13'	72° 04.90'	-1 10	-2 04	-1 40	-0 50	0.1	0.1	0.1	241°	0.3	316°	--	--	0.3	167°	
	... do. ....	15d	41° 19.13'	72° 04.90'	-2 14	-2 36	--	--	0.1	--	--	--	0.3	335°	--	--	--	--	
	... do. ....	31d	41° 19.13'	72° 04.90'	-2 06	-2 59	--	--	0.1	--	--	--	0.3	353°	--	--	--	--	
	<i>Thames River</i>																		
1073	Thames River Approach .....	5d	41° 17.63'	72° 04.71'	-2 43	-1 29	-1 08	-2 09	0.3	0.2	0.1	166°	0.9	268°	--	--	0.8	071°	
	... do. ....	15d	41° 17.63'	72° 04.71'	-2 04	-1 30	-1 09	-1 58	0.3	0.2	0.1	357°	0.8	271°	--	--	0.8	065°	
	... do. ....	35d	41° 17.63'	72° 04.71'	-2 09	-2 26	-1 38	-1 27	0.2	0.2	0.2	346°	0.6	267°	0.1	171°	0.6	051°	
1075	Fort Trumbull State Park .....	5d	41° 20.73'	72° 05.18'	-1 07	-1 59	-1 39	-1 05	0.1	0.1	--	--	0.3	357°	--	--	0.3	169°	
	... do. ....	14d	41° 20.73'	72° 05.18'	-1 45	-2 03	--	--	0.1	--	--	--	0.4	349°	--	--	--	--	
	... do. ....	31d	41° 20.73'	72° 05.18'	-2 30	-2 17	--	--	0.1	--	--	--	0.5	347°	--	--	--	--	
1077	New London State Pier .....	14d	41° 21.44'	72° 05.20'	-1 37	-2 20	-1 20	-0 30	0.1	0.1	--	--	0.4	358°	--	--	0.4	178°	
	... do. ....	31d	41° 21.44'	72° 05.20'	-2 03	-2 22	-1 12	-1 13	0.2	0.1	--	--	0.5	351°	--	--	0.3	172°	
	... do. ....	57d	41° 21.44'	72° 05.20'	-4 03	-2 35	-1 48	-3 21	0.2	0.1	--	--	0.5	346°	--	--	0.3	164°	
1079	U.S. Coast Guard Academy .....	9d	41° 22.42'	72° 05.37'	-1 45	-1 47	-1 11	-0 43	0.1	0.1	--	--	0.3	358°	--	--	0.3	182°	
	... do. ....	16d	41° 22.42'	72° 05.37'	-1 39	-2 15	-1 15	-0 19	0.1	0.1	--	--	0.5	002°	--	--	0.3	179°	
	... do. ....	32d	41° 22.42'	72° 05.37'	-2 07	-2 53	-2 04	-1 52	0.1	0.1	--	--	0.4	004°	--	--	0.3	184°	
1081	Smith Cove .....	5d	41° 23.79'	72° 05.76'	-1 03	-2 23	-2 09	-0 57	0.1	0.2	--	--	0.4	355°	--	--	0.7	181°	
	... do. ....	14d	41° 23.79'	72° 05.76'	-1 15	-2 15	-1 56	-0 23	0.1	0.1	--	--	0.4	359°	--	--	0.4	184°	
	... do. ....	31d	41° 23.79'	72° 05.76'	-2 41	-2 53	-1 47	-2 52	0.1	0.1	--	--	0.4	357°	--	--	0.3	179°	

Endnotes can be found at the end of table 2.

TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS									
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb			
											h	m	h	m	knots	Dir.	knots	Dir.	knots	Dir.
	LONG ISLAND SOUND Time meridian, 75°W	ft	North	West	h	m	h	m	h	m	h	m								
					on The Race, p.48															
	<i>Thames River-cont.</i>																			
1083	Allyn Point	4d	41° 26.58'	72° 05.14'	-1 31	-2 25	-2 10	-1 41	0.3	0.2	--	--	0.8	002°	--	--	0.6	195°		
	do.	12d	41° 26.58'	72° 05.14'	-1 22	-1 54	-1 04	-0 53	0.1	0.2	--	--	0.4	005°	--	--	0.6	182°		
	do.	19d	41° 26.58'	72° 05.14'	-1 33	-2 23	-1 16	-1 16	0.1	0.1	--	--	0.3	002°	--	--	0.4	184°		
1085	Lower Coal Dock	15	41° 30.88'	72° 04.72'	Current weak and variable															
1087	Goshen Point, 1.9 miles SSE of	15	41° 16.00'	72° 06.30'	-0 57	-1 05	-0 53	-2 01	0.4	0.4	--	--	1.2	285°	--	--	1.6	062°		
1089	Bartlett Reef, 0.2 mile south of	15	41° 16'	72° 08'	-2 03	-0 58	-1 04	-1 46	0.4	0.3	--	--	1.4	255°	--	--	1.3	090°		
1091	Twotree Island Channel	11	41° 17.90'	72° 08.50'	-0 58	-1 32	-0 33	-1 54	0.4	0.4	--	--	1.2	267°	--	--	1.6	099°		
1093	Niantic (Railroad Bridge)	5	41° 19.60'	72° 10.60'	-0 45	-1 08	-0 43	-0 52	0.5	0.2	--	--	1.6	352°	--	--	0.8	178°		
1095	Black Point, 0.8 mile south of	15	41° 16.40'	72° 12.50'	-0 42	-1 16	-0 15	-1 22	0.4	0.3	--	--	1.3	260°	--	--	1.4	073°		
1097	Black Point and Plum Island, between	15	41° 14.00'	72° 12.30'	+0 33	-0 01	+0 39	+0 14	0.7	0.6	--	--	2.1	236°	--	--	2.4	076°		
1099	Plum Island, 3nm. North of, Buoy PI	20d	41° 13.35'	72° 10.63'	+0 08	+0 18	+0 10	-0 18	0.6	0.6	0.3	185°	2.0	259°	0.2	342°	2.4	081°		
	do.	79d	41° 13.35'	72° 10.63'	-0 08	-0 02	+0 10	+0 05	0.6	0.4	0.1	352°	2.0	258°	0.1	162°	1.8	079°		
	do.	131d	41° 13.35'	72° 10.63'	-0 30	-0 42	-0 02	-0 09	0.6	0.3	0.3	347°	1.8	253°	0.3	170°	1.3	082°		
1101	Plum Island, 0.8 mile NNW of	15	41° 11.90'	72° 11.90'	+0 12	-0 21	-1 03	-0 53	0.5	0.6	--	--	1.7	247°	--	--	2.4	065°		
1103	Plum Gut	25d	41° 09.55'	72° 12.45'	-1 00	-1 07	-1 05	-1 43	0.6	0.7	0.1	033°	1.9	306°	0.1	032°	3.0	116°		
	do.	99d	41° 09.55'	72° 12.45'	-1 06	-1 28	-0 59	-1 30	0.6	0.6	0.1	031°	2.0	305°	0.1	039°	2.5	124°		
	do.	158d	41° 09.55'	72° 12.45'	-1 13	-1 36	-1 01	-1 34	0.5	0.5	0.1	021°	1.7	317°	0.2	043°	1.9	121°		
1105	Hatchett Point, 1.6 n.mi. S of	15	41° 15.40'	72° 15.37'	-0 59	-1 07	-0 27	-1 04	0.5	0.4	0.1	160°	1.7	255°	0.1	336°	1.9	075°		
1107	Hatchett Point, 1.1 miles WSW of	41° 16.35'	72° 16.92'	-2 29	-1 16	-0 42	-2 49	0.4	0.3	--	--	1.3	240°	--	--	1.2	045°			
1109	Orient Point, 1 mile WNW of	41° 10.00'	72° 15.10'	-1 01	-2 07	-0 23	-1 27	0.4	0.7	--	--	1.4	245°	--	--	3.1	055°			
1111	Saybrook Breakwater, 1.5 miles SE of	41° 14.78'	72° 19.05'	-1 22	-1 16	-0 45	-2 09	0.6	0.5	--	--	1.9	260°	--	--	2.0	070°			
	<i>Connecticut River</i>																			
1113	Saybrook Breakwater Light	5d	41° 15.49'	72° 20.52'	-1 52	-2 08	-1 33	-1 55	0.4	0.4	0.4	183°	1.3	249°	--	--	1.8	103°		
	do.	14d	41° 15.49'	72° 20.52'	-1 30	-2 06	-1 25	-2 01	0.4	0.3	0.1	024°	1.4	286°	--	--	1.4	105°		
	do.	19d	41° 15.49'	72° 20.52'	-1 31	-1 59	-1 26	-2 05	0.4	0.3	0.1	025°	1.2	287°	--	--	1.2	104°		
1115	Saybrook Channel	2d	41° 17.00'	72° 20.85'	+1 12	+0 49	+0 37	+0 42	0.4	0.5	--	--	1.2	000°	--	--	2.0	180°		
	do.	13d	41° 17.00'	72° 20.85'	-0 10	-0 11	+0 40	+0 06	0.3	0.2	--	--	1.1	003°	--	--	0.8	186°		
1117	I-95 Bridge	3d	41° 19.09'	72° 20.75'	+1 15	+0 38	+0 18	+0 38	0.3	0.4	--	--	0.9	356°	--	--	1.8	166°		
	do.	14d	41° 19.09'	72° 20.75'	+0 32	+0 48	+0 44	+0 45	0.3	0.3	--	--	1.1	000°	--	--	1.2	169°		
	do.	23d	41° 19.09'	72° 20.75'	+0 09	+0 55	+0 57	+0 46	0.3	0.2	--	--	0.9	352°	--	--	0.6	182°		
1119	Eustasia Island, 0.6 mile ESE of	41° 23.30'	72° 24.23'	+2 01	+1 33	+1 33	+1 14	0.3	0.3	--	--	1.1	290°	--	--	1.4	070°			
1121	Eddy Rock Shoal, west of	15	41° 26.57'	72° 27.78'	+1 49	+2 11	+2 11	+1 08	0.2	0.1	--	--	0.8	350°	--	--	0.6	155°		
1123	Higganum Creek, 0.5 mile ESE of	41° 30.02'	72° 32.62'	+3 14	+2 47	+2 45	+2 49	0.2	0.2	--	--	0.8	270°	--	--	1.0	080°			
1125	Wilcox Island Park, east of	41° 34.33'	72° 38.88'	+4 14	+3 31	+3 17	+3 23	0.3	0.2	--	--	0.9	355°	--	--	1.0	160°			
1127	Rocky Hill	9	41° 39.82'	72° 37.73'	+4 51	+3 32	+3 31	+3 18	0.2	0.2	--	--	0.6	335°	--	--	0.8	135°		
1129	Hartford Jetty <35>	9	41° 45.07'	72° 39.02'	+5 53	+4 34	+3 32	+4 17	0.0	0.2	--	--	0.1	290°	--	--	0.7	095°		
1131	Mulford Point, 3.1 miles northwest of	15	41° 12.00'	72° 19.10'	+0 02	-1 10	+0 05	-0 36	0.6	0.5	--	--	1.9	269°	--	--	2.3	066°		
1133	Rocky Point, 0.3 mile north of	15	41° 08.63'	72° 21.42'	-0 19	-1 07	-0 51	-0 40	0.5	0.5	--	--	1.8	279°	--	--	2.1	041°		
1135	Cornfield Point, 2.8 n.mi. SE of	15d	41° 13.95'	72° 20.33'	-1 27	-1 02	-0 32	-1 44	0.6	0.3	0.1	170°	1.9	249°	--	--	1.4	085°		
1137	Cornfield Point, 4 miles south of, Buoy CF	19d	41° 11.37'	72° 22.18'	-0 06	+0 00	-0 06	+0 04	0.6	0.6	0.4	157°	2.0	245°	0.4	332°	2.3	065°		
	do.	71d	41° 11.37'	72° 22.18'	-0 25	-0 31	-0 11	-0 20	0.5	0.4	--	--	1.6	244°	0.1	155°	1.6	067°		
	do.	124d	41° 11.37'	72° 22.18'	-0 51	-0 41	-0 26	-0 25	0.4	0.2	0.4	338°	1.2	240°	0.4	169°	1.0	069°		
1139	Cornfield Point, 1.1 miles south of	15	41° 14.65'	72° 23.40'	-0 53	-1 39	-0 52	-2 15	0.4	0.4	--	--	1.4	293°	--	--	1.6	108°		
1141	Cornfield Point, 1.9 n.mi. SW of	15d	41° 14.48'	72° 25.30'	-1 09	-1 40	-1 24	-1 23	0.4	0.4	0.1	174°	1.3	272°	0.1	358°	1.5	091°		
1143	Kelsey Point, 2.1 miles southeast of	41° 14.10'	72° 27.93'	-0 27	-1 07	-0 44	-1 12	0.5	0.4	--	--	1.5	260°	--	--	1.8	070°			
1145	Kelsey Point, 1 mile south of	41° 14'	72° 30'	-1 34	-1 08	-1 07	-2 06	0.6	0.4	--	--	2.0	249°	--	--	1.5	118°			
1147	Six Mile Reef, 1.5 miles north of	41° 12.67'	72° 28.87'	-0 09	-0 17	-0 13	-0 53	0.3	0.3	--	--	1.0	290°	--	--	1.3	095°			
1149	Six Mile Reef, 2 miles east of	41° 10.83'	72° 26.90'	-0 28	-0 17	+0 03	-0 47	0.5	0.5	--	--	1.6	235°	--	--	2.1	040°			
1151	Six mile Reef, 1 mile south of	15d	41° 10.10'	72° 29.96'	-0 21	-0 35	-0 31	-0 37	0.5	0.4	0.3	164°	1.8	250°	--	--	1.7	077°		
	do.	35d	41° 10.10'	72° 29.96'	-0 39	-0 46	-0 36	-0 45	0.5	0.3	0.1	164°	1.5	257°	0.1	166°	1.4	075°		
	do.	58d	41° 10.10'	72° 29.96'	-0 54	-0 40	-0 37	-0 27	0.3	0.2	--	--	1.1	258°	0.2	169°	1.0	073°		
1153	Six Mile Reef, 2 miles south of, Buoy TE	16d	41° 08.07'	72° 29.36'	-0 15	-0 08	+0 01	+0 02	0.6	0.4	0.5	166°	1.8	255°	0.4	338°	1.8	073°		
	do.	49d	41° 08.07'	72° 29.36'	-0 26	-0 09	+0 17	+0 02	0.5	0.4	0.1	159°	1.7	252°	--	--	1.5	074°		
	do.	88d	41° 08.07'	72° 29.36'	-0 54	-0 07	+0 00	-0 35	0.4	0.2	0.3	342°	1.2	247°	0.3	168°	0.8	082°		
1155	Six Mile Reef, 1 mile west of	13d	41° 10.78'	72° 33.11'	-0 16	-0 43	-0 31	-0 21	0.5	0.4	0.1	182°	1.6	275°	0.1	001°	1.7	087°		
	do.	26d	41° 10.78'	72° 33.11'	-0 34	-0 49	-0 32	-0 31	0.4	0.4	--	--	1.4	277°	0.1	002°	1.5	086°		
	do.	36d	41° 10.78'	72° 33.11'	-0 43	-0 49	-0 33	-0 30	0.4	0.3	0.1	004°	1.2	278°	0.1	003°	1.2	087°		

Endnotes can be found at the end of table 2.

TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS							
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb	
		ft	North	West	h m	h m	h m	h m			knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.
LONG ISLAND SOUND Time meridian, 75°W																		
<b>on The Race, p.48</b>																		
1157	Horton Point, 1.4 miles NNW of		41° 06.30'	72° 27.40'	+0 12	+0 03	+0 07	-0 30	0.4	0.5	--	--	1.4	260°	--	--	2.0	040°
1159	Hammonasset Point, 1.2 miles SW of	15	41° 14.22'	72° 34.00'	-0 51	-1 20	-0 34	-1 43	0.3	0.2	--	--	1.0	287°	--	--	1.0	106°
1161	Hammonasset Point, 5 miles south of	15	41° 09.80'	72° 34.17'	+0 05	-0 08	-0 14	-0 18	0.4	0.4	--	--	1.4	284°	--	--	1.5	090°
1163	Duck Pond Point, 3.2 n.mi. NW of	15d	41° 04.73'	72° 33.91'	-0 25	-0 14	-0 06	-0 15	0.4	0.3	0.2	161°	1.2	253°	0.1	343°	1.2	071°
1165	Mattituck Inlet, 1 mile northwest of	15	41° 01.68'	72° 34.22'	-0 13	-0 20	+0 02	-0 38	0.3	0.2	--	--	0.9	241°	--	--	1.0	053°
1167	Sachem Head, 1 mile SSE of		41° 13.65'	72° 42.30'	-0 30	-0 41	-0 25	-1 14	0.3	0.2	--	--	1.1	255°	--	--	1.0	065°
1169	Sachem Head 6.2 miles south of	15	41° 08.73'	72° 42.30'	+0 37	+0 19	-0 02	-0 16	0.2	0.2	--	--	0.6	260°	--	--	0.9	065°
1171	Roanoke Point, 5.6 miles north of	15	41° 04.37'	72° 42.53'	+0 06	-0 07	-0 05	-0 36	0.2	0.2	--	--	0.7	255°	--	--	0.9	050°
1173	Roanoke Point, 2 miles NE of	16d	41° 00.42'	72° 39.79'	-0 28	-0 20	-0 29	-0 27	0.2	0.2	--	178°	0.7	271°	0.1	009°	0.7	093°
	do.	39d	41° 00.42'	72° 39.79'	-0 45	-0 25	-0 15	-0 30	0.2	0.2	0.1	187°	0.7	277°	0.1	011°	0.8	106°
	do.	62d	41° 00.42'	72° 39.79'	-1 39	-1 46	-0 45	-1 12	0.2	0.2	--	--	0.6	287°	--	--	0.7	103°
1175	Roanoke Point, 2.3 miles NNW of		41° 00.92'	72° 42.97'	-1 11	-0 27	+0 00	-0 41	0.3	0.2	--	--	0.9	270°	--	--	0.7	070°
1177	Branford Reef, 1.5 miles southwest of	15	41° 12.57'	72° 49.83'	-0 05	-0 19	+0 01	-0 30	0.2	0.2	--	--	0.8	272°	--	--	0.7	068°
1179	Branford Reef, 5.0 miles south of	6d	41° 08.67'	72° 49.68'	+0 03	+0 07	+0 15	+0 17	0.2	0.2	--	--	0.7	262°	--	--	0.8	084°
	do.	39d	41° 08.67'	72° 49.68'	-0 36	-0 20	+0 03	-0 09	0.3	0.2	0.1	184°	0.9	273°	--	--	0.7	096°
	do.	69d	41° 08.67'	72° 49.68'	-1 00	-0 43	-0 24	-0 42	0.2	0.1	0.1	013°	0.6	277°	0.1	187°	0.5	106°
1181	Herod Point, 6.5 miles north of	15	41° 04.65'	72° 49.80'	-0 19	+0 01	+0 22	-0 19	0.3	0.2	--	--	0.9	254°	--	--	0.7	070°
1183	Herod Point, 2.8 miles north of	15	41° 00.97'	72° 49.93'	-0 21	-0 22	-0 17	-0 18	0.1	0.1	0.1	020°	0.4	290°	0.1	020°	0.6	090°
1185	Herod Point, 5.0 n.mi. NW of	15d	41° 01.64'	72° 54.73'	-0 09	-0 22	-0 27	-0 01	0.2	0.2	0.1	179°	0.6	271°	--	--	0.7	089°
1187	New Haven Harbor entrance	4d	41° 13.34'	72° 54.56'	-0 12	-0 11	+0 06	+0 20	0.2	0.1	0.1	215°	0.7	277°	0.1	192°	0.5	122°
	do.	14d	41° 13.34'	72° 54.56'	-0 25	-0 49	-0 20	-0 05	0.2	0.1	0.1	221°	0.6	288°	0.1	194°	0.5	117°
	do.	31d	41° 13.34'	72° 54.56'	-0 51	-1 49	-1 05	-0 30	0.2	0.1	--	--	0.5	295°	--	--	0.4	106°
1189	New Haven Harbor, Gateway Terminal Approach	8d	41° 16.96'	72° 54.72'	--	+0 31	--	--	0.1	--	--	--	0.3	005°	--	--	--	--
	do.	18d	41° 16.96'	72° 54.72'	--	-0 05	--	--	0.2	--	--	--	0.5	015°	--	--	--	--
	do.	31d	41° 16.96'	72° 54.72'	--	-1 14	--	--	0.2	--	--	--	0.6	015°	--	--	--	--
1191	New Haven Harbor, Tanker Terminal	11d	41° 17.70'	72° 54.54'	--	--	--	+0 12	--	0.1	--	--	--	--	--	--	0.5	218°
	do.	21d	41° 17.70'	72° 54.54'	--	--	--	-0 14	--	0.1	--	--	--	--	--	--	0.3	209°
	do.	30d	41° 17.70'	72° 54.54'	Current weak and variable				--	--	--	--	--	--	--	--	--	--
1193	Oyster River Pt., 1.3 miles SSE of <1>		41° 12.87'	72° 58.00'	--	-0 20	--	-0 59	0.1	0.1	--	--	0.3	255°	--	--	0.3	060°
1195	Pond Point, 4.2 miles SSE of		41° 08.60'	72° 58.08'	-0 12	-0 01	+0 06	-0 26	0.2	0.1	--	--	0.6	265°	--	--	0.6	065°
1197	Sound Beach, 2.2 miles north of		41° 00.33'	72° 58.45'	+0 05	-0 11	-0 05	-0 37	0.3	0.2	--	--	0.9	270°	--	--	0.9	075°
1199	Charles Island, 0.8 mile SSE of		41° 10.77'	73° 02.63'	-0 43	-0 41	-0 20	-1 06	0.1	0.1	--	--	0.4	250°	--	--	0.4	070°
<i>Housatonic River</i>																		
1201	Milford Point, 0.2 mile west of	10	41° 10.35'	73° 06.82'	+0 02	-0 04	+0 25	-1 07	0.4	0.3	--	--	1.2	330°	--	--	1.2	135°
1203	Railroad drawbridge, above	5	41° 12.53'	73° 06.67'	+0 42	+0 08	+0 39	-1 07	0.3	0.3	--	--	1.1	350°	--	--	1.3	185°
1205	Fowler Island, 0.1 mile NNW of	5	41° 14.40'	73° 06.23'	+0 56	+0 05	+0 40	+0 36	0.3	0.3	--	--	1.1	040°	--	--	1.1	270°
1207	Wooster Island, 0.1 mile southwest of	5	41° 16.67'	73° 05.20'	+1 27	+0 28	+0 30	+0 10	0.2	0.2	--	--	0.6	020°	--	--	0.7	220°
1209	Derby-Shelton Bridge, below <13>		41° 18.73'	73° 04.78'	--	--	--	-0 18	--	0.1	--	--	--	--	--	--	0.4	095°
1211	Point No Point, 2.1 miles south of	15	41° 06.75'	73° 07.13'	-0 22	-0 11	+0 02	-0 13	0.4	0.3	--	--	1.3	251°	--	--	1.2	074°
1213	Stratford Point, 3.5 miles south of	6d	41° 05.40'	73° 06.27'	-0 01	-0 04	+0 14	+0 05	0.4	0.3	0.2	154°	1.2	247°	--	--	1.0	070°
	do.	16d	41° 05.40'	73° 06.27'	-0 03	-0 01	+0 09	-0 01	0.3	0.2	0.1	157°	1.1	251°	--	--	1.0	071°
	do.	43d	41° 05.40'	73° 06.27'	-0 21	-0 19	-0 12	-0 17	0.2	0.2	0.1	338°	0.8	249°	0.2	166°	0.7	067°
1215	Stratford Point, 4.3 miles south of	15	41° 04.77'	73° 06.67'	+0 20	+0 14	+0 15	+0 02	0.3	0.2	--	--	1.0	254°	--	--	1.0	075°
	do.	60	41° 04.77'	73° 06.67'	-0 28	-0 14	-0 13	+0 03	0.2	0.2	--	--	0.6	291°	--	--	0.8	078°
1217	Stratford Point, 6.1 miles south of	15	41° 02.97'	73° 05.80'	-0 10	-0 02	+0 26	+0 18	0.3	0.2	--	--	1.0	267°	--	--	0.8	080°
	do.	51	41° 02.97'	73° 05.80'	-0 35	-0 36	-0 24	-0 24	0.3	0.2	--	--	0.9	279°	--	--	0.9	087°
1219	Stratford Shoal, 6 miles east of		41° 04.52'	72° 58.43'	+0 09	-0 07	+0 03	-0 21	0.2	0.1	--	--	0.6	265°	--	--	0.6	060°
1221	Stratford Shoal, 2 miles south of	22d	41° 01.38'	73° 06.29'	+0 18	+0 11	+0 22	+0 15	0.3	0.2	0.1	172°	0.9	272°	0.2	356°	0.9	079°
	do.	68d	41° 01.38'	73° 06.29'	-0 26	-0 05	+0 05	-0 10	0.3	0.2	0.1	176°	0.9	263°	--	--	0.7	093°
	do.	114d	41° 01.38'	73° 06.29'	-1 03	-0 10	-0 18	-0 30	0.2	0.2	--	--	0.8	261°	0.1	182°	0.6	099°
1223	Old Field Point, 2.9 n.mi. NNW of	15d	41° 01.32'	73° 08.37'	+0 27	-0 16	-0 35	-0 15	0.2	0.2	--	--	0.5	254°	0.1	338°	0.6	076°
1225	Old Field Point, 2 miles northeast of	15	41° 00.23'	73° 05.70'	+0 41	+0 08	-0 01	+0 46	0.3	0.3	--	--	1.0	266°	--	--	1.1	092°
	do.	40	41° 00.23'	73° 05.70'	+0 30	+0 03	-0 02	+0 29	0.2	0.2	--	--	0.5	236°	--	--	0.6	081°
1227	Old Field Point, 1 mile east of	15	40° 58.47'	73° 05.80'	+3 34	+2 26	+2 35	+1 44	0.1	0.2	--	--	0.2	105°	--	--	0.6	308°
	do.	22	40° 58.47'	73° 05.80'	+2 38	+1 49	+2 27	+1 32	0.1	0.1	--	--	0.2	110°	--	--	0.5	297°
1229	Port Jefferson Harbor entrance	3d	40° 58.19'	73° 05.50'	-0 18	-0 05	-0 05	-0 05	0.5	0.2	--	--	1.6	150°	0.1	060°	1.0	336°
	do.	15d	40° 58.19'	73° 05.50'	-0 24	-0 09	-0 02	-0 03	0.5	0.2	--	--	1.7	149°	0.1	065°	1.0	342°
	do.	31d	40° 58.19'	73° 05.50'	-0 29	-0 09	+0 04	-0 01	0.4	0.2	--	--	1.3	154°	--	--	0.9	001°

Endnotes can be found at the end of table 2.

TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS								
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb		
											h	m	h	m	h	m	h	m	knots
	LONG ISLAND SOUND Time meridian, 75°W	ft	North	West	on The Race, p.48														
1231	Crane Neck Point, 0.5 mile northwest of	5d	40° 58'	73° 10'	-0 47	-1 32	-1 42	-1 49	0.4	0.4	--	--	1.3	256°	--	--	1.5	016°	
1233	Bridgeport Harbor Entrance	15d	41° 07.28'	73° 11.37'	+0 06	+0 01	-0 07	-0 06	0.2	0.1	--	--	0.5	256°	0.2	345°	0.6	058°	
	do.	31d	41° 07.28'	73° 11.37'	-0 09	-0 25	-0 34	-0 28	0.2	0.1	--	--	0.5	256°	0.1	342°	0.5	058°	
1235	Bridgeport Harbor, Tongue Point	4d	41° 10.00'	73° 10.52'	-0 51	-1 00	-1 27	-0 54	0.1	0.1	0.1	337°	0.3	254°	--	--	0.4	062°	
	do.	15d	41° 10.00'	73° 10.52'	---	+1 01	---	---	0.1	--	--	--	0.3	043°	--	--	--	--	
	do.	30d	41° 10.00'	73° 10.52'	---	+0 50	---	---	0.1	--	--	--	0.2	040°	--	--	--	--	
1237	Pine Creek Point, 2.3 miles SSE of	15	41° 05.05'	73° 14.40'	-0 12	+0 01	+0 31	+0 11	0.2	0.1	--	--	0.7	272°	--	--	0.6	084°	
1239	Shoal Point, 6 miles south of	15	41° 01.70'	73° 14.03'	+0 30	+0 23	+0 52	+0 43	0.1	0.1	--	--	0.4	232°	--	--	0.4	047°	
1241	Crane Neck Point, 3.4 miles WNW of	15	40° 59.00'	73° 13.87'	-0 04	-0 03	-0 15	-0 03	0.2	0.1	--	--	0.5	261°	--	--	0.6	079°	
1243	Crane Neck Point, 3.7 miles WSW of	15	40° 56.30'	73° 13.87'	-1 24	-0 36	-0 14	-0 30	0.1	0.1	--	--	0.4	066°	--	--	0.4	232°	
1245	Saugatuck River, 0.3 mi. NW of Bluff Pt	15	41° 06.27'	73° 21.92'	-0 04	-0 46	+0 30	-0 02	0.2	0.1	--	--	0.5	265°	--	--	0.4	080°	
1247	Saugatuck R., 0.5 mile above Bluff Pt	2d	41° 06'	73° 23'	Current weak and variable														
1249	Norwalk Harbor	11d	41° 05.12'	73° 24.14'	-0 10	-0 46	+0 13	+0 43	0.2	0.1	--	--	0.5	339°	--	--	0.4	148°	
	do.	12	41° 05.12'	73° 24.14'	-0 43	-1 06	+0 25	+0 28	0.2	0.1	--	--	0.5	329°	--	--	0.4	151°	
1251	Sheffield I. Hbr., 0.5 mile southeast of	12	41° 03.32'	73° 25.25'	-2 33	-3 59	-3 26	-2 24	0.1	0.1	--	--	0.2	229°	--	--	0.4	042°	
1253	Sheffield I. Tower, 1.1 miles SE of	15	41° 01.97'	73° 24.33'	+0 41	+0 34	+1 09	+0 21	0.3	0.2	--	--	0.9	283°	--	--	0.8	081°	
	do.	60	41° 01.97'	73° 24.33'	-0 19	+0 19	+1 10	+0 24	0.2	0.1	--	--	0.6	269°	--	--	0.5	076°	
1255	Eatons Neck, 3 miles north of	10d	41° 00.30'	73° 24.30'	+0 20	+0 05	+0 22	+0 18	0.3	0.2	0.1	173°	0.8	267°	0.1	351°	0.7	076°	
	do.	49d	41° 00.30'	73° 24.30'	+0 00	+0 07	+0 35	+0 02	0.3	0.2	--	--	0.9	264°	0.1	347°	0.7	080°	
	do.	92d	41° 00.30'	73° 24.30'	-0 15	-0 02	+0 35	-0 20	0.3	0.1	0.1	341°	0.8	249°	0.2	155°	0.5	083°	
1257	Eatons Neck Pt., 2.5 n.mi. NNW of	15d	40° 59.73'	73° 24.60'	-1 51	-2 02	-2 06	-2 21	0.2	0.2	0.1	164°	0.6	263°	0.1	341°	0.6	073°	
1259	Eatons Neck Pt., 1.3 miles north of	15	40° 58.60'	73° 23.77'	+0 29	+0 16	+0 13	+0 09	0.4	0.3	--	--	1.4	283°	--	--	1.4	075°	
1261	Eatons Neck, 2.5 miles east of	5d	40° 57.45'	73° 20.52'	-0 49	-0 25	-0 06	-0 14	0.2	0.1	0.1	207°	0.5	276°	--	--	0.5	125°	
	do.	18d	40° 57.45'	73° 20.52'	-0 48	-0 34	-0 11	-0 15	0.2	0.1	0.2	207°	0.5	279°	--	--	0.5	128°	
	do.	41d	40° 57.45'	73° 20.52'	-1 13	-0 45	-0 59	-0 54	0.1	0.1	0.1	201°	0.4	291°	0.1	209°	0.4	122°	
1263	Eatons Neck Pt., 1.8 miles west of	15	40° 57'	73° 26'	-1 11	-1 09	-0 32	-0 44	0.2	0.1	--	--	0.5	199°	--	--	0.6	068°	
1265	Huntington Bay, off East Fort Point	30	40° 55.60'	73° 25.05'	+0 02	+0 09	+0 24	+0 39	0.2	0.1	--	--	0.5	190°	--	--	0.5	014°	
	do.	15	40° 55.60'	73° 25.05'	-0 46	+0 05	+0 15	-0 28	0.1	0.1	--	--	0.4	179°	--	--	0.3	007°	
1267	Northport Bay entrance (in channel)	15	40° 54.53'	73° 24.45'	-0 03	+0 09	+0 22	+0 18	0.1	0.1	--	--	0.4	100°	--	--	0.4	267°	
1269	Northport Bay, south of Duck I. Bluff	15	40° 55'	73° 23'	+0 29	+0 46	+0 08	-0 20	0.1	0.1	--	--	0.4	007°	--	--	0.3	286°	
1271	Long Neck Point, 0.6 mile south of	15	41° 01.58'	73° 28.68'	-1 12	-0 10	+1 24	-0 01	0.3	0.1	--	--	0.8	252°	--	--	0.5	073°	
	do.	27	41° 01.58'	73° 28.68'	-0 57	-0 13	+1 22	-0 03	0.2	0.1	--	--	0.8	257°	--	--	0.5	080°	
1273	Lloyd Point, 1.3 miles NNW of	15	40° 57.95'	73° 29.70'	+1 24	+0 49	+1 30	+0 53	0.3	0.2	--	--	1.0	255°	--	--	0.9	055°	
	do.	40	40° 57.95'	73° 29.70'	+0 00	+0 08	+1 17	+0 25	0.3	0.2	--	--	1.0	269°	--	--	0.7	053°	
1275	Shippan Point, 1.3 miles SSE of	15	40° 59.90'	73° 31.00'	+0 36	+0 02	+0 23	+0 04	0.3	0.1	--	--	0.9	239°	--	--	0.9	055°	
	do.	40	40° 59.98'	73° 31.03'	+0 18	+0 06	+0 56	-0 22	0.2	0.2	--	--	0.7	247°	--	--	0.8	071°	
1277	The Cows, 2 miles SE of	14d	40° 59.31'	73° 29.75'	+0 39	+0 11	+0 42	+0 17	0.2	0.2	--	--	0.6	243°	--	--	0.6	072°	
	do.	47d	40° 59.31'	73° 29.75'	+0 03	-0 03	+0 37	+0 14	0.2	0.1	--	--	0.7	253°	--	--	0.5	080°	
	do.	86d	40° 59.31'	73° 29.75'	-0 25	-0 24	+0 13	+0 00	0.2	0.1	0.1	354°	0.7	263°	--	--	0.5	081°	
1279	Stamford Harbor entrance	3d	41° 00.92'	73° 32.22'	-1 19	-1 31	-2 11	-0 46	0.2	0.1	--	--	0.5	015°	0.2	107°	0.4	175°	
	do.	14d	41° 00.92'	73° 32.22'	-1 27	-1 26	-1 53	-0 49	0.2	0.1	--	--	0.5	023°	0.1	113°	0.4	174°	
	Oyster Bay																		
1281	Rocky Point, 1 mile east of	15	40° 55.15'	73° 30.03'	+0 19	+0 15	+0 24	+0 30	0.2	0.1	--	--	0.6	117°	--	--	0.5	306°	
1283	Harbor ent., south of Plum Point	7	40° 54'	73° 31'	-0 06	-0 01	+0 00	-0 11	0.2	0.2	--	--	0.7	244°	--	--	0.7	054°	
1285	Harbor, west of Soper Point	7	40° 53'	73° 32'	+0 24	+0 20	-0 03	+0 11	0.2	0.1	--	--	0.6	333°	--	--	0.4	140°	
1287	Cold Spring Harbor		40° 53'	73° 29'	Current weak and variable														
1289	Greenwich Point, 1.1 miles south of	15	40° 59.02'	73° 34.02'	+1 21	+0 58	+1 49	+1 01	0.2	0.2	--	--	0.7	258°	--	--	0.8	073°	
	do.	55	40° 59.02'	73° 34.02'	+1 24	+0 51	+0 51	+1 03	0.2	0.1	--	--	0.6	265°	--	--	0.4	069°	
1291	Greenwich Point, 2.5 miles south of	15	40° 57.60'	73° 33.68'	+0 47	+0 10	+0 57	+0 29	0.2	0.2	--	--	0.7	242°	--	--	0.7	052°	
	do.	55	40° 57.60'	73° 33.68'	-1 07	-0 04	-0 27	-0 17	0.2	0.1	--	--	0.5	256°	--	--	0.4	079°	
1293	Oak Neck Point, 0.6 mile north of	15	40° 55.50'	73° 34.02'	+2 51	+1 58	+2 25	+2 11	0.2	0.2	--	--	0.5	260°	--	--	0.6	072°	
	do.	30	40° 55.50'	73° 34.02'	+0 54	+1 35	+1 41	+1 51	0.2	0.1	--	--	0.5	300°	--	--	0.5	090°	
1295	Coscob Harbor, off Goose Island	15	41° 01'	73° 36'	+0 11	-0 15	+0 00	-0 55	0.2	0.1	--	--	0.5	013°	--	--	0.4	188°	
1297	Captain Hbr. Ent., 0.6 mile southwest of	15	40° 59.65'	73° 35.67'	+1 32	+1 44	+1 49	+2 00	0.2	0.2	--	--	0.6	312°	--	--	0.7	118°	
	do.	30	40° 59.65'	73° 35.67'	+1 22	+1 14	+0 58	+1 58	0.2	0.2	--	--	0.5	319°	--	--	0.7	142°	
1299	Parsonage Point, 1.3 n.mi. ESE of	15d	40° 56.25'	73° 39.49'	+0 47	+0 24	+1 10	+1 00	0.2	0.1	--	--	0.5	230°	--	--	0.4	051°	

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS							
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb	
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.
	LONG ISLAND SOUND Time meridian, 75°W	ft	<b>North</b>	<b>West</b>	<b>h</b>	<b>m</b>	<b>h</b>	<b>m</b>	<b>h</b>	<b>m</b>	<b>h</b>	<b>m</b>	<b>h</b>	<b>m</b>	<b>h</b>	<b>m</b>	<b>h</b>	<b>m</b>
					<b>on The Race, p.48</b>													
1301	Peningo Neck, 0.6 mi. off Parsonage Pt	15	40° 56.32'	73° 40.50'	+1 09	+0 23	+1 16	+0 27	0.2	0.2	--	--	0.7	226°	--	--	0.7	035°
1303	Matinecock Point, 1.7 miles northwest of	10d	40° 55.47'	73° 39.35'	+0 58	+0 19	+1 01	+0 49	0.2	0.1	0.1	147°	0.5	233°	--	--	0.5	055°
	do.	30d	40° 55.47'	73° 39.35'	+0 18	-0 10	+0 43	+0 32	0.2	0.1	--	--	0.5	244°	0.1	163°	0.4	063°
	do.	46d	40° 55.47'	73° 39.35'	-0 57	-0 29	-0 08	-0 17	0.1	0.1	0.1	351°	0.4	251°	0.1	166°	0.3	072°
1305	Matinecock Point, 0.7 mile NNW of	15	40° 54.80'	73° 38.40'	+1 14	+0 27	+1 34	+0 36	0.2	0.1	--	--	0.6	233°	--	--	0.6	046°
	do.	40	40° 54.80'	73° 38.40'	+0 35	+0 07	+1 33	+0 20	0.2	0.1	--	--	0.7	262°	--	--	0.5	053°
1307	Hempstead Harbor, 0.3 mile north of	15	40° 51.72'	73° 40.47'	Current weak and variable													
1309	Hempstead Harbor, 0.5 mile east of	15	40° 51.50'	73° 39.98'	--	+0 00	--	-0 31	0.1	--	--	--	0.3	157°	--	--	0.1	331°
1311	Hempstead Harbor, off Glenwood Landing	10	40° 49.68'	73° 39.00'	-0 38	-0 19	+0 03	-0 59	0.3	0.2	--	--	0.9	138°	--	--	0.7	320°
1313	Old Town Wharf, 0.5 mile north of	5	40° 48.78'	73° 39.08'	--	-0 27	--	--	0.1	--	--	--	0.4	196°	--	--	--	--
1315	Delancey Point, 1 mile southeast of	15	40° 55.00'	73° 42.73'	+0 45	+0 09	+1 14	-0 05	0.2	0.1	--	--	0.5	244°	--	--	0.4	059°
	do.	33	40° 55.00'	73° 42.73'	--	+0 06	+1 09	-0 39	0.1	0.1	--	--	0.4	239°	--	--	0.3	069°
1317	Mamaroneck Harbor		40° 56'	73° 43'	Current weak and variable													
1319	Echo Bay entrance		40° 54'	73° 46'	Current weak and variable													
					<b>on Throgs Neck, p.52</b>													
1321	Davids Island, channel 0.1 mile east of		40° 53'	73° 46'	Current weak and variable													
1323	Huckleberry Island, 0.2 mile NW of	15	40° 53.43'	73° 45.43'	-3 25	-4 16	-3 21	-3 40	0.1	0.2	--	--	0.2	069°	--	--	0.2	234°
1325	Huckleberry Island, 0.6 mile SE of	15	40° 52.80'	73° 44.75'	-2 35	-0 33	-1 53	-2 24	0.2	0.3	--	--	0.4	025°	--	--	0.3	226°
1327	Execution Rocks	11d	40° 52.39'	73° 44.00'	-2 30	-2 18	-2 14	-2 02	0.3	0.4	--	--	0.5	043°	--	--	0.4	232°
	do.	50d	40° 52.39'	73° 44.00'	-2 40	-2 33	-2 45	-2 53	0.3	0.5	--	--	0.4	058°	--	--	0.5	232°
	do.	96d	40° 52.39'	73° 44.00'	-2 36	-2 51	-3 10	-2 52	0.2	0.4	--	--	0.4	057°	--	--	0.4	219°
1329	Manhasset Bay entrance	15	40° 49.75'	73° 43.78'	+2 48	+2 18	+2 48	+3 04	0.2	0.3	--	--	0.4	115°	--	--	0.3	307°
1331	Hart Island, 0.2 mile north of	15	40° 51.82'	73° 46.26'	-2 33	-4 04	-3 56	-3 10	0.1	0.3	--	--	0.2	098°	--	--	0.3	264°
1333	Hart Island, southeast of	13d	40° 50.59'	73° 45.73'	-1 47	-0 10	-1 11	-0 42	0.5	0.5	0.1	122°	0.7	035°	0.2	125°	0.5	201°
	do.	59d	40° 50.59'	73° 45.73'	-1 10	-0 46	-2 09	-1 10	0.3	0.6	--	--	0.5	030°	0.1	115°	0.6	194°
	do.	98d	40° 50.59'	73° 45.73'	-1 12	-0 58	-1 58	-1 36	0.3	0.6	--	--	0.4	009°	--	--	0.6	189°
1335	Hart Island, 0.3 n.mi. SSE of	15d	40° 50.43'	73° 45.94'	-1 37	-1 28	-1 46	-1 10	0.3	0.5	0.1	114°	0.5	040°	0.2	119°	0.5	201°
1337	Hart Island and City Island, between	15	40° 51.37'	73° 46.73'	-1 58	-3 00	-1 58	-2 27	0.1	0.2	--	--	0.2	349°	--	--	0.2	143°
1339	City Island Bridge	10	40° 51.47'	73° 47.60'	-3 09	-5 01	-4 06	-4 13	0.1	0.4	--	--	0.2	352°	--	--	0.5	198°
1341	Eastchester Bay, near Big Tom	5	40° 50.20'	73° 47.72'	-3 15	-4 00	-3 46	-3 14	0.2	0.4	--	--	0.3	097°	--	--	0.4	294°
1343	Hutchinson R., Pelham Highway Bridge	5	40° 51.70'	73° 49.00'	+2 31	+2 28	+2 12	+2 13	0.5	0.4	--	--	0.8	305°	--	--	0.4	078°
1345	City Island, 0.6 mile southeast of	15	40° 49.72'	73° 46.47'	-1 27	-0 54	-2 38	-3 27	0.3	0.4	--	--	0.5	038°	--	--	0.4	251°
1347	Elm Point, 0.2 mile west of	15	40° 48.92'	73° 46.02'	-1 43	-3 25	-1 27	-0 13	0.2	0.6	--	--	0.2	026°	--	--	0.6	213°
1349	Throgs Neck, 0.3 n.mi. NE of	15d	40° 48.64'	73° 47.13'	-0 31	-0 40	-0 52	+0 08	0.6	0.6	0.1	312°	1.0	015°	0.1	286°	0.6	193°
1351	Throgs Neck, 0.4 mile south of	15	40° 47.90'	73° 47.45'	+0 26	+0 09	+0 41	+0 19	0.5	0.6	--	--	0.8	090°	--	--	0.6	278°
1353	Throgs Neck, 0.2 mile S of (Willets Point)	15	40° 48.12'	73° 47.48'	-0 10	-0 09	+0 21	+0 13	0.4	0.7	--	--	0.6	090°	--	--	0.8	289°
1355	THROGS NECK BRIDGE	14d	40° 48.06'	73° 47.53'	Daily predictions													
	do.	36d	40° 48.06'	73° 47.53'	-0 30	+0 02	-0 35	-0 05	0.8	0.8	0.1	182°	1.6	106°	--	--	1.0	262°
	do.	59d	40° 48.06'	73° 47.53'	-0 41	-0 08	-0 53	+0 10	0.6	0.8	0.1	353°	1.3	105°	--	--	0.9	268°
	EAST RIVER				<b>on Hell Gate, p.56</b>													
1357	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	--	--	1.3	110°	--	--	1.1	285°
1359	Bronx-Whitestone Bridge, East of	14	40° 48.1'	73° 49.6'	-0 34	-0 46	-0 10	-1 27	0.5	0.2	--	--	1.7	076°	--	--	1.0	247°
1361	College Point Reef, 0.25 n.mi. NW of	15d	40° 48.06'	73° 51.28'	-0 27	-0 47	-0 32	-1 00	0.4	0.3	0.1	351°	1.5	074°	0.1	350°	1.4	261°
1363	Flushing Creek entrance		40° 45.9'	73° 50.7'	Current weak and variable													
1365	Rikers I. chan., off La Guardia Field		40° 47'	73° 53'	+0 04	-0 04	+0 04	-0 08	0.3	0.3	--	--	1.1	088°	--	--	1.3	261°

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS											
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb					
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.				
	<b>EAST RIVER</b> Time meridian, 75°W	ft	<b>North</b>	<b>West</b>	h	m	h	m	h	m	h	m										
					<b>on Hell Gate, p.56</b>																	
					Current weak and variable																	
1367	Bronx River (1 mile north of Hunts Pt.)	15	40° 48.9'	73° 52.5'	+0 01	-0 10	+0 01	-0 05	0.5	0.3	--	--	1.7	108°	--	--	1.3	280°				
1369	Hunts Point, southwest of		40° 48'	73° 53'	-0 17	+0 04	-0 06	-0 12	0.4	0.3	--	--	1.5	054°	--	--	1.2	252°				
1371	South Brother Island, NW of		40° 47.8'	73° 54.1'	+0 04	+0 02	-0 01	-0 11	1.0	0.5	--	--	3.4	040°	--	--	2.5	220°				
1373	Off Winthrop Ave., Astoria		40° 46.9'	73° 56.2'	-0 23	+0 05	-0 29	-0 32	0.7	0.1	--	--	2.3	103°	--	--	0.6	288°				
1375	Mill Rock, northeast of		40° 46.8'	73° 56.5'	-0 26	+0 08	-0 02	-0 17	0.4	0.2	--	--	1.2	000°	--	--	1.0	180°				
1377	Mill Rock, west of		40° 46.7'	73° 56.3'	<b>Daily predictions</b>								--	--	3.4	050°	--	--	4.6	230°		
1379	HELL GATE (off Mill Rock)																					
	<i>Roosevelt Island</i>																					
1381	west of, off 75th Street		40° 46'	73° 57'	-0 02	-0 04	-0 08	+0 07	1.1	1.0	--	--	3.8	037°	--	--	4.7	215°				
1383	east of, off 36th Avenue		40° 46'	73° 57'	-0 08	-0 04	-0 08	-0 11	1.0	0.7	--	--	3.5	030°	--	--	3.4	210°				
1385	west of, off 67th Street	40° 45.74'	73° 57.24'	+0 13	-0 08	+0 06	+0 11	1.1	0.9	--	--	3.6	011°	--	--	4.0	230°					
1387	west of, off 63rd Street	40° 45.58'	73° 57.27'	-0 10	-0 08	+0 00	+0 03	0.8	0.6	--	--	2.8	036°	--	--	2.9	223°					
1389	east of	40° 45.49'	73° 57.08'	+0 00	-0 06	+0 02	+0 07	0.8	0.6	--	--	2.8	028°	--	--	2.6	200°					
1391	Manhattan, off 31st Street	40° 44.38'	73° 58.17'	+0 09	-0 11	-0 02	+0 36	0.4	0.5	--	--	1.5	000°	--	--	2.1	175°					
1393	Newtown Creek entrance	40° 44'	73° 57'	Current weak and variable																		
1395	Pier 67, off 19th Street	40° 44'	73° 58'	-0 08	+0 08	-0 08	+0 07	0.5	0.4	--	--	1.8	355°	--	--	1.9	179°					
1397	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	--	--	2.7	020°	--	--	2.9	220°					
1399	Manhattan Bridge, East of	40° 42.5'	73° 59.4'	-0 28	+0 19	-0 13	+0 03	0.7	0.5	0.1	161°	2.5	083°	--	--	2.2	259°					
1401	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	--	--	2.9	046°	--	--	3.5	222°					
	<b>HARLEM RIVER</b>																					
1403	East 107th Street	15	40° 47.4'	73° 56.1'	-0 08	-0 03	-1 09	-1 39	0.2	0.2	--	--	0.8	206°	--	--	0.8	030°				
1405	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	--	--	1.2	140°	--	--	1.3	330°				
1407	Madison Ave. Bridge		40° 48.8'	73° 56.1'	-0 20	+0 18	-0 21	-0 14	0.5	0.4	--	--	1.8	180°	--	--	1.7	000°				
1409	Macombs Dam Bridge		40° 49.7'	73° 56.1'	-0 20	+0 14	-0 22	-0 11	0.5	0.3	--	--	1.7	180°	--	--	1.4	000°				
1411	High Bridge		40° 50.5'	73° 55.9'	-0 20	+0 08	-0 23	-0 08	0.6	0.4	--	--	2.0	189°	--	--	2.0	015°				
1413	West 207th Street Bridge		40° 51.8'	73° 54.9'	-0 22	+0 05	-0 22	-0 02	0.6	0.4	--	--	2.0	215°	--	--	2.0	035°				
1415	Broadway Bridge		40° 52.4'	73° 54.7'	-0 23	+0 08	-0 20	+0 04	0.6	0.5	--	--	2.1	116°	--	--	2.3	299°				
1417	Henry Hudson Bridge, 0.7 nmi. SE of		40° 52.6'	73° 55.3'	+0 12	+0 31	-0 31	+0 41	0.2	0.3	--	--	1.8	137°	--	--	1.3	325°				
	<b>LONG ISLAND, South Coast</b>																					
					<b>on The Narrows, p.60</b>																	
1419	Fire Island Lighted Whistle Bouy 2FI	40° 29'	73° 11'	Current weak and variable																		
1421	Fire Island Inlet, 22 miles S of	40° 16'	73° 16'	Current weak and variable																		
1423	Shinnecock Canal, railroad bridge <16>	40° 53.2'	72° 30.1'				-0 42	--	0.8	--	--	--	--	--	--	--	1.5	180°				
1425	Ponquogue bridge, Shinnecock Bay	40° 50.7'	72° 30.1'	+1 04	+0 34	+0 19	+0 30	0.5	0.3	--	--	0.8	250°	--	--	0.6	090°					
1427	Shinnecock Inlet	40° 50.6'	72° 28.7'	+0 04	-0 22	-0 38	-0 50	1.6	1.2	--	--	2.5	350°	--	--	2.3	170°					
1429	Fire I. Inlet, 0.5 mi. S of Oak Beach	40° 37.78'	73° 18.40'	+0 07	-0 02	+0 21	-0 08	1.5	1.3	--	--	2.4	082°	--	--	2.4	244°					
1431	Jones Inlet	40° 35.5'	73° 34.0'	-1 15	-0 49	-0 48	-1 05	1.8	1.3	--	--	3.1	035°	--	--	2.6	217°					
1433	Long Beach, inside, between bridges	40° 35.7'	73° 39.6'	-0 44	+0 22	+0 24	-0 07	0.3	0.3	--	--	0.5	076°	--	--	0.6	277°					
1435	East Rockaway Inlet	40° 35.4'	73° 45.3'	-1 36	-1 36	-1 11	-1 45	1.4	1.2	--	--	2.2	042°	--	--	2.3	227°					
1437	Ambrose Light	40° 27'	73° 49'	Current weak and variable																		
1439	Sandy Hook App. Lighted Horn Bouy 2A	40° 27'	73° 55'	See table 5.																		
	<b>JAMAICA BAY</b>																					
1441	Rockaway Point	14	40° 32.18'	73° 56.48'	-2 26	-2 35	-1 46	-3 09	1.2	0.6	0.2	228°	1.9	301°	0.2	217°	1.1	140°				
1443	Rockaway Inlet entrance		40° 33.7'	73° 56.1'	-1 45	-2 21	-1 41	-2 18	1.1	1.4	--	--	1.8	085°	--	--	2.7	244°				
1445	Rockaway Inlet		40° 34.12'	73° 53.48'	-1 43	-2 01	-1 23	-2 36	1.0	0.8	--	--	1.6	066°	0.1	344°	1.5	261°				
1447	Barren Island, east of		40° 35.0'	73° 53.0'	-1 49	-2 29	-2 11	-2 26	0.8	0.9	--	--	1.2	004°	--	--	1.7	192°				
1449	Canarsie (midchannel, off pier)		40° 37.6'	73° 53.0'	-1 44	-1 39	-1 26	-2 13	0.3	0.4	--	--	0.5	045°	--	--	0.7	225°				
1451	Beach Channel (bridge)		40° 35.0'	73° 49.0'	-1 38	-1 14	-1 05	-1 32	1.2	1.1	--	--	1.9	062°	--	--	2.0	225°				
1453	Grass Hassock Channel		40° 36.6'	73° 47.1'	-1 11	-1 03	-1 05	-1 01	0.6	0.5	--	--	1.0	052°	--	--	1.0	228°				

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No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS								
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb		
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.	
	NEW YORK HARBOR ENTRANCE Time meridian, 75°W	ft	<b>North</b>	<b>West</b>	h	m	h	m	h	m	h	m							
			<b>on The Narrows, p.60</b>																
1455	Ambrose Channel	15	40° 31.00'	73° 58.48'	-0 47	-1 11	-0 33	-0 14	1.0	0.9	0.1	025°	1.6	303°	--	--	1.7	123°	
1457	Norton Point, WSW of	16	40° 33.30'	74° 01.30'	-0 03	-1 02	+0 18	+0 20	0.6	0.7	0.3	263°	1.0	341°	0.1	071°	1.2	166°	
1459	THE NARROWS, midchannel	17	40° 36.56'	74° 02.77'	<b>Daily predictions</b>						0.2	064°	1.6	336°	--	--	1.9	164°	
	do.	30	40° 36.56'	74° 02.77'	-0 23	-0 07	+0 13	+0 14	1.1	0.9	--	--	1.7	332°	0.1	246°	1.7	160°	
	do.	43	40° 36.56'	74° 02.77'	-0 44	-0 11	+0 17	+0 00	1.2	0.9	0.1	244°	1.8	332°	0.1	244°	1.6	156°	
	do.	63	40° 36.56'	74° 02.77'	-1 10	-0 31	+0 10	-0 13	1.1	0.7	0.1	240°	1.7	331°	--	--	1.3	147°	
	NEW YORK HARBOR, Upper Bay																		
1461	Bay Ridge, west of	22	40° 37.54'	74° 03.24'	-0 01	+0 19	+0 34	+0 52	0.9	0.8	0.1	104°	1.4	354°	--	--	1.5	185°	
1463	Bay Ridge Channel	15	40° 39.18'	74° 01.54'	-0 48	-1 27	-0 04	-1 24	0.7	0.4	--	--	1.0	032°	0.1	125°	0.7	212°	
	do.	36	40° 39.18'	74° 01.54'	-1 25	-2 37	-0 58	-0 16	0.4	0.2	--	--	0.6	037°	--	--	0.4	225°	
1465	Red Hook Channel		40° 40.0'	74° 01.2'	-0 53	-0 45	-0 16	-0 37	0.6	0.4	--	--	1.0	353°	--	--	0.7	170°	
1467	Robbins Reef Light, east of		40° 39.45'	74° 03.50'	+0 26	+0 15	-0 06	+0 17	0.8	0.9	--	--	1.3	016°	--	--	1.6	204°	
1469	Red Hook, 1 mile west of		40° 40.5'	74° 02.5'	+0 51	+1 05	+0 39	+0 45	0.8	1.2	--	--	1.3	024°	--	--	2.3	206°	
1471	Statue of Liberty, east of		40° 41.4'	74° 01.8'	+1 07	+0 57	+0 48	+0 52	0.9	1.0	--	--	1.4	031°	--	--	1.9	205°	
	HUDSON RIVER, Midchannel <17>																		
			<b>on George Washington Bridge, p.64</b>																
1473	Hudson River entrance	14	40° 42.30'	74° 01.12'	-0 28	-0 28	-0 25	+0 18	0.8	0.5	0.1	292°	1.4	009°	--	--	1.4	199°	
1475	Grants Tomb	18	40° 48.48'	73° 58.06'	-0 13	-0 22	+0 11	-0 33	1.0	0.7	--	--	1.8	025°	--	--	1.8	208°	
1477	GEORGE WASHINGTON BRIDGE	14d	40° 50.97'	73° 56.99'	<b>Daily predictions</b>						0.3	288°	1.8	010°	0.1	289°	2.5	203°	
	do.	40d	40° 50.97'	73° 56.99'	-0 35	-0 38	-0 04	-0 19	1.0	0.8	0.2	285°	1.7	012°	--	--	1.9	198°	
	do.	63d	40° 50.97'	73° 56.99'	-0 56	-0 40	+0 04	-0 36	0.7	0.4	0.1	266°	1.3	355°	--	--	1.1	177°	
1479	Spuyten Duyvil		40° 53'	73° 56'	-0 06	+0 28	+0 10	+0 24	0.9	0.8	--	--	1.6	020°	--	--	2.1	200°	
1481	Riverdale		40° 54'	73° 55'	+0 54	+0 27	+0 15	+0 32	0.8	0.8	--	--	1.4	015°	--	--	2.0	200°	
1483	Mount St. Vincent College, SW of	15	40° 54.42'	73° 54.48'	+0 09	+0 20	+0 27	+0 29	0.8	0.5	--	--	1.5	007°	--	--	1.4	190°	
1485	Dobbs Ferry		41° 01'	73° 53'	+1 13	+0 53	+0 37	+0 49	0.7	0.7	--	--	1.3	010°	--	--	1.7	190°	
1487	Tappan Zee Bridge	5d	41° 04.00'	73° 52.90'	+1 12	+0 55	+0 52	+1 06	0.6	0.8	--	--	1.1	356°	--	--	1.9	175°	
	do.	16d	41° 04.00'	73° 52.90'	+0 50	+0 29	+1 04	+1 05	0.7	0.7	--	--	1.2	354°	0.1	265°	1.6	174°	
	do.	35d	41° 04.00'	73° 52.90'	+0 14	+0 05	+0 51	+0 54	0.5	0.4	0.1	265°	0.8	349°	--	--	0.9	178°	
1489	Tarrytown		41° 05'	73° 53'	+1 20	+1 06	+0 53	+1 02	0.6	0.6	--	--	1.1	000°	--	--	1.5	180°	
1491	Ossining		41° 10'	73° 54'	+1 33	+1 22	+1 16	+1 19	0.5	0.5	--	--	0.9	320°	--	--	1.3	140°	
1493	Haverstraw	4d	41° 12.55'	73° 57.07'	+2 29	+2 11	+1 58	+2 01	0.4	0.6	--	--	0.8	348°	--	--	1.5	165°	
	do.	12d	41° 12.55'	73° 57.07'	+2 04	+2 10	+2 14	+1 45	0.5	0.4	--	--	1.0	345°	--	--	1.1	166°	
	do.	20d	41° 12.55'	73° 57.07'	+1 26	+1 46	+2 14	+1 31	0.5	0.3	0.1	076°	0.8	344°	0.1	073°	0.7	162°	
1495	Stony Point	14d	41° 14.49'	73° 58.00'	+2 09	+1 55	+1 46	+2 00	0.6	0.6	0.1	069°	1.0	348°	--	--	1.5	154°	
	do.	50d	41° 14.49'	73° 58.00'	+1 26	+1 50	+2 21	+1 40	0.7	0.5	--	--	1.3	334°	0.1	250°	1.1	165°	
	do.	83d	41° 14.49'	73° 58.00'	+1 34	+1 57	+2 22	+1 36	0.7	0.2	--	--	1.3	338°	--	--	0.6	170°	
1497	Peekskill		41° 17'	73° 57'	+1 53	+1 44	+1 46	+1 42	0.5	0.5	--	--	0.8	000°	--	--	1.2	180°	
1499	Bear Mountain Bridge	13d	41° 18.95'	73° 59.03'	+2 18	+1 32	+1 40	+2 02	0.4	0.6	--	--	0.6	000°	--	--	1.4	180°	
	do.	52d	41° 18.95'	73° 59.03'	+1 58	+1 46	+2 02	+2 05	0.6	0.5	--	--	1.0	343°	--	--	1.2	167°	
	do.	88d	41° 18.95'	73° 59.03'	+1 34	+1 38	+2 07	+2 07	0.6	0.4	--	--	1.0	339°	--	--	0.9	161°	
1501	Highland Falls		41° 22'	73° 58'	+2 07	+1 57	+1 57	+2 02	0.6	0.5	--	--	1.0	005°	--	--	1.2	185°	
1503	West Point, off Duck Island		41° 24'	73° 57'	+2 15	+2 07	+2 04	+2 04	0.6	0.4	--	--	1.0	010°	--	--	1.1	190°	
1505	Newburgh Beacon Bridge	4d	41° 31.00'	73° 59.50'	+2 19	+2 19	+2 25	+2 19	0.6	0.5	--	--	1.2	350°	--	--	1.2	171°	
	do.	17d	41° 31.00'	73° 59.50'	+2 15	+2 08	+2 25	+2 18	0.6	0.4	--	--	1.0	346°	--	--	1.0	169°	
	do.	24d	41° 31.00'	73° 59.50'	+2 13	+2 07	+2 23	+2 18	0.5	0.3	--	--	0.9	345°	--	--	0.9	168°	
1507	Roseton	5d	41° 33.75'	73° 58.23'	+2 57	+2 36	+2 41	+2 51	0.6	0.6	0.1	123°	1.1	039°	0.1	128°	1.4	213°	
	do.	15d	41° 33.75'	73° 58.23'	+2 56	+2 37	+2 43	+2 50	0.6	0.5	--	--	1.1	038°	0.1	128°	1.3	214°	
	do.	41d	41° 33.75'	73° 58.23'	+2 53	+2 32	+2 44	+3 01	0.5	0.4	--	--	0.9	031°	--	--	0.9	215°	
1509	New Hamburg		41° 35'	73° 57'	+2 48	+2 40	+2 24	+2 33	0.6	0.4	--	--	1.0	005°	--	--	1.1	195°	
1511	Mid-Hudson Suspension Bridge	16d	41° 42.10'	73° 56.76'	+3 15	+2 49	+2 54	+3 09	0.7	0.6	--	--	1.2	005°	--	--	1.5	188°	
	do.	32d	41° 42.10'	73° 56.76'	+3 14	+2 47	+2 50	+3 08	0.6	0.5	--	--	1.1	005°	--	--	1.4	186°	
	do.	48d	41° 42.10'	73° 56.76'	+3 12	+2 45	+2 46	+3 09	0.5	0.5	--	--	0.9	005°	--	--	1.2	185°	
1513	Hyde Park		41° 47'	73° 57'	+3 25	+3 08	+2 43	+3 00	0.7	0.5	--	--	1.2	005°	--	--	1.3	185°	

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS									
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb			
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.		
	HUDSON RIVER, Midchannel <17> Time meridian, 75°W	ft	<b>North</b>	<b>West</b>	h	m	h	m	h	m	h	m								
			<b>on Kingston-Rhinecliff Bridge, p.68</b>																	
1515	Kingston Point, south of	4d	41° 55.10'	73° 57.57'	-0 31	-0 09	-0 07	-0 24	1.2	1.1	0.1	090°	1.3	009°	0.1	095°	1.5	177°		
	do.	17d	41° 55.10'	73° 57.57'	-0 30	-0 10	-0 10	-0 22	1.2	1.1	0.1	090°	1.2	010°	0.1	095°	1.4	177°		
	do.	30d	41° 55.10'	73° 57.57'	-0 30	-0 07	-0 07	-0 25	1.0	0.9	0.1	090°	1.0	011°	0.1	095°	1.1	178°		
1517	KINGSTON-RHINECLIFF BRIDGE	14d	41° 58.63'	73° 57.13'	<b>Daily predictions</b>								1.1	011°					1.3	191°
	do.	4d	41° 58.63'	73° 57.13'	+0 00	-0 01	+0 01	-0 01	1.1	1.1			1.1	011°					1.4	192°
	do.	27d	51° 58.63'	73° 57.13'	-0 02	-0 01	-0 02	+0 01	0.8	0.9			0.9	010°					1.1	190°
1519	Barrytown	4d	42° 00'	73° 56'	+0 21	+0 24	-0 05	-0 04	1.3	1.3			1.4	010°					1.7	190°
1521	Saugerties	4d	42° 04'	73° 56'	+0 38	+0 45	+0 14	+0 06	1.4	1.5			1.5	000°					1.9	180°
1523	Silver Point, south of	4d	42° 08.29'	73° 54.51'	+0 38	+0 54	+0 41	+0 28	1.3	1.2			1.4	025°					1.5	205°
	do.	14d	42° 08.29'	73° 54.51'	+0 38	+0 54	+0 40	+0 29	1.2	1.1			1.3	025°					1.5	205°
	do.	31d	42° 08.29'	73° 54.51'	+0 28	+0 54	+0 37	+0 27	1.0	0.8			1.0	024°					1.1	205°
1525	Catskill	4d	42° 13'	73° 51'	+1 11	+1 30	+0 54	+0 36	1.5	1.5			1.6	355°					2.0	175°
1527	Hudson	14d	42° 14.88'	73° 49.10'	+1 22	+1 17	+0 46	+0 48	1.4	1.5			1.5	061°					1.9	242°
	do.	24d	42° 14.88'	73° 49.10'	+1 22	+1 17	+0 44	+0 47	1.3	1.4			1.4	061°					1.8	242°
	do.	40d	42° 14.88'	73° 49.10'	+1 21	+1 14	+0 40	+0 52	1.0	1.1			1.1	060°					1.4	238°
1529	Coxsackie	4d	42° 21.08'	73° 47.40'	+1 31	+1 17	+1 01	+1 04	1.4	1.1			1.5	007°					1.5	190°
	do.	14d	42° 21.08'	73° 47.40'	+1 30	+1 16	+1 00	+1 04	1.3	1.1			1.4	007°					1.4	189°
	do.	31d	42° 21.08'	73° 47.40'	+1 28	+1 16	+0 58	+1 04	1.1	0.8			1.1	007°					1.1	184°
1531	Houghtaling Island, south of	4d	42° 25.36'	73° 46.80'	+1 41	+1 12	+1 10	+1 12	1.2	0.9			1.2	000°					1.2	180°
	do.	14d	42° 25.36'	73° 46.80'	+1 41	+1 12	+1 09	+1 15	1.1	0.8			1.2	359°					1.1	180°
	do.	27d	42° 25.36'	73° 46.80'	+1 40	+1 09	+1 07	+1 14	0.9	0.7			1.0	357°					0.9	181°
1533	New Baltimore	4d	42° 27'	73° 47'	+2 07	+2 07	+1 58	+1 58	1.2	1.1			1.3	355°					1.5	175°
1535	Castleton-on-Hudson Bridge	6d	42° 30.26'	73° 46.64'	+1 50	+1 09	+1 06	+1 23	1.0	0.7			1.0	051°					0.9	233°
	do.	16d	42° 30.26'	73° 46.64'	+1 50	+1 10	+1 04	+1 20	0.9	0.7			1.0	050°					0.9	232°
	do.	32d	42° 30.26'	73° 46.64'	+1 48	+1 09	+1 00	+1 16	0.8	0.6			0.8	049°					0.8	229°
1537	Port of Albany	7d	42° 37.39'	73° 45.34'	+2 08	+1 09	+1 27	+0 48	0.4	0.4			0.5	021°					0.5	198°
	do.	16d	42° 37.39'	73° 45.34'	+2 17	+1 10	+1 26	+2 14	0.4	0.4			0.4	020°					0.5	198°
	do.	30d	42° 37.39'	73° 45.34'	+2 18	+1 11	+1 27	+2 06	0.4	0.4			0.4	018°					0.5	200°
1539	Troy (below the locks) <19>		42° 44'	73° 42'	--	--	--	--	--	--			--	--					--	--
	NEW YORK HARBOR, Lower Bay		<b>on The Narrows, p.60</b>																	
1541	Sandy Hook Channel	15	40° 29.06'	74° 00.06'	-1 23	-2 04	-1 14	-1 30	1.0	0.5			1.6	286°					1.9	094°
1543	Sandy Hook Chan., 0.4 mi. W of N. Tip		40° 28.79'	74° 01.30'	-1 41	-1 56	-1 38	-1 57	1.3	0.9			2.0	235°					1.6	050°
1545	Sandy Hook Pt., 2 mi. W of (channel)		40° 28.8'	74° 03.6'	-1 35	-2 01	-1 58	-1 49	0.4	0.3			0.6	263°					0.6	086°
1547	Chapel Hill South Channel		40° 29.90'	74° 03.8'	-2 02	-2 31	-1 48	-2 15	0.4	0.3			0.7	255°					0.6	075°
1549	New Dorp Beach, 1.2 miles south of		40° 32.4'	74° 05.8'	-4 09	-3 37	-4 43	-4 23	0.3	0.3			0.4	225°					0.5	030°
1551	Old Orchard Shoal Lt., 1.2 mi. ENE of		40° 31.1'	74° 04.4'	-2 09	-2 08	-1 31	-2 09	0.4	0.2			0.7	270°					0.4	085°
1553	New Dorp Beach, 1.8 miles SE of <20>		40° 32.9'	74° 03.7'	--	--	--	--	--	--			0.5	045°					0.5	225°
1555	Midland Beach, 2.6 miles SE of <21>		40° 32.8'	74° 02.35'	--	+0 06	--	-0 06	0.5	0.7	0.2	270°	0.8	335°	0.2	068°			1.3	160°
1557	Coney Island Lt., 1.5 miles SSE of		40° 33.1'	74° 00.3'	-1 17	-1 57	-1 06	-1 00	0.7	0.7			1.1	310°					1.3	125°
1559	Hoffman Island, 0.2 mile west of		40° 35'	74° 04'	-1 33	-1 49	-0 25	-0 57	0.6	0.4			0.9	020°					0.8	210°
1561	Rockaway Inlet Jetty, 1 mile SW of		40° 31.8'	73° 57.2'	-2 06	-2 13	-1 36	-1 50	0.8	0.8			1.2	287°					1.4	142°
1563	Coney Island Channel, west end		40° 34.2'	74° 00.5'	-1 14	-0 45	-0 32	-0 55	0.7	0.6			1.1	293°					1.2	102°
	SANDY HOOK BAY <22>																			
1565	Highlands Bridge, Shrewsbury River		40° 23.8'	73° 58.8'	+0 31	+0 35	+0 25	+0 12	1.7	1.3			2.6	170°					2.5	--
1567	Seabright Bridge, Shrewsbury River		40° 21.9'	73° 58.5'	+1 05	+1 05	+0 44	+0 44	0.9	0.9			1.4	185°					1.7	--

Endnotes can be found at the end of table 2.

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No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS							
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb	
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.
	<b>RARITAN BAY</b> Time meridian, 75°W	ft	<b>North</b>	<b>West</b>	h	m	h	m	h	m	h	m						
			<b>on The Narrows, p.60</b>															
1569	Raritan Bay Reach Channel	15	40° 29.36'	74° 07.06'	-1 55	-2 41	-0 46	-0 58	0.4	0.2	--	--	0.6	285°	--	--	0.4	094°
1571	Keyport Channel entrance		40° 26.9'	74° 11.9'	Current weak and variable													
1573	Red Bank, 1.4 miles south of		40° 28.9'	74° 12.6'	-1 35	-2 13	-1 30	-1 51	0.4	0.3	--	--	0.6	278°	--	--	0.5	079°
1575	Seguine Point	14	40° 30.24'	74° 11.12'	-1 52	-2 51	-0 56	-2 15	0.4	0.2	--	--	0.7	281°	0.1	008°	0.3	079°
	do.	34	40° 30.24'	74° 11.12'	-3 28	-2 52	-0 21	-2 31	0.3	0.1	--	--	0.5	285°	--	--	0.2	105°
1577	Ward Point, ESE	14	40° 29.30'	74° 13.48'	-1 45	-1 59	-0 19	-1 01	0.5	0.3	0.1	328°	0.7	244°	0.1	133°	0.5	048°
	<b>RARITAN RIVER</b>																	
1579	Railroad Bridge, Raritan River	15	40° 29.54'	74° 17.00'	-2 02	-2 26	-1 23	-2 08	0.6	0.4	--	--	0.9	326°	--	--	0.7	147°
1581	Washington Canal, north entrance		40° 28.3'	74° 22.1'	-1 02	-1 26	-1 38	-2 58	1.0	0.8	--	--	1.5	240°	--	--	1.5	060°
1583	South River entrance		40° 28.7'	74° 22.7'	-1 45	-2 15	-0 35	-1 51	0.7	0.5	--	--	1.1	180°	--	--	1.0	000°
	<b>ARTHUR KILL</b>																	
1585	Tottenville, Arthur Kill River	15	40° 30.8'	74° 15.3'	-1 04	-1 26	-0 41	-1 30	0.7	0.6	--	--	1.0	023°	--	--	1.1	211°
	do.	32	40° 30.8'	74° 15.3'	-1 23	-1 06	-0 56	-1 10	0.4	0.3	--	--	0.6	026°	--	--	0.5	207°
1587	Tufts Point–Smoking Point		40° 33.4'	74° 13.4'	-0 38	-0 45	-0 32	-1 07	0.8	0.6	--	--	1.2	109°	--	--	1.2	267°
1589	Tremley Point Reach	21	40° 35.18'	74° 12.30'	-0 08	-0 55	+0 23	+0 22	0.6	0.4	--	--	0.9	015°	--	--	0.8	198°
1591	Elizabethport		40° 38.8'	74° 10.9'	+0 15	-0 10	+0 24	-0 03	0.9	0.6	--	--	1.4	090°	--	--	1.1	262°
	<b>KILL VAN KULL</b>																	
			<b>on Bergen Point Reach, p.72</b>															
			<b>Daily predictions</b>															
1593	BERGEN POINT REACH (BAYONNE BRIDGE)	16	40° 38.5'	74° 08.6'	-0 15	+0 02	+0 14	-0 04	0.8	0.9	0.1	346°	1.9	260°	--	--	1.4	078°
	do.	29	40° 38.5'	74° 08.6'							--	--	1.6	263°	--	--	1.3	079°
			<b>on The Narrows, p.60</b>															
1595	Bergen Point, East Reach	15	40° 38.42'	74° 07.48'	-1 24	-2 14	-1 43	-1 51	0.7	0.6	--	--	1.1	274°	--	--	1.2	094°
1597	New Brighton	15	40° 39.00'	74° 05.06'	-1 34	-2 09	-1 32	-1 50	0.8	1.0	--	--	1.3	262°	--	--	1.9	072°
	<b>NEWARK BAY</b>																	
1599	South Reach, Newark Bay	15	40° 39.36'	74° 08.24'	-0 46	-1 46	-0 59	-1 13	0.4	0.4	--	--	0.7	031°	0.0	296°	0.7	218°
	<b>HACKENSACK RIVER</b>																	
1601	Lincoln Highway Bridge, north of		40° 44'	74° 06'	+0 04	+0 11	+0 39	-0 21	0.6	0.4	--	--	0.9	017°	--	--	0.8	181°
	<b>PASSAIC RIVER</b>																	
1603	Lincoln Highway Bridge		40° 44'	74° 07'	-0 21	-0 20	-0 20	-0 27	0.4	0.3	--	--	0.6	009°	--	--	0.5	180°
	<b>NEW JERSEY COAST</b>																	
			<b>on Delaware Bay Entrance, p.76</b>															
1605	Shark River Entrance	5d	40° 11.24'	74° 00.76'	-2 26	-2 31	-2 33	-2 08	1.1	0.9	--	--	1.9	273°	--	--	1.5	098°
	do.	15d	40° 11.24'	74° 00.76'	-2 27	-2 30	-2 33	-2 10	0.9	0.7	--	--	1.5	275°	--	--	1.2	097°
1607	Manasquan Inlet		40° 06'	74° 02'	-1 03	-1 09	-1 39	-1 53	1.0	1.1	--	--	1.7	300°	--	--	1.8	120°
1609	Manasquan R., hwy. bridge, main chan		40° 06'	74° 03'	-1 01	-1 29	-1 42	-0 46	1.3	1.2	--	--	2.2	230°	--	--	2.1	050°
1611	Point Pleasant Canal, north bridge <54>		40° 05'	74° 04'	+1 26	+0 49	+0 21	+1 14	1.0	1.2	--	--	1.8	170°	--	--	2.0	350°
1613	Barnegat Inlet		39° 46'	74° 07'	+0 41	-0 27	-0 12	-0 08	1.3	1.5	--	--	2.2	270°	--	--	2.5	090°
1615	Manahawkin Drawbridge		39° 39'	74° 11'	+2 13	+2 04	+1 58	+3 25	0.6	0.5	--	--	1.1	030°	--	--	0.9	210°
1617	Absecon Inlet	9d	39° 22.59'	74° 24.87'	-1 30	-1 30	-1 21	-2 14	1.3	1.2	0.1	055°	2.2	328°	--	--	2.0	147°
	do.	42d	39° 22.59'	74° 24.87'	-1 22	-1 45	-1 23	-2 04	1.1	1.1	0.1	239°	1.9	327°	--	--	1.8	144°
1619	Corson's Inlet Entrance	15d	39° 12.50'	74° 39.11'	-1 53	-1 57	-2 04	-2 59	0.9	1.1	--	--	1.6	308°	--	--	1.8	129°
1621	Cape May, 72 miles east of		39° 04'	73° 25'	Current weak and variable													
1623	Five-Fathom Bank NE. Buoy 2 FB		38° 58'	74° 32'	Current weak and variable													

Endnotes can be found at the end of table 2.

TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS									
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb			
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.		
	NEW JERSEY COAST Time meridian, 75°W	ft	<b>North</b>	<b>West</b>	<b>h</b>	<b>m</b>	<b>h</b>	<b>m</b>	<b>h</b>	<b>m</b>										
			<b>on Delaware Bay Entrance, p.76</b>																	
1625	Five Fathom Bank Traffic Lane	35d	38° 47.30'	74° 42.68'	-2 10	-2 21	-1 27	-1 36	0.3	0.2	--	--	0.6	304°	--	--	0.4	121°		
	do	50d	38° 47.30'	74° 42.68'	-2 45	-1 57	-1 48	-2 16	0.2	0.2	--	--	0.4	302°	--	--	0.3	128°		
1627	McCrie Shoal		38° 51'	74° 51'	-0 54	-1 05	-1 10	-1 00	0.7	0.8	--	--	1.3	280°	--	--	1.4	100°		
1629	Cape May Harbor entrance	5d	38° 58.85'	74° 52.36'	-2 02	-1 59	-2 01	-2 06	0.9	1.0	--	--	1.6	324°	--	--	1.7	142°		
	do	15d	38° 58.85'	74° 52.36'	-1 42	-1 23	-1 34	-1 07	1.1	1.3	--	--	1.5	323°	--	--	1.7	142°		
	do	28d	38° 58.85'	74° 52.36'	-2 07	-2 01	-2 01	-2 01	0.7	0.8	--	--	1.2	322°	--	--	1.4	143°		
1631	Cape May Canal, east end		38° 57'	74° 54'	-2 07	-2 27	-2 20	-2 01	1.1	1.1	--	--	1.9	310°	--	--	1.9	130°		
1633	Cape May Canal, west end		38° 58'	74° 58'	-2 08	-2 27	-2 15	-2 12	0.5	0.5	--	--	0.9	264°	--	--	0.9	089°		
	DELAWARE BAY and RIVER																			
1635	Cape May Channel		38° 54'	74° 58'	-1 34	-2 09	-1 38	-1 41	0.9	1.4	--	--	1.5	306°	--	--	2.3	150°		
1637	Cape May Point, 1.4 n.mi. SSW of	15d	38° 54.37'	74° 58.68'	-1 24	-1 57	-1 29	-1 43	0.8	1.1	0.1	030°	1.5	309°	0.1	214°	1.8	130°		
	do	25d	38° 54.37'	74° 58.68'	-1 17	-1 44	-1 27	-1 27	0.6	0.7	0.1	038°	1.1	306°	0.1	223°	1.2	139°		
1639	Cape May Point, 2.7 n.mi. SSW of	15d	38° 53.40'	74° 59.13'	-1 50	-1 47	-1 14	-1 32	0.7	0.5	0.1	228°	1.2	299°	0.2	208°	0.9	146°		
1641	DELAWARE BAY ENTRANCE	22	38° 51.22'	75° 04.62'	<b>Daily predictions</b>															
1643	Cape Henlopen, 0.7 n.mi. ESE of	12d	38° 47.97'	75° 04.90'	-0 25	-0 32	-1 07	-0 59	1.0	1.4	--	--	1.8	331°	--	--	2.4	139°		
	do	70d	38° 47.97'	75° 04.90'	-1 46	-0 35	-0 51	-0 40	0.7	0.4	0.1	042°	1.2	317°	0.1	232°	0.7	150°		
1645	Cape Henlopen, 2 miles northeast of		38° 49.2'	75° 03.4'	+0 01	-0 18	-0 30	+0 03	1.1	1.4	--	--	2.0	315°	--	--	2.3	145°		
1647	Cape Henlopen, 3.0 n.mi. NNE of	17d	38° 51.22'	75° 04.62'	-0 02	-0 01	-0 01	+0 04	1.0	1.0	0.2	252°	1.7	342°	0.2	062°	1.7	152°		
	do	31d	38° 51.22'	75° 04.62'	-0 09	-0 12	+0 04	+0 02	1.1	0.9	0.1	250°	1.9	338°	0.1	065°	1.5	152°		
	do	57d	38° 51.22'	75° 04.62'	-0 18	-0 27	+0 17	+0 08	1.1	0.8	--	--	1.9	334°	0.0	245°	1.3	154°		
	do	96d	38° 51.22'	75° 04.62'	-0 30	-0 28	+0 11	+0 01	1.0	0.7	0.1	053°	1.8	333°	--	--	1.2	149°		
1649	Cape Henlopen, 4.8 n.mi. northeast of	18d	38° 51.55'	75° 01.47'	-0 43	-1 50	-1 09	-0 59	0.9	1.1	0.2	241°	1.5	322°	0.2	229°	1.8	150°		
	do	28d	38° 51.55'	75° 01.47'	-1 04	-1 39	-1 11	-0 51	0.6	0.7	0.1	228°	1.0	301°	0.2	220°	1.2	154°		
1651	Cape Henlopen, 5 miles north of		38° 53.0'	75° 05.3'	+0 02	+0 00	+0 14	+0 12	1.1	1.1	--	--	2.0	344°	--	--	1.9	173°		
1653	Breakwater Harbor		38° 47.6'	75° 06.5'	-1 15	-1 29	-1 41	-1 10	0.5	0.5	--	--	0.8	266°	--	--	0.9	078°		
1655	Roosevelt Inlet (between jetties) <24>		38° 47.5'	75° 09.5'	--	+1 31	--	+0 19	0.4	0.7	--	--	0.7	206°	--	--	1.1	030°		
1657	Broadkill Slough	14d	38° 53.78'	75° 12.63'	-0 56	-0 31	-0 30	-0 55	0.5	0.4	--	--	0.8	314°	0.1	223°	0.6	132°		
1659	Mispiration River mouth		38° 56.8'	75° 18.9'	+2 14	+1 50	+1 22	+1 18	0.9	0.6	--	--	1.5	025°	--	--	1.0	190°		
1661	Bay Shore Channel (north)	13d	39° 04.68'	74° 58.88'	-0 49	-0 34	-0 24	-0 04	0.5	0.4	0.1	098°	0.8	006°	0.1	275°	0.7	183°		
1663	Bay Shore Channel (city of Town Bank)	15d	38° 59.08'	74° 59.28'	-0 51	-1 30	-1 12	-0 21	0.5	0.6	0.1	093°	0.9	006°	--	--	1.0	183°		
1665	BRANDYWINE SHOAL LIGHT, 0.5nm west of	15d	38° 59.26'	75° 07.62'	<b>Daily Predictions, p.80</b>															
1667	Brandywine Ra. (off Brandywine Shoal N)	15d	39° 00.37'	75° 08.38'	-0 30	-0 38	-0 25	-0 39	0.7	0.7	--	--	1.2	339°	--	--	1.1	164°		
	do	40d	39° 00.37'	75° 08.38'	-0 56	-0 39	-0 32	-0 32	0.3	0.4	0.1	061°	0.6	334°	--	--	0.6	153°		
1669	Big Stone Beach, 2.8 miles southeast of		38° 58.7'	75° 16.6'	-1 04	-1 30	-1 08	-1 07	0.4	0.5	--	--	0.7	326°	--	--	0.9	145°		
1671	Big Stone Beach, 2.2 n.mi. ENE of	15d	39° 00.48'	75° 17.05'	-0 13	-0 26	-0 23	+0 04	0.3	0.4	--	--	0.6	319°	0.1	233°	0.7	135°		
1673	Fourteen Ft. Bank Lt., 1.4 n.mi. SSE of	12d	39° 02.32'	75° 09.48'	-0 10	-0 36	-0 14	+0 10	0.7	0.7	0.1	071°	1.2	344°	--	--	1.2	160°		
	do	30d	39° 02.32'	75° 09.48'	-0 40	-0 32	-0 17	-0 05	0.5	0.4	0.1	069°	0.9	343°	0.1	249°	0.7	155°		
1675	Fourteen Ft. Bank Lt., 1.2 mi. east of		39° 03.3'	75° 09.5'	-0 10	-0 26	+0 02	+0 05	0.7	0.9	--	--	1.3	339°	--	--	1.5	174°		
1677	Deadman Shoal, 3.1 n.mi. SW of	13d	39° 04.00'	75° 04.22'	-0 43	-0 35	-0 35	-0 19	0.5	0.4	0.1	085°	0.8	352°	0.1	263°	0.6	173°		
1679	Egg Island Flats		39° 06.4'	75° 07.1'	-1 13	-1 05	-0 58	-1 26	0.4	0.4	--	--	0.7	355°	--	--	0.7	150°		
1681	Brandywine Range at Miah Maull Range	9d	39° 04.97'	75° 11.28'	+0 20	-0 36	-0 06	+0 44	0.6	0.7	0.1	067°	1.0	341°	--	--	1.2	159°		
1683	Maurice River entrance		39° 13.0'	75° 02.7'	+0 31	+0 06	+0 37	+0 39	0.6	0.6	--	--	1.1	012°	--	--	1.0	192°		
1685	Mauricetown Bridge, Maurice River		39° 17.2'	74° 59.6'	+0 41	+0 48	+0 27	+0 33	1.4	1.3	--	--	2.4	000°	--	--	2.2	180°		
1687	Millville Drawbridge, Maurice River <25>		39° 23.7'	75° 02.4'	--	--	--	+1 51	--	--	--	--	0.2	000°	--	--	0.4	180°		
1689	St. Jones River ent., 1 mile east of		39° 04'	75° 23'	-0 20	-0 40	-0 16	-0 09	0.3	0.4	--	--	0.6	334°	--	--	0.7	122°		
1691	Kelly Island, 1.5 miles east of		39° 12.8'	75° 21.7'	+0 31	+0 11	+0 17	+0 16	0.5	0.7	--	--	0.9	348°	--	--	1.2	164°		
1693	Miah Maull Range at Cross Ledge Range	16d	39° 10.72'	75° 16.40'	+0 59	+0 02	+1 00	+1 31	0.9	1.1	0.2	254°	1.5	335°	0.1	241°	1.8	160°		
1695	False Egg Island Point, 2 miles off		39° 11.4'	75° 12'	+0 07	-0 35	-0 14	+0 06	0.6	0.8	--	--	1.1	342°	--	--	1.3	158°		
1697	Ben Davis Pt. Shoal, southwest of	15d	39° 14.87'	75° 18.93'	+1 27	+0 51	+1 03	+1 41	1.0	1.1	0.2	047°	1.8	321°	--	--	1.9	147°		
1699	Ben Davis Point, 3.2 n.mi. SW of	12d	39° 16.13'	75° 20.88'	+1 46	+0 59	+1 24	+1 55	1.1	1.3	0.2	047°	1.9	328°	--	--	2.2	140°		
	do	43d	39° 16.13'	75° 20.88'	+0 41	+0 38	+1 48	+2 13	0.5	0.2	--	--	0.8	319°	--	--	0.4	136°		
1701	Ben Davis Point, 0.8 mile southwest of		39° 16.9'	75° 18.2'	+0 37	+0 19	+0 46	+0 25	0.7	0.5	--	--	1.2	308°	--	--	0.8	122°		
1703	Cohansey River, 0.5 mile above entrance		39° 20.9'	75° 21.6'	+1 10	+0 41	+1 04	+0 53	0.7	0.8	--	--	1.2	074°	--	--	1.4	254°		
1705	Bridgeton (Broad Street Bridge) <1>		39° 25.6'	75° 14.2'	--	--	--	+1 56	0.1	0.2	--	--	0.2	000°	--	--	0.3	180°		

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS									
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb			
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.		
	DELAWARE BAY and RIVER Time meridian, 75°W	ft	<b>North</b>	<b>West</b>	h	m	h	m	h	m	h	m								
					<b>on Delaware Bay Entrance, p.76</b>															
1707	Arnold Point, 2.2 n.mi. WSW of	14d	39° 22.67'	75° 28.07'	+2 03	+1 39	+2 00	+2 14	1.2	1.1	--	--	2.1	324°	0.1	047°	1.9	145°		
	do.	29d	39° 22.67'	75° 28.07'	+1 30	+1 29	+1 49	+1 34	0.9	0.8	0.1	225°	1.6	327°	0.1	055°	1.3	140°		
1709	Smyrna River entrance		39° 21.9'	75° 30.8'	+1 29	+1 02	+1 30	+1 32	0.7	0.9	--	--	1.2	250°	--	--	1.5	070°		
					<b>on Reedy Point, p.84</b>															
1711	Stony Point, channel west of		39° 27.1'	75° 33.8'	+0 03	+0 00	-0 25	-1 09	0.8	0.9	--	--	1.5	324°	--	--	1.9	151°		
1713	Appoquinimink River entrance		39° 26.8'	75° 34.9'	-0 47	+0 05	-0 47	-1 41	0.6	0.5	--	--	1.0	231°	--	--	1.2	048°		
1715	Artificial Island (Baker Range)	14d	39° 28.20'	75° 33.88'	-0 19	-0 11	-0 09	-0 30	1.2	1.2	0.2	267°	2.1	346°	--	--	2.7	175°		
1717	Reedy Island (off end of pier)		39° 30.7'	75° 33.4'	-0 19	+0 11	-0 09	-0 52	1.3	1.2	--	--	2.4	027°	--	--	2.6	194°		
1719	Alloway Creek ent., 0.2 mile above		39° 29.9'	75° 31.5'	-0 59	-0 08	-0 44	-2 19	1.2	0.9	--	--	2.1	129°	--	--	2.1	325°		
1721	New Bridge, Alloway Creek		39° 31.6'	75° 27.1'	-0 17	+1 07	+0 33	-0 39	0.7	0.6	--	--	1.3	090°	--	--	1.4	270°		
1723	Chesapeake and Delaware Canal Entrance	15d	39° 33.63'	75° 34.20'	+2 44	+2 41	+3 36	+1 40	0.8	0.9	--	--	1.4	264°	--	--	2.0	087°		
1725	REEDY POINT, 0.3nm east of south jetty	15d	39° 33.51'	75° 33.10'							0.1	074°	1.7	351°	0.1	260°	2.0	163°		
1727	Reedy Point, 1.1 miles east of		39° 33.58'	75° 32.47'	-0 01	+0 21	+0 05	-0 39	1.0	0.8	--	--	1.8	354°	--	--	1.7	179°		
1729	Reedy Point, 0.85 n.mi. northeast of	15d	39° 34.23'	75° 33.22'	+0 14	-0 14	-0 03	-0 45	0.9	1.0	--	--	1.6	341°	--	--	2.2	163°		
1731	Salem River entrance		39° 34.2'	75° 30.1'	+0 26	+0 43	+0 34	-0 06	0.8	0.7	--	--	1.5	062°	--	--	1.6	245°		
1733	Bulkhead Shoal Channel, SE, Del. City	14d	39° 34.58'	75° 34.52'	+0 04	-0 05	+0 06	-0 33	1.0	0.9	--	--	1.8	299°	--	--	2.1	118°		
1735	Bulkhead Shoal Channel, off Del. City		39° 35.0'	75° 35.2'	-0 04	+0 08	+0 00	-0 31	1.2	0.9	--	--	2.1	308°	--	--	2.1	138°		
1737	Pea Patch Island, channel east of		39° 36.0'	75° 33.9'	+0 10	+0 23	+0 30	-0 06	1.3	1.0	--	--	2.3	319°	--	--	2.3	148°		
1739	Finns Point, 0.60 n.mi. Northwest of	16d	39° 36.37'	75° 34.47'	+0 14	+0 18	+0 22	-0 22	1.2	1.0	--	--	2.1	332°	--	--	2.3	152°		
1741	Penns Neck, 0.6 mile west of		39° 37.05'	75° 34.92'	+0 18	+0 48	+0 11	-0 44	0.9	0.8	--	--	1.7	002°	--	--	1.7	167°		
1743	Penns Neck, 0.3 mile west of		39° 37.07'	75° 34.58'	+0 02	+0 17	+0 05	-0 38	1.0	0.8	--	--	1.8	339°	--	--	1.7	152°		
1745	New Castle, channel abreast of		39° 39.1'	75° 33.2'	+0 16	+0 03	+0 03	-0 42	1.0	1.1	--	--	1.9	051°	--	--	2.4	230°		
1747	Kelly Point, 0.2 mile northwest of		39° 38.9'	75° 32.8'	+0 23	+1 05	+0 21	-0 44	0.9	0.7	--	--	1.6	049°	--	--	1.5	230°		
1749	Riverview Beach, 0.75 n.mi. west of	15d	39° 39.40'	75° 32.38'	+0 31	+0 33	+0 36	-0 08	1.1	0.9	--	--	2.0	038°	--	--	1.9	225°		
1751	Deepwater Point, channel northwest of		39° 42.1'	75° 30.6'	+0 24	+1 04	+0 42	-0 20	1.7	1.2	--	--	3.0	029°	--	--	2.6	215°		
1753	Christina River, 0.9 n.mi. above ent	15d	39° 43.30'	75° 31.77'	+0 32	+0 26	-0 22	-0 46	0.1	0.4	0.1	226°	0.2	303°	--	--	0.8	137°		
1755	Cherry Island Flats, channel east of		39° 44.3'	75° 29.1'	+0 49	+1 18	+0 59	-0 18	0.9	0.6	--	--	1.6	027°	--	--	1.4	207°		
1757	Oldsmans Point		39° 45.9'	75° 28.4'	+1 08	+0 52	+1 00	+0 25	0.9	0.7	--	--	1.6	027°	--	--	1.5	210°		
					<b>on Philadelphia, p.88</b>															
1759	Marcus Hook Bar (north), Main Channel	15d	39° 47.70'	75° 26.08'	-1 25	-1 29	-0 22	-0 37	1.3	0.8	--	--	1.9	059°	--	--	1.7	246°		
1761	Marcus Hook		39° 48.2'	75° 24.6'	-0 41	-0 37	-0 25	-0 14	1.1	0.8	--	--	1.7	061°	--	--	1.6	232°		
1763	Eddystone		39° 50.8'	75° 20.5'	-0 14	-0 15	+0 04	-0 10	1.1	1.1	--	--	1.7	058°	--	--	2.2	242°		
1765	Essington Harbor		39° 51.5'	75° 18.3'	-1 30	-1 02	-0 23	-1 09	0.9	0.6	--	--	1.4	096°	--	--	1.2	274°		
1767	Crab Point, 0.5 mile east of		39° 50.8'	75° 17.0'	-0 51	-0 12	+0 17	-0 07	1.4	0.9	--	--	2.1	094°	--	--	1.9	268°		
1769	Hog Island, channel southeast of		39° 52.0'	75° 12.9'	-0 49	-0 03	+0 15	-0 13	1.3	1.1	--	--	1.9	054°	--	--	2.2	231°		
1771	Schuykill River entrance <1>		39° 53.2'	75° 11.7'	--	-1 36	--	-0 57	0.3	0.2	--	--	0.5	356°	--	--	0.4	178°		
1773	Schuykill River <1>	12d	39° 54.23'	75° 12.90'	--	-1 24	--	-1 35	0.2	0.2	--	--	0.2	351°	--	--	0.3	172°		
1775	Eagle Point, 0.2 n.mi. northwest of	17d	39° 52.82'	75° 10.38'	-0 27	-0 56	+0 08	-0 29	1.1	0.9	--	--	1.6	091°	--	--	1.8	271°		
	do.	40d	39° 52.82'	75° 10.38'	-0 33	-1 11	+0 03	-0 29	0.7	0.6	--	--	1.1	090°	--	--	1.3	274°		
1777	Gloucester		39° 53.4'	75° 08.1'	-0 26	+0 06	+0 26	-0 05	1.5	1.0	--	--	2.2	020°	--	--	2.0	210°		
1779	Greenwich Point, northeast of		39° 54.5'	75° 07.6'	-0 26	-0 03	+0 27	-0 04	1.1	0.8	--	--	1.6	002°	--	--	1.6	188°		
1781	Camden Marine Terminals, E of Chan. <26>		39° 56.4'	75° 08.2'	+0 13	+0 17	+0 49	+0 02	0.9	0.6	--	--	1.3	005°	--	--	1.1	174°		
1783	PHILADELPHIA, PENNS LANDING,	15d	39° 56.76'	75° 08.33'							--	--	1.5	017°	--	--	2.0	201°		
1785	Petty Island (west end), Main Channel	24d	39° 58.03'	75° 07.13'	-0 06	-0 06	+0 21	-0 26	1.0	0.9	--	--	1.8	066°	--	--	1.8	248°		
1787	Fisher Point		39° 58.9'	75° 04.2'	-0 11	-0 03	+0 14	-1 06	1.0	0.7	--	--	1.4	041°	--	--	1.7	223°		
1789	Fivemile Point Bridge, northeast of	35d	39° 59.18'	75° 03.75'	+0 28	+0 50	+0 56	+0 01	0.9	0.8	--	--	1.5	038°	--	--	1.3	214°		
1791	Torresdale, west of channel		40° 02.4'	74° 59.4'	+1 15	+1 00	+0 32	+0 41	0.6	0.8	--	--	0.9	044°	--	--	1.6	223°		
1793	Rancocas Creek, off Delanco		40° 02.6'	74° 57.6'	+0 57	+1 29	+1 24	+1 03	0.7	0.5	--	--	1.0	090°	--	--	0.9	272°		
1795	College Point, 0.4 n.mi. east of	21d	40° 04.65'	74° 53.20'	+0 54	-0 01	+0 42	-0 36	0.8	0.6	--	--	1.2	084°	--	--	1.2	252°		
1797	Bristol, south of	8	40° 05.3'	74° 51.6'	+1 16	+0 35	+0 30	+1 05	0.9	0.8	--	--	1.3	024°	--	--	1.6	200°		
1799	Burlington Island, channel east of		40° 05.7'	74° 50.2'	+1 53	+0 50	-0 11	+1 42	0.6	0.9	--	--	0.9	018°	--	--	1.8	204°		
1801	Newbold Island north of, Main Channel	15d	40° 08.03'	74° 45.38'	+0 47	-0 26	+0 09	-1 35	0.4	0.2	--	--	0.7	084°	--	--	0.5	250°		
1803	Whitehill <27>		40° 08.2'	74° 44.2'	--	--	--	+2 02	--	0.7	--	--	--	--	--	--	1.4	233°		

Endnotes can be found at the end of table 2.

TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS									
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb			
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.		
			ft		North West		h m h m h m h m													
DEL., MD. and VA. COAST Time meridian, 75°W					<b>on Chesapeake Bay Entrance, p.92</b>															
1805	Fenwick Shoal Lighted Whistle Buoy 2		38° 25'	74° 46'	See table 5.															
1807	Winter-Quarter Shoal Buoy 6WQS		37° 55'	74° 56'	Current weak and variable															
1809	Smith Island Shoal, southeast of	7	37° 05.3'	75° 43.5'	-1 41	-1 56	-2 15	-1 41	0.3	0.4	--	--	0.3	298°	--	--	0.4	068°		
1811	Cape Henry Light, 2.2 miles southeast of		36° 53.9'	75° 58.7'	-1 21	-1 02	-0 50	-1 17	0.9	0.8	--	--	1.0	346°	--	--	0.9	165°		
CHESAPEAKE BAY																				
1813	Cape Henry Light, 3.4nm NNE of	7d	36° 58.79'	75° 58.85'	-0 08	-0 39	-0 31	-0 08	0.9	1.5	0.2	206°	1.0	287°	0.2	016°	1.6	116°		
	do.	15d	36° 58.79'	75° 58.85'	-0 19	-0 43	-0 29	-0 12	0.9	1.1	0.1	199°	1.0	284°	0.1	198°	1.2	112°		
	do.	30d	36° 58.79'	75° 58.85'	-0 54	-0 38	-0 43	-0 45	0.5	0.6	0.1	009°	0.6	277°	0.1	195°	0.6	104°		
1815	Cape Henry Light, 2.35nm NNE of	15d	36° 57.74'	75° 59.14'	+0 12	-0 06	-0 22	+0 00	0.9	1.1	--	--	1.0	291°	0.1	029°	1.2	116°		
	do.	30d	36° 57.74'	75° 59.14'	-0 41	-0 39	-0 33	-0 32	1.1	0.9	--	--	1.2	294°	0.1	208°	1.0	123°		
	do.	45d	36° 57.74'	75° 59.14'	-1 10	-0 47	-0 30	-0 48	1.3	0.8	--	--	1.4	294°	0.1	205°	0.9	125°		
	do.	60d	36° 57.74'	75° 59.14'	-1 27	-0 57	-0 36	-1 03	1.1	0.7	--	--	1.2	294°	0.1	204°	0.7	124°		
1817	Cape Henry Light, 1.4nm NE of	15d	36° 56.73'	75° 59.38'	+0 38	+0 05	-0 23	+0 14	0.8	1.4	0.1	205°	0.9	298°	--	--	1.5	117°		
	do.	30d	36° 56.73'	75° 59.38'	-0 05	-0 20	-0 15	+0 03	1.1	1.1	0.1	205°	1.2	298°	--	--	1.2	118°		
	do.	45d	36° 56.73'	75° 59.38'	-0 23	-0 30	-0 10	-0 08	1.1	1.0	0.1	203°	1.2	293°	0.1	199°	1.1	114°		
	do.	60d	36° 56.73'	75° 59.38'	-0 37	-0 32	-0 10	-0 18	0.9	0.9	--	--	1.0	282°	0.1	191°	1.0	107°		
1819	Cape Henry Light, 0.8 n.mi. NNE of	15d	36° 56.33'	75° 59.98'	+0 21	-0 36	-0 44	+0 03	0.9	1.6	--	--	1.0	298°	--	--	1.7	113°		
	do.	38d	36° 56.33'	75° 59.98'	-1 47	-2 20	-2 16	-1 59	1.0	1.1	0.2	003°	1.1	275°	0.2	189°	1.2	106°		
1821	Cape Henry Light, 2.0 n.mi. north of	15d	36° 57.53'	76° 00.63'	+0 07	-0 14	+0 20	+0 13	1.1	1.0	0.1	210°	1.2	289°	--	--	1.1	110°		
	do.	39d	36° 57.53'	76° 00.63'	-0 28	-0 29	+0 15	-0 24	1.1	0.7	0.1	012°	1.2	277°	0.1	190°	0.7	110°		
	do.	54d	36° 57.53'	76° 00.63'	-1 08	-0 32	-0 06	-1 12	0.8	0.5	0.1	002°	0.9	263°	0.2	177°	0.5	111°		
1823	CHESAPEAKE BAY ENTRANCE, buoy LB2CH	22d	36° 57.54'	76° 00.76'	<b>Daily predictions</b>															
1825	Cape Henry Light, 4.6 miles north of		37° 00.1'	75° 59.3'	-0 32	-0 30	-0 21	+0 16	1.2	1.2	--	--	1.3	294°	--	--	1.3	104°		
1827	Cape Henry Light, 5.9 n.mi. north of	14d	37° 01.24'	75° 59.33'	-1 04	-0 48	-1 06	-0 43	0.5	0.7	0.1	228°	0.6	307°	--	--	0.7	140°		
1829	Cape Henry Light, 8.3 mi. NW of	12	37° 02.20'	76° 06.60'	+0 11	+0 04	+0 05	+0 19	0.9	1.0	--	--	1.0	329°	--	--	1.1	133°		
1831	Lynnhaven Roads		36° 55.1'	76° 04.9'	-0 25	-0 21	-0 25	-0 17	0.7	0.8	--	--	0.8	280°	--	--	0.9	070°		
1833	Lynnhaven Inlet bridge		36° 54.4'	76° 05.6'	-1 23	-1 41	-2 23	-2 37	0.5	1.3	--	--	0.6	180°	--	--	1.4	000°		
<i>Chesapeake Bay Bridge Tunnel</i>																				
1835	Chesapeake Beach, 1.5 miles north of		36° 56.69'	76° 07.33'	+0 24	+0 09	-0 34	-0 07	0.7	0.8	--	--	0.8	305°	--	--	0.9	100°		
1837	0.75nm west, Thimble Shoal Channel	6d	36° 58.64'	76° 07.45'	-0 08	-0 21	-0 27	+0 01	1.1	1.0	0.3	205°	1.2	288°	0.2	013°	1.1	113°		
	do.	16d	36° 58.64'	76° 07.45'	-0 35	-0 20	+0 05	-0 05	1.0	0.8	0.1	200°	1.1	289°	0.1	017°	0.8	111°		
	do.	29d	36° 58.64'	76° 07.45'	-0 47	-0 26	+0 25	+0 04	0.8	0.5	0.1	008°	0.9	284°	--	--	0.5	101°		
	do.	39d	36° 58.64'	76° 07.45'	-0 48	-0 20	+0 12	-0 06	0.5	0.5	--	--	0.6	281°	--	--	0.5	096°		
1839	Tail of the Horseshoe		36° 59.57'	76° 06.20'	+0 00	-0 09	-0 24	+0 21	0.8	0.9	--	--	0.9	300°	--	--	1.0	110°		
1841	Chesapeake Channel (bridge tunnel)		37° 02.50'	76° 04.33'	+0 00	-0 01	-0 08	+0 12	1.6	1.4	--	--	1.8	335°	--	--	1.5	145°		
1843	Chesapeake Channel (Buoy '15')	13d	37° 03.40'	76° 05.58'	-0 35	-0 06	+0 10	+0 31	0.5	0.4	0.2	037°	0.6	311°	0.1	229°	0.4	125°		
	do.	34d	37° 03.40'	76° 05.58'	-0 26	-0 12	+0 17	-0 14	0.5	0.4	0.2	032°	0.6	309°	0.1	232°	0.4	139°		
1845	Fishermans Island, 3.2 miles WSW of	20	37° 04.00'	76° 02.25'	-0 27	-0 51	-0 57	-0 43	1.1	1.5	--	--	1.2	330°	--	--	1.6	135°		
1847	Fishermans Island, 1.4 miles WSW of	5d	37° 04.78'	76° 00.25'	-1 14	-0 41	-0 52	-1 09	1.6	1.0	--	--	1.8	330°	--	--	1.1	140°		
1849	Fishermans Island, 2.45nm south of	6d	37° 02.64'	75° 57.77'	-0 22	-0 59	-0 57	-0 38	1.1	1.7	0.2	220°	1.2	301°	0.1	028°	1.8	126°		
	do.	16d	37° 02.64'	75° 57.77'	-0 39	-1 07	-0 54	-0 40	1.1	1.5	0.1	213°	1.2	298°	--	--	1.6	127°		
	do.	31d	37° 02.64'	75° 57.77'	-1 06	-1 11	-0 53	-0 53	0.9	1.0	--	--	1.0	298°	--	--	1.1	123°		
1851	Fishermans Island, 1.7 n.mi. south of	16d	37° 03.37'	75° 58.33'	-0 24	-1 08	-0 55	-0 33	0.9	1.3	0.2	218°	1.0	297°	--	--	1.4	126°		
	do.	26d	37° 03.37'	75° 58.33'	-0 42	-0 58	-0 56	-0 41	0.7	0.9	--	--	0.8	290°	--	--	1.0	120°		
1853	Fishermans Island, 0.5 n.mi. SW of	15d	37° 04.85'	75° 58.83'	-1 02	-0 54	-1 04	-0 42	1.4	1.8	0.2	223°	1.5	306°	0.1	218°	1.9	140°		
1855	Fishermans I., 0.4 mile west of		37° 05.57'	75° 59.33'	-0 26	-0 47	-0 46	-0 49	1.8	1.9	--	--	2.0	005°	--	--	2.0	175°		
1857	Fishermans I., 1.4 n.mi. WNW of	16d	37° 06.10'	76° 00.33'	-0 33	-0 53	-0 28	-0 34	1.1	1.1	0.1	060°	1.2	333°	0.1	247°	1.2	155°		
1859	Fishermans I., 1.1 miles northwest of		37° 06.50'	76° 00.00'	-0 44	-0 19	-0 17	-0 26	1.6	1.5	--	--	1.8	355°	--	--	1.6	165°		
1861	Cape Charles, off Wise Point	5	37° 06.88'	76° 00.00'	+0 04	-0 02	+0 16	+1 13	0.6	0.2	--	--	0.7	305°	--	--	0.2	075°		
1863	Little Creek, 0.2 n.mi. N of east jetty <63>	15d	36° 56.05'	76° 10.60'	-1 06	-1 57	-1 19	-1 08	0.3	0.3	--	--	0.3	278°	--	--	0.3	092°		
1865	Butler Bluff, 2.1 n.mi. WSW of	7d	37° 09.37'	76° 01.60'	-0 03	-0 25	+0 17	-0 05	0.7	0.8	--	--	0.8	348°	--	--	0.8	164°		
1867	York Spit Channel, N of Buoy '26'	14	37° 12.90'	76° 08.50'	+1 28	+1 11	+0 44	+1 19	0.7	1.0	--	--	0.8	010°	--	--	1.1	195°		
1869	Old Plantation Flats Lt., 0.5 mi. W of	7	37° 14.00'	76° 04.10'	+1 28	+1 22	+1 15	+0 59	1.1	1.2	--	--	1.2	005°	--	--	1.3	175°		
1871	Cape Charles City, 3.3 n.mi. west of	15d	37° 15.87'	76° 05.62'	+0 33	+0 39	+0 23	+0 54	0.9	0.9	0.2	280°	1.0	355°	0.1	094°	1.0	187°		
	do.	40d	37° 15.87'	76° 05.62'	+0 11	+0 04	+0 30	+0 23	0.8	0.8	--	--	0.9	356°	0.1	284°	0.8	182°		
	do.	95d	37° 15.87'	76° 05.62'	+0 24	+0 21	+0 57	+1 17	0.9	0.8	0.1	223°	1.0	322°	--	--	0.8	138°		

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS							
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb	
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.
	CHESAPEAKE BAY Time meridian, 75°W	ft	<b>North</b>	<b>West</b>	h	m	h	m	h	m	h	m						
			<b>on Chesapeake Bay Entrance, p.92</b>															
1873	New Point Comfort, 4.1 n.mi. ESE of	15d	37° 17.40'	76° 11.45'	+1 02	+0 43	+0 06	+0 39	0.7	0.9	0.3	296°	0.8	018°	0.3	098°	1.0	202°
1875	Wolf Trap Light, 0.5 mile west of		37° 23.4'	76° 11.9'	+1 38	+1 21	+0 54	+1 29	0.9	1.1	--	--	1.0	015°	--	--	1.2	190°
1877	Wolf Trap Light, 5.8 miles east of		37° 23.1'	76° 04.3'	+2 18	+2 01	+1 34	+2 09	0.8	1.2	--	--	0.9	015°	--	--	1.3	175°
1879	Church Neck Point, 1.9 n.mi. W of	15d	37° 24.20'	76° 00.78'	+0 41	+0 58	+0 56	+0 43	0.4	0.4	--	--	0.4	003°	--	--	0.4	177°
1881	Wolf Trap Light, 6.1 n.mi. ENE of	14d	37° 24.50'	76° 03.83'	+1 35	+1 19	+1 48	+2 04	1.2	1.0	0.2	275°	1.3	006°	0.2	098°	1.1	191°
	do.	29d	37° 24.50'	76° 03.83'	+0 21	+0 16	+0 47	+1 00	0.8	0.7	0.2	099°	0.7	012°	0.2	279°	0.7	173°
1883	Wolf Trap Light, 5.2 n.mi. ENE of	15d	37° 24.50'	76° 05.00'	+1 30	+1 55	+2 01	+2 02	1.2	1.0	0.2	283°	1.3	010°	0.2	098°	1.1	187°
	do.	40d	37° 24.50'	76° 05.00'	+1 02	+1 45	+2 03	+1 12	0.9	0.7	0.2	089°	1.0	352°	0.2	266°	0.7	183°
	do.	63d	37° 24.50'	76° 06.50'	+0 19	+0 43	+1 25	+1 04	0.7	0.6	--	--	0.8	343°	--	--	0.6	158°
1885	Wolf Trap Light, 1.4 n.mi. NNE of	15d	37° 24.67'	76° 10.57'	+1 33	+1 37	+1 12	+1 12	1.0	1.1	--	--	1.1	005°	0.2	088°	1.2	175°
1887	Wolf Trap Light, 2.0 n.mi. NW of	14d	37° 25.00'	76° 12.54'	-0 02	-0 06	+0 25	+0 01	0.5	0.6	--	--	0.6	345°	--	--	0.6	166°
1889	Nassawadox Point, 1.9 n.mi. NW of	13d	37° 29.97'	75° 59.37'	+1 11	+1 04	+1 16	+1 29	0.5	0.6	--	--	0.6	352°	0.1	270°	0.6	178°
1891	Gwynn Island, 8.0 n.mi. east of	14d	37° 29.70'	76° 06.50'	+1 58	+2 24	+2 08	+2 26	0.9	1.0	0.2	267°	1.0	357°	0.2	090°	1.1	175°
	do.	28d	37° 29.70'	76° 06.50'	+0 28	+0 28	+1 06	+0 16	0.5	0.5	0.2	102°	0.6	013°	0.3	281°	0.5	209°
1893	Gwynn Island, 1.5 n.mi. east of	16d	37° 30.03'	76° 14.70'	+0 54	+0 15	+0 14	+0 15	0.4	0.5	--	--	0.5	331°	0.1	227°	0.5	159°
1895	Stingray Point, 5.5 miles east of		37° 35.0'	76° 10.4'	+2 23	+2 57	+2 41	+2 25	0.9	0.8	--	--	1.0	343°	--	--	0.9	179°
1897	Stingray Point, 12.5 miles east of		37° 33.8'	76° 02.3'	+2 13	+2 21	+1 29	+2 29	0.9	0.8	--	--	1.0	030°	--	--	0.8	175°
1899	Powells Bluff, 2.2 n.mi. NW of	17d	37° 35.45'	76° 58.10'	+1 16	+0 50	+1 14	+1 16	0.5	0.6	0.1	101°	0.6	015°	0.1	284°	0.6	201°
1901	Windmill Point Light, 8.3 n.mi. ESE of	14d	37° 34.60'	76° 03.80'	+2 13	+2 18	+2 24	+2 39	0.8	0.8	0.1	270°	0.9	359°	0.1	095°	0.8	182°
	do.	33d	37° 34.60'	76° 03.80'	+1 01	+0 43	+2 27	+2 07	0.4	0.4	0.2	099°	0.5	017°	0.2	255°	0.4	172°
1903	Windmill Point Light, 2.2 n.mi. ESE of	14d	37° 35.30'	76° 11.50'	+2 44	+1 59	+1 41	+2 22	0.5	0.8	0.1	079°	0.6	001°	0.1	081°	0.9	169°
	do.	35d	37° 35.30'	76° 11.50'	+1 03	+0 56	+1 21	+1 37	0.5	0.4	--	--	0.6	342°	0.1	246°	0.4	175°
1905	Milby Point, 5.3 n.mi. WNW of	13d	37° 39.85'	76° 00.52'	+2 08	+1 51	+1 48	+2 25	0.5	0.7	--	--	0.6	016°	0.2	297°	0.7	210°
	do.	38d	37° 39.85'	76° 00.52'	+0 28	-0 27	+0 32	+0 33	0.4	0.4	0.1	120°	0.5	043°	--	--	0.4	197°
1907	Bluff Point, 4.6 n.mi. east of	13d	37° 40.70'	76° 12.25'	+3 05	+2 46	+1 45	+2 39	0.4	0.7	--	--	0.4	003°	--	--	0.7	178°
	do.	33d	37° 40.70'	76° 12.25'	+1 25	+1 22	+1 52	+1 54	0.4	0.2	0.1	089°	0.4	013°	0.1	291°	0.2	185°
1909	Tangier Sound Light, 5.8 n.mi. west of	15d	37° 47.03'	76° 05.68'	+3 29	+3 30	+3 16	+3 19	0.4	0.7	--	--	0.5	344°	0.2	255°	0.7	185°
1911	Great Wicomico R. Lt., 3.8 n.mi. ESE of	14d	37° 47.00'	76° 11.50'	+3 15	+3 38	+3 14	+3 45	0.4	0.5	0.1	273°	0.4	355°	0.1	280°	0.5	196°
	do.	39d	37° 47.00'	76° 11.50'	+2 06	+2 48	+4 09	+3 15	0.5	0.3	--	--	0.6	013°	--	--	0.3	196°
1913	Smith Point Light, 6.7 n.mi. east of	9d	37° 52.83'	76° 02.65'	+2 24	+2 18	+2 05	+1 52	0.4	0.4	--	--	0.4	352°	--	--	0.4	178°
1915	Smith Point Light, 4.5 n.mi. east of	14d	37° 52.67'	76° 05.30'	+3 22	+3 25	+3 09	+3 28	0.4	0.7	--	--	0.5	341°	0.1	249°	0.7	171°
	do.	24d	37° 52.67'	76° 05.30'	+3 13	+2 48	+2 29	+2 59	0.4	0.5	--	--	0.4	347°	0.1	256°	0.5	168°
1917	Smith Point Light, 3.0 n.mi. east of	15d	37° 52.65'	76° 07.08'	+4 24	+4 15	+3 02	+3 25	0.4	0.7	--	--	0.4	342°	--	--	0.7	167°
	do.	34d	37° 52.65'	76° 07.08'	+2 10	+1 43	+2 36	+3 27	0.4	0.3	0.1	080°	0.4	348°	0.1	272°	0.3	149°
1919	Smith Point Light, 1.5 n.mi. east of	14d	37° 52.75'	76° 09.12'	+4 21	+3 54	+3 04	+4 15	0.4	0.7	0.1	068°	0.4	347°	--	--	0.7	159°
	do.	39d	37° 52.75'	76° 09.12'	+2 44	+3 42	+3 49	+3 27	0.7	0.5	--	--	0.8	013°	0.1	098°	0.5	176°
	do.	68d	37° 52.75'	76° 09.12'	+2 05	+2 03	+3 29	+2 30	0.4	0.3	--	--	0.4	356°	0.1	243°	0.3	160°
1921	Smith Point Light, 0.8 n.mi. NW of	8d	37° 53.23'	76° 11.90'	+2 23	+2 06	+2 33	+2 20	0.8	0.8	0.2	079°	0.9	021°	0.3	097°	0.8	150°
1923	Smith Point Light, 5.0 n.mi. NW of	5d	37° 56.19'	76° 15.68'	+3 46	+3 04	+2 17	+3 17	0.4	0.8	--	--	0.5	306°	--	--	0.9	125°
	do.	15d	37° 56.19'	76° 15.68'	+3 38	+3 18	+2 47	+3 25	0.4	0.7	--	--	0.5	296°	0.1	209°	0.7	125°
1925	Smith Point Light, 6 miles north of		37° 58.9'	76° 11.4'	+4 22	+3 51	+3 39	+3 59	0.4	0.9	--	--	0.4	350°	--	--	1.0	135°
1927	Smith Island, 3.6 n.mi. northwest of	15d	38° 00.45'	76° 07.28'	+2 43	+2 33	+2 59	+3 11	0.4	0.4	0.1	096°	0.5	014°	--	--	0.4	187°
1929	Point Lookout, 5.9 n.mi. ESE of	15d	38° 00.53'	76° 12.07'	+3 40	+4 13	+4 16	+4 07	0.4	0.4	--	--	0.4	340°	--	--	0.4	161°
	do.	51d	38° 00.53'	76° 12.07'	+2 40	+3 51	+3 56	+3 25	0.4	0.2	--	--	0.4	330°	--	--	0.2	167°
1931	Point Lookout, 1.5 n.mi. east of	16d	38° 02.30'	76° 17.50'	See Table 5.													
1933	Point Lookin		38° 06.6'	76° 13.1'	+5 03	+5 31	+4 23	+4 38	0.4	0.5	--	--	0.4	010°	--	--	0.5	160°
1935	Adams Island, 1.1 n.mi. west of	12d	38° 08.67'	76° 06.87'	+4 29	+3 09	+2 17	+3 19	0.1	0.3	--	--	0.1	017°	--	--	0.3	191°
1937	Adams Island, 3.4 n.mi. west of	16d	38° 08.38'	76° 09.80'	+4 52	+4 30	+3 23	+4 30	0.2	0.4	--	--	0.2	325°	0.1	257°	0.4	167°
1939	Point No Point, 4.3 n.mi. east of	17d	38° 08.13'	76° 13.75'	+4 42	+4 53	+5 24	+5 38	0.3	0.2	--	--	0.3	340°	--	--	0.2	170°
1941	Point No Point, 2.8 n.mi. east of	15d	38° 08.38'	76° 15.67'	+5 16	+4 52	+4 04	+4 58	0.2	0.5	--	--	0.2	340°	--	--	0.5	172°
	do.	39d	38° 08.38'	76° 15.67'	+3 32	+4 20	+5 02	+4 46	0.4	0.2	--	--	0.4	347°	--	--	0.2	162°
1943	Point No Point, 1.0 n.mi. east of	17d	38° 08.43'	76° 18.13'	+4 36	+4 26	+3 51	+4 26	0.3	0.5	--	--	0.3	001°	--	--	0.5	172°
1945	Hooper Strait (west), at buoy '2'	15d	38° 13.25'	76° 06.20'	+2 00	+1 49	+1 53	+1 33	0.5	0.6	--	--	0.6	035°	0.2	304°	0.6	233°

Endnotes can be found at the end of table 2.

TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS							
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb	
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.
	CHESAPEAKE BAY Time meridian, 75°W	ft	North	West	h	m	h	m	h	m	h	m						
<b>on Baltimore Harbor Approach, p.96</b>																		
1947	Cedar Point, 4.7 n.mi. east of	5d	38° 17.92'	76° 16.38'	-3 29	-3 45	-4 07	-3 36	0.6	0.9	--	--	0.5	325°	--	--	0.7	145°
	do.	15d	38° 17.92'	76° 16.38'	-3 54	-3 59	-4 04	-3 53	0.6	0.7	--	--	0.4	323°	--	--	0.6	144°
1949	Cedar Point, 2.9 n.mi. ENE of	16d	38° 18.65'	76° 18.80'	-2 35	-2 34	-3 16	-2 55	0.5	0.8	--	--	0.4	347°	--	--	0.7	164°
	do.	50d	38° 18.65'	76° 18.80'	-4 08	-3 30	-3 05	-3 15	0.5	0.3	--	--	0.4	326°	--	--	0.3	141°
1951	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	--	--	0.4	010°	--	--	0.6	185°
1953	Drum Point, 2.8 miles northeast of		38° 20.18'	76° 21.95'	--	-3 12	--	-2 42	0.2	0.5	--	--	0.2	335°	--	--	0.4	185°
1955	Cove Point, 1.1 n.mi. east of	17d	38° 22.88'	76° 21.62'	-2 57	-2 42	-2 40	-2 14	0.9	0.9	--	--	0.7	342°	--	--	0.7	165°
	do.	40d	38° 22.88'	76° 21.62'	-3 22	-3 19	-2 38	-3 26	0.8	0.7	--	--	0.6	343°	0.1	246°	0.6	165°
1957	Cove Point, 2.7 n.mi. east of	15d	38° 22.80'	76° 19.52'	-2 23	-2 41	-2 59	-2 40	0.5	0.9	--	--	0.4	344°	--	--	0.7	169°
	do.	40d	38° 22.80'	76° 19.52'	-3 15	-2 39	-1 53	-2 40	0.9	0.6	--	--	0.8	347°	--	--	0.5	170°
	do.	98d	38° 22.80'	76° 19.52'	-3 49	-4 02	-3 13	-3 36	0.7	0.5	--	--	0.6	341°	--	--	0.4	165°
1959	Cove Point, 3.9 n.mi. east of	11d	38° 22.52'	76° 17.92'	-3 29	-3 36	-4 08	-3 44	0.4	0.6	--	--	0.3	346°	--	--	0.4	171°
1961	Cove Point, 4.9 n.mi. NNE of	15d	38° 28.03'	76° 22.60'	-2 57	-2 29	-2 24	-2 26	0.7	0.7	--	--	0.6	333°	--	--	0.6	159°
	do.	40d	38° 28.03'	76° 22.60'	-3 23	-2 47	-1 58	-2 17	1.0	0.4	--	--	0.8	332°	--	--	0.3	149°
	do.	67d	38° 28.03'	76° 22.60'	-3 55	-3 38	-2 14	-2 58	0.6	0.4	--	--	0.4	321°	--	--	0.4	135°
1963	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	--	--	0.2	340°	--	--	0.3	160°
1965	James Island, 1.6 n.mi. SW of	5d	38° 29.14'	76° 21.87'	-3 27	-3 33	-3 31	-3 41	0.6	0.8	0.1	077°	0.5	352°	--	--	0.6	165°
	do.	15d	38° 29.14'	76° 21.87'	-3 29	-3 33	-3 31	-3 27	0.6	0.7	0.1	068°	0.5	344°	0.1	251°	0.6	156°
1967	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	--	--	0.4	005°	--	--	0.3	175°
1969	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	--	--	0.4	000°	--	--	0.5	175°
1971	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	--	--	0.2	000°	--	--	0.6	155°
1973	Sharp Island Lt., 2.3 n.mi. SE of	20d	38° 36.43'	76° 20.88'	-3 15	-3 34	-3 07	-2 54	0.8	0.7	0.1	116°	0.7	037°	--	--	0.6	203°
1975	Sharp Island Lt., 2.1 n.mi. west of	18d	38° 38.60'	76° 25.22'	-1 49	-1 36	-1 33	-1 33	0.4	0.5	--	--	0.4	357°	--	--	0.4	183°
1977	Sharp Island Lt., 3.4 n.mi. west of	18d	38° 38.63'	76° 26.88'	-1 39	-1 41	-1 57	-1 43	0.4	0.5	--	--	0.3	355°	--	--	0.4	186°
	do.	35d	38° 38.63'	76° 26.88'	-2 34	-2 23	-2 23	-2 24	0.4	0.4	--	--	0.3	353°	0.1	272°	0.3	183°
1979	Plum Point, 2.1 n.mi. NNE of	15d	38° 38.70'	76° 29.23'	-1 50	-1 51	-1 51	-2 01	0.4	0.5	--	--	0.3	350°	--	--	0.4	174°
1981	Poplar Island, 2.2 n.mi. WSW of	14d	38° 45.37'	76° 25.77'	-0 44	-1 26	-0 57	-0 49	0.6	0.8	--	--	0.5	359°	--	--	0.6	185°
1983	Poplar Island, 3.0 n.mi. WSW of	15d	38° 44.98'	76° 26.73'	-1 08	-1 22	-0 59	-1 08	0.6	0.5	--	--	0.4	355°	--	--	0.4	189°
	do.	48d	38° 44.98'	76° 26.73'	+0 58	+1 21	+2 01	+1 13	0.5	0.4	0.1	085°	1.4	350°	--	--	0.3	172°
1985	Holland Point, 2.0 n.mi east of	15d	38° 45.10'	76° 29.93'	-1 20	-1 24	-1 45	-1 39	0.2	0.4	--	--	0.2	354°	--	--	0.3	180°
1987	Kent Point, 4 miles southwest of		38° 47.50'	76° 26.00'	-1 03	-1 04	-1 11	-1 05	0.6	0.6	--	--	0.5	025°	--	--	0.5	210°
1989	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	--	--	0.4	055°	--	--	0.4	235°
1991	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	--	--	0.5	005°	--	--	0.5	200°
1993	Bloody Point Bar Light, 0.6 mi. NW of	19	38° 50.37'	76° 24.17'	-0 08	-0 23	+0 02	-0 05	0.9	0.6	--	--	0.7	035°	--	--	0.5	190°
1995	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	--	--	0.4	340°	--	--	0.3	190°
1997	Thomas Pt. Shoal Lt., 2.0 n.mi. east of	22d	38° 53.75'	76° 23.21'	-1 05	-0 14	-0 22	-0 20	0.6	0.6	--	--	0.5	007°	--	--	0.5	186°
1999	Thomas Pt. Shoal Lt., 0.5 n.mi. SE of	16d	38° 53.46'	76° 25.62'	-0 25	-0 09	-0 43	-0 41	1.0	1.3	0.1	102°	0.8	033°	0.1	120°	1.0	191°
	do.	33d	38° 53.46'	76° 25.62'	-0 54	-1 18	-1 25	-1 20	0.7	0.7	--	--	0.6	018°	--	--	0.6	196°
2001	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	--	--	0.5	355°	--	--	0.7	190°
2003	Chesapeake Bay Bridge, main channel		38° 59.50'	76° 23.10'	+0 16	+0 08	-0 17	+0 13	0.9	1.1	--	--	0.7	025°	--	--	0.9	230°
2005	Sandy Point, 2.3 n.mi. east of	15d	39° 00.16'	76° 20.93'	+0 19	+0 15	+0 13	+0 29	1.1	0.9	--	--	0.8	020°	--	--	0.7	199°
	do.	41d	39° 00.16'	76° 20.93'	-1 33	-1 14	-0 48	-0 39	0.8	0.6	--	--	0.7	021°	--	--	0.5	210°
2007	Sandy Point, 0.8 n.mi. ESE of	15d	39° 00.24'	76° 22.80'	-0 11	+0 24	-0 15	+0 05	1.2	1.5	--	--	0.9	025°	--	--	1.2	199°
	do.	43d	39° 00.24'	76° 22.80'	-0 59	-1 10	-0 59	-1 02	1.0	1.0	0.1	116°	1.8	021°	0.1	276°	0.8	197°
2009	BALTIMORE HBR. APP. (off Sandy Point)		39° 00.78'	76° 22.10'	<b>Daily predictions</b>						--	--	0.8	025°	--	--	0.8	189°
2011	Craighill Channel entrance, Buoy '2C'	15d	39° 02.42'	76° 22.67'	-0 04	+0 26	+0 01	+0 09	1.0	0.9	--	--	0.8	353°	--	--	0.7	182°
	do.	38d	39° 02.42'	76° 22.67'	+0 00	+0 01	-0 06	+0 18	0.5	0.6	--	--	0.4	325°	0.1	244°	0.5	147°
	do.		39° 04.7'	76° 16.3'	<b>Current weak and variable</b>													
2013	Love Point, 2.8 miles NNE of		39° 04.78'	76° 18.73'	-0 48	+0 19	+0 27	-0 07	0.8	0.5	--	--	0.6	055°	--	--	0.4	240°
2015	Love Point, 2.5 miles north of		39° 04.44'	76° 18.19'	-1 33	-0 45	-0 48	-0 38	0.5	0.6	0.1	146°	0.4	067°	0.1	334°	0.5	238°
2017	Love Point, 2.0 nmi north of	5d	39° 04.44'	76° 18.19'	-0 45	-0 05	-0 07	-0 35	0.8	0.5	--	--	0.6	055°	0.1	325°	0.4	240°
	do.	15d	39° 04.44'	76° 18.19'	+0 28	+0 40	+0 25	+0 34	0.8	0.9	--	--	0.6	350°	--	--	0.7	175°
2019	Craighill Channel, NE of Mountain Pt		39° 05.68'	76° 23.58'	+0 10	+0 46	+0 33	+0 19	0.7	0.6	--	--	0.6	360°	0.1	270°	0.5	186°
2021	Craighill Channel, Belvidere Shoal	18d	39° 07.70'	76° 23.27'	+0 12	+0 27	+0 34	+0 23	0.6	0.6	--	--	0.5	345°	--	--	0.5	170°
2023	Craighill Angle, right outside quarter	14d	39° 06.48'	76° 18.32'	+0 18	+0 42	+0 38	+0 25	0.6	0.5	0.1	078°	0.5	006°	--	--	0.4	170°
2025	Swan Point, 2.7 n.mi. SW of	27d	39° 06.48'	76° 18.32'	-0 27	+0 30	+1 17	+0 25	0.6	0.4	--	--	0.4	342°	--	--	0.3	142°
	do.	18d	39° 08.85'	76° 19.48'	+0 18	+0 50	+1 05	+1 06	0.8	0.7	--	--	0.7	008°	0.1	271°	0.5	203°

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS							
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb	
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.
	<b>CHESAPEAKE BAY</b> Time meridian, 75°W	ft	<b>North</b>	<b>West</b>	<b>h</b>	<b>m</b>	<b>h</b>	<b>m</b>	<b>h</b>	<b>m</b>								
			<b>on Baltimore Harbor Approach, p.96</b>															
2029	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	--	--	0.6	020°	--	--	0.7	215°
2031	Brewerton Channel Eastern Ext., Buoy '7'	14d	39° 09.78'	76° 23.38'	+0 16	-0 02	-0 14	-0 05	0.5	0.4	0.2	080°	0.4	013°	--	--	0.3	175°
2033	Tolchester Channel, SW of Bouy '58B'	17d	39° 10.95'	76° 16.87'	+0 44	+0 20	+0 48	+0 54	1.1	1.1	0.2	302°	0.9	030°	--	--	0.9	229°
	do.	25d	39° 10.95'	76° 16.87'	-0 09	+0 02	+0 38	-0 48	0.9	0.7	--	--	0.7	025°	--	--	0.5	217°
2035	Tolchester Channel, Buoy '22'	15d	39° 11.47'	76° 15.95'	+1 43	+1 10	+0 59	+1 23	0.9	0.8	--	--	0.7	061°	0.1	151°	0.7	231°
2037	Tolchester Channel, south of Buoy '38B'	15d	39° 11.57'	76° 17.27'	+0 51	+1 08	+0 59	+0 50	0.7	0.8	--	--	0.5	028°	--	--	0.6	208°
2039	North Point, 2.5 miles northeast of	7	39° 12.87'	76° 23.72'	+1 25	+1 00	+0 53	+1 06	0.4	0.5	--	--	0.3	035°	--	--	0.4	225°
2041	Tolchester Beach, 0.33 n.mi. west of	15d	39° 13.03'	76° 14.90'	+0 49	+1 20	+1 22	+1 24	1.2	1.1	0.1	285°	1.0	015°	--	--	0.8	201°
2043	Pooles Island, 4 miles southwest of		39° 13.60'	76° 19.88'	+0 59	+0 48	+0 56	+1 12	0.6	0.8	--	--	0.5	025°	--	--	0.6	210°
2045	Pooles Island 2.0 n.mi. SSW of	15d	39° 14.78'	76° 17.80'	+1 01	+0 58	+1 03	+1 29	0.7	0.7	0.2	327°	0.6	038°	--	--	0.6	238°
2047	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	--	--	0.7	060°	--	--	1.0	255°
2049	Miller Island, 1.5 miles ENE of	7	39° 16.5'	76° 19.9'	+0 11	+0 15	+0 37	+0 25	0.6	0.3	--	--	0.5	000°	--	--	0.2	185°
2051	Pooles Island, 1.6 n.mi. east of	16d	39° 16.47'	76° 13.57'	+1 28	+1 34	+1 45	+1 03	1.1	1.1	--	--	0.9	014°	0.1	289°	0.8	208°
2053	Robins Point, 0.7 mile ESE of	5	39° 17.75'	76° 16.10'	-0 03	-0 14	+0 37	-0 13	1.4	1.0	--	--	1.1	025°	--	--	0.8	210°
2055	Worton Point, 1.5 n.mi. WSW of	17d	39° 18.70'	76° 13.03'	+2 04	+1 45	+1 27	+1 36	1.0	1.1	--	--	0.8	023°	0.2	298°	0.9	211°
2057	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	--	--	1.1	040°	--	--	1.2	245°
2059	Howell Point, 0.8 n.mi. west of	15d	39° 22.23'	76° 07.80'	+2 30	+1 48	+1 19	+1 33	1.0	1.3	--	--	0.8	051°	--	--	1.0	235°
2061	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	--	--	0.9	080°	--	--	0.9	245°
2063	Grove Point, 0.7 n.mi.NW of	14d	39° 23.78'	76° 03.02'	+2 40	+2 01	+1 31	+2 03	0.6	1.0	0.1	131°	0.5	034°	--	--	0.8	211°
2065	Turkey Point, 1.2 n.mi. SW of	9d	39° 26.60'	76° 02.03'	+2 39	+1 30	+0 58	+1 00	0.6	0.8	0.2	101°	0.5	021°	--	--	0.6	193°
2067	Spesutie Island, channel north of	7	39° 28.83'	76° 04.90'	+1 42	+1 20	+1 49	+1 40	0.8	0.6	--	--	0.6	285°	--	--	0.5	100°
2069	Rocky Pt. (Elk Neck), 0.25 n.mi. SW of	9d	39° 29.30'	76° 59.85'	+2 42	+1 28	+1 14	+1 49	0.6	0.7	--	--	0.5	009°	--	--	0.6	196°
2071	Red Point, 0.2 mile W of, Northeast River	7	39° 31.75'	75° 59.08'	+1 42	+1 28	+1 57	+1 47	0.9	0.6	--	--	0.7	--	--	--	0.5	--
2073	Havre de Grace, Susquehanna River		39° 33.13'	76° 05.08'	Current weak and variable													
	<b>HAMPTON ROADS</b>		<b>on Chesapeake Bay Entrance, p.92</b>															
2075	Thimble Shoal Channel (west end)	15d	37° 00.32'	76° 13.60'	-0 20	-0 27	-0 42	+0 24	0.8	1.1	0.3	204°	0.9	293°	0.2	018°	1.2	116°
2077	Hampton Roads entrance, midchannel	8d	36° 59.66'	76° 18.32'	-0 57	-1 10	-1 04	-1 04	1.5	1.8	--	--	1.7	243°	0.1	151°	1.9	059°
	do.	15d	36° 59.66'	76° 18.32'	-1 04	-1 13	-1 06	-1 05	1.5	1.7	--	--	1.7	244°	--	--	1.8	062°
	do.	31d	36° 59.66'	76° 18.32'	-1 23	-1 15	-1 06	-1 10	1.5	1.5	--	--	1.7	243°	--	--	1.6	065°
	do.	44d	36° 59.66'	76° 18.32'	-1 55	-1 23	-1 17	-1 27	1.5	1.3	--	--	1.7	241°	--	--	1.4	059°
	do.	61d	36° 59.66'	76° 18.32'	-2 26	-1 51	-1 32	-1 43	1.1	1.0	0.1	144°	1.2	229°	0.1	138°	1.1	055°
	<i>Old Point Comfort</i>																	
2079	0.55 n.mi. east of	48d	37° 00.12'	76° 17.72'	-3 07	-1 11	-0 23	-2 18	1.3	0.6	--	--	1.4	251°	--	--	0.6	060°
2081	0.2 mile south of		36° 59.77'	76° 18.88'	-0 42	-1 04	-1 33	-1 32	1.5	1.3	--	--	1.7	240°	--	--	1.4	075°
2083	0.9 mile southwest of		36° 59.33'	76° 19.57'	-0 58	-0 53	-0 41	-1 18	1.5	1.4	--	--	1.7	240°	--	--	1.5	050°
2085	Willoughby Spit, 0.8 mile northwest of		36° 58.6'	76° 18.4'	-1 37	-2 09	-2 21	-2 01	0.6	0.9	--	--	0.7	260°	--	--	1.0	040°
2087	Willoughby Bay entrance		36° 57.7'	76° 17.9'	-2 17	-2 34	-3 01	-2 26	0.3	0.4	--	--	0.3	135°	--	--	0.4	330°
2089	Sewells Point, channel west of		36° 57.5'	76° 20.4'	-0 46	-1 26	-2 03	-1 18	0.8	1.1	--	--	0.9	195°	--	--	1.2	000°
2091	Norfolk Harbor Reach (Buoy 'R 8')	13d	36° 57.00'	76° 20.37'	-0 23	-1 21	-2 16	-0 23	0.5	0.8	--	--	0.6	183°	0.1	094°	0.9	011°
	do.	42d	36° 57.00'	76° 20.37'	-0 38	-1 39	-1 02	+0 57	0.4	0.3	--	--	0.5	152°	--	--	0.3	000°
2093	Sewells Point, pierhead	7	36° 56.8'	76° 20.1'	-0 57	-1 19	-1 41	-1 11	0.5	0.8	--	--	0.6	195°	--	--	0.8	010°
	<i>Newport News</i>																	
2095	Channel, middle	15	36° 57.38'	76° 22.90'	-0 48	-1 02	-0 52	-1 08	1.0	1.0	--	--	1.1	244°	--	--	1.1	076°
2097	Channel, west end <63>	15	36° 57.20'	76° 24.80'	-0 21	-0 59	-0 37	-0 16	0.6	0.6	--	--	0.7	280°	0.1	010°	0.6	092°
2099	Middle Ground, 1 mile south of	7	36° 56.0'	76° 23.2'	+0 28	+0 11	-0 16	+0 19	1.0	1.1	--	--	1.1	270°	--	--	1.2	100°
	<b>ELIZABETH RIVER</b>																	
2101	Crane Island	15	36° 53.68'	76° 20.15'	-1 22	-1 54	-2 33	-1 55	0.6	0.8	0.1	098°	0.7	177°	0.2	270°	0.9	001°
2103	Crane Island Reach	7d	36° 53.43'	76° 20.15'	-1 32	-1 47	-2 16	-1 46	0.5	0.7	--	--	0.6	184°	--	--	0.7	009°
	do.	17d	36° 53.43'	76° 20.15'	-2 05	-2 03	-1 58	-1 53	0.5	0.6	--	--	0.6	184°	--	--	0.6	004°
	do.	33d	36° 53.43'	76° 20.15'	-2 52	-1 24	-1 51	-2 07	0.6	0.5	--	--	0.7	185°	--	--	0.5	008°
	do.	43d	36° 53.43'	76° 20.15'	-3 17	-2 56	-2 06	-2 30	0.6	0.5	--	--	0.7	182°	--	--	0.5	004°
2105	Lamberts Point	15	36° 52.50'	76° 19.95'	-2 08	-2 00	-2 34	-1 57	0.4	0.7	--	--	0.5	143°	--	--	0.7	328°
2107	West Norfolk Bridge, Western Branch		36° 51.5'	76° 20.6'	-2 06	-2 19	-2 46	-2 11	0.5	0.7	--	--	0.6	260°	--	--	0.7	080°

Endnotes can be found at the end of table 2.

TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS											
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb					
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.				
	ELIZABETH RIVER Time meridian, 75°W	ft	North	West	h	m	h	m	h	m	h	m										
			<b>on Chesapeake Bay Entrance, p.92</b>																			
2109	Seaboard Coast Line RR, Pinner Point		36° 51.6'	76° 19.0'	-2	13	-2	14	-2	11	-2	16	0.4	0.4	--	--	0.4	140°	--	--	0.4	290°
2111	Berkley Bridge, Eastern Branch		36° 50.5'	76° 17.0'	-2	30	-2	10	-2	16	-2	56	0.4	0.4	--	--	0.3	120°	--	--	0.4	295°
2113	Norfolk and Western RR, Bridge, E Branch		36° 50.2'	76° 14.7'	-1	37	-1	54	-2	21	-1	46	0.4	0.6	--	--	0.4	100°	--	--	0.6	280°
2115	Berkley, Southern Branch		36° 50.0'	76° 17.8'	-2	28	-1	56	-2	08	-2	34	0.3	0.3	--	--	0.3	215°	--	--	0.3	330°
2117	Chesapeake, Southern Branch		36° 48.5'	76° 17.4'	-2	03	-1	55	-2	10	-2	00	0.6	0.6	--	--	0.7	180°	--	--	0.6	360°
2119	Gilmerton Hwy. bridge, Southern Branch		36° 46.5'	76° 17.7'	-2	13	-1	58	-2	23	-2	10	0.5	0.7	--	--	0.6	180°	--	--	0.7	360°
2121	Money Point, Southern Branch	15d	36° 46.44'	76° 18.13'	-2	09	-1	27	-2	10	-2	28	0.4	0.3	--	--	0.4	088°	--	--	0.3	276°
	NANSEMOND RIVER																					
2123	Pig Point, 1.8 miles northeast of		36° 55.4'	76° 25.1'	-0	53	-0	46	-0	35	-0	48	0.7	0.9	--	--	0.8	285°	--	--	1.0	070°
2125	Town Point Bridge, 0.5 mile east of		36° 53.3'	76° 29.0'	-1	30	-1	38	-1	31	-1	14	0.8	0.8	--	--	0.9	265°	--	--	0.8	070°
2127	Dumpling Island		36° 48.5'	76° 33.5'	-1	22	-1	39	-2	06	-1	31	0.9	0.9	--	--	1.0	175°	--	--	1.0	345°
	JAMES RIVER																					
	<i>Newport News</i>																					
2129	0.15nm WSW of Pier No.2	6d	36° 58.76'	76° 26.61'	-0	01	-0	24	-0	21	-0	06	1.1	1.4	--	--	1.2	342°	--	--	1.5	161°
	do.	15d	36° 58.76'	76° 26.61'	-0	19	-0	36	-0	15	-0	11	1.2	1.3	--	--	1.3	344°	--	--	1.4	161°
	do.	29d	36° 58.76'	76° 26.61'	-0	37	-0	51	-0	16	-0	20	1.1	1.1	--	--	1.2	347°	--	--	1.2	162°
	do.	42d	36° 58.76'	76° 26.61'	-0	53	-0	57	-0	26	-0	26	0.9	0.9	--	--	1.0	346°	--	--	1.0	165°
2131	0.8 mile SW of shipbuilding plant		36° 58.5'	76° 27.3'	-0	02	-0	21	-0	27	-0	03	0.9	1.1	--	--	1.0	325°	--	--	1.2	140°
2133	1.5 miles SW of shipbuilding plant	6	36° 58.1'	76° 28.2'	-0	41	-0	39	-0	43	-0	50	0.9	1.0	--	--	1.0	350°	--	--	1.1	140°
	<i>Rocklanding Shoal Channel</i>																					
2135	South end		37° 03.50'	76° 35.63'	+0	34	+0	22	+0	20	+1	07	0.7	1.0	--	--	0.8	310°	--	--	1.1	165°
2137	Middle		37° 05.20'	76° 36.83'	+0	44	+0	57	+1	03	+1	02	1.0	0.9	--	--	1.1	345°	--	--	1.0	155°
2139	North end		37° 06.60'	76° 37.95'	+0	55	+1	01	+1	07	+1	15	1.2	0.9	--	--	1.3	340°	--	--	1.0	145°
2141	Point of Shoals, west of		37° 03.9'	76° 39.6'	+2	23	+2	06	+1	39	+2	14	0.3	0.8	--	--	0.3	325°	--	--	0.9	195°
2143	Deepwater Shoals		37° 08.6'	76° 38.2'	+1	37	+1	33	+0	59	+0	50	1.1	0.8	--	--	1.2	353°	--	--	0.9	166°
2145	Hog Point		37° 12'	76° 41.5'	+2	23	+1	56	+1	39	+2	04	0.9	1.2	--	--	1.0	260°	--	--	1.3	070°
2147	Jamestown Island, Church Point		37° 12.2'	76° 47.0'	+2	19	+1	55	+2	03	+2	08	1.0	1.2	--	--	1.1	325°	--	--	1.3	145°
2149	Chickahominy River Bridge		37° 15.7'	76° 52.5'	+2	00	+1	50	+2	02	+1	52	1.2	1.1	--	--	1.3	332°	--	--	1.2	154°
2151	Caremont Landing		37° 14.0'	76° 57.2'	+3	38	+3	11	+2	54	+3	19	1.3	1.4	--	--	1.5	290°	--	--	1.5	125°
2153	Brandon Point, 0.3 mile northeast of		37° 16.5'	76° 59.2'	+3	51	+3	17	+2	57	+3	20	1.1	1.2	--	--	1.2	350°	--	--	1.3	170°
2155	Windmill Point		37° 18.7'	77° 05.7'	+4	25	+3	21	+3	24	+3	29	1.2	0.9	--	--	1.3	310°	--	--	1.0	065°
2157	Coggins Point, 0.5 mile north of		37° 18.4'	77° 10.0'	+4	40	+3	39	+3	27	+4	00	0.5	0.8	--	--	0.6	273°	--	--	0.9	088°
2159	City Point		37° 19.0'	77° 16.3'	+4	43	+3	56	+3	59	+4	04	1.2	1.1	--	--	1.3	320°	--	--	1.2	135°
2161	Appomattox River entrance		37° 18.7'	77° 17.7'	+5	19	+4	20	+3	57	+3	51	0.9	0.8	--	--	1.0	271°	--	--	0.8	080°
2163	Bermuda Hundred		37° 20.2'	77° 16.2'	+5	40	+4	13	+3	21	+4	19	0.8	1.2	--	--	0.9	019°	--	--	1.3	199°
2165	Dutch Gap Canal, 0.5 mile east of		37° 22.8'	77° 20.8'	+5	23	+4	41	+4	39	+4	49	0.7	0.8	--	--	0.8	270°	--	--	0.9	090°
2167	Rocketts <19>		37° 31.2'	77° 25.0'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.0	160°
	YORK RIVER																					
2169	York River Ent. Channel (SE end) <29>	13d	37° 07.38'	76° 09.20'	+0	45	+0	43	+0	52	+0	53	0.9	0.9	0.3	256°	1.0	342°	0.3	074°	1.0	162°
	do.	32d	37° 07.38'	76° 09.20'	-0	50	+0	19	+0	24	-0	15	0.4	0.4	0.2	083°	0.5	329°	0.2	246°	0.4	174°
2171	York Spit Light, 0.8 mile southwest of		37° 12.0'	76° 16.0'	-0	42	-0	33	-0	16	-0	20	0.7	0.8	--	--	0.8	323°	--	--	0.8	145°
2173	York River Ent. Channel (NW end)	15d	37° 13.55'	76° 18.47'	-1	52	-0	45	+0	03	-0	26	0.6	0.5	0.2	200°	0.7	298°	--	--	0.5	128°
2175	Tue Marshes Light, 0.7 n.mi. north of	14d	37° 14.80'	76° 23.28'	+1	27	+1	26	+1	18	+1	18	0.9	0.8	--	--	1.0	265°	--	--	0.9	078°
	do.	39d	37° 14.80'	76° 23.28'	+0	27	+0	24	+1	15	+0	55	0.8	0.6	--	--	0.9	247°	--	--	0.6	070°
	do.	49d	37° 14.80'	76° 23.28'	-2	56	-2	11	-1	11	-1	48	0.4	0.3	--	--	0.5	249°	--	--	0.3	068°
2177	Tue Marshes Light, 0.9 n.mi. WNW of	14d	37° 14.28'	76° 24.13'	-0	21	-0	30	-0	30	-0	32	0.7	0.7	--	--	0.8	249°	--	--	0.7	069°
	do.	28d	37° 14.28'	76° 24.13'	-1	20	-1	15	-0	46	-1	41	0.5	0.6	--	--	0.6	262°	--	--	0.6	064°
	<i>Tue Marshes Light, 2.7 miles west of</i>																					
2179	Midchannel		37° 14.0'	76° 26.6'	-0	18	-0	17	-0	22	-0	30	0.5	0.6	--	--	0.6	258°	--	--	0.6	072°
2181	North edge of channel		37° 14.2'	76° 26.6'	-0	53	-0	56	-1	16	-1	08	0.4	0.7	--	--	0.5	251°	--	--	0.7	074°
2183	South edge of channel		37° 13.6'	76° 26.5'	-0	31	-0	49	-1	02	-0	31	0.4	0.5	--	--	0.4	257°	--	--	0.5	095°

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No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS									
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb			
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.		
	YORK RIVER Time meridian, 75°W	ft	North	West	h	m	h	m	h	m	h	m								
			on Chesapeake Bay Entrance, p.92																	
2185	Yorktown		37° 14.5'	76° 30.5'	-0 35	-1 07	-0 59	-0 24	1.1	1.5	--	--	1.2	302°	--	--	1.6	124°		
2187	Gloucester Point, 150 yds. southeast of		37° 14.55'	76° 30.10'	-0 40	-0 40	-1 07	-1 28	0.8	1.0	--	--	0.9	267°	--	--	1.1	090°		
2189	Gloucester Point, 0.4 mile southwest of		37° 14.42'	76° 30.65'	-0 30	-0 39	-0 24	-0 51	1.0	0.9	--	--	1.1	294°	--	--	1.0	108°		
2191	Pages Rock, 1 mile SSE of		37° 17.6'	76° 34.8'	-0 15	-0 15	-0 27	-0 29	0.9	0.9	--	--	1.0	303°	--	--	1.0	125°		
2193	Blundering Point, 0.9 mile SSW of		37° 18.13'	76° 35.08'	-0 27	-0 26	-0 03	-0 23	1.0	1.0	--	--	1.1	293°	--	--	1.1	138°		
2195	Clay Bank Pier, 100 yds. southwest of		37° 20.78'	76° 36.80'	-0 07	-0 25	-0 37	-0 12	1.0	1.0	--	--	1.1	311°	--	--	1.1	123°		
2197	Allmondsville		37° 24'	76° 40'	+0 43	+0 05	-0 01	+0 13	1.0	1.0	--	--	1.2	310°	--	--	1.1	105°		
2199	Purtan Island, 0.2 mile southwest of		37° 24.88'	76° 41.22'	+0 44	+0 26	+0 18	+0 46	1.2	1.0	--	--	1.3	310°	--	--	1.1	104°		
2201	Goff Point, 0.8 mile SSW of		37° 29.97'	76° 47.03'	+1 32	+0 57	+1 14	+1 47	0.8	0.9	--	--	0.9	320°	--	--	1.0	123°		
2203	West Point, 0.8 mile below		37° 30.9'	76° 47.5'	+1 18	+0 41	+0 34	+0 59	1.0	1.4	--	--	1.1	340°	--	--	1.5	150°		
2205	Lord Delaware Bridge, 100 yds. S of		37° 32.22'	76° 47.45'	+1 32	+0 51	+1 08	+1 39	0.7	0.5	--	--	0.8	350°	--	--	0.5	210°		
2207	Wakema, Mattaponi River		37° 39.2'	76° 54.0'	+2 03	+1 26	+1 19	+1 34	1.3	1.6	--	--	1.4	260°	--	--	1.7	280°		
2209	Walkerton, Mattaponi River		37° 43.4'	77° 01.5'	+3 24	+2 35	+2 10	+3 18	0.8	0.9	--	--	0.9	275°	--	--	0.9	095°		
2211	Eltham Bridge, 100 yds. north of		37° 32.10'	76° 48.42'	+2 01	+1 54	+1 37	+2 07	0.5	0.8	--	--	0.6	327°	--	--	0.9	124°		
2213	Lester Manor, Pamunkey River		37° 34.9'	76° 59.4'	+3 13	+2 51	+2 39	+2 59	1.1	0.9	--	--	1.2	235°	--	--	1.0	055°		
2215	Northbury, Pamunkey River		37° 37.5'	77° 07.3'	+4 28	+4 11	+3 44	+4 19	0.4	1.2	--	--	0.5	290°	--	--	1.3	100°		
	MOBJACK BAY and PIANKATANK RIVER																			
2217	New Point Comfort, 2.0 n.mi. WSW of	16d	37° 17.70'	76° 19.25'	+0 58	+1 39	+1 12	+1 56	0.5	0.4	--	--	0.6	315°	--	--	0.4	129°		
2219	Bland Point, Piankatank River		37° 31.8'	76° 21.9'	+0 03	-0 14	-0 41	-0 06	0.4	0.2	--	--	0.4	300°	--	--	0.2	125°		
2221	Doctor Point, 0.4 mile west of		37° 31.1'	76° 27.0'	+0 05	-0 42	-1 28	-0 13	0.4	0.4	--	--	0.4	311°	--	--	0.4	142°		
	RAPPAHANNOCK RIVER																			
2223	Stingray Point, 1.2 n.mi. NE of	28d	37° 34.53'	76° 17.08'	+1 01	-0 04	-0 51	+0 54	0.4	0.5	--	--	0.4	293°	--	--	0.5	121°		
2225	Windmill Point, 1.0 n.mi SSW of	15d	37° 36.00'	76° 17.50'	+1 08	+1 14	+1 49	+1 24	0.6	0.5	--	--	0.7	286°	0.1	188°	0.5	103°		
	do.	38d	37° 36.00'	76° 17.50'	+0 33	+1 18	+1 50	+0 46	0.5	0.3	--	--	0.6	269°	--	--	0.3	090°		
2227	Mosquito Point, 0.9 mile SSE of		37° 35.72'	76° 21.08'	+1 29	+1 47	+1 27	+1 05	0.6	0.8	--	--	0.7	265°	--	--	0.8	090°		
2229	Orchard Point, 1.0 mile south of		37° 37.97'	76° 27.45'	+1 22	+1 51	+1 39	+1 16	0.4	0.6	--	--	0.5	270°	--	--	0.6	085°		
2231	Towles Point		37° 37.8'	76° 30.4'	+1 39	+1 23	+1 59	+1 49	0.6	0.5	--	--	0.6	274°	--	--	0.5	103°		
2233	Rogue Point, 0.8 mile WNW of		37° 40.28'	76° 33.20'	--	+2 00	--	+1 51	0.5	0.6	--	--	0.6	000°	--	--	0.6	195°		
2235	Waterview, 1.3 miles NNE of		37° 44.95'	76° 35.92'	+2 14	+2 15	+2 35	+2 34	0.6	0.6	--	--	0.7	340°	--	--	0.6	155°		
2237	Tarpley Point, 1.5 miles south of		37° 46.15'	76° 39.12'	+2 49	+2 53	+3 09	+3 03	0.6	0.7	--	--	0.7	300°	--	--	0.7	105°		
2239	Jones Point, 1.4 miles NNW of		37° 48.03'	76° 41.58'	+2 37	+2 39	+3 08	+2 51	1.0	0.8	--	--	1.1	315°	--	--	0.9	105°		
2241	Sharps, 1.2 miles south of		37° 48.18'	76° 41.92'	+2 52	+3 02	+3 41	+3 25	0.8	0.8	--	--	0.9	290°	--	--	0.8	095°		
2243	Bowlers Rock, 0.2 mile north of		37° 49.58'	76° 44.00'	+3 00	+2 57	+3 26	+3 14	0.9	1.0	--	--	1.0	315°	--	--	1.1	135°		
2245	Accaceek Point, 0.3 mile southwest of		37° 52.52'	76° 46.40'	+3 13	+3 04	+3 16	+3 37	1.1	0.9	--	--	1.2	335°	--	--	1.0	150°		
2247	Tappahannock Bridge, 1.8 miles SE of		37° 55.10'	76° 49.27'	+3 51	+3 23	+3 45	+3 52	1.3	1.2	--	--	1.4	315°	--	--	1.3	105°		
2249	Port Royal		38° 10.5'	77° 11.4'	+6 43	+6 26	+5 59	+6 34	0.6	0.7	--	--	0.7	310°	--	--	0.7	130°		
	POCOMOKE SOUND																			
2251	Pocomoke Sound Approach		37° 38.00'	75° 57.90'	+1 09	+1 28	+2 00	+1 55	0.6	0.7	--	--	0.7	009°	--	--	0.7	196°		
2253	Watts Island, 4 miles south of	7	37° 43.2'	75° 54.0'	+0 50	+0 17	+0 16	+0 20	0.5	0.6	--	--	0.6	027°	--	--	0.6	247°		
2255	Watts Island, 2.3 n.mi. east of	13d	37° 47.62'	75° 50.83'	+1 53	+1 24	+1 20	+1 50	0.9	1.0	--	--	1.0	032°	--	--	1.1	208°		
	do.	48d	37° 47.62'	75° 50.83'	+1 26	+1 13	+1 30	+1 10	0.9	0.8	--	--	1.0	025°	--	--	0.9	209°		
2257	Long Point, 2.0 n.mi. northeast of	9d	37° 54.90'	75° 47.90'	+1 24	+0 57	+1 03	+1 23	0.4	0.3	--	--	0.4	024°	--	--	0.3	211°		
2259	Pocomoke R., 0.5 mile below Shelltown		37° 58.3'	75° 38.7'	+4 03	+3 16	+3 19	+3 24	1.0	0.8	--	--	1.1	045°	--	--	0.9	170°		
	TANGIER SOUND																			
2261	Tangier Sound Light, 0.5 n.mi. east of	16d	37° 47.25'	75° 57.83'	+2 21	+1 59	+2 07	+2 28	0.8	0.8	0.1	115°	0.9	019°	--	--	0.9	195°		
	do.	41d	37° 47.25'	75° 57.83'	+2 20	+1 57	+2 14	+2 17	0.9	0.8	--	--	1.0	011°	--	--	0.9	189°		
2263	Tangier Sound Light, 1.5 miles NE of		37° 48.5'	75° 57.4'	+2 03	+2 18	+2 04	+2 03	1.1	1.0	--	--	1.2	014°	--	--	1.1	220°		
2265	Clump Island, 2.5 n.mi. west of	15d	37° 54.50'	75° 57.42'	+3 05	+3 04	+3 06	+3 16	0.7	0.6	--	--	0.8	348°	--	--	0.6	168°		
	do.	40d	37° 54.50'	75° 57.42'	+2 56	+2 45	+2 53	+3 09	0.7	0.6	--	--	0.8	342°	--	--	0.6	166°		

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS							
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb	
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.
	TANGIER SOUND Time meridian, 75°W	ft	<b>North</b>	<b>West</b>	<b>h</b>	<b>m</b>	<b>h</b>	<b>m</b>	<b>h</b>	<b>m</b>								
	<b>on Chesapeake Bay Entrance, p.92</b>																	
2267	Janes Island Light, 2.3 n.mi. NNE OF	14d	38° 00.05'	75° 54.52'	+3 17	+3 14	+3 23	+3 09	0.6	0.7	--	--	0.7	001°	--	--	0.7	188°
	do.	39d	38° 00.05'	75° 54.52'	+3 28	+3 33	+3 40	+4 02	0.6	0.7	--	--	0.7	008°	--	--	0.7	174°
	do.	92d	38° 00.05'	75° 54.52'	+2 58	+3 39	+3 33	+3 28	0.5	0.4	--	--	0.6	348°	--	--	0.4	181°
2269	Big Annessex River Entrance	12d	38° 02.56'	75° 51.27'	+2 07	+1 35	+1 36	+1 46	0.3	0.4	--	--	0.3	074°	--	--	0.2	258°
2271	Kedges Strait Buoy '4'	12d	38° 03.45'	76° 01.93'	+0 46	+0 49	+0 47	+0 57	0.7	0.7	--	--	0.8	091°	--	--	0.7	276°
2273	Manokin R. Ent., 1.1 n.mi. E of Drum Pt	20d	38° 05.82'	75° 53.48'	+2 18	+2 16	+2 32	+2 32	0.4	0.3	--	--	0.4	008°	--	--	0.3	197°
2275	Deal Is., 0.6 n.mi. W. of, at Bouy '14'	14d	38° 08.45'	75° 58.33'	+3 18	+3 13	+3 14	+3 03	0.6	0.6	--	--	0.7	000°	--	--	0.6	181°
	do.	41d	38° 08.45'	75° 58.33'	+2 51	+2 21	+3 24	+3 29	0.5	0.4	--	--	0.6	355°	--	--	0.4	175°
2277	Frog Point, 1.6 miles south of Wicomico River		38° 12.6'	75° 57.3'	+3 52	+3 16	+3 30	+3 55	0.9	1.0	--	--	1.0	048°	--	--	1.1	240°
2279	Long Point and Nanticoke Point, between	9d	38° 12.80'	75° 54.00'	+3 24	+2 53	+2 56	+3 36	0.4	0.7	--	--	0.5	063°	--	--	0.7	263°
2281	Victor Point, 0.8 mile southwest of		38° 14.3'	75° 51.8'	+3 43	+3 10	+3 38	+3 58	0.5	0.8	--	--	0.6	034°	--	--	0.9	242°
2283	Whitehaven		38° 15.9'	75° 47.5'	+3 29	+4 01	+3 51	+3 25	1.0	1.0	--	--	1.1	089°	--	--	1.1	284°
2285	Whitehaven, 2.5 miles above	4	38° 17.8'	75° 45.5'	+3 33	+3 29	+3 34	+3 19	0.9	1.0	--	--	1.0	006°	--	--	1.1	188°
2287	Salisbury, 2 miles below	4	38° 20.4'	75° 38.3'	+3 56	+3 47	+3 52	+3 52	0.5	0.8	--	--	0.6	085°	--	--	0.8	258°
2289	Sandy Point, Nanticoke River		38° 14.8'	75° 55.7'	+3 47	+3 52	+4 10	+4 03	1.1	1.0	--	--	1.2	000°	--	--	1.1	182°
2291	Roaring Point, WSW of Nanticoke River	18d	38° 15.80'	75° 55.40'	+3 50	+3 17	+4 06	+3 34	0.8	0.8	--	--	0.9	356°	--	--	0.9	181°
	do.	37d	38° 15.80'	75° 55.40'	+3 38	+3 15	+4 34	+3 36	0.5	0.5	--	--	0.6	350°	--	--	0.5	150°
2293	Chapter Point, Nanticoke River		38° 22.6'	75° 52.0'	+5 19	+3 59	+4 41	+5 42	1.3	1.1	--	--	1.5	014°	--	--	1.2	204°
2295	Fishing Bay Entrance, at Buoy '2'	15d	38° 13.48'	75° 59.37'	+3 47	+4 16	+4 02	+4 45	0.4	0.3	0.1	050°	0.5	311°	0.1	202°	0.3	139°
2297	Hooper Strait, at Buoy '4'	14d	38° 13.05'	76° 03.83'	+0 51	+0 48	+1 16	+1 07	0.7	0.7	--	--	0.8	097°	--	--	0.7	287°
2299	Honga River Entrance, at Buoy '1A'	26d	38° 14.80'	76° 07.00'	+2 52	+2 22	+3 17	+3 03	0.4	0.4	--	--	0.5	331°	0.1	078°	0.4	152°
	GREAT WICOMICO RIVER																	
2301	Sandy Point, east of		37° 49.30'	76° 18.00'	+0 58	+0 41	+0 14	+0 49	0.3	0.3	--	--	0.3	320°	--	--	0.3	140°
	POTOMAC RIVER																	
2303	Point Lookout, 5.2 n.mi. SW of	13d	37° 58.12'	76° 23.50'	+2 34	+1 37	+1 38	+1 16	0.1	0.1	--	--	0.1	294°	--	--	0.1	113°
2305	Point Lookout, 3.1 n.mi. SW of	15d	37° 59.87'	76° 21.75'	+3 34	+3 23	+3 20	+3 19	0.3	0.4	--	--	0.3	295°	--	--	0.4	116°
	do.	34d	37° 59.87'	76° 21.75'	+2 44	+2 20	+2 50	+2 40	0.2	0.2	--	--	0.2	303°	0.1	214°	0.2	126°
2307	Point Lookout, 1.8 n.mi. SW of	14d	38° 00.80'	76° 20.62'	+3 01	+3 01	+3 48	+3 31	0.4	0.4	0.1	216°	0.5	297°	--	--	0.4	122°
	do.	47d	38° 00.80'	76° 20.62'	+2 08	+2 31	+3 16	+3 13	0.3	0.1	--	--	0.3	309°	--	--	0.1	102°
2309	Point Lookout, 1.0 n.mi. south of	15d	38° 01.25'	76° 19.45'	+2 25	+2 48	+3 14	+2 48	0.6	0.5	0.2	211°	0.7	270°	0.1	197°	0.5	117°
	do.	43d	38° 01.25'	76° 19.45'	+2 00	+2 31	+3 58	+3 04	0.5	0.3	--	--	0.6	271°	--	--	0.3	086°
	Cornfield Point																	
2311	1 mile south of		38° 02'	76° 21'									0.5	310°	--	--	0.5	130°
2313	midchannel		38° 01.1'	76° 21.3'	+4 33	+4 16	+3 49	+4 32	0.4	0.6	--	--	0.5	280°	--	--	0.6	110°
2315	3.8 miles south of		37° 59.4'	76° 21.5'	+4 18	+4 01	+3 34	+4 09	0.6	0.6	--	--	0.7	315°	--	--	0.6	100°
2317	Fort Point, St. Marys River		38° 07.8'	76° 26.9'														
2319	Yeocomico River entrance		38° 02.1'	76° 31.2'														
	Piney Point																	
2321	0.2 mile south of		38° 07.8'	76° 32.0'	+3 33	+3 16	+2 49	+3 24	1.2	0.6	--	--	1.3	280°	--	--	0.6	145°
2323	1.06 n.mi. south of	15d	38° 06.95'	76° 31.84'	+4 17	+3 58	+3 34	+4 25	0.4	0.5	--	--	0.5	315°	--	--	0.5	128°
	do.	31d	38° 06.95'	76° 31.84'	+3 45	+3 56	+4 20	+4 06	0.5	0.4	--	--	0.6	315°	0.1	044°	0.4	130°
2325	2.2 miles south of		38° 05.9'	76° 33.1'	+3 33	+3 16	+2 49	+3 24	0.4	0.5	--	--	0.5	280°	--	--	0.5	130°
2327	Lower Machodoc Creek entrance		38° 08.7'	76° 39.3'														
2329	White Point, Nomini Creek entrance		38° 08.1'	76° 43.3'	+4 08	+3 51	+3 24	+3 59	1.1	1.1	--	--	1.2	155°	--	--	1.2	335°
2331	Breton Bay entrance		38° 14.5'	76° 41.7'	+2 53	+2 36	+2 09	+2 44	0.5	0.4	--	--	0.6	030°	--	--	0.4	200°
2333	St. Clements Bay entrance		38° 14.5'	76° 43.7'														
2335	St. Clements I., 1.8 miles southeast of		38° 11.7'	76° 42.5'	+5 18	+5 01	+4 34	+5 09	0.4	0.8	--	--	0.4	250°	--	--	0.9	085°
2337	St. Clements I., 1.1 miles southwest of		38° 11.57'	76° 45.67'	+5 04	+5 10	+4 33	+4 58	0.5	0.8	--	--	0.6	281°	--	--	0.8	099°
2339	Rock Point, Wicomico River entrance		38° 16.4'	76° 49.3'	+3 42	+3 57	+3 42	+3 46	0.4	0.6	--	--	0.5	019°	--	--	0.6	174°

Endnotes can be found at the end of table 2.

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No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS							
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb	
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.
	POTOMAC RIVER Time meridian, 75°W	ft	North	West	h	m	h	m	h	m	h	m						
			<b>on Baltimore Harbor Approach, p.96</b>															
2341	Swan Point		38° 16.4'	76° 56.7'	-1 54	-2 04	-2 32	-2 09	0.4	1.0	--	--	0.3	350°	--	--	0.8	140°
2343	Dahlgren Harbor Channel		38° 18.90'	77° 01.93'	Current weak and variable													
2345	Upper Machodoc Creek entrance		38° 19'	77° 02'	Current irregular													
2347	Persimmon Point		38° 22.1'	76° 59.4'	-1 09	-1 19	-1 47	-1 24	1.5	1.8	--	--	0.3	270°	--	--	0.3	090°
2349	Potomac River Bridge, 0.4 mile south of		38° 21.38'	76° 59.20'	-1 25	-1 28	-1 38	-1 17	1.1	1.8	--	--	0.9	000°	--	--	1.4	175°
2351	Chapel Point, Port Tobacco River		38° 27.9'	77° 02.2'	Current weak and variable													
2353	Maryland Point		38° 20.8'	77° 11.8'	-1 04	-1 14	-1 42	-1 19	1.4	1.8	--	--	1.1	270°	--	--	1.4	080°
2355	Quantico		38° 31.3'	77° 16.6'	-0 54	-1 04	-1 32	-1 09	0.9	1.1	--	--	0.7	020°	--	--	0.9	200°
2357	Quantico Creek entrance		38° 31.7'	77° 17.3'	-1 19	-1 29	-1 57	-1 34	0.6	0.6	--	--	0.5	305°	--	--	0.5	115°
2359	Freestone Point, 2.3 miles east of		38° 35.78'	77° 11.88'	-0 03	-0 01	-0 28	-0 06	0.9	0.9	--	--	0.7	030°	--	--	0.7	229°
2361	Hallowing Point		38° 38.70'	77° 07.65'	+0 12	-0 05	-0 24	-0 15	1.4	1.4	--	--	1.1	345°	--	--	1.1	149°
2363	Jones Point, Alexandria		38° 47.62'	77° 02.23'	+0 36	+0 01	+0 09	+0 07	1.2	1.1	--	--	1.0	352°	--	--	0.9	171°
2365	Hains Point		38° 51.08'	77° 01.32'	+0 20	+0 31	+0 04	-0 18	0.8	0.4	--	--	0.6	359°	--	--	0.3	176°
2367	Anacostia River entrance		38° 51.8'	77° 00.6'	Current weak and variable													
2369	South Capitol Street Bridge		38° 52.07'	77° 00.38'	Current weak and variable													
2371	Washington Channel, Washington, D.C.		38° 51.8'	77° 01.2'	Current weak and variable													
2373	Virginia Channel, Washington, D.C. <13>		38° 52'	77° 02'	--	--	--	--	--	--	--	--	--	--	--	--	0.6	145°
	PATUXENT RIVER																	
2375	Hog Point, 0.6 n.mi. north of	13d	38° 19.08'	76° 24.07'	-4 45	-5 29	-5 59	-6 00	0.5	0.6	--	--	0.4	258°	0.1	358°	0.5	070°
	do.	41d	38° 19.08'	76° 24.07'	-6 24	-5 38	-5 36	-6 38	0.5	0.3	--	--	0.4	263°	--	--	0.2	061°
2377	Drum Point, 0.3 mile SSE of		38° 18.93'	76° 25.15'	-5 19	-5 20	-5 25	-5 16	0.5	0.5	--	--	0.4	245°	--	--	0.4	065°
2379	Sandy Point, 0.5 mile south of		38° 18.50'	76° 27.30'	-5 08	-5 49	-5 53	-4 55	0.5	0.6	--	--	0.4	300°	--	--	0.5	125°
2381	Point Patience, 0.1 mile southwest of		38° 19.70'	76° 29.20'	-5 07	-6 12	-6 46	-6 01	0.6	1.0	--	--	0.5	315°	--	--	0.8	145°
2383	Broomes Island, 0.4 mile south of <62>	15	38° 23.70'	76° 33.25'	-5 01	-5 16	-5 02	-5 02	0.5	0.6	--	--	0.4	290°	--	--	0.5	110°
2385	Sheridan Point, 0.1 mile southwest of		38° 27.97'	76° 38.88'	-4 33	-4 54	-4 38	-4 16	0.8	0.8	--	--	0.6	320°	--	--	0.6	135°
2387	Benedict, highway bridge		38° 30.70'	76° 40.33'	-4 45	-4 38	-4 09	-4 35	1.0	0.6	--	--	0.8	025°	--	--	0.5	190°
2389	Lyons Creek Wharf		38° 44.8'	76° 41.1'	-3 14	-3 24	-3 52	-3 29	1.4	1.1	--	--	1.1	315°	--	--	0.9	140°
	LITTLE CHOPTANK RIVER																	
2391	Hills Point, 1.0 mile south of		38° 33.0'	76° 18.7'	Current weak and variable													
2393	Ragged Point, 1.5 miles east of		38° 31.80'	76° 14.65'	-4 53	-5 15	-4 29	-4 57	0.5	0.2	--	--	0.4	045°	--	--	0.2	235°
	CHOPTANK RIVER																	
2395	Cook Point, 1.4 n.mi. NNW of	15d	38° 38.83'	76° 18.40'	-3 52	-4 06	-4 06	-4 24	0.8	0.7	--	--	0.6	049°	--	--	0.5	241°
	do.	45d	38° 38.83'	76° 18.40'	-4 09	-4 05	-4 03	-4 12	0.6	0.6	0.1	145°	0.5	068°	--	--	0.5	232°
2397	Holland Point, 2.0 n.mi. SSW of	14d	38° 40.43'	76° 15.45'	-3 54	-4 21	-3 26	-4 00	0.3	0.2	--	--	0.2	089°	--	--	0.2	262°
2399	Chlora Point, 0.5 n.mi. SSW of	17d	38° 37.70'	76° 09.10'	-3 45	-3 32	-3 22	-3 58	0.6	0.5	--	--	0.5	139°	--	--	0.4	332°
	do.	24d	38° 37.70'	76° 09.10'	-3 48	-3 33	-3 13	-3 42	0.4	0.4	--	--	0.4	143°	--	--	0.3	323°
2401	Martin Point, 0.6 n.mi. west of	18d	38° 37.63'	76° 08.15'	-3 18	-3 42	-3 22	-3 34	0.3	0.2	--	--	0.2	155°	--	--	0.2	341°
2403	Howell Point, 0.5 n.mi. south of	7d	38° 36.23'	76° 06.87'	-3 17	-4 04	-3 52	-3 42	0.4	0.5	--	--	0.3	122°	--	--	0.4	274°
2405	Cambridge hwy. bridge, W. of Swing Span		38° 34.78'	76° 03.67'	-2 48	-3 05	-1 07	-2 13	0.6	0.3	--	--	0.4	132°	--	--	0.3	316°
2407	Off Jamaica Point		38° 36.58'	75° 58.97'	-2 13	-2 32	-2 44	-2 26	0.6	0.8	--	--	0.5	000°	--	--	0.6	205°
2409	Poplar Point, south of		38° 40.52'	75° 57.98'	-1 52	-2 05	-1 56	-2 15	1.0	1.0	--	--	0.8	305°	--	--	0.8	100°
2411	Dover Bridge		38° 45.40'	75° 59.92'	-1 19	-1 50	-1 25	-1 47	1.1	1.0	--	--	0.9	050°	--	--	0.8	235°
2413	Oxford, Tred Avon River		38° 41.72'	76° 10.67'	--	-4 05	--	-4 03	0.4	0.2	--	--	0.3	040°	--	--	0.2	225°
2415	Easton Pt., 0.5 mi. below, Tred Avon River		38° 45.8'	76° 06.2'	Current weak and variable													
2417	Mulberry Pt., 0.6 mi. S of, Broad Creek		38° 44.33'	76° 14.95'	--	-4 10	--	-4 18	0.4	0.2	--	--	0.3	350°	--	--	0.2	170°
2419	Bald Eagle Pt., east of, Harris Creek		38° 43.75'	76° 18.30'	-4 07	-4 27	-4 07	-4 14	0.5	0.5	--	--	0.4	010°	--	--	0.4	175°

Endnotes can be found at the end of table 2.

TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS								
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb		
											h	m	h	m	h	m	h	m	knots
	EASTERN BAY Time meridian, 75°W	ft	<b>North</b>	<b>West</b>															
					<b>on Baltimore Harbor Approach, p.96</b>														
2421	Poplar Island, east of south end	15d	38° 44.9'	76° 21.2'	-2 20	-2 20	-2 20	-2 20	1.2	0.8	--	--	1.0	000°	--	--	0.6	170°	
2423	Kent Point, 1.4 n.mi. east of		38° 50.33'	76° 20.25'	-3 04	-3 18	-3 49	-3 12	0.5	0.4	--	--	0.4	043°	--	--	0.3	233°	
2425	Long Point, 1 mile southeast of		38° 50.6'	76° 19.6'	-3 40	-3 40	-3 40	-3 40	0.6	0.5	--	--	0.5	040°	--	--	0.4	235°	
2427	Turkey Point, 1.3 miles WSW of		38° 53.68'	76° 19.55'	Current weak and variable														
2429	Parson Island, 1.4 miles west of	9	38° 54.83'	76° 16.77'	Current weak and variable														
2431	Parson Island, 0.7 mile NNE of		38° 55.48'	76° 14.33'	--	-2 45	--	-2 50	0.2	0.2	--	--	0.2	305°	--	--	0.2	150°	
2433	Tilghman Point, 1 mile north of		38° 52.78'	76° 15.18'	--	-3 15	--	-3 55	0.4	0.4	--	--	0.3	060°	--	--	0.3	265°	
2435	Wye River, west of Bruffs Island		38° 51.28'	76° 11.88'	-2 33	-3 18	-3 17	-3 00	0.8	0.9	--	--	0.6	030°	--	--	0.7	190°	
2437	Deepwater Point, Miles River		38° 48.33'	76° 12.55'	-3 48	-3 52	-3 43	-4 14	0.6	0.6	--	--	0.5	215°	--	--	0.5	025°	
2439	Long Point, 0.8 mi. east of, Miles River		38° 46.43'	76° 09.32'	--	-3 24	--	-3 45	0.4	0.2	--	--	0.3	055°	--	--	0.2	245°	
	WEST and SOUTH RIVERS																		
2441	Cheston Point, south of, West River		38° 51.33'	76° 31.43'	Current weak and variable														
2443	South River entrance		38° 54.77'	76° 29.43'	Current weak and variable														
	SEVERN and MAGOTHY RIVERS																		
2445	Greenbury Point, 1.8 miles east of	8	38° 58.40'	76° 25.00'	-0 57	-1 05	-0 51	-0 47	0.8	0.8	--	--	0.6	070°	--	--	0.6	245°	
2447	Annapolis		38° 58.95'	76° 28.50'	--	-3 35	--	-2 26	0.5	0.4	--	--	0.4	320°	--	--	0.3	110°	
2449	Brewer Point, Severn River		39° 01.83'	76° 31.73'	--	-1 22	--	-1 50	0.4	0.4	--	--	0.3	275°	--	--	0.3	155°	
2451	Mountain Point, Magothy River entrance		39° 03.47'	76° 26.23'	-2 20	-2 00	-1 29	-2 04	0.8	0.4	--	--	0.6	315°	--	--	0.3	125°	
	CHESTER RIVER																		
2453	Love Point, 1.6 n.mi. east of	16d	39° 02.05'	76° 16.07'	-1 42	-1 15	-0 47	-1 15	0.6	0.4	0.1	278°	0.4	202°	0.1	261°	0.4	341°	
2455	Kent Island Narrows (highway bridge)	4	38° 58.23'	76° 14.83'	-2 07	-2 25	-2 11	-2 56	1.2	1.1	--	--	1.0	005°	--	--	0.9	190°	
2457	Hail Point, 0.7 n.mi. east of	16d	39° 00.63'	76° 10.95'	-0 51	-1 08	-1 12	-0 37	0.5	0.6	--	--	0.4	002°	--	--	0.5	168°	
2459	Deep Point		39° 06.38'	76° 07.23'	-0 31	-0 33	-0 32	-0 18	0.6	0.9	--	--	0.5	065°	--	--	0.7	260°	
2461	Chestertown		39° 12.43'	76° 03.67'	-0 21	+0 05	-0 02	-0 17	0.8	0.6	--	--	0.6	025°	--	--	0.5	220°	
	PATAPSCO RIVER																		
2463	North Point, Brewerton Channel	15d	39° 10.70'	76° 26.65'	Current weak and variable														
2465	Brewerton Angle		39° 12.08'	76° 30.78'	Current weak and variable														
2467	Fort McHenry Angle		39° 15.45'	76° 34.53'	Current weak and variable														
2469	Bear Creek entrance		39° 13.8'	76° 29.9'	Current weak and variable														
2471	Curtis Creek entrance		39° 13.1'	76° 34.6'	Current weak and variable														
2473	Fort McHenry, NW Harbor entrance		39° 15.8'	76° 34.5'	Current weak and variable														
2475	Middle Branch entrance		39° 15.4'	76° 37.0'	Current weak and variable														
	BACK, GUNPOWDER and BUSH RIVERS																		
2477	Lynch Point, Back River		39° 15.0'	76° 26.3'	+0 00	-0 10	+0 00	-0 10	0.7	0.5	--	--	0.6	310°	--	--	0.4	130°	
2479	Gunpowder River entrance		39° 18.7'	76° 18.5'	-0 24	-0 41	+0 25	+0 05	0.5	0.4	--	--	0.4	040°	--	--	0.3	205°	
2481	Bush River, 0.4 mi. SW of Bush Point		39° 21.4'	76° 15.4'	+0 07	-0 24	+0 21	+0 20	0.8	0.6	--	--	0.6	325°	--	--	0.5	165°	
	SASSAFRAS RIVER																		
2483	Grove Point		39° 22.7'	76° 02.6'	+0 46	+0 46	+0 51	+0 44	0.5	0.4	--	--	0.4	095°	--	--	0.3	288°	
2485	Ordinary Point, 0.4 mile west of		39° 22.45'	75° 59.25'	+0 50	+0 37	+1 17	+0 58	0.6	0.5	--	--	0.5	165°	--	--	0.4	345°	
2487	Georgetown		39° 21.67'	75° 53.17'	+1 00	+0 25	+0 56	+1 25	0.4	0.5	--	--	0.3	090°	--	--	0.4	200°	

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS							
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb	
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.
	ELK RIVER Time meridian, 75°W	ft	<b>North</b>	<b>West</b>	h	m	h	m	h	m	h	m						
					<b>on Baltimore Harbor Approach, p.96</b>													
2489	Arnold Point, 0.4 mile west of	17d	39° 27.83'	75° 58.45'	+1 39	+1 45	+1 24	+1 32	1.0	1.0	--	--	0.8	040°	--	--	0.8	215°
2491	Old Town Point Wharf, northwest of	29d	39° 30.23'	75° 55.12'	+2 00	+1 53	+1 49	+1 45	1.3	1.6	--	--	1.1	054°	--	--	1.3	242°
	do.		39° 30.23'	75° 55.12'	+2 07	+2 04	+1 47	+1 45	1.2	1.4	--	--	0.9	055°	--	--	1.1	237°
2493	Hendersons Point		39° 33.2'	75° 51.6'	+2 05	+2 05	+2 05	+2 05	0.6	0.9	--	--	0.5	030°	--	--	0.7	210°
	CHESAPEAKE and DELAWARE CANAL				<b>on Ches. &amp; Del. Canal, p.100</b>													
2495	Back Creek, 0.3 n.mi. W of Sandy Pt	14d	39° 31.67'	75° 51.97'	-0 06	-0 12	-0 10	-0 01	0.6	0.7	--	--	1.2	057°	--	--	1.4	244°
	do.	31d	39° 31.67'	75° 51.97'	-0 04	-0 25	+0 00	+0 01	0.6	0.6	--	--	1.2	052°	--	--	1.2	240°
2497	C&D CANAL, Chesapeake City	9d	39° 31.82'	75° 49.58'							--	--	2.0	097°	--	--	1.9	278°
2499	Chesapeake City Bridge, 0.45 n.mi. E of	26d	39° 31.67'	75° 48.43'	-0 27	-0 11	+0 08	-0 07	1.0	0.7	--	--	2.0	092°	--	--	1.4	273°
	do.	37d	39° 31.67'	75° 48.43'	-0 31	-0 16	+0 11	-0 14	0.7	0.5	--	--	1.5	083°	--	--	0.9	275°
2501	Conrail Bridge, east of	17d	39° 32.55'	75° 42.15'	-0 35	-0 25	+0 02	-0 08	0.9	0.7	--	--	1.9	099°	--	--	1.3	278°
	do.	34d	39° 32.55'	75° 42.15'	-0 40	-0 23	-0 01	-0 34	0.7	0.5	--	--	1.4	096°	--	--	1.0	281°
2503	St. George Bridge, 0.1 n.mi. ENE of	18d	39° 33.17'	75° 39.00'	-0 57	-1 08	-0 48	-1 08	0.9	0.7	--	--	1.7	064°	--	--	1.3	247°
2505	Reedy Point Radio Tower, south of	19d	39° 33.62'	75° 34.20'	-1 05	-0 55	-0 10	-0 16	1.0	0.7	--	--	1.9	078°	--	--	1.3	263°
	VIRGINIA, outer coast				<b>on Chesapeake Bay Entrance, p.92</b>													
2507	Cape Henry Light, 0.7 mile east of		36° 55.70'	75° 59.60'	-0 06	-0 23	-1 07	-0 06	0.9	1.8	--	--	1.0	320°	--	--	1.9	105°
2509	Virginia Beach, south end		36° 33.00'	75° 52.10'	-0 53	-0 20	-0 21	-0 09	0.4	0.4	--	--	0.5	350°	--	--	0.4	170°
	PAMLICO SOUND				<b>on Charleston Harbor, p.112</b>													
	<i>Oregon Inlet</i>																	
2511	Bodie Island–Pea Island, between	6	35° 46.6'	75° 32.1'	+2 38	+2 20	+2 03	+1 52	1.2	0.6	--	--	2.1	202°	0.1	113°	1.2	028°
	do.	12	35° 46.6'	75° 32.1'	+2 49	+2 36	+2 02	+1 48	1.2	0.6	--	--	2.0	204°	0.1	113°	1.2	036°
2513	Coast Guard Tower, southwest of	6	35° 45.7'	75° 31.9'	+3 04	+2 30	+1 53	+2 18	0.8	0.8	--	--	1.4	205°	--	--	1.5	028°
	do.	12	35° 45.7'	75° 31.9'	+3 01	+2 33	+1 57	+1 33	0.8	0.7	--	--	1.3	212°	--	--	1.4	033°
2515	Herbert C. Bonner Bridge, WSW of	6	35° 46.2'	75° 32.8'	+3 32	+2 55	+1 30	+1 46	0.6	0.9	--	--	1.0	280°	--	--	1.8	087°
2517	Hatteras Inlet		35° 12'	75° 45'	+2 42	+2 42	+2 18	+1 38	1.2	1.0	--	--	2.1	307°	--	--	2.0	148°
2519	Diamond Shoal Light, 3.9 miles SSW of		35° 09'	75° 18'														
	<i>Ocracoke Inlet</i>																	
2521	channel entrance		35° 03.92'	76° 01.13'	+2 48	+2 24	+1 43	+1 40	1.0	1.2	--	--	1.7	000°	--	--	2.4	145°
2523	Teaches Hole Channel	10	35° 04.75'	76° 00.28'	+2 49	+2 27	+1 42	+1 47	0.6	0.8	--	--	1.1	050°	--	--	1.6	195°
2525	Blair Channel	10	35° 04.88'	76° 02.03'	+2 52	+2 33	+1 48	+2 03	0.6	0.9	--	--	1.0	355°	--	--	1.7	140°
2527	Wallace Channel	9	35° 04.78'	76° 03.12'	+2 51	+2 57	+2 03	+2 13	0.9	0.9	--	--	1.6	305°	--	--	1.8	140°
2529	Sheep Island Slue		35° 04'	76° 06'	+2 33	+3 18	+1 35	+1 56	0.1	0.2	--	--	0.2	310°	--	--	0.3	095°
2531	Ocracoke Inlet, 3.5 miles SSE of		35° 01'	76° 00'														
	NORTH CAROLINA COAST																	
	<i>Beaufort Inlet</i>																	
2533	Shackleford Banks, 0.8 mile S of	6	34° 39.98'	76° 39.33'	+1 19	+1 16	+0 30	+0 31	0.8	0.7	--	--	1.4	314°	--	--	1.5	145°
2535	Approach		34° 40.3'	76° 40.2'	+2 03	+1 19	+0 37	+0 57	0.2	0.7	--	--	0.3	358°	--	--	1.4	161°
2537	Fort Macon, 0.6 mile SE of		34° 41.15'	76° 40.10'	+1 42	+1 47	+0 51	+0 38	0.7	0.9	--	--	1.2	332°	--	--	1.7	154°
2539	Fort Macon, 0.2 mile NE of	10	34° 41.98'	76° 40.52'	+1 12	+1 20	+0 36	+0 21	1.1	0.9	0.1	232°	2.0	307°	--	--	1.8	151°
	do.	20	34° 41.98'	76° 40.52'	+1 12	+1 18	+0 36	+0 39	1.1	0.9	0.2	242°	2.0	320°	0.1	232°	1.7	153°
2541	Tombstone Point, 0.1 mile E of	15	34° 42.23'	76° 41.17'	+1 13	+1 25	+0 34	+0 27	0.9	0.8	0.1	222°	1.6	305°	0.1	220°	1.7	128°
2543	Turning Basin	6	34° 42.78'	76° 41.65'	+1 11	+1 34	+0 50	+0 32	0.8	0.5	--	--	1.3	327°	0.1	237°	1.0	144°
	do.	15	34° 42.78'	76° 41.65'	+1 09	+1 34	+0 59	+0 32	0.7	0.5	0.4	048°	1.2	334°	0.1	237°	1.0	138°
2545	Sugarloaf Island, 0.2 mile S of	6	34° 42.75'	76° 42.83'	+1 58	+1 39	+1 22	+1 14	0.7	0.8	--	--	1.1	266°	--	--	1.6	094°
2547	Morehead City, S of	6	34° 43.00'	76° 43.97'	+2 12	+1 47	+1 29	+1 42	0.8	0.7	--	--	1.4	293°	--	--	1.4	110°
2549	Morehead City, RR. bridge, N of	6	34° 43.37'	76° 41.63'	+0 44	+1 01	+0 09	-1 03	0.6	0.5	0.2	127°	1.0	054°	0.1	122°	1.0	185°
2551	Newport Marshes, SE of	6	34° 43.88'	76° 41.00'	+0 57	+1 02	+0 18	-0 08	0.8	0.6	0.1	130°	1.4	044°	--	--	1.2	215°
	do.	15	34° 43.88'	76° 41.00'	+0 53	+1 15	+0 21	-0 08	0.8	0.6	--	--	1.3	044°	--	--	1.2	226°
2553	Newport Marshes, E of	6	34° 44.27'	76° 40.83'	+0 07	+0 11	-0 37	-0 09	0.6	0.5	--	--	1.0	040°	--	--	1.0	224°

Endnotes can be found at the end of table 2.

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No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS									
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb			
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.		
	NORTH CAROLINA COAST Time meridian, 75°W	ft	North	West	h	m	h	m	h	m	h	m								
					<b>on Charleston Harbor, p.112</b>															
	<i>Beaufort Inlet-cont.</i>																			
2555	Radio Island, E of .....	6	34° 42.70'	76° 40.78'	+0 55	+0 55	+0 20	+0 16	0.7	0.6	--	--	1.2	022°	--	--	1.2	202°		
2557	Beaufort, off docks .....		34° 43'	76° 40'							--	--	0.5	310°	--	--	0.5	130°		
2559	Bird Shoal, SE of .....	6	34° 42.03'	76° 39.23'	+1 40	+1 34	+1 10	+0 16	0.5	0.4	--	--	0.8	126°	0.1	217°	0.8	304°		
2561	Shackleford Point, NE of .....	6	34° 41.53'	76° 39.13'	+1 32	+1 28	+1 10	+0 46	0.8	0.6	0.1	218°	1.3	135°	--	--	1.1	305°		
2563	Carrot Island .....	6	34° 42.13'	76° 37.05'	+1 49	+1 34	+1 15	+1 49	0.5	0.7	0.1	359°	0.9	080°	--	--	1.3	262°		
2565	Middle Marshes, S of .....	6	34° 40.70'	76° 36.83'	+0 59	+1 04	+1 03	+0 18	0.8	0.5	0.1	197°	1.4	123°	0.1	181°	1.1	275°		
2567	Cape Lookout Shoals Ltd. Whistle Buoy 14 .....		34° 18'	76° 24'																
					<b>on Southport, p.104</b>															
2569	Bald Head Shoal .....	12d	33° 51.26'	78° 01.63'	-0 40	+0 07	-1 24	-0 49	0.3	0.5	0.2	291°	0.6	013°	0.3	095°	1.7	208°		
	do. ....	28d	33° 51.26'	78° 01.63'	-2 01	-1 51	-0 44	-0 51	0.3	0.3	0.3	295°	0.6	013°	0.1	108°	1.0	203°		
2571	Fort Caswell .....	12d	33° 53.30'	78° 00.46'	-0 22	+0 06	-0 24	-0 32	0.7	0.5	--	--	1.2	012°	0.1	119°	1.6	161°		
	do. ....	18d	33° 53.30'	78° 00.46'	-0 32	-0 01	-0 21	-0 35	0.6	0.4	--	--	1.1	006°	0.1	254°	1.3	161°		
	do. ....	28d	33° 53.30'	78° 00.46'	-0 40	+0 18	-0 06	-0 51	0.7	0.3	0.1	074°	1.3	347°	0.2	258°	0.9	162°		
2573	SOUTHPORT .....	7d	33° 54.92'	78° 00.73'							--	--	1.8	048°	0.1	142°	3.3	235°		
	do. ....	20d	33° 54.92'	78° 00.73'	-0 14	+0 04	+0 02	-0 06	1.1	0.8	--	--	1.9	056°	--	--	2.5	231°		
	do. ....	37d	33° 54.92'	78° 00.73'	-0 30	+0 01	-0 01	-0 11	1.0	0.5	--	--	1.7	060°	--	--	1.7	225°		
2575	Southport, at Dutchman Creek, ICW .....	4d	33° 55.06'	78° 02.58'	-1 14	-0 01	-0 58	-2 03	0.4	0.3	--	--	0.7	295°	--	--	0.9	119°		
	do. ....	12d	33° 55.06'	78° 02.58'	-1 11	+0 17	-0 49	-1 48	0.3	0.2	--	--	0.6	294°	--	--	0.7	117°		
2577	Oak Island Bridge, ICW .....	11d	33° 55.30'	78° 04.37'	-0 58	-0 47	-1 55	-2 07	0.2	0.3	--	--	0.4	270°	--	--	0.9	086°		
2579	Snows Marsh Channel .....	12d	33° 56.23'	77° 58.67'	-0 09	+0 10	+0 18	-0 02	1.3	0.7	0.2	336°	2.2	049°	0.1	030°	2.1	262°		
	do. ....	25d	33° 56.23'	77° 58.67'	-0 14	+0 18	+0 24	+0 21	1.1	0.5	0.1	322°	1.9	051°	0.1	335°	1.7	239°		
	do. ....	38d	33° 56.23'	77° 58.67'	-0 16	+0 33	+0 24	+0 03	0.9	0.4	0.1	330°	1.6	054°	0.1	333°	1.4	247°		
2581	Sunny Point, 0.5 nm southeast of .....	12d	33° 58.70'	77° 57.00'	+0 10	+0 12	+0 28	+0 06	1.0	0.4	0.1	209°	1.8	017°	--	--	1.3	190°		
	do. ....	18d	33° 58.70'	77° 57.00'	-0 06	+0 00	+0 34	+0 08	0.9	0.3	0.1	097°	1.6	014°	0.1	090°	1.0	178°		
	do. ....	35d	33° 58.70'	77° 57.00'	-0 35	+0 18	+0 47	-0 05	0.7	0.2	0.1	262°	1.2	000°	0.1	267°	0.8	178°		
2583	Reaves Point, 0.3 mile east of .....	6	33° 59.92'	77° 56.97'	-0 21	-1 01	+0 23	-1 58	0.2	0.1	--	--	0.3	351°	--	--	0.3	181°		
	do. ....	16	33° 59.92'	77° 56.97'	-0 06	+0 37	+1 00	-0 56	0.4	0.1	--	--	0.7	332°	0.1	251°	0.4	159°		
	do. ....	26	33° 59.92'	77° 56.97'	-0 39	+0 40	+2 05	+0 28	0.6	0.1	--	--	1.0	331°	0.0	256°	0.2	160°		
2585	Reaves Point Channel .....	6	33° 59.08'	77° 55.85'	+0 57	+0 27	+1 02	+1 08	0.8	0.5	--	--	1.3	009°	--	--	1.6	195°		
	do. ....	16	33° 59.08'	77° 55.85'	+0 34	+0 04	+0 56	+1 10	0.9	0.5	--	--	1.5	013°	--	--	1.7	192°		
	do. ....	26	33° 59.08'	77° 55.85'	+0 20	+1 02	+1 02	+0 43	0.6	0.3	--	--	1.1	017°	--	--	1.1	194°		
2587	Reaves Point, 0.9 nm northeast of .....	10d	34° 00.36'	77° 56.41'	+0 16	+0 43	+1 03	-0 04	0.9	0.3	0.1	105°	1.5	022°	--	--	1.1	191°		
	do. ....	20d	34° 00.36'	77° 56.41'	+0 06	+0 17	+1 06	+0 37	0.8	0.4	--	--	1.3	019°	--	--	1.2	191°		
	do. ....	33d	34° 00.36'	77° 56.41'	-0 11	+0 35	+1 15	+0 44	0.5	0.3	--	--	0.9	020°	--	--	1.0	205°		
2589	Reaves Point, 0.4 mile north of .....	6	34° 00.37'	77° 57.15'	+1 11	+0 42	+1 05	+1 10	0.5	0.3	--	--	0.8	027°	--	--	0.9	198°		
	do. ....	16	34° 00.37'	77° 57.15'	+0 51	+1 34	+1 18	+0 58	0.5	0.2	--	--	0.9	011°	--	--	0.7	191°		
	do. ....	26	34° 00.37'	77° 57.15'	-0 05	+1 00	+1 37	+0 17	0.5	0.2	--	--	0.9	050°	0.1	117°	0.8	183°		
2591	Orton Point, 0.5 nm south of .....	8d	34° 02.84'	77° 56.46'	+0 03	+0 20	+0 14	+0 21	1.9	0.7	--	--	1.5	358°	--	--	2.2	189°		
	do. ....	15d	34° 02.84'	77° 56.46'	-0 11	-0 01	+0 21	+0 22	1.0	0.5	--	--	1.7	359°	--	--	1.7	181°		
	do. ....	38d	34° 02.84'	77° 56.46'	-1 14	-1 01	+0 19	-0 29	0.7	0.2	--	--	1.3	001°	--	--	0.7	179°		
2593	Snows Cut, Intracoastal Waterway .....	3d	34° 03.35'	77° 53.94'	+4 31	+5 19	+5 51	+4 22	0.8	0.5	--	--	1.4	073°	--	--	1.8	254°		
2595	Myrtle Sound, Intracoastal Waterway .....	16d	34° 04.76'	77° 53.06'	+4 19	+5 59	+5 34	+4 12	0.4	0.1	--	--	0.7	045°	--	--	0.4	233°		
2597	Upper Midnight Channel .....	7d	34° 01.74'	77° 56.45'	+0 42	+0 35	+0 43	+0 53	0.6	0.6	0.1	098°	1.1	013°	--	--	2.1	183°		
	do. ....	20d	34° 01.74'	77° 56.45'	+0 20	+0 34	+0 57	+0 46	0.6	0.5	0.1	102°	1.1	011°	--	--	1.6	188°		
	do. ....	33d	34° 01.74'	77° 56.45'	-0 12	+0 17	+1 09	+0 40	0.7	0.4	--	--	1.3	359°	--	--	1.2	183°		
2599	Doctor Point, 0.6 nm NNW of .....	6d	34° 04.73'	77° 55.92'	+0 57	+1 08	+0 59	+1 01	0.9	0.7	--	--	1.5	349°	0.1	080°	2.4	166°		
	do. ....	16d	34° 04.73'	77° 55.92'	+0 47	+0 44	+1 13	+1 06	1.0	0.6	--	--	1.7	348°	--	--	1.9	166°		
	do. ....	32d	34° 04.73'	77° 55.92'	+0 17	+0 16	+1 12	+0 51	0.8	0.4	--	--	1.3	344°	--	--	1.1	163°		
2601	Keg Island, west side .....	7d	34° 05.82'	77° 56.08'	+1 06	+1 12	+1 05	+1 16	0.8	0.7	--	--	1.4	344°	--	--	2.3	161°		
	do. ....	30d	34° 05.82'	77° 56.08'	+0 25	+0 22	+1 12	+0 40	0.7	0.4	--	--	1.2	350°	--	--	1.2	167°		
2603	Campbell Island, east side .....	9d	34° 07.19'	77° 56.11'	+1 09	+1 26	+1 24	+1 21	1.0	0.6	--	--	1.8	007°	--	--	2.1	189°		
	do. ....	15d	34° 07.19'	77° 56.18'	+0 56	+1 14	+1 29	+1 19	1.1	0.6	--	--	1.8	007°	--	--	1.9	185°		
	do. ....	35d	34° 07.19'	77° 56.18'	+0 25	+0 53	+1 35	+0 57	0.8	0.3	--	--	1.4	004°	--	--	1.1	187°		
2605	Upper Big I Range .....	7d	34° 08.13'	77° 56.53'	+1 21	+1 33	+1 20	+1 03	0.8	0.5	0.1	037°	1.4	310°	--	--	1.7	126°		
	do. ....	13d	34° 08.13'	77° 56.53'	+1 19	+1 43	+1 44	+1 22	0.9	0.5	--	--	1.6	309°	--	--	1.7	124°		
	do. ....	36d	34° 08.13'	77° 56.53'	+0 25	+1 08	+1 51	+1 27	0.8	0.3	--	--	1.4	313°	--	--	0.8	136°		

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS							
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb	
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.
	CAPE FEAR RIVER Time meridian, 75°W	ft	<b>North</b>	<b>West</b>	<b>h</b>	<b>m</b>	<b>h</b>	<b>m</b>	<b>h</b>	<b>m</b>								
					<b>on Southport, p.104</b>													
2607	Lower Brunswick Range	9d	34° 09.36'	77° 57.50'	+1 30	+1 57	+1 36	+1 35	0.9	0.5	--	--	1.5	322°	--	--	1.8	140°
	do.	16d	34° 09.36'	77° 57.50'	+1 29	+1 47	+1 50	+1 49	0.9	0.5	--	--	1.6	322°	--	--	1.7	141°
	do.	39d	34° 09.36'	77° 57.50'	+0 28	+1 24	+2 01	+1 22	0.7	0.3	--	--	1.2	324°	--	--	0.8	147°
2609	Port of Wilmington, south end shoals	14d	34° 10.55'	77° 57.42'	+1 15	+2 09	+1 24	+0 36	0.3	0.4	--	--	0.6	005°	--	--	1.2	182°
2611	Port of Wilmington, south end, east of channel	14d	34° 10.55'	77° 57.45'	+1 27	+1 33	+1 03	+0 15	0.4	0.5	--	--	0.7	005°	0.1	083°	1.5	174°
2613	Port of Wilmington, south end, mid-channel	14d	34° 10.55'	77° 57.45'	+1 22	+1 19	+1 00	+0 30	0.5	0.3	--	--	0.8	355°	--	--	1.1	173°
	<i>Brunswick River</i>																	
2615	0.4 mile north of	6	34° 10.87'	77° 57.95'	+1 42	+0 26	+1 12	+0 13	0.5	0.4	--	--	0.8	290°	0.1	200°	1.2	118°
	do.	16	34° 10.87'	77° 57.95'	+1 34	+0 48	+1 14	+0 13	0.5	0.3	--	--	0.8	301°	--	--	1.0	127°
2617	1.8 miles north of mouth	6	34° 12.33'	77° 58.47'	+1 48	+1 30	+1 20	+1 43	0.3	0.3	--	--	0.5	354°	--	--	0.8	170°
					<b>on Wilmington, p.108</b>													
2619	Dram Tree Point, 0.5 mile SSE of	6d	34° 11.44'	77° 57.46'	+0 09	-0 02	-0 24	-0 26	0.5	0.7	--	--	0.7	358°	--	--	1.3	181°
	do.	32d	34° 11.44'	77° 57.46'	-0 34	-0 26	+0 38	+0 17	0.8	0.5	--	--	1.2	000°	--	--	1.0	178°
2621	State Pier, at the pier	15d	34° 12.47'	77° 57.33'	-2 59	-1 28	-0 16	-1 28	0.2	0.2	--	--	0.3	011°	--	--	0.5	192°
2623	State Pier, east of channel	15d	34° 12.47'	77° 57.36'	-0 33	+0 23	+0 19	-0 49	0.3	0.3	--	--	0.5	011°	--	--	0.7	185°
2625	State Pier, midchannel	15d	34° 12.47'	77° 57.39'	+0 23	+0 10	-0 09	+0 31	0.3	0.5	--	--	0.4	007°	--	--	1.1	185°
2627	WILMINGTON, USS North Carolina	5d	34° 14.01'	77° 57.02'							--	--	1.6	000°	--	--	2.1	179°
	do.	25d	34° 14.01'	77° 57.02'	-0 16	-0 07	+0 13	+0 22	1.1	0.9	--	--	1.7	000°	--	--	1.8	180°
2629	Wilmington, Northeast River	4d	34° 14.52'	77° 57.24'	-0 04	+0 13	+0 27	+0 30	0.9	0.7	--	--	1.4	336°	0.1	250°	1.4	171°
	do.	14d	34° 14.52'	77° 57.24'	-0 01	+0 03	+0 29	+0 34	0.8	0.6	--	--	1.3	342°	--	--	1.3	169°
	do.	34d	34° 14.52'	77° 57.24'	-0 14	+0 01	+0 37	+0 48	0.5	0.3	--	--	0.8	006°	--	--	0.7	161°
2631	Point Peter	5d	34° 14.55'	77° 57.46'	+0 19	+0 20	+0 05	-0 11	0.9	0.8	--	--	1.5	311°	--	--	1.6	132°
	do.	23d	34° 14.55'	77° 57.46'	-0 17	-0 17	+0 08	+0 28	0.6	0.5	--	--	0.9	305°	--	--	1.1	133°
2633	Isabel Holmes Bridge	6d	34° 15.14'	77° 57.01'	+0 11	+0 23	+0 34	+0 41	0.9	0.7	--	--	1.4	036°	--	--	1.4	215°
	do.	29d	34° 15.14'	77° 57.01'	+0 02	+0 01	+0 42	+1 17	0.7	0.5	--	--	1.1	037°	--	--	1.1	224°
2635	Hilton RR Bridge, 0.1nm north of	12d	34° 15.55'	77° 56.88'	+0 23	+0 19	+0 13	+0 34	0.3	0.6	--	--	0.4	344°	--	--	1.2	169°
	do.	31d	34° 15.55'	77° 56.88'	+0 07	+0 07	+0 17	+0 38	0.3	0.5	--	--	0.5	002°	--	--	1.1	173°
	NORTH CAROLINA COAST				<b>on Charleston Harbor, p.112</b>													
2637	Frying Pan Shoals, off Cape Fear		33° 34'	77° 49'	See table 5.													
2639	Frying Pan Shoals Light, 14.3 mi. NW of		33° 28'	77° 34'	Current weak and variable													
	WINYAH BAY																	
2641	Winyah Bay entrance		33° 12.43'	79° 11.07'	+1 47	+1 35	+1 05	+1 20	1.1	1.0	--	--	1.9	320°	--	--	2.0	140°
2643	Range D, off Mosquito Creek		33° 14.65'	79° 12.35'	+2 00	+1 57	+1 13	+1 42	1.2	1.1	--	--	2.1	330°	--	--	2.2	130°
2645	Frazier Point, south of		33° 17.70'	79° 16.37'	+1 52	+1 52	+2 20	+1 59	1.1	0.5	--	--	1.8	320°	--	--	0.9	115°
2647	Frazier Point, west of		33° 18.58'	79° 17.20'	+2 23	+2 19	+2 01	+1 41	0.9	1.0	--	--	1.6	000°	--	--	2.0	170°
2649	Rabbit Island, northwest of		33° 20.37'	79° 16.88'	+2 39	+2 46	+2 14	+2 25	1.2	0.9	--	--	2.1	015°	--	--	1.8	215°
2651	Sampit River entrance		33° 21.08'	79° 16.82'	+1 33	+1 20	+1 39	+0 53	0.6	0.7	--	--	1.1	345°	--	--	1.3	135°
2653	Georgetown, Sampit River		33° 21.55'	79° 17.25'	+2 00	+1 18	+0 56	+0 52	0.5	0.6	--	--	0.8	275°	--	--	1.1	080°
2655	Pee Dee River, swing bridge		33° 22.23'	79° 15.83'	+3 03	+3 13	+1 57	+2 43	0.4	0.5	--	--	0.7	000°	--	--	0.9	210°
2657	Lafayette swing bridge, Waccamaw River		33° 22.12'	79° 15.12'	+3 23	+3 04	+1 56	+2 31	0.4	0.6	--	--	0.7	005°	--	--	1.2	200°
2659	Butler Island, 0.3 mile south of		33° 25.00'	79° 12.72'	+3 36	+3 34	+2 11	+2 55	0.4	0.5	--	--	0.6	030°	--	--	0.9	205°
	SOUTH CAROLINA COAST																	
2661	North Santee River entrance	6	33° 08.15'	79° 14.45'	+1 00	+0 33	+0 03	-0 01	0.9	0.9	--	--	1.5	010°	--	--	1.8	165°
2663	South Santee River entrance	5	33° 07.2'	79° 16.5'	+0 20	+0 38	+0 27	+0 15	0.9	0.8	--	--	1.5	045°	--	--	1.6	240°
2665	Cape Romain		--	--	See table 5.													
2667	Capers Inlet		--	--	Current weak and variable													
2669	Charleston Entrance, 37 miles east of		32° 42'	79° 06'	See table 5.													
2671	Charleston Lighted Whistle Buoy 2C		32° 41'	79° 43'	See table 5.													

Endnotes can be found at the end of table 2.

TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS									
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb			
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.		
	CHARLESTON HARBOR Time meridian, 75°W	ft	North	West	h	m	h	m	h	m	h	m								
			<b>on Charleston Harbor, p.112</b>																	
2673	Fort Sumter Range, Buoy '2'		32° 40.98'	79° 43.56'	-1 05	-0 51	-1 11	-1 03	0.2	0.2	0.2	194°	0.3	280°	0.2	023°	0.4	104°		
2675	Fort Sumter Range, Buoy '4'		32° 41.86'	79° 45.34'	-0 49	-0 59	-1 10	-0 38	0.3	0.2	0.1	202°	0.5	289°	0.1	026°	0.4	117°		
2677	Fort Sumter Range, Buoy '8'		32° 42.90'	79° 47.54'	-0 15	-0 16	+0 17	+0 24	0.4	0.5	0.2	204°	0.6	299°	0.1	038°	0.9	128°		
2679	Fort Sumter Range, Buoy '14'		32° 43.46'	79° 48.60'	-0 10	-0 04	+0 16	+0 01	0.6	0.8	0.1	193°	1.1	287°	0.2	019°	1.5	116°		
2681	North Jetty, 0.8 mile southeast of <30>		32° 43.05'	79° 48.00'	-0 06	-0 48	-1 09	-0 16	0.2	0.6	0.1	202°	0.4	295°	0.1	358°	1.1	110°		
2683	Charleston Hbr. ent. (between jetties)		32° 44.00'	79° 50.00'	-0 01	+0 04	+0 05	+0 09	1.1	0.9	--	--	1.8	320°	--	--	1.8	121°		
2685	Fort Sumter Range, Buoy '20'		32° 44.43'	79° 50.67'	-0 33	-0 15	-0 33	-0 51	0.9	0.9	0.1	230°	1.6	305°	0.1	040°	1.8	128°		
2687	South Jetty, break in		32° 43.87'	79° 51.02'	+0 38	+0 31	+0 06	+0 22	0.7	1.4	--	--	1.2	002°	--	--	2.8	204°		
2689	CHARLESTON HARBOR (off Fort Sumter)		32° 45.36'	79° 52.22'							0.2	212°	1.7	313°	--	--	2.0	127°		
2691	Ft. Sumter, 0.6 n.mi. NW of		32° 45.67'	79° 52.03'	-0 05	-0 03	+0 01	-0 24	0.9	0.9	0.1	220°	1.6	322°	0.1	233°	1.7	138°		
2693	South Chan., 0.8 mi. ENE of Ft. Johnson		32° 45.52'	79° 53.08'	+0 43	+0 11	-0 12	+0 13	0.5	1.3	--	--	0.8	275°	--	--	2.6	115°		
2695	South Chan., 0.4 mi. NW of Ft. Johnson		32° 45.48'	79° 54.38'	+1 10	+0 58	+0 16	+0 43	0.4	1.0	--	--	0.7	282°	--	--	1.9	104°		
2697	Sullivans I., 0.7 mi. NE of Ft. Sumter		32° 45.72'	79° 52.05'	+0 17	+0 37	+0 01	-0 03	0.8	0.8	--	--	1.4	342°	--	--	1.5	132°		
2699	Castle Pinckney, 0.4 mile south of		32° 46.02'	79° 54.70'	+0 40	+1 00	+0 14	+0 58	0.5	0.9	--	--	0.8	304°	--	--	1.7	098°		
2701	South Channel, Buoy '32'		32° 45.73'	79° 54.66'	-0 01	-0 04	+0 18	-0 02	0.5	0.5	0.1	219°	0.8	305°	0.1	026°	1.0	125°		
2703	Castle Pinckney, 0.6 mile southwest of		32° 45.98'	79° 55.17'	+1 21	+1 20	+0 24	+0 40	0.4	0.7	--	--	0.7	318°	--	--	1.3	156°		
2705	Shutes Folly Island, 0.4 mile west of		32° 46.58'	79° 55.25'	+0 53	+0 59	+0 20	+0 08	0.5	1.1	--	--	0.8	028°	--	--	2.2	164°		
2707	Customhouse Reach, off Customhouse		32° 46.77'	79° 55.35'	+0 49	+1 03	+0 59	+0 23	0.6	0.7	--	--	1.0	009°	0.1	098°	1.3	190°		
2709	Customhouse Reach		32° 46.95'	79° 55.20'	+0 46	+0 37	+0 37	+0 15	0.6	0.9	--	--	1.0	005°	--	--	1.8	153°		
2711	Town Creek Lower Reach		32° 47.55'	79° 55.47'	+0 34	+0 24	+0 02	+0 07	0.6	1.1	--	--	1.1	335°	--	--	2.2	172°		
2713	Town Creek, 0.2 mile above bridge		32° 48.32'	79° 55.90'	+1 06	+0 54	+0 03	+0 03	0.5	1.3	--	--	0.8	002°	--	--	2.5	166°		
2715	Rebellion Reach, 0.8 n.mi. N. of Ft. Sumter		32° 45.98'	79° 52.40'	-0 06	+0 27	-0 25	-0 48	0.4	0.4	0.1	240°	0.7	329°	--	--	0.8	143°		
2717	The Cove, entrance on the Cove Range		32° 46.05'	79° 52.32'	+0 28	+1 14	+0 06	+0 10	1.0	0.7	--	--	1.2	346°	--	--	0.9	151°		
2719	Hog Island Channel		32° 46.87'	79° 52.58'	-0 39	+0 03	-0 29	-0 20	0.5	0.4	--	--	0.8	325°	--	--	0.8	125°		
2721	Folly I. Channel, N of Ft. Johnson		32° 46.18'	79° 54.07'	-1 09	-0 03	-0 04	-0 59	0.7	0.6	--	--	1.2	301°	--	--	1.1	104°		
2723	Folly Reach, Buoy '5'		32° 46.58'	79° 53.95'	+0 02	+0 35	+0 18	+0 13	0.7	0.8	0.1	205°	1.2	292°	--	--	1.6	110°		
2725	Shutes Reach, Buoy '8'		32° 46.93'	79° 54.65'	+0 18	+0 22	+0 15	-0 25	0.7	0.8	--	--	1.3	315°	0.1	037°	1.5	136°		
2727	Horse Reach		32° 47.17'	79° 54.90'	+0 36	+0 23	-0 12	+0 09	0.8	1.0	--	--	1.4	350°	--	--	1.9	146°		
2729	Hog Island Reach, Buoy '12'		32° 47.67'	79° 54.90'	+0 13	+0 28	+0 14	-0 12	0.7	0.7	--	--	1.2	012°	0.1	103°	1.3	193°		
2731	Drum Island, 0.4 mile SSE of		32° 47.67'	79° 55.25'	+0 34	+0 53	+0 11	-0 02	0.8	0.9	--	--	1.3	011°	--	--	1.8	155°		
2733	Drum Island, east of (bridge)		32° 48.27'	79° 54.92'	+0 30	+0 42	+0 15	+0 06	0.7	1.0	--	--	1.2	020°	--	--	2.0	183°		
2735	Hog Island Reach, SW of Remley Point		32° 48.71'	79° 54.72'	+0 30	+0 44	+0 43	+0 51	0.7	0.7	--	--	1.1	030°	--	--	1.4	210°		
2737	Drum Island Reach, off Drum I., Buoy '45'		32° 48.97'	79° 55.37'	+0 26	+1 00	+1 06	+1 00	0.4	0.5	--	--	0.6	312°	--	--	1.0	133°		
	Cooper River																			
2739	Drum Island, 0.2 mile above		32° 49.18'	79° 55.75'	+1 12	+1 09	+0 01	+0 37	0.6	1.2	--	--	1.1	332°	--	--	2.4	152°		
2741	Daniel Island Reach, Buoy '48'		32° 49.63'	79° 55.73'	+1 01	+1 29	+0 53	+0 55	0.7	0.7	--	--	1.2	006°	0.1	278°	1.3	182°		
2743	Shipyard Creek entrance <31>		32° 49.80'	79° 56.10'	+0 41	+1 06	-0 29	+0 09	0.3	0.8	--	--	0.5	--	--	--	1.5	197°		
2745	Daniel Island Reach		32° 49.97'	79° 55.80'	+1 29	+1 49	+0 42	+0 51	0.8	1.2	--	--	1.3	352°	--	--	2.3	190°		
2747	Daniel Island Bend		32° 50.90'	79° 55.75'	+0 55	+1 29	+0 55	+0 39	0.7	1.1	--	--	1.2	335°	0.1	260°	2.1	153°		
2749	Daniel Island Bend, west side of <47>		32° 50.85'	79° 56.00'	--	--	--	-0 01	--	0.5	--	--	--	--	--	--	1.0	144°		
2751	North Charleston		32° 51.82'	79° 57.53'	+1 26	+2 28	+1 04	+0 17	0.6	0.9	--	--	1.1	335°	--	--	1.7	142°		
2753	Filbin Creek Reach		32° 53.32'	79° 57.92'	+1 31	+2 06	+1 08	+1 27	0.7	0.9	--	--	1.2	006°	--	--	1.8	180°		
2755	Filbin Creek Reach, 0.2 mile east of		32° 53.28'	79° 57.63'	+1 16	+1 47	+0 32	+0 29	0.4	0.7	--	--	0.6	002°	--	--	1.4	197°		
2757	Filbin Creek Reach, Buoy '58'		32° 53.78'	79° 57.67'	+1 18	+2 04	+1 24	+1 09	0.6	0.7	--	--	1.1	031°	--	--	1.3	214°		
2759	Ordnance Reach		32° 54.38'	79° 57.17'	+1 35	+2 34	+1 05	+1 07	0.6	0.6	--	--	1.0	062°	--	--	1.2	242°		
2761	Yellow House Creek		32° 54.53'	79° 56.18'	+2 06	+2 41	+0 57	+1 12	0.4	0.7	--	--	0.7	088°	--	--	1.4	270°		
2763	Yellow House Landing, 1 mile NW of		32° 55.18'	79° 55.83'	+2 26	+2 43	+0 58	+1 06	0.4	0.9	--	--	0.7	334°	--	--	1.8	170°		
2765	Woods Point, SE of		32° 55.55'	79° 55.97'	+1 48	+1 55	+1 55	+2 09	0.5	0.5	--	--	0.8	334°	0.1	067°	1.0	157°		
2767	Woods Point		32° 55.90'	79° 56.30'	+2 41	+3 02	+1 11	+1 43	0.5	0.7	--	--	0.9	002°	--	--	1.4	201°		
2769	Snow Point, 0.5 mile north of		32° 57.1'	79° 55.8'	+2 15	+2 36	+1 48	+1 33	0.6	0.7	--	--	1.1	010°	--	--	1.4	201°		
2771	Back River entrance		32° 58.1'	79° 56.0'	+0 46	+0 45	+0 48	+0 34	0.6	0.6	--	--	1.0	252°	--	--	1.2	067°		
2773	Amoco Pier, off		32° 57.55'	79° 55.08'	+2 09	+2 49	+2 10	+1 48	0.4	0.5	0.1	292°	0.7	024°	0.1	297°	0.9	191°		
2775	Moreland, 0.5 n.mi. below		33° 00.03'	79° 54.28'	+2 39	+2 58	+2 28	+2 19	1.1	1.0	--	--	1.9	036°	--	--	2.0	216°		
2777	Hagan Island, 1 n.mi. below		33° 02.00'	79° 54.80'	+2 39	+3 52	+2 27	+1 37	0.8	0.7	0.1	048°	1.3	308°	--	--	1.4	134°		
2779	The Tee, 0.4 mile southwest of		33° 03.80'	79° 55.78'	+4 22	+4 20	+2 29	+3 20	0.6	0.9	--	--	1.0	280°	--	--	1.7	098°		
2781	The Tee		33° 03.95'	79° 55.38'	+3 00	+3 09	+2 36	+1 43	0.6	0.5	0.1	075°	0.9	339°	0.1	253°	1.0	161°		

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS									
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb			
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.		
	CHARLESTON HARBOR Time meridian, 75°W	ft	North	West	h	m	h	m	h	m	h	m								
			<b>on Charleston Harbor, p.112</b>																	
	<i>Cooper River-cont.</i>																			
2783	Childsbury, S.A.L. RR. bridge		33° 05.63'	79° 56.55'	+4 43	+4 27	+2 15	+3 34	0.4	0.9	--	--	0.7	309°	--	--	1.7	141°		
2785	East Branch, 0.2 mile above entrance		33° 04.1'	79° 55.2'	+3 01	+3 07	+2 59	+3 06	1.1	0.9	--	--	1.8	084°	--	--	1.7	262°		
2787	Bonneau Ferry, east of		33° 04.3'	79° 53.0'	+3 27	+3 10	+2 44	+3 36	0.4	0.4	--	--	0.7	022°	--	--	0.8	197°		
	<i>Wando River</i>																			
2789	Remley Point, 0.2 mile northwest of		32° 48.97'	79° 54.57'	-0 14	+0 36	+0 20	-0 04	0.8	0.9	--	--	1.3	028°	--	--	1.8	191°		
2791	Wando River Upper Reach, Turning Basin		32° 50.00'	79° 53.80'	-0 14	-0 12	-0 09	-0 09	0.6	0.6	--	--	1.0	012°	--	--	1.2	192°		
2793	Rathall Creek entrance		32° 51.57'	79° 53.77'	+0 25	+0 35	+0 18	-0 18	0.8	0.9	--	--	1.3	030°	--	--	1.7	216°		
2795	Horlbeck Creek, 0.2 mile above entrance		32° 53.1'	79° 50.7'	+0 28	+0 29	+0 31	+0 24	0.6	0.5	--	--	1.0	026°	--	--	0.9	218°		
2797	Nowell Creek entrance		32° 52.7'	79° 52.5'	-0 02	+0 42	-0 12	-0 39	0.4	0.6	--	--	0.7	350°	--	--	1.1	171°		
2799	Buoy '19', off Nowell Creek		32° 52.32'	79° 51.93'	-0 08	-0 06	+0 04	-0 19	0.5	0.5	--	--	0.8	080°	--	--	1.0	261°		
2801	Horlbeck Creek, 2.5 miles north of		32° 55.1'	79° 50.3'	+0 30	+0 41	+0 26	+0 28	0.5	0.7	--	--	0.8	015°	--	--	1.3	207°		
	<i>Ashley River</i>																			
2803	Battery, southwest of		32° 46.03'	79° 56.03'	+0 16	+0 09	-0 24	+0 03	0.7	0.9	--	--	1.2	303°	--	--	1.8	114°		
2805	Wappoo Creek, off of		32° 46.38'	79° 57.00'	+0 07	-0 05	-0 06	-0 41	0.7	0.6	--	--	1.1	315°	--	--	1.2	136°		
2807	Highway Bridge		32° 46.92'	79° 57.60'	-0 09	+0 30	-0 03	-0 18	0.7	0.6	--	--	1.2	321°	--	--	1.1	138°		
2809	S.C.L. RR. bridge, 0.1 mile below		32° 47.73'	79° 58.40'	-0 06	+0 44	-0 12	-0 28	0.6	0.6	--	--	1.0	353°	--	--	1.1	150°		
2811	S.C.L. RR. bridge, 1.5 miles above		32° 49.2'	79° 57.9'	+0 22	+0 19	+0 17	+0 09	0.7	0.8	--	--	1.2	351°	--	--	1.5	178°		
2813	State Hwy. 7 bridge		32° 50.23'	79° 58.92'	+0 06	-0 04	+0 05	-0 05	0.6	0.5	--	--	1.0	293°	--	--	1.0	114°		
2815	West Marsh Island, 0.1 mile east of		32° 49.7'	80° 00.5'	+0 23	+0 30	+0 14	+0 25	0.4	0.5	--	--	0.7	250°	--	--	1.0	086°		
2817	Bees Ferry Bridge		32° 50.8'	80° 03.0'	+1 13	+0 44	+0 37	+0 22	1.1	1.2	--	--	1.9	310°	--	--	2.3	130°		
	STONO RIVER																			
2819	Stono Inlet		32° 37.6'	79° 59.6'	-0 14	+0 44	-0 09	-0 45	1.1	1.4	--	--	1.9	315°	--	--	2.7	136°		
2821	Snake Island	12	32° 38.4'	80° 01.2'	-0 44	-0 42	-0 30	-0 38	0.7	0.5	--	--	1.1	347°	--	--	1.0	179°		
2823	Johns Island Airport, south of	12	32° 41.0'	80° 00.2'	-0 15	-0 46	-0 13	-0 34	0.9	0.8	--	--	1.5	007°	--	--	1.6	192°		
2825	Johns Island Bridge	14	32° 45.2'	80° 00.6'	+0 40	+0 21	+0 33	+0 10	0.5	0.5	--	--	0.8	358°	--	--	1.0	182°		
2827	Elliott Cut, west end		32° 46.0'	80° 00.0'	+0 10	-1 00	-0 46	+0 18	0.9	1.0	--	--	1.6	260°	--	--	1.9	080°		
2829	Johns Island	12	32° 47.2'	80° 06.4'	-0 24	+1 48	+0 29	-0 32	0.4	0.4	--	--	0.6	249°	--	--	0.8	068°		
2831	Pleasant Point	12	32° 45.0'	80° 08.0'	+2 04	0 34	+3 54	+3 37	0.3	0.4	--	--	0.4	008°	--	--	0.7	196°		
									0.1				0.2	006°						
									0.4				0.7	011°						
	SOUTH CAROLINA COAST-cont.																			
2833	Folly Island, 3.5 miles east of		32° 38.4'	79° 50.5'	Current weak and variable															
2835	Folly Island, 2.0 miles east of		32° 39.4'	79° 52.1'	See table 5.															
2837	Deveaux Banks, off North Edisto River entrance	12	32° 32.7'	80° 09.4'	-0 16	-0 01	-0 04	-0 26	0.8	1.0	0.1	042°	1.4	306°	0.1	072°	2.0	126°		
2839	North Edisto River entrance		32° 33.7'	80° 11.2'	+0 56	+1 10	+1 11	+0 43	1.7	1.9	--	--	2.9	332°	--	--	3.7	142°		
2841	Wadmalaw Island, Wadmalaw River entrance		32° 39.9'	80° 14.1'	-1 02	+0 11	+0 06	-1 29	0.7	0.4	--	--	1.1	355°	--	--	0.7	165°		
2843	Goshen Point, SE of, Wadmalaw River	12	32° 42.6'	80° 10.3'	+0 51	+2 18	+1 47	+1 48	0.5	0.4	--	--	0.8	059°	--	--	0.7	249°		
2845	Goshen Point, south of, Wadmalaw River	12	32° 42.8'	80° 11.2'	+1 24	+2 03	+1 35	+1 53	0.4	0.5	--	--	0.6	048°	--	--	1.0	235°		
2847	White Point, south of, Dawho River	12	32° 37.5'	80° 16.9'	+0 31	+0 02	+0 29	+0 15	0.5	0.4	--	--	0.8	234°	--	--	0.8	044°		
2849	Whooping Island, Dawho River	12	32° 38.2'	80° 20.4'	+1 36	+0 36	+1 35	+1 37	0.5	0.3	--	--	0.8	246°	--	--	0.6	070°		
2851	South Edisto River entrance		32° 29.3'	80° 20.9'	+0 19	-0 14	-0 09	+0 24	1.1	1.1	--	--	1.8	350°	--	--	2.2	146°		
2853	Pine Island, South Edisto River	15	32° 30.4'	80° 21.7'	+0 00	-0 09	+0 12	+0 37	0.7	0.5	--	--	1.2	345°	--	--	1.0	163°		
2855	Fenwick Island Cut, South Edisto River	15	32° 32.1'	80° 24.8'	-2 43	-0 55	-3 20	-1 26	0.4	0.4	--	--	0.8	220°	--	--	0.8	023°		
2857	Sampson Island, S end, South Edisto River	15	32° 33.8'	80° 23.5'	+0 59	0 34	+0 59	+0 52	0.8	0.8	--	--	1.4	037°	--	--	1.5	244°		
2859	Sampson Island, NE end, South Edisto River	15	32° 37.0'	80° 23.2'	+1 35	+1 15	+1 02	+0 52	0.8	0.8	--	--	1.4	334°	--	--	1.5	156°		
2861	Jehossee Island, S tip, South Edisto River	15	32° 36.2'	80° 25.2'	+1 44	+0 48	+0 53	+0 05	0.7	0.7	--	--	1.2	275°	0.1	352°	1.4	069°		
2863	Smuggledy Swamp, South Edisto River	6	32° 39.6'	80° 24.7'	+2 26	+1 14	+1 01	+2 25	0.5	0.7	--	--	0.8	349°	--	--	1.4	166°		
2865	Hutchinson Island, Ashepoo River	10	32° 31.9'	80° 26.1'	+1 21	+1 14	+0 54	+0 56	0.6	0.7	0.1	349°	1.1	278°	--	--	1.3	068°		
2867	Ashepoo Coosaw Cutoff	6	32° 31.5'	80° 27.2'	+1 22	+0 36	+0 56	+1 12	0.5	0.6	--	--	0.8	065°	--	--	1.2	265°		
2869	Pelican Bank, St. Helena Sound	15	32° 27.3'	80° 25.7'	+0 05	-0 33	+0 17	-0 35	0.9	0.8	--	--	1.5	300°	--	--	1.6	118°		
2871	Ashepoo River, off Jefford Creek entrance		32° 30.4'	80° 24.6'	+1 04	+0 46	+1 00	+0 43	0.9	0.8	--	--	1.5	016°	--	--	1.6	197°		
2873	Egg Bank, St. Helena Sound	10	32° 26.1'	80° 26.6'	-0 12	-1 24	-0 06	-0 20	0.8	0.8	--	--	1.3	329°	0.1	053°	1.5	128°		

Endnotes can be found at the end of table 2.

TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS										
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb				
											h	m	h	m	knots	Dir.	knots	Dir.	knots	Dir.	knots
	SOUTH CAROLINA COAST—cont. Time meridian, 75°W	ft	<b>North</b>	<b>West</b>	h	m	h	m	h	m	h	m									
					<b>on Charleston Harbor, p.112</b>																
2875	Morgan Island, NE of, Coosaw River	15	32° 29.3'	80° 28.4'	+0 28	+0 27	+0 36	+0 19	0.8	1.0	--	--	1.4	303°	0.1	205°	1.8	125°			
2877	Ashe Island Cut, SW of, Coosaw River	15	32° 30.6'	80° 30.3'	+0 32	-0 09	+0 43	+0 31	0.6	0.6	--	--	1.0	325°	--	--	1.2	134°			
2879	Ashe Island Cut, St. Helena Sound	6	32° 31.2'	80° 29.3'	+0 31	+1 41	+1 01	-0 13	0.5	0.4	--	--	0.8	232°	--	--	0.8	034°			
2881	Combahee River	8	32° 31.6'	80° 32.2'	+0 55	+0 59	+1 04	+0 53	0.6	0.8	--	--	1.0	335°	--	--	1.5	147°			
2883	Combahee River	15	32° 33.0'	80° 33.8'	+1 36	+1 35	+1 33	+1 03	0.8	1.0	--	--	1.3	280°	--	--	2.0	073°			
2885	Parrot Creek, Coosaw Island	15	32° 28.4'	80° 32.7'	+0 12	-0 48	+0 24	-0 54	0.7	0.6	--	--	1.2	355°	--	--	1.1	175°			
2887	Morgan Island, North end, Coosaw River	15	32° 30.2'	80° 32.2'	+0 34	+0 41	+0 27	-0 30	0.8	0.9	--	--	1.4	271°	--	--	1.7	085°			
2889	Williman Creek	10	32° 33.7'	80° 35.5'	+0 40	+1 27	+1 02	+0 04	0.6	0.8	--	--	1.1	343°	--	--	1.6	160°			
2891	Coosaw Island, South of, Morgan River	10	32° 27.1'	80° 35.0'	+0 09	+0 55	+0 15	+0 03	0.7	0.7	--	--	1.2	252°	--	--	1.4	058°			
2893	Sams Point, Northwest of, Coosaw River	10	32° 29.6'	80° 35.6'	+0 34	+0 36	+0 31	+0 24	0.5	0.6	--	--	0.8	292°	--	--	1.1	117°			
2895	Whale Branch River	10	32° 31.6'	80° 41.5'	+1 12	-0 09	+0 51	-0 09	0.5	0.7	--	--	0.8	295°	--	--	1.3	111°			
2897	Fripps Inlet, Fripps Island	15	32° 20.4'	80° 27.9'	-0 29	+1 12	-0 22	-1 29	0.7	0.6	--	--	1.2	299°	--	--	1.2	104°			
2899	Martins Industry, 5 miles east of		32° 06'	80° 28'																	
					See table 5.																
	PORT ROYAL SOUND																				
2901	Southeast Channel entrance		32° 08'	80° 35'	-0 30	-0 38	-0 09	-0 12	0.8	0.8	--	--	1.3	310°	--	--	1.6	150°			
2903	Port Royal Plantation Tower, east of	15	32° 13.4'	80° 39.4'	+0 33	-0 16	+0 19	+0 16	0.9	1.0	--	--	1.5	347°	0.2	071°	1.9	147°			
2905	Bay Point Island, S of, Broad River entrance	15	32° 14.0'	80° 37.8'	+0 39	-1 09	+0 06	+0 46	0.7	0.9	0.1	238°	1.2	320°	--	--	1.7	128°			
2907	Broad River Entrance, Point Royal Sound	15	32° 13.9'	80° 38.4'	+0 36	+0 21	+0 32	-0 25	1.0	0.9	0.1	234°	1.7	324°	0.2	041°	1.7	138°			
2909	Hilton Head		32° 15'	80° 40'	+0 16	+0 49	+0 32	+0 01	1.1	0.9	--	--	1.8	324°	--	--	1.8	146°			
2911	Beaufort River Entrance	15	32° 17.3'	80° 39.1'	+0 19	+1 11	+0 20	-0 03	0.7	0.7	--	--	1.3	010°	--	--	1.4	195°			
2913	Parris Island, Beaufort River	10	32° 19.6'	80° 39.4'	+0 29	+1 12	+0 11	+0 00	0.7	0.8	--	--	1.2	356°	--	--	1.5	175°			
2915	Chowan Creek	15	32° 22.2'	80° 38.3'	+0 24	+1 53	+0 23	-0 34	0.6	0.6	--	--	0.9	039°	--	--	1.1	246°			
2917	Parris Island, Beaufort River	15	32° 21.6'	80° 40.5'	+0 56	+1 19	+0 51	+0 22	0.7	0.7	--	--	1.2	341°	--	--	1.4	149°			
2919	Beaufort River	15	32° 24.2'	80° 40.3'	+1 04	+1 19	+1 01	+0 33	0.5	0.5	0.1	286°	0.9	012°	--	--	1.0	200°			
2921	Beaufort, Beaufort River	12	32° 25.8'	80° 40.6'	+0 55	+1 18	+1 08	+0 17	0.7	0.6	--	--	1.1	073°	--	--	1.1	257°			
2923	Beaufort Airport, Beaufort River	15	32° 27.0'	80° 39.8'	+1 25	+1 39	+1 21	+1 08	0.5	0.5	--	--	0.9	333°	--	--	0.9	152°			
2925	Brickyard Creek	10	32° 28.4'	80° 41.5'	+1 48	+0 30	+2 50	+2 58	0.5	0.4	--	--	0.8	351°	--	--	0.8	171°			
2927	Skull Creek, north entrance		32° 15.8'	80° 44.5'	-1 50	-1 20	-1 58	-2 14	0.4	0.6	--	--	0.7	222°	--	--	1.2	035°			
2929	Daws Island, SE of, Broad River	15	32° 18.1'	80° 43.5'	+0 46	+0 05	+0 39	+0 31	0.8	0.8	--	--	1.4	330°	0.1	048°	1.5	150°			
2931	Parris Island Lookout Tower, Broad River	15	32° 18.7'	80° 42.4'	+0 39	-0 07	+0 29	+0 16	0.7	0.7	--	--	1.1	339°	--	--	1.4	152°			
2933	Daws Island, south of, Chechessee River	15	32° 17.2'	80° 44.6'	+0 31	-0 22	+0 34	+0 31	0.6	0.7	0.1	232°	1.0	317°	0.1	048°	1.3	142°			
2935	Lemon Island South, Chechessee River	10	32° 21.0'	80° 48.4'	+0 33	+1 19	+0 39	-0 02	0.6	0.7	--	--	0.9	359°	--	--	1.3	175°			
2937	Broad River Bridge, S of, Broad River	15	32° 22.9'	80° 46.6'	+0 52	-0 15	+0 49	+0 07	0.6	0.8	--	--	1.1	341°	--	--	1.5	156°			
2939	Byrd Creek Entrance, SE of, Broad River	12	32° 27.4'	80° 49.1'	+1 27	+0 51	+1 32	+0 52	0.6	0.5	--	--	0.9	354°	--	--	1.0	174°			
2941	Little Barnwell I., E of, Whale Branch River	6	32° 30.1'	80° 47.2'	+1 41	+3 03	+1 54	+0 40	0.6	0.4	--	--	1.0	354°	--	--	0.8	175°			
	CALIBOGUE SOUND																				
					<b>on Savannah River Entrance, p.116</b>																
2943	Braddock Point, SW of, Calibogue Sound	10	32° 06.3'	80° 50.2'	-0 15	+0 16	-0 04	-1 04	0.8	1.0	--	--	1.6	006°	0.1	095°	2.0	183°			
2945	Haig Point Light, NW of, Cooper River	10	32° 08.9'	80° 50.5'	-0 51	-0 05	-0 40	-1 12	0.4	0.7	--	--	0.8	278°	--	--	1.4	094°			
2947	Ramshorn Creek Light, E of, Cooper River	6	32° 07.8'	80° 52.9'	+0 06	-0 53	+0 15	-1 17	0.5	0.7	--	--	1.0	280°	--	--	1.3	098°			
2949	Spanish Wells, Calibogue Sound	30	32° 11.2'	80° 47.1'	-0 14	+0 51	+0 12	-1 10	0.7	0.7	--	--	1.4	028°	--	--	1.5	204°			
2951	Skull Creek, south entrance	10	32° 13.4'	80° 47.1'	+0 38	+2 57	+1 23	+0 55	0.4	0.4	--	--	0.7	053°	0.1	309°	0.9	231°			
2953	MacKay Creek, south entrance	10	32° 13.2'	80° 47.4'	+0 06	+0 03	+0 12	-0 26	0.3	0.6	--	--	0.7	033°	--	--	1.2	212°			
	NEW and WRIGHT RIVERS																				
2955	Bloody Pt., 0.5 mile north of, New River		32° 05.3'	80° 52.8'	-1 03	+0 00	-0 53	-2 13	0.6	0.6	--	--	1.2	332°	--	--	1.3	147°			
2957	Bloody Pt., 0.5 mile west of, New River		32° 04.9'	80° 53.0'	-0 47	-0 21	-0 36	-1 26	0.9	0.9	--	--	1.7	267°	--	--	1.8	092°			
2959	Wright R., 0.2 mile above Walls Cut		32° 05.1'	80° 55.3'	-0 38	-0 16	-0 38	-1 16	0.6	0.8	--	--	1.2	332°	--	--	1.6	142°			
2961	Fields Cut <32>		32° 05'	80° 57'	--	--	-2 00	-1 51	--	0.9	--	--	--	--	--	--	1.9	042°			
2963	Walls Cut, Turtle Island	6	32° 04.9'	80° 55.0'	-2 29	-0 57	-1 12	-3 05	0.5	0.5	0.2	087°	1.0	294°	0.1	060°	0.9	100°			
2965	Daufuskie Landing Light, south of	10	32° 06.1'	80° 53.9'	+0 07	+1 04	+0 02	-1 45	0.7	0.8	--	--	1.5	043°	--	--	1.7	226°			

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS								
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb		
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.	
	SAVANNAH RIVER Time meridian, 75°W	ft	<b>North</b>	<b>West</b>	h	m	h	m	h	m	h	m							
			<b>on Savannah River Entrance, p.116</b>																
2967	Savannah Light, 1.2 miles southeast of	11	31° 57'	80° 40'	See table 5.														
2969	SAVANNAH RIVER ENT. (between jetties)		32° 02.14'	80° 53.42'	<b>Daily predictions</b>														
2971	Fort Pulaski		32° 02.2'	80° 54.1'	+0 42	+0 51	+0 15	+0 09	0.9	1.5	--	--	1.8	283°	--	--	2.0	110°	
2973	Fort Pulaski, 1.8 miles above		32° 02.7'	80° 55.9'	+0 25	+0 18	-0 01	+0 12	1.1	1.4	--	--	2.2	316°	--	--	2.8	140°	
2975	Fort Pulaski, 4.8 miles above		32° 04.5'	80° 58.6'	+0 36	+0 31	+0 06	-0 16	1.1	1.5	--	--	2.1	296°	--	--	3.0	116°	
2977	McQueen Island Cut	10	32° 03.9'	80° 59.2'	-2 39	-2 45	-1 04	-2 44	0.3	0.6	--	--	0.7	251°	--	--	1.2	069°	
2979	Elba Island Cut, NE of, Savannah River	10	32° 04.4'	80° 57.9'	+0 26	+0 15	-0 37	-0 14	0.7	1.3	0.1	202°	1.4	288°	0.1	183°	2.6	104°	
2981	Elba Island, NE of, Savannah River	10	32° 05.4'	80° 59.6'	+1 01	+0 40	-0 35	-0 27	0.6	1.2	--	--	1.1	329°	--	--	2.5	149°	
2983	Elba Island, west of, Savannah River	10	32° 05.7'	81° 01.2'	+0 37	+0 52	-0 30	-0 53	0.5	0.8	--	--	0.9	219°	--	--	1.6	040°	
2985	Fig Island, north of, Back River		32° 05.1'	81° 03.0'	+0 14	+1 06	-0 25	-1 00	0.5	0.7	--	--	1.0	280°	--	--	1.5	094°	
2987	South Channel, western end		32° 05.3'	81° 01.0'	+0 42	+0 18	-0 33	-0 35	0.5	0.7	--	--	1.0	300°	--	--	1.5	122°	
2989	Wilmington R. ent., south channel		32° 04.6'	81° 00.1'	+0 42	-0 36	+1 28	+1 25	0.5	0.8	--	--	1.0	032°	--	--	1.6	206°	
2991	Savannah, southeast of highway bridge	10	32° 05.2'	81° 05.8'	+1 36	+0 41	-0 24	+0 05	0.6	1.3	--	--	1.1	319°	--	--	2.6	146°	
2993	Savannah		32° 05'	81° 05'	+1 12	+0 45	+0 01	+0 18	0.8	1.1	--	--	1.6	279°	--	--	2.2	106°	
2995	Kings Island Channel, Savannah River <58>	10	32° 07.6'	81° 08.2'	+1 21	+0 45	+0 06	-0 21	0.8	1.0	--	--	1.5	339°	--	--	2.1	152°	
2997	Seaboard Coast Line Railroad		32° 06.2'	81° 07.1'	+1 06	+0 45	+0 29	+0 59	1.2	1.7	--	--	2.4	320°	--	--	3.5	150°	
2999	King Island, west of		32° 07.4'	81° 08.1'	+1 21	+0 54	+0 33	+0 48	0.7	1.0	--	--	1.4	337°	--	--	2.0	160°	
3001	Port Wentworth, 0.2 mile above		32° 08.8'	81° 08.4'	+2 00	+1 36	+0 24	+1 19	0.5	0.7	--	--	0.9	022°	--	--	1.5	210°	
3003	Seaboard Coast Line Railroad		32° 13.9'	81° 08.7'	--	--	--	--	--	--	--	--	--	--	--	--	1.9	--	
3005	Wassaw Island, N of E end, Wassaw Sound	10	31° 54.9'	80° 56.3'	-0 48	-0 50	-0 45	-1 33	0.7	1.0	0.1	015°	1.4	292°	--	--	2.1	108°	
	WASSAW SOUND																		
3007	Entrance, off Beach Hammock		31° 56.5'	80° 55.9'	-0 41	-1 00	-0 54	-1 44	0.9	1.1	--	--	1.7	352°	--	--	2.2	156°	
3009	Wilmington Island, SSE of, Bull River	10	31° 58.0'	80° 55.8'	-0 35	+0 38	-0 40	-2 00	0.4	0.7	--	--	0.7	035°	--	--	1.5	218°	
3011	Lazaretto Creek Entrance, N of, Bull River	10	32° 00.0'	80° 55.7'	-0 37	+0 00	-0 33	-2 04	0.5	0.7	--	--	1.0	015°	--	--	1.4	207°	
3013	Bull River, 2 miles below hwy. bridge		32° 01.1'	80° 56.4'	-0 18	-0 18	-0 25	-1 57	0.6	0.8	--	--	1.1	327°	--	--	1.6	151°	
3015	Entrance, off Wassaw Island		31° 55.0'	80° 56.8'	-0 46	-1 11	-0 42	-1 27	0.7	0.9	--	--	1.4	277°	--	--	1.8	105°	
3017	Wilmington River ent. off Cabbage Island		31° 56.3'	80° 58.6'	-0 44	-0 36	-0 45	-1 51	0.6	0.8	--	--	1.2	323°	--	--	1.7	138°	
3019	Joe's Cut, Wilmington River	10	31° 56.6'	80° 59.1'	-0 54	-0 48	-0 34	-1 44	0.6	1.0	0.1	208°	1.2	315°	--	--	2.1	123°	
3021	Wilmington R., 0.5 mi. S of Turners Creek		32° 00.3'	81° 00.2'	-0 31	-0 10	-0 37	-1 51	0.5	0.7	--	--	1.0	344°	--	--	1.4	154°	
3023	Thunderbolt, SE of, Wilmington River	10	32° 01.4'	81° 02.7'	-0 20	-1 04	+0 12	+0 25	0.4	0.5	--	--	0.8	298°	--	--	1.0	121°	
3025	Oatland Island, north tip	10	32° 04.4'	81° 00.6'	-3 20	-2 14	-0 43	-2 32	0.3	0.5	--	--	0.6	317°	--	--	1.0	138°	
3027	Skidaway River, north entrance		32° 00.5'	81° 01.0'	-0 46	-0 02	-0 49	-2 11	0.6	0.7	--	--	1.1	204°	--	--	1.4	016°	
3029	Skidaway Island, N End, Wilmington River	10	32° 00.6'	81° 00.5'	-0 33	+0 16	-0 23	-1 49	0.6	0.9	0.1	225°	1.1	307°	--	--	1.9	119°	
3031	Dutch Island, SE of, Skidaway River	10	31° 59.5'	81° 01.2'	-0 40	+0 16	-0 33	-2 02	0.5	0.6	--	--	1.0	245°	--	--	1.2	061°	
3033	Isle of Hope City, SE of, Skidaway River	10	31° 58.6'	81° 02.8'	-0 17	-0 30	-0 32	-1 40	0.2	0.3	--	--	0.5	268°	--	--	0.5	072°	
3035	Isle of Hope City, Skidaway River	10	31° 58.8'	81° 03.3'	-0 34	+0 00	-0 19	-1 25	0.4	0.3	--	--	0.8	212°	--	--	0.6	028°	
3037	Burntpot Island, west of, Skidaway River	6	31° 58.1'	81° 03.2'	-0 27	-0 41	-0 13	-1 03	0.5	0.5	--	--	1.0	194°	--	--	1.0	018°	
3039	Skidaway Narrows		31° 57.2'	81° 03.9'	+0 03	-0 24	+0 26	-0 24	0.5	0.5	--	--	0.9	218°	--	--	1.1	042°	
3041	Long Island, NNE of, Skidaway River	6	31° 57.4'	81° 03.6'	-0 13	-1 09	+1 02	+0 17	0.4	0.4	--	--	0.8	226°	--	--	0.8	047°	
3043	Long Island, south of, Skidaway River	10	31° 56.6'	81° 04.4'	-4 25	-4 43	-6 07	-8 05	0.2	0.3	--	--	0.5	075°	--	--	0.5	258°	
3045	Pigeon Island, SSE of, Skidaway River	10	31° 56.2'	81° 04.6'	-2 37	-2 43	-0 56	-2 16	0.2	0.5	--	--	0.4	331°	--	--	1.0	150°	
3047	Burnside Island, SE of, Burnside River	10	31° 55.3'	81° 04.8'	-0 40	+0 53	-0 20	-2 05	0.4	0.6	--	--	0.9	114°	--	--	1.2	295°	
3049	Little Don Island, east of, Vernon River	10	31° 52.2'	81° 04.4'	-0 17	-1 16	-0 03	-1 38	0.7	0.7	0.2	232°	1.4	316°	0.1	234°	1.5	153°	
3051	Little Ogeechee River Entrance	10	31° 53.3'	81° 05.9'	-0 15	-0 59	-0 03	-1 06	0.7	1.0	--	--	1.3	259°	0.1	179°	2.1	071°	
	do.	20	31° 53.3'	81° 05.9'	-0 30	-0 50	+0 05	-0 57	0.6	0.9	--	--	1.1	244°	--	--	1.9	073°	
3053	Montgomery, Vernon River	6	31° 56.1'	81° 07.7'	-0 32	+0 00	-0 24	-1 30	0.3	0.6	--	--	0.6	267°	--	--	1.1	089°	
3055	Odingsell River Entrance	10	31° 52.1'	81° 00.0'	-0 54	+0 44	-0 48	-2 14	0.7	0.9	--	--	1.3	032°	0.1	127°	1.8	212°	
	do.	20	31° 52.1'	81° 00.0'	-1 19	+0 42	-0 42	-2 12	0.6	0.8	--	--	1.3	030°	--	--	1.6	210°	
	OSSABAW SOUND																		
3057	Wassaw Island, SSW of	10	31° 51.4'	81° 00.5'	-0 26	-1 04	-0 27	-1 01	0.8	1.1	0.1	034°	1.6	316°	--	--	2.3	123°	
	do.	20	31° 51.4'	81° 00.5'	-0 46	-0 58	-0 33	-1 01	0.7	0.9	--	--	1.4	312°	--	--	1.8	132°	
3059	Bradley Point, NNE of	10	31° 49.9'	81° 02.3'	-0 48	-0 58	-0 48	-1 12	0.6	0.8	0.1	209°	1.3	302°	0.1	198°	1.7	125°	
3061	Raccoon Key	10	31° 51.7'	81° 03.3'	-0 45	-1 23	-0 36	-1 35	0.8	0.9	0.1	033°	1.6	285°	0.1	198°	1.9	117°	

Endnotes can be found at the end of table 2.

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No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS							
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb	
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.
	OSSABAW SOUND Time meridian, 75°W	ft	<b>North</b>	<b>West</b>	<b>h</b>	<b>m</b>	<b>h</b>	<b>m</b>	<b>h</b>	<b>m</b>								
			<b>on Savannah River Entrance, p.116</b>															
3063	Little Wassaw Island, SW of	10	31° 52.2'	81° 03.0'	-1 05	-0 17	-0 21	-1 51	0.9	0.7	0.1	209°	1.7	282°	0.1	193°	1.4	116°
3065	Vernon R., 1.2 miles S of Possum Point		31° 53.9'	81° 05.9'	-0 24	+0 02	-0 12	-1 33	0.6	0.8	--	--	1.1	324°	--	--	1.7	166°
3067	Little Ogeechee River Entrance, north of	6	31° 53.8'	81° 05.7'	-0 41	+0 29	-0 30	-2 03	0.6	0.8	--	--	1.2	324°	0.1	239°	1.6	156°
3069	Raccoon Key & Egg Island Shoal, between	10d	31° 50.57'	81° 04.05'	+0 20	+0 17	-0 23	-0 57	0.8	1.0	0.2	274°	1.6	254°	0.2	197°	2.0	129°
3071	Florida Passage, N of, Ogeechee River	10	31° 51.4'	81° 08.6'	+0 10	+0 01	-0 01	-0 05	0.7	1.0	--	--	1.4	302°	--	--	2.1	127°
3073	Florida Passage (south)	6d	31° 49.78'	81° 09.47'	-1 48	-1 13	-0 23	-1 10	0.5	0.7	--	--	0.9	187°	0.3	191°	1.4	018°
	ST. CATHERINES SOUND																	
	<i>Bear River</i>																	
3075	610 Statute Mile Mark	6d	31° 48.63'	81° 10.60'	+0 20	+0 48	-0 05	-0 39	0.5	0.7	0.2	338°	1.0	357°	0.2	280°	1.5	175°
3077	North of Big Tom Creek Entrance	10d	31° 47.00'	81° 09.62'	-0 24	-0 13	-0 19	-1 25	0.6	0.7	--	--	1.2	011°	--	--	1.5	179°
3079	South of Kilkenny Creek Entrance		31° 45.50'	81° 10.40'	+0 26	+1 25	-0 02	-1 12	0.6	1.0	--	--	1.2	348°	--	--	2.0	190°
3081	Northwest of Newell Creek Entrance	10d	31° 44.93'	81° 09.93'	-0 11	+0 12	-0 16	-1 12	0.6	0.9	0.1	086°	1.1	349°	0.1	076°	1.8	149°
3083	Medway River at Marsh Island	10d	31° 44.60'	81° 13.20'	+0 20	-0 18	-0 15	-0 56	0.3	0.8	0.3	306°	0.6	313°	0.1	209°	1.6	117°
3085	St. Catherines Sound Entrance	10d	31° 42.90'	81° 08.43'	-0 39	-0 31	+0 13	-1 27	0.9	0.8	0.1	020°	1.8	291°	0.2	173°	1.7	126°
3087	Medway River, northwest of Cedar Point	10d	31° 42.87'	81° 11.45'	-0 40	-0 43	-0 23	-0 21	0.7	0.8	0.5	139°	1.5	304°	0.4	324°	1.7	146°
3089	N. Newport River, NE of Vandyke Creek	10d	31° 41.47'	81° 11.22'	-0 27	+0 12	+0 00	-1 21	0.7	0.8	--	--	1.3	233°	--	--	1.7	045°
3091	N. Newport River, above Walburg Creek	6d	31° 40.43'	81° 11.72'	-0 34	+0 30	-0 39	-0 40	0.6	0.8	0.2	011°	1.0	195°	--	--	1.6	011°
3093	N. Newport River, NW of Johnson Creek	10d	31° 39.78'	81° 12.63'	+0 20	-1 01	-0 37	-0 27	0.5	0.9	0.2	308°	0.9	312°	--	--	1.8	138°
3095	N. Newport River, ESE of S. Newport Cut	6d	31° 39.92'	81° 15.87'	+0 32	-0 13	+0 27	+0 15	0.5	0.7	0.1	210°	1.0	319°	--	--	1.4	147°
3097	S. Newport River, below S. Newport Cut	10d	31° 39.02'	81° 18.12'	+1 20	+1 30	+2 41	+2 15	0.5	0.5	0.2	128°	0.9	306°	0.1	042°	1.0	134°
3099	S. Newport River, above Swain River Ent	10d	31° 37.47'	81° 13.00'	-0 22	-1 13	+0 00	-0 43	0.6	0.6	0.1	156°	1.1	335°	0.1	075°	1.2	156°
	SAPELO SOUND																	
3101	Entrance	19d	31° 32.4'	81° 10.8'	-0 30	+0 28	-0 06	-0 59	0.9	1.1	0.1	212°	1.7	290°	0.1	194°	2.2	118°
	do.	29d	31° 32.4'	81° 10.8'	-0 48	-0 36	-0 17	-1 02	0.7	0.9	--	--	1.3	289°	0.1	189°	1.7	116°
3103	Johnson Creek, midway between ends		31° 37.6'	81° 11.3'	-1 50	-1 08	-0 35	-1 59	0.4	0.4	--	--	0.8	015°	--	--	0.9	195°
3105	Cedar Hammock, south of	12d	31° 32.7'	81° 14.8'	-0 26	-1 00	-0 12	-1 38	0.7	0.6	--	--	1.4	277°	--	--	1.2	096°
3107	Sapelo River Entrance	11d	31° 32.1'	81° 16.3'	-0 23	-1 05	-0 13	-0 43	0.6	0.6	--	--	1.1	234°	--	--	1.3	058°
3109	Sutherland Bluff, Sapelo River		31° 32.9'	81° 20.0'	-0 30	+0 10	-0 12	-1 16	0.5	0.6	--	--	1.0	281°	--	--	1.2	104°
3111	Front River	13d	31° 30.8'	81° 17.9'	-0 33	+1 16	-0 25	-2 05	0.4	0.5	--	--	0.8	227°	--	--	1.0	056°
	<i>Mud River</i>																	
3113	New Teakettle Cr., 0.8 mi. N of <35>		31° 29.8'	81° 17.4'	-0 54	-0 29	-1 08	-2 11	0.4	0.5	--	--	0.8	236°	--	--	1.0	053°
3115	Crescent River	11d	31° 29.2'	81° 18.4'	-1 27	+1 07	-0 34	-1 21	0.2	0.5	--	--	0.5	293°	0.1	203°	1.1	133°
3117	Old Teakettle Creek (north)	13d	31° 28.7'	81° 19.7'	-0 35	+0 01	+0 14	-0 37	0.5	0.6	--	--	0.9	078°	--	--	1.2	256°
	DOBOY SOUND																	
3119	Bar		31° 20.7'	81° 14.1'	-0 29	-0 29	-0 09	-0 53	0.7	0.7	--	--	1.3	312°	--	--	1.4	114°
3121	Entrance	14d	31° 20.5'	81° 15.8'	-0 32	-0 10	-0 24	-1 49	0.8	0.9	--	--	1.6	289°	--	--	1.8	106°
	do.	22d	31° 20.5'	81° 15.8'	-0 56	-0 05	-0 20	-1 26	0.8	0.8	--	--	1.6	276°	--	--	1.7	099°
3123	Old Teakettle Creek Entrance, south of	15d	31° 25.2'	81° 18.9'	-0 45	-0 59	+0 00	-1 27	0.5	0.5	--	--	1.1	335°	--	--	1.1	159°
3125	Old Teakettle Creek (south)	13d	31° 26.2'	81° 18.5'	-3 12	-1 45	-2 16	-2 44	0.5	0.4	--	--	0.9	021°	--	--	0.7	207°
3127	Folly River and Cardigan River, between	10d	31° 26.5'	81° 20.2'	-0 55	-0 56	-0 16	-1 00	0.3	0.3	--	--	0.7	327°	--	--	0.6	150°
3129	South River	13d	31° 22.0'	81° 18.7'	-0 22	-0 25	-0 32	-0 24	0.6	0.7	--	--	1.1	282°	--	--	1.3	095°
	do.	21d	31° 22.0'	81° 18.7'	-0 41	-0 33	-0 29	-0 24	0.5	0.4	--	--	1.0	286°	--	--	0.8	095°
3131	North River at Darien River	9d	31° 23.0'	81° 20.1'	-0 10	-0 33	+0 08	+0 22	0.2	0.2	0.1	317°	0.5	247°	--	--	0.4	029°
3133	Doboy Island (North River)	12d	31° 24.2'	81° 19.7'	-0 14	-0 06	+0 47	+0 13	0.6	0.5	--	--	1.1	224°	--	--	1.1	037°
	do.	20d	31° 24.2'	81° 19.7'	-0 20	+0 36	+0 46	+0 22	0.5	0.3	--	--	0.9	225°	--	--	0.6	043°
3135	Buzzard Roost Creek	13d	31° 24.9'	81° 22.5'	+0 22	+0 12	+0 56	+0 28	0.3	0.2	--	--	0.7	177°	--	--	0.4	002°

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS									
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb			
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.		
	ALTAMAHA SOUND Time meridian, 75°W	ft	<b>North</b>	<b>West</b>	h	m	h	m	h	m	h	m								
			<b>on Savannah River Entrance, p.116</b>																	
3137	Little Egg Island, northwest of	12d	31° 19.1'	81° 18.3'	-0 33	-0 53	-0 25	-1 10	0.6	0.6	--	--	1.1	296°	--	--	1.2	110°		
3139	Little Mud River Range	9d	31° 19.6'	81° 19.1'	-0 38	-1 05	-0 23	-0 06	0.3	0.5	--	--	0.6	304°	--	--	0.9	116°		
3141	Little St. Simon Island (north)	11d	31° 18.7'	81° 21.2'	+0 10	+0 06	-0 15	-1 29	0.6	0.8	--	--	1.2	267°	--	--	1.6	089°		
3143	Onemile Cut, 1 mile southeast of <i>Buttermilk Sound</i>		31° 18.8'	81° 21.1'	+0 46	+0 03	-1 09	-0 32	0.5	0.9	--	--	1.0	272°	--	--	1.9	092°		
3145	Broughton Island (south)	9d	31° 18.6'	81° 24.8'	-2 06	+0 12	-0 01	-1 51	0.4	0.4	0.1	292°	0.9	222°	--	--	0.8	030°		
	ST. SIMONS SOUND																			
3147	Bar Channel	12d	31° 06.3'	81° 20.3'	-0 13	-0 44	+0 09	-0 02	0.4	0.8	0.1	033°	0.8	308°	--	--	1.7	119°		
3149	Entrance, north of channel	13d	31° 08.01'	81° 24.24'	-0 32	+0 18	+0 07	-1 11	0.9	0.6	--	--	1.7	290°	--	--	1.2	107°		
3151	Entrance, south of channel	11d	31° 07.6'	81° 24.2'	-0 27	-0 32	-0 21	-0 59	0.8	1.1	--	--	1.6	262°	--	--	2.2	080°		
	do.	29d	31° 07.6'	81° 24.2'	-0 18	-0 03	+0 06	-0 21	0.6	0.8	--	--	1.2	257°	0.1	188°	1.7	092°		
3153	Back River entrance	10d	31° 08.9'	81° 26.5'	-0 37	+1 34	+0 06	-1 16	0.5	0.5	--	--	1.0	288°	--	--	1.1	111°		
	do.	18d	31° 08.9'	81° 26.5'	-1 29	+1 36	+0 08	-1 15	0.5	0.4	--	--	0.9	280°	--	--	0.8	109°		
3155	Mackay R., 0.5 mi. N of Troup Creek entrance		31° 13.5'	81° 26.0'	+0 56	+0 09	+0 35	+0 24	0.5	0.7	--	--	0.9	348°	--	--	1.5	166°		
3157	Brunswick River, off Quarantine Dock		31° 06.7'	81° 28.4'	+0 10	-0 03	+0 11	-0 39	0.7	1.0	--	--	1.3	300°	--	--	2.1	125°		
3159	Brunswick River Bridge, southeast of	13d	31° 06.9'	81° 28.6'	-0 15	+0 13	+0 26	-1 09	0.5	0.7	0.1	223°	1.0	308°	--	--	1.4	132°		
	do.	21d	31° 06.9'	81° 28.6'	+0 19	+0 42	+0 56	-0 02	0.5	0.7	0.1	226°	1.0	306°	--	--	1.5	129°		
3161	Brunswick, off Prince Street Dock		31° 08.3'	81° 29.8'	-0 01	+0 55	+0 06	-1 08	0.5	0.6	--	--	1.0	342°	--	--	1.3	166°		
3163	Turtle River, off Allied Chemical Corp		31° 10.6'	81° 31.5'	+0 16	+0 18	+0 36	-0 33	0.7	0.8	--	--	1.3	348°	--	--	1.7	165°		
3165	Turtle River, off Andrews Island	20d	31° 08.6'	81° 31.6'	-0 21	+0 40	+0 31	-0 23	0.5	0.7	--	--	1.1	339°	--	--	1.4	153°		
	ST. ANDREWS SOUND																			
3167	Entrance		30° 59.2'	81° 24.3'	-0 18	+0 13	+0 02	-1 00	1.1	1.1	--	--	2.1	268°	--	--	2.2	103°		
3169	Jekyll Creek, south entrance		31° 02.1'	81° 26.0'	-0 21	-0 21	-0 25	-1 20	0.5	0.7	--	--	1.0	060°	--	--	1.4	232°		
3171	Cumberland River, north entrance		30° 57.5'	81° 25.9'	-0 29	+0 32	-0 17	-1 18	0.7	0.7	--	--	1.3	191°	--	--	1.5	018°		
3173	Cabin Bluff, Cumberland River		30° 52.9'	81° 30.8'	+0 21	+1 29	+0 51	-0 45	0.7	0.6	--	--	1.3	171°	--	--	1.3	355°		
	CUMBERLAND SOUND																			
			<b>on St. Marys River Entrance, p.120</b>																	
3175	<i>St. Marys River</i> south jetty	8d	30° 42.42'	81° 32.92'	-0 18	-1 16	-0 56	-0 27	0.3	0.6	0.5	038°	0.8	341°	0.1	225°	1.6	110°		
	do.	18d	30° 42.42'	81° 32.92'	-0 19	-1 02	-0 54	-0 33	0.3	0.6	0.4	033°	0.7	329°	0.2	226°	1.5	112°		
	do.	34d	30° 42.42'	81° 32.92'	-0 19	-0 55	-0 48	-0 32	0.3	0.5	0.2	024°	0.6	313°	0.2	225°	1.2	114°		
3177	ST. MARYS RIVER ENTRANCE	8d	30° 42.48'	81° 26.68'	<b>Daily predictions</b>				0.1	183°	2.3	272°	--	--	--	--	2.8	093°		
	do.	25d	30° 42.48'	81° 26.68'	-0 04	+0 00	+0 01	+0 02	0.9	0.9	--	--	2.2	272°	--	--	2.5	093°		
	do.	42d	30° 42.48'	81° 26.68'	-0 08	+0 01	+0 01	+0 02	0.8	0.7	0.1	002°	1.9	271°	--	--	2.0	092°		
3179	Fort Clinch, 0.3 n.mi. N of	50d	30° 42.36'	81° 27.14'	-0 36	-0 14	-0 23	-0 33	0.6	0.6	0.2	226°	1.4	275°	0.1	280°	1.6	087°		
3181	Quarantine Reach, 0.4nm W of Fort Clinch	7d	30° 42.28'	81° 27.72'	-0 05	-0 19	-0 27	+0 00	0.5	0.6	0.1	307°	1.2	235°	0.1	318°	1.7	034°		
	do.	27d	30° 42.28'	81° 27.72'	-0 09	+0 02	-0 18	-0 14	0.5	0.5	--	--	1.2	232°	--	--	1.4	047°		
	do.	46d	30° 42.28'	81° 27.72'	-0 11	+0 13	-0 12	-0 21	0.5	0.4	--	--	1.1	226°	--	--	1.2	065°		
3183	Fort Clinch, 1.1 n.mi. NW of	14d	30° 42.54'	81° 28.36'	+0 01	-0 01	+0 10	+0 18	0.6	0.7	0.1	214°	1.3	309°	0.1	067°	1.9	133°		
	do.	29d	30° 42.54'	81° 28.36'	-0 13	+0 02	+0 02	+0 08	0.5	0.5	0.1	010°	1.1	315°	0.1	032°	1.3	122°		
3185	Cumberland Island, Range B Channel	22d	30° 43.52'	81° 29.04'	-0 18	-0 38	-0 06	+0 06	0.5	0.7	--	--	1.2	350°	--	--	1.8	170°		
3187	Drum Point Island, Range D Channel	12d	30° 45.54'	81° 29.13'	-0 05	-0 11	+0 02	-0 03	0.5	0.6	0.1	165°	1.1	350°	0.1	154°	1.5	170°		
	do.	22d	30° 45.54'	81° 29.12'	-0 10	-0 34	-0 08	-0 09	0.4	0.5	0.2	160°	0.9	351°	0.1	115°	1.3	170°		
3189	Kings Bay, Lower Turning Basin	14d	30° 47.56'	81° 30.48'	-0 03	+0 38	-0 18	-1 04	0.1	0.1	0.1	282°	0.3	307°	0.1	316°	0.3	127°		
3191	Stafford Island, west of		30° 48.6'	81° 29.5'	-0 25	-0 28	-0 27	-1 01	0.6	0.5	--	--	1.3	000°	--	--	1.3	180°		
3193	Old Fernandina, Amelia River, Old Town Reach	4d	30° 41.16'	81° 27.64'	-0 03	+0 20	+0 03	-0 06	0.7	0.6	--	--	1.5	188°	--	--	1.6	018°		
	do.	14d	30° 41.16'	81° 27.64'	-0 06	+0 28	+0 05	-0 03	0.6	0.5	--	--	1.4	189°	--	--	1.4	015°		
	do.	24d	30° 41.16'	81° 27.64'	-0 12	+0 31	+0 06	-0 02	0.5	0.5	--	--	1.2	193°	--	--	1.2	010°		
3195	Fernandina Beach, City Front Reach, Amelia River	5d	30° 40.21'	81° 28.07'	+0 24	-0 11	-0 12	+0 30	0.4	0.4	--	--	0.8	240°	--	--	1.0	068°		
	do.	11d	30° 40.21'	81° 28.07'	+0 28	-0 05	-0 08	+0 33	0.3	0.4	--	--	0.8	239°	--	--	1.0	063°		
	do.	29d	30° 40.21'	81° 28.07'	+0 29	+0 03	-0 07	+0 34	0.3	0.3	--	--	0.6	239°	0.1	146°	0.9	059°		
3197	Kingsley Creek, highway bridge		30° 37.7'	81° 29.1'	+1 45	+1 17	+0 53	+1 25	0.5	0.6	--	--	1.1	150°	--	--	1.6	330°		

Endnotes can be found at the end of table 2.

TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS									
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb			
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.		
	NASSAU SOUND Time meridian, 75°W	ft	North	West	h	m	h	m	h	m	h	m								
					on Miami Harbor Entrance, p.140															
3199	Midsound, 1 mi. N of Sawpit Creek entrance		30° 31.4'	81° 27.1'	+0 02	-0 12	-0 15	-0 21	0.8	0.7	--	--	1.7	312°	--	--	1.7	135°		
3201	South Amelia River, off Walker Creek		30° 32.2'	81° 27.9'	-1 08	-0 09	-0 40	-1 57	0.6	0.6	--	--	1.4	341°	--	--	1.4	162°		
3203	Nassau River, SW of Mesa Marsh		30° 32.0'	81° 28.8'	+0 09	-0 09	-0 01	-0 13	0.7	0.7	--	--	1.5	294°	--	--	1.7	129°		
3205	Ft. George River		30° 27.4'	81° 27.1'	-1 35	-1 08	-1 26	-2 20	0.1	0.4	--	--	0.3	334°	--	--	0.9	162°		
	ST. JOHNS RIVER				on St. Johns River Entrance, p.124															
3207	St. Johns Point, 5 miles east of		30° 23.5'	81° 18.0'	Current weak and variable															
3209	St. Johns Bar Cut, 0.7 n.mi. east of jetties <64>	5d	30° 23.88'	81° 21.83'	+0 33	-1 19	-0 41	+1 04	0.3	0.8	0.5	021°	0.6	356°	0.2	045°	1.6	091°		
	do.	14d	30° 23.88'	81° 21.83'	-1 19	-2 43	-1 04	+0 13	0.3	0.6	0.6	040°	0.7	007°	--	--	1.2	095°		
	do.	31d	30° 23.88'	81° 21.83'	-2 20	-2 04	-1 17	-0 54	0.2	0.3	0.3	038°	0.4	318°	0.2	22°	0.6	122°		
3211	St. Johns Bar Cut 0.13 n.mi. ENE of south jetty	14d	30° 23.85'	81° 22.45'	+0 11	+0 02	+0 10	+1 35	0.4	1.1	0.2	011°	0.9	317°	0.2	173°	2.2	094°		
	do.	33d	30° 23.85'	81° 22.45'	-1 03	+0 04	+0 21	-0 11	0.5	0.7	0.2	178°	1.0	298°	0.2	158°	1.4	095°		
	do.	46d	30° 23.85'	81° 22.45'	-2 05	-0 03	+0 22	-0 25	0.5	0.5	0.2	176°	1.1	275°	0.1	144°	1.0	100°		
3213	ST. JOHNS RIVER ENT. (between jetties)	16d	30° 24.02'	81° 23.15'	Daily predictions															
	do.	10d	30° 24.02'	81° 23.15'	+0 06	+0 13	-0 04	+0 07	1.0	1.2	--	--	2.0	262°	--	--	2.0	081°		
	do.	30d	30° 24.02'	81° 23.15'	-0 19	+0 01	-0 02	+0 07	0.9	0.9	--	--	1.9	262°	--	--	1.9	080°		
3215	Mayport Basin Entrance	9d	30° 23.82'	81° 23.93'	-0 02	-0 08	+0 01	+0 33	0.6	0.7	0.1	179°	1.2	255°	--	--	1.4	093°		
	do.	15d	30° 23.82'	81° 23.93'	-0 12	+0 17	+0 11	+0 07	0.7	0.6	--	--	1.3	251°	0.1	166°	1.2	087°		
	do.	32d	30° 23.82'	81° 23.93'	+0 24	+0 48	+0 17	+0 34	0.6	0.3	0.1	333°	1.2	247°	0.1	164°	0.6	069°		
3217	Mayport	7d	30° 23.6'	81° 26.0'	+0 06	+1 02	+0 15	-0 04	1.1	1.6	--	--	2.2	211°	--	--	3.3	026°		
	do.	17d	30° 23.6'	81° 26.0'	-0 03	+0 38	+0 12	+0 05	1.1	1.3	--	--	2.2	211°	--	--	2.6	026°		
	do.	27d	30° 23.6'	81° 26.0'	-0 27	+0 26	+0 15	+0 14	0.9	0.9	--	--	1.7	211°	--	--	1.8	026°		
3219	Mile Point, southeast of	7d	30° 22.9'	81° 26.7'	+0 06	+0 38	+0 48	+0 44	1.5	1.6	--	--	3.0	241°	--	--	3.2	073°		
	do.	18d	30° 22.9'	81° 26.7'	-0 12	+0 38	+0 54	+0 56	1.2	1.2	--	--	2.5	241°	--	--	2.5	073°		
	do.	29d	30° 22.9'	81° 26.7'	-0 42	+0 38	+1 00	+0 38	1.1	0.9	--	--	2.3	241°	--	--	1.8	073°		
3221	ICW Intersection	10d	30° 23.02'	81° 27.52'	+0 27	+0 29	+0 08	+0 58	0.8	1.3	0.2	217°	1.6	293°	0.4	003°	2.6	125°		
	do.	16d	30° 23.02'	81° 27.52'	+0 22	+0 31	+0 10	+0 49	0.8	1.2	0.2	213°	1.6	293°	0.3	007°	2.4	113°		
	do.	29d	30° 23.02'	81° 27.52'	+0 09	+0 35	+0 10	+0 21	0.8	1.0	0.1	200°	1.5	294°	0.2	020°	2.1	099°		
3223	Pablo Creek bascule bridge <33>	3	30° 19.4'	81° 26.3'	-0 14	-0 18	+0 49	+0 59	1.7	2.5	--	--	3.4	180°	--	--	5.2	000°		
3225	Sisters Creek entrance (bridge)	4d	30° 23.4'	81° 27.7'	-3 30	-3 14	-2 13	-2 34	0.8	0.8	--	--	1.6	000°	--	--	1.6	180°		
	do.	10d	30° 23.4'	81° 27.7'	-3 36	-3 04	-2 07	-2 34	0.6	0.6	--	--	1.2	000°	--	--	1.2	180°		
3227	St. Johns Bluff	7d	30° 23.4'	81° 29.5'	+0 30	+1 21	-0 18	+1 02	0.8	1.2	--	--	1.6	244°	--	--	2.4	059°		
	do.	17d	30° 23.4'	81° 29.5'	+0 18	+1 03	+0 30	+1 02	0.9	1.0	--	--	1.7	244°	--	--	2.0	059°		
	do.	26d	30° 23.4'	81° 29.5'	-0 12	+0 33	+0 24	+1 14	0.8	0.8	--	--	1.6	244°	--	--	1.6	059°		
3229	Blount Island, East of	7d	30° 23.52'	81° 30.51'	+1 21	+1 08	+0 49	+1 54	0.7	1.1	0.2	000°	1.5	275°	0.2	183°	2.3	079°		
	do.	16d	30° 23.52'	81° 30.51'	+0 54	+0 58	+1 04	+1 43	0.7	0.8	0.2	011°	1.4	270°	0.1	168°	1.7	090°		
	do.	30d	30° 23.52'	81° 30.51'	+0 33	+1 08	+1 12	+1 32	0.5	0.6	0.1	183°	1.1	264°	--	--	1.3	099°		
3231	Dames Point, 0.23 n.mi. ESE of	5d	30° 23.19'	81° 33.23'	+1 58	+1 51	+1 40	+1 59	0.5	0.9	0.2	351°	1.0	244°	0.4	136°	1.7	066°		
	do.	14d	30° 23.19'	81° 33.23'	+1 26	+0 54	+1 19	+1 57	0.6	0.9	0.1	343°	1.1	256°	0.2	158°	1.9	068°		
	do.	31d	30° 23.19'	81° 33.23'	+0 33	+2 24	+2 04	+1 58	0.6	0.4	--	--	1.1	270°	0.1	000°	0.7	069°		
3233	Dames Point, 0.25 n.mi. SE of	5d	30° 23.08'	81° 33.28'	+1 52	+1 39	+1 28	+2 14	0.6	0.9	0.1	345°	1.2	254°	0.2	155°	1.9	080°		
	do.	14d	30° 23.08'	81° 33.28'	+1 30	+1 29	+1 32	+2 07	0.7	0.9	0.1	343°	1.4	257°	--	--	1.8	073°		
	do.	28d	30° 23.08'	81° 33.28'	+1 15	+2 00	+2 01	+2 14	0.6	0.7	0.1	160°	1.2	254°	--	--	1.4	073°		
3235	Drummond Point, channel south of	7d	30° 24.55'	81° 36.17'	+1 51	+2 32	+2 44	+3 00	0.7	0.8	--	--	1.4	241°	--	--	1.7	060°		
	do.	17d	30° 24.55'	81° 36.17'	+1 34	+2 35	+2 51	+3 01	0.7	0.7	--	--	1.3	222°	--	--	1.4	061°		
	do.	27d	30° 24.55'	81° 36.17'	+1 21	+2 20	+2 46	+2 51	0.6	0.5	--	--	1.2	243°	--	--	1.1	057°		
3237	Trout River Cut	6d	30° 23.03'	81° 37.69'	+2 31	+2 48	+2 32	+2 52	0.7	0.7	0.1	277°	1.3	193°	0.1	280°	1.5	005°		
	do.	15d	30° 23.03'	81° 37.69'	+2 19	+2 53	+2 42	+2 52	0.6	0.6	--	--	1.1	191°	0.1	107°	1.3	025°		
	do.	32d	30° 23.03'	81° 37.69'	+1 49	+2 31	+3 02	+2 58	0.6	0.6	--	--	1.2	205°	--	--	1.1	023°		
3239	Chaseville Turn	4d	30° 22.71'	81° 37.77'	+2 16	+2 39	+2 28	+2 27	0.7	0.5	--	--	1.4	165°	--	--	1.0	339°		
	do.	14d	30° 22.71'	81° 37.77'	+2 10	+2 29	+2 25	+2 28	0.7	0.5	0.1	089°	1.3	166°	0.1	082°	1.1	003°		
	do.	30d	30° 22.71'	81° 37.77'	+1 48	+2 25	+2 55	+2 43	0.6	0.5	0.1	279°	1.2	186°	--	--	1.0	017°		
3241	Terminal Channel (north end)	7d	30° 21.42'	81° 37.08'	+2 39	+3 16	+3 02	+3 38	0.5	0.6	--	--	1.0	225°	--	--	1.3	001°		
	do.	17d	30° 21.42'	81° 37.08'	+2 16	+3 06	+3 20	+3 33	0.6	0.5	--	--	1.2	183°	--	--	1.1	001°		
	do.	27d	30° 21.42'	81° 37.08'	+1 51	+3 28	+3 16	+3 23	0.5	0.3	--	--	1.0	185°	--	--	0.7	001°		
3243	Commodore Point, terminal channel	7d	30° 19.05'	81° 37.58'	+2 39	+3 28	+3 10	+3 37	0.5	0.5	--	--	0.9	197°	--	--	1.0	072°		
	do.	17d	30° 19.05'	81° 37.58'	+2 12	+3 13	+3 23	+3 25	0.5	0.4	--	--	1.0	221°	--	--	0.9	051°		
	do.	27d	30° 19.05'	81° 37.58'	+1 43	+2 30	+3 38	+3 08	0.6	0.4	--	--	1.1	221°	--	--	0.8	035°		

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS											
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb					
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.				
	ST. JOHNS RIVER Time meridian, 75°W	ft	<b>North</b>	<b>West</b>	h	m	h	m	h	m	h	m										
			<b>on St. Johns River Entrance, p.124</b>																			
3245	Jacksonville, off Washington St		30° 19.3'	81° 39.2'	+2 59	+3 10	+2 54	+3 23	0.9	0.9	--	--	1.8	281°	--	--	1.9	118°				
3247	Jacksonville, F.E.C. RR. bridge		30° 19.3'	81° 39.9'	+2 59	+3 24	+2 59	+3 39	0.8	0.8	--	--	1.8	240°	--	--	1.7	060°				
3249	Winter Point		30° 18.5'	81° 40.5'	+2 59	+3 22	+4 04	+3 59	0.6	0.5	--	--	1.1	200°	--	--	1.1	015°				
3251	Mandarin Point	6d	30° 09.3'	81° 41.1'	+3 07	+3 39	+3 24	+3 38	0.3	0.4	--	--	0.6	179°	--	--	0.8	013°				
	do.	15d	30° 09.3'	81° 41.1'	+3 13	+3 33	+3 24	+3 38	0.3	0.3	--	--	0.6	179°	--	--	0.7	013°				
	do.	24d	30° 09.3'	81° 41.1'	+2 48	+3 33	+3 24	+3 32	0.3	0.3	--	--	0.5	179°	--	--	0.5	013°				
3253	Red Bay Point, draw bridge	4d	29° 59.1'	81° 37.8'	+2 48	+3 57	+5 24	+4 02	0.5	0.3	--	--	0.9	115°	--	--	0.6	300°				
	do.	6d	29° 59.1'	81° 37.8'	+2 42	+3 57	+5 18	+4 08	0.5	0.3	--	--	0.9	115°	--	--	0.5	300°				
	do.	14d	29° 59.1'	81° 37.8'	+2 48	+3 57	+5 30	+4 08	0.4	0.2	--	--	0.8	115°	--	--	0.4	300°				
3255	Tocoi to Lake George		-- --	-- --	Current weak and variable																	
	FORT PIERCE INLET		<b>on Fort Pierce Inlet, p.128</b>																			
3257	FORT PIERCE INLET ENTRANCE	16d	27° 28.27'	80° 17.55'	<b>Daily predictions</b>						--	--	2.7	258°	--	--	2.8	080°				
	do.	6d	27° 28.27'	80° 17.55'	+0 03	+0 02	-0 01	+0 01	1.1	1.1	--	--	2.8	258°	--	--	3.1	081°				
	do.	23d	27° 28.27'	80° 17.55'	-0 02	+0 00	+0 00	-0 01	1.0	0.9	--	--	2.6	259°	--	--	2.6	079°				
	do.	33d	27° 28.27'	80° 17.55'	-0 03	+0 00	+0 00	-0 03	0.8	0.8	--	--	2.2	260°	--	--	2.3	077°				
3259	Inner Range, north of USCG station	5d	27° 27.98'	80° 18.49'	-0 05	-0 01	+0 06	-0 06	0.8	0.6	--	--	2.1	242°	0.1	159°	1.6	076°				
	do.	14d	27° 27.98'	80° 18.49'	+0 01	-0 01	+0 05	+0 08	0.7	0.6	--	--	2.0	243°	--	--	1.6	065°				
	do.	21d	27° 27.98'	80° 18.49'	+0 01	-0 01	+0 05	+0 08	0.6	0.5	--	--	1.7	243°	--	--	1.4	061°				
3261	Turning Basin	6d	27° 27.61'	80° 19.26'	+0 06	-0 18	+0 14	+0 23	0.2	0.2	--	--	0.6	218°	0.1	298°	0.6	020°				
	do.	16d	27° 27.61'	80° 19.26'	+0 05	-0 21	+0 17	+0 26	0.2	0.2	0.1	303°	0.7	219°	0.1	297°	0.5	022°				
	do.	19d	27° 27.61'	80° 19.26'	+0 06	-0 20	+0 16	+0 28	0.2	0.2	0.1	302°	0.6	218°	0.1	296°	0.5	023°				
3263	South Bridge (ICW)	3d	27° 27.60'	80° 19.15'	-0 06	+0 12	+0 10	+0 00	0.6	0.5	--	--	1.6	238°	0.2	315°	1.3	031°				
	do.	9d	27° 27.60'	80° 19.15'	+0 00	+0 09	+0 11	+0 03	0.5	0.4	--	--	1.4	236°	0.2	317°	1.2	036°				
	do.	16d	27° 27.60'	80° 19.15'	+0 00	+0 09	+0 14	+0 06	0.5	0.3	--	--	1.3	232°	0.1	325°	0.9	053°				
	LAKE WORTH INLET		<b>on Lake Worth Inlet, p.132</b>																			
3265	LAKE WORTH INLET ENTRANCE	15d	26° 46.38'	80° 02.17'	<b>Daily predictions</b>						--	--	1.6	267°	--	--	1.3	086°				
	do.	5d	26° 46.38'	80° 02.17'	+0 04	+0 02	+0 02	+0 05	1.1	0.9	--	--	1.8	267°	--	--	1.2	092°				
	do.	28d	26° 46.38'	80° 02.17'	-0 04	-0 01	-0 03	-0 04	0.7	0.9	--	--	1.2	268°	--	--	1.1	085°				
3267	Pier 13	6d	26° 46.02'	80° 03.04'	See Table 5																	
	do.	15d	26° 46.02'	80° 03.04'	See Table 5																	
	do.	19d	26° 46.02'	80° 03.04'	See Table 5																	
3269	North Turning Basin	3d	26° 46.28'	80° 03.02'	-0 02	-0 26	-0 05	+0 33	0.6	0.9	--	--	0.9	356°	--	--	1.1	170°				
	do.	8d	26° 46.28'	80° 03.02'	+0 00	-0 25	-0 04	+0 35	0.6	0.8	--	--	0.9	356°	0.1	254°	1.0	168°				
	PORT EVERGLADES		<b>on Port Everglades, p.136</b>																			
3271	Pier 2, 1.3 miles east of <34>		26° 05.63'	80° 05.78'	Current weak and variable																	
3273	PORT EVERGLADES ENTRANCE	16d	26° 05.59'	80° 06.33'	<b>Daily predictions</b>						--	--	0.6	257°	--	--	0.6	075°				
	do.	9d	26° 05.59'	80° 06.33'	+0 24	+0 09	-0 09	-0 07	1.0	1.1	--	--	0.5	259°	--	--	0.7	077°				
	do.	22d	26° 05.59'	80° 06.33'	-0 24	-0 01	+0 06	+0 01	1.0	0.9	--	--	0.6	255°	--	--	0.6	075°				
	do.	35d	26° 05.59'	80° 06.33'	-1 03	-0 04	+0 08	-0 07	1.0	0.7	--	--	0.6	251°	--	--	0.4	077°				
3275	Turning Basin	4d	26° 05.69'	80° 07.04'	+0 20	-0 58	-0 52	-0 13	0.3	0.8	--	--	0.1	358°	--	--	0.5	173°				
	do.	14d	26° 05.69'	80° 07.04'	Current weak and variable																	
	do.	34d	26° 05.69'	80° 07.04'	Current weak and variable																	
3277	17th Street Bridge, 0.1mile south of	6d	26° 05.98'	80° 07.15'	-0 20	-0 12	-0 09	-0 18	1.6	1.2	0.1	100°	0.9	022°	0.1	101°	0.8	184°				
	do.	9d	26° 05.98'	80° 07.15'	-0 29	-0 14	-0 10	-0 24	1.6	1.1	--	--	0.9	021°	0.1	102°	0.7	184°				
	do.	12d	26° 05.98'	80° 07.15'	-0 38	-0 12	-0 09	-0 27	1.5	1.1	--	--	0.9	024°	0.1	103°	0.7	184°				
3279	Fort Lauderdale, New River		26° 06.73'	80° 07.18'	-0 14	-0 01	+0 28	+0 52	1.4	0.8	--	--	0.8	005°	--	--	0.5	130°				
3281	South Entrance (ICW)	5d	26° 05.24'	80° 06.79'	+0 34	-0 06	-0 38	-0 22	0.3	0.7	--	--	0.2	173°	--	--	0.4	353°				
	do.	15d	26° 05.24'	80° 06.79'	+0 37	+0 15	-0 21	-0 06	0.3	0.6	--	--	0.2	171°	--	--	0.4	350°				
	do.	31d	26° 05.24'	80° 06.79'	-0 14	+0 11	+0 20	-0 03	0.4	0.3	--	--	0.2	168°	--	--	0.2	351°				

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS										
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb				
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.			
	PORT EVERGLADES Time meridian, 75°W	ft	<b>North</b>	<b>West</b>	h	m	h	m	h	m	h	m									
<b>on Port Everglades, p.136</b>																					
3283	South Port, at the terminals	6d	26° 04.46'	80° 06.83'	+0 26	+0 20	-0 05	-0 03	0.5	0.5	--	--	0.3	175°	--	--	0.3	356°			
	... do.	16d	26° 04.46'	80° 06.83'	+0 18	+0 29	+0 09	-0 09	0.5	0.4	--	--	0.3	175°	--	--	0.3	356°			
	... do.	26d	26° 04.46'	80° 06.83'	-0 28	+0 36	+0 12	-0 39	0.5	0.4	--	--	0.3	175°	--	--	0.3	355°			
<b>MIAMI HARBOR</b>																					
<b>on Miami Harbor Entrance, p.140</b>																					
3285	Bakers Haulover Cut		25° 54.0'	80° 07.4'	+0 00	+0 19	+0 13	-0 08	1.3	1.0	--	--	2.9	270°	--	--	2.5	090°			
3287	Government Cut																				
	South Jetty	9d	25° 45.63'	80° 07.61'	-0 03	-0 01	-0 05	-0 12	0.7	0.8	0.1	040°	1.6	317°	0.1	041°	1.8	118°			
	... do.	15d	25° 45.63'	80° 07.61'	-0 06	-0 03	-0 05	-0 10	0.7	0.7	0.1	039°	1.6	319°	0.1	042°	1.7	117°			
	... do.	38d	25° 45.63'	80° 07.61'	-0 15	-0 01	-0 02	-0 14	0.6	0.5	0.2	044°	1.4	321°	0.1	041°	1.2	115°			
3289	MIAMI HARBOR ENTRANCE	15d	25° 45.84'	80° 08.04'	<b>Daily predictions</b>								2.2	293°	--	--	2.4	113°			
	... do.	8d	25° 45.84'	80° 08.04'	+0 00	+0 01	+0 00	-0 01	1.0	1.0	--	--	2.3	293°	--	--	2.4	114°			
	... do.	22d	25° 45.84'	80° 08.04'	-0 01	-0 01	+0 00	-0 01	1.0	1.0	--	--	2.2	292°	--	--	2.3	113°			
	... do.	35d	25° 45.84'	80° 08.04'	-0 04	-0 01	-0 02	-0 02	0.8	0.8	--	--	1.8	292°	--	--	1.9	115°			
3291	West entrance, south side	4d	25° 45.88'	80° 08.25'	-0 06	+0 03	-0 27	-0 11	1.0	0.5	0.8		1.0	290°	0.1	015°	2.0	097°			
	... do.	14d	25° 45.88'	80° 08.25'	-0 09	-0 09	-0 29	-0 05	0.4	0.8	--	--	0.9	289°	0.1	015°	2.0	094°			
	... do.	34d	25° 45.80'	80° 08.25'	-0 16	-0 36	-0 28	-0 08	0.3	0.6	--	--	0.7	262°	--	--	1.4	090°			
<i>Main Channel</i>																					
3293	Fisher Island Turning Basin	9d	25° 46.07'	80° 08.61'	+0 00	+0 34	+0 34	-0 01	0.6	0.3	0.1	038°	1.4	293°	--	--	0.8	123°			
	... do.	16d	25° 46.07'	80° 08.61'	+0 08	+0 34	+0 36	+0 09	0.6	0.4	0.1	033°	1.4	293°	--	--	0.9	119°			
	... do.	36d	25° 46.07'	80° 08.61'	+0 00	+0 33	+0 38	+0 07	0.5	0.3	--	--	1.1	291°	--	--	0.7	111°			
3295	Main Ship Channel	6d	25° 46.40'	80° 09.42'	+0 17	+0 22	+0 19	+0 13	0.5	0.4	--	--	1.2	295°	--	--	1.0	110°			
	... do.	16d	25° 46.40'	80° 09.42'	+0 04	+0 16	+0 21	+0 15	0.5	0.4	--	--	1.2	294°	--	--	0.9	112°			
	... do.	33d	25° 46.40'	80° 09.42'	-0 28	+0 28	+0 22	-0 06	0.4	0.3	--	--	0.9	292°	--	--	0.6	116°			
3297	Dodge Island, SE Turning Basin	4d	25° 46.91'	80° 10.84'	+0 41	+0 06	-0 36	+0 07	0.2	0.1	0.2	027°	0.4	305°	--	--	0.3	118°			
	... do.	14d	25° 46.91'	80° 10.84'	+0 27	+0 00	+0 19	+0 12	0.2	0.2	0.1	028°	0.5	307°	--	--	0.4	119°			
	... do.	30d	25° 46.91'	80° 10.84'	+0 02	-0 48	+0 43	+0 17	0.1	0.1	0.1	032°	0.3	304°	--	--	0.3	104°			
3299	Dodge Island, NW Turning Basin	7d	25° 47.13'	80° 11.04'	-0 03	+0 14	-0 15	-0 43	0.1	0.2	--	--	0.3	334°	--	--	0.5	173°			
	... do.	17d	25° 47.13'	80° 11.04'	-0 38	+0 18	+0 06	-0 31	0.1	0.1	--	--	0.3	317°	--	--	0.3	163°			
	... do.	30d	25° 47.13'	80° 11.04'	Current weak and variable																
<i>Fishermans Channel</i>																					
3301	Pilot House	5d	25° 45.95'	80° 08.75'	-0 02	-1 37	-1 36	-0 02	0.2	0.3	--	--	0.3	255°	--	--	0.7	086°			
	... do.	14d	25° 45.95'	80° 08.75'	-0 03	-1 27	-1 05	+0 19	0.2	0.2	--	--	0.4	255°	--	--	0.6	086°			
	... do.	31d	25° 45.95'	80° 08.75'	-0 07	-1 00	-0 38	+0 07	0.3	0.2	--	--	0.6	258°	--	--	0.4	085°			
3303	Norris Cut	7d	25° 45.90'	80° 09.07'	+0 06	+0 15	-0 05	-0 20	0.4	0.4	--	--	0.8	294°	0.1	018°	1.1	089°			
	... do.	14d	25° 45.90'	80° 09.07'	+0 03	+0 07	-0 05	-0 09	0.4	0.4	--	--	0.8	286°	--	--	1.0	088°			
	... do.	34d	25° 45.90'	80° 09.07'	-0 03	+0 10	-0 01	+0 00	0.4	0.3	--	--	0.9	276°	--	--	0.8	092°			
3305	Lummus Island, SW corner	4d	25° 45.91'	80° 09.69'	+0 06	-0 12	-0 08	+0 13	0.3	0.3	--	--	0.6	268°	--	--	0.6	091°			
	... do.	14d	25° 45.91'	80° 09.69'	+0 02	-0 02	-0 04	+0 01	0.2	0.3	--	--	0.5	269°	--	--	0.7	089°			
3307	Lummus Island Turning Basin	7d	25° 46.06'	80° 10.06'	+0 18	-0 26	-0 51	+0 41	0.1	0.1	--	--	0.3	293°	--	--	0.3	121°			
	... do.	14d	25° 46.06'	80° 10.06'	+0 06	-0 32	-0 13	+0 45	0.1	0.1	0.1	012°	0.3	291°	--	--	0.3	099°			
	... do.	34d	25° 46.06'	80° 10.06'	--	--	--	+1 43	--	0.1	--	--	--	--	--	--	0.3	060°			
3309	Dodge Island Cut, west end	5d	25° 46.38'	80° 10.71'	+0 44	+0 31	-0 05	+0 04	0.1	0.1	--	--	0.1	253°	--	--	0.2	085°			
	... do.	15d	25° 46.38'	80° 10.71'	+0 32	+0 31	+0 37	+0 43	0.1	0.1	--	--	0.2	271°	--	--	0.2	089°			
	... do.	28d	25° 46.38'	80° 10.71'	-0 08	-0 48	+0 18	+1 04	0.1	0.1	--	--	0.3	266°	--	--	0.2	077°			
3311	Miami River Entrance	2d	25° 46.22'	80° 11.25'	+0 30	-0 05	-0 08	+0 48	0.2	0.2	--	--	0.3	267°	--	--	0.5	090°			
	... do.	12d	25° 46.22'	80° 11.25'	-0 06	-0 46	+0 24	+0 51	0.2	0.2	--	--	0.3	263°	--	--	0.4	051°			
3313	Fowey Rocks Light, 1.5 miles SW of		25° 35'	80° 07'	Current weak and variable																
<b>FLORIDA REEFES to BLACKBURN BAY</b>																					
<b>on Key West, p.144</b>																					
3315	Caesar Creek, Biscayne Bay		25° 23.2'	80° 13.6'	+0 09	+0 03	-0 21	-0 23	0.9	1.0	--	--	1.2	316°	--	--	1.8	123°			
3317	Long Key, drawbridge east of		24° 50.4'	80° 46.2'	+1 00	+1 38	+2 14	+1 15	0.8	0.7	--	--	1.1	000°	--	--	1.2	202°			
3319	Long Key Viaduct		24° 48.1'	80° 51.9'	+1 36	+1 39	+1 55	+1 39	0.7	0.7	--	--	0.9	349°	--	--	1.2	170°			
3321	Moser Channel, between Molasses and Pigeon Keys	3d	24° 41.89'	81° 10.15'	+1 21	+1 19	+1 16	+1 15	0.9	0.9	--	--	1.2	346°	--	--	1.6	164°			
	... do.	9d	24° 41.89'	81° 10.15'	+1 21	+1 17	+1 15	+1 16	0.7	0.8	--	--	0.9	345°	--	--	1.3	163°			

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS							
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb	
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.
	FLORIDA REEFS to BLACKBURN BAY Time meridian, 75°W	ft	<b>North</b>	<b>West</b>	h	m	h	m	h	m	h	m						
					<b>on Key West, p.144</b>													
3323	Bahia Honda Harbor	4d	24° 39.38'	81° 17.31'	+1 15	+1 09	+1 07	+1 17	1.0	0.9	--	--	1.3	007°	--	--	1.5	183°
3325	Loggerhead Key, East of	2d	24° 36.97'	81° 27.19'	+0 03	+0 10	+0 10	+0 06	0.2	0.2	--	--	0.2	322°	--	--	0.3	158°
	do.	8d	24° 36.97'	81° 27.19'	+0 27	+0 14	-0 06	+0 29	0.1	0.1	--	--	0.2	330°	--	--	0.2	154°
3327	Safe Harbor Entrance, Stock Island	11d	24° 33.35'	81° 44.07'	Current weak and variable													
3329	No Name Key, northeast of Key West		24° 42.3'	81° 18.8'	+0 57	+1 35	+1 13	+0 35	0.5	0.5	--	--	0.7	312°	--	--	0.9	142°
3331	Main Ship Channel entrance	4d	24° 28.24'	81° 48.71'	-0 22	-0 48	-0 12	-0 10	0.2	0.2	0.1	260°	0.3	339°	0.1	263°	0.3	187°
	do.	17d	24° 28.24'	81° 48.71'	-0 10	-0 06	-0 39	-0 29	0.1	0.2	0.1	258°	0.2	331°	0.1	265°	0.3	182°
3333	Key West Channel, Cut-A Cut-B Turn	6d	24° 31.56'	81° 49.09'	+0 27	-0 04	+0 20	+0 52	0.4	0.5	0.3	248°	0.5	309°	0.2	237°	0.8	164°
	do.	26d	24° 31.56'	81° 49.09'	+0 32	-0 03	+0 06	+0 56	0.3	0.4	0.1	249°	0.4	324°	0.1	241°	0.7	161°
3335	Southwest channel	3d	24° 32.05'	81° 49.93'	+0 33	+0 35	+0 01	+0 16	0.4	0.5	0.1	279°	0.5	355°	0.1	282°	0.8	202°
	do.	20d	24° 32.05'	81° 49.93'	+0 31	+0 25	-0 03	+0 19	0.3	0.4	0.1	283°	0.4	004°	0.1	286°	0.7	202°
3337	KEY WEST, 0.3 mi. W of Ft. Taylor	4d	24° 32.88'	81° 49.01'	<b>Daily predictions</b>													
	do.	14d	24° 32.88'	81° 49.01'	-0 02	+0 01	-0 02	-0 01	0.8	0.9	--	--	1.1	009°	0.1	096°	1.4	186°
3339	Ft. Taylor, 0.6 mile N of		24° 33.5'	81° 48.6'	+0 22	+0 24	-0 18	-0 05	0.4	0.7	--	--	0.6	042°	--	--	1.2	202°
3341	Key West Harbor Range channel	6d	24° 33.78'	81° 48.56'	+0 18	+0 25	+0 10	+0 09	0.8	0.8	0.1	304°	1.1	035°	0.1	126°	1.4	215°
	do.	19d	24° 33.78'	81° 48.56'	+0 15	+0 26	+0 08	+0 05	0.7	0.7	--	--	0.9	032°	--	--	1.1	212°
3343	Turning Basin	6d	24° 33.83'	81° 48.37'	+0 23	+0 27	+0 19	+0 16	0.9	0.7	0.1	115°	1.2	024°	0.1	299°	1.2	210°
	do.	23d	24° 33.83'	81° 48.37'	+0 18	+0 31	+0 16	+0 10	0.7	0.6	0.1	120°	0.9	026°	0.1	304°	0.9	214°
3345	Northwest Channel, W of Middle Ground	4d	24° 34.10'	81° 50.10'	-0 07	-0 19	+0 01	-0 04	1.2	0.8	--	--	1.2	353°	--	--	1.4	162°
	do.	17d	24° 34.10'	81° 50.10'	-0 08	-0 18	+0 00	-0 04	1.0	0.8	--	--	1.3	313°	0.1	227°	1.4	140°
3347	Northwest Channel, W of Calda Bank	5d	24° 36.92'	81° 52.29'	-0 19	-0 22	+0 03	-0 07	1.0	0.6	--	--	1.2	321°	--	--	1.0	145°
	do.	22d	24° 36.92'	81° 52.29'	-0 19	-0 21	-0 01	-0 10	0.8	0.5	--	--	1.1	321°	--	--	0.8	144°
3349	Fleming Key Cut	4d	24° 34.09'	81° 48.11'	+1 27	+0 23	-0 02	+0 56	0.4	1.0	0.3	003°	0.5	068°	--	--	1.7	279°
	do.	17d	24° 34.09'	81° 48.11'	+1 19	+0 09	-0 11	+1 00	0.4	0.8	0.3	000°	0.5	064°	--	--	1.4	274°
3351	Man of War Harbor	3d	24° 35.22'	81° 48.37'	+0 28	+0 45	+0 21	+0 01	0.7	0.5	0.2	289°	0.9	002°	--	--	0.9	187°
	do.	16d	24° 35.22'	81° 48.37'	+1 03	+0 45	+0 18	+0 00	0.5	0.5	0.2	293°	0.7	006°	--	--	0.8	182°
3353	Fleming Key, North of	2d	24° 35.80'	81° 47.92'	+1 30	+1 17	+0 48	+1 07	1.1	1.1	--	--	1.4	059°	--	--	1.9	242°
	do.	9d	24° 35.80'	81° 47.92'	+1 28	+1 17	+0 49	+1 08	0.8	0.8	--	--	1.1	061°	--	--	1.4	241°
3355	Boca Grande Channel	2d	24° 33.99'	82° 04.01'	-0 10	-0 18	-0 11	-0 11	0.9	0.7	--	--	1.2	013°	--	--	1.3	190°
	do.	12d	24° 33.99'	82° 04.01'	-0 12	-0 21	-0 13	-0 11	0.7	0.6	--	--	0.9	013°	--	--	1.0	191°
3357	New Ground	6d	24° 39.04'	82° 24.97'	+1 41	+1 08	+1 04	+1 46	0.5	0.5	0.3	305°	0.6	064°	0.2	154°	0.9	260°
	do.	32d	24° 39.04'	82° 24.97'	+1 38	+1 04	+1 01	+1 43	0.4	0.4	0.3	351°	0.6	066°	0.1	152°	0.7	259°
3359	Isaac Shoal		24° 33.5'	82° 32.2'	+1 02	+1 05	+1 45	+1 37	0.8	0.5	--	--	1.0	002°	--	--	0.8	181°
3361	Southeast Channel, 1.1 miles E of Garden Key		24° 37.60'	82° 51.10'	-0 25	+0 05	+0 30	+0 18	0.5	0.4	--	--	0.6	004°	--	--	0.6	172°
3363	Southwest Channel		24° 36.92'	82° 54.70'	+0 47	+1 10	+1 18	+1 46	0.3	0.3	--	--	0.4	001°	--	--	0.6	209°
					<b>on Tampa Bay Entrance, p.148</b>													
3365	Point Ybel, 0.4 mile northwest of		26° 27.40'	82° 01.12'	-0 25	-0 52	+0 17	+0 35	0.8	0.7	--	--	1.0	255°	--	--	0.9	080°
3367	Captiva Pass <37>		26° 36.56'	82° 13.34'	-0 53	-1 29	-1 14	-0 23	1.4	0.9	--	--	1.8	067°	--	--	1.9	251°
3369	Boca Grande Pass, Charlotte Harbor		26° 42.86'	82° 15.40'	-0 15	-0 37	-0 15	+0 05	1.7	1.3	--	--	2.2	057°	--	--	1.8	251°
3371	Pine Island Sound		26° 40.90'	82° 11.87'	--	--	--	--	--	--	--	--	0.5	011°	--	--	0.5	191°
3373	Little Pine I. bridge, Matlacha Pass		26° 37.9'	82° 04.1'	--	-0 19	--	--	0.4	--	--	--	0.6	132°	--	--	--	--
3375	Cape Haze, 2.3 mi. S of, Charlotte Hbr		26° 44.7'	82° 09.1'	+0 30	+0 41	-0 20	+1 18	0.4	0.4	--	--	0.5	080°	--	--	0.5	268°
3377	Punta Gorda, Peace River Bridge		26° 56.7'	82° 03.4'	--	--	--	--	0.3	0.2	--	--	0.4	047°	--	--	0.3	230°
3379	Myakka River bridge <45>		26° 57.5'	82° 12.8'	+1 48	+1 18	+1 47	--	0.4	--	--	--	0.5	304°	--	--	--	--
3381	Gasparilla Pass		26° 48.74'	82° 16.86'	-1 15	-1 13	-0 35	-0 41	0.8	0.8	--	--	1.0	066°	--	--	1.1	236°
3383	Venice Inlet		27° 06.8'	82° 28.0'	-2 05	-2 08	-1 57	-1 59	0.8	0.7	--	--	1.1	087°	--	--	0.9	262°
3385	Blackburn Bay, south end, bridge		27° 07.4'	82° 28.2'	-0 55	-1 20	-1 28	-0 10	0.7	0.5	--	--	0.9	357°	--	--	0.7	180°

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS								
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb		
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.	
	SARASOTA BAY Time meridian, 75°W	ft	North	West	h m	h m	h m	h m			knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.	
					<b>on Tampa Bay Entrance, p.148</b>														
3387	Big Sarasota Pass		27° 18.0'	82° 33.8'	-1 54	-1 49	-1 34	-2 03	1.2	0.8	--	--	1.5	006°	--	--	1.0	183°	
3389	Sarasota Bay, south end, bridge		27° 18.1'	82° 32.8'	-1 25	-1 39	-1 13	-0 32	0.2	0.2	--	--	0.3	196°	--	--	0.3	013°	
3391	New Pass		27° 19.9'	82° 34.9'	-2 06	-2 48	-1 18	-1 25	1.2	0.8	--	--	1.6	046°	--	--	1.0	231°	
3393	Golden Gate Point, off		27° 19.7'	82° 33.4'	-1 38	-1 57	-1 25	-1 19	0.3	0.2	--	--	0.4	344°	--	--	0.3	159°	
3395	Longboat Pass		27° 26.5'	82° 41.4'	-2 32	-2 42	-1 51	-1 56	1.4	1.2	--	--	1.8	088°	--	--	1.6	267°	
3397	Cortez, north of bridge		27° 28.2'	82° 41.6'	-1 47	-1 10	-0 25	-1 11	0.5	0.1	--	--	0.6	346°	--	--	0.1	162°	
	TAMPA BAY																		
3399	Egmont Channel, marker '10'	15d	27° 36.03'	82° 52.06'	-2 04	-3 17	-2 22	-1 31	0.2	0.2	0.2	319°	0.2	018°	0.1	139°	0.3	259°	
3401	Egmont Channel (3 mi. W of Egmont Key Lt.)		27° 36.5'	82° 49.1'	-0 30	-0 28	-0 30	-0 29	0.4	0.5	--	--	0.5	065°	--	--	0.7	260°	
3403	TAMPA BAY ENTRANCE (Egmont Channel)	15d	27° 36.26'	82° 45.62'	<b>Daily predictions</b>						--	--	1.3	120°	0.1	032°	1.3	298°	
3405	Southwest Channel (S of Egmont Key)	15d	27° 33.70'	82° 46.04'	-0 46	-0 53	-0 40	-0 30	0.6	0.9	0.1	357°	0.8	087°	--	--	1.2	269°	
3407	Mullet Key Channel entrance		27° 36.27'	82° 43.43'	-0 03	-0 01	-0 23	+0 08	0.8	0.8	--	--	1.1	055°	--	--	1.1	255°	
3409	Passage Key Inlet (off Bean Pt.)	15d	27° 32.36'	82° 44.86'	-1 29	-1 50	-1 13	-1 08	0.6	0.7	--	--	0.8	081°	--	--	0.9	247°	
3411	Rattlesnake Key, 3.1 miles west of		27° 33.20'	82° 41.30'	+0 20	-0 05	-0 51	+0 04	0.3	0.4	--	--	0.4	065°	--	--	0.6	250°	
3413	Rattlesnake Key, 1.1 miles northwest of		27° 34.25'	82° 38.63'	-0 28	-0 34	-0 34	-0 09	0.2	0.1	--	--	0.3	035°	--	--	0.2	210°	
3415	Mullet Key Channel, marker '24'	15d	27° 36.50'	82° 41.64'	-0 14	-0 07	-0 06	-0 06	0.7	0.7	--	--	0.9	073°	--	--	1.0	255°	
3417	Bunces Pass (West of Bayway bridge)		27° 38.82'	82° 44.37'	-0 47	-0 46	-1 07	-1 02	0.8	0.7	--	--	1.0	125°	--	--	1.0	315°	
3419	Pine Key (Pinellas Bayway bridge)		27° 41.55'	82° 43.03'	-0 32	-0 29	-1 07	-1 00	0.3	0.6	--	--	0.4	100°	--	--	0.8	280°	
3421	Cats Point (bridge west of)		27° 42.50'	82° 43.48'	-1 27	-2 41	-2 12	-1 23	0.5	0.5	--	--	0.6	015°	--	--	0.7	150°	
3423	SUNSHINE SKYWAY BRIDGE	15d	27° 37.22'	82° 39.32'	<b>Daily predictions, p.152</b>						--	--	1.3	060°	--	--	1.1	235°	
3425	Cut A & B, Channel Junction		27° 38.33'	82° 37.53'	+0 25	+0 07	+0 23	+0 46	0.8	0.7	--	--	1.0	045°	--	--	1.0	225°	
3427	Joe Island, 1.8 miles northwest of		27° 36.75'	82° 37.50'	+0 03	-0 07	-0 24	-0 02	0.5	0.7	--	--	0.7	070°	--	--	0.9	245°	
3429	Harbor Key, 1.3 miles west of		27° 36.67'	82° 35.67'	-0 50	-0 56	-1 06	-0 38	0.2	0.3	--	--	0.3	020°	--	--	0.4	160°	
	<i>Pinellas Point</i>				<b>Current weak and variable</b>														
3431	2 miles southwest of		27° 40.55'	82° 39.53'	-0 46	-0 23	-0 16	-0 34	0.6	0.7	--	--	0.8	030°	--	--	0.9	210°	
3433	2.6 miles south of		27° 39.63'	82° 38.50'	-1 28	-1 19	-1 53	-0 57	0.2	0.2	--	--	0.3	045°	--	--	0.3	220°	
3435	0.5 mile southeast of		27° 41.82'	82° 37.95'	+0 29	-0 32	-0 06	+0 20	0.5	0.6	--	--	0.7	020°	--	--	0.8	180°	
3437	1.9 miles SE of		27° 41.08'	82° 36.58'	+0 29	+0 23	+0 20	+0 47	0.6	0.6	--	--	0.8	025°	--	--	0.8	200°	
3439	3 miles southeast of		27° 40.38'	82° 35.58'	-0 01	+0 08	+0 24	+0 23	0.6	0.6	--	--	0.8	033°	--	--	0.8	216°	
3441	Port Manatee Channel entrance	15d	27° 39.72'	82° 35.95'	-0 34	-0 11	-0 22	+0 01	0.2	0.3	--	--	0.2	056°	--	--	0.4	242°	
3443	Port Manatee Channel, marker '4'		27° 39.21'	82° 35.39'	+0 12	-0 29	-0 45	+0 01	0.3	0.4	--	--	0.4	355°	--	--	0.5	215°	
3445	Piney Point, 0.6 mile NNW of		27° 39.22'	82° 33.73'	<b>on Old Tampa Bay ent., p.156</b>														
3447	Lewis Island, 0.9 mile east of	14	27° 43.47'	82° 36.58'	+0 03	-0 52	-0 47	-0 23	0.9	0.7	--	--	0.8	022°	--	--	0.7	143°	
3449	Camp Key, 1.9 miles northwest of	15	27° 42.47'	82° 33.00'	+0 02	-0 27	-0 35	-0 27	0.7	0.5	--	--	0.6	036°	--	--	0.5	223°	
3451	Shell Point, 1.1 miles west of		27° 43.28'	82° 30.22'	<b>Current weak and variable</b>														
3453	Port of St. Petersburg approach, marker 'S'	12	27° 45.55'	82° 36.61'	<b>Current weak and variable</b>						0.1	274°	0.3	344°	0.1	277°	0.3	203°	
3455	Snell Isle, 1.8 miles east of	14	27° 47.62'	82° 34.33'	+0 45	-0 03	-0 43	-0 12	0.3	0.4	--	--	0.3	353°	--	--	0.4	158°	
3457	Ross Island, 1 mile east of, marker '4'	15d	27° 59.90'	82° 34.20'	+0 34	+0 34	+0 07	+0 25	0.9	0.7	--	--	0.8	358°	--	--	0.7	179°	
3459	OLD TAMPA BAY ENTRANCE (Port Tampa)	15d	27° 51.80'	82° 33.22'	<b>Daily predictions</b>						0.1	297°	0.9	025°	--	--	0.9	211°	
3461	Gandy Bridge, west channel	15	27° 52.75'	82° 34.83'	+0 07	-0 46	-0 38	-0 38	1.0	0.9	--	--	0.9	000°	--	--	0.8	155°	
3463	Gandy Bridge, east channel	6d	27° 53.17'	82° 33.08'	+0 31	-0 01	-0 15	+0 23	0.6	0.5	--	--	0.5	014°	--	--	0.5	166°	
3465	W Howard Frankland Bridge	7	27° 55.55'	82° 35.17'	+0 18	+0 27	+0 03	+0 10	0.3	0.2	--	--	0.3	285°	--	--	0.2	138°	
3467	Courtney Campbell Parkway	7	27° 58.08'	82° 37.45'	+0 36	+0 03	-0 20	+0 10	0.6	0.6	--	--	0.5	338°	--	--	0.6	138°	
3469	Gadsden Pt. Cut-Cut G Channel junction	15d	27° 47.16'	82° 31.32'	<b>Current weak and variable</b>						--	--	0.2	030°	0.1	312°	0.2	241°	
3471	Alafia River ent., 1.2 miles west of		27° 50.97'	82° 25.28'	<b>Current weak and variable</b>						--	--	0.2	060°	--	--	0.2	215°	

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS									
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb			
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.		
	<b>BOCA CIEGA BAY and ST. JOSEPH SOUND</b> Time meridian, 75°W	ft	<b>North</b>	<b>West</b>	h	m	h	m	h	m	h	m								
					<b>on Tampa Bay Entrance, p.148</b>															
3473	Pass-a-Grille Channel		27° 41.1'	82° 44.1'	-0 30	-0 43	-0 30	-0 17	0.9	1.0	--	--	1.2	357°	--	--	1.4	186°		
3475	Bridge, 0.8 mi. south of Maximo Pt. <39>		27° 41.6'	82° 40.8'	-1 05	-1 22	-1 05	-0 50	0.9	1.0	--	--	1.2	078°	--	--	1.4	255°		
3477	Gulfport, south of		27° 43.7'	82° 42.4'	Current weak and variable															
3479	Blind Pass (north end)		27° 45.4'	82° 45.7'	-1 20	-1 25	-1 20	-1 12	0.5	0.3	--	--	0.6	000°	--	--	0.4	180°		
3481	Treasure Island Causeway		27° 46.2'	82° 45.3'	Current weak and variable															
					<b>on Johns Pass Entrance, p.160</b>															
3483	JOHNS PASS ENTRANCE	2d	27° 46.69'	82° 47.23'	<b>Daily predictions</b>						--	--	0.4	053°	0.1	137°	1.1	222°		
	do.	8d	27° 46.69'	82° 47.23'	+0 01	-0 05	-0 03	+0 02	0.9	0.9	--	--	0.4	051°	0.1	135°	0.9	223°		
3485	Johns Pass Bridge, north span	3d	27° 47.00'	82° 46.93'	-0 30	-0 08	+0 04	-0 27	2.3	1.4	--	--	1.0	034°	--	--	1.5	209°		
	do.	16d	27° 47.00'	82° 46.93'	-0 37	-0 11	+0 09	-0 23	2.7	1.2	--	--	1.1	039°	--	--	1.2	209°		
3487	Johns Pass Bridge, 0.3nm north of	3d	27° 47.10'	82° 46.79'	-0 39	+0 11	+0 31	-0 32	3.3	0.7	0.1	135°	1.4	045°	--	--	0.8	228°		
	do.	11d	27° 47.10'	82° 46.79'	-0 39	+0 09	+0 27	-0 33	2.8	0.6	0.1	322°	1.2	047°	--	--	0.7	235°		
					<b>on Tampa Bay Entrance, p.148</b>															
3489	Treasure Island, 3.5 miles southwest of		27° 45.0'	82° 50.0'	Current weak and variable															
3491	The Narrows (Indian Rocks Beach Bridge)		27° 52.6'	82° 51.0'	-0 23	-0 25	-1 17	-0 54	0.5	0.1	--	--	0.6	180°	--	--	0.2	000°		
3493	Clearwater Pass, 0.2 mi. NE of Sand Key		27° 57.4'	82° 49.4'	-2 24	-2 49	-2 18	-1 50	1.0	0.8	--	--	1.3	179°	--	--	1.1	348°		
3495	St. Joseph Sound, off		28° 05.0'	82° 55.0'	--	--	--	--	--	--	--	--	0.4	018°	--	--	0.6	195°		
	<b>APALACHEE BAY</b>																			
3497	St. Marks River approach		30° 02.8'	84° 10.8'	-0 57	-0 46	-0 10	-0 08	0.5	0.4	--	--	0.6	339°	--	--	0.5	170°		
3499	Four Mile Point, St. Marks River		30° 06.7'	84° 12.2'	-0 13	-0 14	+0 24	-0 26	0.3	0.3	--	--	0.4	358°	--	--	0.4	187°		
3501	St. Marks, St. Marks River		30° 09.3'	84° 12.1'	+1 38	+1 10	-0 23	+0 23	0.2	0.3	--	--	0.3	067°	--	--	0.4	247°		
	<b>ST. ANDREW BAY</b> Time meridian, 90°W				<b>on St. Andrew Bay Entrance, p.164</b>															
3503	ST. ANDREW BAY ENTRANCE	18d	30° 07.31'	85° 43.78'	<b>Daily predictions</b>						--	--	1.3	045°	--	--	1.6	225°		
	do.	5d	30° 07.31'	85° 43.78'	+0 45	+0 07	-0 14	-0 16	1.0	1.4	--	--	1.2	044°	--	--	1.8	230°		
	do.	31d	30° 07.31'	85° 43.78'	-0 32	-0 09	+0 02	+0 00	0.8	0.8	--	--	1.1	047°	--	--	1.3	221°		
3505	Courtney Point, 0.75mi. SE of	7d	30° 08.32'	85° 41.95'	+2 10	+0 32	+0 03	+0 29	0.2	0.4	--	--	0.3	069°	--	--	0.6	210°		
	do.	20d	30° 08.32'	85° 41.95'	-0 47	+1 49	+1 31	+0 23	0.4	0.2	--	--	0.4	065°	--	--	0.3	256°		
	do.	30d	30° 08.32'	85° 41.95'	-0 49	+2 07	+1 39	+0 20	0.3	0.2	--	--	0.4	068°	--	--	0.3	273°		
3507	Courtney Point, 0.4mi. ESE of	4d	30° 08.65'	85° 42.20'	--	--	--	-0 04	--	0.4	--	--	--	--	--	--	0.7	174°		
	do.	11d	30° 08.65'	85° 42.20'	--	--	--	-1 05	--	0.2	--	--	--	--	--	--	0.4	190°		
	do.	17d	30° 08.65'	85° 42.20'	Current weak and variable															
3509	Redfish Point	5d	30° 08.64'	85° 40.01'	+1 20	-0 02	-0 49	-0 17	0.2	0.4	--	--	0.2	101°	--	--	0.6	319°		
	do.	19d	30° 08.64'	85° 40.01'	-1 03	-0 05	+0 36	-0 14	0.3	0.3	--	--	0.4	118°	--	--	0.4	310°		
	do.	32d	30° 08.64'	85° 40.01'	-1 11	+0 26	+1 04	-0 50	0.4	0.2	--	--	0.4	129°	--	--	0.3	303°		
3511	Paper Mill	3d	30° 07.83'	85° 37.90'	--	--	-0 41	+0 58	--	0.4	--	--	--	--	--	--	0.7	249°		
	do.	16d	30° 07.83'	85° 37.90'	+0 44	+0 28	+0 19	+1 08	0.3	0.3	--	--	0.3	086°	--	--	0.5	245°		
	do.	27d	30° 07.83'	85° 37.90'	-0 46	--	+0 40	+0 05	--	0.2	--	--	--	--	--	--	0.3	238°		
3513	Bear Point, 0.6nm E of	4d	30° 09.86'	85° 42.81'	+2 59	+0 41	-0 20	+0 41	0.2	0.4	--	--	0.2	297°	--	--	0.6	120°		
	do.	14d	30° 09.86'	85° 42.81'	-0 05	+0 44	+1 13	-0 38	0.4	0.2	--	--	0.5	312°	--	--	0.3	137°		
	do.	27d	30° 09.86'	85° 42.81'	-2 13	+0 32	+2 40	--	0.5	--	--	--	0.6	334°	--	--	--	--		
3515	Long Point, West Bay	4d	30° 14.35'	85° 44.99'	+0 52	+0 04	+0 11	+0 31	0.2	0.2	--	--	0.2	005°	--	--	0.3	173°		
	<b>PENSACOLA BAY</b>				<b>on Mobile Bay Entrance, p.168</b>															
3517	Pensacola Bay entrance, midchannel		30° 20.1'	87° 18.0'	-1 13	-1 01	+0 06	-0 49	1.1	1.3	--	--	1.6	074°	--	--	1.8	256°		

Endnotes can be found at the end of table 2.

**TABLE 2. – CURRENT DIFFERENCES AND OTHER CONSTANTS**

No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS										
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb				
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.			
	<b>MOBILE BAY</b> Time meridian, 90°W	ft	<b>North</b>	<b>West</b>	h	m	h	m	h	m	h	m									
					<b>on Mobile Bay Entrance, p.168</b>																
3519	Main Ship Channel entrance	11d	30° 09.2'	88° 03.2'	--	--	+0 20	--	--	+1 16	0.4	0.7	--	--	0.7	344°	0.0	175°	1.0	182°	
3521	MOBILE BAY ENTRANCE, off Mobile Point	25d	30° 13.62'	88° 02.07'	<b>Daily predictions</b>				0.1	0.7	0.1	285°	1.4	014°	--	--	--	--	1.4	201°	
	do.	41d	30° 13.62'	88° 02.07'	-0 19	--	+0 01	+0 08	+0 01		0.8	0.7	0.1	285°	1.2	007°	0.1	282°	1.0	198°	
	do.		30° 13.62'	88° 02.07'	-0 38	--	+0 01	+0 08	+0 16		0.6	0.5	0.2	279°	0.9	357°	0.1	280°	0.8	205°	
3523	Channel, 6 miles N of Mobile Point		30° 19.8'	88° 01.7'	-0 10	--	+0 46	+1 14	+1 09		0.4	0.4	--	--	0.6	032°	--	--	0.5	208°	
3525	Great Point Clear, channel west of		30° 29.4'	88° 01.1'	<b>Current weak and variable</b>																
3527	Mobile River entrance		30° 40.2'	88° 02.0'	+5 11	--	+4 24	+2 32	+3 11		0.2	0.5	--	--	0.3	333°	--	--	0.7	151°	
3529	Tensaw River entrance (bridge)		30° 40.9'	88° 00.7'	+1 39	--	+1 05	-1 12	+0 05		0.3	0.7	--	--	0.4	029°	--	--	1.0	222°	
3531	Dauphin Island Causeway	7d	30° 17.36'	88° 07.72'	+0 44	--	+4 50	+1 50	+1 26		0.9	0.9	--	--	1.2	061°	--	--	1.2	242°	
	<b>MISSISSIPPI SOUND</b>																				
3533	Petit Bois Island, Dauphin Island, between	5d	30° 13.31'	88° 22.25'	-3 31	--	-2 12	-2 06	-1 02		0.3	0.4	0.1	268°	0.4	349°	--	--	0.6	172°	
3535	Horn Island Pass (LB 17)	12d	30° 12.90'	88° 30.65'	-2 04	--	+3 08	-1 09	-0 40		0.5	1.0	--	--	0.6	024°	--	--	1.4	228°	
	do.	25d	30° 12.90'	88° 30.65'	-2 49	--	+3 02	-0 20	-0 35		0.5	0.6	--	--	0.7	024°	--	--	0.9	222°	
3537	Horn Island, Petit Bois Island, between	7d	30° 13.54'	88° 32.40'	-2 38	--	-1 23	-0 58	-0 36		0.4	0.5	--	--	0.6	048°	0.1	134°	0.7	172°	
3539	Pascagoula River highway bridge <24>		30° 22.3'	88° 33.8'	--	--	+0 18	--	-0 36		0.9	0.9	--	--	1.2	016°	--	--	1.2	201°	
	<i>Gulfport Ship Channel</i>																				
3541	Ship Island, 1.0nm S of, (LB 22)	11d	30° 11.64'	88° 59.35'	-2 09	--	+3 28	+0 43	+0 56		0.2	0.3	--	--	0.3	308°	--	--	0.5	113°	
3543	Ship Island, 0.5nm NW of, (LB 26)	15d	30° 12.96'	88° 59.68'	-0 05	--	+3 50	+2 05	+1 41		0.3	0.4	--	--	0.5	008°	--	--	0.5	141°	
3545	Ship Island, 1.8nm NW of, (DM 32)	10d	30° 14.35'	89° 00.00'	+2 49	--	+5 04	+2 22	+2 29		0.3	0.4	--	--	0.4	029°	--	--	0.6	184°	
	<b>LOUISIANA COAST</b>																				
3547	Quatre Bayoux Pass, Barataria Bay		29° 18.6'	89° 51.1'	+1 12	--	+0 34	+0 31	+0 32		0.9	0.9	--	--	1.2	288°	--	--	1.3	103°	
3549	Pass Abel, Barataria Bay		29° 17.7'	89° 54.2'	+0 28	--	+0 30	+0 01	+0 23		0.6	1.1	--	--	0.9	317°	--	--	1.6	143°	
3551	Barataria Pass, Barataria Bay		29° 16.3'	89° 56.9'	+2 04	--	+0 53	+0 49	+0 45		1.1	0.9	--	--	1.5	315°	--	--	1.3	120°	
3553	Barataria Bay, 1.1 mi. NE of Manilla		29° 26.2'	89° 57.6'	+4 16	--	+3 05	+2 58	+4 38		0.3	0.3	--	--	0.4	356°	--	--	0.5	160°	
3555	Caminada Pass, Barataria Bay		29° 11.9'	90° 02.8'	+1 19	--	+1 57	+0 44	+1 04		1.1	1.1	--	--	1.5	297°	--	--	1.5	118°	
3557	Seabrook Bridge, New Orleans <1>		30° 01.9'	90° 02.1'	--	--	-2 54	--	-4 02		0.9	0.6	--	--	1.2	350°	--	--	0.9	170°	
	<b>on Galveston Bay Entrance, p.180</b>																				
3559	Cat Island Pass, Terrebonne Bay	6	29° 04.8'	90° 34.4'	-2 32	--	-1 57	-1 05	-2 59		0.8	1.2	--	--	1.1	013°	--	--	1.5	195°	
3561	Wine Island Pass		29° 04.2'	90° 38.0'	-4 33	--	-5 03	-3 38	-4 17		1.2	1.5	--	--	1.7	325°	--	--	1.9	160°	
3563	Caillou Boca, Caillou Bay	4	29° 03.5'	90° 48.5'	-0 33	--	-0 41	+2 59	-0 05		0.9	0.6	--	--	1.3	095°	--	--	0.7	264°	
3565	Calcasieu Pass, Cameron Fishing Pier	6d	29° 45.85'	93° 20.58'	<b>Daily predictions, p.172</b>										1.5	356°	--	--	1.8	175°	
3567	Calcasieu Pass, 35 miles south of		29° 10.15'	93° 19.23'	<b>Current weak and variable</b>																
3569	Calcasieu Pass, 67 miles south of <41>		28° 39.80'	93° 19.95'	<b>Current weak and variable</b>																
	<b>TEXAS</b>																				
	<i>Sabine Pass</i>																				
3571	Texas Point, 1.7 miles SSE of		29° 39.0'	93° 49.6'	+0 33	--	-0 08	-0 50	-0 17		1.0	1.6	--	--	1.1	335°	--	--	1.6	145°	
3573	SABINE PASS, USCG STATION	4d	29° 43.72'	93° 52.20'	<b>Daily predictions</b>										1.1	321°	--	--	1.0	143°	
3575	Sabine Front Range	3d	29° 45.48'	93° 53.41'	+0 19	--	+0 10	+0 36	+0 26		1.2	1.2	--	--	1.3	335°	0.1	248°	1.2	166°	
3577	Rainbow Bridge, Sabine Lake	13	29° 58.78'	93° 52.29'	+1 14	--	+2 01	+4 40	+2 40		0.7	0.6	--	--	0.8	285°	--	--	0.7	108°	
	<b>on Galveston Bay Entrance, p.180</b>																				
3579	GALVESTON BAY ENT. (between jetties)	15d	29° 20.92'	94° 42.85'	<b>Daily predictions</b>										1.4	277°	0.1	004°	1.2	088°	
	do.	5d	29° 20.92'	94° 42.85'	+0 17	--	+0 15	+0 02	+0 05		1.0	1.1	0.1	179°	1.4	272°	--	--	1.3	091°	
	do.	34d	29° 20.92'	94° 42.85'	-0 18	--	-0 01	-0 03	-0 13		0.8	0.9	0.1	188°	1.1	274°	--	--	1.1	094°	

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No.	PLACE	Meter Depth	POSITION		TIME DIFFERENCES				SPEED RATIOS		AVERAGE SPEEDS AND DIRECTIONS										
			Latitude	Longitude	Min. before Flood	Flood	Min. before Ebb	Ebb	Flood	Ebb	Minimum before Flood		Maximum Flood		Minimum before Ebb		Maximum Ebb				
											knots	Dir.	knots	Dir.	knots	Dir.	knots	Dir.			
	GALVESTON BAY Time meridian, 90°W	ft	<b>North</b>	<b>West</b>	h	m	h	m	h	m	h	m									
			<b>on Bolivar Roads, p.184</b>																		
3581	Galveston Bay Entr. Channel, LB11	13	29° 20.55'	94° 44.46'	+0 04	-0 02	+0 37	+0 24	0.8	1.0	0.1	000°	1.3	282°	0.1	359°	1.3	077°			
	do.	26	29° 20.55'	94° 44.46'	-0 25	-0 13	-0 34	-0 44	0.8	0.9	0.1	346°	1.3	267°	0.1	344°	1.2	065°			
3583	BOLIVAR ROADS	14d	29° 20.60'	94° 46.88'	<b>Daily predictions</b>																
	do.	8d	29° 20.60'	94° 46.88'	+0 09	+0 07	-0 16	-0 01	1.0	1.1	0.1	210°	1.6	296°	0.1	210°	1.3	123°			
	do.	31d	29° 20.60'	94° 46.88'	-0 32	-0 11	+0 17	-0 08	0.8	0.6	---	---	1.6	295°	---	---	1.5	125°			
3585	Quarantine Station, 0.3 mile S of <24>		29° 19.8'	94° 46.7'	---	+2 16	---	-1 53	0.7	0.6	---	---	1.1	196°	---	---	0.8	009°			
3587	Galveston Channel, west end <24>		29° 18.6'	94° 49.2'	-0 30	-0 54	-2 30	-1 11	1.0	1.2	---	---	1.6	272°	---	---	1.6	103°			
3589	Galveston Causeway RR. bridge	16d	29° 17.85'	94° 53.15'	-0 12	-0 22	-3 49	-1 21	0.4	0.8	---	---	0.6	266°	0.1	182°	1.1	099°			
3591	Houston Channel, W of Port Bolivar	3d	29° 21.88'	94° 47.80'	-0 05	-0 18	-2 14	-1 41	1.1	1.0	---	---	1.7	313°	0.1	052°	1.3	135°			
	do.	14d	29° 21.88'	94° 47.80'	-0 03	-0 11	-2 15	-1 55	1.0	0.9	---	---	1.5	312°	---	---	1.2	133°			
	do.	26d	29° 21.88'	94° 47.80'	-0 06	-0 14	-2 12	-1 41	0.9	0.8	---	---	1.4	312°	---	---	1.0	133°			
3593	Houston Ship Channel (Red Fish Bar)	7d	29° 30.44'	94° 52.48'	+0 41	+1 13	+1 13	+0 50	0.5	0.5	0.1	069°	0.7	341°	---	---	0.7	154°			
	do.	14d	29° 30.44'	94° 52.48'	+0 45	+1 28	+1 17	+1 10	0.7	0.7	0.1	064°	1.0	331°	---	---	0.9	148°			
	do.	24d	29° 30.44'	94° 52.48'	+0 48	+1 15	+1 20	+1 42	0.5	0.5	0.1	065°	0.8	323°	---	---	0.7	144°			
3595	Morgans Point	6d	29° 40.79'	94° 58.90'	+2 15	+1 43	-1 05	+1 16	0.3	0.5	---	---	0.5	336°	---	---	0.7	163°			
	do.	15d	29° 40.79'	94° 58.90'	+1 44	+1 23	-0 50	+1 11	0.3	0.4	---	---	0.5	341°	---	---	0.5	159°			
	do.	25d	29° 40.79'	94° 58.90'	+0 47	+0 58	-1 02	+1 20	0.2	0.3	---	---	0.4	340°	---	---	0.4	160°			
	TEXAS COAST		<b>on Galveston Bay Entrance, p.180</b>																		
3597	Matagorda Channel (entrance jetty)	15	28° 25.3'	96° 19.4'	-0 40	-0 27	-1 14	-1 25	1.4	1.5	---	---	2.0	317°	---	---	1.9	142°			
			<b>on Aransas Pass, p.188</b>																		
3599	ARANSAS PASS	35d	27° 50.03'	97° 02.65'	<b>Daily predictions</b>																
	do.	15d	27° 50.03'	97° 02.65'	+0 00	+0 00	+0 00	+0 00	1.1	1.5	---	---	1.6	300°	---	---	1.5	118°			
	do.	50d	27° 50.03'	97° 02.65'	+0 00	+0 00	+0 00	+0 00	0.9	0.8	---	---	1.0	300°	---	---	0.7	118°			
3601	Port Ingleside	5d	27° 48.90'	97° 13.80'	+0 24	+1 48	+2 11	+1 09	0.7	0.5	---	---	0.7	286°	---	---	0.5	102°			
3603	Sabine Bank <46>		29° 18.20'	94° 00.20'	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
3605	Heald Bank, 28 miles SSE of <46>		28° 40.17'	93° 59.60'	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
	PUERTO RICO Time meridian, 60°W		<b>on Vieques Passage, p.192</b>																		
3607	Las Mareas		17° 55.41'	66° 09.70'	<b>Current weak and variable</b>																
3609	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	---	---	0.3	256°	---	---	0.4	095°			
3611	VIEQUES PASSAGE		18° 11.3'	65° 37.1'	<b>Daily predictions</b>																
3613	Vieques Sound		18° 15.87'	65° 34.20'	-0 44	-1 16	-1 28	-1 05	0.7	0.9	---	---	0.6	250°	---	---	0.7	057°			
3615	Largo Shoals, west of		18° 19'	65° 35'	-0 52	-1 28	-1 33	-1 08	0.7	1.0	---	---	0.4	180°	---	---	0.6	355°			
3617	Ramos Cay, 0.3 mile SE of <1>		18° 18.6'	65° 36.4'	---	-0 42	---	-0 44	0.3	0.1	---	---	0.2	120°	---	---	0.1	284°			
3619	Palominos Island, 0.9 mile SW of <13>		18° 20.1'	65° 34.8'	---	---	---	-0 48	---	0.7	---	---	---	---	---	---	0.5	307°			
3621	Fajardo Harbor (channel)		18° 20'	65° 37'	-1 13	-1 52	-2 27	-1 45	0.5	1.6	---	---	0.3	162°	---	---	1.1	339°			
3623	Isla Marina, 0.2 mile west of <1> <13>		18° 20.50'	65° 37.38'	---	---	---	-2 06	---	1.0	---	---	---	---	---	---	0.7	335°			
3625	Coronala Laja, 0.4 mile NW of <1> <13>		18° 21.6'	65° 37.3'	---	---	---	-1 33	---	0.4	---	---	---	---	---	---	0.3	000°			
3627	Pasaje de San Juan <1> <13>		18° 23.9'	65° 36.9'	---	---	---	-1 15	---	1.7	---	---	---	---	---	---	1.2	310°			
3629	Bahia de San Juan		18° 27.23'	66° 06.6'	<b>Current weak and variable</b>																
3631	Bahia de San Juan entrance <42>		18° 28.3'	66° 07.6'	---	---	---	---	---	---	---	---	---	---	---	---	---	---			

Endnotes can be found at the end of table 2.

## ENDNOTES

- <1> The times of minimum before flood and minimum before ebb are indefinite.
- < 2> Current speeds up to 9.0 knots have been observed in the vicinity of the Boilers.
- < 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, 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.
- <13> Current seldom floods.
- <16> 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.
- <17> Spring freshwater flow tends to decrease flood speeds and increase ebb speeds by approximately 0.25knots. This also has the effect of delaying the slack before flood and advancing the slack before ebb by 15 to 45 minutes.
- <19> Current always ebbs. Ebb speeds vary depending on freshwater flow and average 1.5 knots in the spring and 0.5 knots in the fall.
- <20> 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.
- <21> 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.
- <22> In Sandy Hook Bay (except in southern extremity) the current is weak.
- <24> The times of minimum before flood and ebb are variable.
- <25> Current usually ebbs during the period 3 hours before to 3 hours after maximum ebb. Flood is weak and variable.
- <26> Station is east of channel. Velocities in mid-channel are approximately 40% greater.
- <27> 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.
- <29> Current tends to rotate clockwise. At times of "minimum before flood" there may be a weak current flowing WSW while at times of "minimum before ebb" there may be a weak current flowing ENE.
- <30> Current tends to rotate clockwise. At times of "minimum before flood" there may be a weak current flowing southwest, while at times of "minimum before ebb" there may be a weak current flowing north.
- <31> Flood usually flows northward, however, direction is variable.
- <32> Flood is variable, current sometimes changes to ebb for a short time during the flood period.
- <33> Due to changes in the waterway, average speed values given are probably too large.
- <34> Flood usually occurs in a southerly direction and the ebb in a northeastwardly direction.
- <35> Flood is weak and variable.
- <37> For greater ebb only.
- <39> For greater ebb. Lesser ebb is almost equal to greater ebb.

## ENDNOTES

- <41> Current is weak and variable. Current is somewhat rotary turning clockwise.
- <42> Current is normally weak and variable, but winds may cause heavy swells.
- <43> Minimum ebb is extremely weak, possibly flooding for a short period.
- <44> Every other ebb phase exhibits a double ebb pattern. For single ebb phases use time differences and speed ratios of the first ebb.
- <45> Ebb is weak and variable.
- <46> Current is somewhat rotary, speed seldom exceeds 0.3 knot.
- <47> Flood is weak and variable with speeds less than or equal to 0.2 knot. Minimums are indefinite.
- <49> During period observed, the current flow was nearly continuous in a southwesterly direction with an average speed of about 0.4 knot.
- <51> Observations were made in the summer months when the freshwater discharge was at a minimum. Periods of heavier discharge will increase ebb current speeds and decrease flood current speeds.
- <52> Observations were made in the spring during period of heavy freshwater discharge. Periods of lesser discharge will decrease ebb current speeds and increase flood current speeds.
- <53> Observations at this location showed long periods of minimum currents and short durations of flood and ebb currents.
- <54> Turbulence with hazardous current speeds of 6 to 7 knots have been reported near the bridges in the canal. Extreme caution should be exercised.
- <55> The time of minimum before flood is indefinite.
- <58> It has been reported that under conditions of extreme river discharge, the currents can reach 7 or 8 knots. Caution should be exercised when docking and undocking vessels.
- <59> Flood currents are defined as flowing out of Buzzards Bay into Vineyard Sound.
- <62> Short term observational data taken by United States Power Squadrons (USPS) as part of the NOS/USPS Tidal Current Predictions Quality Assurance Program has shown that predictions at this location are accurate.
- <63> Short term observational data taken by United States Power Squadrons (USPS) as part of the NOS/USPS Tidal Current Predictions Quality Assurance Program have shown predictions at these locations to be inaccurate.
- Observed speeds at "Little Creek" were approximately twice the predicted values.
  - Observations at "Newport News Channel, west end" showed both time and speed of the currents were altered by the Monitor-Merrimac Tunnel. Predictions should be used with caution.
  - Observations at "Lake Worth Inlet" showed that maximum currents occurred up to 2 hours earlier than predicted, and speeds were decreased by at least 25%.
  - Observations at "Fort Pierce Inlet" showed that maximum currents occurred up to 1 hours earlier than predicted, and speeds were decreased by at least 25%.
- CAUTION—During the first 2 hours of flood in the channel north of Governors Island, the current in the Hudson River is still ebbing while during the first 1 1/2 hours of ebb in this channel, the current in the Hudson River is still flooding. At such times, special care must be taken by large ships in navigating this channel.
- <64> At times of slack before flood there is a non-tidal current flowing NE at speeds of approximately 0.5 knots.



## TABLE 3.—SPEED OF CURRENT AT ANY TIME

### EXPLANATION

Though the predictions in this publication give only the slacks and maximum currents, the speed 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 be first 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 speed 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	Time	Speed
	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  $7:36 - 4:18 = 3^h18^m$ . Column heading nearest to  $3^h18^m$  is  $3^h20^m$ .

(3) Interval between slack and time desired is  $6:00 - 4:18 = 1^h42^m$ . Line labeled  $1^h40^m$  is nearest to  $1^h42^m$ .

(4) Factor in column  $3^h20^m$  and on line  $1^h40^m$  is 0.7. The above flood speed of 3.2 knots multiplied by 0.7 gives a flood speed of 2.24 knots (or 2.2 knots, since one decimal is sufficient) for the time desired.

*Example 2.*—Find the speed 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	Speed	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  $17:25 - 13:49 = 3^h36^m$ . Hence, use column headed  $3^h40^m$ .

(3) Interval between slack and time desired is  $17:25 - 16:30 = 0^h55^m$ . Hence, use line labeled  $1^h00^m$ .

(4) Factor in column  $3^h40^m$  and on line  $1^h00^m$  is 0.5. The above ebb speed of 2.5 knots multiplied by 0.5 gives an ebb speed of 1.2 knots for the desired time.

When the interval between slack and maximum current is greater than  $5^h40^m$ , 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.—SPEED OF CURRENT AT ANY TIME**

TABLE A

		Interval between slack and maximum current													
		<i>h. m.</i> 1 20	<i>h. m.</i> 1 40	<i>h. m.</i> 2 00	<i>h. m.</i> 2 20	<i>h. m.</i> 2 40	<i>h. m.</i> 3 00	<i>h. m.</i> 3 20	<i>h. m.</i> 3 40	<i>h. m.</i> 4 00	<i>h. m.</i> 4 20	<i>h. m.</i> 4 40	<i>h. m.</i> 5 00	<i>h. m.</i> 5 20	<i>h. m.</i> 5 40
Interval between slack and desired time	<i>h. m.</i>	<i>knots</i>	<i>knots</i>	<i>knots</i>	<i>knots</i>	<i>knots</i>	<i>knots</i>	<i>knots</i>	<i>knots</i>	<i>knots</i>	<i>knots</i>	<i>knots</i>	<i>knots</i>	<i>knots</i>	
	0 20	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	
	0 40	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	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	0.5	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	0.7	0.6	
	2 40	----	----	----	----	1.0	1.0	1.0	0.9	0.9	0.8	0.8	0.7	0.7	
	3 00	----	----	----	----	----	1.0	1.0	1.0	0.9	0.9	0.8	0.8	0.8	
	3 20	----	----	----	----	----	----	1.0	1.0	1.0	0.9	0.9	0.9	0.8	
	3 40	----	----	----	----	----	----	----	1.0	1.0	1.0	0.9	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	
	5 20	----	----	----	----	----	----	----	----	----	----	----	----	1.0	
	5 40	----	----	----	----	----	----	----	----	----	----	----	----	1.0	

TABLE B

		Interval between slack and maximum current													
		<i>h. m.</i> 1 20	<i>h. m.</i> 1 40	<i>h. m.</i> 2 00	<i>h. m.</i> 2 20	<i>h. m.</i> 2 40	<i>h. m.</i> 3 00	<i>h. m.</i> 3 20	<i>h. m.</i> 3 40	<i>h. m.</i> 4 00	<i>h. m.</i> 4 20	<i>h. m.</i> 4 40	<i>h. m.</i> 5 00	<i>h. m.</i> 5 20	<i>h. m.</i> 5 40
Interval between slack and desired time	<i>h. m.</i>	<i>knots</i>	<i>knots</i>	<i>knots</i>	<i>knots</i>	<i>knots</i>	<i>knots</i>	<i>knots</i>	<i>knots</i>	<i>knots</i>	<i>knots</i>	<i>knots</i>	<i>knots</i>	<i>knots</i>	
	0 20	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	
	0 40	0.8	0.7	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	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	0.5	0.4	0.4	0.4	
	1 20	1.0	1.0	0.9	0.8	0.8	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5	
	1 40	----	1.0	1.0	0.9	0.9	0.8	0.8	0.7	0.7	0.7	0.6	0.6	0.6	
	2 00	----	----	1.0	1.0	0.9	0.9	0.9	0.8	0.8	0.7	0.7	0.7	0.6	
	2 20	----	----	----	1.0	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.7	0.7	
	2 40	----	----	----	----	1.0	1.0	1.0	0.9	0.9	0.9	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	0.9	
	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	
	5 20	----	----	----	----	----	----	----	----	----	----	----	----	1.0	
	5 40	----	----	----	----	----	----	----	----	----	----	----	----	1.0	

Use Table A for all places except those listed below for Table B.

Use Table B for Cape Code Canal, Hell Gate, Chesapeake and Delaware Canal, and all stations in table 2 which are referred to them.

1. 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.
2. 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.
3. 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.
4. 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 speed, which is only momentary. There is a period on each side of the slack water, however, during which the current is so weak that for practical purposes it may be considered 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

Maximum current	<i>Period with a speed not more than -</i>				
	<i>0.1 knot</i>	<i>0.2 knot</i>	<i>0.3 knot</i>	<i>0.4 knot</i>	<i>0.5 knot</i>
<i>Knots</i>	<i>Minutes</i>	<i>Minutes</i>	<i>Minutes</i>	<i>Minutes</i>	<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>Period with a speed not more than -</i>				
	<i>0.1 knot</i>	<i>0.2 knot</i>	<i>0.3 knot</i>	<i>0.4 knot</i>	<i>0.5 knot</i>
<i>Knots</i>	<i>Minutes</i>	<i>Minutes</i>	<i>Minutes</i>	<i>Minutes</i>	<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
6.0	2	4	6	8	11
7.0	2	4	5	7	9
8.0	2	3	5	6	8

When there is a difference between the speeds 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 speed 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. The current sets in one direction for a period of 6 hours after which it ceases to flow momentarily and then sets in the opposite direction during the following 6 hours. The offshore tidal current, not being confined to a definite channel, changes its direction continually and never slows to a true slack water. Thus in a tidal cycle of 12 ½ hours it will have set in all directions of the compass. This type of current is referred to as 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 does not give rise to a period of slack water. When the speed 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 speeds of the rotary current are related to each other in the same way as slack and strength of current. A minimum speed of the current follows a maximum speed by an interval of approximately 3 hours and followed in turn by another maximum after a further interval of 3 hours.

The following table provides the direction and speed of the rotary current for each hour at a number of offshore stations. The times and speeds are referred to predictions for a reference station in Table 1. All times are in local standard time for the secondary station.

The speeds given in the table are the average speeds for the station. The Moon when new, full, or at perigee tends to increase the speeds 15 to 20 percent above average. When perigee occurs at or near the time of new or full Moon, the current speeds will be 30 to 40 percent above average. The Moon when at first and third quarter or at apogee tend to decrease the current speeds below average by 15 to 20 percent. When apogee occurs at or near the first or third quarter Moon, the currents will be 30 to 40 percent below average. The speeds will be about average when apogee occurs at or near the time of the new or full Moon and also when perigee occurs at or near the first or third quarter Moon. (See table of astronomical data for dates of Moon phases and other 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 speeds and directions are for tidal current only and do not include the effect of the wind. When a wind is blowing, a wind-driven current will be set up as is superimposed on the normal tidal current. The actual current encountered will thus be a combination of the wind-driven current and the 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 speed of the current at Nantucket Shoals at 3:15 p.m. (15:15) on a day when the maximum flood at Pollock Rip Channel is predicted in Table 1 to occur at 13:20. The desired time is therefore 2 hours after the maximum flood at Pollock Rip Channel. From the table the tidal current at Nantucket Shoals at 2 hours is setting 015E true with an average speed of 0.8 knots. If this day is near the time of new Moon and about half way between apogee and perigee, then the distance effect of the moon will be nil and the phase effect alone will increase the speed by about 15 percent, to 0.9 knots.

**Caution** - Speeds from 1 ½ to 3 knots have been observed at most of the stations in this table. Near Diamond Shoal Light a speed of 4 knots has occurred.

At some offshore stations, such as those 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. At these stations the current is essentially a reversing current. For such places, differences for predicting the current are given in Table 2.

TABLE 5.- ROTARY TIDAL CURRENTS

Station Name	Depth	Hourly time increments												
		0	1	2	3	4	5	6	7	8	9	10	11	
After Maximum Flood at BAY OF FUNDY ENTRANCE														
Isleboro Harbor, Penobscot Bay	14	0.30 342	0.29 348	0.22 336	0.32 348	0.31 210	0.32 205	0.43 188	0.42 177	0.25 139	0.24 090	0.25 069	0.2 063	knots degrees
Mark Island, 0.3 nm North of	14	0.33 044	0.19 088	0.17 171	0.18 244	0.28 235	0.23 204	0.2 329	0.21 294	0.23 308	0.25 312	0.28 022	0.32 037	knots degrees
Pickering Island, north of	14	0.23 296	0.2 278	0.21 281	0.31 283	0.29 256	0.27 254	0.22 237	0.23 200	0.24 198	0.2 171	0.24 088	0.24 087	knots degrees
Swains Ledge, WSW	14	0.39 029	0.36 040	0.39 313	0.35 296	0.29 275	0.3 141	0.38 163	0.36 171	0.37 172	0.27 034	0.27 038	0.24 035	knots degrees
After Maximum Flood at BUCKSPORT														
Isleboro Ledge PEB0612 Bin13	18.5	0.17 013	0.08 354	0.06 276	0.14 215	0.28 192	0.43 183	0.48 189	0.46 205	0.37 216	0.21 223	0.06 287	0.17 002	knots degrees
Isleboro Ledge PEB0612 Bin 8	51	0.24 035	0.12 37	0.04 116	0.19 203	0.32 204	0.37 196	0.34 182	0.26 168	0.13 155	0.06 074	0.18 040	0.26 039	knots degrees
After Minimum Before Flood at BOSTON HARBOR														
Bass Point, 0.5nm SSW of	15	0.11 191	0.51 295	0.55 303	0.5 308	0.47 313	0.46 354	0.46 010	0.48 046	0.57 089	0.66 109	0.64 121	0.51 132	knots degrees
Bass Point, 0.7nm west of	10	0.30 251	0.38 331	0.38 332	0.37 343	0.36 343	0.35 347	0.3 029	0.19 144	0.3 146	0.35 165	0.38 173	0.36 190	knots degrees
Deer Island Ligh, 1.3nm NW of	10	0.33 007	0.36 024	0.36 060	0.4 348	0.4 063	0.45 095	0.35 081	0.35 102	0.34 104	0.35 135	0.34 158	0.29 339	knots degrees
Egg Rock, 0.2nm north of	10	0.42 221	0.43 215	0.46 213	0.46 215	0.48 219	0.49 235	0.48 221	0.5 019	0.49 009	0.47 052	0.47 055	0.45 135	knots degrees

**TABLE 5.- ROTARY TIDAL CURRENTS**

Station Name	Depth	Hourly time increments												
		0	1	2	3	4	5	6	7	8	9	10	11	
		After Minimum Before Flood at BOSTON HARBOR												
Egg Rock, southeast of	10	0.42 213	0.45 193	0.47 175	0.46 178	0.45 222	0.44 267	0.45 330	0.44 328	0.47 335	0.42 334	0.43 337	0.4 306	knots degrees
Galloupes Point, 0.4nm south of	10	0.50 138	0.52 220	0.56 284	0.54 252	0.55 250	0.55 240	0.52 211	0.52 078	0.49 081	0.51 085	0.5 091	0.49 095	knots degrees
Georges Island, 0.2nm WSW of	10	0.22 217	0.29 209	0.37 052	0.44 074	0.44 066	0.44 032	0.5 029	0.47 061	0.39 082	0.37 071	0.36 070	0.3 069	knots degrees
Georges Island, 0.2nm WSW of	20	0.15 271	0.24 231	0.28 030	0.31 076	0.34 064	0.35 029	0.4 021	0.39 049	0.28 067	0.35 056	0.32 050	0.23 044	knots degrees
Great Pig Rocks, southeast of	10	0.29 200	0.3 212	0.32 229	0.34 247	0.37 265	0.35 284	0.34 002	0.34 042	0.34 058	0.35 065	0.36 080	0.34 086	knots degrees
Little Hahant 0.9nm northeast of	10	0.20 306	0.21 340	0.24 228	0.25 223	0.26 200	0.26 216	0.24 290	0.23 357	0.23 059	0.21 045	0.21 037	0.2 028	knots degrees
Peddocks Island, east of	10	0.20 246	0.27 282	0.41 019	0.35 024	0.28 355	0.34 338	0.33 345	0.29 013	0.33 002	0.33 345	0.32 333	0.26 331	knots degrees
Peddocks Island, east of	20	0.15 220	0.2 232	0.34 020	0.24 024	0.22 345	0.31 333	0.32 331	0.26 009	0.28 003	0.31 339	0.26 329	0.17 322	knots degrees
Ram Island, 0.2nm NNE of	10	0.03 265	0.23 265	0.23 270	0.25 282	0.32 319	0.33 333	0.31 357	0.29 067	0.27 070	0.28 073	0.26 076	0.23 073	knots degrees
Ram Island, 0.2nm southeast of	10	0.30 210	0.45 258	0.46 248	0.5 262	0.51 280	0.5 340	0.51 009	0.49 049	0.48 068	0.49 074	0.46 082	0.4 090	knots degrees
		After Maximum Flood at POLLOCK RIP CHANNEL												
Browns Ledge, Massachusetts		0.3 330	0.3 012	0.3 028	0.4 104	0.4 118	0.4 123	0.3 168	0.2 205	0.3 201	0.3 270	0.4 282	0.5 318	knots degrees

TABLE 5.- ROTARY TIDAL CURRENTS

Station Name	Depth	Hourly time increments												
		0	1	2	3	4	5	6	7	8	9	10	11	
		After Maximum Flood at POLLOCK RIP CHANNEL												
Cuttyhunk Island, 3.25 miles SW		0.4 356	0.3 015	0.2 080	0.3 123	0.5 146	0.5 158	0.4 173	0.3 208	0.2 267	0.3 306	0.3 322	0.4 335	knots degrees
Davis Bank, Nantucket Shoals		1.5 015	2.1 028	2.4 032	2.1 035	1.1 037	0.4 128	1.2 197	1.9 204	2.2 205	2.2 206	1.6 213	0.7 307	knots degrees
Davis Bank, Nantucket Shoals 15 miles SE of Nantucket Island		0.9 346	1.2 028	1.3 047	1.1 073	0.8 103	0.9 132	0.8 182	1.2 215	1.1 240	0.9 251	0.7 267	0.7 302	knots degrees
Davis Bank, Nantucket Shoals 17.5 miles SE of Nantucket Island		0.8 023	1.5 027	1.9 028	1.8 029	1.1 046	0.4 115	1.2 191	1.9 202	1.7 215	1.5 225	0.9 233	0.2 270	knots degrees
Davis Bank, Nantucket Shoals 18.5 miles SE of Nantucket Island		0.6 030	1.3 036	1.5 038	1.4 050	1.1 080	0.8 105	0.6 178	1.3 230	1.7 235	1.4 238	1 241	0.3 265	knots degrees
Georges Bank 40° 48' N 67° 40' W		0.9 304	0.9 340	0.8 353	0.6 029	0.6 056	0.6 083	0.9 107	1 140	1 156	0.9 175	0.8 202	0.8 245	knots degrees
Georges Bank 40° 49' N 68° 34' W		1.2 301	1.5 326	1.4 345	1.1 008	0.8 036	0.8 069	1 106	1.4 139	1.5 153	1.4 175	1.1 201	0.9 237	knots degrees
Georges Bank 41° 13' N 68° 20' W		1.5 319	2 332	1.4 345	0.8 009	0.6 042	0.7 080	1 118	1.3 138	1.4 154	1.5 169	1.3 188	0.9 236	knots degrees
Georges Bank 41° 14' N 67° 38' W		1.4 305	1.6 332	1.6 355	1.4 015	1.1 038	0.9 077	1.2 112	1.6 141	1.6 162	1.5 187	1.4 214	1.2 252	knots degrees
Georges Bank 41° 29' N 67° 04' W		1.0 277	1.2 302	1.4 329	1.3 348	1.2 015	1.1 048	1.2 085	1.4 122	1.5 145	1.3 166	1.2 194	1.1 223	knots degrees
Georges Bank 41° 30' N 68° 07' W		1.5 312	1.7 338	1.5 346	1.1 014	0.9 059	0.9 099	1.3 123	1.7 144	1.6 160	1.3 187	1 244	1.1 274	knots degrees
Georges Bank 41° 41' N 67° 49' W		1.6 318	1.8 320	1.4 325	0.8 330	0.3 067	0.9 111	1.5 117	1.7 126	1.7 144	1.1 160	0.8 242	1.2 292	knots degrees

**TABLE 5.- ROTARY TIDAL CURRENTS**

Station Name	Depth	Hourly time increments												
		0	1	2	3	4	5	6	7	8	9	10	11	
		After Maximum Flood at POLLOCK RIP CHANNEL												
Georges Bank 41° 42' N 67° 37' W		1.1 316	1.3 341	1 356	0.8 016	0.6 043	0.8 092	1 122	1.1 146	1.1 170	1 195	1 215	0.9 272	knots degrees
Georges Bank 41° 48' N 67° 34' W		1.5 325	2.1 332	2 342	1.3 358	0.7 035	0.8 099	1.3 126	2 150	1.9 159	1.7 169	1.2 197	0.9 275	knots degrees
Georges Bank 41° 50' N 66° 37' W		0.9 285	1.1 304	1.2 324	1.1 341	1 010	0.9 043	1 089	1.3 127	1.6 147	1.4 172	0.9 197	0.8 232	knots degrees
Georges Bank 41° 54' N 67° 08' W		1.1 298	1.4 325	1.5 344	1.2 000	0.7 033	0.8 082	1.1 118	1.5 138	1.2 153	1.1 178	0.9 208	0.8 236	knots degrees
Gooseberry Neck, 2 miles SSE of		0.6 052	0.4 65	0.2 108	0.3 168	0.4 210	0.5 223	0.5 232	0.3 249	0.2 274	0.2 321	0.3 016	0.5 038	knots degrees
Great Round Shoal Channel entrance		1.6 032	1.4 045	1.3 068	1.1 095	0.8 140	1.2 192	1.5 210	1.5 220	1.2 235	0.9 264	0.8 303	1.2 350	knots degrees
Great Round Shoal Channel 4 miles NE of Great Point		0.8 080	1.1 088	1.3 096	1 104	0.5 129	0.5 213	1.1 267	1.4 275	1.2 280	0.7 284	0.2 328	0.4 042	knots degrees
Great South Channel, Georges Bank 41° 10' N 68° 56' W		0.5 318	0.7 349	1.1 352	1 356	0.7 359	0.4 018	0.4 106	0.7 157	1 165	1 173	0.8 180	0.6 204	knots degrees
Great South Channel, Georges Bank 40° 31' N 68° 47' W		0.7 320	0.9 331	1.1 342	1 003	0.8 023	0.4 063	0.7 129	0.9 140	1 164	1 179	0.8 190	0.6 221	knots degrees
Monomoy Point, 23 miles east of		0.7 320	1 324	0.9 326	0.7 330	0.3 334	0.1 144	0.5 145	0.8 146	0.9 147	0.8 148	0.5 150	0.1 230	knots degrees
Nantucket Island, 28 miles east of		0.9 019	1.3 007	1.4 359	1.1 351	0.5 334	0.3 221	0.8 198	1.1 185	1.1 184	0.9 184	0.7 183	0.1 060	knots degrees
Nantucket Shoals		0.6 323	0.7 355	0.8 015	0.8 038	0.8 055	0.7 085	0.6 125	0.7 162	0.8 192	0.8 212	0.8 232	0.7 257	knots degrees

**TABLE 5.- ROTARY TIDAL CURRENTS**

Station Name	Depth	Hourly time increments												
		0	1	2	3	4	5	6	7	8	9	10	11	
		After Maximum Flood at POLLOCK RIP CHANNEL												
Nauset Beach Light, 5 miles NE		0.5 315	0.6 327	0.5 340	0.2 357	0.1 016	0.2 124	0.4 132	0.6 135	0.6 139	0.4 145	0.2 269	0.2 297	knots degrees
		After Maximum Flood at THE RACE												
Grace Point, 2 miles NW of		0.2 304	0.2 002	0.4 028	0.6 028	0.7 037	0.6 071	0.6 086	0.4 126	0.2 137	0.1 213	0.1 256	0.1 267	knots degrees
Great Round Shoal Channel		1.0 047	1.3 060	1.3 070	0.8 091	0.5 153	0.7 211	0.9 234	1.3 247	1.1 252	0.9 260	0.3 305	0.4 035	knots degrees
Little Gull Island, 3.7 miles ESE		0.8 271	0.5 284	0.2 320	0.2 068	0.7 077	1.1 095	1.6 118	1.2 128	0.6 150	0.2 171	0.4 221	0.7 228	knots degrees
Point Judith, Harbor of Refuge		0.2 197	0.2 160	0.4 151	0.5 159	0.5 146	0.5 124	0.4 109	0.2 104	0.1 090	0.1 030	0.1 336	0.1 209	knots degrees
Point Judith, 4.5 miles SW of		0.6 264	0.6 270	0.5 270	0.2 280	0.2 062	0.6 070	0.7 078	0.5 095	0.3 105	0.1 120	0.1 286	0.3 277	knots degrees
		After Maximum Flood at THE NARROWS, NEW YORK												
Sandy Hook Approach Lighted Horn Buoy 2A, 0.2 miles W		0.4 313	0.3 325	0.2 356	0.2 055	0.3 094	0.4 118	0.6 136	0.5 147	0.2 177	0.2 256	0.3 290	0.4 298	knots degrees
		After Maximum Flood at DELAWARE BAY ENTRANCE												
Fenwick Shoal Lighted Whistle Buoy 2		0.2 342	0.2 349	0.1 357	0.1 043	0.1 110	0.2 135	0.3 150	0.3 165	0.2 185	0.1 226	0.1 282	0.2 318	knots degrees

**TABLE 5.- ROTARY TIDAL CURRENTS**

Station Name	Depth	Hourly time increments												
		0	1	2	3	4	5	6	7	8	9	10	11	
		After Maximum Flood at CHESAPEAKE BAY ENTRANCE												
Point Lookout, 1.5 nm east of	16	0.31 197	0.26 217	0.24 242	0.24 266	0.22 290	0.22 311	0.18 330	0.1 358	0.09 073	0.13 113	0.2 152	0.29 179	knots degrees
		After Maximum Flood at CHARLESTON HARBOR												
Cape Romain, 5 miles SE		0.2 006	0.2 038	0.3 055	0.3 067	0.3 093	0.3 114	0.2 167	0.2 212	0.3 242	0.4 244	0.3 262	0.3 292	knots degrees
Cape Romain, 6.9 miles SW		0.3 317	0.2 350	0.2 019	0.3 071	0.3 115	0.3 111	0.2 132	0.2 160	0.2 216	0.2 251	0.3 266	0.3 303	knots degrees
Charleston Entrance, 37 miles E		0.3 328	0.3 350	0.2 020	0.2 065	0.3 095	0.3 118	0.3 140	0.3 163	0.2 195	0.2 235	0.2 268	0.3 295	knots degrees
Charleston Lighted Whistle Buoy 2C		0.2 300	0.2 332	0.1 017	0.2 055	0.3 077	0.3 093	0.3 117	0.2 153	0.2 207	0.2 242	0.3 260	0.3 275	knots degrees
Folly Island, 2 miles east of		0.1 346	0.2 024	0.3 058	0.3 076	0.3 102	0.2 121	0.1 164	0.2 222	0.2 256	0.3 256	0.3 271	0.2 290	knots degrees
Frying Pan Shoals, off Cape Fear		0.3 335	0.2 010	0.2 050	0.3 090	0.3 110	0.3 128	0.3 150	0.2 188	0.2 235	0.3 268	0.3 290	0.3 305	knots degrees
Martins Industry, 5 miles east of		0.4 282	0.3 293	0.1 330	0.1 030	0.3 075	0.4 092	0.5 102	0.4 110	0.2 140	0.2 200	0.3 250	0.4 271	knots degrees
		After Maximum Flood at SAVANNAH RIVER ENTRANCE												
Savannah Light, 1.2 miles SE		0.3 296	0.2 308	0.1 326	0.1 045	0.2 090	0.3 107	0.3 114	0.3 123	0.2 145	0.1 213	0.2 267	0.3 283	knots degrees

**TABLE 5.- ROTARY TIDAL CURRENTS**

Station Name	Depth	Hourly time increments												
		0	1	2	3	4	5	6	7	8	9	10	11	
		After Maximum Flood at LAKE WORTH INLET ENTRANCE												
Pier 13, Lake Worth Inlet	5.5	0.21 347	0.4 349	0.43 350	0.31 351	0.11 347	0.02 207	0.05 190	0.03 224	0.02 289	0 282	0.04 176	0.04 188	knots degrees
Pier 13, Lake Worth Inlet	15.4	0.23 339	0.44 347	0.47 349	0.33 348	0.12 339	0.03 213	0.06 188	0.04 190	0.03 190	0.02 169	0.04 172	0.04 209	knots degrees
Pier 13, Lake Worth Inlet	18.7	0.23 314	0.44 349	0.47 351	0.33 350	0.12 342	0.04 205	0.06 183	0.04 177	0.02 168	0.01 138	0.03 162	0.04 203	knots degrees

## 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 Grand Banks.

Throughout the whole stretch of 400 miles in the Straits of Florida, the stream flows with considerable speed. Abreast of Havana, the average surface speed in the axis of the stream is about 2 1/2 knots. As the cross-sectional area of the stream decreases, the speed increases gradually, until abreast of Cape Florida it becomes about 3 1/2 knots. From this point within the narrows of the straits, the speed along the axis gradually decreases to about 2 1/2 knots off Cape Hatteras, N.C. These values are for the axis of the stream where the current is a maximum, the speed of the stream decreasing gradually from the axis as the edges of the stream are approached. The speed of the stream, furthermore, is subject to fluctuations brought about by variations in winds and barometric pressure.

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

<i>Between Rebecca Shoal and Cuba</i>		<i>Between Fowey Rocks and Gun Cay</i>	
<i>Distance south of Rebecca Shoal</i>	<i>Mean surface speed observed</i>	<i>Distance east of Fowey Rocks</i>	<i>Mean Surface Speed observe</i>
Nautical miles	Knots	Nautical miles	Knots
20	0.3	8	2.7
35	0.7	11 1/2	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 2.5 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-fathoms curves is 1.1 knots in an east-north-easterly direction.

## THE GULF STREAM

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. Observation of the National Ocean Service 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 speed; 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 speed may be found) are indicated in the following table:

Approximate mean position of the Gulf Stream

Locality	Inner Edge	Axis
North of Havana, Cuba .....		25
Southeast of Key West, Florida .....		45
East of Fowey Rocks, Florida .....		10
East of Miami Beach, Florida .....		15
East of Palm Beach, Florida .....		15
East of Jupiter Inlet, Florida .....		20
East of Cape Canaveral, Florida .....	10	45
East of Daytona Beach, Florida .....	25	75
East of Ormond Beach, Florida .....	25	75
East of St. Augustine, Florida. (coast line) .....	40	85
East of Jacksonville, Florida. (coast line) .....	55	90
Southeast of Savannah, Georgia. (coast line) .....	65	95
Southeast of Charleston, South Carolina. (coast line) .....	55	90
Southeast of Myrtle Beach, South Carolina .....	60	100
Southeast of Cape Fear, North Carolina (light) .....	35	75
Southeast of Cape Lookout, North Carolina (light) .....	20	50
Southeast of Cape Hatteras, North Carolina .....	10	35
Southeast of Virginia Beach, Virginia .....	85	115
Southeast of Atlantic City, New Jersey .....	120	
Southeast of Sandy Hook, New Jersey .....	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, Florida., 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 lesser 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 Service Charts: No. 11013, Straits of Florida; No. 411, South Carolina to Cuba; No. 11460, Cape Canaveral to Key West; No. 11420, Alligator Reef to Havana. Chart No. 11009 show 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 speed of which depends on the speed of the wind, and unless the current is 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 have been investigated from observations made at 20 lightships (some of which have since been moved) from Portland, Maine to St. John's River, Florida. The observations were made hourly and varied in length from 1 to 2 years at most of the locations to 5 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 speed 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.

**Speed.**—The table below shows the average speed of the current due to winds of various strengths.

Wind speed (mile per hour).....	10	20	30	40	50
<i>Average current speed (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.

## WIND-DRIVEN CURRENTS

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	°	8	°	0	°	18	°	18	°	24	°	15	°	18
Boston.....	42 20	70 45	°	21	°	32	°	29	°	20	°	2	°	19	°	15
Pollock Rip Slue.....	41 37	69 54	°	38	°	30	°	75	°	167	°	59	°	36	°	19
Nantucket Shoals.....	40 37	69 37	°	24	°	16	°	3	°	0	°	6	°	18	°	48
Hen and Chickens .....	41 27	71 01	°	1	°	3	°	36	°	55	°	30	°	20	°	8
Brenton Reef.....	41 26	71 23	°	19	°	1	°	8	°	48	°	41	°	41	°	24
Fire Island.....	40 29	73 11	°	8	°	17	°	55	°	41	°	14	°	0	°	37
Ambrose Channel.....	40 27	73 49	°	11	°	72	°	112	°	70	°	46	°	37	°	21
Scotland.....	40 27	73 55	°	36	°	61	°	92	°	33	°	44	°	15	°	13
Barnegat.....	39 46	73 56	°	9	°	7	°	33	°	30	°	8	°	0	°	29
Northeast End.....	38 58	74 30	°	11	°	20	°	42	°	44	°	18	°	7	°	18
Overfalls.....	38 48	75 01	°	2	°	40	°	78	°	28	°	54	°	32	°	45
Winter-Quarter Shoal.....	37 55	74 56	°	5	°	27	°	19	°	20	°	4	°	8	°	27
Chesapeake.....	36 59	75 42	°	5	°	6	°	73	°	57	°	26	°	18	°	22
Diamond Shoal.....	35 05	75 20	°	36	°	88	°	52	°	22	°	10	°	17	°	4
Cape Lookout Shoals .....	34 18	76 24	°	2	°	29	°	80	°	31	°	21	°	2	°	5
Frying Pan Shoals.....	33 34	77 49	°	6	°	9	°	55	°	38	°	14	°	7	°	6
Savannah.....	31 57	80 40	°	18	°	23	°	50	°	17	°	7	°	10	°	33
Brunswick.....	31 00	81 10	°	28	°	18	°	37	°	2	°	8	°	21	°	18
St. Johns.....	30 23	81 18	°	47	°	84	°	26	°	27	°	16	°	8	°	8

## THE COMBINATION OF CURRENTS

In determining from the current tables the speed 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 speed 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  $120^\circ$  with a speed of 0.6 knot, and at the same time a wind of 40 miles per hour is blowing from the west; What current will the vessel be subject to at that time? Since a wind of 40 miles per hour from the west will give rise to a current setting  $120^\circ$  with a speed of 0.5 knot, the combined tidal and wind-driven currents will set in the same direction ( $120^\circ$ ) with a speed of  $0.6 + 0.5 = 1.1$  knots.

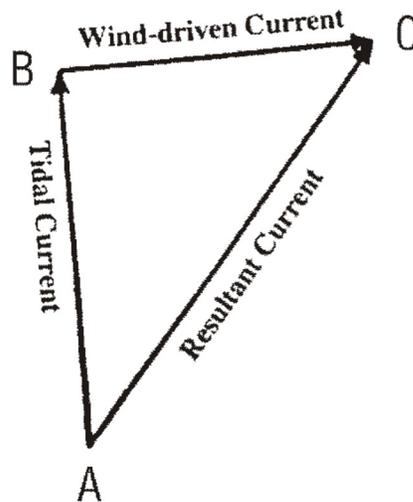
Currents in opposite directions.—The combination of currents setting in opposite directions is likewise a simple matter. The speed of the resultant current is the difference between the opposite setting currents, and the direction of the resultant current is the same as that of the greater current.

As an example, let it be required to determine the speed of the current at the Nantucket Shoals station when the tidal current is setting  $205^\circ$  with a speed of 0.8 knot, and when a wind of 40 miles per hour is blowing from the south. The current produced by a wind of 40 miles per hour from the south would set  $025^\circ$  with a speed 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 ( $205^\circ$ ) with a speed of  $0.8 - 0.5 = 0.3$  knot.

## THE COMBINATION OF CURRENTS

Currents in different directions.—The combination of currents setting at arbitrary angles is best solved by a graphical method. Taking the combination of two currents as the simplest case, draw a line whose direction and length (to a suitable scale) represent the direction and speed of one of the currents to be combined. From this line draw another (to the same scale) representing the direction and speed of the second current. The line joining the origin of the first line with the end of the second line represents the direction and speed of the combined current.

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



### Combination of tidal current and wind-driven current

Using a scale of 2 inches to represent 1 knot, draw from point *A*, the origin in the diagram above, the line *AB* 1.4 inches in length directed  $355^\circ$  to represent the tidal current. From point *B* draw the line *BC* 1.2 inches in length directed  $085^\circ$  to represent the wind-driven current. The line *AC* represents the resultant current, which on being measured, is found to be about 1.8 inches in length directed  $035^\circ$ . Hence, the combined current sets  $35^\circ$  with a speed of 0.9 knot.

The combination of three or more currents is made in the same way as above, for example, the third current to be combined being drawn from the point *C*. The resultant current is given by joining the origin with the end of the last line. For drawing the lines, a parallel rule and compass rose will be found convenient. A protractor or polar coordinate paper may also 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 to carry the most favorable current and also the speed 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 speeds in the shaded area should then be multiplied by the ratio of the predicted flood speed to the average flood speed (maximum flood speed given opposite the name of the reference station on the diagram) and the speeds in the unshaded area by the ratio of the predicted ebb speed to the average ebb speed.

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 speeds as mentioned above. Thus, if the diagram in a particular case gives a favorable flood speed averaging about 1.0 knot and the ratio of the predicted flood speed to the average flood speed is 0.5 the approximate favorable current for the particular time would be  $1.0 \times 0.5 = 0.5$  knot.

## CURRENT DIAGRAMS

### 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 speed 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 speed 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 speed 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 ruler will show the speed 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 speed 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 ruler 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 speeds 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.

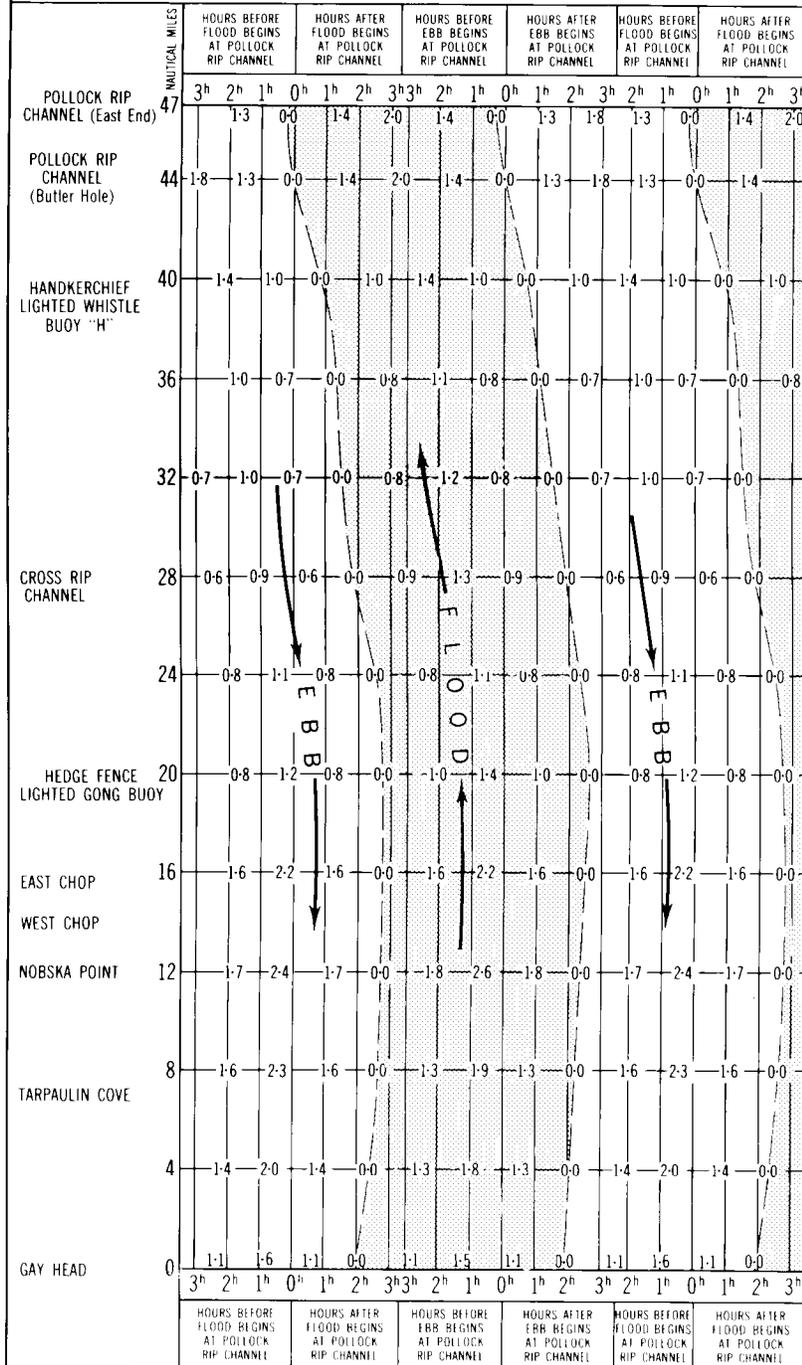
To determine the time of a favorable current for passing through the sounds.—With parallel rulers transfer to the diagram the direction of the speed line corresponding to normal speed of vessel, moving the ruler over the diagram until its edge runs as nearly as possible through the general line of largest speeds 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?

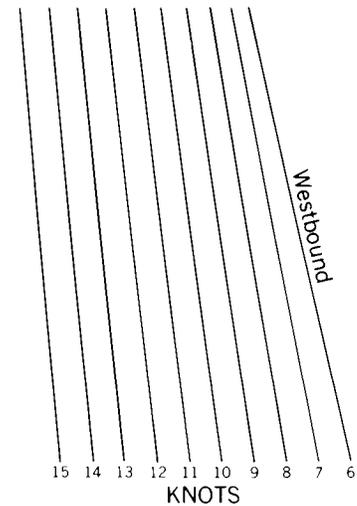
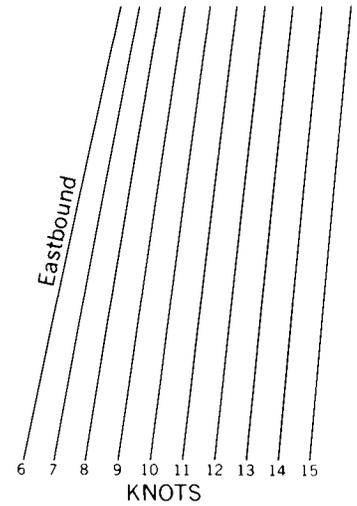
Place parallel rulers along the 12-knot speed line "Eastbound." Transfer the direction to the shaded portion of the diagram and as near as possible to the axis so as to include the greatest possible number of larger current speeds. It will be found that the edge of the ruler cuts the horizontal line 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.

## CURRENT DIAGRAM - VINEYARD AND NANTUCKET SOUNDS

Referred to predicted times of slack water at Pollock Rip Channel (Butler Hole)



### SPEED LINES



## CURRENT DIAGRAMS

### EAST RIVER, NEW YORK

#### EXPLANATION OF CURRENT DIAGRAM

The current diagram on the opposite page represents average conditions of the surface currents along the middle of the channel between Governors Island and Throgs Neck, the scale being too small to show details. Eddies, of more or less violence, occur in numerous localities in the East River, but as a general rule the currents follow the channels.

On the diagram northerly and easterly streams are designated as "Flood" currents and westerly and southerly streams as "Ebb" currents. The small figures on the diagram denote the speed of the current in knots and tenths. The times are referred to slack waters at Hell Gate, daily predictions for which are given in Table 1 of these current tables.

The speed lines are directly related to the diagram. By their use the speed and general direction of the current encountered by a vessel passing through the river may be determined; also the time of a favorable current for leaving any place shown on the left margin of the diagram may be found.

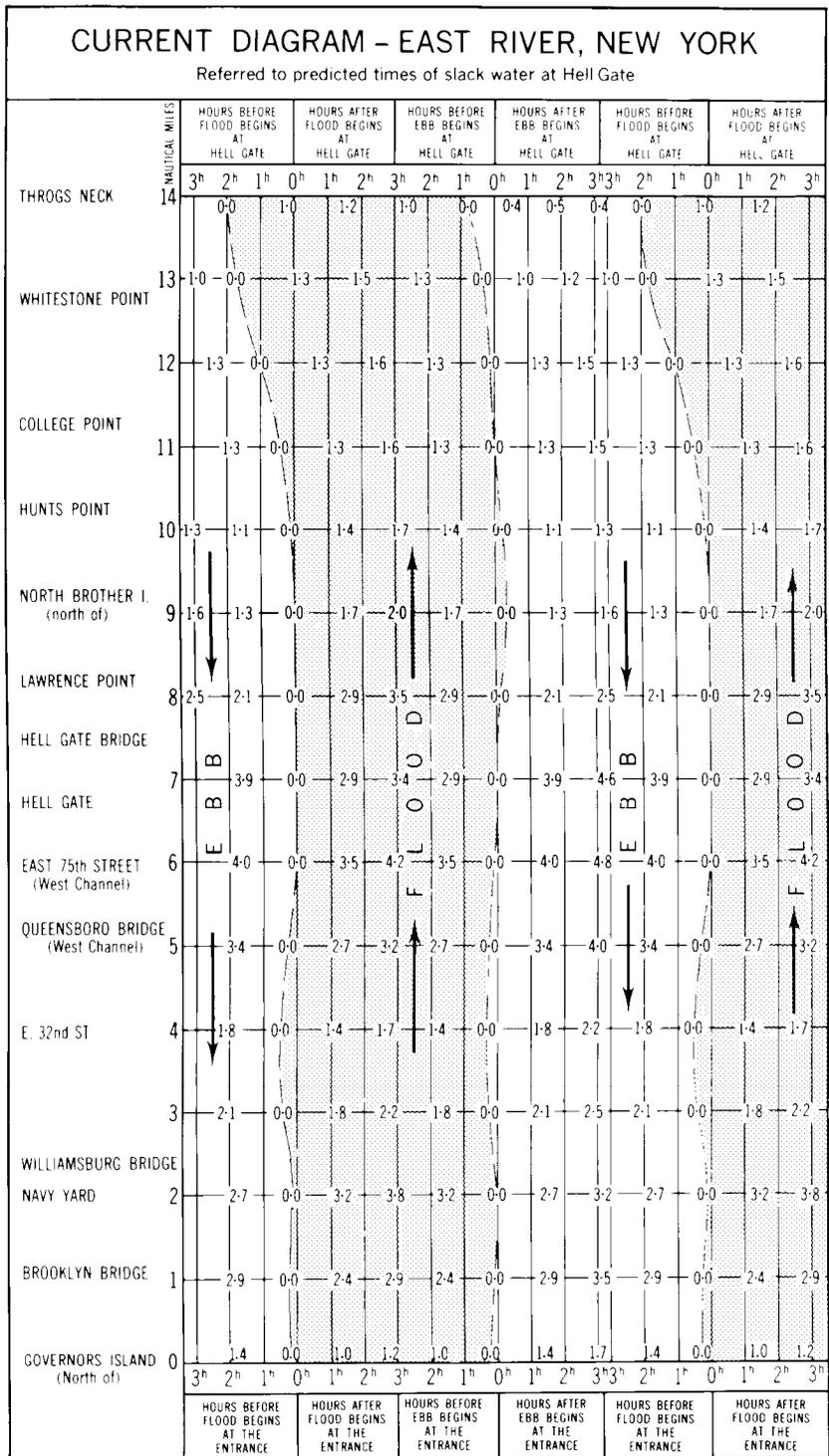
To determine the speed and direction of the current.—With parallel rulers transfer to the diagram the direction of the speed line corresponding to the normal speed of vessel, placing edge of ruler opposite the place of departure on the time before or after flood begins or ebb begins at Hell Gate that corresponds to the time of day desired. If the ruler's edge lies along the shaded portion of the diagram, a flood current will be encountered; if along the unshaded, an ebb current; and if along the boundary of both, slack water. The figures on the diagram along the edge of the ruler will show the speed of the current encountered at any place along the course indicated by the names on the left margin of diagram.

Example.—A 12-knot vessel passes Throgs Neck for Governors Island at 0820 of a given day and it is desired to ascertain the speed and direction of the current which will be encountered in passing through East River. Assuming that on the given day ebb begins at Hell Gate at 0614 and flood begins at 1245, the time 0820 will be about 2 hours after ebb begins. With parallel rulers transfer to the diagram the 12-knot speed line "Southbound", placing edge of ruler at the top in the column "Hours after ebb begins at Hell Gate" and intersecting 2h. It will be found that the edge of the ruler passes through strength of current in the unshaded portion of diagram averaging about 2.4 knots. The vessel will, therefore, have a favorable current averaging about 2.4 knots all the way.

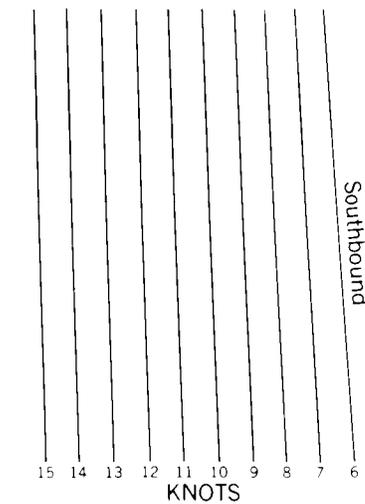
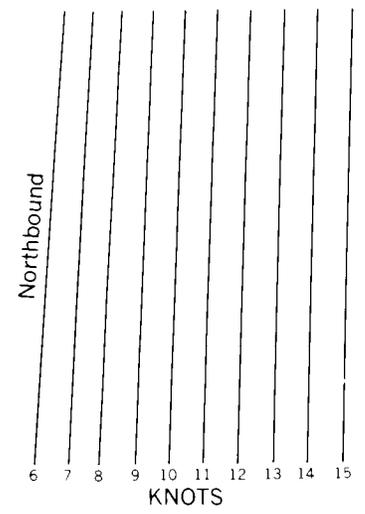
To determine the time of a favorable current for passing through the East River.—With parallel rulers transfer to the diagram the direction of the speed line corresponding to normal speed of vessel, moving the ruler over the diagram until its edge runs as nearly as possible through the general line of greatest current of unshaded portion if bound westward and southward, and shaded portion if bound northward and eastward. An average of the figures along edge of ruler will give average strength of current. The time (before or after flood begins or ebb begins at Hell Gate) for leaving any place on the left margin of diagram will be found vertically above the point where the parallel ruler cuts the horizontal line opposite the name of the place in question.

Example.—A 12-knot vessel in New York Harbor desires to pass through the East River in the afternoon of a day when flood begins at Hell Gate at 1404 and ebb begins at 1934. At what time should she get under way as to carry the most favorable current all the way to Throgs Neck?

Place parallel rulers along the 12-knot speed line "Northbound." Transfer this direction to the shaded portion of diagram so as to include the greatest number of larger current speeds. It will be found that the ruler's edge cuts the horizontal line at Governors Island about vertically under "2 1/2 hours after flood begins at Hell Gate", and the average of the speeds along the edge of the ruler is about 2.3 knots. For the given day flood begins in Hell Gate at 1404 hence, if the vessel leaves Governors Island about 2 1/2 hours later, or 1630 on that day, she will have a favorable current, averaging about 2.3 knots all the way.



SPEED LINES



## CURRENT DIAGRAMS

**NEW YORK HARBOR VIA AMBROSE CHANNEL  
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 Ambrose Channel entrance to Spuyten Duyvil, 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 speed of the current in knots and tenths. The times are referred to slack waters at The Narrows, 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 speed of the current encountered by the vessel on entering or leaving the harbor or the most favorable time, with respect to currents, for leaving any place shown on the left margin.

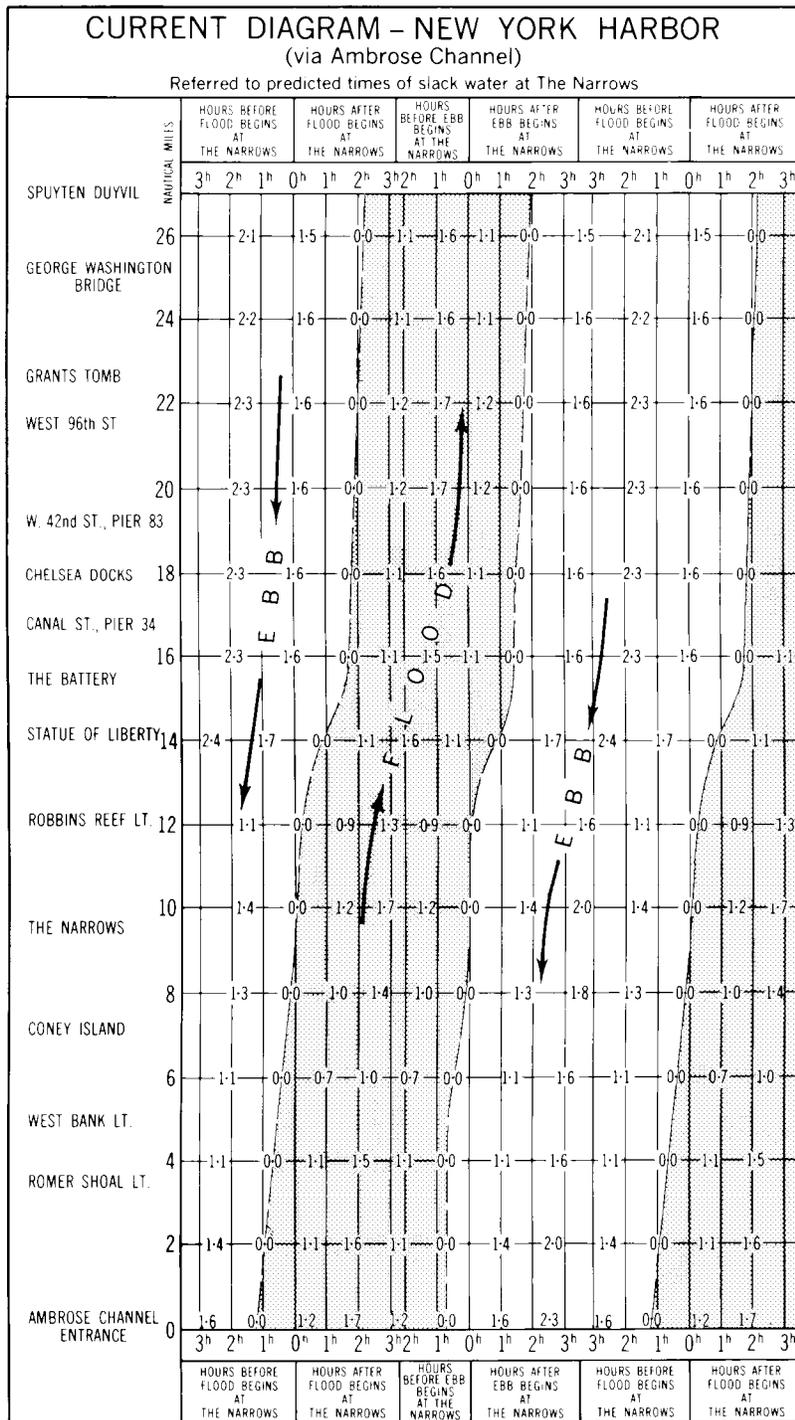
To determine speed and direction of current.—With parallel rulers transfer to the diagram the direction of the speed line corresponding to normal speed of vessel, moving edge of ruler to the point where the horizontal line representing place of departure intersects the vertical line representing the 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 ruler will show the speed of the current encountered at any place indicated on the left margin of the diagram.

Example.—A 10-knot vessel enters Ambrose Channel about 1040 of a given day. Flood begins at The Narrows at 0835 and ebb begins at 1420. The time 1040 will be about 2 hours after flood begins. With parallel rulers transfer to the diagram the 10-knot speed line "Northbound," placing edge of ruler on the point where the vertical line "2 hours after flood begins" intersects the horizontal 0-mile line which is the starting point. It will be found that the edge of the ruler passes through the shaded portion of the diagram, the speeds along the edge of the ruler from Ambrose Channel entrance to Chelsea Docks averaging about 1.4 knots. The vessel will, therefore, have a favorable flood current averaging about 1.4 knots all the way to Chelsea Docks.

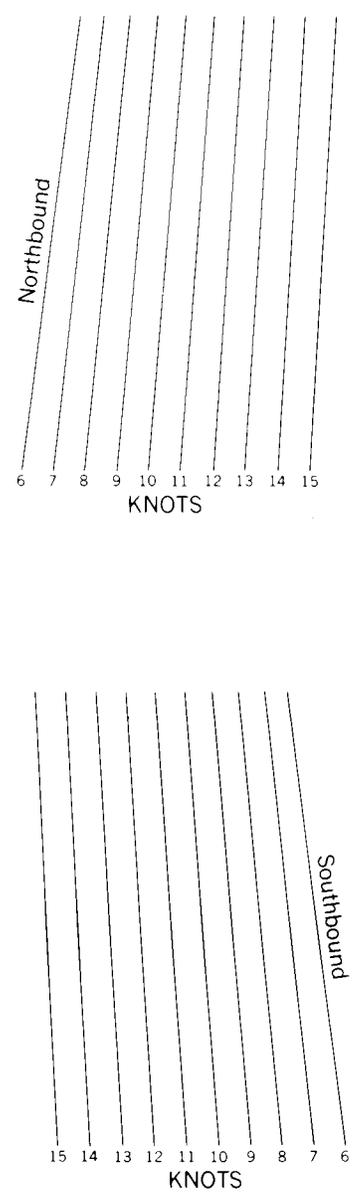
To determine the time of a favorable current for leaving or entering the harbor.—With parallel rulers transfer to the diagram the direction of the speed line corresponding to normal speed of vessel, moving the ruler over the diagram until its edge runs as nearly as possible through the general line of largest speeds of shaded portion if northbound and unshaded portion if southbound, 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 or ebb begins at The Narrows) 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 10-knot vessel will leave Chelsea Docks on a day when flood begins at The Narrows at 0804 and ebb begins at 1338. At what time should she get under way so as to carry the most favorable current all the way to Ambrose Channel entrance?

Place parallel rulers along the 10-knot speed line "Southbound." Transfer the direction to the unshaded portion of the diagram as near as possible to the axis so as to include the greatest possible number of larger current speeds on the portion of the chart below Chelsea Docks. It will be found that the edge of the ruler cuts the horizontal line at Chelsea Docks at the point representing "2 hours after ebb begins at The Narrows," and that the average of the currents along the edge of the ruler is about 1.5 knots in a favorable direction. For the given day, ebb begins at The Narrows at 1338; hence, if the vessel leaves Chelsea Docks 2 hours later, or about 1608, she will average a favorable current of about 1.5 knots all the way to Ambrose Channel entrance.



### SPEED LINES



## CURRENT DIAGRAMS

### DELAWARE BAY AND RIVER

#### EXPLANATION OF CURRENT DIAGRAM

This current diagram represents 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 speed 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 speed 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 speed 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 speed 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 speed 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 speed 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 speed 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.

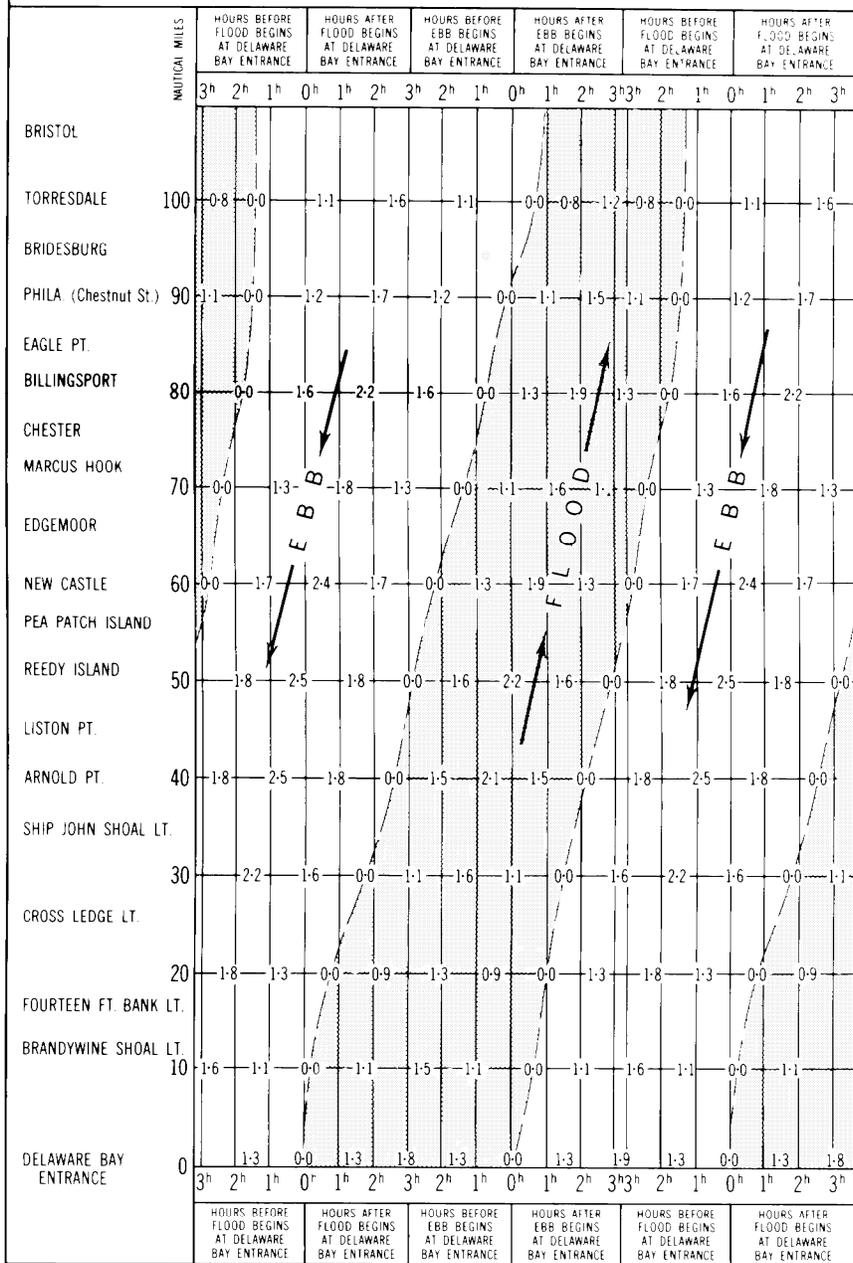
To determine the time of a favorable current for passing up or down the bay and river.—With parallel rulers transfer to the diagram the direction of the speed line corresponding to normal speed of vessel, moving the ruler over the diagram until its edge runs as nearly as possible through the general line of largest speeds of shaded portion if northbound or unshaded portion if southbound giving consideration only to that part of the diagram which lies between places of departure and destination. An average of the figures along edge of ruler will give the average speed 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 speeds. 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 speeds 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.

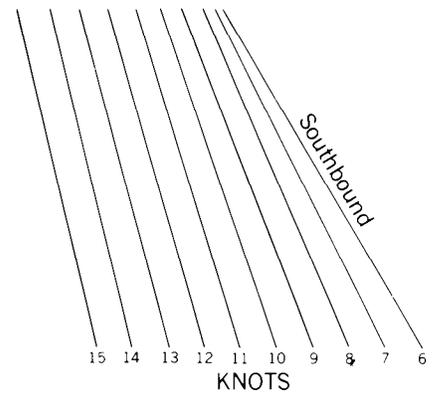
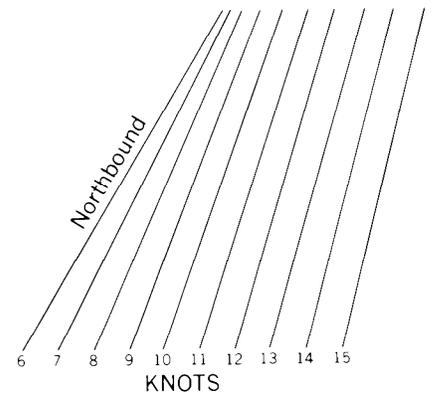
Note.—It is readily seen by transferring southbound speed lines to this diagram that southbound vessels can carry a favorable current for about 50 miles only.

# CURRENT DIAGRAM - DELAWARE BAY AND RIVER

Referred to predicted times of slack water at Delaware Bay Entrance



## SPEED LINES



## CURRENT DIAGRAMS

### CHESAPEAKE BAY

#### EXPLANATION OF CURRENT DIAGRAM

This current diagram represents 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 speed 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 speed 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.

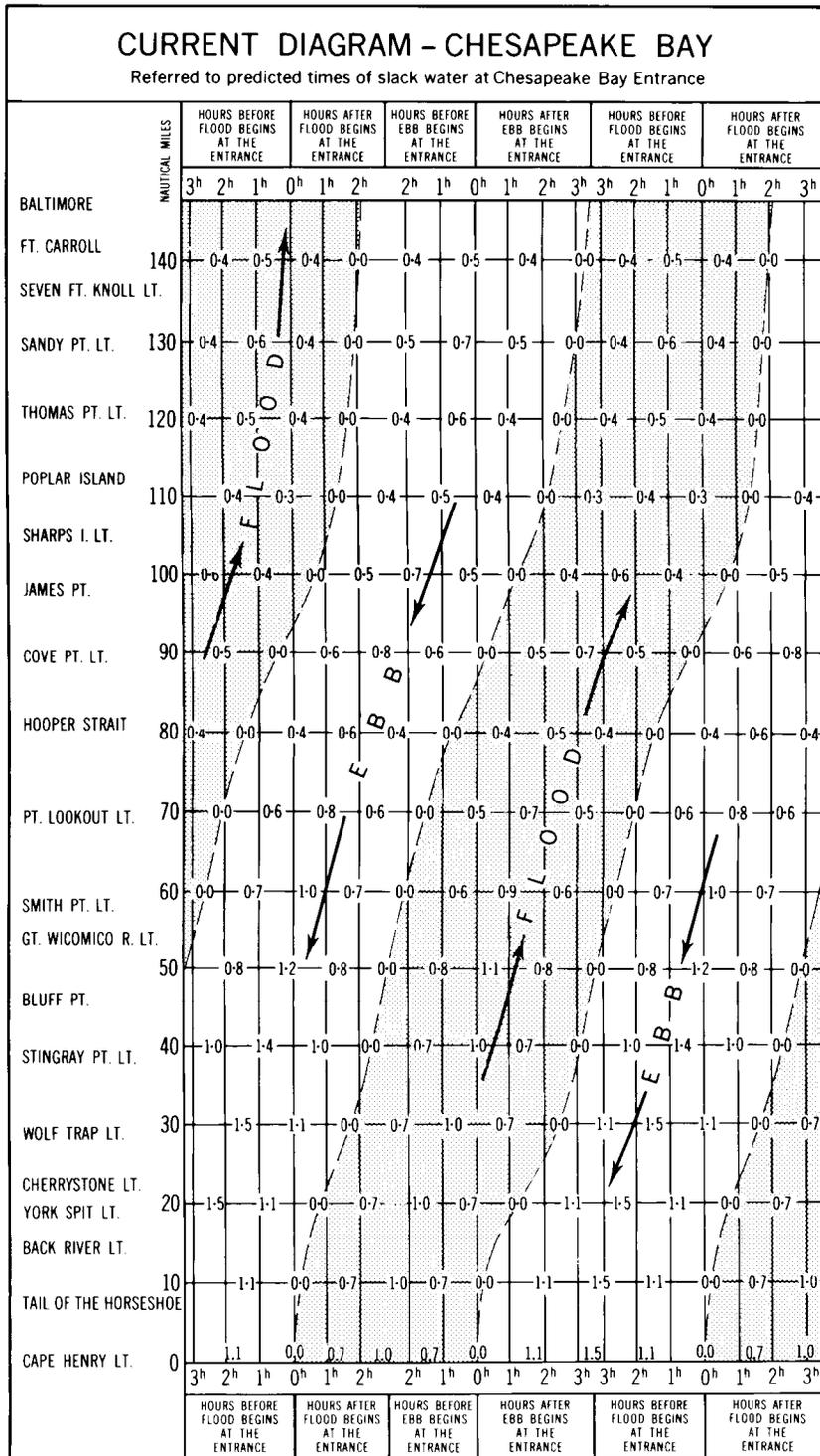
To determine speed and direction of current.—With parallel rulers transfer to the diagram the direction of the speed line corresponding to the normal speed of vessel, moving edge of ruler to the point where the horizontal line representing place of departure intersects the vertical line representing 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 speed 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 speed 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 1 hour after flood begins. With parallel rulers transfer to the 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 "1 hour 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 the diagram averaging about 0.7 knot. The vessel will, therefore, have a favorable current averaging about 0.7 knot all the way to Baltimore.

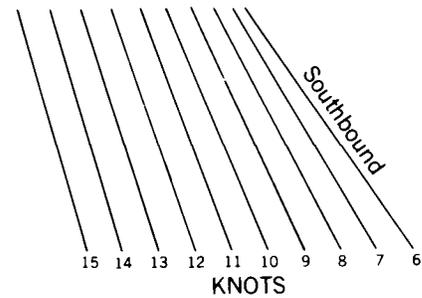
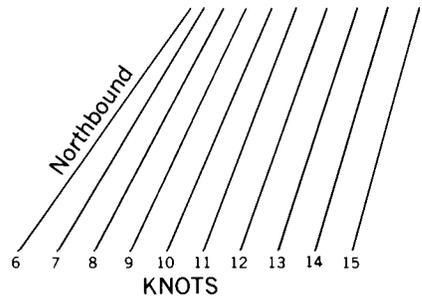
To determine the time of a favorable current for passing through the bay.—With parallel rulers transfer to the diagram the direction of the speed line corresponding to normal speed of vessel, moving the ruler over the diagram until its edge runs approximately through the general line of greatest current 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 speeds 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





# **PUBLICATIONS RELATING TO TIDES AND TIDAL CURRENTS**

## **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)

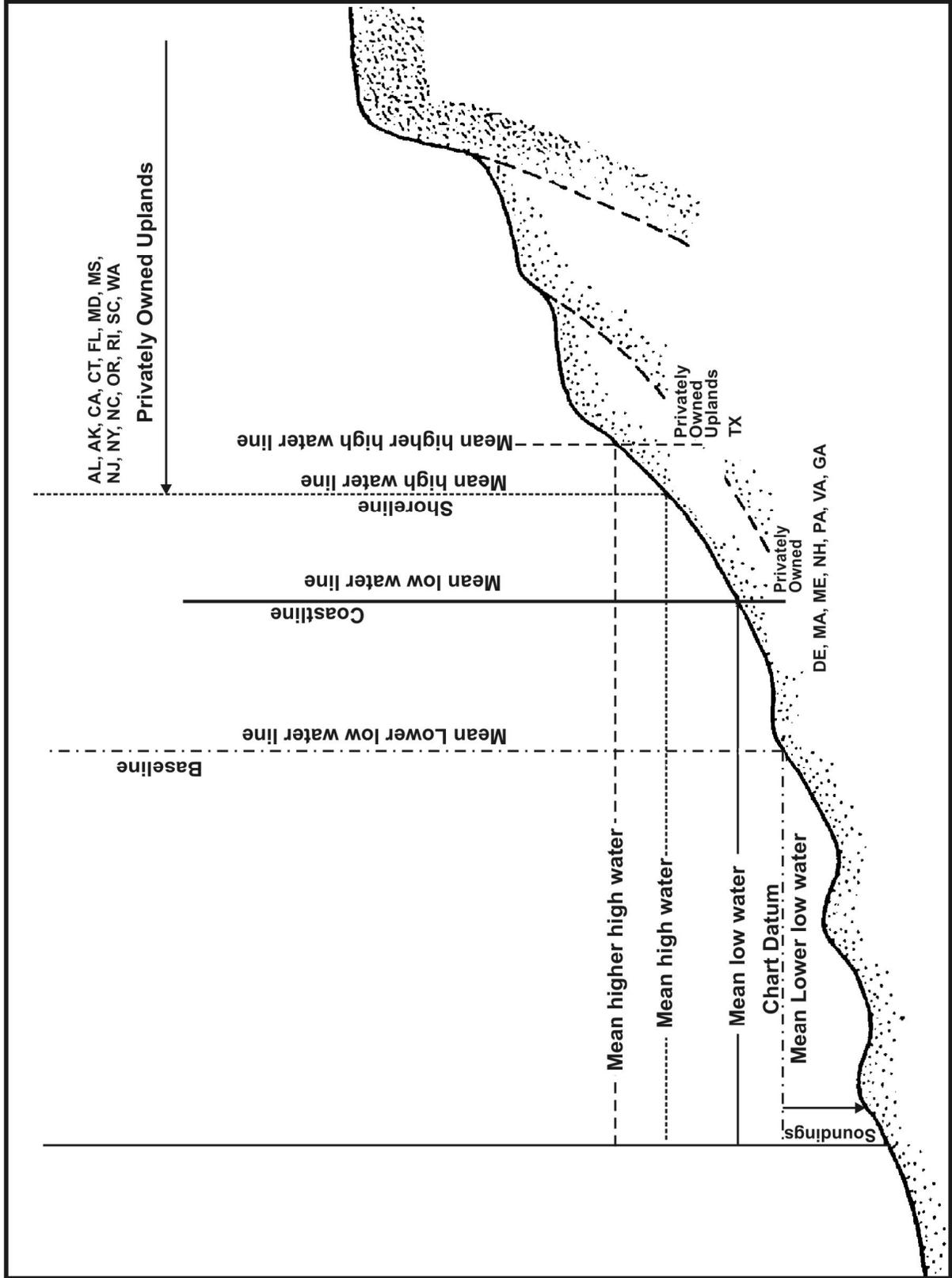
## **TIDAL CURRENT TABLES**

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

# OFFICIAL U.S. DATUMS



## GLOSSARY OF TERMS

- 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 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

## GLOSSARY OF TERMS

defined above are applicable only when the type of tide is either semidiurnal or mixed. Diurnal inequality is sometimes called *declinational inequality*.

**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*.

**GREENWICH INTERVAL**—An interval referred to the transit of the Moon over the meridian of Greenwich as distinguished from the local interval which is referred to the Moon's transit over the local meridian. The relation in hours between Greenwich and local intervals may be expressed by the formula:

$$\text{Greenwich interval} = \text{local interval} + 0.069 L$$

where L is the west longitude of the local meridian in degrees. For east longitude, L is to be considered negative.

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

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

## GLOSSARY OF TERMS

- HARMONIC ANALYSIS**—The mathematical process by which the observed tide or tidal current at any place is separated into basic harmonic constituents.
- HARMONIC CONSTANTS**—The amplitudes and epochs of the harmonic constituents of the tide or tidal current at any place.
- HARMONIC CONSTITUENT**—One of the harmonic elements in a mathematical expression for the tide-producing force and in corresponding formulas for the tide or tidal current. Each constituent represents a periodic change or variation in the relative positions of the Earth, Moon, and Sun. A single constituent is usually written in the form  $y=A \cos (at+ \ )$ , in which  $y$  is a function of time as expressed by the symbol  $t$  and is reckoned from a specific origin. The coefficient  $A$  is called the amplitude of the constituent and is a measure of its relative importance. The angle  $(at+ \ )$  changes uniformly and its value at any time is called the phase of the constituent. The speed of the constituent is the rate of change in its phase and is represented by the symbol  $a$  in the formula. The quantity  $\ )$  is the phase of the constituent at the initial instant from which the time is reckoned. The period of the constituent is the time required for the phase to change through  $360^\circ$  and is the cycle of the astronomical condition represented by the constituent.
- 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 unit of speed, one 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 arithmetic mean of the high water heights observed over a specific 19-year Metonic cycle (the National Tidal Datum Epoch). For stations with shorter series, simultaneous observational comparisons are made with a primary control tide station in order to derive the equivalent of a 19-year value.

## GLOSSARY OF TERMS

- MEAN HIGHER HIGH WATER (MHHW)**—A tidal datum. The arithmetic mean of the higher high water heights of a mixed tide observed over a specific 19-year Metonic cycle (the National Tidal Datum Epoch). Only the higher high water of each pair of high waters, or the only high water of a tidal day is included in the mean.
- 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 arithmetic mean of the low water heights observed over a specific 19-year Metonic cycle (the National Tidal Datum Epoch). For stations with shorter series, simultaneous observational comparisons are made with a primary control tide station in order to derive the equivalent of a 19-year value.
- 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 arithmetic mean of the lower low water heights of a mixed tide observed over a specific 19-year Metonic cycle (the National Tidal Datum Epoch). Only the lower low water of each pair of low waters, or the only low water of a tidal day is included in the mean.
- 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.
- NATIONAL TIDAL DATUM EPOCH**—The specific 19-year period adopted by the National Ocean Service as the official time segment over which tide observations are taken and reduced to obtain mean values (e.g., mean lower low water, etc.) for tidal datums. It is necessary for standardization because of periodic and apparent secular trends in sea level. The present National Tidal Datum Epoch is 1960 through 1978. It is reviewed annually for possible revision and must be actively considered for revision every 25 years.
- 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* ( $N_p$ ) 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* ( $P_n$ ) 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.

## GLOSSARY OF TERMS

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

## GLOSSARY OF TERMS

be shown that the average speed for an entire flood or ebb period is equal to  $2/3$  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 between 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 semidiurnal tide, although still present, cannot be readily seen on the tide curve.





	No.
Chops Passage.....	253,255
Choptank River.....	2395-2419
Chowan Creek.....	2915
Christina River.....	1753
Church Neck Point.....	1879
City Island.....	1337,1339,1345
City Point, Mass.....	519
City Point, Va.....	2159
Clam Island.....	57
Claremont Landing.....	2151
Clarks Cove.....	811
Clark Island.....	313,315
Clay Bank Pier.....	2195
Clay Head.....	943
Clay Point.....	1055
Clearwater Pass.....	3493
Cleveland Ledge.....	823
Clump Island.....	2265
Coast Guard Tower, Oregon Inlet.....	2513
Coggins Point.....	2157
Cohansey River.....	1703
Cold Spring Harbor.....	1287
Cold Spring Point.....	925
College Point.....	1795
College Point Reef.....	1361
Combahee River.....	2881,2883
Commissioners Ledge.....	451
Commodore Point.....	3243
Compass Island.....	79
Common Fence Point.....	857,891
Conanicut Point.....	881
Conrail Bridge.....	2501
Coney Island Channel.....	1563
Coney Island Lt.....	1557
Connecticut River.....	1113-1129
Cook Point.....	2395
Cooper River.....	2739-2787
Coosaw Island.....	2891
Coosaw River.....	2875,2883,2887,2893
Cornfield Pt., L.I. Sound.....	1135-1141
Cornfield Point, Md.....	2311-2315
Coronala Laja.....	3625
Corson's Inlet, New Jersey.....	1619
Cortez.....	3397
Cos Cob Harbor.....	1295
Cotuit Bay.....	723
Courtney Campbell Parkway.....	3467
Courtney Point.....	3505,3507
Cove Point.....	1955-1961
Cow Island.....	271,273
The Cows, Long Island Sound.....	1277
Coxsackie, Hudson River.....	1529
Crab Point.....	1767
Craighill Angle.....	2023
Craighill Channel.....	2011,2021
Crabtree Point.....	191
Craighill Channel.....	2019,2021
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# ASTRONOMICAL DATA, 2018

January			
	d	h	m
P	1	22	..
N	2	00	..
○	2	02	24
E	8	07	..
●	8	22	25
A	15	02	..
S	15	17	..
●	17	02	17
E	23	02	..
●	24	22	20
N	29	12	..
P	30	10	..
○	31	13	27

February			
	d	h	m
E	4	16	..
●	7	15	54
A	11	14	..
S	12	00	..
●	15	21	05
E	19	07	..
●	23	08	09
N	25	21	..
P	27	15	..

March			
	d	h	m
○	2	00	51
E	4	02	..
●	9	11	20
S	11	07	..
A	11	09	..
●	17	13	12
E	18	14	..
⊙ <sub>m</sub>	20	16	15
●	24	15	35
N	25	03	..
P	26	17	..
E	31	12	..
○	31	12	37

April			
	d	h	m
S	7	15	..
A	8	06	..
●	8	07	18
E	14	22	..
●	16	01	57
P	20	15	..
N	21	08	..
●	22	21	46
E	27	20	..
○	30	00	58

May			
	d	h	m
S	5	00	..
A	6	01	..
●	8	02	09
E	12	08	..
●	15	11	48
P	17	21	..
N	18	16	..
●	22	03	49
E	25	02	..
○	29	14	20

June			
	d	h	m
S	1	08	..
A	2	17	..
●	6	18	32
E	8	18	..
●	13	19	43
P	15	00	..
N	15	01	..
●	20	10	51
E	21	09	..
⊙ <sub>j</sub>	21	10	07
○	28	04	53
S	28	15	..
A	30	03	..

July			
	d	h	m
E	6	03	..
●	6	07	51
N	12	12	..
●	13	02	48
P	13	08	..
E	18	16	..
●	19	19	52
S	25	21	..
A	27	06	..
○	27	20	20

August			
	d	h	m
E	2	09	..
●	4	18	18
N	8	23	..
P	10	18	..
●	11	09	58
E	15	00	..
●	18	07	49
S	22	03	..
A	23	11	..
○	26	11	56
E	29	14	..

September			
	d	h	m
●	3	02	37
N	5	07	..
P	8	01	..
●	9	18	01
E	11	10	..
●	16	23	15
S	18	10	..
A	20	01	..
⊙ <sub>s</sub>	23	01	54
○	25	02	52
E	25	20	..

October			
	d	h	m
●	2	09	45
N	2	14	..
P	5	22	..
E	8	20	..
●	9	03	47
S	15	18	..
●	16	18	02
A	17	19	..
E	23	04	..
○	24	16	45
N	29	19	..
●	31	16	40
P	31	20	..

November			
	d	h	m
E	5	04	..
●	7	16	02
S	12	03	..
A	14	16	..
●	15	14	54
E	19	14	..
○	23	05	39
N	26	02	..
P	26	12	..
●	30	00	19

December			
	d	h	m
E	2	11	..
●	7	07	20
S	9	12	..
A	12	12	..
●	15	11	49
E	17	00	..
⊙ <sub>d</sub>	21	22	23
○	22	17	49
N	23	12	..
P	24	10	..
●	29	09	34
E	29	18	..

### LUNAR DATA

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>● -- new Moon</li> <li>◐ -- first quarter</li> <li>○ -- full Moon</li> <li>◑ -- last quarter</li> </ul> | <ul style="list-style-type: none"> <li>A -- Moon in apogee</li> <li>P -- Moon in perigee</li> <li>N -- Moon farthest north of Equator</li> <li>E -- Moon on Equator</li> <li>S -- Moon farthest south of Equator</li> </ul> |
|--|---|

### SOLAR DATA

- ⊙<sub>m</sub> -- March equinox
- ⊙<sub>j</sub> -- June solstice
- ⊙<sub>s</sub> -- September equinox
- ⊙<sub>d</sub> -- 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<sup>h</sup> at midnight and 12<sup>h</sup> 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 supplied by the Nautical Almanac Office, United States Naval Observatory.



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