

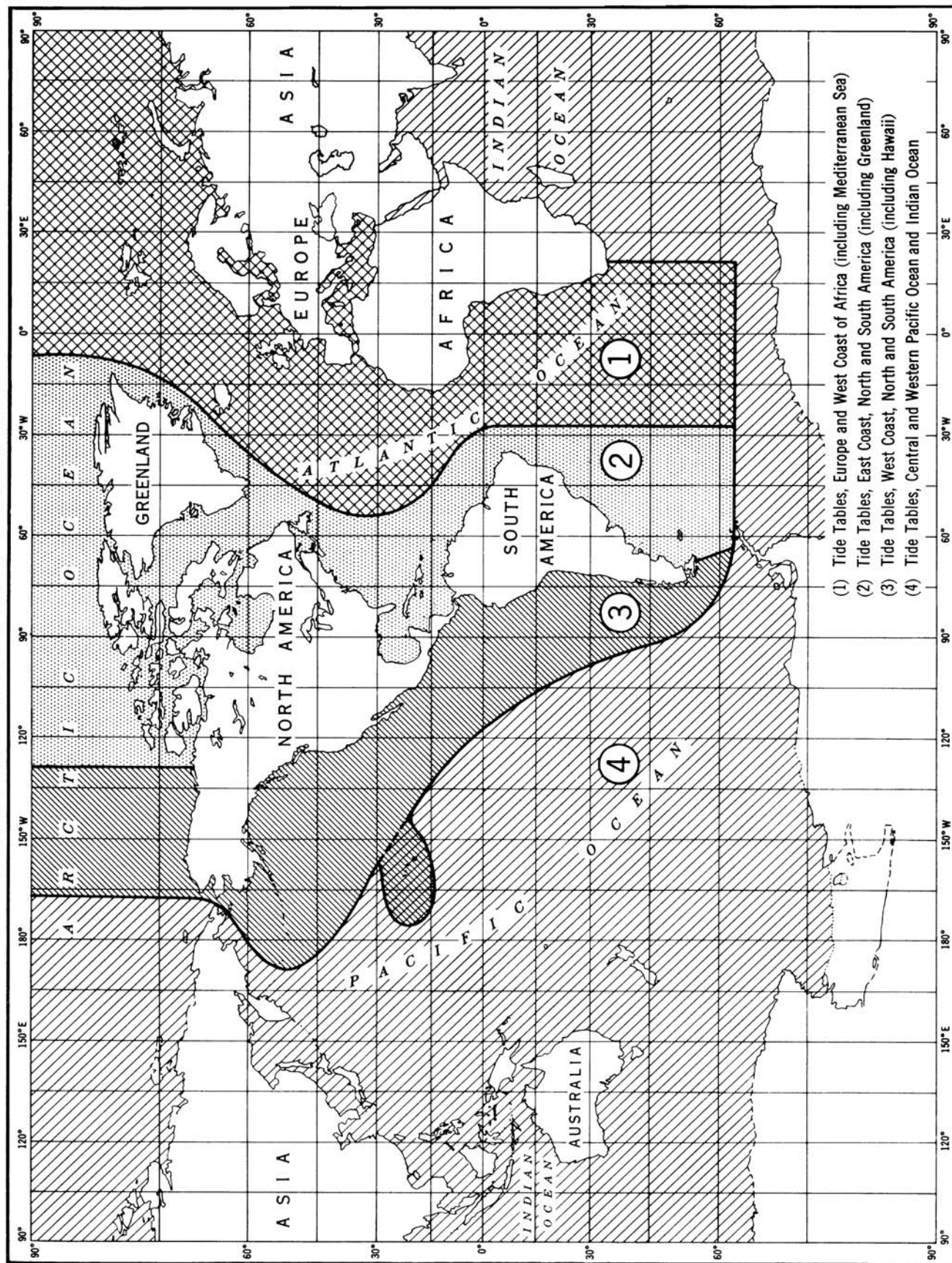
Tide Tables 2008 – Central and Western Pacific Ocean and Indian Ocean

Tide Tables 2008 HIGH AND LOW WATER PREDICTIONS

Central and Western Pacific Ocean and Indian Ocean



INDEX OF TIDE TABLE COVERAGE



Tide Tables 2008 HIGH AND LOW WATER PREDICTIONS

Central and Western Pacific Ocean and Indian Ocean

Issued 2007

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 private companies working from information provided by NOS.

NOS now offers two new 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 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 reference stations, limited predictions are available on the NOS, Center for Operational Oceanographic Products and Services (CO-OPS), web site, (<http://tidesandcurrents.noaa.gov>).

In addition to predictions, the web site 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
Products and Services Division, N/OPS3
1305 East-West Highway
Silver Spring, MD 20910
301-713-2815, fax 301-713-4500

PUBLICATIONS:

United States Coast Pilots, Distance Tables, and Nautical Charts may be ordered from:

FAA, National Aeronautical Charting Office
Distribution Division, AJW-3550
10201 Good Luck Road
Glenn Dale, MD 20769-9700
(301) 436-8301
(800) 638-8972 toll free, U.S. Only
<http://naco.faa.gov>

A list of authorized sales agents is published in the Nautical Chart Catalogs or may be obtained on request from the National Ocean Service. The publications may also be purchased across-the-counter at the NOAA, Distribution Branch office listed above.

TECHNICAL ASSISTANCE:

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

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

SOURCES OF ADDITIONAL INFORMATION

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

National Ocean Service
Products and Services Division, N/OPS3
1305 East-West Highway
Silver Spring, MD 20910
(301) 713-2877

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

National Ocean Service
Customer Affairs Branch
1315 East-West Highway.
Silver Spring, MD 20910
(301) 713-2729

WEBSITES

Center for Operational Oceanographic Products and Services
(PORTS[®] * Predictions * Observations * Bench Marks * Tides Online * Great Lakes Online)

<http://tidesandcurrents.noaa.gov>

Coastal Services Center - <http://www.csc.noaa.gov>

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

Ocean Predictions Center - <http://www.opc.ncep.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.nos.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.nws.noaa.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 - <https://www.navo.navy.mil>

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

For the most part, tide predictions for U.S. reference stations are based upon analyses of tide observations for periods of at least one year. Since the extremes of meteorological conditions have been excluded from the analyses and predictions, the predicted tidal heights should be considered as those expected under average weather conditions. During times when weather conditions differ from what is considered average for the area, the mariner must take note of the corresponding differences between predicted levels and those actually observed. Generally, prolonged onshore winds or a low barometric pressure can produce higher levels than predicted, while the opposite can result in lower levels than those predicted. Exclusive of weather conditions, the astronomical tide is subject to range variations which should be noted. Decreased ranges may be expected near the times when the Moon is in apogee (apogean tides) or in quadrature (neap tides), and increased ranges may be expected when the Moon is in perigee (perigean tides) or in a new or full position (spring tides). A larger diurnal range may also result when the Moon is in its maximum declination (tropic tides). The actual range will depend upon the extent to which combinations of these positions reinforce or detract one from the other. The effect of these astronomical lineups is included in the predictions and may be apparent upon inspection.

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

DAYLIGHT-SAVING TIME IS NOT USED IN THIS PUBLICATION. All daily tide 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 on the inside back cover, it should be noted that daylight-saving time is based on a meridian 15° east of the normal standard meridian for a particular place.

Predicted heights for all reference stations in table 1 are given in both feet and centimeters. Predicted values from the use of table 2 and 3 will be in the English system, but can be converted to metric units by the use of table 6.

The daily tide predictions for the Philippine locations, JOLO, LEGASPI PORT, and SAN FERNANDO HARBOR do not appear in this publication. Daily tide predictions for the Philippine locations are normally supplied to the National Ocean Service by the Bureau of Coast and Geodetic Survey, Republic of the Philippines in accordance with cooperative arrangements for the exchange of tidal predictions. Their predictions were not forwarded in time to appear in this publication. Those predictions usually appear on pages 172 through 175 and 188 through 195. These pages have been omitted from this publication.

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:

PORTS [®] SITES	VOICE ACCESS	INTERNET ACCESS
NARRAGANSETT BAY	866-75-PORTS (866-757-6787)	www.tidesandcurrents.noaa.gov
NEW HAVEN		“
NEW YORK/NEW JERSEY	866-21-PORTS (866-217-6787)	“
DELAWARE RIVER & BAY	866-30-PORTS (866-307-6787)	“
CHESAPEAKE BAY	866-CH-PORTS (866-247-6787)	“
TAMPA BAY	866-TB-PORTS (866-827-6787)	“

IMPORTANT NOTICES

PORTS[®] SITES	VOICE ACCESS	INTERNET ACCESS
HOUSTON/GALVESTON	866-HG-PORTS (866-447-6787)	“
SAN FRANCISCO BAY	866-SB-PORTS (866-727-6787)	“
LOS ANGELES/LONG BEACH		“
LOWER COLUMBIA RIVER		“
TACOMA		“
PORT OF ANCHORAGE	866-AK-PORTS (866-257-6787)	“
SOO LOCKS		“

INTRODUCTION

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

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

The tide tables are now issued in four volumes, as follows: Europe and West Coast of Africa (including the Mediterranean Sea); East Coast of North and South America (including Greenland); West Coast of North and South America (including the Hawaiian Islands); Central and Western Pacific Ocean and Indian Ocean. Together, they contain daily predictions for 269 reference ports and differences and other constants for about 6,000 stations.

This edition of the Tide Tables, Central and Western Pacific Ocean and Indian Ocean contains full daily predictions for 95 reference stations and differences and other constants for more than 1,932 stations. It also contains a table for obtaining the approximate height of the tide at any time, a table of local mean time of sunrise and sunset for every 5th day of the year for different latitudes, a table for the reduction of local mean time to standard time, a table for converting feet to centimeters, a table of the Greenwich mean time of the Moon's phases, apogee, perigee, greatest north and south and zero declination, and the time of the solar equinoxes and solstices, and a glossary of terms.

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

In the preparation of these tables all available observations were used. In some cases, however, the observations were insufficient for obtaining final results, and as further information becomes available it will be included in subsequent editions. All persons using these tables are invited to send information or suggestions for increasing their usefulness to the National Ocean Service, Products and Services Division, 1305 East-West Highway, N/OPS3, Silver Spring, Maryland 20910, U.S.A.

In accordance with cooperative arrangements between the National Ocean Service and the authorities listed below, predictions for the following stations appear in this issue:

Hydrographic Office, Japan.—O. Paramushir Island, Kamaisi, Yokohama, Kobe, Kure, Moji, Sasebo, and Naha.

Hydrographic Department, Admiralty, England.—Musi River, Surabaja Strait, Kutei River entrance, Barito River, Shatt al Arab, Mina Salman, Aden, Karachi, Dar es Salaam, Dreger Harbor, Mina Al Ahmadi, Musay'id Outer Channel Entrance, Mina Jebel Ali, Manila, Cebu and Davao.

Department of Lands and Survey, New Zealand.—Wellington and Auckland.

Geodetic and Research Branch, Survey of India, India.—Mergui, Rangoon, Sagar, Madras, Colombo, Bombay, and Suez.

Service Hydrographique, France.—Do Son, Mui Vung Tau.

Hydrographic Department, Thailand.—Bangkok Bar.

Maritime Headquarters, Republic of South Africa.—Durban.

Instituto Hidrografico, Portugal.—Beira.

INTRODUCTION

Hydrographic Office, Australia.—Sydney, Darwin, Port Phillip, Townsville, Brisbane Bar, Port Adelaide, Port Lincoln, and Port Hedland.

Port of Singapore Authority.—Singapore.

National Mapping & Resource Information Authority, Republic of the Philippines.—Legaspi Port, San Fernando Harbor, Jolo.

National Marine Data and Information Service, Peoples Republic of China.—Hong Kong, Dalian, Qinhuangdao, Tanggu, Yantai, Qingdao, Lianyungang, Wusong, Zhongjun, Kanmen, Xiamen, Shantou, Huangpu, Haikou, and Beihai.

Marine Meteorological Center, Central Weather Bureau, Taiwan.—PengHu, Keelung.

LIST OF REFERENCE STATIONS

Name of station	Page	Datum below mean sea-level	Updated	Data Series
Aden, Yemen.....	360	4.4		
Apia, Samoa Islands	252	1.6		
Auckland, New Zealand	268	5.8		
Bangkok Bar, Thailand**	140	7.7		
Barito River, Borneo	168	4.3		
Beihai, China	128	8.4		
Beira, Mozambique	372	11.4		
Belawan Channel, Sumatra.....	148	4.9		
Bombay, India	328	8.2		
Brisbane Bar, Australia	284	4.0		
Cebu, Philippines	180	2.4		
Ch'ang Chiang Approach, China	92	9.7		
Chuuk, Moen Island, Caroline Islands	204	3.56	2003	6 years (1981-1986)
Colombo, Sri Lanka	324	1.2		
Dalian, China	60	5.3		
Dar Es Salaam, Tanzania	368	5.0		
Darwin, Australia	276	13.5		
Davao, Philippines	176	2.5		
Diego Garcia Island.....	380	2.70		
Djakarta, Java	156	2.0		
Do Son, Vietnam	132	6.1		
Dreger Harbor, New Guinea	272	3.8		
Durban, South Africa.....	376	3.6		
Guam, Mariana Islands	196	1.4	2002	5 years (1994-2000)
Haikou, China.....	124	4.9	2002	5 years (1994-1998)
Hilo, Hawaii Island, Hawaii.....	240	1.19	2002	5 years (1994-1998)
Hong Kong, China.....	120	4.5		
Honolulu, Hawaii.	228	0.8	2003	5 years (1996-2000)
Huangpu, China	116	5.1		
Inch'on, Korea	52	15.2		
Jolo, Philippines**	172	1.1		
Johnston Island.....	244	1.07	2002	5 years (1994-1998)
Kahului, Maui Island, Hawaii	236	1.16	2002	5 years (1994-1998)
Kamaisi, Japan.....	16	2.8		
Kanmen, China.....	96	10.8		
Karachi, Pakistan	332	5.4		
Keelung (Chi-lung Chiang), Taiwan.....	112	1.9		
Kobe, Japan	24	3.1		
Kure, Japan	32	6.6		
Kutei River Entrance, Borneo.....	164	4.6		
Kwajalein Atoll, Marshall Islands.....	216	3.0	2001	5 years (1994-1998)
Legaspi Port, Philippines**	192	2.4		
Lianyun Gang, China.....	80	9.5		
Madras, India	320	2.1		
Malakal Harbor, Palau Islands	200	3.6		
Manila, Philippines	184	1.6		
Mergui, Burma	308	9.1		
Mina Al Ahmadi, Kuwait	340	5.64		
Mina Jebel Ali, United Arab Emirates.....	356	3.34		
Mina Salman, Bahrain	348	4.2		

LIST OF REFERENCE STATIONS Cont.

Name of station	Page	Datum below mean sea-level	Updated	Data Series
Moji, Japan.....	36	4.6		
Moku O Loe, Oahu Island, Hawaii	232	1.07	2002	4 years (1993-1996)
Mui Vung Tau, Vietnam	136	7.9		
Musay'id Outer Channel Entrance, Qatar	352	3.84		
Musi River, Sumatra.....	152	6.2		
Naha, Japan	44	3.9		
Namp'O-Hang, Korea	56	10.0		
Nawiliwili, Kauai Island, Hawaii	224	0.85	2002	4 years (1993-1996)
O. Paramushiru, Kuril Islands.....	8	3.8		
Otomari, Sakhalin Island	4	2.4		
Pago Pago, American Samoa	260	1.34	2002	3 years (1989-1991)
Papeete Harbor, Tahiti Island*	248	0.73	2003	5 years (1994-1998)
PengHu (Ma-Kung Kang), Pescadores ..	108	5.1		
Pohnpei Harbor, Caroline Island	208	2.3		
Port Adelaide, Australia	296	4.9		
Port Hedland, Australia	304	10.0		
Port Lincoln, Australia	300	2.9		
Port Phillip, Australia.....	292	2.9		
Pusan, Korea	48	2.1		
Qingdao (Da Gang), China	76	7.8		
Qinhuangdao, China	64	3.0		
Rangoon, Burma	312	10.2		
Ras at Tannurah, Saudi Arabia	344	4.1		
Sagar, India	316	9.7		
Sakate, Japan	28	3.3		
San Fernando Harbor, Philippines	188	1.0		
Sand Island, Midway Islands	220	0.65	2002	5 years (1994-1998)
Sasebo, Japan	40	5.4		
Shantou, China	104	4.5		
Shatt al Arab, Iraq	336	5.7		
Singapore, Malaysia	144	5.2		
Suez, Egypt	364	3.7		
Surabaya Strait, Java	160	3.6		
Suva, Suva Harbor	256	2.15	2003	8 years (1990-1997)
Sydney, Australia	288	3.0		
Tanggu, China	68	7.9		
Townsville, Australia	280	5.2		
Wake Island.....	212	1.17	2002	5 years (1994-1998)
Wellington, New Zealand	264	2.9		
Wusong, China.....	84	6.6		
Xiamen, China.....	100	10.8		
Yamato Wan, Matsuwa To.....	12	2.6		
Yantai, China.....	72	4.8		
Yokohama, Japan	20	3.8		
Zhongjun, China.....	88	7.4		

*New Reference Station.

**Daily predictions for this station were omitted.

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

TABLE 1.—DAILY TIDE PREDICTIONS

EXPLANATION OF TABLE

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

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

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

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

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

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

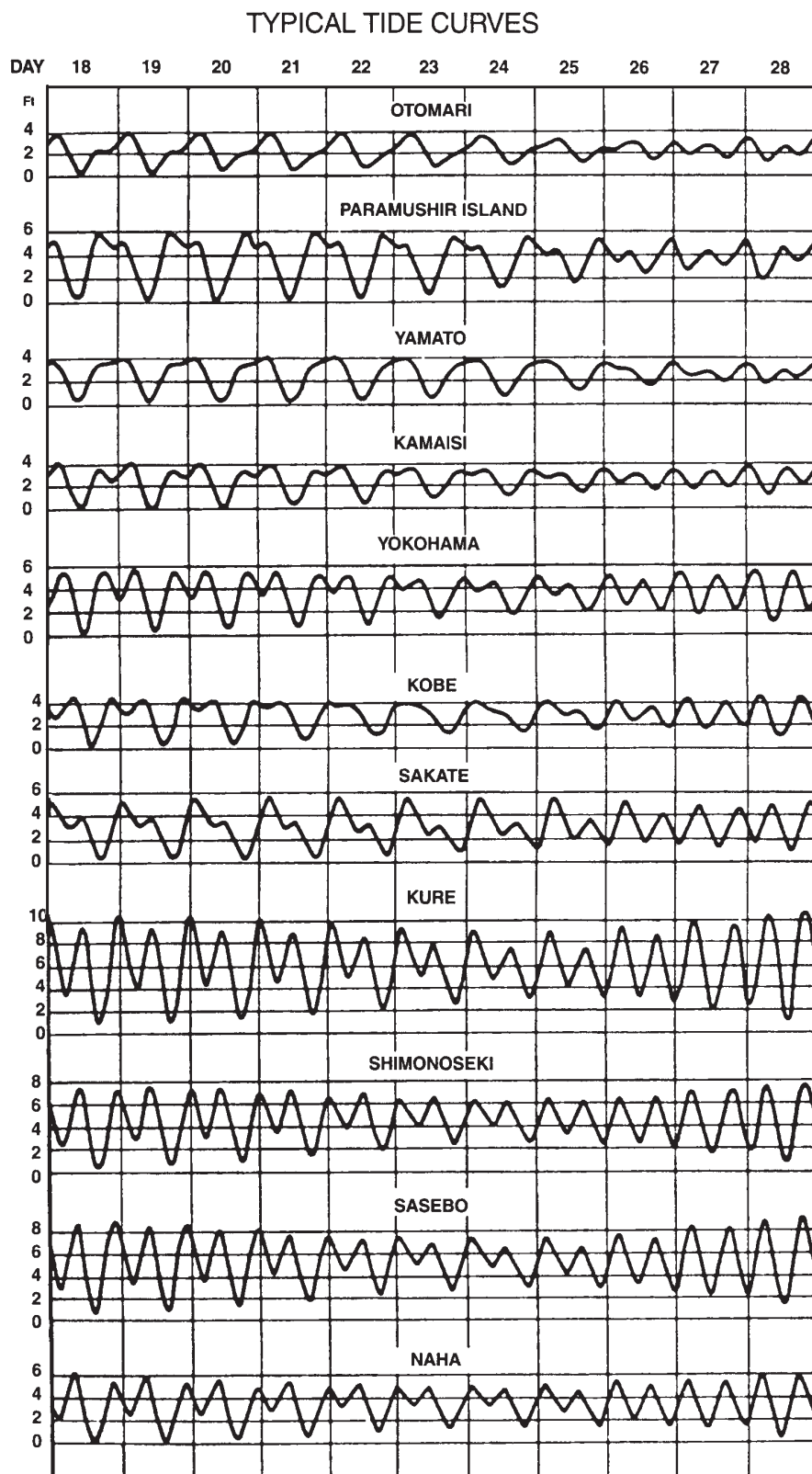
At stations on tidal rivers the average seasonal variation in river level due to freshets and droughts may be considerably more than a foot. The predictions for these stations include an allowance for this seasonal variation representing average freshet and drought conditions. Unusual freshets or droughts,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

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

Relation of tide to current.— In using these tables of tide predictions bear in mind that they give the times and heights of high and low waters and not the times of turning of the current or slack water. For stations on the outer coast there is usually a small difference between the time of high or low water and the beginning of ebb or flood current, but for places in narrow channels, landlocked harbors, or on tidal rivers,

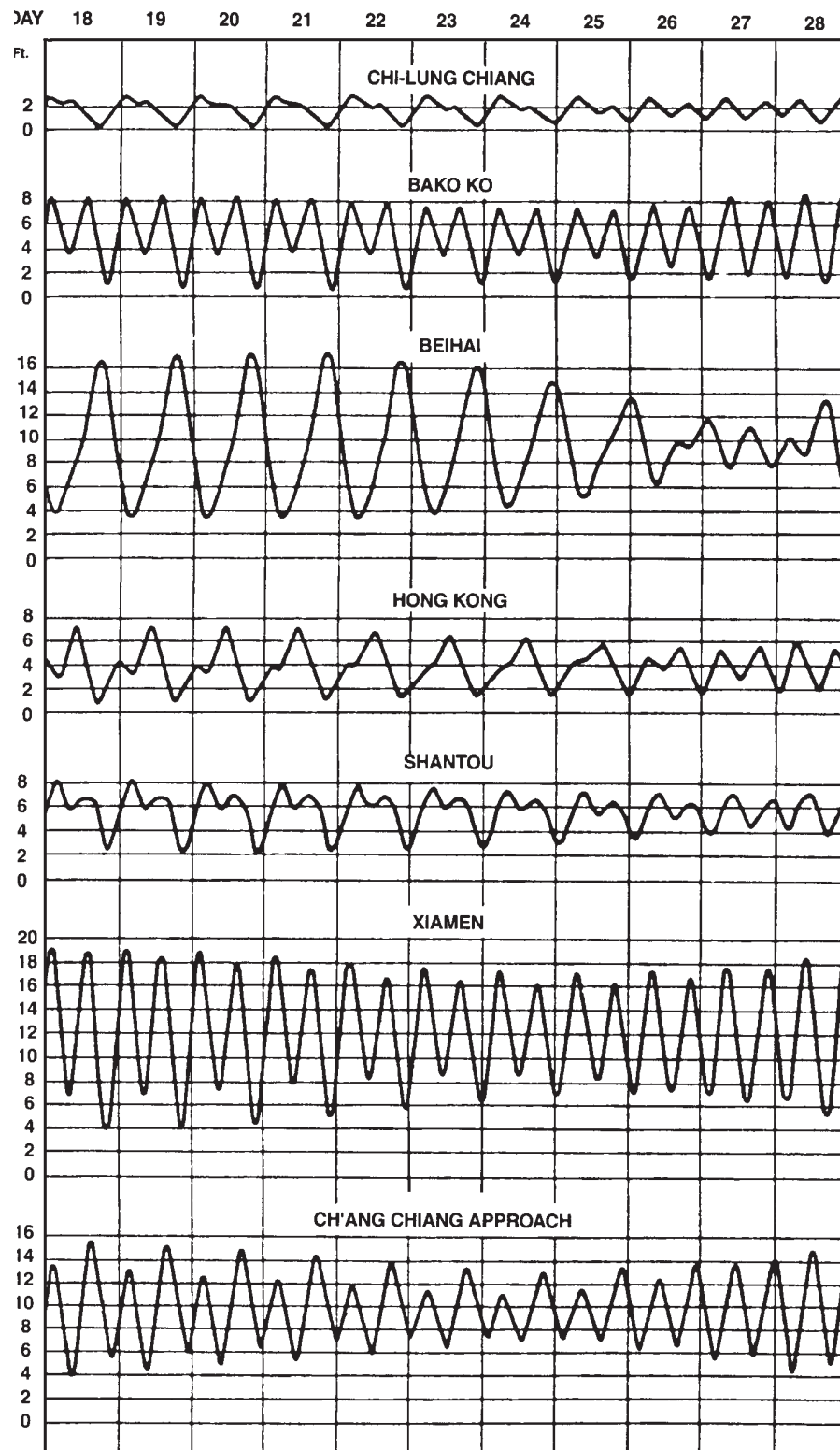
the time of slack water may differ by several hours from the time of high or low water stand. The relation of the times of high and low water to the turning of the current depends upon a number of factors, so no simple or general rule can be given. For the predicted time of slack water, and other current data, reference should be made to the Tidal Current Tables prepared by the National Ocean Service, for the Atlantic and the Pacific coast of North America and Asia.

Typical tide curves.— The principal variations in the tide are illustrated by the curves for 25 stations on pages 3, 3a and 3b. These stations are on the Japan and China coasts, but similar variations will be found in other localities. The tide at Pusan is uniformly semidiurnal with the variations following the Moon's phase. The tides for the remainder of the group exhibits considerable inequality. By reference to the curves it is seen that where the inequality is large the tide at some places becomes diurnal around the times of the Moon's maximum declination, whereas at other places there is just a few tenths of a foot difference between the heights of successive high and low waters. It is essential therefore in using tide tables to carefully note the heights as well as the times of the tide.



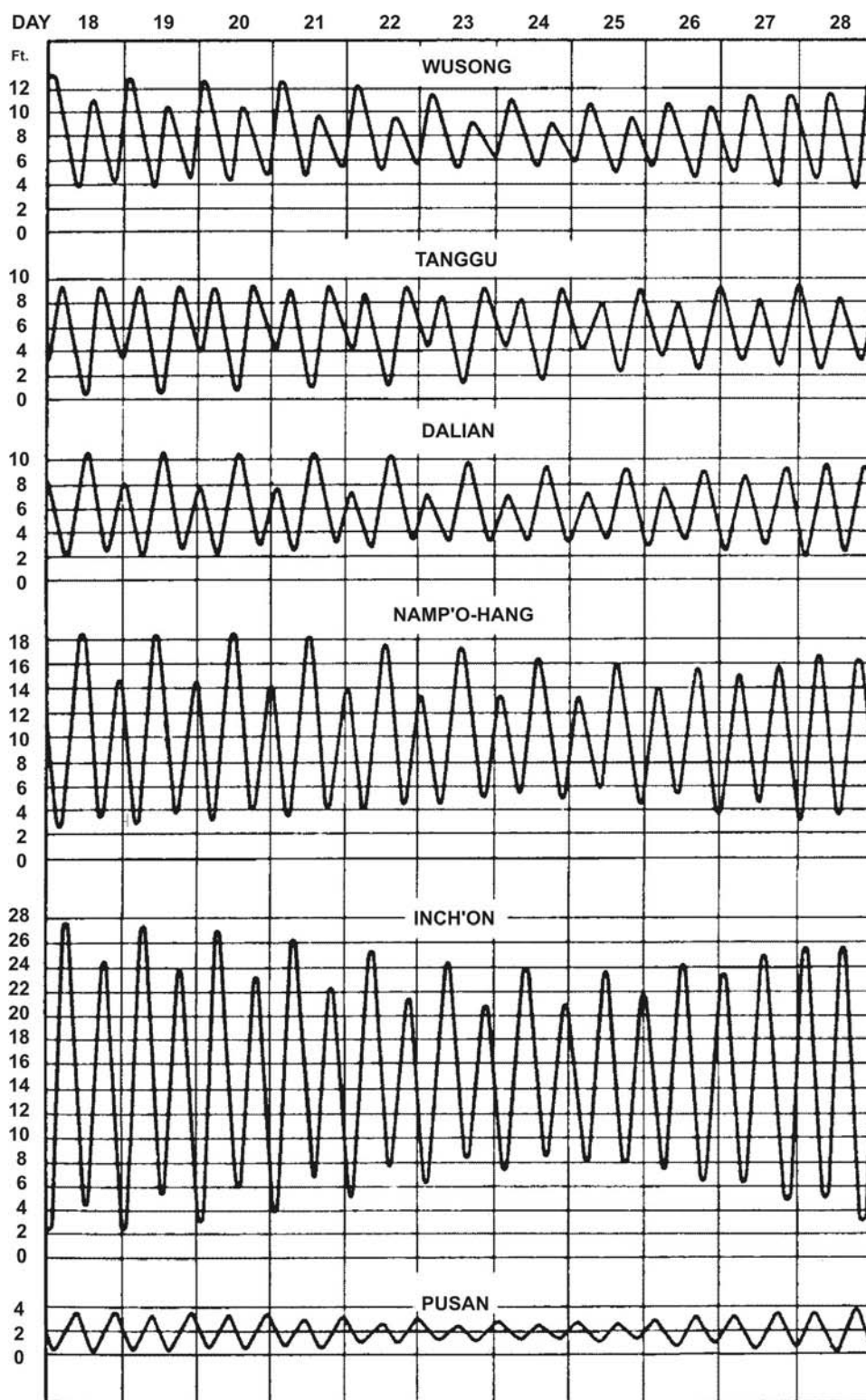
Lunar Data: On Equator, 12th; full Moon, 16th; maximum south declination, 20th; last quarter, 24th; on Equator, 27th; new Moon, 31st.

TYPICAL TIDE CURVES



Lunar Data: On Equator, 12th; full Moon, 16th; maximum south declination, 20th; last quarter, 24th; on Equator, 27th; new Moon, 31st.

TYPICAL TIDE CURVE



Lunar Data: On Equator, 12th; full Moon, 16th; maximum south declination, 20th; last quarter, 24th; on Equator, 27th; new Moon, 31st.

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Otomari, Sakhalin Island, 2008

Times and Heights of High and Low Waters

July					August					September																			
Time		Height			Time		Height			Time		Height			Time		Height												
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm										
1 Tu	0135	4.7	143		16 W	0242	4.3	131		1 F	0346	5.0	152		16 Sa	0410	4.3	131		1 M	0537	4.1	125		16 Tu	0525	3.7	113	
	1041	0.4	12			1121	0.9	27			1210	0.3	9			1158	0.8	24			1221	1.1	34			1146	1.3	40	
2 W	0238	4.9	149		17 Th	0333	4.4	134		2 Sa	0444	5.0	152		17 Su	0450	4.4	134		2 Tu	0622	3.8	116		17 W	0609	3.4	104	
	1132	0.1	3			1156	0.8	24			1242	0.5	15			1221	0.9	27			1238	1.4	43			1200	1.6	49	
3 Th	0340	5.1	155		18 F	0419	4.5	137		3 Su	0537	4.8	146		18 M	0529	4.3	131		3 W	0046	1.1	34		18 Th	0033	0.8	24	
	1220	0.0	0			1227	0.7	21			1310	0.7	21			1241	1.0	30			0704	3.4	104			0655	3.1	94	
4 F	0438	5.2	158		19 Sa	0459	4.6	140		4 M	0624	4.5	137		19 Tu	0607	4.1	125		4 Th	0132	1.0	30		19 F	0121	0.6	18	
	1303	0.1	3			1257	0.7	21			1333	1.0	30			1259	1.2	37			0746	3.1	94			0744	2.7	82	
5 Sa	0534	5.1	155		20 Su	0536	4.6	140		5 Tu	0624	4.5	137		20 W	0607	4.1	125		5 F	0132	1.0	30		20 Sa	0121	0.6	18	
	1343	0.3	9			1945	2.6	79			1333	1.0	30			1311	1.5	46			1303	1.8	55			0744	2.7	82	
6 Su	0625	4.9	149		21 M	0536	4.6	140		6 W	1936	3.0	91		19 Tu	1858	3.1	94		4 Th	1918	3.8	116		19 F	1209	2.0	61	
	1418	0.6	18			2230	2.4	73			1936	3.0	91			1858	3.1	94			1918	3.8	116			1839	4.1	125	
7 M	0020	2.2	67		22 Tu	0611	4.4	134		7 Th	0044	1.8	55		20 W	0028	1.7	52		5 F	0219	1.1	34		20 Sa	0216	0.6	18	
	0715	4.5	137			1347	0.9	27			0710	4.1	125			0646	3.8	116			0827	2.7	82			0841	2.2	67	
8 Tu	1448	0.9	27		23 W	0611	4.4	134		8 F	1353	1.3	40		21 Th	1311	1.5	46		6 Sa	1308	2.0	61		21 Su	1155	2.0	61	
	2108	2.8	85			2011	2.8	85			1956	3.3	101			1318	1.8	55			1943	3.9	119			1910	4.3	131	
9 W	0020	2.2	67		24 Th	0611	4.4	134		9 Sa	0142	1.7	52		22 F	0118	1.5	46		7 Su	0309	1.1	34		22 M	0321	0.7	21	
	0715	4.5	137			1347	0.9	27			0753	3.6	110			0813	2.9	88			0912	2.3	70			1948	4.3	131	
10 Th	1511	1.3	40		25 F	0611	4.4	134		10 Su	1408	1.6	49		23 Sa	1318	1.8	55		6 Sa	1303	2.0	61		23 Tu	0705	0.8	24	
	2132	3.1	94			2024	2.9	88			2020	3.5	107			1929	3.6	110			2012	3.9	119			2149	4.0	122	
11 F	0133	2.2	67		26 Sa	0104	2.2	67		11 M	0240	1.7	52		24 Su	0212	1.4	43		9 Tu	0412	1.3	40		24 W	0843	0.7	21	
	0803	4.0	122			0723	3.9	119			0838	3.1	94			0813	2.9	88			2049	3.8	116			2343	3.8	116	
12 Sa	1511	1.3	40		27 Su	0104	2.2	67		12 Tu	1416	1.9	58		25 M	1315	2.0	61		8 M	1232	1.9	58		25 Th	0933	0.7	21	
	2132	3.1	94			2037	3.1	94			2045	3.7	113			1952	3.9	119			2049	3.8	116			2343	3.8	116	
13 Su	0133	2.2	67		28 M	0104	2.2	67		13 W	0343	1.6	49		26 Tu	0317	1.3	40		11 Th	0546	1.4	43		26 F	0139	3.7	113	
	0803	4.0	122			0723	3.9	119			0926	2.7	82			0906	2.3	70			2141	3.7	113			1005	0.8	24	
14 M	1511	1.3	40		29 Tu	0104	2.2	67		14 Th	1415	2.1	64		27 W	1257	2.0	61		11 Th	0546	1.4	43		27 Sa	1704	2.3	70	
	2132	3.1	94			2037	3.1	94			2115	3.9	119			2023	4.2	128			2141	3.7	113			2009	2.2	67	
15 Tu	0133	2.2	67		30 W	0104	2.2	67		15 F	0459	1.7	52		28 Th	0444	1.3	40		12 F	0803	1.4	43		28 Su	0843	0.7	21	
	0803	4.0	122			0723	3.9	119			1033	2.3	70			2105	4.3	131			2302	3.6	110			2343	3.8	116	
16 W	1511	1.3	40		31 Th	0104	2.2	67		16 Sa	1352	2.1	64		29 F	0702	1.2	37		13 Sa	0803	1.4	43		29 M	0843	0.7	21	
	2132	3.1	94			2037	3.1	94			2151	3.9	119			2207	4.3	131			2302	3.6	110			2343	3.8	116	
17 Th	0133	2.2	67		32 F	0104	2.2	67		17 M	0642	1.6	49		30 Sa	0905	0.9	27		14 Su	0921	1.2	37		30 Tu	0933	0.7	21	
	0803	4.0	122			0723	3.9	119			2353	3.9	119			2339	4.3	131			0959	1.1	34			1005	0.8	24	
18 F	1511	1.3	40		33 Sa	0104	2.2	67		18 Tu	0839	1.5	46		31 Su	0905	0.9	27		15 M	0046	3.6	110		31 W	0139	3.7	113	
	2132	3.1	94			0723	3.9	119			2151	3.9	119			2339	4.3	131			0959	1.1	34			1704	2.3	70	
19 Sa	0133	2.2	67		34 M	0104	2.2	67		19 W	0459	1.7	52		32 M	0905	0.9	27		16 Tu	0046	3.6	110		32 Th	0139	3.7	113	
	0803	4.0	122			0723	3.9	119			1033	2.3	70			2339	4.3	131			0959	1.1	34			1005	0.8	24	
20 Su	1511	1.3	40		35 Tu	0104	2.2	67		20 Th	1352	2.1	64		33 W	0905	0.9	27		17 Th	0046	3.6	110		33 F	1704	2.3	70	
	2132	3.1	94			2037	3.1	94			2151	3.9	119			2339	4.3	131			0959	1.1	34			2009	2.2	67	
21 M	0133	2.2	67		36 W	0104	2.2	67		21 F	0459	1.7	52		34 Th	0905	0.9	27		18 F	0046	3.6	110		34 Sa	0139	3.7	113	
	0803	4.0	122			0723	3.9	119			1033	2.3	70			2339	4.3	131			0959	1.1	34			1005	0.8	24	
22 Tu	1511	1.3	40		37 Th	0104	2.2	67		22 Sa	1352	2.1	64		35 M	0905	0.9	27		19 Sa	0046	3.6	110		35 Su	1704	2.3	70	
	2132	3.1	94			2037	3.1	94			2151	3.9	119			2339	4.3	131			0959	1.1	34			2009	2.2	67	
23 W	0133	2.2	67		38 F	0104	2.2	67		23 Su	0459	1.7	52		36 Tu	0905	0.9	27		20 M	0046	3.6	110		36 M	0139	3.7	113	
	0803	4.0	122			0723	3.9	119			1033	2.3	70			2339	4.3	131			0959	1.1	34			1005	0.8	24	
24 Th	1511	1.3	40		39 Sa	0104	2.2	67		24 M	1352	2.1	64		37 W	0905	0.9	27		21 Tu	0046	3.6	110		37 Tu	1704	2.3	70	
	2132	3.1	94			2037	3.1	94			2151	3.9	119			2339	4.3	131			0959	1.1	34			2009	2.2	67	
25 F	0133	2.2	67		40 Su	0104	2.2	67		25 Tu	0459	1.7	52		38 Th	0905	0.9	27		22 W	0046	3.6	110		38 W	0139	3.7	113	
	0803	4.0	122			0723	3.9	119			1033	2.3	70			2339	4.3	131			0959	1.1	34			1005	0.8	24	
26 Sa	1511	1.3	40		41 M	0104	2.2	67		26 W	1352	2.1	64		39 F	0905	0.9	27		23 Th	0046	3.6	110		39 Th	1704	2.3	70	
	2132	3.1	94			2037	3.1	94			2151	3.9	119			2339	4.3	131			0959	1.1	34			2009	2.2	67	
27 Su	0133	2.2	67		42 Tu	0104	2.2	67		27 Th	0459	1.7	52		40 M	0905	0.9	27		24 F	0046	3.6	110		40 F	0139	3.7	113	
	0803	4.0	122			0723	3.9	119			1033	2.3	70			2339	4.3	131			0959	1.1	34			1005	0.8	24	
28 M	1511	1.3	40		43 W	0104	2.2	67		28 Sa	1352	2.1	64		41 Tu	0905	0.9	27		25 M	0046	3.6	110		41 Sa	1704	2.3	70	
	2132	3.1	94			2037	3.1	94			2151	3.9	119			2339	4.3	131			0959	1.1	34			2009	2.2	67	
29 Tu	0133	2.2	67		44 Th	0104	2.2	67		29 Su	0459	1.7	52		42 W	0905	0.9	27		26 Tu	0046	3.6	110		42 Su	0139	3.7	113	

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Otomari, Sakhalin Island, 2008

Times and Heights of High and Low Waters

October								November								December							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm			
1 W	0622 1136 1739	3.1 1.8 3.8	94 55 116	16 Th	0623 1050 1704	2.8 2.0 4.1	85 61 125	1 Sa	0108 0754 1103 1756	0.4 2.2 2.4 4.2	12 73 67 128	16 Su	0132 1758	-0.1 5.0	-3 152	1 M	0144 1816	0.7 4.4	21 134	16 Tu	0219 1852	0.3 5.0	9 152
2 Th	0039 0704 1150 1803	0.6 2.8 1.9 3.9	18 85 58 119	17 F	0034 0719 1056 1734	0.1 2.5 2.1 4.4	3 76 64 134	2 Su	0148 0837 1111 1828	0.5 2.2 2.1 4.1	15 67 64 125	17 M	0227 1846	0.1 4.9	3 149	2 Tu	0222 1850	0.8 4.3	24 131	17 W	0301 0958 1216 1943	0.6 2.4 2.3 4.5	18 73 70 137
3 F	0118 0744 1200 1828	0.5 2.6 2.0 4.0	15 79 61 122	18 Sa	0125 0824 1050 1809	0.1 2.2 2.1 4.6	3 67 64 140	3 M	0231 1902	0.7 4.0	21 122	18 Tu	0325 1938	0.4 4.5	12 137	3 W	0300 1925	0.9 4.1	27 125	18 Th	0338 1019 1347 2037	1.0 2.6 2.4 4.0	30 79 73 122
4 Sa	0159 0826 1205 1856	0.6 2.3 2.0 4.0	18 70 61 122	19 Su	0222 1849	0.2 4.6	6 140	4 Tu	0321 1939	0.9 3.9	27 119	19 W	0424 2036	0.7 4.1	21 125	4 Th	0336 2002	1.1 3.9	34 119	19 F	0409 1046 1535 2137	1.4 2.9 2.4 3.4	43 88 73 104
5 Su	0244 0913 1200 1928	0.8 2.1 2.0 3.9	24 64 61 119	20 M	0328 1935	0.4 4.4	12 134	5 W	0418 2022	1.1 3.7	34 113	20 Th	0521 2148	1.1 3.6	34 110	5 F	0409 1130 1340 2046	1.3 2.6 2.5 3.5	40 79 76 107	20 Sa	0431 1118 1741 2304	1.8 3.3 2.2 2.8	55 101 67 85
6 M	0340 2005	1.0 3.7	30 113	21 Tu	0451 2031	0.6 4.1	18 125	6 Th	0522 2119	1.2 3.4	37 104	21 F	0610 1332 1726 2333	1.4 2.6 2.4 3.1	43 79 73 94	6 Sa	0439 1145 1556 2150	1.6 2.8 2.5 3.1	49 85 76 94	21 Su	0443 1154 1943	2.1 3.6 1.9	64 110 58
7 Tu	0458 2054	1.2 3.6	37 110	22 W	0626 2149	0.8 3.7	24 113	7 F	0622 2245	1.3 3.2	40 98	22 Sa	0649 1336 1952	1.7 3.0 2.0	52 91 61	7 Su	0505 1206 1825 2340	1.8 3.1 2.3 2.7	55 94 70 82	22 M	0139 0433 1235 2105	2.4 2.3 3.9 1.5	73 70 119 46
8 W	0648 2207	1.2 3.4	37 104	23 Th	0741 2347	0.9 3.4	27 104	8 Sa	0709 1425 1839	1.5 2.6 2.3	46 79 70	23 Su	0138 0718 1356 2107	2.7 2.0 3.3 1.6	82 61 101 49	8 M	0526 1233 2010	2.1 3.4 1.8	64 104 55	23 Tu	1319 2159	4.1 1.2	125 37
9 Th	0809 2354	1.2 3.3	37 101	24 F	0828 1544 1919	1.1 2.4 2.3	34 73 70	9 Su	0038 0744 1418 2020	2.9 1.6 2.8 1.9	88 49 85 58	24 M	0323 0741 1422 2159	2.6 2.2 3.7 1.1	79 67 113 34	9 Tu	0219 0539 1308 2119	2.5 2.4 3.8 1.2	76 73 116 37	24 W	1405 2242	4.3 1.0	131 30
10 F	0852	1.2	37	25 Sa	0143 0859 1520 2056	3.2 1.4 2.7 1.8	98 43 82 55	10 M	0220 0812 1430 2122	2.8 1.9 3.2 1.4	85 58 98 43	25 Tu	0441 0804 1451 2240	2.6 2.4 4.0 0.8	79 73 122 24	10 W	1350 2215	4.3 0.7	131 21	25 Th	1452 2320	4.4 0.8	134 24
11 Sa	0130 0921 1556 2021	3.3 1.2 2.5 2.0	101 37 76 61	26 Su	0306 0921 1527 2153	3.1 1.6 3.1 1.3	94 49 94 40	11 Tu	0342 0836 1452 2212	2.8 2.1 3.6 0.8	85 64 110 24	26 W	0540 0828 1522 2318	2.6 2.5 4.2 0.6	79 76 128 18	11 Th	1436 2306	4.7 0.3	143 9	26 F	1537 2355	4.5 0.7	137 21
12 Su	0243 0944 1552 2124	3.3 1.3 2.7 1.6	101 40 82 49	27 M	0410 0939 1543 2238	3.0 1.8 3.4 0.9	91 55 104 27	12 W	0453 0856 1520 2301	2.7 2.3 4.1 0.4	82 70 125 12	27 Th	0626 0856 1556 2353	2.6 2.5 4.4 0.5	79 76 134 15	12 F	1526 2356	5.0 0.1	152 3	27 Sa	1620	4.6	140
13 M	0342 1005 1602 2214	3.3 1.4 3.0 1.2	101 43 91 37	28 Tu	0504 0957 1605 2318	2.9 1.9 3.8 0.6	88 58 116 18	13 Th	0559 0913 1553 2349	2.7 2.4 4.5 0.0	82 73 137 0	28 F	0703 0926 1630	2.6 2.5 4.5	79 76 137	13 Sa	1618	5.3	162	28 Su	0029 1700	0.7 4.7	21 143
14 Tu	0437 1023 1618 2301	3.2 1.6 3.4 0.7	98 49 104 21	29 W	0550 1014 1630 2355	2.8 2.1 4.0 0.4	85 64 122 12	14 F	0705 0924 1631	2.5 2.4 4.8	76 73 146	29 Sa	0029 0737 0955 1706	0.5 2.5 2.4 4.5	15 76 73 137	14 Su	0046 1709	0.0 5.3	0 162	29 M	0102 0803 1020 1737	0.7 2.6 2.5 4.7	21 79 76 143
15 W	0530 1039 1639 2347	3.0 1.9 3.8 0.4	91 58 116 12	30 Th	0633 1032 1657	2.6 2.1 4.1	79 64 125	15 Sa	0039 1713	-0.1 5.0	-3 152	30 Su	0106 0812 1021 1741	0.6 2.5 2.4 4.5	18 76 73 137	15 M	0134 1801	0.1 5.3	3 162	30 Tu	0133 0823 1103 1811	0.8 2.6 2.5 4.6	24 79 76 140
				31 F	0031 0714 1049 1725	0.3 2.5 2.2 4.2	9 76 67 128													31 W	0202 0844 1146 1843	0.9 2.7 2.5 4.4	27 82 76 134

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

O. Paramushiru (Zaliv Tuxharka), Kuril Islands, 2008

Times and Heights of High and Low Waters

January						February						March																	
Time			Height			Time			Height			Time			Height			Time			Height								
1 Tu	h	m	ft	cm	16 W O	h	m	ft	cm	1 F	h	m	ft	cm	16 Sa	h	m	ft	cm	1 Sa	h	m	ft	cm	16 Su	h	m	ft	cm
	0258	2.6	79	0256		3.3	101	0047	4.6		140	0911	5.9	181		0031	4.9	150	0111		5.1	156							
	0949	5.7	174	0924		5.8	177	0308	4.5		137	1758	1.0	31		0245	4.9	148	0316		5.1	155							
	1648	2.5	76	1649		1.9	57	0926	6.0		182					0829	5.9	179	0821		5.6	172							
	2248	4.2	129	2344		4.4	134	1750	1.1		34					1704	1.0	32	1713		1.1	35							
2 W	0333	3.4	103	0324	4.0	121	0954	6.0	182	0946	5.8	178	0903	5.8	176	0240	5.2	160											
	1008	5.7	175	0946	5.9	179	1850	0.9	26	1903	0.9	27	1809	1.1	33	0507	5.2	158											
	1741	1.9	57	1744	1.4	43									0910	5.4	165												
3 Th	0050	4.3	132	1010	5.9	181	1031	5.9	180	1041	5.7	173	0955	5.5	169	0316	5.3	161											
	0408	4.1	124	1841	1.0	30	1950	0.6	19	2004	0.8	25	1917	1.1	34	0730	5.0	151											
	1031	5.8	176												1047	5.1	156												
4 F	1835	1.3	40	1040	6.0	182	0531	5.6	172	0502	5.6	170	0415	5.4	165	1931	1.5	45											
	0309	4.7	144	1937	0.6	19	0746	5.6	170	0852	5.3	161	0812	5.1	156	0339	5.3	162											
	1057	5.8	178				1128	5.8	177	1213	5.5	168	1132	5.3	162	0840	4.5	137											
5 Sa	1928	0.8	25	2045	0.5	15	2045	0.5	15	2100	0.8	25	2020	1.2	36	1252	5.0	152											
	1128	5.9	180	1119	5.9	181	0538	5.8	176	0516	5.6	172	0432	5.4	166	2034	1.7	51											
	2019	0.4	13	2031	0.4	11	0931	5.4	165	0951	4.9	149	0916	4.7	143	0400	5.3	161											
6 Su	0534	5.6	171	2136	0.5	14	1250	5.6	172	2151	0.9	28	1323	5.2	159	0923	3.9	120											
	0800	5.5	168	0554	5.8	177	2136	0.5	14	0533	5.6	171	2115	1.3	39	1429	5.1	155											
	1208	5.9	180	1026	5.1	154	0554	5.8	177	1032	4.4	134	2100	0.8	25	2128	1.9	58											
7 M	2107	0.1	3	1416	5.5	169	2222	0.6	17	1512	5.4	165	0449	5.4	166	2215	2.2	67											
	0604	5.9	180	2222	0.6	17	0612	5.8	177	2236	1.1	34	0958	4.2	127	0419	5.2	160											
	0936	5.6	171	0607	5.9	181	1107	4.6	141	0550	5.6	170	1452	5.3	161	1000	3.3	101											
8 Tu	1259	5.9	179	1107	5.5	168	1532	5.5	168	1621	5.5	167	2204	1.5	45	1543	5.3	162											
	2153	-0.1	-2	2305	0.8	23	2305	0.8	23	2317	1.4	43	2248	1.8	55	2257	2.6	78											
	0632	6.0	184	0612	5.8	177	0630	5.7	175	2317	1.4	43	0506	5.4	165	0437	5.3	161											
9 W	1043	5.5	167	1144	4.1	125	1144	4.1	125	0607	5.5	169	1034	3.6	109	1035	2.7	81											
	1400	5.8	176	1639	5.5	167	1639	5.5	167	1145	3.3	100	1602	5.4	165	1645	5.5	168											
	2237	-0.1	-3	2345	1.1	34	2345	1.1	34	1722	5.5	168	2248	1.8	55	2257	2.6	78											
10 Th	0657	6.1	186	0627	6.0	182	0647	5.7	174	2355	1.8	56	0523	5.4	165	0455	5.3	162											
	1133	5.2	160	1100	5.2	158	1221	3.5	108	1145	3.3	100	1109	3.0	91	1111	2.1	63											
	1505	5.7	173	1441	5.6	172	1740	5.4	165	1722	5.5	168	1703	5.5	169	1740	5.7	173											
11 F	2319	0.0	1	2251	0.3	8	0647	5.7	174	2355	1.8	56	2327	2.2	66	2335	3.0	90											
	0720	6.1	185	0648	6.0	182	1221	3.5	108	0624	5.5	169	0541	5.4	165	0514	5.4	164											
	1215	4.9	149	1141	4.8	146	1740	5.4	165	1221	2.7	82	1145	2.4	73	1147	1.5	46											
12 Sa	1610	5.5	168	1551	5.5	169	0707	5.9	180	1819	5.5	168	1759	5.6	171	1833	5.7	175											
	2359	0.3	9	2332	0.5	15	1220	4.3	131	0624	5.5	169	0541	5.4	165	0514	5.4	164											
	0743	6.0	183	0707	5.9	180	1656	5.4	165	1819	5.5	168	1759	5.6	171	1833	5.7	175											
13 Su	0743	6.0	183	0707	5.9	180	0022	1.6	48	0624	5.5	169	0541	5.4	165	0514	5.4	164											
	1256	4.5	136	1220	4.3	131	0705	5.7	173	1221	2.7	82	1145	2.4	73	1147	1.5	46											
	1714	5.3	163	1656	5.4	165	1259	3.0	91	1819	5.5	168	1759	5.6	171	1833	5.7	175											
14 M	0038	0.7	22	0011	0.9	27	1840	5.3	162	0624	5.5	169	0541	5.4	165	0514	5.4	164											
	0803	5.9	180	0726	5.8	178	0056	2.1	65	0624	5.5	169	0541	5.4	165	0514	5.4	164											
	1337	4.0	121	1258	3.8	115	0723	5.7	174	0624	5.5	169	0541	5.4	165	0514	5.4	164											
15 Tu	1818	5.1	156	1759	5.3	161	1339	2.5	75	0624	5.5	169	0541	5.4	165	0514	5.4	164											
	0115	1.3	39	0011	0.9	27	1940	5.2	158	0624	5.5	169	0541	5.4	165	0514	5.4	164											
	0824	5.8	178	0726	5.8	178	0056	2.1	65	0624	5.5	169	0541	5.4	165	0514	5.4	164											
16 W	1420	3.4	104	0726	5.8	178	0129	2.7	83	0624	5.5	169	0541	5.4	165	0514	5.4	164											
	1924	4.9	149	1339	3.2	99	0741	5.7	175	0624	5.5	169	0541	5.4	165	0514	5.4	164											
	0151	1.9	59	1901	5.1	156	1422	2.0	61	0624	5.5	169	0541	5.4	165	0514	5.4	164											
17 Th	0843	5.8	176	2006	4.9	149	2044	5.0	152	0624	5.5	169	0541	5.4	165	0514	5.4	164											
	1506	2.9	88	0123	2.0	61	0159	3.3	102	0624	5.5	169	0541	5.4	165	0514	5.4	164											
	2036	4.6	141	2006	4.9	149	0800	5.8	177	0624	5.5	169	0541	5.4	165	0514	5.4	164											
18 F	0224	4.2	129	0803	5.8	176	0159	3.3	102	0624	5.5	169	0541	5.4	165	0514	5.4	164											
	0333	3.4	103	1421	2.7	83	1508	1.6	50	0624	5.5	169	0541	5.4	165	0514	5.4	164											
	1008	5.7	175	2006	4.9	149	2159	4.8	146	0624	5.5	169	0541	5.4	165	0514	5.4	164											
19 Sa	0946	5.9	179	0156	2.6	80	0225	3.9	120	0624	5.5	169	0541	5.4	165	0514	5.4	164											
	1741	1.9	57	0822	5.8	176	0821	5.9	180	0624	5.5	169	0541	5.4	165	0514	5.4	164											
	0309	4.7	144	1507	2.2	68	1600	1.3	41	0624	5.5	169	0541	5.4	165	0514	5.4	164											
20 Su	1128	5.9	180	2119	4.7	143	2336	4.7	144	0624	5.5	169	0541	5.4	165	0514	5.4	164											
	0534	5.6	171	0226	3.3	101	0246	4.5	136	0624	5.5	169	0541	5.4	165	0514	5.4	164											
	0800	5.5	168	0842	5.8	178	0844	5.9	181	0624	5.5	169	0541	5.4	165	0514	5.4	164											
21 M	1208	5.9	180	1557	1.8	55	1656	1.1	35	0624	5.5	169	0541	5.4	165	0514	5.4	164											
	2107	0.1	3	2246	4.6	139				0624	5.5	169	0541	5.4	165	0514	5.4	164											
	0604	5.9	180	0252	3.9	120				0624	5.5	169	0541	5.4	165	0514	5.4	164											
22 Tu	0936	5.6	171	0903	5.9	180				0624	5.5	169	0541	5.4	165	0514	5.4	164											
	1259	5.9	179	0903	5.9	180				0624	5.5	169	0541	5.4	165	0514	5.4	164											
	2153	-0.1	-2	1651	1.4	43				0624	5.5	169	0541	5.4	165	0514	5.4	164											
23 W	0632	6.0	184							0624	5.5	169	0541	5.4	165	0514	5.4	164											
	1043	5.5	167							0624	5.5	169	0541	5.4	165	0514	5.4	164											
	1400	5.8	176							0624	5.5	169	0541	5.4	165	0514	5.4	164											
24 Th	2237	-0.1	-3							0624	5.5	169	0541	5.4	165	0514	5.4	164											
	0657	6.1	186							0624	5.5	169	0541	5.4	165	0514	5.4	164											
	1133	5.2	160							0624	5.5	169	0541	5.4	165	0514	5.4	164											
25 F	1505	5.7	173							0624	5.5	169	0541	5.4	165	0514	5.4	164											
	2319	0.0	1							0624	5.5	169	0541	5.4	165	0514	5.4	164											
	0720	6.1	185							0624	5.5	169	0541	5.4	165	0514	5.4	164											
26 Sa	1215	4.9	149							0624	5.5	169	0541	5.4	165	0514	5.4	164											
	1610	5.5	168							0624	5.5	169	0541	5.4	165	0514	5.4	164											
	2359	0.3	9							0624	5.5	169	0541	5.4	165	0514	5.4	164											
27 Su	0743	6.0	183							0624	5.5	169	0541	5.4	165	0514	5.4	164											
	1256	4.5	136							0																			

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Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

O. Paramushiru (Zaliv Tuxharka), Kuril Islands, 2008

Times and Heights of High and Low Waters

July					August					September																			
Time		Height			Time		Height			Time		Height			Time		Height												
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm										
1 Tu	0834	0.1	3		16 W	0846	-0.1	-2		1 F	0106	5.3	163		16 Sa	0204	5.1	155		1 M	0412	5.1	155		16 Tu	0454	5.2	158	
	1737	5.4	166			1755	5.5	168			0950	0.0	0			1004	0.4	12			1100	1.3	39			1110	2.1	63	
	2030	5.3	161			2109	5.3	162			1808	5.5	169			1748	5.3	162			1740	5.1	155			1713	5.0	152	
											2240	4.8	145			2246	4.1	125			2323	2.7	82			2324	1.8	55	
2 W	0028	5.6	172		17 Th	0033	5.5	169		2 Sa	0228	5.2	159		17 Su	0322	5.1	155		2 Tu	0512	5.2	158		17 W	0549	5.3	162	
	0921	-0.2	-7			0935	-0.2	-7			1035	0.1	3			1048	0.6	19			1139	1.7	51			1147	2.5	76	
	1811	5.7	174			1817	5.7	173			1826	5.5	168			1805	5.3	161			1757	5.1	155			1731	5.1	155	
	2154	5.3	163			2223	5.2	158			2321	4.3	131			2323	3.5	108											
3 Th	0117	5.6	171		18 F	0141	5.4	166		3 Su	0341	5.2	157		18 M	0430	5.1	156		3 W	0000	2.1	64		18 Th	0001	1.3	39	
	1006	-0.4	-12			1020	-0.3	-8			1117	0.3	10			1129	1.0	29			0609	5.2	159			0643	5.3	163	
	1841	5.8	178			1839	5.7	174			1844	5.4	166			1822	5.2	160			1215	2.2	66			1222	3.0	90	
	2257	5.2	159			2314	4.9	149			2358	3.8	116			2359	3.0	91			1815	5.2	157			1751	5.2	158	
4 F	0215	5.5	169		19 Sa	0252	5.3	163		4 M	0447	5.1	156		19 Tu	0531	5.1	156		4 Th	0037	1.6	48		19 F	0039	0.9	26	
	1049	-0.4	-13			1103	-0.2	-5			1156	0.7	21			1206	1.4	42			0704	5.2	158			0737	5.3	162	
	1908	5.9	179			1901	5.7	174			1902	5.4	165			1840	5.2	159			1248	2.7	82			1254	3.4	105	
	2346	5.0	152			2355	4.5	137											1834	5.2	160			1811	5.3	162			
5 Sa	0317	5.4	165		20 Su	0400	5.2	159		5 Tu	0036	3.2	99		20 W	0036	2.4	74		5 F	0116	1.2	36		20 Sa	0119	0.6	18	
	1130	-0.3	-9			1144	0.1	3			0549	5.0	153			0628	5.1	154			0800	5.1	154			0833	5.2	158	
	1933	5.8	178			1921	5.6	172			1233	1.1	35			1241	1.9	58			1319	3.2	98			1325	3.9	118	
						1920	5.3	163							1857	5.2	160			1853	5.3	163			1833	5.4	165		
6 Su	0029	4.7	142		21 M	0035	4.0	123		6 W	0115	2.7	82		21 Th	0115	1.9	58		6 Sa	0158	0.9	26		21 Su	0202	0.4	13	
	0420	5.2	160			0505	5.1	155			0649	4.9	149			0726	5.0	151			0902	4.9	149			0937	5.1	154	
	1210	0.0	0			1222	0.5	16			1307	1.7	53			1314	2.5	75			1348	3.7	113			1356	4.2	129	
	1956	5.8	176			1941	5.5	169			1938	5.3	163			1916	5.3	162			1915	5.4	166			1857	5.4	166	
7 M	0111	4.2	129		22 Tu	0114	3.5	107		7 Th	0156	2.2	67		22 F	0156	1.4	44		7 Su	0244	0.7	21		22 M	0249	0.5	14	
	0523	5.1	154			0608	4.9	149			0751	4.7	143			0827	4.8	146			1015	4.7	144			1052	4.9	150	
	1249	0.5	14			1259	1.0	32			1340	2.4	72			1344	3.1	93			1415	4.1	126			1430	4.5	138	
	2018	5.6	172			2000	5.5	167			1957	5.4	165			1935	5.4	165			1938	5.5	167			1924	5.4	165	
8 Tu	0153	3.7	114		23 W	0155	3.0	91		8 F	0240	1.7	52		23 Sa	0241	1.1	34		8 M	0334	0.6	19		23 Tu	0341	0.6	18	
	0627	4.8	146			0712	4.7	143			0859	4.5	137			0936	4.6	140			1148	4.7	142			1222	4.9	148	
	1326	1.0	31			1334	1.6	50			1409	3.0	91			1411	3.6	110			1441	4.5	137			1517	4.7	144	
	2039	5.6	170			2019	5.4	166			2016	5.4	166			1956	5.5	167			2005	5.4	166			1958	5.2	160	
9 W	0238	3.2	97		24 Th	0239	2.4	74		9 Sa	0328	1.3	41		24 Su	0330	0.9	27		9 Tu	0432	0.7	21		24 W	0441	0.8	25	
	0736	4.5	138			0819	4.5	136			1018	4.3	132			1103	4.5	136			2038	5.3	162			1345	4.9	149	
	1403	1.7	51			1407	2.3	71			1436	3.6	109			1434	4.1	125				1657	4.8	145					
	2059	5.5	168			2038	5.4	166			2037	5.5	169			2019	5.5	169							2046	5.0	152		
10 Th	0325	2.7	81		25 F	0326	1.9	59		10 Su	0420	1.0	31		25 M	0425	0.8	23		10 W	0536	0.8	24		25 Th	0548	1.1	33	
	0851	4.3	130			0936	4.3	130			1205	4.3	131			1310	4.5	138			1516	4.9	149			1434	4.9	150	
	1437	2.4	72			1437	3.0	91			1454	4.1	125			1444	4.5	137			1723	4.9	148			1907	4.5	137	
	2119	5.5	167			2058	5.5	168			2100	5.6	170			2045	5.5	168			2129	5.1	155			2222	4.7	142	
11 F	0416	2.1	64		26 Sa	0418	1.5	45		11 M	0518	0.8	23		26 Tu	0526	0.7	20		11 Th	0645	0.9	27		26 F	0659	1.3	40	
	1021	4.1	124			1110	4.1	126			2128	5.6	170			2120	5.4	165			1540	5.0	152			1503	4.9	150	
	1510	3.1	94			1504	3.6	111									1949	4.6	141			2018	4.0	123					
	2140	5.5	168			2119	5.6	170											2308	4.8	147								
12 Sa	0510	1.6	48		27 Su	0513	1.1	33		12 Tu	0620	0.6	18		27 W	0632	0.6	19		12 F	0752	1.0	31		27 Sa	0033	4.5	138	
	1212	4.1	124			1323	4.3	130			2204	5.5	168			2214	5.2	159			1600	5.0	152			0806	1.6	48	
	1539	3.7	114			1517	4.2	128									2055	4.2	128			1526	4.9	149					
	2203	5.6	170			2143	5.6	171													2102	3.4	105						
13 Su	0605	1.1	33		28 M	0611	0.7	22		13 W	0723	0.4	13		28 Th	0737	0.6	19		13 Sa	0108	4.7	144		28 Su	0215	4.7	142	
	2228	5.6	171			2212	5.6	172			1715	5.2	157			1634	5.1	156			0852	1.2	36			0904	1.8	56	
						1909	5.1	156			2301	5.3	163			2030	4.8	146			1619	5.0	152			1547	4.9	149	
															2352	5.0	152			2137	3.6	111			2139	2.8	85		
14 M	0701	0.6	19		29 Tu	0710	0.4	13		14 Th	0822	0.3	10		29 F	0837	0.7	20		14 Su	0240	4.8	147		29 M	0332	4.9	150	
	2258	5.6	172			2250	5.6	170			1717	5.3	161			1649	5.2	157			0943	1.4	43			0954	2.1	65	
											2109	5.0	151			2131	4.4	134			1637	5.0	151			1607	4.9	149	
15 Tu	0755	0.2	7		30 W	0807	0.2	5		15 F	0031	5.2	158		30 Sa	0137	4.9	150		15 M	0352	5.0	153		30 Tu	0435	5.2	158	
	2338	5.6	172			1738	5.3	163			0916	0.3	9			0931	0.8	24			1029	1.7	52			1038	2.5	76	
						2014	5.2	160			1731	5.3	162			1706	5.1	156			1655	5.0	151			1626	5.0	151	
						2347	5.5	167			2206	4.6	139								2249	2.4	73			2250	1.5	47	
					31 Th	0901	0.0	1																					
						1750	5.5	167																					
						2147	5.1	155																					
																</													

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Yamato Wan, Matsuwa To, Kuril Islands, 2008

Times and Heights of High and Low Waters

January					February					March													
Time		Height			Time		Height			Time		Height			Time		Height						
	h m	ft cm			h m	ft cm			h m	ft cm		h m	ft cm		h m	ft cm							
1 Tu	0326	1.8	55	16 W ☉	0243	1.9	58	1 F	0942	3.9	119	16 Sa	0915	4.5	137	1 Sa	0831	3.9	119	16 Su	0833	4.4	134
	1041	3.5	107		0936	3.7	113		1903	1.1	34		1905	0.4	12		1754	1.1	34		1837	0.5	15
	1757	2.0	61		1701	1.6	49																
	2305	2.4	73		2316	2.5	76																
2 W	0322	2.2	67	17 Th	0225	2.4	73	2 Sa	1008	4.0	122	17 Su	0959	4.5	137	2 Su	0902	4.0	122	17 M	0926	4.2	128
	1053	3.6	110		0949	4.0	122		2014	0.9	27		2025	0.2	6		1918	1.0	30		1958	0.6	18
	1908	1.6	49		1818	1.1	34																
3 Th	1108	3.7	113	18 F	1012	4.2	128	3 Su	1047	4.0	122	18 M	1104	4.4	134	3 M	0945	3.9	119	18 Tu	1057	3.9	119
	2007	1.2	37		1933	0.6	18		2114	0.7	21		2131	0.1	3		2032	0.9	27		2106	0.7	21
4 F	1129	3.9	119	19 Sa	1045	4.4	134	4 M	1145	4.0	122	19 Tu	1241	4.2	128	4 Tu	1056	3.8	116	19 W	1319	3.6	110
	2057	0.9	27		2041	0.2	6		2204	0.5	15		2225	0.2	6		2128	0.8	24		2158	0.9	27
5 Sa	1159	4.0	122	20 Su	1134	4.6	140	5 Tu	1300	4.1	125	20 W	1422	4.1	125	5 W	1246	3.8	116	20 Th	0548	3.2	98
	2143	0.6	18		2142	−0.2	−6		2245	0.3	9		2310	0.3	9		2212	0.7	21		0954	2.9	88
6 Su	1240	4.1	125	21 M	1241	4.6	140	6 W	1413	4.1	125	21 Th	0730	3.3	101	6 Th	1424	3.7	113		1507	3.5	107
	2224	0.4	12		2235	−0.3	−9		2321	0.3	9		1018	3.2	98		2249	0.7	21		2240	1.1	34
													1544	4.0	122								
7 M	1330	4.1	125	22 Tu	1358	4.6	140	7 Th	1518	4.1	125	22 F	0714	3.2	98	7 F	0635	3.2	98	22 Sa	0538	3.2	98
	2303	0.2	6		2323	−0.3	−9		2353	0.3	9		1120	2.8	85		1011	2.9	88		1123	1.9	58
													1652	3.8	116		1542	3.7	113		1730	3.5	107
8 Tu	1421	4.2	128	23 W	1512	4.5	137	8 F	☉			23 Sa	0019	0.8	24	8 Sa	0619	3.1	94		23 Su	0543	3.3	101
	2339	0.1	3						0813	3.3	101		0712	3.2	98		1101	2.4	73	1159		1.5	46
													1618	4.0	122		1208	2.4	73	1650		3.7	113
9 W	1511	4.3	131	24 Th	0006	−0.2	−6	9 Sa	0023	0.5	15	24 Su	0046	1.2	37	9 Su	0614	3.2	98	24 M		1826	3.4	104
					1619	4.3	131		0757	3.2	98		0715	3.3	101		1146	1.9	58		0009	2.1	64
													1145	2.9	88		1252	2.0	61		1755	3.6	110	0550	3.4	104
10 Th	0013	0.0	0	25 F	0043	0.1	3	10 Su	0050	0.7	21	25 M	0109	1.6	49	10 M	0017	1.6	49		25 Tu	0030	2.4	73
	1558	4.2	128		0846	3.4	104		0751	3.3	101		0721	3.4	104		0616	3.4	104	0559		3.6	110
					1153	3.2	98		1237	2.5	76		1332	1.7	52		1230	1.4	43	1306		1.0	30
					1719	4.1	125		1815	3.7	113		1942	3.3	101		1859	3.5	107	2012		3.3	101
11 F	0045	0.1	3	26 Sa	0116	0.4	12	11 M	0115	1.1	34	26 Tu	0127	2.0	61	11 Tu	0039	2.1	64	26 W	0045	2.7	82
	1646	4.2	128		0843	3.3	101		0750	3.4	104		0728	3.5	107		0623	3.6	110		0610	3.7	113
					1256	2.8	85		1329	2.0	61		1413	1.4	43		1316	0.9	27		1341	0.8	24
12 Sa	0115	0.2	6	27 Su	0143	0.9	27	12 Tu	0135	1.6	49	27 W	0138	2.3	70	12 W	0054	2.5	76		27 Th	0051	2.9	88
	0935	3.4	104		0846	3.3	101		0755	3.5	107		0738	3.6	110		0636	3.9	119	0624		3.8	116
	1217	3.2	98		1353	2.5	76		1423	1.6	49		1456	1.2	37		1405	0.6	18	1418		0.8	24
	1736	4.0	122		1914	3.4	104		2031	3.1	94		2149	2.9	88		2129	3.2	98	2221		3.1	94
13 Su	0143	0.5	15	28 M	0206	1.3	40	13 W	0148	2.1	64	28 Th	0135	2.6	79	13 Th	0055	2.9	88	28 F	0038	3.0	91
	0927	3.3	101		0852	3.4	104		0804	3.8	116		0751	3.8	116		0655	4.2	128		0642	3.9	119
	1326	3.0	91		1448	2.1	64		1522	1.2	37		1544	1.1	34		1500	0.4	12		1501	0.8	24
	1832	3.7	113		2015	3.1	94		2206	2.8	85												
14 M	0209	0.9	27	29 Tu	0222	1.8	55	14 Th	0141	2.5	76	29 F	0808	3.9	119	14 F	0721	4.4	134	29 Sa	0705	4.0	122
	0925	3.4	104		0900	3.5	107		0820	4.1	125		1642	1.1	34		1602	0.3	9		1553	0.8	24
	1435	2.6	79		1544	1.8	55		1627	0.8	24												
	1937	3.3	101		2128	2.8	85		☉				☉				☉						
15 Tu	0231	1.4	43	30 W	0227	2.2	67	15 F	0843	4.3	131					15 Sa	0753	4.5	137	30 Su	0733	4.0	122
	0928	3.5	107		0910	3.6	110		1743	0.6	18						1714	0.4	12		1656	0.9	27
	1546	2.1	64		1644	1.6	49																
	2102	2.8	85		2320	2.5	76																
				31 Th	0158	2.4	73												31 M	0805	3.9	119	
					0923	3.8	116															1810	1.0	30
					1751	1.4	43																

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

* Neither a high or low water but an intermediate value to show the period of an approximate stand.

* Neither a high or low water but an intermediate value to show the period of an approximate stand.

Yamato Wan, Matsuwa To, Kuril Islands, 2008

Times and Heights of High and Low Waters

July				August				September															
Time		Height		Time		Height		Time		Height		Time		Height									
h	m	ft	cm	h	m	ft	cm	h	m	ft	cm	h	m	ft	cm								
1 Tu	0921	0.0	0	16 W	0019 1012	4.1 0.4	125 12	1 F ●	0125 1059	4.6 −0.3	140 −9	16 Sa	0208 1107	3.9 0.5	119 15	1 M	0438 1156 1838 2348	3.8 1.0 3.2 2.2	116 30 98 67	16 Tu	0444 1129 1742 2330	3.6 1.5 3.2 1.8	110 46 98 55
2 W	0034 1014	4.6 −0.4	140 −12	17 Th	0112 1053	4.1 0.3	125 9	2 Sa	0246 1144	4.5 −0.2	137 −6	17 Su ○	0314 1139 1940 2242	3.9 0.5 3.2 3.1	119 15 98 94	2 Tu	0542 1225 1842	3.7 1.4 3.3	113 43 101	17 W	0546 1155 1744	3.5 1.8 3.4	107 55 104
3 Th ●	0130 1105	4.8 −0.6	146 −18	18 F ○	0208 1130	4.1 0.2	125 6	3 Su	0400 1223 2018 2330	4.3 0.1 3.3 3.1	131 3 101 94	18 M	0412 1207 1927 2335	3.9 0.7 3.2 2.7	119 21 98 82	3 W	0033 0643 1249 1849	1.8 3.5 1.8 3.4	55 107 55 104	18 Th	0010 0648 1216 1752	1.3 3.5 2.3 3.6	40 70 70 110
4 F	0233 1154	4.8 −0.6	146 −18	19 Sa	0301 1203	4.1 0.2	125 6	4 M	0506 1257 2013	4.1 0.5 3.3	125 15 101	19 Tu	0509 1232 1922	3.8 1.0 3.2	116 30 98	4 Th	0115 0741 1309 1859	1.4 3.3 2.2 3.6	43 101 67 110	19 F	0053 0754 1231 1804	0.8 3.4 2.7 3.9	24 104 82 119
5 Sa	0337 1239	4.7 −0.5	143 −15	20 Su	0351 1234	4.1 0.2	125 6	5 Tu	0036 0609 1326 2016	2.7 3.8 0.9 3.3	82 116 27 101	20 W	0022 0606 1256 1922	2.3 3.6 1.3 3.3	70 110 40 101	5 F	0157 0842 1321 1911	1.2 3.1 2.5 3.7	37 94 76 113	20 Sa	0138 0911 1233 1823	0.5 3.2 3.0 4.2	15 98 91 128
6 Su	0439 1320 2200	4.5 −0.2 3.4	137 −6 104	21 M	0440 1302 2108	4.0 0.4 3.3	122 12 101	6 W	0134 0711 1350 2023	2.3 3.5 1.4 3.4	70 107 43 104	21 Th	0109 0707 1315 1926	1.9 3.4 1.8 3.5	58 104 55 107	6 Sa	0239 0954 1318 1926	1.0 3.0 2.7 3.8	30 91 82 116	21 Su	0229 1848	0.3 4.4	9 134
7 M	0000 0539 1356 2150	3.3 4.2 0.2 3.3	101 128 6 101	22 Tu	0014 0530 1328 2101	3.1 3.9 0.6 3.3	94 119 18 101	7 Th	0229 0816 1407 2033	1.9 3.1 1.9 3.6	58 94 58 110	22 F	0157 0816 1328 1935	1.5 3.2 2.2 3.7	46 98 67 113	7 Su	0326 1944	1.0 3.9	30 119	22 M ●	0327 1921	0.2 4.5	6 137
8 Tu	0130 0640 1428 2153	3.0 3.8 0.7 3.4	91 116 21 104	23 W	0115 0624 1352 2059	2.8 3.6 1.0 3.3	85 110 30 101	8 F	0324 0930 1413 2045	1.6 2.8 2.3 3.7	49 85 70 113	23 Sa	0250 0942 1326 1950	1.1 2.9 2.6 4.0	34 88 79 122	8 M ●	0422 2009	1.0 3.9	30 119	23 Tu	0434 2000	0.3 4.4	9 134
9 W	0250 0745 1453 2200	2.7 3.3 1.3 3.5	82 101 40 107	24 Th	0215 0727 1412 2101	2.5 3.3 1.4 3.5	76 101 43 107	9 Sa ●	0421 1121 1348 2100	1.4 2.6 2.5 3.8	43 79 76 116	24 Su ●	0350 2012	0.8 4.3	24 131	9 Tu	0532 2040	1.0 3.9	30 119	24 W	0553 2049	0.4 4.2	12 128
10 Th ●	0407 0904 1510 2211	2.3 2.9 1.8 3.6	70 88 55 110	25 F	0317 0844 1425 2108	2.0 2.9 1.9 3.7	61 88 58 113	10 Su	0525 2121	1.2 3.9	37 119	25 M	0500 2043	0.6 4.4	18 134	10 W	0654 2124	1.0 3.8	30 116	25 Th	0714 2211	0.6 3.9	18 119
11 F	0523 1055 1508 2225	1.9 2.5 2.2 3.7	58 76 67 113	26 Sa ●	0423 1035 1417 2121	1.6 2.6 2.4 3.9	49 79 73 119	11 M	0637 2149	1.1 3.9	34 119	26 Tu	0620 2126	0.4 4.5	12 137	11 Th	0810 2240	1.0 3.7	30 113	26 F	0826	0.7	21
12 Sa	0634 2242	1.5 3.8	46 116	27 Su	0535 2142	1.1 4.2	34 128	12 Tu	0751 2230	0.9 4.0	27 122	27 W	0743 2228	0.3 4.4	9 134	12 F	0908	0.9	27	27 Sa	0041 0923 1710 2132	3.6 0.9 3.2 2.8	110 27 98 85
13 Su	0739 2305	1.2 3.9	37 119	28 M	0650 2214	0.7 4.4	21 134	13 W	0856 2331	0.8 3.9	24 119	28 Th	0855	0.2	6	13 Sa	0042 0953 1826 2110	3.6 0.9 3.2 3.1	110 27 98 94	28 Su	0244 1009 1700 2222	3.4 1.2 3.2 2.2	104 37 98 67
14 M	0836 2336	0.9 4.0	27 122	29 Tu	0803 2300	0.3 4.6	9 140	14 Th	0949	0.6	18	29 F	0003 0954	4.2 0.2	128 6	14 Su	0221 1029 1757 2207	3.6 1.0 3.1 2.7	110 30 94 82	29 M ●	0411 1047 1701 2304	3.4 1.6 3.3 1.7	104 49 101 52
15 Tu	0926	0.6	18	30 W	0909	0.0	0	15 F	0051 1031	3.9 0.5	119 15	30 Sa	0153 1042 1858 2151	4.1 0.4 3.3 3.1	125 12 101 94	15 M ○	0338 1101 1746 2250	3.6 1.2 3.1 2.3	110 37 94 70	30 Tu	0521 1118 1707 2341	3.4 2.0 3.4 1.3	104 61 104 40
				31 Th	0005 1008	4.6 −0.2	140 −6					31 Su ●	0323 1122 1840 2257	3.9 0.6 3.2 2.7	119 18 98 82								

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Heights are referred to the chart datum of soundings.

* Neither a high or low water but an intermediate value to show the period of an approximate stand.

Yamato Wan, Matsuwa To, Kuril Islands, 2008

Times and Heights of High and Low Waters

October								November								December							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm			
1 W	0622 1145 1717	3.4 2.3 3.5	104 70 107	16 Th	0631 1105 1617 2355	3.5 2.8 3.8 0.3	107 85 116 9	1 Sa	0031 0859 1125 1640	0.3 3.4 3.3 4.0	9 104 101 122	16 Su	0029 1622	-0.6 4.8	-18 146	1 M	0052 1633	0.1 4.2	3 128	16 Tu	0111 1705	-0.6 4.7	-18 143
2 Th	0017 0718 1207 1728	0.9 3.4 2.6 3.7	27 104 79 113	17 F	0739 1122 1636	3.5 3.2 4.1	107 98 125	2 Su	0105 1704	0.2 4.1	6 125	17 M	0117 1706	-0.6 4.8	-18 146	2 Tu	0127 1706	0.2 4.1	6 125	17 W	0155 1801	-0.3 4.3	-9 131
3 F	0051 0813 1223 1742	0.7 3.3 2.9 3.8	21 101 88 116	18 Sa	0038 0856 1126 1701	-0.1 3.5 3.4 4.4	-3 107 104 134	3 M	0141 1730	0.3 4.1	9 125	18 Tu	0206 1752	-0.5 4.6	-15 140	3 W	0201 1739	0.3 4.0	9 122	18 Th	0235 1100 1351 1900	0.1 3.4 3.2 3.8	3 104 98 116
4 Sa	0126 0913 1229 1758	0.6 3.2 3.0 3.9	18 98 91 119	19 Su	0125 1732	-0.3 4.6	-9 140	4 Tu	0220 1759	0.4 4.0	12 122	19 W	0256 1840	-0.1 4.3	-3 131	4 Th	0235 1815	0.5 3.8	15 116	19 F	0311 1059 1542 2010	0.7 3.3 2.9 3.3	21 101 88 101
5 Su	0204 1818	0.6 3.9	18 119	20 M	0215 1808	-0.3 4.6	-9 140	5 W	0303 1828	0.6 3.9	18 119	20 Th	0345 1934	0.3 3.7	9 113	5 F	0309 1217 1433 1858	0.7 3.3 3.2 3.5	21 101 98 107	20 Sa	0340 1107 1729 2152	1.3 3.4 2.4 2.7	40 104 73 82
6 M	0246 1842	0.7 4.0	21 122	21 Tu	0311 1848	-0.1 4.5	-3 137	6 Th	0349 1858	0.8 3.7	24 113	21 F	0433 1311 1737 2055	0.9 3.3 3.0 3.2	27 101 91 98	6 Sa	0341 1202 1656 2004	1.1 3.3 2.9 3.0	34 101 88 91	21 Su	0359 1119 1858	1.9 3.6 1.8	58 110 55
7 Tu	0335 1909	0.8 3.9	24 119	22 W	0412 1933	0.2 4.2	6 128	7 F	0439 1930	1.0 3.4	30 104	22 Sa	0518 1309 1944 2351	1.4 3.3 2.4 2.7	43 101 73 82	7 Su	0412 1200 1842 2229	1.5 3.3 2.5 2.6	46 101 76 79	22 M	0059 0347 1136 2004	2.4 2.3 3.7 1.3	73 70 113 40
8 W	0435 1940	0.9 3.8	27 116	23 Th	0518 2027	0.6 3.7	18 113	8 Sa	0531 1430	1.3 3.2	40 98	23 Su	0601 1318 2042	2.0 3.4 1.8	61 104 55	8 M	0437 1203 1943	2.0 3.4 1.8	61 104 55	23 Tu	1156 2055	3.9 0.9	119 27
9 Th	0545 2017	1.1 3.6	34 110	24 F	0627 1546 1932 2241	1.0 3.3 3.1 3.2	30 101 94 98	9 Su	0625 1410 2030	1.6 3.2 2.4	49 98 73	24 M	0303 0642 1331 2125	2.6 2.5 3.6 1.3	79 76 110 40	9 Tu	0219 0442 1213 2031	2.5 2.4 3.7 1.2	76 73 113 37	24 W	1222 2140	4.0 0.6	122 18
10 F	0658 2137	1.2 3.4	37 104	25 Sa	0731 1516 2056	1.4 3.2 2.5	43 98 76	10 M	0112 0717 1406 2104	2.7 2.0 3.3 1.8	82 61 101 55	25 Tu	0520 0721 1348 2202	2.9 2.8 3.7 0.8	88 85 113 24	10 W	1230 2117	3.9 0.5	119 15	25 Th	1255 2220	4.0 0.4	122 12
11 Sa	0800 1639 2043	1.3 3.2 3.0	40 98 91	26 Su	0145 0827 1514 2141	3.0 1.8 3.3 1.9	91 55 101 58	11 Tu	0331 0806 1410 2141	2.9 2.5 3.5 1.2	88 76 107 37	26 W	1409 2237	3.9 0.5	119 15	11 Th	1258 2203	4.2 0.0	128 0	26 F	1335 2258	4.1 0.2	125 6
12 Su	0047 0851 1610 2125	3.2 1.5 3.1 2.5	98 46 94 76	27 M	0343 0914 1520 2219	3.0 2.2 3.4 1.4	91 67 104 43	12 W	0509 0848 1421 2219	3.1 2.9 3.7 0.5	94 88 113 15	27 Th	1432 2311	4.0 0.2	122 6	12 F	1337 2250	4.5 -0.5	137 -15	27 Sa	1419 2335	4.1 0.1	125 3
13 M	0246 0933 1601 2201	3.2 1.7 3.2 1.9	98 52 98 58	28 Tu	0507 0953 1531 2253	3.1 2.5 3.6 0.9	94 76 110 27	13 Th	0631 0920 1441 2300	3.4 3.3 4.1 0.0	104 101 125 0	28 F	1459 2344	4.1 0.1	125 3	13 Sa	1424 2338	4.7 -0.7	143 -21	28 Su	1503	4.2	128
14 Tu	0412 1009 1600 2237	3.3 2.0 3.3 1.4	101 61 101 43	29 W	0613 1026 1545 2326	3.3 2.8 3.7 0.6	101 85 113 18	14 F	1508 2344	4.4 -0.4	134 -12	29 Sa	1528	4.1	125	14 Su	1516	4.9	149	29 M	0009 1546	0.1 4.2	3 128
15 W	0524 1040 1605 2315	3.4 2.4 3.5 0.8	104 73 107 24	30 Th	0710 1054 1601 2358	3.4 3.1 3.8 0.4	104 94 116 12	15 Sa	1542	4.6	140	30 Su	0018 1600	0.1 4.2	3 128	15 M	0025 1610	-0.8 4.8	-24 146	30 Tu	0042 1627	0.1 4.1	3 125
				31 F	0804 1114 1619	3.4 3.3 3.9	104 101 119													31 W	0112 1708	0.2 4.0	6 122

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Heights are referred to the chart datum of soundings.

* Neither a high or low water but an intermediate value to show the period of an approximate stand.

Kamaisi, Japan, 2008

Times and Heights of High and Low Waters

January				February				March															
Time		Height		Time		Height		Time		Height		Time		Height									
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm									
1 Tu	0208	2.0	62	16 W O	0134	2.1	63	1 F	0843	4.0	122	16 Sa	0815	4.1	125	1 Sa	0734	3.8	117	16 Su	0738	3.8	115
	0852	4.1	124		0808	4.1	126		1751	1.3	40		1806	0.7	20		1641	1.3	39		1746	0.8	23
	1619	2.0	60		1535	1.4	43																
	2215	2.8	86		2159	2.9	89																
2 W	0237	2.5	76	17 Th	0152	2.6	79	2 Sa	0940	3.9	118	17 Su	0946	3.9	119	2 Su	0821	3.6	110	17 M	1010	3.4	105
	0926	4.1	125		0838	4.2	128		1902	1.0	31		1923	0.4	12		1821	1.1	33		1902	0.7	20
	1737	1.6	50		1658	1.1	33																
3 Th	0130	2.9	89	18 F	0920	4.2	129	3 Su	0410	3.4	104	18 M	0404	3.5	108	3 M	0359	3.3	100	18 Tu	0256	3.3	101
	0328	2.9	88		1819	0.7	20		0556	3.4	103		0714	3.4	104		0555	3.2	99		0732	2.8	85
	1010	4.1	125		1112	3.8	117		1214	3.9	119		1021	3.5	106		1240	3.5	108				
	1840	1.3	39		1955	0.7	21		2019	0.2	5		1925	0.8	25		1955	0.6	18				
4 F	0254	3.2	99	19 Sa	1026	4.2	129	4 M	0403	3.6	109	19 Tu	0400	3.6	111	4 Tu	0330	3.4	104	19 W	0301	3.4	105
	0505	3.2	97		1927	0.3	8		0741	3.3	100		0823	3.0	91		0738	3.0	92		0815	2.3	69
	1105	4.1	125		1238	3.9	120		1339	4.1	125		1334	3.6	109		1224	3.6	109		1351	3.7	114
	1929	0.9	28		2038	0.4	12		2102	0.1	2		2010	0.6	17		2035	0.6	18				
5 Sa	0331	3.5	108	20 Su	0419	3.7	113	5 Tu	0417	3.7	113	20 W	0411	3.7	113	5 W	0335	3.5	107	20 Th	0313	3.6	109
	0638	3.3	102		0625	3.7	112		0833	3.1	94		0905	2.6	78		0820	2.7	81		0851	1.7	53
	1204	4.2	127		1158	4.3	131		1340	4.1	126		1437	4.3	131		1334	3.8	117		1443	3.9	120
	2012	0.6	19		2024	-0.1	-2		2115	0.2	5		2139	0.1	2		2048	0.4	11		2109	0.7	21
6 Su	0401	3.7	114	21 M	0430	3.8	117	6 W	0434	3.8	116	21 Th	0426	3.8	116	6 Th	0347	3.6	111	21 F	0329	3.7	114
	0748	3.3	102		0806	3.5	107		0912	2.8	86		0942	2.1	64		0855	2.2	68		0924	1.3	39
	1259	4.3	130		1319	4.5	136		1430	4.3	132		1524	4.4	133		1427	4.1	124		1527	4.0	123
	2051	0.4	11		2113	-0.3	-8		2149	0.0	1		2211	0.2	7		2122	0.3	10		2140	0.9	27
7 M	0430	3.9	118	22 Tu	0450	3.9	120	7 Th	0452	3.9	118	22 F	0442	3.9	119	7 F	0401	3.7	114	22 Sa	0345	3.9	119
	0839	3.3	100		0904	3.2	99		0948	2.5	77		1016	1.7	52		0928	1.7	53		0955	0.9	27
	1348	4.4	134		1423	4.6	140		1515	4.5	136		1607	4.3	132		1514	4.2	129		1607	4.0	123
	2128	0.1	4		2156	-0.3	-9		2221	0.0	1		2240	0.5	15		2154	0.4	13		2208	1.1	35
8 Tu	0457	3.9	120	23 W	0512	3.9	120	8 F	0511	3.9	119	23 Sa	0458	4.0	122	8 Sa	0417	3.8	117	23 Su	0403	4.0	123
	0920	3.2	97		0948	2.9	89		1022	2.2	67		1050	1.4	42		1002	1.2	38		1027	0.6	18
	1432	4.5	138		1515	4.7	143		1558	4.5	137		1647	4.2	128		1600	4.3	131		1646	3.9	120
	2203	0.0	1		2233	-0.2	-6		2251	0.2	6		2306	0.8	25		2223	0.7	21		2234	1.4	43
9 W	0524	4.0	121	24 Th	0532	4.0	121	9 Sa	0529	4.0	121	24 Su	0516	4.1	125	9 Su	0433	4.0	121	24 M	0422	4.1	126
	0957	3.0	92		1029	2.6	78		1058	1.8	56		1124	1.1	34		1036	0.8	24		1057	0.4	13
	1513	4.6	141		1603	4.6	141		1641	4.4	134		1726	4.0	121		1645	4.2	129		1723	3.8	115
	2237	0.0	0		2307	0.1	2		2320	0.5	15		2330	1.2	36		2251	1.1	33		2258	1.7	52
10 Th	0550	4.0	121	25 F	0551	4.0	122	10 Su	0547	4.0	123	25 M	0534	4.2	128	10 M	0450	4.1	125	25 Tu	0443	4.2	128
	1034	2.9	87		1108	2.2	68		1135	1.5	45		1158	1.0	30		1113	0.4	13		1128	0.4	11
	1554	4.6	141		1646	4.4	135		1726	4.2	128		1805	3.7	112		1731	4.0	123		1801	3.6	109
	2310	0.1	2		2337	0.4	12		2346	0.9	28		2352	1.5	47		2316	1.5	46		2320	2.0	61
11 F	0615	4.0	121	26 Sa	0610	4.1	124	11 M	0604	4.1	125	26 Tu	0554	4.2	129	11 Tu	0509	4.2	129	26 W	0504	4.2	128
	1111	2.7	81		1148	2.0	60		1214	1.2	37		1233	1.0	29		1152	0.2	6		1200	0.4	12
	1635	4.5	138		1728	4.2	127		1813	3.9	119		1846	3.3	102		1820	3.7	113		1841	3.3	102
	2341	0.3	8																				
12 Sa	0639	4.0	121	27 Su	0003	0.8	25	12 Tu	0010	1.4	43	27 W	0010	1.9	58	12 W	0529	4.3	132	27 Th	0527	4.1	126
	1151	2.5	75		0630	4.1	126		0623	4.2	128		0615	4.2	128		1235	0.2	5		1235	0.5	16
	1718	4.3	132		1228	1.8	54		1258	1.0	30		1311	1.0	31		1914	3.3	101		1926	3.1	94
					1811	3.8	116		1906	3.5	106		1933	3.0	92		2353	2.3	71		2355	2.4	74
13 Su	0012	0.6	18	28 M	0027	1.2	38	13 W	0030	1.9	58	28 Th	0023	2.2	68	13 Th	0553	4.4	133	28 F	0551	4.0	123
	0701	4.0	122		0650	4.2	128		0642	4.3	130		0638	4.1	126		1325	0.3	9		1315	0.7	22
	1234	2.2	67		1311	1.7	51		1349	0.9	27		1357	1.1	34		2026	2.9	89		2030	2.8	86
	1805	4.0	122		1856	3.4	104		2012	3.1	93		2041	2.7	83		2357	2.6	79		2359	2.6	80
14 M	0041	1.0	31	29 Tu	0048	1.7	52	14 Th	0042	2.3	71	29 F	0018	2.5	76	14 F	0619	4.3	131	29 Sa	0617	3.9	118
	0722	4.0	123		0713	4.2	128		0706	4.3	131		0703	4.0	122		1429	0.5	16		1408	1.0	29
	1323	2.0	60		1400	1.6	49		1455	0.9	27		1502	1.2	38								
	1900	3.6	111		1951	3.0	92		O	2218	2.7		83	O				O					
15 Tu	0109	1.5	47	30 W	0105	2.1	64	15 F	0012	2.7	82	15 Sa	0651	4.1	125	15 Sa	0651	4.1	125	30 Su	0648	3.7	112
	0743	4.1	124		0738	4.2	127		0734	4.2	129		1601	0.7	22		1601	0.7	22		1529	1.1	34
	1422	1.7	52		1501	1.6	48		1626	0.8	25												
	2010	3.2	99		O	2117	2.7		83														
31 Th	0106	2.5	76		0106	2.5	76													0734	3.4	104	
	0806	4.1	125			0806	4.1		125														
	1621	1.5	45		1621	1.5	45																

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Kamaisi, Japan, 2008

Times and Heights of High and Low Waters

April						May						June																
Time			Height			Time			Height			Time			Height			Time			Height							
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm				
1 Tu	0229	3.1	96		16 W	0129	3.3	100		1 Th	0042	3.3	101		16 F	0023	3.7	113		1 Su	0002	4.0	121		16 M	0026	4.2	128
	0600	3.0	92			0710	2.2	67			0630	2.2	67			0720	1.3	40			0722	0.6	19			0811	0.7	21
	0948	3.2	97			1246	3.2	99			1149	3.1	95			1351	3.3	100			1428	3.7	112			1541	3.8	115
	1831	1.0	30			1909	1.2	37			1821	1.4	43			1855	2.2	66			1903	2.8	86			1952	3.2	97
2 W	0220	3.3	100		17 Th	0147	3.4	105		2 F	0103	3.5	106		17 Sa	0054	3.9	118		2 M	0038	4.2	128		17 Tu	0110	4.3	131
	0714	2.6	80			0752	1.6	50			0714	1.6	49			0759	0.9	27			0809	0.1	2			0850	0.5	14
	1208	3.2	99			1353	3.4	105			1316	3.4	103			1446	3.5	107			1531	3.9	119			1619	3.9	120
	1924	0.9	26			1952	1.3	41			1912	1.6	49			1942	2.3	71			1954	3.1	94			2041	3.2	98
3 Th	0229	3.4	104		18 F	0206	3.6	111		3 Sa	0124	3.6	111		18 Su	0124	4.0	122		3 Tu	0118	4.5	136		18 W	0153	4.4	134
	0753	2.1	64			0827	1.1	35			0754	0.9	28			0834	0.5	16			0857	-0.4	-11			0927	0.3	10
	1325	3.5	108			1443	3.6	111			1420	3.7	112			1531	3.7	112			1626	4.0	123			1654	4.0	122
	2006	0.9	26			2029	1.5	46			1957	1.9	57			2024	2.5	76			2041	3.3	100			2123	3.2	97
4 F	0242	3.5	108		19 Sa	0227	3.8	117		4 Su	0147	3.9	118		19 M	0155	4.1	126		4 W	0201	4.7	142		19 Th	0233	4.5	137
	0827	1.5	46			0900	0.7	21			0833	0.3	9			0908	0.3	8			0945	-0.6	-18			1003	0.3	8
	1423	3.8	116			1527	3.7	114			1516	3.9	119			1612	3.8	116			1718	4.0	123			1727	4.0	122
	2044	1.0	29			2102	1.7	51			2037	2.2	66			2103	2.6	80			2125	3.3	102			2200	3.1	96
5 Sa	0257	3.7	113		20 Su	0248	4.0	121		5 M	0212	4.1	125		20 Tu	0225	4.2	129		5 Th	0246	4.8	146		20 F	0311	4.6	139
	0901	0.9	28			0931	0.4	11			0913	-0.3	-8			0941	0.1	3			1032	-0.6	-19			1038	0.3	8
	1514	4.0	123			1608	3.8	116			1609	4.0	122			1651	3.8	117			1807	4.0	121			1759	4.0	122
	2118	1.2	36			2134	1.9	58			2113	2.5	75			2139	2.8	84			2209	3.3	101			2236	3.1	94
6 Su	0315	3.9	118		21 M	0310	4.1	125		6 Tu	0240	4.4	133		21 W	0256	4.3	131		6 F	0333	4.8	147		21 Sa	0349	4.6	139
	0937	0.3	10			1002	0.1	4			0955	-0.6	-19			1014	0.0	1			1119	-0.4	-13			1113	0.3	10
	1602	4.1	125			1646	3.8	116			1702	4.0	121			1728	3.8	116			1850	3.8	117			1830	4.0	121
	2149	1.5	46			2203	2.1	64			2146	2.7	83			2211	2.8	86			2255	3.2	97			2312	3.0	92
7 M	0334	4.1	124		22 Tu	0334	4.2	127		7 W	0311	4.6	139		22 Th	0327	4.3	132		7 Sa	0422	4.7	144		22 Su	0427	4.5	137
	1014	-0.1	-4			1033	0.0	1			1039	-0.8	-23			1048	0.1	2			1205	-0.1	-3			1146	0.5	15
	1650	4.1	124			1724	3.7	114			1755	3.8	117			1805	3.7	114			1928	3.7	114			1901	3.9	120
	2218	1.9	58			2231	2.3	70			2218	2.9	89			2242	2.9	87			2345	3.0	92			2351	2.9	89
8 Tu	0356	4.3	130		23 W	0358	4.2	129		8 Th	0346	4.7	142		23 F	0359	4.3	132		8 Su	0513	4.5	136		23 M	0507	4.4	133
	1053	-0.4	-12			1104	0.0	1			1124	-0.7	-20			1123	0.2	5			1248	0.3	10			1220	0.7	21
	1740	3.9	118			1802	3.6	109			1850	3.6	110			1844	3.6	111			2002	3.7	113			1929	3.9	120
	2244	2.3	69			2256	2.5	75			2250	3.0	91			2314	2.9	88										
9 W	0420	4.4	135		24 Th	0424	4.2	128		9 F	0423	4.6	140		24 Sa	0432	4.3	130		9 M	0042	2.9	87		24 Tu	0035	2.8	85
	1134	-0.5	-14			1136	0.1	4			1212	-0.4	-11			1158	0.3	10			0607	4.1	125			0551	4.1	126
	1832	3.6	109			1842	3.4	104			1948	3.4	104			1925	3.5	108			1331	0.8	25			1253	1.0	30
	2307	2.5	77			2321	2.6	79			2327	3.0	92			2349	2.9	89			2033	3.7	113			1957	3.9	120
10 Th	0447	4.5	137		25 F	0451	4.1	126		10 Sa	0505	4.4	134		25 Su	0506	4.1	126		10 Tu	0149	2.7	81		25 W	0125	2.6	80
	1220	-0.3	-10			1211	0.3	9			1303	0.0	1			1236	0.5	16			0710	3.7	112			0644	3.9	118
	1932	3.2	99			1928	3.2	99			2048	3.3	100			2009	3.5	106			1412	1.3	41			1328	1.4	42
	2326	2.7	83			2344	2.7	82											2104		3.8	115		2024		4.0	121	
11 F	0518	4.4	134		26 Sa	0519	4.0	123		11 Su	0016	3.0	91		26 M	0032	2.9	89		11 W	0309	2.4	73		26 Th	0226	2.4	73
	1311	0.0	0			1250	0.5	16			0553	4.1	124			0545	3.9	120			0829	3.3	100			0750	3.6	109
	2055	3.0	91			2028	3.1	94			1357	0.5	16			1316	0.8	24			1455	1.8	55			1406	1.8	56
	2339	2.9	87								2145	3.2	98			2054	3.5	106			2137	3.9	118			2051	4.0	123
12 Sa	0553	4.2	127		27 Su	0010	2.8	86		12 M	0132	2.9	89		27 Tu	0131	2.9	88		12 Th	0433	2.1	64		27 F	0336	2.1	63
	1414	0.4	12			0550	3.8	117			0653	3.6	111			0634	3.7	112			1021	3.0	92			0920	3.3	101
						1338	0.8	24			1458	1.0	30			1403	1.0	32			1545	2.3	69			1448	2.3	71
						2154	3.0	92			2234	3.2	99			2138	3.5	106			2214	4.0	121			2121	4.1	125
13 Su	0636	3.8	117		28 M	0050	2.9	89		13 Tu	0331	2.7	83		28 W	0255	2.8	84		13 F	0546	1.7	52		28 Sa	0448	1.6	49
	1535	0.8	23			0629	3.6	110			0828	3.2	98			0745	3.4	103			1229	3.1	94			1125	3.2	99
						1439	1.0	31			1603	1.4	42			1457	1.4	43			1644	2.6	80			1538	2.8	86
						2330	3.1	94			2315	3.4	103			2218	3.5	108			2255	4.1	124			2157	4.2	129
14 M	0752	3.4	103		29 Tu	0246	3.0	91		14 W	0524	2.3	71		29 Th	0426	2.4	73		14 Sa	0643	1.3	40		29 Su	0556	1.1	34
	1704	1.0	30			0731	3.3	100			1047	3.0	91			0930	3.1	95			1358	3.3	101			1338	3.5	106
						1559	1.2	36			1706	1.7	51			1600	1.8	54			1749	2.9	88			1644	3.3	100
											2350	3.5	108			2254	3.6	111			2340	4.1	126			2243	4.4	133
15 Tu	0116	3.1	95		30 W	0016	3.2	97		15 Th	0632	1.8	55		30 F	0537	1.9	57		15 Su	0729	1.0	30		30 M	0659	0.6	19
	0601	2.7	83			0520	2.7	83			1239	3.1	94			1133	3.1	96			1456	3.6	109			1504	3.8	115
	1050	3.1	95			0938	3.1	93			1804	1.9	59			1705	2.1	65			1854	3.1	94			1803	3.6	110
	1816	1.1	34			1717	1.3	40								2327	3.8	115								2341	4.5	138
																			</									

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Kamaisi, Japan, 2008

Times and Heights of High and Low Waters

July				August				September															
Time		Height		Time		Height		Time		Height		Time		Height									
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm								
1 Tu	0757	0.2	6	16 W	0040	4.4	133	1 F	0200	4.9	150	16 Sa	0220	4.7	143	1 M	0352	4.9	150	16 Tu	0343	4.8	146
	1600	4.0	122		0837	0.8	24		0934	0.2	6		0932	0.8	24		1020	1.2	37		0959	1.5	45
	1921	3.7	114		1618	4.1	124		1650	4.3	130		1629	4.3	132		1632	4.6	139		1607	4.6	140
					2030	3.5	107		2127	3.2	99		2134	2.9	88		2230	1.8	54		2216	1.3	41
2 W	0045	4.7	143	17 Th	0136	4.5	137	2 Sa	0258	5.0	153	17 Su	0304	4.8	147	2 Tu	0435	4.8	146	17 W	0427	4.8	145
	0851	−0.1	−4		0916	0.6	19		1015	0.3	9		1003	0.8	24		1047	1.5	47		1027	1.8	56
	1644	4.1	126		1644	4.2	127		1709	4.3	131		1647	4.4	134		1650	4.7	143		1624	4.7	144
	2029	3.7	113		2113	3.4	103		2209	2.9	87		2208	2.6	78		2305	1.5	45		2251	1.0	30
3 Th	0148	4.9	148	18 F	0224	4.6	141	3 Su	0349	5.1	154	18 M	0346	4.9	149	3 W	0516	4.6	139	18 Th	0511	4.6	141
	0941	−0.3	−8		0952	0.5	16		1050	0.6	17		1032	0.9	28		1112	1.9	59		1052	2.2	68
	1720	4.2	127		1709	4.2	128		1728	4.4	133		1705	4.5	136		1709	4.8	146		1643	4.9	148
	2124	3.5	108		2150	3.2	98		2250	2.5	76		2241	2.2	68		2340	1.3	41		2328	0.8	23
4 F	0246	5.0	152	19 Sa	0307	4.8	145	4 M	0436	4.9	149	19 Tu	0428	4.8	147	4 Th	0557	4.3	130	19 F	0558	4.4	133
	1028	−0.2	−7		1026	0.5	15		1121	0.9	28		1100	1.2	36		1135	2.3	70		1114	2.6	80
	1751	4.2	127		1732	4.2	129		1747	4.5	136		1722	4.5	138		1730	4.9	148		1703	5.0	151
	2213	3.3	100		2226	3.0	92		2330	2.2	66		2316	1.9	58								
5 Sa	0340	5.0	152	20 Su	0348	4.8	146	5 Tu	0521	4.7	142	20 W	0511	4.7	143	5 F	0016	1.3	41	20 Sa	0009	0.7	21
	1110	0.0	0		1057	0.6	18		1149	1.3	41		1126	1.6	48		0640	4.0	121		0651	4.0	122
	1818	4.1	126		1755	4.3	130		1806	4.6	139		1739	4.6	141		1154	2.7	81		1132	3.0	91
	2300	3.0	92		2302	2.8	86						2353	1.6	49		1752	4.8	147		1726	5.0	152
6 Su	0432	4.9	148	21 M	0428	4.7	144	6 W	0011	2.0	60	21 Th	0556	4.5	136	6 Sa	0055	1.4	43	21 Su	0056	0.8	24
	1149	0.4	11		1127	0.8	23		0606	4.3	131		1150	2.0	61		0730	3.7	112		0758	3.6	111
	1842	4.1	126		1817	4.3	131		1214	1.8	55		1757	4.7	144		1209	3.0	90		1140	3.2	99
	2347	2.7	83		2338	2.6	79		1827	4.7	142						1816	4.7	144		1753	4.9	150
7 M	0522	4.6	140	22 Tu	0510	4.6	140	7 Th	0053	1.8	56	22 F	0033	1.4	43	7 Su	0141	1.6	48	22 M	0156	1.0	31
	1223	0.8	24		0653	3.9	120		0646	4.1	126		0843	3.4	103		1824	4.8	145				
	1905	4.2	127		1236	2.3	69		1211	2.5	75		1208	3.2	98		1842	4.6	140				
					1849	4.7	143		1817	4.8	146		1842	4.6	140								
8 Tu	0035	2.5	76	23 W	0018	2.4	72	8 F	0140	1.8	55	23 Sa	0120	1.3	40	8 M	0243	1.8	54	23 Tu	0320	1.3	39
	0612	4.2	129		0555	4.4	133		0749	3.6	109		0747	3.7	114		1914	4.4	134		1907	4.4	135
	1254	1.3	39		1224	1.4	43		1255	2.7	81		1226	2.9	88								
	1928	4.3	130		1857	4.4	133		1914	4.7	142		1840	4.8	147								
9 W	0128	2.3	70	24 Th	0101	2.1	65	9 Sa	0235	1.8	56	24 Su	0218	1.3	40	9 Tu	0417	1.9	57	24 W	0504	1.4	42
	0706	3.8	117		0910	3.3	100		0921	3.4	103		2002	4.2	127		2110	4.1	124				
	1323	1.8	55		1304	3.0	92		1222	3.2	99		1807	3.8	116								
	1953	4.3	132		1918	4.4	135		1943	4.6	139		1907	4.8	146		2208	4.0	121		1901	3.4	105
10 Th	0227	2.1	65	25 F	0151	1.9	58	10 Su	0347	1.8	56	25 M	0339	1.3	41	10 W	0557	1.7	53	25 Th	0628	1.3	40
	0811	3.4	105		0748	3.7	114		2018	4.4	135		1944	4.7	142		1511	3.9	118		1429	3.9	119
	1351	2.3	69		1316	2.4	72								1807		3.8	116	1901		3.4	105	
	2020	4.4	133		1940	4.5	137								2208		4.0	121					
11 F	0335	2.0	60	26 Sa	0252	1.7	51	11 M	0516	1.8	54	26 Tu	0519	1.3	39	11 Th	0704	1.5	47	26 F	0005	4.1	124
	0946	3.1	96		0912	3.4	104		2113	4.3	131		2056	4.5	136		1500	4.0	122		0725	1.3	39
	1421	2.7	83		1337	2.9	87								1928		3.5	107	1432		4.0	123	
	2053	4.4	133		2007	4.6	139											1949	2.9		88		
12 Sa	0451	1.8	54	27 Su	0408	1.4	44	12 Tu	0636	1.6	48	27 W	0646	1.0	32	12 F	0013	4.1	124	27 Sa	0126	4.3	131
	1234	3.1	96		1540	3.9	118		1548	4.0	123		0750	1.3	40		0808	1.3	40				
	1458	3.1	95		1749	3.8	117		1824	4.0	121		1508	4.1	126		1445	4.2	128				
	2133	4.3	132		2249	4.2	128		2330	4.4	134		2007	3.1	96		2026	2.3	70				
13 Su	0602	1.5	47	28 M	0532	1.1	35	13 W	0735	1.3	40	28 Th	0748	0.9	26	13 Sa	0122	4.3	131	28 Su	0223	4.5	137
	1438	3.4	105		1540	4.0	123		1535	4.1	126		0827	1.2	36		0844	1.4	43				
	1622	3.4	104		1931	3.7	113		1953	3.6	109		1520	4.2	129		1500	4.4	133				
	2227	4.3	131								2040		2.7	83	2101		1.8	54					
14 M	0702	1.3	39	29 Tu	0649	0.8	25	14 Th	0024	4.3	131	29 F	0111	4.6	140	14 Su	0214	4.5	138	29 M	0310	4.6	141
	1520	3.7	114		0820	1.1	33		0836	0.7	22		0900	1.1	35		0916	1.6	50				
	1811	3.6	110		1555	4.2	127		1545	4.2	128		1535	4.4	133		1518	4.5	138				
	2334	4.3	131		2022	3.5	106		2039	3.1	94		2111	2.3	69		2134	1.3	41				
15 Tu	0753	1.0	31	30 W	0754	0.5	15	15 F	0130	4.5	137	30 Sa	0215	4.8	146	15 M	0259	4.7	144	30 Tu	0352	4.6	141
	1550	3.9	120		1612	4.1	126		0916	0.8	23		0930	1.2	38		0945	1.9	58				
	1933	3.6	110		1930	3.9	119		1559	4.3	131		1550	4.5	136		1536	4.7	143				
									2100	3.2	97		2118	2.6	79		2143	1.8	54		2207	1.0	31
				31 Th	0047	4.7	144					31 Su	0306	4.9	150								
					0848	0.3	8						0950	0.9	28								
					1630	4.2	129						1615	4.4	135								
					2038	3.6	111						2155	2.1	65								

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Yokohama, Japan, 2008

Times and Heights of High and Low Waters

January						February						March																	
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height											
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm										
1 Tu	0348	2.7	82		16 W O	0324	2.6	80		1 F	0133	3.9	119		16 Sa	1004	4.8	147		1 Sa	0018	3.8	117		16 Su	0354	4.4	135	
	1009	5.2	159			0941	5.3	163			0341	3.8	117			1946	1.1	34			0231	3.8	116			0743	4.4	133	
	1758	2.6	78			1659	1.9	59			1014	4.9	149								0907	4.7	144			0932	4.4	134	
						2340	4.3	130			1941	1.9	58							1836	2.1	65			1933	1.3	40		
2 W	0002	4.0	122		17 Th	0407	3.4	103		2 Sa	0347	4.3	131		17 Su	0420	4.8	146		2 Su	0401	4.3	130		17 M	0343	4.8	146	
	0429	3.3	100			1017	5.2	159			0708	4.2	128			0842	4.3	130			0713	4.2	129			0851	3.8	115	
	1046	5.2	157			1835	1.5	46			1136	4.7	143			1251	4.7	142			1033	4.4	134			1341	4.4	135	
	1920	2.1	64								2038	1.5	45			2052	0.7	20			2006	1.7	53			2036	1.0	30	
3 Th	0156	4.2	127		18 F	0149	4.4	133		3 Su	0419	4.7	144		18 M	0440	5.2	158		3 M	0358	4.7	142		18 Tu	0401	5.1	155	
	0546	3.8	115			0522	4.0	123			0854	4.0	121			0934	3.7	114			0851	3.8	117			0922	3.1	94	
	1142	5.1	154			1114	5.1	155			1327	4.8	145			1443	5.1	154			1301	4.4	134			1452	5.0	151	
	2013	1.6	49			1952	1.0	29			2121	1.0	32			2143	0.2	7			2056	1.3	39			2123	0.8	23	
4 F	0316	4.5	138		19 Sa	0342	4.8	146		4 M	0447	5.1	155		19 Tu	0503	5.5	167		4 Tu	0419	5.0	153		19 W	0422	5.3	163	
	0744	3.9	120			0759	4.3	130			0940	3.6	111			1010	3.2	97			0927	3.4	103			0951	2.4	73	
	1254	5.1	154			1249	5.1	155			1441	5.1	155			1540	5.5	168			1433	4.8	146			1539	5.4	165	
	2055	1.2	36			2053	0.4	12			2200	0.7	20			2226	0.0	-1			2136	0.9	26			2202	0.6	19	
5 Sa	0411	4.9	150		20 Su	0440	5.2	160		5 Tu	0513	5.4	165		20 W	0526	5.7	174		5 W	0441	5.3	163		20 Th	0442	5.5	169	
	0856	3.9	118			0921	4.1	124			1016	3.3	100			1044	2.6	79			0958	2.9	87			1021	1.8	54	
	1401	5.2	158			1422	5.3	162			1530	5.4	166			1624	5.9	179			1524	5.3	161			1619	5.7	175	
	2134	0.8	25			2146	-0.1	-3			2235	0.3	9			2304	-0.1	-3			2212	0.5	16			2237	0.7	21	
6 Su	0451	5.2	160		21 M	0519	5.6	171		6 W	0539	5.7	173		21 Th O	0547	5.9	179		6 Th	0504	5.6	171		21 F	0501	5.7	174	
	0945	3.7	112			1013	3.7	114			1049	2.9	89			1115	2.1	63			1028	2.3	70			1050	1.2	37	
	1453	5.4	165			1527	5.6	172			1612	5.8	176			1704	6.1	185			1608	5.7	175			1656	5.9	180	
	2210	0.5	16			2234	-0.4	-12			2309	0.1	2			2337	0.0	1			2246	0.4	11			2308	0.9	27	
7 M	0526	5.5	168		22 Tu O	0552	5.8	178		7 Th ●	0605	5.9	179		22 F	0608	6.0	182		7 F	0527	5.8	178		22 Sa O	0519	5.8	178	
	1025	3.5	106			1055	3.3	102			1121	2.6	78			1146	1.7	51			1059	1.7	52			1118	0.8	25	
	1536	5.6	172			1618	5.9	181			1651	6.0	183			1741	6.1	185			1650	6.1	185			1733	5.9	181	
	2245	0.3	8			2318	-0.5	-16			2342	0.0	0							2320	0.4	11			2337	1.2	36		
8 Tu ●	0557	5.7	174		23 W	0622	6.0	183		8 F	0630	6.0	182		23 Sa	0007	0.3	10		8 Sa ●	0549	6.0	182		23 Su	0537	5.9	180	
	1100	3.3	101			1133	3.0	90			1153	2.2	67			0626	6.0	183			1130	1.1	35			1145	0.6	17	
	1614	5.8	178			1703	6.1	186			1731	6.1	187			1215	1.3	41			1732	6.2	190			1809	5.9	179	
	2319	0.1	3			2358	-0.4	-13							1817	5.9	181			2353	0.6	18							
9 W	0628	5.8	178		24 Th	0648	6.0	184		9 Sa	0014	0.1	3		24 Su	0035	0.8	24		9 Su	0611	6.0	183		24 M	0004	1.5	47	
	1134	3.1	96			1208	2.6	79			0653	6.0	184			0643	6.0	183			1203	0.7	22			0554	5.9	181	
	1650	6.0	183			1743	6.1	186			1226	1.9	57			1243	1.2	36			1816	6.2	190			1212	0.5	14	
	2353	0.0	1								1813	6.1	185			1853	5.6	172							1845	5.7	173		
10 Th	0657	5.9	181		25 F	0033	-0.2	-5		10 Su	0046	0.4	13		25 M	0059	1.3	39		10 M	0025	1.0	31		25 Tu	0030	1.9	59	
	1207	3.0	91			0712	6.0	184			0716	6.0	182			0700	5.9	181			0631	6.0	183			0612	5.9	180	
	1726	6.0	184			1242	2.3	71			1300	1.6	48			1310	1.1	35			1236	0.4	13			1238	0.5	16	
						1822	5.9	180			1858	5.9	179			1931	5.3	161			1902	6.0	183			1922	5.4	165	
11 F	0027	0.1	3		26 Sa	0104	0.3	9		11 M	0118	0.9	28		26 Tu	0123	1.8	56		11 Tu	0056	1.6	48		26 W	0054	2.3	71	
	0726	5.9	181			0733	6.0	182			0717	5.8	178			0717	5.8	178			0651	5.9	181			0632	5.8	177	
	1242	2.9	87			1314	2.2	66			1336	1.4	42			1339	1.2	38			1312	0.4	11			1305	0.7	22	
	1805	5.9	181			1901	5.6	170			1947	5.5	168			2013	4.9	149			1951	5.6	171			2001	5.1	155	
12 Sa	0102	0.3	9		27 Su	0132	0.9	26		12 Tu	0148	1.6	48		27 W	0145	2.4	72		12 W	0125	2.2	68		27 Th	0119	2.7	83	
	0754	5.9	179			0752	5.9	179			0756	5.7	175			0737	5.7	173			0710	5.8	177			0654	5.6	171	
	1319	2.7	82			1347	2.1	63			1416	1.3	40			1410	1.5	45			1351	0.5	15			1334	1.0	31	
	1847	5.7	174			1943	5.2	157			2043	5.0	153			2103	4.5	136			2045	5.1	155			2046	4.7	144	
13 Su	0136	0.7	20		28 M	0158	1.5	45		13 W	0217	2.3	70		28 Th	0207	2.9	87		13 Th	0152	2.9	88		28 F	0144	3.1	95	
	0821	5.7	175			0810	5.8	176			0816	5.6	170			0759	5.4	165			0728	5.6	170			0717	5.3	163	
	1359	2.5	77			1422	2.1	63			1504	1.4	42			1450	1.8	54			1439	0.9	26			1411	1.4	42	
	1938	5.3	163			2031	4.7	143			2150	4.5	138			2208	4.1	124			2150	4.6	139			2141	4.4	133	
14 M	0211	1.2	37		29 Tu	0222	2.1	64		14 Th O	0243	3.0	92		29 F O	0227	3.3	102		14 F O	0216	3.5	106		29 Sa	0211	3.5	106	
	0846	5.6	171			0830	5.6	171			0837	5.4	164			0827	5.1	155			0749	5.3	162			0744	5.0	153	
	1445	2.4	72			1502	2.1	65			1613	1.5	46			1557	2.1	63			1550	1.3	39			1506	1.8	54	
	2042	4.9	150			2132	4.2	129			2326	4.1	126							2336	4.1	126			2306	4.1	125		
15 Tu	0247	1.9	58		30 W O	0246	2.7	83		15 F	0306	3.7	113		15 Sa	0228	4.0	122		15 Sa	0228	4.0	122		30 Su O	0249	3.9	118	
	0912	5.5	167			0855	5.4	165			0906	5.1	156			0814	4.9	149			0814	4.9	149			0820	4.6	141	
	1542	2.2	66			1600	2.2	68			1805	1.5	45								1747	1.5	46				1643	2.0	62
	2201	4.5	138			2258	3.9	119																					
					31 Th	0311	3.3	101																					
						0927	5.2	158																					
						1757	2.2	67																					

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Kobe, Japan, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
1 Tu	h m 1238 2205 ft 3.5 1.8 cm 108 54	16 W O	h m 0025 0536 1215 2020 ft 2.9 2.4 3.7 1.3 cm 89 74 113 40	1 F	h m 0858 2232 ft 3.7 1.0 cm 112 31	16 Sa	h m 0719 2219 ft 4.0 0.4 cm 121 12	1 Sa	h m 0757 2143 ft 3.7 1.2 cm 114 36	16 Su	h m 0634 2159 ft 4.1 0.7 cm 126 21
2 W	1223 2236 3.5 1.4 108 42	17 Th	1246 2128 3.6 0.9 111 26	2 Sa	0826 2318 3.8 0.7 115 22	17 Su	0719 2313 4.1 0.1 126 3	2 Su	0717 2245 3.8 1.0 116 29	17 M	0645 1321 1538 2253 4.1 2.9 3.1 0.6 126 89 96 19
3 Th	1159 2307 3.6 1.0 110 32	18 F	0652 0844 1047 2229 3.6 3.6 3.6 0.4 111 11	3 Su	0718 2356 3.9 0.4 118 13	18 M	0725 1353 1636 2354 4.2 3.2 3.6 -0.2 127 99 110 -5	3 M	0635 2327 3.9 0.7 120 22	18 Tu	0638 1311 1637 2331 4.0 2.8 3.5 0.6 123 85 108 18
4 F	0817 2340 3.7 0.7 113 22	19 Sa	0716 2320 4.0 -0.1 123 -3	4 M	0714 1207 1450 4.0 3.3 3.4 123 100 104	19 Tu	0651 1200 1729 4.2 2.9 4.0 128 87 123	4 Tu	0640 1200 1635 2357 4.0 3.0 3.3 0.5 123 90 100 15	19 W	0604 1147 1722 4.1 2.4 3.9 124 72 120
5 Sa	0731 1139 1358 3.9 3.6 3.7 119 110 112	20 Su	0729 1136 1623 4.3 3.6 3.9 130 109 118	5 Tu	0027 0723 1219 1725 0.2 4.1 3.0 3.7 5 126 92 114	20 W	0029 0659 1228 1815 -0.3 4.3 2.4 4.4 -9 132 72 134	5 W	0644 1202 1721 4.1 2.6 3.8 125 79 115	20 Th	0002 0618 1211 1803 0.6 4.2 1.8 4.3 19 128 55 130
6 Su	0012 0731 1200 1536 0.4 4.1 3.5 3.8 13 125 106 115	21 M	0005 0720 1207 1727 -0.5 4.4 3.3 4.2 -15 135 101 127	6 W	0053 0735 1242 1811 -0.1 4.3 2.7 4.1 -2 130 81 126	21 Th O	0102 0722 1302 1856 -0.3 4.5 1.9 4.6 -8 136 59 140	6 Th	0022 0652 1223 1803 0.3 4.3 2.1 4.3 9 130 65 130	21 F	0032 0641 1243 1843 0.7 4.4 1.3 4.5 22 133 41 136
7 M	0044 0744 1224 1704 0.2 4.3 3.3 3.9 5 130 101 120	22 Tu O	0046 0732 1242 1819 -0.8 4.6 3.0 4.5 -23 139 90 136	7 Th ●	0118 0751 1313 1853 -0.2 4.4 2.3 4.4 -7 134 70 135	22 F	0134 0749 1338 1936 -0.1 4.5 1.6 4.6 -3 138 48 139	7 F	0046 0707 1252 1843 0.2 4.4 1.6 4.7 5 135 48 143	22 Sa O	0101 0707 1317 1922 0.9 4.4 1.0 4.5 28 135 29 138
8 Tu ●	0113 0803 1252 1802 -0.1 4.4 3.1 4.1 -2 133 94 126	23 W	0124 0758 1319 1905 -0.9 4.7 2.6 4.6 -26 142 80 140	8 F	0145 0813 1348 1935 -0.3 4.5 1.9 4.6 -9 138 59 141	23 Sa	0204 0817 1415 2014 0.3 4.5 1.3 4.4 8 137 41 133	8 Sa ●	0114 0730 1327 1925 0.2 4.6 1.0 5.0 5 141 32 151	23 Su	0130 0732 1352 2000 1.2 4.4 0.7 4.4 37 135 22 135
9 W	0141 0825 1326 1850 -0.2 4.5 2.9 4.3 -6 136 88 131	24 Th	0201 0828 1357 1948 -0.7 4.6 2.4 4.5 -22 141 72 138	9 Sa	0215 0839 1427 2018 -0.2 4.6 1.6 4.6 -6 140 49 140	24 Su	0232 0843 1454 2053 0.8 4.3 1.2 4.0 23 132 38 123	9 Su	0145 0756 1405 2008 0.4 4.7 0.6 5.0 11 144 18 151	24 M	0157 0755 1428 2040 1.6 4.3 0.6 4.2 49 132 19 129
10 Th	0210 0850 1403 1935 -0.3 4.5 2.7 4.4 -8 137 83 133	25 F	0236 0859 1438 2029 -0.4 4.5 2.2 4.3 -11 138 67 130	10 Su	0247 0908 1511 2103 0.1 4.5 1.4 4.4 4 138 42 133	25 M	0257 0906 1535 2134 1.3 4.1 1.2 3.6 40 126 37 110	10 M	0218 0825 1448 2054 0.8 4.7 0.3 4.7 24 143 10 144	25 Tu	0222 0814 1505 2123 2.0 4.2 0.7 3.9 61 128 20 120
11 F	0241 0920 1445 2020 -0.2 4.5 2.6 4.3 -6 136 79 130	26 Sa	0309 0931 1521 2109 0.2 4.3 2.1 3.8 6 132 64 117	11 M	0320 0939 1600 2152 0.7 4.4 1.2 4.0 21 133 37 121	26 Tu	0317 0923 1620 2220 1.9 3.9 1.2 3.2 57 120 38 98	11 Tu	0252 0853 1534 2145 1.4 4.5 0.2 4.3 44 137 7 130	26 W	0245 0827 1545 2213 2.4 4.0 0.8 3.6 74 123 23 111
12 Sa	0315 0953 1533 2107 0.0 4.4 2.5 4.0 1 134 76 123	27 Su	0337 1000 1611 2150 0.8 4.1 2.0 3.3 25 125 62 102	12 Tu	0353 1009 1657 2251 1.4 4.1 1.1 3.5 43 126 33 106	27 W	0329 0932 1715 2329 2.4 3.8 1.3 2.9 72 115 39 87	12 W	0324 0918 1629 2249 2.2 4.2 0.3 3.7 66 129 10 113	27 Th	0306 0835 1630 2336 2.8 3.9 0.9 3.3 86 118 28 102
13 Su	0349 1029 1629 2159 0.5 4.2 2.3 3.7 14 129 71 112	28 M	0359 1024 1717 2238 1.5 3.9 2.0 2.9 45 118 60 88	13 W	0422 1034 1806 2.2 3.9 1.0 30 67 118 30	28 Th	0302 0930 1822 2.8 3.7 1.3 40 85 112 40	13 Th	0349 0931 1734 2.9 4.0 0.5 15 88 121 15	28 F	0322 0824 1724 3.2 3.7 1.1 34 97 114 34
14 M	0426 1105 1740 2300 1.0 4.1 2.1 3.2 31 124 64 99	29 Tu	0406 1039 1906 2353 2.1 3.7 1.8 2.5 64 112 55 76	14 Th O	0018 0246 1039 1927 3.0 2.9 3.7 0.9 92 88 113 26	29 F O	0835 2001 3.6 1.3 111 40	14 F O	0807 1854 3.9 0.7 118 20	29 Sa	0725 1829 3.7 1.3 114 39
15 Tu	0502 1141 1903 1.7 3.9 1.8 52 118 54	30 W O	0130 1042 2027 2.5 3.6 1.5 75 110 47	15 F	0858 2059 3.8 0.7 115 20			15 Sa	0711 2034 4.0 0.8 122 23	30 Su O	0638 2023 3.8 1.4 116 42
		31 Th	1023 2136 3.6 1.3 110 39							31 M	0531 2154 3.9 1.3 120 40

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Kobe, Japan, 2008

Times and Heights of High and Low Waters

July					August					September																			
Time		Height			Time		Height			Time		Height			Time		Height												
1 Tu	h	m	ft	cm	16 W	h	m	ft	cm	1 F	h	m	ft	cm	16 Sa	h	m	ft	cm	1 M	h	m	ft	cm	16 Tu	h	m	ft	cm
	0358	4.8	145	0217		4.5	137	0020	4.0		121	0029	3.7	114		0117	2.5	77	0108		2.1	64							
	1140	0.5	14	1226		1.2	38	0557	5.4		166	0558	5.0	153		0717	5.8	176	0705		5.8	176							
	1855	5.2	160	1928		5.1	154	1301	0.3		9	1301	1.2	37		1342	1.5	45	1320		1.7	52							
	2343	4.2	127						172			1932	5.4	164			1953	5.6	172				1931	5.7	173				
2 W	0456	5.0	152		17 Th	0017	4.2	127		2 Sa	0058	3.6	109		17 Su	0058	3.3	102		2 Tu	0156	2.2	68		17 W	0144	1.6	50	
	1228	0.1	2			0439	4.6	140			0646	5.7	173			0638	5.3	163			0758	5.6	171			0747	5.8	178	
	1926	5.5	167			1259	1.1	33			1339	0.4	12			1326	1.2	36			1412	2.0	61			1352	2.0	62	
3 Th	0028	4.0	123		18 F	0044	3.9	120		3 Su	0137	3.2	99		18 M	0131	3.0	91		3 W	0236	2.1	64		18 Th	0224	1.3	41	
	0553	5.2	159			0554	4.8	146			0731	5.7	174			0718	5.5	169			0839	5.2	160			0832	5.7	174	
	1315	-0.2	-5			1329	1.0	29			1416	0.7	22			1353	1.2	38			1439	2.6	78			1425	2.6	78	
	2001	5.6	170			2010	5.2	160			2036	5.6	171			2017	5.6	171			2044	5.3	162			2027	5.6	170	
4 F	0111	3.8	117		19 Sa	0116	3.7	114		4 M	0219	3.0	92		19 Tu	0208	2.7	81		4 Th	0318	2.1	64		19 F	0309	1.2	37	
	0647	5.3	163			0642	5.0	152			0814	5.5	168			0800	5.6	171			0923	4.8	147			0922	5.3	163	
	1400	-0.1	-4			1358	0.9	28			1451	1.3	39			1424	1.5	46			1501	3.1	96			1459	3.2	97	
	2037	5.5	169			2034	5.3	161			2107	5.4	166			2044	5.6	171			2102	5.1	155			2053	5.3	163	
5 Sa	0154	3.7	112		20 Su	0151	3.5	107		5 Tu	0303	2.9	87		20 W	0249	2.4	73		5 F	0406	2.1	65		20 Sa	0401	1.2	38	
	0737	5.3	163			0726	5.1	156			0857	5.1	156			0843	5.5	167			1014	4.4	134			1022	4.9	149	
	1444	0.2	5			1427	1.0	30			1522	1.9	59			1456	2.0	60			1514	3.7	112			1529	3.9	118	
	2115	5.4	164			2101	5.3	162			2137	5.2	159			2113	5.5	168			2110	4.9	149			2110	5.1	154	
6 Su	0239	3.6	109		21 M	0230	3.4	103		6 W	0353	2.8	85		21 Th	0336	2.2	67		6 Sa	0505	2.2	67		21 Su	0505	1.4	42	
	0825	5.2	157			0809	5.1	156			0942	4.6	141			0931	5.2	158			2058	4.8	145			1207	4.4	135	
	1526	0.7	20			1457	1.2	36			1549	2.7	81			1530	2.6	79						1514		4.4	134		
	2154	5.2	157			2131	5.3	161			2203	5.0	152			2143	5.3	162						2001		4.9	148		
7 M	0329	3.5	106		22 Tu	0315	3.2	98		7 Th	0456	2.8	84		22 F	0430	2.1	63		7 Su	0617	2.3	69		22 M	0622	1.5	47	
	0913	4.8	146			0854	5.0	151			1034	4.1	126			1028	4.8	145			1943	4.8	146			1855	5.0	151	
	1606	1.3	41			1530	1.5	47			1604	3.3	101			1603	3.3	100											
	2232	4.9	150			2203	5.2	158			2220	4.8	146			2209	5.1	154			●			●					
8 Tu	0431	3.4	104		23 W	0407	3.1	94		8 F	0626	2.6	80		23 Sa	0534	2.0	60		8 M	0742	2.3	70		23 Tu	0752	1.6	50	
	1003	4.3	131			0943	4.7	144			2221	4.7	142			1145	4.3	132			1910	4.9	148			1751	5.1	156	
	1642	2.1	63			1605	2.0	62								1628	4.0	122											
	2309	4.7	143			2237	5.1	154								2225	4.9	148											
9 W	0716	3.2	97		24 Th	0509	2.9	88		9 Sa	0743	2.5	75		24 Su	0647	1.9	57		9 Tu	0912	2.2	68		24 W	0920	1.6	49	
	1102	3.8	116			1040	4.4	134			2150	4.7	143			2051	4.8	147			1820	5.0	151			1806	5.2	157	
	1710	2.8	85			1642	2.7	81			●					●													
	2340	4.5	137			2311	4.9	149																					
10 Th	0819	2.8	86		25 F	0620	2.6	79		10 Su	0852	2.3	70		25 M	0810	1.8	54		10 W	1017	2.1	63		25 Th	0049	3.9	120	
	1353	3.5	106			1153	4.1	125			2021	4.8	146			1832	5.0	153			1803	5.0	153			0305	4.1	125	
	1714	3.4	104			1721	3.3	102													1020	1.6	48			1020	1.6	48	
	2359	4.4	133			2343	4.7	144													1801	5.1	155			1801	5.1	155	
11 F	0908	2.5	76		26 Sa	0729	2.3	69		11 M	0956	2.1	65		26 Tu	0935	1.5	47		11 Th	1103	1.9	58		26 F	0028	3.7	114	
	2348	4.4	133			1517	4.0	122			1955	4.9	149			1840	5.2	159			1813	5.1	155			0410	4.5	137	
				●	1808	4.0	121													2349	3.9	120		1102	1.6	48			
12 Sa	0952	2.2	67		27 Su	0010	4.6	141		12 Tu	1048	1.9	58		27 W	1037	1.3	39		12 F	0425	4.3	130		27 Sa	0458	4.9	149	
	2310	4.5	136			0836	1.9	57			1852	5.0	151			1847	5.3	161			1136	1.8	54			1135	1.6	49	
						1806	4.5	138													1823	5.2	157			1135	1.6	49	
						1944	4.5	137													2351	3.6	110			1754	5.2	158	
13 Su	1032	1.9	59		28 M	0944	1.5	46		13 W	1131	1.7	52		28 Th	0118	4.4	134		13 Sa	0507	4.7	142		28 Su	0542	5.2	159	
	2031	4.6	139			1842	5.0	151			1849	5.1	155			0405	4.7	143			1201	1.6	50			1207	1.8	54	
											2354	4.3	132			1123	1.0	32			1832	5.2	160			1817	5.3	163	
																					1826	5.3	163						
14 M	1112	1.7	52		29 Tu	1045	1.1	33		14 Th	0152	4.4	135		29 F	0504	5.1	156		14 Su	0009	3.1	96		29 M	0022	2.2	66	
	1935	4.7	144			1859	5.2	159			1206	1.5	46			1202	0.9	28			0546	5.1	155			0623	5.4	165	
						2313	4.6	140			1901	5.2	158			1835	5.4	166			1225	1.6	48			1237	2.0	61	
																					1846	5.4	164			●	1843	5.4	165
15 Tu	1151	1.4	44		30 W	0342	4.8	145		15 F	0007	4.1	124		30 Sa	0006	3.5	106		15 M	0035	2.6	80		30 Tu	0057	1.7	53	
	1915	4.9	149			1135	0.7	21			0514	4.7	143			0552	5.5	168			0625	5.5	167			0704	5.5	167	
	2353	4.4	133			1856	5.4	164			1235	1.3	41			1237	1.0	29			1251	1.6	48			1307	2.3	70	
						2345	4.3	132			1916	5.3	161			1858	5.6	171			1907	5.6	170			1909	5.4	165	
				31 Th	0500	5.1	155																						
						1220	0.4	13																					
					1909	5.5	169																						
			</																										

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Sakate, Shodo Shima, Japan, 2008

Times and Heights of High and Low Waters

July				August				September															
Time		Height		Time		Height		Time		Height		Time		Height									
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm								
1 Tu	0354	3.7	113	16 W	0511	3.6	110	1 F	0524	4.0	122	16 Sa	0512	3.6	110	16 Tu	0456	2.6	79				
	0720	4.1	125		0830	3.9	119		0904	4.5	137		0934	4.6	140		1113	5.3	162	1050	5.6	171	
	1443	0.3	9		1526	1.0	30		1611	0.7	21		1612	1.4	43		1726	2.2	67	1703	2.3	70	
	2240	6.3	192		2317	6.0	183		2353	6.6	201		2328	6.2	189		2357	5.9	180	2305	5.6	171	
2 W	0449	3.8	116	17 Th	0534	3.7	113	2 Sa	0551	3.9	119	17 Su	0525	3.6	110	2 Tu	0605	2.8	85	17 W	0521	2.2	67
	0758	4.2	128		0848	4.0	122		0958	4.7	143		1005	4.8	146		1203	5.5	168		1135	5.8	177
	1528	0.1	3		1555	1.0	30		1656	0.9	27		1642	1.5	46		1809	2.6	79		1745	2.7	82
	2327	6.5	198		2343	6.0	183		2344	6.1	186		2344	6.1	186		2326	5.5	168				
3 Th	0535	4.0	122	18 F	0549	3.8	116	3 Su	0024	6.4	195	18 M	0543	3.4	104	3 W	0018	5.7	174	18 Th	0553	1.8	55
	0839	4.3	131		0911	4.2	128		0622	3.7	113		1045	5.1	155		0638	2.4	73		1228	6.0	183
	1613	0.1	3		1624	1.0	30		1056	4.9	149		1717	1.7	52		1258	5.6	171		1834	3.0	91
									1741	1.3	40						1857	3.0	91		2353	5.3	162
4 F	0012	6.5	198	19 Sa	0006	6.0	183	4 M	0054	6.2	189	19 Tu	0002	6.0	183	4 Th	0043	5.4	165	19 F	0633	1.4	43
	0617	4.0	122		0605	3.8	116		0656	3.4	104		0609	3.0	91		0715	2.1	64		1328	6.1	186
	0928	4.4	134		0948	4.4	134		1200	5.0	152		1135	5.3	162		1356	5.7	174		1932	3.4	104
	1701	0.2	6		1656	1.0	30		1828	1.8	55		1758	2.0	61		1952	3.3	101				
5 Sa	0056	6.4	195	20 Su	0028	6.0	183	5 Tu	0123	6.0	183	20 W	0026	5.9	180	5 F	0114	5.2	158	20 Sa	0025	5.0	152
	0701	3.9	119		0629	3.7	113		0735	3.0	91		0642	2.6	79		0758	1.9	58		0719	1.2	37
	1030	4.4	134		1036	4.5	137		1308	5.0	152		1231	5.5	168		1459	5.7	174		1436	6.0	183
	1752	0.5	15		1734	1.1	34		1919	2.3	70		1846	2.3	70		2055	3.6	110		2039	3.8	116
6 Su	0138	6.3	192	21 M	0053	6.1	186	6 W	0153	5.8	177	21 Th	0054	5.7	174	6 Sa	0150	4.9	149	21 Su	0059	4.8	146
	0746	3.7	113		0701	3.4	104		0816	2.5	76		0721	2.2	67		0846	1.8	55		0813	1.1	34
	1144	4.4	134		1134	4.6	140		1419	5.1	155		1333	5.6	171		1608	5.7	174		1557	6.0	183
	1846	0.9	27		1817	1.3	40		2014	2.7	82		1939	2.8	85		2209	3.8	116		2204	4.1	125
7 M	0217	6.2	189	22 Tu	0122	6.1	186	7 Th	0225	5.5	168	22 F	0125	5.5	168	7 Su	0232	4.5	137	22 M	0134	4.5	137
	0832	3.3	101		0738	3.0	91		0900	2.2	67		0804	1.8	55		0940	1.7	52		0916	1.2	37
	1308	4.3	131		1237	4.7	143		1531	5.2	158		1441	5.6	171		1727	5.7	174		1731	5.9	180
	1941	1.4	43		1905	1.5	46		2115	3.2	98		2039	3.2	98		2343	3.8	116		2343	3.8	116
8 Tu	0255	6.0	183	23 W	0154	6.0	183	8 F	0259	5.2	158	23 Sa	0158	5.2	158	8 M	0324	4.2	128	23 Tu	0007	4.1	125
	0917	2.8	85		0817	2.6	79		0947	1.9	58		0852	1.5	46		1045	1.8	55		0208	4.2	128
	1433	4.4	134		1343	4.8	146		1649	5.3	162		1559	5.7	174		1848	5.8	177		1033	1.3	40
	2039	1.9	58		1957	1.9	58		2227	3.5	107		2151	3.8	116				1904		6.0	183	
9 W	0331	5.7	174	24 Th	0226	5.8	177	9 Sa	0337	4.8	146	24 Su	0229	4.9	149	9 Tu	0131	3.7	113	24 W	1201	1.5	46
	1003	2.3	70		0859	2.2	67		1039	1.8	55		0947	1.4	43		0452	3.9	119		2015	6.2	189
	1559	4.5	137		1453	4.9	149		1813	5.4	165		1735	5.7	174		1158	1.8	55				
	2141	2.5	76		2053	2.4	73		2332	4.2	128		2332	4.2	128		1959	5.9	180				
10 Th	0408	5.3	162	25 F	0300	5.4	165	10 Su	0001	3.8	116	25 M	0301	4.5	137	10 W	0247	3.5	107	25 Th	0307	3.6	110
	1051	2.0	61		0944	1.8	55		0424	4.4	134		1055	1.4	43		0641	3.9	119		0646	3.9	119
	1728	4.6	140		1611	5.0	152		1139	1.7	52		1920	5.9	180		1308	1.7	52		1323	1.5	46
	2253	3.0	91		2159	3.0	91		1936	5.6	171						2054	6.1	186		2106	6.2	189
11 F	0449	4.9	149	26 Sa	0333	5.0	152	11 M	0155	3.8	116	26 Tu	1215	1.3	40	11 Th	0329	3.3	101	26 F	0334	3.3	101
	1142	1.7	52		1034	1.6	49		0534	4.1	125		2041	6.2	189		0755	4.0	122		0819	4.3	131
	1857	4.9	149		1745	5.2	158		1244	1.6	49				1405		1.7	52	1428		1.6	49	
					2325	3.6	110		2044	5.9	180				2135		6.2	189	2144		6.2	189	
12 Sa	0022	3.4	104	27 Su	0408	4.6	140	12 Tu	0324	3.6	110	27 W	0341	4.0	122	12 F	0356	3.2	98	27 Sa	0357	3.0	91
	0535	4.5	137		1132	1.3	40		0659	3.9	119		0544	4.1	125		0842	4.3	131		0919	4.7	143
	1236	1.5	46		1926	5.5	168		1344	1.5	46		1331	1.2	37		1449	1.6	49		1519	1.8	55
	2015	5.3	162				2136		6.1	186	2137		6.5	198	2205		6.2	189	2212		6.0	183	
13 Su	0204	3.6	110	28 M	0118	4.0	122	13 W	0413	3.5	107	28 Th	0410	3.9	119	13 Sa	0414	3.2	98	28 Su	0417	2.7	82
	0629	4.2	128		0449	4.3	131		0803	4.0	122		0741	4.2	128		0915	4.6	140		1004	5.1	155
	1328	1.3	40		1236	1.1	34		1433	1.4	43		1434	1.2	37		1524	1.7	52		1601	2.1	64
	2117	5.6	171		2049	6.0	183		2217	6.2	189		2218	6.6	201		2225	6.1	186		2231	5.8	177
14 M	0333	3.5	107	29 Tu	0310	4.0	122	14 Th	0442	3.5	107	29 F	0433	3.7	113	14 Su	0427	3.1	94	29 M	0436	2.4	73
	0723	3.9	119		0548	4.1	125		0843	4.1	125		0850	4.5	137		0943	4.9	149		1044	5.4	165
	1415	1.2	37		1339	0.9	27		1512	1.4	43		1524	1.2	37		1555	1.8	55		1638	2.5	76
	2205	5.9	180		2150	6.4	195		2248	6.3	192		2251	6.5	198		2239	5.9	180		2244	5.5	168
15 Tu	0433	3.5	107	30 W	0418	4.0	122	15 F	0500	3.6	110	30 Sa	0453	3.6	110	15 M	0439	2.9	88	30 Tu	0455	2.2	67
	0805	3.8	116		0703	4.2	128		0909	4.3	131		0941	4.9	149		1013	5.2	158		1121	5.6	171
	1454	1.1	34		1436	0.7	21		1543	1.4	43		1607	1.4	43		1627	2.0	61		1715	2.9	88
	2245	6.0	183		2237	6.6	201		2311	6.2	189		2317	6.4	195		2250	5.8	177		2254	5.2	158
				31 Th	0455	4.0	122					31 Su	0514	3.4	104								
					0808	4.3	131						1027	5.1	155								
				1526	0.6	18					1647	1.8	55										
				2318	6.7	204					2338	6.1	186										

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Sakate, Shodo Shima, Japan, 2008

Times and Heights of High and Low Waters

October					November					December																								
Time		Height			Time		Height			Time		Height			Time		Height																	
	h m	ft	cm			h m	ft	cm			h m	ft	cm			h m	ft	cm																
1 W	0518	1.9	58		16 Th	0441	1.1	34		1 Sa	0540	0.8	24		16 Su	0540	-0.2	-6		1 M	0557	0.2	6		16 Tu	0629	-0.4	-12						
	1200	5.7	174			1136	6.0	183			1316	5.6	171			1335	5.9	180			1344	5.3	162			1422	5.6	171						
	1754	3.2	98			1739	3.1	94			1924	3.5	107			1946	3.6	110			2003	3.0	91			2037	3.0	91						
	2309	5.0	152			2228	4.8	146			2306	4.0	122			2253	4.0	122			2329	3.5	107											
2 Th	0546	1.7	52		17 F	0515	0.7	21		2 Su	0623	0.8	24		17 M	0636	-0.1	-3		2 Tu	0645	0.3	9		17 W	0013	3.5	107		17 W	0013	3.5	107	
	1244	5.8	177			1229	6.1	186			1406	5.6	171			1440	5.8	177			1428	5.4	165			0728	0.0	0						
	1840	3.4	104			1832	3.5	107			2026	3.4	104			2102	3.5	107			2055	2.8	85			1510	5.4	165						
	2332	4.8	146			2255	4.7	143			2356	3.9	119			2352	3.8	116								2132	2.6	79						
3 F	0621	1.5	46		18 Sa	0559	0.5	15		3 M	0714	0.8	24		18 Tu	0738	0.2	6		3 W	0037	3.3	101		18 Th	0147	3.4	104		18 Th	0147	3.4	104	
	1334	5.8	177			1330	6.1	186			1501	5.6	171			1543	5.7	174			0738	0.4	12			0830	0.6	18						
	1935	3.6	110			1936	3.7	113			2132	3.2	98			2217	3.3	101			1513	5.3	162			1555	5.1	155						
						2330	4.5	137								2147	2.5	76			2147	2.5	76			2225	2.1	64						
4 Sa	0005	4.6	140		19 Su	0650	0.5	15		4 Tu	0057	3.6	110		19 W	0115	3.5	107		4 Th	0152	3.2	98		19 F	0330	3.3	101		19 F	0330	3.3	101	
	0704	1.4	43			1440	6.1	186			0810	0.9	27			0845	0.5	15			0833	0.6	18			0935	1.2	37						
	1430	5.8	177			2053	3.9	119			1559	5.6	171			1643	5.5	168			1558	5.2	158			1639	4.8	146						
	2040	3.6	110						2240		3.0	91		2324		2.9	88		2238		2.2	67		2319		1.6	49							
5 Su	0046	4.4	134		20 M	0010	4.3	131		5 W	0212	3.4	104		20 Th	0312	3.3	101		5 F	0312	3.2	98		20 Sa	0518	3.4	104		20 Sa	0518	3.4	104	
	0753	1.4	43			0750	0.6	18			0911	1.1	34			0958	1.0	30			0931	1.0	30			1049	1.8	55						
	1533	5.8	177			1557	5.9	180			1658	5.5	168			1740	5.3	162			1644	5.0	152			1725	4.4	134						
	2154	3.6	110			2227	3.9	119			2345	2.8	85						2328		1.9	58												
6 M	0136	4.1	125		21 Tu	0100	4.0	122		6 Th	0343	3.3	101		21 F	0023	2.4	73		6 Sa	0442	3.2	98		21 Su	0012	1.2	37		21 Su	0012	1.2	37	
	0850	1.4	43			0858	0.8	24			1017	1.3	40			0526	3.4	104			1036	1.4	43			0700	3.8	116						
	1642	5.7	174			1716	5.9	180			1755	5.4	165			1119	1.6	49			1729	4.7	143			1218	2.3	70						
	2319	3.5	107											1834		5.1	155							1813		4.0	122							
7 Tu	0240	3.8	116		22 W	0013	3.6	110		7 F	0042	2.5	76		22 Sa	0115	1.9	58		7 Su	0015	1.5	46		22 M	0105	0.8	24		22 M	0105	0.8	24	
	0955	1.5	46			0219	3.7	113			0527	3.3	101			0716	3.7	113			0615	3.5	107			0822	4.2	128						
	1755	5.7	174			1017	1.2	37			1128	1.5	46			1244	2.0	61			1150	1.8	55			1355	2.6	79						
						1830	5.8	177			1848	5.3	162			1922	4.8	146			1813	4.4	134			1902	3.6	110						
8 W	0046	3.4	104		23 Th	0128	3.3	101		8 Sa	0128	2.2	67		23 Su	0159	1.4	43		8 M	0058	1.1	34		23 Tu	0152	0.5	15		23 Tu	0152	0.5	15	
	0417	3.6	110			0503	3.5	107			0657	3.6	110			0835	4.3	131			0736	3.9	119			0925	4.7	143						
	1108	1.7	52			1143	1.5	46			1238	1.8	55			1404	2.3	70			1309	2.2	67			1521	2.6	79						
	1902	5.8	177			1932	5.7	174			1932	5.1	155			2003	4.5	137			1852	4.1	125			1946	3.4	104						
9 Th	0151	3.1	94		24 F	0213	2.8	85		9 Su	0203	1.9	58		24 M	0235	1.0	30		9 Tu	0136	0.7	21		24 W	0232	0.3	9		24 W	0232	0.3	9	
	0610	3.7	113			0715	3.8	116			0804	4.1	125			0933	4.7	143			0840	4.5	137			1013	5.0	152						
	1222	1.7	52			1307	1.8	55			1343	2.0	61			1512	2.6	79			1422	2.4	73			1625	2.7	82						
	1958	5.8	177			2020	5.6	171			2006	4.9	149			2034	4.2	128			1924	3.8	116			2019	3.2	98						
10 F	0234	2.9	88		25 Sa	0248	2.4	73		10 M	0231	1.5	46		25 Tu	0305	0.7	21		10 W	0211	0.3	9		25 Th	0306	0.1	3		25 Th	0306	0.1	3	
	0732	3.9	119			0835	4.3	131			0854	4.6	140			1019	5.1	155			0931	5.0	152			1052	5.1	155						
	1326	1.8	55			1417	2.0	61			1438	2.2	67			1606	2.8	85			1524	2.6	79			1711	2.7	82						
	2040	5.8	177			2057	5.4	165			2030	4.7	143			2054	3.9	119			1949	3.6	110			2037	3.1	94						
11 Sa	0303	2.6	79		26 Su	0317	2.0	61		11 Tu	0254	1.1	34		26 W	0330	0.5	15		11 Th	0244	-0.1	-3		26 F	0334	0.1	3		26 F	0334	0.1	3	
	0827	4.3	131			0931	4.8	146			0936	5.1	155			1056	5.3	162			1017	5.4	165			1124	5.2	158						
	1418	1.8	55			1513	2.3	70			1526	2.4	73			1649	3.0	91			1617	2.8	85			1741	2.8	85						
	2110	5.7	174			2124	5.1	155			2046	4.4	134			2102	3.7	113			2012	3.6	110			2047	3.1	94						
12 Su	0324	2.4	73		27 M	0341	1.6	49		12 W	0316	0.7	21		27 Th	0351	0.4	12		12 F	0320	-0.4	-12		27 Sa	0400	0.0	0		27 Sa	0400	0.0	0	
	0908	4.7	143			1016	5.2	158			1015	5.5	168			1128	5.3	162			1102	5.7	174			1152	5.1	155						
	1501	1.9	58			1558	2.6	79			1610	2.7	82			1724	3.1	94			1704	3.1	94			1802	2.9	88						
	2131	5.5	168			2141	4.8	146			2059	4.3	131			2105	3.6	110			2037	3.7	113			2104	3.2	98						
13 M	0340	2.2	67																															

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

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Times and Heights of High and Low Waters

April					May					June																			
Time		Height			Time		Height			Time		Height			Time		Height												
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm										
1 Tu	0640	8.7	266		16 W	0049	2.7	83		1 Th	0624	9.5	291		16 F	0105	3.8	115		1 Su	0114	3.8	116		16 M	0213	5.1	154	
	1301	5.0	151			0719	9.9	301			1246	3.5	108			0710	9.7	295			0705	10.1	307			0742	9.3	283	
	1817	7.4	225			1334	3.1	96			1843	8.9	272			1332	2.3	71			1333	1.1	35			1413	1.9	58	
2 W	0045	2.9	89		17 Th	0142	2.4	72		2 F	0056	2.9	87		17 Sa	0153	3.7	113		2 M	0209	3.7	113		17 Tu	0254	4.9	149	
	0728	9.4	288			0759	10.2	311			0712	10.0	306			0748	9.8	299			0753	10.3	313			0822	9.5	289	
	1339	3.9	120			1411	2.3	69			1330	2.4	73			1409	1.7	52			1420	0.3	9			1450	1.6	48	
3 Th	0140	2.0	62		18 F	0225	2.1	65		3 Sa	0149	2.4	73		18 Su	0234	3.7	112		3 Tu	0300	3.7	112		18 W	0331	4.7	144	
	0806	10.1	309			0832	10.4	317			0754	10.5	320			0822	9.9	301			0840	10.4	317			0859	9.7	295	
	1414	2.8	86			1445	1.5	47			1410	1.2	38			1442	1.2	38			1507	-0.3	-10			1526	1.3	40	
4 F	2009	9.7	297		19 Sa	2056	10.7	325		4 Su	2026	11.2	341		19 M	2110	11.0	335		4 W	2143	12.5	380		19 Th	2207	11.4	346	
	0224	1.3	40			0301	2.1	63			0235	2.1	65			0310	3.7	113			0348	3.8	115			0405	4.6	140	
	0840	10.7	327			0903	10.5	321			0833	10.8	329			0853	9.9	303			0926	10.5	320			0935	9.9	301	
5 Sa	1523	1.7	53		20 Su	1516	1.0	31		5 M	1450	0.2	7		20 Tu	1514	1.0	29		5 Th	1553	-0.6	-19		20 F	1601	1.2	36	
	2051	10.8	330			2130	11.1	338			2111	12.0	366			2145	11.3	343			2232	12.6	383			2242	11.4	348	
	0304	0.9	26			0335	2.2	67			0318	2.2	66			0344	3.8	115			0435	3.9	118			0440	4.5	136	
6 Su	0914	11.2	340		21 M	0931	10.5	321		6 Tu	0911	10.9	332		21 W	0924	10.0	304		6 F	1012	10.5	319		21 Sa	1012	10.0	305	
	1523	0.8	23			1545	0.7	20			1529	-0.5	-15			1545	0.8	24			1640	-0.6	-17			1637	1.1	34	
	2132	11.6	355			○ 2203	11.3	344			● 2155	12.5	380			○ 2218	11.3	345			2321	12.4	379			2316	11.5	349	
7 M	0343	0.7	22		22 Tu	0406	2.5	75		7 W	0401	2.4	74		22 Th	0416	3.9	118		7 Sa	0522	4.0	123		22 Su	0515	4.4	133	
	0947	11.4	346			0957	10.5	319			0949	10.9	331			0954	9.9	303			1100	10.4	316			1050	10.1	307	
	1558	-0.1	-2			1613	0.5	14			1610	-0.9	-27			1616	0.8	23			1728	-0.2	-7			1714	1.1	35	
8 Tu	● 2212	12.2	371		23 W	2235	11.3	345		8 Th	2240	12.6	383		23 F	2251	11.3	344		8 Su	0008	12.1	370		23 M	0052	11.5	349	
	0421	1.0	30			0436	2.8	85			0443	2.9	88			0449	4.0	122			0056	11.7	356			0026	11.4	348	
	1021	11.3	345			1024	10.3	314			1028	10.6	324			1026	9.9	301			0659	4.2	128			0630	4.1	126	
9 W	1634	-0.6	-18		24 Th	1640	0.5	14		9 F	1651	-0.9	-27		24 Sa	1647	0.9	26		9 M	1149	10.1	308		24 Tu	1210	9.9	302	
	2254	12.3	376			2307	11.2	342			2326	12.3	375			2326	11.2	340			1815	0.4	12			1751	1.3	41	
	0459	1.6	48			0506	3.2	97			0527	3.5	106			0523	4.2	127			0056	11.7	356			0026	11.4	348	
10 Th	1054	11.1	337		25 F	1050	10.1	307		8 Th	1108	10.3	313		23 F	1059	9.7	296		8 Su	0659	4.2	128		23 M	0630	4.1	126	
	1711	-0.8	-24			1708	0.6	18			1734	-0.5	-15			1721	1.1	33			1239	9.7	296			1210	9.9	302	
	2336	12.1	369			2339	11.0	334								1721	1.1	33			1904	1.2	38			1830	1.6	50	
11 F	0539	2.4	73		26 Th	0536	3.6	110		9 F	0014	11.8	360		24 Sa	0001	10.9	333		9 M	0142	11.2	341		24 Tu	0103	11.3	344	
	1128	10.6	322			1118	9.7	296			0614	4.1	124			0600	4.4	133			0751	4.2	129			0711	4.0	123	
	1749	-0.6	-17			1737	0.9	28			1151	9.7	297			1134	9.4	288			1334	9.3	282			1254	9.7	296	
12 Sa	1829	0.1	3		27 Su	1809	1.4	42		10 Sa	1820	0.2	7		25 Su	1757	1.4	43		10 Tu	1953	2.3	69		25 W	1911	2.2	66	
	0021	11.6	353			0013	10.6	323			0106	11.2	340			0040	10.7	326			0229	10.6	324			0141	11.1	337	
	0620	3.4	103			0610	4.1	125			0707	4.6	140			0641	4.6	139			0846	4.2	129			0756	3.9	119	
13 Su	1203	9.9	301		28 M	1148	9.3	282		11 Su	1239	9.1	277		26 M	1213	9.1	278		11 W	1436	8.8	268		26 Th	1344	9.5	289	
	1829	0.1	3			1809	1.4	42			1912	1.2	36			1837	1.8	56			2047	3.3	102			1956	2.9	88	
	0110	10.8	329			0051	10.1	308			0205	10.5	320			0122	10.4	317			0319	10.1	307			0223	10.7	327	
14 M	0707	4.4	134		29 Tu	0647	4.6	141		12 M	0811	4.9	150		27 Tu	0728	4.8	145		11 W	0948	4.1	124		27 F	0845	3.7	113	
	1241	9.1	276			1221	8.7	265			1339	8.4	257			1258	8.7	266			1551	8.5	260			1444	9.3	284	
	1915	1.0	31			1845	2.0	60			2013	2.2	67			1923	2.4	73			● 2150	4.3	131			● 2049	3.7	114	
15 Tu	0110	10.8	329		30 W	1845	2.0	60		13 Tu	2013	2.2	67		28 W	1923	2.4	73		13 F	0319	10.1	307		28 Sa	0223	10.7	327	
	0707	4.4	134			0647	4.6	141			0811	4.9	150			0728	4.8	145			0948	4.1	124			0845	3.7	113	
	1241	9.1	276			1221	8.7	265			1339	8.4	257			1258	8.7	266			1551	8.5	260			1444	9.3	284	
16 W	1915	1.0	31		31 Th	1845	2.0	60		14 W	2013	2.2	67		29 Th	1923	2.4	73		14 Sa	2150	4.3	131		29 Su	2049	3.7	114	
	0211	9.9	302			0136	9.6	292			0421	9.6	292			0408	9.7	296			0513	9.3	283			0405	9.9	301	
	0808	5.3	161			0734	5.2	157			1050	4.5	138			1042	4.0	123			1156	3.3	102			1050	3.0	90	
17 Th	1329	8.1	248		32 F	1301	8.1	247		15 Th	1638	7.9	242		30 F	0931	4.6	140		15 Su	1831	9.2	279		30 M	1728	9.7	297	
	2017	2.1	64			1931	2.7	81			2250	3.6	110			2127	3.5	107								2325	5.2		

Kure, Japan, 2008

Times and Heights of High and Low Waters

July						August						September					
Time			Height			Time			Height			Time			Height		
	h	m	ft	cm			h	m	ft	cm			h	m	ft	cm	
1 Tu	0155	5.1	155			16 W	0249	5.5	168			1 M	0428	2.4	73		
	0723	9.8	298				0803	9.2	280				1028	12.2	371		16 Tu
	1401	0.8	25				1436	2.2	67				1640	1.2	37		1621
	2047	11.9	364				2123	11.2	342				2252	12.5	382		2229
2 W	0252	4.8	146			17 Th	0323	5.1	156			2 Tu	0500	2.1	63		17 W
	0822	10.1	308				0847	9.7	295				1104	12.1	369		1048
	1456	0.2	7				1515	1.8	54				1712	1.9	57		1656
	2139	12.4	378				2157	11.5	351				2319	12.2	373		2300
3 Th	0343	4.5	136			18 F	0356	4.7	144			3 W	0530	2.0	60		18 Th
	0916	10.5	319				0926	10.1	309				1139	11.8	361		1127
	1547	-0.1	-4				1553	1.4	42				1743	2.7	83		1732
	2227	12.6	385				2228	11.7	358				2345	11.8	359		2331
4 F	0430	4.2	127			19 Sa	0428	4.4	133			4 Th	0559	2.0	62		19 F
	1008	10.8	328				1005	10.5	321				1214	11.4	347		1208
	1635	-0.2	-6				1628	1.1	35				1813	3.7	112		1810
	2311	12.7	386				2300	11.9	364								3.5
5 Sa	0514	3.9	119			20 Su	0500	4.0	122			5 F	0009	11.2	342		20 Sa
	1056	10.9	333				1043	10.8	329				0628	2.3	71		0624
	1720	0.0	1				1704	1.1	33				1249	10.8	330		1253
	2353	12.5	381				2331	12.1	369				1842	4.7	142		1850
6 Su	0556	3.7	112			21 M	0534	3.6	111			6 Sa	0032	10.5	321		21 Su
	1142	10.9	332				1121	10.9	333				0657	2.8	85		0704
	1803	0.6	19				1739	1.2	37				1329	10.1	309		1346
7 M	0031	12.2	372			22 Tu	0003	12.1	370			7 Su	0057	9.7	297		22 M
	0637	3.5	108				0609	3.3	102				0730	3.4	104		0755
	1227	10.6	323				1201	10.9	333				1420	9.4	288		1502
	1843	1.5	45				1815	1.6	49				1958	6.6	202		2054
8 Tu	0108	11.7	358			23 W	0036	12.0	366			8 M	0129	8.9	270		23 Tu
	0717	3.5	106				0646	3.1	94				0815	4.1	126		0916
	1312	10.2	310				1242	10.8	329				1603	9.0	273		1659
	1922	2.6	78				1852	2.3	69				2127	7.4	225		2328
9 W	0142	11.2	340			24 Th	0108	11.7	356			9 Tu	0222	8.0	244		24 W
	0759	3.5	108				0724	3.0	90				0941	4.7	144		1115
	1400	9.6	293				1327	10.5	321				1814	9.3	282		1831
	2002	3.7	114				1931	3.2	98								10.4
10 Th	0217	10.5	320			25 F	0142	11.2	340			10 W	0053	6.9	210		25 Th
	0844	3.7	112				0806	2.9	88				0444	7.6	232		0615
	1459	9.1	277				1420	10.2	310				1201	4.5	138		1241
	2047	5.0	151				2017	4.4	133				1919	9.9	302		1927
11 F	0254	9.8	298			26 Sa	0220	10.5	320			11 Th	0138	6.1	185		26 F
	0938	3.8	116				0856	3.0	90				0644	8.3	252		0724
	1620	8.8	269				1529	9.8	300				1312	3.7	114		1340
	2152	6.0	182				2118	5.5	168				1959	10.6	323		2009
12 Sa	0343	9.1	278			27 Su	0307	9.7	297			12 F	0208	5.2	159		27 Sa
	1047	3.8	116				1002	3.0	91				0738	9.3	282		0813
	1754	9.1	276				1704	9.9	301				1358	2.9	88		1426
	2334	6.5	198				2255	6.3	193				2031	11.2	342		2044
13 Su	0453	8.7	264			28 M	0419	9.2	279			13 Sa	0236	4.4	133		28 Su
	1159	3.6	109				1127	2.8	84				0819	10.2	312		0854
	1907	9.6	294				1837	10.4	317				1436	2.1	65		1505
14 M	0105	6.4	194			29 Tu	0043	6.3	193				2100	11.7	358		2117
	0610	8.6	261				0553	9.0	275			14 Su	0304	3.5	107		29 M
	1300	3.2	97				1248	2.2	67				0856	11.2	340		0932
	2002	10.3	313				1950	11.2	341				1512	1.6	48		1541
15 Tu	0206	6.0	182			30 W	0158	5.7	175			15 M	0335	2.7	82		30 Tu
	0712	8.8	268				0716	9.4	288				0933	11.9	362		1007
	1351	2.7	82				1356	1.4	44				1546	1.3	41		1614
	2046	10.8	329				2046	11.9	364				2159	12.4	379		2214
						31 Th	0252	5.1	154			31 Su	0354	2.9	89		31 Tu
							0822	10.1	309				0950	11.9	364		1037
							1453	0.7	22				1605	0.8	25		1614
							2133	12.5	380				2221	12.7	387		2214

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

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Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
1 W	h m 0427 1.3 40 1041 12.2 372 1645 2.8 84 2240 11.6 354	16 Th	h m ft cm 0410 0.2 5 1030 12.9 394 1635 2.6 78 2228 11.7 358	1 Sa	h m ft cm 0453 1.0 30 1126 11.5 349 1723 4.3 132 2259 10.1 309	16 Su	h m ft cm 0510 -0.5 -16 1150 12.2 372 1749 4.2 128 2325 10.2 311	1 M	h m ft cm 0508 0.9 27 1149 11.0 334 1747 4.4 133 2317 9.4 288	16 Tu	h m ft cm 0553 -0.5 -15 1231 11.7 357 1833 3.6 111
2 Th	0455 1.3 39 1114 12.0 365 1714 3.4 104 2305 11.2 342	17 F	0446 -0.1 -2 1112 12.8 390 1714 3.2 99 2302 11.3 345	2 Su	0522 1.3 40 1201 11.1 337 1756 4.8 145 2330 9.7 295	17 M	0556 0.0 1 1240 11.6 354 1840 4.7 142	2 Tu	0543 1.2 37 1225 10.7 327 1826 4.5 137 2355 9.1 278	17 W	0014 9.8 299 0640 0.3 9 1316 11.2 342 1922 3.6 111
3 F	0522 1.4 44 1147 11.6 353 1744 4.1 126 2329 10.7 327	18 Sa	0524 0.1 2 1156 12.3 376 1755 4.1 125 2337 10.7 326	3 M	0554 1.8 55 1238 10.6 322 1834 5.2 159	18 Tu	0013 9.6 292 0646 0.9 27 1335 11.0 335 1940 5.0 152	3 W	0620 1.6 50 1304 10.4 318 1910 4.6 140	18 Th	0106 9.3 284 0727 1.3 40 1401 10.6 324 2014 3.6 111
4 Sa	0550 1.8 54 1221 11.1 337 1814 4.9 148 2355 10.1 308	19 Su	0604 0.6 17 1244 11.6 355 1841 5.0 152	4 Tu	0003 9.1 278 0629 2.4 73 1322 10.0 306 1920 5.6 172	19 W	0110 8.9 272 0744 1.9 58 1436 10.4 317 2050 5.0 153	4 Th	0038 8.7 265 0702 2.2 66 1347 10.1 308 2001 4.7 142	19 F	0204 8.7 266 0817 2.5 76 1447 10.0 304 2112 3.6 109
5 Su	0618 2.3 70 1258 10.4 318 1848 5.6 171	20 M	0015 9.9 302 0649 1.4 43 1341 10.8 330 1938 5.8 177	5 W	0043 8.5 259 0713 3.1 94 1418 9.6 292 2029 5.9 181	20 Th	0223 8.3 254 0852 2.9 87 1544 10.0 304 2210 4.7 143	5 F	0131 8.3 252 0751 2.8 85 1436 9.8 299 2101 4.5 137	20 Sa	0313 8.2 251 0914 3.7 112 1539 9.4 285 2218 3.4 103
6 M	0023 9.4 286 0651 3.0 91 1344 9.8 298 1932 6.3 193	21 Tu	0102 9.0 275 0747 2.4 73 1458 10.2 310 2109 6.2 189	6 Th	0140 7.9 240 0814 3.7 114 1534 9.3 284 2211 5.8 176	21 F	0356 8.1 247 1010 3.6 110 1652 9.7 297 2325 4.0 122	6 Sa	0238 8.0 243 0851 3.4 105 1533 9.5 291 2210 4.1 124	21 Su	0442 8.1 247 1028 4.7 142 1639 8.9 270 2329 3.0 91
7 Tu	0058 8.6 262 0734 3.8 115 1456 9.2 280 2052 6.9 210	22 W	0218 8.2 250 0912 3.3 100 1633 9.9 303 2303 5.8 176	7 F	0313 7.5 230 0944 4.2 127 1656 9.4 287 2333 5.0 153	22 Sa	0530 8.5 258 1130 4.0 121 1753 9.7 296	7 Su	0405 8.1 246 1007 4.0 121 1637 9.4 287 2318 3.3 101	22 M	0610 8.5 259 1155 5.1 156 1743 8.6 262
8 W	0152 7.8 239 0845 4.5 136 1704 9.1 278 2354 6.5 199	23 Th	0422 8.0 244 1054 3.6 109 1752 10.2 310	8 Sa	0507 7.9 242 1119 4.1 124 1759 9.8 298	23 Su	0024 3.1 96 0642 9.2 281 1238 4.1 124 1844 9.8 298	8 M	0535 8.7 265 1133 4.2 128 1740 9.5 289	23 Tu	0030 2.5 75 0716 9.2 279 1308 5.1 155 1841 8.6 261
9 Th	0357 7.4 227 1059 4.6 140 1822 9.6 293	24 F	0017 4.8 146 0603 8.7 265 1215 3.3 102 1848 10.5 321	9 Su	0026 4.0 122 0624 9.0 273 1230 3.7 112 1847 10.2 312	24 M	0111 2.3 71 0735 10.0 304 1332 4.0 122 1926 9.9 301	9 Tu	0017 2.3 71 0645 9.6 294 1245 4.1 125 1836 9.6 294	24 W	0120 1.9 58 0807 9.8 299 1403 4.9 148 1929 8.7 264
10 F	0048 5.6 172 0607 8.1 247 1226 4.0 122 1909 10.2 312	25 Sa	0107 3.7 114 0707 9.7 296 1314 3.0 92 1931 10.9 331	10 M	0108 2.9 87 0719 10.1 308 1324 3.2 98 1929 10.6 324	25 Tu	0150 1.6 50 0818 10.6 323 1417 3.9 120 2002 9.9 302	10 W	0109 1.2 38 0742 10.7 325 1344 3.9 119 1926 9.9 301	25 Th	0204 1.4 44 0849 10.3 315 1448 4.6 139 2012 8.9 271
11 Sa	0123 4.7 142 0707 9.2 280 1319 3.2 98 1944 10.9 331	26 Su	0147 2.7 83 0755 10.6 323 1400 2.8 86 2007 11.1 338	11 Tu	0148 1.7 52 0805 11.2 341 1411 2.9 89 2007 10.9 333	26 W	0226 1.1 34 0857 11.1 337 1456 3.9 120 2036 10.0 304	11 Th	0157 0.3 9 0833 11.5 350 1436 3.8 115 2014 10.1 308	26 F	0243 1.0 31 0927 10.7 326 1525 4.3 131 2050 9.2 279
12 Su	0155 3.6 110 0751 10.3 314 1402 2.5 77 2017 11.4 347	27 M	0222 1.9 59 0836 11.3 345 1440 2.8 85 2040 11.2 340	12 W	0227 0.7 20 0849 12.0 367 1454 2.8 86 2045 11.1 338	27 Th	0300 0.8 24 0933 11.3 345 1532 4.0 121 2108 10.0 304	12 F	0244 -0.5 -15 0922 12.0 367 1525 3.7 112 2100 10.3 313	27 Sa	0320 0.7 22 1002 10.9 332 1559 4.1 124 2126 9.4 287
13 M	0227 2.6 78 0831 11.4 346 1442 2.1 63 2049 11.8 359	28 Tu	0255 1.3 40 0913 11.7 358 1516 2.9 89 2110 11.1 339	13 Th	0306 -0.1 -4 0932 12.6 383 1537 3.0 90 2123 11.1 339	28 F	0332 0.6 19 1008 11.4 347 1605 4.0 123 2139 9.9 303	13 Sa	0331 -1.0 -30 1010 12.3 375 1612 3.6 111 2148 10.4 316	28 Su	0354 0.5 16 1034 11.0 335 1632 3.9 118 2202 9.6 292
14 Tu	0301 1.6 48 0910 12.2 371 1519 1.9 59 2122 12.0 365	29 W	0326 1.0 29 0947 11.9 364 1549 3.2 97 2138 11.0 335	14 F	0346 -0.7 -20 1017 12.8 389 1619 3.3 100 2202 11.0 334	29 Sa	0403 0.6 18 1041 11.4 346 1638 4.1 125 2210 9.9 301	14 Su	0418 -1.1 -35 1058 12.3 375 1659 3.6 111 2236 10.3 315	29 M	0429 0.4 12 1106 11.0 336 1704 3.7 113 2238 9.7 295
15 W	0335 0.8 23 0950 12.7 388 1557 2.1 64 2155 11.9 364	30 Th	0356 0.8 24 1021 11.9 364 1621 3.5 108 2205 10.8 329	15 Sa	0427 -0.8 -24 1102 12.6 384 1703 3.7 114 2242 10.7 325	30 Su	0435 0.7 21 1115 11.2 341 1712 4.2 129 2243 9.7 296	15 M	0506 -1.0 -30 1145 12.1 369 1746 3.6 111 2325 10.2 310	30 Tu	0503 0.4 12 1138 11.0 336 1738 3.5 108 2314 9.6 294
		31 F	0425 0.8 24 1054 11.7 358 1652 3.9 120 2232 10.5 320							31 W	0536 0.5 16 1208 11.0 334 1811 3.4 103 2351 9.5 291

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Moji, Japan, 2008

Times and Heights of High and Low Waters

April								May								June							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm				
1 Tu	0632	4.9	150	16 W	0023	1.7	52	1 Th	0558	5.6	172	16 F	0029	2.4	74	1 Su	0031	2.5	76	16 M	0128	3.3	101
	1211	3.2	97		0710	5.8	178		1207	2.2	68		0637	6.2	188		0616	6.7	205		0655	6.7	203
	1729	5.1	154		1259	1.9	58		1753	5.8	178		1301	1.5	45		1305	0.7	20		1347	1.4	42
			1908		5.9	180				1925	6.1	187			1935	6.8	207	2030	6.5		199		
2 W	0016	1.8	56	17 Th	0114	1.4	43	2 F	0018	1.8	54	17 Sa	0116	2.3	71	2 M	0130	2.4	74	17 Tu	0211	3.1	96
	0715	5.4	165		0744	6.2	188		0642	6.1	186		0709	6.4	195		0703	7.0	214		0735	6.9	209
	1258	2.4	72		1339	1.2	37		1255	1.3	41		1339	1.0	32		1356	0.0	1		1425	1.1	35
	1832	5.6	172		1956	6.3	191		1856	6.3	193		2010	6.4	194		2036	7.1	216		2109	6.7	205
3 Th	0108	1.2	37	18 F	0154	1.2	36	3 Sa	0112	1.4	44	18 Su	0156	2.3	69	3 Tu	0222	2.4	72	18 W	0249	3.0	92
	0749	5.9	179		0812	6.4	195		0719	6.5	199		0739	6.6	202		0750	7.3	221		0813	7.0	214
	1336	1.5	46		1413	0.7	21		1339	0.5	15		1414	0.7	22		1445	-0.4	-11		1501	1.0	29
	1927	6.2	190		2036	6.5	198		1955	6.8	207		2048	6.6	200		2131	7.3	222		2145	6.8	208
4 F	0151	0.7	20	19 Sa	0229	1.1	34	4 Su	0159	1.2	38	19 M	0232	2.2	68	4 W	0311	2.4	72	19 Th	0324	2.9	88
	0820	6.3	193		0835	6.6	201		0755	6.9	209		0807	6.8	207		0838	7.4	226		0849	7.2	218
	1414	0.7	20		1445	0.3	10		1421	-0.2	-7		1447	0.5	16		1533	-0.6	-17		1537	0.9	26
	2017	6.7	205		2110	6.6	202		2049	7.2	218		2123	6.7	203		● 2221	7.3	223		○ 2219	6.9	209
5 Sa	0231	0.3	9	20 Su	0301	1.2	36	5 M	0243	1.2	38	20 Tu	0306	2.3	69	5 Th	0357	2.4	73	20 F	0359	2.8	86
	0849	6.7	204		0855	6.7	205		0830	7.1	217		0837	6.9	211		0927	7.4	227		0925	7.2	220
	1451	-0.1	-2		1515	0.1	3		1503	-0.7	-22		1519	0.4	13		1621	-0.5	-15		1612	0.8	24
	2106	7.1	216		○ 2142	6.7	204		● 2139	7.3	222		○ 2156	6.7	205		2309	7.2	220		2251	6.9	209
6 Su	0309	0.2	6	21 M	0330	1.3	40	6 Tu	0326	1.4	43	21 W	0339	2.3	71	6 F	0443	2.5	76	21 Sa	0433	2.8	85
	0918	7.0	212		0914	6.8	208		0905	7.3	221		0908	7.0	212		1015	7.4	225		1000	7.2	220
	1528	-0.6	-19		1544	0.0	1		1546	-0.9	-28		1551	0.4	13		1707	-0.2	-6		1647	0.8	25
	2151	7.3	221		2212	6.7	203		2226	7.3	222		2228	6.7	203		2355	7.0	214		2322	6.8	208
7 M	0347	0.4	11	22 Tu	0359	1.5	47	7 W	0408	1.7	52	22 Th	0411	2.5	75	7 Sa	0528	2.6	79	22 Su	0508	2.8	85
	0945	7.1	216		0936	6.9	209		0940	7.3	222		0939	7.0	212		1105	7.2	218		1036	7.2	218
	1606	-0.9	-28		1612	0.1	2		1630	-0.9	-26		1623	0.5	16		1753	0.3	9		1722	1.0	29
	2234	7.2	220		2241	6.6	200		2311	7.1	215		2258	6.6	200				2352		6.8	206	
8 Tu	0424	0.8	23	23 W	0428	1.8	56	8 Th	0450	2.1	63	23 F	0444	2.6	79	8 Su	0039	6.8	207	23 M	0546	2.8	85
	1010	7.1	216		1001	6.8	208		1018	7.1	217		1010	6.9	210		0615	2.7	83		1115	7.0	214
	1645	-0.9	-28		1641	0.2	7		1714	-0.5	-15		1657	0.7	22		1158	6.8	208		1759	1.2	36
	2315	7.0	213		2309	6.4	195		2357	6.7	205		2329	6.4	196		1839	0.9	28				
9 W	0501	1.3	41	24 Th	0457	2.2	66	9 F	0533	2.5	76	24 Sa	0518	2.8	85	9 M	0121	6.5	199	24 Tu	0022	6.7	205
	1035	7.0	213		1027	6.7	203		1059	6.9	209		1043	6.7	205		0705	2.8	86		0626	2.8	85
	1725	-0.6	-19		1711	0.5	16		1801	0.1	3		1732	1.0	30		1256	6.4	196		1200	6.8	207
	2357	6.6	200		2338	6.2	188								1926		1.6	49	1838		1.5	47	
10 Th	0539	2.0	60	25 F	0528	2.5	77	10 Sa	0045	6.3	192	25 Su	0000	6.2	190	10 Tu	0203	6.3	192	25 W	0054	6.7	203
	1104	6.7	204		1055	6.4	196		0621	2.9	87		0555	3.0	90		0801	2.9	89		0713	2.8	84
	1808	-0.1	-2		1743	0.9	28		1147	6.4	196		1120	6.5	198		1401	6.0	184		1254	6.6	200
					1852	0.8	24						1811	1.3	39		2015	2.3	70		1922	2.0	61
11 F	0041	6.0	183	26 Sa	0008	5.8	178	11 Su	0140	5.9	180	26 M	0036	6.0	184	11 W	0248	6.2	188	26 Th	0133	6.6	201
	0621	2.7	81		0601	2.9	88		0718	3.2	97		0638	3.1	96		0906	2.9	89		0808	2.7	82
	1140	6.3	191		1127	6.1	186		1251	5.9	180		1205	6.2	189		1513	5.8	176		1359	6.3	193
	1858	0.7	21		1821	1.3	41		1951	1.5	46		1855	1.6	50		● 2113	2.9	89		● 2013	2.6	78
12 Sa	0137	5.4	166	27 Su	0044	5.5	167	12 M	0249	5.6	172	27 Tu	0122	5.9	179	12 Th	0338	6.1	186	27 F	0221	6.6	200
	0713	3.2	99		0641	3.3	100		0833	3.3	100		0734	3.2	99		1016	2.7	83		0913	2.5	76
	1231	5.7	173		1208	5.7	174		1425	5.5	168		1307	5.9	180		1630	5.7	173		1514	6.2	188
	2002	1.4	44		1908	1.8	56		● 2101	2.1	64		1949	2.0	61		2221	3.3	101		2115	3.1	94
13 Su	0312	5.0	153	28 M	0141	5.2	157	13 Tu	0402	5.6	170	28 W	0223	5.8	177	13 F	0431	6.1	187	28 Sa	0320	6.5	199
	0841	3.6	111		0743	3.6	109		1002	3.1	94		0846	3.1	96		1122	2.4	74		1023	2.2	66
	1412	5.1	155		1313	5.3	161		1603	5.4	166		1429	5.7	174		1746	5.8	176		1638	6.2	188
	2134	1.9	59		● 2014	2.2	68		2218	2.4	74		● 2055	2.3	71		2334	3.5	106		2234	3.4	105
14 M	0510	5.1	155	29 Tu	0327	5.0	153	14 W	0505	5.7	174	29 Th	0332	5.9	179	14 Sa	0523	6.3	191	29 Su	0425	6.6	202
	1049	3.4	103		0931	3.6	109		1118	2.6	80		1004	2.8	84		1218	2.1	63		1134	1.7	51
	1638	5.1	155		1505	5.1	155		1724	5.6	170		1554	5.8	177		1853	6.0	184		1808	6.4	195
	2312	2.0	60		2145	2.4	72		2330	2.5	76		2209	2.5	77								
15 Tu	0623	5.4	166	30 W	0500	5.2	160	15 Th	0556	5.9	181	30 F	0434	6.1	186	15 Su	0037	3.4	105	30 M	0000	3.6	109
	1209	2.7	81		1106	3.1	93		1216	2.0	62		1113	2.1	65		0611	6.4	196		0531	6.8	208
	1807	5.5	167		1641	5.3	163		1831	5.8	178		1712	6.1	185		1305	1.7	51		1240	1.1	35
					2312	2.1	65						2324	2.6	78		1946	6.3	192		1928	6.7	205
												31 Sa	0527	6.4	195								
													1212	1.4	42								
													1826	6.4	196								

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Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Moji, Japan, 2008

Times and Heights of High and Low Waters

October					November					December													
Time		Height			Time		Height			Time		Height			Time		Height						
	h m	ft cm			h m	ft cm			h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm				
1 W	0355	0.9	26	16 Th	0341	0.0	-1	1 Sa	0426	0.7	21	16 Su	0450	-0.5	-14	1 M	0444	0.5	15	16 Tu	0530	-0.6	-17
	1015	7.6	232		1006	7.9	240		1055	6.8	208		1131	7.0	212		1116	6.3	193		1214	6.6	200
	1609	1.8	56		1558	1.7	51		1643	2.8	84		1709	2.6	78		1704	2.6	80		1751	2.0	62
	2153	7.7	235		2136	7.9	240		2208	7.2	218		2230	7.2	219		2228	6.7	203		2331	6.7	203
2 Th	0424	0.9	28	17 F	0419	-0.1	-3	2 Su	0457	1.0	30	17 M	0537	0.0	0	2 Tu	0518	0.7	22	17 W	0615	0.0	1
	1044	7.4	225		1048	7.6	233		1124	6.6	200		1219	6.6	200		1146	6.1	187		1255	6.3	192
	1636	2.3	69		1636	2.1	65		1714	3.1	94		1756	2.9	88		1740	2.8	84		1839	2.1	65
	2210	7.6	233		2203	7.8	237		2238	6.9	210		2319	6.8	207		2303	6.4	195		2303	6.4	195
3 F	0451	1.1	34	18 Sa	0500	0.1	3	3 M	0530	1.3	41	18 Tu	0627	0.6	19	3 W	0554	1.0	31	18 Th	0026	6.2	190
	1112	7.1	217		1130	7.3	222		1156	6.2	190		1313	6.2	188		1219	5.9	181		0659	0.8	23
	1703	2.8	84		1714	2.7	82		1748	3.4	104		1850	3.1	96		1820	2.9	88		1334	6.0	184
	2233	7.4	227		2234	7.5	229		2312	6.5	199						2344	6.1	185		1931	2.2	68
4 Sa	0519	1.4	44	19 Su	0543	0.6	17	4 Tu	0607	1.8	55	19 W	0019	6.3	191	4 Th	0633	1.4	42	19 F	0128	5.7	175
	1141	6.8	206		1215	6.8	207		1234	5.9	180		0723	1.3	40		1258	5.8	176		0746	1.5	46
	1730	3.2	99		1756	3.3	100		1829	3.7	113		1417	5.9	179		1910	3.0	91		1415	5.8	177
	2259	7.2	219		2312	7.1	216		2353	6.1	186		1959	3.3	100						2031	2.3	69
5 Su	0550	1.9	58	20 M	0633	1.2	36	5 W	0652	2.2	68	20 Th	0147	5.8	176	5 F	0038	5.7	174	20 Sa	0238	5.3	161
	1213	6.4	194		1310	6.2	190		1329	5.6	170		0827	1.9	59		0720	1.8	54		0838	2.3	69
	1800	3.8	115		1848	3.8	117		1929	4.0	121		1527	5.8	176		1350	5.6	172		1502	5.6	172
	2329	6.8	206								2123		3.1	96	2015		3.0	91	2142		2.2	67	
6 M	0627	2.4	73	21 Tu	0003	6.5	199	6 Th	0055	5.6	172	21 F	0328	5.5	169	6 Sa	0152	5.4	164	21 Su	0359	5.0	153
	1254	5.9	180		0734	1.9	58		0753	2.6	80		0941	2.4	72		0817	2.1	65		0943	2.8	86
	1837	4.3	130		1437	5.8	177		1510	5.4	165		1633	5.8	178		1454	5.6	171		1558	5.6	170
					2006	4.2	128		2110	4.0	121		2245	2.7	82		2131	2.7	82		2256	2.0	60
7 Tu	0007	6.2	190	22 W	0133	5.9	181	7 F	0245	5.4	164	22 Sa	0455	5.6	171	7 Su	0321	5.3	162	22 M	0529	5.1	154
	0715	3.0	90		0858	2.4	73		0917	2.8	86		1056	2.6	78		0928	2.4	74		1104	3.1	96
	1412	5.5	167		1629	5.8	177		1640	5.6	171		1728	6.0	183		1600	5.7	175		1659	5.6	171
	1941	4.7	143		2204	4.0	123		2245	3.5	106		2349	2.1	63		2244	2.1	65				
8 W	0116	5.7	174	23 Th	0359	5.8	177	8 Sa	0424	5.5	169	23 Su	0609	5.8	178	8 M	0445	5.5	167	23 Tu	0001	1.6	49
	0836	3.4	103		1032	2.5	77		1043	2.7	82		1201	2.6	78		1046	2.6	78		0648	5.3	161
	1655	5.5	168		1745	6.1	187		1735	6.0	182		1812	6.2	190		1659	6.0	182		1221	3.1	95
	2231	4.7	142		2333	3.3	102		2346	2.7	82						2346	1.4	43		1755	5.8	176
9 Th	0349	5.5	169	24 F	0532	6.1	187	9 Su	0534	6.0	182	24 M	0039	1.5	45	9 Tu	0602	5.8	177	24 W	0054	1.2	36
	1037	3.3	101		1148	2.3	70		1151	2.4	72		0708	6.1	186		1200	2.5	77		0745	5.6	171
	1809	5.9	179		1835	6.5	198		1816	6.4	195		1254	2.5	76		1750	6.3	192		1318	2.9	89
	2355	4.0	122								1848		6.5	197					1844		6.0	182	
10 F	0517	5.9	181	25 Sa	0029	2.5	77	10 M	0033	1.8	55	25 Tu	0121	1.0	30	10 W	0041	0.6	19	25 Th	0139	0.8	25
	1156	2.8	86		0638	6.6	200		0634	6.5	197		0756	6.3	193		0711	6.2	189		0830	5.9	180
	1849	6.3	192		1244	2.0	62		1245	2.0	62		1338	2.4	73		1303	2.4	73		1403	2.7	81
					1913	6.8	208		1852	6.8	207		1920	6.6	202		1838	6.6	202		1926	6.2	189
11 Sa	0039	3.2	98	26 Su	0112	1.8	54	11 Tu	0115	1.0	29	26 W	0159	0.6	19	11 Th	0132	-0.1	-2	26 F	0218	0.5	16
	0615	6.5	197		0729	6.9	210		0729	6.9	210		0836	6.5	199		0812	6.6	200		0907	6.1	186
	1246	2.3	69		1328	1.8	56		1332	1.8	55		1417	2.3	71		1357	2.2	68		1442	2.4	74
	1921	6.7	205		1944	7.1	215		1925	7.1	217		1950	6.8	207		1925	6.9	210		2004	6.4	195
12 Su	0116	2.4	73	27 M	0150	1.2	36	12 W	0157	0.2	6	27 Th	0234	0.4	12	12 F	0222	-0.6	-19	27 Sa	0255	0.3	8
	0704	7.0	212		0813	7.1	217		0821	7.2	220		0912	6.6	202		0907	6.8	208		0941	6.2	190
	1327	1.7	53		1406	1.7	53		1416	1.7	53		1453	2.3	71		1447	2.1	64		1517	2.3	69
	1950	7.1	217		2009	7.2	220		1958	7.4	225		2019	6.9	210		2012	7.1	217		2039	6.6	200
13 M	0151	1.6	49	28 Tu	0225	0.8	23	13 Th	0239	-0.4	-11	28 F	0307	0.3	8	13 Sa	0310	-1.0	-29	28 Su	0329	0.1	3
	0751	7.4	226		0851	7.2	220		0911	7.4	226		0945	6.7	203		0958	6.9	211		1012	6.3	191
	1406	1.4	42		1441	1.8	55		1459	1.8	55		1526	2.3	71		1534	2.0	62		1549	2.1	64
	2018	7.4	227		2030	7.3	223		2033	7.5	230		2050	7.0	212		2101	7.2	220		2114	6.6	202
14 Tu	0227	0.9	27	29 W	0257	0.5	16	14 F	0321	-0.7	-20	29 Sa	0339	0.3	8	14 Su	0358	-1.0	-32	29 M	0402	0.0	0
	0837	7.7	235		0925	7.2	220		0958	7.4	226		1016	6.6	201		1046	6.9	211		1042	6.3	191
	1443	1.2	38		1513	2.0	60		1542	2.0	60		1559	2.4	73		1620	2.0	60		1622	2.0	61
	2045	7.7	234		2050	7.4	225		2109	7.6	231		2122	6.9	211		2150	7.2	219		2148	6.7	203
15 W	0303	0.3	10	30 Th	0327	0.5	14	15 Sa	0405	-0.7	-21	30 Su	0411	0.3	10	15 M	0445	-0.9	-28	30 Tu	0434	0.0	0
	0922	7.9	240		0957	7.2	218		1045	7.3	221		1046	6.5	198		1131	6.8	206		1109	6.0	191
	1521	1.3	41		1543	2.2	67		1625	2.3	69		1631	2.5	76		1705	2.0	61		1654	1.9	59
	2111	7.8	239		2113	7.4	225		2148	7.4	227		2154	6.9	209		2240	7.0	213		2222	6.6	200
16 Th				31 F	0357	0.5	16												31 W	0506	0.1	3	
					1026	7.0	214													1134	6.2	189	
					1613	2.5	75													1727	1.9	57	
					2139	7.3	223													2257	6.4	196	

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Sasebo, Japan, 2008

Times and Heights of High and Low Waters

July					August					September																		
Time		Height			Time		Height			Time		Height			Time		Height											
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm									
1 Tu	0031	4.6	140		16 W	0121	5.0	153	1 F	0218	4.0	123	16 Sa	0212	4.1	124	1 M	0308	2.4	72	16 Tu	0241	1.9	59				
	0605	8.7	266			0643	8.3	253			0746	9.4		286		0904		10.3	315			0840	10.4	317				
	1249	0.7	22			1323	2.0	61			1416	1.4		43		1521		1.3	40			1456	1.5	45				
	1945	9.4	287			2015	8.8	268			2108	10.3		314		2128		10.3	313			2100	10.3	315				
2 W	0132	4.4	134		17 Th	0159	4.7	143	2 Sa	0259	3.5	107	17 Su	0242	3.5	108	2 Tu	0339	2.1	65	17 W	0314	1.4	43				
	0701	9.1	278			0724	8.7	265			0838	10.1		309		0822		9.8	298			0940	10.1	308		0919	10.5	319
	1343	0.2	5			1400	1.6	49			1509	0.3		8		1449		1.2	36			1553	1.9	59		1531	1.9	57
	2037	9.9	301			2047	9.1	278			2142	10.4		316		2113		10.0	305			2152	10.0	306		2128	10.3	314
3 Th	0225	4.1	125		18 F	0233	4.4	133	3 Su	0337	3.1	95	18 M	0312	3.1	93	3 W	0409	2.1	64	18 Th	0348	1.1	34				
	0754	9.5	289			0801	9.0	275			0921	10.2		311		0857		10.0	306			1015	9.7	295		1000	10.3	313
	1434	-0.2	-5			1435	1.3	40			1548	0.6		18		1521		1.2	36			1622	2.7	83		1606	2.5	77
	2125	10.1	308			2117	9.4	285			2213	10.2		312		2139		10.1	309			2215	9.7	296		2157	10.0	306
4 F	0313	3.8	117		19 Sa	0306	4.1	125	4 M	0412	2.9	88	19 Tu	0344	2.6	80	4 Th	0438	2.3	69	19 F	0426	1.1	34				
	0844	9.7	296			0837	9.3	283			1001	10.0		304		0934		10.1	308			1050	9.1	277		1044	9.8	298
	1522	-0.2	-5			1510	1.1	35			1623	1.2		38		1554		1.4	44			1650	3.5	108		1643	3.4	103
	2209	10.1	309			2145	9.5	290			2240	10.0		304		2206		10.1	309			2237	9.3	283		2228	9.6	293
5 Sa	0358	3.6	111		20 Su	0338	3.8	116	5 Tu	0447	2.8	86	20 W	0417	2.3	71	5 F	0509	2.6	78	20 Sa	0507	1.4	44				
	0932	9.7	297			0912	9.4	288			1040	9.5		290		1013		9.9	303			1126	8.4	257		1135	9.0	275
	1607	0.1	4			1543	1.1	34			1657	2.1		63		1629		2.0	60			1718	4.4	133		1723	4.3	132
	2249	9.9	303			2214	9.6	293			2305	9.6		293		2233		10.0	304			2301	8.8	269		2302	9.0	274
6 Su	0440	3.5	108		21 M	0411	3.6	109	6 W	0521	2.9	89	21 Th	0453	2.2	66	6 Sa	0542	3.0	92	21 Su	0555	2.0	61				
	1018	9.5	290			0949	9.4	288			1120	8.9		271		1055		9.6	292			1209	7.7	236		1241	8.2	250
	1650	0.7	22			1617	1.3	39			1728	3.0		92		1704		2.8	84			1747	5.2	157		1811	5.3	162
	2325	9.6	293			2243	9.6	292			2330	9.2		279		2303		9.6	294			2327	8.3	252		2342	8.3	252
7 M	0522	3.5	107		22 Tu	0445	3.3	102	7 Th	0555	3.1	96	22 F	0532	2.2	68	7 Su	0624	3.5	107	22 M	0659	2.7	82				
	1104	9.1	276			1027	9.3	283			1201	8.2		250		1143		9.0	274			1317	7.1	217		1427	7.6	232
	1730	1.5	47			1652	1.7	51			1759	4.0		121		1742		3.7	113			1825	5.8	178		1931	6.1	186
	2358	9.2	280			2312	9.5	289			2355	8.7		266		2335		9.2	280			2335	9.2	280		2358	9.2	280
8 Tu	0603	3.5	108		23 W	0523	3.2	97	8 F	0634	3.4	105	23 Sa	0618	2.5	76	8 M	0001	7.7	234	23 Tu	0053	7.5	229				
	1150	8.5	258			1110	9.0	274			1253	7.5		229		1242		8.3	252			0727	4.0	123		0835	3.2	97
	1808	2.5	76			1729	2.3	69			1832	4.9		148		1825		4.7	144			1545	6.9	209		1637	7.7	236
						2344	9.3	282												1956		6.4	196		2220	6.1	185	
9 W	0030	8.8	267		24 Th	0604	3.1	94	9 Sa	0025	8.2	251	24 Su	0014	8.6	262	9 Tu	0115	7.1	216	24 W	0326	7.3	221				
	0646	3.6	111			1159	8.6	261			0723	3.8		115		0717		2.9	87			0925	4.2	129		1026	3.0	92
	1242	7.8	238			1809	3.1	93			1413	7.0		213		1412		7.7	234			1742	7.3	223		1749	8.3	253
	1847	3.5	106							1917	5.7	173			1927	5.7		174		2319		6.2	189		2345	5.2	160	
10 Th	0103	8.3	254		25 F	0019	9.0	273	10 Su	0108	7.7	236	25 M	0111	8.0	243	10 W	0359	7.0	213	25 Th	0507	7.8	239				
	0735	3.7	114			0652	3.1	93			0835	4.0		122		0842		3.1	96			1108	3.8	116		1139	2.5	76
	1347	7.2	220			1259	8.1	247			1625	6.9		211		1625		7.6	233			1826	7.9	240		1832	8.9	270
	1931	4.4	134			1855	4.0	121			2053	6.3		191		2133		6.3	191									
11 F	0143	7.9	242		26 Sa	0102	8.6	261	11 M	0232	7.3	223	26 Tu	0305	7.6	232	11 Th	0013	5.5	169	26 F	0028	4.3	130				
	0835	3.8	115			0750	3.1	93			1017	3.9		120		1027		3.0	90			0521	7.5	229		0607	8.6	263
	1515	6.9	211			1420	7.7	235			1803	7.4		225		1800		8.2	251			1203	3.1	96		1229	2.0	60
	2030	5.2	157			1955	4.9	148			2324	6.2		188		2344		5.8	178			1855	8.5	258		1904	9.4	285
12 Sa	0236	7.6	233		27 Su	0159	8.2	250	12 Tu	0427	7.3	224	27 W	0459	7.9	242	12 F	0046	4.8	147	27 Sa	0103	3.3	102				
	0946	3.7	112			0904	2.9	89			1136	3.5		106		1147		2.3	70			0611	8.2	250		0654	9.3	284
	1654	7.0	214			1605	7.7	234			1852	7.9		242		1854		9.0	273			1242	2.5	77		1310	1.7	51
	2157	5.6	171			2125	5.5	169												1920		9.0	274		1932	9.7	296	
13 Su	0346	7.5	229		28 M	0319	8.0	244	13 W	0030	5.7	173	28 Th	0043	5.0	153	13 Sa	0114	4.1	125	28 Su	0135	2.6	78				
	1058	3.3	102			1028	2.6	78			0540	7.8		237		0609		8.7	265			0651	8.9	271		0734	9.8	299
	1810	7.4	226			1744	8.1	248			1228	2.9		88		1244		1.6	48			1316	2.0	60		1347	1.6	49
	2331	5.6	171			2318	5.6	172			1926	8.5		259		1934		9.6	292			1944	9.5	289		1957	9.9	302
14 M	0457	7.6	233		29 Tu	0449	8.1	248	14 Th	0109	5.2	157	29 F	0124	4.2	127	14 Su	0142	3.3	102	29 M	0206	2.0	60				
	1156	2.9	89			1145	1.9	59			0630	8.3		254		0701		9.4	288			0727	9.5	291		0812	10.0	306
	1902	7.9	242			1854	8.8	269			1308	2.3		71		1330		1.1	33			1349	1.6	48		1421	1.8	54
										1955	9.0	273			2007	10.0		305		2008		9.9	301		2021	10.0	304	
15 Tu	0035	5.3	163		30 W	0038	5.2	159	15 F	0142	4.6	140	30 Sa	0201	3.4	104	15 M	0210	2.6	79	30 Tu	0236	1.6	48				
	0555	7.9	241			0602	8.7	264			0710	8.9		271		0745		10.0	305			0803	10.1	307		0847	10.1	307
	1243	2.5	75			1247	1.2	38			1343	1.8		55		1410		0.8	25			1422	1.4	43		1453	2.2	66
	1941	8.4	256			1946	9.5	290			2022	9.4		286		2037		10.3	313			2033	10.2	311		2045	9.9	302
				31 Th	0133	4.6	141					31 Su	0235	2.8	85													
					0701	9.3	283							0826	10.3	315												
					1340	0.6	19							1447	0.9	28												
					2029	10.0	305							2104	10.4	316												

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Sasebo, Japan, 2008

Times and Heights of High and Low Waters

October					November					December													
Time		Height		Time		Height		Time		Height		Time		Height									
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm									
1 W	0305	1.4	42	16 Th	0246	0.2	6	1 Sa	0336	1.0	32	16 Su	0357	-0.5	-15	1 M	0356	0.8	23	16 Tu	0442	-0.6	-17
	0921	9.9	301		0908	10.4	318		1013	8.8	268		1046	9.4	287		1038	8.3	253		1129	8.9	272
	1523	2.7	82		1510	2.5	75		1603	4.0	122		1631	3.8	116		1628	3.9	118		1718	3.2	98
	2109	9.7	296		2055	10.0	306		2132	8.7	264		2200	8.9	270		2154	8.0	245		2252	8.3	254
2 Th	0333	1.4	43	17 F	0325	0.0	0	2 Su	0408	1.3	41	17 M	0447	0.1	2	2 Tu	0431	1.0	32	17 W	0529	0.2	6
	0954	9.5	290		0953	10.2	310		1048	8.4	255		1141	8.8	269		1113	8.0	244		1213	8.4	257
	1552	3.3	100		1550	3.1	94		1635	4.4	134		1723	4.2	129		1704	4.0	123		1807	3.3	100
	2132	9.4	288		2129	9.7	297		2202	8.3	252		2250	8.3	252		2230	7.7	235		2345	7.7	236
3 F	0402	1.6	49	18 Sa	0406	0.2	6	3 M	0443	1.8	55	18 Tu	0541	0.9	26	3 W	0508	1.4	44	18 Th	0617	1.1	35
	1026	9.1	276		1042	9.6	293		1127	7.9	241		1242	8.2	251		1152	7.7	235		1258	7.9	242
	1621	3.9	119		1632	3.8	117		1711	4.8	146		1824	4.5	138		1747	4.2	127		1902	3.3	101
	2157	9.1	277		2206	9.3	282		2235	7.8	237		2349	7.6	231		2311	7.3	221				
4 Sa	0432	2.0	60	19 Su	0452	0.7	22	4 Tu	0522	2.3	71	19 W	0641	1.7	52	4 Th	0549	1.9	58	19 F	0047	7.1	215
	1101	8.5	258		1138	8.9	271		1216	7.4	226		1351	7.8	237		1237	7.4	226		0706	2.1	65
	1650	4.5	138		1719	4.6	141		1757	5.2	157		1941	4.6	139		1839	4.2	129		1344	7.5	228
	2223	8.6	263		2247	8.6	261		2316	7.3	221								2003		3.2	99	
5 Su	0504	2.5	75	20 M	0545	1.5	46	5 W	0611	2.9	87	20 Th	0111	7.0	213	5 F	0003	6.8	207	20 Sa	0205	6.5	197
	1142	7.8	239		1249	8.1	248		1326	7.1	215		0751	2.5	75		0638	2.4	74		0802	3.1	94
	1721	5.1	156		1818	5.3	162		1910	5.4	164		1502	7.5	230		1330	7.3	221		1434	7.1	217
	2251	8.1	246		2339	7.8	238		●	2109	4.3		130	●	2109		4.3	130	1946		4.1	125	2113	3.1	93
6 M	0544	3.0	92	21 Tu	0652	2.3	71	6 Th	0018	6.7	204	21 F	0256	6.7	205	6 Sa	0116	6.4	196	21 Su	0340	6.2	190
	1240	7.3	221		1427	7.7	234		0718	3.3	101		0909	3.0	92		0738	2.9	88		0911	3.8	116
	1802	5.7	174		1956	5.6	172		1459	7.0	213		1604	7.5	230		1432	7.2	219		1530	6.9	211
	2325	7.4	227		●	2102	5.2		158	●	2223		3.6	110	●		2100	3.6	111		2223	2.7	82
7 Tu	0640	3.6	111	22 W	0112	7.1	216	7 F	0208	6.4	194	22 Sa	0427	6.9	211	7 Su	0250	6.4	194	22 M	0510	6.4	195
	1433	6.9	209		0823	2.9	88		0848	3.5	107		1022	3.3	100		0852	3.3	100		1031	4.2	129
	1932	6.1	187		1605	7.7	235		1611	7.3	222		1652	7.7	234		1532	7.3	223		1628	6.9	210
					2203	5.2	160		2224	4.5	138		2318	2.9	88		2206	2.9	89		2323	2.2	67
8 W	0032	6.8	208	23 Th	0327	7.0	214	8 Sa	0355	6.6	202	23 Su	0535	7.3	223	8 M	0418	6.8	206	23 Tu	0620	6.8	207
	0815	4.0	123		1000	3.0	91		1010	3.4	103		1123	3.4	104		1008	3.4	105		1145	4.3	130
	1640	7.1	217		1708	8.0	245		1657	7.7	235		1731	7.8	239		1627	7.6	231		1721	7.0	214
	2234	5.9	179		2314	4.4	133		2312	3.6	110						2302	2.0	61				
9 Th	0313	6.6	202	24 F	0456	7.5	230	9 Su	0504	7.3	223	24 M	0000	2.2	66	9 Tu	0528	7.4	226	24 W	0012	1.7	51
	1011	3.8	117		1110	2.8	85		1111	3.1	94		0629	7.8	237		1118	3.4	105		0710	7.3	221
	1734	7.6	232		1750	8.4	256		1733	8.2	250		1213	3.4	105		1716	7.9	241		1243	4.1	126
	2333	5.1	156		2358	3.4	105		2351	2.6	79		1805	8.0	245		2352	1.0	32		1809	7.3	221
10 F	0448	7.1	217	25 Sa	0555	8.2	249	10 M	0557	8.1	247	25 Tu	0037	1.6	48	10 W	0629	8.1	248	25 Th	0054	1.2	37
	1118	3.3	101		1202	2.6	79		1200	2.8	85		0713	8.1	248		1219	3.3	102		0750	7.7	234
	1806	8.2	249		1822	8.7	266		1807	8.7	264		1257	3.4	105		1804	8.3	252		1328	3.9	118
													1838	8.2	250						1851	7.5	229
11 Sa	0007	4.3	130	26 Su	0034	2.6	79	11 Tu	0028	1.5	47	26 W	0111	1.1	33	11 Th	0041	0.1	4	26 F	0131	0.8	25
	0543	7.8	239		0644	8.9	270		0751	8.5	258		0723	8.8	268		0824	8.0	245				
	1203	2.8	84		1245	2.6	79		1336	3.4	105		1314	3.2	99		1406	3.6	111				
	1832	8.7	266		1841	9.1	277		1910	8.4	255		1851	8.6	263		1930	7.8	237				
12 Su	0036	3.3	102	27 M	0106	1.9	57	12 W	0105	0.6	18	27 Th	0144	0.8	23	12 F	0129	-0.6	-18	27 Sa	0207	0.5	15
	0626	8.6	263		0722	9.1	278		0730	9.5	290		0826	8.7	264		0816	9.3	283		0855	8.3	252
	1241	2.3	70		1321	2.5	77		1329	2.6	78		1413	3.4	105		1405	3.2	97		1441	3.4	105
	1857	9.2	281		1916	9.2	280		1916	9.4	287		1943	8.4	257		1938	8.9	272		●	2007	8.0	244
13 M	0106	2.4	73	28 Tu	0137	1.3	41	13 Th	0145	-0.2	-6	28 F	0217	0.6	17	13 Sa	0217	-1.1	-33	28 Su	0241	0.3	9
	0705	9.4	286		0759	9.4	285		0816	9.9	302		0900	8.7	266		0906	9.5	291		0926	8.4	256
	1317	2.0	60		1355	2.7	82		1413	2.7	82		1447	3.5	107		1455	3.1	95		1514	3.3	100
	1924	9.7	295		1942	9.3	282		●	2015	8.5		258	●	2015		8.5	258	●		2025	9.1	276	2041	8.2	249
14 Tu	0137	1.5	45	29 W	0207	1.0	30	14 F	0227	-0.7	-20	29 Sa	0249	0.5	15	14 Su	0306	-1.2	-38	29 M	0314	0.2	6
	0745	10.0	304		0833	9.4	287		0904	10.0	306		0932	8.7	265		0955	9.5	291		0955	8.4	257
	1354	1.9	57		1428	2.9	89		1458	3.0	91		1521	3.6	110		1543	3.1	95		1545	3.1	96
	1952	10.0	304		●	2008	9.3		282	2033	9.5		290	2048	8.4		257	2113	9.0		275	2115	8.2	250
15 W	0210	0.7	22	30 Th	0236	0.8	25	15 Sa	0311	-0.8	-23	30 Su	0322	0.6	18	15 M	0354	-1.0	-32	30 Tu	0347	0.2	6
	0825	10.4	316		0907	9.4	285		0954	9.8	300		1005	8.5	260		1042	9.3	284		1024	8.4	255
	1431	2.0	62		1500	3.2	99		1543	3.4	103		1554	3.7	114		1630	3.1	96		1617	3.1	94
	2023	10.1	309		2035	9.1	278		2115	9.3	283		2121	8.3	252		2202	8.8	268		2148	8.1	247
16 Th				31 F	0306	0.9	26											31 W	0419	0.4	11		
					0940	9.1	278												1051	8.3	252		
					1532	3.6	110												1649	3.0	91		
					2103	8.9	272												2222	7.9	242		

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Naha, Nansei Shoto, Japan, 2008

Times and Heights of High and Low Waters

January						February						March					
Time			Height			Time			Height			Time			Height		
	h	m	ft	cm			h	m	ft	cm			h	m	ft	cm	
1 Tu	0048	4.2	129			16 W	0011	4.8	145			1 F	0326	3.8	116		
	0634	2.5	75				0601	2.1	65				0726	3.5	106		
	1308	5.1	155			16 O	1230	5.5	167			16 Sa	0834	3.6	111		
	2013	2.3	70				1924	1.5	47				1427	5.0	152		
2 W	0225	4.0	122				2048	1.2	38				2204	1.0	29		
	0734	2.9	89			17 Th	0143	4.4	134			17 Su	0525	4.7	144		
	1402	5.1	154				0706	2.8	85				1035	3.4	104		
	2127	1.9	59				1332	5.4	164			2 Su	1606	5.2	160		
3 Th	0406	4.1	126				2048	1.2	38				2314	0.5	14		
	0855	3.2	98			18 F	0338	4.4	135			18 M	0611	5.2	159		
	1503	5.1	155				0840	3.2	99				1138	2.9	89		
	2228	1.5	47				1447	5.4	165			3 M	1714	5.7	174		
4 F	0518	4.5	136				2208	0.8	23				2312	1.1	35		
	1012	3.3	100			19 Sa	0511	4.8	147			4 Tu	0602	5.0	152		
	1601	5.2	159				1018	3.3	101				1127	2.9	88		
	2316	1.1	34				1603	5.6	171			4 W	1701	5.2	159		
5 Sa	0606	4.8	147				2315	0.2	7				2352	0.7	20		
	1111	3.2	97			20 Su	0613	5.3	161			5 W	0628	5.4	165		
	1650	5.4	165				1130	3.1	95				1203	2.4	72		
	2356	0.7	22				1709	5.9	181			5 Th	1747	5.7	175		
6 Su	0644	5.2	157			21 M	0010	-0.3	-8			6 Th	0026	0.3	8		
	1156	3.1	93				0659	5.6	172				0653	5.8	176		
	1734	5.7	173				1224	2.8	85			6 F	1236	1.8	54		
7 M	0033	0.4	11				1805	6.3	192				1827	6.2	189		
	0717	5.4	164			22 Tu	0058	-0.6	-18			7 F	0059	0.0	1		
	1234	2.9	88				0739	5.9	181				0719	6.1	186		
	1813	5.9	181				1309	2.5	75			7 Sa	1310	1.2	36		
8 Tu	0108	0.1	3				1854	6.6	200				1907	6.5	199		
	0749	5.6	170			23 W	0140	-0.7	-22			8 Sa	0131	0.0	-1		
	1309	2.7	82				0814	6.1	185				0745	6.4	194		
	1850	6.2	188				1350	2.2	66			8 Su	1344	0.7	20		
9 W	0142	-0.1	-3				1938	6.7	203				1947	6.7	203		
	0819	5.7	174			24 Th	0218	-0.6	-18			9 Su	0204	0.1	4		
	1344	2.5	77				0847	6.1	186				0813	6.5	198		
	1927	6.3	192				1428	1.9	59			9 M	1421	0.2	7		
10 Th	0215	-0.2	-6				2019	6.6	200				2029	6.6	201		
	0850	5.8	176			25 F	0253	-0.3	-9			10 M	0236	0.5	16		
	1419	2.4	72				0917	6.1	185				0842	6.5	199		
	2004	6.4	194				1505	1.8	54			10 Tu	1459	0.0	0		
11 F	0248	-0.1	-4				2058	6.3	192				2111	6.3	192		
	0921	5.8	178			26 Sa	0325	0.2	5			11 Tu	0309	1.0	32		
	1457	2.2	66				0945	6.0	182				0912	6.4	196		
	2043	6.3	191				1541	1.7	51			11 W	1540	0.0	0		
12 Sa	0322	0.0	1				2136	5.9	179				2157	5.8	177		
	0953	5.8	178			27 Su	0354	0.7	21			12 W	0343	1.7	52		
	1537	2.0	62				1011	5.8	177				0944	6.2	189		
	2125	6.0	184				1618	1.7	52			12 Th	1625	0.2	7		
13 Su	0357	0.4	12				2214	5.3	163				2249	5.2	159		
	1026	5.8	177			28 M	0422	1.3	39			13 Th	0418	2.4	72		
	1621	1.9	58				1038	5.6	172				1020	5.8	178		
	2210	5.7	174				1657	1.8	54			13 F	1720	0.6	19		
14 M	0433	0.9	27				2255	4.8	147				2357	4.6	140		
	1102	5.7	175			29 Tu	0449	1.9	57			14 F	0501	3.0	92		
	1712	1.8	54				1106	5.4	165				1105	5.3	163		
	2304	5.2	160				1743	1.9	58			14 O	1834	1.1	33		
15 Tu	0514	1.5	45				2346	4.3	131								
	1142	5.6	171			30 W	0520	2.5	75			15 Sa	0149	4.2	128		
	1811	1.7	51				1140	5.2	158				0619	3.6	109		
							1844	2.0	61				1222	4.9	148		
													2017	1.3	40		
						31 Th	0107	3.9	118			15 Su	0127	4.0	122		
							0601	3.0	92				0546	3.6	109		
							1227	4.9	150			31 O	1131	4.6	139		
							2011	2.0	62				1935	1.9	59		
												31 M	0340	4.2	128		
													0826	3.7	112		
													1334	4.4	133		
													2118	1.8	54		

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Naha, Nansei Shoto, Japan, 2008

Times and Heights of High and Low Waters

July				August				September															
Time		Height		Time		Height		Time		Height		Time		Height									
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm									
1 Tu	0441	6.7	205	16 W	0520	6.3	191	1 F	0045	3.4	104	16 Sa	0044	3.3	102	1 M	0147	2.0	62	16 Tu	0123	1.6	50
	1143	0.5	15		1222	1.4	43		0630	7.4	227		0628	7.0	213		0749	7.5	229		0726	7.3	224
	1831	6.3	192		1908	6.1	186		1317	0.3	9		1309	1.1	33		1406	1.2	36		1339	1.3	40
	2353	3.6	109		●	1952	7.0		213	1937	6.8		207	2015	7.3		221	2015	7.3		223		
2 W	0537	7.0	214	17 Th	0025	3.8	115	2 Sa	0129	3.1	93	17 Su	0116	3.0	90	2 Tu	0221	1.8	55	17 W	0158	1.2	37
	1236	0.1	2		0602	6.5	199		0718	7.6	233		0704	7.2	220		0827	7.3	221		0806	7.3	223
	1923	6.6	200		1258	1.1	35		1358	0.3	10		1339	1.0	30		1435	1.6	49		1411	1.6	49
					1939	6.3	192		2026	7.1	217		2003	7.0	213		2040	7.2	219		2015	7.4	222
3 Th	0047	3.4	105	18 F	0101	3.6	109	3 Su	0209	2.7	83	18 M	0149	2.6	79	3 W	0254	1.7	52	18 Th	0234	1.0	29
	0631	7.3	222		0641	6.8	207		0803	7.6	232		0741	7.3	224		0904	6.9	210		0847	7.1	217
	1327	-0.1	-4		1331	1.0	29		1436	0.6	18		1409	1.0	31		1502	2.1	65		1443	2.1	63
	2010	6.7	205		○	2008	6.5		197	2058	7.1		217	2029	7.1		217	2104	7.1		215	2045	7.3	223
4 F	0137	3.3	100	19 Sa	0135	3.3	102	4 M	0249	2.5	76	19 Tu	0223	2.2	68	4 Th	0327	1.7	53	19 F	0314	0.9	27
	0722	7.4	226		0717	7.0	212		0845	7.4	225		0819	7.3	223		0940	6.4	195		0932	6.7	204
	1414	-0.1	-4		1403	0.9	27		1510	1.0	32		1439	1.2	38		1528	2.7	81		1516	2.6	79
	2053	6.8	206		2037	6.6	200		2127	7.1	215		2056	7.2	219		2129	6.8	208		2116	7.1	217
5 Sa	0224	3.1	95	20 Su	0209	3.1	96	5 Tu	0327	2.4	72	20 W	0259	2.0	60	5 F	0401	1.9	59	20 Sa	0358	1.0	32
	0811	7.4	225		0754	7.1	215		0926	7.0	213		0858	7.2	218		1019	5.9	180		1022	6.2	188
	1458	0.1	4		1435	0.9	27		1541	1.6	50		1510	1.6	50		1554	3.2	97		1552	3.2	98
	2133	6.7	205		2106	6.7	203		2155	6.9	211		2124	7.2	219		2154	6.6	200		2152	6.8	207
6 Su	0310	3.0	91	21 M	0244	3.0	90	6 W	0406	2.4	72	21 Th	0337	1.8	55	6 Sa	0440	2.2	67	21 Su	0450	1.4	42
	0859	7.2	218		0831	7.0	214		1007	6.5	197		0941	6.8	208		1105	5.4	165		1125	5.6	170
	1540	0.6	17		1506	1.0	32		1611	2.3	69		1542	2.1	65		1622	3.7	112		1634	3.8	116
	2210	6.6	202		2135	6.7	205		2222	6.7	205		2154	7.1	216		2223	6.2	189		2236	6.3	193
7 M	0356	2.9	88	22 Tu	0322	2.8	85	7 Th	0446	2.5	75	22 F	0420	1.8	54	7 Su	0528	2.5	77	22 M	0558	1.8	55
	0946	6.8	207		0910	6.9	209		1050	5.9	180		1028	6.4	194		1212	5.0	152		1302	5.2	158
	1619	1.1	35		1539	1.3	40		1639	2.9	88		1616	2.8	84		1657	4.1	126		1743	4.3	132
	2246	6.5	197		2205	6.7	205		2250	6.5	198		2227	6.9	209		●	2301	5.8		178	●	2344	5.9	179
8 Tu	0443	2.9	87	23 W	0402	2.6	80	8 F	0531	2.6	79	23 Sa	0509	1.9	58	8 M	0641	2.8	86	23 Tu	0734	2.1	63
	1034	6.3	191		0953	6.6	201		1142	5.4	164		1126	5.8	177		1424	4.8	147		1512	5.2	160
	1656	1.8	55		1612	1.7	53		1710	3.5	106		1655	3.4	104		1813	4.6	139		2013	4.5	136
	2321	6.3	193		2237	6.7	204		2323	6.2	190		2307	6.6	201								
9 W	0533	2.9	87	24 Th	0447	2.5	76	9 Sa	0628	2.8	85	24 Su	0614	2.1	63	9 Tu	0007	5.4	166	24 W	0145	5.6	171
	1126	5.7	175		1041	6.2	190		1258	5.0	151		1249	5.3	162		0829	2.9	88		0913	2.0	60
	1733	2.5	76		1649	2.3	69		1751	4.0	123		1748	4.1	124		1626	5.1	156		1629	5.6	172
	2357	6.2	188		2312	6.6	201		●				●				2100	4.6	141		2201	4.0	122
10 Th	0630	2.9	87	25 F	0538	2.4	73	10 Su	0006	5.9	181	25 M	0004	6.3	191	10 W	0214	5.3	163	25 Th	0331	5.9	179
	1229	5.2	159		1139	5.8	177		0746	2.9	88		0741	2.2	66		0959	2.6	79		1025	1.7	51
	1813	3.1	95		1730	2.9	88		1503	4.9	148		1457	5.2	159		1712	5.5	169		1712	6.1	186
					2354	6.5	198		1908	4.5	136		1933	4.6	139		2228	4.2	129		2258	3.3	102
11 F	0037	6.0	183	26 Sa	0642	2.3	71	11 M	0116	5.7	174	26 Tu	0137	6.0	184	11 Th	0349	5.6	171	26 F	0441	6.3	193
	0736	2.8	86		1256	5.4	166		0920	2.8	84		0919	2.0	61		1054	2.2	66		1116	1.4	43
	1352	4.9	150		1824	3.5	107		1651	5.2	158		1642	5.6	171		1742	5.9	181		1745	6.5	197
	1905	3.6	111		●				2116	4.6	140		2147	4.5	136		2313	3.8	115		2340	2.7	81
12 Sa	0127	5.9	179	27 Su	0047	6.3	193	12 Tu	0252	5.7	173	27 W	0322	6.2	188	12 F	0447	6.0	184	27 Sa	0533	6.7	205
	0850	2.7	81		0759	2.2	66		1033	2.4	74		1037	1.6	48		1133	1.8	54		1157	1.3	39
	1533	4.9	149		1440	5.3	161		1742	5.6	170		1738	6.1	186		1808	6.3	192		1815	6.8	206
	2020	4.0	123		1943	4.1	124		2243	4.4	134		2303	4.0	122		2347	3.2	99				
13 Su	0228	5.8	177	28 M	0158	6.3	191	13 W	0411	5.9	180	28 Th	0440	6.6	201	13 Sa	0531	6.5	198	28 Su	0017	2.1	63
	0959	5.4	73		0923	1.8	56		1124	2.0	62		1134	1.1	34		1207	1.4	44		0617	7.0	213
	1657	5.2	157		1626	5.5	169		1816	6.0	182		1817	6.5	199		1832	6.6	202		1232	1.3	40
	2145	4.2	127		2127	4.3	131		2333	4.1	124		2353	3.4	105						1842	7.0	212
14 M	0333	5.8	178	29 Tu	0319	6.4	195	14 Th	0506	6.3	191	29 F	0538	7.1	215	14 Su	0019	2.7	82	29 M	0050	1.6	49
	1056	2.1	63		1038	1.4	42		1204	1.6	50		1219	0.8	25		0610	6.9	210		0657	7.1	216
	1753	5.5	168		1740	6.0	183		1845	6.3	192		1850	6.9	210		1238	1.2	37		1304	1.5	45
	2254	4.1	125		2253	4.2	127								1856		6.9	211	●		1907	7.1	215
15 Tu	0431	6.0	184	30 W	0434	6.7	205	15 F	0011	3.7	113	30 Sa	0035	2.9	88	15 M	0050	2.1	65	30 Tu	0122	1.2	38
	1142	1.7	52		1140	0.9	26		0549	6.6	202		0626	7.4	226		0648	7.2	220		0734	7.1	215
	1834	5.8	178		1832	6.4	196		1238	1.3	40		1259	0.7	22		1308	1.2	36		1333	1.8	54
	2345	4.0	121		2355	3.8	116		1912	6.6	200		1921	7.1	217		○	1921	7.2		219	1932	7.1	215
				31 Th	0536	7.1	217					31 Su	0112	2.4	73								
					1232	0.5	14						0709	7.5	230								
					1914	6.8	206					●	1949	7.2	220								

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

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Pusan, Korea, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height			Time	Height			Time	Height		
	h	m	ft		h	m	ft		h	m	ft
1 Tu	0510	2.4	73	16 W	0558	3.0	91	1 Su	0608	3.4	104
	1126	1.0	30		1213	0.7	21		1205	0.4	12
	1741	2.4	73		1842	3.0	91		1838	3.9	119
	2323	1.0	30								
2 W	0608	2.8	85	17 Th	0027	0.7	21	2 M	0031	0.6	18
	1209	0.6	18		0640	3.2	98		0702	3.7	113
	1827	2.9	88		1246	0.5	15		1253	0.3	9
					1914	3.3	101		1927	4.2	128
3 Th	0010	0.7	21	18 F	0104	0.5	15	3 Tu	0121	0.4	12
	0648	3.2	98		0714	3.5	107		0751	3.9	119
	1245	0.3	9		1314	0.3	9		1339	0.2	6
	1905	3.3	101		1943	3.6	110		2013	4.4	134
4 F	0050	0.3	9	19 Sa	0136	0.3	9	4 W	0210	0.3	9
	0723	3.6	110		0746	3.6	110		0837	4.0	122
	1319	0.0	0		1340	0.2	6		1425	0.2	6
	1940	3.8	116		2012	3.8	116	●	2059	4.6	140
5 Sa	0127	0.0	0	20 Su	0205	0.2	6	5 Th	0258	0.3	9
	0758	3.9	119		0817	3.7	113		0922	4.0	122
	1353	-0.3	-9		1405	0.1	3		1512	0.3	9
	2016	4.1	125	○	2040	3.9	119		2143	4.5	137
6 Su	0203	-0.2	-6	21 M	0233	0.2	6	6 F	0346	0.4	12
	0833	4.1	125		0847	3.7	113		1007	3.9	119
	1426	-0.4	-12		1430	0.1	3		1559	0.5	15
●	2051	4.3	131		2109	3.9	119		2227	4.4	134
7 M	0240	-0.3	-9	22 Tu	0301	0.2	6	7 Sa	0436	0.6	18
	0908	4.1	125		0918	3.7	113		1052	3.7	113
	1500	-0.4	-12		1456	0.1	3		1649	0.7	21
	2128	4.3	131		2139	3.8	116		2311	4.2	128
8 Tu	0317	-0.2	-6	23 W	0329	0.3	9	8 Su	0528	0.8	24
	0944	4.0	122		0949	3.5	107		1138	3.5	107
	1535	-0.2	-6		1522	0.2	6		1744	1.0	30
	2206	4.2	128		2208	3.7	113		2356	3.9	119
9 W	0354	0.0	0	24 Th	0358	0.5	15	9 M	0626	1.0	30
	1022	3.7	113		1021	3.3	101		1227	3.3	101
	1611	0.0	0		1549	0.3	9		1848	1.2	37
	2245	4.0	122		2239	3.5	107				
10 Th	0434	0.3	9	25 F	0428	0.6	18	10 Tu	0044	3.5	107
	1101	3.4	104		1055	3.0	91		0729	1.2	37
	1649	0.4	12		1619	0.5	15		1321	3.0	91
	2327	3.6	110		2312	3.2	98		1959	1.4	43
11 F	0520	0.7	21	26 Sa	0504	0.8	24	11 W	0136	3.2	98
	1143	3.0	91		1133	2.8	85		0833	1.3	40
	1734	0.8	24		1652	0.8	24		1428	2.9	88
					2350	3.0	91	○	2110	1.5	46
12 Sa	0015	3.2	98	27 Su	0553	1.1	34	12 Th	0238	3.0	91
	0623	1.1	34		1219	2.5	76		0934	1.3	40
	1236	2.5	76		1737	1.0	30		1556	2.9	88
	1852	1.2	37						2214	1.5	46
13 Su	0116	2.8	85	28 M	0038	2.7	82	13 F	0353	2.9	88
	0827	1.3	40		0731	1.2	37		1028	1.3	40
	1402	2.2	67		1322	2.3	70		1716	3.0	91
○	2108	1.3	40	○	1902	1.3	40		2311	1.4	43
14 M	0252	2.6	79	29 Tu	0148	2.6	79	14 Sa	0508	2.9	88
	1020	1.2	37		0919	1.1	34		1115	1.2	37
	1657	2.3	70		1452	2.3	70		1810	3.2	98
	2240	1.2	37		2111	1.3	40				
15 Tu	0454	2.7	82	30 W	0330	2.6	79	15 Su	0001	1.3	40
	1128	1.0	30		1026	0.9	27		0606	3.0	91
	1804	2.7	82		1630	2.6	79		1157	1.1	34
	2342	1.0	30		2230	1.0	30		1852	3.4	104
				15 Th	0507	2.9	88	31 Sa	0504	3.2	98
					1125	0.9	27		1116	0.6	18
					1805	3.0	91		1743	3.5	107
					2351	1.0	30		2339	0.8	24

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Inch'on, Korea, 2008

Times and Heights of High and Low Waters

January					February					March																									
Time		Height			Time		Height			Time		Height			Time		Height																		
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm																
1 Tu	0425	5.8	177		16 W ●	0400	2.5	76		1 F	0503	7.4	226		16 Sa	0536	6.1	186		1 Sa	0403	7.2	219		16 Su	0512	7.2	219							
	1049	21.3	649				1023	23.9	728				1154	20.1		613			1234		21.8	664				1045	20.6	628			1218	21.6	658		
	1645	8.0	244				1630	5.3	162				1820	11.3		344			1906		10.2	311				1708	11.6	354			1853	10.9	332		
	2255	21.3	649				2236	23.2	707										2309		18.1	552				2309	18.1	552							
2 W	0519	6.8	207		17 Th	0458	3.9	119		2 Sa	0010	18.2	555		17 Su	0058	18.8	573		2 Su	0520	9.3	283		17 M	0049	18.6	567		18 Tu	0235	20.0	610		
	1151	20.6	628				1132	22.9	698				0633	8.7		265			0717		6.9	210				1234	19.3	588				0700	8.2	250	
	1759	9.6	293				1747	7.7	235				1333	19.9		607			1429		22.6	689				1924	12.2	372				1416	22.2	677	
	2358	19.9	607				2348	21.2	646				2011	11.1		338			2049		8.9	271									2037	9.3	283		
3 Th	0628	7.4	226		18 F	0613	5.1	155		3 Su	0150	18.1	552		18 M	0242	19.8	604		3 M	0109	17.4	530		18 Tu	0235	20.0	610		19 W	0342	22.5	686		
	1308	20.6	628				1302	22.6	689				0809	8.1		247			0847		5.5	168				0722	9.5	290				0937	4.5	137	
	1928	10.0	305				1924	8.5	259				1504	21.3		649			1549		24.8	756				1427	20.4	622				1618	26.1	796	
							2128	9.3	283				2155	6.4		195			2155		6.4	195				2059	10.3	314				2220	4.1	125	
4 F	0115	19.3	588		19 Sa	0119	20.2	616		4 M	0308	19.4	591		19 Tu	0353	22.0	671		4 Tu	0241	19.0	579		19 W	0342	22.5	686							
	0744	7.1	216				0918	6.3	192				0951	3.3		101			0847		7.5	229				0937	4.5	137							
	1425	21.6	658				1602	23.2	707				1640	26.7		814			1532		22.7	692				1618	26.1	796							
	2047	9.1	277				2216	7.2	219				2242	4.1		125			2149		7.7	235				2220	4.1	125							
5 Sa	0229	19.8	604		20 Su	0246	20.9	637		5 Tu	0403	21.2	646		20 W	0444	24.0	732		5 W	0340	21.3	649		20 Th	0428	24.9	759							
	0849	6.1	186				1007	4.3	131				1040	1.5		46			0941		4.9	149				1023	2.7	82							
	1528	23.1	704				1644	25.0	762				1720	27.9		850			1614		24.9	759				1652	27.2	829							
	2146	7.6	232				2254	5.4	165				2321	2.5		76			2226		5.2	158				2255	2.3	70							
6 Su	0330	20.9	637		21 M	0354	22.3	680		6 W	0447	22.8	695		21 Th	0526	25.5	777		6 Th	0423	23.6	719		21 F	0506	26.5	808							
	0941	4.7	143				1047	2.5	76				1121	0.4		12			1023		2.6	79				1102	1.6	49							
	1618	24.5	747				1719	26.3	802				1754	28.4		866			1648		26.8	817				1722	27.7	844							
	2231	6.3	192				2328	3.8	116				2356	1.4		43			2258		3.0	91				2326	1.2	37							
7 M	0419	21.9	668		22 Tu	0449	23.7	722		7 Th	0525	24.0	732		22 F	0604	26.3	802		7 F	0501	25.6	780		22 Sa	0540	27.5	838							
	1025	3.5	107				1124	1.0	30				1159	0.1		3			1101		0.7	21				1137	1.2	37							
	1659	25.5	777				1752	27.3	832				1825	28.2		860			1721		28.1	856				1750	27.6	841							
	2311	5.3	162				●											2330	1.2		37			2356		0.7	21								
8 Tu	0501	22.6	689		23 W	0537	24.6	750		8 F	0000	2.5	76		23 Sa	0028	0.9	27		8 Sa	0537	27.1	826		23 Su	0612	27.9	850							
	1104	2.5	76				0602	25.0	762				0639	26.7		814			1139		-0.5	-15				1212	1.5	46							
	1737	26.1	796				1200	-0.1	-3				1234	0.3		9			1754		28.8	878				1819	27.1	826							
	2347	4.6	140				1825	28.0	853				1854	27.7		844			●																
9 W	0541	23.1	704		24 Th	0016	2.2	67		9 Sa	0032	1.3	40		24 Su	0058	0.8	24		9 Su	0003	-0.2	-6		24 M	0025	0.8	24							
	1141	1.7	52				0638	26.0	792				0712	26.8		817			0614		28.4	866				0642	27.9	850							
	1813	26.5	808				1236	-0.8	-24				1308	1.0		30			1217		-1.1	-34				1245	2.1	64							
							1857	28.5	869				1921	27.1		826			1828		29.1	887				1847	26.5	808							
10 Th	0021	4.0	122		25 F	0053	1.9	58		10 Su	0104	0.3	9		25 M	0127	0.9	27		10 M	0036	-1.2	-37		25 Tu	0054	1.1	34							
	0619	23.5	716				0714	26.8	817				0743	26.7		814			0651		29.2	890				0712	27.7	844							
	1217	1.0	30				1313	-1.0	-30				1341	2.0		61			1255		-0.9	-27				1317	3.1	94							
	1847	26.9	820				1929	28.6	872				1948	26.3		802			1903		28.8	878				1916	25.7	783							
11 F	0055	3.3	101		26 Sa	0128	1.8	55		11 M	0137	-0.5	-15		26 Tu	0154	1.4	43		11 Tu	0111	-1.5	-46		26 W	0121	1.7	52							
	0656	23.9	728				0750	27.4	835				0812	26.3		802			0729		29.5	899				0741	27.2	829							
	1253	0.4	12				1351	-0.6	-18				1413	3.3		101			1335		-0.1	-3				1349	4.2	128							
	1920	27.3	832				2003	28.2	860				2015	25.4		774			1939		28.1	856				1945	24.9	759							
12 Sa	0128	2.5	76		27 Su	0200	1.9	58		12 Tu	0211	-0.6	-18		27 W	0221	2.1	64		12 W	0147	-1.2	-37		27 Th	0149	2.6	79							
	0733	24.4	744				0827	27.5	838				0841	25.6		780			0807		29.2	890				0810	26.3	802							
	1329	0.1	3				1431	0.7	21				1444	4.9		149			1416		1.6	49				1420	5.6	171							
	1953	27.5	838				2037	27.2	829				2043	24.1		735			2016		26.7	814				2015	23.7	722							
13 Su	0201	1.8	55		28 M	0230	2.2	67		13 W	0248	0.0	0		28 Th	0249	3.4	104		13 Th	0225	-0.1	-3		28 F	0218	3.7	113							
	0809	24.8	756				0907	26.8	817				0911	24.4		744			0848		28.0	853				0839	25.1	765							
	1407	0.3	9				1514	2.9	88				1517	6.9		210			1459		4.0	122				1451	7.3	223							
	2026	27.4	835				2116	25.4	774				2115	22.4		683			2057		24.8	756				2046	22.3	680							

Inch'on, Korea, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height			Time	Height			Time	Height		
	h	m	ft		h	m	ft		h	m	ft
1 Tu	0026	17.9	546	16 W	0208	20.6	628	1 Su	0237	25.9	789
	0628	9.7	296		0807	7.9	241		0849	5.9	180
	1328	20.6	628		1449	23.4	713		1448	25.0	762
	2006	10.4	317		2103	6.7	204		2104	2.7	82
2 W	0201	19.3	588	17 Th	0315	23.0	701	2 M	0333	28.1	856
	0803	8.2	250		0911	6.1	186		0946	4.5	137
	1442	22.6	689		1537	24.8	756		1541	25.8	786
	2104	7.7	235		2146	4.4	134		2154	1.2	37
3 Th	0304	21.9	668	18 F	0400	25.3	771	3 Tu	0423	29.8	908
	0905	5.6	171		0958	4.5	137		1038	3.6	110
	1530	24.9	759		1613	25.8	786		1631	26.2	799
	2145	4.9	149		2221	2.7	82		2242	0.3	9
4 F	0351	24.7	753	19 Sa	0437	27.0	823	4 W	0513	30.6	933
	0953	3.2	98		1037	3.4	104		1128	3.3	101
	1609	26.8	817		1644	26.3	802		1721	26.1	796
	2221	2.3	70		2252	1.7	52	●	2328	0.0	0
5 Sa	0431	27.1	826	20 Su	0511	28.0	853	5 Th	0603	30.6	933
	1035	1.3	40		1114	3.0	91		1216	3.5	107
	1645	28.1	856		1714	26.4	805		1812	25.7	783
	2256	0.4	12	○	2323	1.4	43				
6 Su	0509	29.0	884	21 M	0543	28.4	866	6 F	0015	0.3	9
	1116	0.2	6		1149	3.2	98		0654	30.2	920
●	1722	28.7	875		1745	26.0	792		1303	4.0	122
	2332	-0.9	-27		2354	1.6	49		1904	25.2	768
7 M	0548	30.2	920	22 Tu	0614	28.2	860	7 Sa	0102	0.9	27
	1157	-0.1	-3		1223	3.8	116		0744	29.4	896
	1800	28.6	872		1817	25.4	774		1350	4.6	140
8 Tu	0009	-1.5	-46	23 W	0024	2.1	64		1955	24.7	753
	0629	30.7	936		0646	27.8	847	8 Su	0148	1.9	58
	1239	0.3	9		1257	4.6	140		0831	28.4	866
	1839	28.1	856		1850	24.7	753		1435	5.3	162
9 W	0047	-1.4	-43	24 Th	0054	2.7	82		2044	24.1	735
	0710	30.6	933		0718	27.1	826	9 M	0233	3.3	101
	1321	1.4	43		1330	5.5	168		0914	27.2	829
	1920	27.1	826		1924	23.9	728		1521	6.0	183
10 Th	0126	-0.7	-21	25 F	0125	3.5	107		2132	23.4	713
	0754	29.7	905		0749	26.3	802	10 Tu	0320	5.0	152
	1405	3.1	94		1403	6.5	198		0955	25.8	786
	2003	25.7	783		1958	23.1	704		1608	6.7	204
11 F	0208	0.7	21	26 Sa	0158	4.2	128		2223	22.7	692
	0839	28.2	860		0822	25.4	774	11 W	0412	7.0	213
	1451	5.3	162		1437	7.6	232		1039	24.2	738
	2049	23.9	728		2033	22.1	674		1700	7.4	226
12 Sa	0253	2.8	85	27 Su	0233	5.2	158	○	2319	22.0	671
	0930	26.1	796		0859	24.3	741	12 Th	0513	8.8	268
	1544	7.7	235		1516	8.7	265		1131	22.8	695
	2143	21.9	668		2116	21.0	640		1801	7.8	238
13 Su	0346	5.3	162	28 M	0315	6.5	198	13 F	0026	21.9	668
	1032	23.9	728		0948	23.1	704		0629	10.0	305
○	1655	9.8	299		1609	9.8	299		1233	21.8	664
	2256	20.0	610	○	2218	19.8	604		1906	7.6	232
14 M	0458	7.7	235	29 Tu	0414	7.9	241	14 Sa	0137	22.5	686
	1158	22.2	677		1058	22.0	671		0747	9.9	302
	1831	10.4	317		1729	10.4	317		1339	21.6	658
					2344	19.3	588		2007	6.8	207
15 Tu	0033	19.3	588	30 W	0539	8.8	268	15 Su	0241	23.9	728
	0636	8.8	268		1224	21.9	668		0853	9.0	274
	1335	22.2	677		1858	9.4	287		1440	22.1	674
	2003	9.0	274						2100	5.8	177
				1 Th	0111	20.4	622	16 F	0232	22.9	698
					0711	8.2	250		0833	8.0	244
					1340	23.0	701		1441	23.2	707
					2006	7.2	219		2100	5.3	162
				2 F	0220	22.8	695	17 Sa	0324	24.9	759
					0823	6.4	195		0927	6.7	204
					1439	24.6	750		1527	24.0	732
					2058	4.6	140		2141	3.9	119
				3 Sa	0314	25.6	780	18 Su	0405	26.5	808
					0920	4.3	131		1011	5.6	171
					1527	26.2	799		1605	24.6	750
					2141	2.2	67		2218	3.0	91
				4 Su	0400	28.1	856	19 M	0442	27.6	841
					1008	2.6	79		1051	5.1	155
					1610	27.3	832		1642	24.8	756
					2222	0.4	12		2252	2.7	82
				5 M	0443	29.9	911	20 Tu	0517	27.9	850
					1054	1.7	52		1129	5.0	152
				●	1653	27.7	844	○	1718	24.7	753
					2303	-0.6	-18		2327	2.8	85
				6 Tu	0527	30.9	942	21 W	0553	27.8	847
					1140	1.5	46		1205	5.3	162
					1736	27.4	835		1756	24.2	738
					2345	-0.9	-27				
				7 W	0612	31.1	948	22 Th	0001	3.2	98
					1225	2.1	64		0628	27.3	832
					1821	26.8	817		1242	5.9	180
				8 Th	0028	-0.6	-18		1834	23.7	722
					0659	30.5	930	23 F	0035	3.6	110
					1311	3.1	94		0704	26.8	817
					1909	25.8	786		1317	6.4	195
				9 F	0112	0.3	9		1912	23.2	707
					0748	29.5	899	24 Sa	0109	3.9	119
					1358	4.4	134		0739	26.3	802
					1958	24.7	753		1352	6.8	207
				10 Sa	0157	1.6	49		1950	22.8	695
					0837	28.2	860	25 Su	0145	4.2	128
					1446	5.9	180		0814	25.9	789
					2049	23.5	716		1427	7.1	216
				11 Su	0244	3.4	104		2028	22.4	683
					0927	26.5	808	26 M	0222	4.6	140
					1538	7.3	223		0851	25.5	777
					2144	22.3	680		1505	7.3	223
				12 M	0336	5.4	165		2110	22.0	671
					1021	24.7	753	27 Tu	0303	5.3	162
				○	1638	8.6	262		0933	24.9	759
					2247	21.1	643		1549	7.6	232
				13 Tu	0439	7.5	229		2200	21.6	658
					1123	23.2	707	28 W	0354	6.4	195
					1751	9.1	277		1024	24.2	738
				14 W	0002	20.6	628	○	1646	7.8	238
					0559	8.9	271		2304	21.4	652
					1234	22.3	680	29 Th	0500	7.5	229
					1907	8.5	259		1128	23.6	719
				15 Th	0122	21.2	646		1755	7.4	226
					0723	9.0	271	30 F	0019	22.0	671
					1344	22.4	683		0621	7.9	241
					2011	7.0	213		1240	23.5	716
									1906	6.3	192
								31 Sa	0133	23.6	719
									0741	7.3	223
									1348	24.0	732
									2009	4.6	140

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
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Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Inch'on, Korea, 2008

Times and Heights of High and Low Waters

October				November				December			
Time		Height		Time		Height		Time		Height	
	h m	ft	cm		h m	ft	cm		h m	ft	cm
1 W	0557	28.1	856	16 Th	0532	28.8	878	1 M	0104	5.5	168
	1206	1.2	37		1144	-0.7	-21		0658	22.9	698
	1823	28.9	881		1801	30.7	936		1257	2.9	88
									1927	25.8	786
2 Th	0026	3.0	91	17 F	0013	1.2	37	2 Tu	0138	5.9	180
	0626	27.2	829		0610	28.3	863		0736	22.4	683
	1235	1.7	52		1221	-0.9	-27		1332	3.3	101
	1854	28.4	866		1841	30.7	936		2002	25.3	771
3 F	0100	4.1	125	18 Sa	0055	2.0	61	3 W	0213	6.2	189
	0655	26.3	802		0650	27.4	835		0814	22.0	671
	1304	2.4	73		1300	-0.4	-12		1408	3.7	113
	1924	27.7	844		1924	30.0	914		2037	24.8	756
4 Sa	0133	5.4	165	19 Su	0138	3.4	104	4 Th	0248	6.5	198
	0726	25.2	768		0733	26.2	799		0852	21.5	655
	1304	3.4	104		1342	0.7	21		1446	4.4	134
	1954	26.8	817		2010	28.7	875		2114	24.2	738
5 Su	0206	6.8	207	20 M	0224	5.3	162	5 F	0327	6.8	207
	0757	24.1	735		0820	24.6	750		0937	21.0	640
	1404	4.5	137		1427	2.4	73		1530	5.4	165
	2026	25.5	777		2102	27.0	823		2158	23.4	713
6 M	0239	8.4	256	21 Tu	0316	7.4	226	6 Sa	0415	7.0	213
	0832	22.7	692		0914	22.7	692		1033	20.5	625
	1437	6.0	183		1519	4.6	140		1627	6.7	204
	2104	23.9	728		2204	24.9	759		2254	22.5	686
7 Tu	0319	10.2	311	22 W	0422	9.3	283	7 Su	0517	7.1	216
	0914	21.0	640		1025	20.9	637		1143	20.6	628
	1519	7.7	235		1626	6.9	210		1742	7.7	235
	2158	22.2	677		2323	23.2	707				
8 W	0418	12.0	366	23 Th	0551	10.3	314	8 M	0004	21.9	668
	1023	19.2	585		1157	19.9	607		0629	6.6	201
	1622	9.6	293		1757	8.4	256		1300	21.6	658
	2327	20.8	634						1907	7.6	232
9 Th	0608	12.7	387	24 F	0056	22.8	695	9 Tu	0117	22.1	674
	1209	18.5	564		0725	9.3	283		0738	5.2	158
	1808	10.4	317		1332	20.8	634		1409	23.6	719
					1932	8.0	244		2021	6.4	195
10 F	0110	21.1	643	25 Sa	0216	23.7	722	10 W	0222	23.0	701
	0750	11.2	341		0834	7.0	213		0838	3.3	101
	1343	19.7	600		1446	23.0	701		1508	25.9	789
	1945	9.1	277		2043	6.4	195		2122	4.8	146
11 Sa	0223	22.9	698	26 Su	0310	25.1	765	11 Th	0318	24.1	735
	0848	8.5	259		0921	4.6	140		0930	1.4	43
	1447	22.1	674		1538	25.4	774		1600	27.9	850
	2048	6.8	207		2135	4.7	143		2215	3.4	104
12 Su	0311	25.0	762	27 M	0350	26.1	796	12 F	0408	25.0	762
	0928	5.8	177		0959	2.7	82		1019	-0.1	-3
	1533	24.7	753		1618	27.2	829		1650	29.2	890
	2134	4.4	134		2217	3.6	110		2305	2.6	79
13 M	0349	26.8	817	28 Tu	0424	26.7	814	13 Sa	0458	25.4	774
	1002	3.3	101		1033	1.6	49		1106	-1.0	-30
	1611	27.1	826		1653	28.3	863		1739	29.8	908
	2215	2.6	79		2255	3.1	94		2352	2.3	70
14 Tu	0423	28.1	856	29 W	0455	26.7	814	14 Su	0547	25.4	774
	1035	1.3	40		1105	1.2	37		1153	-1.3	-40
	1647	28.9	881		1725	28.7	875		1829	29.7	905
	2254	1.4	43		2331	3.3	101				
15 W	0457	28.8	878	30 Th	0526	26.3	802	15 M	0039	2.4	73
	1109	0.0	0		1136	1.3	40		0638	25.2	768
	1723	30.2	920		1757	28.5	869		1240	-1.1	-34
	2333	0.9	27	31 F	0006	3.9	119		1918	29.2	890
					0558	25.6	780	30 Tu	0052	4.5	137
					1207	1.9	58		0651	23.1	704
					1829	27.9	850		1246	1.9	58
									1917	26.2	799
								31 W	0124	4.3	131
									0727	23.0	701
									1320	1.9	58
									1948	26.1	796

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Namp'O-Hang, Korea, 2008

Times and Heights of High and Low Waters

January						February						March																	
Time			Height			Time			Height			Time			Height			Time			Height								
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm					
1 Tu	0240	14.3	436		16 W ○	0147	15.6	475		1 F	0327	12.1	369		16 Sa	0317	11.9	363		1 Sa	0234	12.4	378		16 Su	0310	11.4	347	
	0916	3.6	110			0819	2.3	70			1005	4.3	131			0958	4.1	125			0907	4.7	143			0943	5.1	155	
	1533	13.7	418			1432	15.3	466			1642	14.2	433			1646	15.1	460			1534	14.5	442			1636	15.0	457	
	2147	5.4	165			2057	4.5	137			2316	6.0	183			2335	5.9	180			2226	6.3	192			2328	6.1	186	
2 W	0335	13.2	402		17 Th	0240	14.1	430		2 Sa	0447	11.3	344		17 Su	0510	11.0	335		2 Su	0343	11.5	351		17 M	0525	11.1	338	
	1010	3.8	116			0919	2.8	85			1112	4.5	137			1126	4.3	131			1023	5.1	155			1119	5.1	155	
	1642	14.0	427			1541	15.2	463			1809	14.5	442			1836	15.7	479			1705	14.3	436			1826	15.5	472	
	2257	5.6	171			2220	5.2	158																					
3 Th	0443	12.3	375		18 F	0347	12.7	387		3 Su	0028	5.7	174		18 M	0059	5.1	155		3 M	0531	11.2	341		18 Tu	0046	5.2	158	
	1106	3.8	116			1029	3.2	98			0627	11.2	341			0711	11.6	354			1139	5.0	152			0709	12.3	375	
	1754	14.5	442			1708	15.4	469			1216	4.2	128			1244	3.7	113			1837	14.9	454			1238	4.4	134	
						2346	5.1	155			1921	15.3	466			1952	16.9	515								1937	16.5	503	
4 F	0004	5.4	165		19 Sa	0521	11.7	357		4 M	0129	5.0	152		19 Tu	0204	4.0	122		4 Tu	0053	5.4	165		19 W	0144	4.0	122	
	0602	11.9	363			1143	3.2	98			0740	11.8	360			0819	12.9	393			0705	11.9	363			0807	13.9	424	
	1201	3.7	113			1842	16.1	491			1313	3.7	113			1349	2.9	88			1243	4.3	131			1341	3.4	104	
	1859	15.3	466								2014	16.3	497			2046	18.0	549			1939	15.9	485			2027	17.4	530	
5 Sa	0104	4.9	149		20 Su	0105	4.5	137		5 Tu	0219	4.3	131		20 W	0254	2.9	88		5 W	0145	4.4	134		20 Th	0229	3.0	91	
	0711	12.0	366			0706	11.8	360			0830	12.5	381			0908	14.2	433			0801	13.0	396			0851	15.4	469	
	1253	3.4	104			1252	2.8	85			1401	3.0	91			1443	2.0	61			1337	3.4	104			1431	2.6	79	
	1952	16.0	488			1956	17.3	527			2055	17.1	521			2129	18.7	570			2025	16.9	515			2108	17.8	543	
6 Su	0156	4.4	134		21 M	0211	3.6	110		6 W	0300	3.5	107		21 Th ○	0336	2.1	64		6 Th	0228	3.4	104		21 F	0306	2.3	70	
	0806	12.3	375			0820	12.5	381			0909	13.3	405			0949	15.3	466			0843	14.2	433			0929	16.5	503	
	1339	3.0	91			1354	2.2	67			1443	2.4	73			1528	1.5	46			1422	2.6	79			1513	2.1	64	
	2037	16.7	509			2053	18.4	561			2130	17.7	539			2207	18.9	576			2102	17.6	536			2144	17.9	546	
7 M	0242	3.8	116		22 Tu ○	0306	2.7	82		7 Th ●	0335	2.8	85		22 F	0411	1.6	49		7 F	0303	2.6	79		22 Sa ○	0338	1.8	55	
	0850	12.6	384			0915	13.4	408			0942	14.0	427			1024	16.1	491			0918	15.3	466			1001	17.2	524	
	1422	2.6	79			1448	1.6	49			1521	1.8	55			1608	1.3	40			1502	1.8	55			1551	1.8	55	
	2115	17.3	527			2141	19.1	582			2200	18.2	555			2240	18.7	570			2134	18.0	549			2214	17.6	536	
8 Tu ●	0321	3.4	104		23 W	0353	2.0	61		8 F	0407	2.2	67		23 Sa	0443	1.4	43		8 Sa ●	0336	1.8	55		23 Su	0407	1.7	52	
	0926	12.9	393			1001	14.2	433			1012	14.7	448			1057	16.5	503			0950	16.3	497			1031	17.7	539	
	1500	2.3	70			1537	1.2	37			1557	1.4	43			1645	1.4	43			1541	1.3	40			1625	1.9	58	
	2148	17.7	539			2223	19.4	591			2229	18.4	561			2310	18.1	552			2205	18.2	555			2242	17.1	521	
9 W	0356	3.0	91		24 Th	0435	1.7	52		9 Sa	0437	1.7	52		24 Su	0512	1.4	43		9 Su	0407	1.3	40		24 M	0435	1.7	52	
	0957	13.3	405			1041	14.8	451			1042	15.5	472			1127	16.8	512			1021	17.3	527			1058	17.9	546	
	1535	2.0	61			1621	1.1	34			1632	1.2	37			1720	1.7	52			1618	1.1	34			1657	2.1	64	
	2218	18.0	549			2301	19.2	585			2257	18.4	561			2338	17.4	530			2236	18.0	549			2308	16.5	503	
10 Th	0428	2.7	82		25 F	0512	1.5	46		10 Su	0507	1.3	40		25 M	0540	1.6	49		10 M	0438	0.9	27		25 Tu	0501	1.8	55	
	1027	13.6	415			1118	15.2	463			1113	16.2	494			1156	16.9	515			1054	18.0	549			1125	18.0	549	
	1609	1.7	52			1702	1.3	40			1709	1.2	37			1755	2.3	70			1657	1.2	37			1729	2.5	76	
	2246	18.2	555			2335	18.6	567			2328	18.1	552								2307	17.5	533			2333	15.9	485	
11 F	0500	2.3	70		26 Sa	0546	1.6	49		11 M	0539	1.1	34		26 Tu	0005	16.6	506		11 Tu	0511	0.9	27		26 W	0529	2.1	64	
	1056	14.1	430			1153	15.4	469			1148	16.7	509			0610	1.9	58			1130	18.4	561			1153	17.8	543	
	1644	1.6	49			1742	1.8	55			1750	1.6	49			1227	16.8	512			1738	1.7	52			1803	3.1	94	
	2315	18.3	558													1832	3.0	91			2341	16.7	509						
12 Sa	0532	2.0	61		27 Su	0007	17.8	543		12 Tu	0001	17.5	533		27 W	0034	15.6	475		12 W	0546	1.2	37		27 Th	0001	15.2	463	
	1129	14.6	445			0620	1.8	55			0614	1.2	37			0642	2.4	73			1209	18.3	558			0600	2.6	79	
	1721	1.6	49			1228	15.4	469			1227	17.0	518			1300	16.5	503			1823	2.7	82			1225	17.4	530	
	2347	18.1	552			1822	2.5	76			1835	2.4	73			1914	3.9	119								1842	3.9	119	
13 Su	0607	1.8	55		28 M	0039	16.8	512		13 W	0038	16.4	500		28 Th	0106	14.6	445		13 Th	0019	15.6	475		28 F	0033	14.5	442	
	1206	15.0	457			0654	2.2	67			0654	1.6	49			0719	3.1	94			0626	1.8	55			0636	3.2	98	
	1803	2.0	61			1304	15.3	466			1312	16.8	512			1340	15.9	485			1253	17.8	543			1302	16.8	512	
						1905	3.3	101			1928	3.5	107			2004	4.9	149			1916	3.9	119			1928	4.7	143	
14 M	0022	17.7	539		29 Tu	0112	15.7	479		14 Th ○	0120	15.0	457		29 F ○	0145	13.5	411		14 F ○	0101	14.2	433		29 Sa	0111	13.7	418	
	0645	1.7	52			0731	2.6	79			0741	2.3	70			0806	3.9	119			0713	2.9	88			0720	4.0	122	
	1248	15.3	466			1344	15.1	460			1405	16.3	497			1429	15.2	463			1346	16.8	512			1348	16.1	491	
	1850	2.6	79			1954	4.3	131			2034	4.8	146			2108	5.8	177			2023	5.3	162			2026	5.6	171	
15 Tu	0102	16.8	512		30 W ○	0148	14.5	442		15 F	0210	13.4	408		15 Sa	0154	12.7	387		15 Sa	0154	12.7	387		30 Su ○	0159	12.8	390	
	0728	1.9	58			0813	3.2	98			0840	3.3	101			0815	4.1	125			0836	5.5	168			0819	4.9	149	
	1336	15.4	469			1430	14.8	451			1512	15.5	472			1455	15.7	479			1447	15.3	466			1447	15.3	466	
	1947	3.5	107			2051	5.2	158			2200	5.8	177			2152	6.2	189								2141	6.1	186	
				31 Th	0232	13.3	405															31 M	0304	12.0	366				
					0904	3.8	116																0936	5.5	168				

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Namp'O-Hang, Korea, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu	0033 3.5 107 0723 18.6 567 1342 4.8 146 1942 14.1 430	16 W	0123 4.8 146 0823 18.0 549 1428 5.6 171 2038 13.9 424	1 F	0219 3.3 101 0914 20.4 622 1526 3.8 116 2134 15.7 479	16 Sa	0230 4.1 125 0916 19.0 579 1519 4.5 137 2129 15.7 479	1 M	0347 2.5 76 1019 20.0 610 1620 2.7 82 2237 18.3 558	16 Tu	0322 2.8 85 0945 18.8 573 1544 2.6 79 2201 18.4 561
2 W	0131 3.1 94 0826 19.7 600 1442 4.1 125 2046 14.5 442	17 Th	0208 4.4 134 0904 18.5 564 1509 5.2 158 2117 14.3 436	2 Sa	0312 2.8 85 0959 20.9 637 1610 3.3 101 2218 16.5 503	17 Su	0307 3.6 110 0946 19.3 588 1549 4.0 122 2158 16.3 497	2 Tu	0427 2.6 79 1052 19.4 591 1651 2.7 82 2309 18.6 567	17 W	0358 2.5 76 1013 18.7 570 1614 2.3 70 2231 19.1 582
3 Th	0226 2.7 82 0920 20.5 625 1536 3.6 110 2140 14.9 454	18 F	0248 4.1 125 0939 19.0 579 1545 4.8 146 2150 14.7 448	3 Su	0359 2.5 76 1040 20.8 634 1650 3.0 91 2258 17.0 518	18 M	0342 3.2 98 1013 19.5 594 1618 3.5 107 2226 17.0 518	3 W	0504 3.0 91 1122 18.6 567 1721 2.9 88 2341 18.6 567	18 Th	0434 2.5 76 1043 18.2 555 1644 2.1 64 2304 19.5 594
4 F	0317 2.5 76 1009 20.9 637 1625 3.3 101 2228 15.3 466	19 Sa	0324 3.8 116 1009 19.2 585 1617 4.4 134 2219 15.1 460	4 M	0443 2.7 82 1117 20.3 619 1727 3.0 91 2336 17.3 527	19 Tu	0416 3.0 91 1040 19.5 594 1647 3.1 94 2255 17.7 539	4 Th	0541 3.6 110 1151 17.7 539 1752 3.4 104	19 F	0513 2.9 88 1115 17.6 536 1718 2.3 70 2341 19.5 594
5 Sa	0407 2.4 73 1054 20.9 637 1711 3.3 101 2313 15.6 475	20 Su	0358 3.5 107 1037 19.4 591 1647 4.1 125 2247 15.6 475	5 Tu	0526 3.1 94 1152 19.5 594 1802 3.2 98	20 W	0450 3.0 91 1108 19.3 588 1716 2.8 85 2327 18.3 558	5 F	0013 18.3 558 0619 4.4 134 1221 16.6 506 1825 3.9 119	20 Sa	0555 3.6 110 1151 16.6 506 1755 2.8 85
6 Su	0455 2.7 82 1136 20.4 622 1755 3.4 104 2357 15.8 482	21 M	0432 3.4 104 1104 19.5 594 1717 3.7 113 2317 16.1 491	6 W	0013 17.4 530 0608 3.8 116 1225 18.5 564 1837 3.6 110	21 Th	0528 3.2 98 1138 18.8 573 1749 2.8 85	6 Sa	0047 17.9 546 0701 5.3 162 1254 15.6 475 1902 4.7 143	21 Su	0024 19.1 582 0644 4.7 143 1232 15.5 472 1839 3.7 113
7 M	0542 3.2 98 1217 19.6 597 1837 3.6 110	22 Tu	0507 3.4 104 1133 19.4 591 1749 3.4 104 2350 16.7 509	7 Th	0050 17.3 527 0651 4.7 143 1259 17.3 527 1914 4.1 125	22 F	0003 18.6 567 0610 3.8 116 1213 18.0 549 1826 3.0 91	7 Su	0127 17.3 527 0751 6.3 192 1333 14.5 442 1949 5.5 168	22 M	0114 18.3 558 0746 5.9 180 1322 14.1 430 1937 4.9 149
8 Tu	0040 15.8 482 0631 4.0 122 1257 18.6 567 1920 3.9 119	23 W	0546 3.5 107 1204 19.1 582 1824 3.3 101	8 F	0130 17.0 518 0739 5.7 174 1336 16.0 488 1955 4.8 146	23 Sa	0044 18.6 567 0658 4.7 143 1253 16.8 512 1909 3.6 110	8 M	0217 16.5 503 0856 7.2 219 1424 13.5 411 2052 6.2 189	23 Tu	0217 17.2 524 0910 6.9 210 1431 12.8 390 2059 5.9 180
9 W	0125 15.8 482 0723 4.9 149 1338 17.4 530 2004 4.3 131	24 Th	0028 17.1 521 0629 4.0 122 1241 18.5 564 1903 3.3 101	9 Sa	0215 16.6 506 0836 6.6 201 1418 14.8 451 2045 5.4 165	24 Su	0133 18.2 555 0758 5.9 180 1340 15.4 469 2003 4.5 137	9 Tu	0322 15.8 482 1014 7.6 232 1537 12.7 387 2209 6.6 201	24 W	0344 16.3 497 1046 7.0 213 1623 12.2 372 2238 6.2 189
10 Th	0214 15.7 479 0820 5.8 177 1422 16.1 491 2052 4.7 143	25 F	0112 17.4 530 0720 4.7 143 1322 17.6 536 1948 3.6 110	10 Su	0310 16.2 494 0943 7.3 223 1513 13.7 418 2146 6.0 183	25 M	0234 17.5 533 0917 6.9 210 1441 13.9 424 2116 5.4 165	10 W	0452 15.6 475 1132 7.3 223 1724 12.6 384 2325 6.3 192	25 Th	0536 16.3 497 1208 6.2 189 1825 13.1 399
11 F	0309 15.7 479 0924 6.6 201 1512 14.9 454 2145 5.0 152	26 Sa	0202 17.4 530 0822 5.6 171 1410 16.3 497 2042 4.1 125	11 M	0422 15.9 485 1058 7.6 232 1630 12.9 393 2254 6.2 189	26 Tu	0354 16.9 515 1050 7.3 223 1611 12.8 390 2244 5.7 174	11 Th	0621 16.1 491 1236 6.5 198 1851 13.4 408	26 F	0003 5.5 168 0659 17.2 524 1310 5.0 152 1934 14.8 451
12 Sa	0413 15.7 479 1032 7.0 213 1615 13.9 424 2241 5.3 162	27 Su	0302 17.2 524 0937 6.4 195 1508 14.9 454 2148 4.6 140	12 Tu	0549 16.1 491 1210 7.3 223 1810 12.8 390	27 W	0541 17.0 518 1218 6.7 204 1818 12.9 393	12 F	0029 5.6 171 0722 17.0 518 1327 5.6 171 1945 14.5 442	27 Sa	0110 4.5 137 0756 18.1 552 1358 3.9 119 2023 16.3 497
13 Su	0526 16.0 488 1140 7.0 213 1732 13.3 405 2338 5.3 162	28 M	0417 17.1 521 1102 6.7 204 1625 13.7 418 2301 4.8 146	13 W	0000 5.9 180 0704 16.8 512 1312 6.7 204 1925 13.4 408	28 Th	0007 5.3 162 0711 18.0 549 1327 5.6 171 1942 14.1 430	13 Sa	0122 4.7 143 0807 17.9 546 1408 4.6 140 2026 15.6 475	28 Su	0204 3.5 107 0841 18.6 567 1439 3.0 91 2104 17.6 536
14 M	0636 16.5 503 1244 6.7 204 1849 13.2 402	29 Tu	0549 17.5 533 1223 6.4 195 1809 13.2 402	14 Th	0058 5.4 165 0758 17.7 539 1402 5.9 180 2016 14.2 433	29 F	0117 4.4 134 0813 19.1 582 1422 4.5 137 2038 15.6 475	14 Su	0206 3.9 119 0844 18.5 564 1443 3.8 116 2100 16.6 506	29 M	0250 2.9 88 0920 18.7 570 1514 2.5 76 2140 18.5 564
15 Tu	0032 5.1 155 0735 17.3 527 1340 6.2 189 1950 13.5 411	30 W	0014 4.5 137 0715 18.4 561 1335 5.6 171 1940 13.8 421	15 F	0147 4.7 143 0841 18.4 561 1444 5.2 158 2056 15.0 457	30 Sa	0214 3.5 107 0910 19.9 607 1507 3.6 110 2122 16.8 512	15 M	0246 3.2 98 0916 18.8 573 1515 3.1 94 2131 17.6 536	30 Tu	0331 2.6 79 0954 18.4 561 1545 2.3 70 2212 18.9 576
		31 Th	0120 4.0 122 0821 19.5 594 1435 4.6 140 2044 14.7 448			31 Su	0303 2.8 85 0942 20.2 616 1545 3.0 91 2201 17.7 539				

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Namp'O-Hang, Korea, 2008

Times and Heights of High and Low Waters

October						November						December					
Time			Height			Time			Height			Time			Height		
	h	m	ft	cm			h	m	ft	cm			h	m	ft	cm	
1 W	0407	2.6	79			16 Th	0341	2.1	64			1 M	0513	3.2	98		
	1024	17.8	543				0949	17.1	521				1107	13.6	415		
	1615	2.4	73				1543	1.5	46				1652	2.5	76		
	2242	19.1	582				2211	19.8	604				2329	17.8	543		
2 Th	0442	2.9	88			17 F	0421	2.1	64			2 Tu	0548	3.4	104		
	1052	17.1	521				1023	16.6	506				1139	13.5	411		
	1643	2.6	79				1618	1.5	46				1728	2.8	85		
	2310	19.0	579				2247	20.0	610								
3 F	0515	3.4	104			18 Sa	0502	2.6	79			3 W	0002	17.5	533		
	1120	16.3	497				1059	15.9	485				0626	3.5	107		
	1712	3.0	91				1654	1.9	58				1215	13.5	411		
	2339	18.7	570				2328	19.7	600				1809	3.2	98		
4 Sa	0550	4.0	122			19 Su	0548	3.4	104			4 Th	0039	17.1	521		
	1148	15.6	475				1139	15.0	457				0709	3.7	113		
	1743	3.6	110				1735	2.6	79				1258	13.4	408		
													1856	3.7	113		
5 Su	0012	18.2	555			20 M	0013	19.0	579			5 F	0121	16.6	506		
	0629	4.8	146				0640	4.4	134				0759	3.7	113		
	1220	14.8	451				1224	14.0	427				1349	13.4	408		
	1819	4.2	128				1824	3.6	110				1954	4.3	131		
6 M	0049	17.5	533			21 Tu	0105	17.9	546			6 Sa	0209	15.9	485		
	0715	5.6	171				0744	5.4	165				0854	3.7	113		
	1259	14.0	427				1321	13.0	396				1447	13.5	411		
	1904	5.0	152				1927	4.8	146				2103	4.8	146		
7 Tu	0135	16.7	509			22 W	0209	16.7	509			7 Su	0303	15.2	463		
	0815	6.4	195				0905	6.1	186				0952	3.6	110		
	1348	13.2	402				1439	12.2	372				1554	13.9	424		
	2004	5.8	177				2054	5.8	177				2217	4.9	149		
8 W	0234	15.9	485			23 Th	0334	15.7	479			8 M	0406	14.4	439		
	0929	6.8	207				1031	5.9	180				1051	3.2	98		
	1456	12.6	384				1631	12.2	372				1707	14.7	448		
	2123	6.3	192				2230	6.0	183				2329	4.6	140		
9 Th	0350	15.4	469			24 F	0513	15.5	472			9 Tu	0516	13.9	424		
	1045	6.6	201				1143	5.2	158				1146	2.7	82		
	1629	12.5	381				1810	13.5	411				1817	15.8	482		
	2244	6.2	189				2351	5.4	165								
10 F	0517	15.5	472			25 Sa	0631	15.9	485			10 W	0034	4.0	122		
	1150	5.8	177				1239	4.2	128				0627	13.6	415		
	1801	13.3	405				1913	15.1	460				1239	2.2	67		
	2353	5.5	168										1919	17.0	518		
11 Sa	0628	16.0	488			26 Su	0056	4.5	137			11 Th	0133	3.2	98		
	1242	4.8	146				0729	16.4	500				0732	13.7	418		
	1903	14.6	445				1325	3.3	101				1329	1.6	49		
							2001	16.6	506				2013	18.2	555		
12 Su	0049	4.6	140			27 M	0148	3.6	110			12 F	0227	2.5	76		
	0721	16.7	509				0815	16.6	506				0829	13.8	421		
	1325	3.8	116				1405	2.6	79				1416	1.2	37		
	1949	15.9	485				2041	17.7	539				2103	19.1	582		
13 M	0138	3.7	113			28 Tu	0233	3.1	94			13 Sa	0319	2.1	64		
	0803	17.2	524				0854	16.5	503				0920	13.9	424		
	1403	2.9	88				1440	2.3	70				1503	0.9	27		
	2027	17.2	524				2116	18.5	564				2150	19.7	600		
14 Tu	0221	2.9	88			29 W	0313	2.8	85			14 Su	0407	1.9	58		
	0841	17.4	530				0929	16.2	494				1007	14.0	427		
	1437	2.2	67				1512	2.1	64				1550	0.8	24		
	2102	18.3	558				2148	18.8	573				2236	19.8	604		
15 W	0301	2.3	70			30 Th	0349	2.7	82			15 M	0455	1.9	58		
	0915	17.4	530				0959	15.8	482				1053	14.0	427		
	1510	1.7	52				1542	2.2	67				1636	1.1	34		
	2136	19.2	585				2217	18.9	576				2321	19.5	594		
16 Th	0422	2.9	88			31 F	0422	2.9	88			16 Tu	0529	2.6	79		
	1028	15.3	466				1028	15.3	466				1125	13.9	424		
	1611	2.4	73				1611	2.4	73				1712	2.1	64		
	2246	18.7	570				2246	18.7	570				2342	17.8	543		

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Dalian, China, 2008

Times and Heights of High and Low Waters

April						May						June					
Time			Height			Time			Height			Time			Height		
	h	m	ft	cm			h	m	ft	cm			h	m	ft	cm	
1 Tu	0012	3.6	111			16 W	0130	2.4	73			1 Su	0056	2.0	61		
	0553	5.7	174				0724	7.2	220				0723	9.6	293		16 M
	1142	3.1	94				1321	2.5	75				1347	2.7	81		
	1833	7.8	239				1940	8.5	259				1937	8.3	253		
2 W	0131	3.1	94			17 Th	0214	2.0	60			2 M	0146	1.6	49		
	0718	6.4	194				0815	8.1	246				0813	10.5	319		17 Tu
	1307	2.7	83				1420	2.1	65				1445	2.4	72		
	1935	8.3	254				2026	8.5	260				2029	8.3	254		
3 Th	0216	2.4	74			18 F	0248	1.6	50			3 Tu	0235	1.2	37		
	0808	7.2	219				0853	8.8	267				0902	11.1	339		18 W
	1403	2.2	66				1506	1.9	57				1540	2.2	66		
	2020	8.8	269				2103	8.5	260				2120	8.3	254		
4 F	0249	1.8	56			19 Sa	0317	1.4	43			4 W	0324	0.9	27		
	0846	8.1	246				0926	9.3	283				0950	11.6	353		19 Th
	1447	1.6	48				1544	1.7	52				1633	2.1	63		
	2057	9.2	280				2135	8.5	259			●	2209	8.3	254		
5 Sa	0318	1.3	41			20 Su	0345	1.3	39			5 Th	0413	0.7	21		
	0919	8.9	271				0957	9.6	293				1040	11.8	360		20 F
	1528	1.1	34				1619	1.6	50				1725	2.0	62		
	2132	9.4	285			○	2207	8.4	256				2259	8.2	251		
6 Su	0348	0.9	28			21 M	0413	1.2	36			6 F	0503	0.6	19		
	0952	9.7	296				1027	9.8	300				1131	11.8	359		21 Sa
	1608	0.8	25				1653	1.7	51				1817	2.1	63		
●	2206	9.3	284				2239	8.3	252				2348	8.1	247		
7 M	0419	0.5	16			22 Tu	0442	1.1	35			7 Sa	0553	0.8	24		
	1027	10.4	317				1058	10.0	305				1223	11.5	351		22 Su
	1650	0.7	22				1727	1.8	54				1909	2.1	65		
	2244	9.2	280				2312	8.0	245								
8 Tu	0454	0.2	6			23 W	0511	1.1	34			8 Su	0040	8.0	243		
	1106	10.9	331				1129	10.1	308				0645	1.1	35		23 M
	1734	0.8	25				1802	2.0	60				1315	11.0	336		
	2324	8.9	271				2345	7.8	237				2000	2.2	67		
9 W	0533	0.0	0			24 Th	0543	1.1	34			9 M	0135	7.9	240		
	1149	11.1	338				1202	10.1	308				0738	1.7	52		24 Tu
	1822	1.1	34				1837	2.2	68				1407	10.3	315		
10 Th	0007	8.5	258			25 F	0019	7.5	229				2050	2.3	69		
	0616	0.1	2				0616	1.2	37			10 Tu	0237	7.8	239		
	1236	11.0	334				1237	9.9	303				0835	2.4	73		25 W
	1914	1.6	48				1914	2.5	77			○	1500	9.5	291		
11 F	0054	7.9	241			26 Sa	0054	7.2	220				2140	2.3	71		
	0703	0.4	12				0652	1.5	45			11 W	0342	7.9	241		26 Th
	1329	10.5	320				1316	9.6	293				0942	3.1	93		
	2013	2.2	66				1955	2.9	87				1556	8.8	267		
12 Sa	0147	7.3	221			27 Su	0134	6.9	210			12 Th	0450	8.1	248		27 F
	0756	1.0	31				0732	1.9	58				1058	3.5	106		
	1432	9.8	300				1402	9.1	278				1656	8.1	248		
	2125	2.7	82				2046	3.1	96				2323	2.5	75		
13 Su	0254	6.6	200			28 M	0224	6.5	199			13 F	0558	8.5	258		
	0859	1.8	55				0822	2.5	75				1212	3.6	111		28 Sa
	1551	9.1	278				1459	8.6	263				1759	7.7	234		
○	2251	3.0	91			○	2153	3.3	102								
14 M	0427	6.2	189			29 Tu	0335	6.3	191			14 Sa	0017	2.5	77		
	1026	2.5	76				0927	3.0	91				0657	8.9	270		29 Su
	1720	8.7	264				1610	8.2	251				1321	3.6	109		
							2308	3.3	101				1900	7.5	228		
15 Tu	0024	2.8	86			30 W	0505	6.4	194			15 Su	0110	2.6	78		
	0610	6.5	197				1052	3.3	100				0749	9.3	283		30 M
	1204	2.7	82				1732	8.2	249				1422	3.3	102		
	1839	8.5	259										1957	7.4	226		
						15 Th	0031	2.4	74								
							0648	7.9	242			31 Sa	0004	2.4	72		
							1253	3.1	93				0629	8.7	265		
							1854	8.0	244				1243	3.0	91		
													1842	8.3	253		

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Dalian, China, 2008

Times and Heights of High and Low Waters

July					August					September																			
Time		Height			Time		Height			Time		Height			Time		Height												
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm										
1 Tu	0115	1.9	59		16 W	0216	2.9	89		1 F	0312	1.6	50		16 Sa	0328	2.5	75		1 M	0435	1.6	48		16 Tu	0415	1.8	56	
	0755	10.8	330			0900	10.2	310			0946	11.8	359			0956	10.8	329			1044	11.0	335			1022	10.6	322	
	1440	3.1	94			1548	3.4	104			1626	2.6	79			1626	2.9	87			1706	1.9	58			1640	1.9	58	
	2014	7.9	242			2117	7.6	231			2158	8.8	267	●		2207	8.8	269			2259	10.2	311			2238	10.2	312	
2 W	0217	1.6	50		17 Th	0303	2.6	80		2 Sa	0402	1.3	41		17 Su	0404	2.2	66		2 Tu	0514	1.7	52		17 W	0451	1.7	52	
	0853	11.4	346			0941	10.5	320			1030	11.8	361			1025	11.0	334			1116	10.7	325			1053	10.4	317	
	1540	2.8	85			1624	3.1	96			1704	2.3	71			1652	2.6	79			1736	1.7	53			1708	1.6	49	
	2112	8.1	248			2154	7.9	242			2240	9.2	280	○		2237	9.2	280			2335	10.4	317			2311	10.7	321	
3 Th	0314	1.3	40		18 F	0344	2.3	71		3 Su	0448	1.3	39		18 M	0438	2.0	60		3 W	0552	1.9	59		18 Th	0530	1.7	53	
	0948	11.7	358			1016	10.7	327			1109	11.7	356			1053	11.0	336			1150	10.3	314			1127	10.1	309	
	1632	2.5	77			1654	3.0	91			1740	2.1	65			1718	2.4	72			1807	1.7	51			1741	1.3	41	
	2204	8.3	254	○		2228	8.3	252			2321	9.5	290			2307	9.5	290								2348	11.1	339	
4 F	0407	1.0	32		19 Sa	0421	2.1	64		4 M	0531	1.4	42		19 Tu	0512	1.9	57		4 Th	0011	10.4	318		19 F	0612	1.9	59	
	1038	11.9	364			1048	10.9	332			1146	11.4	346			1123	11.0	335			0630	2.3	70			1204	9.7	297	
	1720	2.3	71			1722	2.8	86			1814	2.0	61			1745	2.1	65			1224	9.8	300			1817	1.2	36	
	2251	8.5	260			2300	8.5	259			2339	9.8	300			2339	9.8	300			1839	1.7	52						
5 Sa	0457	1.0	29		20 Su	0456	1.9	59		5 Tu	0001	9.7	297		20 W	0548	1.9	57		5 F	0049	10.3	315		20 Sa	0030	11.3	344	
	1125	11.9	362			1118	11.0	334			0613	1.7	52			1155	10.8	329			0710	2.8	84			0659	2.3	71	
	1805	2.2	67			1750	2.7	81			1222	10.9	331			1816	1.9	57			1300	9.3	283			1245	9.2	281	
	2338	8.7	264			2331	8.7	265			1848	1.9	57								1913	1.9	58			1859	1.2	37	
6 Su	0545	1.1	33		21 M	0530	1.9	58		6 W	0043	9.8	299		21 Th	0014	10.2	311		6 Sa	0129	10.1	308		21 Su	0118	11.1	339	
	1210	11.6	353			1149	11.0	334			0655	2.2	66			0628	2.0	62			0753	3.3	102			0753	2.9	88	
	1847	2.1	65			1819	2.5	75			1258	10.3	315			1230	10.5	320			1337	8.6	263			1332	8.5	260	
											1922	1.9	57			1849	1.7	51			1948	2.2	67			1946	1.5	47	
7 M	0024	8.8	267		22 Tu	0005	8.9	270		7 Th	0126	9.8	298		22 F	0054	10.5	320		7 Su	0213	9.8	298		22 M	0215	10.7	326	
	0632	1.4	43			0606	1.9	59			0739	2.7	83			0712	2.4	72			0843	4.0	122			0858	3.5	108	
	1252	11.1	338			1222	10.9	331			1336	9.7	296			1308	10.0	305			1417	7.9	240			1427	7.7	236	
	1928	2.1	63			1850	2.3	69			1958	2.0	60			1927	1.6	48			2028	2.7	81	○		2042	2.1	65	
8 Tu	0113	8.9	270		23 W	0041	9.1	276		8 F	0212	9.6	293		23 Sa	0139	10.7	325		8 M	0306	9.4	285		23 Tu	0328	10.1	309	
	0719	1.9	59			0645	2.1	63			0825	3.3	102			0802	2.9	88			0949	4.6	141			1026	4.0	122	
	1335	10.4	318			1257	10.6	324			1416	9.0	274			1351	9.4	285			1506	7.1	216			1546	7.0	213	
	2008	2.0	62			1925	2.1	63			2037	2.3	69			2011	1.7	51			2117	3.2	99			2158	2.8	85	
9 W	0204	8.9	271		24 Th	0121	9.3	284		9 Sa	0303	9.4	287		24 Su	0233	10.6	322		9 Tu	0417	9.0	273		24 W	0503	9.8	298	
	0809	2.6	78			0730	2.4	72			0920	4.0	123			0902	3.6	109			1125	5.0	151			1212	4.0	121	
	1417	9.7	296			1336	10.2	312			1500	8.2	250			1441	8.5	260			1630	6.5	198			1737	6.8	207	
	2048	2.1	64			2002	1.9	59	○		2119	2.7	82			2102	2.1	63	○		2233	3.8	115			2337	3.1	93	
10 Th	0259	8.9	270		25 F	0207	9.6	292		10 Su	0401	9.2	280		25 M	0340	10.3	314		10 W	0552	8.8	269		25 Th	0633	9.8	300	
	0903	3.2	99			0820	2.8	86			1033	4.6	141			1020	4.2	128			1312	4.7	143			1336	3.4	103	
	1502	9.0	273			1419	9.6	294			1556	7.4	225			1546	7.7	234			1828	6.5	199			1912	7.3	224	
	2132	2.3	70	○		2044	1.9	58			2213	3.2	97			2208	2.6	78											
11 F	0357	8.9	270		26 Sa	0301	9.8	298		11 M	0514	9.1	276		26 Tu	0505	10.1	308		11 Th	0017	3.8	117		26 F	0103	2.8	86	
	1007	3.8	117			0918	3.3	102			1209	4.9	148			1204	4.4	135			0713	9.1	278			0743	10.1	307	
	1554	8.2	250			1508	9.0	273			1721	6.8	207			1724	7.1	217			1414	4.1	124			1426	2.8	84	
	2220	2.6	78	○		2133	2.0	62			2328	3.6	109			2336	2.9	88			1946	7.2	218			2011	8.2	250	
12 Sa	0500	8.9	270		27 Su	0404	9.9	303		12 Tu	0637	9.2	280		27 W	0639	10.3	313		12 F	0130	3.5	106		27 Sa	0208	2.4	72	
	1123	4.2	129			1030	3.9	118			1346	4.6	140			1345	4.0	122			0810	9.6	293			0833	10.2	312	
	1657	7.5	230			1609	8.2	250			1901	6.7	205			1907	7.3	222			1452	3.4	105			1503	2.3	69	
	2316	2.9	88			2232	2.3	70													2033	7.9	241			2054	9.1	276	
13 Su	0608	9.0	274		28 M	0517	10.1	307		13 W	0050	3.6	110		28 Th	0105	2.8	84		13 Sa	0223	3.0	90		28 Su	0259	2.0	61	
	1246	4.3	131			1158	4.2	127			0748	9.6	292			0755	10.7	327			0851	10.1	307			0912	10.2	312	
	1813	7.1	217			1729	7.6	232			1447	4.1	125			1447	3.3	102			1522	2.9	89			1534	1.9	59	
						2345	2.5	75			2012	7.2	219			2018	7.9	241			2109	8.6	262			2130	9.7	296	
14 M	0019	3.1	95		29 Tu	0638	10.4	317		14 Th	0156	3.3	100		29 F	0214	2.3	71		14 Su	0304	2.5	76		29 M	0341	1.8	55	
	0714	9.3	284			1333	4.0	122			0842	10.1	307			0852	11.2	340			0924	10.4	317			0945	10.1	307	
	1404	4.1	125			1858	7.5	228			1528	3.6	109			1531	2.8	84			1548	2.5	76			1602	1.7	52	
	1928	7.0	214								2059	7.8	238			2107	8.7	264			2140	9.2	280			2203	10.2	310	●
15 Tu	0122	3.1	95		30 W	0103	2.4	73		15 F	0247	2.9	87		30 Sa	0308	1.9	57		15 M	0341	2.1	64		30 Tu	0419	1.8	54	
	0812	9.7	297			0753	10.9	332			0922	10.5	320			0935	11.3	345			0953	10.6	322			1016	9.8	300	
	1503	3.7	114			1447	3.5	107			1559	3.2	97			1606	2.4	72			1614	2.2	66			1630	1.5	47	
	2030	7.3	221			2014	7.8	237			2136	8.4	255			2148	9.3	284			2208	9.7	296	○		2235	10.4	318	
16 W	0214	2.1	63		31 Th	0214																							

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Dalian, China, 2008

Times and Heights of High and Low Waters

October						November						December					
Time			Height			Time			Height			Time			Height		
	h	m	ft	cm			h	m	ft	cm			h	m	ft	cm	
1 W	0455	1.8	56			16 Th	0432	1.5	46			1 M	0615	1.9	59		
	1047	9.6	293				1023	9.4	285				1148	6.9	209		
	1659	1.4	44				1633	0.9	27				1743	0.8	24		
	2308	10.6	322				2245	11.2	342								
2 Th	0532	2.0	62			17 F	0515	1.6	48			2 Tu	0007	9.6	292		
	1120	9.3	283				1102	9.1	276				0648	2.0	60		
	1729	1.4	44				1710	0.7	20				1224	6.8	206		
	2341	10.6	322				2326	11.5	349				1819	1.0	30		
3 F	0609	2.3	70			18 Sa	0601	1.8	54			3 W	0043	9.3	284		
	1155	8.9	270				1144	8.7	265				0724	2.0	61		
	1800	1.5	46				1752	0.6	19				1303	6.6	201		
													1858	1.3	40		
4 Sa	0016	10.5	319			19 Su	0012	11.4	348			4 Th	0123	9.0	273		
	0647	2.7	81				0653	2.1	64				0804	2.0	61		
	1230	8.4	256				1230	8.2	249				1347	6.4	196		
	1833	1.7	51				1838	0.9	26				1942	1.7	53		
5 Su	0053	10.2	312			20 M	0104	11.0	336			5 F	0207	8.6	261		
	0728	3.1	95				0751	2.6	78				0850	2.0	61		
	1305	7.8	239				1321	7.6	231				1441	6.3	193		
	1908	2.0	60				1930	1.3	40				2035	2.2	67		
6 M	0134	9.8	300			21 Tu	0205	10.4	318			6 Sa	0257	8.1	247		
	0814	3.6	110				0900	3.0	90				0942	2.0	60		
	1344	7.3	222				1426	6.9	211				1546	6.4	196		
	1948	2.4	73				2032	2.0	61				2139	2.6	78		
7 Tu	0222	9.3	284			22 W	0320	9.7	297			7 Su	0356	7.7	234		
	0912	4.1	124				1022	3.1	96				1038	1.9	57		
	1433	6.7	205				1554	6.6	200				1656	6.9	209		
	2036	3.0	91				2152	2.6	80				2255	2.7	83		
8 W	0324	8.8	267			23 Th	0447	9.2	281			8 M	0502	7.3	224		
	1032	4.3	132				1147	3.0	91				1133	1.6	50		
	1552	6.3	191				1735	6.8	206				1802	7.5	229		
	2146	3.6	109				2330	2.9	88								
9 Th	0451	8.4	255			24 F	0607	9.0	274			9 Tu	0013	2.6	79		
	1203	4.2	127				1258	2.6	78				0609	7.2	219		
	1742	6.3	193				1855	7.5	228				1228	1.3	40		
	2330	3.8	116										1900	8.4	255		
10 F	0618	8.5	258			25 Sa	0051	2.7	82			10 W	0122	2.3	69		
	1317	3.6	111				0711	8.9	271				0709	7.2	218		
	1905	7.0	212				1346	2.1	64				1321	0.9	27		
							1950	8.4	255				1951	9.2	281		
11 Sa	0053	3.5	106			26 Su	0154	2.3	71			11 Th	0222	1.9	57		
	0720	8.8	269				0801	8.8	269				0804	7.2	220		
	1401	3.0	92				1423	1.7	53				1412	0.4	13		
	1956	7.8	237				2032	9.1	277				2040	10.0	304		
12 Su	0149	2.9	89			27 M	0244	2.0	62			12 F	0317	1.5	47		
	0806	9.2	281				0841	8.8	267				0855	7.3	223		
	1434	2.5	75				1455	1.4	44				1501	0.0	0		
	2033	8.6	261				2108	9.6	294				2129	10.5	320		
13 M	0234	2.4	73			28 Tu	0326	1.9	57			13 Sa	0409	1.3	40		
	0842	9.5	289				0916	8.6	263				0944	7.4	225		
	1502	2.0	61				1526	1.3	39				1550	-0.3	-10		
	2105	9.4	285				2140	10.0	304				2217	10.9	331		
14 Tu	0313	1.9	59			29 W	0404	1.8	55			14 Su	0459	1.2	36		
	0915	9.6	292				0949	8.5	259				1033	7.4	225		
	1530	1.6	49				1556	1.2	36				1638	-0.5	-16		
	2136	10.1	307				2212	10.2	310				2306	10.9	333		
15 W	0352	1.6	50			30 Th	0441	1.8	56			15 M	0548	1.1	33		
	0948	9.5	290				1023	8.3	253				1121	7.3	223		
	1600	1.2	37				1626	1.1	35				1727	-0.5	-14		
	2209	10.7	327				2244	10.3	313				2355	10.8	328		
16 Th						31 F	0517	2.0	60			16 Tu					
							1057	8.0	245				0623	1.3	41		
							1657	1.1	34				1205	7.0	213		
							2317	10.3	314				1803	0.5	16		

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Qinhuangdao, China, 2008

Times and Heights of High and Low Waters

January					February					March																				
Time		Height			Time		Height			Time		Height			Time		Height													
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm											
1 Tu	0546	2.9	89		16 W	0556	2.9	88		1 F	0241	3.4	104		16 Sa	0226	4.1	126		1 Sa	0139	4.0	121		16 Su	0147	4.7	142		
	2102	1.4	43			1027	1.7	52			1320	1.0	29			1327	0.7	21			1231	0.9	28			1253	0.7	21		
					○	1343	2.0	61																						
						1635	1.6	50																						
2 W	0553	3.0	92		17 Th	0253	3.1	93		2 Sa	0311	3.7	112		17 Su	0314	4.3	132		2 Su	0225	4.2	127		17 M	0246	4.6	140		
	1719	1.3	40			1151	1.3	39			1438	0.6	18			1453	0.4	12			1408	0.8	24			1422	0.7	20		
3 Th	0449	3.2	97		18 F	0317	3.5	107		3 Su	0350	3.9	119		18 M	0404	4.4	133		3 M	0313	4.2	129		18 Tu	0346	4.4	133		
	1416	1.1	33			1347	0.9	26			1539	0.3	9			1550	0.2	6			1516	0.7	20			1523	0.8	23		
4 F	0447	3.4	103		19 Sa	0351	3.9	119		4 M	0434	4.0	122		19 Tu	0458	4.2	129		4 Tu	0401	4.2	127		19 W	0459	4.0	121		
	1503	0.7	21			1506	0.4	12			1627	0.1	4			1639	0.2	6			1601	0.7	20			1610	1.0	31		
5 Sa	0447	3.6	109		20 Su	0431	4.1	126		5 Tu	0521	4.0	121		20 W	0606	4.0	121		5 W	0449	4.0	123		20 Th	0015	3.3	100		
	1552	0.3	9			1604	0.0	1			1710	0.1	4			1723	0.4	11			1639	0.8	24			0233	3.1	96		
																											0704	3.6	109	
																											1652	1.4	43	
6 Su	0513	3.7	114		21 M	0516	4.2	129		6 W	0609	3.9	118		21 Th	0809	3.7	112		6 Th	0540	3.8	116		21 F	0037	3.3	101		
	1639	0.0	0			1655	-0.2	-7			1749	0.2	6			1804	0.7	21			1713	1.0	29			0346	2.8	84		
																											0809	3.2	98	
																											1729	1.9	58	
7 M	0552	3.9	118		22 Tu	0605	4.2	128		7 Th	0658	3.7	113		22 F	0148	3.1	94		7 F	0059	3.3	102		22 Sa	0108	3.3	101		
	1725	-0.2	-5			1742	-0.3	-10			1825	0.3	10			0420	2.7	83			0326	3.1	95			0450	2.4	74		
					○					●						0903	3.3	102			0645	3.6	109			1341	3.5	106		
																1841	1.1	34			1746	1.2	36			1759	2.3	71		
8 Tu	0637	3.9	119		23 W	0706	4.0	123		8 F	0200	3.1	95		23 Sa	0219	3.1	93		8 Sa	0128	3.4	105		23 Su	0141	3.3	100		
	1808	-0.2	-7			1826	-0.2	-7			0413	2.9	89			0518	2.5	75			0430	2.9	88			0548	2.1	65		
											0749	3.5	108			0948	3.0	91			0817	3.3	101			1417	3.5	106		
											1858	0.5	16			1912	1.5	47			1817	1.5	47			1808	2.7	81		
																											2151	3.2	99	
9 W	0723	3.9	118		24 Th	0855	3.8	117		9 Sa	0234	3.2	98		24 Su	0250	3.1	93		9 Su	0202	3.4	105		24 M	0634	1.8	56		
	1849	-0.2	-7			1908	0.0	0			0512	2.8	86			0621	2.2	67			0530	2.6	78			1449	3.4	105		
											0854	3.3	102			1028	2.7	82			0922	3.1	94			1746	2.8	86		
											1929	0.8	23			1929	1.9	58			1840	1.9	59			2211	3.4	104		
10 Th	0807	3.8	115		25 F	0946	3.5	108		10 Su	0310	3.2	99		25 M	0321	3.0	92		10 M	0238	3.3	102		25 Tu	0715	1.6	48		
	1926	-0.1	-4			1946	0.4	11			0611	2.6	80			0719	1.9	59			0633	2.1	65			1515	3.4	103		
											0957	3.1	95			1546	2.8	86			1500	3.5	107			1800	2.9	87		
											1953	1.1	34			1912	2.1	63			1849	2.4	72			2229	3.6	109		
																2337	2.9	87			2240	3.0	90							
11 F	0850	3.7	112		26 Sa	0329	2.8	86		11 M	0346	3.2	97		26 Tu	0808	1.7	51		11 Tu	0730	1.7	51		26 W	0757	1.3	39		
	2000	0.0	0			0547	2.5	76			0718	2.3	70			1612	2.7	81			1542	3.5	106			1539	3.3	102		
						1031	3.1	96			1056	2.8	86			1910	2.1	64			1849	2.7	82			1822	2.9	87		
						2015	0.8	24			2004	1.5	46								2256	3.4	103			2249	3.8	116		
12 Sa	0338	3.1	93		27 Su	0358	2.8	85		12 Tu	0420	3.1	93		27 W	0002	3.1	94		12 W	0823	1.3	39		27 Th	0842	1.0	32		
	0543	2.8	85			0654	2.3	70			0820	1.9	58			0856	1.4	43			1625	3.3	101			1608	3.2	99		
	0936	3.5	107			1111	2.8	84			1155	2.5	76			1636	2.6	78			1856	2.9	87			1844	2.9	87		
	2028	0.2	6			2032	1.1	35			2006	1.9	57			1925	2.1	65			2324	3.8	117			2321	4.1	125		
13 Su	0417	3.1	94		28 M	0425	2.8	86		13 W	0042	2.8	86		28 Th	0027	3.3	102		13 Th	0917	1.0	29		28 F	0932	0.9	28		
	0645	2.7	83			0807	2.1	63			0919	1.5	46			0948	1.2	37								1648	3.1	93		
	1027	3.3	100			1150	2.4	74			1730	2.5	76			1711	2.4	74								1902	2.8	86		
	2051	0.5	16			2026	1.4	42			2008	2.1	64			1942	2.2	67												
14 M	0453	3.1	93		29 Tu	0450	2.9	88		14 Th	0106	3.3	101		29 F	0058	3.7	112		14 F	0003	4.3	130		29 Sa	0003	4.3	132		
	0801	2.5	76			0912	1.8	55			1023	1.2	36			1053	1.0	32			1015	0.8	24			1029	0.9	28		
	1125	3.0	90			1234	2.1	64		○																				
	2107	0.9	28			2014	1.5	46																						
15 Tu	0526	3.0	90		30 W	0510	2.9	88		15 F	0142	3.8	115																	
	0914	2.1	65			1018	1.5	47			1141	0.9	28																	
	1231	2.5	76			1325	1.8	54																						
	2115	1.3	41		○	2017	1.6	49																						
					31 Th	0222	3.1	95																						
						1144	1.3	39																						

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Qinhuangdao, China, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
1 Tu	h m 0236 4.4 1422 1.2 37	16 W	h m 0343 4.0 1433 1.6 2300 3.4 104	1 Th	h m 0252 4.1 1319 2.0 2222 3.6 110	16 F	h m 0217 2.9 1051 3.3 1337 3.0 1902 3.9 120	1 Su	h m 0235 2.6 1113 3.9 1320 3.7 1818 4.4 135	16 M	h m 0343 1.8 1809 4.9 149
2 W	0326 4.2 1507 1.3 41	17 Th	0143 3.2 0521 3.5 1521 2.1 2318 3.4 105	2 F	0034 3.5 0407 3.7 1410 2.3 2242 3.6 110	17 Sa	0316 2.4 1140 3.6 1406 3.3 1917 4.2 127	2 M	0342 2.0 1821 4.8 147	17 Tu	0429 1.4 1812 5.1 155
3 Th	0419 3.9 1542 1.5 2354 3.5 107	18 F	0307 2.8 1156 3.4 1557 2.5 2349 3.5 106	3 Sa	0233 3.1 0557 3.4 1451 2.8 1938 3.6 111	18 Su	0402 2.0 1218 3.8 1432 3.6 1937 4.3 131	3 Tu	0442 1.4 1835 5.2 159	18 W	0514 1.1 1847 5.2 160
4 F	0214 3.3 0530 3.6 1614 1.8 56	19 Sa	0410 2.4 1240 3.6 1617 2.9 2024 3.7 112	4 Su	0341 2.5 1216 3.9 1522 3.2 1948 3.9 120	19 M	0444 1.7 1250 4.0 1501 3.7 1951 4.4 135	4 W	0536 1.0 1915 5.5 168	19 Th	0559 0.9 1935 5.3 163
5 Sa	0017 3.5 0338 3.0 0714 3.3 1642 2.2 68	20 Su	0500 2.0 1317 3.7 1614 3.2 2044 3.8 117	5 M	0444 1.9 1259 4.2 1546 3.6 2002 4.3 130	20 Tu	0527 1.4 1318 4.1 1532 3.9 1941 4.6 140	5 Th	0626 0.6 2007 5.7 175	20 F	0642 0.9 2028 5.4 164
6 Su	0050 3.5 0440 2.5 1319 3.7 1703 2.7 2106 3.3 0542 2.0 1401 4.0 1717 3.1 2118 3.7 112	21 M	0542 1.7 1349 3.8 1627 3.3 2100 3.9 120	6 Tu	0542 1.4 1342 4.4 1607 4.0 2008 4.7 142	21 W	0610 1.1 1346 4.2 1603 3.9 1957 4.8 146	6 F	0713 0.4 2112 5.8 177	21 Sa	0724 0.9 2115 5.3 163
7 M	0542 2.0 1401 4.0 1717 3.1 2118 3.7 112	22 Tu	0623 1.4 1416 3.9 1650 3.4 2108 4.1 125	7 W	0634 0.9 1426 4.4 1630 4.1 2033 5.1 154	22 Th	0654 0.9 1418 4.2 1633 3.9 2040 5.0 151	7 Sa	0758 0.4 2210 5.7 174	22 Su	0801 1.0 2155 5.2 160
8 Tu	0639 1.5 1443 4.1 1727 3.4 2133 4.1 124	23 W	0704 1.1 1442 3.9 1715 3.5 2119 4.3 132	8 Th	0723 0.6 2122 5.3 162	23 F	0738 0.7 1456 4.1 1701 3.9 2128 5.1 155	8 Su	0842 0.5 2303 5.4 166	23 M	0835 1.2 2235 5.1 156
9 W	0730 1.0 1525 4.0 1743 3.6 2159 4.5 137	24 Th	0747 0.9 1512 3.8 1740 3.4 2156 4.6 139	9 F	0811 0.4 2215 5.5 167	24 Sa	0821 0.7 2214 5.1 155	9 M	0922 0.9 2357 5.0 151	24 Tu	0903 1.5 1700 4.4 1908 4.2 2318 4.9 149
10 Th	0819 0.7 2240 4.8 147	25 F	0832 0.8 1549 3.7 1802 3.4 2240 4.7 144	10 Sa	0858 0.3 2307 5.4 165	25 Su	0901 0.9 2255 5.0 153	10 Tu	0959 1.4 1801 4.0 2020 3.9 118	25 W	0926 1.8 1735 4.4 2032 4.0 123
11 F	0910 0.6 2328 5.0 153	26 Sa	0919 0.8 2326 4.8 146	11 Su	0946 0.5 14	26 M	0937 1.1 2335 4.9 149	11 W	0054 4.4 1029 2.0 1820 4.0 2220 3.6 109	26 Th	0011 4.5 0946 2.3 1807 4.3 2155 3.7 113
12 Sa	1003 0.5 15	27 Su	1006 0.9 28	12 M	0001 5.2 1034 0.8 25	27 Tu	1009 1.4 42	12 Th	0154 3.7 1052 2.6 1825 4.2 127	27 F	0125 4.1 1006 2.8 1829 4.3 2318 3.3 100
13 Su	0020 5.1 1102 0.6 19	28 M	0011 4.8 1053 1.1 35	13 Tu	0101 4.7 1123 1.3 40	28 W	0017 4.7 1040 1.7 1853 3.9 2056 3.8 117	13 F	0100 3.1 0303 3.2 0613 2.9 1757 4.4 133	28 Sa	0246 3.5 0550 3.2 1604 4.6 139
14 M	0119 4.9 1210 0.9 26	29 Tu	0057 4.6 1139 1.4 42	14 W	0215 4.1 1211 1.9 2037 3.6 109	29 Th	0111 4.3 1116 2.1 1925 3.9 2308 3.6 110	14 Sa	0207 2.6 1753 4.6 140	29 Su	0100 2.7 1615 5.0 152
15 Tu	0226 4.5 1328 1.2 36	30 W	0149 4.4 1228 1.7 51	15 Th	0012 3.4 0336 3.5 1258 2.5 1927 3.7 112	30 F	0241 3.9 1157 2.6 1936 3.9 119	15 Su	0257 2.2 1808 4.8 145	30 M	0235 2.1 1642 5.4 165
						31 Sa	0048 3.1 0422 3.4 0724 3.1 1806 4.1 125				

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
Heights are referred to the chart datum of soundings.

Qinhuangdao, China, 2008

Times and Heights of High and Low Waters

July				August				September															
Time		Height		Time		Height		Time		Height		Time		Height									
1 Tu	h 0341	m 1.6	ft 48	16 W	h 0417	m 1.3	ft 39	1 F	h 0513	ft 1.0	cm 29	16 Sa	h 0523	ft 1.5	cm 47	1 M	h 0608	ft 2.3	cm 71	16 Tu	h 0539	ft 2.7	cm 82
	1720	5.7	175		1735	5.6	172		1942	6.1	185		1938	5.4	165		1355	4.6	140		1337	4.5	136
2 W	0437	1.1	34	17 Th	0503	1.1	34	2 Sa	0556	1.0	32	17 Su	0558	1.7	53	2 Tu	0639	2.8	86	17 W	0556	3.1	94
	1806	5.9	181		1829	5.7	173		2045	5.9	179		1345	4.8	146		1427	4.5	137		1411	4.3	131
3 Th	0527	0.8	24	18 F	0545	1.1	33	3 Su	0637	1.3	41	18 M	0629	2.0	61	3 W	0034	3.9	119	18 Th	0234	4.6	139
	1902	6.0	184		1935	5.6	171		1434	4.8	147		1414	4.9	148		0248	4.5	138		0605	3.5	106
4 F	0613	0.6	19	19 Sa	0625	1.2	36	4 M	1649	4.5	138	19 Tu	1615	4.5	138	4 Th	0655	3.2	99	19 F	1019	4.3	132
	2026	6.0	184		2033	5.5	168		1747	4.2	128		1707	4.3	132		1049	4.2	129		1905	2.5	77
5 Sa	0658	0.6	19	20 Su	0701	1.4	42	5 Tu	2138	5.5	169	20 W	2118	5.0	153	5 F	1902	3.1	93	20 Sa	0358	4.4	134
	2128	5.9	180		2114	5.3	163		2308	4.7	142		2205	4.8	146		2040	2.5	75		0623	3.9	119
6 Su	0740	0.9	26	21 M	0733	1.6	48	6 W	0745	2.3	71	21 Th	0715	2.7	83	6 Sa	0354	4.1	126	21 Su	0358	4.4	134
	2221	5.6	171		1443	4.7	144		1535	4.6	141		1520	4.7	143		0644	3.6	109		0623	3.9	119
7 M	0818	1.2	38	22 Tu	1518	4.8	146	7 Th	1852	3.9	118	22 F	1858	3.7	113	7 Su	1139	4.8	145	22 M	1101	5.2	158
	1822	4.3	131		2155	5.2	158		2349	4.2	128		2255	4.5	137		2040	2.5	75		2050	1.8	54
8 Tu	0850	1.8	54	23 W	0801	1.9	57	8 F	0805	2.8	85	23 Sa	0724	3.1	95	8 M	0422	3.9	120	23 Tu	1139	5.6	170
	1645	4.4	135		1518	4.8	146		1604	4.6	140		1553	4.5	138		0657	3.6	109		2147	1.5	47
9 W	1938	4.0	122	24 Th	1745	4.5	136	9 Sa	1958	3.5	108	24 Su	1956	3.3	100	9 Tu	1205	5.0	153	24 W	1225	5.8	178
	2357	4.6	141		2155	5.2	158		2349	4.2	128		2347	4.1	126		2134	2.2	67		2253	1.4	44
10 Th	0913	2.3	70	25 F	0801	1.9	57	10 Su	0802	3.1	95	25 M	0158	3.8	115	10 W	0459	3.8	115	25 Th	1225	5.8	178
	1709	4.4	135		1553	4.8	146		1629	4.6	139		0411	4.3	130		0706	3.6	110		2253	1.4	44
11 F	2102	3.7	112	26 Sa	1841	4.3	132	11 M	2058	3.2	99	26 Tu	0726	3.5	106	11 Th	1236	5.3	162	26 F	0247	1.4	44
	0016	2.9	89		2241	5.0	152		2349	4.2	128		1211	4.6	141		2240	2.0	62		1700	5.1	154
12 Sa	0016	2.9	89	27 Su	0822	2.2	68	12 Tu	0034	3.8	116	27 W	2053	2.9	87	12 F	0010	1.9	57	27 Sa	0337	1.7	52
	1547	4.9	150		1627	4.7	144		0750	3.3	101		0500	4.1	125		1403	5.7	173		1151	4.2	127
13 Su	0131	2.5	75	28 M	1946	4.0	123	13 W	1324	4.8	145	28 Th	0731	3.7	113	13 Sa	0252	1.6	49	28 Su	1416	4.0	122
	1600	5.2	157		2333	4.7	142		2201	2.9	89		1235	5.2	157		1545	5.5	168		1842	4.6	141
14 M	0233	2.0	61	29 Tu	0834	2.6	80	14 Th	0540	3.5	108	29 F	2155	2.5	76	14 Su	0010	1.9	57	29 M	0419	2.1	65
	1617	5.4	164		1700	4.6	140		0747	3.4	105		1311	5.6	171		0447	2.0	62		1212	4.1	126
15 Tu	0328	1.6	49	30 W	2052	3.7	112	15 F	1349	5.1	155	30 Sa	0217	1.6	49	15 M	1403	5.7	173	30 Tu	1529	5.5	167
	1650	5.5	169		2333	4.7	142		2318	2.6	80		2308	2.2	67		1545	5.5	168		1842	4.6	141
16 W	0426	1.1	33	31 Th	0834	2.6	80	16 Sa	0314	1.5	47	31 Su	0217	1.6	49	16 F	0338	1.6	50	31 M	0415	1.8	55
	1757	6.2	189		1523	5.9	179		1617	5.8	178		1545	6.2	189		1641	5.2	160		1800	5.0	151
17 Th	0913	2.3	70	1 F	0101	2.4	72	17 W	0404	1.4	42	1 M	0318	1.3	41	17 Tu	0415	1.8	55	1 W	0419	2.1	65
	1720	5.7	175		1523	5.9	179		1617	5.8	178		1648	6.0	184		1800	5.0	151		1212	4.1	126
18 F	0527	0.8	24	2 Sa	0503	1.1	34	2 Sa	0404	1.4	42	2 Su	0523	1.5	47	2 Tu	0447	2.0	62	2 W	1529	5.5	167
	1902	6.0	184		1829	5.7	173		1711	5.8	176		1836	5.8	176		1800	5.0	151		1951	4.2	129
19 M	0613	0.6	19	3 Su	0545	1.1	33	3 Su	0446	1.4	42	3 M	0523	1.5	47	3 W	1244	4.5	137	3 Th	2222	3.8	115
	2026	6.0	184		1935	5.6	171		1819	5.6	171		1952	5.5	167		1526	4.2	129		0029	4.2	128
20 Tu	0658	0.6	19	4 M	0625	1.2	36	4 M	0532	1.8	55	4 Sa	0629	2.0	61	4 F	1923	4.7	144	4 M	0455	2.6	80
	2128	5.9	180		2033	5.5	168		1325	4.7	142		0656	4.8	146		2025	4.5	137		1242	4.1	125
21 W	0740	0.9	26	5 Tu	0733	1.6	48	5 Tu	0532	1.8	55	5 W	0629	2.0	61	5 F	0034	3.9	119	5 Th	1629	3.0	92
	2221	5.6	171		1518	4.8	146		1610	4.2	127		0656	4.8	146		0034	3.9	119		0522	3.1	94
22 Th	0818	1.2	38	6 W	1745	4.5	136	6 W	1747	4.2	128	6 Sa	1858	3.7	113	6 Sa	0642	3.5	107	6 Su	0907	4.0	123
	1822	4.3	131		2155	5.2	158		2205	4.8	146		1114	4.5	137		0642	3.5	107		1724	2.6	80
23 Tu	0850	1.8	54	7 Th	0801	1.9	57	7 Th	2224	5.1	156	7 M	2205	4.8	146	7 M	1952	2.8	84	7 Tu	1957	2.1	64
	1645	4.4	135		1518	4.8	146		2308	4.7	142		2205	4.5	137		1952	2.8	84		1957	2.1	64
24 W	1938	4.0	122	8 F	1841	4.3	132	8 F	0714	1.8	55	8 M	2205	4.8	146	8 F	0354	4.1	126	8 W	0358	4.4	134
	2357	4.6	141		2241	5.0	152		1747	4.2	128		2205	4.5	137		0644	3.6	109		0623	3.9	119
25 Th	0913	2.3	70	9 Sa	0822	2.2	68	9 Sa	0805	2.8	85	9 Su	0715	2.7	83	9 Tu	1139	4.8	145	9 Th	1101	5.2	158
	1709	4.4	135		1629	4.6	139		1535	4.6	141		1520	4.7	143		2040	2.5	75		2050	1.8	54
26 F	2102	3.7	112	10 Su	1841	4.3	132	10 Su	1958	3.5	108	10 W	1858	3.7	113	10 W	0422	3.9	120	10 Sa	0358	4.4	134
	0016	2.9	89		2241	5.0	152		2349	4.2	128		2255	4.5	137		0657	3.6	109		0623	3.9	119
27 Sa	0016	2.9	89	11 M	0801	1.9	57	11 M	2349	4.2	128	11 Th	2255	4.5	137	11 Sa	2134	2.2	67	11 Su	2050	1.8	54
	1547	4.9	150		1518	4.8	146		2349	4.2	128		2255	4.5	137		2134	2.2	67		2050	1.8	54
28 Su	0131	2.5	75	12 Tu	0822	2.2	68	12 Tu	0802	3.1	95	12 W	0724	3.1	95	12 F	0459	3.8	115	12 Th	1139	5.6	170
	1600	5.2	157		1553	4.8	146		1604	4.6	140		0726	3.5	106		0459	3.8	115		1139	5.6	170
29 M	0233	2.0	61	13 W	1841	4.3	132	13 W	2058	3.2	99	13 Th	1956	3.3	100	13 Su	0706	3.6	110	13 M	2253	1.4	44
	1617	5.4	164		2241	5.0	152		2349	4.2	128		1211	4.6	141		0706	3.6	110		2253	1.4	44
30 Tu	0328	1.6	49	14 Th	0822	2.2	68	14 Th	0034	3.8	116	14 F	2053	2.9	87	14 Tu	1236	5.3	162	14 W	0240	2.0	62
	1650	5.5	169		1627	4.7	144		0750	3.3	101		0500	4.1	125		1236	5.3	162		0240	2.0	62
31 W	0426	1.1	33	15 F	1946	4.0	123	15 F	2201	2.9	89	15 Sa	0500	4.1	125	15 W	0010	1.9	57	15 Th	1319	5.9	180
	1757	6.2	189		2333	4.7	142		2201	2.9	89		2155	2.5	76		0010	1.9	57		1319	5.9	180

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Qinhuangdao, China, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height			Time	Height			Time	Height		
h m	ft	cm		h m	ft	cm		h m	ft	cm	
1 W	0153 0524 0930 1812	4.4 3.4 4.3 2.3	133 105 130 69	16 Th	0138 0437 0856 1814	4.3 3.5 4.3 1.6	130 106 130 49	1 M	0906 2006	4.2 -0.1	127 -3
2 Th	0227 0520 0952 1856	4.3 3.6 4.4 2.0	130 110 135 60	17 F	0219 0453 0911 1906	4.4 3.7 4.7 1.1	133 114 142 35	16 Su	0852 1951	5.0 -0.2	151 -6
3 F	0257 0535 1012 1940	4.2 3.6 4.6 1.6	127 111 140 50	18 Sa	0301 0513 0936 1956	4.3 3.9 5.0 0.8	131 118 153 25	2 Tu	0950 2045	4.1 0.1	124 2
4 Sa	0324 0556 1033 2026	4.1 3.6 4.8 1.4	124 110 147 43	19 Su	1015 2045	5.3 0.6	162 19	17 W	1027 2104	4.1 -0.2	125 -5
5 Su	0355 0615 1104 2116	3.9 3.6 5.0 1.3	119 109 153 39	20 M	1102 2137	5.5 0.6	167 17	18 Th	1119 2137	3.6 0.3	110 10
6 M	1144 2213	5.2 1.3	158 39	21 Tu	1151 2232	5.4 0.7	166 20	19 F	0534 0805 1212 2201	2.8 2.6 3.0 0.9	86 78 92 26
7 Tu	1228 2323	5.2 1.4	159 42	22 W	1247 2333	5.2 0.9	158 27	20 Sa	0556 0955 1308 2211	2.8 2.2 2.4 1.3	86 68 72 41
8 W	1317	5.1	156	23 Th	1355	4.7	144	21 Su	0609 1739	3.0 1.5	90 45
9 Th	0051 1409	1.5 4.9	47 149	24 F	0041 1521	1.2 4.2	38 127	22 M	0515 1354	3.1 1.3	96 39
10 F	0158 1503	1.7 4.6	51 140	25 Sa	0148 1027 1322 1659	1.7 3.4 3.3 3.6	52 105 100 109	23 Tu	0515 1446	3.4 0.9	103 26
11 Sa	0242 1603	1.9 4.2	57 129	26 Su	0239 1043 1447 2332	2.2 3.4 2.7 3.4	66 105 81 104	24 W	0535 1533	3.5 0.5	108 15
12 Su	0315 1132 1433 1742	2.1 3.9 3.6 3.9	64 118 111 119	27 M	0314 0735 1546	2.6 3.6 2.1	80 110 65	25 Th	0542 1619	3.6 0.2	111 6
13 M	0341 1147 1531 1910 2157	2.4 3.9 3.2 3.6 3.3	73 118 97 111 100	28 Tu	0018 0332 0757 1637	3.6 3.0 3.9 1.7	110 92 118 53	26 F	0554 1704	3.7 -0.1	114 -2
14 Tu	0017 0403 0834 1623	3.6 2.7 3.7 2.7	111 83 114 81	29 W	0057 0341 0820 1722	3.7 3.2 4.0 1.4	114 99 123 43	27 Sa	0630 1749	3.8 -0.2	116 -6
15 W	0057 0422 0843 1719	4.0 3.1 4.0 2.1	122 95 121 65	30 Th	0132 0358 0840 1805	3.8 3.4 4.2 1.1	115 103 127 33	28 Su	0714 1832	3.8 -0.3	117 -8
16 Th	0132 0422 0843 1719	4.0 3.1 4.0 2.1	122 95 121 65	31 F	0201 0421 0851 1847	3.8 3.4 4.3 0.8	115 104 131 25	29 M	0802 1913	3.8 -0.2	115 -5
17 F	0257 0535 1012 1940	4.2 3.6 4.6 1.6	127 111 140 50	1 Sa	0230 0448 0905 1931	3.7 3.4 4.5 0.6	114 103 136 17	30 Tu	0829 1943	4.6 -0.6	140 -19
18 Sa	0324 0556 1033 2026	4.1 3.6 4.8 1.4	124 110 147 43	2 Su	0300 0514 0939 2016	3.6 3.3 4.6 0.4	110 101 140 13	31 W	0924 2022	3.5 0.2	107 5
19 Su	0355 0615 1104 2116	3.9 3.6 5.0 1.3	119 109 153 39	3 M	0337 0537 1021 2102	3.4 3.2 4.7 0.5	105 99 143 14	1 Th	1103 2146	3.7 0.5	113 16
20 M	1144 2213	5.2 1.3	158 39	4 Tu	1103 2148	4.7 0.6	142 19	2 F	1128 2207	4.6 0.2	141 6
21 Tu	1228 2323	5.2 1.4	159 42	5 W	1143 2232	4.5 0.9	137 27	3 Sa	1139 2207	3.4 0.8	105 25
22 W	1317	5.1	156	6 Th	1221 2312	4.2 1.2	129 36	4 Su	0618 0904 1218 2227	3.0 2.8 3.1 1.2	91 85 94 36
23 Th	0051 1409	1.5 4.9	47 149	7 F	1257 2351	3.9 1.5	119 45	5 M	0649 1053 1303 2256	3.0 2.5 2.6 1.6	91 77 80 48
24 F	0158 1503	1.7 4.6	51 140	8 Sa	1343	3.5	107	6 Tu	0706 1852	3.0 1.7	91 53
25 Sa	0242 1603	1.9 4.2	57 129	9 Su	0031 0827 1234 1530	1.8 3.2 3.1 3.1	55 99 93 94	7 W	0537 1436	3.1 1.5	96 46
26 Su	0315 1132 1433 1742	2.1 3.9 3.6 3.9	64 118 111 119	10 M	0114 0757 1442 1732 2025 0708 1532 2359	2.1 3.3 2.5 2.7 2.4 3.4 1.9 3.3	65 100 76 83 74 105 59 100	8 Th	0542 1533	3.5 0.9	106 28
27 M	0341 1147 1531 1910 2157	2.4 3.9 3.2 3.6 3.3	73 118 97 111 100	11 Tu	0708 1532 2359	3.4 1.9 3.3	105 59 100	9 F	0542 1630	3.8 0.4	117 12
28 Tu	0017 0403 0834 1623	3.6 2.7 3.7 2.7	111 83 114 81	12 W	0229 0720 1628	2.9 3.7 1.3	88 113 41	10 Sa	0610 1723	4.2 0.0	127 -1
29 W	0057 0341 0820 1722	3.7 3.2 4.0 1.4	114 99 123 43	13 Th	0040 0258 0733 1723	3.6 3.2 4.0 0.8	110 98 123 25	11 Su	0649 1812	4.4 -0.4	135 -11
30 Th	0132 0358 0840 1805	3.8 3.4 4.2 1.1	115 103 127 33	14 F	0121 0327 0737 1815	3.8 3.4 4.4 0.4	115 105 134 11	12 M	0735 1858	4.6 -0.6	140 -18
31 F	0201 0421 0851 1847	3.8 3.4 4.3 0.8	115 104 131 25	15 Sa	0807 1904	4.7 0.0	144 1	13 Tu	0829 1943	4.6 -0.6	140 -19

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Tanggu (Xingang), China, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu	0724 1346 2004	3.0 12.5 7.4	91 382 225	16 W	0113 0833 1500 2101	11.5 3.2 12.5 7.9	349 98 381 242	1 F	0149 0930 1534 2158	12.2 2.2 13.3 7.1	372 67 406 216
2 W	0056 0828 1445 2110	11.9 2.5 13.0 7.4	363 75 397 227	17 Th	0204 0923 1535 2145	11.6 2.9 12.8 7.5	354 89 391 230	2 Sa	0251 1025 1616 2246	12.6 2.0 13.5 6.4	383 61 410 195
3 Th	0151 0931 1539 2208	11.9 2.0 13.3 7.3	364 62 406 223	18 F	0246 1008 1608 2224	11.7 2.8 13.1 7.2	358 85 399 218	3 Su	0346 1112 1653 2331	12.8 2.1 13.5 5.7	390 64 411 175
4 F	0245 1030 1627 2300	12.1 1.8 13.4 7.1	368 55 409 215	19 Sa	0321 1047 1640 2302	11.8 2.8 13.2 6.8	361 84 403 207	4 M	0435 1152 1729	12.9 2.4 13.5	393 74 410
5 Sa	0339 1124 1712 2348	12.2 1.7 13.4 6.6	372 53 409 202	20 Su	0356 1121 1712 2340	11.9 2.9 13.2 6.5	364 87 403 197	5 Tu	0012 0520 1228 1803	5.2 12.8 3.0 13.4	159 391 90 409
6 Su	0434 1211 1755	12.3 1.9 13.4	375 58 407	21 M	0432 1153 1743	12.0 3.0 13.1	367 90 400	6 W	0051 0605 1303 1837	4.8 12.7 3.6 13.3	145 386 109 406
7 M	0033 0529 1253 1837	6.2 12.3 2.3 13.3	188 374 70 405	22 Tu	0016 0510 1225 1813	6.1 12.1 3.1 13.1	187 369 94 398	7 Th	0129 0651 1337 1911	4.4 12.4 4.4 13.1	135 378 133 400
8 Tu	0118 0622 1332 1918	5.7 12.1 2.9 13.2	174 370 88 402	23 W	0052 0552 1258 1844	5.8 12.2 3.3 13.1	176 371 102 398	8 F	0205 0740 1411 1946	4.2 12.1 5.3 12.8	128 369 162 391
9 W	0201 0716 1410 2000	5.3 11.9 3.7 13.0	162 362 112 396	24 Th	0129 0636 1334 1917	5.3 12.2 3.7 13.1	162 371 114 400	9 Sa	0244 0837 1449 2022	4.1 11.7 6.4 12.4	124 357 195 379
10 Th	0246 0814 1451 2043	5.0 11.6 4.6 12.7	151 353 141 386	25 F	0208 0725 1414 1953	4.8 12.1 4.4 13.1	146 369 133 400	10 Su	0329 0949 1532 2104	4.1 11.3 7.5 12.0	125 345 229 366
11 F	0332 0922 1539 2127	4.7 11.3 5.7 12.3	144 344 175 374	26 Sa	0250 0822 1458 2033	4.3 11.9 5.3 13.0	130 364 161 397	11 M	0426 1116 1633 2159	4.3 11.2 8.5 11.5	130 340 258 352
12 Sa	0425 1042 1636 2215	4.5 11.2 6.8 11.8	137 340 208 361	27 Su	0339 0931 1551 2120	3.9 11.8 6.4 12.7	118 359 194 388	12 Tu	0541 1238 1803 2309	4.3 11.4 9.0 11.2	132 347 273 342
13 Su	0525 1205 1745 2310	4.3 11.3 7.7 11.5	131 345 235 351	28 M	0438 1057 1700 2216	3.6 11.8 7.4 12.3	110 360 227 376	13 W	0701 1345 1935	4.1 11.9 8.7	126 362 266
14 M	0631 1317 1900	4.0 11.7 8.2	122 356 249	29 Tu	0548 1225 1823 2322	3.4 12.1 8.1 12.0	103 369 248 366	14 Th	0032 0807 1434 2038	11.2 3.7 12.5 8.0	341 114 380 245
15 Tu	0013 0735 1416 2007	11.4 3.6 12.1 8.2	348 110 369 249	30 W	0709 1341 1952	3.1 12.6 8.2	93 384 250	15 F	0142 0901 1512 2124	11.5 3.4 12.9 7.3	349 103 394 222
				31 Th	0038 0824 1444 2102	12.0 2.6 13.0 7.8	365 79 397 237				
								16 Sa	0233 0946 1545 2204	11.8 3.1 13.2 6.6	360 95 402 200
								17 Su	0313 1025 1616 2241	12.2 3.0 13.2 6.0	371 92 403 183
								18 M	0350 1059 1644 2317	12.4 3.1 13.1 5.5	378 93 400 169
								19 Tu	0425 1131 1711 2352	12.6 3.2 13.1 5.1	383 98 398 156
								20 W	0501 1204 1738	12.6 3.4 13.1	385 105 398
								21 Th	0027 0540 1238 1806	4.6 12.7 3.8 13.2	141 386 115 402
								22 F	0102 0622 1313 1836	4.1 12.7 4.3 13.3	125 387 131 405
								23 Sa	0140 0709 1351 1910	3.6 12.7 5.1 13.3	110 386 154 405
								24 Su	0222 0804 1433 1949	3.2 12.5 6.1 13.1	98 380 185 398
								25 M	0312 0912 1524 2035	3.1 12.1 7.2 12.6	95 369 220 384
								26 Tu	0413 1044 1637 2140	3.3 11.8 8.2 12.0	100 361 250 367
								27 W	0534 1221 1815 2309	3.4 12.0 8.5 11.6	105 365 260 355
								28 Th	0705 1341 1948	3.3 12.4 8.0	101 377 244
								29 F	0045 0821 1437 2053	11.8 2.9 12.8 7.0	360 88 390 214
								30 Sa	0201 0921 1519 2144	12.3 2.6 13.1 6.0	375 79 399 182
								31 Su	0259 1010 1553 2228	12.8 2.6 13.2 5.2	389 79 403 157
								1 M	0346 1051 1624 2309	13.0 2.9 13.2 4.5	397 87 403 137
								2 Tu	0427 1128 1654 2346	13.1 3.3 13.2 4.1	398 101 401 125
								3 W	0506 1201 1723	13.0 3.9 13.1	395 118 398
								4 Th	0020 0545 1232 1752	3.8 12.8 4.5 12.9	116 391 137 394
								5 F	0053 0624 1303 1820	3.6 12.6 5.2 12.8	109 384 159 389
								6 Sa	0126 0706 1332 1848	3.4 12.3 6.0 12.6	105 375 182 384
								7 Su	0202 0753 1404 1918	3.4 11.9 6.8 12.3	105 362 208 376
								8 M	0243 0854 1439 1952	3.7 11.4 7.6 11.9	112 347 233 364
								9 Tu	0333 1015 1528 2040	4.1 11.0 8.4 11.3	126 336 257 345
								10 W	0441 1147 1701 2210	4.6 11.1 8.9 10.7	139 338 271 326
								11 Th	0614 1302 1900 2353	4.7 11.5 8.5 10.6	143 352 258 322
								12 F	0732 1357 2010	4.4 12.1 7.5	134 368 228
								13 Sa	0119 0830 1437 2056	11.0 4.0 12.5 6.4	336 121 381 196
								14 Su	0216 0915 1510 2135	11.6 3.6 12.7 5.5	355 111 386 169
								15 M	0259 0954 1539 2212	12.2 3.5 12.7 4.8	371 108 387 147
								16 Tu	0336 1030 1605 2247	12.5 3.6 12.6 4.3	381 110 385 131
								17 W	0411 1104 1630 2322	12.7 3.8 12.6 3.8	386 116 385 116
								18 Th	0446 1139 1655 2357	12.8 4.1 12.7 3.3	389 125 387 101
								19 F	0525 1215 1723	12.9 4.6 12.8	392 139 389
								20 Sa	0034 0608 1253 1755	2.9 12.9 5.2 12.8	87 393 157 390
								21 Su	0114 0656 1332 1830	2.5 12.8 5.9 12.7	76 390 180 387
								22 M	0200 0752 1416 1912	2.4 12.5 6.8 12.4	73 380 206 378
								23 Tu	0253 0903 1510 2006	2.7 11.9 7.6 11.9	81 363 232 362
								24 W	0401 1041 1634 2131	3.2 11.5 8.1 11.2	97 352 248 342
								25 Th	0528 1215 1815 2320	3.6 11.6 7.8 11.0	110 354 239 336
								26 F	0657 1325 1938	3.6 11.9 6.8	110 364 207
								27 Sa	0058 0807 1413 2036	11.5 3.4 12.3 5.5	349 104 375 169
								28 Su	0206 0902 1450 2123	12.1 3.3 12.5 4.5	368 101 382 136
								29 M	0257 0947 1521 2205	12.5 3.5 12.6 3.7	381 107 383 114
								30 Tu	0339 1026 1549 2242	12.7 3.9 12.5 3.3	387 118 380 101

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
Heights are referred to the chart datum of soundings.

Tanggu (Xingang), China, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height			Time	Height			Time	Height		
	h	m	ft		h	m	ft		h	m	ft
1 W	0415	12.7	388	16 Th	0351	12.4	377	1 M	0524	11.2	340
	1101	4.4	133		1035	4.6	139		1139	5.9	181
	1615	12.3	376		1542	11.9	364		1624	10.5	319
	2316	3.1	94		2249	2.5	77				
2 Th	0450	12.6	385	17 F	0429	12.5	382	2 Tu	0001	2.2	67
	1134	4.9	149		1115	4.9	150		0559	11.2	341
	1641	12.2	372		1610	11.9	364		1214	5.9	179
	2348	3.0	90		2328	2.1	64		1658	10.4	317
3 F	0524	12.5	381	18 Sa	0511	12.7	386	3 W	0027	2.3	70
	1203	5.4	165		1155	5.4	164		0637	11.2	340
	1705	12.1	369		1641	11.9	364		1252	5.8	176
									1738	10.2	312
4 Sa	0019	2.9	87	19 Su	0011	1.8	55	4 Th	0057	2.5	75
	0559	12.3	375		0557	12.7	386		0717	11.0	335
	1230	5.9	180		1237	5.9	179		1334	5.7	174
	1730	12.1	369		1717	11.9	363		1826	9.9	303
5 Su	0050	2.8	86	20 M	0057	1.7	52	5 F	0134	2.8	84
	0637	12.1	368		0648	12.4	379		0801	10.7	327
	1257	6.4	194		1320	6.4	194		1421	5.6	170
	1758	12.0	367		1759	11.7	358		1922	9.6	292
6 M	0124	3.0	91	21 Tu	0148	1.9	58	6 Sa	0222	3.2	98
	0721	11.8	359		0746	12.0	365		0850	10.5	319
	1328	6.8	207		1408	6.8	208		1515	5.3	162
	1829	11.8	361		1852	11.4	347		2032	9.2	281
7 Tu	0201	3.3	101	22 W	0244	2.4	73	7 Su	0319	3.8	116
	0813	11.4	347		0859	11.4	348		0943	10.3	314
	1405	7.3	222		1511	7.2	218		1616	4.9	148
	1905	11.4	347		2003	10.8	330		2158	9.1	277
8 W	0244	3.8	116	23 Th	0352	3.1	95	8 M	0424	4.4	134
	0922	11.0	335		1029	11.1	339		1037	10.3	313
	1455	7.8	237		1636	7.1	215		1721	4.2	128
	1954	10.7	326		2145	10.4	316		2324	9.3	284
9 Th	0341	4.4	134	24 F	0512	3.7	112	9 Tu	0535	4.9	148
	1047	10.8	330		1147	11.1	339		1128	10.4	316
	1617	8.0	245		1802	6.3	193		1824	3.4	105
	2122	10.0	304		2330	10.4	316				
10 F	0502	4.8	147	25 Sa	0632	4.0	121	10 W	0036	9.8	300
	1207	11.0	335		1247	11.4	346		0644	5.2	159
	1814	7.5	230		1915	5.2	158		1217	10.5	319
	2320	9.8	300						1923	2.7	81
11 Sa	0636	4.8	147	26 Su	0056	10.9	332	11 Th	0135	10.5	319
	1306	11.3	345		0739	4.1	124		0752	5.4	166
	1929	6.5	198		1333	11.5	352		1302	10.5	320
					2010	4.1	124		2019	2.0	60
12 Su	0051	10.4	317	27 M	0159	11.5	349	12 F	0227	11.0	336
	0744	4.6	139		0833	4.2	128		0852	5.6	172
	1349	11.6	353		1410	11.6	354		1344	10.5	321
	2017	5.4	164		2056	3.2	98		2112	1.4	43
13 M	0151	11.1	339	28 Tu	0248	11.9	362	13 Sa	0318	11.4	347
	0834	4.3	131		0919	4.5	136		0946	5.8	177
	1422	11.8	359		1442	11.6	353		1426	10.5	321
	2057	4.4	134		2136	2.7	81		2206	1.1	33
14 Tu	0236	11.7	357	29 W	0328	12.0	367	14 Su	0407	11.5	352
	0916	4.2	128		1000	4.8	147		1038	5.9	179
	1450	11.9	363		1511	11.5	349		1510	10.6	322
	2135	3.6	110		2213	2.4	73		2302	0.9	28
15 W	0314	12.1	369	30 Th	0403	12.0	367	15 M	0455	11.5	351
	0956	4.3	131		1035	5.2	160		1128	5.8	177
	1516	11.9	364		1537	11.3	345		1558	10.6	323
	2212	3.0	92		2247	2.3	70		2356	0.9	27
16 Th				31 F	0434	11.9	363	16 Tu			
					1106	5.7	173				
					1601	11.2	342				
					2320	2.3	70				
17 W								17 W			
18 Th								18 Th			
19 F								19 F			
20 Sa								20 Sa			
21 Su								21 Su			
22 M								22 M			
23 Tu								23 Tu			
24 W								24 W			
25 Th								25 Th			
26 F								26 F			
27 Sa								27 Sa			
28 Su								28 Su			
29 M								29 M			
30 Tu								30 Tu			
31 W								31 W			

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Yantai, China, 2008

Times and Heights of High and Low Waters

January					February					March													
Time		Height			Time		Height			Time		Height			Time		Height						
	h m	ft cm			h m	ft cm			h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm				
1 Tu	0321	5.9	181	16 W ○	0250	6.6	202	1 F	0429	5.2	157	16 Sa	0441	5.8	177	1 Sa	0340	5.5	168	16 Su	0443	5.9	181
	0936	1.5	47		0859	1.0	31		1020	2.6	80		1037	2.5	75		0920	3.0	91		1035	3.1	96
	1611	6.3	193		1528	7.1	216		1651	6.0	184		1706	6.8	206		1542	6.3	192		1652	6.7	203
	2232	2.2	68		2143	1.6	49						2310	2.5	77								
2 W	0421	5.4	165	17 Th	0350	6.2	189	2 Sa	0009	2.3	69	17 Su	0021	1.9	59	2 Su	0509	5.2	157	17 M	0019	2.1	63
	1030	1.9	59		0953	1.4	44		0605	5.0	151		0626	5.6	172		1048	3.5	106		0633	5.9	180
	1707	6.2	190		1627	7.1	215		1150	3.0	92		1218	2.8	85		1700	6.0	182		1230	3.2	99
	2347	2.2	67		2300	1.7	51		1806	5.9	181		1842	6.7	203				1839		6.6	201	
3 Th	0535	5.1	156	18 F	0501	5.8	178	3 Su	0135	2.0	62	18 M	0151	1.6	49	3 M	0047	2.4	74	18 Tu	0141	1.7	52
	1136	2.3	70		1100	1.9	57		0746	5.2	159		0759	6.0	183		0706	5.3	161		0755	6.4	194
	1808	6.2	190		1734	7.0	213		1313	3.1	93		1350	2.6	79		1238	3.5	106		1351	2.9	87
					1931	6.1	187		2005	7.0	212		1849	6.0	184		1957	7.0	212				
4 F	0101	2.0	61	19 Sa	0027	1.6	49	4 M	0237	1.6	50	19 Tu	0251	1.2	36	4 Tu	0203	2.1	63	19 W	0235	1.4	42
	0703	5.2	158		0626	5.7	175		0848	5.7	174		0903	6.5	198		0815	5.8	177		0849	6.9	209
	1242	2.5	77		1221	2.1	65		1421	2.8	84		1450	2.2	67		1353	3.1	93		1441	2.3	71
	1912	6.3	193		1850	7.0	214		2033	6.6	200		2105	7.4	226		2006	6.5	198		2052	7.4	225
5 Sa	0206	1.7	52	20 Su	0147	1.4	42	5 Tu	0321	1.3	39	20 W	0335	0.9	26	5 W	0250	1.6	50	20 Th	0313	1.2	36
	0813	5.5	167		0751	6.0	182		0930	6.2	188		0949	6.9	211		0859	6.4	194		0928	7.3	221
	1345	2.6	78		1340	2.1	65		1507	2.3	71		1534	1.8	54		1441	2.5	76		1519	1.9	57
	2007	6.5	199		2004	7.2	220		2120	7.0	214		2151	7.8	237		2056	7.1	215		2135	7.7	234
6 Su	0258	1.4	42	21 M	0252	1.0	32	6 W	0356	1.0	32	21 Th	0411	0.7	22	6 Th	0323	1.3	40	21 F	0345	1.2	36
	0906	5.9	179		0859	6.3	193		1003	6.5	199		1025	7.2	219		0933	6.9	209		0959	7.6	231
	1439	2.5	75		1446	1.9	59		1542	1.9	58		1610	1.4	43		1517	2.0	60		1552	1.5	45
	2053	6.8	208		2106	7.5	229		2200	7.4	226		2231	7.9	242		2135	7.5	229		2211	7.8	238
7 M	0340	1.1	34	22 Tu	0344	0.8	23	7 Th	0425	0.9	27	22 F	0442	0.7	21	7 F	0350	1.1	33	22 Sa	0413	1.2	37
	0947	6.2	189		0954	6.7	204		1033	6.8	208		1057	7.4	225		1004	7.3	222		1027	7.8	238
	1521	2.3	69		1539	1.7	51		1614	1.6	48		1644	1.1	35		1550	1.6	48		1624	1.2	38
	2134	7.1	217		2158	7.8	238		2235	7.7	234		2306	8.0	243		2210	7.8	238		2244	7.8	238
8 Tu	0416	1.0	30	23 W	0427	0.5	16	8 F	0451	0.8	23	23 Sa	0512	0.7	22	8 Sa	0417	0.9	27	23 Su	0440	1.3	39
	1022	6.4	196		1040	6.9	211		1103	7.1	215		1126	7.5	230		1033	7.7	234		1056	8.0	244
	1557	2.0	61		1622	1.4	44		1646	1.3	40		1719	1.0	30		1625	1.2	38		1658	1.1	35
	2212	7.3	224		2243	8.0	244		2308	7.8	238		2340	7.8	239		2243	8.0	244		2315	7.7	236
9 W	0448	0.9	27	24 Th	0505	0.4	13	9 Sa	0520	0.6	19	24 Su	0542	0.8	24	9 Su	0447	0.8	23	24 M	0508	1.3	40
	1053	6.6	201		1120	7.0	214		1133	7.3	221		1157	7.6	233		1104	8.0	244		1126	8.1	247
	1630	1.8	54		1702	1.3	39		1721	1.1	34		1754	1.0	29		1701	1.0	30		1732	1.2	36
	2249	7.5	230		2324	8.0	244		2341	7.9	240						2317	8.1	247		2347	7.6	233
10 Th	0517	0.9	26	25 F	0541	0.4	13	10 Su	0550	0.5	15	25 M	0013	7.6	233	10 M	0519	0.7	21	25 Tu	0538	1.4	43
	1124	6.7	203		1156	7.1	215		1206	7.4	227		0612	0.9	26		1136	8.3	254		1156	8.1	246
	1703	1.6	49		1740	1.2	36		1759	1.0	30		1229	7.7	234		1741	0.8	24		1807	1.2	38
	2324	7.6	233								1831		1.0	32				2354	8.1		246		
11 F	0546	0.8	23	26 Sa	0002	7.9	240	11 M	0016	7.8	239	26 Tu	0046	7.4	225	11 Tu	0554	0.7	22	26 W	0020	7.5	228
	1156	6.7	205		0616	0.5	15		0624	0.4	13		0643	1.0	31		1213	8.5	260		0608	1.6	48
	1738	1.5	45		1230	7.1	216		1241	7.7	234		1302	7.6	232		1823	0.8	23		1227	8.0	243
	2359	7.6	233		1819	1.1	35		1841	0.9	28		1909	1.3	39				1843		1.4	42	
12 Sa	0619	0.6	19	27 Su	0039	7.6	232	12 Tu	0054	7.7	234	27 W	0121	7.0	214	12 W	0034	7.9	241	27 Th	0055	7.3	221
	1231	6.8	206		0650	0.6	18		0700	0.5	15		0715	1.3	39		0632	0.9	27		0640	1.9	57
	1817	1.4	44		1305	7.1	216		1320	7.8	238		1336	7.4	226		1253	8.6	261		1259	7.8	238
					1859	1.2	38		1926	1.0	29		1949	1.5	47		1909	0.9	27		1919	1.6	48
13 Su	0035	7.5	230	28 M	0116	7.2	219	13 W	0137	7.3	224	28 Th	0159	6.6	201	13 Th	0120	7.6	231	28 F	0132	6.9	210
	0654	0.6	17		0724	0.8	23		0741	0.8	23		0749	1.7	53		0715	1.2	38		0713	2.3	69
	1309	6.9	209		1342	7.0	214		1403	7.8	238		1412	7.1	216		1337	8.3	254		1333	7.5	229
	1859	1.4	43		1943	1.4	43		2017	1.1	35		2034	1.9	58		2000	1.2	36		1959	1.8	56
14 M	0115	7.3	224	29 Tu	0154	6.7	205	14 Th	0227	6.9	210	29 F	0243	6.1	185	14 F	0211	7.1	215	29 Sa	0215	6.5	197
	0731	0.6	17		0759	1.0	32		0826	1.2	37		0828	2.3	71		0804	1.8	56		0752	2.8	84
	1351	7.0	212		1421	6.9	209		1452	7.6	231		1451	6.7	205		1427	7.8	239		1411	7.2	218
	1947	1.4	44		2031	1.7	52		2117	1.5	45		2134	2.3	69		2103	1.6	50		2049	2.2	67
15 Tu	0159	7.1	215	30 W	0235	6.2	188	15 F	0325	6.3	193				15 Sa	0314	6.4	196	30 Su	0308	6.0	182	
	0813	0.7	21		0836	1.4	44		0922	1.8	56					0907	2.6	78		0842	3.3	100	
	1436	7.1	215		1504	6.6	202		1551	7.2	219					1528	7.2	220		1500	6.7	204	
	2040	1.5	46		2128	2.0	61		2237	1.8	56					2229	2.0	62		2204	2.6	78	
				31 Th	0324	5.6	171																

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Qingdao (Da Gang), China, 2008

Times and Heights of High and Low Waters

January						February						March					
Time			Height			Time			Height			Time			Height		
	h	m	ft	cm			h	m	ft	cm			h	m	ft	cm	
1 Tu	0459	4.0	123			16 W	0418	2.7	81			1 F	0602	4.0	121		
	1040	9.5	290				0950	11.1	338				1258	9.3	284		
	1709	3.9	119			16 O	1632	2.9	89			16 Sa	1232	10.5	320		
	2312	10.5	320				2216	11.8	359				1845	5.7	175		
2 W	0604	4.0	123			17 Th	0518	2.6	79			2 Su	0015	10.4	317		
	1206	9.3	284				1105	10.7	326				0735	2.4	72		
	1813	4.8	146				1736	4.0	121			2 Su	1409	11.1	339		
							2320	11.4	348				2025	5.5	167		
3 Th	0017	10.3	313			18 F	0627	2.4	73			3 M	0147	10.7	327		
	0714	3.8	115				1233	10.7	327				0858	1.6	50		
	1330	9.6	294				1855	4.7	144			3 M	1509	11.9	362		
	1928	5.3	161										2135	4.7	143		
4 F	0119	10.3	313			19 Sa	0032	11.2	342			4 Tu	0254	11.5	350		
	0817	3.3	101				0744	2.0	60				0959	0.9	27		
	1438	10.2	311				1358	11.3	344			4 Tu	1517	11.4	348		
	2035	5.4	165				2021	4.9	148				2133	5.2	159		
5 Sa	0213	10.4	318			20 Su	0146	11.4	346			5 W	0252	10.8	330		
	0910	2.8	84				0858	1.3	40				0951	2.4	72		
	1528	10.8	330				1505	12.0	366			5 W	1547	12.1	370		
	2130	5.2	159				2132	4.5	136				2214	4.2	128		
6 Su	0257	10.7	326			21 M	0252	11.7	358			6 Th	0332	11.8	360		
	0956	2.3	70				1002	0.6	18				1032	1.6	49		
	1605	11.3	345				1557	12.6	384			6 Th	1616	12.8	389		
	2214	4.9	149				2230	3.9	119				2250	3.2	97		
7 M	0334	11.0	336			22 Tu	0346	12.3	375			7 F	0409	12.8	389		
	1037	1.9	57				1056	0.0	0				1109	1.0	30		
	1636	11.7	357				1640	13.0	396			7 F	1644	13.3	405		
	2253	4.5	136				2319	3.3	101				2326	2.3	69		
8 Tu	0408	11.4	347			23 W	0433	12.8	390			8 Sa	0444	13.5	412		
	1115	1.5	47				1144	-0.3	-10				1144	0.6	18		
	1705	12.0	366				1720	13.1	400			8 Sa	1712	13.7	419		
	2330	4.0	122														
9 W	0442	11.8	359			24 Th	0002	2.9	87			9 Su	0002	1.5	45		
	1152	1.2	38				0516	13.1	398				0520	14.0	428		
	1734	12.3	374				1227	-0.4	-11			9 Su	1219	0.5	14		
							1758	13.1	399				1742	14.1	429		
10 Th	0005	3.6	109			25 F	0042	2.5	77			10 M	0037	0.9	27		
	0516	12.1	369				0556	13.1	398				0557	14.2	433		
	1227	1.0	29				1305	-0.1	-3			10 M	1254	0.6	19		
	1805	12.4	379				1834	13.0	396				1813	14.2	432		
11 F	0041	3.2	98			26 Sa	0120	2.4	73			11 Tu	0114	0.5	16		
	0552	12.4	378				0635	12.8	389				0636	14.1	429		
	1302	0.7	21				1341	0.4	12			11 Tu	1331	1.2	36		
	1838	12.5	382				1910	12.8	389				1847	14.0	426		
12 Sa	0118	3.0	90			27 Su	0158	2.4	74			12 W	0153	0.5	15		
	0630	12.6	383				0715	12.2	372				0718	13.6	414		
	1338	0.6	18				1415	1.1	33			12 W	1410	2.1	63		
	1914	12.5	382				1947	12.4	377				1925	13.4	408		
13 Su	0157	2.8	86			28 M	0236	2.6	80			13 Th	0235	0.8	25		
	0711	12.5	381				0757	11.5	351				0807	12.7	388		
	1416	0.7	21				1449	1.9	59			13 Th	1455	3.3	101		
	1952	12.5	381				2025	11.8	361				2007	12.5	380		
14 M	0239	2.7	83			29 Tu	0316	3.0	91			14 F	0325	1.4	43		
	0756	12.2	372				0844	10.7	326				0909	11.7	357		
	1456	1.1	34				1527	3.0	92			14 F	1549	4.7	142		
	2034	12.3	376				2107	11.2	340			14 F	2102	11.3	345		
15 Tu	0326	2.7	82			30 W	0401	3.4	104			15 Sa	0428	2.2	66		
	0848	11.7	356				0941	9.9	301				1036	10.8	329		
	1540	1.9	58				1611	4.2	128				1706	5.8	177		
	2121	12.1	369				2156	10.5	319				2222	10.3	314		
						31 Th	0455	3.8	116								
							1104	9.3	283								
							1708	5.3	163								
							2258	9.9	301								

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Qingdao (Da Gang), China, 2008

Times and Heights of High and Low Waters

October				November				December			
Time		Height		Time		Height		Time		Height	
	h m	ft	cm		h m	ft	cm		h m	ft	cm
1 W	0511	14.2	432	16 Th	0445	14.7	447	1 M	0048	4.2	129
	1211	2.4	72		1148	1.0	31		0554	11.9	362
	1733	14.2	432		1715	15.2	462		1308	1.7	51
									1853	12.0	365
2 Th	0027	3.1	93	17 F	0008	2.6	78	2 Tu	0123	4.4	134
	0540	13.9	424		0518	14.6	446		0628	11.6	354
	1243	2.4	72		1227	0.7	21		1342	1.8	56
	1808	13.9	423		1755	15.0	457		1933	11.7	357
3 F	0059	3.6	110	18 Sa	0048	3.0	92	3 W	0201	4.6	141
	0610	13.5	411		0554	14.3	436		0707	11.3	344
	1316	2.5	77		1308	0.7	21		1418	2.1	63
	1846	13.4	408		1840	14.5	442		2017	11.4	348
4 Sa	0133	4.3	131	19 Su	0132	3.7	114	4 Th	0242	4.9	148
	0641	12.9	393		0635	13.6	416		0752	10.9	332
	1350	2.9	87		1354	1.0	30		1458	2.3	71
	1928	12.7	387		1931	13.6	416		2107	11.2	340
5 Su	0208	5.2	157	20 M	0220	4.6	141	5 F	0331	5.0	153
	0713	12.2	372		0721	12.7	388		0848	10.5	320
	1427	3.3	102		1446	1.6	49		1546	2.7	83
	2018	11.9	362		2035	12.6	385		2202	11.0	336
6 M	0248	6.1	185	21 Tu	0318	5.5	168	6 Sa	0429	5.0	152
	0749	11.5	349		0821	11.7	356		0956	10.2	312
	1510	3.9	120		1551	2.3	70		1642	3.1	95
	2128	11.2	341		2203	11.8	361		2300	11.1	337
7 Tu	0338	7.0	212	22 W	0435	6.1	186	7 Su	0532	4.6	140
	0838	10.7	325		0947	10.9	332		1112	10.3	314
	1605	4.5	137		1712	2.8	84		1743	3.5	106
	2308	10.9	332		2347	11.7	358		2356	11.3	344
8 W	0452	7.5	230	23 Th	0609	5.9	181	8 M	0636	3.9	119
	1005	10.1	307		1134	10.8	330		1226	10.7	327
	1719	4.8	146		1839	2.8	86		1849	3.7	114
9 Th	0030	11.1	339	24 F	0101	12.1	368	9 Tu	0050	11.7	357
	0629	7.4	227		0732	5.2	157		0737	3.0	91
	1155	10.2	310		1254	11.3	345		1330	11.4	348
	1848	4.7	142		1952	2.7	81		1957	3.8	115
10 F	0127	11.6	354	25 Sa	0153	12.5	381	10 W	0139	12.2	371
	0746	6.7	204		0832	4.1	126		0834	2.0	60
	1304	10.9	331		1356	11.9	364		1426	12.3	374
	2001	4.1	126		2048	2.6	78		2058	3.7	112
11 Sa	0210	12.2	372	26 Su	0233	12.9	392	11 Th	0226	12.6	384
	0837	5.7	173		0920	3.2	98		0928	1.0	32
	1357	11.8	360		1446	12.5	381		1517	13.0	397
	2053	3.5	106		2135	2.7	82		2154	3.4	105
12 Su	0245	12.8	391	27 M	0308	13.1	399	12 F	0312	13.0	395
	0918	4.6	140		1001	2.6	78		1020	0.3	8
	1442	12.8	391		1528	12.9	394		1605	13.6	414
	2135	3.0	90		2216	2.9	89		2246	3.2	98
13 M	0316	13.4	409	28 Tu	0340	13.2	403	13 Sa	0358	13.2	403
	0956	3.5	107		1037	2.2	66		1110	-0.3	-10
	1522	13.8	420		1605	13.2	402		1652	13.9	423
	2214	2.6	78		2253	3.2	97		2335	3.1	93
14 Tu	0345	13.9	425	29 W	0411	13.3	404	14 Su	0444	13.4	408
	1033	2.5	76		1111	1.9	59		1200	-0.7	-21
	1600	14.5	442		1641	13.4	407		1739	13.8	421
	2252	2.3	71		2327	3.4	105				
15 W	0414	14.4	439	30 Th	0441	13.2	401	15 M	0023	3.0	90
	1110	1.6	50		1144	1.8	55		0531	13.4	407
	1637	15.0	456		1716	13.3	406		1250	-0.8	-24
	2330	2.3	71						1827	13.5	410
16 Th				31 F	0001	3.7	113	16 Su			
					0511	13.0	395				
					1217	1.8	56				
					1751	13.1	400				
17 F								17 M			
18 Sa								18 Tu			
19 Su								19 W			
20 M								20 Th			
21 Tu								21 F			
22 W								22 Sa			
23 Th								23 Su			
24 F								24 M			
25 Sa								25 Tu			
26 Su								26 W			
27 M								27 Th			
28 Tu								28 F			
29 W								29 Sa			
30 Th								30 Su			
31 F								31 M			

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Lianyun Gang, China, 2008

Times and Heights of High and Low Waters

January					February					March																			
Time		Height			Time		Height			Time		Height			Time		Height												
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm										
1 Tu	0642	4.5	137		16 W ●	0606	3.2	99		1 F	0031	12.6	385		16 Sa	0029	13.8	422		1 Sa	0646	4.8	147		16 Su	0018	13.4	407	
	1227	12.0	365			1136	13.8	421			0748	4.5	138			0756	3.3	100			1325	12.5	381			0745	3.7	112	
	1848	4.9	148			1812	3.7	113			1412	12.0	365			1410	13.6	415			1911	7.0	214			1409	14.1	430	
						2357	14.5	442			2001	6.5	199			2030	6.2	188								2035	6.5	198	
2 W	0052	13.0	395		17 Th	0709	3.1	94		2 Sa	0144	12.2	371		17 Su	0157	13.3	405		2 Su	0042	12.1	370		17 M	0158	13.0	395	
	0745	4.3	132			1253	13.5	411			0900	4.4	134			0924	3.1	95			0758	5.0	152			0916	3.4	105	
	1348	11.8	359			1919	4.7	143			1529	12.5	381			1538	14.1	429			1452	12.7	387			1531	14.6	444	
	1952	5.6	171				2122	6.7	203			2203	5.8	177			2040	7.2	220			2203	5.7	175					
3 Th	0153	12.7	388		18 F	0101	14.1	431		3 Su	0259	12.1	370		18 M	0325	13.4	409		3 M	0215	12.0	365		18 Tu	0326	13.4	409	
	0851	4.0	122			0819	2.8	86			1008	3.9	120			1045	2.5	76			0919	4.7	142			1033	2.8	85	
	1500	12.1	368			1416	13.5	413			1632	13.3	405			1646	14.9	454			1559	13.3	406			1634	15.2	463	
	2100	5.9	180			2041	5.3	162			2233	6.2	190			2319	4.9	150			2202	6.6	201			2310	4.7	143	
4 F	0251	12.7	386		19 Sa	0212	13.9	424		4 M	0404	12.6	383		19 Tu	0436	14.1	431		4 Tu	0335	12.5	381		19 W	0430	14.3	435	
	0952	3.6	109			0935	2.4	73			1108	3.3	100			1153	1.6	50			1029	4.0	121			1135	2.1	64	
	1602	12.7	387			1538	14.1	429			1720	14.1	431			1738	15.6	477			1649	14.1	431			1719	15.7	478	
	2205	5.8	178			2204	5.3	161			2331	5.5	167								2305	5.5	168						
5 Sa	0345	12.8	389		20 Su	0324	14.0	426		5 Tu	0456	13.3	405		20 W	0019	4.0	121		5 W	0433	13.5	410		20 Th	0002	3.7	112	
	1046	3.1	94			1047	1.9	57			1159	2.6	79			1247	1.0	30			1127	3.1	95			0518	15.0	458	
	1655	13.5	411			1647	14.8	452			1800	14.8	452			1818	16.1	490			1729	15.0	457			1224	1.8	54	
	2303	5.5	168			2317	4.8	146											2355		4.3	131		1754		15.9	485		
6 Su	0432	13.0	396		21 M	0432	14.4	438		6 W	0020	4.6	139		21 Th ○	0106	3.2	98		6 Th	0517	14.4	440		21 F	0043	2.9	88	
	1134	2.6	80			1154	1.2	37			0539	14.1	431			0611	15.6	474			1214	2.3	69			0556	15.6	474	
	1740	14.2	434			1744	15.6	476			1243	1.9	59			1329	0.7	21			1801	15.7	479			1302	1.8	55	
	2353	5.1	156				1833	15.4	470			1851	16.2	495								1822	16.0	487					
7 M	0513	13.4	409		22 Tu ○	0020	4.1	126		7 Th ●	0101	3.7	113		22 F	0143	2.7	82		7 F	0038	3.2	98		22 Sa ○	0115	2.3	71	
	1218	2.2	66			0616	14.9	453			0647	15.9	485			0554	15.3	467			0629	15.8	483						
	1820	14.9	453			1320	1.4	42			1402	0.9	26			1253	1.6	48			1332	2.1	65						
						1902	15.8	483			1920	16.2	494			1829	16.3	498			1847	16.0	489						
8 Tu ●	0037	4.7	143		23 W	0113	3.5	108		8 F	0139	3.0	92		23 Sa	0213	2.4	72		8 Sa ●	0115	2.4	72		23 Su	0143	2.0	60	
	0551	13.9	424			0617	15.4	470			0720	16.0	488			0626	16.0	488			0700	15.9	486						
	1258	1.8	54			1342	0.2	7			1354	1.0	30			1429	1.3	40			1329	1.1	35			1357	2.5	77	
	1855	15.3	465			1912	16.3	498			1929	16.2	493			1946	16.1	491			1855	16.8	512			1911	16.1	490	
9 W	0116	4.3	130		24 Th	0158	3.2	98		9 Sa	0213	2.5	77		24 Su	0240	2.2	66		9 Su	0150	1.8	54		24 M	0211	1.9	58	
	0627	14.4	440			0659	15.7	479			0721	15.8	483			0753	15.9	484			0659	16.6	506			0731	15.9	486	
	1334	1.5	45			1422	0.2	5			1426	0.8	25			1454	1.9	57			1403	1.1	33			1424	2.9	89	
	1926	15.5	472			1948	16.3	496			1956	16.4	500			2014	16.0	487			1921	17.1	521			1937	16.0	488	
10 Th	0153	3.9	119		25 F	0235	3.1	94		10 Su	0247	2.3	70		25 M	0309	2.2	66		10 M	0224	1.4	44		25 Tu	0240	2.1	64	
	0702	14.9	453			0738	15.8	481			0754	16.1	490			0828	15.5	473			0734	17.0	518			0806	15.8	482	
	1407	1.2	38			1455	0.5	14			1458	0.9	27			1521	2.5	76			1437	1.4	42			1453	3.3	101	
	1956	15.6	474			2021	16.0	487			2025	16.5	503			2043	15.7	479			1951	17.2	524			2006	15.7	480	
11 F	0228	3.6	111		26 Sa	0308	3.0	92		11 M	0322	2.2	66		26 Tu	0341	2.5	75		11 Tu	0259	1.3	40		26 W	0311	2.5	76	
	0736	15.1	460			0816	15.5	473			0832	16.1	491			0907	15.0	457			0814	17.0	519			0845	15.6	474	
	1439	1.1	34			1524	1.0	32			1533	1.3	40			1552	3.2	97			1513	2.0	61			1525	3.9	118	
	2026	15.6	475			2053	15.6	475			2058	16.4	501			2117	15.3	465			2025	17.0	519			2039	15.3	465	
12 Sa	0302	3.5	106		27 Su	0340	3.0	92		12 Tu	0400	2.2	66		27 W	0418	3.0	92		12 W	0337	1.4	43		27 Th	0343	3.1	93	
	0811	15.2	462			0855	15.0	457			0917	15.8	483			0953	14.3	436			0902	16.7	509			0931	15.1	460	
	1513	1.1	34			1554	1.8	56			1611	2.1	63			1628	4.0	123			1553	2.9	89			1601	4.7	142	
	2057	15.6	475			2127	15.2	462			2137	16.1	492			2154	14.6	444			2106	16.5	503			2115	14.6	445	
13 Su	0340	3.4	104		28 M	0415	3.1	95		13 W	0444	2.3	70		28 Th	0500	3.7	113		13 Th	0421	1.8	55		28 F	0417	3.6	110	
	0850	15.0	458			0938	14.2	434			1010	15.3	465			1047	3.6	414			0958	16.0	487			1023	14.4	440	
	1550	1.3	41			1627	2.8	85			1654	3.1	96			1710	5.1	155			1639	4.1	124			1642	5.6	171	
	2133	15.5	471			2203	14.6	446			2223	15.6	474			2238	13.7	418			2156	15.6	476			2157	13.8	422	
14 M	0422	3.4	103		29 Tu	0458	3.4	104		14 Th ○	0536	2.6	79		29 F ○	0548	4.4	133		14 F ○	0514	2.5	76		29 Sa	0458	4.2	127	
	0936	14.7	449			1027	13.4	407			1114	14.5	442			1154	12.9	392			1105	15.0	458			1124	13.7	418	
	1631	1.9	57			1704	3.8	117			1747	4.4	134			1802	6.2	188			1735	5.3	161			1730	6.5	199	
	2214	15.3	465			2244	14.0	427			2318	14.7	449			2330	12.8	391			2256	14.4	440			2249	13.1	398	
15 Tu	0510	3.3	102		30 W ○	0547	3.8	117		15 F	0639	3.0	91		15 Sa	0620	3.2	99		15 Sa	0620	3.2	99		30 Su ○	0550	4.7	142	
	1031	14.3	435			1126	12.5	382			1235	13.8	421			1234	14.2	434			1234	14.2	434			1241	13.1	400	
	1718	2.7	81			1749	4.9	149			1855	5.6	170			1851	6.3	191								1833	7.2	220	
	2301	14.9	454			2332	13.3	406																					
15 Th	0644	4.3	130		31 Th	0644	4.3	130																					
	1242	12.0	365			1847	5.9	179																					

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Lianyun Gang, China, 2008

Times and Heights of High and Low Waters

July					August					September																			
Time		Height			Time		Height			Time		Height			Time		Height												
	h m	ft cm			h m	ft cm			h m	ft cm		h m	ft cm		h m	ft cm													
1 Tu	0416	16.3	497		16 W	0532	15.8	482		1 F	0012	1.8	55		16 Sa	0017	3.3	100		1 M	0132	1.7	51		16 Tu	0101	2.5	77	
	1043	5.8	177			1136	7.0	213			0608	18.0	549			0621	16.9	516			0700	18.0	549			0635	17.6	536	
	1558	16.1	492			1657	14.5	441			1243	5.5	167			1241	6.0	182			1348	4.1	124			1321	3.7	113	
	2314	2.0	60			2359	3.4	105	●		1749	17.1	520			1755	16.1	492			1856	17.8	544			1834	17.8	542	
2 W	0517	17.1	520		17 Th	0613	16.4	499		2 Sa	0107	1.2	38		17 Su	0055	2.9	87		2 Tu	0204	2.2	67		17 W	0135	2.5	77	
	1147	5.6	170			1222	6.6	202			0651	18.3	559			0648	17.2	524			0728	17.8	542			0658	17.8	543	
	1656	16.5	502			1737	14.9	455			1332	5.0	153			1317	5.3	161			1418	3.9	118			1354	3.3	101	
											1834	17.5	533		1828	16.7	509	○	1931	17.7	540		1908	18.2	555				
3 Th	0014	1.5	45		18 F	0040	3.1	95		3 Su	0153	1.0	32		18 M	0129	2.6	79		3 W	0233	2.9	89		18 Th	0209	2.9	87	
	0612	17.7	540			0648	16.7	508			0729	18.3	558			0713	17.4	530			0756	17.5	532			0723	17.9	546	
	1245	5.2	160			1302	6.3	191			1414	4.7	144			1350	4.8	147			1449	3.8	117			1427	3.1	95	
	1751	16.8	512	●		1813	15.5	471	○		1915	17.7	538			1858	17.1	522			2008	17.3	528			1947	18.3	559	
4 F	0110	1.1	34		19 Sa	0117	2.9	87		4 M	0231	1.3	39		19 Tu	0201	2.5	76		4 Th	0303	3.7	114		19 F	0245	3.5	106	
	0702	18.1	551			0718	16.8	512			0804	18.0	549			0736	17.5	534			0825	17.1	520			0755	17.8	543	
	1339	5.1	154			1339	5.9	179			1450	4.6	139			1422	4.5	137			1522	4.1	125			1503	3.1	93	
	1841	17.0	518			1847	15.9	484			1955	17.5	532			1929	17.5	532			2050	16.7	509			2033	18.1	551	
5 Sa	0203	0.9	26		20 Su	0150	2.7	82		5 Tu	0305	1.9	59		20 W	0232	2.6	80		5 F	0336	4.6	141		20 Sa	0325	4.4	134	
	0748	18.1	552			0746	16.8	513			0837	17.6	536			0801	17.6	537			0859	16.4	501			0834	17.4	531	
	1428	5.0	151			1412	5.6	170			1524	4.5	137			1454	4.3	131			1600	4.6	140			1545	3.2	99	
	1929	17.0	519			1920	16.2	494			2036	17.0	518			2005	17.6	537			2139	16.0	487			2128	17.4	530	
6 Su	0249	0.9	27		21 M	0221	2.6	80		6 W	0338	2.9	87		21 Th	0306	3.1	93		6 Sa	0414	5.6	172		21 Su	0410	5.5	167	
	0832	17.9	545			0812	16.8	513			0911	17.1	520			0831	17.6	537			0938	15.6	477			0922	16.6	507	
	1514	5.0	153			1445	5.3	162			1601	4.5	138			1530	4.2	127			1643	5.2	158			1636	3.7	113	
	2015	16.8	511			1953	16.4	499			2121	16.3	496			2048	17.5	533			2238	15.2	464			2235	16.5	503	
7 M	0332	1.2	38		22 Tu	0253	2.7	82		7 Th	0413	3.9	120		22 F	0343	3.8	115		7 Su	0458	6.8	207		22 M	0506	6.7	203	
	0915	17.4	529			0840	16.8	513			0948	16.5	503			0907	17.5	532			1024	14.8	451			1022	15.6	475	
	1558	5.1	155			1519	5.2	158			1644	4.8	145			1611	4.1	126			1733	5.7	175			1741	4.2	129	
	2103	16.2	495			2028	16.4	500			2213	15.4	470			2140	17.1	520			2352	14.6	444	○		1741	4.2	129	○
8 Tu	0412	2.0	62		23 W	0327	2.9	88		8 F	0452	5.1	156		23 Sa	0426	4.8	146		8 M	0552	7.9	242		23 Tu	0002	15.7	480	
	0957	16.7	510			0910	16.8	513			1030	15.8	482			0951	17.0	519			1120	13.9	425			0620	7.6	233	
	1642	5.1	156			1557	5.1	154			1733	5.2	157			1700	4.2	129			1834	6.1	186			1140	14.6	444	
	2155	15.5	473			2111	16.3	496			2316	14.6	446			2243	16.4	501								1906	4.5	138	
9 W	0454	3.1	95		24 Th	0405	3.3	102		9 Sa	0539	6.3	192		24 Su	0517	6.0	182		9 Tu	0123	14.3	436		24 W	0138	15.6	476	
	1042	16.1	490			0947	16.8	511			1119	15.1	459			1045	16.4	500			0705	8.8	268			0804	7.9	240	
	1730	5.1	155			1641	4.9	150			1829	5.5	169			1800	4.4	135	○		1233	13.4	407			1318	14.2	433	
	2255	14.7	448			2201	16.0	488	○										1948		6.1	185		2039		4.1	126		
10 Th	0539	4.4	133		25 F	0449	4.1	124		10 Su	0034	14.1	431		25 M	0001	15.8	482		10 W	0242	14.5	443		25 Th	0300	16.0	488	
	1130	15.5	471			1030	16.6	506			0637	7.4	226			0622	7.1	217			0835	8.9	272			0931	7.1	217	
	1823	5.1	154			1732	4.7	144			1218	14.3	437			1151	15.6	476			1359	13.3	405			1445	14.6	446	
						2303	15.7	478			1933	5.7	175			1914	4.5	138			2105	5.6	171			2154	3.3	102	
11 F	0005	14.0	428		26 Sa	0539	5.1	154		11 M	0200	14.1	431		26 Tu	0134	15.6	475		11 Th	0346	15.1	459		26 F	0405	16.7	508	
	0630	5.6	170			1120	16.3	498			0750	8.2	250			0751	7.8	238			0950	8.3	253			1038	6.0	183	
	1225	14.9	455			1831	4.5	137			1328	13.8	422			1315	15.1	459			1513	13.8	422			1555	15.5	473	
	1921	5.0	152								2043	5.6	170			2041	4.3	130			2209	4.9	148			2257	2.6	79	
12 Sa	0123	13.7	419		27 Su	0015	15.4	470		12 Tu	0316	14.6	445		27 W	0303	16.0	487		12 F	0435	15.7	478		27 Sa	0454	17.1	522	
	0730	6.6	200			0641	6.1	185			0909	8.4	257			0926	7.6	232			1047	7.3	222			1130	5.0	151	
	1324	14.5	442			1219	16.0	488			1439	13.7	418			1441	15.1	461			1610	14.7	449			1646	16.4	499	
	2024	4.8	147			1936	4.2	127			2148	5.1	155			2200	3.5	108			2301	4.1	124			2349	2.2	66	
13 Su	0237	13.9	424		28 M	0135	15.4	469		13 W	0419	15.3	466		28 Th	0416	16.8	511		13 Sa	0514	16.3	497		28 Su	0531	17.3	528	
	0837	7.2	218			0757	6.9	209			1018	8.1	248			1042	6.8	207			1132	6.2	188			1213	4.1	125	
	1423	14.2	433			1327	15.7	479			1543	14.0	428			1556	15.7	480			1655	15.6	477			1728	17.0	518	
	2126	4.6	139			2048	3.7	114			2245	4.5	136			2309	2.6	80			2346	3.4	103						
14 M	0344	14.4	439		29 Tu	0259	15.7	480		14 Th	0509	16.0	488		29 F	0511	17.6	535		14 Su	0545	16.9	514		29 M	0031	2.2	68	
	0943	7.3	224			0921	7.1	216			1114	7.5	229			1144	5.9	179			1212	5.1	156			0601	17.3	527	
	1520	14.1	429			1440	15.6	476			1635	14.7	447			1655	16.6	505			1731	16.5	503			1248	3.5	107	
	2222	4.2	128			2201	3.2	97			2334	3.8	117										●	1804		17.3	527		
15 Tu	0442	15.1	461		30 W	0416	16.5	503		15 F	0549	16.5	504		30 Sa	0007	1.9	57		15 M	0025	2.8	86		30 Tu	0106	2.7	81	
	1043	7.3	221			1038	6.8	206			1201	6.8	206			0555	18.0	549			0611	17.3	527			0627	17.2	523	
	1612	14.2	432			1552	15.9	484			1719	15.5	471			1234	5.1	154			1248	4.3	131			1318	3.2	97	
	2313	3.8	117			2309	2.5	76								1741	17.3	527			1803	17.2	524	○		1837	17.4	530	
					31 Th	0517	17.4	529																					
						1145	6.1	187																					

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Lianyun Gang, China, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height			Time	Height			Time	Height		
h m	ft	cm		h m	ft	cm		h m	ft	cm	
1 W	0135 0651 1347 1910	3.2 17.0 3.1 17.3	98 519 94 528	16 Th	0109 0620 1327 1852	2.8 17.5 1.9 18.3	86 534 59 557	1 Su	0218 0716 1435 2026	4.0 16.6 0.8 17.3	121 506 24 526
2 Th	0204 0717 1417 1946	3.8 16.8 3.3 17.1	115 512 100 521	17 F	0148 0652 1404 1936	3.2 17.6 1.7 18.3	99 537 53 557	16 M	0306 0805 1525 2123	4.6 16.0 1.1 16.6	139 487 35 506
3 F	0234 0746 1448 2027	4.4 16.4 3.7 16.7	133 500 112 509	18 Sa	0228 0729 1444 2027	3.9 17.4 1.9 17.8	119 529 57 544	17 Tu	0358 0901 1622 2227	5.2 15.1 1.7 15.8	159 460 51 483
4 Sa	0307 0818 1520 2115	5.1 15.8 4.1 16.1	154 482 126 491	19 Su	0312 0813 1529 2125	4.8 16.7 2.3 17.1	145 510 69 520	18 W	0416 0936 1625 2243	5.6 13.6 3.1 13.9	171 414 94 424
5 Su	0344 0855 1555 2211	5.9 15.1 4.6 15.4	181 461 140 469	20 M	0402 0906 1624 2235	5.7 15.7 2.9 16.2	174 479 88 493	19 Th	0500 1005 1725 2342	5.8 14.1 2.3 15.1	177 430 69 461
6 M	0426 0937 1637 2317	7.0 14.3 5.1 14.6	212 437 154 446	21 Tu	0503 1012 1734	6.7 14.6 3.5	203 444 106	20 Th	0615 1125 1836	6.1 13.3 2.9	185 406 88
7 Tu	0515 1031 1732	7.9 13.5 5.5	241 413 167	22 W	0003 0627 1318 1900	15.5 7.3 13.7 3.8	473 221 417 115	21 F	0056 0731 1253 1947	14.7 5.7 13.0 3.4	448 175 397 103
8 W	0037 0619 1146 1845	14.1 8.6 12.9 5.7	429 261 394 174	23 Th	0129 0802 1315 2023	15.4 7.0 13.5 3.6	468 214 412 109	22 Sa	0200 0839 1413 2054	14.5 5.0 13.3 3.8	442 151 405 115
9 Th	0156 0748 1317 2010	14.0 8.5 12.8 5.5	426 260 391 169	24 F	0241 0916 1437 2132	15.5 6.1 14.1 3.2	473 185 429 98	23 Su	0255 0937 1520 2154	14.4 3.9 13.8 4.1	440 120 420 124
10 F	0300 0909 1437 2122	14.3 7.7 13.4 4.9	436 235 408 150	25 Sa	0339 1015 1542 2232	15.8 4.9 14.9 3.0	481 149 453 91	24 M	0343 1027 1615 2246	14.5 3.1 14.3 4.2	441 93 435 129
11 Sa	0350 1008 1537 2219	14.9 6.5 14.3 4.2	455 197 436 127	26 Su	0424 1103 1632 2322	15.9 3.8 15.6 3.0	486 117 474 92	25 Tu	0423 1112 1700 2331	14.5 2.4 7.4 4.3	443 73 448 132
12 Su	0430 1055 1623 2307	15.6 5.2 15.3 3.4	477 158 466 104	27 M	0500 1143 1714	16.0 3.1 16.0	487 93 488	26 W	0458 1154 1739	14.6 2.1 15.1	444 64 459
13 M	0502 1136 1701 2351	16.3 4.0 16.3 2.9	497 123 496 88	28 Tu	0003 0529 1219 1749	3.3 16.0 2.6 16.2	100 487 78 495	27 Th	0011 0529 1231 1816	4.3 14.6 2.0 15.4	132 445 62 469
14 Tu	0529 1214 1737	16.8 3.1 17.2	513 94 523	29 W	0038 0555 1252 1823	3.6 15.9 2.4 16.4	110 485 73 500	28 F	0047 0559 1306 1853	4.4 14.6 2.1 15.6	133 445 64 476
15 W	0031 0554 1251 1813	2.7 17.3 2.4 17.8	82 526 73 544	30 Th	0109 0620 1323 1857	3.9 15.8 2.5 16.5	120 482 76 502	29 Sa	0122 0630 1337 1930	4.5 14.6 2.2 15.7	136 445 67 479
1 O				31 F	0140 0647 1353 1935	4.3 15.6 2.7 16.4	130 477 83 501	30 Su	0156 0702 1406 2007	4.7 14.6 2.2 15.6	143 445 68 476
								1 M	0213 0714 1436 2021	3.6 16.1 -0.1 16.9	109 492 -3 514
								16 Tu	0302 0803 1525 2110	3.8 15.8 0.1 16.4	115 481 3 499
								17 W	0352 0854 1613 2201	4.1 15.2 0.6 15.7	125 463 18 478
								18 Th	0444 0950 1702 2255	4.4 14.3 1.4 14.9	133 437 44 454
								19 F	0540 1055 1755 2355	4.5 13.5 2.6 14.2	137 411 78 433
								20 Sa	0640 1213 1853	4.4 12.8 3.7	133 390 113
								21 Su	0057 0744 1335 1957	13.7 4.0 12.6 4.7	418 123 383 143
								22 M	0155 0849 1448 2103	13.5 3.5 12.7 5.2	410 108 387 160
								23 Tu	0251 0949 1551 2205	13.3 3.0 13.1 5.4	406 92 400 164
								24 W	0344 1043 1645 2300	13.3 2.6 13.7 5.2	406 80 417 159
								25 Th	0431 1132 1731 2348	13.4 2.3 14.3 5.0	409 71 435 151
								26 F	0511 1216 1812	13.5 2.1 14.8	413 65 451
								27 Sa	0031 0547 1255 1848	4.7 13.8 1.9 15.2	143 421 59 462
								28 Su	0109 0621 1329 1922	4.5 14.1 1.8 15.3	136 430 55 467
								29 M	0143 0654 1359 1953	4.3 14.4 1.7 15.3	132 440 51 467
								30 Tu	0216 0727 1427 2022	4.2 14.7 1.7 15.2	128 447 51 463
								31 W	0247 0801 1457 2051	4.1 14.7 1.7 15.0	125 448 53 458

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Wusong (Shanghai), China, 2008

Times and Heights of High and Low Waters

January								February								March							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm			
1 Tu	0115	2.4	72	16 W ●	0048	1.8	54	1 F	0105	2.9	89	16 Sa	0128	3.0	90	1 Sa	0605	7.8	237	16 Su	0044	3.8	116
	0632	7.7	236		0549	9.2	280		0725	7.4	226		0751	8.4	255		1354	4.1	125		0739	8.4	256
	1306	3.7	112		1249	3.1	93		1457	4.0	121		1547	3.8	116		1838	5.6	170		1559	3.6	111
	1830	7.9	241		1757	8.9	270		1947	5.8	176		2037	6.1	185		2113	6.1	185				
2 W	0155	2.6	78	17 Th	0133	2.1	63	2 Sa	0221	3.3	101	17 Su	0324	3.3	101	2 Su	0034	3.8	116	17 M	0334	4.0	121
	0738	7.6	232		0655	8.9	272		0910	7.6	232		0948	8.7	264		0802	7.4	227		0943	8.8	269
	1427	3.9	120		1402	3.6	110		1649	3.5	107		1740	3.0	91		1608	3.8	116		1735	2.7	83
	1939	7.1	217		1907	7.8	238		2142	5.8	177		2238	6.6	202		2110	5.5	169		2245	7.2	221
3 Th	0250	2.8	85	18 F	0232	2.4	72	3 Su	0409	3.2	98	18 M	0518	2.8	85	3 M	0317	4.0	121	18 Tu	0520	3.1	94
	0853	7.9	240		0817	8.9	270		1027	8.4	256		1106	9.6	293		0951	8.1	247		1052	9.7	297
	1601	3.7	114		1547	3.6	111		1756	2.9	89		1850	2.2	66		1723	3.2	97		1838	2.0	60
	2100	6.8	206		2041	7.1	217		2252	6.6	201		2341	7.7	236		2232	6.6	200		2328	8.6	261
4 F	0355	2.8	86	19 Sa	0348	2.5	77	4 M	0533	2.7	81	19 Tu	0638	1.9	59	4 Tu	0458	3.3	101	19 W	0633	2.1	63
	1000	8.5	258		0947	9.3	283		1119	9.4	285		1159	10.5	321		1048	9.1	278		1137	10.6	322
	1721	3.2	98		1731	3.1	94		1847	2.5	75		1947	1.6	49		1816	2.6	80		1932	1.5	45
	2213	6.9	211		2216	7.2	220		2335	7.6	231						2314	7.8	238				
5 Sa	0500	2.6	80	20 Su	0517	2.3	71	5 Tu	0635	2.0	62	20 W	0024	8.8	269	5 W	0603	2.6	78	20 Th	0006	9.6	293
	1053	9.3	283		1102	10.1	307		1200	10.2	310		0741	1.2	38		1129	10.1	309		0732	1.4	43
	1823	2.7	83		1847	2.4	73		1936	2.1	65		1238	11.2	340		1901	2.2	68		1216	11.1	337
	2307	7.4	227		2328	7.8	238						2039	1.2	37		2350	9.0	274		2000	1.5	47
6 Su	0557	2.3	70	21 M	0636	1.8	55	6 W	0013	8.6	261	21 Th	0104	9.6	293	6 Th	0700	2.0	60	21 F	0036	10.3	314
	1136	10.1	307		1200	10.9	331		0732	1.5	46		0835	0.8	24		1208	11.0	334		0810	1.4	43
	1911	2.4	73		1951	1.9	57		1235	10.9	331		1319	11.5	352		1946	1.8	56		1248	11.2	340
	2350	8.1	246						2020	2.1	63		2117	1.5	47						2038	1.3	39
7 M	0650	1.9	58	22 Tu	0023	8.6	261	7 Th	0049	9.3	284	22 F	0137	10.1	307	7 F	0023	10.0	306	22 Sa	0111	10.8	329
	1216	10.8	328		0740	1.3	40		0818	1.3	41		0914	1.0	30		0751	1.5	45		0843	1.3	40
	1952	2.2	68		1248	11.5	349		1314	11.4	348		1352	11.4	348		1238	11.5	352		1319	11.2	342
					2046	1.5	45		2052	1.9	57		2143	1.2	38		2037	1.4	42		2100	1.6	49
8 Tu	0026	8.7	266	23 W	0112	9.2	279	8 F	0124	9.9	303	23 Sa	0212	10.3	315	8 Sa	0101	10.8	329	23 Su	0135	11.0	335
	0741	1.5	47		0838	0.9	28		0855	1.0	32		0942	1.0	30		0841	1.0	32		0914	1.8	55
	1252	11.2	342		1328	11.9	363		1342	11.7	356		1421	11.3	345		1317	12.0	367		1345	11.0	335
	2037	2.1	63		2139	1.2	38		2140	1.4	43		2208	1.5	46		2116	1.6	50		2134	1.4	42
9 W	0103	9.2	281	24 Th	0155	9.5	291	9 Sa	0201	10.3	315	24 Su	0238	10.3	314	9 Su	0129	11.5	351	24 M	0207	11.1	338
	0832	1.2	38		0930	0.7	21		0939	0.8	25		1004	1.5	45		0933	0.8	23		0938	1.8	56
	1326	11.6	353		1415	11.9	363		1419	11.9	364		1447	10.9	331		1347	12.0	366		1411	10.8	328
	2115	2.2	68		2214	1.7	51		2219	1.6	49		2236	1.2	37		2144	1.0	32		2144	1.6	49
10 Th	0139	9.5	290	25 F	0232	9.7	295	10 Su	0232	10.6	323	25 M	0308	10.2	311	10 M	0212	11.9	362	25 Tu	0228	11.2	340
	0900	1.3	41		0956	1.0	30		1014	1.2	36		1033	1.6	49		0954	1.3	39		0956	2.2	67
	1404	11.7	356		1448	11.6	353		1450	11.7	358		1512	10.4	318		1421	12.0	366		1433	10.4	316
	2147	2.0	60		2243	1.3	41		2245	1.1	34		2246	1.4	43		2231	0.9	26		2158	1.9	58
11 F	0215	9.7	295	26 Sa	0309	9.7	295	11 M	0311	10.8	328	26 Tu	0330	10.0	305	11 Tu	0238	11.9	363	26 W	0254	11.0	334
	0940	1.2	37		1034	1.1	33		1044	1.2	37		1044	2.1	63		1037	1.2	36		1031	2.2	67
	1431	11.7	356		1521	11.3	343		1522	11.5	350		1534	9.8	298		1457	11.3	345		1501	9.7	297
	2235	1.7	51		2309	1.6	49		2324	1.4	42		2258	1.7	52		2242	1.1	33		2216	2.1	65
12 Sa	0252	9.7	295	27 Su	0341	9.4	288	12 Tu	0345	10.7	325	27 W	0358	9.6	294	12 W	0319	11.9	362	27 Th	0318	10.7	327
	1012	1.5	46		1050	1.6	50		1119	1.8	54		1108	2.5	76		1059	2.0	60		1048	2.6	78
	1512	11.6	353		1549	10.6	322		1558	10.7	326		1601	8.9	271		1530	10.5	320		1527	8.9	271
	2259	1.7	53		2337	1.4	43		2342	1.2	38		2311	2.1	63		2301	1.6	48		2226	2.5	75
13 Su	0328	9.7	295	28 M	0414	9.2	279	13 W	0425	10.4	317	28 Th	0426	9.2	280	13 Th	0359	11.3	343	28 F	0345	10.2	311
	1045	1.6	48		1116	2.1	65		1145	2.2	68		1138	3.0	90		1137	2.5	75		1118	3.1	93
	1543	11.3	343		1617	9.8	300		1635	9.6	294		1633	7.7	236		1611	9.2	281		1601	7.9	240
	2341	1.5	45		2351	1.6	50						2321	2.5	77		2332	2.0	62		2235	2.8	86
14 M	0411	9.6	293	29 Tu	0446	8.7	266	14 Th	0004	1.7	52	29 F	0505	8.5	259	14 F	0442	10.4	316	29 Sa	0419	9.5	289
	1125	2.0	62		1138	2.6	78		0513	9.8	298		1222	3.6	111		1217	3.3	102		1156	3.6	109
	1622	10.7	327		1646	8.9	271		1229	3.1	94		1716	6.5	199		1701	7.7	235		1645	6.9	209
					●	1721	8.3		253	2341	3.1		94	●	2343		2.9	88	2251		3.5	106	
15 Tu	0012	1.7	51	30 W	0010	2.0	61	15 F	0039	2.2	68				15 Sa	0546	9.2	281	30 Su	0511	8.6	263	
	0456	9.4	287		0523	8.3	252		0614	9.0	274					1339	3.9	119		1310	4.1	124	
	1156	2.4	74		1211	3.2	97		1337	3.8	115					1825	6.3	192		1800	6.0	184	
	1705	9.9	302		1722	7.8	237		1831	6.9	209									2338	4.2	129	
			31 Th	0034	2.4	73										31 M	0650	8.0	244				
				0612	7.7	236											1506	4.0	122				
				1305	3.8	115																	
				1815	6.6	202																	

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Wusong (Shanghai), China, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height			Time	Height			Time	Height		
	h	m	ft		h	m	ft		h	m	ft
1 W	0109	12.9	392	16 Th	0028	13.4	408	1 M	0208	9.6	292
	0851	2.2	68		0839	1.4	42		0916	2.3	69
	1324	13.3	404		1304	14.4	438		1424	11.9	362
	2112	2.9	88		2107	2.4	72		2215	2.7	81
2 Th	0130	12.5	381	17 F	0114	13.0	396	2 Tu	0242	9.2	281
	0925	2.6	78		0907	2.1	63		0939	2.4	72
	1355	13.1	398		1324	14.9	453		1456	11.5	349
	2139	2.7	82		2146	1.7	53		2245	2.6	80
3 F	0202	11.9	362	18 Sa	0152	12.2	373	3 W	0317	8.8	269
	0936	2.5	75		0938	1.8	55		1001	2.8	84
	1421	13.0	395		1416	14.4	438		1529	11.0	335
	2157	3.2	97		2235	2.3	69		2321	2.8	85
4 Sa	0227	11.1	339	19 Su	0231	11.3	343	4 Th	0400	8.4	255
	0942	2.9	89		0954	2.5	76		1035	3.1	93
	1444	12.5	382		1455	13.5	413		1609	10.4	317
	2234	3.4	103		2253	3.1	95		2358	2.9	87
5 Su	0258	10.1	308	20 M	0318	10.0	306	5 F	0451	8.0	245
	0949	3.3	101		1021	3.2	99		1116	3.5	108
	1513	11.9	364		1541	12.5	381		1658	9.8	298
	2253	3.9	119		2344	3.7	113				
6 M	0329	9.0	273	21 Tu	0415	8.6	263	6 Sa	0048	3.0	90
	0959	3.8	115		1039	4.0	123		0553	7.9	242
	1545	11.1	338		1643	11.2	340		1219	4.0	122
	2334	4.5	138						1801	9.2	281
7 Tu	0412	7.8	237	22 W	0056	4.3	130	7 Su	0147	3.0	91
	1009	4.4	133		0546	7.5	228		0707	8.2	251
	1632	10.0	306		1145	5.1	154		1348	4.2	127
					1824	10.1	307		1917	8.9	270
8 W	0047	5.1	154	23 Th	0247	4.1	125	8 M	0252	2.9	89
	0523	6.8	208		0811	7.5	229		0821	9.0	273
	1041	5.2	160		1431	5.2	159		1527	3.9	120
	1809	9.2	280		2023	10.0	305		2034	8.9	270
9 Th	0248	4.9	150	24 F	0417	3.4	105	9 Tu	0358	2.7	81
	0808	6.7	205		0940	8.8	267		0926	10.0	304
	1334	5.9	180		1617	4.2	129		1647	3.3	101
	2024	9.4	285		2139	10.6	322		2141	9.2	279
10 F	0410	4.3	131	25 Sa	0525	2.8	85	10 W	0502	2.3	71
	0942	7.9	242		1026	10.1	308		1022	11.0	336
	1552	5.1	156		1732	3.2	97		1757	2.8	84
	2135	10.3	314		2228	11.2	340		2238	9.5	291
11 Sa	0505	3.6	111	26 Su	0612	2.3	71	11 Th	0602	2.0	60
	1018	9.4	288		1105	11.2	341		1114	11.9	364
	1700	4.1	126		1832	2.4	74		1902	2.3	71
	2220	11.3	345		2309	11.5	350		2328	9.9	303
12 Su	0552	3.1	94	27 M	0648	2.0	60	12 F	0658	1.6	49
	1050	10.9	331		1131	11.9	364		1201	12.6	384
	1759	3.3	101		1919	2.4	73		1959	2.0	60
	2257	12.2	372		2341	11.6	353				
13 M	0640	2.5	76	28 Tu	0734	1.6	50	13 Sa	0018	10.2	311
	1120	12.2	373		1210	12.4	379		0751	1.3	40
	1852	2.7	82		1946	2.2	66		1239	13.0	396
	2325	13.0	395						2052	1.6	48
14 Tu	0734	1.9	57	29 W	0015	11.6	355	14 Su	0109	10.2	312
	1152	13.2	401		0750	2.0	60		0841	1.1	35
	1942	2.0	60		1230	12.8	391		1326	13.4	408
					2034	2.0	62		2148	1.3	39
15 W	0006	13.2	402	30 Th	0044	11.4	348	15 M	0159	10.1	308
	0755	2.2	67		0831	1.8	56		0932	1.1	35
	1221	14.2	433		1308	12.9	392		1420	13.2	401
	2040	1.3	39		2049	2.4	74		2242	1.3	39
				31 F	0114	11.2	342	30 Tu	0204	9.4	286
					0841	2.2	67		0930	1.4	42
					1328	13.0	395		1424	11.5	349
					2133	2.4	72		2206	2.3	70
								31 W	0236	9.3	284
									0947	1.7	51
									1454	11.3	343
									2242	2.0	61

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Zhongjun, Changjiang Approach, China, 2008

Times and Heights of High and Low Waters

January				February				March															
Time		Height		Time		Height		Time		Height		Time		Height									
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm								
1 Tu	0453	9.1	277	16 W ●	0407	10.7	325	1 F	0548	9.0	274	16 Sa	0612	9.9	302	1 Sa	0428	9.4	286	16 Su	0601	9.9	302
	1116	4.9	148		1052	4.0	123		1300	5.3	163		1344	5.1	155		1157	5.3	162		1356	4.7	143
	1650	9.4	287		1613	10.5	320		1754	7.4	225		1839	7.5	228		1646	7.1	216		1911	7.2	220
	2359	3.6	109		2332	2.8	86										2243	4.8	146				
2 W	0603	9.0	275	17 Th	0516	10.4	316	2 Sa	0024	4.4	135	17 Su	0123	4.3	131	2 Su	0630	9.0	275	17 M	0133	4.9	148
	1238	5.2	159		1206	4.8	145		0737	9.2	281		0813	10.2	312		1418	5.0	153		0807	10.3	314
	1757	8.6	263		1720	9.4	286		1456	4.8	147		1542	4.1	124		1917	6.9	209		1536	3.6	109
									1952	7.3	222		2051	7.9	241		2101	8.3	254				
3 Th	0056	3.8	117	18 F	0032	3.2	99	3 Su	0218	4.3	131	18 M	0321	3.6	111	3 M	0129	5.1	154	18 Tu	0324	3.8	115
	0720	9.4	285		0644	10.3	314		0858	10.1	307		0933	11.2	342		0822	9.7	295		0917	11.3	344
	1413	5.0	153		1352	4.9	149		1605	4.0	123		1655	2.9	89		1536	4.1	126		1640	2.5	76
	1917	8.3	252		1855	8.6	263		2110	8.0	245		2159	9.1	276		2053	7.8	238		2150	9.7	297
4 F	0203	3.8	117	19 Sa	0152	3.4	104	4 M	0339	3.6	109	19 Tu	0441	2.6	78	4 Tu	0310	4.2	127	19 W	0436	2.6	78
	0829	10.0	306		0818	10.8	329		0951	11.0	335		1026	12.2	373		0921	10.7	326		1004	12.1	369
	1532	4.4	133		1536	4.2	128		1657	3.3	101		1753	2.1	63		1630	3.3	102		1735	1.7	53
	2031	8.4	256		2034	8.6	263		2158	9.0	275		2246	10.2	311		2138	9.1	276		2227	10.9	332
5 Sa	0309	3.5	108	20 Su	0323	3.1	95	5 Tu	0440	2.7	83	20 W	0545	1.7	51	5 W	0415	3.1	96	20 Th	0535	1.7	52
	0923	10.9	332		0932	11.6	355		1032	11.8	361		1109	12.9	393		1003	11.7	356		1043	12.6	384
	1631	3.7	112		1654	3.3	100		1744	2.8	84		1844	1.5	46		1716	2.7	81		1816	1.6	48
	2127	8.9	272		2150	9.2	281		2236	10.0	304		2324	11.1	337		2215	10.2	312		2303	11.7	357
6 Su	0407	3.1	93	21 M	0439	2.4	74	6 W	0536	2.0	60	21 Th	0640	1.0	32	6 Th	0511	2.3	69	21 F	0621	1.5	45
	1008	11.7	357		1030	12.5	381		1109	12.5	382		1147	13.1	400		1041	12.5	380		1116	12.7	388
	1720	3.2	98		1758	2.5	76		1833	2.3	71		1932	1.2	38		1758	2.1	65		1847	1.3	39
	2211	9.6	292		2246	10.0	304		2312	10.8	330						2252	11.3	345		2336	12.1	370
7 M	0458	2.5	76	22 Tu	0544	1.8	54	7 Th	0628	1.5	47	22 F	0000	11.6	354	7 F	0601	1.6	49	22 Sa	0652	1.4	42
	1049	12.3	376		1120	13.2	402		1144	13.0	396		0726	1.1	33		1115	13.1	398		1148	12.6	385
	1802	2.9	88		1854	2.0	60		1909	2.2	66		1219	13.1	399		1844	1.6	48		1917	1.5	45
	2250	10.2	311		2333	10.6	323		2349	11.5	350		1953	1.4	43		2327	12.2	371				
8 Tu	0546	2.0	60	23 W	0642	1.2	38	8 F	0705	1.2	36	23 Sa	0033	11.8	360	8 Sa	0648	1.1	35	23 Su	0006	12.4	377
	1125	12.8	391		1204	13.5	412		1217	13.4	407		0750	1.1	35		1149	13.4	408		0730	1.5	45
	1844	2.7	81		1944	1.6	50		1946	1.7	52		1248	12.8	390		1932	1.1	35		1213	12.4	378
	2326	10.7	327								2023		1.6	48	●				1939		1.3	41	
9 W	0635	1.5	47	24 Th	0014	11.1	337	9 Sa	0023	11.9	364	24 Su	0102	11.9	362	9 Su	0003	12.9	392	24 M	0033	12.4	378
	1202	13.1	399		0734	0.9	28		0745	1.0	29		0819	1.6	50		0736	0.9	27		0746	1.9	57
	1930	2.5	75		1242	13.5	411		1249	13.5	410		1312	12.4	379		1220	13.5	410		1238	12.1	369
					2030	1.6	48		2032	1.4	42		2040	1.4	43		1953	1.1	35		1953	1.6	49
10 Th	0001	11.1	338	25 F	0053	11.3	343	10 Su	0058	12.3	374	25 M	0127	11.7	358	10 M	0038	13.3	404	25 Tu	0059	12.5	380
	0710	1.5	46		0806	1.2	36		0827	1.3	40		0839	1.9	59		0806	1.3	41		0811	2.3	69
	1234	13.3	404		1316	13.3	404		1317	13.4	408		1333	12.0	365		1252	13.3	404		1301	11.7	357
	1958	2.5	75		2050	1.7	53		2051	1.4	42		2051	1.7	51		2033	0.9	26		2009	1.9	59
11 F	0037	11.3	343	26 Sa	0126	11.2	342	11 M	0130	12.4	377	26 Tu	0153	11.5	352	11 Tu	0111	13.5	410	26 W	0121	12.4	378
	0745	1.4	43		0839	1.4	44		0849	1.5	47		0855	2.5	75		0840	1.5	46		0837	2.5	75
	1307	13.3	406		1346	12.7	388		1347	13.0	396		1355	11.4	347		1321	12.7	387		1324	11.1	339
	2039	2.2	66		2117	2.0	60		2124	1.5	47		2103	2.1	63		2047	1.2	38		2027	2.3	70
12 Sa	0111	11.4	346	27 Su	0159	11.0	336	12 Tu	0206	12.3	375	27 W	0218	11.3	343	12 W	0145	13.2	403	27 Th	0147	12.1	370
	0825	1.7	53		0858	2.1	63		0924	2.2	68		0919	3.1	94		0907	2.3	70		0857	3.0	91
	1338	13.2	402		1411	12.2	371		1416	12.3	376		1419	10.5	321		1352	11.9	362		1351	10.3	314
	2108	2.2	67		2138	1.9	59		2143	1.6	48		2118	2.6	78		2105	1.8	54		2036	2.7	82
13 Su	0149	11.3	344	28 M	0228	10.7	325	13 W	0245	11.9	364	28 Th	0248	10.8	329	13 Th	0222	12.8	389	28 F	0215	11.7	356
	0851	2.0	61		0928	2.8	84		0949	2.9	89		0946	3.7	114		0939	3.0	91		0929	3.7	112
	1410	12.9	393		1436	11.4	348		1451	11.3	345		1449	9.4	287		1427	10.7	326		1421	9.3	283
	2142	2.0	61		2152	2.2	68		2205	2.2	66		2131	3.1	96		2131	2.4	73		2045	3.3	102
14 M	0227	11.2	341	29 Tu	0302	10.3	313	14 Th	0330	11.4	346	29 F	0326	10.1	309	14 F	0307	11.9	362	29 Sa	0250	11.0	334
	0931	2.5	75		0946	3.4	103		1032	3.9	118		1029	4.6	141		1018	4.0	121		1007	4.4	134
	1444	12.4	377		1503	10.5	321		1533	10.0	304		1530	8.2	249		1513	9.2	281		1504	8.2	250
	2213	2.2	68		2210	2.7	83		●	2236	2.9		88	●	2149		3.9	120	●		2149	3.4	103	2106	4.2	127
15 Tu	0313	11.0	334	30 W	0339	9.8	299	15 F	0433	10.5	320	15 F	0409	10.8	328	15 Sa	0409	10.8	328	30 Su	0344	10.1	307
	1002	3.2	99		1018	4.2	128		1136	4.8	147		1136	4.8	147		1136	4.8	147		1122	5.1	154
	1523	11.5	352		1537	9.5	289		1639	8.5	259		1630	7.7	236		1630	7.7	236		1617	7.3	222
	2247	2.4	74		2234	3.2	99		2327	3.8	116		2246	4.5	138		2246	4.5	138		2154	5.1	154
				31 Th	0428	9.4	285											31 M	0526	9.4	288		
			1112		5.0	151													1322	5.0	151		
			1626	8.3	253														1837	7.1	217		
			2308	3.9	120																		

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Zhongjun, Changjiang Approach, China, 2008

Times and Heights of High and Low Waters

July				August				September															
Time		Height		Time		Height		Time		Height		Time		Height									
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm								
1 Tu	0410	3.6	109	16 W	0457	3.2	99	1 F	0618	2.0	60	16 Sa	0554	2.5	75	1 M	0731	1.0	32	16 Tu	0641	1.5	45
	0907	10.4	318		0959	10.0	304		1057	11.7	356		1047	11.9	364		1155	13.6	415		1122	14.4	438
	1556	3.1	95		1633	3.4	105		1754	2.1	65		1743	2.3	69		1918	1.8	56		1846	1.6	49
	2150	13.9	425		2224	13.4	409		2320	15.2	463		2308	14.5	443		2337	14.8	450				
2 W	0522	2.8	85	17 Th	0542	2.8	84	2 Sa	0703	1.6	48	17 Su	0638	2.0	61	2 Tu	0006	14.6	445	17 W	0721	1.8	55
	1008	10.9	332		1036	10.7	326		1141	12.3	376		1116	12.7	386		0744	1.4	42		1155	14.9	453
	1700	2.7	82		1720	3.0	91		1847	1.7	53		1831	1.8	56		1225	13.7	417		1934	1.4	44
	2243	14.6	445		2301	13.9	425		2359	15.3	466		2337	14.8	450		1941	2.1	63				
3 Th	0628	2.2	67	18 F	0628	2.6	80	3 Su	0746	1.2	36	18 M	0710	2.1	65	3 W	0034	14.1	429	18 Th	0005	14.5	443
	1102	11.4	346		1109	11.4	346		1217	12.7	388		1150	13.3	405		0800	1.9	57		0741	1.4	43
	1758	2.3	70		1759	2.6	78		1935	1.6	48		1900	1.9	58		1256	13.5	413		1226	15.1	460
	2332	15.1	459		2335	14.2	434						2002	2.7	82		2002	2.7	82		1954	2.2	67
4 F	0720	1.9	57	19 Sa	0656	2.5	75	4 M	0035	15.0	458	19 Tu	0007	14.9	453	4 Th	0058	13.5	410	19 F	0038	14.0	427
	1152	11.7	357		1144	11.8	361		0831	1.3	39		0742	1.7	51		0821	2.2	68		0801	1.8	56
	1851	2.0	61		1841	2.2	68		1256	12.9	393		1220	13.7	417		1320	13.4	408		1302	15.0	457
					2003	2.1	64		2003	2.1	64		1938	1.8	56		2031	3.1	94		2032	2.5	75
5 Sa	0018	15.2	464	20 Su	0007	14.4	440	5 Tu	0108	14.5	443	20 W	0035	14.7	449	5 F	0121	12.7	386	20 Sa	0107	13.2	402
	0800	1.7	51		0737	2.2	67		0845	1.6	49		0811	2.0	60		0832	2.5	76		0829	2.3	69
	1238	11.9	363		1215	12.2	371		1328	12.8	390		1254	13.9	425		1349	13.0	397		1338	14.5	442
	1941	1.9	58		1917	2.3	71		2035	2.5	77		2008	2.4	72		2048	3.8	115		2055	3.4	104
6 Su	0100	15.0	458	21 M	0037	14.5	441	6 W	0137	13.8	422	21 Th	0103	14.4	439	6 Sa	0147	11.7	356	21 Su	0144	12.0	366
	0845	1.5	46		0805	2.3	71		0905	2.1	64		0838	1.7	51		0840	3.1	95		0841	2.8	86
	1318	11.9	364		1249	12.4	378		1403	12.6	383		1324	14.0	427		1418	12.5	382		1422	13.7	418
	2024	2.3	70		1947	2.3	71		2054	3.3	100		2038	2.7	82		2117	4.6	140		2137	4.4	133
7 M	0139	14.6	444	22 Tu	0106	14.4	439	7 Th	0204	13.0	397	22 F	0134	13.8	420	7 Su	0216	10.4	318	22 M	0228	10.5	320
	0929	2.0	61		0839	2.0	62		0927	2.5	77		0855	2.1	65		0849	3.9	119		0902	3.9	119
	1402	11.8	361		1320	12.5	382		1435	12.1	370		1403	13.8	421		1455	11.8	359		1520	12.5	382
	2054	2.7	82		2022	2.7	82		2125	4.1	124		2107	3.5	107		2201	5.5	169		2246	5.4	166
8 Tu	0216	13.9	423	23 W	0135	14.2	432	8 F	0232	12.0	365	23 Sa	0205	12.8	390	8 M	0257	9.0	275	23 Tu	0339	8.9	271
	0948	2.1	65		0903	2.2	68		0940	3.0	92		0921	2.7	82		0905	4.8	147		0947	5.2	160
	1444	11.5	352		1357	12.6	384		1513	11.7	357		1447	13.3	406		1555	10.9	331		1702	11.4	348
	2132	3.4	103		2050	3.0	92		2154	4.9	149		2146	4.4	133		2342	6.3	191				
9 W	0251	13.0	395	24 Th	0205	13.7	418	9 Sa	0305	10.7	326	24 Su	0246	11.5	349	9 Tu	0413	7.7	235	24 W	0101	5.5	168
	1018	2.6	79		0937	2.2	67		0956	3.8	117		0945	3.4	104		0942	5.9	180		0615	8.0	245
	1527	13.3	343		1435	12.5	382		1600	11.2	340		1543	12.5	382		1804	10.3	315		1232	6.0	184
	2203	4.2	128		2130	3.6	109		2250	5.7	175		2246	5.4	165				1917		11.5	352	
10 Th	0327	11.9	362	25 F	0240	13.0	395	10 Su	0354	9.3	283	25 M	0345	9.9	301	10 W	0209	5.7	174	25 Th	0251	4.3	130
	1045	3.0	92		1001	2.7	81		1026	4.7	144		1028	4.5	137		0726	7.5	230		0829	9.2	281
	1618	10.9	332		1522	12.4	379		1712	10.7	325		1710	11.8	359		1304	6.4	194		1440	4.8	147
	2250	5.0	153		2210	4.4	135								2000		11.1	337	2036		12.6	384	
11 F	0411	10.7	327	26 Sa	0323	11.9	362	11 M	0041	6.2	188	26 Tu	0043	5.8	178	11 Th	0316	4.6	141	26 F	0357	3.0	90
	1118	3.6	111		1038	3.1	96		0521	8.1	246		0534	8.5	260		0849	8.8	268		0917	10.9	331
	1717	10.6	324		1622	12.1	370		1132	5.5	168		1208	5.4	164		1447	5.2	159		1552	3.4	104
	2359	5.6	170		2313	5.2	158		1903	10.7	327		1913	11.8	360		2054	12.1	370		2124	13.5	413
12 Sa	0511	9.6	293	27 Su	0421	10.6	324	12 Tu	0239	5.4	165	27 W	0249	4.8	147	12 F	0401	3.6	111	27 Sa	0451	2.1	63
	1205	4.3	130		1128	3.9	118		0740	7.9	241		0806	8.8	267		0921	10.2	310		0954	12.3	374
	1831	10.6	324		1741	11.9	363		1344	5.5	169		1427	4.9	149		1545	4.0	121		1652	2.4	73
					2030	11.5	352		2030	11.5	352		2043	12.8	391		2133	13.2	401		2203	14.1	431
13 Su	0137	5.5	169	28 M	0050	5.5	169	13 W	0346	4.3	132	28 Th	0407	3.4	103	13 Sa	0443	2.9	87	28 Su	0540	1.4	42
	0635	8.8	269		0549	9.5	290		0901	8.8	268		0921	10.1	307		0951	11.5	350		1025	13.3	405
	1314	4.6	141		1242	4.3	132		1509	4.7	144		1549	3.6	110		1637	2.9	89		1743	1.7	53
	1951	11.1	339		1917	12.2	371		2122	12.6	383		2139	13.9	424		2205	13.9	425		2237	14.3	435
14 M	0303	4.8	147	29 Tu	0240	4.9	149	14 Th	0436	3.4	105	29 F	0510	2.3	71	14 Su	0532	2.2	67	29 M	0622	1.6	48
	0804	8.8	267		0739	9.2	281		0943	9.9	302		1006	11.4	348		1018	12.7	386		1100	13.8	422
	1433	4.5	138		1421	4.3	130		1607	3.8	115		1655	2.6	78		1730	2.1	63		1832	1.4	44
	2054	11.9	363		2041	13.0	395		2201	13.4	409		2223	14.7	449		2236	14.5	441		2308	14.1	430
15 Tu	0407	3.9	120	30 W	0405	3.7	113	15 F	0518	2.9	88	30 Sa	0600	1.7	51	15 M	0603	2.1	63	30 Tu	0642	1.3	41
	0911	9.3	282		0908	9.8	299		1014	11.0	335		1046	12.5	381		1051	13.6	416		1129	14.1	429
	1537	4.0	123		1544	3.5	108		1656	2.9	89		1751	1.9	57		1810	1.9	57		1850	2.0	60
	2143	12.7	388		2144	13.9	425		2235	14.1	429		2300	15.1	459		2306	14.8	450		2338	13.7	419
			31 Th	0516	2.7	81				31 Su	0645	1.1	35										
				1008	10.8	328					1120	13.2	403										
				1652	2.8	85					1840	1.4	44										
				2235	14.7	449					2335	15.0	456										

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Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Ch'ang Chiang Approach (Side Saddle), China, 2008

Times and Heights of High and Low Waters

January						February						March					
Time			Height			Time			Height			Time			Height		
	h	m	ft	cm			h	m	ft	cm			h	m	ft	cm	
1 Tu	0338	11.4	347			16 W	0251	12.4	378			1 Sa	0324	11.5	351		
	0934	7.2	219				0909	6.2	189				0939	8.3	253		
	1541	11.8	360				1500	12.2	372				1451	10.0	305		
	2219	6.2	189				2142	5.2	158				2135	7.0	213		
2 W	0454	11.4	347			17 Th	0411	12.1	369			2 Su	0526	11.3	344		
	1050	7.8	238				1030	7.1	216				1222	8.6	262		
	1646	11.2	341				1612	11.2	341				1732	9.6	293		
	2321	6.3	192				2256	5.5	168				2343	7.2	219		
3 Th	0609	11.7	357			18 F	0550	12.3	375			3 M	0707	12.0	366		
	1226	7.9	241				1222	7.3	223				1402	7.6	232		
	1757	10.9	332				1746	10.7	326				1918	10.3	314		
4 F	0030	6.1	186			19 Sa	0025	5.3	162			4 Tu	0128	6.4	195		
	0712	12.3	375				0718	13.1	399				0806	13.1	399		
	1346	7.4	226				1358	6.7	204				1444	6.6	201		
	1903	10.9	332				1915	10.9	332				2014	11.4	347		
5 Sa	0130	5.6	171			20 Su	0145	4.6	140			5 W	0225	5.4	165		
	0804	13.1	399				0825	14.1	430				0848	14.1	430		
	1441	6.8	207				1503	5.8	177				1517	5.5	168		
	1958	11.2	341				2024	11.4	347				2056	12.6	384		
6 Su	0221	5.1	155			21 M	0247	3.8	116			6 Th	0309	4.3	131		
	0849	13.8	421				0919	15.0	457				0924	15.0	457		
	1524	6.2	189				1552	5.0	152				1549	4.5	137		
	2045	11.7	357				2118	12.1	369				2133	13.6	415		
7 M	0305	4.5	137			22 Tu	0339	3.1	94			7 F	0348	3.4	104		
	0929	14.5	442				1004	15.7	479				0957	15.6	475		
	1602	5.6	171				1635	4.3	131				1621	3.6	110		
	2126	12.1	369				2205	12.8	390				2208	14.6	445		
8 Tu	0344	4.0	122			23 W	0424	2.6	79			8 Sa	0426	2.8	85		
	1006	15.0	457				1044	16.1	491				1029	15.9	485		
	1637	5.2	158				1714	3.9	119				1652	2.9	88		
	2204	12.5	381				2247	13.3	405				2243	15.3	466		
9 W	0421	3.6	110			24 Th	0506	2.5	76			9 Su	0503	2.5	76		
	1041	15.5	472				1120	16.1	491				1100	15.9	485		
	1711	4.8	146				1749	3.6	110				1724	2.6	79		
	2240	12.9	393				2325	13.6	415				2318	15.7	479		
10 Th	0457	3.3	101			25 F	0544	2.7	82			10 M	0541	2.7	82		
	1114	15.7	479				1153	15.9	485				1132	15.5	472		
	1744	4.5	137				1823	3.7	113				1756	2.5	76		
	2314	13.1	399										2354	15.7	479		
11 F	0532	3.2	98			26 Sa	0001	13.6	415			11 Tu	0619	3.2	98		
	1146	15.7	479				0619	3.2	98				1203	14.8	451		
	1816	4.4	134				1224	15.3	466				1829	2.7	82		
	2349	13.3	405				1853	3.9	119								
12 Sa	0608	3.3	101			27 Su	0036	13.4	408			12 W	0032	15.4	469		
	1218	15.5	472				0652	4.0	122				0659	4.2	128		
	1850	4.3	131				1253	14.6	445				1236	13.8	421		
							1922	4.2	128				1904	3.3	101		
13 Su	0025	13.3	405			28 M	0111	13.1	399			13 Th	0114	14.7	448		
	0645	3.7	113				0723	4.8	146				0743	5.4	165		
	1252	15.0	457				1321	13.7	418				1311	12.7	387		
	1925	4.4	134				1950	4.7	143				1944	4.2	128		
14 M	0105	13.1	399			29 Tu	0147	12.6	384			14 F	0204	13.7	418		
	0725	4.3	131				0756	5.8	177				0838	6.7	204		
	1328	14.3	436				1349	12.7	387				1354	11.4	347		
	2003	4.6	140				2019	5.2	158				2034	5.3	162		
15 Tu	0152	12.8	390			30 W	0229	12.1	369			15 Sa	0319	12.6	384		
	0811	5.2	158				0833	6.7	204				1004	7.8	238		
	1409	13.3	405				1422	11.7	357				1504	10.2	311		
	2047	4.9	149				2052	5.7	174				2155	6.3	192		
						31 Th	0325	11.5	351								
							0923	7.7	235								
							1507	10.8	329								
							2140	6.3	192								

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Ch'ang Chiang Approach (Side Saddle), China, 2008

Times and Heights of High and Low Waters

July					August					September																			
Time		Height			Time		Height			Time		Height			Time		Height												
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm										
1 Tu	0229	6.7	204		16 W	0315	7.3	223		1 F	0411	5.5	168		16 Sa	0403	6.0	183		1 M	0501	4.1	125		16 Tu	0429	4.1	125	
	0751	12.5	381			0830	12.1	369			0940	13.6	415			0938	13.8	421			1048	15.6	475			1021	16.1	491	
	1418	4.5	137			1450	5.7	174			1559	3.8	116			1551	4.8	146			1706	3.9	119			1640	3.9	119	
	2050	15.8	482			2117	15.1	460			2221	17.1	521	●		2206	16.5	503			2304	16.8	512			2360	16.6	506	
2 W	0328	6.0	183		17 Th	0354	6.7	204		2 Sa	0452	4.9	149		17 Su	0433	5.4	165		2 Tu	0531	3.9	119		17 W	0500	3.7	113	
	0849	12.9	393			0914	12.6	384			1025	14.2	433			1012	14.5	442			1121	15.8	482			1055	16.5	503	
	1514	3.9	119			1531	5.3	162			1644	3.5	107			1626	4.3	131			1740	4.4	134			1716	4.0	122	
	2142	16.6	506			2154	15.7	479			2259	17.3	527	○		2237	16.8	512			2332	16.2	494			2306	16.3	497	
3 Th	0420	5.5	168		18 F	0428	6.2	189		3 Su	0529	4.5	137		18 M	0503	4.8	146		3 W	0600	4.1	125		18 Th	0531	3.5	107	
	0942	13.2	402			0953	13.1	399			1107	14.7	448			1045	15.1	460			1153	15.6	475			1129	16.6	506	
	1605	3.5	107			1609	4.9	149			1725	3.6	110			1701	4.1	125			1812	5.0	152			1754	4.4	134	
	2230	17.0	518	●		2229	16.1	491	○		2334	17.1	521			2306	16.9	515			2358	15.5	472			2337	15.7	479	
4 F	0506	5.1	155		19 Sa	0500	5.8	177		4 M	0605	4.4	134		19 Tu	0532	4.4	134		4 Th	0626	4.5	137		19 F	0603	3.7	113	
	1031	13.6	415			1029	13.5	411			1145	14.8	451			1117	15.4	469			1224	15.3	466			1206	16.4	500	
	1653	3.3	101			1644	4.6	140			1803	4.1	125			1735	4.1	125			1842	5.9	180			1833	5.2	158	
	2315	17.2	524			2301	16.4	500								2335	16.6	506											
5 Sa	0550	4.9	149		20 Su	0531	5.5	168		5 Tu	0007	16.6	506		20 W	0602	4.3	131		5 F	0024	14.6	445		20 Sa	0008	14.8	451	
	1117	13.8	421			1103	13.9	424			0637	4.5	137			1151	15.6	475			0650	5.1	155			0637	4.2	128	
	1738	3.5	107			1719	4.4	134			1222	14.8	451			1810	4.5	137			1255	14.7	448			1246	15.8	482	
	2357	17.0	518			2332	16.5	503			1839	4.8	146						1912		6.8	207		1916		6.3	192		
6 Su	0631	4.9	149		21 M	0602	5.3	162		6 W	0037	15.8	482		21 Th	0004	16.1	491		6 Sa	0048	13.7	418		21 Su	0043	13.8	421	
	1202	13.8	421			1137	14.1	430			0708	4.8	146			0633	4.3	131			0714	5.7	174			0715	5.0	152	
	1821	4.0	122			1753	4.5	137			1259	14.5	442			1226	15.5	472			1329	14.1	430			1334	14.9	454	
						1913	5.7	174			1913	5.7	174			1847	5.1	155			1944	7.8	238			2008	7.5	229	
7 M	0036	16.5	503		22 Tu	0002	16.4	500		7 Th	0106	14.9	454		22 F	0035	15.4	469		7 Su	0114	12.8	390		22 M	0123	12.6	384	
	0710	5.0	152			0633	5.1	155			0738	5.3	162			0706	4.6	140			0741	6.5	198			0803	6.0	183	
	1247	13.7	418			1211	14.2	433			1337	14.0	427			1305	15.1	460			1411	13.3	405			1441	13.9	424	
	1903	4.7	143			1827	4.7	143			1948	6.7	204			1928	6.0	183			2026	8.7	265	●		2126	8.6	262	○
8 Tu	0114	15.8	482		23 W	0032	16.0	488		8 F	0136	13.9	424		23 Sa	0108	14.4	439		8 M	0144	11.8	360		23 Tu	0223	11.4	347	
	0749	5.3	162			0705	5.1	155			0808	5.9	180			0742	5.1	155			0818	7.3	223			0916	7.0	213	
	1332	13.4	408			1247	14.2	433			1419	13.4	408			1352	14.5	442			1519	12.6	384			1635	13.3	405	
	1944	5.7	174			1905	5.2	158			2026	7.8	238			2017	7.2	219			2139	9.6	293			2334	8.9	271	
9 W	0151	14.8	451		24 Th	0105	15.4	469		9 Sa	0208	12.9	393		24 Su	0148	13.2	402		9 Tu	0238	10.9	332		24 W	0443	10.7	326	
	0828	5.7	174			0739	5.2	158			0841	6.5	198			0827	5.8	177			0924	8.1	247			1112	7.4	226	
	1421	13.0	396			1329	14.0	427			1513	12.8	390			1457	13.8	421			1721	12.4	378			1830	13.8	421	
	2028	6.7	204			1947	6.0	183	●		2117	8.7	265	○		2126	8.4	256	○										
10 Th	0230	13.9	424		25 F	0141	14.6	445		10 Su	0250	11.9	363		25 M	0242	12.0	366		10 W	0030	9.6	293		25 Th	0117	8.0	244	
	0908	6.1	186			0818	5.5	168			0926	7.2	219			0932	6.6	201			0526	10.5	320			0652	11.5	351	
	1518	12.7	387			1420	13.7	418			1633	12.5	381			1638	13.3	405			1130	8.3	253			1256	6.8	207	
	2119	7.7	235	○		2037	6.9	210			2243	9.4	287			2323	9.0	274			1855	13.1	399			1936	14.7	448	
11 F	0315	12.9	393		26 Sa	0225	13.6	415		11 M	0406	11.1	338		26 Tu	0426	11.1	338		11 Th	0152	8.7	265		26 F	0211	6.7	204	
	0954	6.5	198			0905	5.8	177			1037	7.7	235			1114	7.0	213			0706	11.3	344			0755	12.7	387	
	1627	12.5	381			1527	13.4	408			1809	12.7	387			1834	13.8	421			1311	7.6	232			1401	5.9	180	
	2225	8.5	259			2144	7.9	241	○										1949		14.1	430		2022		15.5	472		
12 Sa	0412	12.1	369		27 Su	0323	12.5	381		12 Tu	0104	9.3	283		27 W	0125	8.4	256		12 F	0229	7.6	232		27 Sa	0251	5.6	171	
	1050	6.8	207			1007	6.2	189			0559	10.9	332			0638	11.3	344			0759	12.4	378			0840	13.9	424	
	1741	12.6	384			1657	13.3	405			1221	7.6	232			1259	6.6	201			1407	6.6	201			1450	5.1	155	
	2356	8.8	268			2323	8.4	256			1924	13.4	408			1951	14.8	451			2029	15.1	460			2059	16.0	488	
13 Su	0523	11.6	354		28 M	0449	11.7	357		13 W	0217	8.5	259		28 Th	0230	7.2	219		13 Sa	0259	6.6	201		28 Su	0326	4.7	143	
	1157	6.9	210			1130	6.3	192			0722	11.4	347			0757	12.2	372			0839	13.5	411			0917	14.9	454	
	1850	13.1	399			1833	13.8	421			1340	7.1	216			1411	5.6	171			1449	5.6	171			1532	4.5	137	
											2017																		

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Kanmen, China, 2008

Times and Heights of High and Low Waters

January					February					March																	
Time		Height			Time		Height			Time		Height			Time		Height										
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm								
1 Tu	0242	14.1	429		16 W ○	0201	15.6	476		1 F	0415	13.4	408		16 Sa	0427	15.0	457		16 Su	0422	15.2	463				
	0837	6.6	200			0752	5.1	156			1000	8.7	266			1017	8.2	249			1025	8.4	257				
	1502	15.1	459			1423	16.2	495			1555	13.4	408			1622	14.4	439			1627	14.0	427				
	2127	6.1	185			2039	4.3	131			2255	6.2	188			2313	4.5	138			2311	5.0	153				
2 W	0357	13.8	420		17 Th	0313	15.2	464		2 Sa	0545	13.9	423		17 Su	0559	15.6	477		2 Su	0459	13.6	415	17 M	0550	15.8	483
	0950	7.5	229			0900	6.5	197			1133	8.7	266			1200	7.7	235			1053	9.2	279		1202	7.4	226
	1602	14.5	443			1525	15.6	477			1721	13.4	409			1758	14.9	453			1632	12.9	394		1802	14.9	453
	2240	5.9	179			2157	4.3	130										2337	6.2		190						
3 Th	0516	14.0	428		18 F	0440	15.3	467		3 Su	0015	5.4	165		18 M	0037	3.5	106		3 M	0616	14.6	446	18 Tu	0029	4.0	121
	1105	7.9	240			1030	7.3	221			0651	14.9	454			0709	16.8	513			1219	8.1	247		0656	16.9	515
	1706	14.3	437			1639	15.4	469			1246	8.0	243			1313	6.5	197			1802	13.7	419		1303	5.9	180
	2347	5.3	162			2320	3.7	114			1832	14.1	430			1910	15.9	485					1908		16.1	490	
4 F	0623	14.8	451		19 Sa	0603	16.0	489		4 M	0113	4.3	130		19 Tu	0139	2.2	67		4 Tu	0044	5.0	151	19 W	0124	2.9	88
	1212	7.8	237			1155	7.2	219			0740	16.0	489			0804	17.9	545			0709	15.9	486		0744	17.7	541
	1807	14.5	442			1755	15.6	476			1337	6.9	209			1404	5.2	157			1312	6.6	202		1346	4.5	137
											1924	15.1	460			2005	17.0	517			1901	15.0	458		1957	17.1	521
5 Sa	0042	4.5	138		20 Su	0035	2.8	85		5 Tu	0158	3.1	94		20 W	0226	1.2	36		5 W	0131	3.5	107	20 Th	0206	2.2	66
	0717	15.7	479			0712	17.1	522			0821	17.1	521			0847	18.6	566			0751	17.2	524		0822	18.2	556
	1307	7.3	224			1308	6.5	198			1417	5.7	173			1445	4.0	122			1352	5.1	155		1422	3.3	102
	1859	15.0	456			1904	16.2	495			2007	16.0	489			2049	17.7	538			1945	16.3	497		2036	17.7	541
6 Su	0130	3.6	111		21 M	0139	1.7	51		6 W	0236	2.0	61		21 Th	0305	0.7	20		6 Th	0210	2.2	67	21 F	0241	1.8	56
	0802	16.6	505			0810	18.1	552			0857	17.9	547			0923	18.8	574			0827	18.1	553		0854	18.4	561
	1352	6.8	206			1407	5.6	171			1452	4.6	140			1519	3.1	96			1427	3.7	114		1453	2.5	77
	1942	15.5	473			2002	17.0	517			2044	16.9	514			2126	18.0	548	○		2023	17.4	530		2109	18.1	551
7 M	0212	2.8	86		22 Tu	0233	0.7	22		7 Th	0310	1.1	34		22 F	0339	0.6	19		7 F	0244	1.2	37	22 Sa	0312	1.9	57
	0841	17.3	528			0859	18.8	573			0931	18.5	564			0954	18.8	572			0900	18.8	572		0922	18.3	558
	1430	6.1	186			1455	4.8	146			1525	3.7	113			1550	2.6	78			1500	2.6	78		1523	2.0	60
	2020	16.1	490			2052	17.5	534	○		2119	17.5	533	●		2159	18.0	549			2059	18.2	556		2139	18.2	554
8 Tu	0250	2.1	64		23 W	0318	0.1	3		8 F	0342	0.6	18		23 Sa	0409	1.0	29		8 Sa	0317	0.7	21	23 Su	0341	2.2	66
	0917	17.8	544			0943	19.1	582			1003	18.8	572			1023	18.5	564			0931	19.1	581		0948	18.1	551
	1506	5.5	167			1536	4.1	126			1558	3.0	91			1621	2.2	68			1533	1.6	50		1551	1.7	52
	2055	16.6	505			2135	17.8	542			2153	17.9	545			2231	17.8	544	●		2135	18.8	574		2209	18.1	553
9 W	0325	1.5	47		24 Th	0358	0.0	0		9 Sa	0414	0.4	13		24 Su	0438	1.6	48		9 Su	0349	0.7	20	24 M	0408	2.7	81
	0951	18.2	554			1021	19.0	579			1034	18.8	573			1050	18.1	552			1001	19.1	582		1014	17.7	541
	1540	4.9	150			1613	3.7	112			1631	2.5	75			1650	2.2	66			1606	1.0	29		1620	1.7	52
	2130	16.9	515			2215	17.7	541			2229	18.0	550			2304	17.5	533			2212	19.1	582		2239	17.9	547
10 Th	0359	1.2	37		25 F	0434	0.4	11		10 Su	0446	0.7	21		25 M	0506	2.4	74		10 M	0422	1.1	33	25 Tu	0436	3.3	102
	1025	18.3	558			1056	18.7	569			1104	18.6	568			1118	17.6	537			1031	18.9	577		1039	17.3	528
	1615	4.5	137			1648	3.4	105			1705	2.1	64			1721	2.4	73			1640	0.6	18		1649	2.0	61
	2205	17.1	520			2253	17.4	531			2307	18.0	548			2338	17.0	518			2252	19.0	580		2312	17.6	535
11 F	0432	1.1	34		26 Sa	0508	1.1	33		11 M	0519	1.3	41		26 Tu	0535	3.5	106		11 Tu	0455	1.9	58	26 W	0504	4.2	128
	1059	18.3	557			1128	18.2	554			1136	18.3	558			1146	16.9	516			1103	18.6	566		1106	16.8	512
	1650	4.2	129			1722	3.4	103			1740	2.0	61			1752	3.0	91			1716	0.7	21		1719	2.6	79
	2242	17.1	520			2330	16.9	515			2350	17.7	538								2336	18.6	567		2348	17.0	517
12 Sa	0506	1.3	39		27 Su	0540	2.1	65		12 Tu	0554	2.4	74		27 W	0016	16.3	496		12 W	0532	3.1	95	27 Th	0535	5.2	160
	1133	18.1	551			1200	17.6	535			1210	17.8	543			0605	4.8	145			1139	17.9	546		1135	16.1	492
	1726	4.0	123			1756	3.6	109			1820	2.3	69			1216	16.1	491			1756	1.3	41		1751	3.5	106
	2321	16.9	515													1826	3.9	118									
13 Su	0541	1.8	54		28 M	0010	16.2	494		13 W	0039	17.0	519		28 Th	0059	15.4	468		13 Th	0025	17.8	542	28 F	0028	16.1	491
	1209	17.7	541			0612	3.4	103			0634	3.8	117			0639	6.2	190			0613	4.7	143		0609	6.5	197
	1805	4.0	121			1233	16.8	513			1250	17.1	520			1250	15.1	461			1221	16.9	516		1209	15.3	467
						1833	4.0	123			1906	2.9	88			1906	5.0	152			1843	2.5	77		1829	4.6	140
14 M	0006	16.6	505		29 Tu	0053	15.4	469		14 Th	0137	16.2	493		29 F	0153	14.4	438		14 F	0124	16.7	508	29 Sa	0118	15.1	461
	0619	2.6	79			0646	4.8	146			0721	5.5	169			0722	7.7	236			0703	6.5	197		0651	7.7	236
	1247	17.4	529			1309	15.9	486			1340	16.0	489	</													

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Kanmen, China, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height			Time	Height			Time	Height		
	h	m	ft		h	m	ft		h	m	ft
1 W	0332	2.2	68	16 Th	0315	1.0	29	1 M	0429	2.6	78
	0952	19.6	596		0933	20.7	630		1105	17.8	544
	1550	3.6	111		1533	3.4	103		1646	6.2	188
	2155	18.9	576		2134	19.6	597		2238	16.5	503
2 Th	0402	2.3	70	17 F	0351	0.7	20	2 Tu	0503	3.0	91
	1025	19.3	588		1015	20.6	629		1141	17.4	531
	1619	4.4	135		1610	4.1	125		1723	6.4	195
	2222	18.4	560		2209	19.2	586		2315	16.1	491
3 F	0433	2.7	81	18 Sa	0430	0.9	27	3 W	0539	3.6	109
	1059	18.8	573		1101	20.2	615		1220	16.9	516
	1648	5.4	164		1650	5.1	155		1804	6.7	205
	2250	17.7	541		2250	18.6	566		2357	15.6	474
4 Sa	0504	3.3	102	19 Su	0513	1.7	51	4 Th	0620	4.3	132
	1137	18.1	551		1152	19.4	590		1305	16.4	500
	1719	6.5	197		1735	6.3	193		1852	7.0	214
	2321	17.0	519		2336	17.6	537	5 F	0049	15.0	456
5 Su	0536	4.3	130	20 M	0604	3.0	90		0709	5.1	156
	1219	17.2	524		1252	18.3	558		1357	15.9	486
	1754	7.7	234		1830	7.7	235		1951	7.2	218
	2355	16.2	493	21 Tu	0034	16.4	501	6 Sa	0156	14.5	442
6 M	0615	5.4	166		0708	4.4	134		0807	5.9	179
	1309	16.2	493		1405	17.3	527		1454	15.7	479
	1837	8.9	272	22 W	0157	15.4	469	7 Su	0312	14.5	442
7 Tu	0038	15.2	463		0833	5.5	168		0918	6.4	194
	0706	6.7	203		1529	16.9	514		1554	15.8	481
	1415	15.3	467		2142	8.7	264		2214	6.0	184
8 W	0144	14.2	434	23 Th	0340	15.1	461	8 M	0429	15.1	459
	0838	7.6	231		1011	5.7	174		1034	6.5	197
	1546	15.1	459		1647	17.1	521		1652	16.1	491
	2202	9.9	303		2306	7.5	230		2317	4.8	146
9 Th	0328	13.8	422	24 F	0508	15.8	483	9 Tu	0539	16.1	490
	1025	7.4	226		1127	5.2	159		1139	6.2	189
	1709	15.7	479		1751	17.7	540		1745	16.6	507
	2322	8.8	269	25 Sa	0005	6.1	186	10 W	0013	3.4	103
10 F	0505	14.6	444		0615	16.9	516		0639	17.3	528
	1139	6.4	196		1224	4.6	141		1236	5.8	176
	1807	16.8	511		1841	18.3	557		1835	17.2	525
11 Sa	0016	7.3	222	26 Su	0050	4.7	144	11 Th	0104	2.0	61
	0608	15.9	484		0708	17.9	546		0733	18.5	563
	1231	5.2	159		1310	4.2	129		1329	5.3	163
	1850	17.8	544		1922	18.6	566		1924	17.7	541
12 Su	0057	5.7	173	27 M	0129	3.6	110	12 F	0154	0.9	26
	0656	17.3	526		0751	18.6	567		0824	19.4	591
	1312	4.1	125		1349	4.1	126		1418	5.0	151
	1927	18.7	570		1957	18.6	568		2012	18.1	553
13 M	0133	4.2	127	28 Tu	0203	2.9	87	13 Sa	0242	0.1	2
	0736	18.5	565		0827	19.0	580		0914	19.9	608
	1349	3.3	102		1423	4.2	129		1506	4.7	144
	1959	19.3	587		2028	18.5	564		2100	18.3	558
14 Tu	0207	2.8	86	29 W	0236	2.4	73	14 Su	0331	-0.3	-10
	0815	19.6	597		0901	19.2	586		1003	20.1	612
	1424	3.0	91		1455	4.5	137		1553	4.7	142
	2030	19.6	597	30 Th	0307	2.2	67		2148	18.3	557
15 W	0240	1.7	52		0934	19.2	585	15 M	0419	-0.3	-8
	0853	20.3	619		1525	4.9	150		1052	19.8	605
	1458	3.0	92		2125	17.9	546		1640	4.8	145
16 Th	0240	1.7	52	31 F	0338	2.3	69		2237	17.9	546
	0853	20.3	619		1007	19.0	579	16 Su	0357	2.3	71
	1458	3.0	92		1555	5.4	165		1030	18.2	554
17 F	0240	1.7	52		2153	17.6	536		1612	6.0	183
	0853	20.3	619						2204	16.8	511
	1458	3.0	92								
	2101	19.7	600								

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Xiamen, China, 2008

Times and Heights of High and Low Waters

January						February						March																
Time			Height			Time			Height			Time			Height			Time			Height							
	h	m	ft	cm			h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm			
1 Tu	0000	6.1	186		16 W O	0523	16.4	500		1 F	0053	5.5	169		16 Sa	0055	3.8	115		1 Sa	0627	14.3	435		16 Su	0044	4.1	125
	0602	15.2	464			1133	5.2	158			0726	14.1	431			0740	15.4	470			0735	15.5	473					
	1205	6.7	203			1743	17.5	534			1313	8.5	259			1337	7.8	239			1338	8.2	249					
	1823	16.4	500								1911	14.6	446			1930	15.7	480			1809	14.3	435					
2 W	0059	6.0	183		17 Th	0013	4.2	129		2 Sa	0205	5.6	171		17 Su	0221	3.9	118		2 Su	0102	5.9	181		17 M	0214	4.4	135
	0712	14.8	451			0634	15.9	486			0851	14.3	437			0913	15.7	480			0754	14.0	428					
	1307	7.6	231			1237	6.3	193			1441	8.8	267			1510	7.8	238			1348	9.1	278					
	1918	15.9	486			1841	17.0	518			2027	14.5	441			2056	15.9	485			1935	14.0	426					
3 Th	0203	5.7	174		18 F	0121	4.0	121		3 Su	0318	5.2	157		18 M	0345	3.3	100		3 M	0230	5.8	176		18 Tu	0338	3.9	120
	0828	14.9	453			0755	15.8	483			1004	15.2	462			1034	16.8	512			0920	14.7	448					
	1418	8.1	246			1351	7.1	217			1556	8.3	253			1632	7.1	215			1518	8.6	262					
	2017	15.7	478			1948	16.7	509			2138	14.9	455			2214	16.6	506			2101	14.5	443					
4 F	0305	5.2	158		19 Sa	0237	3.4	104		4 M	0418	4.3	131		19 Tu	0451	2.5	75		4 Tu	0343	4.9	149		19 W	0441	3.3	100
	0938	15.5	471			0919	16.3	498			1100	16.2	495			1135	17.8	544			1025	15.9	484					
	1531	8.1	246			1514	7.3	224			1653	7.5	230			1732	6.1	187			1623	7.5	230					
	2116	15.7	478			2101	16.8	511			2236	15.8	481			2316	17.5	533			2208	15.6	477					
5 Sa	0400	4.5	136		20 Su	0350	2.6	80		5 Tu	0508	3.3	101		20 W	0545	1.8	56		5 W	0439	3.7	114		20 Th	0532	2.9	87
	1036	16.3	496			1035	17.3	527			1146	17.3	526			1221	18.5	564			1113	17.1	522					
	1631	7.8	237			1632	7.0	213			1741	6.7	204			1817	5.4	166			1710	6.4	195					
	2209	15.9	486			2211	17.2	524			2324	16.7	508								2301	16.9	514					
6 Su	0449	3.7	113		21 M	0454	1.8	54		6 W	0552	2.5	75		21 Th	0005	18.1	553		6 Th	0525	2.8	85		21 F	0610	2.8	85
	1124	17.1	520			1139	18.2	556			1226	18.0	550			1300	18.8	573			1155	18.2	554					
	1719	7.4	226			1735	6.4	195			1821	6.0	183			1855	4.8	146			1753	5.2	160					
	2256	16.4	500			2313	17.8	542													2347	17.9	545					
7 M	0533	3.0	92		22 Tu	0550	1.1	35		7 Th	0005	17.5	533		22 F	0048	18.5	565		7 F	0604	2.1	63		22 Sa	0036	18.6	566
	1206	17.7	541			1232	18.9	576			0633	1.8	56			0706	1.7	52			1232	18.8	574					
	1801	7.0	212			1830	5.9	179			1301	18.7	569			1334	18.8	573			1832	4.3	130					
	2340	16.9	515								1856	5.3	162			1932	4.2	129										
8 Tu	0611	2.5	76		23 W	0007	18.2	556		8 F	0045	18.1	551		23 Sa	0127	18.5	565		8 Sa	0029	18.5	565		23 Su	0109	18.7	569
	1245	18.2	556			0641	0.9	27			0707	1.5	47			0742	2.1	63			0643	1.8	54					
	1841	6.5	199			1317	19.2	584			1336	19.0	579			1401	18.7	569			1304	19.1	583					
						1912	5.5	169			1935	4.7	144			2001	3.8	115			1903	3.4	105					
9 W	0018	17.3	528		24 Th	0055	18.5	565		9 Sa	0123	18.3	558		24 Su	0201	18.5	564		9 Su	0107	19.1	581		24 M	0144	18.7	570
	0650	2.1	64			0724	1.0	32			0744	1.5	45			0812	2.7	81			0719	2.0	60					
	1321	18.5	564			1357	19.2	584			1407	19.1	581			1428	18.5	563			1336	19.2	586					
	1916	6.3	191			1953	5.1	156			2005	4.2	128			2034	3.3	102			1939	2.6	79					
10 Th	0055	17.7	540		25 F	0139	18.5	565		10 Su	0200	18.5	563		25 M	0239	18.3	557		10 M	0148	19.4	590		25 Tu	0216	18.5	563
	0726	2.0	61			0802	1.4	44			0816	1.8	56			0845	3.3	101			0755	2.4	73					
	1355	18.7	570			1433	18.9	577			1439	19.1	581			1454	18.3	559			1405	19.2	584					
	1951	5.9	181			2034	4.8	147			2041	3.6	110			2104	3.2	97			2012	2.0	61					
11 F	0134	17.9	546		26 Sa	0219	18.2	555		11 M	0241	18.5	563		26 Tu	0313	17.8	542		11 Tu	0229	19.3	588		26 W	0251	18.2	554
	0800	1.9	59			0841	2.1	63			0853	2.4	72			0915	4.2	129			0836	3.1	93					
	1430	18.7	569			1503	18.6	568			1508	18.9	576			1522	17.8	544			1439	19.1	581					
	2030	5.7	175			2105	4.6	141			2117	3.2	97			2140	3.3	100			2052	1.5	45					
12 Sa	0209	17.8	544		27 Su	0259	17.8	543		12 Tu	0323	18.1	553		27 W	0352	17.1	521		12 W	0312	19.1	581		27 Th	0326	17.5	534
	0838	2.1	65			0915	3.0	91			0934	3.2	97			0950	5.2	159			0914	4.1	124					
	1502	18.7	570			1535	18.3	558			1543	18.7	569			1552	17.2	525			1513	18.7	569					
	2103	5.4	165			2145	4.4	134			2157	2.8	85			2216	3.8	116			2135	1.5	47					
13 Su	0249	17.7	541		28 M	0342	17.2	525		13 W	0410	17.7	539		28 Th	0434	16.2	493		13 Th	0400	18.4	561		28 F	0402	16.8	511
	0913	2.6	79			0951	3.9	120			1014	4.4	133			1030	6.4	195			0958	5.2	158					
	1538	18.6	567			1605	17.8	544			1621	18.1	551			1627	16.2	494			1555	18.0	549					
	2144	5.0	153			2223	4.5	137			2245	2.9	87			2257	4.5	138			2226	2.2	66					
14 M	0335	17.5	532		29 Tu	0425	16.4	499		14 Th	0505	16.9	515		29 F	0522	15.1	461		14 F	0457	17.3	528		29 Sa	0447	15.8	482
	0953	3.2	97			1031	5.1	155			1104	5.7	173			1112	7.6	233			1053	6.5	197					
	1613	18.3	559			1640	17.2	524			1708	17.3	528			1708	15.2	462			1647	17.0	517					
	2228	4.8	146			2304	4.7	143			2344	3.2	99			2349	5.4	164			2325	3.1	96					
15 Tu	0424	16.9	516		30 W	0513	15.5	472		15 F	0613	16.0	487		15 Sa	0605	16.2	493		15 Sa	0605	16.2	493		30 Su	0545	14.9	455
	1040	4.1	125			1109	6.4	194			1209	7.0	213			1203	7.6	233			1138	8.6	262					
	1655	18.0	549			1719	16.3	496			1809	16.4	500			1755	15.8	483			1727	14.5	442					
	2315	4.5	136			2353	5.2	157																				
16 Th	0612	14.6	446		31 Th	0612	14.6	446		16 Su	0044	4.1	125		16 Su	0044	4.1	125		16 Su	0044	4.1	125		31 M	0013	5.9	179
	1201	7.6	231			1807	15.4	468																				
17 M	0214	4.4	135		17 M	0214	4.4	135		17 M	0214	4.4	135		17 M	0214	4.4	135		17 M	0214	4.4	135		17 M	0214	4.4	135
	0908	15.9	485			0908	15.9	485			0908	15.9	485			0908	15.9	485			0908	15.9	485			0908	15.9	485
	1512	7.7	235			1512	7.7	235			1512	7.7	235			1512	7.7	235			1512	7.7	235			1512	7.7	235
	2059	15.6	476			2059	15.6	476			2059	15.6	476			2059	15.6	476			2059	15.6	476			2059	15.6	476
18 Tu	0338	3																										

Xiamen, China, 2008

Times and Heights of High and Low Waters

April								May								June							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm				
1 Tu	0140	5.9	181	16 W	0316	4.6	141	1 Th	0207	5.2	160	16 F	0340	5.4	164	1 Su	0332	5.2	157	16 M	0446	6.5	199
	0827	15.0	456		0952	16.9	516		0841	16.2	495		0954	16.8	511		0936	17.1	522		1038	15.9	484
	1434	8.4	256		1602	6.0	184		1455	6.5	198		1613	4.5	136		1559	2.6	80		1703	3.1	94
	2021	14.6	445		2201	16.5	504		2055	15.7	480		2230	16.8	511		2232	17.8	542		2340	17.0	518
2 W	0257	5.2	160	17 Th	0416	4.4	133	2 F	0311	4.8	145	17 Sa	0433	5.4	165	2 M	0433	5.1	156	17 Tu	0536	6.5	197
	0938	16.0	487		1042	17.4	531		0937	17.0	518		1038	16.9	514		1028	17.4	531		1120	15.9	484
	1543	7.2	220		1651	5.0	152		1551	5.0	153		1655	3.6	111		1652	1.4	42		1745	2.6	80
	2136	15.7	479		2255	17.4	530		2159	16.9	515		2316	17.3	527		2330	18.7	571				
3 Th	0358	4.3	130	18 F	0504	4.2	127	3 Sa	0408	4.3	130	18 Su	0516	5.5	169	3 Tu	0530	5.2	157	18 W	0021	17.4	529
	1031	17.1	522		1121	17.7	538		1024	17.6	536		1114	16.8	513		1117	17.8	542		0616	6.5	197
	1636	5.8	178		1732	4.1	126		1640	3.5	107		1735	3.0	92		1744	0.5	14		1158	16.1	490
	2234	17.0	518		2340	18.0	548		2255	18.1	551		2358	17.7	540						1823	2.4	73
4 F	0449	3.4	103	19 Sa	0546	4.1	126	4 Su	0459	4.0	122	19 M	0556	5.6	170	4 W	0025	19.4	591	19 Th	0100	17.6	536
	1113	18.0	549		1154	17.8	542		1105	18.1	551		1149	16.8	513		0624	5.3	161		0653	6.4	194
	1718	4.5	138		1802	3.4	104		1722	2.2	67		1807	2.6	79		1206	18.1	551		1237	16.3	496
	2322	18.0	550				2346		19.1	582					●		1836	-0.1	-2		1859	2.2	66
5 Sa	0535	2.9	87	20 Su	0017	18.3	557	5 M	0549	4.0	123	20 Tu	0038	17.9	547	5 Th	0119	19.7	601	20 F	0137	17.7	538
	1151	18.6	568		0621	4.4	134		1147	18.4	561		0636	5.7	175		0716	5.3	162		0731	6.3	192
	1755	3.2	98		1223	17.7	538		1803	1.0	31		1222	16.7	508		1258	18.2	555		1311	16.4	501
					1836	2.9	87		●				1843	2.3	70		1927	-0.1	-4		1937	2.1	64
6 Su	0006	19.0	579	21 M	0052	18.5	563	6 Tu	0036	19.8	602	21 W	0112	18.0	548	6 F	0211	19.7	601	21 Sa	0211	17.7	538
	0615	2.8	86		0653	4.7	142		0638	4.3	130		0708	6.0	183		0807	5.4	164		0802	6.2	190
	1226	18.8	574		1250	17.6	537		1229	18.5	563		1252	16.7	508		1350	18.2	554		1347	16.7	508
	1834	2.1	64		1904	2.5	76		1848	0.2	7		1914	2.3	69		2018	0.2	5		2011	2.2	67
7 M	0050	19.7	599	22 Tu	0127	18.4	562	7 W	0124	20.0	610	22 Th	0148	17.9	546	7 Sa	0302	19.5	593	22 Su	0246	17.7	538
	0655	3.0	92		0729	5.1	156		0726	4.8	146		0743	6.2	189		0858	5.4	165		0839	6.1	185
	1259	19.0	579		1317	17.4	531		1309	18.6	567		1325	16.5	504		1444	17.9	546		1425	16.7	509
	1908	1.2	37		1937	2.3	69		1935	-0.1	-2		1949	2.3	71		2109	0.8	23		2048	2.4	72
8 Tu	0135	20.0	609	23 W	0159	18.3	559	8 Th	0213	20.0	609	23 F	0221	17.7	538	8 Su	0352	19.0	578	23 M	0319	17.6	535
	0738	3.5	108		0757	5.4	166		0811	5.2	158		0815	6.5	197		0952	5.5	168		0913	6.0	183
	1335	19.0	580		1346	17.3	527		1355	18.5	563		1356	16.6	505		1539	17.4	531		1501	16.7	509
	1949	0.6	18		2005	2.4	72		2024	0.2	7		2024	2.6	80		2201	1.7	53		2126	2.7	82
9 W	0219	19.9	607	24 Th	0234	18.0	550	9 F	0304	19.6	596	24 Sa	0256	17.4	531	9 M	0441	18.3	558	24 Tu	0356	17.6	535
	0820	4.3	131		0832	5.9	180		0902	5.6	171		0850	6.6	200		1045	5.5	169		0953	5.7	175
	1411	18.8	574		1413	17.0	517		1446	18.0	550		1433	16.5	503		1635	16.8	511		1545	16.6	505
	2033	0.6	17		2040	2.7	81		2116	0.9	28		2059	2.9	88		2254	2.8	86		2204	3.1	93
10 Th	0306	19.5	595	25 F	0306	17.6	536	10 Sa	0357	18.8	574	25 Su	0333	17.1	522	10 Tu	0530	17.6	537	25 W	0435	17.4	531
	0903	5.1	155		0901	6.5	197		0957	6.1	186		0928	6.8	207		1141	5.6	171		1038	5.5	168
	1453	18.4	562		1445	16.7	508		1540	17.4	529		1509	16.3	496		1735	16.1	491		1634	16.3	497
	2121	1.0	32		2113	3.2	98		2211	2.0	60		2140	3.3	102		2349	4.0	122		2249	3.6	110
11 F	0357	18.7	571	26 Sa	0344	17.0	518	11 Su	0454	18.0	548	26 M	0412	16.8	513	11 W	0619	17.0	517	26 Th	0515	17.2	524
	0955	6.0	183		0939	7.0	214		1056	6.6	201		1008	6.9	211		1238	5.5	168		1127	5.2	159
	1543	17.7	538		1521	16.1	492		1642	16.5	503		1554	16.0	487		1840	15.6	475		1730	15.9	486
	2215	2.0	61		2153	3.9	118		2312	3.1	95		2226	3.9	118						2341	4.3	130
12 Sa	0455	17.6	537	27 Su	0426	16.3	497	12 M	0555	17.2	524	27 Tu	0458	16.6	506	12 Th	0048	5.1	154	27 F	0602	17.0	517
	1055	7.0	212		1020	7.6	232		1202	6.9	210		1058	7.0	212		0711	16.5	502		1220	4.7	144
	1641	16.6	505		1604	15.6	475		1751	15.7	480		1648	15.6	475		1336	5.2	160		1834	15.8	483
	2319	3.3	100		2242	4.6	141		●				2316	4.4	133		1948	15.4	468				
13 Su	0604	16.6	506	28 M	0517	15.7	480	13 Tu	0019	4.2	128	28 W	0550	16.4	501	13 F	0149	5.9	179	28 Sa	0040	5.0	153
	1207	7.7	234		1115	8.1	246		0700	16.7	508		1157	6.8	207		0805	16.1	491		0655	16.7	510
	1755	15.6	476		1702	15.0	457		1315	6.8	206		1751	15.3	466		1435	4.8	146		1320	4.1	124
	●				2342	5.2	160		1909	15.4	469		●				2055	15.5	472		1946	16.0	488
14 M	0036	4.3	132	29 Tu	0622	15.5	471	14 W	0132	4.9	150	29 Th	0015	4.8	145	14 Sa	0252	6.4	194	29 Su	0147	5.7	173
	0725	16.1	490		1228	8.2	250		0805	16.5	503		0647	16.4	499		0858	15.9	486		0754	16.6	507
	1337	7.8	237		1817	14.7	447		1425	6.2	190		1301	6.3	191		1530	4.2	129		1426	3.2	98
	1925	15.2	464				2027		15.6	474				1903	15.3		467	2157	15.9		486	2101	16.5	504
15 Tu	0200	4.8	145	30 W	0055	5.5	167	15 Th	0240	5.3	161	30 F	0121	5.1	154	15 Su	0351	6.5	199	30 M	0258	6.0	184
	0847	16.3	498		0735	15.6	477		0903	16.6	505		0746	16.5	504		0950	15.9	484		0856	16.7	509
	1459	7.1	216		1347	7.6	233		1525	5.4	164		1405	5.3	161		1618	3.6	111		1532	2.2	68
	2052	15.7	478		1941	14.9	455		2135	16.1	492		2017	15.8	482		2251	16.5	502		2213	17.4	529

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Xiamen, China, 2008

Times and Heights of High and Low Waters

July					August					September																			
Time		Height			Time		Height			Time		Height			Time		Height												
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm										
1 Tu	0408	6.1	186		16 W	0509	7.1	217		1 F	0013	19.2	584		16 Sa	0014	18.2	555		1 M	0115	19.8	602		16 Tu	0044	19.7	600	
	0959	17.0	518			1054	15.5	473			0606	5.6	171			0607	6.1	186			0711	4.1	125			0644	3.8	117	
	1635	1.3	39			1721	3.1	93			1156	18.3	558			1158	17.6	537			1313	19.7	599			1250	19.9	606	
	2320	18.3	557								1819	0.6	17			1817	2.3	69			1925	2.3	69			1859	2.8	85	
2 W	0514	5.9	180		17 Th	0002	17.2	523		2 Sa	0103	19.7	600		17 Su	0050	18.8	573		2 Tu	0147	19.6	596		17 W	0113	19.7	600	
	1101	17.5	532			0555	6.7	204			0655	5.0	152			0644	5.4	164			0746	3.5	108			0715	3.1	95	
	1734	0.5	15			1141	16.1	491			1248	18.8	573			1239	18.3	557			1352	19.6	598			1329	20.1	612	
						1802	2.5	76			1906	0.5	15			1854	1.9	59			2000	2.9	87			1937	3.2	99	
3 Th	0020	19.1	581		18 F	0043	17.7	539		3 Su	0147	19.8	602		18 M	0123	19.1	581		3 W	0214	19.2	586		18 Th	0144	19.7	600	
	0614	5.6	172			0636	6.3	191			0741	4.5	138			0717	4.9	148			0818	3.3	100			0750	2.4	74	
	1159	17.9	546			1221	16.6	506			1336	19.0	579			1314	18.6	567			1431	19.3	589			1407	20.2	617	
	1829	0.1	3			1843	2.1	63			1950	0.9	26			1931	1.9	59			2035	3.7	113			2013	4.0	121	
4 F	0114	19.5	595		19 Sa	0118	18.0	549		4 M	0225	19.5	594		19 Tu	0154	19.2	585		4 Th	0244	19.0	578		19 F	0214	19.5	595	
	0708	5.3	163			0709	5.9	181			0819	4.2	129			0750	4.2	129			0852	3.1	94			0829	2.1	65	
	1254	18.2	556			1258	17.1	522			1417	18.8	573			1352	18.9	575			1507	18.9	575			1450	20.1	612	
	1920	0.0	-1			1918	1.9	57			2032	1.5	47			2002	2.3	69			2108	4.7	143			2053	4.7	143	
5 Sa	0204	19.7	599		20 Su	0153	18.2	556		5 Tu	0258	19.2	585		20 W	0224	19.1	582		5 F	0311	18.5	563		20 Sa	0250	19.4	590	
	0758	5.1	154			0745	5.5	169			0857	3.8	116			0823	3.7	114			0931	3.2	99			0908	2.0	61	
	1347	18.4	560			1337	17.5	533			1459	18.6	566			1431	18.9	577			1547	18.2	554			1538	19.6	596	
	2008	0.2	6			1954	1.8	54			2107	2.5	77			2039	2.8	84			2146	5.7	173			2139	5.7	173	
6 Su	0251	19.5	594		21 M	0226	18.3	558		6 W	0331	18.7	571		21 Th	0254	19.0	580		6 Sa	0344	17.8	543		21 Su	0332	18.8	574	
	0847	4.8	145			0819	5.3	161			0937	3.6	109			0856	3.1	96			1005	3.8	115			0957	2.5	75	
	1438	18.2	556			1411	17.6	535			1543	18.1	551			1509	18.8	574			1630	17.2	525			1631	18.6	568	
	2055	0.9	26			2030	2.0	60			2147	3.5	107			2115	3.5	108			2224	6.9	211			2234	6.8	208	
7 M	0333	19.1	581		22 Tu	0257	18.4	560		7 Th	0402	18.2	555		22 F	0326	18.8	572		7 Su	0419	16.8	513		22 M	0421	17.9	546	
	0933	4.6	140			0853	4.9	148			1012	3.6	110			0937	2.8	85			1048	4.6	141			1055	3.3	102	
	1526	17.8	542			1449	17.6	537			1626	17.3	527			1554	18.6	566			1717	16.2	494			1737	17.6	537	
	2142	1.7	53			2103	2.3	71			2225	4.8	146			2157	4.5	136			2309	8.1	247			2338	7.9	242	
8 Tu	0411	18.5	565		23 W	0330	18.3	558		8 F	0437	17.5	534		23 Sa	0402	18.4	562		8 M	0502	15.8	482		23 Tu	0527	17.0	517	
	1015	4.5	138			0931	4.4	135			1054	3.9	118			1020	2.8	86			1141	5.5	169			1208	4.3	132	
	1612	17.3	526			1531	17.5	534			1712	16.4	501			1646	18.0	548			1820	15.4	468			1858	17.0	517	
	2226	3.0	90			2142	2.8	86			2307	6.0	183			2246	5.6	171											
9 W	0450	17.9	547		24 Th	0402	18.2	554		9 Sa	0514	16.6	505		24 Su	0448	17.8	543		9 Tu	0013	9.1	278		24 W	0103	8.6	261	
	1059	4.4	135			1006	4.0	123			1142	4.4	134			1114	3.1	94			0602	14.9	455			0650	16.4	501	
	1703	16.6	506			1613	17.3	527			1807	15.6	474			1749	17.2	523			1250	6.3	191			1337	4.8	145	
	2308	4.2	127			2222	3.7	112			2358	7.3	221			2347	6.8	208			1941	15.0	458			2028	17.1	522	
10 Th	0531	17.2	525		25 F	0440	17.9	546		10 Su	0601	15.6	475		25 M	0545	17.0	519		10 W	0141	9.5	290		25 Th	0237	8.2	249	
	1147	4.4	135			1051	3.7	112			1238	5.0	152			1221	3.6	111			0725	14.6	445			0823	16.7	508	
	1758	15.9	484			1705	17.0	517			1915	14.9	455			1906	16.5	504			1413	6.3	191			1500	4.4	135	
	2356	5.4	164			2308	4.6	141																2145		18.0	549		
11 F	0613	16.5	502		26 Sa	0523	17.4	530		11 M	0106	8.2	251		26 Tu	0104	7.7	236		11 Th	0305	9.0	275		26 F	0351	7.2	218	
	1240	4.6	139			1144	3.5	106			0701	14.8	451			0659	16.4	500			0849	15.2	462			0942	17.7	538	
	1859	15.3	465			1807	16.5	504			1347	5.3	163			1344	3.8	117			1525	5.5	169			1607	3.8	116	
											2034	14.9	453			2037	16.6	506			2207	16.6	507			2243	18.9	577	
12 Sa	0053	6.5	198		27 Su	0007	5.7	174		12 Tu	0229	8.6	263		27 W	0238	7.9	240		12 F	0406	8.0	244		27 Sa	0448	6.0	182	
	0703	15.7	480			0615	16.9	514			0815	14.5	442			0826	16.4	499			0954	16.3	496			1042	18.7	571	
	1339	4.7	142			1246	3.3	102			1459	5.2	157			1508	3.4	105			1621	4.6	139			1700	3.3	101	
	2008	15.0	457			1921	16.2	494			2149	15.5	471			2200	17.5	534			2255	17.8	543			2329	19.5	593	
13 Su	0158	7.3	222		28 M	0119	6.7	203		13 W	0345	8.3	253		28 Th	0358	7.2	220		13 Sa	0454	6.8	208		28 Su	0534	5.0	152	
	0801	15.2	463			0720	16.4	501			0929	14.9	453			0947	17.2	524			1047	17.5	534			1132	19.5	595	
	1441	4.5	138			1358	3.1	96			1602	4.5	137			1619	2.7	81			1706	3.6	109			1746	3.1	96	
	2118	15.2	463			2045	16.4	500			2248	16.4	500			2305	18.7	569			2336	18.8	572						
14 M	0310	7.6	231		29 Tu	0242	7.0	214		14 Th	0443	7.6	232		29 F	0502	6.3	191		14 Su	0537	5.7	174		29 M	0004	19.7	599	
	0903	15.0	456			0835	16.4	501			1030	15.7	479			1053	18.2	555			1132	18.6	566			0608	4.2	129	
	1541	4.1	126			1514	2.6	79			1654	3.6	111			1716	2.0	60			1747	2.9	89			1212	19.9	607	
	2222	15.7	480			2205	17.2	524			2335	17.4	530			2357	19.5	594								1826	3.5	106	
15 Tu	0416	7.5	228		30 W	0400	6.8	208		15 F	0530	6.8	208		30 Sa	0553	5.4	164		15 M	0010	19.4	590		30 Tu	0037	19.6	597	
	1002	15.1	460			0949	16.9	514			1116	16.7	509			1147	19.1	581			0609	4.8	145			0642	3.5	108	
	1635	3.6	110			1625	1.8	55			1739	2.8	86			1804	1.6	49			1210	19.3	589			1250	20.1	613	
	2316	16.5	503			2315	18.2	556															1824	2.7		83		1858	3.9	118
				31 Th	0508	6.3	191																						
					1056	17.6	536																						
					1727	1.0	32																						

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Xiamen, China, 2008

Times and Heights of High and Low Waters

October				November				December															
Time		Height		Time		Height		Time		Height		Time		Height									
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm								
1 W	0103	19.4	592	16 Th	0031	19.9	606	1 Sa	0122	18.6	566	16 Su	0118	19.7	599	1 M	0132	17.9	546	16 Tu	0200	19.1	582
	0712	3.1	95		0645	1.9	57		0749	2.8	86		0753	0.7	21		0804	3.0	92		0838	1.0	29
	1327	20.0	609		1307	21.0	639		1413	19.3	588		1430	20.6	628		1432	18.5	564		1510	19.9	606
	1934	4.4	135		1912	4.5	138		2012	6.8	206		2034	6.2	189		2031	7.1	216		2114	5.9	179
2 Th	0132	19.3	587	17 F	0102	19.9	607	2 Su	0151	18.3	558	17 M	0205	19.3	589	2 Tu	0204	17.7	540	17 W	0252	18.6	566
	0745	2.8	86		0723	1.4	42		0823	3.3	100		0844	1.3	39		0840	3.4	104		0927	2.0	60
	1401	19.8	603		1351	21.0	641		1448	18.8	573		1519	20.0	609		1505	18.2	554		1557	19.3	588
	2003	5.1	156		1954	5.1	155		2046	7.2	220		2124	6.8	207		2103	7.3	222		2204	5.9	180
3 F	0157	19.0	579	18 Sa	0141	19.9	606	3 M	0224	17.8	544	18 Tu	0257	18.7	570	3 W	0241	17.4	531	18 Th	0348	17.8	544
	0815	2.9	88		0804	1.2	38		0857	3.8	117		0939	2.3	70		0916	4.0	122		1016	3.1	95
	1438	19.4	591		1437	20.7	631		1524	18.1	553		1613	19.2	585		1543	17.8	544		1645	18.6	568
	2038	5.8	178		2041	5.7	175		2123	7.8	239		2219	7.2	220		2144	7.4	226		2258	5.9	180
4 Sa	0228	18.5	564	19 Su	0221	19.5	593	4 Tu	0258	17.4	529	19 W	0356	17.8	543	4 Th	0322	16.9	515	19 F	0447	17.0	518
	0850	3.2	98		0852	1.6	49		0938	4.6	141		1037	3.5	108		0956	4.6	140		1107	4.4	135
	1512	18.7	571		1526	19.9	608		1604	17.5	533		1711	18.4	561		1623	17.5	533		1734	17.9	547
	2110	6.7	205		2131	6.6	202		2202	8.4	256		2325	7.5	230		2231	7.6	231		2354	5.9	179
5 Su	0257	17.9	547	20 M	0308	18.8	574	5 W	0342	16.7	510	20 Th	0504	16.9	516	5 F	0409	16.3	498	20 Sa	0552	16.2	495
	0927	3.9	120		0945	2.5	75		1021	5.5	169		1141	4.7	144		1043	5.2	160		1204	5.7	173
	1552	17.9	546		1621	19.0	579		1653	16.9	514		1814	17.8	543		1709	17.2	524		1824	17.3	528
	2147	7.6	232		2226	7.6	232		2254	8.9	271		●	●	2323		7.6	232	2323		7.6	232	
6 M	0333	17.2	524	21 Tu	0404	17.9	546	6 Th	0437	16.0	488	21 F	0036	7.4	227	6 Sa	0508	15.8	481	21 Su	0056	5.7	175
	1004	4.8	147		1046	3.6	111		1117	6.3	192		0623	16.4	499		1138	5.9	180		0704	15.7	480
	1636	16.9	516		1726	18.0	549		1753	16.5	502		1250	5.7	173		1802	17.0	518		1307	6.7	205
	2232	8.6	261		●	2335	8.3		252	●	●		1919	17.5	534		●	●	1919		16.9	514	
7 Tu	0413	16.3	496	22 W	0515	17.0	517	7 F	0001	9.1	277	22 Sa	0147	6.9	211	7 Su	0025	7.3	221	22 M	0200	5.4	164
	1053	5.8	178		1158	4.8	146		0547	15.5	473		0745	16.4	500		0620	15.5	473		0818	15.7	480
	1731	16.1	490		1844	17.5	532		1227	6.8	206		1400	6.2	190		1241	6.4	195		1416	7.4	225
	2328	9.4	288						1901	16.5	503		2020	17.6	535		1900	17.0	517		2018	16.6	507
8 W	0512	15.5	471	23 Th	0057	8.5	258	8 Sa	0119	8.6	263	23 Su	0251	6.0	184	8 M	0132	6.4	196	23 Tu	0301	4.8	147
	1158	6.7	203		0643	16.5	503		0709	15.6	474		0858	16.9	515		0739	15.8	481		0928	16.2	493
	1845	15.6	477		1320	5.4	165		1340	6.7	203		1505	6.5	197		1348	6.6	202		1523	7.6	231
					2003	17.6	535		2007	17.0	517		2114	17.7	541		1958	17.2	523		2115	16.6	506
9 Th	0048	9.7	297	24 F	0222	7.9	240	9 Su	0231	7.5	230	24 M	0346	5.0	153	9 Tu	0235	5.2	159	24 W	0357	4.2	127
	0634	15.1	459		0810	16.8	511		0829	16.2	495		0959	17.6	537		0853	16.6	507		1028	16.8	512
	1320	6.9	211		1440	5.4	165		1446	6.2	190		1602	6.5	197		1456	6.6	201		1624	7.4	227
	2005	15.9	486		2111	18.0	550		2103	17.7	538		2201	17.9	547		2054	17.6	535		2207	16.7	510
10 F	0216	9.2	281	25 Sa	0330	6.7	204	10 M	0329	6.1	186	25 Tu	0434	4.1	125	10 W	0333	3.8	116	25 Th	0447	3.5	108
	0801	15.5	472		0925	17.6	537		0934	17.4	530		1051	18.3	557		0959	17.8	542		1118	17.5	532
	1438	6.4	194		1545	5.1	156		1544	5.7	175		1652	6.4	195		1559	6.4	196		1714	7.2	219
	2112	16.9	514		2204	18.6	567		2151	18.3	558		2243	18.1	552		2148	18.1	551		2254	16.9	516
11 Sa	0324	8.1	246	26 Su	0422	5.6	170	11 Tu	0414	4.5	138	26 W	0512	3.4	104	11 Th	0427	2.5	76	26 F	0531	3.1	93
	0914	16.5	503		1024	18.5	565		1029	18.6	567		1136	18.8	572		1058	18.9	576		1201	18.0	548
	1539	5.5	167		1638	4.9	150		1637	5.3	163		1738	6.4	194		1657	6.2	188		1757	6.9	211
	2204	17.9	547		2248	19.0	578		2234	18.9	576		2320	18.1	551		2240	18.6	567		2337	17.2	523
12 Su	0414	6.7	203	27 M	0503	4.5	137	12 W	0457	3.0	92	27 Th	0550	2.9	89	12 F	0516	1.3	41	27 Sa	0607	2.7	83
	1011	17.8	542		1111	19.3	587		1118	19.7	601		1214	19.0	580		1153	19.8	604		1240	18.3	557
	1630	4.6	141		1722	5.0	152		1725	5.3	161		1814	6.5	198		1752	5.9	181		1837	6.7	204
	2247	18.8	574		2323	19.1	581		2312	19.3	587		2353	18.1	552		2331	19.1	581		●	●	
13 M	0456	5.2	158	28 Tu	0541	3.7	112	13 Th	0540	1.8	55	28 F	0625	2.7	83	13 Sa	0605	0.6	17	28 Su	0012	17.3	528
	1059	19.0	578		1153	19.7	601		1205	20.5	626		1251	19.1	583		1245	20.3	620		0645	2.5	75
	1711	4.1	126		1759	5.1	156		1808	5.2	160		1850	6.6	200		1845	5.7	175		1314	18.4	560
	2324	19.4	590		2354	19.1	582		2352	19.7	599		●	●	●		●	1909	6.6		201		
14 Tu	0535	3.9	118	29 W	0613	3.1	96	14 F	0621	1.0	32	29 Sa	0028	18.0	548	14 Su	0019	19.3	587	29 M	0047	17.6	536
	1143	19.9	607		1231	19.9	606		1253	21.0	639		0657										

Shantou, China, 2008

Times and Heights of High and Low Waters

January						February						March					
Time			Height			Time			Height			Time			Height		
	h	m	ft	cm			h	m	ft	cm			h	m	ft	cm	
1 Tu	0101	3.5	106			16 W	0715	5.5	167			1 Sa	0103	2.2	66		
	0744	5.2	157				1158	3.0	91				0829	5.3	163		16 Su
	1228	3.4	105				1906	6.3	192				1225	4.7	142		1402
	1949	6.2	190			17 Th	0059	2.5	75				1805	5.6	171		1829
2 W	0205	3.1	93				0834	5.5	169			2 Su	0207	2.1	65		17 M
	0905	5.1	156				1253	3.6	111				1017	5.3	161		1128
	1316	4.0	123				1932	6.2	189				1338	5.0	151		1547
	2015	6.0	184			18 F	0209	2.0	60				1826	5.4	166		1933
3 Th	0301	2.7	82				1002	5.7	175			3 M	0317	2.0	62		18 Tu
	1034	5.3	163				1356	4.3	131				1159	5.4	166		1242
	1417	4.6	139				1935	6.2	188				1545	5.0	153		1706
	2031	5.9	181			19 Sa	0321	1.5	47				1916	5.3	161		2047
4 F	0353	2.4	73				1132	6.1	185			4 Tu	0428	1.8	56		19 W
	1152	5.7	175				1512	4.9	148				1301	5.7	173		1337
	1528	5.0	152				2003	6.2	190				1712	4.8	146		1757
	2034	5.9	180			20 Su	0430	1.1	35				2027	5.2	157		2151
5 Sa	0441	2.2	66				1252	6.5	198			5 W	0525	1.6	49		20 Th
	1251	6.2	189				1634	5.2	157				1345	5.9	179		1414
	1640	5.2	160				2049	6.3	191				1756	4.5	136		1835
	2055	5.9	181			21 M	0533	0.8	25			6 Th	0610	1.5	45		21 F
6 Su	0524	1.9	59				1355	6.9	210				1417	6.0	182		0156
	1339	6.6	202				1743	5.2	157				1826	4.1	125		0658
	1736	5.4	164			22 Tu	0629	0.7	22								1445
	2124	6.0	182				1447	7.1	216			7 F	0119	5.0	151		1905
7 M	0606	1.7	53				1836	5.0	152				0648	1.5	47		22 Sa
	1418	5.4	164				2234	6.1	187				1447	5.9	181		0731
	2202	6.0	184			23 W	0717	0.8	23				1854	3.7	113		1505
8 Tu	0647	1.6	48				1528	7.1	216			8 Sa	0213	5.2	160		23 Su
	1457	7.1	215				1923	4.7	143				0721	1.8	54		0316
	1852	5.3	163				2322	6.0	183				1507	5.9	179		0757
	2240	6.0	184			24 Th	0801	0.9	28				1922	3.3	101		1525
9 W	0724	1.4	44				1605	7.0	213			9 Su	0257	5.6	172		2005
	1529	7.1	215				2004	4.3	132				0754	2.1	64		0351
	2315	6.0	183			25 F	0011	5.8	176				1531	5.8	178		0825
10 Th	0800	1.4	42				0843	1.2	37			10 M	0343	6.0	184		1544
	1600	7.0	213				1640	6.8	206				0827	2.6	78		2041
	1952	5.0	152				2047	3.9	120				1552	5.9	179		0852
	2354	5.9	180			26 Sa	0355	5.6	172				2036	2.3	71		1600
11 F	0836	1.4	43				0919	1.6	49			11 Tu	0430	6.4	194		2114
	1629	6.9	209				1708	6.6	201				0902	3.0	90		0458
	2027	4.7	142				2133	3.6	109				1619	5.9	180		0923
12 Sa	0028	5.7	174			27 Su	0449	5.6	172				2120	1.9	57		1621
	0908	1.5	46				0956	2.0	61			12 W	0517	6.5	199		2153
	1657	6.8	207				1738	6.4	196				0947	3.4	104		0534
	2107	4.3	131				2218	3.2	98				1646	6.0	184		0953
13 Su	0407	5.5	169			28 M	0538	5.6	170				2214	1.5	46		1640
	0946	1.7	51				1033	2.5	76			13 Th	0610	6.6	200		2234
	1728	6.7	203				1801	6.3	192				1033	3.9	118		0609
	2155	3.8	117				2310	2.9	89				1701	6.0	184		1029
14 M	0506	5.5	168			29 Tu	0624	5.4	166				2315	1.3	39		1652
	1023	2.0	61				1104	3.0	91			14 F	0711	6.4	195		2317
	1759	6.6	201				1826	6.1	187				1123	4.3	131		0652
	2251	3.4	104										1717	6.1	185		1108
15 Tu	0608	5.5	167			30 W	0005	2.7	82			15 Sa	0024	1.2	38		1707
	1108	2.4	73				0713	5.3	162				0824	6.1	186		0012
	1837	6.5	197				1142	3.5	108				1235	4.7	142		0750
	2352	2.9	89				1842	6.0	183				1745	5.9	181		1203
						31 Th	0104	2.5	77								1726
							0812	5.2	158								1749
							1221	4.1	125								0114
							1853	5.8	178								0914
																	1322
																	1749

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Shantou, China, 2008

Times and Heights of High and Low Waters

July								August								September							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h	m	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm
1 Tu	0035	6.0	184	16 W	0155	6.1	186	1 F	0245	6.8	207	16 Sa	0252	6.4	196	1 M	0328	6.4	196	16 Tu	0242	6.4	195
	0436	4.4	135		0615	4.7	143		0650	4.6	139		0704	4.4	134		0744	3.4	103		0704	3.5	107
	0839	5.6	172		0925	5.2	158		1018	5.7	173		1028	5.2	160		1507	5.9	179		1442	6.3	192
	1720	0.7	21		1817	1.2	38		1914	0.3	9		1915	1.2	37		2009	2.0	60		1933	2.7	83
2 W	0145	6.6	200	17 Th	0240	6.4	194	2 Sa	0330	6.9	209	17 Su	0320	6.4	195	2 Tu	0352	6.3	193	17 W	0259	6.3	193
	0544	4.8	145		0702	4.7	142		0735	4.3	130		0732	4.2	127		0817	3.0	92		0737	3.1	95
	0926	5.8	177		1009	5.2	159		1112	5.6	171		1108	5.2	159		1550	6.2	189		1518	6.7	203
	1820	0.3	10		1901	1.1	33		2001	0.5	14		1950	1.3	40		2044	2.5	75		2002	3.2	91
3 Th	0246	6.9	211	18 F	0318	6.5	199	3 Su	0408	6.8	206	18 M	0347	6.3	192	3 W	0413	6.2	190	18 Th	0318	6.3	193
	0648	4.9	149		0737	4.6	140		0815	3.9	118		0757	3.9	119		0855	2.7	81		0808	2.7	82
	1020	5.9	180		1051	5.3	161		1203	5.4	166		1500	5.3	162		1633	6.4	195		1559	7.0	214
	1916	0.1	3		1942	1.0	30		2046	0.8	23		2020	1.6	49		2114	3.0	90		2040	3.6	111
4 F	0339	7.1	217	19 Sa	0354	6.6	200	4 M	0444	6.5	199	19 Tu	0405	6.2	188	4 Th	0437	6.3	191	19 F	0341	6.4	196
	0742	4.8	146		0806	4.5	137		0856	3.4	105		0823	3.6	110		0937	2.4	74		0853	2.3	69
	1115	5.9	179		1125	5.2	160		1606	5.3	163		1544	5.6	170		1710	6.5	199		1647	7.3	221
	2009	0.1	2		2017	1.0	29		2124	1.2	37		2051	1.9	58		2151	3.4	105		2115	4.1	126
5 Sa	0425	7.2	218	20 Su	0423	6.4	196	5 Tu	0511	6.3	192	20 W	0425	6.0	184	5 F	0454	6.3	191	20 Sa	0359	6.5	199
	0831	4.5	138		0835	4.3	132		0940	3.1	93		0853	3.2	98		1016	2.3	69		0945	1.9	59
	1209	5.7	175		1202	5.2	158		1657	5.5	169		1624	5.8	176		1751	6.6	200		1739	7.3	221
	2059	0.2	6		2052	1.0	31		2202	1.7	51		2121	2.3	71		2225	4.0	121		2200	4.5	138
6 Su	0508	7.0	213	21 M	0450	6.3	192	6 W	0541	6.2	188	21 Th	0446	6.0	184	6 Sa	0511	6.2	190	21 Su	0425	6.6	202
	0920	4.1	126		0901	4.1	124		1020	2.7	82		0931	2.8	85		1102	2.2	67		1044	1.7	52
	1304	5.5	168		1233	5.0	153		1746	5.6	172		1706	6.0	184		1833	6.4	196		1836	7.1	216
	2148	0.5	16		2123	1.2	36		2241	2.2	68		2157	2.7	82		2301	4.4	134		2255	4.9	150
7 M	0550	6.7	205	22 Tu	0512	6.1	187	7 Th	0604	6.0	183	22 F	0507	6.0	184	7 Su	0531	6.2	189	22 M	0445	6.7	203
	1007	3.7	113		0932	3.7	114		1108	2.4	72		1013	2.4	72		1153	2.2	68		1148	1.6	50
	1401	5.2	157		1636	5.0	153		1834	5.6	172		1756	6.2	189		1919	6.2	190		1946	6.8	208
	2235	1.0	29		2155	1.4	43		2316	2.8	86		2240	3.2	97		2344	4.8	145		2359	5.2	159
8 Tu	0625	6.4	195	23 W	0537	6.0	183	8 F	0629	5.8	178	23 Sa	0535	6.1	185	8 M	0543	6.1	185	23 Tu	0521	6.5	198
	1100	3.2	99		1006	3.3	101		1158	2.2	66		1106	2.0	60		1248	2.3	70		1300	1.7	51
	1800	5.1	154		1721	5.1	155		1921	5.5	169		1853	6.2	190		2022	6.0	182		2113	6.7	203
	2315	1.5	45		2232	1.7	53		2358	3.4	104		2326	3.7	114								
9 W	0659	6.1	186	24 Th	0601	5.9	180	9 Sa	0643	5.7	175	24 Su	0550	6.1	185	9 Tu	0041	5.1	155	24 W	0128	5.3	163
	1153	2.8	86		1050	2.9	88		1252	2.0	62		1209	1.7	51		0556	5.9	179		0604	6.2	189
	1859	5.0	153		1810	5.2	159		2016	5.4	166		2002	6.1	187		1351	2.4	72		1416	1.8	54
	2359	2.0	62		2308	2.1	65										2200	5.9	179		2242	6.7	203
10 Th	0734	5.8	177	25 F	0631	5.8	177	10 Su	0043	4.0	121	25 M	0022	4.3	130	10 W	0206	5.3	161	25 Th	0307	5.2	157
	1250	2.5	75		1139	2.5	75		0650	5.6	170		0602	6.0	184		0620	5.7	173		0705	5.9	179
	1959	5.0	151		1908	5.3	163		1349	2.0	60		1321	1.5	45		1459	2.3	71		1537	1.9	58
					2355	2.7	81		2128	5.4	164		2129	6.0	184		2329	6.0	182		2354	6.7	205
11 F	0047	2.7	82	26 Sa	0655	5.7	173	11 M	0137	4.5	137	26 Tu	0133	4.7	144	11 Th	0356	5.2	159	26 F	0423	4.7	144
	0756	5.5	169		1236	2.0	62		0654	5.4	166		0628	6.0	182		0714	5.5	167		0816	5.6	171
	1347	2.2	66		2014	5.4	165		1450	1.9	59		1439	1.3	39		1608	2.2	67		1644	2.0	62
	2106	5.0	151				2305		5.5	167	2306		6.2	188									
12 Sa	0136	3.3	102	27 Su	0047	3.3	100	12 Tu	0302	4.8	147	27 W	0303	5.0	152	12 F	0032	6.2	188	27 Sa	0050	6.7	205
	0814	5.3	162		0712	5.6	170		0713	5.3	163		0711	5.8	178		0504	4.9	150		0516	4.2	129
	1444	1.9	58		1343	1.6	50		1555	1.8	56		1558	1.1	35		0822	5.4	164		1216	5.5	168
	2225	5.1	154		2138	5.5	168										1705	2.0	62		1738	2.2	68
13 Su	0237	3.9	120	28 M	0150	3.9	120	13 W	0027	5.7	175	28 Th	0026	6.4	196	13 Sa	0117	6.3	193	28 Su	0133	6.7	203
	0807	5.2	159		0708	5.6	171		0445	4.9	150		0437	4.9	150		0542	4.6	139		0557	3.7	114
	1542	1.7	53		1456	1.2	38		0800	5.2	160		0814	5.7	174		0919	5.3	162		1325	5.9	181
	2349	5.3	163		2312	5.8	176		1657	1.7	51		1708	1.0	31		1751	2.0	60		1817	2.6	78
14 M	0349	4.4	134	29 Tu	0305	4.5	137	14 Th	0127	6.0	184	29 F	0130	6.6	202	14 Su	0153	6.5	197	29 M	0201	6.6	200
	0811	5.2	157		0732	5.7	173		0553	4.8	146		0544	4.6	139		0611	4.2	129		0632	3.3	102
	1637	1.6	48		1608	0.9	27		0858	5.2	159		0918	5.6	171		1314	5.5	167		1406	6.4	195
							1752		1.4	44	1806		1.0	31	1806		1.0	31	1828		2.1	63	1853	3.0	91
15 Tu	0059	5.7	174	30 W	0039	6.1	187	15 F	0213	6.3	192	30 Sa	0218	6.7	204	15 M	0219	6.4	196	30 Tu	0228	6.5	197
	0510	4.6	141		0435	4.8	146		0632	4.6	141		0630	4.2	127		0639	3.9	118		0702	3.0	92
	0844	5.2	157		0821	5.7	174		0950	5.2	160		1015	5.5	169		1400	5.9	179		1446	6.8	208
	1730	1.4	44		1719	0.6	17		1838	1.2	38		1855	1.2	37		1900	2.3	71		1922	3.5	107
			31 Th	0149	6.6	200																	
				0551	4.8	146																	
				0920	5.7	174																	
				1820	0.3	10																	

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Shantou, China, 2008

Times and Heights of High and Low Waters

October						November						December																
Time			Height			Time			Height			Time			Height			Time			Height							
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm				
1 W	0245	6.5	198		16 Th	0150	6.7	205		1 Sa	0217	6.9	209		16 Su	0032	7.3	224		1 M	0149	6.6	202		16 Tu	0056	6.9	209
	0738	2.7	83			0654	2.5	75			0810	2.3	70			0808	1.2	38			0832	2.1	64			0900	1.0	30
	1521	7.1	217			1455	7.8	238			1601	8.0	245			1620	8.4	257			1620	7.7	236			1705	7.8	239
	1951	3.9	120			1912	4.5	138			2003	5.6	171			2006	5.8	178			2016	5.6	171			2105	5.2	158
2 Th	0301	6.6	200		17 F	0207	6.8	208		2 Su	0241	7.0	212		17 M	0131	7.3	223		2 Tu	0237	6.6	200		17 W	0200	6.5	197
	0810	2.5	76			0739	2.1	63			0852	2.3	71			0905	1.2	38			0909	2.1	65			0951	1.3	41
	1556	7.4	225			1542	8.1	247			1636	7.9	242			1711	8.2	251			1654	7.5	230			1752	7.5	230
	2021	4.4	134			1952	5.0	151			2037	5.7	173			2104	5.8	177			2058	5.4	166			2209	4.8	146
3 F	0322	6.6	202		18 Sa	0233	7.0	214		3 M	0305	6.9	210		18 Tu	0235	7.1	216		3 W	0315	6.4	195		18 Th	0415	6.0	182
	0850	2.4	72			0823	1.8	55			0933	2.4	73			1002	1.4	44			0950	2.2	66			1044	1.8	56
	1632	7.5	228			1630	8.1	248			1711	7.7	236			1806	7.9	240			1730	7.3	222			1837	7.2	219
	2052	4.8	145			2036	5.3	163			2120	5.7	174			2219	5.6	172			2147	5.2	160			2326	4.3	132
4 Sa	0342	6.7	205		19 Su	0238	7.2	218		4 Tu	0339	6.8	207		19 W	0342	6.7	204		4 Th	0353	6.1	187		19 F	0550	5.7	174
	0929	2.4	72			0919	1.6	49			1014	2.5	75			1100	1.8	56			1029	2.3	70			1134	2.4	73
	1707	7.5	228			1720	8.0	244			1752	7.4	226			1902	7.5	229			1807	7.1	216			1919	6.8	208
	2129	5.1	154			2124	5.6	170			2209	5.6	172			2345	5.3	162			2248	5.0	153			2358	4.7	143
5 Su	0359	6.7	205		20 M	0316	7.2	219		5 W	0408	6.6	200		20 Th	0453	6.2	189		5 F	0445	5.8	178		20 Sa	0039	3.8	117
	1009	2.4	72			1018	1.6	48			1104	2.6	78			1201	2.3	71			1112	2.5	76			0719	5.4	166
	1745	7.3	223			1819	7.7	236			1840	7.1	215			2002	7.2	218			1850	6.9	210			1226	3.1	93
	2204	5.3	161			2229	5.7	174			2312	5.5	169			2101	6.9	210			2358	4.7	143			2000	6.6	200
6 M	0427	6.6	202		21 Tu	0404	7.0	213		6 Th	0444	6.2	190		21 F	0113	4.8	146		6 Sa	0552	5.5	168		21 Su	0149	3.3	100
	1058	2.5	75			1123	1.8	54			1155	2.7	82			0626	5.7	173			1200	2.8	85			0850	5.4	164
	1828	7.0	213			1926	7.4	225			1939	6.8	207			1305	2.9	88			1938	6.7	205			1323	3.7	112
	2253	5.4	166			2351	5.7	173			2043	6.7	203			2101	6.9	210			2042	6.3	193			2042	6.3	193
7 Tu	0447	6.5	198		22 W	0457	6.6	201		7 F	0039	5.3	162		22 Sa	0229	4.2	127		7 Su	0110	4.2	129		22 M	0252	2.8	86
	1149	2.6	79			1233	2.0	62			0531	5.8	178			0855	5.5	167			0736	5.3	163			1020	5.5	169
	1923	6.7	203			2044	7.1	217			1251	2.9	88			1411	3.4	104			1253	3.2	97			1423	4.3	130
	2352	5.5	169						2043		6.7	203		2156		6.7	204		2027		6.6	202		2113		6.2	188	
8 W	0512	6.2	190		23 Th	0130	5.4	164		8 Sa	0207	5.0	151		23 Su	0327	3.6	109		8 M	0210	3.7	113		23 Tu	0348	2.4	74
	1249	2.7	82			0558	6.1	186			0646	5.5	167			1047	5.7	175			0917	5.5	167			1139	5.9	180
	2042	6.4	194			1345	2.4	74			1352	3.1	95			1515	3.9	119			1352	3.7	112			1527	4.8	145
						2157	7.0	212			2143	6.7	203			2244	6.6	200			2111	6.6	200			2118	6.1	185
9 Th	0116	5.5	168		24 F	0258	4.9	149		9 Su	0307	4.4	135		24 M	0415	3.1	93		9 Tu	0305	3.1	95		24 W	0437	2.1	65
	0545	5.9	180			0717	5.7	173			0946	5.5	167			1158	6.2	189			1044	6.0	183			1240	6.4	194
	1354	2.8	84			1458	2.8	85			1454	3.4	103			1609	4.3	132			1454	4.2	127			1630	5.1	155
	2205	6.3	193			2300	6.8	208			2235	6.7	204			2325	6.4	196			2151	6.5	199			2114	6.1	186
10 F	0300	5.3	161		25 Sa	0400	4.3	130		10 M	0351	3.8	117		25 Tu	0458	2.7	81		10 W	0357	2.5	76		25 Th	0520	1.9	59
	0644	5.6	171			1052	5.6	172			1115	6.0	182			1252	6.7	205			1154	6.7	203			1328	6.8	206
	1502	2.8	85			1603	3.1	95			1550	3.7	112			1654	4.7	144			1553	4.7	142			1725	5.3	161
	2308	6.4	196			2351	6.8	206			2316	6.7	204			2348	6.4	196			2155	6.5	199			2136	6.1	186
11 Sa	0404	4.9	148		26 Su	0446	3.7	113		11 Tu	0429	3.3	100		26 W	0537	2.4	72		11 Th	0447	1.9	58		26 F	0600	1.8	56
	0809	5.4	165			1214	6.1	185			1216	6.7	203			1334	7.2	218			1254	7.3	222			1409	7.1	216
	1602	2.8	85			1654	3.4	105			1637	4.1	124			1734	5.1	155			1646	5.1	154			1809	5.4	165
	2357	6.6	200						2351		6.8	206							2138		6.8	206		2208		6.1	187	
12 Su	0445	4.4	133		27 M	0033	6.7	203		12 W	0505	2.7	82		27 Th	0009	6.4	196		12 F	0538	1.4	43		27 Sa	0639	1.7	53
	1147	5.7	173			0524	3.2	99			1307	7.4	225			0609	2.2	66			1350	7.8	238			1447	7.3	221
	1650	2.9	88			1306	6.6	201			1717	4.5	138			1409	7.5	230			1734	5.4	164			1845	5.4	165
						1735	3.8	117								1808	5.4	164			2216	7.0	213			2243	6.1	187
13 M	0037	6.6	202		28 Tu	0057	6.6	202		13 Th	0027	6.8	206		28 F	0035	6.5	199		13 Sa	0626	1.0	32		28 Su	0714	1.7	53
	0515	3.9	118			0558	2.9	88			0548	2.2	66			0645	2.1	63			1442	8.1	246			1518	7.3	222
	1247	6.2	189			1349	7.1	216			1355	8.0	243			1444	7.8	238			1821	5.6	170			1915	5.3	163
	1730	3.1	96			1804	4.3	131			1755	5.0	152	</														

PengHu (Ma-Kung Kang), Pescadores Islands, 2008

Times and Heights of High and Low Waters

January						February						March					
Time			Height			Time			Height			Time			Height		
	h	m	ft	m	cm		h	m	ft	m	cm		h	m	ft	m	cm
1 Tu	0524	2.0	62			16 W	0438	3.0	90			1 Sa	0607	1.6	50		
	1129	-2.4	-73				1025	-2.6	-78				1135	-0.8	-23		
	1749	2.6	80			17 O	1700	3.5	107				1714	2.2	67		
							2311	-3.2	-98								
2 W	0029	-2.7	-83			17 Th	0552	2.6	79			2 Su	0037	-2.9	-87		
	0637	1.8	55				1129	-1.9	-58				0726	1.7	51		
	1230	-1.9	-57				1756	3.3	102				1255	-0.6	-18		
	1842	2.5	76										1829	2.1	64		
3 Th	0130	-3.0	-91			18 F	0023	-3.5	-106			3 M	0144	-3.0	-91		
	0750	1.8	55				0717	2.5	75				0838	2.0	61		
	1332	-1.5	-46				1243	-1.3	-41				1406	-0.7	-21		
	1935	2.4	74				1900	3.2	99				1954	2.3	71		
4 F	0226	-3.3	-100			19 Sa	0137	-3.8	-116			4 Tu	0244	-3.2	-99		
	0856	2.0	61				0838	2.6	79				0933	2.5	77		
	1430	-1.3	-39				1401	-1.0	-31				1504	-1.0	-31		
	2026	2.5	76				2008	3.3	100				2101	2.8	86		
5 Sa	0317	-3.6	-109			20 Su	0249	-4.1	-126			5 W	0335	-3.6	-109		
	0952	2.3	71				0948	2.9	88				1015	3.1	93		
	1523	-1.2	-37				1510	-0.9	-27				1550	-1.4	-43		
	2113	2.7	82				2113	3.4	105				2154	3.4	105		
6 Su	0402	-3.8	-117			21 M	0354	-4.4	-135			6 Th	0419	-3.8	-117		
	1038	2.6	80				1047	3.2	97				1052	3.5	108		
	1609	-1.2	-37				1610	-1.0	-30				1629	-1.8	-56		
	2155	2.9	89				2211	3.7	113				2240	4.0	123		
7 M	0443	-4.1	-124			22 Tu	0451	-4.6	-141			7 F	0457	-3.9	-120		
	1118	2.9	89				1137	3.4	104				1126	3.9	120		
	1649	-1.3	-39				1701	-1.1	-35				1704	-2.3	-71		
	2235	3.2	98				2303	3.9	120				2322	4.5	136		
8 Tu	0520	-4.2	-129			23 W	0541	-4.7	-142			8 Sa	0530	-3.9	-118		
	1154	3.2	97				1220	3.5	108				1158	4.2	128		
	1725	-1.3	-41				1747	-1.4	-44				1736	-2.8	-85		
	2313	3.5	106				2351	4.0	123								
9 W	0554	-4.3	-132			24 Th	0625	-4.6	-139			9 Su	0003	4.7	142		
	1228	3.4	103				1259	3.6	109				0601	-3.6	-110		
	1757	-1.5	-45				1830	-1.8	-54				1230	4.4	133		
	2350	3.7	113										1810	-3.2	-99		
10 Th	0623	-4.4	-133			25 F	0037	4.0	122			10 M	0045	4.6	141		
	1301	3.5	107				0703	-4.3	-132				0633	-3.2	-99		
	1827	-1.6	-50				1335	3.6	109				1302	4.4	134		
							1913	-2.1	-65				1848	-3.6	-110		
11 F	0029	3.9	118			26 Sa	0121	3.8	117			11 Tu	0128	4.4	133		
	0652	-4.4	-133				0739	-4.0	-123				0708	-2.8	-84		
	1334	3.6	110				1411	3.5	107				1335	4.3	132		
	1858	-1.9	-57				1958	-2.5	-75				1930	-3.9	-118		
12 Sa	0109	3.9	119			27 Su	0206	3.5	107			12 W	0215	3.9	120		
	0723	-4.3	-130				0816	-3.6	-111				0748	-2.2	-67		
	1409	3.7	113				1446	3.4	103				1413	4.1	126		
	1935	-2.1	-65				2045	-2.7	-82				2020	-3.9	-119		
13 Su	0153	3.8	117			28 M	0252	3.1	93			13 Th	0310	3.4	103		
	0800	-4.0	-123				0855	-3.1	-96				0836	-1.6	-49		
	1445	3.7	114				1522	3.2	97				1457	3.8	115		
	2018	-2.4	-74				2136	-2.8	-86				2121	-3.8	-115		
14 M	0241	3.6	111			29 Tu	0342	2.6	79			14 F	0416	2.8	86		
	0842	-3.7	-112				0938	-2.6	-79				0936	-1.0	-32		
	1525	3.7	114				1600	2.9	89				1552	3.3	102		
	2108	-2.7	-82				2231	-2.9	-88				2238	-3.5	-108		
15 Tu	0335	3.3	102			30 W	0438	2.1	64			15 Sa	0534	2.4	74		
	0930	-3.2	-97				1027	-2.0	-61				1100	-0.7	-20		
	1610	3.6	111				1640	2.7	81				1702	2.9	89		
	2206	-3.0	-90				2330	-2.9	-88								
						31 Th	0545	1.7	53								
							1126	-1.4	-44								
							1727	2.4	72								

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

PengHu (Ma-Kung Kang), Pescadores Islands, 2008

Times and Heights of High and Low Waters

April						May						June																																																																																																																																																																																																																																																								
Time			Height			Time			Height			Time			Height																																																																																																																																																																																																																																																					
	h	m	ft	cm			h	m	ft	cm			h	m	ft	cm																																																																																																																																																																																																																																																				
1 Tu	0051	-2.9	-88		16 W	0219	-3.2	-98		1 Th	0103	-3.1	-93	16 F	0244	-2.6	-79	1 Su	0213	-2.4	-72	16 M	0343	-1.6	-48																																																																																																																																																																																																																																											
	0746	2.2	67			0851	3.1	94			0749	3.0	90			0857	3.1		96		0840		3.7	113		0938	2.9	89																																																																																																																																																																																																																																								
	1322	-0.8	-25			1459	-2.0	-60			1337	-1.8	-55			1527	-3.1		-95		1447		-3.8	-116		1622	-4.0	-121																																																																																																																																																																																																																																								
	1916	2.3	71			2055	3.1	95			1957	2.9	87			2133	3.1		93		2137		3.5	106		2248	2.9	88																																																																																																																																																																																																																																								
2 W	0156	-3.1	-94		17 Th	0320	-3.1	-95		2 F	0202	-3.1	-94		17 Sa	0336	-2.4	-72		2 M	0309	-2.0	-61		17 Tu	0425	-1.5	-45																																																																																																																																																																																																																																								
	0844	2.7	82			0940	3.3	102			0840	3.4	103			0940	3.2	99			0928	3.9	120			1015	3.1	93																																																																																																																																																																																																																																								
	1424	-1.3	-39			1554	-2.5	-77			1432	-2.5	-76			1614	-3.5	-108			1540	-4.4	-133			1700	-4.2	-127																																																																																																																																																																																																																																								
	2031	2.9	88			2151	3.5	106			2101	3.4	104			2222	3.2	99			2234	3.7	114			2328	3.1	93																																																																																																																																																																																																																																								
3 Th	0251	-3.3	-101		18 F	0411	-3.0	-91		3 Sa	0255	-3.0	-92		18 Su	0419	-2.1	-64		3 Tu	0401	-1.6	-50		18 W	0503	-1.4	-44																																																																																																																																																																																																																																								
	0930	3.2	99			1019	3.5	107			0925	3.8	116			1016	-3.1	101			1014	4.1	125			1049	3.2	97																																																																																																																																																																																																																																								
	1513	-1.8	-56			1640	-3.0	-91			1520	-3.2	-97			1653	-3.8	-117			1632	-4.8	-145			1734	-4.3	-130																																																																																																																																																																																																																																								
	2129	3.5	108			2238	3.7	113			2156	3.9	120			2305	3.3	102			2328	3.8	117																																																																																																																																																																																																																																													
4 F	0338	-3.5	-106		19 Sa	0452	-2.7	-83		4 Su	0342	-2.8	-85		19 M	0456	-1.9	-58		4 W	0450	-1.3	-41		19 Th	0004	3.1	96																																																																																																																																																																																																																																								
	1010	3.7	114			1053	3.6	109			1006	4.1	126			1048	3.3	102			1058	4.2	129			0536	-1.4	-44																																																																																																																																																																																																																																								
	1555	-2.5	-75			1717	-3.3	-102			1604	-3.8	-117			1726	-4.0	-123			1723	-5.0	-152			1121	3.3	101																																																																																																																																																																																																																																								
	2218	4.1	126			2320	3.8	115			2247	4.2	129			2343	3.4	103						1805		-4.3	-132																																																																																																																																																																																																																																									
5 Sa	0420	-3.4	-105		20 Su	0526	-2.5	-75		5 M	0426	-2.4	-74		20 Tu	0528	-1.7	-53		5 Th	0019	3.8	116		20 F	0037	3.2	98																																																																																																																																																																																																																																								
	1047	4.1	126			1123	3.6	109			1045	4.4	133			1117	3.4	103			0537	-1.1	-35			0607	-1.5	-45																																																																																																																																																																																																																																								
	1633	-3.1	-93			1749	-3.6	-110			1647	-4.3	-132			1757	-4.2	-127			1144	4.2	129			1153	3.4	104																																																																																																																																																																																																																																								
	2304	4.5	138			2358	3.7	114			2336	4.3	132						1815		-5.1	-154		1833		-4.3	-132																																																																																																																																																																																																																																									
6 Su	0458	-3.2	-98		21 M	0554	-2.2	-68		6 Tu	0507	-2.0	-61		21 W	0019	3.4	103		6 F	0109	3.7	112		21 Sa	0110	3.2	99																																																																																																																																																																																																																																								
	1121	4.4	134			1151	3.6	109			1123	4.4	135			0558	-1.6	-50			0626	-1.1	-34			0637	-1.5	-46																																																																																																																																																																																																																																								
	1710	-3.6	-110			1817	-3.8	-116			1731	-4.7	-143			1144	3.4	104			1231	4.2	127			1227	3.5	106																																																																																																																																																																																																																																								
	2348	4.7	142								1824	-4.2	-129			1824	-4.2	-129			1908	-5.0	-151			1859	-4.3	-130																																																																																																																																																																																																																																								
7 M	0533	-2.8	-86		22 Tu	0033	3.6	111		7 W	0024	4.2	128		22 Th	0053	3.3	100		7 Sa	0158	3.5	107		22 Su	0143	3.3	100																																																																																																																																																																																																																																								
	1155	4.5	137			0620	-2.0	-62			0549	-1.6	-48			0626	-1.5	-47			0718	-1.2	-37			0707	-1.6	-49																																																																																																																																																																																																																																								
	1748	-4.0	-123			1216	3.5	108			1201	4.4	134			1211	3.4	104			1321	3.9	120			1304	3.5	107																																																																																																																																																																																																																																								
						1844	-4.0	-121			1818	-4.8	-147			1850	-4.2	-129			2003	-4.7	-143			1928	-4.2	-128																																																																																																																																																																																																																																								
8 Tu	0033	4.5	138		23 W	0108	3.5	106		8 Th	0114	3.9	119		23 F	0128	3.2	98		8 Su	0247	3.4	103		23 M	0217	3.3	101																																																																																																																																																																																																																																								
	0608	-2.4	-72			0646	-1.9	-57			0633	-1.3	-39			0655	-1.5	-46			0817	-1.4	-42			0741	-1.7	-53																																																																																																																																																																																																																																								
	1229	4.5	137			1240	3.5	107			1243	4.3	130			1241	3.4	103			1417	3.6	110			1345	3.4	105																																																																																																																																																																																																																																								
	1829	-4.3	-132			1910	-4.0	-122			1910	-4.8	-145			1917	-4.2	-128			2058	-4.3	-132			2003	-4.1	-124																																																																																																																																																																																																																																								
9 W	0119	4.2	128		24 Th	0143	3.3	100		9 F	0207	3.5	108		24 Sa	0203	3.1	94		9 M	0337	3.2	99		24 Tu	0253	3.3	102																																																																																																																																																																																																																																								
	0646	-1.9	-57			0715	-1.7	-52			0723	-1.1	-33			0727	-1.4	-44			0922	-1.6	-49			0821	-1.9	-59																																																																																																																																																																																																																																								
	1305	4.4	133			1306	3.4	104			1329	4.0	121			1316	3.3	100			1518	3.2	97			1431	3.3	101																																																																																																																																																																																																																																								
	1915	-4.4	-134			1939	-4.0	-121			2009	-4.5	-138			1949	-4.1	-124			2155	-3.9	-118			2044	-3.9	-118																																																																																																																																																																																																																																								
10 Th	0210	3.7	114		25 F	0220	3.0	92		10 Sa	0303	3.2	99		25 Su	0241	3.0	91		10 Tu	0428	3.1	96		25 W	0333	3.4	103																																																																																																																																																																																																																																								
	0730	-1.4	-44			0748	-1.5	-46			0823	-1.0	-30			0804	-1.4	-43			1031	-1.9	-58			0908	-2.1	-65																																																																																																																																																																																																																																								
	1346	4.1	124			1337	3.2	99			1424	3.6	109			1357	3.1	96			1624	2.7	83			1523	3.1	95																																																																																																																																																																																																																																								
	2010	-4.3	-130			2014	-3.8	-117			2115	-4.2	-128			2028	-3.9	-119			2254	-3.3	-102			2131	-3.5	-108																																																																																																																																																																																																																																								
11 F	0307	3.2	99		26 Sa	0300	2.8	85		11 Su	0402	3.0	92		26 M	0322	2.9	89		11 W	0521	3.0	92		26 Th	0417	3.4	103																																																																																																																																																																																																																																								
	0825	-1.0	-32			0827	-1.3	-39			0936	-1.0	-31			0848	-1.4	-42			1142	-2.2	-68			1003	-2.4	-73																																																																																																																																																																																																																																								
	1435	3.7	112			1415	3.0	92			1530	3.1	95			1445	3.0	90			1736	2.4	73			1623	2.9	88																																																																																																																																																																																																																																								
	2117	-4.0	-121			2056	-3.6	-110			2222	-3.8	-117			2115	-3.7	-113			2355	-2.9	-87			2225	-3.1	-95																																																																																																																																																																																																																																								
12 Sa	0413	2.8	86		27 Su	0348	2.5	77		12 M	0502	2.9	87		27 Tu	0409	2.9	88		12 Th	0617	2.9	89		27 F	0506	3.4	103																																																																																																																																																																																																																																								
	0936	-0.8	-23			0914	-1.1	-33			1055	-1.2	-36			0940	-1.4	-44			1251	-2.6	-80			1104	-2.7	-83																																																																																																																																																																																																																																								
	1537	3.2	97			1502	2.7	83			1645	2.7	83			1542	2.7	83			1852	2.2	68			1733	2.7	81																																																																																																																																																																																																																																								
	2236	-3.7	-112			2148	-3.3	-102			2330	-3.4	-105			2208	-3.5	-106						2324		-2.6	-79																																																																																																																																																																																																																																									
13 Su	0525	2.6	79		28 M	0444	2.4	73		13 Tu	0605	2.8	86		28 W	0501	2.9	89		13 F	0058	-2.4	-72		28 Sa	0600	3.4	103																																																																																																																																																																																																																																								
	1105	-0.7	-21			1012	-1.0	-29			1041	-1.6	-49			0714	2.9	87			1209	-3.1	-95																																																																																																																																																																																																																																													
	1655	2.8	84			1601	2.4	74			1648	2.6	79			1354	-3.1	-93			1853	2.6	79																																																																																																																																																																																																																																													
	2354	-3.4	-104			2250	-3.1	-96			2308	-3.2	-98			2005	2.3	70																																																																																																																																																																																																																																																		
14 M	0639	2.6	78		29 Tu	0546	2.4	73		14 W	0038	-3.1	-95		29 Th	0556	3.0	92		14 Sa	0159	-2.0	-61		29 Su	0029	-2.1	-63																																																																																																																																																																																																																																								
	1232	-0.9	-28			1122	-1.0	-29			0708	2.9	88			1146	-2.0	-60			0808	2.8	86			0658	3.4	103																																																																																																																																																																																																																																								
	1822	2.6	79			1714	2.3	70			1328	-2.1	-63			1803	2.6	78			1450	-3.4	-104			1316	-3.6	-109																																																																																																																																																																																																																																								
						2357	-3.1	-93			1924	2.6	78						2109		2.5	76		2012		2.8	84																																																																																																																																																																																																																																									
15 Tu	0109	-3.3	-100		30 W	0650	2.6	79		15 Th	0144	-2.8	-86		30 F	0010	-3.0	-90		15 Su	0254	-1.7	-53		30 M	0138	-1.6	-49																																																																																																																																																																																																																																								
	0751	2.8	84			1234	-1.3	-39			0807	3.0	92			0653	3.2	98			0856	2.9	87			0759	3.5	106																																																																																																																																																																																																																																								
	1351	-1.4	-42			1839	2.4	74			1433	-2.6	-80			1251	-2.5	-77			1539	-3.7	-114			1422	-4.1	-124																																																																																																																																																																																																																																								
	1945	2.8	85								2034	2.8	85			1923	2.8	84			2203	2.7	83			2124	3.0	92																																																																																																																																																																																																																																								
																																																																																																																																																																																																																																																																				</

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

PengHu (Ma-Kung Kang), Pescadores Islands, 2008

Times and Heights of High and Low Waters

July				August				September															
Time		Height		Time		Height		Time		Height		Time		Height									
h	m	ft	cm	h	m	ft	cm	h	m	ft	cm	h	m	ft	cm								
1 Tu	0245	-1.3	-39	16 W	0355	-1.1	-35	1 F	0436	-1.1	-34	16 Sa	0447	-1.6	-48	1 M	0007	3.8	117	16 Tu	0521	-2.9	-87
	0858	3.6	110		0945	2.8	85		1041	4.0	121		1047	3.6	109		0600	-2.6	-78		1146	4.5	136
	1526	-4.5	-137		1631	-4.0	-122		1716	-4.6	-140		1716	-4.0	-121		1208	4.3	131		1743	-3.3	-102
	2227	3.3	100		2308	2.8	86		2356	3.6	110		2344	3.5	107		1823	-3.6	-110				
2 W	0347	-1.1	-33	17 Th	0437	-1.3	-39	2 Sa	0525	-1.5	-45	17 Su	0520	-1.9	-57	2 Tu	0040	3.9	118	17 W	0007	4.3	130
	0953	3.8	117		1026	3.1	94		1131	4.2	128		1125	3.9	120		0638	-3.0	-90		0551	-3.3	-100
	1625	-4.8	-146		1710	-4.1	-126		1802	-4.5	-138		1746	-4.0	-122		1250	4.2	127		1225	4.5	138
	2322	3.5	107		2343	3.1	94		2356	3.6	110		2344	3.5	107		1854	-3.3	-100		1812	-3.1	-93
3 Th	0441	-1.0	-31	18 F	0514	-1.4	-43	3 Su	0035	3.7	114	18 M	0014	3.8	115	3 W	0112	3.8	117	18 Th	0037	4.4	133
	1045	4.0	123		1104	3.4	103		0609	-1.9	-57		0549	-2.2	-67		0716	-3.3	-100		0625	-3.7	-112
	1721	-5.0	-151		1743	-4.2	-129		1218	4.3	130		1203	4.2	128		1331	3.9	118		1306	4.4	133
	●	●	●		1843	-4.3	-132		1813	-3.9	-119		1813	-3.9	-119		1925	-2.9	-89		1844	-2.6	-80
4 F	0011	3.6	110	19 Sa	0015	3.3	100	4 M	0112	3.8	115	19 Tu	0043	4.0	121	4 Th	0142	3.7	113	19 F	0110	4.3	132
	0531	-1.1	-34		0546	-1.6	-48		0653	-2.3	-70		0617	-2.6	-78		0755	-3.5	-107		0704	-3.9	-120
	1136	4.2	127		1141	3.6	110		1304	4.1	126		1240	4.3	132		1413	3.5	106		1351	4.0	123
	1812	-5.0	-151		1813	-4.2	-129		1920	-4.0	-123		1839	-3.7	-114		1959	-2.6	-78		1922	-2.1	-65
5 Sa	0056	3.6	111	20 Su	0046	3.4	105	5 Tu	0148	3.8	115	20 W	0112	4.1	125	5 F	0213	3.5	107	20 Sa	0146	4.2	127
	0619	-1.3	-41		0615	-1.8	-54		0739	-2.7	-82		0649	-3.0	-90		0836	-3.6	-109		0749	-4.0	-122
	1225	4.2	127		1217	3.8	116		1349	3.8	117		1319	4.3	130		1457	3.0	92		1441	3.5	108
	1859	-4.8	-147		1839	-4.2	-128		1957	-3.6	-110		1909	-3.4	-105		2037	-2.1	-65		2006	-1.6	-50
6 Su	0139	3.6	110	21 M	0116	3.6	109	6 W	0223	3.7	112	21 Th	0143	4.1	126	6 Sa	0245	3.2	99	21 Su	0227	3.9	118
	0708	-1.7	-51		0643	-2.0	-61		0826	-3.0	-91		0726	-3.3	-100		0921	-3.5	-106		0844	-3.9	-118
	1314	4.0	123		1254	3.9	119		1436	3.4	104		1402	4.0	123		1545	2.5	77		1542	3.0	92
	1945	-4.5	-138		1905	-4.1	-126		2037	-3.1	-96		1945	-3.0	-92		2121	-1.7	-51		2101	-1.1	-34
7 M	0221	3.6	109	22 Tu	0146	3.7	113	7 Th	0300	3.5	106	22 F	0218	4.1	124	7 Su	0320	2.9	88	22 M	0318	3.5	106
	0800	-2.0	-61		0715	-2.3	-70		0917	-3.1	-96		0810	-3.5	-107		1013	-3.3	-100		0953	-3.6	-111
	1405	3.7	114		1333	3.9	119		1526	2.9	88		1450	3.6	110		1642	2.1	64		1655	2.6	78
	2030	-4.1	-126		1937	-4.0	-121		2120	-2.6	-80		2028	-2.5	-75		●	2213	-1.2		-36	●	2214	-0.7	-21
8 Tu	0303	3.5	107	23 W	0219	3.8	115	8 F	0338	3.2	97	23 Sa	0258	3.9	119	8 M	0402	2.5	77	23 Tu	0422	3.1	93
	0857	-2.3	-71		0753	-2.6	-79		1012	-3.2	-97		0901	-3.6	-109		1113	-3.1	-93		1118	-3.4	-104
	1459	3.3	100		1416	3.7	114		1621	2.4	72		1546	3.1	95		1750	1.8	54		1817	2.4	73
	2117	-3.6	-111		2014	-3.7	-112		2209	-2.0	-62		2118	-1.8	-56		2320	-0.8	-24		2350	-0.5	-16
9 W	0346	3.3	102	24 Th	0255	3.8	116	9 Sa	0420	2.9	87	24 Su	0344	3.6	109	9 Tu	0457	2.2	66	24 W	0546	2.8	84
	0957	-2.6	-79		0837	-2.9	-87		1110	-3.1	-96		1003	-3.5	-108		1219	-2.9	-88		1243	-3.3	-102
	1556	2.8	85		1505	3.5	106		1726	1.9	59		1657	2.6	79		1907	1.7	52		1938	2.5	77
	2208	-3.1	-93		2057	-3.2	-98		2307	-1.5	-45		●	2220	-1.2		-36	●	2220		-1.2	-36	●
10 Th	0432	3.1	96	25 F	0335	3.7	114	10 Su	0507	2.5	76	25 M	0441	3.2	99	10 W	0037	-0.6	-19	25 Th	0121	-0.8	-23
	1100	-2.8	-85		0929	-3.1	-94		1211	-3.1	-94		1120	-3.4	-105		0612	2.0	60		0716	2.8	86
	1700	2.3	71		1601	3.1	94		1839	1.7	51		1823	2.3	70		1326	-2.9	-88		1400	-3.4	-104
	2304	-2.5	-75		2147	-2.6	-80		●	2307	-1.5		-45	●	2220		-1.2	-36	2019		1.9	59	2047	2.9	88
11 F	0521	2.9	87	26 Sa	0421	3.6	109	11 M	0015	-1.0	-31	26 Tu	0553	3.0	90	11 Th	0149	-0.7	-22	26 F	0235	-1.2	-38
	1203	-3.0	-90		1029	-3.3	-100		0604	2.2	68		1246	-3.5	-106		0740	2.1	65		0833	3.2	97
	1811	2.0	60		1709	-2.7	82		1314	-3.1	-94		1952	2.4	72		1427	-3.1	-93		1507	-3.5	-107
	●	●	●		2246	-1.9	-59		1957	1.7	52		●	2220	-1.2		-36	2115	2.4		72	2141	3.3	100
12 Sa	0005	-1.9	-58	27 Su	0515	3.4	103	12 Tu	0125	-0.8	-25	27 W	0118	-0.6	-17	12 F	0248	-1.0	-31	27 Sa	0336	-1.8	-55
	0614	2.6	80		1137	-3.4	-105		0712	2.1	65		0718	2.9	89		0848	2.6	79		0936	3.6	110
	1305	-3.1	-96		1832	2.4	73		1415	-3.2	-98		1408	-3.7	-112		1519	-3.3	-100		1603	-3.5	-106
	1926	1.9	57		2357	-1.3	-40		2107	2.0	60		2108	2.7	83		2158	2.9	87		2225	3.6	109
13 Su	0109	-1.5	-45	28 M	0618	3.2	97	13 W	0229	-0.8	-25	28 Th	0237	-0.8	-23	13 Sa	0336	-1.4	-44	28 Su	0427	-2.4	-72
	0710	2.5	75		1254	-3.6	-111		0820	2.3	70		0837	3.2	97		0941	3.2	97		1028	4.0	121
	1405	-3.3	-102		1959	2.4	74		1511	-3.4	-104		1518	-3.9	-119		1603	-3.5	-107		1650	-3.3	-102
	2038	2.0	61		2159	2.4	72		2159	2.4	72		2206	3.1	96		2233	3.3	102		2302	3.8	115
14 M	0211	-1.2	-37	29 Tu	0119	-0.9	-28	14 Th	0323	-1.0	-30	29 F	0340	-1.1	-35	14 Su	0416	-1.9	-58	29 M	0511	-2.9	-87
	0807	2.4	74		0918	2.7	81		0942	3.6	111		1025	3.7	114		1114	4.1	126				
	1459	-3.6	-109		1559	-3.6	-111		1617	-4.0	-123		1641	-3.6	-110		1729	-3.1	-94				
	2139	2.3	69		2239	2.8	85		2253	3.5	106		2253	3.5	106		2306	3.8	115		●	2336	3.8	117
15 Tu	0306	-1.1	-34	30 W	0237	-0.8	-24	15 F	0409	-1.3	-39	30 Sa	0433	-1.6	-49	15 M	0450	-2.4	-73	30 Tu	0549	-3.2	-99
	0859	2.6	78		0841	3.3	102		1006	3.1	95		1036	4.0	123		1106	4.2	128		1156	4.1	126
	1548	-3.8	-116		1521	-4.3	-130		1640	-3.8	-117		1707	-4.0	-123		1714	-3.5	-108		1801	-2.8	-85
	2228	2.6	78		2220	3.1	94		2313	3.1	96		2332	3.7	113		●	2337	4.1		124	●	2337	4.1	124
16 W	0347	-1.1	-33	17 Th	0437	-1.3	-39	2 Sa	0525	-1.5	-45	17 Su	0520	-1.9	-57	2 Tu	0040	3.9	118	17 W	0007	4.3	130
	0953	3.8	117		1026	3.1	94		1131	4.2	128		1125	3.9	120		0638	-3.0	-90		0551	-3.3	-100
	1625	-4.8	-146		1710	-4.1	-126		1802	-4.5	-138		1746	-4.0	-122		1250	4.2	127		1225	4.5	138
	2322	3.5	107		2343	3.1	94		2356	3.6	110		2344	3.5	107		1854	-3.3	-100		1812	-3.1	-93
17 Th	0441	-1.0	-31	18 F	0514	-1.4	-43	3 Su	0035	3.7	114	18 M	0014	3.8	115	3 W	0112	3.8	117	18 Th	0037	4.4	133
	1045	4.0	123		1104	3.4	103		0609	-1.9	-57		0549	-2.2	-67		0716	-3.3	-100		0625	-3.7	-112
	1721	-5.0	-151		1743	-4.2	-129		1218	4.3	130		1203	4.2	128		1331	3.9	118		1306	4.4	133
	●	●	●		1843	-4.3	-132		1813	-3.9	-119		1813	-3.9	-119		1925	-2.9	-89		1844	-2.6	-80
18 F	0011	3.6	110	19 Sa	0015	3.3	100	4 M	0112	3.8	115	19 Tu	0043	4.0	121	4 Th	0142	3.7	113	19 F	0110	4.3	132
	0531	-1.1	-34		0546	-1.6	-48		0653	-2.3	-70		0617	-2.6	-78		0755	-3.5	-107		0704	-3.9	-120
	1136	4.2	127		1141	3.6	110		1304	4.1	126		1240	4.3	132		1413	3.5	106		1351	4.0	123
	1812	-5.0	-151		1813	-4.2	-129		1920	-4.0	-123		1839	-3.7	-114		1						

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Keelung (Chi-lung Chiang), Taiwan, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height			Time	Height			Time	Height		
	h	m	ft		h	m	ft		h	m	ft
1 Tu	0516	0.3	10	16 W	0408	0.6	19	1 Sa	0638	1.0	32
	1025	-0.2	-7		0918	-0.5	-14		1307	0.3	9
	1644	0.7	21		1526	0.9	26		1546	0.4	12
	2335	-1.1	-33	17 Th	2219	-1.5	-46		2318	-1.4	-43
2 W	0647	0.6	17		0540	0.8	25	2 Su	0726	1.2	38
	1203	0.0	1		1045	-0.1	-3		1340	0.3	10
	1717	0.6	17		1602	0.7	22		1651	0.5	15
					2313	-1.8	-56				
3 Th	0016	-1.3	-39	18 F	0659	1.1	34	3 M	0007	-1.4	-44
	0757	0.8	25		1210	0.2	5		0806	1.4	42
	1340	0.2	6		1637	0.7	20		1400	0.3	10
	1743	0.5	14						1753	0.6	19
4 F	0052	-1.4	-44	19 Sa	0005	-2.1	-65	4 Tu	0051	-1.5	-46
	0851	1.0	31		0806	1.4	42		0841	1.5	45
	1504	0.3	9		1319	0.4	11		1416	0.3	10
	1804	0.4	13		1713	0.7	20		1847	0.8	23
5 Sa	0125	-1.6	-49	20 Su	0054	-2.4	-72	5 W	0130	-1.5	-47
	0934	1.2	36		0904	1.5	47		0913	1.5	46
	1613	0.4	11		1410	0.5	14		1432	0.3	8
	1831	0.4	13		1753	0.7	22		1935	0.9	27
6 Su	0157	-1.7	-53	21 M	0140	-2.5	-77	6 Th	0205	-1.6	-48
	1010	1.3	40		0954	1.6	48		0941	1.5	45
	1706	0.4	13		1447	0.5	15		1447	0.1	3
	1902	0.5	14		1840	0.8	25		2021	1.0	30
7 M	0227	-1.8	-56	22 Tu	0223	-2.6	-78	7 F	0238	-1.5	-46
	1042	1.4	43		1039	1.5	47		1005	1.4	43
	1745	0.5	14		1519	0.5	14		1504	-0.1	-4
	1936	0.5	16		1932	0.9	27		2108	1.1	33
8 Tu	0258	-1.9	-59	23 W	0305	-2.5	-76	8 Sa	0311	-1.4	-43
	1112	1.4	44		1119	1.4	43		1026	1.3	39
	1737	0.5	16		1552	0.3	10		1528	-0.5	-15
	2013	0.6	17		2029	0.9	27		2201	1.2	36
9 W	0330	-2.0	-61	24 Th	0345	-2.3	-70	9 Su	0346	-1.2	-36
	1140	1.5	45		1156	1.3	39		1044	1.1	35
	1712	0.5	15		1632	0.1	4		1601	-0.9	-27
	2053	0.6	19		2131	0.8	24		2258	1.2	37
10 Th	0403	-2.0	-62	25 F	0427	-2.0	-61	10 M	0426	-0.9	-26
	1209	1.4	44		1230	1.1	35		1103	1.0	32
	1719	0.4	12		1725	-0.1	-3		1643	-1.3	-39
	2142	0.7	20		2240	0.6	19				
11 F	0440	-2.0	-62	26 Sa	0509	-1.6	-49	11 Tu	0002	1.2	37
	1238	1.4	43		1304	1.0	31		0513	-0.5	-14
	1745	0.2	6		1834	-0.4	-11		1126	1.0	30
	2239	0.7	20						1734	-1.6	-48
12 Sa	0522	-1.9	-58	27 Su	0001	0.5	14	12 W	0114	1.2	37
	1309	1.3	41		0557	-1.1	-35		0615	-0.1	-2
	1828	-0.1	-2		1338	0.9	26		1156	0.9	28
	2345	0.6	19		1945	-0.6	-18		1837	-1.7	-52
13 Su	0608	-1.7	-51	28 M	0133	0.3	10	13 Th	0236	1.2	37
	1341	1.2	38		0655	-0.7	-22		0749	0.3	8
	1924	-0.4	-11		1411	0.7	22		1237	0.8	25
					2047	-0.8	-25		1953	-1.8	-54
14 M	0103	0.6	17	29 Tu	0309	0.3	9	14 F	0403	1.3	39
	0701	-1.3	-40		0818	-0.3	-9		0938	0.4	12
	1415	1.1	35		1443	0.6	18		1336	0.7	21
	2024	-0.8	-23		2143	-1.0	-32		2113	-1.8	-54
15 Tu	0232	0.5	16	30 W	0449	0.4	13	15 Sa	0526	1.4	43
	0804	-0.9	-27		1000	0.0	0		1114	0.4	12
	1450	1.0	31		1516	0.5	15		1453	0.6	19
	2123	-1.1	-34		2234	-1.2	-37		2230	-1.8	-54
				31 Th	0622	0.7	20				
					1153	0.2	6	30 Su	0532	1.2	36
					1551	0.4	13		1219	0.2	6
					2322	-1.3	-41		1514	0.3	10
									2226	-1.3	-41
								31 M	0620	1.3	39
									1240	0.2	5
									1631	0.5	14
									2323	-1.3	-40

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Keelung (Chi-lung Chiang), Taiwan, 2008

Times and Heights of High and Low Waters

April					May					June																		
Time		Height			Time		Height			Time		Height			Time		Height											
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm									
1 Tu	0703	1.4	42		16 W	0024	-1.1	-35	1 Th	0638	1.3	39	16 F	0119	-0.4	-11	1 Su	0048	-0.3	-9	16 M	0425	0.2	6				
	1301	0.1	3			0745	1.2	37			0737	0.7		22		0625		0.8	24			0706	0.3	9				
	1742	0.6	19			1330	-0.4	-11			1340	-1.0		-32		1301		-1.8	-55			1412	-1.7	-51				
						1931	0.7	22		1839	0.8	23		2046	0.9	26		2041	1.3	40		2221	1.2	36				
2 W	0013	-1.3	-40		17 Th	0117	-0.9	-27	2 F	0022	-1.0	-30	17 Sa	0226	-0.1	-4	2 M	0140	0.0	1	17 Tu	0532	0.3	8				
	0740	1.4	43			0824	1.0	30			0710	1.1		35		0804		0.5	14			0639	0.8	23		0711	0.3	9
	1324	0.0	-1			1358	-0.6	-17			1305	-0.8		-25		1406		-1.2	-38			1337	-2.2	-67		1440	-1.8	-55
	1843	0.8	24			2032	0.8	24		1941	1.0	30		2138	1.0	29		2136	1.5	47		2257	1.2	38				
3 Th	0056	-1.3	-39		18 F	0202	-0.7	-20	3 Sa	0108	-0.8	-23	18 Su	0347	0.0	1	3 Tu	0228	0.3	9	18 W	0625	0.3	9				
	0813	1.4	42			0855	0.7	21			0813	0.3		8		0651		0.8	24			0734	0.3	9				
	1345	-0.2	-6			1422	-0.8	-24			1429	-1.4		-44		1416		-2.5	-77			1509	-1.9	-58				
	1938	1.0	29			2125	0.8	25		2037	1.2	37		2222	1.0	31		2229	1.7	51		2329	1.3	39				
4 F	0135	-1.2	-36		19 Sa	0242	-0.4	-12	4 Su	0150	-0.5	-14	19 M	0527	0.1	4	4 W	0314	0.5	16	19 Th	0704	0.3	10				
	0841	1.3	39			0914	0.5	14			0756	0.2		6		0717		0.9	28			0805	0.4	11				
	1404	-0.5	-14			1443	-1.0	-32			1454	-1.6		-50		1500		-2.7	-83			1540	-2.0	-60				
	2030	1.1	34			2212	0.9	26		2131	1.4	43		2302	1.1	33	●	2320	1.7	53	○	2359	1.3	39				
5 Sa	0211	-1.0	-31		20 Su	0321	-0.2	-6	5 M	0231	-0.2	-5	20 Tu	0643	0.2	5	5 Th	0402	0.6	19	20 F	0721	0.4	11				
	0902	1.1	35			0801	0.8	25			0759	0.2		6		0803		1.0	30			0845	0.4	12				
	1426	-0.8	-25			1431	-2.0	-61			1522	-1.8		-54		1549		-2.8	-84			1613	-2.0	-61				
	2122	1.3	39	○	2255	0.9	27	●	2225	1.6	48	○	2339	1.1	34													
6 Su	0247	-0.8	-24		21 M	0409	0.0	-1	6 Tu	0313	0.1	4	21 W	1554	-1.9	-57	6 F	0012	1.7	52	21 Sa	0029	1.3	40				
	0917	1.0	31			0813	0.9	27			0458	0.6		19		0458		0.6	19			0653	0.4	11				
	1455	-1.3	-39			1511	-2.3	-71			0902	1.0		31		0902		1.0	31			0933	0.4	12				
●	2215	1.4	43			2337	0.9	28		2319	1.7	51			1641	-2.6	-80		1650	-2.0	-61							
7 M	0324	-0.5	-15		22 Tu	0535	0.1	3	7 W	0403	0.4	12	22 Th	0016	1.1	35	7 Sa	0105	1.6	50	22 Su	0059	1.3	40				
	0930	1.0	29			0838	1.0	29			1631	-1.9		-59		0609		0.5	16			0701	0.3	8				
	1531	-1.7	-51			1558	-2.5	-77								1011		0.9	27			1029	0.4	13				
	2311	1.5	45											1738	-2.3	-70		1731	-1.9	-59								
8 Tu	0407	-0.1	-4		23 W	0020	1.0	29	8 Th	0016	1.7	52	23 F	0053	1.2	36	8 Su	0158	1.5	47	23 M	0131	1.3	39				
	0947	0.9	28			0506	0.6	17			1713	-1.9		-58		0732		0.3	10			0730	0.1	3				
	1615	-2.0	-61			0919	1.0	29								1132		0.7	21			1134	0.4	12				
						1651	-1.7	-52		1653	-2.5	-76			1840	-1.9	-58		1817	-1.8	-55							
9 W	0012	1.5	47		24 Th	0106	1.0	30	9 F	0118	1.7	51	24 Sa	0132	1.2	37	9 M	0250	1.4	44	24 Tu	0206	1.3	39				
	0502	0.2	6			0633	0.6	19			0848	0.2		7		0853		0.0	1			0811	-0.1	-4				
	1012	0.9	28			1016	0.9	27			1019	0.2		7		1311		0.5	14			1246	0.4	11				
	1707	-2.1	-65			1738	-1.7	-52		1755	-2.3	-70		1759	-1.8	-56		1950	-1.4	-43		1909	-1.6	-48				
10 Th	0119	1.5	46		25 F	0157	1.0	32	10 Sa	0223	1.6	49	25 Su	0212	1.2	38	10 Tu	0342	1.3	40	25 W	0242	1.2	37				
	0624	0.4	13			0805	0.5	16			0858	0.2		5		1003		-0.3	-9			0858	-0.4	-12				
	1051	0.9	27			1133	0.8	23			1140	0.2		7		1513		0.3	10			1408	0.3	10				
	1811	-2.1	-63			1906	-2.0	-60		1906	-2.0	-60		1852	-1.7	-53	○	2107	-1.0	-29		2007	-1.3	-39				
11 F	0234	1.5	46		26 Sa	0250	1.1	34	11 Su	0327	1.6	48	26 M	0254	1.2	38	11 W	0432	1.1	35	26 Th	0318	1.1	34				
	0811	0.5	16			0930	0.3	9			0929	0.0		1		1104		-0.7	-20			0945	-0.8	-23				
	1148	0.8	24			1309	0.6	17			1302	0.2		7		1703		0.4	12			1538	0.4	12				
	1928	-1.9	-59			2024	-1.6	-49		2024	-1.6	-49		1950	-1.6	-48		2231	-0.5	-16	●	2111	-0.9	-28				
12 Sa	0351	1.5	46		27 Su	0341	1.2	36	12 M	0427	1.5	45	27 Tu	0336	1.3	39	12 Th	0521	1.0	29	27 F	0355	1.0	31				
	0948	0.5	14			1042	0.0	1			1006	-0.1		-4		1156		-1.0	-29			1031	-1.1	-34				
	1313	0.7	20			1507	0.4	13			1426	0.3		8		1835		0.6	17			1708	0.6	17				
	2050	-1.7	-53			2034	-1.4	-44	○	2142	-1.2	-38		2050	-1.4	-42						2221	-0.5	-16				
13 Su	0502	1.5	47		28 M	0430	1.2	38	13 Tu	0523	1.4	42	28 W	0417	1.2	38	13 F	0000	-0.2	-7	28 Sa	0430	0.9	27				
	1109	0.3	8			1141	-0.3	-9			1045	-0.4		-12		0605		0.7	22			1115	-1.5	-45				
	1455	0.6	17			1703	0.5	14			1553	0.3		10		1238		-1.2	-36			1829	0.9	26				
●	2209	-1.5	-47	○	2137	-1.3	-41		2259	-0.9	-28	○	2152	-1.1	-35		1950	0.8	24		2334	-0.2	-6					
14 M	0604	1.5	46		29 Tu	0516	1.3	40	14 W	0614	1.2	36	29 Th	0457	1.2	36	14 Sa	0131	0.0	-1	29 Su	0500	0.8	23				
	1208	0.1	2			1142	-0.1	-3			1122	-0.7		-21		0641		0.5	16			1158	-1.9	-57				
	1647	0.6	17			1613	0.4	12			1719	0.5		15		1314		-1.4	-42			1939	1.2	36				
	2322	-1.3	-41			2237	-1.2	-38		1833	0.6	18		2253	-0.9	-27		2050	1.0	29								
15 Tu	0659	1.4	43		30 W	0559	1.3	40	15 Th	0012	-0.6	-19	30 F	0534	1.1	33	15 Su	0302	0.1	3	30 M	0043	0.1	4				
	1253	-0.2	-5			1212	-0.3	-8			1157	-1.0		-31		0704		0.4	11			0524	0.7	21				
	1819	0.6	19			1731	0.6	17			1834	0.8		23		1344		-1.5	-47			1241	-2.2	-67				
						2333	-1.1	-35		1945	0.7	22		2353	-0.6	-18		2140	1.1	34		2040	1.4	44				

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Keelung (Chi-lung Chiang), Taiwan, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu	0142 0.4 11 0544 0.7 22 1324 -2.5 -76 2135 1.6 49	16 W	0439 0.4 11 0656 0.5 14 1419 -1.8 -55 2234 1.4 42	1 F	0249 0.5 14 0714 1.0 30 1441 -2.5 -75 2249 1.5 45	16 Sa	0328 0.3 10 0814 0.8 24 1453 -1.7 -51 2239 1.4 43	1 M	0330 -0.5 -15 0950 0.9 26 1541 -1.2 -38 2308 0.8 23	16 Tu	0311 -0.6 -18 0954 1.1 35 1529 -1.0 -29 2218 1.0 32
2 W	0228 0.5 16 0615 0.9 26 1407 -2.7 -83 2225 1.7 51	17 Th	0508 0.4 13 0732 0.5 16 1449 -1.9 -57 2301 1.4 43	2 Sa	0321 0.3 9 0812 1.0 31 1522 -2.3 -70 2325 1.3 40	17 Su	0338 0.2 6 0857 0.9 26 1524 -1.6 -50 2301 1.3 41	2 Tu	0410 -0.8 -24 1100 0.8 24 1621 -0.9 -27 2329 0.6 19	17 W	0340 -1.0 -30 1046 1.2 37 1606 -0.7 -21 2235 1.0 29
3 Th	0307 0.6 18 0703 1.0 30 1452 -2.8 -85 2312 1.7 51	18 F	0503 0.5 14 0811 0.6 17 1519 -1.9 -58 2326 1.4 42	3 Su	0359 0.0 1 0915 1.0 29 1603 -2.0 -60 2359 1.1 35	18 M	0354 0.0 -1 0944 0.9 28 1556 -1.5 -47 2322 1.2 38	3 W	0457 -1.0 -31 1208 0.7 21 1709 -0.5 -16 2350 0.5 16	18 Th	0417 -1.3 -41 1143 1.2 38 1649 -0.4 -12 2255 0.9 28
4 F	0345 0.6 17 0801 1.0 32 1538 -2.7 -83 2356 1.6 48	19 Sa	0452 0.4 13 0853 0.6 19 1551 -1.9 -59 2351 1.4 42	4 M	0446 -0.2 -7 1027 0.8 24 1646 -1.6 -48	19 Tu	0421 -0.3 -10 1036 0.9 28 1632 -1.3 -41 2344 1.1 35	4 Th	0555 -1.2 -36 1317 0.7 20 1829 -0.2 -6	19 F	0503 -1.6 -50 1246 1.3 39 1745 0.0 -1 2321 0.9 26
5 Sa	0430 0.4 13 0905 1.0 31 1625 -2.5 -75	20 Su	0458 0.3 9 0938 0.7 20 1624 -1.9 -58	5 Tu	0032 1.0 31 0547 -0.5 -15 1151 0.6 19 1734 -1.1 -33	20 W	0457 -0.7 -20 1134 0.9 28 1713 -1.1 -33	5 F	0017 0.4 13 0701 -1.2 -38 1432 0.7 20 2021 0.0 1	20 Sa	0558 -1.8 -54 1400 1.3 39 1907 0.3 8 2357 0.8 24
6 Su	0038 1.5 45 0528 0.2 7 1015 0.9 26 1714 -2.1 -63	21 M	0016 1.3 40 0519 0.1 3 1031 0.7 20 1702 -1.8 -55	6 W	0105 0.9 27 0701 -0.7 -22 1320 0.5 15 1834 -0.6 -19	21 Th	0008 1.0 32 0542 -1.0 -31 1241 0.9 28 1802 -0.7 -21	6 Sa	0052 0.4 11 0806 -1.3 -40 1556 0.8 23 2207 0.2 6	21 Su	0707 -1.8 -56 1521 1.3 40 2054 0.4 13
7 M	0121 1.3 41 0643 0.0 -1 1135 0.6 19 1808 -1.6 -49	22 Tu	0042 1.3 39 0555 -0.2 -5 1130 0.6 19 1744 -1.6 -48	7 Th	0140 0.7 22 0812 -1.0 -29 1451 0.4 13 2009 -0.2 -7	22 F	0035 1.0 29 0638 -1.3 -39 1358 0.9 28 1906 -0.3 -9	7 Su	0135 0.3 10 0906 -1.3 -40 1718 0.9 28	22 M	0050 0.7 22 0825 -1.8 -55 1643 1.4 42 2230 0.4 13
8 Tu	0203 1.2 37 0803 -0.3 -10 1316 0.4 13 1911 -1.1 -33	23 W	0111 1.2 36 0644 -0.5 -14 1239 0.6 18 1832 -1.3 -39	8 F	0215 0.6 18 0914 -1.1 -34 1630 0.5 16 2156 0.1 2	23 Sa	0107 0.9 26 0745 -1.5 -46 1525 1.0 29 2035 0.1 2	8 M	0001 0.2 7 0228 0.3 9 1005 -1.3 -40 1821 1.1 33	23 Tu	0207 0.6 19 0944 -1.7 -53 1754 1.5 45 2345 0.3 10
9 W	0247 1.0 32 0913 -0.6 -19 1506 0.3 10 2030 -0.6 -18	24 Th	0142 1.1 33 0741 -0.8 -24 1359 0.6 17 1930 -0.9 -27	9 Sa	0253 0.5 15 1011 -1.2 -38 1805 0.8 23 2358 0.2 6	24 Su	0146 0.8 23 0857 -1.7 -52 1654 1.1 34 2218 0.3 9	9 Tu	0057 0.3 8 0332 0.4 11 1101 -1.3 -41 1910 1.2 37	24 W	0336 0.6 18 1058 -1.7 -52 1855 1.5 45
10 Th	0331 0.9 26 1015 -0.9 -28 1651 0.4 12 2206 -0.2 -6	25 F	0216 1.0 30 0841 -1.1 -34 1529 0.6 19 2041 -0.5 -14	10 Su	0334 0.4 13 1104 -1.4 -42 1914 1.0 30	25 M	0235 0.7 21 1008 -1.8 -56 1814 1.3 40 2346 0.4 11	10 W	0129 0.3 8 0441 0.5 14 1152 -1.3 -41 1949 1.3 40	25 Th	0036 0.2 5 0506 0.7 20 1202 -1.6 -50 1946 1.4 43
11 F	0415 0.7 21 1109 -1.2 -36 1828 0.6 19 2354 0.1 2	26 Sa	0251 0.9 26 0940 -1.5 -45 1701 0.8 24 2207 -0.1 -2	11 M	0126 0.3 8 0420 0.4 12 1153 -1.4 -44 2006 1.2 36	26 Tu	0335 0.7 20 1114 -2.0 -60 1920 1.5 45	11 Th	0148 0.3 8 0546 0.6 18 1237 -1.3 -41 2023 1.4 42	26 F	0116 0.0 0 0628 0.7 22 1255 -1.5 -46 2030 1.2 38
12 Sa	0456 0.5 16 1157 -1.3 -41 1943 0.9 27	27 Su	0328 0.8 23 1038 -1.8 -54 1824 1.1 33 2336 0.2 6	12 Tu	0220 0.3 9 0511 0.5 14 1237 -1.5 -46 2047 1.3 40	27 W	0048 0.4 11 0441 0.7 21 1214 -2.0 -62 2016 1.5 47	12 F	0203 0.2 7 0643 0.7 22 1317 -1.3 -41 2052 1.4 43	27 Sa	0147 -0.2 -6 0737 0.8 24 1340 -1.3 -39 2106 1.0 31
13 Su	0137 0.2 5 0531 0.4 13 1238 -1.5 -46 2040 1.1 33	28 M	0405 0.7 21 1133 -2.0 -62 1934 1.3 41	13 W	0257 0.4 11 0601 0.5 16 1316 -1.6 -48 2121 1.4 42	28 Th	0131 0.3 10 0544 0.8 23 1304 -2.1 -63 2103 1.5 45	13 Sa	0219 0.1 4 0733 0.9 26 1352 -1.3 -41 2119 1.4 42	28 Su	0214 -0.4 -13 0840 0.8 25 1419 -1.0 -31 2134 0.8 23
14 M	0254 0.3 8 0558 0.4 12 1315 -1.6 -49 2125 1.2 38	29 Tu	0049 0.4 11 0445 0.7 21 1226 -2.3 -69 2034 1.5 46	14 Th	0315 0.4 12 0648 0.6 19 1351 -1.6 -49 2150 1.4 44	29 F	0203 0.3 8 0643 0.9 26 1348 -2.0 -61 2142 1.3 41	14 Su	0234 0.0 -1 0820 1.0 29 1424 -1.3 -39 2142 1.3 39	29 M	0240 -0.7 -22 0937 0.9 26 1454 -0.8 -23 2154 0.6 17
15 Tu	0354 0.3 10 0624 0.4 12 1348 -1.7 -52 2202 1.3 40	30 W	0141 0.5 14 0529 0.8 24 1314 -2.4 -74 2125 1.6 49	15 F	0321 0.4 12 0732 0.7 22 1423 -1.6 -50 2216 1.4 44	30 Sa	0230 0.1 2 0740 0.9 27 1428 -1.8 -56 2216 1.1 35	15 M	0250 -0.3 -8 0906 1.0 32 1456 -1.1 -35 2201 1.2 36	30 Tu	0308 -1.0 -31 1031 0.9 27 1530 -0.5 -15 2201 0.4 12
		31 Th	0219 0.5 15 0619 0.9 27 1359 -2.5 -77 2210 1.6 48			31 Su	0258 -0.2 -6 0841 0.9 27 1504 -1.6 -48 2244 1.0 29				

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Huangpu, China, 2008

Times and Heights of High and Low Waters

January				February				March															
Time		Height		Time		Height		Time		Height		Time		Height									
1 Tu	h	m	ft	16 W O	h	m	ft	16 Sa	h	m	ft	1 Sa	h	m	ft								
	0118	4.2	129		0039	3.0	90		0347	1.3	41		0242	1.7	52								
	0557	5.8	176		0545	6.1	185		1013	4.4	134		1824	7.3	222								
	1331	1.9	59		1241	1.8	54		1316	4.1	124		1953	5.0	153								
2014	7.1	215	1858	7.2	218	1958	7.8	239	2013	7.4	226	1953	7.8	237									
2 W	0323	3.6	110	17 Th	0227	2.6	79	2 Sa	0509	1.4	42	17 Su	0514	1.0	29	2 Su	0412	1.5	47	17 M	0459	1.1	33
	0752	4.8	145		0725	5.1	156		2100	7.7	234		1209	5.0	153		2013	7.4	226		1148	5.8	177
	1407	2.7	81		1326	2.4	73		1533	4.4	134		1533	4.4	134		1555	4.5	137				
	2046	7.3	223		1939	7.5	230		2128	8.3	252		2128	8.1	241		2132	8.1	241				
3 Th	0451	2.6	79	18 F	0401	1.9	57	3 Su	0610	1.0	30	18 M	0633	0.7	21	3 M	0527	1.3	40	18 Tu	0607	1.0	32
	1039	4.5	137		0936	4.7	142		1314	5.2	159		1249	5.6	170		1240	5.6	170		1209	6.3	192
	1457	3.4	104		1422	3.1	94		1612	4.7	142		1656	4.0	121		1600	4.9	148		1706	3.5	108
	2117	7.7	234		2033	8.0	245		2200	8.2	251		2238	8.8	267		2135	7.9	242		2239	8.5	260
4 F	0552	1.6	50	19 Sa	0525	1.2	36	4 M	0700	0.8	24	19 Tu	0732	0.6	19	4 Tu	0623	1.1	33	19 W	0657	1.1	33
	1215	4.9	150		1128	4.8	147		1321	5.5	168		1316	5.9	181		1243	6.0	183		1234	6.6	202
	1553	4.0	121		1534	3.6	109		1712	4.2	127		1757	3.2	98		1702	4.1	125		1759	2.7	81
	2151	8.1	248		2134	8.5	260		2249	8.8	267		2334	9.1	278		2230	8.5	258		2332	8.7	265
5 Sa	0642	1.0	31	20 Su	0639	0.6	19	5 Tu	0744	0.7	21	20 W	0813	0.8	24	5 W	0704	0.9	27	20 Th	0737	1.2	36
	1305	5.3	163		1245	5.2	160		1338	5.8	176		1345	6.2	188		1259	6.4	195		1255	7.0	212
	1645	4.2	127		1645	3.8	115		1757	3.5	108		1847	2.5	75		1751	3.2	99		1847	2.0	61
	2226	8.6	262		2231	9.0	275		2330	9.1	278						2315	8.8	269				
6 Su	0724	0.8	23	21 M	0740	0.4	12	6 W	0818	0.8	23	21 Th O	0023	9.2	281	6 Th	0746	0.7	22	21 F	0018	8.6	261
	1333	5.6	171		1334	5.6	171		1401	6.1	185		0851	0.9	27		1321	6.7	205		0757	1.3	41
	1731	4.0	123		1746	3.6	110		1842	3.0	90		1409	6.4	195		1841	2.5	75		1317	7.3	221
	2303	9.1	276		2325	9.4	287						1936	1.9	58				1935		1.6	50	
7 M	0800	0.7	22	22 Tu O	0833	0.4	13	7 Th ●	0011	9.3	283	22 F	0107	9.0	274	7 F	0001	8.9	272	22 Sa O	0058	8.2	251
	1358	5.8	176		1413	5.8	177		0853	0.7	20		0917	1.1	35		0815	0.9	26		0822	1.5	45
	1806	3.8	116		1840	3.2	98		1429	6.3	191		1438	6.7	204		1347	7.0	214		1339	7.5	230
	2340	9.4	285				1930		2.6	79	2016		1.8	55	1931		1.8	56	2012		1.6	49	
8 Tu ●	0840	0.9	26	23 W	0016	9.6	292	8 F	0051	9.3	282	23 Sa	0145	8.6	262	8 Sa ●	0046	8.8	269	23 Su	0138	7.8	239
	1421	5.9	179		0913	0.7	20		0928	0.8	24		0942	1.0	31		0846	0.9	26		0842	1.4	44
	1843	3.4	105		1450	5.9	181		1459	6.5	198		1503	7.0	213		1410	7.3	221		1357	7.8	237
					1931	2.8	84		2005	2.2	67		2053	1.7	51		2010	1.5	46		2057	1.3	41
9 W	0016	9.5	289	24 Th	0105	9.5	291	9 Sa	0131	9.0	275	24 Su	0223	8.1	246	9 Su	0134	8.5	260	24 M	0216	7.4	225
	0908	1.0	30		0954	0.8	24		0954	0.7	20		0955	1.0	32		0905	1.0	31		0857	1.6	48
	1451	6.0	182		1523	6.1	186		1530	6.7	203		1528	7.2	219		1434	7.5	228		1413	8.0	244
	1922	3.3	100		2014	2.5	77		2049	1.8	56		2141	1.7	51		2058	1.1	33		2145	1.1	34
10 Th	0054	9.5	289	25 F	0149	9.3	282	10 Su	0215	8.6	263	25 M	0259	7.4	227	10 M	0222	8.1	246	25 Tu	0258	7.0	212
	0946	1.0	29		1029	1.0	31		1021	0.9	28		1010	1.2	36		0934	1.0	32		0923	2.1	63
	1524	6.0	184		1557	6.4	194		1557	6.9	209		1544	7.3	224		1452	7.8	237		1426	8.2	251
	1955	3.1	95		2053	2.4	72		2140	1.6	49		2230	1.7	52		2152	1.0	29		2231	0.9	26
11 F	0128	9.4	285	26 Sa	0227	8.8	269	11 M	0300	8.1	246	26 Tu	0340	6.7	205	11 Tu	0309	7.5	229	26 W	0342	6.5	197
	1016	1.0	29		1051	0.9	27		1041	0.9	26		1033	1.5	46		0952	1.2	38		0939	2.5	75
	1601	6.2	188		1633	6.6	201		1621	7.0	214		1554	7.4	227		1508	8.0	245		1443	8.4	256
	2039	3.0	90		2141	2.4	73		2231	1.7	51		2324	1.7	52		2249	0.8	25		2307	0.8	24
12 Sa	0207	9.1	277	27 Su	0304	8.2	249	12 Tu	0349	7.3	224	27 W	0429	5.9	179	12 W	0359	6.8	207	27 Th	0426	5.9	180
	1051	0.8	25		1111	1.0	30		1057	1.2	36		1043	2.2	67		1015	1.8	54		0948	3.2	97
	1640	6.3	192		1702	6.8	207		1639	7.2	220		1608	7.5	230		1526	8.3	254		1504	8.4	257
	2126	3.0	91		2227	2.7	83		2334	1.8	54						2350	0.8	24		2349	1.0	29
13 Su	0249	8.6	263	28 M	0339	7.3	223	13 W	0443	6.4	196	28 Th	0019	1.6	50	13 Th	0455	5.9	181	28 F	0519	5.3	161
	1122	1.0	29		1132	1.0	32		1123	1.6	48		0527	5.0	152		1038	2.4	74		0955	3.8	117
	1717	6.5	197		1728	6.8	208		1657	7.4	227		1046	3.0	92		1558	8.4	257		1533	8.3	252
	2215	3.0	90		2315	3.0	90						1630	7.5	230								
14 M	0335	8.0	243	29 Tu	0424	6.3	192	14 Th O	0052	1.7	53	29 F O	0118	1.7	51	14 F O	0051	0.9	28	29 Sa	0040	1.3	41
	1147	1.0	32		1144	1.5	47		0551	5.4	165		0708	4.2	129		0612	5.1	156		0652	4.8	145
	1753	6.6	202		1747	6.9	209		1146	2.2	68		1028	3.8	116		1056	3.3	102		0945	4.5	136
	2316	3.0	91				1729		7.6	233	1710		7.4	227	1643		8.2	251	1615		7.9	241	
15 Tu	0432	7.1	216	30 W O	0040	3.0	91	15 F	0213	1.6	50	15 Sa	0204	1.1	35	15 Sa	0204	1.1	35	30 Su O	0148	1.7	52
	1211	1.4	42		0527	5.2	157		0735	4.6	139		0819	4.7	143		0819	4.7	143		1730	7.5	228
	1827	6.8	208		1158	2.3	70		1218	3.2	97		1119	4.3	132		1119	4.3	132				
					1809	6.9	211		1828	7.7	235		1756	7.9	240								
15 Tu	0432	7.1	216	31 Th	0217	2.6	79																
	1211	1.4	42		0720	4.1	126																
	1827	6.8	208		1208	3.2	98																
					1849	7.0	214																

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Huangpu, China, 2008

Times and Heights of High and Low Waters

April								May								June																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	h m ft cm		h m ft cm		h m ft cm		h m ft cm		h m ft cm		h m ft cm		h m ft cm		h m ft cm		h m ft cm		h m ft cm																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
1 Tu	0429	1.6	49	16 W	0525	1.5	46	1 Th	0422	1.7	52	16 F	0455	1.9	58	1 Su	0442	2.3	70	16 M	0007	5.6	171																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	1137	6.2	188		1545	4.9	149		2100	7.6	232																								2 W	0530	1.3	41	17 Th	0600	1.5	47	2 F	0504	1.7	52	17 Sa	0533	2.1	65	2 M	0531	2.5	77	17 Tu	0057	5.8	177	1148	6.7	203	1646	3.9	120	2204	8.0	245																					3 Th	0612	1.3	39	18 F	0635	1.6	48	3 Sa	0545	1.7	52	18 Su	0601	2.5	77	3 Tu	0030	6.4	195	18 W	0129	5.9	181	1205	7.1	216	1740	3.0	90	2257	8.3	252																					4 F	0649	1.2	36	19 Sa	0005	7.5	230	4 Su	0624	1.9	58	19 M	0050	6.4	195	4 W	0129	6.3	191	19 Th	0158	6.0	183	1227	7.4	227	1835	2.1	64	2350	8.3	254																					5 Sa	0720	1.3	41	20 Su	0049	7.3	222	5 M	0034	7.3	223	20 Tu	0132	6.4	195	5 Th	0227	6.1	186	20 F	0225	6.0	184	1248	7.8	238	1926	1.6	48																			6 Su	0042	8.2	249	21 M	0132	7.1	215	6 Tu	0128	7.1	215	21 W	0208	6.4	194	6 F	0325	5.9	181	21 Sa	0300	6.1	185	0748	1.3	40	1308	8.1	248	2015	1.1	33																					7 M	0132	7.9	240	22 Tu	0213	6.9	209	7 W	0222	6.7	204	22 Th	0243	6.3	191	7 Sa	0422	5.8	178	22 Su	0342	6.1	185	0815	1.5	47	1330	8.5	260	2109	0.7	22																					8 Tu	0222	7.4	227	23 W	0254	6.6	202	8 Th	0319	6.3	193	23 F	0316	6.2	188	8 Su	0518	5.9	179	23 M	0427	6.1	187	0845	1.7	51	1351	8.9	271	2203	0.5	14																					9 W	0313	6.9	210	24 Th	0333	6.3	193	9 F	0421	5.9	181	24 Sa	0359	6.0	182	9 M	0028	1.1	34	24 Tu	0514	6.2	190	0909	2.2	67	1415	9.2	280	2256	0.3	8																					10 Th	0408	6.3	192	25 F	0413	6.0	182	10 Sa	0531	5.7	173	25 Su	0450	5.8	177	10 Tu	0109	1.3	39	25 W	0007	1.3	41	0937	2.8	85	1446	9.3	282	2349	0.4	12																					11 F	0514	5.7	173	26 Sa	0507	5.6	170	11 Su	0043	0.9	28	26 M	0554	5.7	175	11 W	0150	1.4	43	26 Th	0045	1.5	45	0956	3.6	111	1525	9.1	276																			12 Sa	0047	0.8	23	27 Su	0009	1.4	44	12 M	0144	1.2	38	27 Tu	0041	1.5	45	12 Th	0230	1.7	51	27 F	0121	1.8	56	0647	5.2	160	1027	4.5	136	1622	8.6	261																					13 Su	0157	1.1	34	28 M	0109	1.7	52	13 Tu	0244	1.4	44	28 W	0132	1.6	48	13 F	0304	2.1	63	28 Sa	0158	2.2	68	0902	5.4	164	1142	5.2	158	1754	8.0	243																					14 M	0317	1.3	41	29 Tu	0218	1.8	54	14 W	0337	1.6	48	29 Th	0222	1.8	54	14 Sa	0345	2.5	77	29 Su	0247	2.6	80	1019	6.0	182	1425	5.1	154	1950	7.7	236																					15 Tu	0431	1.4	42	30 W	0326	1.7	52	15 Th	0419	1.7	53	30 F	0309	1.9	59	15 Su	0430	3.1	94	30 M	0341	3.0	92	1054	6.5	199	1553	4.1	126	2118	7.8	239																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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12 Sa	0047	0.8	23	27 Su	0009	1.4	44	12 M	0144	1.2	38	27 Tu	0041	1.5	45	12 Th	0230	1.7	51	27 F	0121	1.8	56																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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	0902	5.4	164		1142	5.2	158		1754	8.0	243																								14 M	0317	1.3	41	29 Tu	0218	1.8	54	14 W	0337	1.6	48	29 Th	0222	1.8	54	14 Sa	0345	2.5	77	29 Su	0247	2.6	80	1019	6.0	182	1425	5.1	154	1950	7.7	236																					15 Tu	0431	1.4	42	30 W	0326	1.7	52	15 Th	0419	1.7	53	30 F	0309	1.9	59	15 Su	0430	3.1	94	30 M	0341	3.0	92	1054	6.5	199	1553	4.1	126	2118	7.8	239																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	1142	5.2	158		1754	8.0	243																									14 M	0317	1.3		41	29 Tu	0218		1.8	54	14 W		0337	1.6	48		29 Th	0222	1.8		54	14 Sa	0345		2.5	77	29 Su	0247	2.6	80	1019	6.0	182	1425	5.1	154	1950	7.7	236																							15 Tu	0431	1.4		42	30 W	0326		1.7	52	15 Th		0419	1.7	53		30 F	0309	1.9	59	15 Su	0430	3.1	94	30 M	0341	3.0	92	1054	6.5	199	1553	4.1	126	2118	7.8	239																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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15 Tu	0431	1.4	42	30 W	0326	1.7	52	15 Th	0419	1.7	53	30 F	0309	1.9	59	15 Su	0430	3.1	94	30 M	0341	3.0	92																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Huangpu, China, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height			Time	Height			Time	Height		
h m	ft	cm		h m	ft	cm		h m	ft	cm	
1 Tu	0438	3.3	102	16 W	0058	5.6	172	1 M	0149	7.7	236
	1010	9.2	279		0512	4.4	133		0802	2.1	64
	1903	0.9	26		1048	8.9	272		1322	9.5	289
					1938	1.4	42		2111	1.8	56
2 W	0036	5.8	177	17 Th	0117	5.9	179	2 Tu	0215	8.0	245
	0535	3.5	108		0558	4.0	121		0849	2.0	61
	1102	9.6	292		1130	9.3	283		1402	8.9	272
	2002	0.7	22		2013	1.5	47		2136	1.8	55
3 Th	0134	5.9	180	18 F	0139	6.1	185	3 W	0241	8.3	253
	0628	3.7	112		0643	3.5	106		0939	2.0	61
	1154	9.9	301		1211	9.5	290		1441	8.3	253
	2058	0.8	23		2051	1.6	48		2153	2.0	61
4 F	0224	5.9	181	19 Sa	0205	6.3	191	4 Th	0301	8.5	258
	0714	3.6	109		0729	3.2	98		1031	2.0	62
	1246	10.0	305		1251	9.6	292		1523	7.6	232
	2151	0.9	27		2127	1.6	50		2211	2.6	78
5 Sa	0311	6.0	182	20 Su	0239	6.4	196	5 F	0319	8.6	262
	0802	3.3	101		0803	3.0	91		1116	2.0	62
	1337	9.9	303		1327	9.5	290		1611	6.8	208
	2239	1.0	32		2157	1.4	44		2233	3.2	97
6 Su	0356	6.1	186	21 M	0314	6.6	201	6 Sa	0339	8.6	263
	0855	3.1	95		0847	2.7	83		1201	2.0	61
	1426	9.7	297		1407	9.3	284		1710	6.0	184
	2315	1.1	35		2235	1.3	40		2238	4.0	122
7 M	0439	6.4	194	22 Tu	0351	6.8	207	7 Su	0407	8.5	260
	0948	3.0	90		0935	2.6	79		1257	2.2	66
	1513	9.3	283		1447	9.0	273		1843	5.3	163
	2352	1.1	35		2258	1.3	40		2224	4.8	147
8 Tu	0520	6.6	202	23 W	0423	7.0	212	8 M	0448	8.3	253
	1043	3.1	93		1021	2.6	78		1410	2.4	72
	1559	8.6	261		1530	8.5	258				
					2333	1.4	43				
9 W	0022	1.3	41	24 Th	0451	7.2	219	9 Tu	0600	8.0	244
	0558	6.9	210		1114	2.5	77		1537	2.4	73
	1138	3.3	101		1620	7.8	237				
	1645	7.6	232		2352	1.7	51				
10 Th	0044	1.5	46	25 F	0517	7.4	227	10 W	0752	8.0	245
	0631	7.1	215		1231	2.5	75		1653	2.2	68
	1248	3.5	106		1719	6.9	211				
	1741	6.5	199								
11 F	0109	2.0	61	26 Sa	0023	2.2	66	11 Th	0000	6.5	199
	0704	7.3	221		0550	7.7	236		0351	5.6	170
	1425	3.3	100		1347	2.3	70		0916	8.5	258
	1901	5.5	168		1834	6.0	184		1751	2.0	61
12 Sa	0141	2.7	83	27 Su	0058	2.8	84	12 F	0003	7.0	213
	0741	7.4	226		0634	8.1	246		0451	4.8	145
	1551	2.7	82		1508	2.0	61		1012	9.0	275
	2108	4.9	148		2018	5.4	166		1838	1.8	55
13 Su	0218	3.6	110	28 M	0146	3.4	105	13 Sa	0016	7.4	226
	0825	7.7	234		0737	8.4	256		0541	3.9	118
	1702	2.0	62		1633	1.6	49		1057	9.4	286
	2317	5.0	152		2210	5.3	163		1908	1.8	54
14 M	0315	4.3	130	29 Tu	0254	4.0	122	14 Su	0036	7.8	238
	0914	8.0	245		0848	8.9	270		0631	3.1	94
	1802	1.5	47		1751	1.2	37		1140	9.5	290
					2340	5.6	171		1943	1.7	51
15 Tu	0024	5.3	163	30 W	0415	4.2	128	15 M	0056	8.1	248
	0420	4.5	138		0957	9.4	285		0709	2.6	78
	1002	8.5	258		1858	1.0	30		1225	9.4	287
	1853	1.3	41						2004	1.8	56
				31 Th	0040	5.9	181				
					0528	4.0	122				
					1058	9.8	298				
					1957	0.9	28				
								31 Su	0120	7.4	226
									0724	2.5	75
									1240	9.9	301
									2050	1.6	49

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Hong Kong, China, 2008

Times and Heights of High and Low Waters

January					February					March																			
Time		Height			Time		Height			Time		Height			Time		Height												
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm										
1 Tu	0125	5.2	160		16 W	0146	5.3	161		1 F	0106	3.1	95		16 Sa	1659	6.6	201		1 Sa	1518	5.9	181		16 Su	1643	6.4	196	
	0910	3.3	101			0823	2.9	88			1632	6.1	185																
	1655	5.9	179			1607	5.9	179																					
	2326	4.4	134			2202	3.3	102																					
2 W	0427	4.6	139		17 Th	0357	4.4	134		2 Sa	0151	2.5	75		17 Su	0118	1.4	43		2 Su	0113	2.3	69		17 M	0059	1.4	43	
	0944	3.6	111			0856	3.3	100			1720	6.3	193			1817	6.9	210			1629	6.1	185			1817	6.5	199	
	1721	6.1	187			1646	6.3	192																					
						2349	2.7	81																					
3 Th	0108	3.6	111		18 F	0625	3.9	120		3 Su	0225	1.9	58		18 M	0211	1.0	30		3 M	0151	1.9	57		18 Tu	0145	1.3	40	
	0645	4.3	130			0934	3.6	110			1811	6.6	202			1928	7.2	220			1739	6.3	192			0903	4.5	136	
	1019	3.9	119			1731	6.8	207																1214		4.0	121		
	1744	6.4	196																					1930		6.7	204		
4 F	0154	2.9	89		19 Sa	0111	1.8	56		4 M	0256	1.5	47		19 Tu	0252	0.8	24		4 Tu	0221	1.6	49		19 W	0220	1.4	42	
	0836	4.3	130			1823	7.3	222			1902	7.0	212			0952	4.2	129			0923	4.3	131			0912	4.7	143	
	1056	4.1	126								1301	3.6	111			1301	3.6	111			1157	4.1	124			1320	3.4	105	
	1810	6.8	206								2027	7.4	227			2027	7.4	227			1843	6.6	200			2026	6.8	206	
5 Sa	0232	2.3	70		20 Su	0213	1.1	35		5 Tu	0323	1.3	39		20 W	0327	0.8	25		5 W	0246	1.4	44		20 Th	0249	1.5	47	
	1841	7.1	216			0937	4.1	124			1009	4.3	130			1010	4.5	136			0926	4.5	137			0927	5.0	153	
						1142	3.9	120			1257	3.9	119			1402	3.3	100			1306	3.7	112			1411	3.0	90	
						1920	7.7	236			1951	7.3	222			2116	7.5	230			1939	6.9	209			2112	6.7	204	
6 Su	0306	1.8	55		21 M	0303	0.7	21		6 W	0349	1.1	35		21 Th	0358	1.0	31		6 Th	0308	1.4	42		21 F	0316	1.8	54	
	1015	4.4	135			1012	4.2	128			1023	4.5	136			1030	4.7	144			0941	4.8	146			0943	5.4	165	
	1217	4.3	131			1246	3.8	117			1353	3.7	112			1454	3.0	90			1401	3.2	98			1456	2.6	78	
	1917	7.4	226			2017	8.1	246			2037	7.5	230			2157	7.4	227			2030	7.1	215			2151	6.5	198	
7 M	0339	1.5	45		22 Tu	0347	0.5	15		7 Th	0414	1.1	35		22 F	0427	1.3	40		7 F	0332	1.4	42		22 Sa	0341	2.0	62	
	1037	4.5	136			1042	4.3	132			1045	4.7	142			1050	5.1	154			1002	5.1	156			0958	5.8	176	
	1259	4.2	129			1345	3.7	113			1446	3.4	104			1541	2.7	83			1451	2.8	84			1537	2.3	69	
	1957	7.7	235			2109	8.3	252			2120	7.7	234			2231	7.1	217			2117	7.1	217			2225	6.2	189	
8 Tu	0410	1.3	40		23 W	0427	0.6	17		8 F	0440	1.2	36		23 Sa	0454	1.6	50		8 Sa	0356	1.5	45		23 Su	0404	2.3	71	
	1057	4.5	138			1110	4.5	136			1112	4.9	149			1111	5.3	163			1027	5.5	167			1013	6.1	186	
	1343	4.2	127			1441	3.5	108			1537	3.2	97			1624	2.7	81			1538	2.3	70			1617	2.1	65	
	2037	7.9	242			2156	8.2	250			2202	7.6	232			2259	6.7	203			2203	7.0	213			2257	5.8	177	
9 W	0441	1.3	39		24 Th	0503	0.9	26		9 Sa	0507	1.3	39		24 Su	0518	2.0	61		9 Su	0422	1.7	51		24 M	0425	2.7	81	
	1121	4.6	141			1138	4.7	142			1142	5.1	156			1131	5.6	170			1054	5.8	178			1029	6.3	193	
	1430	4.1	124			1534	3.4	105			1626	3.0	90			1707	2.7	81			1625	1.9	59			1657	2.1	64	
	2118	8.1	246			2235	7.9	242			2242	7.3	224			2324	6.1	186			2250	6.6	202			2329	5.3	163	
10 Th	0511	1.3	40		25 F	0536	1.2	37		10 Su	0535	1.5	46		25 M	0540	2.4	72		10 M	0448	1.9	59		25 Tu	0443	3.0	91	
	1150	4.7	144			1208	4.9	148			1215	5.3	162			1153	5.7	175			1121	6.2	188			1048	6.5	198	
	1520	4.0	122			1625	3.4	105			1716	2.8	85			1749	2.8	84			1713	1.7	52			1737	2.1	65	
	2157	8.0	245			2307	7.5	228			2324	6.9	209			2351	5.5	168			2339	6.0	184						
11 F	0542	1.4	43		26 Sa	0606	1.6	50		11 M	0602	1.8	55		26 Tu	0600	2.7	83		11 Tu	0514	2.3	71		26 W	0004	4.9	149	
	1227	4.8	147			1239	5.1	154			1249	5.5	168			1218	5.8	178			1147	6.4	196			0458	3.2	99	
	1613	4.0	121			1713	3.5	107			1808	2.7	82			1834	2.9	88			1805	1.6	49			1110	6.6	200	
	2235	7.9	240			2332	6.9	210																1821		2.2	68		
12 Sa	0614	1.6	48		27 Su	0635	2.1	63		12 Tu	0008	6.2	188		27 W	0026	4.8	147		12 W	0033	5.3	162		27 Th	0049	4.4	134	
	1310	4.9	150			1312	5.2	160			0629	2.2	67			0615	3.1	93			0538	2.8	84			0508	3.5	107	
	1709	4.0	121			1802	3.6	111			1324	5.7	174			1248	5.9	180			1214	6.6	201			1137	6.5	199	
	2313	7.5	229			2354	6.2	189			1905	2.7	81			1927	3.0	91			1904	1.7	51			1912	2.4	72	
13 Su	0647	1.8	55		28 M	0700	2.5	76		13 W	0101	5.3	161		28 Th	0120	4.2	127		13 Th	0138	4.5	137		28 F	0153	4.0	121	
	1357	5.1	154			1348	5.4	164			0655	2.7	81			0623	3.3	102			0558	3.1	96			0507	3.7	112	
	1807	3.9	120			1853	3.8	115			1400	5.9	180			1325	5.9	180			1245	6.7	203			1210	6.4	196	
	2354	7.0	212								2016	2.6	80			2044	3.0	92			2018	1.8	55			2020	2.5	76	
14 M	0719	2.1	64		29 Tu	0020	5.4	166		14 Th	0222	4.3	132		29 F	0329	3.6	110		14 F	0315	3.8	116		29 Sa	1256	6.3	192	
	1444	5.2	160			0723	2.9	87			0717	3.1	93			0603	3.5	107			0608	3.5	106			2210	2.5	76	
	1910	3.9	118			1426	5.5	169			1444	6.1	187			1414	5.9	180			1333	6.6	202						
						1954	3.8	117			2157	2.5	75			2349	2.8	84			2201	1.8	56						
15 Tu	0041	6.2	189		30 W	0056	4.7	143		15 F	0443	3.6	111		15 Sa	1456	6.5	198		15 Sa	1456	6.5	198		30 Su	1408	6.1	187	
	0751	2.5	75			0741	3.2	98			0727	3.4	104																
	1527	5.5	168			1506	5.7	173			1544	6.4	194																
	2024	3.7	113			2141	3.7	114			2355	2.0	60																
16 W					31 Th	0257	3.9	120																					
						0751	3.5	107																					
						1547	5.8	178																					
17 Th																													
18 F																													

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
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Hong Kong, China, 2008

Times and Heights of High and Low Waters

July				August				September															
Time		Height		Time		Height		Time		Height		Time		Height									
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm									
1 Tu	0643	7.3	222	16 W	0652	6.8	208	1 F	0121	3.6	110	16 Sa	0140	3.8	117	1 M	0326	2.9	89	16 Tu	0322	2.9	87
	1431	0.7	21		1527	1.3	40		0839	7.9	242		0814	7.3	221		1018	7.2	220		0941	7.0	213
	2141	4.0	123		2238	4.1	125		1601	0.4	13		1555	1.5	45		1628	2.0	60		1553	2.4	74
									2250	4.4	135		2228	4.8	146		2254	5.9	180		2225	6.4	196
2 W	0032	3.6	109	17 Th	0039	4.0	121	2 Sa	0224	3.4	104	17 Su	0234	3.6	109	2 Tu	0413	2.8	85	17 W	0408	2.5	75
	0734	7.7	236		0735	7.1	215		0935	7.9	242		0900	7.3	224		1056	6.7	205		1029	6.7	204
	1526	0.3	8		1600	1.2	36		1639	0.7	20		1619	1.6	48		1653	2.4	72		1618	2.7	81
	2232	4.1	126		2254	4.2	127		2319	4.7	143		2252	5.1	154		2317	6.2	190		2249	6.8	207
3 Th	0122	3.6	110	18 F	0129	3.9	119	3 Su	0322	3.2	99	18 M	0324	3.3	101	3 W	0459	2.8	85	18 Th	0455	2.2	67
	0832	8.1	246		0821	7.3	222		1024	7.7	236		0943	7.3	222		1130	6.1	187		1120	6.2	190
	1617	0.1	3		1630	1.2	36		1713	1.0	32		1643	1.7	52		1716	2.8	84		1643	3.0	91
	2316	4.2	128		2312	4.3	131		2350	5.0	152		2319	5.3	163		2341	6.4	196		2313	7.1	216
4 F	0214	3.6	110	19 Sa	0220	3.8	116	4 M	0417	3.1	96	19 Tu	0413	3.1	94	4 Th	0544	2.9	88	19 F	0545	2.0	62
	0930	8.2	250		0905	7.4	225		1107	7.3	222		1025	7.1	215		1203	5.5	168		1215	5.7	173
	1704	0.2	6		1659	1.2	38		1744	1.5	46		1708	1.9	58		1736	3.1	96		1708	3.3	102
	2356	4.3	131		2336	4.4	135						2350	5.6	171					2338	7.3	222	
5 Sa	0309	3.6	109	20 Su	0314	3.7	113	5 Tu	0022	5.3	161	20 W	0502	2.9	88	5 F	0006	6.5	199	20 Sa	0641	2.0	62
	1025	8.1	246		0947	7.4	225		0508	3.1	96		1109	6.6	202		0632	3.0	92		1320	5.0	153
	1747	0.5	16		1727	1.4	42		1144	6.7	203		1734	2.1	65		1244	4.9	150		1730	3.7	113
									1812	2.0	60					1752	3.5	106					
6 Su	0038	4.4	135	21 M	0007	4.6	140	6 W	0056	5.5	168	21 Th	0021	5.8	178	6 Sa	0035	6.6	200	21 Su	0008	7.3	224
	0408	3.6	110		0408	3.6	110		0559	3.2	99		0552	2.7	83		0728	3.1	96		0749	2.1	65
	1115	7.7	235		1027	7.3	221		1216	5.9	181		1156	6.0	184		1350	4.4	133		1447	4.5	136
	1827	1.0	30		1755	1.5	47		1838	2.4	74		1800	2.5	75		1800	3.8	115		1745	4.1	124
7 M	0121	4.6	141	22 Tu	0044	4.8	146	7 Th	0131	5.7	174	22 F	0052	6.1	185	7 Su	0112	6.5	199	22 M	0053	7.3	223
	0508	3.7	112		0502	3.5	108		0652	3.4	103		0646	2.6	80		0851	3.2	98		0919	2.2	67
	1201	7.2	218		1107	7.0	212		1250	5.2	158		1252	5.3	162								
	1904	1.5	46		1823	1.7	52		1901	2.8	86		1825	2.9	87								
8 Tu	0207	4.9	148	23 W	0124	5.0	151	8 F	0206	5.9	179	23 Sa	0124	6.3	192	8 M	0159	6.5	197	23 Tu	0208	7.2	219
	0608	3.8	115		0556	3.4	105		0754	3.5	106		0751	2.6	78		1123	3.0	91		1058	2.1	63
	1243	6.4	195		1149	6.5	197		1343	4.5	136		1408	4.6	139								
	1938	2.0	61		1852	2.0	60		1919	3.2	97		1848	3.2	98								
9 W	0253	5.1	156	24 Th	0204	5.2	158	9 Sa	0242	6.0	182	24 Su	0201	6.5	198	9 Tu	0259	6.5	197	24 W	0353	7.1	216
	0711	3.8	117		0654	3.3	102		0934	3.4	104		0917	2.4	74		1237	2.6	79		1215	1.9	58
	1325	5.6	171		1237	5.8	177		1549	3.9	118		1601	3.9	120								
	2010	2.5	75		1921	2.3	69		1928	3.5	107		1904	3.6	109								
10 Th	0334	5.4	164	25 F	0241	5.4	165	10 Su	0320	6.1	185	25 M	0253	6.7	204	10 W	0407	6.5	199	25 Th	0530	7.1	217
	0824	3.9	118		0759	3.1	96		1211	3.0	90		1103	2.1	63		1322	2.3	70		1307	1.9	57
	1424	4.9	148		1339	5.1	154										2032	5.1	155		2032	5.1	155
	2040	2.9	87		1950	2.6	80									2342	4.6	141		2342	4.6	141	
11 F	0410	5.6	171	26 Sa	0316	5.7	175	11 M	0402	6.2	189	26 Tu	0403	6.9	210	11 Th	0514	6.7	203	26 F	0650	7.2	219
	1015	3.7	112		0920	2.9	88		1315	2.4	73		1231	1.6	49		1356	2.1	64		1347	1.9	59
	1614	4.2	128		1517	4.3	130								2106		4.8	147	2043		5.4	164	
	2108	3.2	97		2019	3.0	91						2345	4.6	139								
12 Sa	0440	5.8	178	27 Su	0353	6.1	186	12 Tu	0449	6.4	194	27 W	0522	7.1	217	12 F	0616	6.8	208	27 Sa	0055	4.1	124
	1220	3.1	96		1058	2.4	73		1357	1.9	59		1333	1.2	37		1422	2.0	62		0753	7.2	220
	1812	3.8	116		1727	3.7	114								2106		5.0	153	1419		2.1	65	
	2135	3.5	106		2049	3.3	101									2059	5.7	175		2059	5.7	175	
13 Su	0508	6.0	184	28 M	0436	6.5	199	13 W	0541	6.6	200	28 Th	0639	7.3	224	13 Sa	0053	4.2	128	28 Su	0150	3.5	107
	1326	2.5	77		1227	1.7	53		1433	1.6	50		1419	1.0	32		0713	7.0	214		0846	7.2	218
													2128	4.5	137		1445	2.1	63		1447	2.4	74
14 M	0537	6.3	192	29 Tu	0529	7.0	212	14 Th	0634	6.8	208	29 F	0031	4.0	122	14 Su	0147	3.7	114	29 M	0238	3.0	92
	1412	2.0	61		1337	1.1	33		1504	1.5	45		0747	7.6	231		0805	7.1	217		0933	6.9	210
													2201	4.4	133		1457	1.1	33		1507	2.1	65	1513	2.7	83
													2146	4.8	146		2137	5.6	172		2135	6.6	201
15 Tu	0611	6.6	200	30 W	0631	7.3	224	15 F	0041	4.1	124	30 Sa	0138	3.6	109	15 M	0236	3.3	100	30 Tu	0323	2.7	83
	1451	1.6	48		1433	0.6	19		0725	7.1	215		0845	7.7	234		0853	7.1	217		1015	6.6	200
					2152	4.0	122		1531	1.4	43		1530	1.3	39		1529	2.3	69		1537	3.1	93
									2211	4.5	138		2208	5.1	156		2200	6.1	185		2151	7.0	213
				31 Th	0012	3.8	115					31 Su	0235	3.2	98								
					0737	7.7	235							0935	7.5	230							
					1520	0.4	12							1600	1.6	48							
					2221	4.2	128						2230	5.5	168								

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Haikou, China, 2008

Times and Heights of High and Low Waters

October						November						December																
Time			Height			Time			Height			Time			Height			Time			Height							
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm				
1 W	0406	4.2	129		16 Th	0337	5.0	151		1 Sa	0849	8.3	254		16 Su	0831	9.1	276		1 M	0948	8.0	243		16 Tu	0951	8.6	263
	0912	6.5	197			0824	6.8	207			1746	1.8	55			1828	0.6	18			1857	2.1	63			2018	0.8	24
	1559	2.4	73			1607	1.9	58																				
	2252	7.3	222			2317	7.6	231																				
2 Th	0412	5.0	152		17 F	0347	5.8	177		2 Su	0937	8.4	255		17 M	0931	9.1	278		2 Tu	1016	7.8	239		17 W	1018	8.3	253
	0908	7.1	217			0831	7.6	232			1815	2.1	63			2028	0.9	28			1909	2.3	70			2049	1.4	43
	1652	1.9	57			1657	1.1	34																				
	2348	6.8	206																									
3 F	0411	5.4	164		18 Sa	0052	7.1	217		3 M	1020	8.2	251		18 Tu	1013	8.9	272		3 W	0957	7.7	236		18 Th	1033	7.9	241
	0921	7.7	236			0356	6.5	198			1833	2.3	71			2154	1.3	41			1959	2.5	77			2115	2.2	67
	1743	1.7	53			0855	8.4	257																				
						1748	0.8	24																				
4 Sa	0054	6.2	188		19 Su	0930	9.0	274		4 Tu	1034	8.0	245		19 W	1006	8.6	261		4 Th	0958	7.8	237		19 F	1111	7.4	226
	0413	5.5	168			1842	0.9	28			1908	2.6	80			2254	1.9	58			2100	2.8	86			2144	3.1	95
	0950	8.2	249																									
	1828	1.9	57																									
5 Su	1028	8.3	252		20 M	1007	9.2	279		5 W	0939	8.0	244		20 Th	1030	8.2	249		5 F	1035	7.6	233		20 Sa	1214	6.7	203
	1859	2.2	66			1956	1.4	44			2026	3.0	92			2335	2.5	77			2156	3.1	96			2209	4.1	125
6 M	1105	8.2	249		21 Tu	1026	9.0	273		6 Th	1004	8.0	244		21 F	1121	7.6	231		6 Sa	1126	7.3	221		21 Su	0427	5.4	164
	1923	2.5	75			2335	1.7	52			2342	3.1	96								2244	3.6	109			0859	4.9	148
																										1405	5.7	175
																										2212	5.1	154
7 Tu	1115	7.9	242		22 W	1031	8.6	263		7 F	1048	7.8	237		22 Sa	0005	3.2	98		7 Su	1252	6.6	200		22 M	0305	5.8	178
	2002	2.8	85								1243	6.8	207			2320	4.1	126			1110	4.0	122					
8 W	1035	7.8	238		23 Th	0045	1.9	59		8 Sa	0019	3.2	98		23 Su	0032	4.0	121		8 M	0732	5.9	179		23 Tu	0246	6.6	201
						1102	8.2	249			1143	7.3	223			0716	6.0	182			1135	5.3	163			1247	3.0	92
																	1106	5.5	167			1601	5.9	180				
																	1945	6.4	195			2343	4.8	147				
9 Th	0115	2.8	86		24 F	0125	2.3	70		9 Su	0054	3.4	103		24 M	0054	4.8	146		9 Tu	0455	5.8	176		24 W	0311	7.3	221
	1044	7.7	236			1205	7.5	230			0858	6.8	207			0642	6.1	185			1245	4.1	125			1402	2.2	68
											1157	6.5	199			1236	4.3	130			2019	6.0	184					
												1423	6.6	202			2058	6.6	200			2356	5.6	171				
10 F	0144	2.7	83		25 Sa	0146	2.7	83		10 M	0124	3.7	114		25 Tu	0104	5.6	172		10 W	0420	6.4	195		25 Th	0403	7.6	231
	1109	7.5	229			1725	6.9	211			0835	6.4	195			0558	6.5	197			1341	2.8	85			1518	1.7	52
											1253	5.4	166			1341	3.1	95										
												1904	6.6	200			2201	6.6	201									
11 Sa	0201	2.6	80		26 Su	0202	3.2	98		11 Tu	0148	4.3	132		26 W	0059	6.2	190		11 Th	0432	7.2	220		26 F	0525	7.6	233
	1024	7.1	215			0836	6.2	190			0746	6.1	187			0533	7.1	217			1438	1.6	50			1635	1.4	44
						1226	5.5	169			1343	4.2	128			1441	2.2	68										
						1956	7.1	217			2039	7.0	213															
12 Su	0222	2.7	81		27 M	0221	3.9	118		12 W	0202	5.1	156		27 Th	0558	7.7	234		12 F	0507	8.0	243		27 Sa	0659	7.6	233
	0948	6.7	203			0814	6.2	190			0652	6.4	194			1540	1.7	53			1543	0.8	24			1740	1.3	40
	1253	6.2	190			1327	4.4	133			1432	2.9	87															
	1759	7.0	212			2103	7.3	222			2153	7.3	221															
13 M	0246	2.9	88		28 Tu	0238	4.7	142		13 Th	0212	6.0	182		28 F	0649	8.0	243		13 Sa	0609	8.5	258		28 Su	0810	7.6	233
	0926	6.3	193			0759	6.5	198			0637	7.1	216			1640	1.6	48			1703	0.3	10			1826	1.4	42
	1340	5.3	161			1423	3.2	98			1522	1.7	52															
	1948	7.3	222			2155	7.3	222			2321	7.3	224															
14 Tu	0308	3.3	102		29 W	0248	5.4	166		14 F	0225	6.7	205		29 Sa	0755	8.1	246		14 Su	0744	8.7	266		29 M	0902	7.6	233
	0903	6.1	187			0743	7.0	212			0655	7.9	242			1741	1.6	50			1828	0.2	5			1850	1.5	47
	1428	4.1	126			1517	2.3	70			1615	0.9	26															
	2059	7.6	231			2246	7.1	215																				
15 W	0325	4.1	125		30 Th	0249	6.0	182		15 Sa	0734	8.7	264		30 Su	0858	8.1	246		15 M	0859	8.8	268		30 Tu	0936	7.5	230
	0837	6.2	190			0742	7.6	231			1713	0.5	15			1837	1.8	56			1933	0.3	10			1846	1.7	52
	1517	3.0	90			1611	1.8	55																				
	2205	7.7	236			2345	6.7	205																				
				31 F	0250	6.2	188														31 W	0944	7.5	228				
					0807	8.1	246																1902	1.9	57			
					1702	1.6	50																					

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
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Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Beihai, China, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height			Time	Height			Time	Height		
	h	m	ft		h	m	ft		h	m	ft
1 Tu	0026	13.8	420	16 W	0201	13.7	417	1 Su	0354	9.2	281
	1155	2.7	81		1204	3.7	114		0838	7.5	230
									1526	12.3	374
									2347	4.2	129
2 W	0131	13.7	417	17 Th	0325	12.9	393	2 M	1557	14.5	443
	1234	2.9	88		1223	4.8	147				
					1754	7.3	223	17 Tu	0217	3.0	91
					2112	6.7	205		1651	15.2	462
3 Th	0242	13.6	414	18 F	0445	12.1	368	3 Tu	0114	2.3	71
	1307	3.4	104		1229	6.0	183		1639	16.4	500
					1740	8.6	261	18 W	0310	2.5	76
					2315	5.8	176		1723	15.5	471
4 F	0357	13.5	410	19 Sa	0600	11.1	337	4 W	0235	1.1	33
	1327	4.3	131		1222	7.1	216		1728	17.5	534
	1853	6.4	196		1745	10.1	309	●			
	2105	6.2	189					5 Th	0356	0.5	16
5 Sa	0512	13.1	399	20 Su	0044	4.6	141		1821	17.9	545
	1329	5.5	169		0710	9.9	303	20 Tu	0241	2.9	89
	1809	7.5	228		1207	7.8	238		1756	14.9	454
	2325	5.2	157		1801	11.7	358	○			
6 Su	0625	12.3	375	21 M	0154	3.7	113	21 W	0338	2.6	78
	1315	6.9	209		0817	8.8	268		1827	15.3	465
	1758	9.3	284		1142	8.1	246	6 F	0513	0.5	16
●					1826	13.1	399		1916	17.7	539
7 M	0055	3.6	110	22 Tu	0300	3.1	96	7 Sa	0620	0.9	28
	0740	11.1	337		1857	14.0	428		2011	17.1	522
	1312	7.9	240	23 W	0401	2.8	86	8 Su	0714	1.6	48
	1813	11.6	355		1929	14.6	444		2106	16.3	498
8 Tu	0216	2.3	70	24 Th	0502	2.7	81	9 M	0752	2.4	74
	0908	9.4	287		2003	14.8	451		2202	15.3	467
	1300	8.6	262	25 F	0605	2.6	80	10 Tu	0813	3.4	105
	1847	13.9	424		2038	14.8	451		2301	13.9	425
9 W	0341	1.5	45	26 Sa	0711	2.6	80	○			
	1933	15.5	473		2115	14.6	446	11 W	0824	4.5	138
10 Th	0512	1.1	34	27 Su	0819	2.6	80	12 Th	0007	12.2	371
	2026	16.4	499		2155	14.4	439		0832	5.7	173
11 F	0646	1.2	36	28 M	0918	2.7	82		1418	8.9	270
	2123	16.4	501		2241	14.1	429		1847	7.5	228
12 Sa	0829	1.4	42	29 Tu	1003	2.9	88	13 F	0132	10.2	311
	2223	15.9	486		2335	13.7	418		0818	6.6	202
13 Su	0954	1.7	51	30 W	1037	3.3	100		1441	10.7	325
	2329	15.2	464						2151	6.7	203
○								14 Sa	0323	8.4	255
14 M	1052	2.2	67						0751	7.2	218
									1512	12.3	376
15 Tu	0042	14.4	440						2358	5.2	158
	1132	2.9	88	15 Th	0144	12.2	372	15 Su	1546	13.7	417
					1024	5.3	163	30 F	0015	12.3	375
					1612	8.4	256		0914	5.3	161
					2019	7.3	224		1510	8.3	253
									1844	7.5	230
								31 Sa	0154	10.8	329
									0911	6.5	199
									1509	10.0	306
									2144	6.3	193

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Beihai, China, 2008

Times and Heights of High and Low Waters

October								November								December							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm				
1 W	0133	7.8	237	16 Th	0033	8.3	252	1 Sa	0717	15.6	476	16 Su	0657	17.9	547	1 M	0719	15.5	472	16 Tu	0735	17.4	531
	0642	11.8	359		0601	13.1	400		1656	3.0	92		1726	1.0	32		1744	2.9	87		1828	1.7	53
	1412	4.2	127		1410	3.0	92																
	2038	10.2	311		2041	9.2	279																
2 Th	0126	8.3	254	17 F	0632	15.1	460	2 Su	0752	15.6	474	17 M	0748	17.8	543	2 Tu	0754	15.2	464	17 W	0828	16.7	508
	0712	13.3	405		1529	2.1	64		1753	3.1	94		1843	1.4	43		1823	3.0	92		1901	2.6	79
	1530	3.8	115																				
	2151	8.8	267																				
3 F	0042	8.4	255	18 Sa	0716	16.5	504	3 M	0827	15.4	468	18 Tu	0840	17.3	526	3 W	0829	14.9	453	18 Th	0923	15.6	476
	0750	14.3	436		1655	1.7	51		1853	3.2	97		1945	1.9	59		1857	3.2	98		1916	3.6	109
	1636	3.6	110																				
4 Sa	0829	14.8	452	19 Su	0807	17.2	525	4 Tu	0904	15.1	459	19 W	0934	16.4	500	4 Th	0905	14.4	439	19 F	1019	14.1	430
	1755	3.6	110		1822	1.6	50		1948	3.2	99		2026	2.7	82		1924	3.5	107		1922	4.6	140
5 Su	0910	15.0	457	20 M	0901	17.3	526	5 W	0942	14.6	446	20 Th	1032	15.3	467	5 F	0942	13.8	421	20 Sa	0109	7.4	226
	1907	3.6	110		1956	1.9	57		2036	3.4	103		2053	3.5	108		1946	3.9	119		0339	7.1	215
																					1121	12.1	370
																					1932	5.6	170
6 M	0952	14.9	454	21 Tu	0958	16.8	512	6 Th	1023	14.1	431	21 F	1137	13.9	425	6 Sa	1025	13.0	395	21 Su	0123	9.3	282
	2026	3.5	108		2112	2.2	66		2114	3.6	111		2111	4.6	139		2002	4.5	138		0623	7.4	226
																					1237	9.9	301
																					1920	6.4	194
7 Tu	1036	14.7	448	22 W	1100	16.0	489	7 F	1110	13.5	413	22 Sa	1257	12.2	373	7 Su	1123	11.7	357	22 M	0158	11.2	342
	2137	3.4	104		2205	2.7	83		2143	4.1	125		2122	5.6	172		2012	5.4	165		0923	6.7	203
																					1434	7.8	237
																					1901	6.6	202
8 W	1124	14.4	440	23 Th	1208	15.2	464	8 Sa	1210	12.8	390	23 Su	0316	9.3	284	8 M	0241	9.2	281	23 Tu	0237	12.9	394
	2232	3.4	103		2242	3.4	105		2204	4.8	145		0801	7.6	233		0640	8.3	252		1154	5.1	156
																					1253	10.0	306
																					2003	6.4	194
9 Th	1219	14.1	430	24 F	1326	14.3	435	9 Su	1334	11.9	362	24 M	0337	11.1	338	9 Tu	0247	10.8	328	24 W	0318	14.2	432
	2316	3.5	107		2309	4.4	133		2218	5.6	172		1034	6.4	195		0953	6.9	211		1312	3.7	114
																					1509	8.4	256
																					1936	7.1	216
10 F	1320	13.8	420	25 Sa	1451	13.3	404	10 M	0425	9.1	276	25 Tu	0404	12.8	391	10 W	0305	12.7	387	25 Th	0357	14.9	455
	2351	3.9	120		2327	5.4	166		0836	8.0	245		1214	4.8	147		1146	4.8	147		1410	2.9	88
																					1817	7.9	240
																					2044	7.5	229
11 Sa	1429	13.5	410	26 Su	0455	8.5	260	11 Tu	0422	10.4	318	26 W	0435	14.2	434	11 Th	0335	14.7	447	26 F	0434	15.3	465
					0913	7.2	218		1050	6.4	196		1328	3.6	110		1306	2.9	87		1458	2.5	76
					1617	12.2	371		1656	9.9	302												
					2332	6.6	201		2205	7.7	235												
12 Su	0016	4.6	139	27 M	0500	10.1	307	12 W	0431	12.3	374	27 Th	0508	15.2	463	12 F	0413	16.4	499	27 Sa	0508	15.4	469
	1543	13.1	398		1111	5.9	181		1218	4.5	136		1430	2.9	88		1419	1.5	45		1540	2.4	73
					1737	11.0	335		1832	8.8	269												
					2338	7.5	230		2144	8.2	250												
13 M	0033	5.4	165	28 Tu	0514	11.8	359	13 Th	0451	14.3	437	28 F	0541	15.6	477	13 Sa	0500	17.5	532	28 Su	0544	15.4	468
	0600	8.1	248		1232	4.7	142		1335	2.7	83		1524	2.6	80		1529	0.9	26		1619	2.5	75
	0941	7.2	220		1853	9.8	298																
	1656	12.6	383		2328	8.2	250																
14 Tu	0035	6.5	197	29 W	0539	13.4	409	14 F	0523	16.2	493	29 Sa	0613	15.8	481	14 Su	0550	17.9	546	29 M	0621	15.3	466
	0545	9.3	284		1344	3.7	113		1452	1.5	47		1615	2.6	80		1639	0.8	24		1654	2.6	80
	1132	6.0	182		2013	8.6	263																
	1807	11.8	359		2251	8.2	251																
15 W	0029	7.5	229	30 Th	0609	14.6	446	15 Sa	0607	17.4	531	30 Su	0645	15.7	479	15 M	0642	17.8	544	30 Tu	0659	15.1	460
	0545	11.1	337		1452	3.2	97		1609	1.0	31		1702	2.7	83		1741	1.1	34		1722	2.9	87
	1254	4.4	134																				
	1919	10.6	324																				
15 O				31 F	0643	15.4	468													31 W	0738	14.8	452
					1556	3.0	91														1746	3.1	96

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Do Son, Hon Dau, Vietnam, 2008

Times and Heights of High and Low Waters

January								February								March												
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height										
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm									
1 Tu	0744	7.3	222		16 W	0538	6.3	191		1 F	0140	8.3	252		16 Sa	1206	0.7	21		1 Sa	0007	8.9	270		16 Su	1133	0.2	7
	1849	5.6	170			1241	5.2	160			1304	2.7	83									1152	2.0	61				
					●	2224	7.2	220																				
2 W	0451	7.1	216		17 Th	1215	3.7	113		2 Sa	0158	9.1	277		17 Su	0042	11.0	336		2 Su	0045	9.5	289		17 M	0016	11.2	342
	1446	4.9	149			2353	8.8	267			1334	2.0	60			1302	0.1	2			1230	1.6	48			1234	0.4	12
3 Th	0303	7.7	235		18 F	1246	2.2	66		3 Su	0221	9.8	299		18 M	0145	11.6	354		3 M	0121	10.0	304		18 Tu	0121	11.1	339
	1429	3.9	119								1410	1.4	42			1402	-0.1	-3			1314	1.3	40			1341	0.9	27
4 F	0250	8.6	263		19 Sa	0059	10.2	311		4 M	0247	10.4	317		19 Tu	0242	11.8	359		4 Tu	0157	10.3	315		19 W	0220	10.7	325
	1439	3.0	90			1331	0.9	28			1450	1.0	30			1508	0.1	2			1405	1.3	39			1457	1.6	50
5 Sa	0302	9.4	288		20 Su	0157	11.4	346		5 Tu	0315	10.9	331		20 W	0334	11.6	353		5 W	0234	10.5	319		20 Th	0314	9.9	301
	1504	2.1	64			1423	0.0	0			1536	0.8	23			1620	0.6	17			1507	1.4	44			1636	2.5	76
6 Su	0322	10.2	311		21 M	0251	12.1	370		6 W	0347	11.2	340		21 Th	0422	11.0	334		6 Th	0314	10.3	315		21 F	0402	8.9	271
	1535	1.4	44			1520	-0.4	-13			1629	0.7	22			1739	1.3	39			1625	1.8	55			1833	3.3	102
					○					7 Th	0421	11.2	340		22 F	0506	10.1	307		7 F	0355	9.9	301		22 Sa	0443	7.7	236
7 M	0345	10.9	331			1619	-0.5	-15			1728	1.0	29			1858	2.2	66			1759	2.3	71			2012	4.2	127
	1610	0.9	28		○					●					23 Sa	0544	9.0	274		8 Sa	0438	9.1	277			2012	4.2	127
8 Tu	0413	11.4	347		23 W	0433	12.5	380		8 F	0458	10.9	331		23 Sa	0544	9.0	274			1937	3.0	91		23 Su	0507	6.6	201
	1649	0.6	17			1721	-0.2	-5			1835	1.4	44			2011	3.1	96			●					0859	6.2	190
●					24 Th	0520	12.0	365		9 Sa	0536	10.2	311		24 Su	0609	7.8	237		9 Su	0523	8.0	244		24 M	0439	5.5	169
9 W	0444	11.7	357			1823	0.5	14			1947	2.2	66			2120	4.2	128			2112	3.7	113			0817	5.3	163
	1731	0.5	14		25 F	0603	11.2	340		10 Su	0613	9.2	281		25 M	0609	6.7	203		10 M	0606	6.6	202		25 Tu	0807	4.4	133
10 Th	0518	11.8	361			1922	1.4	42			2105	3.1	95			1110	6.0	182			0958	6.4	195			1742	7.7	234
	1817	0.6	18		26 Sa	0640	10.1	307		11 M	0643	7.9	241		26 Tu	0410	5.8	176		11 Tu	0541	5.2	157		26 W	0828	3.5	107
11 F	0555	11.6	355			2014	2.5	76			2236	4.2	129			1037	5.1	155			0723	5.2	157			1908	8.2	251
	1907	1.0	32		27 Su	0707	8.9	270		12 Tu	0640	6.4	196		27 W	0410	5.8	176		11 Tu	0723	5.2	157					
12 Sa	0632	11.1	338			2054	3.7	112			1133	6.0	182			1840	6.6	200			1710	7.7	236					
	2002	1.8	54		28 M	0712	7.6	233		13 W	0102	5.4	164		28 Th	1049	3.3	100		12 W	0759	3.6	111		28 Th	0858	2.8	85
13 Su	0708	10.2	310			2110	4.9	148			0330	5.5	167			2319	8.1	248			1847	8.8	267			2025	8.8	267
	2100	2.8	86		29 Tu	0619	6.7	203		14 Th	1011	4.6	140		29 F					13 Th	0849	2.3	70		29 F	0932	2.2	68
14 M	0737	8.9	272			1314	5.4	166			2015	7.7	234								2015	9.7	296			2131	9.3	282
	2206	4.1	125		30 W	0326	6.7	203		15 F	1116	1.7	52		30 Sa	1036	0.5	16		14 F	0941	1.2	37		30 Su	1008	1.8	56
						1243	4.5	138			2328	10.1	307			2301	11.0	335			2141	10.5	319			2228	9.6	294
15 Tu	0741	7.5	228		○																○				31 M	1047	1.6	50
	2348	5.5	169																									
					31 Th	0145	7.4	225																				
						1243	3.6	109																				

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Do Son, Hon Dau, Vietnam, 2008

Times and Heights of High and Low Waters

April								May								June				
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height		
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm	
1	0006	10.1	307	16	0043	10.0	304	1	1243	3.6	109	16	1244	5.7	174	1	0238	4.7	142	
Tu	1220	1.8	54	W	1312	2.6	79	Th				F	2224	6.0	183	Su	1323	8.2	250	
2	0054	10.0	304	17	0141	9.0	273	2	0028	8.2	251	17	0502	5.5	167	2	0246	3.1	96	
W	1322	2.2	67	Th	1437	3.7	113	F	1516	4.6	141	Sa	1447	6.9	211	M	1419	9.6	294	
3	0142	9.6	293	18	0231	7.8	238	3	0110	7.0	214	18	0417	4.4	135	3	0324	1.7	53	
Th	1447	2.9	87	F	1751	4.7	143	Sa	0807	6.2	188	Su	1514	8.0	244	Tu	1515	10.9	333	
4	0232	8.9	272	19	0307	6.6	201	4	0057	5.6	171	19	0431	3.4	103	4	0411	0.6	18	
F	1707	3.5	108	Sa	0717	6.3	191	Su	0348	5.6	170	M	1555	8.9	272	W	1611	11.9	363	
5	0325	7.9	242	20	0229	5.5	167	5	0334	4.1	125	20	0502	2.5	77	●	0503	−0.2	−5	
Sa	1920	4.1	125	Su	0610	5.3	163	M	1452	9.0	274	Tu	1636	9.6	294	Th	1706	12.5	382	
6	0432	6.7	205	○	1434	7.3	222	●				○				5	0557	−0.5	−16	
Su	0827	6.5	197	21	0549	4.3	132	6	0420	2.7	81	21	0537	1.8	56	6	1800	12.7	387	
●	1254	6.8	207	M	1600	8.1	247	Tu	1555	10.2	312	W	1716	10.2	312	F				
7	2120	4.5	137	22	0617	3.4	104	7	0511	1.4	43	22	0612	1.4	42	7	0652	−0.5	−14	
M	1511	7.9	242	Tu	1706	8.8	268	W	1657	11.2	342	Th	1755	10.7	325	Sa	1853	12.4	379	
8	0512	3.8	117	23	0650	2.7	81	8	0604	0.5	14	23	0646	1.0	32	8	0746	0.0	1	
Tu	1633	9.1	277	W	1803	9.4	286	Th	1758	11.9	363	F	1833	11.0	334	Su	1944	11.8	359	
9	0620	2.5	76	24	0725	2.1	63	9	0659	−0.1	−2	24	0721	1.0	29	9	0839	0.9	27	
W	1746	10.1	308	Th	1855	9.8	299	F	1859	12.2	372	Sa	1912	11.1	338	M	2032	10.8	328	
10	0717	1.4	42	25	0759	1.7	51	10	0753	−0.2	−5	25	0758	1.0	31	10	0928	2.0	62	
Th	1858	10.9	331	F	1944	10.2	310	Sa	1959	12.1	368	Su	1951	11.0	335	Tu	2112	9.5	290	
11	0813	0.6	18	26	0835	1.4	44	11	0848	0.1	4	26	0838	1.3	41	○	11	1010	3.3	101
F	2010	11.3	345	Sa	2032	10.4	316	Su	2058	11.6	354	M	2030	10.7	325	W	2135	8.2	249	
12	0909	0.2	6	27	0912	1.4	42	12	0943	0.9	26	27	0921	1.9	58	11	1010	3.3	101	
Sa	2121	11.5	350	Su	2118	10.4	318	M	2155	10.8	329	Tu	2109	10.1	307	Th	2135	8.2	249	
13	1006	0.3	8	28	0953	1.5	47	○				28	0921	1.9	58	12	1033	4.7	142	
Su	2231	11.3	344	M	2205	10.3	314	●				W	2145	9.2	279	Th	2113	6.9	211	
○				●				13	1036	1.9	57	28	1007	2.8	84	13	0749	5.7	175	
14	1104	0.8	23	29	1039	2.0	60	Tu	2248	9.7	296	○				F	1721	6.6	200	
M	2338	10.8	329	Tu	2252	9.9	302	14	1128	3.1	94	29	1058	3.8	117	14	0318	4.9	149	
15	1205	1.5	47	30	1133	2.6	80	W	2333	8.5	258	Th	2211	8.0	243	Sa	1500	7.5	228	
Tu				W	2339	9.2	281	15	1216	4.4	134	14				15	0318	4.9	149	
								Th	2353	7.2	218	15	1212	5.2	158	15	1507	8.5	259	
								15				30	2154	6.6	202	30	0301	3.8	116	
												F				Su				
												31	1212	5.2	158	30	1334	2.6	79	
												Sa	1225	6.7	203	M				

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Do Son, Hon Dau, Vietnam, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height			Time	Height			Time	Height		
	h	m	ft		h	m	ft		h	m	ft
1 W	0215	7.9	240	16 Th	0309	9.1	278	1 M	0619	11.6	354
	1838	5.3	161		1715	4.0	123		1906	1.2	37
2 Th	0359	8.5	260	17 F	0415	10.2	312	2 Tu	0655	11.6	353
	1903	4.3	130		1759	2.8	84		1939	1.4	44
3 F	0524	9.1	278	18 Sa	0521	11.2	341	3 W	0730	11.4	346
	1939	3.4	105		1847	1.7	51		2012	1.9	57
4 Sa	0643	9.6	292	19 Su	0628	11.9	362	4 Th	0805	10.9	332
	2016	2.9	87		1937	1.0	30		2045	2.5	77
5 Su	0758	9.9	303	20 M	0736	12.3	374	5 F	0837	10.2	311
	2053	2.5	76		2029	0.7	21		2115	3.4	103
6 M	0906	10.2	312	21 Tu	0844	12.3	376	6 Sa	0904	9.3	283
	2129	2.3	71		2123	0.9	27		2120	4.4	135
7 Tu	1004	10.4	318	22 W	0951	12.0	367	7 Su	0914	8.2	249
	2207	2.3	71		2218	1.5	45		2005	5.5	168
8 W	1054	10.5	321	23 Th	1056	11.4	348	8 M	0759	7.1	215
	2247	2.6	78		2316	2.4	74		1639	5.7	175
9 Th	1139	10.5	319	24 F	1158	10.5	320	9 Tu	0120	7.3	223
	2332	2.9	89						1441	4.7	144
10 F	1222	10.2	312	25 Sa	0023	3.7	112	10 W	0132	8.8	268
					1254	9.4	285		1439	3.3	100
11 Sa	0032	3.5	108	26 Su	0152	5.0	152	11 Th	0213	10.2	312
	1304	9.7	297		1340	8.0	245		1511	1.9	59
12 Su	0205	4.3	131	27 M	0634	5.9	179	12 F	0301	11.5	350
	1346	9.0	275		1349	6.7	205		1554	0.8	24
					1805	6.4	196				
13 M	0518	5.0	151	28 Tu	0122	7.7	234	13 Sa	0351	12.4	379
	1426	8.0	244		1706	5.3	163		1642	0.0	0
14 Tu	0729	5.3	162	29 W	0247	8.7	265	14 Su	0443	13.0	397
	1455	6.8	208		1714	4.2	128		1733	-0.3	-10
	1910	6.6	200								
15 W	0157	7.9	241	30 Th	0352	9.5	291	15 M	0535	13.2	402
	0947	5.5	168		1748	3.2	99		1826	-0.3	-8
	1203	5.6	170								
	1650	5.4	165	31 F	0451	10.2	311	30 Tu	0555	11.5	350
					1825	2.6	78		1851	1.1	34
								31 W	0625	11.2	341
									1930	1.6	49

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Mui Vung Tau, Vietnam, 2008

Times and Heights of High and Low Waters

January								February								March												
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height										
	h	m	ft		h	m	ft		h	m	ft		h	m	ft		h	m	ft									
1 Tu	0202	7.3	224	16 W ○	0112	6.1	187	1 F	0246	5.1	155	16 Sa	0250	3.1	95	1 Sa	0131	4.4	135	16 Su	0216	2.8	86					
	0759	9.3	283		0717	10.1	308		1047	9.3	284		1106	10.3	313		1026	9.3	284		1113	10.5	320					
	1317	7.0	213		1252	6.7	204		1334	9.0	274		1406	9.8	299		1226	9.2	281		1406	10.2	310					
	2020	11.4	348		1921	11.7	356		1946	10.9	333		1935	11.3	345		1749	10.6	323		1804	10.6	324					
2 W	0310	6.5	198	17 Th	0219	5.1	156	2 Sa	0352	4.6	139	17 Su	0413	2.6	80	2 Su	0237	4.4	134	17 M	0348	3.0	91					
	0946	9.4	285		0909	10.0	305		1218	9.8	300		1236	10.9	331		1224	9.8	300		1220	10.9	333					
	1408	8.0	243		1346	8.0	243		1447	9.6	294		1626	10.3	314		1336	9.8	300		1802	9.8	298					
	2053	11.5	349		2002	11.7	358		2039	10.8	330		2104	11.1	339		1812	10.2	312		2059	10.0	303					
3 Th	0409	5.6	170	18 F	0330	4.0	122	3 Su	0456	3.9	120	18 M	0530	2.1	63	3 M	0358	4.2	127	18 Tu	0515	2.9	89					
	1110	9.7	296		1052	10.4	316		1316	10.4	317		1330	11.4	346		1258	10.4	316		1258	11.2	341					
	1509	8.8	267		1452	9.1	277		1712	9.9	303		1824	9.9	301		1812	9.8	299		1840	8.8	267					
	2127	11.5	351		2050	11.9	362		2142	10.8	330		2233	11.2	340		2040	9.9	302		2255	10.2	312					
4 F	0459	4.7	143	19 Sa	0439	2.9	87	4 M	0551	3.2	98	19 Tu	0632	1.6	50	4 Tu	0514	3.7	113	19 W	0619	2.9	87					
	1216	10.2	312		1216	11.0	334		1352	10.9	333		1407	11.6	355		1319	10.8	330		1326	11.3	345					
	1623	9.3	283		1621	9.9	301		1834	9.7	297		1915	9.1	278		1842	9.2	281		1909	7.6	232					
	2202	11.6	354		2145	12.0	367		2242	11.0	335		2346	11.4	348		2229	10.1	308									
5 Sa	0542	3.8	116	20 Su	0543	1.8	55	5 Tu	0637	2.6	78	20 W	0722	1.4	44	5 W	0611	3.2	97	20 Th	0010	10.8	329					
	1310	10.8	328		1324	11.6	353		1420	11.4	346		1437	11.8	359		1339	11.2	340		0708	3.0	91					
	1736	9.6	292		1756	10.1	308		1918	9.4	286		1952	8.2	250		1907	8.5	258		1349	11.4	346					
	2238	11.7	358		2241	12.2	373		2336	11.3	344						2337	10.7	325		1937	6.4	196					
6 Su	0621	3.0	91	21 M	0638	1.0	30	6 W	0718	2.0	61	21 Th ○	0049	11.7	357	6 Th	0657	2.8	84	21 F	0108	11.3	345					
	1354	11.2	342		1418	12.0	366		1446	11.6	355		0805	1.6	49		1358	11.4	348		0748	3.3	101					
	1835	9.7	295		1902	9.9	303		1952	8.9	271		1502	11.7	358		1933	7.6	231		1408	11.4	347					
	2314	11.9	362		2336	12.4	378						2025	7.3	221						2005	5.3	162					
7 M	0658	2.3	70	22 Tu ○	0728	0.5	15	7 Th ●	0026	11.7	356	22 F	0143	11.9	363	7 F	0034	11.4	347	22 Sa ○	0157	11.7	357					
	1434	11.6	354		1501	12.2	373		0756	1.7	51		0842	2.1	64		0737	2.6	78		0823	3.8	117					
	1921	9.7	295		1951	9.5	290		1509	11.8	361		1524	11.7	356		1418	11.6	353		1426	11.4	348					
	2350	12.0	367				2023		8.3	253	2057		6.4	194	2001		6.5	199	2033		4.4	133						
8 Tu ●	0734	1.7	53	23 W	0031	12.5	381	8 F	0115	12.0	367	23 Sa	0233	11.9	364	8 Sa ●	0125	12.0	366	23 Su	0241	11.8	361					
	1509	11.9	363		0812	0.5	14		0832	1.6	50		0916	2.9	87		0814	2.6	80		0853	4.5	137					
	2000	9.6	292		1537	12.3	374		1532	11.9	363		1544	11.6	354		1438	11.7	358		1443	11.5	350					
					2033	9.0	273		2055	7.6	232		2129	5.6	170		2031	5.4	165		2102	3.6	110					
9 W	0029	12.2	372	24 Th	0123	12.4	379	9 Sa	0203	12.3	374	24 Su	0319	11.8	359	9 Su	0214	12.5	380	24 M	0322	11.8	359					
	0810	1.4	42		0854	0.9	26		0909	1.9	59		0947	3.8	115		0850	3.1	94		0920	5.2	160					
	1543	12.1	369		1609	12.2	371		1555	11.9	363		1602	11.5	352		1459	11.9	362		1459	11.5	352					
	2036	9.4	288		2112	8.3	254		2129	6.8	208		2202	5.0	152		2105	4.4	133		2131	3.1	95					
10 Th	0107	12.3	376	25 F	0214	12.2	373	10 Su	0252	12.3	376	25 M	0404	11.4	347	10 M	0303	12.6	384	25 Tu	0401	11.5	351					
	0845	1.3	39		0932	1.6	49		0945	2.6	79		1016	4.8	146		0925	3.8	117		0947	6.0	183					
	1615	12.1	370		1638	12.0	365		1618	11.9	362		1619	11.5	350		1521	12.0	365		1516	11.5	352					
	2111	9.2	281		2151	7.7	235		2206	6.0	184		2236	4.6	141		2141	3.4	104		2201	2.9	88					
11 F	0149	12.4	377	26 Sa	0305	11.8	361	11 M	0345	12.1	369	26 Tu	0449	10.9	332	11 Tu	0354	12.4	379	26 W	0441	11.1	338					
	0922	1.5	46		1008	2.6	80		1021	3.6	110		1043	5.8	177		0959	4.9	149		1012	6.8	207					
	1645	12.1	369		1704	11.7	358		1642	11.8	361		1636	11.4	347		1544	12.0	367		1533	11.5	350					
	2148	8.9	271		2230	7.2	218		2248	5.3	161		2312	4.4	135		2221	2.8	84		2233	2.9	88					
12 Sa	0234	12.2	372	27 Su	0357	11.3	344	12 Tu	0443	11.6	354	27 W	0538	10.3	313	12 W	0450	11.9	363	27 Th	0526	10.6	323					
	0959	2.1	63		1043	3.8	117		1058	4.8	147		1109	6.8	206		1034	6.1	186		1037	7.6	231					
	1715	12.0	365		1728	11.6	353		1706	11.8	359		1654	11.3	344		1608	12.0	367		1549	11.3	345					
	2229	8.4	257		2312	6.7	203		2335	4.6	141		2351	4.4	133		2306	2.4	72		2307	3.1	93					
13 Su	0325	11.9	362	28 M	0452	10.6	324	13 W	0550	11.0	334	28 Th	0640	9.7	295	13 Th	0556	11.2	341	28 F	0621	10.1	307					
	1039	2.9	89		1116	5.1	154		1136	6.2	189		1134	7.7	234		1110	7.4	225		1103	8.3	253					
	1744	11.8	360		1751	11.4	348		1733	11.7	358		1711	11.1	339		1634	11.9	364		1606	11.1	338					
	2315	7.8	238		2358	6.2	190										2357	2.3	71		2347	3.3	102					
14 M	0425	11.4	346	29 Tu	0555	9.9	303	14 Th ○	0031	4.0	123	29 F ○	0037	4.4	134	14 F ○	0721	10.5	320	29 Sa	0746	9.7	295					
	1120	4.0	123		1147	6.2	189		0716	10.3	313		0812	9.3	282		1147	8.6	261		1131	9.0	274					
	1814	11.7	357		1814	11.3	344		1216	7.5	230		1159	8.5	258		1701	11.7	356		1621	10.8	329					
									1804	11.7	356		1730	10.9	332													
15 Tu	0010	7.0	214	30 W ○	0049	5.9	179	15 F	0135	3.6	109				15 Sa	0100	2.5	77	30 Su ○	0035	3.7	114						
	0540	10.7	325		0715	9.4	286		0908	10.0	304					0916	10.2	311		0953	9.7	296						
	1204	5.3	163		1219	7.3	222		1301	8.8	268					1233	9.5	291		1214	9.5	291						
	1845	11.6	355		1839	11.2	341		1840	11.5	352					1729	11.3	343		1633	10.4	317						
				31 Th	0144	5.5	168										31 M	0136	4.1	125								
					0859	9.1	278																			1121	10.1	308
					1252	8.2	250																			1426	9.9	301
					1907	11.1	337																			1620	9.9	303

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Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Mui Vung Tau, Vietnam, 2008

Times and Heights of High and Low Waters

July						August						September					
Time			Height			Time			Height			Time			Height		
	h	m	ft	cm			h	m	ft	cm			h	m	ft	cm	
1 Tu	0043	10.0	305			1 F	0236	10.7	325			1 Sa	0228	10.3	314		
	0519	8.1	248				0730	8.1	247				0744	7.4	226		
	1036	11.2	342				1208	11.0	334				1218	10.1	307		
	1818	-0.1	-3				1949	-0.7	-22				1941	1.1	35		
2 W	0145	10.6	322			2 Sa	0312	10.8	330			2 Su	0250	10.5	320		
	0629	8.4	257				0815	7.4	225				0813	6.8	207		
	1122	11.5	350				1306	11.0	336				1306	10.5	319		
	1909	-1.0	-30				2033	-0.5	-14				2017	1.1	34		
3 Th	0240	11.0	334			3 Su	0344	10.8	329			3 M	0310	10.6	323		
	0727	8.4	257				0855	6.6	201				0843	6.1	185		
	1208	11.6	354				1402	11.0	334				1353	10.8	329		
	1956	-1.4	-44				2114	0.2	6				2051	1.4	42		
4 F	0329	11.2	340			4 M	0413	10.7	326			4 Tu	0330	10.7	325		
	0816	8.3	252				0934	5.8	178				0914	5.3	161		
	1256	11.6	353				1456	10.7	326				1440	11.0	334		
	2041	-1.4	-43				2152	1.2	36				2125	2.0	60		
5 Sa	0414	11.2	341			5 Tu	0439	10.5	321			5 W	0351	10.7	326		
	0903	7.9	242				1014	5.2	158				0948	4.5	137		
	1345	11.4	346				1551	10.2	312				1530	10.9	332		
	2124	-0.9	-28				2227	2.4	73				2200	2.8	86		
6 Su	0454	11.0	336			6 W	0503	10.4	316			6 Th	0412	10.7	326		
	0949	7.5	229				1055	4.7	142				1026	3.8	115		
	1437	10.9	332				1647	9.6	294				1623	10.6	322		
	2207	0.0	0				2301	3.7	112				2234	3.9	120		
7 M	0531	10.8	329			7 Th	0526	10.2	312			7 F	0435	10.8	328		
	1036	7.0	214				1138	4.2	129				1109	3.1	95		
	1533	10.2	312				1749	9.0	274				1724	10.0	306		
	2249	1.2	38				2333	4.9	150				2310	5.2	158		
8 Tu	0606	10.5	321			8 F	0548	10.1	308			8 Sa	0500	10.8	329		
	1127	6.5	198				1225	3.9	120				1159	2.6	79		
	1636	9.4	288				1903	8.4	256				1841	9.4	288		
	2330	2.6	80										2347	6.4	196		
9 W	0639	10.3	314			9 Sa	0610	10.0	305			9 Su	0528	10.8	328		
	1223	5.9	180				1318	3.7	113				1257	2.2	68		
	1754	8.7	264				2037	8.0	245				2022	9.0	275		
10 Th	0012	4.1	124			10 Su	0035	7.0	213			10 M	0030	7.6	233		
	0710	10.1	308				0636	9.8	300				0602	10.7	325		
	1323	5.3	161				1416	3.5	106				1405	2.0	60		
	1930	8.1	247				2225	8.1	247				2219	9.2	280		
11 F	0054	5.3	163			11 M	0111	7.8	238			11 Tu	0127	8.6	263		
	0741	10.0	305				0710	9.7	295				0649	10.4	318		
	1426	4.6	139				1522	3.2	98				1525	1.7	51		
	2112	7.9	242										2354	9.7	296		
12 Sa	0137	6.4	196			12 Tu	0002	8.6	261			12 W	0316	9.3	282		
	0813	10.0	304				0215	8.4	257				0814	10.1	309		
	1528	3.8	117				0803	9.5	289				1647	1.3	40		
	2246	8.1	248				1631	2.8	86								
13 Su	0227	7.3	224			13 W	0105	9.1	277			13 Th	0055	10.2	312		
	0848	9.9	303				0455	8.7	266				0544	9.0	273		
	1627	3.1	94				0917	9.4	285				0959	10.1	307		
							1732	2.3	71				1757	1.0	29		
14 M	0004	8.6	261			14 Th	0139	9.6	292			14 F	0133	10.6	323		
	0336	8.0	244				0629	8.4	257				0647	8.1	247		
	0927	10.0	304				1027	9.4	287				1121	10.4	316		
	1719	2.4	72				1821	1.8	56				1853	0.8	24		
15 Tu	0108	9.1	276			15 F	0205	10.0	304			15 Sa	0204	10.8	328		
	0508	8.4	255				0712	8.0	243				0728	7.1	217		
	1009	10.0	305				1126	9.7	295				1228	10.7	327		
	1805	1.7	52				1903	1.4	43				1940	1.0	29		
						31 Th	0153	10.3	315			31 Su	0231	10.8	330		
							0633	8.6	263				0804	6.0	184		
							1107	10.8	330				1326	11.1	337		
							1901	-0.6	-18				2020	1.4	43		

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Mui Vung Tau, Vietnam, 2008

Times and Heights of High and Low Waters

October					November					December																			
Time		Height			Time		Height			Time		Height			Time		Height												
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm										
1 W	0215	11.5	349		16 Th	0133	12.3	376		1 Sa	0159	12.3	375		16 Su	0147	13.5	413		1 M	0148	12.4	377		16 Tu	0212	13.2	403	
	0844	3.0	90			0818	2.0	61			0917	1.8	56			0920	0.0	1			0928	2.0	60			0956	0.6	18	
	1509	11.7	357			1426	12.7	386			1629	11.6	355			1639	12.7	387			1709	11.9	362			1729	12.6	383	
	2102	5.5	167			2034	6.2	189			2128	8.7	264			2129	9.4	287			2149	9.7	296			2215	9.5	290	
2 Th	0233	11.5	351		17 F	0158	12.6	384		2 Su	0219	12.2	371		17 M	0220	13.4	407		2 Tu	0215	12.1	368		17 W	0258	12.5	382	
	0914	2.5	75			0855	1.1	35			0948	2.1	63			1004	0.4	13			1001	2.4	74			1042	1.7	51	
	1551	11.5	349			1536	12.6	384			1716	11.4	346			1742	12.4	377			1754	11.7	358			1818	12.3	374	
	2129	6.3	192			2109	7.1	215			2158	9.2	279			2214	9.9	301			2231	9.9	301			2312	9.3	282	
3 F	0251	11.5	352		18 Sa	0224	12.8	389		3 M	0240	11.9	364		18 Tu	0256	12.8	391		3 W	0244	11.7	356		18 Th	0353	11.6	355	
	0945	2.3	70			0935	0.7	21			1022	2.5	77			1053	1.3	39			1038	3.1	94			1130	3.1	93	
	1634	11.1	337			1632	12.2	373			1812	11.1	337			1850	12.0	367			1843	11.6	354			1906	12.0	366	
	2155	7.1	216			2144	8.0	243			2234	9.6	294			2312	10.1	309			2323	9.9	302			2323	9.9	302	
4 Sa	0309	11.5	350		19 Su	0251	12.8	389		4 Tu	0300	11.5	352		19 W	0335	12.0	366		4 Th	0318	11.2	340		19 F	0021	8.8	268	
	1018	2.4	73			1018	0.7	22			1059	3.1	96			1147	2.5	75			1118	3.9	118			0508	10.6	324	
	1722	10.6	322			1736	11.7	358			1924	10.9	333			1959	11.8	361			1930	11.5	351			1221	4.5	138	
	2221	7.8	239			2222	8.9	271			2322	10.0	305										1950	11.8		359			
5 Su	0326	11.3	345		20 M	0319	12.5	381		5 W	0319	11.1	338		20 Th	0035	10.1	307		5 F	0030	9.7	296		20 Sa	0140	8.0	245	
	1053	2.7	82			1107	1.2	36			1142	3.9	118			0425	10.9	333			0405	10.5	319			0705	9.8	299	
	1821	10.1	307			1856	11.3	344			2041	11.0	334			1249	3.8	115			1205	4.7	144			1317	6.0	182	
	2249	8.5	260			2308	9.6	294								2059	11.8	359			2013	11.5	350			2031	11.7	356	
6 M	0343	11.1	337		21 Tu	0349	12.0	366		6 Th	0045	10.2	310		21 F	0234	9.4	286		6 Sa	0148	9.1	277		21 Su	0300	7.1	215	
	1132	3.1	96			1204	2.0	60			0337	10.5	320			0633	9.8	300			0533	9.7	297			0909	9.6	294	
	1947	9.8	299			2031	11.1	338			1236	4.6	140			1401	5.1	154			1259	5.6	172			1418	7.3	221	
	2323	9.2	279								2138	11.1	339			2146	11.8	359			2049	11.5	351			2108	11.6	355	
7 Tu	0359	10.7	326		22 W	0018	10.2	310		7 F	1342	5.3	161		22 Sa	0413	8.1	248		7 Su	0300	8.1	247		22 M	0407	5.9	180	
	1218	3.7	113			0421	11.2	342			2215	11.3	344			0920	9.7	296			0810	9.4	288			1045	10.0	305	
	2137	9.9	302			1312	3.0	90								1520	6.1	186			1401	6.5	199			1525	8.3	252	
						2154	11.2	342								2222	11.8	360			2121	11.6	355			2142	11.7	356	
8 W	0023	9.7	295		23 Th	0237	10.1	307		8 Sa	0448	8.8	268		23 Su	0504	6.7	205		8 M	0357	6.8	208		23 Tu	0500	4.8	147	
	0408	10.2	312			0503	10.2	310			0824	9.1	278			1054	10.3	313			0959	9.9	302			1159	10.5	320	
	1318	4.2	129			1435	3.8	117			1458	5.8	178			1633	6.9	211			1508	7.3	224			1636	9.0	273	
	2251	10.3	313			2248	11.4	348			2241	11.5	350			2252	11.9	362			2151	11.9	363			2215	11.8	360	
9 Th	1434	4.6	141		24 F	0509	9.0	273		9 Su	0507	7.6	233		24 M	0543	5.4	164		9 Tu	0445	5.3	163		24 W	0545	3.8	117	
	2327	10.6	324			0903	9.6	292			1017	9.7	297			1202	10.9	333			1114	10.7	325			1259	11.0	334	
						1604	4.5	136			1611	6.2	189			1734	7.5	230			1616	8.0	244			1741	9.4	285	
						2325	11.5	352			2304	11.7	357			2318	12.0	367			2222	12.2	373			2248	11.9	364	
10 F	0637	8.9	270		25 Sa	0545	7.6	232		10 M	0535	6.3	192		25 Tu	0618	4.2	128		10 W	0531	3.8	115		25 Th	0624	3.0	92	
	0817	8.9	271			1050	10.1	308			1124	10.6	324			1257	11.5	349			1215	11.4	348			1348	11.4	346	
	1558	4.8	145			1717	5.0	151			1714	6.5	199			1821	8.1	246			1720	8.6	261			1833	9.5	291	
	2351	10.9	333			2353	11.6	355			2327	12.0	366			2342	12.2	372			2256	12.7	386			2321	12.1	368	
11 Sa	0604	8.0	245		26 Su	0617	6.2	190		11 Tu	0607	4.8	147		26 W	0651	3.2	97		11 Th	0615	2.3	70		26 F	0701	2.4	73	
	1026	9.4	286			1200	10.9	331			1219	11.5	351			1344	11.8	360			1311	12.1	368			1430	11.6	355	
	1708	4.7	143			1812	5.4	165			1805	6.9	209			1901	8.5	258			1817	9.0	273			1916	9.6	292	
											2351	12.4	378								2331	13.1	400			2354	12.2	372	
12 Su	0011	11.2	340		27 M	0018	11.7	358		12 W	0642	3.3	101		27 Th	0007	12.4	378		12 F	0659	1.0	32		27 Sa	0735	2.0	60	
	0621	7.0	213			0647	4.9	150			1309	12.2	373			0723	2.4	74			1405	12.6	383			1507	11.9	362	
	1131	10.2	311			1255	11.5	350			1850	7.3	221			1427	12.0	367			1907	9.3	283			1954	9.5	290	
	1801	4.7	142			1856	5.9	181								1935	8.8	268											
13 M	0030	11.4	348		28 Tu	0039	11.9	362		13 Th	0017	12.8	391		28 F	0031	12.5	382		13 Sa	0009	13.5	411		28 Su	0028	12.2	373	
	0645	5.8	176			0718	3.8	115			0719	1.9	59			0754	1.9	58			0743	0.2	5			0808	1.7	53	
	1224	11.1	338			1343	11.9	363			1359	12.8	389			1507	12.1	369			1457	12.8	391			1541	12.0	366	
	1845	4.8	145			1932	6.5	198			1931	7.7	236			2008	9.0	275			1954	9.5	289			2031	9.4	287	
14 Tu																													

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Bangkok Bar, Thailand, 2008

Times and Heights of High and Low Waters

July				August				September			
Time		Height		Time		Height		Time		Height	
	h m	ft	cm		h m	ft	cm		h m	ft	cm
1 Tu	0907 1808	2.1 11.4	65 348	16 W	1000 1830	2.9 11.3	87 344	1 M	0045 0535 1212 1857	6.6 10.0 2.9 11.8	202 305 87 361
2 W	1011 1856	1.4 12.1	42 370	17 Th	1054 1901	2.4 11.6	72 354	2 Tu	0108 0627 1245 1909	5.7 10.2 3.7 11.5	173 311 113 352
3 Th	1112 1942	0.8 12.5	24 382	18 F	1139 1935	2.0 11.8	61 360	3 W	0132 0715 1315 1915	4.8 10.2 4.8 11.3	147 311 146 343
4 F	1208 2023	0.4 12.7	12 387	19 Sa	0147 0423 1218 2005	8.4 8.8 1.8 11.9	257 268 54 362	4 Th	0156 0801 1342 1924	4.1 10.1 5.9 11.1	126 308 179 337
5 Sa	0231 0443 1256 2100	9.0 9.3 0.3 12.6	274 282 10 385	20 Su	0204 0509 1250 2030	8.3 9.0 1.8 11.8	253 273 54 361	5 F	0220 0848 1407 1935	3.6 10.0 6.9 10.9	110 304 209 332
6 Su	0259 0550 1338 2128	8.6 9.2 0.7 12.4	262 281 21 378	21 M	0221 0552 1318 2049	8.0 9.1 2.0 11.7	244 276 62 357	6 Sa	0245 0941 1431 1945	3.3 9.8 7.7 10.7	100 300 236 325
7 M	0330 0651 1413 2147	8.0 9.1 1.5 12.0	243 276 45 367	22 Tu	0239 0638 1343 2101	7.5 9.1 2.5 11.5	228 276 77 352	7 Su	0314 1045 1454 1951	3.2 9.7 8.5 10.4	98 295 260 318
8 Tu	0400 0750 1443 2200	7.2 8.7 2.6 11.6	220 265 79 354	23 W	0300 0727 1406 2105	6.7 9.0 3.3 11.3	205 273 100 345	8 M	0348 1219 1519 1949	3.4 9.6 9.3 10.2	104 293 283 311
9 W	0427 0852 1509 2208	6.4 8.2 4.0 11.2	195 251 121 341	24 Th	0326 0821 1429 2107	5.8 8.9 4.3 11.1	178 270 131 339	9 Tu	0433 1847	3.7 10.1	114 309
10 Th	0455 1004 1530 2212	5.6 7.8 5.5 10.8	171 238 167 328	25 F	0354 0924 1454 2114	4.9 8.7 5.5 11.0	150 266 169 334	10 W	0542 1623	4.1 10.7	125 325
11 F	0527 1143 1534 2209	5.0 7.6 7.0 10.3	151 231 212 315	26 Sa	0426 1046 1520 2125	4.1 8.6 7.0 10.7	126 262 212 327	11 Th	0715 1651	4.3 11.2	130 342
12 Sa	0604 2158	4.5 10.0	136 305	27 Su	0508 1251 1542 2133	3.5 8.7 8.4 10.4	107 266 256 318	12 F	0850 1717	4.1 11.6	124 354
13 Su	0652 2101	4.1 9.8	125 299	28 M	0607 2107	3.1 10.2	94 312	13 Sa	0956 1739 2351	3.8 11.8 7.7	116 359 235
14 M	0754 1815	3.8 10.2	115 311	29 Tu	0728 1753	2.7 11.0	83 336	14 Su	0345 1043 1753 2357	8.9 3.7 11.7 7.0	272 113 356 214
15 Tu	0900 1805	3.3 10.8	102 330	30 W	0854 1819	2.2 11.8	68 361	15 M	0439 1121 1802	9.6 3.9 11.5	292 118 351
				31 Th	1010 1852	1.6 12.3	49 376	16 Sa	0018 0329 1049 1823	8.3 9.0 2.1 12.2	253 275 65 372
								17 Su	0025 0438 1133 1840	7.5 9.6 2.3 12.1	230 292 70 368
								18 M	0057 0339 1119 1859	8.3 8.7 2.4 11.9	252 264 74 364
								19 Tu	0100 0433 1155 1919	8.0 9.0 2.4 11.9	244 275 72 362
								20 W	0112 0520 1226 1933	7.5 9.4 2.6 11.7	230 286 79 356
								21 Th	0128 0606 1254 1941	6.8 9.6 3.1 11.5	208 294 94 350
								22 F	0213 0745 1348 1952	4.9 10.0 4.8 11.2	150 304 146 342
								23 Sa	0240 0841 1415 2001	4.0 10.0 5.9 11.1	122 305 180 339
								24 Su	0310 0944 1443 2015	3.2 9.9 7.2 11.0	99 301 218 335
								25 M	0345 1106 1510 2028	2.8 9.7 8.4 10.8	86 296 256 329
								26 Tu	0430 1317 1527 2030	2.7 9.7 9.6 10.6	83 297 292 322
								27 W	0535 1723	2.9 10.7	88 326
								28 Th	0709 1716	3.0 11.5	90 351
								29 F	0842 1742	2.7 12.0	83 366
								30 Sa	0955 1805	2.3 12.2	71 373
								31 Su	0018 0329 1049 1823	8.3 9.0 2.1 12.2	253 275 65 372
								1 M	0025 0438 1133 1840	7.5 9.6 2.3 12.1	230 292 70 368
								2 Tu	0045 0535 1212 1857	6.6 10.0 2.9 11.8	202 305 87 361
								3 W	0108 0627 1245 1909	5.7 10.2 3.7 11.5	173 311 113 352
								4 Th	0132 0715 1315 1915	4.8 10.2 4.8 11.3	147 311 146 343
								5 F	0156 0801 1342 1924	4.1 10.1 5.9 11.1	126 308 179 337
								6 Sa	0220 0848 1407 1935	3.6 10.0 6.9 10.9	110 304 209 332
								7 Su	0245 0941 1431 1945	3.3 9.8 7.7 10.7	100 300 236 325
								8 M	0314 1045 1454 1951	3.2 9.7 8.5 10.4	98 295 260 318
								9 Tu	0348 1219 1519 1949	3.4 9.6 9.3 10.2	104 293 283 311
								10 W	0433 1847	3.7 10.1	114 309
								11 Th	0542 1623	4.1 10.7	125 325
								12 F	0715 1651	4.3 11.2	130 342
								13 Sa	0850 1717	4.1 11.6	124 354
								14 Su	0956 1739 2351	3.8 11.8 7.7	116 359 235
								15 M	0345 1043 1753 2357	8.9 3.7 11.7 7.0	272 113 356 214
								16 Tu	0439 1121 1802	9.6 3.9 11.5	292 118 351
								17 W	0018 0329 1049 1823	8.3 9.0 2.1 12.2	253 275 65 372
								18 Th	0025 0438 1133 1840	7.5 9.6 2.3 12.1	230 292 70 368
								19 F	0057 0339 1119 1859	8.3 8.7 2.4 11.9	252 264 74 364
								20 Sa	0100 0433 1155 1919	8.0 9.0 2.4 11.9	244 275 72 362
								21 Su	0112 0520 1226 1933	7.5 9.4 2.6 11.7	230 286 79 356
								22 M	0128 0606 1254 1941	6.8 9.6 3.1 11.5	208 294 94 350
								23 Tu	0213 0745 1348 1952	4.9 10.0 4.8 11.2	150 304 146 342
								24 W	0240 0841 1415 2001	4.0 10.0 5.9 11.1	122 305 180 339
								25 Th	0310 0944 1443 2015	3.2 9.9 7.2 11.0	99 301 218 335
								26 F	0345 1106 1510 2028	2.8 9.7 8.4 10.8	86 296 256 329
								27 Sa	0430 1317 1527 2030	2.7 9.7 9.6 10.6	83 297 292 322
								28 Su	0535 1723	2.9 10.7	88 326
								29 M	0709 1716	3.0 11.5	90 351
								30 Tu	0842 1742	2.7 12.0	83 366
								31 W	0955 1805	2.3 12.2	71 373
								1 Th	0018 0329 1049 1823	8.3 9.0 2.1 12.2	253 275 65 372
								2 F	0025 0438 1133 1840	7.5 9.6 2.3 12.1	230 292 70 368

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Singapore (Tanjong Pagar), Singapore, 2008

Times and Heights of High and Low Waters

January						February						March											
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm			
1 Tu	0500	8.2	250	16 W ○	0416	9.2	280	1 F	0443	7.9	240	16 Sa	0458	8.5	260	1 Sa	0324	7.9	240	16 Su	0428	8.2	250
	1111	4.6	140		1037	3.6	110		1250	3.6	110		1245	2.6	80		1150	3.3	100		1245	2.3	70
	1713	7.2	220		1648	8.2	250		2122	6.2	190		2124	7.2	220						2107	7.2	220
	2315	4.6	140		2233	4.3	130		2216	6.2	190												
2 W	0539	8.2	250	17 Th	0501	8.9	270	2 Sa	0545	7.5	230	17 Su	0100	6.6	200	2 Su	0411	7.5	230	17 M	0122	6.2	190
	1233	4.3	130		1145	3.3	100		1411	3.3	100		0624	8.2	250		1322	3.3	100		0624	7.5	230
	1903	6.9	210		1824	7.5	230		2231	6.9	210		1422	2.3	70		2228	6.6	200		1428	2.0	60
					2335	5.6	170						2228	7.9	240						2203	7.5	230
3 Th	0024	5.6	170	18 F	0556	8.9	270	3 Su	0215	6.6	200	18 M	0303	6.2	190	3 M	0128	6.2	190	18 Tu	0307	5.6	170
	0630	7.9	240		1305	2.6	80		0735	7.5	230		0826	8.2	250		0620	6.9	210		0843	7.9	240
	1352	3.6	110		2050	7.5	230		1522	2.6	80		1539	1.6	50		1446	2.6	80		1537	1.6	50
	2115	6.9	210						2256	7.5	230		2311	8.5	260		2230	7.2	220		2241	7.9	240
4 F	0148	5.9	180	19 Sa	0111	6.2	190	4 M	0333	6.2	190	19 Tu	0405	5.6	170	4 Tu	0309	5.9	180	19 W	0358	4.6	140
	0731	8.2	250		0703	8.9	270		0905	8.2	250		0939	8.9	270		0841	7.5	230		0943	8.5	260
	1456	3.0	90		1422	2.0	60		1611	2.0	60		1633	1.3	40		1546	2.3	70		1624	1.6	50
	2220	7.5	230		2220	8.2	250		2324	8.2	250		2346	8.5	260		2252	7.9	240		2309	8.2	250
5 Sa	0301	6.2	190	20 Su	0246	6.6	200	5 Tu	0420	5.6	170	20 W	0446	4.9	150	5 W	0358	5.2	160	20 Th	0433	3.9	120
	0833	8.2	250		0818	8.9	270		0954	8.5	260		1030	9.5	290		0933	8.2	250		1028	9.2	280
	1545	2.3	70		1528	1.3	40		1650	1.6	50		1716	1.0	30		1626	1.6	50		1701	1.3	40
	2301	7.9	240		2316	8.9	270		2350	8.5	260						2313	8.2	250		2328	8.5	260
6 Su	0356	5.9	180	21 M	0358	6.2	190	6 W	0454	5.2	160	21 Th ○	0016	8.9	270	6 Th	0431	4.6	140	21 F	0503	3.3	100
	0924	8.5	260		0928	9.5	290		1030	9.2	280		0522	4.3	130		1013	8.9	270		1105	9.5	290
	1624	2.0	60		1624	1.0	30		1722	1.3	40		1111	9.8	300		1658	1.3	40		1735	1.6	50
	2337	8.5	260								1756		1.0	30	1756		1.0	30	2330		8.5	260	2339	8.5	260
7 M	0437	5.6	170	22 Tu ○	0001	9.2	280	7 Th ●	0016	8.9	270	22 F	0037	8.9	270	7 F	0501	3.9	120	22 Sa ○	0533	2.6	80
	1005	9.2	280		0450	5.9	180		0524	4.9	150		0556	3.6	110		1048	9.5	290		1141	9.5	290
	1700	1.6	50		1024	9.8	300		1105	9.5	290		1150	10.2	310		1730	1.3	40		1805	2.0	60
					1715	0.7	20		1752	1.0	30		1831	1.3	40		2346	8.9	270		2354	8.9	270
8 Tu ●	0011	8.5	260	23 W	0043	9.2	280	8 F	0037	8.9	270	23 Sa	0050	8.9	270	8 Sa ●	0533	3.3	100	23 Su	0603	2.0	60
	0511	5.6	170		0533	5.2	160		0558	4.3	130		0630	3.3	100		1126	10.2	310		1216	9.5	290
	1041	9.5	290		1111	10.2	310		1139	10.2	310		1228	10.2	310		1801	1.3	40		1835	2.3	70
	1730	1.3	40		1803	0.7	20		1824	1.0	30		1903	1.6	50								
9 W	0043	8.9	270	24 Th	0116	9.2	280	9 Sa	0056	9.2	280	24 Su	0105	8.9	270	9 Su	0005	9.2	280	24 M	0015	9.2	280
	0545	5.2	160		0615	4.9	150		0635	3.9	120		0703	3.0	90		0609	2.6	80		0635	1.6	50
	1116	9.5	290		1156	10.5	320		1216	10.5	320		1303	9.8	300		1205	10.2	310		1254	9.2	280
	1801	1.3	40		1846	1.0	30		1858	1.0	30		1933	2.0	60		1839	1.6	50		1905	2.6	80
10 Th	0111	8.9	270	25 F	0145	9.2	280	10 Su	0116	9.5	290	25 M	0124	9.2	280	10 M	0030	9.5	290	25 Tu	0037	9.2	280
	0618	4.9	150		0654	4.6	140		0713	3.3	100		0735	2.6	80		0648	2.0	60		0709	1.3	40
	1150	9.8	300		1239	10.5	320		1256	10.5	320		1341	9.5	290		1248	10.2	310		1331	8.9	270
	1835	1.0	30		1926	1.3	40		1935	1.3	40		2000	2.6	80		1915	2.0	60		1931	3.3	100
11 F	0139	9.2	280	26 Sa	0207	9.2	280	11 M	0143	9.5	290	26 Tu	0146	9.2	280	11 Tu	0100	9.8	300	26 W	0103	9.2	280
	0654	4.9	150		0730	3.9	120		0752	3.0	90		0811	2.3	70		0728	1.3	40		0741	1.3	40
	1228	10.2	310		1318	10.2	310		1339	10.2	310		1418	8.9	270		1335	9.8	300		1413	8.5	260
	1911	1.0	30		2001	1.6	50		2009	2.0	60		2020	3.3	100		1950	3.0	90		1952	3.6	110
12 Sa	0205	9.2	280	27 Su	0228	8.9	270	12 Tu	0213	9.5	290	27 W	0209	8.9	270	12 W	0131	9.8	300	27 Th	0128	9.2	280
	0733	4.6	140		0805	3.9	120		0831	2.6	80		0846	2.3	70		0807	1.0	30		0815	1.3	40
	1305	10.2	310		1358	9.5	290		1428	9.5	290		1500	7.9	240		1430	9.2	280		1454	7.9	240
	1948	1.3	40		2031	2.3	70		2043	3.0	90		2033	3.9	120		2024	3.6	110		2007	4.3	130
13 Su	0233	9.2	280	28 M	0248	8.9	270	13 W	0245	9.5	290	28 Th	0231	8.9	270	13 Th	0205	9.8	300	28 F	0152	8.9	270
	0813	4.3	130		0843	3.6	110		0915	2.3	70		0926	2.6	80		0852	1.0	30		0850	1.6	50
	1348	10.2	310		1439	8.9	270		1526	8.9	270		1548	7.2	220		1533	8.2	250		1543	6.9	210
	2026	1.6	50		2100	3.0	90		2115	3.9	120		2045	4.6	140		2056	4.6	140		2022	4.6	140
14 M	0303	9.2	280	29 Tu	0311	8.9	270	14 Th ○	0320	9.2	280	29 F ○	0256	8.5	260	14 F ○	0243	9.2	280	29 Sa	0216	8.5	260
	0856	3.9	120		0922	3.6	110		1005	2.3	70		1022	3.0	90		0945	1.3	40		0937	2.3	70
	1435	9.5	290		1522	8.2	250		1637	7.9	240		1656	6.2	190		1646	7.2	220		1641	6.2	190
	2105	2.3	70		2122	3.9	120		2152	4.9	150		2056	5.2	160		2133	5.2	160		2045	5.2	160
15 Tu	0337	9.2	280	30 W ○	0335	8.5	260	15 F	0401	8.9	270					15 Sa	0326	8.9	270	30 Su ○	0248	7.9	240
	0943	3.6	110		1013	3.6	110		1111	2.3	70		1056	2.0	60		1056	2.6	80		1056	2.6	80
	1531	8.9	270		1618	7.2	220		1818	6.9	210		1905	6.6	200		1811	5.9	180		1811	5.9	180
	2146	3.3	100		2137	4.9	150		2246	5.9	180						2233	6.2	190		2131	5.6	170
			31 Th	0403	8.2	250										31 M	0337	7.2	220				
				1122	3.6	110												1228	3.0	90			
				1741	6.6	200												2048	6.2	190			
				2152	5.6	170																	

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Singapore (Tanjong Pagar), Singapore, 2008

Times and Heights of High and Low Waters

October					November					December																			
Time		Height			Time		Height			Time		Height			Time		Height												
1 W	h	m	ft	cm	16 Th	h	m	ft	cm	1 Sa	h	m	ft	cm	16 Su	h	m	ft	cm	1 M	h	m	ft	cm	16 Tu	h	m	ft	cm
	0001	9.5	290	0546		3.0	90	0124	8.9		270	0139	9.5	290		0152	8.5	260	0230		9.5	290							
	0615	2.3	70	1126		9.8	300	0652	4.3		130	0652	5.2	160		0705	4.9	150	0731		5.2	160							
	1152	9.2	280	1754		0.7	20	1215	9.5		290	1216	10.5	320		1228	9.5	290	1301		10.5	320							
1816	1.3	40				1901	1.0	30				1909	0.0	0								2000	0.7	20					
2 Th	0043	9.2	280	17 F	0026	9.8	300	2 Su	0203	8.5	260	17 M	0235	9.2	280	2 Tu	0226	8.5	260	17 W	0315	9.2	280						
	0646	3.0	90		0626	3.3	100		0722	4.6	140		0739	5.2	160		0737	4.9	150		0818	5.2	160						
	1218	9.2	280		1200	10.2	310		1245	9.2	280		1303	10.2	310		1301	9.5	290		1354	10.2	310						
	1852	1.0	30		1835	0.0	0		1937	1.3	40		2003	0.3	10		1954	1.6	50		2052	1.3	40						
3 F	0126	8.9	270	18 Sa	0122	9.5	290	3 M	0243	8.2	250	18 Tu	0330	8.9	270	3 W	0301	8.2	250	18 Th	0354	8.9	270						
	0716	3.3	100		0707	3.9	120		0750	4.9	150		0828	5.6	170		0813	4.9	150		0907	4.9	150						
	1245	9.2	280		1235	10.2	310		1315	9.2	280		1356	9.8	300		1337	9.2	280		1450	9.5	290						
	1928	1.0	30		1920	0.0	0		2015	1.6	50		2101	1.0	30		2030	2.0	60		2141	2.3	70						
4 Sa	0209	8.2	250	19 Su	0224	8.9	270	4 Tu	0324	7.5	230	19 W	0426	8.5	260	4 Th	0337	8.2	250	19 F	0433	8.9	270						
	0743	3.9	120		0748	4.6	140		0820	5.2	160		0920	5.6	170		0852	5.2	160		1000	4.9	150						
	1313	9.2	280		1315	9.8	300		1346	8.9	270		1458	9.2	280		1416	8.9	270		1550	8.9	270						
	2003	1.3	40		2011	0.3	10		2058	2.0	60		2207	2.0	60		2107	2.3	70		2230	3.0	90						
5 Su	0254	7.9	240	20 M	0326	8.5	260	5 W	0411	7.2	220	20 Th	0528	8.2	250	5 F	0420	8.2	250	20 Sa	0513	8.5	260						
	0805	4.3	130		0830	5.2	160		0900	5.2	160		1028	5.6	170		0943	5.2	160		1105	4.6	140						
	1339	8.9	270		1400	9.5	290		1424	8.2	250		1607	8.5	260		1503	8.5	260		1703	7.9	240						
	2045	1.6	50		2107	1.0	30		2150	2.6	80		2322	2.6	80		2152	3.0	90		2326	4.3	130						
6 M	0341	7.2	220	21 Tu	0431	7.9	240	6 Th	0507	7.2	220	21 F	0631	7.9	240	6 Sa	0511	8.2	250	21 Su	0556	8.2	250						
	0822	4.9	150		0918	5.6	170		1003	5.6	170		1156	5.2	160		1045	4.9	150		1228	4.3	130						
	1405	8.5	260		1454	8.9	270		1518	7.9	240		1737	7.9	240		1609	7.9	240		1845	7.2	220						
	2137	2.0	60		2220	1.6	50		2258	3.0	90				2250		3.6	110											
7 Tu	0435	6.6	200	22 W	0601	7.5	230	7 F	0618	7.2	220	22 Sa	0041	3.3	100	7 Su	0603	8.2	250	22 M	0037	4.9	150						
	0846	5.2	160		1030	5.9	180		1128	5.6	170		0726	8.2	250		1156	4.6	140		0646	8.2	250						
	1439	7.9	240		1609	8.2	250		1645	7.2	220		1328	4.6	140		1748	7.5	230		1348	3.6	110						
	2248	2.6	80		2354	2.3	70				1930		7.9	240	2358		3.9	120	2041		7.2	220							
8 W	0554	6.2	190	23 Th	0731	7.5	230	8 Sa	0013	3.3	100	23 Su	0152	3.9	120	8 M	0656	8.5	260	23 Tu	0154	5.6	170						
	0946	5.6	170		1228	5.6	170		0726	7.5	230		0811	8.2	250		1309	3.9	120		0741	8.2	250						
	1530	7.2	220		1754	7.9	240		1258	5.2	160		1435	3.9	120		1928	7.5	230		1452	3.0	90						
									1843	7.2	220		2054	7.9	240				2200		7.9	240							
9 Th	0011	3.0	90	24 F	0126	2.3	70	9 Su	0126	3.3	100	24 M	0252	4.3	130	9 Tu	0113	4.6	140	24 W	0300	5.6	170						
	0813	6.2	190		0831	7.9	240		0811	8.2	250		0846	8.5	260		0741	8.9	270		0833	8.5	260						
	1218	5.9	180		1407	4.9	150		1407	4.3	130		1524	3.0	90		1409	3.0	90		1541	2.3	70						
	1724	6.9	210		1954	7.9	240		2009	7.9	240		2158	8.5	260		2050	8.2	250		2250	8.2	250						
10 F	0133	2.6	80	25 Sa	0237	2.6	80	10 M	0224	3.3	100	25 Tu	0339	4.3	130	10 W	0220	4.9	150	25 Th	0354	5.6	170						
	0900	6.9	210		0913	8.2	250		0846	8.5	260		0916	8.9	270		0824	9.2	280		0920	8.9	270						
	1358	5.2	160		1507	3.9	120		1454	3.3	100		1601	2.3	70		1458	2.0	60		1620	2.0	60						
	1937	7.2	220		2107	8.5	260		2111	8.5	260		2248	8.5	260		2203	8.9	270		2330	8.5	260						
11 Sa	0239	2.6	80	26 Su	0330	2.6	80	11 Tu	0311	3.6	110	26 W	0416	4.6	140	11 Th	0318	5.2	160	26 F	0433	5.6	170						
	0926	7.5	230		0943	8.5	260		0916	9.2	280		0946	9.2	280		0907	9.5	290		1001	9.2	280						
	1500	4.6	140		1548	3.3	100		1533	2.3	70		1633	1.6	50		1545	1.0	30		1656	1.6	50						
	2048	7.9	240		2200	8.9	270		2201	8.9	270		2330	8.9	270		2305	9.2	280										
12 Su	0326	2.3	70	27 M	0409	2.6	80	12 W	0354	3.6	110	27 Th	0452	4.6	140	12 F	0411	5.2	160	27 Sa	0005	8.5	260						
	0948	8.2	250		1003	8.9	270		0946	9.5	290		1018	9.2	280		0950	10.2	310		0509	5.6	170						
	1539	3.6	110		1620	2.3	70		1609	1.3	40		1705	1.3	40		1630	0.3	10		1037	9.2	280						
	2135	8.5	260		2245	9.2	280		2252	9.5	290							1730	1.3		40								
13 M	0401	2.3	70	28 Tu	0445	3.0	90	13 Th	0435	3.9	120	28 F	0007	8.9	270	13 Sa	0001	9.5	290	28 Su	0037	8.9	270						
	1011	8.9	270		1024	8.9	270		1018	9.8	300		0526	4.9	150		0501	5.6	170		0541	5.2	160						
	1609	2.6	80		1652	1.6	50		1648	0.7	20		1050	9.5	290		1035	10.5	320		1113	9.5	290						
	2215	9.2	280		2326	9.2	280		2345	9.8	300		1737	1.3	40		1718	0.0	0		1803	1.3	40						
14 Tu	0433	2.3	70	29 W	0516	3.3	100	14 F	0520	4.3	130	29 Sa	0043	8.9	270	14 Su	0052	9.8	300	29 M	0107	8.9	270						
	1031	9.2	280		1048	9.2	280		1056	10.2	310		0600	4.9	150		0552	5.6	170		0613	4.9	150						
	1641	2.0	60		1722	1.3	40		1731	0.0	0		1122	9.5	290		1122	10.5	320		1145	9.8	300						
	2254	9.5	290		●					1811	1.0		30	1811	1.0		30	1811	0.0		0	1835	1.3	40					
15 W	0507	2.3	70	30 Th	0005	9.2	280	15 Sa	0041	9.8	300	30 Su	0118	8.9	270	15 M	0143	9.8	300	30 Tu	0135	8.9	270						
	1058	9.5	290		0548	3.6	110		0605	4.6	140		0631	4.9	150		0643	5.6	170		0646	4.9	150						
	1716	1.3	40		1115	9.5	290		1135	10.5	320		1156	9.5	290		1211	10.5	320		1218	9.8	300						
	2337	9.8	300		1754	1.0	30		1818	0.0	0		1846	1.3	40		1905	0.0	0		1905	1.3	40						
16 Th	0045	9.2	280	31 F	0620	3.9	120																						
	0620	3.9	120		1145	9.5	290																						
	1145	9.5	290		1828	1.0	30																						
	1828	1.0	30																										

Belawan Channel, Sumatra, 2008

Times and Heights of High and Low Waters

January				February				March																		
Time		Height		Time		Height		Time		Height		Time		Height												
1 Tu	h	m	ft	16 W	h	m	ft	1 F	h	m	ft	1 Sa	h	m	ft											
	0113	4.2	128		0031	3.4	104		0249	3.9	119		0331	3.2	98	0052	3.6	110								
	0625	5.5	168		0611	6.0	183		0753	4.4	134		1007	4.8	146	0627	4.5	137								
	1259	3.0	91		1234	2.5	76		1317	3.8	116		1516	4.0	122	1126	4.0	122								
2 W	2013	6.3	192	O	1927	6.7	204	2111	5.8	177	2159	6.0	183	1907	5.5	168	16 Su	0318	3.1	94						
	0251	4.2	128		0200	3.5	107		0508	3.5		107	0518		2.6	79		0405	3.6	110	0501	2.6	79			
	0750	5.0	152		0737	5.3	162		1124	4.6		140	1154		5.4	165		1150	4.7	143	1152	6.0	183			
	1402	3.4	104		1345	3.0	91		1557	4.1		125	1718		3.7	113		1539	4.5	137	1734	3.8	116			
3 Th	2123	6.4	195	2049	6.6	201	2247	6.0	183	2323	6.5	198	2204	5.5	168	2317	6.2	189	17 M	2317	6.2	189				
	0429	3.8	116		0350	3.2		98	0603		2.9	88		0614	1.8		55	0528		3.0	91	0553	2.0	61		
	0948	4.9	149		0943	5.1		155	1225		5.1	155		1244	6.1		186	1212		5.4	165	1228	6.6	201		
	1521	3.7	113		1523	3.4		104	1732		3.8	116		1820	3.2		98	1733		4.0	122	1820	3.2	98		
4 F	2226	6.6	201	2214	6.8	207	2344	6.4	195	2344	6.4	195	2321	5.9	180	2321	5.9	180	18 Tu	1820	3.2	98				
	0532	3.3	101		0518	2.6		79	0637		2.3	70		0017	7.0		213	0605		2.4	73	0007	6.7	204		
	1119	5.1	155		1129	5.5		168	1258		5.7	174		0655	1.3		40	1235		6.0	183	0631	1.6	49		
	1636	3.7	113		1656	3.4		104	1822		3.4	104		1320	6.7		204	1814		3.4	104	1257	7.2	219		
5 Sa	2317	6.8	207	2323	7.1	216	5 Tu	0024	6.8	207	20 W	0059	7.4	226	5 W	0004	6.5	198	20 Th	0045	7.1	216				
	0615	2.8	85		1217	5.4		165	0706	1.7		52	0729	0.9		27	0635	1.7		52	0702	1.3	40			
	1217	5.4	165		1235	6.0		183	1326	6.2		189	1350	7.2		219	1259	6.7		204	1323	7.6	232			
	1734	3.6	110		1805	3.2		98	1859	3.0		91	1938	2.3		70	1847	2.8		85	1923	2.2	67			
6 Su	2358	7.1	216	2358	7.1	216	6 W	0058	7.2	219	21 Th	0134	7.6	232	6 Th	0039	7.0	213	21 F	0117	7.4	226				
	0650	2.3	70		0703	1.3		40	0733	1.2		37	0759	0.6		18	0703	1.2		37	0729	1.2	37			
	1259	5.8	177		1323	6.5		198	1352	6.7		204	1418	7.4		226	1323	7.2		219	1347	7.8	238			
	1820	3.4	104		1857	2.9		88	1932	2.6		79	2009	2.0		61	1917	2.3		70	1950	1.9	58			
7 M	0034	7.4	226	22 Tu	0102	7.8	238	7 Th	0130	7.5	229	22 F	0205	7.7	235	7 F	0112	7.5	229	22 Sa	0145	7.5	229			
	0720	1.9	58		0743	0.9	27		0800	0.8	24		0826	0.6	18		0731	0.8	24		0753	1.2	37			
	1333	6.2	189		1403	6.9	210		1419	7.1	216		1444	7.6	232		1349	7.7	235		1409	8.0	244			
	1859	3.3	101		O	1941	2.6		79	●	2003		2.3	70	2038		1.9	58	1947		1.8	55	O	2015	1.7	52
8 Tu	0107	7.6	232	23 W	0142	8.0	244	8 F	0201	7.8	238	23 Sa	0234	7.7	235	8 Sa	0144	7.8	238	23 Su	0212	7.5	229			
	0749	1.5	46		0818	0.6	18		0827	0.5	15		0851	0.7	21		0800	0.6	18		0816	1.3	40			
	1405	6.5	198		1439	7.2	219		1446	7.5	229		1508	7.7	235		1417	8.1	247		1431	8.1	247			
	1934	3.1	94		2019	2.5	76		2035	2.0	61		2105	1.8	55		●	2018	1.4		43	2040	1.6	49		
9 W	0138	7.8	238	24 Th	0218	8.0	244	9 Sa	0232	7.9	241	24 Su	0301	7.5	229	9 Su	0216	8.0	244	24 M	0237	7.4	226			
	0818	1.2	37		0850	0.5	15		0856	0.4	12		0915	0.9	27		0829	0.5	15		0838	1.5	46			
	1435	6.8	207		1511	7.3	223		1515	7.7	235		1531	7.6	232		1446	8.3	253		1452	8.0	244			
	2008	2.9	88		2054	2.4	73		2108	1.9	58		2132	1.9	58		2050	1.2	37		2105	1.7	52			
10 Th	0209	7.9	241	25 F	0251	7.9	241	10 Su	0305	7.9	241	25 M	0327	7.2	219	10 M	0250	7.9	241	25 Tu	0302	7.1	216			
	0847	1.0	30		0921	0.6	18		0926	0.5	15		0937	1.3	40		0900	0.7	21		0859	1.8	55			
	1506	7.0	213		1542	7.3	223		1546	7.7	235		1555	7.4	226		1516	8.3	253		1514	7.9	241			
	2042	2.8	85		2128	2.5	76		2142	1.9	58		2159	2.1	64		2125	1.3	40		2131	1.8	55			
11 F	0241	7.9	241	26 Sa	0322	7.6	232	11 M	0339	7.6	232	26 Tu	0353	6.8	207	11 Tu	0325	7.6	232	26 W	0328	6.8	207			
	0917	0.9	27		0949	0.9	27		0957	0.8	24		0959	1.7	52		0931	1.1	34		0921	2.2	67			
	1538	7.1	216		1612	7.2	219		1619	7.6	232		1619	7.2	219		1548	8.1	247		1536	7.6	232			
	2118	2.8	85		2200	2.6	79		2220	2.0	61		2228	2.4	73		2202	1.5	46		2158	2.1	64			
12 Sa	0314	7.8	238	27 Su	0352	7.2	219	12 Tu	0415	7.2	219	27 W	0419	6.3	192	12 W	0403	7.1	216	27 Th	0356	6.4	195			
	0948	0.9	27		1016	1.2	37		1031	1.2	37		1021	2.2	67		1004	1.7	52		0943	2.6	79			
	1613	7.2	219		1641	7.0	213		1655	7.4	226		1645	6.8	207		1622	7.7	235		1600	7.3	223			
	2156	2.8	85		2233	2.8	85		2303	2.3	70		2300	2.8	85		2243	1.9	58		2229	2.5	76			
13 Su	0350	7.6	232	28 M	0421	6.8	207	13 W	0456	6.5	198	28 Th	0447	5.7	174	13 Th	0445	6.4	195	28 F	0427	5.9	180			
	1023	1.1	34		1043	1.7	52		1107	1.9	58		1043	2.7	82		1038	2.4	73		1006	3.2	98			
	1650	7.2	219		1711	6.8	207		1737	7.0	213		1713	6.4	195		1700	7.1	216		1626	6.8	207			
	2238	2.9	88		2309	3.1	94		2356	2.7	82		2341	3.2	98		2334	2.5	76		2306	2.9	88			
14 M	0430	7.2	219	29 Tu	0451	6.2	189	14 Th	0546	5.8	177	29 F	0520	5.1	155	14 F	0539	5.6	171	29 Sa	0508	5.4	165			
	1100	1.4	43		1110	2.2	67		1149	2.7	82		1105	3.3	101		1119	3.3	101		1031	3.8	116			
	1733	7.0	213		1745	6.5	198		1830	6.5	198		1750	5.9	180		1748	6.4	195		1657	6.3	192			
	2328	3.1	94		2351	3.4	104		O	O	O		O	O	O		O	O	O		O	O				
15 Tu	0515	6.6	201	30 W	0524	5.6	171	15 F	0115	3.2	98	15 Sa	0053	3.0	91	15 Sa	0053	3.0	91	30 Su	0005	3.4	104			
	1143	1.9	58		1138	2.7	82		0708	5.0	152		0723	5.0	152		0723	5.0	152		0630	4.9	149			
	1823	6.9	210		1826	6.2	189		1253	3.5	107		1229	4.2	128		1229	4.2	128		1105	4.4	134			
									1957	6.0	183		1917	5.8	177		1917	5.8	177		O	1752	5.7	174		
16 W				31 Th	0051	3.8	116													31 M	0215	3.6	110			
					0607	5.0	152																	1034	5.2	158
					1212	3.3	101																	1516	4.8	146
					1928	5.9	180																	2047	5.4	165

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Belawan Channel, Sumatra, 2008

Times and Heights of High and Low Waters

July					August					September													
Time		Height			Time		Height			Time		Height			Time		Height						
	h m	ft cm			h m	ft cm			h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm				
1 Tu	0525	3.4	104	16 W	0051	6.1	186	1 F	0140	7.4	226	16 Sa	0137	7.2	219	1 M	0223	8.3	253	16 Tu	0154	8.5	259
	1151	8.3	253		0607	4.1	125		0719	3.1	94		0719	3.3	101		0820	2.3	70		0757	2.0	61
	1838	2.1	64		1222	7.5	229		1321	8.4	256		1316	7.8	238		1417	8.2	250		1355	8.3	253
					1911	2.5	76		1957	1.1	34		1944	1.6	49		2032	1.3	40		2005	1.3	40
2 W	0050	6.9	210	17 Th	0127	6.4	195	2 Sa	0218	7.7	235	17 Su	0202	7.6	232	2 Tu	0249	8.3	253	17 W	0221	8.7	265
	0624	3.3	101		0650	3.9	119		0801	2.9	88		0749	2.9	88		0850	2.2	67		0828	1.8	55
	1240	8.6	262		1256	7.8	238		1400	8.5	259		1345	8.1	247		1446	8.0	244		1427	8.3	253
	1925	1.6	49		1940	2.1	64		2032	1.0	30		2010	1.3	40		2058	1.5	46		2034	1.3	43
3 Th	0141	7.2	219	18 F	0158	6.8	207	3 Su	0253	7.9	241	18 M	0228	7.9	241	3 W	0314	8.2	250	18 Th	0250	8.8	268
	0716	3.2	98		0726	3.7	113		0839	2.8	85		0818	2.6	79		0918	2.3	70		0901	1.8	55
	1325	8.7	265		1328	8.0	244		1436	8.4	256		1415	8.2	250		1514	7.7	235		1501	8.0	244
	2008	1.3	40		2008	1.8	55		2104	1.1	34		2036	1.2	37		2122	1.9	58		2105	1.7	52
4 F	0228	7.5	229	19 Sa	0227	7.1	216	4 M	0325	8.0	244	19 Tu	0254	8.1	247	4 Th	0338	8.1	247	19 F	0320	8.6	262
	0803	3.2	98		0800	3.5	107		0914	2.8	85		0849	2.4	73		0946	2.5	76		0936	1.9	58
	1408	8.7	265		1359	8.1	247		1510	8.2	250		1446	8.2	250		1541	7.3	223		1538	7.6	232
	2049	1.1	34		2036	1.6	49		2135	1.3	40		2104	1.2	37		2144	2.3	70		2137	2.2	67
5 Sa	0312	7.6	232	20 Su	0256	7.3	223	5 Tu	0356	7.9	241	20 W	0323	8.2	250	5 F	0403	7.8	238	20 Sa	0353	8.3	253
	0848	3.3	101		0832	3.3	101		0948	2.9	88		0921	2.4	73		1016	2.8	85		1016	2.2	67
	1448	8.6	262		1430	8.2	250		1542	7.8	238		1518	8.1	247		1609	6.8	207		1619	7.0	213
	2128	1.2	37		2104	1.5	46		2204	1.7	52		2134	1.4	43		2207	2.8	85		2211	2.9	88
6 Su	0353	7.6	232	21 M	0325	7.5	229	6 W	0427	7.7	235	21 Th	0354	8.2	250	6 Sa	0428	7.4	226	21 Su	0430	7.8	238
	0932	3.4	104		0906	3.2	98		1023	3.1	94		0956	2.4	73		1049	3.2	98		1104	2.7	82
	1527	8.3	253		1501	8.1	247		1613	7.4	226		1553	7.7	235		1639	6.2	189		1711	6.3	192
	2206	1.4	43		2133	1.4	43		2231	2.1	64		2206	1.8	55		2229	3.4	104		2252	3.7	113
7 M	0434	7.6	232	22 Tu	0356	7.7	235	7 Th	0457	7.5	229	22 F	0427	8.0	244	7 Su	0457	7.0	213	22 M	0516	7.1	216
	1015	3.6	110		0941	3.2	98		1058	3.4	104		1036	2.7	82		1130	3.7	113		1214	3.3	101
	1606	7.8	238		1535	8.0	244		1644	6.8	207		1632	7.2	219		1716	5.6	171		1841	5.7	174
	2242	1.8	55		2204	1.6	49		2259	2.7	82		2241	2.4	73		2251	4.0	122		2356	4.5	137
8 Tu	0515	7.4	226	23 W	0429	7.7	235	8 F	0530	7.2	219	23 Sa	0506	7.6	232	8 M	0533	6.4	195	23 Tu	0630	6.4	195
	1059	3.8	116		1019	3.2	98		1139	3.7	113		1125	3.0	91		1242	4.1	125		1417	3.5	107
	1644	7.3	223		1611	7.7	235		1718	6.2	189		1719	6.5	198		1839	5.0	152		2146	5.7	174
	2319	2.2	67		2238	1.8	55		2327	3.2	98		2321	3.1	94		2314	4.7	143				
9 W	0557	7.2	219	24 Th	0507	7.6	232	9 Sa	0609	6.8	207	24 Su	0554	7.2	219	9 Tu	0648	5.9	180	24 W	0301	4.9	149
	1148	4.1	125		1103	3.4	104		1235	4.1	125		1232	3.5	107		1542	4.1	125		0857	6.2	189
	1725	6.7	204		1652	7.3	223		1802	5.6	171		1829	5.8	177		2332	5.3	162		1615	3.1	94
	2356	2.7	82		2316	2.2	67												2314		6.4	195	
10 Th	0643	7.0	213	25 F	0551	7.5	229	10 Su	0000	3.8	116	25 M	0017	3.8	116	10 W	0348	5.1	155	25 Th	0459	4.4	134
	1247	4.3	131		1156	3.6	110		0703	6.5	198		0706	6.7	204		0948	5.9	180		1039	6.6	201
	1813	6.2	189		1742	6.7	204		1414	4.3	131		1424	3.7	113		1707	3.5	107		1718	2.6	79
					1938	5.0	152		1938	5.0	152		2053	5.4	165		2356	6.0	183		2356	7.2	219
11 F	0038	3.2	98	26 Sa	0001	2.7	82	11 M	0058	4.4	134	26 Tu	0213	4.5	137	11 Th	0524	4.5	137	26 F	0551	3.7	113
	0738	6.9	210		0644	7.3	223		0838	6.2	189		0902	6.5	198		1106	6.3	192		1137	7.1	216
	1405	4.4	134		1307	3.8	116		1637	4.0	122		1628	3.2	98		1746	3.0	91		1800	2.1	64
	1918	5.6	171		1849	6.1	186		2305	5.1	155		2311	5.9	180								
12 Sa	0130	3.7	113	27 Su	0059	3.3	101	12 Tu	0335	4.7	143	27 W	0435	4.3	131	12 F	0018	6.6	201	27 Sa	0029	7.7	235
	0843	6.8	207		0754	7.1	216		1024	6.4	195		1043	6.8	207		0602	4.0	122		0629	3.1	94
	1543	4.3	131		1446	3.8	116		1744	3.5	107		1738	2.6	79		1149	6.9	210		1219	7.5	229
	2102	5.3	162		2036	5.6	171										1815	2.4	73		1835	1.8	55
13 Su	0241	4.1	125	28 M	0224	3.8	116	13 W	0012	5.7	174	28 Th	0011	6.6	201	13 Sa	0041	7.2	219	28 Su	0058	8.2	250
	0952	6.9	210		0921	7.1	216		0519	4.5	137		0549	3.8	116		0632	3.4	104		0701	2.6	79
	1705	3.9	119		1629	3.3	101		1128	6.7	204		1146	7.3	223		1223	7.3	223		1255	7.8	238
	2253	5.4	165		2240	5.8	177		1821	2.9	88		1824	1.9	58		1843	1.9	58		1905	1.6	49
14 M	0404	4.2	128	29 Tu	0408	4.0	122	14 Th	0045	6.2	189	29 F	0051	7.3	223	14 Su	0104	7.7	235	29 M	0124	8.4	256
	1053	7.0	213		1042	7.4	226		0611	4.1	125		0637	3.3	101		0700	2.9	88		0730	2.2	67
	1759	3.4	104		1742	2.7	82		1210	7.1	216		1233	7.8	238		1254	7.8	238		1326	7.9	241
									1851	2.4	73		1902	1.5	46		1910	1.6	49		1932	1.6	49
15 Tu	0004	5.7	174	30 W	0002	6.3	192	15 F	0112	6.7	204	30 Sa	0125	7.8	238	15 M	0128	8.2	250	30 Tu	0148	8.6	262
	0514	4.2	128		0531	3.8	116		0648	3.7	113		0715	2.8	85		0728	2.4	73		0758	2.0	61
	1141	7.3	223		1146	7.8	238		1245	7.5	229		1311	8.1	247		1324	8.1	247		1355	7.9	241
	1838	2.9	88		1835	2.0	61		1918	2.0	61		1935	1.2	37		1937	1.3	40		1957	1.8	55
			31 Th	0057	6.9	210																	
				0631	3.5	107																	
				1237	8.1	247																	
				1918	1.5	46																	

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Belawan Channel, Sumatra, 2008

Times and Heights of High and Low Waters

October						November						December																
Time			Height			Time			Height			Time			Height			Time			Height							
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm				
1 W	0211	8.6	262		16 Th	0150	9.1	277		1 Sa	0224	8.4	256		16 Su	0239	8.9	271		1 M	0234	8.0	244		16 Tu	0315	8.3	253
	0824	2.0	61			0809	1.4	43			0857	2.1	64			0919	1.3	40			0918	1.9	58			0959	1.0	30
	1422	7.7	235			1411	8.1	247			1501	6.9	210			1536	7.3	223			1534	6.6	201			1628	7.1	216
	2020	2.0	61			2007	1.8	55			2035	3.2	98			2110	3.2	98			2058	3.7	113			2202	3.4	104
2 Th	0234	8.5	259		17 F	0221	9.1	277		2 Su	0248	8.2	250		17 M	0318	8.4	256		2 Tu	0303	7.8	238		17 W	0358	7.8	238
	0850	2.0	61			0845	1.4	43			0926	2.3	70			1004	1.6	49			0950	2.0	61			1043	1.4	43
	1449	7.5	229			1450	7.8	238			1533	6.6	201			1629	6.9	210			1613	6.5	198			1719	6.9	210
	2042	2.4	73			2041	2.2	67			2102	3.6	110			2157	3.8	116			2134	4.0	122			2254	3.8	116
3 F	0256	8.4	256		18 Sa	0254	8.9	271		3 M	0314	7.8	238		18 Tu	0401	7.8	238		3 W	0334	7.5	229		18 Th	0442	7.2	219
	0916	2.2	67			0923	1.6	49			1056	2.0	61			1026	2.2	67			1026	2.2	67			1130	1.9	58
	1515	7.1	216			1531	7.4	226			1735	6.6	201			1658	6.4	195			1658	6.4	195			1816	6.7	204
	2104	2.8	85			2116	2.8	85			2131	4.1	125			2256	4.4	134			2218	4.2	128			2356	4.1	125
4 Sa	0319	8.1	247		19 Su	0329	8.4	256		4 Tu	0342	7.4	226		19 W	0451	7.1	216		4 Th	0412	7.1	216		19 F	0533	6.5	198
	0944	2.5	76			1006	2.0	61			1037	2.9	88			1157	2.5	76			1108	2.4	73			1220	2.4	73
	1544	6.7	204			1620	6.9	210			1703	6.0	183			1900	6.4	195			1753	6.3	192			1919	6.6	201
	2126	3.2	98			2155	3.5	107			2209	4.6	140						2316		4.5	137						
5 Su	0342	7.7	235		20 M	0408	7.8	238		5 W	0416	6.9	210		20 Th	0025	4.8	146		5 F	0458	6.6	201		20 Sa	0116	4.3	131
	1016	2.9	88			1058	2.5	76			1129	3.2	98			0559	6.4	195			1158	2.7	82			0636	5.9	180
	1616	6.2	189			1724	6.3	192			1826	5.8	177			1313	2.9	88			1859	6.4	195			1318	2.8	85
	2148	3.8	116			2245	4.3	131			2314	5.0	152			2035	6.6	201						2029		6.6	201	
6 M	0407	7.2	219		21 Tu	0455	7.1	216		6 Th	0507	6.3	192		21 F	0232	4.8	146		6 Sa	0038	4.6	140		21 Su	0255	4.2	128
	1054	3.3	101			1209	3.0	91			1246	3.4	104			0742	6.0	183			0603	6.2	189			0805	5.4	165
	1700	5.7	174			1913	6.0	183			2028	6.0	183			1435	3.0	91			1301	2.9	88			1426	3.2	98
	2213	4.4	134													2149	6.9	210			2013	6.6	201			2136	6.7	204
7 Tu	0437	6.7	204		22 W	0017	5.0	152		7 F	0152	5.2	158		22 Sa	0408	4.3	131		7 Su	0220	4.5	137		22 M	0424	3.8	116
	1153	3.7	113			0613	6.4	195			0655	5.9	180			0926	5.9	180			0735	5.8	177			0948	5.3	162
	1836	5.3	162			1356	3.3	101			1422	3.4	104			1545	3.0	91			1413	3.0	91			1536	3.4	104
	2246	5.0	152			2133	6.3	192			2148	6.5	198			2240	7.3	223			2120	7.0	213			2233	6.9	210
8 W	0526	6.1	186		23 Th	0318	5.0	152		8 Sa	0354	4.7	143		23 Su	0506	3.7	113		8 M	0347	4.0	122		23 Tu	0525	3.3	101
	1400	4.0	122			0834	6.1	186			0902	5.9	180			1039	6.1	186			0913	5.8	177			1109	5.4	165
	2231	5.7	174			1537	3.1	94			1536	3.2	98			1639	3.0	91			1524	3.0	91			1639	3.5	107
						2243	6.9	210			2233	7.1	216			2319	7.7	235			2216	7.4	226			2319	7.2	219
9 Th	0331	5.3	162		24 F	0448	4.3	131		9 Su	0448	4.0	122		24 M	0548	3.2	98		9 Tu	0450	3.3	101		24 W	0610	2.9	88
	0829	5.7	174			1015	6.3	192			1019	6.3	192			1132	6.3	192			1032	6.1	186			1206	5.6	171
	1557	3.6	110			1640	2.8	85			1630	2.8	85			1721	3.0	91			1626	2.8	85			1730	3.5	107
	2307	6.3	192			2325	7.5	229			2310	7.7	235			2352	7.9	241			2304	7.9	241			2357	7.4	226
10 F	0458	4.6	140		25 Sa	0535	3.7	113		10 M	0529	3.3	101		25 Tu	0623	2.7	82		10 W	0541	2.6	79		25 Th	0646	2.4	73
	1019	6.1	186			1114	6.7	204			1112	6.7	204			1215	6.5	198			1135	6.4	195			1250	5.9	180
	1650	3.1	94			1725	2.5	76			1713	2.5	76			1757	3.0	91			1721	2.7	82			1812	3.4	104
	2333	7.0	213			2357	7.9	241			2344	8.3	253						2349		8.3	253						
11 Sa	0534	4.0	122		26 Su	0611	3.1	94		11 Tu	0605	2.6	79		26 W	0021	8.1	247		11 Th	0626	1.9	58		26 F	0031	7.6	232
	1111	6.6	201			1158	7.1	216			1157	7.1	216			0654	2.4	73			1229	6.8	207			0717	2.1	64
	1727	2.6	79			1801	2.3	70			1753	2.3	70			1251	6.6	201			1811	2.6	79			1326	6.1	186
	2359	7.6	232													1829	3.0	91						1850		3.4	104	
12 Su	0604	3.3	101		27 M	0026	8.3	253		12 W	0017	8.7	265		27 Th	0048	8.3	253		12 F	0031	8.6	262		27 Sa	0102	7.7	235
	1150	7.1	216			0642	2.6	79			0642	2.0	61			0723	2.1	64			0710	1.4	43			0747	1.8	55
	1800	2.2	67			1234	7.3	223			1240	7.5	229			1324	6.7	204			1318	7.1	216			1359	6.4	195
						1831	2.3	70			1832	2.1	64			1858	3.1	94			1858	2.6	79			1924	3.3	101
13 M	0025	8.2	250		28 Tu	0051	8.5	259		13 Th	0051	9.0	274		28 F	0114	8.3	253		13 Sa	0112	8.8	268		28 Su	0132	7.8	238
	0634	2.6	79			0710	2.3	70			0719	1.5	46			0751	1.9	58			0752	1.0	30			0814	1.6	49
	1226	7.6	232			1306	7.4	226			1321	7.7	235			1356	6.7	204			1406	7.3	223			1430	6.5	198
	1831	1.8	55			1858	2.3	70			1910	2.2	67			1927	3.2	98			1943	2.7	82			1956	3.2	98
14 Tu	000																											

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Musi River (Outer Bar), Sumatra, 2008

Times and Heights of High and Low Waters

October					November					December																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
Time		Height			Time		Height			Time		Height			Time		Height																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
1 W	h	m	ft	cm	16 Th	h	m	ft	cm	1 Sa	h	m	ft	cm	16 Su	h	m	ft	cm	1 M	h	m	ft	cm	16 Tu	h	m	ft	cm																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	0123	3.9	120	0036		4.3	130	0031	1.6		50	0922	13.1	400		0945	12.1	370	0016		0.3	10																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
	0809	7.9	240	0740		8.9	270	0931	10.8		330					1010	13.5	410																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
	1436	4.9	150	1455		4.6	140																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
2 Th	0126	3.3	100	17 F	0032	3.3	100	2 Su	0047	1.6	50	17 M	0027	0.3	10	2 Tu	0012	1.3	40	17 W	0101	0.7	20																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	0856	8.5	260		0826	10.2	310		1007	10.8	330		1015	13.1	400		1017	12.1	370		1057	12.8	390																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	1552	5.6	170		1719	4.6	140																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	1847	5.9	180		1751	4.6	140																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
3 F	0136	2.6	80	18 Sa	0040	2.3	70	3 M	0102	1.3	40	18 Tu	0104	0.0	0	3 W	0028	1.6	50	18 Th	0145	1.6	50																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	0942	9.2	280		0917	11.2	340		1043	10.8	330		1112	12.8	390		1051	11.8	360		1141	11.8	360																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
4 Sa	0151	2.3	70	19 Su	0100	1.3	40	4 Tu	0115	1.3	40	19 W	0142	0.7	20	4 Th	0043	2.0	60	19 F	0225	3.0	90																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	1028	9.5	290		1015	11.8	360		1123	10.8	330		1210	12.1	370		1128	11.5	350		1219	10.5	320																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
5 Su	0207	2.0	60	20 M	0129	0.7	20	5 W	0125	1.6	50	20 Th	0219	1.6	50	5 F	0058	2.3	70	20 Sa	0244	4.6	140																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	1116	9.5	290		1118	11.8	360		1207	10.8	330		1307	11.5	350		1209	11.2	340		1245	9.2	280																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
6 M	0222	2.0	60	21 Tu	0203	0.3	10	6 Th	0134	2.0	60	21 F	0244	2.6	80	6 Sa	0102	3.0	90	21 Su	1248	8.2	250																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	1207	9.5	290		1228	11.8	360		1256	10.8	330		1400	10.2	310		1251	10.2	310		2059	4.6	140																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
7 Tu	0234	2.0	60	22 W	0240	0.7	20	7 F	0138	2.3	70	22 Sa	0113	4.3	130	7 Su	0018	3.9	120	22 M	0541	7.9	240																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	1304	9.8	300		1342	11.5	350		1350	10.5	320		1442	9.2	280		1330	9.2	280		2057	3.9	120																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
8 W	0244	2.0	60	23 Th	0318	1.3	40	8 Sa	0131	3.0	90	23 Su	1508	7.9	240	8 M	1402	8.2	250	23 Tu	0559	9.2	280																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	1404	9.8	300		1454	10.8	330		1444	9.8	300		2243	4.6	140		2202	4.9	150		2108	3.3	100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
9 Th	0249	2.0	60	24 F	0352	2.6	80	9 Su	0059	3.6	110	24 M	0606	7.5	230	9 Tu	0532	7.5	230	24 W	0630	10.2	310																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	1502	9.8	300		1554	10.2	310		1534	9.2	280		1122	6.6	200		1033	6.9	210		2127	2.6	80																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
10 F	0251	2.3	70	25 Sa	0234	3.9	120	10 M	0015	4.3	130	25 Tu	0635	8.9	270	10 W	0543	9.2	280	25 Th	0702	11.2	340																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	1556	9.8	300		1642	9.2	280		1616	8.2	250		2235	3.3	100		2134	3.6	110		2150	2.3	70																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
11 Sa	0242	3.0	90	26 Su	0052	4.6	140	11 Tu	0608	6.9	210	26 W	0709	9.8	300	11 Th	0618	10.8	330	26 F	0732	11.8	360																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	1644	9.8	300		0544	5.6	170		1126	5.6	170		2246	2.6	80		2148	2.3	70		2213	2.0	60																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
12 Su	0218	3.3	100	27 M	0014	4.6	140	12 W	0628	8.5	260	27 Th	0743	10.8	330	12 F	0659	12.1	370	27 Sa	0800	12.1	370																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	1728	9.2	280		0621	6.9	210		1322	5.6	170		2303	2.0	60		2215	1.3	40		2236	1.6	50																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
13 M	0146	3.9	120	28 Tu	1152	5.2	160	13 Th	1658	5.9	180	28 F	●			13 Sa	●			28 Su	●																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	0627	4.9	150		1733	7.2	220		2305	3.6	110		0815	11.5	350		0745	13.1	400		0827	12.5	380																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
14 Tu	1021	4.6	140	29 W	0001	4.3	130	14 F	0702	10.2	310	29 Sa	2321	1.6	50	14 Su	2251	0.7	20	29 M	2258	1.6	50																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	1806	8.5	260		0700	8.2	250		2309	2.6	80		0846	11.8	360		0833	13.8	420		0854	12.5	380																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
15 W	0115	4.6	140	30 Th	2355	3.6	110	15 Sa	0744	11.5	350	30 Su	0815	11.5	350	15 M	2332	0.3	10	30 Tu	2320	1.6	50																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	0633	6.2	190		0740	9.2	280		2326	1.6	50		2339	1.3	40		0922	14.1	430		2343	2.0	60																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
15 O	1203	4.6	140	31 F	1513	5.6	170	15 Sa	0831	12.5	380	31 Su	0915	11.8	360	15 M				31 W																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
	1837	7.5	230		1655	5.6	170		2353	0.7	20		2356	1.3	40						0952	12.5	380																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	1857	6.6	200		0002	2.6	80																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Djakarta (Tandjungpriok), Java, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
1 Tu	h m 0825 ft 2.9 cm 88	16 W	h m 0709 ft 2.9 cm 88	1 F	h m 0800 ft 3.1 cm 94	16 Sa	h m 0718 ft 3.5 cm 107	1 Sa	h m 0703 ft 2.9 cm 88	16 Su	h m 0647 ft 3.2 cm 98
	1830 1.2 37		1730 1.0 30		1709 0.8 24		1639 0.4 12		1605 0.8 24		1540 0.6 18
			●								
2 W	0828 3.1 94 1800 1.0 30	17 Th	0716 3.2 98 1716 0.7 21	2 Sa	0817 3.2 98 1729 0.7 21	17 Su	0801 3.6 110 1705 0.5 15	2 Su	0729 3.1 94 1626 0.7 21	17 M	0736 3.2 98 1603 0.7 21
3 Th	0837 3.2 98 1806 0.8 24	18 F	0742 3.5 107 1729 0.5 15	3 Su	0836 3.4 104 1750 0.6 18	18 M	0839 3.6 110 1730 0.6 18	3 M	0755 3.2 98 1645 0.7 21	18 Tu	0817 3.1 94 1620 0.9 27 2315 2.0 61
4 F	0850 3.3 101 1823 0.7 21	19 Sa	0816 3.7 113 1753 0.3 9	4 M	0857 3.5 107 1813 0.6 18	19 Tu	0914 3.6 110 1751 0.7 21	4 Tu	0821 3.2 98 1703 0.8 24	19 W	0154 1.9 58 0853 2.9 88 1632 1.1 34 2304 2.1 64
5 Sa	0905 3.4 104 1845 0.6 18	20 Su	0852 3.9 119 1822 0.3 9	5 Tu	0918 3.5 107 1834 0.6 18	20 W	0944 3.4 104 1808 0.9 27	5 W	0847 3.2 98 1716 0.9 27	20 Th	0258 1.9 58 0923 2.7 82 1637 1.3 40 2305 2.2 67
6 Su	0921 3.5 107 1910 0.5 15	21 M	0928 3.9 119 1851 0.3 9	6 W	0939 3.5 107 1852 0.7 21	21 Th	1008 3.1 94 1820 1.1 34	6 Th	0914 3.1 94 1723 1.1 34 2347 1.8 55	21 F	0357 1.8 55 0946 2.4 73 1631 1.5 46 2310 2.3 70
							○				
7 M	0939 3.6 110 1937 0.5 15	22 Tu	1001 3.8 116 1919 0.5 15	7 Th	1000 3.4 104 1905 0.9 27	22 F	1023 2.8 85 1821 1.3 40	7 F	0158 1.7 52 0940 2.9 88 1722 1.3 40 2322 1.9 58	22 Sa	0459 1.8 55 0957 2.1 64 1607 1.6 49 2315 2.4 73
			○		●						○
8 Tu	0958 3.6 110 2003 0.5 15	23 W	1030 3.7 113 1943 0.7 21	8 F	1020 3.2 98 1910 1.1 34	23 Sa	1021 2.5 76 1808 1.4 43	8 Sa	0318 1.8 55 1005 2.6 79 1709 1.5 46 2321 2.2 67	23 Su	0627 1.8 55 0927 1.9 58 1513 1.6 49 2318 2.5 76
									●		
9 W	1018 3.6 110 2027 0.6 18	24 Th	1052 3.4 104 2002 0.9 27	9 Sa	1035 3.0 91 1904 1.3 40	24 Su	0939 2.3 70 1728 1.5 46	9 Su	0438 1.8 55 1019 2.2 67 1639 1.6 49 2337 2.4 73	24 M	1402 1.5 46 2319 2.6 79
10 Th	1037 3.6 110 2047 0.7 21	25 F	1103 3.1 94 2014 1.1 34	10 Su	1034 2.6 79 1840 1.4 43	25 M	0714 2.2 67 1623 1.5 46	10 M	0644 1.8 55 0943 1.9 58 1543 1.5 46	25 Tu	1331 1.3 40 2324 2.7 82
11 F	1055 3.4 104 2100 0.9 27	26 Sa	1049 2.8 85 2013 1.2 37	11 M	0938 2.3 70 1752 1.5 46	26 Tu	0521 2.3 70 1536 1.3 40	11 Tu	0008 2.7 82 1431 1.3 40	26 W	1335 1.1 34 2338 2.7 82
12 Sa	1105 3.2 98 2102 1.0 30	27 Su	0945 2.6 79 1945 1.4 43	12 Tu	0419 2.4 73 1643 1.3 40	27 W	0543 2.5 76 1524 1.2 37	12 W	0059 2.8 85 1408 1.0 30	27 Th	1352 1.0 30
13 Su	1057 2.9 88 2047 1.2 37	28 M	0815 2.6 79 1824 1.4 43	13 W	0456 2.7 82 1600 1.0 30	28 Th	0610 2.6 79 1531 1.0 30	13 Th	0225 2.9 88 1423 0.7 21	28 F	0008 2.7 82 1412 0.9 27
14 M	0952 2.6 79 2005 1.3 40	29 Tu	0740 2.7 82 1711 1.3 40	14 Th	0545 3.0 91 1558 0.7 21	29 F	0637 2.8 85 1546 0.9 27	14 F	0422 3.1 94 1447 0.6 18	29 Sa	0146 2.7 82 1434 0.8 24
					○		○		○		
15 Tu	0751 2.6 79 1842 1.3 40	30 W	0737 2.8 85 1651 1.1 34	15 F	0633 3.3 101 1615 0.5 15			15 Sa	0546 3.2 98 1514 0.5 15	30 Su	0511 2.7 82 1455 0.8 24
			○								○
		31 Th	0746 3.0 91 1654 0.9 27							31 M	0608 2.8 85 1513 0.8 24

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Djakarta (Tandjungpriok), Java, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
1 Tu	h m 0620 ft 2107 cm 9 119	16 W	h m 0633 ft 2124 cm 0.5 107	1 F	h m 0636 ft 2207 cm 0.5 110	16 Sa	h m 0608 ft 2136 cm 0.8 98	1 M	h m 0527 ft 1219 cm 1.3 67 2.2 61 2.0 61 2.3 70	16 Tu	h m 0414 ft 1103 cm 1.5 73 2.4 55 1.8 61 2.0 61
2 W	0653 2145 0.2 4.0 6 122	17 Th	0658 2142 0.6 3.5 18 107	2 Sa	0657 2233 0.7 3.3 21 101	17 Su	0616 2153 1.0 3.0 30 91	2 Tu	0508 1232 1.4 2.4 43 73	17 W	0340 1114 1.5 2.6 46 79
3 Th	0728 2222 0.2 3.9 6 119	18 F	0721 2159 0.6 3.5 18 107	3 Su	0711 2248 0.9 2.9 27 88	18 M	0614 2205 1.2 2.7 37 82	3 W	0422 1250 1.5 2.5 46 76	18 Th	0244 1137 1.4 2.9 43 88
4 F	0802 2255 0.4 3.7 12 113	19 Sa	0741 2215 0.7 3.4 21 104	4 M	0716 2238 1.1 2.6 34 79	19 Tu	0601 1307 1528 2201 1.3 2.0 1.9 2.4 40 61 58 73	4 Th	0314 1312 1.4 2.6 43 79	19 F	0141 1213 1.2 3.0 37 91
5 Sa	0832 2321 0.6 3.4 18 104	20 Su	0756 2229 0.8 3.2 24 98	5 Tu	0706 2102 1.3 2.4 40 73	20 W	0534 1305 1733 2056 1.4 2.2 2.1 2.2 43 67 64 67	5 F	0237 1349 1.2 2.6 37 79	20 Sa	0128 1307 0.9 3.1 27 94
6 Su	0856 2332 0.8 3.0 24 91	21 M	0801 2237 1.0 3.0 30 91	6 W	0625 1814 1.4 2.4 43 73	21 Th	0447 1333 1.4 2.5 43 76	6 Sa	0236 1553 1.0 2.7 30 82	21 Su	0144 1434 0.6 3.2 18 98
7 M	0911 2300 1.0 2.7 30 82	22 Tu	0755 2228 1.2 2.7 37 82	7 Th	0503 1812 1.4 2.6 43 79	22 F	0351 1434 1.2 2.7 37 82	7 Su	0249 1725 0.8 2.7 24 82	22 M	0210 1621 0.5 3.2 15 98
8 Tu	0914 2043 1.2 2.6 37 79	23 W	0731 2128 1.3 2.5 40 76	8 F	0411 1834 1.2 2.8 37 85	23 Sa	0319 1607 1.0 2.9 30 88	8 M	0308 1815 0.7 2.8 21 85	23 Tu	0237 1743 0.4 3.2 12 98
9 W	0849 1942 1.3 2.7 40 82	24 Th	0645 1904 1.4 2.5 43 76	9 Sa	0403 1900 1.0 2.9 30 88	24 Su	0320 1726 0.7 3.2 21 98	9 Tu	0330 1852 0.7 2.9 21 88	24 W	0303 1844 0.5 3.1 15 94
10 Th	0648 1938 1.4 2.9 43 88	25 F	0537 1814 1.3 2.8 40 85	10 Su	0413 1926 0.8 3.0 24 91	25 M	0337 1827 0.5 3.4 15 104	10 W	0350 1924 0.7 3.0 21 91	25 Th	0324 1933 0.6 3.0 18 91
11 F	0521 1949 1.2 3.0 37 91	26 Sa	0447 1828 1.0 3.1 30 94	11 M	0431 1951 0.7 3.1 21 94	26 Tu	0401 1918 0.4 3.5 12 107	11 Th	0409 1952 0.7 3.0 21 91	26 F	0340 1103 1403 2015 0.8 2.2 2.1 2.8 24 67 64 85
12 Sa	0512 2007 0.9 3.2 27 98	27 Su	0438 1901 0.7 3.4 21 104	12 Tu	0452 2015 0.6 3.2 18 98	27 W	0426 2002 0.4 3.5 12 107	12 F	0424 2018 0.8 3.0 24 91	27 Sa	0350 1046 1519 2050 1.1 2.3 1.9 2.5 34 70 58 76
13 Su	0524 2027 0.8 3.3 24 101	28 M	0451 1939 0.5 3.6 15 110	13 W	0514 2037 0.6 3.3 18 101	28 Th	0450 2041 0.5 3.4 15 104	13 Sa	0434 2044 1.0 2.8 30 85	28 Su	0351 1045 1631 2119 1.3 2.4 1.8 2.2 40 73 55 67
14 M	0544 2047 0.6 3.3 18 101	29 Tu	0515 2019 0.3 3.8 9 116	14 Th	0535 2058 0.6 3.3 18 101	29 F	0509 2116 0.7 3.2 21 98	14 Su	0437 1127 1440 2109 1.1 2.0 1.9 2.6 34 61 58 79	29 M	0341 1052 1755 2134 1.4 2.6 1.8 1.9 43 79 55 58
15 Tu	0608 2106 0.6 3.4 18 104	30 W	0542 2058 0.3 3.8 9 116	15 F	0554 2118 0.7 3.3 21 101	30 Sa	0524 2144 0.9 3.0 27 91	15 M	0431 1106 1552 2130 1.3 2.2 1.9 2.4 40 67 58 73	30 Tu	0311 1102 1.5 2.7 46 82
		31 Th	0610 2135 0.3 3.8 9 116			31 Su	0530 1213 1539 2204 1.1 2.0 1.9 2.6 34 61 58 79				

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Djakarta (Tandjungpriok), Java, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height			Time	Height			Time	Height		
h m	ft	cm		h m	ft	cm		h m	ft	cm	
1 W	0206 1112	1.5 2.8	46 85	16 Th	1035 2220	3.3 0.9	101 27	1 M	1101 2249	3.4 0.6	104 18
2 Th	0045 1122	1.3 2.9	40 88	17 F	1107 2312	3.5 0.7	107 21	2 Tu	1117 2313	3.4 0.7	104 21
3 F	0033 1131	1.1 2.9	34 88	18 Sa	1148 2355	3.5 0.5	107 15	3 W	1131 2330	3.2 0.8	98 24
4 Sa	0049 1142	0.9 2.9	27 88	19 Su	1239 1343	3.5 3.3	107 101	4 Th	1136 2338	3.1 0.9	94 27
5 Su	0112 1202	0.8 2.9	24 88	20 M	0033 1343	0.4 3.3	12 101	5 F	1116 2335	2.9 1.1	88 34
6 M	0137 1235	0.7 2.9	21 88	21 Tu	0106 1504	0.4 3.1	12 94	6 Sa	1011 2317	2.7 1.2	82 37
7 Tu	0200 1413	0.7 2.8	21 85	22 W	0134 1629	0.5 2.9	15 88	7 Su	0901 2233	2.7 1.3	82 40
8 W	0222 1649	0.7 2.8	21 85	23 Th	0155 1742	0.7 2.6	21 79	8 M	0829 1943	2.9 1.2	88 37
9 Th	0239 1751	0.8 2.7	24 82	24 F	0209 1002 1453 1844	0.9 2.5 2.2 2.3	27 76 67 70	9 Tu	0826 1836	3.2 0.9	98 27
10 F	0252 1839	0.9 2.6	27 79	25 Sa	0215 0948 1616 1938	1.1 2.6 1.9 2.0	34 79 58 61	10 W	0841 1847	3.5 0.6	107 18
11 Sa	0259 1047 1427 1922	1.0 2.3 2.2 2.4	30 70 67 73	26 Su	0211 0950 1737 2034	1.3 2.8 1.6 1.7	40 85 49 52	11 Th	0907 1917	3.8 0.4	116 12
12 Su	0257 1012 1534 2005	1.2 2.4 2.0 2.2	37 73 61 67	27 M	0150 0959 1903 2157	1.4 3.0 1.4 1.5	43 91 43 46	12 F	0940 1955	4.0 0.2	122 6
13 M	0247 0958 1646 2049	1.4 2.6 1.7 1.9	43 79 52 58	28 Tu	0045 1010 2026	1.4 3.1 1.2	43 94 37	13 Sa	1017 2036	4.1 0.2	125 6
14 Tu	0222 0959 1815 2140	1.5 2.8 1.5 1.6	46 85 46 49	29 W	1022 2126	3.2 1.0	98 30	14 Su	1055 2116	4.0 0.2	122 6
15 W	0131 1012 2028	1.5 3.1 1.2	46 94 37	30 Th	1032 2211	3.2 0.9	98 27	15 M	1130 2152	3.8 0.4	116 12
16 Th				31 F	1043 2250	3.2 0.8	98 24	16 Tu			
17 F								17 W			
18 Sa								18 Th			
19 Su								19 F			
20 M								20 Sa			
21 Tu								21 Su			
22 W								22 M			
23 Th								23 Tu			
24 F								24 W			
25 Sa								25 Th			
26 Su								26 F			
27 M								27 Sa			
28 Tu								28 Su			
29 W								29 M			
30 Th								30 Tu			
31 F								31 W			

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Surabaya Strait, Djamuang Reef, Java, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height			Time	Height			Time	Height		
h m	ft	cm		h m	ft	cm		h m	ft	cm	
1 Tu	0820 1852	6.2 0.3	190 10	16 W	0738 1845	6.2 0.3	190 10	1 M	0917 1851	4.9 2.0	150 60
2 W	0829 1917	6.6 0.0	200 0	17 Th	0811 1907	6.6 0.0	200 0	16 Tu	0143 0647 1053 1802	4.3 3.9 4.3 2.6	130 120 130 80
3 Th	0845 1945	6.6 0.0	200 0	18 F	0845 1931	6.6 0.0	200 0	17 W	0117 0742 1156 1739	4.3 3.3 3.6 3.0	130 100 110 90
4 F	0904 2013	6.6 0.0	200 0	19 Sa	0919 1954	6.6 0.3	200 10	18 Th	0058 0851 1331 1604	4.6 3.0 3.3 3.3	140 90 100 100
5 Sa	0924 2040	6.6 0.3	200 10	20 Su	0949 2017	6.2 0.7	190 20	19 F	0044 1030	4.9 2.6	150 80
6 Su	0944 2104	6.6 0.7	200 20	21 M	1012 2035	5.9 1.0	180 30	20 Sa	0036 1220	5.2 2.0	160 60
7 M	1000 2120	6.2 1.0	190 30	22 Tu	1021 2046	5.6 1.3	170 40	21 Su	0037 1326	5.6 1.6	170 50
8 Tu	1008 2123	5.9 1.3	180 40	23 W	0958 2040	5.2 2.0	160 60	22 M	0045 1414	5.9 1.3	180 40
9 W	1004 2101	5.6 2.0	170 60	24 Th	0835 2000	4.9 2.3	150 70	23 Tu	0058 1454	5.9 1.0	180 30
10 Th	0941 2007	5.2 2.3	160 70	25 F	0719 1833	4.6 2.3	140 70	24 W	0115 1531	5.9 1.0	180 30
11 F	0854 1906	4.9 2.3	150 70	26 Sa	0641 1733	4.9 2.0	150 60	25 Th	0133 1604	5.9 1.0	180 30
12 Sa	0753 1827	4.9 2.0	150 60	27 Su	0623 1722	5.2 1.3	160 40	26 F	0148 1634	5.6 1.3	170 40
13 Su	0708 1812	5.2 1.3	160 40	28 M	0621 1732	5.6 1.0	170 30	27 Sa	0156 1658	5.2 1.6	160 50
14 M	0657 1814	5.6 1.0	170 30	29 Tu	0634 1753	5.9 0.7	180 20	28 Su	0152 1715	4.9 2.0	150 60
15 Tu	0711 1826	5.9 0.7	180 20	30 W	0658 1818	5.9 0.3	180 10	29 M	0132 0805 0905 1717	4.6 3.9 3.9 2.6	140 120 120 80
				31 Th	0730 1844	6.2 0.0	190 0	30 Tu	0057 0739 1052 1654	4.6 3.6 3.6 3.0	140 110 110 90
								31 Su			

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Surabaya Strait, Djamuang Reef, Java, 2008

Times and Heights of High and Low Waters

October								November								December							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
1 W	h m 0018 0758 2347	ft 4.6 3.0 4.9	cm 140 90 150	16 Th	h m 0811 2313	ft 2.0 5.6	cm 60 170	1 Sa	h m 0908 2241	ft 1.0 6.6	cm 30 200	16 Su	h m 0923 2227	ft 0.3 6.9	cm 10 210	1 M	h m 0914 2228	ft 0.3 6.9	cm 10 210	16 Tu	h m 0925 2209	ft 0.3 6.6	cm 10 200
2 Th	0836 2333	2.6 5.2	80 160	17 F	0857 2312	1.6 5.9	50 180	2 Su	0949 2300	1.0 6.6	30 200	17 M	1004 2240	0.3 6.9	10 210	2 Tu	0945 2247	0.3 6.9	10 210	17 W	0953 2220	0.7 6.6	20 200
3 F	0931 2336	2.3 5.6	70 170	18 Sa	0950 2316	1.3 6.2	40 190	3 M	1033 2320	0.7 6.9	20 210	18 Tu	1045 2254	0.7 6.6	20 200	3 W	1016 2259	0.7 6.6	20 200	18 Th	1015 2225	1.0 5.9	30 180
4 Sa	1042 2349	2.0 5.9	60 180	19 Su	1048 2326	1.0 6.2	30 190	4 Tu	1118 2338	0.7 6.6	20 200	19 W	1125 2304	0.7 6.6	20 200	4 Th	1044 2259	1.0 5.9	30 180	19 F	1024 2220	1.6 5.6	50 170
5 Su	1155	1.6	50	20 M	1148 2339	1.0 6.6	30 200	5 W	1202 2350	1.0 6.2	30 190	20 Th	1201 2310	1.0 6.2	30 190	5 F	1106 2242	1.3 5.6	40 170	20 Sa	1001 2203	2.0 5.2	60 160
6 M	0008 1253	6.2 1.3	190 40	21 Tu	1243 2353	1.0 6.2	30 190	6 Th	1242 2350	1.3 5.9	40 180	21 F	1228 2309	1.6 5.9	50 180	6 Sa	1112 2211	2.0 5.2	60 160	21 Su	0844 2133	2.3 5.2	70 160
7 Tu	0029 1340	6.2 1.3	190 40	22 W	1331	1.0	30	7 F	1317 2337	1.6 5.6	50 170	22 Sa	1236 2257	2.0 5.6	60 170	7 Su	1035 2141	2.3 5.2	70 160	22 M	0730 2055	2.3 5.2	70 160
8 W	0049 1420	6.2 1.0	190 30	23 Th	0005 1412	6.2 1.3	190 40	8 Sa	1342 2313	2.0 5.2	60 160	23 Su	1119 2235	2.6 5.2	80 160	8 M	0753 2120	2.3 5.2	70 160	23 Tu	0654 2021	1.6 5.6	50 170
9 Th	0105 1455	5.9 1.3	180 40	24 F	0015 1445	5.9 1.6	180 50	9 Su	1354 2249	2.3 5.2	70 160	24 M	0809 2204	2.3 5.2	70 160	9 Tu	0651 2107	2.0 5.6	60 170	24 W	0645 2005	1.3 5.9	40 180
10 F	0111 1525	5.6 1.3	170 40	25 Sa	0017 1510	5.6 2.0	170 60	10 M	0759 1038 1325 2229	3.0 3.0 3.0 5.2	90 90 90 160	25 Tu	0729 2135	2.0 5.6	60 170	10 W	0645 2103	1.3 5.9	40 180	25 Th	0651 2009	1.0 6.2	30 190
11 Sa	0101 1551	5.2 1.6	160 50	26 Su	0008 1519 2348	5.2 2.3 4.9	160 70 150	11 Tu	0708 2216	2.3 5.6	70 170	26 W	0722 2118	1.6 5.9	50 180	11 Th	0700 2105	1.0 6.2	30 190	26 F	0705 2027	0.7 6.6	20 200
12 Su	0038 1609	4.9 2.3	150 70	27 M	0834 1027 1456 2318	3.0 3.0 3.0 4.9	90 90 90 150	12 W	0715 2208	2.0 5.6	60 170	27 Th	0732 2116	1.3 6.2	40 190	12 F	0723 2113	0.3 6.6	10 200	27 Sa	0725 2051	0.3 6.9	10 210
13 M	0012 1618 2350	4.9 2.6 4.9	150 80 150	28 Tu	0746 2247	2.6 5.2	80 160	13 Th	0737 2206	1.3 5.9	40 180	28 F	0750 2127	0.7 6.6	20 200	13 Sa	0752 2125	0.3 6.9	10 210	28 Su	0748 2118	0.0 6.9	0 210
14 Tu	0709 1141 1604 2333	3.0 3.3 3.0 4.9	90 100 90 150	29 W	0747 2225	2.3 5.6	70 170	14 F	0808 2208	1.0 6.2	30 190	29 Sa	0815 2145	0.3 6.9	10 210	14 Su	0822 2139	0.0 6.9	0 210	29 M	0813 2145	0.0 6.9	0 210
15 W	0734 2321	2.6 5.2	80 160	30 Th	0805 2219	1.6 5.9	50 180	15 Sa	0844 2216	0.7 6.6	20 200	30 Su	0843 2206	0.3 6.9	10 210	15 M	0854 2155	0.0 6.9	0 210	30 Tu	0837 2209	0.3 6.6	10 200
				31 F	0833 2226	1.3 6.2	40 190										31 W	0901 2226	0.7 6.2	20 190			

Time meridian 105° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Kutei River Entrance, Muara Bayor, Borneo, 2008

Times and Heights of High and Low Waters

January						February						March					
Time			Height			Time			Height			Time			Height		
	h	m	ft	cm			h	m	ft	cm			h	m	ft	cm	
1 Tu	0507	3.3	100			16 W	0442	2.6	80			1 Sa	0330	3.3	100		
	1148	6.6	200				1111	7.2	220				1035	6.6	200		
	1727	4.9	150			16 O	1713	3.9	120				1628	5.2	160		
	2256	6.2	190				2250	6.6	200				2012	5.6	170		
2 W	0550	3.6	110			17 Th	0519	3.3	100			2 Su	0310	3.6	110		
	1316	6.6	200				1226	6.9	210				1633	5.9	180		
	1929	5.2	160				1900	4.6	140			17 M	0037	3.9	120		
	2334	5.6	170				2333	5.6	170				1634	7.2	220		
3 Th	0652	3.6	110			18 F	0612	3.6	110			3 M	0122	3.9	120		
	1506	6.6	200				1424	7.2	220				0809	4.9	150		
	2255	4.9	150				2249	4.6	140				0947	4.9	150		
													1706	6.9	210		
4 F	0156	4.9	150			19 Sa	0213	4.6	140			4 Tu	0024	3.6	110		
	0823	3.9	120				0758	3.9	120				0614	5.6	170		
	1622	7.2	220				1612	7.9	240				1100	4.3	130		
	2346	4.3	130				2355	3.6	110				1730	7.5	230		
5 Sa	0423	4.9	150			20 Su	0457	4.9	150			5 W	0020	3.0	90		
	0946	3.6	110				0954	3.6	110				0610	6.2	190		
	1709	7.9	240				1716	8.5	260				1132	3.3	100		
													1755	8.5	260		
6 Su	0015	3.6	110			21 M	0029	3.0	90			6 Th	0030	2.3	70		
	0526	5.2	160				0553	5.2	160				0621	6.9	210		
	1043	3.6	110				1106	3.0	90				1200	2.6	80		
	1744	8.2	250				1802	9.2	280				1820	8.9	270		
7 M	0042	3.3	100			22 Tu	0059	2.3	70			7 F	0046	2.0	60		
	0606	5.6	170				0631	5.9	180				0639	7.5	230		
	1126	3.3	100				1156	2.6	80				1228	2.0	60		
	1816	8.9	270				1840	9.5	290				1845	9.2	280		
8 Tu	0108	2.6	80			23 W	0126	2.0	60			8 Sa	0103	1.6	50		
	0639	5.9	180				0704	6.6	200				0700	8.2	250		
	1203	3.0	90				1239	2.3	70				1257	1.3	40		
	1846	9.2	280				1914	9.8	300				1910	9.5	290		
9 W	0133	2.3	70			24 Th	0151	2.0	60			9 Su	0123	1.3	40		
	0708	6.2	190				0734	6.9	210				0723	8.9	270		
	1236	2.6	80				1316	2.0	60				1327	1.0	30		
	1914	9.5	290				1945	9.8	300				1936	9.2	280		
10 Th	0158	2.3	70			25 F	0215	1.6	50			10 M	0144	1.3	40		
	0736	6.6	200				0803	7.5	230				0749	9.2	280		
	1308	2.3	70				1350	2.0	60				1357	1.0	30		
	1943	9.5	290				2012	9.5	290				2001	8.9	270		
11 F	0223	2.0	60			26 Sa	0237	1.6	50			11 Tu	0205	1.3	40		
	0804	6.9	210				0831	7.5	230				0816	9.5	290		
	1341	2.3	70				1422	2.0	60				1429	1.3	40		
	2013	9.5	290				2038	9.2	280				2026	8.2	250		
12 Sa	0248	2.0	60			27 Su	0259	2.0	60			12 W	0226	1.3	40		
	0833	6.9	210				0859	7.9	240				0846	9.2	280		
	1414	2.3	70				1452	2.3	70				1502	2.0	60		
	2043	9.2	280				2101	8.5	260				2049	7.5	230		
13 Su	0314	2.0	60			28 M	0320	2.0	60			13 Th	0248	1.6	50		
	0905	7.2	220				0928	7.9	240				0918	8.9	270		
	1450	2.3	70				1521	3.0	90				1537	3.0	90		
	2113	8.9	270				2121	7.9	240				2109	6.6	200		
14 M	0341	2.3	70			29 Tu	0341	2.3	70			14 F	0307	2.3	70		
	0940	7.2	220				0958	7.5	230				0953	8.2	250		
	1529	2.6	80				1550	3.6	110				1618	3.9	120		
	2144	8.2	250				2139	7.2	220				2118	5.9	180		
15 Tu	0410	2.6	80			30 W	0401	2.6	80			15 Sa	0322	3.0	90		
	1020	7.2	220				1030	7.2	220				1038	7.5	230		
	1614	3.3	100				1620	4.3	130				1737	4.9	150		
	2216	7.2	220				2152	6.6	200				2028	5.2	160		
						31 Th	0421	3.0	90			30 Su	0248	3.3	100		
							1111	6.9	210				0954	6.9	210		
							1656	4.9	150				1630	4.9	150		
							2151	5.9	180				2006	5.2	160		
												31 M	0226	3.9	120		
													1050	6.2	190		

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Kutei River Entrance, Muara Bayor, Borneo, 2008

Times and Heights of High and Low Waters

July					August					September																			
Time		Height			Time		Height			Time		Height			Time		Height												
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm										
1 Tu	0441	7.2	220		16 W	0535	6.6	200		1 F	0621	7.5	230		16 Sa	0627	7.2	220		1 M	0054	0.0	0		16 Tu	0039	0.0	0	
	1145	2.0	60			1240	2.0	60			1306	0.3	10			1302	0.3	10			0708	7.5	230			0649	7.5	230	
	1703	4.3	130			1802	3.9	120			1846	4.9	150			1850	4.9	150			1321	-0.3	-10			1259	0.0	0	
	2229	1.6	50			2316	2.0	60			●								1921		6.9	210		1902		7.2	220		
2 W	0533	7.9	240		17 Th	0609	6.9	210		2 Sa	0021	0.3	10		17 Su	0027	0.7	20		2 Tu	0124	-0.3	-10		17 W	0107	-0.3	-10	
	1231	1.3	40			1302	1.3	40			0657	7.9	240			0651	7.5	230			0732	7.2	220			0714	7.5	230	
	1757	4.6	140			1835	4.3	130			1332	0.0	0			1320	0.0	0			1340	-0.3	-10			1319	0.0	0	
	2323	1.3	40			2355	1.6	50			1916	5.2	160			1910	5.6	170			1945	7.2	220			1926	7.9	240	
3 Th	0618	8.5	260		18 F	0639	7.2	220		3 Su	0101	0.0	0		18 M	0056	0.3	10		3 W	0151	0.0	0		18 Th	0137	-0.3	-10	
	1310	1.0	30			1325	1.0	30			0729	7.9	240			0716	7.5	230			0753	6.9	210			0738	7.2	220	
	1842	4.9	150			1903	4.6	140			1356	0.0	0			1339	0.0	0			1359	-0.3	-10			1340	0.0	0	
	●					○					1946	5.9	180			1932	5.9	180			2010	7.2	220			1953	7.9	240	
4 F	0011	1.0	30		19 Sa	0029	1.3	40		4 M	0137	0.0	0		19 Tu	0124	0.0	0		4 Th	0217	0.3	10		19 F	0207	0.0	0	
	0659	8.5	260			0706	7.5	230			0758	7.9	240			0740	7.5	230			0813	6.6	200			0803	6.9	210	
	1346	0.7	20			1348	0.7	20			1420	0.0	0			1359	-0.3	-10			1417	0.0	0			1401	0.0	0	
	1921	5.2	160			1929	4.9	150			2015	6.2	190			1955	6.6	200			2034	7.2	220			2022	7.9	240	
5 Sa	0056	0.7	20		20 Su	0101	1.0	30		5 Tu	0210	0.0	0		20 W	0153	-0.3	-10		5 F	0242	0.7	20		20 Sa	0240	0.7	20	
	0737	8.5	260			0733	7.9	240			0824	7.2	220			0805	7.5	230			0831	6.2	190			0826	6.2	190	
	1420	0.7	20			1410	0.3	10			1442	0.0	0			1419	-0.3	-10			1435	0.0	0			1423	0.3	10	
	1959	5.2	160			1954	5.2	160			2044	6.2	190			2021	6.6	200			2058	6.9	210			2053	7.5	230	
6 Su	0138	0.7	20		21 M	0132	0.7	20		6 W	0242	0.3	10		21 Th	0223	0.0	0		6 Sa	0306	1.3	40		21 Su	0315	1.3	40	
	0814	8.2	250			0800	7.9	240			0848	6.9	210			0830	6.9	210			0846	5.6	170			0848	5.2	160	
	1451	0.7	20			1433	0.3	10			1503	0.0	0			1440	0.0	0			1452	0.7	20			1444	0.7	20	
	2036	5.6	170			2021	5.6	170			2113	6.2	190			2049	6.9	210			2122	6.2	190			2128	7.2	220	
7 M	0218	1.0	30		22 Tu	0204	0.7	20		7 Th	0312	1.0	30		22 F	0255	0.3	10		7 Su	0329	2.0	60		22 M	0356	2.3	70	
	0847	7.9	240			0828	7.5	230			0910	6.2	190			0855	6.2	190			0857	4.9	150			0905	4.6	140	
	1520	0.7	20			1457	0.3	10			1524	0.3	10			1502	0.0	0			1506	1.0	30			1502	1.3	40	
	2113	5.6	170			2049	5.6	170			2142	6.2	190			2121	6.6	200			2148	5.9	180			2212	6.2	190	
8 Tu	0258	1.3	40		23 W	0237	0.7	20		8 F	0341	1.6	50		23 Sa	0331	1.0	30		8 M	0354	2.6	80		23 Tu	0504	3.3	100	
	0919	7.2	220			0856	7.2	220			0928	5.6	170			0918	5.6	170			0856	4.3	130			0853	3.6	110	
	1549	1.0	30			1521	0.3	10			1544	0.7	20			1525	0.3	10			1512	1.6	50			1505	2.3	70	
	2150	5.6	170			2120	5.9	180			2214	5.6	170			2157	6.2	190			2218	5.2	160			2344	5.2	160	
9 W	0338	1.6	50		24 Th	0312	1.0	30		9 Sa	0411	2.3	70		24 Su	0411	2.0	60		9 Tu	0423	3.6	110		24 W	1224	2.6	80	
	0949	6.6	200			0925	6.6	200			0941	4.9	150			0937	4.6	140			0802	3.9	120						
	1618	1.3	40			1547	0.7	20			1603	1.0	30			1547	1.0	30			1450	2.3	70						
	2231	5.6	170			2156	5.9	180			2251	5.2	160			2244	5.9	180			2346	4.3	130						
10 Th	0419	2.3	70		25 F	0352	1.3	40		10 Su	0446	3.0	90		25 M	0512	3.0	90		10 W	0204	4.3	130		25 Th	0346	5.6	170	
	1016	5.9	180			0954	5.9	180			0943	4.3	130			0942	3.6	110			0343	4.3	130			1119	2.3	70	
	1647	1.3	40			1615	1.0	30			1620	1.6	50			1606	1.6	50			1255	2.3	70			1717	4.3	130	
	2319	5.6	170			2239	5.9	180			2349	4.6	140										2215	3.0		90			
11 F	0509	3.0	90		26 Sa	0441	2.0	60		11 M	0610	3.6	110		26 Tu	0014	5.2	160		11 Th	0447	5.2	160		26 F	0445	6.2	190	
	1042	4.9	150			1024	4.9	150			0819	3.6	110			1540	2.3	70			1200	2.0	60			1128	1.6	50	
	1720	1.6	50			1646	1.3	40			1622	2.0	60								1757	3.9	120			1726	5.2	160	
						2337	5.6	170								2249	2.6	80			2304	2.0	60						
12 Sa	0023	5.2	160		27 Su	0553	3.0	90		12 Tu	0336	4.6	140		27 W	0345	5.2	160		12 F	0513	5.9	180		27 Sa	0522	6.9	210	
	0625	3.6	110			1056	4.3	130			1338	2.3	70			1201	2.0	60			1157	1.3	40			1144	1.3	40	
	1107	4.3	130			1726	1.6	50								1732	3.3	100			1753	4.6	140			1745	6.2	190	
	1801	2.0	60								2147	2.3	70			2147	2.3	70			2319	2.0	60			2340	1.3	40	
13 Su	0201	5.2	160		28 M	0111	5.2	160		13 W	0501	5.2	160		28 Th	0458	6.2	190		13 Sa	0537	6.6	200		28 Su	0551	7.2	220	
	1009	3.6	110			0911	3.0	90			1232	2.0	60			1204	1.3	40			1208	1.0	30			1203	0.7	20	
	1127	3.6	110			1148	3.3	100			1803	3.3	100			1746	3.9	120			1804	5.6	170			1807	6.9	210	
	1913	2.3	70			1840	2.0	60			2242	2.3	70			2301	1.6	50			2345	1.3	40						
14 M	0348	5.6	170		29 Tu	0324	5.9	180		14 Th	0535	5.9	180		29 F	0540	6.9	210		14 Su	0601	7.2	220		29 M	0010	0.7	20	
	1155	3.0	90			1137	2.3	70			1233	1.3	40			1221	0.7	20			1223	0.7	20			0617	7.2	220	
	1541	3.3	100			1613	3.0	90			1814	3.9	120			1808	4.9	150			1821	6.2	190			1222	0.7	20	
	2103	2.3	70			2105	2.0	60			2326	1.6	50			2345	1.0	30								●	1829	7.5	230
15 Tu	0453	5.9	180		30 W	0448	6.6	200		15 F	0602	6.6	200		30 Sa	0613	7.2	220		15 M	0012	0.7	20		30 Tu	0039	0.3	10	
	1217	2.3	70			1210	1.6	50			1245	1.0	30			1241	0.3	10			0625	7.5	230			0640	7.2	220	
	1718	3.6	110			1731	3.6	110			1831	4.6	140			1832	5.6	170			1240	0.3	10			1240	0.3	10	
	2223	2.3	70			2238	1.6	50			2359	1.3	40								1840	6.9	210			1852	8.2	250	
				31 Th	0540	7.2	220						31 Su	0022	0.3	10													
					1239	1.0	30							0642	7.5	230													
					1812	4.3	130							1301	0.0	0													
					2336	1.0	30							1856	6.2	190													

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Kutei River Entrance, Muara Bayor, Borneo, 2008

Times and Heights of High and Low Waters

October						November						December					
Time			Height			Time			Height			Time			Height		
	h	m	ft	cm			h	m	ft	cm			h	m	ft	cm	
1 W	0106	0.3	10			16 Th	0051	0.3	10			1 M	0210	2.6	80		
	0701	6.9	210				0647	7.2	220				0741	6.2	190		16 Tu
	1259	0.3	10				1241	0.3	10				1317	2.3	70		0820
	1915	8.2	250				1901	9.2	280				1958	8.9	270		1358
2 Th	0130	0.7	20			17 F	0124	0.3	10			2 Tu	0240	2.6	80		2039
	0721	6.9	210				0714	6.9	210				0812	6.2	190		9.5
	1317	0.3	10				1305	0.7	20				1345	2.6	80		2.3
	1938	8.2	250				1931	9.2	280				2028	8.9	270		70
3 F	0154	0.7	20			18 Sa	0158	0.7	20			3 W	0313	3.0	90		2.0
	0740	6.6	200				0741	6.6	200				0846	5.9	180		2.0
	1335	0.7	20				1330	0.7	20				1416	3.0	90		6.6
	2001	8.2	250				2003	9.2	280				2100	8.2	250		3.3
4 Sa	0218	1.3	40			19 Su	0234	1.3	40			4 Th	0350	3.0	90		2.6
	0758	6.2	190				0809	5.9	180				0927	5.9	180		8.9
	1353	0.7	20				1355	1.0	30				1452	3.6	110		2.0
	2023	7.9	240				2038	8.5	260				2136	7.9	240		3.0
5 Su	0241	1.6	50			20 M	0314	2.0	60			5 F	0434	3.3	100		3.0
	0815	5.6	170				0836	5.2	160				1021	5.6	170		90
	1410	1.3	40				1420	1.6	50				1538	3.9	120		6.6
	2046	7.2	220				2116	7.9	240				2221	7.2	220		2.0
6 M	0307	2.3	70			21 Tu	0403	3.0	90			6 Sa	0529	3.6	110		0518
	0829	5.2	160				0904	4.6	140				1143	5.6	170		3.3
	1424	1.6	50				1444	2.3	70				1655	4.6	140		6.2
	2110	6.6	200				2204	6.9	210				2325	6.6	200		4.6
7 Tu	0336	3.0	90			22 W	0534	3.6	110			7 Su	0640	3.6	110		2320
	0836	4.6	140				0937	3.9	120				1332	5.9	180		3.6
	1431	2.3	70				1457	3.3	100				1913	4.6	140		6.6
	2137	5.9	180				2342	5.9	180								2.0
8 W	0425	3.6	110			23 Th	0936	3.6	110			8 M	0102	6.2	190		0608
	0804	3.9	120				1643	4.3	130				0755	3.6	110		3.6
	1407	3.0	90				1940	4.3	130				1458	6.6	200		6.6
	2223	5.2	160										2118	4.3	130		4.9
9 Th	1142	3.3	100			24 F	0255	5.9	180			9 Tu	0245	5.9	180		0680
	1913	4.3	130				1009	3.0	90				0858	3.3	100		3.6
	2116	4.3	130				1628	5.2	160				1555	7.5	230		3.6
							2200	3.6	110				2231	3.6	110		7.9
10 F	0343	5.2	160			25 Sa	0407	6.2	190			10 W	0359	5.9	180		2359
	1057	2.6	80				1034	2.6	80				0949	3.0	90		0508
	1714	4.9	150				1650	6.2	190				1641	8.5	260		3.3
	2221	3.6	110				2249	2.6	80				2323	3.0	90		8.5
11 Sa	0427	5.9	180			26 Su	0449	6.6	200			11 Th	0454	6.2	190		0508
	1103	2.0	60				1056	2.0	60				1034	2.6	80		3.3
	1712	5.6	170				1714	7.2	220				1723	9.2	280		8.9
	2252	2.6	80				2325	2.0	60								2.0
12 Su	0457	6.6	200			27 M	0520	6.9	210			12 F	0007	2.6	80		0549
	1117	1.6	50				1118	1.6	50				0539	6.2	190		5.6
	1725	6.6	200				1738	7.9	240				1116	2.3	70		3.0
	2321	2.0	60				2355	1.6	50				1803	9.8	300		9.2
13 M	0525	7.2	220			28 Tu	0547	6.9	210			13 Sa	0049	2.0	60		0057
	1136	1.3	40				1139	1.3	40				0621	6.2	190		3.0
	1745	7.2	220				1803	8.5	260				1157	2.0	60		5.9
	2350	1.3	40										1842	10.2	310		3.0
14 Tu	0553	7.5	230			29 W	0023	1.6	50			14 Su	0128	2.0	60		0123
	1156	1.0	30				0610	6.9	210				0701	6.6	200		2.6
	1808	8.2	250				1201	1.3	40				1237	2.0	60		6.2
							1826	8.9	270				1921	10.2	310		2.6
15 W	0020	0.7	20			30 Th	0050	1.3	40			15 M	0206	2.0	60		0148
	0619	7.5	230				0633	6.9	210				0741	6.6	200		2.3
	1218	0.7	20				1222	1.3	40				1317	2.0	60		6.6
	1833	8.9	270				1850	9.2	280				2000	10.2	310		2.6
16 Th						31 F	0115	1.6	50								2.0
							0655	6.6	200								6.6
							1243	1.3	40								2.6
							1914	8.9	270								8.9

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Barito River (Outer Bar), Borneo, 2008

Times and Heights of High and Low Waters

January					February					March																			
Time		Height			Time		Height			Time		Height			Time		Height												
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm										
1 Tu	0719	3.3	100		16 W	0626	3.6	110		1 F	0707	2.3	70		16 Sa	0642	1.3	40		1 Sa	0606	2.3	70		16 Su	0602	1.3	40	
	1415	5.6	170			1313	5.6	170			1602	7.5	230			1516	8.9	270			1453	8.2	250			1429	9.5	290	
	1612	5.2	160			1608	5.6	170																					
	2335	7.9	240			2254	7.9	240																					
2 W	0737	3.0	90		17 Th	0648	2.6	80		2 Sa	0734	2.0	60		17 Su	0725	0.7	20		2 Su	0639	2.0	60		17 M	0650	1.3	40	
	1556	6.2	190			1448	6.9	210			1636	8.2	250			1600	9.2	280			1526	8.5	260			1509	9.5	290	
	1717	6.2	190			1756	6.6	200																					
	2339	7.5	230			2306	7.5	230																					
3 Th	0756	2.6	80		18 F	0719	1.6	50		3 Su	0802	1.6	50		18 M	0808	0.7	20		3 M	0713	1.6	50		18 Tu	0737	1.3	40	
	1653	6.9	210			1550	7.9	240			1709	8.5	260			1642	9.5	290			1557	8.5	260			1546	9.2	280	
	1906	6.9	210			2011	7.2	220																					
	2329	7.2	220			2308	7.5	230																					
4 F	0818	2.0	60		19 Sa	0755	1.0	30		4 M	0831	1.3	40		19 Tu	0851	0.7	20		4 Tu	0748	1.6	50		19 W	0102	5.6	170	
	1733	7.5	230			1640	8.9	270			1740	8.9	270			1720	9.5	290			1627	8.5	260			0823	2.0	60	
5 Sa	0842	1.6	50		20 Su	0834	0.3	10		5 Tu	0903	1.0	30		20 W	0934	1.0	30		5 W	0824	1.6	50		20 Th	0220	5.6	170	
	1807	8.2	250			1725	9.5	290			1811	8.9	270			1757	9.2	280			1655	8.5	260			0908	2.3	70	
6 Su	0908	1.3	40		21 M	0915	0.0	0		6 W	0937	1.0	30		21 Th	1018	1.6	50		6 Th	0903	1.6	50		21 F	0335	5.6	170	
	1839	8.5	260			1808	9.8	300			1841	9.2	280			1832	8.9	270			1723	8.5	260			0954	3.3	100	
7 M	0936	1.0	30		22 Tu	0957	0.3	10		7 Th	1013	1.3	40		22 F	0203	5.6	170		7 F	0023	6.2	190		22 Sa	0452	5.9	180	
	1911	9.2	280			1849	10.2	310			1911	8.9	270			0313	5.9	180			0116	6.2	190			1042	3.9	120	
8 Tu	1007	1.0	30		23 W	1040	0.3	10		8 F	1051	1.3	40		23 Sa	0217	5.2	160		8 Sa	0020	5.9	180		23 Su	0023	4.3	130	
	1943	9.2	280			1928	9.8	300			1939	8.9	270			1145	3.3	100			1028	2.6	80			0617	5.9	180	
9 W	1041	1.0	30		24 Th	1122	1.0	30		9 Sa	1132	2.0	60		24 Su	0244	4.9	150		9 Su	0043	5.2	160		24 M	0055	3.9	120	
	2014	9.5	290			2005	9.8	300			2006	8.5	260			1232	3.9	120			1117	3.3	100			1251	5.6	170	
10 Th	1116	1.0	30		25 F	1205	1.6	50		10 Su	1216	2.6	80		25 M	0315	4.6	140		10 M	0117	4.6	140		25 Tu	0130	3.6	110	
	2044	9.5	290			2040	9.2	280			2031	8.2	250			0848	5.6	170			0626	5.9	180			0936	6.6	200	
11 F	1153	1.3	40		26 Sa	1248	2.6	80		11 M	0409	5.2	160		26 Tu	0349	3.9	120		11 Tu	0158	3.9	120		26 W	0208	3.3	100	
	2112	9.5	290			2111	8.9	270			0636	5.2	160			1056	5.9	180			0832	6.2	190			1057	7.2	220	
12 Sa	1233	1.6	50		27 Su	0534	4.6	140		12 Tu	0418	4.6	140		27 W	0424	3.6	110		12 W	0245	3.3	100		27 Th	0250	3.0	90	
	2138	9.2	280			0736	4.9	150			0930	5.6	170			1233	6.6	200			1030	6.9	210			1154	7.5	230	
						1331	3.6	110			1409	4.6	140			1657	6.2	190			1544	5.9	180						
						2139	8.2	250			2114	7.5	230			2036	6.6	200			1938	6.6	200						
13 Su	1315	2.6	80		28 M	0535	4.3	130		13 W	0446	3.6	110		28 Th	0459	3.3	100		13 Th	0334	2.6	80		28 F	0332	2.6	80	
	2201	8.9	270			1020	4.9	150			1152	6.2	190			1333	7.2	220			1154	7.9	240			1238	8.2	250	
						1416	4.6	140			1543	5.9	180																
						2201	7.9	240			2132	7.2	220																
14 M	1401	3.3	100		29 Tu	0554	3.9	120		14 Th	0522	2.6	80		29 F	0533	2.6	80		14 F	0423	2.0	60		29 Sa	0414	2.6	80	
	2221	8.5	260			1245	5.6	170			1325	7.2	220			1417	7.5	230			1255	8.5	260			1315	8.5	260	
15 Tu	0620	4.3	130		30 W	0617	3.3	100		15 F	0601	2.0	60							15 Sa	0514	1.3	40		30 Su	0455	2.3	70	
	1046	4.9	150			1427	6.2	190			1426	8.2	250								1345	9.2	280			1347	8.5	260	
	1455	4.3	130			1641	6.2	190			2017	6.9	210																
	2239	8.2	250			2225	7.2	220			2146	6.9	210																
31 Th	0641	3.0	90																										
	1522	6.9	210																										
	1848	6.9	210																										
	2218	6.9	210																										

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Barito River (Outer Bar), Borneo, 2008

Times and Heights of High and Low Waters

October					November					December																			
Time		Height			Time		Height			Time		Height			Time		Height												
	h m	ft	cm			h m	ft	cm			h m	ft	cm			h m	ft	cm											
1 W	0514 1211 1942	5.9 3.3 6.6	180 100 200		16 Th	0402 1127 1928	6.2 2.6 7.2	190 80 220		1 Sa	1223 2200	2.0 8.5	60 260		16 Su	1229 2139	0.7 9.8	20 300		1 M	1216 2201	1.6 9.5	50 290		16 Tu	1253 2146	0.7 10.5	20 320	
2 Th	0125 0512 1247 2106	5.2 5.6 3.0 6.9	160 170 90 210		17 F	0110 0354 1212 2051	5.9 6.2 2.0 7.9	180 190 60 240		2 Su	1302 2240	2.0 8.9	60 270		17 M	1320 2223	0.7 10.2	20 310		2 Tu	1252 2231	1.6 9.5	50 290		17 W	1343 2223	1.3 10.2	40 310	
3 F	1327 2218	2.6 7.2	80 220		18 Sa	1302 2159	1.6 8.5	50 260		3 M	1342 2315	2.0 8.9	60 270		18 Tu	1413 2304	1.0 10.2	30 310		3 W	1330 2259	2.0 9.2	60 280		18 Th	1434 2256	2.3 9.5	70 290	
4 Sa	1410 2315	2.6 7.9	80 240		19 Su	1355 2254	1.3 9.2	40 280		4 Tu	1425 2347	2.0 8.9	60 270		19 W	1507 2341	1.6 10.2	50 310		4 Th	1409 2323	2.3 9.2	70 280		19 F	0703 1028 1529 2326	4.3 4.6 3.3 9.2	130 140 100 280	
5 Su	1455	2.3	70		20 M	1451 2342	1.0 9.5	30 290		5 W	1510	2.3	70		20 Th	0825 0935 1603	4.3 4.3 2.3	130 130 70		5 F	1451 2343	3.0 8.9	90 270		20 Sa	0712 1234 1627 2350	3.6 4.9 4.6 8.5	110 150 140 260	
6 M	0000 1540	7.9 2.3	240 70		21 Tu	1548	1.3	40		6 Th	0016 1555	8.9 2.6	270 80		21 F	0015 0804 1154 1659	9.5 3.9 4.6 3.3	290 120 140 100		6 Sa	0855 1010 1536	4.3 4.3 3.6	130 130 110		21 Su	0731 1419 1735	3.0 5.9 5.6	90 180 170	
7 Tu	0039 1625	8.2 2.3	250 70		22 W	0024 1643	9.5 1.6	290 50		7 F	0041 1642	8.9 3.0	270 90		22 Sa	0044 0815 1333 1757	8.9 3.6 5.2 4.3	270 110 160 130		7 Su	0000 0801 1246 1626	8.5 3.9 4.9 4.3	260 120 150 130		22 M	0006 0754 1544 1858	7.9 2.6 6.6 6.2	240 80 200 190	
8 W	0113 1708	8.2 2.3	250 70		23 Th	0103 0857 1107 1738	9.5 4.6 4.6 2.0	290 140 140 60		8 Sa	0103 0901 1155 1730	8.5 4.6 4.6 3.3	260 140 140 100		23 Su	0107 0833 1500 1900	8.2 3.0 5.9 5.2	250 90 180 160		8 M	0014 0800 1433 1726	8.2 3.6 5.6 5.2	250 110 170 160		23 Tu	0012 0818 1651	7.5 2.0 7.5	230 60 230	
9 Th	0144 1751	8.2 2.3	250 70		24 F	0138 0900 1244 1833	9.2 4.3 4.9 2.6	280 130 150 80		9 Su	0122 0848 1327 1821	8.2 4.3 4.9 3.9	250 130 150 120		24 M	0123 0855 1620 2014	7.9 2.6 6.6 5.9	240 80 200 180		9 Tu	0025 0815 1600 1846	7.9 2.6 6.2 6.2	240 80 190 190		24 W	0844 1743	1.6 8.2	50 250	
10 F	0211 1015 1106 1833	8.2 4.9 4.9 2.3	250 150 150 70		25 Sa	0208 0914 1406 1928	8.5 3.9 5.2 3.6	260 120 160 110		10 M	0138 0854 1451 1918	7.9 3.6 5.6 4.6	240 110 170 140		25 Tu	0128 0918 1732 2155	7.2 2.3 7.2 6.6	220 70 220 200		10 W	0034 0840 1710 2036	7.5 2.0 7.2 6.9	230 60 220 210		25 Th	0912 1828	1.3 8.5	40 260	
11 Sa	0236 0943 1241 1917	7.9 4.9 5.2 2.6	240 150 160 80		26 Su	0234 0933 1523 2026	7.9 3.6 5.9 4.3	240 110 180 130		11 Tu	0152 0913 1613 2025	7.5 3.0 6.2 5.6	230 90 190 170		26 W	0110 0943 1835	6.9 2.0 7.9	210 60 240		11 Th	0035 0912 1806	7.5 1.3 8.2	230 40 250		26 F	0940 1907	1.3 8.9	40 270	
12 Su	0258 0943 1354 2003	7.5 4.6 5.2 3.3	230 140 160 100		27 M	0253 0955 1639 2131	7.2 3.0 6.2 5.2	220 90 190 160		12 W	0203 0940 1735 2157	7.2 2.3 6.9 6.2	220 70 210 190		27 Th	1009 1928	1.6 8.5	50 260		12 F	0950 1856	0.7 9.2	20 280		27 Sa	1009 1943	1.0 9.2	30 280	
13 M	0318 0956 1508 2053	7.2 4.3 5.6 3.9	220 130 170 120		28 Tu	0304 1019 1755 2254	6.9 2.6 6.9 5.9	210 80 210 180		13 Th	0205 1015 1850	6.9 1.6 7.9	210 50 240		28 F	1039 2013	1.3 8.9	40 270		13 Sa	1033 1942	0.3 9.8	10 300		28 Su	1039 2016	1.0 9.5	30 290	
14 Tu	0336 1018 1628 2151	6.9 3.6 5.9 4.6	210 110 180 140		29 W	0259 1046 1909	6.2 2.3 7.2	190 70 220		14 F	1055 1954	1.0 8.9	30 270		29 Sa	1109 2053	1.3 9.2	40 280		14 Su	1117 2026	0.0 10.2	0 310		29 M	1111 2047	1.3 9.5	40 290	
15 W	0352 1049 1756 2308	6.6 3.3 6.6 5.2	200 100 200 160		30 Th	1115 2016	2.3 7.9	70 240		15 Sa	1140 2050	0.7 9.5	20 290		30 Su	1142 2128	1.3 9.5	40 290		15 M	1204 2107	0.3 10.5	10 320		30 Tu	1143 2117	1.3 9.5	40 290	
					31 F	1148 2112	2.0 8.2	60 250																31 W	1217 2144	1.6 9.2	50 280		

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Pages 172 through 175 intentionally omitted

Davao, Philippines, 2008

Times and Heights of High and Low Waters

January								February								March									
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height							
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm					
1 Tu	0506	0.7	20	16 W O	0426	0.3	10	1 F	0501	1.3	40	16 Sa	0039	2.3	70	1 Sa	0339	1.6	50	16 Su	0054	2.3	70		
	1149	3.6	110		1057	3.9	120		1246	3.3	100		0532	1.6	50		1056	3.6	110		0509	2.0	60		
	1806	1.3	40		1728	0.7	20		2043	1.3	40		1320	3.9	120		1905	1.6	50		1305	3.9	120		
	2352	2.6	80		2326	3.0	90						2118	1.0	30						2103	1.0	30		
2 W	0604	1.0	30	17 Th	0518	1.0	30	2 Sa	0317	2.0	60	17 Su	0350	2.6	80	2 Su	0201	2.0	60	17 M	0341	3.0	90		
	1302	3.6	110		1210	3.9	120		0726	1.6	50		0818	1.6	50		0404	2.0	60		0831	2.0	60		
	1947	1.3	40		1906	1.0	30		1440	3.6	110		1507	4.3	130		1338	3.6	110		1455	4.3	130		
									2220	0.7	20		2227	0.3	10		2147	1.3	40		2201	0.7	20		
3 Th	0154	2.3	70	18 F	0106	2.6	80	3 Su	0438	2.3	70	18 M	0448	3.0	90	3 M	0420	2.6	80	18 Tu	0423	3.6	110		
	0719	1.3	40		0637	1.3	40		0919	1.6	50		0955	1.3	40		0850	2.0	60		0950	1.3	40		
	1418	3.6	110		1345	3.9	120		1549	3.9	120		1614	4.9	150		1515	3.9	120		1558	4.9	150		
	2126	1.0	30		2102	0.7	20		2257	0.3	10		2308	-0.3	-10		2223	0.7	20		2238	0.3	10		
4 F	0334	2.6	80	19 Sa	0320	2.6	80	4 M	0511	3.0	90	19 Tu	0523	3.6	110	4 Tu	0440	3.3	100	19 W	0451	4.3	130		
	0838	1.3	40		0821	1.3	40		1021	1.0	30		1049	0.7	20		0957	1.3	40		1035	0.7	20		
	1519	3.9	120		1511	4.3	130		1636	4.6	140		1702	5.2	160		1608	4.6	140		1643	5.2	160		
	2223	0.3	10		2221	0.0	0		2326	-0.3	-10		2340	-0.7	-20		2250	0.0	0		2308	0.0	0		
5 Sa	0434	2.6	80	20 Su	0439	3.0	90	5 Tu	0537	3.3	100	20 W	0551	4.3	130	5 W	0502	3.9	120	20 Th	0516	4.9	150		
	0943	1.0	30		0946	1.0	30		1103	0.7	20		1131	0.0	0		1039	1.0	30		1112	0.0	0		
	1608	4.3	130		1615	4.9	150		1715	4.9	150		1742	5.6	170		1648	5.2	160		1721	5.6	170		
	2303	0.0	0		2312	-0.7	-20		2353	-0.7	-20						2318	-0.3	-10		2336	-0.3	-10		
6 Su	0515	3.0	90	21 M	0528	3.3	100	6 W	0603	3.9	120	21 Th O	0011	-1.0	-30	6 Th	0527	4.3	130	21 F	0542	5.2	160		
	1032	0.7	20		1047	0.3	10		1139	0.3	10		0618	4.6	140		1115	0.3	10		1146	-0.3	-10		
	1649	4.6	140		1707	5.2	160		1750	5.6	170		1208	-0.3	-10		1724	5.6	170		1754	5.6	170		
	2336	-0.7	-20		2354	-1.3	-40						1818	5.9	180		2346	-0.7	-20						
7 M	0549	3.3	100	22 Tu O	0607	3.9	120	7 Th ●	0020	-1.0	-30	22 F	0040	-1.0	-30	7 F	0554	4.9	150	22 Sa O	0002	-0.3	-10		
	1113	0.7	20		1135	0.0	0		0630	4.3	130		0645	4.9	150		1148	-0.3	-10		0607	5.6	170		
	1727	4.9	150		1752	5.6	170		1212	0.0	0		1242	-0.7	-20		1758	5.9	180		1218	-0.7	-20		
					1823	5.9	180		1851	5.9	180		1851	5.9	180						1824	5.6	170		
8 Tu ●	0007	-1.0	-30	23 W	0030	-1.3	-40	8 F	0048	-1.3	-40	23 Sa	0106	-1.0	-30	8 Sa ●	0012	-1.0	-30	23 Su	0027	-0.3	-10		
	0620	3.6	110		0641	4.3	130		0656	4.6	140		0710	5.2	160		0619	5.6	170		0631	5.9	180		
	1150	0.3	10		1218	-0.3	-10		1244	-0.3	-10		1314	-0.7	-20		1221	-0.7	-20		1247	-0.7	-20		
	1802	5.2	160		1833	5.9	180		1855	5.9	180		1921	5.6	170		1831	6.2	190		1852	5.6	170		
9 W	0038	-1.0	-30	24 Th	0105	-1.6	-50	9 Sa	0114	-1.3	-40	24 Su	0130	-1.0	-30	9 Su	0040	-1.0	-30	24 M	0051	-0.3	-10		
	0651	3.9	120		0714	4.6	140		0722	4.9	150		0735	5.2	160		0647	5.9	180		0657	5.9	180		
	1223	0.0	0		1258	-0.7	-20		1316	-0.7	-20		1344	-0.7	-20		1255	-1.0	-30		1315	-0.7	-20		
	1836	5.2	160		1910	5.9	180		1927	5.9	180		1949	5.2	160		1904	5.9	180		1919	5.2	160		
10 Th	0108	-1.3	-40	25 F	0137	-1.3	-40	10 Su	0141	-1.3	-40	25 M	0154	-0.7	-20	10 M	0108	-1.0	-30	25 Tu	0114	-0.3	-10		
	0721	3.9	120		0745	4.6	140		0749	5.2	160		0801	5.2	160		0716	5.9	180		0723	5.6	170		
	1255	0.0	0		1335	-0.7	-20		1350	-0.7	-20		1413	-0.3	-10		1331	-1.0	-30		1343	-0.3	-10		
	1908	5.6	170		1945	5.6	170		2000	5.6	170		2015	4.9	150		1938	5.6	170		1946	4.6	140		
11 F	0137	-1.3	-40	26 Sa	0206	-1.0	-30	11 M	0209	-1.0	-30	26 Tu	0217	-0.3	-10	11 Tu	0136	-0.7	-20	26 W	0137	0.0	0		
	0749	4.3	130		0814	4.6	140		0819	5.2	160		0828	4.9	150		0748	5.9	180		0749	5.6	170		
	1328	0.0	0		1410	-0.3	-10		1426	-0.7	-20		1442	0.0	0		1408	-0.7	-20		1411	0.0	0		
	1941	5.6	170		2017	5.2	160		2034	5.2	160		2041	4.3	130		2013	4.9	150		2012	4.3	130		
12 Sa	0206	-1.0	-30	27 Su	0234	-0.7	-20	12 Tu	0239	-0.7	-20	27 W	0239	0.0	0	12 W	0206	-0.3	-10	27 Th	0158	0.3	10		
	0818	4.3	130		0843	4.6	140		0852	4.9	150		0855	4.9	150		0821	5.9	180		0814	5.2	160		
	1402	0.0	0		1444	0.0	0		1506	-0.3	-10		1512	0.3	10		1449	-0.3	-10		1439	0.3	10		
	2016	5.2	160		2048	4.6	140		2110	4.6	140		2106	3.6	110		2049	4.3	130		2038	3.9	120		
13 Su	0237	-1.0	-30	28 M	0300	-0.3	-10	13 W	0309	0.0	0	28 Th	0258	0.7	20	13 Th	0235	0.3	10	28 F	0218	1.0	30		
	0849	4.3	130		0913	4.3	130		0928	4.9	150		0923	4.3	130		0858	5.2	160		0842	4.9	150		
	1441	0.0	0		1519	0.3	10		1553	0.3	10		1546	1.0	30		1535	0.3	10		1512	0.7	20		
	2053	4.9	150		2118	4.3	130		2150	3.6	110		2132	3.3	100		2129	3.6	110		2108	3.3	100		
14 M	0310	-0.7	-20	29 Tu	0327	0.0	0	14 Th O	0341	0.3	10	29 F O	0317	1.0	30	14 F O	0307	0.7	20	29 Sa	0242	1.3	40		
	0924	4.3	130		0945	4.3	130		1012	4.6	140		0957	3.9	120		0941	4.9	150		0917	4.3	130		
	1525	0.3	10		1558	0.7	20		1656	0.7	20		1639	1.3	40		1639	1.0	30		1600	1.3	40		
	2134	4.3	130		2149	3.6	110		2244	3.0	90		2211	2.6	80		2226	3.0	90		2157	3.0	90		
15 Tu	0345	0.0	0	30 W O	0354	0.7	20	15 F	0420	1.0	30				15 Sa	0345	1.3	40	30 Su O	0311	1.6	50			
	1005	4.3	130		1022	3.9	120		1119	3.9	120					1048	4.3	130		1048	4.3	130	1012	3.9	120
	1618	0.3	10		1645	1.0	30		1843	1.0	30					1836	1.3	40		1836	1.3	40	1754	1.6	50
	2222	3.6	110		2223	3.0	90																		
			31 Th	0421	1.0	30												31 M	0013	2.6	80				
				1112	3.6	110													0417	2.3	70				
				1803	1.3	40													1204	3.6	110				
				2322	2.3	70													2013	1.6	50				

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Davao, Philippines, 2008

Times and Heights of High and Low Waters

July					August					September													
Time		Height			Time		Height			Time		Height			Time		Height						
	h m	ft	cm			h m	ft	cm			h m	ft	cm			h m	ft	cm					
1 Tu	0330	5.6	170	16 W	0421	4.9	150	1 F	0514	5.9	180	16 Sa	0520	5.6	170	1 M	0011	-0.3	-10	16 Tu	0601	5.9	180
	1024	-0.3	-10		1111	0.0	0		1153	-1.0	-30		1147	-0.3	-10		0620	5.9	180		1204	-0.7	-20
	1642	3.9	120		1727	3.6	110		1806	4.6	140		1758	4.6	140		1232	-0.7	-20		1814	5.9	180
	2159	1.0	30		2245	1.3	40		● 2343	0.3	10		2343	0.3	10		1838	5.9	180				
2 W	0426	5.9	180	17 Th	0501	4.9	150	2 Sa	0558	6.2	190	17 Su	0552	5.9	180	2 Tu	0047	-0.3	-10	17 W	0025	-0.7	-20
	1115	-0.7	-20		1141	-0.3	-10		1229	-1.0	-30		1213	-0.7	-20		0652	5.9	180		0632	5.9	180
	1732	3.9	120		1757	3.9	120		1840	4.9	150		1824	4.9	150		1258	-0.3	-10		1232	-0.3	-10
	2253	0.7	20		2324	1.0	30		○						1906		5.9	180	1842		6.2	190	
3 Th	0517	6.2	190	18 F	0537	5.2	160	3 Su	0026	0.0	0	18 M	0014	0.0	0	3 W	0120	-0.3	-10	18 Th	0100	-0.7	-20
	1200	-1.0	-30		1210	-0.7	-20		0638	6.2	190		0623	5.9	180		0722	5.2	160		0706	5.6	170
	1817	4.3	130		1826	4.3	130		1303	-1.0	-30		1239	-0.7	-20		1322	0.0	0		1301	-0.3	-10
	● 2344	0.3	10		○ 2358	0.7	20		1913	5.2	160		1849	5.2	160		1934	5.9	180		1913	6.2	190
4 F	0604	6.2	190	19 Sa	0610	5.6	170	4 M	0107	0.0	0	19 Tu	0045	0.0	0	4 Th	0152	0.0	0	19 F	0138	-0.7	-20
	1243	-1.0	-30		1239	-0.7	-20		0716	5.9	180		0654	5.9	180		0751	4.9	150		0741	4.9	150
	1859	4.6	140		1855	4.3	130		1334	-0.7	-20		1304	-0.7	-20		1347	0.3	10		1330	0.0	0
					1945	5.2	160		1915	5.6	170		1915	5.6	170		2002	5.6	170		1947	5.9	180
5 Sa	0031	0.3	10	20 Su	0030	0.7	20	5 Tu	0146	0.0	0	20 W	0119	0.0	0	5 F	0225	0.3	10	20 Sa	0219	0.0	0
	0649	6.2	190		0641	5.6	170		0750	5.6	170		0725	5.6	170		0819	4.3	130		0818	4.3	130
	1324	-1.0	-30		1306	-0.7	-20		1402	-0.3	-10		1331	-0.3	-10		1410	0.7	20		1400	0.7	20
	1939	4.6	140		1922	4.6	140		2016	5.2	160		1944	5.6	170		2032	5.2	160		2023	5.6	170
6 Su	0118	0.3	10	21 M	0102	0.3	10	6 W	0224	0.3	10	21 Th	0155	0.0	0	6 Sa	0300	0.7	20	21 Su	0306	0.3	10
	0732	5.9	180		0712	5.6	170		0823	4.9	150		0759	5.2	160		0847	3.6	110		0901	3.6	110
	1403	-0.7	-20		1333	-0.3	-10		1430	0.0	0		1400	0.0	0		1430	1.0	30		1433	1.0	30
	2018	4.6	140		1948	4.6	140		2047	5.2	160		2015	5.6	170		2102	4.6	140		2106	5.2	160
7 M	0204	0.3	10	22 Tu	0136	0.3	10	7 Th	0303	0.7	20	22 F	0235	0.3	10	7 Su	0343	1.3	40	22 M	0412	1.0	30
	0814	5.6	170		0745	5.6	170		0856	4.3	130		0835	4.6	140		0919	3.0	90		1006	3.0	90
	1439	-0.3	-10		1401	-0.3	-10		1457	0.7	20		1429	0.3	10		1449	1.6	50		1515	1.6	50
	2057	4.6	140		2017	4.9	150		2121	4.9	150		2050	5.2	160		● 2138	4.3	130		● 2210	4.6	140
8 Tu	0250	0.7	20	23 W	0212	0.3	10	8 F	0347	1.0	30	23 Sa	0322	0.7	20	8 M	0500	1.6	50	23 Tu	0604	1.3	40
	0855	4.9	150		0820	5.2	160		0930	3.6	110		0915	3.9	120		1017	2.6	80		1247	2.6	80
	1514	0.3	10		1431	0.0	0		1525	1.0	30		1501	1.0	30		1512	2.0	60		1645	2.3	70
	2136	4.6	140		2049	4.9	150		2200	4.6	140		2132	4.9	150		2243	3.9	120				
9 W	0340	1.0	30	24 Th	0255	0.7	20	9 Sa	0443	1.3	40	24 Su	0426	1.0	30	9 Tu	0726	1.6	50	24 W	0020	4.3	130
	0938	4.3	130		0859	4.6	140		1011	3.0	90		1011	3.3	100		1512	2.6	80		0809	1.0	30
	1551	0.7	20		1504	0.3	10		1552	1.6	50		1539	1.3	40		1615	2.6	80		1455	3.3	100
	2220	4.3	130		2126	4.9	150		● 2252	4.3	130		● 2232	4.6	140				2000		2.3	70	
10 Th	0437	1.3	40	25 F	0345	0.7	20	10 Su	0608	1.6	50	25 M	0609	1.3	40	10 W	0131	3.6	110	25 Th	0218	4.3	130
	1025	3.6	110		0944	4.3	130		1131	2.6	80		1208	2.6	80		0912	1.3	40		0915	0.7	20
	1631	1.0	30		1541	0.7	20		1631	2.0	60		1644	2.0	60		1549	3.3	100		1540	3.9	120
	● 2311	4.3	130		2212	4.6	140								2043		2.3	70	2118		1.6	50	
11 F	0545	1.3	40	26 Sa	0451	1.0	30	11 M	0021	3.9	120	26 Tu	0022	4.3	130	11 Th	0255	4.3	130	26 F	0324	4.9	150
	1128	3.3	100		1044	3.6	110		0817	1.6	50		0815	1.0	30		0949	0.7	20		0956	0.3	10
	1723	1.6	50		1626	1.3	40		1502	2.6	80		1457	3.0	90		1610	3.6	110		1612	4.6	140
					● 2314	4.6	140		1903	2.3	70		1924	2.3	70		2137	1.6	50		2205	0.7	20
12 Sa	0016	4.3	130	27 Su	0622	1.0	30	12 Tu	0210	3.9	120	27 W	0217	4.6	140	12 F	0343	4.6	140	27 Sa	0411	5.2	160
	0709	1.3	40		1215	3.0	90		0944	1.0	30		0934	0.7	20		1018	0.3	10		1031	0.0	0
	1315	2.6	80		1733	1.6	50		1610	3.0	90		1601	3.6	110		1631	4.3	130		1641	5.2	160
	1832	1.6	50		2051	2.0	60						2109	1.6	50		2215	1.0	30		2243	0.0	0
13 Su	0132	4.3	130	28 M	0041	4.6	140	13 W	0319	4.3	130	28 Th	0330	4.9	150	13 Sa	0421	5.2	160	28 Su	0451	5.6	170
	0844	1.3	40		0804	1.0	30		1025	0.7	20		1022	0.0	0		1045	0.0	0		1102	-0.3	-10
	1502	3.0	90		1421	3.0	90		1643	3.3	100		1639	4.3	130		1656	4.9	150		1709	5.6	170
	1953	2.0	60		1917	1.6	50		2152	1.6	50		2209	1.0	30		2248	0.7	20		2319	-0.3	-10
14 M	0241	4.3	130	29 Tu	0214	4.9	150	14 Th	0406	4.6	140	29 F	0422	5.6	170	14 Su	0456	5.6	170	29 M	0527	5.6	170
	0951	0.7	20		0930	0.3	10		1054	0.0	0		1058	-0.3	-10		1112	-0.3	-10		1131	-0.3	-10
	1609	3.0	90		1553	3.3	100		1708	3.9	120		1710	4.6	140		1722	5.2	160		1737	5.9	180
	2105	1.6	50		2052	1.6	50		2235	1.3	40		2254	0.3	10		2320	0.0	0		● 2352	-0.7	-20
15 Tu	0336	4.6	140	30 W	0328	5.2	160	15 F	0445	5.2	160	30 Sa	0506	5.9	180	15 M	0529	5.9	180	30 Tu	0600	5.6	170
	1037	0.3	10		1028	-0.3	-10		1120	-0.3	-10		1131	-0.7	-20		1138	-0.3	-10		1157	-0.3	-10
	1653	3.3	100		1647	3.6	110		1732	4.3	130		1740	5.2	160		1748	5.6	170		1805	6.2	190
	2200	1.3	40		2201	1.0	30		2310	0.7	20		2334	0.0	0		2352	-0.3	-10				
				31 Th	0425	5.6	170				31 Su	0545	6.2	190									
			1113		-0.7	-20				1202		-0.7	-20										
			1729		4.3	130				1810		5.6	170										
			2256		0.7	20																	

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Davao, Philippines, 2008

Times and Heights of High and Low Waters

October						November						December																
Time			Height			Time			Height			Time			Height			Time			Height							
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm				
1 W	0024	-0.7	-20		16 Th	0007	-1.0	-30		1 Sa	0107	-0.7	-20		16 Su	0124	-1.3	-40		1 M	0133	-0.7	-20		16 Tu	0208	-1.3	-40
	0630	5.2	160			0616	5.2	160			0715	4.3	130			0735	4.3	130			0748	3.6	110			0823	4.3	130
	1223	0.0	0			1204	-0.3	-10			1252	0.7	20			1306	0.3	10			1317	0.7	20			1358	0.0	0
	1831	6.2	190			1816	6.6	200			1904	5.6	170			1926	5.9	180			1929	4.9	150			2015	5.6	170
2 Th	0055	-0.7	-20		17 F	0046	-1.3	-40		2 Su	0138	-0.3	-10		17 M	0210	-1.0	-30		2 Tu	0205	-0.7	-20		17 W	0251	-1.0	-30
	0658	4.9	150			0653	4.9	150			0747	3.9	120			0823	3.9	120			0822	3.6	110			0908	3.9	120
	1248	0.0	0			1236	0.0	0			1317	1.0	30			1350	0.7	20			1347	1.0	30			1448	0.3	10
	1859	5.9	180			1851	6.6	200			1932	5.2	160			2012	5.6	170			2001	4.6	140			2102	4.9	150
3 F	0125	-0.3	-10		18 Sa	0127	-1.0	-30		3 M	0211	0.0	0		18 Tu	0300	-0.3	-10		3 W	0238	-0.3	-10		18 Th	0335	-0.3	-10
	0726	4.6	140			0732	4.6	140			0821	3.6	110			0918	3.6	110			0857	3.3	100			0956	3.9	120
	1312	0.3	10			1310	0.3	10			1343	1.3	40			1442	1.0	30			1421	1.0	30			1542	0.7	20
	1927	5.6	170			1929	6.2	190			2002	4.6	140			2104	4.9	150			2037	4.6	140			2151	4.3	130
4 Sa	0155	0.0	0		19 Su	0211	-0.7	-20		4 Tu	0247	0.3	10		19 W	0357	0.0	0		4 Th	0314	0.0	0		19 F	0421	0.0	0
	0755	3.9	120			0816	3.9	120			0901	3.3	100			1025	3.3	100			0937	3.3	100			1051	3.9	120
	1335	0.7	20			1346	0.7	20			1415	1.6	50			1548	1.3	40			1506	1.3	40			1644	1.0	30
	1954	5.2	160			2010	5.6	170			2038	4.3	130			2208	4.3	130			2121	4.3	130			2249	3.6	110
5 Su	0227	0.3	10		20 M	0302	0.0	0		5 W	0332	0.7	20		20 Th	0504	0.7	20		5 F	0357	0.3	10		20 Sa	0512	0.7	20
	0824	3.6	110			0908	3.6	110			0959	3.0	90			1146	3.6	110			1025	3.3	100			1154	3.6	110
	1355	1.3	40			1428	1.3	40			1502	2.0	60			1719	1.6	50			1604	1.3	40			1803	1.0	30
	2021	4.9	150			2059	4.9	150			2131	3.9	120			2336	3.6	110			2217	3.9	120					
6 M	0304	1.0	30		21 Tu	0407	0.7	20		6 Th	0441	1.0	30		21 F	0622	0.7	20		6 Sa	0450	0.7	20		21 Su	0006	3.3	100
	0859	3.0	90			1027	3.0	90			1136	3.0	90			1307	3.6	110			1127	3.6	110			0613	1.0	30
	1419	1.6	50			1527	2.0	60			1625	2.3	70			1912	1.3	40			1723	1.3	40			1305	3.9	120
	2055	4.3	130			2209	4.3	130			2252	3.6	110								2329	3.6	110			1940	1.0	30
7 Tu	0359	1.3	40		22 W	0543	1.0	30		7 F	0620	1.3	40		22 Sa	0118	3.6	110		7 Su	0556	1.0	30		22 M	0148	3.0	90
	1003	2.6	80			1238	3.0	90			1318	3.3	100			0736	1.0	30			1239	3.6	110			0727	1.0	30
	1452	2.3	70			1727	2.3	70			1851	2.0	60			1410	4.3	130			1859	1.3	40			1413	3.9	120
	2150	3.9	120													2035	1.0	30								2107	0.7	20
8 W	0607	1.6	50		23 Th	0010	3.9	120		8 Sa	0046	3.6	110		23 Su	0238	3.6	110		8 M	0057	3.3	100		23 Tu	0313	3.0	90
	1358	2.6	80			0726	1.0	30			0736	1.0	30			0835	0.7	20			0709	1.0	30			0839	1.0	30
	1624	2.6	80			1412	3.6	110			1415	3.9	120			1458	4.6	140			1349	3.9	120			1511	4.3	130
	2357	3.6	110			1957	2.0	60			2016	1.6	50			2131	0.3	10			2023	0.7	20			2206	0.3	10
9 Th	0757	1.3	40		24 F	0200	3.9	120		9 Su	0218	3.9	120		24 M	0336	3.9	120		9 Tu	0230	3.3	100		24 W	0416	3.0	90
	1451	3.3	100			0835	0.7	20			0830	1.0	30			0922	0.7	20			0815	1.0	30			0938	1.0	30
	2011	2.3	70			1501	4.3	130			1456	4.3	130			1540	4.9	150			1448	4.6	140			1600	4.6	140
						2106	1.3	40			2110	0.7	20			2214	0.0	0			2129	0.0	0			2251	0.0	0
10 F	0212	3.9	120		25 Sa	0307	4.3	130		10 M	0316	4.3	130		25 Tu	0423	3.9	120		10 W	0341	3.6	110		25 Th	0503	3.3	100
	0852	1.0	30			0921	0.7	20			0913	0.7	20			1002	0.7	20			0913	0.7	20			1026	0.7	20
	1520	3.9	120			1537	4.9	150			1533	4.9	150			1617	5.2	160			1540	5.2	160			1642	4.6	140
	2107	1.6	50			2150	0.3	10			2154	0.0	0			2253	-0.3	-10			2223	-0.7	-20			2329	-0.7	-20
11 Sa	0309	4.3	130		26 Su	0355	4.6	140		11 Tu	0403	4.6	140		26 W	0503	3.9	120		11 Th	0436	3.6	110		26 F	0541	3.3	100
	0929	0.7	20			0958	0.3	10			0952	0.3	10			1038	0.3	10			1004	0.3	10			1106	0.3	10
	1547	4.6	140			1609	5.2	160			1608	5.6	170			1651	5.2	160			1628	5.6	170			1719	4.9	150
	2147	1.0	30			2228	0.0	0			2235	-0.7	-20			2328	-0.7	-20			2311	-1.3	-40					
12 Su	0352	4.9	150		27 M	0436	4.9	150		12 W	0446	4.6	140		27 Th	0539	3.9	120		12 F	0525	3.9	120		27 Sa	0001	-0.7	-20
	1002	0.3	10			1031	0.0	0			1029	0.0	0			1111	0.3	10			1052	0.0	0			0614	3.6	110
	1615	5.2	160			1640	5.6	170			1645	5.9	180			1724	5.6	170			1715	5.9	180			1142	0.3	10
	2222	0.3	10			2303	-0.7	-20			2316	-1.3	-40								2357	-1.6	-50			1753	4.9	150
13 M	0429	5.2	160		28 Tu	0512	4.9	150		13 Th	0527	4.6	140		28 F	0000	-1.0	-30		13 Sa	0611	3.9	120		28 Su	0031	-1.0	-30
	1032	0.0	0			1101	0.0	0			1106	0.0	0			0612	3.9	120			1139	0.0	0			0643	3.6	110
	1643	5.6	170			1710	5.9	180			1722	6.2	190			1144	0.3	10			1800	6.2	190			1216	0.3	10
	2256	-0.3	-10			2336	-0.7	-20			2357	-1.3	-40			1755	5.2	160								1826	5.2	160
14 Tu	0505	5.6	170		29																							

Cebu, Philippines, 2008

Times and Heights of High and Low Waters

January					February					March													
Time		Height			Time		Height			Time		Height			Time		Height						
	h m	ft cm			h m	ft cm			h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm				
1 Tu	0350	3.0	90	16 W ☉	0335	3.0	90	1 F	0034	1.0	30	16 Sa	0114	0.3	10	1 Sa	0353	1.3	40	16 Su	0132	0.3	10
	1019	0.7	20		0937	0.7	20		0459	1.3	40		1743	4.6	140		0727	1.0	30		1724	4.3	130
	1716	3.3	100		1620	3.9	120		0850	1.0	30		1607	3.9	120								
	2356	1.3	40		2313	0.7	20		1735	3.9	120												
2 W	0458	2.3	70	17 Th	0443	2.3	70	2 Sa	0310	0.7	20	17 Su	0331	-0.3	-10	2 Su	0246	0.7	20	17 M	0323	0.0	0
	1044	1.0	30		0957	1.0	30		1906	3.9	120		1938	4.6	140		1754	3.9	120		1945	4.3	130
	1811	3.6	110		1716	4.3	130																
3 Th	0156	1.0	30	18 F	0114	0.3	10	3 Su	0415	0.0	0	18 M	0431	-0.7	-20	3 M	0357	0.0	0	18 Tu	0409	-0.3	-10
	0701	1.6	50		0656	1.3	40		2032	4.3	130		2108	4.9	150		2004	3.9	120		1108	2.3	70
	1115	1.3	40		1007	1.3	40										1433	2.0	60				
	1909	3.9	120		1825	4.6	140										2112	4.6	140				
4 F	0322	0.7	20	19 Sa	0310	0.0	0	4 M	0455	-0.3	-10	19 Tu	0511	-1.0	-30	4 Tu	0431	-0.3	-10	19 W	0441	-0.7	-20
	0937	1.6	50		1945	4.9	150		1216	2.0	60		1153	2.3	70		1149	2.3	70		1101	2.6	80
	1206	1.6	50				1419		2.0	60	1521		1.6	50	1432		2.0	60	1546		1.3	40	
	2007	4.3	130				2133		4.6	140	2210		5.2	160	2117		4.6	140	2208		4.9	150	
5 Sa	0416	0.0	0	20 Su	0424	-0.7	-20	5 Tu	0528	-1.0	-30	20 W	0544	-1.3	-40	5 W	0459	-0.7	-20	20 Th	0507	-0.3	-10
	1101	2.0	60		2059	5.2	160		1212	2.3	70		1200	2.3	70		1133	2.6	80		1112	3.3	100
	1325	1.6	50				1536		1.6	50	1623		1.0	30	1539		1.6	50	1634		0.7	20	
	2059	4.6	140				2220		4.9	150	2259		5.6	170	2206		4.9	150	2252		4.9	150	
6 Su	0458	-0.3	-10	21 M	0516	-1.3	-40	6 W	0557	-1.0	-30	21 Th	0611	-1.0	-30	6 Th	0524	-0.7	-20	21 F	0528	-0.3	-10
	1143	2.0	60		1222	2.0	60		1223	2.3	70		1214	2.6	80		1137	2.6	80		1127	3.6	110
	1438	1.6	50		1437	1.6	50		1623	1.3	40		1710	0.7	20		1623	1.0	30		1713	0.0	0
	2145	4.9	150		2202	5.6	170		2259	5.2	160		2339	5.2	160		2247	5.2	160		2329	4.6	140
7 M	0536	-1.0	-30	22 Tu	0559	-1.6	-50	7 Th	0624	-1.3	-40	22 F	0634	-1.0	-30	7 F	0546	-0.7	-20	22 Sa	0546	0.0	0
	1215	2.0	60		1236	2.0	60		1236	2.3	70		1230	3.0	90		1147	3.0	90		1144	3.9	120
	1533	1.6	50		1555	1.3	40		1702	1.0	30		1750	0.3	10		1701	0.3	10		1748	-0.3	-10
	2226	5.2	160		2255	5.9	180		●	2335	5.6		170				2324	5.2	160		○		
8 Tu	0610	-1.0	-30	23 W	0636	-1.6	-50	8 F	0647	-1.3	-40	23 Sa	0014	5.2	160	8 Sa	0606	-0.7	-20	23 Su	0001	4.3	130
	1242	2.3	70		1255	2.0	60		1250	2.6	80		0652	-0.7	-20		1200	3.6	110		0600	0.0	0
	1616	1.6	50		1651	1.0	30		1740	0.7	20		1248	3.3	100		1739	0.0	0		1201	4.6	140
	2304	5.6	170		2341	5.9	180				1827		0.0	0	●				1820		-0.7	-20	
9 W	0642	-1.3	-40	24 Th	0708	-1.3	-40	9 Sa	0009	5.6	170	24 Su	0045	4.6	140	9 Su	0000	4.9	150	24 M	0030	3.9	120
	1307	2.3	70		1314	2.3	70		0708	-1.0	-30		0707	-0.3	-10		0623	-0.3	-10		0613	0.3	10
	1653	1.3	40		1739	1.0	30		1306	3.0	90		1305	3.9	120		1217	3.9	120		1219	4.9	150
	2339	5.6	170				1817		0.3	10	1902		0.0	0	1817		-0.7	-20	1850		-0.7	-20	
10 Th	0712	-1.3	-40	25 F	0021	5.6	170	10 Su	0044	5.2	160	25 M	0113	4.3	130	10 M	0035	4.6	140	25 Tu	0056	3.6	110
	1328	2.3	70		0735	-1.0	-30		0727	-0.7	-20		0719	0.0	0		0638	0.0	0		0625	0.7	20
	1729	1.3	40		1335	2.6	80		1323	3.3	100		1324	4.3	130		1237	4.6	140		1239	4.9	150
					1823	0.7	20		1858	0.0	0		1937	0.0	0		1857	-0.7	-20		1921	-0.7	-20
11 F	0013	5.6	170	26 Sa	0058	5.2	160	11 M	0118	4.9	150	26 Tu	0140	3.6	110	11 Tu	0111	4.3	130	26 W	0122	3.3	100
	0740	-1.3	-40		0757	-0.7	-20		0744	-0.3	-10		0730	0.3	10		0653	0.3	10		0637	0.7	20
	1349	2.3	70		1355	3.0	90		1345	3.9	120		1345	4.3	130		1301	4.9	150		1300	4.9	150
	1807	1.0	30		1906	0.7	20		1943	0.0	0		2013	0.0	0		1940	-1.0	-30		1953	-0.3	-10
12 Sa	0048	5.6	170	27 Su	0131	4.6	140	12 Tu	0154	4.3	130	27 W	0206	3.0	90	12 W	0147	3.3	100	27 Th	0148	3.0	90
	0805	-1.0	-30		0814	-0.3	-10		0800	0.0	0		0741	0.3	10		0707	0.7	20		0649	1.0	30
	1410	2.6	80		1416	3.3	100		1412	4.3	130		1410	4.6	140		1330	5.2	160		1324	4.9	150
	1849	1.0	30		1950	0.7	20		2033	0.0	0		2054	0.3	10		2027	-0.7	-20		2029	0.0	0
13 Su	0124	5.2	160	28 M	0202	3.9	120	13 W	0233	3.3	100	28 Th	0234	2.6	80	13 Th	0225	2.6	80	28 F	0217	2.3	70
	0830	-0.7	-20		0829	0.0	0		0816	0.3	10		0750	0.7	20		0719	0.7	20		0659	1.0	30
	1434	2.6	80		1441	3.6	110		1444	4.6	140		1438	4.3	130		1404	5.2	160		1352	4.9	150
	1938	0.7	20		2036	0.7	20		2133	0.0	0		2146	0.7	20		2126	-0.3	-10		2116	0.3	10
14 M	0203	4.6	140	29 Tu	0233	3.3	100	14 Th	0317	2.3	70	29 F	0305	2.0	60	14 F	0308	2.0	60	29 Sa	0253	2.0	60
	0853	-0.3	-10		0842	0.3	10		0828	0.7	20		0754	1.0	30		0725	1.0	30		0702	1.3	40
	1502	3.3	100		1510	3.6	110		1525	4.6	140		1514	4.3	130		1445	5.2	160		1426	4.6	140
	2035	0.7	20		2130	0.7	20		●	2255	0.3		10	○	2312		1.0	30	●		2250	0.0	0	2231	0.7	20
15 Tu	0245	3.9	120	30 W	0305	2.6	80	15 F	0416	1.6	50	15 Sa	0422	1.3	40	15 Sa	0422	1.3	40	30 Su	0404	1.3	40
	0916	0.0	0		0854	0.7	20		0828	1.0	30		0700	1.0	30		0725	1.0	30		0625	1.3	40
	1537	3.6	110		1545	3.9	120		1620	4.6	140		1542	4.9	150		1513	4.3	130		●		
	2143	0.7	20		●	2239	1.0		30														
15 Tu				31 Th	0344	2.0	60											31 M	0114	0.7	20		
					0902	1.0	30												1648	3.9	120		
					1630	3.9	120																

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Cebu, Philippines, 2008

Times and Heights of High and Low Waters

July				August				September															
Time		Height		Time		Height		Time		Height		Time		Height									
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm								
1 Tu	0054	2.0	60	16 W	0215	2.3	70	1 F	0018	2.6	80	16 Sa	0003	3.0	90	1 M	0008	3.9	120	16 Tu	0528	0.3	10
	0838	5.6	170		0936	5.2	160		0337	2.0	60		0421	2.0	60		0538	0.7	20		1146	5.2	160
	1648	-0.7	-20		1729	-0.3	-10		1037	6.2	190		1051	5.6	170		1201	5.6	170		1801	0.3	10
	2346	2.3	70		1816	-1.0	-30		1806	-0.7	-20		1806	0.0	0		2355	4.6	140				
2 W	0207	2.3	70	17 Th	0008	2.6	80	2 Sa	0033	2.6	80	17 Su	0017	3.3	100	2 Tu	0026	4.3	130	17 W	0604	0.0	0
	0936	6.2	190		0325	2.3	70		0439	1.6	50		0458	1.6	50		0617	0.3	10		1220	4.9	150
	1739	-1.0	-30		1020	5.6	170		1126	6.6	200		1126	5.9	180		1235	5.2	160		1816	0.7	20
					1801	-0.7	-20		1847	-1.0	-30		1828	-0.3	-10		1847	0.3	10				
3 Th	0025	2.3	70	18 F	0030	2.6	80	3 Su	0052	3.0	90	18 M	0031	3.3	100	3 W	0045	4.6	140	18 Th	0014	5.2	160
	0315	2.0	60		0414	2.0	60		0529	1.3	40		0533	1.0	30		0653	0.0	0		0640	-0.3	-10
	1030	6.6	200		1059	5.9	180		1208	6.2	190		1158	5.9	180		1305	4.6	140		1254	4.6	140
	1823	-1.3	-40		1830	-0.7	-20		1914	-0.7	-20		1847	-0.3	-10		1859	0.7	20		1829	1.0	30
4 F	0057	2.3	70	19 Sa	0051	3.0	90	4 M	0112	3.3	100	19 Tu	0045	3.6	110	4 Th	0105	4.9	150	19 F	0037	5.6	170
	0413	2.0	60		0453	2.0	60		0615	1.0	30		0608	0.7	20		0728	0.0	0		0720	-0.7	-20
	1120	6.6	200		1133	5.9	180		1246	5.9	180		1230	5.6	170		1332	3.9	120		1329	3.9	120
	1905	-1.3	-40		1857	-0.7	-20		1936	-0.3	-10		1905	0.0	0		1910	1.0	30		1843	1.0	30
5 Sa	0125	2.3	70	20 Su	0111	3.0	90	5 Tu	0133	3.6	110	20 W	0101	4.3	130	5 F	0126	5.2	160	20 Sa	0104	5.9	180
	0506	1.6	50		0529	1.6	50		0658	0.7	20		0645	0.3	10		0804	0.3	10		0804	-0.3	-10
	1206	6.6	200		1206	6.2	190		1321	5.2	160		1302	5.2	160		1358	3.6	110		1405	3.3	100
	1942	-1.0	-30		1922	-0.7	-20		1954	0.3	10		1920	0.3	10		1920	1.0	30		1856	1.3	40
6 Su	0152	2.6	80	21 M	0130	3.0	90	6 W	0154	3.9	120	21 Th	0120	4.6	140	6 Sa	0150	5.2	160	21 Su	0137	5.9	180
	0557	1.3	40		0604	1.3	40		0741	0.7	20		0724	0.3	10		0843	0.7	20		0856	0.0	0
	1250	6.2	190		1238	5.9	180		1353	4.6	140		1335	4.6	140		1424	3.0	90		1445	2.3	70
	2015	-0.7	-20		1945	-0.3	-10		2008	0.7	20		1935	0.7	20		1929	1.3	40		1906	1.3	40
7 M	0219	2.6	80	22 Tu	0148	3.3	100	7 Th	0218	4.3	130	22 F	0144	4.9	150	7 Su	0218	5.2	160	22 M	0216	5.9	180
	0648	1.3	40		0642	1.3	40		0825	1.0	30		0809	0.3	10		0930	1.0	30		1007	0.3	10
	1331	5.9	180		1310	5.6	170		1423	3.9	120		1411	3.9	120		1453	2.3	70		1543	1.6	50
	2044	0.0	0		2006	-0.3	-10		2020	1.0	30		1949	1.0	30		1933	1.3	40		1901	1.3	40
8 Tu	0247	3.0	90	23 W	0209	3.6	110	8 F	0245	4.6	140	23 Sa	0213	5.2	160	8 M	0252	4.9	150	23 Tu	0307	5.6	170
	0741	1.3	40		0724	1.0	30		0915	1.0	30		0901	0.3	10		1045	1.3	40		1209	0.7	20
	1411	5.2	160		1345	5.2	160		1453	3.3	100		1450	3.3	100		1532	2.0	60				
	2108	0.3	10		2026	0.0	0		2029	1.3	40		2001	1.3	40		1915	1.6	50				
9 W	0318	3.3	100	24 Th	0233	3.9	120	9 Sa	0317	4.6	140	24 Su	0249	5.2	160	9 Tu	0340	4.6	140	24 W	0429	4.9	150
	0839	1.6	50		0813	1.0	30		1016	1.3	40		1008	0.7	20		1405	1.3	40		1433	0.7	20
	1451	4.3	130		1423	4.6	140		1526	2.6	80		1537	2.3	70								
	2129	0.7	20		2045	0.7	20		2034	1.3	40		2006	1.3	40								
10 Th	0353	3.6	110	25 F	0302	4.3	130	10 Su	0358	4.6	140	25 M	0337	5.2	160	10 W	0517	4.3	130	25 Th	0650	4.6	140
	0948	1.6	50		0910	1.0	30		1157	1.6	50		1200	1.0	30		1537	1.0	30		1533	0.3	10
	1533	3.3	100		1505	3.6	110		1616	2.0	60		1727	1.6	50						2247	2.6	80
	2147	1.0	30		2103	1.0	30		2018	1.6	50		1918	1.6	50								
11 F	0436	3.9	120	26 Sa	0339	4.6	140	11 M	0458	4.6	140	26 Tu	0448	5.2	160	11 Th	0744	4.3	130	26 F	0152	2.6	80
	1119	1.6	50		1024	1.0	30		1502	1.3	40		1449	0.7	20		1611	0.3	10		0837	4.9	150
	1627	2.6	80		1558	3.0	90						2325	3.0	90		2325	0.0	0		1610	0.0	0
	2202	1.3	40		2119	1.3	40										2233	3.3	100		2233	3.3	100
12 Sa	0528	4.3	130	27 Su	0427	4.9	150	12 Tu	0635	4.3	130	27 W	0646	4.9	150	12 F	0228	2.6	80	27 Sa	0322	1.6	50
	1321	1.6	50		1210	1.0	30		1609	0.7	20		1604	0.0	0		0903	4.6	140		0943	4.9	150
	1812	2.0	60		1729	2.0	60								1639		0.0	0	1639		0.0	0	
	2214	1.6	50		2122	1.6	50								2310		3.0	90	2245		3.6	110	
13 Su	0631	4.6	140	28 M	0533	4.9	150	13 W	0818	4.6	140	28 Th	0836	5.2	160	13 Sa	0334	2.0	60	28 Su	0416	1.0	30
	1511	1.0	30		1430	0.7	20		1645	0.3	10		1646	-0.3	-10		0953	4.9	150		1032	4.9	150
											2334		2.6	80	2334		0.0	0	1703		0.3	10	
															2316		3.3	100	2303		4.3	130	
14 M	0740	4.6	140	29 Tu	0700	5.2	160	14 Th	0925	4.9	150	29 F	0257	2.3	70	14 Su	0416	1.6	50	29 M	0459	0.3	10
	1612	0.7	20		1602	0.0	0		1714	0.0	0		0947	5.6	170		1034	5.2	160		1113	4.9	150
									2354	3.0	90		1720	-0.3	-10		1725	0.0	0		1723	0.3	10
											2336		3.0	90	2336		3.0	90	2327		3.6	110	2322	4.6	140
15 Tu	0843	4.9	150	30 W	0828	5.6	170	15 F	0334	2.3	70	30 Sa	0406	1.6	50	15 M	0453	1.0	30	30 Tu	0536	0.0	0
	1654	0.0	0		1657	-0.7	-20		1012	5.6	170		1039	5.9	180		1111	5.2	160		1149	4.6	140
	2350	2.3	70		1742	-0.3	-10		1742	-0.3	-10		1748	-0.3	-10		1744	0.0	0		1739	0.7	20
											2350		3.3	100	2350		3.3	100	2340		4.3	130	2341	5.2	160
			31 Th	0022	2.3	70				31 Su	0456	1.0	30										
				0158	2.3	70					1123	5.9	180										
				0940	5.9	180					1812	-0.3	-10										
				1739	-1.0	-30																	

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Cebu, Philippines, 2008

Times and Heights of High and Low Waters

October						November						December																
Time			Height			Time			Height			Time			Height			Time			Height							
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm				
1 W	0611	-0.3	-10		16 Th	0558	-1.0	-30		1 Sa	0704	-0.7	-20		16 Su	0726	-1.3	-40		1 M	0003	5.6	170		16 Tu	0031	6.2	190
	1221	4.3	130			1214	3.9	120			1309	2.6	80			1344	2.3	70			0735	-0.7	-20			0814	-1.3	-40
	1753	1.0	30			1722	1.3	40			1737	1.3	40			1723	1.3	40			1347	2.3	70			1428	2.0	60
						2335	5.9	180								1741	1.3	40			1741	1.3	40			1814	1.3	40
2 Th	0001	5.6	170		17 F	0637	-1.0	-30		2 Su	0015	5.9	180		17 M	0028	6.6	200		2 Tu	0035	5.6	170		17 W	0118	5.9	180
	0642	-0.3	-10			1251	3.3	100			0736	-0.3	-10			0815	-1.0	-30			0810	-0.7	-20			0855	-1.0	-30
	1249	3.9	120			1739	1.3	40			1339	2.6	80			1431	2.0	60			1423	2.3	70			1506	2.0	60
	1805	1.0	30						1754		1.3	40		1753		1.3	40		1811		1.6	50		1910		1.3	40	
3 F	0022	5.6	170		18 Sa	0004	6.2	190		3 M	0044	5.6	170		18 Tu	0113	6.2	190		3 W	0109	5.2	160		18 Th	0205	5.2	160
	0713	-0.3	-10			0719	-1.0	-30			0813	-0.3	-10			0908	-0.7	-20			0847	-0.3	-10			0933	-0.3	-10
	1316	3.3	100			1330	3.0	90			1414	2.3	70			1527	2.0	60			1503	2.3	70			1547	2.3	70
	1818	1.3	40			1755	1.3	40			1813	1.6	50			1828	1.6	50			1845	1.6	50			2016	1.3	40
4 Sa	0044	5.6	170		19 Su	0038	6.2	190		4 Tu	0115	5.6	170		19 W	0202	5.6	170		4 Th	0146	5.2	160		19 F	0254	4.6	140
	0745	-0.3	-10			0807	-1.0	-30			0856	0.0	0			1007	-0.3	-10			0926	-0.3	-10			1009	0.0	0
	1342	3.0	90			1412	2.3	70			1501	2.0	60			1643	2.0	60			1550	2.3	70			1633	2.6	80
	1830	1.3	40			1812	1.3	40			1830	1.6	50			1917	1.6	50			1932	1.6	50			2141	1.6	50
5 Su	0109	5.6	170		20 M	0116	6.2	190		5 W	0152	5.2	160		20 Th	0301	4.9	150		5 F	0228	4.6	140		20 Sa	0351	3.6	110
	0821	0.0	0			0902	-0.3	-10			0952	0.3	10			1110	0.3	10			1008	0.0	0			1043	0.7	20
	1410	2.6	80			1504	2.0	60			1621	2.0	60			1811	2.3	70			1643	2.3	70			1725	3.3	100
	1842	1.3	40			1825	1.3	40			1839	2.0	60			2101	2.0	60			2041	2.0	60			2331	1.3	40
6 M	0137	5.2	160		21 Tu	0201	5.9	180		6 Th	0238	4.6	140		21 F	0418	3.9	120		6 Sa	0320	3.9	120		21 Su	0505	2.6	80
	0905	0.7	20			1015	0.0	0			1104	0.7	20			1212	0.7	20			1052	0.3	10			1116	1.0	30
	1445	2.3	70			1646	1.6	50								1911	2.6	80			1737	2.6	80			1820	3.6	110
	1850	1.6	50			1811	1.6	50			1911	2.6	80			2358	2.0	60			2227	2.0	60					
7 Tu	0211	4.9	150		22 W	0258	5.2	160		7 F	0343	4.3	130		22 Sa	0602	3.3	100		7 Su	0432	3.3	100		22 M	0132	1.0	30
	1010	1.0	30			1156	0.3	10			1225	0.7	20			1306	1.0	30			1137	0.7	20			0654	2.0	60
	1550	2.0	60						2049		2.6	80		1952		3.3	100		1828		3.3	100		1152		1.3	40	
	1833	1.6	50						2205		2.6	80												1915		4.3	130	
8 W	0256	4.6	140		23 Th	0427	4.6	140		8 Sa	0529	3.6	110		23 Su	0202	1.3	40		8 M	0035	1.6	50		23 Tu	0303	0.7	20
	1214	1.0	30			1334	0.7	20			1329	0.7	20			0748	3.0	90			0613	2.6	80			0858	2.0	60
						2211	2.6	80			2031	3.0	90			1350	1.0	30			1223	1.0	30			1237	1.6	50
						2253	2.6	80								2027	3.9	120			1914	3.6	110			2006	4.6	140
9 Th	0416	4.3	130		24 F	0639	4.3	130		9 Su	0129	2.0	60		24 M	0315	0.7	20		9 Tu	0217	1.0	30		24 W	0403	0.0	0
	1416	1.0	30			1432	0.7	20			0723	3.6	110			0909	3.0	90			0809	2.3	70			1026	2.0	60
						2117	3.0	90			1415	1.0	30			1426	1.3	40			1307	1.3	40			1332	1.6	50
									2047		3.6	110		2100		4.6	140		1959		4.3	130		2054		4.9	150	
10 F	0643	3.9	120		25 Sa	0213	2.0	60		10 M	0250	1.3	40		25 Tu	0407	0.0	0		10 W	0328	0.0	0		25 Th	0448	-0.3	-10
	1506	0.7	20			0820	3.9	120			0847	3.6	110			1011	2.6	80			0944	2.3	70			1118	2.0	60
	2215	3.0	90			1512	0.7	20			1450	1.0	30			1457	1.3	40			1350	1.6	50			1429	1.6	50
						2132	3.6	110			2108	3.9	120			2132	4.9	150			2043	4.9	150			2138	5.2	160
11 Sa	0212	2.3	70		26 Su	0324	1.3	40		11 Tu	0343	0.3	10		26 W	0449	-0.3	-10		11 Th	0425	-0.7	-20		26 F	0526	-0.7	-20
	0822	4.3	130			0928	3.9	120			0951	3.3	100			1059	2.6	80			1055	2.3	70			1153	2.0	60
	1540	0.3	10			1541	0.7	20			1519	1.3	40			1527	1.3	40			1432	1.6	50			1521	1.6	50
	2207	3.3	100			2153	4.3	130			2134	4.6	140			2203	5.2	160			2128	5.6	170			2218	5.2	160
12 Su	0317	1.6	50		27 M	0413	0.3	10		12 W	0429	-0.3	-10		27 Th	0526	-0.7	-20		12 F	0515	-1.3	-40		27 Sa	0559	-1.0	-30
	0924	4.3	130			1020	3.9	120			1045	3.3	100			1139	2.6	80			1150	2.3	70			1223	2.3	70
	1606	0.3	10			1605	1.0	30			1544	1.3	40			1555	1.3	40			1514	1.6	50			1604	1.6	50
	2216	3.6	110			2216	4.9	150			2202	5.2	160			2233	5.6	170			2213	6.2	190			2255	5.6	170
13 M	0402	1.0	30		28 Tu	0454	0.0	0		13 Th	0513	-1.0	-30		28 F	0559	-1.0	-30		13 Sa	0602	-1.6	-50		28 Su	0631	-1.0	-30
	1012	4.6	140			1102	3.6	110			1133	3.3	100			1213	2.6	80			1235	2.0	60			1250	2.3	70
	1629	0.7	20			1626	1.0	30			1608	1.6	50			1622	1.3	40			1556	1.6	50			1643	1.3	40
	2230	4.3	130			2239	5.2	160			2233	5.9	180			2303	5.6	170			2259	6.2	190			2329	5.6	170
14 Tu	0441	0.3	10		29 W	0530	-0.7	-20		14 F	0556	-1.3	-40		29 Sa	0631	-1.0	-30		14 Su	0648	-1.6	-50		29 M	0700	-1.0	-30
	1055	4.6	140			1139	3.6	110			1218	3.0	90			1244	2.3	70			1315	2.0	60			1316	2.3	70
	1648	0.7	20			1645	1.3	40			1631	1.6	50			1648	1.3	40			1639	1.3	40			1717	1.3	40

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Times and Heights of High and Low Waters

January								February								March							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm				
1 Tu	0322	1.6	50	16 W ☉	0304	1.6	50	1 F	0228	0.0	0	16 Sa	0153	-0.7	-20	1 Sa	0135	0.0	0	16 Su	0137	-0.7	-20
	1005	0.7	20		0909	0.7	20		1708	2.6	80		1710	3.3	100		1542	2.6	80		1642	3.3	100
	1709	2.0	60		1610	2.3	70																
					2337	0.3	10																
2 W	0038	1.0	30	17 Th	0447	1.0	30	2 Sa	0331	-0.3	-10	17 Su	0314	-1.0	-30	2 Su	0243	-0.3	-10	17 M	0241	-0.7	-20
	0431	1.0	30		0846	0.7	20		1809	3.0	90		1827	3.6	110		1649	3.0	90		1808	3.3	100
	0945	0.7	20		1659	2.6	80																
	1744	2.3	70																				
3 Th	0223	0.3	10	18 F	0137	0.0	0	3 Su	0410	-0.7	-20	18 M	0403	-1.0	-30	3 M	0322	-0.7	-20	18 Tu	0326	-0.7	-20
	0656	0.7	20		1755	3.3	100		1905	3.0	90		1939	3.6	110		1804	3.0	90		1932	3.3	100
	0839	0.7	20																				
	1826	2.6	80																				
4 F	0334	0.0	0	19 Sa	0315	-0.7	-20	4 M	0441	-1.0	-30	19 Tu	0442	-1.0	-30	4 Tu	0352	-0.7	-20	19 W	0401	-0.7	-20
	1908	3.0	90		1853	3.6	110		1954	3.3	100		2044	3.6	110		1913	3.3	100		2044	3.3	100
5 Sa	0422	-0.3	-10	20 Su	0415	-1.0	-30	5 Tu	0508	-1.0	-30	20 W	0515	-1.0	-30	5 W	0417	-0.7	-20	20 Th	0427	-0.3	-10
	1947	3.3	100		1950	3.9	120		2039	3.6	110		2141	3.6	110		2016	3.3	100		1045	1.3	40
																		1422	1.0		30		
																		2143	3.0	90			
6 Su	0459	-0.7	-20	21 M	0500	-1.3	-40	6 W	0532	-1.0	-30	21 Th	0543	-0.7	-20	6 Th	0441	-0.7	-20	21 F	0447	0.0	0
	2024	3.3	100		2043	3.9	120		2123	3.6	110		1208	1.0	30		1126	1.0	30		1044	1.6	50
													1434	0.7	20		1319	1.0	30		1533	0.7	20
																		2233	2.6	80			
7 M	0532	-1.0	-30	22 Tu	0540	-1.3	-40	7 Th	0557	-1.0	-30	22 F	0607	-0.3	-10	7 F	0503	-0.3	-10	22 Sa	0500	0.3	10
	2059	3.6	110		2135	4.3	130		2208	3.6	110		1203	1.0	30		1104	1.3	40		1051	2.0	60
													1549	0.7	20		1447	0.7	20		1631	0.3	10
																		2317	2.6	80			
8 Tu	0602	-1.0	-30	23 W	0617	-1.3	-40	8 F	0621	-0.7	-20	23 Sa	0627	0.0	0	8 Sa	0525	0.0	0	23 Su	0507	0.7	20
	2134	3.9	120		2225	3.9	120		1233	1.0	30		1208	1.3	40		1110	1.3	40		1105	2.3	70
													1503	0.7	20		1554	0.3	10		1726	0.0	0
																		2359	2.0	60			
9 W	0631	-1.0	-30	24 Th	0650	-1.0	-30	9 Sa	0646	-0.3	-10	24 Su	0000	3.0	90	9 Su	0544	0.3	10	24 M	0510	1.0	30
	2209	3.9	120		2313	3.9	120		1235	1.0	30		0640	0.3	10		1127	2.0	60		1124	2.6	80
													1612	0.7	20		1659	0.0	0		1821	0.0	0
10 Th	0701	-1.0	-30	25 F	0721	-0.7	-20	10 Su	0709	0.0	0	25 M	0040	2.3	70	10 M	0558	0.7	20	25 Tu	0039	1.6	50
	2248	3.9	120		1355	0.7	20		1250	1.3	40		0647	0.7	20		1151	2.3	70		0512	1.0	30
													1720	0.3	10		1240	2.0	60		1148	2.6	80
																		1917	0.0	0			
11 F	0731	-1.0	-30	26 Sa	0000	3.3	100	11 M	0029	3.0	90	26 Tu	0119	2.0	60	11 Tu	0042	2.0	60	26 W	0124	1.3	40
	2331	3.6	110		0747	-0.3	-10		0726	0.3	10		0647	0.7	20		0600	0.7	20		0509	1.0	30
													1313	1.6	50		1306	2.3	70		1221	2.6	80	1215	3.0	90
																		2017	0.0	0			
12 Sa	0801	-0.7	-20	27 Su	0045	3.0	90	12 Tu	0119	2.3	70	27 W	0201	1.3	40	12 W	0139	1.6	50	27 Th	0220	1.0	30
	1439	1.0	30		0808	0.0	0		0735	0.3	10		0639	0.7	20		0550	1.0	30		0447	1.0	30
	1606	1.0	30		1356	1.3	40		1343	2.3	70		1336	2.3	70		1257	3.0	90		1244	3.0	90
																		2122	0.0	0			
13 Su	0018	3.3	100	28 M	0127	2.3	70	13 W	0214	1.6	50	28 Th	0253	1.0	30	13 Th	0251	1.0	30	28 F	1316	3.0	90
	0829	-0.3	-10		0820	0.3	10		0728	0.7	20		0613	0.7	20		0527	0.7	20		2240	-0.3	-10
	1443	1.0	30		1415	1.6	50		1419	2.6	80		1410	2.6	80		1338	3.3	100				
	1733	1.0	30		1958	0.7	20		2157	0.0	0		2318	0.0	0		2214	-0.3	-10				
14 M	0109	3.0	90	29 Tu	0208	1.6	50	14 Th	0325	1.0	30	29 F	1450	2.6	80	14 F	1427	3.6	110	29 Sa	1354	3.0	90
	0853	0.0	0		0819	0.3	10		0701	0.7	20												
	1502	1.3	40		1444	2.0	60		1504	3.0	90												
	1911	1.0	30		2157	0.7	20	☉	2346	0.0	0	☉											
15 Tu	0202	2.3	70	30 W	0253	1.3	40	15 F	1600	3.3	100				15 Sa	0000	-0.7	-20	30 Su	0014	-0.3	-10	
	0908	0.3	10		0803	0.7	20					1527	3.6	110		1444	3.0	90					
	1531	1.6	50		1523	2.3	70																
	2129	1.0	30	☉																			

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Manila, Philippines, 2008

Times and Heights of High and Low Waters

July				August				September							
Time		Height		Time		Height		Time		Height		Time		Height	
h	m	ft	cm	h	m	ft	cm	h	m	ft	cm	h	m	ft	cm
1	0738	4.3	130	16	0809	3.9	120	1	0911	4.9	150	16	0911	4.3	130
Tu	1637	-0.7	-20	W	1726	-0.3	-10	F	1754	-0.7	-20	Sa	1742	0.0	0
								●							
2	0825	4.6	140	17	0847	4.3	130	2	1006	4.9	150	17	0955	4.3	130
W	1726	-1.0	-30	Th	1756	-0.3	-10	Sa	1828	-0.3	-10	Su	1804	0.3	10
												○			
3	0913	4.9	150	18	0924	4.3	130	3	1059	4.6	140	18	0004	1.6	50
Th	1812	-1.0	-30	F	1823	-0.3	-10	Su	1900	0.0	0	M	0254	1.3	40
●				○								1040	3.9	120	
4	1003	4.9	150	19	1002	4.3	130	4	0125	1.6	50	18	1825	0.7	20
F	1856	-1.0	-30	Sa	1849	-0.3	-10	M	0355	1.3	40	19	0008	2.0	60
									1150	4.3	130	Tu	0405	1.3	40
5	1054	4.9	150	20	1041	4.3	130	5	1238	3.6	110	19	1126	3.9	120
Sa	1937	-0.7	-20	Su	1915	0.0	0	Tu	1928	0.3	10	20	1845	0.7	20
									0126	1.6	50	20	0023	2.3	70
6	1148	4.6	140	21	1123	4.3	130	6	0518	1.3	40	W	0515	1.3	40
Su	2017	-0.3	-10	M	1941	0.3	10	W	1238	3.6	110	21	1213	3.3	100
									1949	1.0	30	20	1901	1.0	30
7	1241	4.3	130	22	1205	1.6	50	7	0138	2.0	60	21	0046	2.6	80
M	2052	0.0	0	Tu	0415	1.6	50	8	0642	1.3	40	Th	0634	1.0	30
					1207	3.9	120	22	1323	3.0	90	21	1303	3.0	90
8	0404	1.6	50	23	0212	2.0	60	Th	2001	1.3	40	22	1907	1.3	40
Tu	0522	1.6	50	W	0540	1.6	50	7	0159	2.6	80	F	0116	3.0	90
	1333	3.6	110		1255	3.6	110	Th	0814	1.3	40	23	0801	1.0	30
	2119	0.7	20		2024	1.0	30	F	1409	2.3	70	23	1358	2.3	70
9	0354	2.0	60	24	0231	2.3	70	8	1956	1.3	40	24	1857	1.6	50
W	0730	1.6	50	Th	0716	1.6	50	9	0229	3.0	90	25	0152	3.3	100
	1424	3.0	90		1345	3.0	90	F	0949	1.3	40	Sa	0929	0.7	20
	2136	1.0	30		2035	1.0	30	Sa	1500	2.0	60	23	1514	1.6	50
10	0407	2.3	70	25	0259	2.6	80	9	1933	1.3	40	24	1830	1.6	50
Th	0947	1.6	50	F	0905	1.3	40	10	0309	3.0	90	25	0237	3.6	110
●	1518	2.3	70		1443	2.3	70	Sa	1141	1.0	30	Su	1105	0.7	20
	2131	1.3	40		2033	1.3	40	Su	1629	1.3	40	25	●		
11	0434	2.6	80	26	0335	3.0	90	10	1835	1.3	40	26	●		
F	1154	1.3	40	Sa	1051	1.0	30	11	0358	3.3	100	Tu	0443	4.3	130
	1626	1.6	50		1615	1.6	50	Su	1402	0.7	20	26	1438	0.0	0
	2102	1.3	40	●	2013	1.3	40	11	0455	3.6	110	27	0557	4.3	130
12	0512	3.0	90	27	0421	3.3	100	M	1512	0.3	10	27	1531	-0.3	-10
Sa	1358	1.0	30	Su	1245	0.7	20	Tu	0555	3.6	110	W	0557	4.3	130
								12	1554	0.0	0	27	1531	-0.3	-10
13	0556	3.3	100	28	0517	3.9	120	13	0650	3.9	120	28	0709	4.6	140
Su	1524	0.7	20	M	1444	0.3	10	W	1627	0.0	0	28	1613	-0.3	-10
												Th	1613	-0.3	-10
14	0643	3.6	110	29	0617	4.3	130	14	0740	3.9	120	29	0816	4.6	140
M	1615	0.0	0	Tu	1550	-0.3	-10	Th	1654	0.0	0	F	1648	-0.3	-10
15	0727	3.9	120	30	0717	4.6	140	15	0826	4.3	130	30	0918	4.3	130
Tu	1654	0.0	0	W	1636	-0.7	-20	F	1719	0.0	0	Sa	1718	0.0	0
												30	2338	1.6	50
				31	0815	4.9	150					31	0918	4.3	130
				Th	1717	-0.7	-20					Su	1718	0.0	0
												●	2336	2.0	60

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Manila, Philippines, 2008

Times and Heights of High and Low Waters

October					November					December														
Time		Height			Time		Height			Time		Height			Time		Height							
	h m	ft	cm			h m	ft	cm			h m	ft	cm			h m	ft	cm						
1 W	0520	0.7	20	16 Th	0518	0.0	0	1 Sa	0716	-0.3	-10	16 Su	0734	-1.3	-40	1 M	0752	-0.7	-20	16 Tu	0817	-1.3	-40	
	1151	2.6	80		1149	2.0	60		2311	3.6	110		2330	4.6	140		2319	3.6	110					
	1645	1.6	50		1547	1.6	50																	
	2301	3.3	100		2239	3.6	110																	
2 Th	0616	0.3	10	17 F	0621	-0.3	-10	2 Su	0805	-0.3	-10	17 M	0836	-1.0	-30	2 Tu	0831	-0.7	-20	17 W	0017	3.9	120	
	1236	2.0	60		1255	1.6	50		2341	3.6	110		2354	3.6	110		0903	-1.0	-30					
	1641	1.6	50		1532	1.6	50																	
	2325	3.3	100		2313	3.9	120																	
3 F	0714	0.3	10	18 Sa	0726	-0.3	-10	3 M	0857	-0.3	-10	18 Tu	0021	4.3	130	3 W	0912	-0.3	-10	18 Th	0115	3.6	110	
	1329	1.6	50		2353	4.3	130																	
	1629	1.6	50																					
	2353	3.6	110																					
4 Sa	0814	0.3	10	19 Su	0836	-0.7	-20	4 Tu	0015	3.6	110	19 W	0122	3.9	120	4 Th	0036	3.3	100	19 F	0215	3.0	90	
						0954	-0.3		-10		1041		-0.7	-20			0953	-0.3	-10			1022	0.0	0
5 Su	0024	3.6	110	20 M	0040	4.3	130	5 W	0058	3.6	110	20 Th	0231	3.6	110	5 F	0127	3.0	90	20 Sa	0317	2.3	70	
	0918	0.3	10			1054	0.0		0		1135		-0.3	-10			1032	0.0	0			1047	0.3	10
																						1748	1.3	40
																						1933	1.3	40
6 M	0059	3.6	110	21 Tu	0137	4.3	130	6 Th	0153	3.3	100	21 F	0345	3.0	90	6 Sa	0228	2.6	80	21 Su	0428	1.6	50	
	1035	0.3	10			1149	0.0		0		1217		0.0	0			1106	0.3	10			1053	0.7	20
											2054		1.6	50			1831	1.6	50			1801	2.0	60
											2207		1.6	50			2043	1.6	50					
7 Tu	0142	3.6	110	22 W	0248	3.9	120	7 F	0304	3.0	90	22 Sa	0505	2.6	80	7 Su	0343	2.3	70	22 M	0131	0.7	20	
	1202	0.3	10			1234	0.0		0		1247		0.7	20			1131	0.7	20			0613	1.0	30
											1935		2.0	60			1824	2.0	60			1027	1.0	30
																						1833	2.6	80
8 W	0239	3.6	110	23 Th	0407	3.6	110	8 Sa	0424	2.6	80	23 Su	0116	1.3	40	8 M	0012	1.3	40	23 Tu	0255	0.3	10	
	1307	0.0	0			1308	0.3		10		0638		2.0	60			0526	1.6	50			1910	3.0	90
						2020	1.6		50		1305		1.0	30			1147	0.7	20					
						2331	1.6		50		1942		2.3	70			1845	2.3	70					
9 Th	0351	3.3	100	24 F	0531	3.3	100	9 Su	0554	2.6	80	24 M	0229	0.7	20	9 Tu	0149	0.7	20	24 W	0359	-0.3	-10	
	1351	0.0	0			1334	0.7		20		0817		1.6	50			0739	1.3	40			1948	3.3	100
						1957	2.0		60		1307		1.0	30			1151	1.0	30					
											2000		2.6	80			1915	3.0	90					
10 F	0509	3.3	100	25 Sa	0657	3.0	90	10 M	0132	1.3	40	25 Tu	0331	0.3	10	10 W	0301	0.0	0	25 Th	0446	-0.7	-20	
	1425	0.3	10			0732	2.3		70		0944		1.3	40			0944	1.0	30			2025	3.3	100
						1353	1.0		30		1256		1.3	40			1141	1.0	30					
						2009	2.6		80		2024		3.0	90			1949	3.3	100					
11 Sa	0627	3.3	100	26 Su	0157	1.3	40	11 Tu	0241	0.7	20	26 W	0425	0.0	0	11 Th	0402	-0.7	-20	26 F	0525	-0.7	-20	
	1452	0.3	10			0858	2.0		60		1105		1.3	40			2026	3.9	120			2101	3.6	110
	2132	2.0	60			1404	1.0		30		1242		1.3	40										
						2032	3.0		90		2052		3.3	100										
12 Su	0041	1.6	50	27 M	0302	1.0	30	12 W	0342	0.0	0	27 Th	0513	-0.3	-10	12 F	0458	-1.0	-30	27 Sa	0559	-1.0	-30	
	0743	3.3	100			1011	1.6		50		2120		3.6	110			2106	4.3	130			2134	3.6	110
	1515	0.7	20			1406	1.3		40															
	2114	2.0	60			2100	3.6		110															
13 M	0212	1.3	40	28 Tu	0357	0.7	20	13 Th	0440	-0.3	-10	28 F	0556	-0.7	-20	13 Sa	0549	-1.3	-40	28 Su	0630	-1.0	-30	
	0853	3.0	90			1122	1.6		50		2149		3.6	110			2148	4.6	140			2207	3.6	110
	1534	1.0	30			1359	1.3		40															
	2124	2.3	70			2132	3.9		120															
14 Tu	0317	0.7	20	29 W	0449	0.3	10	14 F	0537	-1.0	-30	29 Sa	0636	-0.7	-20	14 Su	0639	-1.6	-50	29 M	0659	-1.0	-30	
	0954	3.0	90			2207	4.3		130		2218		3.6	110			2233	4.6	140			2240	3.6	110
	1547	1.3	40																					
	2143	3.0	90																					
15 W	0417	0.3	10	30 Th	0539	0.0	0	15 Sa	0635	-1.0	-30	30 Su	0714	-0.7	-20	15 M	0728	-1.6	-50	30 Tu	0728	-0.7	-20	
	1051	2.6	80			2246	4.6		140		2247		3.6	110			2322	4.3	130			2314	3.6	110
	1552	1.3	40																					
	2209	3.3	100																					
15 O				31 F	0628	0.0	0																	
						1320	1.3	40																
						1434	1.3	40																
						2243	3.6	110																

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Pages 188 through 195 intentionally omitted

Guam (Apra Harbor), Mariana Islands, 2008

Times and Heights of High and Low Waters

January								February								March																	
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height															
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm														
1 Tu	0201	1.6	49	16 W O	0117	1.8	55	1 F	0507	1.7	52	16 Sa	0511	2.0	61	1 Sa	0421	1.8	55	16 Su	0454	2.1	64										
	0717	1.0	30		0638	1.0	30		0821	1.6	49		0857	1.8	55		0745	1.7	52		0922	1.8	55										
	1350	2.3	70		1300	2.5	76		1349	2.1	64		1359	2.3	70		1244	2.0	61		1347	2.1	64										
	2115	0.5	15		2023	0.2	6		2203	0.1	3		2213	-0.4	-12		2109	0.2	6		2154	-0.2	-6										
2 W	0355	1.6	49	17 Th	0310	1.8	55	2 Sa	0611	1.9	58	17 Su	0615	2.1	64	2 Su	0530	1.9	58	17 M	0546	2.2	67										
	0811	1.3	40		0738	1.3	40		0957	1.7	52		1036	1.8	55		0928	1.7	52		1047	1.6	49										
	1423	2.3	70		1342	2.5	76		1451	2.1	64		1520	2.3	70		1402	2.0	61		1524	2.1	64										
	2205	0.3	9		2126	-0.1	-3		2258	-0.1	-3		2318	-0.5	-15		2215	0.1	3		2300	-0.2	-										
3 Th	0524	1.8	55	18 F	0456	1.9	58	3 Su	0652	2.0	61	18 M	0700	2.3	70	3 M	0609	2.0	61	18 Tu	0623	2.3	70										
	0918	1.5	46		0856	1.6	49		1115	1.7	52		1150	1.7	52		1049	1.7	52		1148	1.4	43										
	1501	2.2	67		1433	2.4	73		1555	2.1	64		1636	2.3	70		1525	2.0	61		1646	2.2	67										
	2250	0.1	3		2229	-0.4	-12		2348	-0.2	-6						2310	-0.1	-3		2355	-0.1	-3										
4 F	0625	1.9	58	19 Sa	0614	2.1	64	4 M	0724	2.1	64	19 Tu	0014	-0.5	-15	4 Tu	0639	2.1	64	19 W	0653	2.3	70										
	1033	1.6	49		1025	1.8	55		1210	1.7	52		0736	2.3	70		1144	1.5	46		1235	1.1	34										
	1543	2.2	67		1533	2.5	76		1653	2.2	67		1245	1.5	46		1634	2.2	67		1752	2.2	67										
	2333	-0.1	-3		2328	-0.7	-21						1742	2.4	73		2358	-0.2	-6														
5 Sa	0710	2.1	64	20 Su	0711	2.3	70	5 Tu	0032	-0.4	-12	20 W	0103	-0.5	-15	5 W	0706	2.3	70	20 Th	0042	0.0	0										
	1139	1.7	52		0754	2.2	67		0754	2.2	67		0806	2.4	73		1227	1.4	43		0718	2.4	73										
	1628	2.2	67		1255	1.6	49		1332	1.3	40		1732	2.3	70		1315	0.9	27														
					1744	2.3	70		1839	2.4	73						1848	2.3	70														
6 Su	0015	-0.3	-9	21 M	0024	-0.8	-24	6 W	0111	-0.4	-12	21 Th	0147	-0.4	-12	6 Th	0040	-0.2	-6	21 F	0123	0.2	6										
	0747	2.2	67		0757	2.4	73		0821	2.3	70		0834	2.4	73		0731	2.4	73		0741	2.4	73										
	1233	1.7	52		1248	1.7	52		1334	1.5	46		1414	1.1	34		1306	1.2	37		1352	0.6	18										
	1713	2.3	70		1737	2.5	76		1831	2.4	73		1931	2.4	73		1825	2.4	73		1938	2.3	70										
7 M	0055	-0.4	-12	22 Tu	0115	-0.9	-27	7 Th	0148	-0.5	-15	22 F	0225	-0.2	-6	7 F	0119	-0.2	-6	22 Sa	0200	0.4	12										
	0822	2.2	67		0838	2.5	76		0848	2.4	73		0859	2.5	76		0756	2.5	76		0803	2.4	73										
	1317	1.7	52		1342	1.6	49		1412	1.4	43		1454	0.9	27		1344	0.9	27		1426	0.4	12										
	1757	2.3	70		1833	2.6	79		1916	2.5	76		2020	2.4	73		1916	2.5	76		2025	2.3	70										
8 Tu	0133	-0.5	-15	23 W	0202	-0.8	-24	8 F	0224	-0.4	-12	23 Sa	0301	0.1	3	8 Sa	0157	0.0	0	23 Su	0235	0.6	18										
	0855	2.3	70		0914	2.5	76		0914	2.5	76		0922	2.5	76		0820	2.5	76		0823	2.4	73										
	1357	1.6	49		1431	1.5	46		1450	1.2	37		1532	0.7	21		1422	0.7	21		1459	0.3	9										
	1838	2.4	73		1926	2.5	76		2003	2.5	76		2107	2.3	70		2008	2.5	76		2109	2.3	70										
9 W	0210	-0.6	-18	24 Th	0245	-0.7	-21	9 Sa	0258	-0.3	-9	24 Su	0334	0.4	12	9 Su	0235	0.2	6	24 M	0308	0.9	27										
	0927	2.4	73		0947	2.5	76		0939	2.5	76		0943	2.4	73		0845	2.5	76		0844	2.3	70										
	1436	1.6	49		1517	1.3	40		1530	1.0	30		1609	0.6	18		1501	0.4	12		1531	0.1	3										
	1919	2.4	73		2016	2.5	76		2052	2.4	73		2154	2.2	67		2101	2.5	76		2153	2.2	67										
10 Th	0245	-0.6	-18	25 F	0325	-0.4	-12	10 Su	0333	0.0	0	25 M	0405	0.7	21	10 M	0314	0.4	12	25 Tu	0341	1.1	34										
	0958	2.4	73		1017	2.5	76		1004	2.5	76		1004	2.4	73		0911	2.5	76		0905	2.3	70										
	1515	1.6	49		1603	1.2	37		1612	0.8	24		1646	0.5	15		1543	0.1	3		1603	0.1	3										
	2000	2.4	73		2106	2.3	70		2145	2.3	70		2245	2.0	61		2157	2.4	73		2238	2.1	64										
11 F	0320	-0.5	-15	26 Sa	0402	-0.1	-3	11 M	0409	0.3	9	26 Tu	0436	0.9	27	11 Tu	0353	0.8	24	26 W	0413	1.2	37										
	1028	2.5	76		1044	2.5	76		1030	2.5	76		1026	2.3	70		0939	2.5	76		0928	2.2	67										
	1557	1.5	46		1649	1.0	30		1657	0.5	15		1725	0.4	12		1629	-0.1	-3		1638	0.0	0										
	2044	2.3	70		2157	2.1	64		2246	2.1	64		2341	1.9	58		2259	2.3	70		2328	2.0	61										
12 Sa	0354	-0.3	-9	27 Su	0437	0.3	9	12 Tu	0447	0.6	18	27 W	0507	1.2	37	12 W	0435	1.1	34	27 Th	0447	1.4	43										
	1056	2.5	76		1109	2.4	73		1057	2.5	76		1049	2.2	67		1009	2.5	76		0954	2.1	64										
	1642	1.3	40		1735	0.9	27		1748	0.3	9		1808	0.3	9		1720	-0.2	-6		1718	0.1	3										
	2134	2.2	67		2253	1.9	58		2357	2.0	61																						
13 Su	0430	-0.1	-3	28 M	0510	0.6	18	13 W	0528	1.0	30	28 Th	0051	1.8	55	13 Th	0012	2.1	64	28 F	0028	1.9	58										
	1125	2.5	76		1134	2.4	73		1128	2.5	76		0542	1.4	43		0522	1.4	43		0525	1.5	46										
	1731	1.1	34		1822	0.7	21		1845	0.1	3		1116	2.1	64		1043	2.4	73		1024	2.1	64										
	2232	2.1	64		2358	1.8	55						1859	0.3	9		1818	-0.3	-9		1807	0.1	3										
14 M	0508	0.2	6	29 Tu	0543	0.9	27	14 Th	0130	1.9	58	29 F	0228	1.7	52	14 F	0144	2.0	61	29 Sa	0146	1.9	58										
	1154	2.5	76		1158	2.3	70		1205	2.4	73		0628	1.6	49		0619	1.6	49		0617	1.6	49										
	1824	0.9	27		1913	0.6	18		O	1950	-0.1		-3	O	1152		2.1	64	1125		2.3	70	1102	2.0	61								
	2344	1.9	58												O		1925	-0.3	-9				1906	0.2	6								
15 Tu	0550	0.6	18	30 W O	0124	1.6	49	15 F	0327	1.9	58	15 Sa	0332	2.0	61	15 Sa	0332	2.0	61	30 Su	0316	1.9	58										
	1225	2.5	76		0619	1.2	37		0722	1.6	49		0740	1.8	55		0740	1.8	55		0735	1.7	52										
	1922	0.5	15		1226	2.2	67		1253	2.3	70		1223	2.2	67		1223	2.2	67		1157	1.9	58										
					2007	0.4	12		2101	-0.3	-9		2040	-0.2	-6		O	2013	0.2		6												
16 W	0320	1.6	49	31 Th	0707	1.5	46																										
	1301	2.2	67																														
	2105	0.3	9																														

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

Guam (Apra Harbor), Mariana Islands, 2008

Times and Heights of High and Low Waters

July					August					September																		
Time		Height			Time		Height			Time		Height			Time		Height											
	h m	ft cm			h m	ft cm			h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm									
1 Tu	0421	2.6	79		16 W	0019	1.7	52		1 F	0109	1.6	49		16 Sa	0118	1.4	43		1 M	0228	0.8	24		16 Tu	0200	0.6	18
	1203	-0.8	-24			0456	2.2	67			0608	2.6	79			0619	2.3	70			0805	2.4	73			0752	2.5	76
	1933	2.4	73			1242	-0.3	-9		●	1338	-0.8	-24			1442	0.2	6			1442	0.2	6			1412	0.4	12
						2013	2.2	67			2047	2.5	76			2027	2.3	70			2055	2.4	73			2016	2.5	76
2 W	0016	1.7	52		17 Th	0107	1.7	52		2 Sa	0202	1.4	43		17 Su	0156	1.3	40		2 Tu	0309	0.6	18		17 W	0237	0.3	9
	0515	2.6	79			0544	2.2	67			0706	2.6	79			0705	2.4	73			0857	2.4	73			0844	2.5	76
	1257	-1.0	-30			1322	-0.4	-12			1424	-0.6	-18		○	1408	-0.2	-6			1519	0.5	15			1450	0.6	18
	2026	2.5	76			2045	2.2	67			2122	2.5	76			2051	2.4	73			2119	2.4	73			2041	2.5	76
3 Th	0120	1.7	52		18 F	0148	1.6	49		3 Su	0252	1.3	40		18 M	0233	1.1	34		3 W	0349	0.4	12		18 Th	0317	0.1	3
	0611	2.6	79			0628	2.3	70			0801	2.5	76			0751	2.4	73			0948	2.2	67			0938	2.4	73
●	1350	-1.0	-30		○	1400	-0.4	-12			1508	-0.4	-12			1441	-0.1	-3			1555	0.8	24			1530	0.9	27
	2115	2.5	76			2115	2.3	70			2153	2.5	76			2115	2.4	73			2142	2.3	70			2109	2.5	76
4 F	0217	1.7	52		19 Sa	0227	1.6	49		4 M	0340	1.1	34		19 Tu	0310	1.0	30		4 Th	0428	0.3	9		19 F	0400	-0.1	-3
	0706	2.6	79			0710	2.3	70			0855	2.4	73			0839	2.4	73			1042	2.1	64			1037	2.3	70
	1440	-1.0	-30			1435	-0.4	-12			1548	-0.1	-3			1515	0.1	3			1632	1.0	30			1613	1.2	37
	2159	2.5	76			2143	2.4	73			2221	2.5	76			2139	2.5	76			2206	2.3	70			2138	2.4	73
5 Sa	0312	1.6	49		20 Su	0305	1.5	46		5 Tu	0427	0.9	27		20 W	0349	0.7	21		5 F	0509	0.2	6		20 Sa	0448	-0.3	-9
	0800	2.6	79			0752	2.3	70			0950	2.2	67			0930	2.3	70			1141	2.0	61			1146	2.2	67
	1528	-0.8	-24			1508	-0.3	-9			1626	0.3	9			1550	0.4	12			1710	1.3	40			1701	1.4	43
	2240	2.5	76			2210	2.4	73			2248	2.4	73			2204	2.5	76			2230	2.2	67			2213	2.4	73
6 Su	0406	1.4	43		21 M	0344	1.4	43		6 W	0514	0.7	21		21 Th	0431	0.5	15		6 Sa	0553	0.2	6		21 Su	0544	-0.3	-9
	0855	2.4	73			0836	2.3	70			1049	2.0	61			1027	2.2	67			1251	1.9	58			1309	2.2	64
	1613	-0.5	-15			1541	-0.2	-6			1703	0.6	18			1628	0.7	21			1754	1.5	46			1759	1.6	49
	2317	2.5	76			2236	2.4	73			2314	2.4	73			2230	2.4	73			2259	2.1	64			2255	2.3	70
7 M	0500	1.3	40		22 Tu	0425	1.3	40		7 Th	0602	0.6	18		22 F	0518	0.3	9		7 Su	0644	0.2	6		22 M	0649	-0.3	-9
	0952	2.3	70			0923	2.2	67			1155	1.9	58			1133	2.1	64			1422	1.8	55			1445	2.1	64
	1657	-0.2	-6			1615	0.0	0			1741	1.0	30			1709	1.0	30			1851	1.6	49			1916	1.7	52
	2352	2.5	76			2301	2.5	76			2340	2.3	70			2300	2.4	73			2337	2.0	61		○	2351	2.2	67
8 Tu	0556	1.1	34		23 W	0508	1.1	34		8 F	0651	0.4	12		23 Sa	0611	0.1	3		8 M	0743	0.2	6		23 Tu	0800	-0.3	-9
	1054	2.0	61			1018	2.1	64			1315	1.8	55			1253	2.0	61			1555	1.9	58			1607	2.1	64
	1738	0.2	6			1650	0.3	9			1821	1.3	40			1756	1.3	40		○	2009	1.7	52			2048	1.7	52
						2327	2.5	76							2335	2.4	73											
9 W	0023	2.4	73		24 Th	0555	0.8	24		9 Sa	0008	2.2	67		24 Su	0711	-0.1	-3		9 Tu	0033	1.9	58		24 W	0111	2.1	64
	0652	0.9	27			1122	2.0	61			0743	0.3	9			1434	1.9	58			0849	0.2	6			0913	-0.2	-6
	1206	1.8	55			1728	0.6	18		○	1456	1.7	52		○	1857	1.6	49			1659	1.9	58			1703	2.2	67
	1819	0.6	18			2356	2.5	76			1911	1.5	46								2133	1.6	49			2210	1.6	49
10 Th	0053	2.4	73		25 F	0646	0.5	15		10 Su	0043	2.1	64		25 M	0021	2.3	70		10 W	0153	1.9	58		25 Th	0248	2.1	64
	0748	0.7	21			1241	1.8	55			0840	0.2	6			0819	-0.2	-6			0953	0.1	3			1020	-0.2	-6
○	1336	1.7	52			1812	0.9	27			1635	1.8	55			1615	2.0	61			1740	2.0	61			1743	2.3	70
	1902	1.0	30								2021	1.6	49			2018	1.7	52			2239	1.6	49			2312	1.3	40
11 F	0123	2.3	70		26 Sa	0028	2.4	73		11 M	0130	2.1	64		26 Tu	0123	2.3	70		11 Th	0315	2.0	61		26 F	0415	2.2	67
	0842	0.5	15			0743	0.2	6			0939	0.1	3			0930	-0.4	-12			1049	0.1	3			1119	-0.1	-3
	1522	1.7	52		○	1418	1.8	55			1744	1.9	58			1729	2.1	64			1811	2.1	64			1815	2.3	70
	1951	1.3	40			1905	1.3	40			2145	1.7	52			2150	1.7	52			2329	1.5	46					
12 Sa	0155	2.3	70		27 Su	0107	2.4	73		12 Tu	0232	2.0	61		27 W	0242	2.3	70		12 F	0423	2.1	64		27 Sa	0002	1.1	34
	0935	0.3	9			0844	-0.1	-3			1037	0.0	0			1038	-0.4	-12			1137	0.0	0			0526	2.2	67
	1658	1.8	55			1603	1.9	58			1829	2.0	61			1820	2.2	67			1838	2.2	67			1210	0.1	3
	2052	1.5	46			2012	1.5	46			2259	1.7	52			2308	1.6	49								1843	2.4	73
13 Su	0233	2.2	67		28 M	0155	2.4	73		13 W	0339	2.1	64		28 Th	0402	2.3	70		13 Sa	0010	1.3	40		28 Su	0046	0.8	24
	1026	0.1	3			0948	-0.3	-9			1129	-0.1	-3			1139	-0.5	-15			0520	2.2	67			0627	2.3	70
	1810	1.9	58			1731	2.0	61			1904	2.1	64			1859	2.3	70			1218	0.0	0			1255	0.3	9
	2207	1.7	52			2135	1.7	52			2354	1.6	49								1903	2.3	70			1908	2.4	73
14 M	0317	2.2	67		29 Tu	0255	2.4	73		14 Th	0439	2.2	67		29 F	0008	1.5	46		14 Su	0047	1.1	34		29 M	0125	0.5	15
	1114	-0.1	-3			1051	-0.6	-18			1215	-0.2	-6			0513	2.4	73			0612	2.3	70			0721	2.4	73
	1900	2.0	61			1836	2.2	67			1934	2.2	67			1232	-0.4	-12			1257	0.1	3			1336	0.5	15
	2320	1.7	52			2258	1.8	55								1933	2.4	73			1928	2.4	73		●	1932	2.4	73
15 Tu	0406	2.2	67		30 W	0401	2.5	76		15 F	0038	1.5	46		30 Sa	0059	1.3	40		15 M	0124	0.9	27		30 Tu	0202	0.3	9
	1159	-0.2	-6			1151	-0.7	-21			0532	2.2	67			0615	2.5	76			0702	2.4	73			0812	2.4	73
	1939	2.1	64			1927	2.3	70			1256																	

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to mean lower low water which is the chart datum of soundings.

Guam (Apra Harbor), Mariana Islands, 2008

Times and Heights of High and Low Waters

October					November					December													
Time		Height			Time		Height			Time		Height			Time		Height						
	h m	ft cm			h m	ft cm			h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm				
1 W	0238	0.1	3	16 Th	0208	-0.3	-9	1 Sa	0314	-0.3	-9	16 Su	0324	-1.0	-30	1 M	0331	-0.4	-12	16 Tu	0404	-0.9	-27
	0900	2.3	70		0849	2.5	76		1029	2.2	67		1050	2.5	76		1100	2.3	70		1127	2.5	76
	1452	1.0	30		1429	1.1	34		1550	1.6	49		1559	1.7	52		1615	1.7	52		1648	1.6	49
	2018	2.3	70		1950	2.5	76		2020	2.1	64		2037	2.5	76		2030	2.1	64		2125	2.4	73
2 Th	0312	0.0	0	17 F	0251	-0.6	-18	2 Su	0351	-0.2	-6	17 M	0417	-0.9	-27	2 Tu	0408	-0.3	-9	17 W	0454	-0.6	-18
	0947	2.3	70		0946	2.5	76		1116	2.2	67		1152	2.5	76		1141	2.3	70		1212	1.5	76
	1529	1.2	37		1515	1.3	40		1632	1.6	49		1701	1.7	52		1702	1.7	52		1753	2.4	43
	2041	2.3	70		2023	2.5	76		2051	2.1	64		2126	2.4	73		2108	2.1	64		2227	2.2	67
3 F	0346	-0.1	-3	18 Sa	0337	-0.7	-21	3 M	0431	-0.2	-6	18 Tu	0512	-0.7	-21	3 W	0446	-0.1	-3	18 Th	0543	-0.2	-6
	1035	2.2	67		1047	2.5	76		1209	2.1	64		1254	2.4	73		1222	2.3	70		1255	2.5	76
	1607	1.4	43		1605	1.5	46		1722	1.7	52		1812	1.7	52		1757	1.6	49		1900	1.2	37
	2105	2.2	67		2059	2.4	73		2126	2.0	61		2225	2.2	67		2153	2.0	61		2342	1.9	58
4 Sa	0423	0.0	0	19 Su	0429	-0.7	-21	4 Tu	0515	-0.1	-3	19 W	0610	-0.4	-12	4 Th	0526	0.0	0	19 F	0632	0.3	9
	1128	2.1	64		1156	2.4	73		1308	2.1	64		1351	2.4	73		1300	2.3	70		1333	2.4	73
	1648	1.5	46		1702	1.7	52		1825	1.7	52		1929	1.5	46		1857	1.5	46		2007	0.9	27
	2132	2.1	64		2140	2.4	73		2208	1.9	58		2340	2.0	61		2251	1.8	55		●		
5 Su	0504	0.0	0	20 M	0527	-0.6	-18	5 W	0606	0.1	3	20 Th	0709	0.0	0	5 F	0609	0.2	6	20 Sa	0119	1.7	52
	1229	2.0	61		1314	2.3	70		1404	2.1	64		1439	2.4	73		1336	2.3	70		0723	0.7	21
	1737	1.6	49		1812	1.7	52		1938	1.6	49		2044	1.3	40		1956	1.3	40		1409	2.4	73
	2203	2.0	61		2231	2.2	67		2307	1.8	55		●					2109	0.6		18		
6 M	0553	0.1	3	21 Tu	0631	-0.4	-12	6 Th	0700	0.2	6	21 F	0121	1.8	55	6 Sa	0011	1.7	52	21 Su	0314	1.7	52
	1346	2.0	61		1431	2.3	70		1450	2.2	67		0809	0.3	9		0657	0.4	12		0818	1.1	34
	1840	1.7	52		1936	1.7	52		2046	1.5	46		1519	2.4	73		1410	2.4	73		1443	2.4	73
	2244	1.9	58		2339	2.1	64		●				2148	0.9	27		●	2050	1.0		30	2204	0.3	9
7 Tu	0651	0.2	6	22 W	0739	-0.2	-6	7 F	0034	1.7	52	22 Sa	0312	1.7	52	7 Su	0152	1.6	49	22 M	0456	1.8	55
	1504	2.0	61		1532	2.3	70		0756	0.3	9		0909	0.7	21		0750	0.7	21		0921	1.4	43
	2001	1.7	52		2100	1.5	46		1527	2.3	70		1552	2.4	73		1443	2.4	73		1517	2.3	70
	2343	1.8	55						2140	1.3	40		2240	0.6	18		2139	0.6	18		2252	0.1	3
8 W	0755	0.2	6	23 Th	0115	1.9	58	8 Sa	0217	1.7	52	23 Su	0445	1.8	55	8 M	0333	1.7	52	23 Tu	0611	1.9	58
	1600	2.0	61		0847	0.0	0		0853	0.5	15		1008	1.0	30		0851	1.0	30		1031	1.6	49
	2118	1.6	49		1617	2.3	70		1558	2.3	70		1622	2.4	73		1518	2.5	76		1553	2.3	70
					2209	1.3	40		2224	1.0	30		2324	0.3	9		2224	0.2	6		2336	-0.1	-3
9 Th	0112	1.8	55	24 F	0302	1.9	58	9 Su	0347	1.8	55	24 M	0557	2.0	61	9 Tu	0458	1.9	58	24 W	0706	2.1	64
	0859	0.2	6		0951	0.2	6		0949	0.6	18		1105	1.2	37		0955	1.2	37		1137	1.7	52
	1638	2.1	64		1652	2.4	73		1627	2.4	73		1650	2.4	73		1555	2.5	76		1631	2.3	70
	2216	1.4	43		2303	1.0	30		2303	0.6	18						2310	-0.2	-6				
10 F	0247	1.8	55	25 Sa	0430	2.0	61	10 M	0501	2.0	61	25 Tu	0003	0.0	0	10 W	0607	2.2	67	25 Th	0015	-0.3	-9
	0956	0.3	9		1048	0.5	15		1043	0.8	24		0655	2.1	64		1101	1.4	43		0748	2.2	67
	1708	2.2	67		1721	2.4	73		1656	2.5	76		1158	1.4	43		1635	2.6	79		1234	1.7	52
	2300	1.2	37		2348	0.6	18		2342	0.2	6		1718	2.4	73		2357	-0.6	-18		1711	2.3	70
11 Sa	0405	2.0	61	26 Su	0541	2.1	64	11 Tu	0605	2.2	67	26 W	0039	-0.2	-6	11 Th	0708	2.4	73	26 F	0053	-0.4	-12
	1046	0.3	9		1139	0.7	21		1137	1.0	30		0744	2.2	67		1204	1.5	46		0824	2.2	67
	1735	2.3	70		1747	2.4	73		1727	2.5	76		1248	1.5	46		1717	2.6	79		1321	1.7	52
	2339	1.0	30								1747		2.3	70					1751		2.3	70	
12 Su	0510	2.1	64	27 M	0027	0.3	9	12 W	0021	-0.2	-6	27 Th	0113	-0.4	-12	12 F	0044	-0.9	-27	27 Sa	0130	-0.5	-15
	1133	0.4	12		0641	2.2	67		0703	2.4	73		0826	2.3	70		0803	2.5	76		0857	2.3	70
	1800	2.4	73		1226	0.9	27		1229	1.2	37		1334	1.6	49		1303	1.6	49		1401	1.7	52
					1812	2.4	73		1800	2.6	79		1817	2.3	70		1802	2.7	82		●	1830	2.3	70
13 M	0015	0.6	18	28 Tu	0103	0.1	3	13 Th	0103	-0.6	-18	28 F	0146	-0.4	-12	13 Sa	0134	-1.1	-34	28 Su	0206	-0.5	-15
	0607	2.3	70		0733	2.3	70		0759	2.5	76		0904	2.3	70		0856	2.6	79		0929	2.3	70
	1217	0.5	15		1309	1.1	34		1321	1.3	40		1415	1.6	49		1358	1.7	52		1438	1.6	49
	1826	2.5	76		1836	2.4	73		1834	2.6	79		●	1849	2.3		70	○	1850		2.7	82	1908	2.3	70
14 Tu	0051	0.3	9	29 W	0136	-0.1	-3	14 F	0147	-0.8	-24	29 Sa	0220	-0.5	-15	14 Su	0224	-1.1	-34	29 M	0241	-0.5	-15
	0702	2.4	73		0819	2.3	70		0855	2.6	79		0942	2.3	70		0948	2.6	79		1000	2.3	70
	1301	0.7	21		1350	1.3	40		1412	1.5	46		1455	1.6	49		1453	1.7	52		1515	1.6	49
	1853	2.5	76		●	1900	2.4		73	1912	2.6		79	1921	2.2		67	1939	2.7		82	1946	2.3	70
15 W	0129	0.0	0	30 Th	0209	-0.3	-9	15 Sa	0234	-1.0	-30	30 Su	0255	-0.4	-12	15 M	0314	-1.1	-34	30 Tu	0314	-0.4	-12
	0755	2.5	76		0903	2.3	70		0951	2.6	79		1021	2.3	70		1038	2.6	79		1031	2.3	70
	1344	0.9	27		1430	1.4	43		1504	1.6	49		1534	1.7	52		1549	1.7	52		1553	1.6	49
	1921	2.5	76		1925	2.3	70		1952	2.6	79		1955	2.2	67		2030	2.6	79		2024	2.2	67
16 Th				31 F	0241	-0.3	-9																
					0945	2.3	70																
					1510	1.5	46																
					1952	2.2	67																

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to mean lower low water which is the chart datum of soundings.

Malakal Harbor, Palau Islands, Caroline Islands, 2008

Times and Heights of High and Low Waters

January						February						March					
Time			Height			Time			Height			Time			Height		
	h	m	ft	cm			h	m	ft	cm			h	m	ft	cm	
1 Tu	0047	4.7	143			16 W	0020	4.9	149			1 Sa	0125	3.8	116		
	0709	2.5	76				0616	2.1	64				0553	3.2	98		16 Su
	1315	5.3	162				1237	5.6	171				1244	4.6	140		
	2024	2.2	67				1936	1.5	46				2048	1.8	55		
2 W	0158	4.3	131			17 Th	0137	4.4	134			2 Su	0320	3.6	110		
	0805	2.8	85				0716	2.6	79				0837	3.4	104		17 M
	1403	5.2	158				1333	5.5	168				1406	4.4	134		
	2131	1.9	58				2101	1.2	37				2222	1.5	46		
3 Th	0325	4.1	125			18 F	0316	4.2	128			3 M	0531	3.9	119		
	0915	3.0	91				0847	3.0	91				1043	3.2	98		18 Tu
	1457	5.1	155				1440	5.3	162				1543	4.5	137		
	2234	1.6	49				2225	0.8	24				2326	1.1	34		
4 F	0456	4.2	128			19 Sa	0506	4.3	131			4 Tu	0610	4.3	131		
	1028	3.1	94				1028	3.1	94				1143	2.8	85		19 W
	1556	5.1	155				1558	5.4	165				1700	4.8	146		
	2329	1.2	37				2336	0.3	9								
5 Sa	0605	4.4	134			20 Su	0625	4.6	140			5 W	0012	0.7	21		
	1130	3.0	91				1145	2.9	88				0638	4.7	143		20 Th
	1653	5.2	158				1712	5.6	171				1225	2.3	70		
6 Su	0017	0.8	24			21 M	0034	-0.2	-6				1755	5.3	162		
	0651	4.6	140				0716	5.0	152			6 Th	0050	0.4	12		21 F
	1220	2.9	88				1243	2.5	76				0703	5.1	155		
	1744	5.4	165				1814	5.9	180				1300	1.8	55		
7 M	0058	0.5	15			22 Tu	0123	-0.5	-15				1840	5.7	174		
	0728	4.9	149				0756	5.3	162			7 F	0123	0.3	9		22 Sa
	1301	2.7	82				1331	2.2	67				0728	5.5	168		
	1827	5.7	174				1907	6.2	189				1333	1.3	40		
8 Tu	0135	0.2	6			23 W	0206	-0.6	-18				1921	6.1	186		
	0759	5.1	155				0831	5.5	168			8 Sa	0154	0.3	9		23 Su
	1336	2.6	79				1413	1.9	58				0754	5.9	180		
	1906	5.9	180				1952	6.3	192				1405	0.8	24		
9 W	0209	0.1	3			24 Th	0245	-0.4	-12				2001	6.3	192		
	0829	5.3	162				0903	5.7	174			9 Su	0224	0.5	15		24 M
	1408	2.5	76				1453	1.7	52				0821	6.1	186		
	1943	6.1	186				2034	6.3	192				1439	0.5	15		
10 Th	0241	0.1	3			25 F	0320	-0.1	-3				2041	6.3	192		
	0858	5.4	165				0932	5.7	174			10 M	0255	0.8	24		25 Tu
	1440	2.4	73				1531	1.7	52				0850	6.3	192		
	2019	6.2	189				2113	6.1	186				1515	0.3	9		
11 F	0312	0.2	6			26 Sa	0354	0.4	12				2123	6.1	186		
	0929	5.6	171				1001	5.7	174			11 Tu	0326	1.3	40		26 W
	1513	2.4	73				1608	1.7	52				0922	6.3	192		
	2057	6.2	189				2152	5.8	177				1555	0.2	6		
12 Sa	0344	0.4	12			27 Su	0425	0.9	27				2208	5.7	174		
	1000	5.7	174				1029	5.7	174			12 W	0358	1.8	55		27 Th
	1550	2.2	67				1647	1.7	52				0957	6.2	189		
	2139	6.1	186				2231	5.4	165				1641	0.4	12		
13 Su	0416	0.7	21			28 M	0455	1.4	43				2258	5.2	158		
	1034	5.7	174				1059	5.5	168			13 Th	0434	2.3	70		28 F
	1633	2.1	64				1727	1.8	55				1037	5.9	180		
	2225	5.8	177				2313	5.0	152				1736	0.6	18		
14 M	0452	1.1	34			29 Tu	0525	1.9	58				2358	4.7	143		
	1111	5.7	174				1130	5.4	165			14 F	0517	2.8	85		29 Sa
	1723	1.9	58				1812	1.8	55				1125	5.6	171		
	2318	5.4	165				1906	1.1	34				1849	1.0	30		
15 Tu	0530	1.6	49			30 W	0001	4.6	140								
	1151	5.7	174				0555	2.4	73			15 Sa	0119	4.2	128		30 Su
	1823	1.7	52				1205	5.2	158				0628	3.3	101		
							1908	1.8	55				1228	5.1	155		
													2025	1.2	37		
						31 Th	0058	4.1	125								
							0630	2.8	85								31 M
							1248	4.9	149								
							2020	1.8	55								

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Heights are referred to the chart datum of soundings which is about 1 foot (30 centimeters) below mean low water springs.

Malakal Harbor, Palau Islands, Caroline Islands, 2008

Times and Heights of High and Low Waters

April						May						June																
Time			Height			Time			Height			Time			Height			Time			Height							
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm				
1 Tu	0408	4.2	128		16 W	0506	5.0	152		1 Th	0348	4.9	149		16 F	0441	5.4	165		1 Su	0424	5.7	174		16 M	0507	5.4	165
	1007	3.2	98			1114	2.1	64			1023	2.4	73			1128	1.3	40			1130	0.5	15			1222	0.6	18
	1504	4.5	137			1700	4.9	149			1551	4.7	143			1735	4.8	146			1746	5.0	152			1853	4.7	143
	2236	1.5	46			2328	1.3	40			2231	1.7	52			2329	2.1	64			2332	2.4	73					
2 W	0504	4.5	137		17 Th	0543	5.3	162		2 F	0435	5.2	158		17 Sa	0518	5.5	168		2 M	0513	6.0	183		17 Tu	0022	2.7	82
	1108	2.7	82			1200	1.4	43			1115	1.6	49			1210	0.8	24			1221	-0.1	-3			0549	5.5	168
	1628	4.8	146			1758	5.2	158			1702	5.0	152			1824	5.0	152			1845	5.3	162			1302	0.3	9
	2328	1.2	37						2323		1.7	52												1931		4.9	149	
3 Th	0541	4.9	149		18 F	0011	1.3	40		3 Sa	0517	5.6	171		18 Su	0012	2.1	64		3 Tu	0025	2.4	73		18 W	0103	2.7	82
	1153	2.0	61			0613	5.6	171			1159	0.9	27			0553	5.7	174			0601	6.2	189			0629	5.7	174
	1731	5.2	158			1239	0.9	27			1801	5.4	165			1247	0.4	12			1309	-0.6	-18			1338	0.2	6
						1843	5.4	165								1904	5.1	155			1938	5.5	168			2005	5.0	152
4 F	0010	1.0	30		19 Sa	0049	1.3	40		4 Su	0009	1.7	52		19 M	0050	2.2	67		4 W	0114	2.5	76		19 Th	0140	2.7	82
	0612	5.4	165			0641	5.8	177			0555	6.0	183			0625	5.8	177			0648	6.4	195			0706	5.8	177
	1231	1.3	40			1314	0.5	15			1241	0.2	6			1321	0.2	6			1356	-0.8	-24			1413	0.1	3
	1821	5.6	171			1920	5.6	171			1853	5.7	174			1940	5.2	158			●	2027	5.6	171			○	2038
5 Sa	0048	0.9	27		20 Su	0123	1.5	46		5 M	0051	1.8	55		20 Tu	0125	2.3	70		5 Th	0200	2.6	79		20 F	0213	2.8	85
	0642	5.8	177			0707	5.9	180			0633	6.3	192			0656	5.8	177			0734	6.5	198			0741	5.9	180
	1307	0.7	21			1345	0.2	6			1322	-0.4	-12			1353	0.1	3			1443	-0.7	-21			1446	0.2	6
	1906	6.0	183			○	1954	5.6	171			●	1941	5.9		180		○	2013		5.3	162		2114		5.6	171		2110	5.2	158
6 Su	0122	1.0	30		21 M	0153	1.7	52		6 Tu	0131	1.9	58		21 W	0156	2.4	73		6 F	0247	2.7	82		21 Sa	0245	2.8	85
	0712	6.1	186			0732	6.0	183			0711	6.5	198			0726	5.9	180			0821	6.5	198			0816	5.9	180
	1342	0.1	3			1414	0.2	6			1404	-0.6	-18			1425	0.1	3			1530	-0.5	-15			1518	0.4	12
	1949	6.2	189			2025	5.6	171			2027	5.9	180			2046	5.3	162			2201	5.5	168			2143	5.3	162
7 M	0156	1.2	37		22 Tu	0220	1.9	58		7 W	0210	2.2	67		22 Th	0225	2.6	79		7 Sa	0337	2.8	85		22 Su	0318	2.9	88
	0744	6.4	195			0757	6.0	183			0750	6.6	201			0757	5.9	180			0910	6.3	192			0853	5.9	180
	1419	-0.2	-6			1443	0.2	6			1448	-0.6	-18			1457	0.3	9			1619	0.0	0			1551	0.6	18
	2032	6.1	186			2056	5.5	168			2114	5.7	174			2119	5.2	158			2249	5.4	165			2217	5.4	165
8 Tu	0230	1.5	46		23 W	0246	2.2	67		8 Th	0251	2.5	76		23 F	0254	2.8	85		8 Su	0432	2.8	85		23 M	0355	2.9	88
	0816	6.5	198			0824	5.9	180			0831	6.5	198			0829	5.8	177			1001	5.9	180			0933	5.8	177
	1458	-0.3	-9			1512	0.4	12			1534	-0.4	-12			1530	0.5	15			1709	0.5	15			1625	0.8	24
	2116	5.9	180			2129	5.3	162			2204	5.5	168			2156	5.1	155			2338	5.4	165			2253	5.4	165
9 W	0304	2.0	61		24 Th	0310	2.6	79		9 F	0336	2.8	85		24 Sa	0324	3.0	91		9 M	0534	2.8	85		24 Tu	0439	2.9	88
	0852	6.5	198			0852	5.8	177			0916	6.3	192			0904	5.7	174			1057	5.5	168			1018	5.6	171
	1541	-0.2	-6			1542	0.6	18			1626	0.0	0			1605	0.7	21			1800	1.0	30			1701	1.1	34
	2204	5.6	171			2205	5.1	155			2258	5.2	158			2236	5.1	155						2331		5.5	168	
10 Th	0341	2.4	73		25 F	0335	2.8	85		10 Sa	0429	3.1	94		25 Su	0400	3.2	98		10 Tu	0027	5.3	162		25 W	0530	2.7	82
	0931	6.3	192			0923	5.7	174			1006	5.9	180			0944	5.6	171			0641	2.7	82			1110	5.3	162
	1630	0.1	3			1617	0.9	27			1723	0.5	15			1644	1.0	30			1200	5.1	155			1740	1.4	43
	2257	5.2	158			2246	4.9	149			2359	5.0	152			2320	5.0	152			1853	1.5	46					
11 F	0424	2.8	85		26 Sa	0403	3.1	94		11 Su	0539	3.2	98		26 M	0447	3.3	101		11 W	0114	5.3	162		26 Th	0012	5.5	168
	1015	6.0	183			1000	5.5	168			1104	5.5	168			1030	5.4	165			0750	2.5	76			0630	2.4	73
	1728	0.5	15			1659	1.2	37			1827	1.0	30			1729	1.2	37			1310	4.7	143			1210	5.0	152
						2335	4.7	143								●	1947	2.0	61			●	1826	1.8		55		
12 Sa	0000	4.8	146		27 Su	0441	3.3	101		12 M	0105	4.9	149		27 Tu	0008	5.0	152		12 Th	0201	5.3	162		27 F	0056	5.6	171
	0523	3.2	98			1044	5.2	158			0704	3.2	98			0550	3.2	98			0856	2.1	64			0738	2.1	64
	1109	5.5	168			1752	1.5	46			1215	5.0	152			1125	5.1	155			1428	4.4	134			1321	4.7	143
	1841	1.0	30						○		1936	1.4	43			1819	1.5	46			2044	2.3	70			1920	2.2	67
13 Su	0121	4.5	137		28 M	0035	4.5	137		13 Tu	0212	5.0	152		28 W	0058	5.1	155		13 F	0248	5.3	162		28 Sa	0144	5.6	171
	0659	3.4	104			0547	3.5	107			0830	2.9	88			0707	3.0	91			0957	1.7	52			0851	1.6	49
	1220	5.1	155			1141	4.9	149			1341	4.7	143			1233	4.8	146			1551	4.3	131			1445	4.4	134
	2007	1.3	40			1900	1.7	52			2043	1.7	52			1917	1.7	52			2144	2.6	79			2029	2.6	79
14 M	0300	4.5	137		29 Tu	0144	4.5	137		14 W	0311	5.1	155		29 Th	0150	5.2	158		14 Sa	0334	5.3	162		29 Su	0240	5.6	171
	0851	3.2	98			0740	3.4	104			0942	2.4	73			0825	2.6	79			1051	1.3	40			1003	1.0	30
	1356	4.7	143			1257	4.7	143			1512	4.6	140			1351	4.6	140			1706	4.4	134			1616	4.4	134
	2128	1.4	43			2019	1.8	55			2145	1.9	58			2021	2.0	61			2242	2.7	82			2150	2.9	88
15 Tu	0417	4.7	143		30 W	0252	4.6	140		15 Th	0400	5.2	158		30 F	0241	5.3	162		15 Su	0421	5.4	165		30 M	0340	5.7	174
	1014	2.7	82			0918	3.0	91			1040	1.8	55			0935	2.0	61			1139	0.9	27			1110	0.4	12
	1540	4.7	143			1426	4.6	140			1632	4.6	140			1515	4.6	140			1806	4.5	137			1741	4.7	143
	2235	1.4	43			2131	1.8	55			2240	2.0	61			2129	2.2	67			2335	2.7	82			2307	2.9	88
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Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Heights are referred to the chart datum of soundings which is about 1 foot (30 centimeters) below mean low water springs.

Malakal Harbor, Palau Islands, Caroline Islands, 2008

Times and Heights of High and Low Waters

July					August					September																			
Time		Height			Time		Height			Time		Height			Time		Height												
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm										
1 Tu	0443	5.9	180		16 W	0002	3.1	94		1 F	0104	2.6	79		16 Sa	0108	2.7	82		1 M	0214	1.6	49		16 Tu	0146	1.6	49	
	1209	-0.1	-3			0524	5.4	165			0638	6.4	195			0640	6.1	186			0804	6.8	207			0740	6.8	207	
	1847	5.0	152			1246	0.6	18			1342	-0.3	-9			1336	0.6	18			1434	0.8	24			1402	1.3	40	
						1923	4.8	146			2010	5.8	177	●		1951	5.7	174			2035	6.6	201			1958	6.8	207	
2 W	0012	2.8	85		17 Th	0048	2.9	88		2 Sa	0150	2.3	70		17 Su	0141	2.4	73		2 Tu	0249	1.4	43		17 W	0218	1.3	40	
	0543	6.1	186			0611	5.6	171			0729	6.6	201			0718	6.4	195			0842	6.6	201			0818	6.8	207	
	1302	-0.5	-15			1324	0.4	12			1423	-0.2	-6			1405	0.6	18			1504	1.3	40			1430	1.6	49	
	1940	5.3	162			1954	5.0	152			2043	6.0	183	○		2014	6.0	183			2100	6.6	201			2026	7.0	213	
3 Th	0107	2.7	82		18 F	0126	2.8	85		3 Su	0233	2.0	61		18 M	0211	2.1	64		3 W	0323	1.4	43		18 Th	0252	1.1	34	
	0639	6.4	195			0653	5.9	180			0814	6.7	204			0754	6.5	198			0918	6.4	195			0858	6.7	204	
	1351	-0.7	-21			1359	0.2	6			1501	0.1	3			1433	0.7	21			1532	1.8	55			1459	2.0	61	
	2025	5.5	168			2022	5.3	162	○		2114	6.1	186			2039	6.2	189			2126	6.5	198			2056	7.0	213	
4 F	0157	2.5	76		19 Sa	0200	2.7	82		4 M	0313	1.9	58		19 Tu	0242	1.9	58		4 Th	0356	1.5	46		19 F	0329	1.0	30	
	0730	6.5	198			0730	6.1	186			0856	6.5	198			0831	6.6	201			0954	6.0	183			0941	6.4	195	
	1437	-0.6	-18			1430	0.3	9			1536	0.6	18			1500	1.0	30			1558	2.3	70			1529	2.5	76	
	2106	5.6	171			2049	5.5	168			2144	6.2	189			2106	6.4	195			2152	6.4	195			2130	7.0	213	
5 Sa	0243	2.4	73		20 Su	0232	2.6	79		5 Tu	0353	1.8	55		20 W	0315	1.7	52		5 F	0431	1.7	52		20 Sa	0412	1.1	34	
	0818	6.5	198			0806	6.2	189			0937	6.2	189			0910	6.5	198			1031	5.6	171			1029	5.9	180	
	1520	-0.3	-9			1500	0.4	12			1609	1.1	34			1528	1.4	43			1623	2.8	85			1602	3.0	91	
	2145	5.7	174			2116	5.7	174			2213	6.1	186			2134	6.5	198			2221	6.2	189			2208	6.8	207	
6 Su	0330	2.4	73		21 M	0304	2.5	76		6 W	0434	1.9	58		21 Th	0351	1.6	49		6 Sa	0509	1.9	58		21 Su	0505	1.3	40	
	0905	6.4	195			0843	6.2	189			1019	5.8	177			0952	6.2	189			1114	5.2	158			1127	5.4	165	
	1602	0.1	3			1528	0.6	18			1640	1.7	52			1557	1.8	55			1646	3.2	98			1642	3.5	107	
	2223	5.7	174			2145	5.8	177			2243	6.1	186			2206	6.5	198			2255	5.9	180			2255	6.5	198	
7 M	0418	2.4	73		22 Tu	0338	2.4	73		7 Th	0516	1.9	58		22 F	0433	1.5	46		7 Su	0557	2.2	67		22 M	0613	1.6	49	
	0953	6.0	183			0922	6.1	186			1102	5.4	165			1039	5.8	177			1205	4.8	146			1242	5.0	152	
	1643	0.7	21			1558	0.9	27			1711	2.3	70			1629	2.3	70			1711	3.6	110			1740	3.9	119	
	2300	5.7	174			2215	5.9	180			2315	5.9	180			2243	6.4	195			2336	5.6	171	○		2355	6.1	186	
8 Tu	0509	2.3	70		23 W	0417	2.2	67		8 F	0602	2.0	61		23 Sa	0524	1.5	46		8 M	0705	2.4	73		23 Tu	0745	1.9	58	
	1041	5.6	171			1005	5.9	180			1149	4.9	149			1135	5.3	162			1317	4.5	137			1431	4.8	146	
	1723	1.2	37			1629	1.3	40			1742	2.8	85			1705	2.8	85			1748	3.9	119			1949	4.2	128	
	2337	5.7	174			2249	6.0	183			2350	5.7	174			2325	6.3	192											
9 W	0602	2.3	70		24 Th	0501	2.0	61		9 Sa	0657	2.1	64		24 Su	0629	1.6	49		9 Tu	0032	5.4	165		24 W	0119	5.7	174	
	1133	5.2	158			1054	5.6	171			1246	4.5	137			1244	4.8	146			0840	2.4	73			0920	1.8	55	
	1803	1.8	55			1703	1.7	52			1817	3.2	98	○		1752	3.3	101	○		1519	4.4	134			1626	5.1	155	
						2325	6.0	183											2035		4.1	125		2150		3.9	119		
10 Th	0014	5.6	171		25 F	0554	1.9	58		10 Su	0032	5.5	168		25 M	0019	6.0	183		10 W	0152	5.2	158		25 Th	0304	5.7	174	
	0659	2.2	67			1150	5.1	155			0807	2.1	64			0755	1.6	49			1006	2.2	67			1036	1.6	49	
	1230	4.7	143			1742	2.2	67			1403	4.2	128			1421	4.5	137			1717	4.6	140			1724	5.5	168	
	1845	2.3	70								1914	3.5	107			1917	3.8	116			2225	3.9	119			2303	3.3	101	
11 F	0053	5.5	168		26 Sa	0007	6.0	183		11 M	0126	5.2	158		26 Tu	0130	5.7	174		11 Th	0326	5.2	158		26 F	0435	5.9	180	
	0801	2.0	61			0658	1.7	52			0927	2.0	61			0932	1.4	43			1108	1.9	58			1133	1.4	43	
	1337	4.3	131			1258	4.7	143			1601	4.1	125			1631	4.6	140			1754	5.0	152			1803	5.9	180	
	1934	2.7	82			1829	2.7	82	○		2109	3.7	113			2138	3.8	116			2324	3.5	107			2356	2.6	79	
12 Sa	0137	5.4	165		27 Su	0056	5.8	177		12 Tu	0237	5.1	155		27 W	0302	5.6	171		12 F	0442	5.5	168		27 Sa	0541	6.2	189	
	0905	1.8	55			0816	1.5	46			1042	1.7	52			1052	1.1	34			1154	1.5	46			1219	1.2	37	
	1458	4.1	125			1425	4.4	134			1750	4.3	131			1752	5.0	152			1820	5.4	165			1834	6.2	189	
	2037	3.1	94			1939	3.2	98			2244	3.6	110			2308	3.4	104											
13 Su	0228	5.2	158		28 M	0158	5.7	174		13 W	0356	5.2	158		28 Th	0432	5.8	177		13 Sa	0007	3.0	91		28 Su	0039	2.0	61	
	1010	1.6	49			0942	1.1	34			1140	1.4	43			1154	0.7	21			0538	5.9	180			0632	6.5	198	
	1634	4.1	125			1613	4.3	131			1833	4.7	143			1836	5.4	165			1231	1.3	40			1258	1.2	37	
	2153	3.2	98			2126	3.4	104			2346	3.3	101						1844		5.8	177		1903		6.5	198		
14 M	0326	5.2	158		29 Tu	0312	5.7	174		14 Th	0505	5.4	165		29 F	0008	2.9	88		14									

Time meridian 135° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
Heights are referred to the chart datum of soundings which is about 1 foot (30 centimeters) below mean low water springs.

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

Chuuk, Moen Island, Caroline Islands, 2008

Times and Heights of High and Low Waters

April								May								June																																																																																																																																																																																																																		
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height																																																																																																																																																																																																																
h	m	ft	cm	h	m	ft	cm	h	m	ft	cm	h	m	ft	cm	h	m	ft	cm																																																																																																																																																																																																															
1 Tu	1155	1.7	52	16 W	0307	1.3	40	1 Th	0218	1.4	43	16 F	0122	1.7	52	1 Su	0053	2.0	61	16 M	0056	2.0	61																																																																																																																																																																																																											
	2013	0.1	3		0717	1.1	34		0641	1.1	34		0859	0.7	21		0853	0.2	6		1044	0.0	0																																																																																																																																																																																																											
					1246	1.6	49		1142	1.5	46		1245	0.9	27		1348	0.5	15																																																																																																																																																																																																															
					1942	0.3	9		1845	0.4	12		1749	0.5	15		1657	0.4	12																																																																																																																																																																																																															
2 W	0324	1.2	37	17 Th	0216	1.4	43	2 F	0139	1.5	46	17 Sa	0114	1.9	58	2 M	0113	2.3	70	17 Tu	0120	2.1	64																																																																																																																																																																																																											
	0619	1.1	34		0738	0.9	27		0722	0.8	24		0906	0.5	15		0934	-0.1	-3		1040	-0.1	-3																																																																																																																																																																																																											
	1235	1.9	58		1312	1.5	46		1237	1.4	43		1317	0.7	21																																																																																																																																																																																																																			
	2006	0.1	3		1933	0.4	12		1846	0.4	12		1742	0.5	15																																																																																																																																																																																																																			
3 Th	0235	1.2	37	18 F	0158	1.7	52	3 Sa	0133	1.8	55	18 Su	0121	2.1	64	3 Tu	0141	2.5	76	18 W	0147	2.2	67																																																																																																																																																																																																											
	0701	0.8	24		0804	0.7	21		0805	0.5	15		0920	0.4	12		1019	-0.3	-9		1045	-0.1	-3																																																																																																																																																																																																											
	1309	1.9	58		1333	1.4	43		1324	1.3	40		1341	0.6	18																																																																																																																																																																																																																			
	2005	0.2	6		1927	0.4	12		1850	0.4	12		1745	0.4	12																																																																																																																																																																																																																			
4 F	0220	1.4	43	19 Sa	0158	1.9	58	4 Su	0143	2.1	64	19 M	0137	2.2	67	4 W	0213	2.7	82	19 Th	0217	2.3	70																																																																																																																																																																																																											
	0741	0.6	18		0830	0.5	15		0849	0.2	6		0939	0.2	6		1108	-0.4	-12		1059	-0.1	-3																																																																																																																																																																																																											
	1343	1.9	58		1352	1.2	37		1408	1.0	30		1401	0.5	15																																																																																																																																																																																																																			
	2008	0.3	9		1924	0.4	12		1853	0.4	12		1753	0.3	9		●				○																																																																																																																																																																																																													
5 Sa	0222	1.7	52	20 Su	0208	2.1	64	5 M	0201	2.4	73	20 Tu	0157	2.3	70	5 Th	0247	2.7	82	20 F	0246	2.4	73																																																																																																																																																																																																											
	0821	0.4	12		0857	0.4	12		0937	0.0	0		1002	0.2	6		1201	-0.4	-12		1119	-0.1	-3																																																																																																																																																																																																											
	1415	1.7	52		1408	1.1	34		1448	0.7	21		1419	0.4	12																																																																																																																																																																																																																			
	2013	0.3	9		1924	0.4	12		●	1853	0.4		12	○	1806		0.2	6																																																																																																																																																																																																																
6 Su	0234	2.0	61	21 M	0223	2.3	70	6 Tu	0225	2.6	79	21 W	0221	2.4	73	6 F	0320	2.6	79	21 Sa	0316	2.4	73																																																																																																																																																																																																											
	0904	0.3	9		0925	0.3	9		1029	-0.1	-3		1031	0.1	3		1259	-0.3	-9		1142	-0.1	-3																																																																																																																																																																																																											
	1446	1.5	46		1423	0.9	27		1524	0.5	15		1434	0.3	9						1634	0.2	6																																																																																																																																																																																																											
	2015	0.4	12		1926	0.3	9		1848	0.3	9		1820	0.2	6						1837	0.1	3																																																																																																																																																																																																											
7 M	0251	2.2	67	22 Tu	0241	2.3	70	7 W	0252	2.7	82	22 Th	0247	2.4	73	7 Sa	0352	2.5	76	22 Su	0344	2.3	70																																																																																																																																																																																																											
	0949	0.2	6		0954	0.3	9		1132	-0.1	-3		1105	0.1	3		1403	-0.2	-6		1207	0.0	0																																																																																																																																																																																																											
	1512	1.1	34		1433	0.8	24		1549	0.2	6		1446	0.3	9																																																																																																																																																																																																																			
	2013	0.3	9		1929	0.3	9		1835	0.1	3		1833	0.1	3																																																																																																																																																																																																																			
8 Tu	0312	2.4	73	23 W	0301	2.4	73	8 Th	0321	2.7	82	23 F	0314	2.4	73	8 Su	0418	2.3	70	23 M	0411	2.2	67																																																																																																																																																																																																											
	1040	0.2	6		1026	0.3	9		1311	-0.1	-3		1148	0.1	3		1508	0.0	0		1232	0.0	0																																																																																																																																																																																																											
	1528	0.8	24		1437	0.7	21		1533	0.0	0		1454	0.2	6																																																																																																																																																																																																																			
	2005	0.3	9		1931	0.2	6		1817	-0.1	-3		1844	0.1	3																																																																																																																																																																																																																			
9 W	0334	2.5	76	24 Th	0322	2.3	70	9 F	0350	2.6	79	24 Sa	0342	2.3	70	9 M	0434	2.0	61	24 Tu	0435	2.0	61																																																																																																																																																																																																											
	1147	0.3	9		1102	0.4	12		1812	-0.1	-3		1247	0.1	3		1545	0.2	6		1254	0.1	3																																																																																																																																																																																																											
	1512	0.5	15		1432	0.6	18				1453		0.2	6																																																																																																																																																																																																																				
	1950	0.1	3		1935	0.1	3				1850		0.1	3																																																																																																																																																																																																																				
10 Th	0359	2.4	73	25 F	0345	2.3	70	10 Sa	0418	2.4	73	25 Su	0412	2.2	67	10 Tu	0434	1.7	52	25 W	0452	1.8	55																																																																																																																																																																																																											
	1936	-0.1	-3		1155	0.4	12		1823	-0.1	-3		1844	0.1	3		1543	0.4	12		1310	0.2	6																																																																																																																																																																																																											
					1407	0.5	15																																																																																																																																																																																																																											
					1939	0.1	3																																																																																																																																																																																																																											
11 F	0424	2.3	70	26 Sa	0410	2.2	67	11 Su	0441	2.1	64	26 M	0441	2.1	64	11 W	0404	1.5	46	26 Th	0447	1.5	46																																																																																																																																																																																																											
	1933	-0.2	-6		1942	0.1	3		1834	-0.1	-3		1804	0.2	6		1508	0.5	15		1319	0.3	9																																																																																																																																																																																																											
12 Sa	0449	2.1	64	27 Su	0438	2.0	61	12 M	0452	1.8	55	27 Tu	0509	1.9	58	12 Th	0248	1.4	43	27 F	0216	1.2	37																																																																																																																																																																																																											
	1939	-0.2	-6		1938	0.1	3		1839	0.1	3		1650	0.3	9		1336	0.5	15		1311	0.4	12																																																																																																																																																																																																											
13 Su	0512	1.9	58	28 M	0510	1.9	58	13 Tu	0434	1.6	49	28 W	0527	1.6	49	13 F	0109	1.5	46	28 Sa	1206	0.3	9																																																																																																																																																																																																											
	1948	-0.2	-6		1925	0.1	3		1834	0.3	9		1638	0.4	12		1153	0.4	12																																																																																																																																																																																																															
14 M	0521	1.6	49	29 Tu	0553	1.6	49	14 W	0324	1.4	43	29 Th	0327	1.4	43	14 Sa	0037	1.7	52	29 Su	0000	1.7	52																																																																																																																																																																																																											
	0833	1.5	46		1905	0.2	6		1820	0.4	12		1641	0.4	12		1116	0.3	9		0947	0.0	0																																																																																																																																																																																																											
	1059	1.6	49																																																																																																																																																																																																																															
	1952	0.0	0		●																																																																																																																																																																																																																													
15 Tu	0433	1.4	43	30 W	1020	1.5	46	15 Th	0202	1.5	46	30 F	0113	1.4	43	15 Su	0039	1.9	58	30 M	0026	2.0	61																																																																																																																																																																																																											
	0712	1.3	40		1850	0.3	9		0907	0.9	27		0805	0.8	24		1057	0.1	3		0945	-0.3	-9																																																																																																																																																																																																											
	1209	1.6	49						1157	1.0	30		1010	0.9	27																																																																																																																																																																																																																			
	1950	0.1	3						1803	0.5	15		1647	0.5	15																																																																																																																																																																																																																			

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

Chuuk, Moen Island, Caroline Islands, 2008

Times and Heights of High and Low Waters

October					November					December													
Time		Height			Time		Height			Time		Height			Time		Height						
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm				
1 W	0229	1.2	37	16 Th	0249	0.9	27	1 Sa	0217	0.3	9	16 Su	0032	-0.4	-12	1 M	0252	0.0	0	16 Tu	0109	-0.5	-15
	0808	0.2	6		0743	0.1	3		0701	-0.1	-3		1533	2.4	73		0631	-0.2	-6		1606	2.2	67
	1454	2.1	64		1448	2.3	70		1506	2.2	67						1529	2.1	64				
	2134	0.3	9		2223	0.0	0		2305	0.1	3												
2 Th	0237	1.0	30	17 F	0309	0.5	15	2 Su	0208	0.3	9	17 M	0537	-0.4	-12	2 Tu	0019	-0.1	-3	17 W	0155	-0.3	-9
	0805	0.1	3		0737	0.1	3		0706	-0.1	-3		1602	2.3	70		0300	0.0	0		1622	1.9	58
	1510	2.1	64		1512	2.4	73		1529	2.1	64				0643		-0.1	-3					
	2205	0.3	9		2329	0.0	0							1555	2.0		61						
3 F	0238	0.8	24	18 Sa	0306	0.2	6	3 M	0711	-0.2	-6	18 Tu	0547	-0.4	-12	3 W	0647	-0.1	-3	18 Th	0226	0.0	0
	0801	0.0	0		0723	-0.1	-3		1552	2.0	61		1626	2.0	61		1620	1.9	58		1622	1.6	49
	1528	2.1	64		1537	2.4	73																
	2236	0.4	12																				
4 Sa	0228	0.7	21	19 Su	0706	-0.2	-6	4 Tu	0716	-0.2	-6	19 W	0602	-0.3	-9	4 Th	0626	0.0	0	19 F	0224	0.2	6
	0759	0.0	0		1603	2.3	70		1615	1.9	58		1637	1.7	52		1640	1.7	52		1556	1.3	40
	1546	2.0	61																				
	2310	0.5	15																				
5 Su	0203	0.6	18	20 M	0658	-0.4	-12	5 W	0715	-0.1	-3	20 Th	0609	-0.2	-6	5 F	0309	0.1	3	20 Sa	0132	0.3	9
	0759	-0.1	-3		1628	2.1	64		1638	1.7	52		1620	1.5	46		1648	1.5	46		1452	1.2	37
	1604	1.9	58																				
6 M	0802	-0.2	-6	21 Tu	0703	-0.4	-12	6 Th	0704	-0.1	-3	21 F	0606	0.0	0	6 Sa	0327	0.2	6	21 Su	0001	0.2	6
	1624	1.8	55		1650	1.8	55		1652	1.5	46		1515	1.3	40		1546	1.2	37		1323	1.3	40
7 Tu	0805	-0.2	-6	22 W	0713	-0.4	-12	7 F	0641	0.0	0	22 Sa	0553	0.2	6	7 Su	0342	0.2	6	22 M	1243	1.5	46
	1646	1.6	49		1657	1.5	46		1551	1.3	40		1355	1.3	40		1324	1.2	37		2254	-0.1	-3
8 W	0805	-0.2	-6	23 Th	0719	-0.3	-9	8 Sa	0620	0.1	3	23 Su	0534	0.3	9	8 M	0356	0.2	6	23 Tu	1242	1.7	52
	1704	1.4	43		1609	1.3	40		1409	1.2	37		1314	1.5	46		1240	1.4	43		2248	-0.2	-6
					1926	1.2	37		1857	0.9	27		2129	0.4	12		2048	0.3	9				
					2328	1.4	43		2304	1.1	34		2356	0.4	12		2356	0.4	12				
9 Th	0757	-0.1	-3	24 F	0718	-0.1	-3	9 Su	0611	0.1	3	24 M	0046	0.5	15	9 Tu	0409	0.2	6	24 W	1257	1.8	55
	2328	1.5	46		1448	1.2	37		1325	1.4	43		0517	0.3	9		1241	1.7	52		2245	-0.3	-9
					1920	1.0	30		1923	0.6	18		1305	1.7	52		2057	-0.1	-3				
10 F	0744	0.0	0	25 Sa	0017	1.3	40	10 M	0008	1.0	30	25 Tu	0125	0.3	9	10 W	0146	0.2	6	25 Th	1320	2.0	61
	1500	1.1	34		0712	0.1	3		0612	0.2	6		0507	0.2	6		0420	0.1	3		2242	-0.4	-12
	1825	1.0	30		1359	1.3	40		1315	1.6	49		1312	1.9	58		1300	2.0	61				
					1940	0.7	21		1959	0.3	9		2139	0.1	3		2127	-0.4	-12				
11 Sa	0009	1.6	49	26 Su	0050	1.2	37	11 Tu	0059	0.9	27	26 W	0150	0.2	6	11 Th	1328	2.3	70	26 F	1345	2.1	64
	0734	0.0	0		0703	0.2	6		0617	0.2	6		0509	0.1	3		2205	-0.6	-18		2244	-0.4	-12
	1413	1.2	37		1341	1.6	49		1324	1.9	58		1327	2.1	64								
	1856	0.7	21		2005	0.5	15		2039	0.0	0		2152	-0.1	-3								
12 Su	0044	1.6	49	27 M	0114	1.0	30	12 W	0145	0.7	21	27 Th	0207	0.1	3	12 F	1400	2.5	76	27 Sa	1413	2.1	64
	0730	0.1	3		0656	0.2	6		0623	0.2	6		0522	0.0	0		2247	-0.7	-21		2251	-0.4	-12
	1356	1.4	43		1341	1.8	55		1342	2.2	67		1348	2.2	67								
	1931	0.5	15		2031	0.3	9		2123	-0.2	-6		2211	-0.2	-6								
13 M	0117	1.6	49	28 Tu	0134	0.9	27	13 Th	0227	0.4	12	28 F	0221	0.1	3	13 Sa	1434	2.5	76	28 Su	1440	2.2	67
	0733	0.1	3		0652	0.2	6		0627	0.1	3		0539	-0.1	-3		2333	-0.7	-21		2302	-0.4	-12
	1358	1.7	52		1351	2.0	61		1406	2.4	73		1411	2.2	67								
	2009	0.3	9		2058	0.2	6		2213	-0.3	-9		2234	-0.2	-6								
14 Tu	0150	1.4	43	29 W	0151	0.7	21	14 F	0307	0.2	6	29 Sa	0233	0.0	0	14 Su	1508	2.5	76	29 M	0405	0.0	0
	0738	0.2	6		0652	0.1	3		0626	0.0	0		0558	-0.1	-3						0622	-0.1	-3
	1410	1.9	58		1407	2.2	67		1433	2.5	76		1437	2.2	67		1507	2.2	67		1507	2.2	67
	2049	0.1	3		2126	0.1	3		2311	-0.4	-12		2303	-0.2	-6		2303	-0.2	-6		2318	-0.3	-9
15 W	0221	1.2	37	30 Th	0205	0.6	18	15 Sa	0341	-0.1	-3	30 Su	0243	0.0	0	15 M	0020	-0.6	-18	30 Tu	0413	0.1	3
	0742	0.2	6		0654	0.1	3		0617	-0.2	-6		0616	-0.2	-6		1539	2.4	73		0702	0.0	0
	1427	2.1	64		1425	2.3	70		1503	2.5	76		1503	2.2	67						1532	2.2	67
	2133	0.0	0		2155	0.1	3						2337	-0.1	-3						2334	-0.2	-6
				31 F	0214	0.4	12													31 W	0433	0.2	6
					0657	0.0	0														0734	0.1	3
					1445	2.3	70														1556	2.1	64
					2227	0.1	3														2351	-0.2	-6

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to mean lower low water which is the chart datum of soundings.

Pohnpei Harbor, Caroline Islands, 2008

Times and Heights of High and Low Waters

January								February								March							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm				
1 Tu	0225	1.3	40	16 W O	0141	1.1	34	1 F	0038	1.3	40	16 Sa	1220	3.2	98	1 Sa	0829	2.8	85	16 Su	1211	3.3	101
	1001	2.8	85		0848	2.9	88		1143	2.8	85		2042	1.0	30		2201	1.4	43		2008	1.1	34
	1605	2.3	70		1519	1.9	58		2238	1.3	40												
	1925	2.4	73		1941	2.2	67																
2 W	0306	1.4	43	17 Th	0222	1.3	40	2 Sa	1302	3.1	94	17 Su	0252	1.9	58	2 Su	1234	3.0	91	17 M	0231	2.4	73
	1132	2.9	88		1037	3.0	91		2120	1.1	34		0607	1.7	52		2050	1.2	37		0636	2.0	61
					1931	1.6	49				1325		3.7	113				1312	3.7		113		
					2237	1.7	52				2053		0.7	21				2020	0.9		27		
3 Th	0406	1.5	46	18 F	0346	1.4	43	3 Su	0306	1.7	52	18 M	0247	2.2	67	3 M	0319	2.1	64	18 Tu	0225	2.7	82
	1233	3.2	98		1217	3.3	101		0604	1.6	49		0723	1.4	43		0619	2.0	61		0729	1.6	49
	2041	1.6	49		2021	1.1	34		1340	3.5	107		1407	4.0	122		1318	3.4	104		1351	4.0	122
									2113	0.8	24		2111	0.4	12		2039	0.9	27		2037	0.7	21
4 F	0032	1.8	55	19 Sa	0137	1.7	52	4 M	0255	2.0	61	19 Tu	0302	2.5	76	4 Tu	0240	2.4	73	19 W	0237	3.1	94
	0521	1.4	43		0547	1.4	43		0717	1.4	43		0809	1.0	30		0720	1.6	49		0806	1.2	37
	1314	3.5	107		1320	3.7	113		1412	3.8	116		1442	4.3	131		1351	3.8	116		1424	4.2	128
	2054	1.3	40		2053	0.7	21		2123	0.6	18		2131	0.3	9		2047	0.7	21		2054	0.7	21
5 Sa	0148	1.8	55	20 Su	0229	1.9	58	5 Tu	0308	2.2	67	20 W	0323	2.9	88	5 W	0244	2.8	85	20 Th	0254	3.5	107
	0623	1.4	43		0704	1.2	37		0801	1.1	34		0847	0.8	24		0758	1.3	40		0839	0.9	27
	1348	3.7	113		1407	4.1	125		1442	4.1	125		1514	4.5	137		1422	4.1	125		1453	4.2	128
	2113	1.0	30		2123	0.4	12		2140	0.3	9		2152	0.2	6		2104	0.5	15		2112	0.6	18
6 Su	0230	2.0	61	21 M	0305	2.2	67	6 W	0328	2.5	76	21 Th	0345	3.2	98	6 Th	0300	3.1	94	21 F	0315	3.8	116
	0712	1.2	37		0758	1.0	30		0839	0.9	27		0921	0.6	18		0833	0.9	27		0910	0.8	24
	1420	4.0	122		1448	4.4	134		1512	4.4	134		1543	4.5	137		1453	4.4	134		1519	4.2	128
	2134	0.7	21		2152	0.2	6		2201	0.2	6		2213	0.2	6		2124	0.4	12		2130	0.6	18
7 M	0304	2.1	64	22 Tu	0336	2.4	73	7 Th	0351	2.8	85	22 F	0409	3.4	104	7 F	0322	3.5	107	22 Sa	0336	4.1	125
	0754	1.1	34		0843	0.8	24		0914	0.7	21		0953	0.5	15		0906	0.7	21		0939	0.7	21
	1450	4.2	128		1525	4.6	140		1543	4.5	137		1610	4.3	131		1623	4.5	137		1542	4.1	125
	2158	0.5	15		2220	0.1	3		2223	0.1	3		2233	0.3	9		2146	0.3	9		2148	0.6	18
8 Tu	0334	2.2	67	23 W	0406	2.6	79	8 F	0416	3.1	94	23 Sa	0433	3.6	110	8 Sa	0346	3.8	116	23 Su	0358	4.2	128
	0833	1.0	30		0923	0.6	18		0948	0.6	18		1023	0.6	18		0940	0.5	15		1007	0.7	21
	1521	4.4	134		1559	4.6	140		1613	4.5	137		1634	4.1	125		1553	4.4	134		1604	3.8	116
	2223	0.3	9		2247	0.1	3		2247	0.2	6		2251	0.4	12		2209	0.4	12		2204	0.7	21
9 W	0404	2.4	73	24 Th	0436	2.8	85	9 Sa	0442	3.3	101	24 Su	0456	3.7	113	9 Su	0412	4.0	122	24 M	0420	4.3	131
	0909	0.9	27		1000	0.6	18		1022	0.6	18		1052	0.7	21		1014	0.5	15		1034	0.9	27
	1553	4.5	137		1631	4.5	137		1642	4.3	131		1655	3.8	116		1623	4.2	128		1624	3.6	110
	2250	0.3	9		2313	0.2	6		2310	0.3	9		2307	0.5	15		2232	0.5	15		2219	0.8	24
10 Th	0434	2.5	76	25 F	0505	3.0	91	10 Su	0509	3.4	104	25 M	0520	3.7	113	10 M	0440	4.1	125	25 Tu	0442	4.2	128
	0945	0.8	24		1036	0.7	21		1057	0.6	18		1119	1.0	30		1050	0.6	18		1100	1.0	30
	1624	4.5	137		1700	4.3	131		1711	4.0	122		1712	3.5	107		1652	3.8	116		1640	3.3	101
	2317	0.3	9		2336	0.3	9		2333	0.4	12		2321	0.7	21		2253	0.6	18		2232	0.9	27
11 F	0505	2.7	82	26 Sa	0534	3.1	94	11 M	0539	3.4	104	26 Tu	0543	3.6	110	11 Tu	0509	4.1	125	26 W	0504	4.1	125
	1021	0.9	27		1109	0.9	27		1133	0.8	24		1145	1.2	37		1127	0.8	24		1127	1.3	40
	1656	4.4	134		1726	3.9	119		1738	3.6	110		1724	3.1	94		1718	3.3	101		1654	3.0	91
	2345	0.4	12		2358	0.5	15		2354	0.6	18		2332	0.8	24		2312	0.8	24		2244	1.0	30
12 Sa	0536	2.8	85	27 Su	0603	3.1	94	12 Tu	0611	3.4	104	27 W	0606	3.5	107	12 W	0541	4.0	122	27 Th	0526	3.9	119
	1058	1.0	30		1141	1.1	34		1213	1.1	34		1211	1.5	46		1208	1.1	34		1155	1.5	46
	1728	4.1	125		1747	3.5	107		1802	3.1	94		1728	2.7	82		1741	2.8	85		1704	2.7	82
											2339		0.9	27	2327		1.0	30	2252		1.1	34	
13 Su	0013	0.5	15	28 M	0017	0.7	21	13 W	0013	0.8	24	28 Th	0631	3.3	101	13 Th	0616	3.8	116	28 F	0550	3.7	113
	0610	2.8	85		0632	3.1	94		0648	3.3	101		1241	1.9	58		1301	1.6	49		1231	1.8	55
	1138	1.1	34		1212	1.4	43		1303	1.5	46		1718	2.4	73		1753	2.3	70		1705	2.4	73
	1759	3.7	113		1803	3.1	94		1820	2.5	76		2339	1.1	34		2333	1.3	40		2254	1.3	40
14 M	0041	0.7	21	29 Tu	0032	0.8	24	14 Th	0028	1.1	34	29 F	0705	3.0	91	14 F	0703	3.4	104	29 Sa	0621	3.4	104
	0649	2.9	88		0704	3.0	91		0741	3.1	94		1344	2.1	64		2253	1.5	46		1352	2.0	61
	1223	1.4	43		1245	1.7	52		1446	1.9	58		1559	2.2	67				1616		2.1	64	
	1831	3.3	101		1809	2.7	82		1756	2.0	61		2321	1.3	40		O		2234		1.6	49	
15 Tu	0109	0.9	27	30 W	0044	1.0	30	15 F	0027	1.3	40					15 Sa	0859	3.1	94	30 Su	0716	3.1	94
	0738	2.9	88		0744	2.8	85		0935	3.0	91				2019		1.4	43	2040		1.7	52	
	1323	1.7	52		1330	2.0	61		2137	1.3	40							O					
	1904	2.8	85		1752	2.4	73																
			31 Th	0049	1.1	34																	
				0853	2.7	82																	

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Heights are referred to the chart datum of soundings which is about 1 foot (30 centimeters) below mean low water springs.

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
Heights are referred to the chart datum of soundings which is about 1 foot (30 centimeters) below mean low water springs.

Pohnpei Harbor, Caroline Islands, 2008

Times and Heights of High and Low Waters

July						August						September					
Time			Height			Time			Height			Time			Height		
	h	m	ft	cm			h	m	ft	cm			h	m	ft	cm	
1 Tu	0137	4.1	125			16 W	0207	3.8	116			1 M	0351	4.5	137		
	0853	0.6	18				0928	0.7	21				1009	0.5	15		
	1430	2.2	67				1505	2.0	61				1613	4.0	122		
	1926	1.0	30				1944	1.2	37				2211	0.8	24		
2 W	0224	4.4	134			17 Th	0239	4.0	122			2 Tu	0418	4.2	128		
	0935	0.3	9				0949	0.5	15				1029	0.6	18		
	1517	2.3	70				1532	2.2	67				1639	4.1	125		
	2017	0.9	27				2025	1.1	34				2242	0.9	27		
3 Th	0308	4.5	137			18 F	0310	4.2	128			3 W	0441	3.9	119		
	1014	0.2	6				1012	0.4	12				1047	0.8	24		
	1559	2.4	73				1558	2.4	73				1704	4.1	125		
	2104	0.8	24				2102	1.0	30				2313	1.1	34		
4 F	0350	4.6	140			19 Sa	0340	4.3	131			4 Th	0501	3.5	107		
	1051	0.1	3				1035	0.3	9				1102	0.9	27		
	1638	2.5	76				1625	2.6	79				1728	4.0	122		
	2148	0.8	24				2138	0.9	27				2342	1.4	43		
5 Sa	0430	4.5	137			20 Su	0411	4.3	131			5 F	0515	3.1	94		
	1126	0.2	6				1100	0.3	9				1113	1.1	34		
	1716	2.6	79				1652	2.8	85				1752	3.8	116		
	2232	0.9	27				2213	0.9	27								
6 Su	0508	4.3	131			21 M	0441	4.2	128			6 Sa	0013	1.7	52		
	1200	0.4	12				1125	0.4	12				0520	2.8	85		
	1754	2.7	82				1721	2.9	88				1117	1.2	37		
	2314	1.0	30				2249	1.0	30				1818	3.6	110		
7 M	0544	4.0	122			22 Tu	0512	4.0	122			7 Su	0051	2.1	64		
	1232	0.6	18				1150	0.5	15				0505	2.5	76		
	1833	2.8	85				1752	3.0	91				1112	1.4	43		
	2358	1.2	37				2327	1.1	34				1849	3.3	101		
8 Tu	0618	3.6	110			23 W	0542	3.7	113			8 M	1039	1.5	46		
	1302	0.8	24				1215	0.7	21				2000	3.1	94		
	1915	2.8	85				1826	3.1	94								
9 W	0045	1.5	46			24 Th	0010	1.3	40			9 Tu	0912	1.6	49		
	0649	3.2	98				0613	3.3	101								
	1330	1.0	30				1241	0.9	27				0732	1.3	40		
	2004	2.8	85				1906	3.1	94				1417	2.7	82		
10 Th	0142	1.8	55			25 F	0102	1.5	46			10 W	0005	3.2	98		
	0716	2.7	82				0645	2.9	88				0822	1.4	43		
	1358	1.2	37				1308	1.0	30				1510	2.5	76		
	2105	2.9	88				1959	3.1	94				1818	2.3	70		
11 F	0315	2.0	61			26 Sa	0223	1.8	55			11 Th	0056	3.5	107		
	0739	2.3	70				0719	2.3	70				0815	1.2	37		
	1427	1.3	40				1338	1.2	37				1429	2.7	82		
	2226	2.9	88				2121	3.1	94				1910	2.0	61		
12 Sa	1507	1.4	43			27 Su	0543	1.7	52			12 F	0129	3.9	119		
	2350	3.1	94				0827	1.8	55				0823	1.0	30		
							1424	1.4	43				1429	3.1	94		
							2315	3.3	101				1945	1.7	52		
13 Su	0839	1.6	49			28 M	0754	1.3	40			13 Sa	0200	4.2	128		
	1216	1.7	52				1309	1.7	52				0839	0.8	24		
	1623	1.5	46				1636	1.6	49				1442	3.5	107		
14 M	0049	3.3	101			29 Tu	0041	3.6	110				2017	1.3	40		
	0852	1.2	37				0830	0.9	27			14 Su	0229	4.4	134		
	1358	1.7	52				1413	1.9	58				0858	0.7	21		
	1752	1.5	46				1828	1.4	43				1502	3.8	116		
15 Tu	0132	3.5	107			30 W	0138	4.0	122			15 M	0259	4.5	137		
	0909	1.0	30				0900	0.5	15				0919	0.6	18		
	1437	1.9	58				1448	2.2	67				1524	4.1	125		
	1856	1.4	43				1935	1.2	37				2122	0.8	24		
						31 Th	0224	4.3	131			16 Sa	0322	4.6	140		
							0930	0.3	9				0948	0.5	15		
							1519	2.5	76				1548	3.8	116		
							2025	0.9	27				2138	0.7	21		

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Heights are referred to the chart datum of soundings which is about 1 foot (30 centimeters) below mean low water springs.

Time meridian 165° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
Heights are referred to the chart datum of soundings which is about 1 foot (30 centimeters) below mean low water springs.

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

Wake Island, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height			Time	Height			Time	Height		
h m	ft	cm		h m	ft	cm		h m	ft	cm	
1 Tu	0115	1.1	34	16 W	0143	1.5	46	1 Su	0122	2.2	67
	0556	0.8	24		0733	0.4	12		0751	0.0	0
	1225	1.6	49		1346	1.9	58		1355	1.9	58
	1937	0.3	9		2009	0.0	0		1949	0.2	6
2 W	0159	1.4	43	17 Th	0221	1.9	58	2 M	0212	2.5	76
	0726	0.5	15		0822	0.2	6		0846	-0.2	-6
	1336	1.9	58		1431	2.1	64		1451	2.0	61
	2016	0.0	0		2042	-0.1	-3		2037	0.1	3
3 Th	0229	1.7	52	18 F	0252	2.1	64	3 Tu	0259	2.7	82
	0814	0.2	6		0900	-0.1	-3		0937	-0.4	-12
	1422	2.1	64		1507	2.2	67		1541	2.0	61
	2048	-0.2	-6		2111	-0.2	-6		2123	0.0	0
4 F	0257	2.0	61	19 Sa	0320	2.4	73	4 W	0345	2.9	88
	0854	-0.1	-3		0934	-0.3	-9		1025	-0.6	-18
	1502	2.4	73		1539	2.2	67		1628	2.0	61
	2118	-0.4	-12		2139	-0.3	-9		2207	0.0	0
5 Sa	0327	2.3	70	20 Su	0348	2.5	76	5 Th	0430	2.9	88
	0931	-0.4	-12		1004	-0.4	-12		1111	-0.6	-18
	1539	2.5	76		1609	2.2	67		1714	2.0	61
	2148	-0.5	-15		2205	-0.3	-9		2251	0.0	0
6 Su	0357	2.6	79	21 M	0414	2.6	79	6 F	0516	2.9	88
	1008	-0.7	-21		1034	-0.5	-15		1157	-0.5	-15
	1615	2.6	79		1638	2.2	67		1758	2.0	61
	2219	-0.5	-15		2231	-0.3	-9		2335	0.0	0
7 M	0428	2.7	82	22 Tu	0441	2.6	79	7 Sa	0601	2.8	85
	1045	-0.8	-24		1102	-0.5	-15		1243	-0.4	-12
	1652	2.5	76		1706	2.1	64		1844	1.9	58
	2249	-0.5	-15		2256	-0.2	-6				
8 Tu	0501	2.8	85	23 W	0507	2.6	79	8 Su	0020	0.1	3
	1123	-0.8	-24		1131	-0.4	-12		0647	2.7	82
	1728	2.3	70		1733	1.9	58		1329	-0.2	-6
	2320	-0.4	-12		2321	-0.1	-3		1931	1.8	55
9 W	0535	2.8	85	24 Th	0534	2.5	76	9 M	0108	0.3	9
	1203	-0.7	-21		1200	-0.3	-9		0735	2.4	73
	1806	2.1	64		1801	1.8	55		1416	0.0	0
	2352	-0.3	-9		2346	0.0	0		2021	1.8	55
10 Th	0611	2.7	82	25 F	0602	2.3	70	10 Tu	0203	0.5	15
	1246	-0.5	-15		1231	-0.1	-3		0826	2.2	67
	1845	1.8	55		1831	1.6	49		1505	0.2	6
11 F	0025	-0.1	-3	26 Sa	0013	0.2	6		2118	1.8	55
	0651	2.4	73		0634	2.2	67	11 W	0307	0.6	18
	1335	-0.2	-6		1308	0.0	0		0924	1.9	58
	1930	1.5	46		1906	1.4	43		1558	0.4	12
12 Sa	0101	0.2	6	27 Su	0043	0.4	12		2221	1.8	55
	0739	2.1	64		0712	2.0	61	12 Th	0426	0.7	21
	1440	0.1	3		1355	0.2	6		1034	1.7	52
	2032	1.2	37		1955	1.3	40		1656	0.5	15
13 Su	0149	0.5	15	28 M	0125	0.6	18		2326	1.9	58
	0849	1.8	55		0805	1.8	55	13 F	0552	0.7	21
	1622	0.3	9		1505	0.4	12		1151	1.6	49
	2231	1.1	34		2120	1.2	37		1755	0.5	15
14 M	0329	0.7	21	29 Tu	0240	0.7	21	14 Sa	0028	2.0	61
	1051	1.7	52		0928	1.7	52		0706	0.5	15
	1819	0.3	9		1646	0.5	15		1304	1.6	49
15 Tu	0045	1.2	37		2326	1.3	40		1852	0.5	15
	0612	0.7	21	30 W	0452	0.8	24	15 Su	0121	2.1	64
	1241	1.8	55		1115	1.7	52		0804	0.4	12
	1926	0.2	6		1813	0.4	12		1404	1.6	49
									1943	0.5	15
				15 Th	0042	1.7	52	30 F	0531	0.5	15
					0651	0.5	15		1137	1.8	55
					1258	1.8	55		1757	0.3	9
					1910	0.3	9	31 Sa	0027	2.0	61
									0648	0.3	9
									1252	1.9	58
									1856	0.3	9

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to mean lower low water which is the chart datum of soundings.

Wake Island, 2008

Times and Heights of High and Low Waters

July				August				September											
Time		Height		Time		Height		Time		Height		Time		Height					
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm
1 Tu	0148	2.5	76		16 W	0234	2.3	70		1 F	0337	2.9	88		16 Tu	0417	3.0	91	
	0839	0.0	0			0924	0.2	6			1016	-0.3	-9			1028	-0.2	-6	
	1443	1.8	55			1530	1.7	52			1618	2.2	67			1635	2.9	88	
	2017	0.4	12			2100	0.5	15			2159	0.1	3			2241	-0.3	-9	
2 W	0247	2.7	82		17 Th	0318	2.5	76		2 Sa	0421	3.1	94		17 W	0449	3.0	91	
	0934	-0.2	-6			1000	0.1	3			1053	-0.4	-12			1055	-0.2	-6	
	1538	1.9	58			1606	1.9	58			1654	2.4	73			1703	3.0	91	
	2112	0.3	9			2140	0.4	12			2241	0.0	0			2315	-0.3	-9	
3 Th	0339	2.9	88		18 F	0355	2.6	79		3 Su	0500	3.1	94		3 W	0539	2.8	85	
	1023	-0.4	-12			1032	-0.1	-3			1126	-0.4	-12			1146	-0.1	-3	
	1626	2.0	61			1638	2.0	61			1728	2.5	76			1753	2.8	85	
	2202	0.1	3			2216	0.3	9			2319	-0.1	-3			2351	-0.3	-9	
4 F	0427	3.0	91		19 Sa	0430	2.8	85		4 M	0536	3.0	91		4 Th	0002	0.0	0	
	1107	-0.4	-12			1103	-0.2	-6			1158	-0.3	-9			0607	2.6	79	
	1709	2.1	64			1708	2.2	67			1800	2.6	79			1209	0.0	0	
	2248	0.1	3			2249	0.2	6			2356	0.0	0			1819	2.7	82	
5 Sa	0512	3.0	91		20 Su	0502	2.8	85		5 Tu	0609	2.9	88		5 F	0032	0.1	3	
	1149	-0.4	-12			1132	-0.2	-6			1227	-0.2	-6			0633	2.3	70	
	1750	2.2	67			1737	2.2	67			1831	2.6	79			1232	0.2	6	
	2331	0.0	0			2322	0.1	3								1846	2.6	79	
6 Su	0554	3.0	91		21 M	0534	2.9	88		6 W	0031	0.1	3		6 Sa	0103	0.3	9	
	1227	-0.3	-9			1200	-0.2	-6			0640	2.6	79			0659	2.0	61	
	1828	2.2	67			1806	2.3	70			1254	0.0	0			1254	0.4	12	
						2355	0.1	3			1902	2.5	76			1914	2.4	73	
7 M	0014	0.1	3		22 Tu	0606	2.9	88		7 Th	0106	0.2	6		7 Su	0137	0.5	15	
	0634	2.8	85			1229	-0.1	-3			0711	2.4	73			0727	1.7	52	
	1303	-0.2	-6			1836	2.4	73			1320	0.2	6			1317	0.7	21	
	1906	2.2	67						1933		2.4	73		1907		2.6	79		
8 Tu	0056	0.2	6		23 W	0030	0.1	3		8 F	0142	0.4	12		8 M	0223	0.8	24	
	0712	2.6	79			0639	2.7	82			0741	2.1	64			0802	1.5	46	
	1338	0.0	0			1259	-0.1	-3			1346	0.4	12			1342	0.9	27	
	1945	2.2	67			1908	2.4	73			2007	2.3	70			2042	1.9	58	
9 W	0139	0.4	12		24 Th	0108	0.2	6		9 Sa	0224	0.6	18		9 Tu	0403	1.0	30	
	0750	2.3	70			0716	2.5	76			0814	1.8	55			0959	1.2	37	
	1413	0.2	6			1330	0.1	3			1415	0.6	18			1442	1.1	34	
	2025	2.1	64			1943	2.4	73			2049	2.1	64			2252	1.8	55	
10 Th	0226	0.5	15		25 F	0152	0.3	9		10 Su	0321	0.8	24		10 W	0718	0.9	27	
	0831	2.0	61			0757	2.3	70			0901	1.5	46			1353	1.4	43	
	1449	0.4	12			1405	0.3	9			1454	0.8	24			1835	1.1	34	
	2110	2.1	64			2026	2.3	70			2153	1.9	58						
11 F	0322	0.7	21		26 Sa	0247	0.4	12		11 M	0512	0.9	27		11 Th	0101	1.9	58	
	0919	1.7	52			0847	2.0	61			1106	1.3	40			0810	0.6	18	
	1531	0.6	18			1448	0.5	15			1622	1.0	30			1426	1.7	52	
	2205	2.0	61			2121	2.2	67			2344	1.9	58			1948	0.9	27	
12 Sa	0437	0.8	24		27 Su	0403	0.6	18		12 Tu	0735	0.8	24		12 F	0159	2.2	67	
	1027	1.5	46			0958	1.7	52			1352	1.4	43			0841	0.4	12	
	1627	0.7	21			1545	0.7	21			1848	1.0	30			1451	2.0	61	
	2314	2.0	61			2239	2.2	67								2029	0.6	18	
13 Su	0615	0.8	24		28 M	0550	0.6	18		13 W	0124	2.0	61		13 Sa	0239	2.5	76	
	1210	1.4	43			1148	1.5	46			0835	0.6	18			0909	0.1	3	
	1745	0.8	24			1716	0.8	24			1446	1.6	49			1517	2.2	67	
									2004		0.8	24		2104		0.3	9		
14 M	0032	2.0	61		29 Tu	0019	2.2	67		14 Th	0223	2.2	67		14 Su	0313	2.7	82	
	0743	0.6	18			0733	0.4	12			0912	0.3	9			0935	0.0	0	
	1345	1.4	43			1339	1.5	46			1519	1.8	55			1542	2.5	76	
	1907	0.8	24			1900	0.7	21			2051	0.6	18			2136	0.1	3	
15 Tu	0141	2.1	64		30 W	0144	2.4	73		15 F	0304	2.5	76		15 M	0345	2.9	88	
	0841	0.4	12			0843	0.1	3			0942	0.1	3			1001	-0.2	-6	
	1447	1.6	49			1449	1.7	52			1548	2.1	64			1608	2.7	82	
	2011	0.7	21			2016	0.6	18			2127	0.4	12			2208	-0.1	-3	
				31 Th	0247	2.7	82						31 Su	0405	3.0	91			
					0934	-0.1	-3							1026	-0.3	-9			
					1537	2.0	61							1628	2.6	79			
					2113	0.3	9							2226	-0.1	-3			

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to mean lower low water which is the chart datum of soundings.

Times and Heights of High and Low Waters

October								November								December							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm				
1 W	0443	2.7	82	16 Th	0427	2.7	82	1 Sa	0518	2.1	64	16 Su	0535	2.1	64	1 M	0544	1.9	58	16 Tu	0018	-0.5	-15
	1043	-0.1	-3		1022	-0.2	-6		1104	0.2	6		1113	0.0	0		1123	0.2	6		0618	2.0	61
	1651	3.0	91		1635	3.1	94		1718	2.7	82		1738	2.9	88		1740	2.5	76		1157	2.0	0
	2306	-0.2	-6		2258	-0.5	-15		2346	-0.1	-3										1823	2.8	85
2 Th	0511	2.6	79	17 F	0503	2.6	79	2 Su	0547	2.0	61	17 M	0020	-0.3	-9	2 Tu	0014	-0.1	-3	17 W	0102	-0.3	-9
	1107	0.0	0		1053	-0.1	-3		1130	0.3	9		0620	1.9	58		0617	1.8	55		0703	1.9	58
	1717	2.9	88		1708	3.1	94		1747	2.6	79		1154	0.2	6		1155	0.3	9		1243	0.1	3
	2335	-0.1	-3		2338	-0.4	-12						1823	2.7	82		1814	2.4	73		1908	2.5	76
3 F	0537	2.4	73	18 Sa	0540	2.4	73	3 M	0019	0.1	3	18 Tu	0111	-0.1	-3	3 W	0050	0.0	0	18 Th	0147	-0.1	-3
	1131	0.1	3		1125	0.0	0		0618	1.8	55		0709	1.7	52		0654	1.7	52		0750	1.8	55
	1743	2.8	85		1745	3.0	91		1158	0.4	12		1240	0.4	12		1231	0.4	12		1334	0.3	9
					1819	2.4	73		1915	2.5	76		1915	2.5	76		1851	2.3	70		1956	2.3	70
4 Sa	0004	0.0	0	19 Su	0020	-0.2	-6	4 Tu	0056	0.3	9	19 W	0209	0.1	3	4 Th	0129	0.2	6	19 F	0233	0.1	3
	0604	2.2	67		0620	2.1	64		0654	1.6	49		0809	1.6	49		0736	1.6	49		0842	1.8	55
	1154	0.3	9		1159	0.2	6		1229	0.6	18		1337	0.6	18		1313	0.6	18		1433	0.5	15
	1809	2.6	79		1825	2.8	85		1857	2.2	67		2017	2.2	67		1934	2.2	67		2050	2.0	61
5 Su	0033	0.2	6	20 M	0109	0.0	0	5 W	0142	0.5	15	20 Th	0317	0.3	9	5 F	0214	0.3	9	20 Sa	0323	0.3	9
	0630	1.9	58		0705	1.8	55		0743	1.5	46		0927	1.6	49		0828	1.6	49		0942	1.8	55
	1216	0.5	15		1237	0.4	12		1310	0.8	24		1459	0.8	24		1409	0.7	21		1547	0.6	18
	1838	2.4	73		1913	2.5	76		1948	2.0	61		2137	2.0	61		2027	2.0	61		2156	1.7	52
6 M	0107	0.4	12	21 Tu	0212	0.3	9	6 Th	0249	0.6	18	21 F	0435	0.4	12	6 Sa	0309	0.4	12	21 Su	0420	0.4	12
	0700	1.7	52		0806	1.5	46		0907	1.4	43		1057	1.6	49		0934	1.6	49		1052	1.8	55
	1240	0.7	21		1325	0.7	21		1425	1.0	30		1648	0.8	24		1525	0.7	21		1720	0.6	18
	1912	2.2	67		2019	2.2	67		2107	1.9	58		2310	1.9	58		2137	1.9	58		2320	1.5	46
7 Tu	0153	0.7	21	22 W	0344	0.5	15	7 F	0423	0.7	21	22 Sa	0547	0.5	15	7 Su	0413	0.4	12	22 M	0525	0.5	15
	0740	1.4	43		0952	1.4	43		1108	1.5	46		1212	1.8	55		1048	1.7	52		1203	1.9	58
	1309	0.9	27		1456	1.0	30		1633	1.0	30		1823	0.7	21		1657	0.7	21		1850	0.5	15
	2003	1.9	58		2208	2.0	61		2251	1.8	55						2301	1.8	55				
8 W	0320	0.9	27	23 Th	0536	0.6	18	8 Sa	0549	0.6	18	23 Su	0030	0.2	58	8 M	0522	0.4	12	23 Tu	0047	1.4	43
	0936	1.3	40		1203	1.5	46		1223	1.7	52		0643	0.4	12		1157	1.9	58		0631	0.5	15
	1417	1.1	34		1729	0.9	27		1811	0.8	24		1306	2.1	64		1821	0.5	15		1305	2.0	61
	2155	1.8	55								1927		0.4	12					1957		0.3	9	
9 Th	0605	0.8	24	24 F	0002	2.0	61	9 Su	0015	2.0	61	24 M	0130	1.9	58	9 Tu	0022	1.8	55	24 W	0156	1.5	46
	1258	1.4	43		0651	0.4	12		0646	0.4	12		0729	0.3	9		0626	0.4	12		0730	0.5	15
	1750	1.1	34		1310	1.8	55		1310	2.0	61		1348	2.3	70		1257	2.1	64		1357	2.1	64
					1901	0.7	21		1912	0.5	15		2016	0.2	6		1929	0.2	6		2046	0.1	3
10 F	0009	1.9	58	25 Sa	0114	2.2	67	10 M	0115	2.1	64	25 Tu	0217	1.9	58	10 W	0131	1.8	55	25 Th	0247	1.6	49
	0715	0.6	18		0739	0.3	9		0730	0.3	9		0808	0.2	6		0723	0.3	9		0820	0.4	12
	1339	1.7	52		1352	2.1	64		1348	2.3	70		1425	2.5	76		1349	2.4	73		1442	2.3	70
	1910	0.9	27		1955	0.4	12		2000	0.2	6		2055	0.0	0		2025	-0.1	-3		2126	0.0	0
11 Sa	0116	2.1	64	26 Su	0204	2.3	70	11 Tu	0204	2.3	70	26 W	0257	2.0	61	11 Th	0229	1.9	58	26 F	0329	1.7	52
	0753	0.4	12		0815	0.2	6		0808	0.1	3		0843	0.2	6		0814	0.2	6		0903	0.3	9
	1408	2.0	61		1426	2.4	73		1424	2.6	79		1459	2.6	79		1437	2.6	79		1521	2.4	73
	1956	0.5	15		2037	0.2	6		2044	-0.1	-3		2131	-0.1	-3		2116	-0.4	-12		2201	-0.2	-6
12 Su	0201	2.4	73	27 M	0243	2.4	73	12 W	0248	2.4	73	27 Th	0333	2.0	61	12 F	0320	2.0	61	27 Sa	0405	1.8	55
	0824	0.2	6		0847	0.1	3		0845	0.0	0		0917	0.1	3		0901	0.1	3		0941	0.2	6
	1435	2.3	70		1457	2.6	79		1500	2.8	85		1532	2.7	82		1523	2.8	85		1557	2.5	76
	2033	0.2	6		2113	0.0	0		2125	-0.4	-12		2204	-0.2	-6		2203	-0.5	-15		2234	-0.3	-9
13 M	0239	2.6	79	28 Tu	0318	2.4	73	13 Th	0330	2.4	73	28 F	0407	2.0	61	13 Sa	0407	2.0	61	28 Su	0439	1.8	55
	0853	0.0	0		0916	0.0	0		0921	-0.1	-3		0949	0.1	3		0945	0.0	0		1016	0.1	3
	1503	2.6	79		1526	2.8	85		1537	3.0	91		1604	2.7	82		1609	2.9	88		1631	2.5	76
	2109	-0.1	-3		2146	-0.2	-6		2207	-0.5	-15		2236	-0.2	-6		2249	-0.6	-18		2305	-0.3	-9
14 Tu	0315	2.7	82	29 W	0350	2.4	73	14 F	0412	2.4	73	29 Sa	0440	2.0	61	14 Su	0451	2.0	61	29 M	0510	1.9	58
	0923	-0.1	-3		0944	0.0	0		0958	-0.1	-3		1021	0.1	3		1029	-0.1	-3		1049	0.0	0
	1532	2.8	85		1554	2.9	88		1616	3.1	94		1636	2.7	82		1654	3.0	91		1703	2.6	79
	2145	-0.3	-9		2217	-0.2	-6		2250	-0.6	-18		2308	-0.2	-6		2334	-0.6	-18		2335	-0.3	-9
15 W	0351	2.8	85	30 Th	0420	2.4	73	15 Sa	0453	2.3	70	30 Su	0512	1.9	58	15 M	0535	2.0	61	30 Tu	0540	1.9	58
	0952	-0.2	-6		1011	0.0	0		1035	-0.1	-3		1052	0.2	6		1113	-0.1	-3		1121	0.0	0
	1603	3.0	91		1622	2.9	88		1656	3.0	91		1707	2.6	79		1738	2.9	88		1735	2.6	79
	2221	-0.4	-12		2246	-0.2	-6		2334	-0.5	-15		2341	-0.2	-6								
			31 F	0449	2.3	70										31 W	0005	-0.3	-9				
				1037	0.1	3											0610	1.9	58				
				1650	2.8	85											1153	0.1	3				
				2316	-0.2	-6											1806	2.5	76				

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

Kwajalein Atoll, Marshall Islands, 2008

Times and Heights of High and Low Waters

January					February					March																			
Time		Height			Time		Height			Time		Height			Time		Height												
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm										
1 Tu	0337	0.8	24		16 W	0301	0.4	12		1 F	0334	1.2	37		16 Sa	0502	1.2	37		1 Sa	0154	1.1	34		16 Su	0019	1.8	55	
	1016	2.7	82			0933	3.2	98			1135	2.6	79			1239	3.1	94			0928	2.5	76			0514	1.4	43	
	1623	1.4	43			1549	1.0	30			1942	1.4	43			2006	0.8	24			2000	1.5	46			1241	3.0	91	
	2207	2.4	73			2143	2.7	82													2002	0.7	21						
2 W	0439	1.0	30		17 Th	0405	0.7	21		2 Sa	0100	1.8	55		17 Su	0205	2.2	67		2 Su	0118	1.6	49		17 M	0211	2.3	70	
	1142	2.8	85			1102	3.2	98			0618	1.3	40			0728	1.0	30			0347	1.5	46			0736	1.1	34	
	1819	1.4	43			1750	1.1	34			1338	2.8	85			1409	3.6	110			1307	2.6	79			1403	3.4	104	
	2349	2.2	67			2335	2.3	70			2046	0.9	27			2101	0.3	9			2034	1.0	30			2045	0.3	9	
3 Th	0600	1.0	30		18 F	0541	0.9	27		3 Su	0234	2.1	64		18 M	0300	2.7	82		3 M	0231	2.1	64		18 Tu	0250	2.9	88	
	1301	3.0	91			1245	3.4	104			0758	1.0	30			0836	0.5	15			0744	1.2	37			0832	0.5	15	
	1949	1.1	34			1944	0.7	21			1435	3.3	101			1502	4.1	125			1414	3.1	94			1449	3.9	119	
											2119	0.5	15			2138	-0.2	-6			2057	0.5	15			2116	-0.1	-3	
4 F	0126	2.2	67		19 Sa	0134	2.4	73		4 M	0312	2.5	76		19 Tu	0337	3.2	98		4 Tu	0255	2.6	79		19 W	0320	3.4	104	
	0713	0.9	27			0718	0.7	21			0848	0.6	18			0922	0.0	0			0832	0.7	21			0911	0.1	3	
	1359	3.3	101			1403	3.8	116			1513	3.8	116			1542	4.5	137			1451	3.7	113			1524	4.3	131	
	2042	0.7	21			2052	0.2	6			2146	0.0	0			2209	-0.6	-18			2121	0.1	3			2143	-0.4	-12	
5 Sa	0228	2.4	73		20 Su	0247	2.7	82		5 Tu	0342	2.9	88		20 W	0409	3.6	110		5 W	0320	3.1	94		20 Th	0347	3.8	116	
	0809	0.7	21			0828	0.4	12			0925	0.2	6			0959	-0.3	-9			0907	0.2	6			0943	-0.3	-9	
	1443	3.6	110			1500	4.3	131			1546	4.2	128			1616	4.8	146			1523	4.2	128			1554	4.5	137	
	2121	0.3	9			2140	-0.3	-9			2214	-0.3	-9			2238	-0.8	-24			2146	-0.4	-12			2208	-0.6	-18	
6 Su	0311	2.7	82		21 M	0337	3.1	94		6 W	0410	3.4	104		21 Th	0438	4.0	122		6 Th	0346	3.6	110		21 F	0413	4.2	128	
	0853	0.4	12			0920	0.0	0			0958	-0.2	-6			1032	-0.6	-18			0939	-0.3	-9			1013	-0.5	-15	
	1521	3.9	119			1546	4.6	140			1617	4.6	140			1647	4.9	149			1553	4.6	140			1621	4.6	140	
	2155	0.0	0			2220	-0.6	-18			2241	-0.6	-18			2305	-0.9	-27			2212	-0.7	-21			2231	-0.7	-21	
7 M	0348	2.9	88		22 Tu	0418	3.4	104		7 Th	0439	3.7	113		22 F	0506	4.2	128		7 F	0414	4.1	125		22 Sa	0438	4.4	134	
	0931	0.1	3			1004	-0.3	-9			1030	-0.5	-15			1103	-0.7	-21			1011	-0.6	-18			1042	-0.6	-18	
	1556	4.2	128			1627	4.9	149			1647	4.9	149			1715	4.9	149			1624	4.9	149			1647	4.5	137	
	2226	-0.3	-9			2256	-0.8	-24			2308	-0.8	-24			2330	-0.9	-27			2239	-1.0	-30			2254	-0.8	-24	
8 Tu	0421	3.2	98		23 W	0454	3.7	113		8 F	0508	4.0	122		23 Sa	0533	4.3	131		8 Sa	0443	4.5	137		23 Su	0502	4.6	140	
	1006	-0.1	-3			1043	-0.5	-15			1101	-0.7	-21			1132	-0.6	-18			1044	-0.9	-27			1109	-0.7	-21	
	1629	4.5	137			1704	5.0	152			1717	5.0	152			1741	4.7	143			1654	5.0	152			1712	4.3	131	
	2257	-0.5	-15			2329	-0.9	-27			2336	-0.9	-27			2353	-0.7	-21			2307	-1.1	-34			2316	-0.7	-21	
9 W	0452	3.4	104		24 Th	0528	3.8	116		9 Sa	0537	4.2	128		24 Su	0558	4.3	131		9 Su	0513	4.7	143		24 M	0526	4.6	140	
	1039	-0.3	-9			1119	-0.6	-18			1134	-0.7	-21			1200	-0.5	-15			1118	-1.0	-30			1136	-0.6	-18	
	1700	4.6	140			1737	4.9	149			1747	5.0	152			1806	4.4	134			1726	4.9	149			1736	4.1	125	
	2327	-0.6	-18																		2336	-1.0	-30			2337	-0.5	-15	
10 Th	0523	3.5	107		25 F	0000	-0.8	-24		10 Su	0005	-0.9	-27		25 M	0015	-0.6	-18		10 M	0545	4.8	146		25 Tu	0550	4.4	134	
	1112	-0.3	-9			0600	3.9	119			0608	4.3	131			0623	4.2	128			1153	-0.9	-27			1202	-0.4	-12	
	1732	4.7	143			1153	-0.5	-15			1207	-0.6	-18			1227	-0.2	-6			1758	4.6	140			1759	3.7	113	
	2357	-0.6	-18			1808	4.7	143			1818	4.8	146			1829	4.0	122				2358	-0.3	-9					
11 F	0555	3.6	110		26 Sa	0029	-0.6	-18		11 M	0034	-0.8	-24		26 Tu	0036	-0.3	-9		11 Tu	0005	-0.9	-27		26 W	0614	4.2	128	
	1145	-0.3	-9			0630	3.8	116			0641	4.3	131			0648	4.0	122			0618	4.7	143			1229	-0.1	-3	
	1804	4.7	143			1225	-0.3	-9			1243	-0.4	-12			1254	0.1	3			1229	-0.6	-18			1822	3.3	101	
						1837	4.4	134			1850	4.3	131			1851	3.5	107			1831	4.1	125						
12 Sa	0029	-0.5	-15		27 Su	0055	-0.4	-12		12 Tu	0104	-0.5	-15		27 W	0056	0.0	0		12 W	0034	-0.5	-15		27 Th	0018	0.0	0	
	0628	3.6	110			0700	3.7	113			0716	4.1	125			0712	3.7	113			0652	4.4	134			0638	3.9	119	
	1219	-0.2	-6			1256	0.0	0			1322	0.0	0			1322	0.5	15			1309	-0.2	-6			1256	0.3	9	
	1837	4.6	140			1904	4.0	122			1924	3.8	116			1912	3.0	91			1905	3.5	107			1845	2.9	88	
13 Su	0101	-0.4	-12		28 M	0121	-0.1	-3		13 W	0135	-0.1	-3		28 Th	0115	0.3	9		13 Th	0105	-0.1	-3		28 F	0039	0.3	9	
	0703	3.6	110			0729	3.5	107			0756	3.8	116			0739	3.3	101			0732	4.0	122			0705	3.5	107	
	1256	0.0	0			1327	0.4	12			1409	0.5	15			1354	0.9	27			1357	0.4	12			1328	0.7	21	
	1911	4.3	131			1930	3.5	107			2003	3.1	94			1933	2.5	76			1944	2.8	85			1910	2.5	76	
14 M	0136	-0.2	-6		29 Tu	0145	0.2	6		14 Th	0212	0.3	9		29 F	0134	0.7	21		14 F	0139	0.5	15		29 Sa	0101	0.7	21	
	0743	3.5	107			0801	3.3	101			0848	3.4	104			0814	2.9	88			0821	3.5	107			0739	3.1	94	
	1339	0.3	9			1401	0.8	24			1516	1.0	30			1441	1.3	40			1508	1.0	30			1415	1.1	34	
	1950	3.8	116																										

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings which is one-half foot below mean low water springs.

Kwajalein Atoll, Marshall Islands, 2008

Times and Heights of High and Low Waters

April								May								June							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm				
1 Tu	0139	2.1	64	16 W	0217	3.0	91	1 Th	0111	2.8	85	16 F	0207	3.5	107	1 Su	0156	4.0	122	16 M	0242	3.8	116
	0657	1.3	40		0809	0.6	18		0703	0.9	27		0818	0.5	15		0818	0.1	3		0914	0.3	9
	1324	3.0	91		1418	3.6	110		1314	3.4	104		1414	3.2	98		1417	3.4	104		1504	2.8	85
	2007	0.6	18		2038	0.1	3		1939	0.2	6		2019	0.2	6		2017	-0.2	-6		2050	0.3	9
2 W	0212	2.7	82	17 Th	0248	3.5	107	2 F	0154	3.4	104	17 Sa	0240	3.8	116	2 M	0243	4.5	137	17 Tu	0318	4.0	122
	0755	0.8	24		0848	0.2	6		0757	0.4	12		0855	0.2	6		0910	-0.3	-9		0950	0.1	3
	1410	3.6	110		1453	3.8	116		1403	3.8	116		1450	3.3	101		1508	3.5	107		1542	2.9	88
	2036	0.1	3		2105	-0.2	-6		2018	-0.2	-6		2049	0.0	0		2103	-0.3	-9		2127	0.2	6
3 Th	0242	3.3	101	18 F	0316	3.9	119	3 Sa	0233	4.0	122	18 Su	0309	4.1	125	3 Tu	0328	4.8	146	18 W	0353	4.1	125
	0835	0.2	6		0842	-0.1	-3		0929	0.0	0		0929	0.0	0		0958	-0.7	-21		1024	-0.1	-3
	1447	4.1	125		1447	4.0	122		1523	3.4	104		1523	3.4	104		1557	3.6	110		1617	3.0	91
	2105	-0.3	-9		2054	-0.5	-15		2118	-0.1	-3		2118	-0.1	-3		2148	-0.5	-15		2203	0.0	0
4 F	0312	3.9	119	19 Sa	0341	4.2	128	4 Su	0310	4.5	137	19 M	0338	4.3	131	4 W	0413	5.0	152	19 Th	0426	4.2	128
	0912	-0.3	-9		0925	-0.8	-18		1000	-0.2	-6		1045	-0.8	-24		1057	-0.3	-9				
	1521	4.5	137		1528	4.2	128		1555	3.4	104		1643	3.6	110		1651	3.1	94				
	2135	-0.7	-21		2131	-0.7	-21		2147	-0.2	-6		●	2232	-0.5		-15	○	2237		0.0	0	
5 Sa	0343	4.4	134	20 Su	0407	4.5	137	5 M	0348	4.9	149	20 Tu	0407	4.4	134	5 Th	0458	5.0	152	20 F	0500	4.3	131
	0948	-0.7	-21		1008	-0.8	-24		1032	-0.3	-9		1131	-0.8	-24		1129	-0.3	-9				
	1555	4.7	143		1609	4.1	125		1626	3.3	101		1729	3.5	107		1724	3.1	94				
	2205	-0.9	-27		2207	-0.8	-24		○	2216	-0.2		-6	○	2216		-0.2	-6	2316		-0.4	-12	2310	0.0	0
6 Su	0415	4.8	146	21 M	0432	4.6	140	6 Tu	0426	5.1	155	21 W	0437	4.4	134	6 F	0543	4.9	149	21 Sa	0533	4.3	131
	1024	-1.0	-30		1050	-1.0	-30		1103	-0.3	-9		1218	-0.6	-18		1202	-0.3	-9				
	1630	4.7	143		1650	4.0	122		1657	3.2	98		1815	3.3	101		1757	3.2	98				
	●	2236	-1.0		-30	●	2244		-0.7	-21	2245		-0.1	-3					2343		0.0	0	
7 M	0448	5.1	155	22 Tu	0457	4.6	140	7 W	0506	5.1	155	22 Th	0507	4.3	131	7 Sa	0001	-0.2	-6	22 Su	0606	4.3	131
	1102	-1.0	-30		1133	-0.9	-27		1134	-0.3	-9		0628	4.6	140		1235	-0.2	-6				
	1705	4.5	137		1731	3.7	113		1728	3.1	94		1304	-0.4	-12		1832	3.1	94				
	2307	-1.0	-30		2323	-0.5	-15		2315	0.0	0		1902	3.1	94								
8 Tu	0522	5.1	155	23 W	0523	4.4	134	8 Th	0547	4.9	149	23 F	0538	4.2	128	8 Su	0047	0.1	3	23 M	0018	0.2	6
	1140	-0.9	-27		1219	-0.6	-18		1207	-0.1	-3		0715	4.2	128		0640	4.2	128				
	1741	4.2	128		1815	3.3	101		1801	3.0	91		1353	0.0	0		1310	-0.1	-3				
	2340	-0.7	-21				2346		0.2	6				1953	2.9		88	1909	3.1		94		
9 W	0558	4.9	149	24 Th	0550	4.2	128	9 F	0003	-0.2	-6	24 Sa	0611	4.0	122	9 M	0137	0.5	15	24 Tu	0056	0.3	9
	1221	-0.6	-18		0631	4.5	137		1243	0.1	3		0804	3.8	116		0717	4.0	122				
	1818	3.7	113		1308	-0.2	-6		1836	2.8	85		1445	0.3	9		1348	0.1	3				
					1902	2.9	88				2051		2.8	85	1951		3.1	94					
10 Th	0013	-0.4	-12	25 F	0618	3.9	119	10 Sa	0046	0.2	6	25 Su	0020	0.4	12	10 Tu	0235	0.8	24	25 W	0139	0.5	15
	0637	4.5	137		0720	4.1	125		0648	3.8	116		0859	3.4	104		0758	3.8	116				
	1305	-0.2	-6		1404	0.2	6		1323	0.3	9		1541	0.6	18		1430	0.2	6				
	1858	3.1	94		2000	2.6	79		1917	2.7	82		2159	2.7	82		2042	3.1	94				
11 F	0048	0.1	3	26 Sa	0022	0.4	12	11 Su	0138	0.7	21	26 M	0059	0.6	18	11 W	0348	1.1	34	26 Th	0234	0.8	24
	0720	4.0	122		0819	3.6	110		0730	3.6	110		1003	3.0	91		0848	3.4	104				
	1359	0.4	12		1516	0.6	18		1411	0.5	15		1642	0.7	21		1521	0.4	12				
	1946	2.5	76		2120	2.3	70		2010	2.5	76		●	2314	2.8		85	2144	3.1		94		
12 Sa	0129	0.6	18	27 Su	0053	0.7	21	12 M	0253	1.1	34	27 Tu	0150	0.9	27	12 Th	0517	1.2	37	27 F	0346	0.9	27
	0817	3.5	107		0939	3.2	98		0823	3.4	104		1116	2.7	82		0953	3.1	94				
	1520	0.9	27		1647	0.8	24		1511	0.7	21		1745	0.8	24		1622	0.5	15				
	2109	2.0	61		●	2309	2.4		73	2120	2.5		76				●	2300	3.2		98		
13 Su	0236	1.2	37	28 M	0140	1.1	34	13 Tu	0445	1.3	40	28 W	0302	1.1	34	13 F	0024	3.0	91	28 Sa	0519	1.0	30
	0956	3.0	91		1116	3.0	91		0932	3.2	98		0641	1.1	34		1116	2.8	85				
	●	1744	1.0		30	1809	0.7		21	1623	0.7		21	1230	2.6		79	1734	0.5		15		
					2155	2.0	61		●	2245	2.7		82	1841	0.7		21						
14 M	0010	2.0	61	29 Tu	0322	1.4	43	14 W	0035	2.7	82	29 Th	0437	1.1	34	14 Sa	0119	3.3	101	29 Su	0018	3.5	107
	0523	1.4	43		0626	1.1	34		1054	3.1	94		0746	0.9	27		0652	0.7	21				
	1214	3.0	91		1236	3.0	91		1734	0.6	18		1332	2.6	79		1245	2.7	82				
	1919	0.7	21		1906	0.6	18				1929		0.6	18	1847		0.4	12					
15 Tu	0136	2.5	76	30 W	0007	2.3	70	15 Th	0128	3.1	94	30 F	0003	3.0	91	15 Su	0203	3.5	107	30 M	0128	3.8	116
	0714	1.1	34		0543	1.3	40		0607	0.9	27		0834	0.6	18		0807	0.3	9				
	1331	3.3	101		1210	3.0	91		1213	3.2	98		1422	2.7	82		1402	2.9	88				
	2006	0.4	12		1853	0.6	18		1836	0.4	12		2011	0.5	15		1953	0.2	6				

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings which is one-half foot below mean low water springs.

Kwajalein Atoll, Marshall Islands, 2008

Times and Heights of High and Low Waters

July					August					September																			
Time		Height			Time		Height			Time		Height			Time		Height												
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm										
1 Tu	0228	4.3	131		16 W	0308	3.7	113		1 F	0404	4.8	146		16 Sa	0401	4.4	134		1 M	0455	4.9	149		16 Tu	0431	4.8	146	
	0907	-0.1	-3			0944	0.1	3			1034	-0.8	-24			1023	-0.5	-15			1108	-0.9	-27			1042	-1.0	-30	
	1503	3.1	94			1538	2.8	85			1633	3.7	113			1622	3.7	113			1713	4.4	134			1649	4.7	143	
	2050	0.0	0			2120	0.3	9			2223	-0.5	-15			2214	-0.4	-12			2315	-0.7	-21			2255	-0.9	-27	
2 W	0320	4.6	140		17 Th	0344	4.0	122		2 Sa	0443	5.0	152		17 Su	0429	4.7	143		2 Tu	0523	4.7	143		17 W	0501	4.7	143	
	0957	-0.5	-15			1016	-0.1	-3			1109	-0.9	-27			1049	-0.7	-21			1134	-0.8	-24			1109	-1.0	-30	
	1555	3.3	101			1611	3.1	94			1709	3.9	119			1650	4.0	122			1741	4.4	134			1719	4.8	146	
	2141	-0.2	-6			2156	0.1	3			2302	-0.6	-18			2244	-0.5	-15			2345	-0.5	-15			2328	-0.8	-24	
3 Th	0408	4.9	149		18 F	0418	4.3	131		3 Su	0520	5.0	152		18 M	0458	4.8	146		3 W	0550	4.3	131		18 Th	0532	4.5	137	
	1043	-0.7	-21			1046	-0.3	-9			1142	-0.8	-24			1115	-0.8	-24			1157	-0.5	-15			1137	-0.8	-24	
	1641	3.5	107			1642	3.3	101			1743	4.0	122			1718	4.2	128			1807	4.3	131			1751	4.7	143	
	2228	-0.4	-12			2230	-0.1	-3			2338	-0.6	-18			2315	-0.6	-18											
4 F	0453	5.0	152		19 Sa	0450	4.5	137		4 M	0553	4.8	146		19 Tu	0527	4.8	146		4 Th	0014	-0.3	-9		19 F	0004	-0.6	-18	
	1126	-0.8	-24			1115	-0.5	-15			1213	-0.7	-21			1142	-0.8	-24			0615	3.9	119			0605	4.0	122	
	1724	3.6	110			1713	3.5	107			1815	4.0	122			1747	4.3	131			1219	-0.3	-9			1206	-0.5	-15	
	2312	-0.4	-12			2302	-0.2	-6								2347	-0.6	-18			1833	4.1	125			1825	4.5	137	
5 Sa	0536	5.0	152		20 Su	0520	4.6	140		5 Tu	0013	-0.4	-12		20 W	0556	4.6	140		5 F	0043	0.1	3		20 Sa	0043	-0.2	-6	
	1207	-0.7	-21			1144	-0.5	-15			0625	4.5	137			1210	-0.7	-21			0638	3.4	104			0639	3.5	107	
	1805	3.6	110			1743	3.6	110			1241	-0.5	-15			1818	4.3	131			1239	0.1	3			1237	-0.1	-3	
	2355	-0.3	-9			2333	-0.3	-9			1847	3.9	119								1859	3.7	113			1903	4.1	125	
6 Su	0617	4.8	146		21 M	0550	4.6	140		6 W	0046	-0.1	-3		21 Th	0021	-0.4	-12		6 Sa	0113	0.5	15		21 Su	0129	0.3	9	
	1245	-0.5	-15			1213	-0.5	-15			0654	4.0	122			0627	4.3	131			0701	2.9	88			0718	2.8	85	
	1845	3.5	107			1813	3.7	113			1308	-0.2	-6			1238	-0.5	-15			1259	0.4	12			1311	0.4	12	
						1918	3.7	113			1851	4.2	128			1851	4.2	128			1926	3.3	101			1951	3.6	110	
7 M	0036	-0.1	-3		22 Tu	0006	-0.2	-6		7 Th	0120	0.3	9		22 F	0059	-0.1	-3		7 Su	0147	0.9	27		22 M	0235	0.8	24	
	0655	4.4	134			0621	4.5	137			0721	3.5	107			0700	3.8	116			0723	2.4	73			0815	2.2	67	
	1322	-0.3	-9			1243	-0.4	-12			1333	0.2	6			1309	-0.2	-6			1318	0.8	24			1357	0.9	27	
	1925	3.4	104			1846	3.7	113			1950	3.5	107			1928	3.9	119			2002	2.9	88			2111	3.1	94	
8 Tu	0117	0.2	6		23 W	0040	-0.1	-3		8 F	0156	0.7	21		23 Sa	0143	0.3	9		8 M	0243	1.3	40		23 Tu	0459	1.1	34	
	0733	4.0	122			0653	4.3	131			0748	3.0	91			0738	3.2	98			0749	1.9	58			1107	1.8	55	
	1358	0.0	0			1314	-0.3	-9			1358	0.5	15			1343	0.2	6			1336	1.2	37			1612	1.4	43	
	2006	3.3	101			1922	3.7	113			2026	3.1	94			2015	3.6	110			2123	2.5	76			2347	3.0	91	
9 W	0200	0.6	18		24 Th	0119	0.2	6		9 Sa	0240	1.1	34		24 Su	0242	0.8	24		9 Tu	0719	1.4	43		24 W	0718	0.7	21	
	0810	3.5	107			0728	3.9	119			0819	2.5	76			0827	2.5	76			1400	1.7	52			1333	2.3	70	
	1435	0.4	12			1348	-0.1	-3			1427	0.9	27			1429	0.7	21			1656	1.6	49			1856	1.1	34	
	2051	3.1	94			2003	3.6	110			2118	2.8	85			2127	3.2	98											
10 Th	0249	0.9	27		25 F	0206	0.5	15		10 Su	0400	1.4	43		25 M	0434	1.1	34		10 W	0052	2.6	79		25 Th	0124	3.4	104	
	0850	3.0	91			0810	3.4	104			0910	2.0	61			1014	2.0	61			0812	1.0	30			0810	0.3	9	
	1514	0.7	21			1428	0.2	6			1515	1.2	37			1602	1.1	34			1417	2.1	64			1418	2.9	88	
	2145	2.9	88			2055	3.4	104			2304	2.6	79			2338	3.1	94			1934	1.2	37			2001	0.6	18	
11 F	0355	1.2	37		26 Sa	0308	0.8	24		11 M	0711	1.4	43		26 Tu	0713	0.9	27		11 Th	0157	3.1	94		26 F	0217	3.9	119	
	0942	2.5	76			0903	2.9	88			1242	1.7	52			1316	2.1	64			0837	0.5	15			0846	-0.1	-3	
	1604	0.9	27			1521	0.5	15			1751	1.4	43			1839	1.1	34			1439	2.6	79			1452	3.4	104	
	2257	2.9	88			2207	3.3	101													2018	0.7	21			2044	0.1	3	
12 Sa	0532	1.4	43		27 Su	0444	1.0	30		12 Tu	0114	2.8	85		27 W	0127	3.4	104		12 F	0233	3.6	110		27 Sa	0256	4.2	128	
	1104	2.2	67			1031	2.4	73			0828	0.9	27			0824	0.3	9			0900	0.1	3			0915	-0.4	-12	
	1714	1.0	30			1640	0.8	24			1421	2.1	64			1426	2.6	79			1502	3.1	94			1522	3.9	119	
						2345	3.3	101			1942	1.1	34			2002	0.6	18			2050	0.3	9			2120	-0.3	-9	
13 Su	0021	2.9	88		28 M	0648	0.9	27		13 W	0217	3.2	98		28 Th	0229	4.0	122		13 Sa	0304	4.1	125		28 Su	0329	4.5	137	
	0718	1.2	37			1238	2.3	70			0902	0.5	15			0907	-0.1	-3			0925	-0.3	-9			0943	-0.7	-21	
	1253	2.1	64			1825	0.8	24			1458	2.5	76			1508	3.1	94			1527	3.6	110			1549	4.3	131	
	1838	1.0	30								2034	0.7	21			2053	0.1	3			2121	-0.2	-6			2152	-0.5	-15	
14 M	0133	3.1	94		29 Tu	0119	3.6	110		14 Th	0257	3.6	110		29 F	0313	4.4	134		14 Su	0333	4.4	134		29 M	0359	4.5	137	
	0825	0.8	24			0815	0.4	12			0930	0.1	3			0941	-0.5	-15			0949	-0.6	-18			1008	-0.8	-24	
	1411	2.3	70			1411	2.5	76			1528	2.9	88			1543	3.6	110			1553	4.1	125			1616	4.6	140	
	1947	0.9	27			1951	0.5	15			2111	0.3	9			2134	-0.3	-9			2151	-0.5	-15			2222	-0.7	-21	
15 Tu	0226	3.4	104		30 W	0227	4.0	122		15 F	0330	4.0	122		30 Sa	0351	4.7	143		15 M	0401	4.7	143		30 Tu	0426	4.5	137	
	0909	0.5	15			0911	-0.1	-3			0957	-0.2	-6			1013	-0.8	-24			1015	-0.8	-24			1032	-0.8	-24	
	1500	2.5	76			1509	2.9	88			1555	3.3	101			1615	4.0	122			1620	4.4	134			1642	4.7	143	
	2039	0.6	18			2052	0.1	3			2144	-0.1	-3			2210	-0.6	-18			2222	-0.8	-24			2251	-0.7	-21	
				31 Th	0319	4.5	137						31 Su	0424	4.9	149													
					0955	-0.5	-15																						
					1554	3.3	101																						
					2141	-0.2	-6																						

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings which is one-half foot below mean low water springs.

Kwajalein Atoll, Marshall Islands, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height			Time	Height			Time	Height		
	h	m	ft		h	m	ft		h	m	ft
1 W	0453	4.3	131	16 Th	0439	4.4	134	1 M	0548	3.0	91
	1055	-0.7	-21		1039	-0.9	-27		1133	0.1	3
	1707	4.7	143		1656	5.1	155		1758	4.1	125
	2320	-0.6	-18		2315	-0.9	-27				
2 Th	0518	4.0	122	17 F	0514	4.1	125	2 Tu	0028	0.0	0
	1117	-0.5	-15		1111	-0.8	-24		0621	2.9	88
	1732	4.5	137		1731	5.0	152		1205	0.3	9
	2347	-0.4	-12		2354	-0.7	-21		1831	3.9	119
3 F	0543	3.6	110	18 Sa	0551	3.7	113	3 W	0105	0.2	6
	1139	-0.3	-9		1144	-0.4	-12		0658	2.7	82
	1757	4.2	128		1809	4.7	143		1240	0.5	15
									1909	3.7	113
4 Sa	0015	-0.1	-3	19 Su	0038	-0.3	-9	4 Th	0147	0.4	12
	0607	3.2	98		0631	3.1	94		0743	2.6	79
	1200	0.0	0		1220	0.0	0		1323	0.8	24
	1822	3.9	119		1852	4.2	128		1953	3.4	104
5 Su	0044	0.3	9	20 M	0130	0.2	6	5 F	0238	0.6	18
	0631	2.8	85		0719	2.6	79		0844	2.5	76
	1220	0.4	12		1301	0.5	15		1422	1.1	34
	1849	3.5	107		1946	3.6	110		2051	3.2	98
6 M	0118	0.7	21	21 Tu	0245	0.7	21	6 Sa	0342	0.7	21
	0657	2.3	70		0834	2.1	64		1005	2.6	79
	1241	0.8	24		1402	1.1	34		1551	1.3	40
	1924	3.0	91		2113	3.1	94		2209	3.0	91
7 Tu	0210	1.1	34	22 W	0453	0.9	27	7 Su	0456	0.7	21
	0733	1.9	58		1119	2.0	61		1131	2.8	85
	1304	1.2	37		1630	1.4	43		1734	1.2	37
	2029	2.6	79		2327	3.0	91		2336	2.9	88
8 W	0505	1.4	43	23 Th	0641	0.7	21	8 M	0605	0.6	18
	1210	1.7	52		1303	2.5	76		1240	3.3	101
	1516	1.6	49		1839	1.1	34		1856	0.8	24
	2342	2.5	76								
9 Th	0714	1.0	30	24 F	0056	3.3	101	9 Tu	0052	3.0	91
	1333	2.2	67		0735	0.3	9		0703	0.3	9
	1851	1.4	43		1350	3.1	94		1335	3.8	116
					1942	0.7	21		1959	0.3	9
10 F	0109	3.0	91	25 Sa	0150	3.6	110	10 W	0154	3.2	98
	0749	0.6	18		0811	0.0	0		0754	0.0	0
	1359	2.7	82		1425	3.6	110		1423	4.3	131
	1942	0.9	27		2025	0.3	9		2051	-0.2	-6
11 Sa	0152	3.5	107	26 Su	0229	3.8	116	11 Th	0247	3.4	104
	0816	0.2	6		0841	-0.2	-6		0841	-0.2	-6
	1425	3.3	101		1454	4.0	122		1509	4.7	143
	2018	0.3	9		2101	-0.1	-3		2139	-0.6	-18
12 Su	0226	3.9	119	27 M	0302	3.9	119	12 F	0336	3.5	107
	0843	-0.2	-6		0908	-0.4	-12		0927	-0.5	-15
	1452	3.9	119		1522	4.3	131		1553	5.0	152
	2052	-0.1	-3		2133	-0.3	-9		2225	-0.8	-24
13 M	0259	4.3	131	28 Tu	0332	4.0	122	13 Sa	0422	3.6	110
	0911	-0.6	-18		0934	-0.5	-15		1011	-0.6	-18
	1521	4.4	134		1549	4.6	140		1637	5.2	158
	2126	-0.5	-15		2203	-0.5	-15		2309	-0.9	-27
14 Tu	0331	4.5	137	29 W	0400	3.9	119	14 Su	0506	3.6	110
	0939	-0.8	-24		0958	-0.5	-15		1054	-0.6	-18
	1551	4.8	146		1615	4.7	143		1721	5.1	155
	2201	-0.8	-24		2232	-0.5	-15		2354	-0.8	-24
15 W	0405	4.5	137	30 Th	0428	3.8	116	15 M	0551	3.5	107
	1009	-1.0	-30		1023	-0.5	-15		1138	-0.4	-12
	1623	5.0	152		1641	4.6	140		1805	4.9	149
	2237	-1.0	-30		2301	-0.5	-15				
				31 F	0455	3.6	110	31 W	0019	-0.3	-9
					1048	-0.4	-12		0615	3.3	101
					1707	4.5	137		1203	0.0	0
					2330	-0.3	-9		1823	4.3	131

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings which is one-half foot below mean low water springs.

Sand Island, Midway Islands, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	h m	ft	h m	ft	h m	ft	h m	ft	h m	ft
1 Tu	0510 0.6 18 1013 1.0 30 1709 0.1 3	16 W	0434 0.7 21 0928 1.1 34 1634 -0.1 -3	1 F	0048 1.3 40 0644 0.8 24 1031 1.0 30 1747 0.1 3	16 Sa	0042 1.4 43 0644 0.8 24 1046 1.0 30 1808 -0.1 -3	1 Sa	0553 0.7 21 0955 0.9 27 1702 0.1 3	16 Su	0012 1.2 37 0624 0.6 18 1103 0.8 24 1756 0.0 0
2 W	0036 1.2 37 0623 0.7 21 1047 1.0 30 1750 0.1 3	17 Th	0000 1.4 43 0549 0.8 24 1006 1.1 34 1727 -0.1 -3	2 Sa	0149 1.3 40 0757 0.8 24 1116 0.9 27 1840 0.1 3	17 Su	0149 1.4 43 0803 0.8 24 1204 1.0 30 1915 0.0 0	2 Su	0058 1.2 37 0702 0.7 21 1047 0.9 27 1759 0.1 3	17 M	0115 1.2 37 0736 0.5 15 1232 0.8 24 1908 0.1 3
3 Th	0135 1.3 40 0739 0.8 24 1124 0.9 27 1835 0.1 3	18 F	0107 1.4 43 0710 0.9 27 1056 1.0 30 1825 -0.2 -6	3 Su	0247 1.3 40 0907 0.8 24 1214 0.9 27 1935 0.1 3	18 M	0250 1.4 43 0912 0.7 21 1333 0.9 27 2022 0.0 0	3 M	0158 1.2 37 0810 0.7 21 1157 0.8 24 1901 0.1 3	18 Tu	0213 1.1 34 0839 0.4 12 1402 0.9 27 2019 0.1 3
4 F	0231 1.3 40 0850 0.8 24 1208 0.9 27 1921 0.1 3	19 Sa	0212 1.5 46 0830 0.9 27 1201 1.0 30 1926 -0.1 -3	4 M	0338 1.4 43 1004 0.8 24 1325 0.9 27 2029 0.1 3	19 Tu	0343 1.4 43 1007 0.6 18 1459 1.0 30 2125 0.1 3	4 Tu	0250 1.2 37 0905 0.6 18 1320 0.8 24 2004 0.1 3	19 W	0304 1.1 34 0929 0.3 9 1519 0.9 27 2125 0.2 6
5 Sa	0322 1.4 43 0953 0.7 21 1300 0.8 24 2009 0.0 0	20 Su	0312 1.5 46 0939 0.8 24 1319 1.0 30 2028 -0.1 -3	5 Tu	0421 1.4 43 1046 0.7 21 1438 0.9 27 2121 0.1 3	20 W	0428 1.3 40 1052 0.5 15 1612 1.0 30 2224 0.1 3	5 W	0333 1.2 37 0946 0.5 15 1439 0.9 27 2107 0.2 6	20 Th	0349 1.0 30 1010 0.2 6 1621 1.0 30 2225 0.2 6
6 Su	0409 1.4 43 1044 0.7 21 1355 0.8 24 2056 0.0 0	21 M	0406 1.5 46 1035 0.7 21 1441 1.0 30 2129 -0.1 -3	6 W	0458 1.4 43 1120 0.6 18 1547 0.9 27 2212 0.2 6	21 Th	0508 1.3 40 1131 0.4 12 1715 1.1 34 2318 0.2 6	6 Th	0410 1.2 37 1020 0.4 12 1549 1.0 30 2206 0.2 6	21 F	0428 1.0 30 1045 0.1 3 1712 1.1 34 2319 0.2 6
7 M	0451 1.5 46 1127 0.7 21 1453 0.8 24 2141 0.0 0	22 Tu	0454 1.5 46 1123 0.6 18 1558 1.0 30 2226 0.0 0	7 Th	0531 1.4 43 1150 0.5 15 1650 1.0 30 2302 0.2 6	22 F	0543 1.3 40 1205 0.3 9 1809 1.2 37	7 F	0443 1.1 34 1051 0.3 9 1650 1.1 34 2303 0.2 6	22 Sa	0503 0.9 27 1117 0.1 3 1757 1.2 37
8 Tu	0530 1.5 46 1204 0.7 21 1550 0.8 24 2224 0.1 3	23 W	0537 1.5 46 1205 0.5 15 1708 1.0 30 2320 0.1 3	8 F	0600 1.4 43 1217 0.4 12 1749 1.1 34 2353 0.3 9	23 Sa	0009 0.3 9 0616 1.2 37 1236 0.2 6 1858 1.2 37	8 Sa	0513 1.1 34 1123 0.1 3 1744 1.2 37 2357 0.3 9	23 Su	0008 0.2 6 0535 0.9 27 1147 0.0 0 1839 1.2 37
9 W	0604 1.5 46 1237 0.6 18 1647 0.8 24 2307 0.1 3	24 Th	0615 1.5 46 1245 0.4 12 1812 1.1 34	9 Sa	0628 1.3 40 1246 0.3 9 1845 1.2 37	24 Su	0058 0.3 9 0646 1.1 34 1306 0.2 6 1944 1.3 40	9 Su	0543 1.0 30 1157 0.0 0 1836 1.3 40	24 M	0053 0.3 9 0604 0.8 24 1217 0.0 0 1918 1.3 40
10 Th	0636 1.5 46 1306 0.5 15 1745 0.9 27 2352 0.1 3	25 F	0012 0.2 6 0651 1.4 43 1321 0.3 9 1911 1.1 34	10 Su	0044 0.3 9 0654 1.3 40 1317 0.2 6 1940 1.3 40	25 M	0144 0.4 12 0714 1.1 34 1337 0.1 3 2029 1.3 40	10 M	0048 0.4 12 0613 1.0 30 1235 -0.1 -3 1927 1.4 43	25 Tu	0134 0.3 9 0633 0.8 24 1248 -0.1 -3 1958 1.2 37
11 F	0705 1.4 43 1334 0.4 12 1843 1.0 30	26 Sa	0103 0.3 9 0724 1.4 43 1355 0.3 9 2007 1.2 37	11 M	0136 0.5 15 0722 1.2 37 1352 0.0 0 2035 1.4 43	26 Tu	0230 0.5 15 0742 1.0 30 1409 0.1 3 2115 1.3 40	11 Tu	0138 0.4 12 0646 1.0 30 1316 -0.2 -6 2019 1.4 43	26 W	0213 0.4 12 0702 0.8 24 1323 -0.1 -3 2039 1.2 37
12 Sa	0040 0.2 6 0733 1.4 43 1402 0.3 9 1943 1.0 30	27 Su	0154 0.4 12 0754 1.3 40 1427 0.2 6 2100 1.2 37	12 Tu	0229 0.6 18 0751 1.1 34 1432 -0.1 -3 2132 1.4 43	27 W	0315 0.6 18 0811 1.0 30 1445 0.1 3 2203 1.3 40	12 W	0227 0.5 15 0721 1.0 30 1402 -0.3 -9 2112 1.4 43	27 Th	0253 0.4 12 0733 0.8 24 1400 -0.1 -3 2124 1.2 37
13 Su	0131 0.3 9 0800 1.3 40 1433 0.2 6 2045 1.1 34	28 M	0246 0.5 15 0824 1.2 37 1501 0.2 6 2154 1.3 40	13 W	0324 0.7 21 0823 1.1 34 1517 -0.1 -3 2232 1.4 43	28 Th	0402 0.6 18 0841 0.9 27 1525 0.0 0 2257 1.2 37	13 Th	0317 0.6 18 0802 1.0 30 1452 -0.3 -9 2208 1.3 40	28 F	0335 0.5 15 0807 0.8 24 1441 -0.1 -3 2212 1.1 34
14 M	0226 0.5 15 0827 1.2 37 1508 0.1 3 2148 1.2 37	29 Tu	0339 0.6 18 0853 1.1 34 1536 0.1 3 2249 1.3 40	14 Th	0423 0.7 21 0901 1.1 34 1608 -0.1 -3 2335 1.4 43	29 F	0453 0.7 21 0915 0.9 27 1611 0.1 3 2355 1.2 37	14 F	0411 0.6 18 0850 0.9 27 1547 -0.2 -6 2308 1.3 40	29 Sa	0422 0.5 15 0846 0.7 21 1527 0.0 0 2304 1.1 34
15 Tu	0327 0.6 18 0855 1.2 37 1548 0.0 0 2253 1.3 40	30 W	0435 0.7 21 0922 1.0 30 1615 0.1 3 2347 1.3 40	15 F	0529 0.8 24 0947 1.0 30 1705 -0.1 -3			15 Sa	0513 0.6 18 0948 0.9 27 1648 -0.1 -3	30 Su	0516 0.5 15 0934 0.7 21 1618 0.0 0 2359 1.0 30
		31 Th	0536 0.8 24 0954 1.0 30 1658 0.1 3							31 M	0615 0.5 15 1039 0.7 21 1719 0.1 3

Time meridian 165° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

Sand Island, Midway Islands, 2008

Times and Heights of High and Low Waters

April								May								June							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft cm			h m	ft cm			h m	ft cm			h m	ft cm			h m	ft cm					
1 Tu	0054	1.0	30	16 W	0123	0.9	27	1 Th	0027	0.8	24	16 F	0110	0.6	18	1 Su	0040	0.6	18	16 M	0135	0.6	18
	0711	0.4	12		0758	0.1	3		0658	0.0	0		0752	-0.2	-6		0740	-0.5	-15		0827	-0.2	-6
	1200	0.7	21		1419	0.8	24		1325	0.8	24		1509	1.0	30		1516	1.2	37		1617	1.2	37
	1829	0.1	3		2016	0.2	6		1928	0.2	6		2120	0.3	9		2146	0.4	12		2254	0.4	12
2 W	0143	1.0	30	17 Th	0212	0.8	24	2 F	0110	0.7	21	17 Sa	0155	0.6	18	2 M	0133	0.6	18	17 Tu	0222	0.5	15
	0759	0.3	9		0843	0.0	0		0739	-0.1	-3		0831	-0.2	-6		0832	-0.5	-15		0909	-0.2	-6
	1326	0.8	24		1523	0.9	27		1433	1.0	30		1557	1.1	34		1610	1.3	40		1700	1.2	37
	1944	0.2	6		2126	0.2	6		2049	0.2	6		2221	0.3	9		2244	0.4	12		2338	0.4	12
3 Th	0227	0.9	27	18 F	0257	0.7	21	3 Sa	0152	0.6	18	18 Su	0238	0.5	15	3 Tu	0231	0.6	18	18 W	0310	0.5	15
	0839	0.2	6		0921	-0.1	-3		0822	-0.3	-9		0907	-0.3	-9		0926	-0.6	-18		0951	-0.2	-6
	1441	0.9	27		1615	1.0	30		1532	1.1	34		1639	1.1	34		1702	1.4	43		1739	1.2	37
	2057	0.2	6		2226	0.2	6		2159	0.3	9		2312	0.2	6		● 2334	0.4	12		○		
4 F	0306	0.9	27	19 Sa	0337	0.7	21	4 Su	0235	0.6	18	19 M	0318	0.5	15	4 W	0332	0.6	18	19 Th	0017	0.4	12
	0917	0.1	3		0955	-0.1	-3		0907	-0.4	-12		0944	-0.3	-9		1020	-0.6	-18		0357	0.6	18
	1545	1.0	30		1659	1.1	34		1626	1.2	37		1719	1.2	37		1751	1.4	43		1031	-0.2	-6
	2204	0.2	6		2319	0.2	6		2258	0.3	9		○ 2355	0.2	6				1816		1.2	37	
5 Sa	0343	0.8	24	20 Su	0414	0.6	18	5 M	0320	0.6	18	20 Tu	0357	0.5	15	5 Th	0021	0.3	9	20 F	0053	0.4	12
	0954	-0.1	-3		1028	-0.2	-6		0954	-0.5	-15		1020	-0.3	-9		0436	0.6	18		0445	0.6	18
	1641	1.2	37		1739	1.2	37		1717	1.3	40		1757	1.2	37		1115	-0.5	-15		1110	-0.2	-6
	● 2303	0.2	6				● 2349		0.3	9				1838	1.3		40	1850	1.2		37		
6 Su	0418	0.8	24	21 M	0004	0.2	6	6 Tu	0408	0.6	18	21 W	0033	0.2	6	6 F	0106	0.3	9	21 Sa	0127	0.3	9
	1033	-0.2	-6		0448	0.6	18		0435	0.5	15		0541	0.7	21		0536	0.6	18				
	1732	1.3	40		1100	-0.2	-6		1057	-0.3	-9		1210	-0.4	-12		1150	-0.1	-3				
	2357	0.3	9		1817	1.2	37		1835	1.2	37		1923	1.3	40		1922	1.2	37				
7 M	0454	0.8	24	22 Tu	0045	0.2	6	7 W	0036	0.3	9	22 Th	0110	0.3	9	7 Sa	0153	0.2	6	22 Su	0158	0.3	9
	1115	-0.4	-12		0520	0.6	18		0458	0.6	18		0513	0.5	15		0648	0.7	21		0629	0.6	18
	1822	1.4	43		1132	-0.2	-6		1134	-0.6	-18		1134	-0.3	-9		1304	-0.3	-9		1231	-0.1	-3
					1855	1.2	37		1855	1.3	40		1911	1.1	34		2006	1.2	37		1952	1.2	37
8 Tu	0046	0.3	9	23 W	0122	0.2	6	8 Th	0122	0.3	9	23 F	0146	0.3	9	8 Su	0239	0.1	3	23 M	0228	0.2	6
	0533	0.7	21		0551	0.6	18		0552	0.5	15		0759	0.7	21		0727	0.6	18				
	1200	-0.4	-12		1207	-0.2	-6		1226	-0.6	-18		1212	-0.3	-9		1400	-0.2	-6		1317	0.0	0
	1911	1.4	43		1932	1.2	37		1943	1.3	40		1947	1.1	34		2047	1.1	34		2020	1.1	34
9 W	0133	0.3	9	24 Th	0159	0.3	9	9 F	0208	0.2	6	24 Sa	0222	0.2	6	9 M	0326	0.0	0	24 Tu	0258	0.1	3
	0614	0.8	24		0624	0.6	18		0649	0.6	18		0636	0.5	15		0912	0.7	21		0829	0.7	21
	1247	-0.5	-15		1243	-0.2	-6		1319	-0.5	-15		1251	-0.2	-6		1458	0.0	0		1408	0.2	6
	2001	1.4	43		2011	1.1	34		2031	1.2	37		2023	1.1	34		2127	1.0	30		2048	1.1	34
10 Th	0219	0.3	9	25 F	0236	0.3	9	10 Sa	0257	0.2	6	25 Su	0259	0.2	6	10 Tu	0412	0.0	0	25 W	0329	0.1	3
	0701	0.8	24		0700	0.6	18		0753	0.6	18		0727	0.5	15		1027	0.8	24		0934	0.8	24
	1338	-0.4	-12		1321	-0.2	-6		1415	-0.3	-9		1333	-0.2	-6		1602	0.2	6		1506	0.3	9
	2052	1.3	40		2051	1.1	34		2118	1.1	34		2058	1.0	30		● 2206	0.9	27		2116	1.0	30
11 F	0308	0.4	12	26 Sa	0316	0.3	9	11 Su	0349	0.1	3	26 M	0336	0.2	6	11 W	0456	-0.1	-3	26 Th	0403	-0.1	-3
	0753	0.8	24		0740	0.6	18		0826	0.5	15		1140	0.8	24		1041	0.9	27				
	1432	-0.4	-12		1403	-0.2	-6		1513	-0.2	-6		1420	-0.1	-3		1713	0.3	9		1614	0.4	12
	2144	1.2	37		2133	1.0	30		● 2205	1.0	30		2132	1.0	30		2245	0.8	24		● 2145	0.9	27
12 Sa	0401	0.4	12	27 Su	0400	0.3	9	12 M	0443	0.1	3	27 Tu	0412	0.1	3	12 Th	0539	-0.1	-3	27 F	0441	-0.2	-6
	0853	0.7	21		0828	0.6	18		1025	0.6	18		0934	0.6	18		1248	0.9	27		1148	1.1	34
	1530	-0.2	-6		1448	-0.1	-3		1618	0.0	0		1516	0.1	3		1830	0.4	12		1730	0.5	15
	● 2239	1.1	34		2217	1.0	30		2251	0.9	27		● 2206	0.9	27		2325	0.7	21		2218	0.8	24
13 Su	0501	0.3	9	28 M	0446	0.3	9	13 Tu	0536	0.0	0	28 W	0448	0.0	0	13 F	0621	-0.2	-6	28 Sa	0526	-0.3	-9
	1006	0.7	21		0930	0.5	15		1049	0.7	21		1349	1.0	30		1254	1.2	37				
	1633	-0.1	-3		1541	0.0	0		1625	0.2	6		1948	0.4	12		1853	0.6	18				
	2334	1.0	30		● 2301	0.9	27		2240	0.8	24				2257		0.8	24					
14 M	0604	0.3	9	29 Tu	0532	0.2	6	14 W	0626	-0.1	-3	29 Th	0526	-0.1	-3	14 Sa	0006	0.7	21	29 Su	0616	-0.4	-12
	1132	0.7	21		1045	0.6	18		1307	0.8	24		1204	0.8	24		0703	-0.2	-6		1358	1.3	40
	1744	0.0	0		1646	0.1	3		1849	0.2	6		1745	0.3	9		1443	1.1	34		2013	0.6	18
					2344	0.8	24				2316		0.7	21	2101		0.4	12	2347		0.8	24	
15 Tu	0030	0.9	27	30 W	0616	0.1	3	15 Th	0024	0.7	21	30 F	0607	-0.2	-6	15 Su	0050	0.6	18	30 M	0711	-0.4	-12
	0705	0.2	6		1207	0.7	21		0711	-0.1	-3		1314	1.0	30		0744	-0.2	-6		1458	1.4	43
	1301	0.7	21		1803	0.1	3		1413	0.9	27		1913	0.4	12		1532	1.2	37		2124	0.6	18
	1900	0.1	3				2008		0.3														

Sand Island, Midway Islands, 2008

Times and Heights of High and Low Waters

July				August				September															
Time		Height		Time		Height		Time		Height		Time		Height									
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm									
1 Tu	0050	0.8	24	16 W	0139	0.7	21	1 F	0326	1.0	30	16 Sa	0339	0.9	27	1 M	0548	1.3	40	16 Tu	0526	1.3	40
	0809	-0.4	-12		0842	0.0	0		1000	-0.1	-3		1001	0.2	6		1151	0.3	9		1140	0.4	12
	1554	1.4	43		1637	1.3	40		1709	1.4	43		1712	1.3	40		1750	1.2	37		1719	1.1	34
	2223	0.6	18		2309	0.6	18		2332	0.5	15		2329	0.5	15						2331	0.1	3
2 W	0202	0.8	24	17 Th	0239	0.7	21	2 Sa	0441	1.0	30	17 Su	0439	1.0	30	2 Tu	0008	0.2	6	17 W	0614	1.4	43
	0908	-0.4	-12		0928	0.0	0		1058	0.0	0		1050	0.3	9		0639	1.3	40		1229	0.5	15
	1646	1.4	43		1716	1.3	40		1749	1.4	43		1741	1.3	40		1242	0.4	12		1747	1.1	34
	2313	0.5	15		2347	0.6	18		2356	0.4	12		2356	0.4	12		1823	1.2	37				
3 Th	0317	0.8	24	18 F	0339	0.7	21	3 Su	0013	0.4	12	18 M	0535	1.1	34	3 W	0042	0.2	6	18 Th	0007	0.0	0
	1007	-0.4	-12		1013	0.0	0		0549	1.1	34		1138	0.3	9		0726	1.4	43		0702	1.5	46
	1733	1.4	43		1750	1.3	40		1153	0.1	3		1807	1.3	40		1330	0.5	15		1317	0.5	15
					1826	1.4	43						1855	1.1	34						1818	1.0	30
4 F	0000	0.4	12	19 Sa	0020	0.5	15	4 M	0052	0.3	9	19 Tu	0024	0.3	9	4 Th	0115	0.1	3	19 F	0046	-0.1	-3
	0431	0.8	24		0438	0.8	24		0650	1.1	34		0627	1.2	37		0811	1.4	43		0751	1.5	46
	1103	-0.3	-9		1056	0.0	0		1246	0.2	6		1227	0.4	12		1417	0.5	15		1404	0.6	18
	1817	1.4	43		1821	1.3	40		1901	1.3	40		1833	1.2	37		1926	1.1	34		1852	1.0	30
5 Sa	0045	0.3	9	20 Su	0049	0.4	12	5 Tu	0129	0.2	6	20 W	0053	0.2	6	5 F	0150	0.1	3	20 Sa	0130	-0.1	-3
	0543	0.8	24		0535	0.8	24		0747	1.2	37		0718	1.3	40		0857	1.4	43		0843	1.5	46
	1159	-0.2	-6		1139	0.1	3		1339	0.3	9		1317	0.5	15		1503	0.6	18		1452	0.7	21
	1858	1.4	43		1849	1.3	40		1934	1.2	37		1859	1.2	37		1956	1.0	30		1931	1.0	30
6 Su	0128	0.2	6	21 M	0116	0.4	12	6 W	0205	0.1	3	21 Th	0125	0.1	3	6 Sa	0227	0.1	3	21 Su	0219	-0.1	-3
	0652	0.9	27		0631	0.9	27		0842	1.2	37		0809	1.4	43		0946	1.4	43		0937	1.5	46
	1253	0.0	0		1225	0.2	6		1431	0.5	15		1408	0.6	18		1550	0.7	21		1543	0.7	21
	1936	1.3	40		1915	1.3	40		2006	1.1	34		1926	1.1	34		2029	1.0	30		2017	1.0	30
7 M	0210	0.1	3	22 Tu	0143	0.3	9	7 Th	0240	0.1	3	22 F	0203	0.0	0	7 Su	0308	0.1	3	22 M	0313	-0.1	-3
	0759	0.9	27		0727	1.0	30		0935	1.3	40		0903	1.4	43		1039	1.3	40		1035	1.4	43
	1348	0.1	3		1314	0.3	9		1525	0.6	18		1459	0.7	21		1641	0.7	21		1641	0.7	21
	2012	1.2	37		1940	1.2	37		2038	1.1	34		1956	1.1	34		2105	1.0	30		2115	1.0	30
8 Tu	0250	0.1	3	23 W	0212	0.2	6	8 F	0317	0.1	3	23 Sa	0246	-0.1	-3	8 M	0355	0.2	6	23 Tu	0414	0.0	0
	0904	1.0	30		0824	1.1	34		1029	1.3	40		1000	1.4	43		1137	1.3	40		1136	1.3	40
	1445	0.3	9		1406	0.4	12		1621	0.6	18		1554	0.7	21		1739	0.8	24		1748	0.7	21
	2047	1.1	34		2006	1.1	34		2110	1.0	30		2032	1.1	34		2149	0.9	27		2230	1.0	30
9 W	0330	0.0	0	24 Th	0244	0.0	0	9 Sa	0358	0.1	3	24 Su	0335	-0.1	-3	9 Tu	0448	0.2	6	24 W	0522	0.1	3
	1008	1.0	30		0922	1.2	37		1126	1.3	40		1101	1.4	43		1238	1.3	40		1237	1.3	40
	1545	0.4	12		1503	0.5	15		1720	0.7	21		1655	0.8	24		1844	0.8	24		1857	0.6	18
	2122	1.0	30		2032	1.1	34		2144	1.0	30		2116	1.1	34		2245	0.9	27				
10 Th	0409	0.0	0	25 F	0321	-0.1	-3	10 Su	0442	0.1	3	25 M	0431	-0.1	-3	10 W	0547	0.2	6	25 Th	0001	1.0	30
	1111	1.1	34		1022	1.3	40		1227	1.3	40		1206	1.4	43		1337	1.2	37		0635	0.2	6
	1650	0.5	15		1605	0.6	18		1825	0.8	24		1804	0.8	24		1949	0.7	21		1335	1.2	37
	2156	0.9	27		2102	1.0	30		2222	0.9	27		2213	1.0	30		2358	0.9	27		1959	0.5	15
11 F	0449	0.0	0	26 Sa	0404	-0.1	-3	11 M	0532	0.1	3	26 Tu	0534	-0.1	-3	11 Th	0650	0.3	9	26 F	0134	1.0	30
	1212	1.1	34		1125	1.3	40		1328	1.3	40		1312	1.4	43		1428	1.2	37		0749	0.3	9
	1759	0.6	18		1713	0.7	21		1934	0.8	24		1919	0.8	24		2042	0.7	21		1427	1.2	37
	2231	0.9	27		2137	1.0	30		2309	0.9	27		2329	1.0	30						2051	0.4	12
12 Sa	0531	-0.1	-3	27 Su	0454	-0.2	-6	12 Tu	0626	0.1	3	27 W	0642	0.0	0	12 F	0119	0.9	27	27 Sa	0253	1.1	34
	1312	1.2	37		1231	1.4	43		1427	1.3	40		1414	1.4	43		0754	0.3	9		0900	0.3	9
	1912	0.6	18		1827	0.8	24		2042	0.8	24		2029	0.8	24		1511	1.2	37		1514	1.2	37
	2308	0.8	24		2222	1.0	30								2123		0.6	18	2135		0.3	9	
13 Su	0616	-0.1	-3	28 M	0551	-0.2	-6	13 W	0009	0.9	27	28 Th	0059	1.0	30	13 Sa	0235	1.0	30	28 Su	0357	1.2	37
	1409	1.2	37		1337	1.4	43		0723	0.1	3		0751	0.1	3		0856	0.3	9		1003	0.4	12
	2024	0.7	21		1945	0.8	24		1519	1.3	40		1508	1.4	43		1548	1.2	37		1555	1.1	34
	2351	0.8	24		2322	0.9	27		2139	0.7	21		2126	0.6	18		2158	0.5	15		●	2214	0.2	6
14 M	0704	-0.1	-3	29 Tu	0653	-0.2	-6	14 Th	0119	0.9	27	29 F	0228	1.0	30	14 Su	0340	1.1	34	29 M	0451	1.3	40
	1503	1.3	40		1439	1.4	43		0818	0.2	6		0857	0.1	3		0954	0.4	12		1059	0.4	12
	2129	0.6	18		2056	0.8	24		1603	1.3	40		1555	1.4	43		1620	1.2	37		1634	1.1	34
					2223	0.7	21		2223	0.7	21		2214	0.5	15		○	2229	0.4		12	2249	0.1	3
15 Tu	0042	0.7	21	30 W	0038	0.9	27	15 F	0232	0.9	27	30 Sa	0346	1.1	34	15 M	0435	1.2	37	30 Tu	0538	1.4	43
	0753	0.0	0		0756	-0.2	-6		0910	0.2	6		1000	0.2	6		1048	0.4	12		1150	0.4	12
	1553	1.3	40		1																		

Sand Island, Midway Islands, 2008

Times and Heights of High and Low Waters

October					November					December														
Time		Height			Time		Height			Time		Height			Time		Height							
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm					
1 W	0620	1.4	43		16 Th	0558	1.6	49	1 Sa	0717	1.4	43	16 Su	0717	1.6	49	1 M	0732	1.4	43	16 Tu	0038	-0.1	-3
	1237	0.4	12			1226	0.5	15			1345	0.5		15		1343		0.5	15			0740	1.5	46
	1742	1.0	30			1703	0.9	27			1807	0.8		24		1816		0.9	27			1410	0.4	12
	2354	0.1	3			2330	-0.2	-6								1825		0.8	24			1930	1.0	30
2 Th	0701	1.5	46		17 F	0646	1.6	49	2 Su	0026	0.0	0	17 M	0049	-0.2	-6	2 Tu	0037	0.1	3	17 W	0134	0.1	3
	1320	0.5	15			1311	0.5	15			0755	1.4		43		0803		1.5	46			0820	1.4	43
	1814	0.9	27			1743	0.9	27			1423	0.5		15		1429		0.5	15			1455	0.3	9
						1844	0.8	24			1844	0.8		24		1920		0.9	27			2043	1.0	30
3 F	0028	0.1	3		18 Sa	0016	-0.3	-9	3 M	0105	0.0	0	18 Tu	0144	-0.1	-3	3 W	0118	0.1	3	18 Th	0232	0.2	6
	0741	1.4	43			0734	1.6	49			0835	1.3		40		0849		1.4	43			0859	1.3	40
	1401	0.5	15			1355	0.6	18			1503	0.5		15		1519		0.4	12			1541	0.2	6
	1845	0.9	27			1827	0.9	27			1927	0.8		24		2033		0.9	27			2015	0.8	24
4 Sa	0103	0.1	3		19 Su	0106	-0.2	-6	4 Tu	0146	0.1	3	19 W	0243	0.0	0	4 Th	0203	0.2	6	19 F	0335	0.4	12
	0823	1.4	43			0823	1.5	46			0916	1.3		40		0934		1.3	40			0937	1.2	37
	1441	0.6	18			1442	0.6	18			1546	0.5		15		1611		0.3	9			1627	0.1	3
	1917	0.9	27			1919	0.9	27			2018	0.8		24		2154		0.9	27			2311	1.1	34
5 Su	0142	0.1	3		20 M	0159	-0.2	-6	5 W	0231	0.1	3	20 Th	0347	0.2	6	5 F	0256	0.3	9	20 Sa	0444	0.5	15
	0907	1.3	40			0914	1.4	43			0957	1.2		37		1019		1.2	37			1016	1.1	34
	1523	0.6	18			1533	0.6	18			1631	0.5		15		1704		0.2	6			1628	0.3	9
	1953	0.9	27			2019	0.9	27			2122	0.8		24		2319		1.0	30			2232	0.9	27
6 M	0224	0.1	3		21 Tu	0256	-0.1	-3	6 Th	0323	0.2	6	21 F	0459	0.4	12	6 Sa	0400	0.5	15	21 Su	0021	1.2	37
	0955	1.3	40			1007	1.3	40			1038	1.1		34		1104		1.1	34			0600	0.6	18
	1610	0.6	18			1630	0.5	15			1716	0.4		12		1754		0.1	3			1057	1.0	30
	2035	0.9	27			2133	0.9	27			2237	0.8		24						2344		1.0	30		1756	0.0	0
7 Tu	0310	0.1	3		22 W	0400	0.1	3	7 F	0426	0.3	9	22 Sa	0040	1.0	30	7 Su	0518	0.6	18	22 M	0125	1.3	40
	1046	1.2	37			1119	1.1	34			1119	1.1		34		1047		1.0	30			0721	0.7	21
	1703	0.6	18			1758	0.3	9			1150	1.0		30		1743		0.0	0			1140	0.9	27
	2128	0.9	27			2358	0.9	27			1842	1.0		30						1841		0.0	0	
8 W	0403	0.2	6		23 Th	0511	0.2	6	8 Sa	0543	0.4	12	23 Su	0150	1.2	37	8 M	0052	1.2	37	23 Tu	0223	1.3	40
	1139	1.2	37			1153	1.2	37			0741	0.5		15		0645		0.7	21			0837	0.7	21
	1800	0.6	18			1830	0.4	12			1238	0.9		27		1123		0.9	27			1226	0.8	24
	2237	0.8	24							1838	0.2	6			1927	0.0		0		1826		-0.1	-3		1926	0.0	0
9 Th	0504	0.3	9		24 F	0033	1.0	30	9 Su	0113	1.0	30	24 M	0248	1.3	40	9 Tu	0155	1.3	40	24 W	0315	1.4	43
	1231	1.1	34			0709	0.5	15			0856	0.6		18		0810		0.7	21			0945	0.7	21
	1854	0.5	15			1241	0.9	27			1326	0.8		24		1205		0.9	27			1315	0.8	24
						1918	0.1	3			2008	0.0		0		1913		-0.2	-6			2011	0.0	0
10 F	0000	0.9	27		25 Sa	0154	1.0	30	10 M	0218	1.2	37	25 Tu	0338	1.3	40	10 W	0253	1.5	46	25 Th	0403	1.4	43
	0615	0.3	9			0830	0.5	15			1001	0.5		15		0924		0.7	21			1040	0.7	21
	1319	1.1	34			1323	0.9	27			1412	0.8		24		1256		0.8	24			1406	0.8	24
	1940	0.5	15			1959	0.0	0			2048	0.0		0		2005		-0.3	-9			2056	0.0	0
11 Sa	0122	0.9	27		26 Su	0300	1.2	37	11 Tu	0314	1.3	40	26 W	0423	1.4	43	11 Th	0347	1.6	49	26 F	0447	1.5	46
	0731	0.4	12			0940	0.5	15			1055	0.5		15		1023		0.7	21			1125	0.6	18
	1402	1.1	34			1405	0.8	24			1457	0.7		21		1354		0.8	24			1456	0.8	24
	2019	0.3	9			2041	-0.2	-6			2127	0.0		0		2058		-0.3	-9			2140	0.0	0
12 Su	0232	1.1	34		27 M	0354	1.3	40	12 W	0405	1.5	46	27 Th	0504	1.4	43	12 F	0439	1.6	49	27 Sa	0527	1.5	46
	0843	0.4	12			1039	0.5	15			1140	0.5		15		1113		0.7	21			1203	0.6	18
	1441	1.0	30			1449	0.8	24			1538	0.7		21		1457		0.9	27			1547	0.8	24
	2055	0.2	6			2127	-0.3	-9			2205	0.0		0		2153		-0.3	-9			2221	0.0	0
13 M	0331	1.2	37		28 Tu	0440	1.4	43	13 Th	0455	1.6	49	28 F	0543	1.4	43	13 Sa	0528	1.6	49	28 Su	0603	1.5	46
	0948	0.4	12			1130	0.5	15			1220	0.5		15		1157		0.6	18			1238	0.6	18
	1516	1.0	30			1535	0.8	24			1618	0.7		21		1603		0.9	27			1637	0.8	24
	2130	0.1	3			2215	-0.3	-9			2243	0.0		0		2248		-0.3	-9			2301	0.1	3
14 Tu	0423	1.4	43		29 W	0521	1.4	43	14 F	0543	1.6	49	29 Sa	0621	1.4	43	14 Su	0614	1.6	49	29 M	0637	1.4	43
	1046	0.5	15			1215	0.5	15			1256	0.5		15		1241		0.6	18			1310	0.6	18
	1551	0.9	27			1625	0.8	24			1658	0.7		21		1710		0.9	27			1728	0.8	24
	2207	0.0	0			2305	-0.4	-12			2321	0.0		0		2343		-0.2	-6			2341	0.1	3
15 W	0511	1.5	46		30 Th	0600	1.4	43	15 Sa	0630	1.6	49	30 Su	0657	1.4	43	15 M	0658	1.6	49	30 Tu	0707	1.4	43
	1138	0.5	15			1258	0.5	15			1331	0.5		15		1325		0.5	15			1341	0.5	15
	1626	0.9	27			1718	0.9	27			1739	0.8		24		1818		0.9	27			1821	0.8	24
	2247	-0.2	-6			2356	-0.3	-9			2358	0.0		0										
31 F	0638	1.4	43		31 F	0638	1.4	43																
	1308	0.5	15																					
	1733	0.8	24																					
	2349	0.0	0																					

Time meridian 165° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to mean lower low water which is the chart datum of soundings.

Nawiliwili, Kauai Island, Hawaii, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height			Time	Height			Time	Height		
	h	m	ft		h	m	ft		h	m	ft
1 Tu	0002	1.4	43	16 W	1556	-0.1	-3	1 Sa	0017	1.6	49
	1626	0.1	3						1635	0.1	3
2 W	0047	1.6	49	17 Th	0024	1.8	55	2 Su	0103	1.7	52
	1704	0.0	0		1651	-0.2	-6		0901	0.4	12
3 Th	0126	1.8	55	18 F	0116	2.1	64	3 M	1234	0.5	15
	1745	0.0	0		0938	0.4	12		1745	0.0	0
4 F	0202	2.0	61	19 Sa	0202	2.3	70	4 Tu	0140	1.8	55
	1015	0.5	15		0953	0.4	12		0857	0.3	9
	1231	0.6	18		1303	0.5	15	5 W	1316	0.6	18
	1827	-0.1	-3		1846	-0.3	-9		1840	-0.1	-3
5 Sa	0236	2.1	64	20 Su	0246	2.4	73	6 Th	0212	1.8	55
	1025	0.5	15		1015	0.3	9		0904	0.3	9
	1323	0.6	18		1402	0.6	18	7 F	1355	0.8	24
	1909	-0.1	-3		1938	-0.4	-12		1927	-0.1	-3
6 Su	0309	2.1	64	21 M	0326	2.4	73	8 Th	0241	1.9	58
	1039	0.4	12		1040	0.3	9		0917	0.2	6
	1404	0.6	18		1452	0.6	18	9 Su	1434	0.9	27
	1949	-0.2	-6		2026	-0.3	-9		2012	-0.2	-6
7 M	0341	2.2	67	22 Tu	0403	2.3	70	10 Sa	0308	1.8	55
	1058	0.4	12		1106	0.2	6		0936	0.0	0
	1442	0.6	18		1538	0.7	21	11 Su	1515	1.1	34
	2028	-0.2	-6		2111	-0.3	-9		2057	-0.1	-3
8 Tu	0413	2.2	67	23 W	0438	2.2	67	12 Th	0336	1.7	52
	1121	0.4	12		1132	0.2	6		0958	-0.1	-3
	1521	0.7	21		1625	0.8	24	13 F	1558	1.3	40
	2106	-0.2	-6		2154	-0.2	-6		2145	0.0	0
9 W	0444	2.2	67	24 Th	0510	2.1	64	14 Sa	0403	1.6	49
	1147	0.3	9		1158	0.2	6		1022	-0.2	-6
	1604	0.7	21		1714	0.9	27	15 Su	1643	1.4	43
	2144	-0.2	-6		2237	0.0	0		2236	0.1	3
10 Th	0514	2.1	64	25 F	0538	1.8	55	16 M	0430	1.4	43
	1216	0.3	9		1224	0.1	3		1048	-0.2	-6
	1653	0.7	21		1808	1.0	30	17 Tu	1733	1.6	49
	2223	0.0	0		2321	0.3	9		2334	0.3	9
11 F	0544	2.0	61	26 Sa	0603	1.6	49	18 W	0455	1.1	34
	1246	0.2	6		1250	0.1	3		1118	-0.3	-9
	1752	0.8	24		1909	1.0	30	19 Th	1828	1.6	49
	2307	0.2	6						1828	1.6	49
12 Sa	0612	1.9	58	27 Su	0011	0.5	15	20 F	0045	0.5	15
	1317	0.1	3		0622	1.4	43		0517	0.9	27
	1904	0.9	27		1317	0.1	3	21 Tu	1151	-0.3	-9
	2359	0.4	12		2020	1.1	34		1933	1.7	52
13 Su	0640	1.6	49	28 M	0117	0.7	21	22 W	0226	0.6	18
	1350	0.1	3		0630	1.1	34		0526	0.7	21
	2031	1.0	30		1346	0.1	3	23 Th	1231	-0.2	-6
14 M	0112	0.7	21		2143	1.2	37		2052	1.7	52
	0705	1.4	43	29 Tu	0315	0.8	24	24 F	0226	0.6	18
	1426	0.0	0		0557	0.9	27		0526	0.7	21
	2204	1.3	40		1420	0.1	3	25 Sa	1231	-0.2	-6
15 Tu	0308	0.9	27		2304	1.4	43		2052	1.7	52
	0725	1.1	34	30 W	1505	0.1	3	26 Su	0806	0.3	9
	1507	-0.1	-3						1128	0.4	12
	2322	1.6	49	31 Th	0008	1.6	49	27 M	1620	0.0	0
					1604	0.1	3				
								28 Th	1443	0.0	0
									2333	1.8	55
								29 Sa			
								30 Su	0759	0.3	9
									1127	0.4	12
									1552	0.2	6
								31 M	0007	1.6	49
									0742	0.3	9
									1223	0.6	18
									1713	0.2	6

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

Nawiliwili, Kauai Island, Hawaii, 2008

Times and Heights of High and Low Waters

April					May					June													
Time		Height			Time		Height			Time		Height			Time		Height						
	h m	ft cm			h m	ft cm			h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm				
1 Tu	0047	1.6	49	16 W	0112	1.4	43	1 Th	0016	1.3	40	16 F	0048	0.9	27	1 Su	0042	0.7	21	16 M	0120	0.5	15
	0745	0.2	6		0744	0.0	0		0650	-0.1	-3		0701	-0.2	-6		0656	-0.4	-12		0712	-0.2	-6
	1306	0.8	24		1405	1.2	37		1332	1.3	40		1426	1.7	52		1442	2.2	67		1514	2.1	64
	1818	0.1	3		1943	0.3	9		1911	0.4	12		2102	0.5	15		2149	0.4	12		2254	0.4	12
2 W	0121	1.6	49	17 Th	0144	1.3	40	2 F	0054	1.2	37	17 Sa	0121	0.8	24	2 M	0133	0.6	18	17 Tu	0203	0.5	15
	0758	0.1	3		0801	-0.1	-3		0714	-0.2	-6		0723	-0.2	-6		0736	-0.5	-15		0748	-0.2	-6
	1345	1.0	30		1440	1.4	43		1412	1.6	49		1458	1.9	58		1526	2.4	73		1547	2.1	64
	1914	0.1	3		2035	0.3	9		2017	0.3	9		2152	0.4	12		2245	0.3	9		2320	0.4	12
3 Th	0152	1.6	49	18 F	0212	1.1	34	3 Sa	0132	1.1	34	18 Su	0153	0.7	21	3 Tu	0223	0.5	15	18 W	0241	0.5	15
	0815	0.0	0		0818	-0.2	-6		0742	-0.3	-9		0747	-0.2	-6		0819	-0.5	-15		0826	-0.2	-6
	1425	1.2	37		1513	1.6	49		1453	1.9	58		1529	2.0	61		1612	2.5	76		1621	2.1	64
	2008	0.1	3		2123	0.3	9		2119	0.3	9		2236	0.4	12		2338	0.3	9		2348	0.4	12
4 F	0222	1.5	46	19 Sa	0238	1.0	30	4 Su	0209	0.9	27	19 M	0225	0.6	18	4 W	0315	0.5	15	19 Th	0318	0.6	18
	0837	-0.2	-6		0837	-0.2	-6		0813	-0.4	-12		0844	-0.2	-6		0904	-0.5	-15		0903	-0.2	-6
	1505	1.5	46		1545	1.7	52		1536	2.1	64		1601	2.0	61		1659	2.4	73		1655	2.1	64
	2102	0.1	3		2209	0.3	9		2220	0.3	9		2317	0.4	12								
5 Sa	0253	1.3	40	20 Su	0303	0.9	27	5 M	0248	0.7	21	20 Tu	0256	0.5	15	5 Th	0029	0.3	9	20 F	0019	0.4	12
	0902	-0.3	-9		0858	-0.2	-6		0847	-0.5	-15		0844	-0.2	-6		0409	0.5	15		0357	0.6	18
	1547	1.7	52		1617	1.8	55		1621	2.2	67		1635	2.0	61		0951	-0.4	-12		0940	-0.1	-3
	2157	0.1	3		2255	0.3	9		2323	0.3	9		2359	0.4	12		1747	2.3	70		1729	2.1	64
6 Su	0324	1.1	34	21 M	0327	0.7	21	6 Tu	0327	0.6	18	21 W	0326	0.5	15	6 F	0120	0.3	9	21 Sa	0052	0.4	12
	0929	-0.4	-12		0921	-0.2	-6		0924	-0.5	-15		0917	-0.2	-6		0511	0.5	15		0442	0.6	18
	1632	1.9	58		1650	1.8	55		1709	2.3	70		1711	2.0	61		1040	-0.2	-6		1017	0.0	0
	2257	0.2	6		2343	0.4	12							1834	2.2		67	1801	2.0		61		
7 M	0355	0.9	27	22 Tu	0350	0.6	18	7 W	0028	0.3	9	22 Th	0043	0.4	12	7 Sa	0209	0.2	6	22 Su	0125	0.3	9
	1000	-0.4	-12		0947	-0.2	-6		0410	0.5	15		0356	0.5	15		0626	0.5	15		0539	0.6	18
	1720	2.0	61		1727	1.8	55		1005	-0.4	-12		0951	-0.1	-3		1131	0.0	0		1056	0.1	3
									1801	2.2	67		1750	1.9	58		1921	2.0	61		1834	1.9	58
8 Tu	0002	0.3	9	23 W	0037	0.4	12	8 Th	0140	0.3	9	23 F	0133	0.4	12	8 Su	0255	0.2	6	23 M	0158	0.3	9
	0425	0.7	21		0409	0.5	15		0459	0.4	12		0431	0.5	15		0758	0.6	18		0654	0.6	18
	1034	-0.4	-12		1015	-0.1	-3		1050	-0.3	-9		1027	-0.1	-3		1229	0.2	6		1141	0.3	9
	1813	2.0	61		1808	1.8	55		1857	2.1	64		1831	1.9	58		2006	1.8	55		1905	1.8	55
9 W	0121	0.4	12	24 Th	0144	0.4	12	9 F	0258	0.3	9	24 Sa	0227	0.3	9	9 M	0335	0.2	6	24 Tu	0231	0.2	6
	0455	0.6	18		0421	0.5	15		0612	0.4	12		0520	0.4	12		0937	0.8	24		0826	0.7	21
	1112	-0.3	-9		1046	-0.1	-3		1142	-0.1	-3		1106	0.0	0		1341	0.5	15		1240	0.5	15
	1914	1.9	58		1856	1.7	52		1957	1.9	58		1914	1.8	55		2049	1.5	46		1937	1.6	49
10 Th	0315	0.3	9	25 F	1123	0.0	0	10 Sa	0408	0.2	6	25 Su	0317	0.3	9	10 Tu	0410	0.1	3	25 W	0303	0.1	3
	0522	0.4	12		1954	1.6	49		0805	0.4	12		0648	0.4	12		1104	1.0	30		1000	1.0	30
	1158	-0.2	-6						1244	0.1	3		1151	0.2	6		1521	0.7	21		1408	0.7	21
	2025	1.8	55						2058	1.8	55		1958	1.7	52		2130	1.3	40		2009	1.4	43
11 F	1259	0.0	0	26 Sa	1212	0.1	3	11 Su	0457	0.2	6	26 M	0354	0.3	9	11 W	0441	0.0	0	26 Th	0336	0.0	0
	2141	1.8	55		2057	1.6	49		1004	0.5	15		0857	0.5	15		1207	1.3	40		1114	1.3	40
									1405	0.3	9		1253	0.3	9		1730	0.8	24		1613	0.9	27
									2156	1.6	49		2043	1.6	49		2211	1.1	34		2045	1.1	34
12 Sa	0626	0.3	9	27 Su	0616	0.3	9	12 M	0531	0.1	3	27 Tu	0424	0.2	6	12 Th	0509	0.0	0	27 F	0413	-0.1	-3
	1003	0.4	12		0909	0.4	12		1130	0.8	24		1040	0.7	21		1255	1.5	46		1211	1.6	49
	1426	0.1	3		1324	0.2	6		1546	0.5	15		1422	0.5	15		1935	0.8	24		1839	0.8	24
	2251	1.7	52		2159	1.5	46		2248	1.4	43		2128	1.4	43		2254	0.9	27		2132	0.9	27
13 Su	0648	0.2	6	28 M	0604	0.3	9	13 Tu	0557	0.0	0	28 W	0450	0.1	3	13 F	0537	-0.1	-3	28 Sa	0454	-0.2	-6
	1141	0.5	15		1109	0.5	15		1230	1.0	30		1145	1.0	30		1333	1.7	52		1300	1.9	58
	1608	0.2	6		1502	0.3	9		1727	0.6	18		1611	0.7	21		2100	0.6	18		2031	0.6	18
	2349	1.6	49		2251	1.5	46		2333	1.3	40		2214	1.3	40		2342	0.7	21		2246	0.7	21
14 M	0709	0.1	3	29 Tu	0614	0.2	6	14 W	0620	0.0	0	29 Th	0518	-0.1	-3	14 Sa	0606	-0.1	-3	29 Su	0539	-0.3	-9
	1241	0.8	24		1208	0.7	21		1315	1.3	40		1233	1.3	40		1408	1.9	58		1347	2.2	67
	1736	0.3	9		1637	0.4	12		1853	0.6	18		1758	0.7	21		2152	0.5	15		2129	0.5	15
					2336	1.4	43						2301	1.1	34								
15 Tu	0035	1.5	46	30 W	0630	0.1	3	15 Th	0013	1.1	34	30 F	0547	-0.2	-6	15 Su	0033	0.6	18	30 M	0009	0.6	18
	0727	0.1	3		1252	1.0	30		0640	-0.1	-3		0638	-0.1	-3		0627	-0.4	-12				
	1326	1.0	30		1759	0.4	12		1353	1.5	46		1930	0.6	18		1441	2.0	61		1432	2.4	73
	1846	0.3	9						2003	0.5	15		2351	0.9	27		2227	0.4	12		2210	0.4	12
											</												

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

Nawiliwili, Kauai Island, Hawaii, 2008

Times and Heights of High and Low Waters

July						August						September					
Time			Height			Time			Height			Time			Height		
	h	m	ft	cm			h	m	ft	cm			h	m	ft	cm	
1 Tu	0120	0.5	15		16 W	0158	0.6	18		1 F	0316	0.9	27	16 Sa	0308	1.0	30
	0717	-0.4	-12			0737	-0.1	-3			0846	0.0	0				
	1517	2.5	76			1530	2.2	67			1554	2.1	64				
	2247	0.4	12			2248	0.5	15			2230	0.3	9				
2 W	0220	0.6	18		17 Th	0236	0.7	21		2 Sa	0406	1.0	30	17 Su	0349	1.1	34
	0808	-0.4	-12			0817	-0.1	-3			0939	-0.1	-3				
	1601	2.5	76			1601	2.2	67			1651	2.2	67				
	2323	0.3	9			2307	0.4	12			2333	0.3	9				
3 Th	0315	0.6	18		18 F	0314	0.7	21		3 Su	0457	1.1	34	18 M	0433	1.2	37
	0857	-0.4	-12			0854	-0.1	-3			1025	0.1	3				
	1643	2.5	76			1630	2.2	67			1721	2.0	61				
	2358	0.3	9			2330	0.4	12			2317	0.2	6				
4 F	0411	0.7	21		19 Sa	0355	0.8	24		4 M	0000	0.2	6	19 Tu	0522	1.4	43
	0945	-0.3	-9			0931	-0.1	-3			0551	1.2	37				
	1724	2.3	70			1658	2.1	64			1113	0.4	12				
						2354	0.3	9			1748	1.7	52				
5 Sa	0033	0.3	9		20 Su	0442	0.8	24		5 Tu	0026	0.2	6	20 W	0617	1.5	46
	0509	0.7	21			1010	0.1	3			0650	1.3	40				
	1032	-0.1	-3			1725	2.0	61			1206	0.6	18				
	1802	2.1	64						1809		1.5	46					
6 Su	0108	0.2	6		21 M	0021	0.3	9		6 W	0053	0.2	6	21 Th	0013	0.1	3
	0614	0.8	24			0535	0.9	27			0757	1.4	43				
	1121	0.1	3			1052	0.2	6			1315	0.8	24				
	1837	1.9	58			1751	1.9	58			1822	1.2	37				
7 M	0141	0.2	6		22 Tu	0049	0.2	6		7 Th	0123	0.2	6	22 F	0048	0.1	3
	0729	0.9	27			0638	1.0	30			0914	1.5	46				
	1214	0.4	12			1142	0.5	15			1512	0.9	27				
	1909	1.7	52			1816	1.7	52			1800	1.0	30				
8 Tu	0214	0.2	6		23 W	0118	0.1	3		8 F	0157	0.2	6	23 Sa	0132	0.1	3
	0853	1.0	30			0753	1.1	34			1033	1.6	49				
	1322	0.7	21			1247	0.7	21									
	1936	1.4	43			1839	1.4	43			○						
9 W	0247	0.1	3		24 Th	0151	0.1	3		9 Sa	0243	0.2	6	24 Su	0233	0.1	3
	1017	1.2	37			0917	1.3	40			1141	1.7	52				
	1505	0.9	27			1424	0.9	27			1123	2.0	61				
	1955	1.1	34			1858	1.2	37									
10 Th	0321	0.1	3		25 F	0230	0.0	0		10 Su	0344	0.3	9	25 M	0351	0.1	3
	1128	1.4	43			1039	1.6	49			1236	1.8	55				
11 F	0357	0.1	3		26 Sa	0317	0.0	0		11 M	0452	0.2	6	26 Tu	0510	0.1	3
	1223	1.7	52			1147	1.8	55			1320	1.9	58				
12 Sa	0438	0.1	3		27 Su	0414	-0.1	-3		12 Tu	0030	0.7	21	27 W	0053	0.8	24
	1308	1.8	55			1244	2.1	64			0553	0.2	6				
											1358	2.0	61				
											2133	0.6	18				
13 Su	0523	0.0	0		28 M	0516	-0.1	-3		13 W	0115	0.7	21	28 Th	0144	0.9	27
	1347	2.0	61			1335	2.3	70			0644	0.1	3				
	2215	0.5	15			2132	0.5	15			1431	2.1	64				
											2141	0.5	15				
14 M	0017	0.6	18		29 Tu	0025	0.6	18		14 Th	0153	0.8	24	29 F	0230	1.1	34
	0609	0.0	0			0617	-0.2	-6			0727	0.0	0				
	1423	2.1	64			1420	2.4	73			1501	2.1	64				
	2221	0.5	15			2152	0.4	12			2153	0.5	15				
15 Tu	0115	0.6	18		30 W	0132	0.7	21		15 F	0230	0.9	27	30 Sa	0314	1.2	37
	0655	0.0	0			0713	-0.3	-9			0807	0.0	0				
	1457	2.1	64			1503	2.4	73			1528	2.1	64				
	2232	0.5	15			2216	0.4	12			2210	0.4	12				
16 W	0226	0.8	24		31 Th	0226	0.8	24		31 Su	0357	1.4	43	15 M	0338	1.6	49
	0805	-0.3	-9			0805	-0.3	-9			0937	0.2	6				
	1542	2.4	73			1542	2.4	73			1610	1.9	58				
	2241	0.4	12			2241	0.4	12			2229	0.2	6				
1 M	0440	1.5	46		16 Tu	0421	1.7	52		1 W	0506	1.9	58	16 Th	0558	1.9	58
	1023	0.4	12			1017	0.4	12			1208	0.7	21				
	1634	1.6	49			1602	1.5	46			1712	1.2	37				
	2251	0.2	6			2218	0.0	0			2338	0.2	6				
2 Tu	0524	1.6	49		17 W	0506	1.9	58		2 F	0658	2.0	61	18 Sa	0658	2.0	61
	1112	0.5	15			1114	0.6	18			1321	0.8	24				
	1656	1.4	43			1627	1.3	40			1715	1.0	30				
	2314	0.2	6			2246	0.0	0			2357	0.1	3				
3 W	0610	1.6	49		18 Th	0558	1.9	58		3 F	0812	2.0	61	19 Sa	0812	2.0	61
	1208	0.7	21			1221	0.7	21			0936	0.1	3				
	1712	1.2	37			1650	1.1	34			0936	2.0	61				
	2338	0.2	6			2319	0.0	0			○						
4 Th	0702	1.7	52		19 F	0658	2.0	61		4 M	0048	0.1	3	21 Su	0048	0.1	3
	1321	0.8	24			1354	0.8	24			0936	2.0	61				
	1715	1.0	30			1704	0.9	27			○						
						2357	0.1	3			○						
5 F	0004	0.2	6		20 Sa	0812	2.0	61		5 Tu	0038	0.3	9	22 M	0204	0.3	9
	0806	1.7	52			0926	1.7	52			1054	2.0	61				
											1932	0.5	15				
											2253	0.6	18				
6 Sa	0128	0.4	12		21 Su	0204	0.3	9		6 W	0128	0.4	12	23 Tu	0341	0.3	9
	1048	1.7	52			1048	1.7	52			1157	2.1	64				
											1940	0.5	15				
											○						
7 Su	0251	0.4	12		22 M	0341	0.3	9		7 Th	0251	0.4	12	24 W	0012	0.8	24
	1153	1.8	55			1157	2.1	64			0509	0.3	9				
	2038	0.6	18			1940	0.5	15			1247	2.1	64				
	2340	0.7	21								1956	0.4	12				
8 M	0423	0.4	12		23 Th	0012	0.8	24		8 Sa	0423	0.4	12	25 Su	0105	1.0	30
	1242	1.9	58			0509	0.3	9			0533	0.3	9				
	2029	0.6	18			1247	2.1	64			1320	1.9	58				
						1956	0.4	12			2030	0.5	15				
9 Tu	0031	0.8	24		24 F	0105	1.0	30		9 Su	0031	0.8	24	26 Th	0149	1.2	37
	0533	0.3	9			0619	0.3	9			0627	0.3	9				
	1320	1.9	58			1328	2.0	61			1351	2.0	61				
	2030	0.5	15			2014	0.3	9			2038	0.5	15				
10 W	0109	0.9	27		25 Sa	0149	1.2	37		10 Tu	0145	1.1	34	27 F	0229	1.4	43
	0627	0.3	9			0717	0.3	9			0713	0.2	6				
	1351	2.0	61			1402	1.9	58			1419	2.0	61				
	2038	0.5	15			2031	0.3	9			2051	0.4	12				
11 Th	0145	1.1	34		26 Su	0229	1.4	43		11 W	0221	1.2	37	28 Sa	0307	1.6	49
	0713	0.2	6			0808	0.3	9			0757	0.2	6				
	1419	2.0	61			1433	1.8	55			1445	1.9	58				
	2051	0.4	12			2050	0.2	6			2108	0.3	9				
12 F	0221	1.2	37		27 M	0307	1.6	49		12 Th	0259	1.4	43	29 Su	0344	1.8	55
	0757	0.2	6			0856	0.4	12			0841	0.2	6				
	1445	1.9	58			1500	1.6	49			1510	1.9	58				
	2108	0.3	9			2109	0.1	3			2129	0.2	6				
13 Sa	0259	1.4	43		28 Tu	0344	1.8	55		13 F	0338	1.6	49	30 M	0420	1.9	58
	0841	0.2	6			0943	0.5	15			0927	0.3	9				
	1510	1.9	58			1525	1.4	43			1536	1.7	52				
	2129	0.2	6			2128	0.1	3			2152	0.1	3				
14 Su	0420	1.9	58		29 W	0344	1.8	55		14 Th	0420	1.9	58	31 Tu	0420	1.9	58
	1031	0.5	15			1547	1.3	40			0927	0.3	9				
	1547	1.3	40			2149	0.1	3			1536	1.7	52				
	2149	0.1	3								2152	0.1	3				

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

Honolulu, Oahu Island, Hawaii, 2008

Times and Heights of High and Low Waters

January								February								March							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm			
1 Tu	0005	1.6	49	16 W	0619	0.7	21	1 F	0056	1.8	55	16 Sa	0059	2.1	64	1 Sa	0012	1.6	49	16 Su	0035	1.9	58
	0646	0.8	24		0922	0.8	24		0910	0.3	9		0848	0.1	3		0827	0.3	9		0807	0.0	0
	0953	0.9	27		1618	-0.2	-6		1200	0.4	12		1253	0.4	12		1205	0.4	12		1310	0.6	18
	1654	0.0	0						1733	0.0	0						1804	-0.2	-6		1701	0.1	3	1807	0.0	0
2 W	0050	1.8	55	17 Th	0020	2.0	61	2 Sa	0139	1.9	58	17 Su	0150	2.2	67	2 Su	0102	1.8	55	17 M	0125	1.9	58
	0819	0.6	18		0804	0.5	15		0927	0.3	9		0917	0.0	0		0841	0.2	6		0834	-0.1	-3
	1100	0.7	21		1053	0.6	18		1307	0.5	15		1353	0.5	15		1301	0.5	15		1356	0.8	24
	1730	0.0	0		1711	-0.2	-6		1828	-0.1	-3		1907	-0.2	-6		1807	0.0	0		1912	0.0	0
3 Th	0128	1.9	58	18 F	0114	2.2	67	3 Su	0218	2.0	61	18 M	0234	2.2	67	3 M	0143	1.9	58	18 Tu	0207	1.9	58
	0911	0.5	15		0900	0.3	9		0947	0.2	6		0945	0.0	0		0859	0.1	3		0858	-0.1	-3
	1211	0.6	18		1227	0.5	15		1353	0.5	15		1440	0.7	21		1343	0.6	18		1436	1.0	30
	1808	0.0	0		1809	-0.3	-9		1916	-0.2	-6		2001	-0.3	-9		1901	-0.1	-3		2005	0.0	0
4 F	0204	2.1	64	19 Sa	0204	2.4	73	4 M	0252	2.1	64	19 Tu	0313	2.2	67	4 Tu	0217	2.0	61	19 W	0242	1.8	55
	0945	0.4	12		0941	0.1	3		1008	0.1	3		1011	-0.1	-3		0917	0.0	0		0920	-0.2	-6
	1311	0.6	18		1339	0.5	15		1433	0.6	18		1522	0.8	24		1421	0.8	24		1512	1.2	37
	1848	-0.1	-3		1905	-0.3	-9		1959	-0.2	-6		2050	-0.2	-6		1948	-0.2	-6		2053	0.0	0
5 Sa	0239	2.2	67	20 Su	0250	2.5	76	5 Tu	0324	2.2	67	20 W	0348	2.1	64	5 W	0250	2.0	61	20 Th	0313	1.7	52
	1014	0.3	9		1017	0.0	0		1031	0.1	3		1036	-0.1	-3		0937	0.0	0		0940	-0.2	-6
	1359	0.5	15		1436	0.5	15		1512	0.7	21		1603	1.0	30		1459	1.0	30		1547	1.4	43
	1928	-0.2	-6		1958	-0.4	-12		2040	-0.3	-9		2135	-0.2	-6		2034	-0.2	-6		2138	0.0	0
6 Su	0313	2.3	70	21 M	0332	2.5	76	6 W	0356	2.2	67	21 Th	0419	2.0	61	6 Th	0321	2.0	61	21 F	0342	1.5	46
	1042	0.2	6		1051	0.0	0		1054	0.0	0		1059	-0.1	-3		0959	-0.1	-3		1000	-0.2	-6
	1440	0.6	18		1526	0.6	18		1552	0.8	24		1642	1.2	37		1539	1.2	37		1620	1.5	46
	2007	-0.2	-6		2048	-0.4	-12		2121	-0.2	-6		2219	0.0	0		2121	-0.1	-3		2223	0.1	3
7 M	0347	2.3	70	22 Tu	0412	2.5	76	7 Th	0426	2.2	67	22 F	0448	1.8	55	7 F	0352	1.9	58	22 Sa	0410	1.4	43
	1110	0.2	6		1123	0.0	0		1119	0.0	0		1122	-0.1	-3		1022	-0.2	-6		1020	-0.2	-6
	1520	0.6	18		1614	0.7	21		1635	0.9	27		1722	1.3	40		1620	1.4	43		1654	1.7	52
	2046	-0.2	-6		2135	-0.3	-9		2204	-0.1	-3		2304	0.1	3		2210	-0.1	-3		2309	0.2	6
8 Tu	0421	2.4	73	23 W	0450	2.4	73	8 F	0456	2.1	64	23 Sa	0516	1.6	49	8 Sa	0423	1.7	52	23 Su	0437	1.2	37
	1139	0.1	3		1154	-0.1	-3		1144	-0.1	-3		1145	-0.1	-3		1046	-0.2	-6		1040	-0.2	-6
	1601	0.6	18		1701	0.8	24		1721	1.1	34		1803	1.4	43		1703	1.6	49		1729	1.7	52
	2123	-0.2	-6		2220	-0.1	-3		2250	0.0	0		2353	0.3	9		2303	0.1	3		2358	0.3	9
9 W	0454	2.4	73	24 Th	0524	2.2	67	9 Sa	0527	1.9	58	24 Su	0542	1.3	40	9 Su	0456	1.5	46	24 M	0504	1.0	30
	1210	0.1	3		1224	-0.1	-3		1210	-0.1	-3		1207	-0.1	-3		1113	-0.3	-9		1100	-0.1	-3
	1645	0.7	21		1750	0.9	27		1811	1.2	37		1847	1.4	43		1750	1.7	52		1806	1.7	52
	2202	-0.2	-6		2306	0.1	3		2344	0.2	6												
10 Th	0526	2.3	70	25 F	0556	2.0	61	10 Su	0558	1.7	52	25 M	0049	0.4	12	10 M	0004	0.2	6	25 Tu	0053	0.3	9
	1240	0.1	3		1253	0.0	0		1238	-0.2	-6		0606	1.1	34		0529	1.2	37		0531	0.8	24
	1735	0.7	21		1842	1.0	30		1908	1.4	43		1229	0.0	0		1141	-0.3	-9		1123	-0.1	-3
	2243	0.0	0		2354	0.3	9						1936	1.5	46		1843	1.8	55		1849	1.7	52
11 F	0559	2.2	67	26 Sa	0626	1.7	52	11 M	0049	0.4	12	26 Tu	0201	0.6	18	11 Tu	0117	0.3	9	26 W	0203	0.4	12
	1311	0.0	0		1321	0.0	0		0629	1.4	43		0628	0.9	27		0604	0.9	27		0558	0.6	18
	1832	0.8	24		1938	1.1	34		1309	-0.2	-6		1254	0.0	0		1214	-0.3	-9		1148	0.0	0
	2331	0.2	6		2012	1.5	46		2012	1.5	46		2035	1.5	46		1943	1.9	58		1940	1.6	49
12 Sa	0632	2.0	61	27 Su	0052	0.5	15	12 Tu	0218	0.6	18	27 W	0400	0.6	18	12 W	0255	0.4	12	27 Th	0345	0.4	12
	1343	0.0	0		0653	1.4	43		0702	1.0	30		0640	0.7	21		0643	0.6	18		0626	0.5	15
	1937	1.0	30		1349	0.0	0		1346	-0.2	-6		1326	0.1	3		1253	-0.2	-6		1220	0.1	3
					2042	1.3	40		2127	1.7	52		2148	1.5	46		2055	1.9	58		2046	1.6	49
13 Su	0030	0.4	12	28 M	0209	0.7	21	13 W	0435	0.6	18	28 Th	1415	0.1	3	13 Th	0512	0.3	9	28 F	1309	0.1	3
	0706	1.8	55		0718	1.2	37		0740	0.7	21		2307	1.6	49		0745	0.4	12		2202	1.5	46
	1415	0.0	0		1418	0.1	3		1431	-0.1	-3						1346	-0.1	-3				
	2051	1.2	37		2152	1.4	43		2246	1.8	55		2246	1.8	55		2215	1.9	58				
14 M	0152	0.7	21	29 Tu	0414	0.8	24	14 Th	1533	-0.1	-3	29 F	1535	0.1	3	14 F	0652	0.2	6	29 Sa	0656	0.2	6
	0742	1.5	46		0737	0.9	27		2358	2.0	61						1007	0.3	9		1025	0.3	9
	1451	-0.1	-3		1452	0.1	3								1507		0.0	0	1437		0.2	6	
	2207	1.4	43		2303	1.5	46								2332		1.9	58	2312		1.6	49	
15 Tu	0352	0.8	24	30 W	1536	0.1	3	15 F	0814	0.3	9	15 Sa	0736	0.1	3	15 Su	0718	0.2	6				
	0824	1.1	34		1120	0.4	12						1205	0.4	12		1158	0.4	12				
	1531	-0.1	-3		1650	-0.1	-3						1646	0.0	0		1620	0.2	6				
	2318	1.7	52																				
			31 Th	0005	1.7	52										31 M	0007	1.7	52				
				1632	0.1	3											0738	0.1	3				

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

Honolulu, Oahu Island, Hawaii, 2008

Times and Heights of High and Low Waters

July					August					September													
Time		Height			Time		Height			Time		Height			Time		Height						
	h m	ft	cm			h m	ft	cm			h m	ft	cm			h m	ft	cm					
1 Tu	0202	0.5	15	16 W	0232	0.6	18	1 F	0351	0.9	27	16 Sa	0337	1.0	30	1 M	0504	1.6	49	16 Tu	0439	1.9	58
	0736	-0.4	-12		0756	-0.1	-3		0916	-0.2	-6		0907	0.0	0		1055	0.3	9		1044	0.3	9
	1522	2.7	82		1536	2.3	70		1629	2.5	76		1607	2.3	70		1658	1.7	52		1629	1.6	49
	2252	0.1	3		2258	0.2	6		2329	0.0	0		2254	0.2	6		2320	0.1	3		2242	0.0	0
2 W	0301	0.5	15	17 Th	0311	0.6	18	2 Sa	0440	1.0	30	17 Su	0417	1.2	37	2 Tu	0546	1.7	52	17 W	0523	2.0	61
	0826	-0.4	-12		0835	-0.1	-3		1005	-0.1	-3		0949	0.1	3		1147	0.5	15		1142	0.4	12
	1608	2.7	82		1608	2.3	70		1705	2.3	70		1635	2.2	67		1726	1.5	46		1702	1.4	43
	2334	0.0	0		2324	0.2	6		2359	0.0	0		2318	0.1	3		2343	0.1	3		2309	0.0	0
3 Th	0357	0.6	18	18 F	0351	0.7	21	3 Su	0530	1.1	34	18 M	0500	1.3	40	3 W	0630	1.8	55	18 Th	0612	2.1	64
	0917	-0.4	-12		0913	-0.1	-3		1055	0.1	3		1034	0.2	6		1247	0.6	18		1251	0.5	15
	1652	2.6	79		1640	2.3	70		1739	2.1	64		1704	2.0	61		1754	1.2	37		1736	1.1	34
					2351	0.2	6				2342		0.1	3					2341		0.0	0	
4 F	0015	0.0	0	19 Sa	0433	0.8	24	4 M	0028	0.1	3	19 Tu	0547	1.5	46	4 Th	0006	0.2	6	19 F	0709	2.1	64
	0453	0.6	18		0622	1.3	40		1125	0.4	12		0719	1.8	55		1422	0.6	18				
	1007	-0.3	-9		1147	0.4	12		1734	1.8	55		1403	0.7	21		1816	0.9	27				
	1735	2.5	76		1811	1.8	55						1820	1.0	30								
5 Sa	0054	0.0	0	20 Su	0019	0.1	3	5 Tu	0056	0.1	3	20 W	0008	0.0	0	5 F	0032	0.3	9	20 Sa	0018	0.1	3
	0552	0.7	21		0520	0.8	24		0717	1.4	43		0638	1.6	49		0816	1.8	55		0816	2.1	64
	1058	-0.1	-3		1031	0.1	3		1247	0.6	18		1227	0.6	18		1601	0.7	21		1625	0.5	15
	1816	2.3	70		1740	2.2	67		1840	1.5	46		1805	1.5	46		1846	0.8	24		1916	0.6	18
6 Su	0132	0.0	0	21 M	0046	0.1	3	6 W	0125	0.1	3	21 Th	0037	0.0	0	6 Sa	0105	0.3	9	21 Su	0108	0.1	3
	0655	0.8	24		0611	1.0	30		0818	1.5	46		0737	1.7	52		0927	1.8	55		0934	2.1	64
	1151	0.2	6		1117	0.3	9		1405	0.8	24		1347	0.7	21				1809		0.4	12	
	1854	2.0	61		1811	2.0	61		1908	1.3	40		1838	1.2	37		2126	0.5	15				
7 M	0208	0.0	0	22 Tu	0114	0.1	3	7 Th	0155	0.2	6	22 F	0112	0.0	0	7 Su	0156	0.4	12	22 M	0225	0.2	6
	0806	1.0	30		0709	1.1	34		0924	1.6	49		0845	1.9	58		1044	1.8	55		1052	2.1	64
	1253	0.5	15		1211	0.5	15		1601	0.9	27		1545	0.8	24		1935	0.5	15		1859	0.3	9
	1931	1.8	55		1842	1.8	55		1935	1.0	30		1916	0.9	27		2241	0.6	18		2330	0.6	18
8 Tu	0243	0.0	0	23 W	0144	0.0	0	8 F	0229	0.2	6	23 Sa	0155	0.1	3	8 M	0321	0.4	12	23 Tu	0406	0.3	9
	0920	1.2	37		0814	1.3	40		1035	1.7	52		1002	2.0	61		1151	1.9	58		1158	2.2	67
	1413	0.7	21		1323	0.7	21				1816		0.6	18	1956		0.5	15	1933		0.2	6	
	2006	1.5	46		1915	1.5	46		○		2022		0.7	21									
9 W	0317	0.0	0	24 Th	0216	0.0	0	9 Sa	0314	0.2	6	24 Su	0254	0.1	3	9 Tu	0010	0.7	21	24 W	0041	0.8	24
	1033	1.4	43		0925	1.5	46		1140	1.8	55		1118	2.1	64		0450	0.4	12		0534	0.3	9
	1605	0.9	27		1506	0.8	24				1936		0.5	15	1243		1.9	58	1252		2.2	67	
	2042	1.2	37		1952	1.2	37				2236		0.6	18	2016		0.4	12	2002		0.2	6	
10 Th	0351	0.0	0	25 F	0254	0.0	0	10 Su	0413	0.3	9	25 M	0411	0.1	3	10 W	0057	0.8	24	25 Th	0130	1.0	30
	1135	1.6	49		1036	1.7	52		1236	1.9	58		1223	2.3	70		0557	0.3	9		0644	0.3	9
	1821	0.8	24		1725	0.8	24		2046	0.5	15		2014	0.3	9		1323	2.0	61		1336	2.1	64
	2125	0.9	27		2041	0.9	27		2359	0.6	18				2035		0.3	9	2027		0.1	3	
11 F	0426	0.1	3	26 Sa	0339	-0.1	-3	11 M	0518	0.2	6	26 Tu	0017	0.6	18	11 Th	0134	0.9	27	26 F	0212	1.3	40
	1227	1.8	55		1142	2.0	61		1322	2.0	61		0530	0.0	0		0650	0.2	6		0742	0.2	6
	2010	0.6	18		1927	0.6	18		2107	0.4	12		1318	2.4	73		1358	2.1	64		1414	2.0	61
	2231	0.7	21		2202	0.7	21				2046		0.2	6	2053		0.3	9	2051		0.1	3	
12 Sa	0505	0.1	3	27 Su	0434	-0.1	-3	12 Tu	0101	0.6	18	27 W	0123	0.7	21	12 F	0209	1.1	34	27 Sa	0251	1.5	46
	1311	1.9	58		1241	2.2	67		0616	0.1	3		0638	0.0	0		0736	0.2	6		0835	0.3	9
	2105	0.5	15		2032	0.4	12		1402	2.1	64		1405	2.4	73		1429	2.1	64		1448	1.9	58
	2352	0.6	18		2344	0.6	18		2128	0.4	12		2115	0.2	6		2112	0.2	6		2112	0.0	0
13 Su	0547	0.0	0	28 M	0535	-0.2	-6	13 W	0144	0.7	21	28 Th	0213	0.9	27	13 Sa	0244	1.3	40	28 Su	0327	1.7	52
	1350	2.1	64		1335	2.4	73		0704	0.1	3		0737	0.0	0		0820	0.2	6		0924	0.3	9
	2139	0.4	12		2115	0.3	9		1437	2.2	67		1446	2.4	73		1458	2.1	64		1519	1.7	52
							2149		0.3	9				2142	0.1		3	2132	0.1		3	2133	0.0	0
14 M	0059	0.6	18	29 Tu	0105	0.6	18	14 Th	0222	0.8	24	29 F	0258	1.1	34	14 Su	0321	1.5	46	29 M	0402	1.9	58
	0631	0.0	0		0635	-0.2	-6		0747	0.0	0		0829	0.0	0		0905	0.2	6		1012	0.4	12
	1427	2.2	67		1423	2.6	79		1508	2.3	70		1523	2.3	70		1528	2.0	61		1548	1.5	46
	2206	0.3	9		2151	0.2	6		2210	0.3	9		2208	0.1	3		2153	0.1	3		2154	0.0	0
15 Tu	0150	0.6	18	30 W	0207	0.6	18	15 F	0259	0.9	27	30 Sa	0341	1.3	40	15 M	0359	1.7	52	30 Tu	0437	2.0	61
	0715	-0.1	-3		0733	-0.3	-9		0828	0.0	0		0918	0.1	3		0953	0.2	6		1101	0.4	12
	1502	2.2	67		1508	2.6	79		1538	2.3	70		1557	2.2	67		1558	1.8	55		1618	1.3	40
	2232	0.3	9		2225	0.1	3		2232	0.2	6		2232	0.1	3		2217	0.0	0		2215	0.1	3
				31 Th	0301	0.7	21				31 Su	0422	1.5	46									

Honolulu, Oahu Island, Hawaii, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 W	0512 2.1 64 1152 0.5 15 1647 1.1 34 2236 0.1 3	16 Th	0505 2.5 76 1203 0.4 12 1638 1.0 30 2224 -0.1 -3	1 Sa	0603 2.2 67 1355 0.4 12 1735 0.6 18 2244 0.2 6	16 Su	0636 2.5 76 1430 0.2 6 1839 0.5 15 2332 0.0 0	1 M	0623 2.2 67 1416 0.3 9 1825 0.5 15 2305 0.2 6	16 Tu	0704 2.3 70 1437 0.0 0 1959 0.7 21
2 Th	0550 2.1 64 1251 0.6 18 1717 0.9 27 2259 0.2 6	17 F	0554 2.5 76 1316 0.4 12 1723 0.8 24 2300 -0.1 -3	2 Su	0649 2.1 64 1507 0.4 12 1833 0.5 15 2318 0.3 9	17 M	0732 2.4 73 1533 0.2 6 2017 0.5 15	2 Tu	0704 2.1 64 1502 0.3 9 1942 0.6 18 2349 0.4 12	17 W	0033 0.3 9 0750 2.0 61 1520 0.0 0 2129 0.9 27
3 F	0633 2.0 61 1403 0.6 18 1749 0.8 24 2324 0.3 9	18 Sa	0650 2.4 73 1443 0.4 12 1822 0.6 18 2344 0.0 0	3 M	0743 2.0 61 1618 0.4 12 2013 0.5 15	18 Tu	0035 0.3 9 0832 2.2 67 1626 0.1 3 2206 0.7 21	3 W	0746 2.0 61 1542 0.2 6 2116 0.7 21	18 Th	0152 0.6 18 0835 1.7 52 1600 0.0 0 2252 1.2 37
4 Sa	0724 1.9 58 1545 0.5 15 1831 0.6 18 2355 0.3 9	19 Su	0755 2.3 70 1616 0.3 9 2000 0.5 15	4 Tu	0003 0.4 12 0841 1.9 58 1707 0.3 9 2218 0.6 18	19 W	0203 0.5 15 0931 2.0 61 1709 0.1 3 2330 1.0 30	4 Th	0050 0.6 18 0829 1.8 55 1616 0.2 6 2241 0.9 27	19 F	0341 0.8 24 0922 1.4 43 1636 0.0 0 2357 1.5 46
5 Su	0828 1.9 58 1737 0.5 15 2016 0.6 18	20 M	0042 0.2 6 0906 2.2 67 1724 0.3 9 2213 0.6 18	5 W	0120 0.5 15 0939 1.8 55 1739 0.3 9 2334 0.8 24	20 Th	0353 0.7 21 1027 1.7 52 1744 0.0 0	5 F	0226 0.8 24 0914 1.7 52 1645 0.1 3 2339 1.2 37	20 Sa	0546 0.9 27 1012 1.2 37 1710 0.0 0
6 M	0044 0.4 12 0942 1.8 55 1826 0.5 15 2252 0.6 18	21 Tu	0212 0.4 12 1017 2.1 64 1809 0.2 6 2345 0.8 24	6 Th	0312 0.7 21 1032 1.8 55 1804 0.2 6	21 F	0028 1.3 40 0538 0.8 24 1119 1.5 46 1813 0.0 0	6 Sa	0423 0.9 27 1004 1.5 46 1714 0.0 0	21 Su	0046 1.8 55 0732 0.7 21 1109 0.9 27 1742 0.0 0
7 Tu	0219 0.5 15 1051 1.8 55 1853 0.4 12	22 W	0402 0.5 15 1120 2.0 61 1842 0.1 3	7 F	0019 1.1 34 0452 0.7 21 1120 1.7 52 1825 0.1 3	22 Sa	0112 1.6 49 0704 0.7 21 1206 1.3 40 1839 0.0 0	7 Su	0024 1.5 46 0608 0.8 24 1057 1.3 40 1744 -0.1 -3	22 M	0127 2.0 61 0845 0.6 18 1209 0.7 21 1815 -0.1 -3
8 W	0002 0.7 21 0409 0.5 15 1145 1.9 58 1914 0.3 9	23 Th	0042 1.1 34 0536 0.5 15 1212 1.9 58 1910 0.1 3	8 Sa	0055 1.4 43 0613 0.7 21 1204 1.6 49 1847 0.0 0	23 Su	0149 1.9 58 0813 0.6 18 1249 1.1 34 1903 -0.1 -3	8 M	0105 1.9 58 0733 0.7 21 1153 1.1 34 1817 -0.2 -6	23 Tu	0203 2.1 64 0934 0.4 12 1307 0.6 18 1848 -0.1 -3
9 Th	0043 0.9 27 0528 0.5 15 1229 1.9 58 1933 0.2 6	24 F	0126 1.4 43 0651 0.5 15 1256 1.8 55 1934 0.0 0	9 Su	0130 1.7 52 0722 0.6 18 1246 1.5 46 1911 -0.1 -3	24 M	0222 2.1 64 0910 0.5 15 1330 1.0 30 1927 -0.1 -3	9 Tu	0145 2.2 67 0841 0.5 15 1250 0.9 27 1853 -0.3 -9	24 W	0236 2.2 67 1011 0.3 9 1356 0.6 18 1924 -0.1 -3
10 F	0118 1.1 34 0630 0.5 15 1306 1.9 58 1951 0.2 6	25 Sa	0204 1.7 52 0753 0.5 15 1334 1.6 49 1956 0.0 0	10 M	0206 2.0 61 0823 0.5 15 1328 1.3 40 1938 -0.2 -6	25 Tu	0253 2.3 70 0958 0.5 15 1409 0.8 24 1953 -0.1 -3	10 W	0227 2.5 76 0939 0.3 9 1345 0.7 21 1933 -0.4 -12	25 Th	0309 2.3 70 1042 0.3 9 1438 0.6 18 2000 -0.1 -3
11 Sa	0152 1.4 43 0725 0.4 12 1340 1.9 58 2011 0.1 3	26 Su	0238 1.9 58 0847 0.5 15 1408 1.4 43 2017 0.0 0	11 Tu	0243 2.3 70 0922 0.4 12 1410 1.1 34 2007 -0.3 -9	26 W	0324 2.3 70 1040 0.4 12 1447 0.7 21 2020 -0.1 -3	11 Th	0311 2.7 82 1032 0.2 6 1439 0.6 18 2016 -0.4 -12	26 F	0342 2.3 70 1112 0.2 6 1517 0.6 18 2036 -0.1 -3
12 Su	0226 1.7 52 0817 0.4 12 1413 1.8 55 2032 0.0 0	27 M	0311 2.1 64 0938 0.5 15 1440 1.2 37 2038 0.0 0	12 W	0323 2.5 76 1019 0.3 9 1454 1.0 30 2040 -0.3 -9	27 Th	0356 2.4 73 1120 0.3 9 1525 0.7 21 2049 -0.1 -3	12 F	0356 2.8 85 1122 0.1 3 1532 0.6 18 2101 -0.4 -12	27 Sa	0416 2.3 70 1142 0.2 6 1554 0.6 18 2112 -0.1 -3
13 M	0302 1.9 58 0909 0.3 9 1447 1.6 49 2056 -0.1 -3	28 Tu	0342 2.2 67 1025 0.4 12 1512 1.1 34 2059 0.0 0	13 Th	0406 2.7 82 1117 0.2 6 1539 0.8 24 2117 -0.3 -9	28 F	0429 2.4 73 1200 0.3 9 1603 0.6 18 2121 0.0 0	13 Sa	0442 2.8 85 1212 0.1 3 1628 0.6 18 2148 -0.4 -12	28 Su	0449 2.3 70 1214 0.2 6 1634 0.6 18 2148 -0.1 -3
14 Tu	0340 2.2 67 1003 0.3 9 1522 1.4 43 2122 -0.1 -3	29 W	0413 2.3 70 1112 0.4 12 1545 0.9 27 2122 0.0 0	14 F	0452 2.7 82 1218 0.2 6 1628 0.7 21 2157 -0.3 -9	29 Sa	0505 2.3 70 1243 0.3 9 1642 0.6 18 2154 0.0 0	14 Su	0530 2.7 82 1302 0.0 0 1728 0.6 18 2238 -0.2 -6	29 M	0522 2.3 70 1246 0.2 6 1718 0.6 18 2223 0.0 0
15 W	0421 2.4 73 1100 0.3 9 1559 1.2 37 2151 -0.2 -6	30 Th	0446 2.3 70 1200 0.4 12 1618 0.8 24 2147 0.0 0	15 Sa	0542 2.7 82 1323 0.2 6 1725 0.6 18 2241 -0.2 -6	30 Su	0543 2.2 67 1329 0.3 9 1728 0.5 15 2229 0.1 3	15 M	0617 2.5 76 1350 0.0 0 1837 0.6 18 2331 0.0 0	30 Tu	0554 2.2 67 1318 0.1 3 1809 0.7 21 2302 0.1 3
		31 F	0522 2.3 70 1253 0.4 12 1654 0.7 21 2214 0.1 3							31 W	0625 2.1 64 1350 0.1 3 1909 0.7 21 2346 0.3 9

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

Moku O Loe, Oahu Island, Hawaii, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
1 Tu	h m 0026 ft 1.5 cm 46	16 W	h m 1512 ft -0.1 cm -3	1 F	h m 0102 ft 2.0 cm 61	16 Sa	h m 0044 ft 2.4 cm 73	1 Sa	h m 0022 ft 1.9 cm 58	16 Su	h m 0012 ft 2.3 cm 70
	m 1555 0.2		m 1512 -0.1		m 1638 0.1		m 1710 -0.2		m 1601 0.3		m 0751 0.7
2 W	0050 1.8 1633 0.1	17 Th	0011 2.0 1614 -0.2	2 Sa	0125 2.2 1734 0.0	17 Su	0121 2.5 0839 0.8	2 Su	0048 2.1 1711 0.1	17 M	0047 2.3 0743 0.7
	55 3		61 -6		67 0		24 30		64 3		21 34
3 Th	0114 2.0 1712 -0.1	18 F	0056 2.3 1714 -0.4	3 Su	0148 2.3 0916 0.9	18 M	0152 2.6 0841 0.8	3 M	0110 2.2 0814 0.8	18 Tu	0115 2.3 0751 0.5
	61 -3		70 -12		27 30		24 34		24 30		15 40
4 F	0139 2.2 1751 -0.2	19 Sa	0135 2.6 1809 -0.5	4 M	0211 2.4 0904 0.9	19 Tu	0221 2.6 0854 0.6	4 Tu	0132 2.3 0810 0.7	19 W	0139 2.2 0804 0.4
	67 -6		79 -15		27 34		18 40		21 37		12 46
5 Sa	0205 2.3 1829 -0.3	20 Su	0212 2.7 0919 0.9	5 Tu	0235 2.5 0912 0.8	20 W	0246 2.5 0912 0.5	5 W	0153 2.3 0819 0.6	20 Th	0159 2.1 0819 0.2
	70 -9		82 27		24 37		15 43		18 43		6 52
6 Su	0231 2.4 0939 1.0	21 M	0246 2.8 0936 0.8	6 W	0258 2.5 0928 0.7	21 Th	0309 2.4 0931 0.4	6 Th	0215 2.3 0835 0.4	21 F	0218 2.0 0836 0.1
	73 30		85 24		21 40		12 46		12 49		3 55
7 M	0259 2.5 0952 1.0	22 Tu	0319 2.7 0959 0.7	7 Th	0321 2.5 0948 0.6	22 F	0329 2.2 0951 0.3	7 F	0237 2.3 0856 0.2	22 Sa	0234 1.8 0854 0.0
	76 30		82 21		18 43		9 49		6 52		0 58
8 Tu	0327 2.6 1012 0.9	23 W	0349 2.7 1024 0.7	8 F	0344 2.4 1011 0.4	23 Sa	0346 2.0 1012 0.2	8 Sa	0258 2.1 0919 0.1	23 Su	0249 1.7 0913 -0.1
	79 27		82 21		12 46		6 49		3 58		-3 61
9 W	0355 2.6 1037 0.8	24 Th	0416 2.5 1051 0.6	9 Sa	0406 2.3 1037 0.3	24 Su	0359 1.8 1032 0.1	9 Su	0319 2.0 0945 -0.1	24 M	0301 1.5 0933 -0.1
	79 34		76 18		70 46		3 24		61 18		-3 61
10 Th	0423 2.5 1105 0.8	25 F	0440 2.3 1118 0.5	10 Su	0426 2.1 1105 0.2	25 M	0407 1.7 1053 0.1	10 M	0337 1.8 1014 -0.2	25 Tu	0307 1.4 0954 -0.1
	76 37		70 15		64 46		3 49		55 61		-3 58
11 F	0449 2.4 1135 0.7	26 Sa	0459 2.1 1145 0.4	11 M	0442 1.9 1137 0.1	26 Tu	0402 1.5 1116 0.1	11 Tu	0349 1.6 1046 -0.2	26 W	0301 1.3 1018 0.0
	73 21		64 12		58 3		46 49		-6 58		0 55
12 Sa	0515 2.3 1208 0.5	27 Su	0512 1.9 1212 0.3	12 Tu	0450 1.7 1215 0.0	27 W	0329 1.4 1145 0.2	12 W	0013 1.2 0342 1.4	27 Th	1046 0.1 1953 1.7
	70 15		58 9		52 0		6 49		37 43		3 52
13 Su	0538 2.1 1244 0.4	28 M	0514 1.7 1242 0.3	13 W	0057 1.4 0423 1.5	28 Th	1229 0.3 2345 1.8	13 Th	1219 0.0 2206 2.0	28 F	1127 0.2 2156 1.8
	64 12		52 9		43 46		9 55		0 61		6 55
14 M	0558 1.9 1325 0.2	29 Tu	0450 1.5 1319 0.3	14 Th	1421 0.0 2359 2.1	29 F	1404 0.3	14 F	1348 0.1 2324 2.2	29 Sa	1249 0.4 2304 1.9
	58 6		46 9		0 64		9		67		12 58
15 Tu	0017 1.2 0609 1.6	30 W	0044 1.5 1412 0.2	15 F	1553 -0.1			15 Sa	1543 0.1	30 Su	1503 0.4 2341 2.0
	37 49		46 6		-3				3		12 61
16 W	0017 1.2 0609 1.6	31 Th	0040 1.8 1526 0.2							31 M	0725 0.8 1040 0.9
	37 49		55 6								24 27

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Moku O Loe, Oahu Island, Hawaii, 2008

Times and Heights of High and Low Waters

October								November								December							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm				
1 W	0347	2.1	64	16 Th	0351	2.4	73	1 Sa	0454	2.2	67	16 Su	0539	2.6	79	1 M	0519	2.3	70	16 Tu	0600	2.5	76
	0947	0.8	24		1004	0.9	27		2124	-0.1	-3		2213	-0.3	-9		2146	-0.1	-3		1321	0.8	24
	1435	1.5	46		1417	1.4	43										1648	0.9	27		1648	0.9	27
	2110	-0.2	-6		2104	-0.5	-15										2253	0.1	3		2253	0.1	3
2 Th	0427	2.1	64	17 F	0444	2.4	73	2 Su	0543	2.1	64	17 M	0639	2.4	73	2 Tu	0559	2.2	67	17 W	0640	2.2	67
	1031	1.0	30		1113	1.1	34		2155	0.0	0		2303	0.0	0		2219	0.1	3		1413	0.6	18
	1440	1.4	43		1429	1.3	40										1835	0.9	27		1835	0.9	27
	2131	-0.1	-3		2140	-0.4	-12										2338	0.5	15		2338	0.5	15
3 F	0511	2.0	61	18 Sa	0547	2.3	70	3 M	0643	2.0	61	18 Tu	0741	2.2	67	3 W	0638	2.1	64	18 Th	0716	2.0	61
	1129	1.2	37		2221	-0.3	-9		2230	0.2	6						2255	0.4	12		1500	0.5	15
	1428	1.3	40														2114	1.0	30		2114	1.0	30
	2154	0.0	0																				
4 Sa	0609	1.9	58	19 Su	0705	2.2	67	4 Tu	0753	1.9	58	19 W	0008	0.3	9	4 Th	0717	2.0	61	19 F	0040	0.9	27
	2220	0.1	3		2313	0.0	0		2319	0.4	12		0839	2.1	64		1536	0.7	21		0747	1.7	52
5 Su	0739	1.8	55	20 M	0834	2.2	67	5 W	0857	1.9	58	20 Th	0147	0.7	21	5 F	0755	1.9	58	20 Sa	0305	1.2	37
	2256	0.3	9						0928	1.9	58		1646	0.6	18		1553	0.5	15		0811	1.5	46
									1703	0.4	12		2139	0.8	24		2221	1.0	30		1616	0.1	3
									2322	1.2	37												
6 M	0935	1.8	55	21 Tu	0035	0.2	6	6 Th	0059	0.6	18	21 F	0346	0.9	27	6 Sa	0128	0.9	27	21 Su	0029	1.7	52
					0950	2.1	64		0945	1.9	58		1008	1.7	52		0833	1.7	52		0622	1.2	37
					1834	0.6	18		1738	0.6	18		1722	0.2	6		1616	0.3	9		0825	1.3	40
					2119	0.7	21		2247	0.9	27						2335	1.4	43		1648	0.0	0
7 Tu	0011	0.4	12	22 W	0237	0.4	12	7 F	0306	0.7	21	22 Sa	0017	1.5	46	7 Su	0357	1.1	34	22 M	0104	2.0	61
	1043	1.9	58		1044	2.1	64		1021	1.8	55		0522	1.0	30		0912	1.6	49		1719	-0.1	-3
					1812	0.5	15		1735	0.4	12		1039	1.6	49		1643	0.0	0				
					2309	1.0	30		2339	1.2	37		1742	0.0	0								
8 W	0249	0.5	15	23 Th	0416	0.5	15	8 Sa	0436	0.8	24	23 Su	0057	1.8	55	8 M	0020	1.8	55	23 Tu	0133	2.2	67
	1120	1.9	58		1122	2.0	61		1052	1.8	55		0636	1.0	30		0552	1.2	37		1751	-0.2	-6
	1858	0.7	21		1819	0.4	12		1746	0.2	6		1106	1.5	46		0954	1.4	43				
	2258	0.9	27								1802		-0.1	-3	1715		-0.2	-6					
9 Th	0418	0.4	12	24 F	0004	1.3	40	9 Su	0020	1.6	49	24 M	0130	2.1	64	9 Tu	0100	2.2	67	24 W	0200	2.3	70
	1146	2.0	61		0526	0.5	15		0545	0.8	24		0736	1.0	30		0714	1.1	34		1824	-0.3	-9
	1843	0.6	18		1151	1.9	58		1120	1.7	52		1130	1.3	40		1039	1.3	40				
	2343	1.1	34		1833	0.2	6		1805	-0.1	-3		1824	-0.3	-9		1751	-0.5	-15				
10 F	0516	0.4	12	25 Sa	0047	1.6	49	10 M	0100	1.9	58	25 Tu	0200	2.3	70	10 W	0141	2.5	76	25 Th	0227	2.4	73
	1209	2.0	61		0621	0.6	18		0645	0.8	24		0825	1.0	30		0818	1.1	34		0945	0.9	27
	1846	0.4	12		1215	1.8	55		1149	1.6	49		1154	1.2	37		1126	1.2	37		1152	1.0	30
					1848	0.0	0		1829	-0.3	-9		1847	-0.3	-9		1831	-0.7	-21		1858	-0.3	-9
11 Sa	0022	1.4	43	26 Su	0124	1.9	58	11 Tu	0140	2.3	70	26 W	0229	2.4	73	11 Th	0223	2.7	82	26 F	0255	2.5	76
	0603	0.4	12		0709	0.7	21		0742	0.8	24		0908	1.0	30		0911	1.0	30		0959	1.0	30
	1230	2.0	61		1235	1.7	52		1218	1.5	46		1220	1.2	37		1213	1.2	37		1239	1.1	34
	1858	0.2	6		1906	-0.1	-3		1858	-0.5	-15		1913	-0.4	-12		1913	-0.8	-24		1932	-0.4	-12
12 Su	0101	1.7	52	27 M	0158	2.1	64	12 W	0221	2.5	76	27 Th	0259	2.5	76	12 F	0306	2.9	88	27 Sa	0323	2.5	76
	0648	0.4	12		0753	0.8	24		0838	0.9	27		0947	1.0	30		0959	1.0	30		1019	0.9	27
	1252	1.9	58		1254	1.6	49		1248	1.4	43		1247	1.1	34		1300	1.2	37		1320	1.1	34
	1916	0.0	0		1924	-0.2	-6		1931	-0.7	-21		1941	-0.4	-12		1957	-0.8	-24		2005	-0.4	-12
13 M	0140	1.9	58	28 Tu	0231	2.2	67	13 Th	0306	2.7	82	28 F	0331	2.5	76	13 Sa	0350	2.9	88	28 Su	0352	2.5	76
	0733	0.5	15		0836	0.8	24		0935	0.9	27		1025	1.0	30		1047	1.0	30		1043	0.9	27
	1314	1.8	55		1311	1.4	43		1317	1.3	40		1314	1.1	34		1347	1.1	34		1359	1.1	34
	1938	-0.2	-6		1944	-0.3	-9		2007	-0.7	-21		2011	-0.4	-12		2041	-0.7	-21		2038	-0.3	-9
14 Tu	0221	2.2	67	29 W	0303	2.3	70	14 F	0353	2.7	82	29 Sa	0405	2.4	73	14 Su	0434	2.8	85	29 M	0420	2.5	76
	0819	0.6	18		0918	0.9	27		1037	1.0	30		1107	1.0	30		1136	0.9	27		1110	0.9	27
	1336	1.7	52		1328	1.3	40		1345	1.2	37		1339	1.1	34		1438	1.1	34		1437	1.1	34
	2004	-0.4	-12		2006	-0.3	-9		2046	-0.7	-21		2042	-0.3	-9		2125	-0.5	-15		2109	-0.2	-6
15 W	0304	2.3	70	30 Th	0337	2.3	70	15 Sa	0444	2.7	82	30 Su	0441	2.4	73	15 M	0518	2.7	82	30 Tu	0448	2.4	73
	0908	0.7	21		1003	1.0	30		1152	1.0	30		1157	1.0	30		1227	0.9	27		1141	0.8	24
	1358	1.6	49		1343	1.3	40		1409	1.1	34		1401	1.1	34		1535	1.0	30		1520	1.1	34
	2032	-0.5	-15		2030	-0.3	-9		2128	-0.5	-15		2114	-0.2	-6		2209	-0.3	-9		2139	-0.1	-3
				31 F	0413	2.3	70													31 W	0514	2.3	70
			1054		1.1	34															1214	0.7	21
			1352		1.2	37															1611	1.0	30
			2056		-0.2	-6															2209	0.1	3

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to mean lower low water which is the chart datum of soundings.

Kahului, Maui Island, Hawaii, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height			Time	Height			Time	Height		
	h	m	ft		h	m	ft		h	m	ft
1 Tu	0337	1.4	43	16 W	0305	1.4	43	1 Sa	0016	1.8	55
	0658	1.5	46		0609	1.5	46		0067	2.2	67
	1540	0.3	9		1458	0.0	0		0734	0.6	18
					2343	2.0	61		1115	0.8	24
									1703	0.0	0
2 W	0014	1.8	55	17 Th	1605	-0.2	-6	2 Su	0041	2.0	61
	1625	0.1	3						0839	0.7	21
									1046	0.8	24
									1712	0.1	3
3 Th	0048	2.1	64	18 F	0035	2.4	73	3 M	0103	2.2	67
	1708	0.0	0		1709	-0.3	-9		0801	0.7	21
									1154	1.0	30
									1800	-0.1	-3
4 F	0118	2.3	70	19 Sa	0117	2.6	79	4 Tu	0124	2.3	70
	1749	-0.1	-3		0834	0.9	27		0800	0.6	18
					1116	1.0	30		1237	1.2	37
					1805	-0.5	-15		1840	-0.2	-6
5 Sa	0147	2.4	73	20 Su	0155	2.8	85	5 W	0145	2.4	73
	0849	1.0	30		0851	0.8	24		0811	0.4	12
	1138	1.1	34		1226	1.1	34		1316	1.4	43
	1829	-0.3	-9		1854	-0.6	-18		1917	-0.3	-9
6 Su	0216	2.6	79	21 M	0231	2.9	88	6 Th	0207	2.5	76
	0906	0.9	27		0915	0.7	21		0828	0.2	6
	1227	1.2	37		1319	1.2	37		1356	1.7	52
	1906	-0.4	-12		1939	-0.6	-18		1955	-0.2	-6
7 M	0245	2.7	82	22 Tu	0304	2.9	88	7 F	0230	2.4	73
	0927	0.9	27		0940	0.6	18		0848	0.0	0
	1309	1.2	37		1406	1.3	40		1436	1.9	58
	1941	-0.5	-15		2019	-0.6	-18		2033	-0.1	-3
8 Tu	0314	2.7	82	23 W	0335	2.8	85	8 Sa	0252	2.3	70
	0952	0.8	24		1007	0.5	15		0911	-0.1	-3
	1349	1.3	40		1450	1.4	43		1517	2.0	61
	2014	-0.5	-15		2056	-0.4	-12		2113	0.1	3
9 W	0343	2.8	85	24 Th	0403	2.7	82	9 Su	0315	2.1	64
	1019	0.8	24		1033	0.5	15		0936	-0.3	-9
	1429	1.3	40		1534	1.5	46		1602	2.1	64
	2047	-0.4	-12		2132	-0.2	-6		2155	0.4	12
10 Th	0410	2.7	82	25 F	0428	2.5	76	10 M	0335	1.9	58
	1048	0.7	21		1100	0.4	12		1004	-0.3	-9
	1511	1.3	40		1618	1.5	46		1651	2.1	64
	2120	-0.3	-9		2205	0.1	3		2242	0.7	21
11 F	0437	2.6	79	26 Sa	0449	2.3	70	11 Tu	0352	1.6	49
	1119	0.6	18		1127	0.4	12		1034	-0.3	-9
	1559	1.3	40		1706	1.4	43		1751	2.0	61
	2153	0.0	0		2236	0.5	15		2341	1.0	30
12 Sa	0503	2.5	76	27 Su	0505	2.0	61	12 W	0358	1.4	43
	1151	0.5	15		1153	0.3	9		1110	-0.3	-9
	1656	1.3	40		1803	1.4	43		1915	1.9	58
	2230	0.3	9		2308	0.8	24				
13 Su	0528	2.3	70	28 M	0514	1.8	55	13 Th	1156	-0.1	-3
	1226	0.4	12		1222	0.3	9		2126	1.9	58
	1810	1.3	40		1925	1.4	43				
	2312	0.7	21		2340	1.2	37				
14 M	0550	2.0	61	29 Tu	0506	1.6	49	14 F	1320	0.1	3
	1307	0.3	9		1257	0.3	9		2307	2.1	64
	1956	1.4	43		2221	1.5	46				
15 Tu	0014	1.1	34	30 W	0102	1.4	43	15 Sa	1532	0.1	3
	0609	1.8	55		0328	1.5	46				
	1356	0.1	3		1351	0.3	9				
	2216	1.7	52	31 Th	0014	1.7	52	31 M	0721	0.6	18
					1514	0.2	6		1055	0.8	24
									1629	0.3	9

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

Kahului, Maui Island, Hawaii, 2008

Times and Heights of High and Low Waters

July					August					September																			
Time		Height			Time		Height			Time		Height			Time		Height												
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm										
1 Tu	0631	-0.7	-21		16 W	0016	1.1	34		1 F	0147	1.4	43		16 Sa	0144	1.6	49		1 M	0310	2.1	64		16 Tu	0256	2.3	70	
	1420	2.9	88			0654	-0.3	-9			0801	-0.5	-15			0751	-0.2	-6			0906	0.3	9			0852	0.4	12	
	2113	0.9	27			1436	2.6	79			1515	2.9	88			1451	2.7	82			1519	2.3	70			1446	2.3	70	
						2119	0.9	27		●	2144	0.6	18		○	2114	0.6	18			2138	0.2	6			2107	-0.1	-3	
2 W	0040	1.2	37		17 Th	0101	1.2	37		2 Sa	0234	1.5	46		17 Su	0223	1.7	52		2 Tu	0350	2.1	64		17 W	0338	2.4	73	
	0719	-0.8	-24			0730	-0.4	-12			0841	-0.4	-12			0824	-0.1	-3			0942	0.5	15			0933	0.7	21	
	1502	3.0	91			1503	2.7	82			1544	2.8	85			1513	2.6	79			1536	2.1	64			1507	2.1	64	
●	2150	0.8	24		○	2141	0.8	24			2211	0.5	15			2136	0.4	12			2200	0.2	6			2134	-0.1	-3	
3 Th	0136	1.2	37		18 F	0142	1.3	40		3 Su	0321	1.6	49		18 M	0303	1.8	55		3 W	0430	2.1	64		18 Th	0425	2.4	73	
	0805	-0.7	-21			0804	-0.4	-12			0919	-0.1	-3			0858	0.1	3			1018	0.8	24			1019	0.9	27	
	1542	3.0	91			1530	2.7	82			1610	2.6	79			1534	2.5	76			1549	1.9	58			1524	1.8	55	
	2226	0.7	21			2205	0.8	24			2239	0.4	12			2159	0.3	9			2221	0.2	6			2204	-0.1	-3	
4 F	0228	1.2	37		19 Sa	0222	1.3	40		4 M	0407	1.7	52		19 Tu	0346	1.9	58		4 Th	0515	2.0	61		19 F	0521	2.3	70	
	0850	-0.6	-18			0836	-0.3	-9			0956	0.2	6			0933	0.3	9			1056	1.1	34			1118	1.2	37	
	1620	2.9	88			1555	2.7	82			1633	2.4	73			1554	2.3	70			1552	1.7	52			1532	1.6	49	
	2303	0.7	21			2230	0.7	21			2306	0.4	12			2224	0.2	6			2244	0.2	6			2238	-0.1	-3	
5 Sa	0321	1.2	37		20 Su	0303	1.4	43		5 Tu	0457	1.7	52		20 W	0433	1.9	58		5 F	0611	1.9	58		20 Sa	0637	2.2	67	
	0932	-0.4	-12			0908	-0.2	-6			1032	0.6	18			1012	0.6	18			1145	1.4	43			2322	0.1	3	
	1655	2.7	82			1620	2.6	79			1651	2.1	64			1613	2.1	64			1533	1.5	46						
	2341	0.6	18			2257	0.6	18			2333	0.3	9			2253	0.1	3			2309	0.3	9						
6 Su	0417	1.2	37		21 M	0348	1.4	43		6 W	0553	1.6	49		21 Th	0530	1.9	58		6 Sa	0749	1.8	55		21 Su	0833	2.2	67	
	1012	-0.1	-3			0940	0.0	0			1110	0.9	27			1057	1.0	30			2347	0.4	12			●			
	1727	2.5	76			1643	2.5	76			1701	1.8	55			1627	1.9	58								1021	2.3	70	
						2325	0.5	15							2326	0.1	3												
7 M	0018	0.5	15		22 Tu	0440	1.4	43		7 Th	0001	0.3	9		22 F	0646	1.9	58		7 Su	1042	1.9	58		22 M	0036	0.2	6	
	0519	1.2	37			1015	0.3	9			0708	1.6	49			1201	1.3	40			1122	2.4	73						
	1052	0.3	9			1705	2.3	70			1155	1.3	40			1628	1.7	52			1904	0.8	24						
	1755	2.2	67			2356	0.4	12			1656	1.6	49						●				2242	1.0	30				
8 Tu	0056	0.5	15		23 W	0542	1.4	43		8 F	0036	0.3	9		23 Sa	0009	0.1	3		8 M	0119	0.5	15		23 Tu	0245	0.3	9	
	0635	1.2	37			1055	0.7	21			0916	1.7	52			0848	1.9	58			1144	2.0	61			1122	2.4	73	
	1134	0.7	21			1726	2.1	64			●					●								1904		0.8	24		
	1818	2.0	61							●													2242	1.0	30				
9 W	0135	0.4	12		24 Th	0030	0.3	9		9 Sa	0126	0.4	12		24 Su	0115	0.1	3		9 Tu	0345	0.5	15		24 W	0426	0.3	9	
	0819	1.3	40			0706	1.5	46			1131	1.8	55			1051	2.1	64			1216	2.2	67			1203	2.5	76	
	1229	1.1	34			1147	1.1	34													1956	0.9	27			1900	0.7	21	
○	1833	1.7	52			1743	1.9	58															2347	1.3	40				
10 Th	0217	0.3	9		25 F	0114	0.2	6		10 Su	0248	0.4	12		25 M	0255	0.1	3		10 W	0458	0.3	9		25 Th	0531	0.2	6	
	1026	1.5	46			0906	1.6	49			1221	2.1	64			1154	2.4	73			1240	2.3	70			1235	2.6	79	
	1438	1.4	43			1334	1.4	43													1935	0.9	27			1912	0.5	15	
	1831	1.5	46		○	1749	1.6	49																					
11 F	0303	0.2	6		26 Sa	0210	0.1	3		11 M	0416	0.3	9		26 Tu	0429	0.0	0		11 Th	0545	0.2	6		26 F	0032	1.6	49	
	1149	1.8	55			1100	2.0	61			1253	2.2	67			1236	2.6	79			1301	2.5	76			0621	0.2	6	
																												1302	2.5	76
12 Sa	0354	0.2	6		27 Su	0320	0.0	0		12 Tu	0519	0.1	3		27 W	0535	-0.1	-3		12 F	0026	1.5	46		27 Sa	0112	1.9	58	
	1233	2.0	61			1205	2.3	70			2026	1.0	30			1311	2.7	82			0624	0.1	3			0704	0.2	6	
							2338	1.1	34																			1326	2.4	73
13 Su	0444	0.1	3		28 M	0431	-0.2	-6		13 W	0605	0.0	0		28 Th	0020	1.3	40		13 Sa	0102	1.7	52		28 Su	0148	2.1	64	
	1307	2.2	67			1251	2.6	79			1344	2.5	76			1342	-0.2	-6			0700	0.1	3			0744	0.3	9	
						2023	1.0	30			2027	0.9	27			2013	0.6	18			1342	2.6	79			1348	2.3	70	
14 M	0532	-0.1	-3		29 Tu	0534	-0.4	-12		14 Th	0025	1.3	40		29 F	0108	1.6	49		14 Su	0139	1.9	58		29 M	0223	2.3	70	
	1358	2.4	73			1332	2.8	85			0643	-0.2	-6			0712	-0.2	-6			0736	0.1	3			0821	0.5	15	
	2054	1.0	30			2032	0.9	27			1407	2.6	79			1410	2.8	85			1403	2.5	76			1408	2.2	67	
	2319	1.1	34			2355	1.1	34			2038	0.8	24			2033	0.5	15		○	2021	0.2	6			2024	0.0	0	
15 Tu	0615	-0.2	-6		30 W	0629	-0.5	-15		15 F	0106	1.4	43		30 Sa	0151	1.8	55		15 M	0217	2.1	64		30 Tu	0257	2.4	73	
	1407	2.5	76			1409	2.9	88			0718	-0.2	-6			0752	-0.1	-3			0813	0.2	6			0858	0.6	18	
	2103	0.9	27			2053	0.8	24			1429	2.7	82			1435	2.7	82			1425	2.4	73			1426	2.0	61	
											2054	0.7	21		●	2054	0.4	12			2043	0.1	3			2044	-0.1	-3	
					31 Th	0056	1.3	40																					
						0717	-0.6	-18																					
						1443	3.0	91																					
					2118	0.7	21																						

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

Kahului, Maui Island, Hawaii, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height			Time	Height			Time	Height		
	h	m	ft		h	m	ft		h	m	ft
1 W	0332	2.5	76	16 Th	0333	2.8	85	1 M	0504	2.5	76
	0935	0.8	24		0945	0.9	27		1215	1.1	34
	1442	1.8	55		1425	1.7	52		1449	1.2	37
	2105	0.0	0		2058	-0.4	-12		2142	0.0	0
2 Th	0407	2.4	73	17 F	0422	2.7	82	2 Tu	0543	2.4	73
	1014	1.0	30		1043	1.1	34		2213	0.2	6
	1454	1.6	49		1444	1.5	46				
	2126	0.0	0		2132	-0.3	-9				
3 F	0447	2.3	70	18 Sa	0519	2.6	79	3 W	0623	2.3	70
	1058	1.2	37		1206	1.3	40		2249	0.5	15
	1455	1.5	46		1450	1.4	43				
	2149	0.1	3		2211	-0.2	-6				
4 Sa	0537	2.1	64	19 Su	0631	2.4	73	4 Th	0704	2.2	67
	1209	1.3	40		2259	0.1	3		1514	0.8	24
	1425	1.4	43						1913	0.9	27
	2214	0.2	6						2340	0.8	24
5 Su	0653	2.0	61	20 M	0803	2.3	70	5 F	0745	2.1	64
	2245	0.4	12						1540	0.6	18
6 M	0904	1.9	58	21 Tu	0015	0.4	12		2158	1.2	37
	2344	0.6	18		0930	2.3	70	6 Sa	0126	1.1	34
					1811	0.8	24		0828	1.9	58
					2116	0.9	27		1606	0.4	12
7 Tu	1032	2.0	61	22 W	0224	0.6	18		2314	1.6	49
					1030	2.3	70	7 Su	0349	1.2	37
					1757	0.7	21		0914	1.8	55
					2304	1.2	37		1636	0.1	3
8 W	0237	0.7	21	23 Th	0409	0.6	18	8 M	0000	2.0	61
	1112	2.1	64		1112	2.3	70		0535	1.2	37
	1849	0.8	24		1807	0.5	15		1002	1.6	49
	2302	1.1	34		2355	1.6	49		1709	-0.1	-3
9 Th	0415	0.6	18	24 F	0520	0.7	21	9 Tu	0041	2.4	73
	1140	2.2	67		1145	2.2	67		0650	1.1	34
	1836	0.7	21		1823	0.3	9		1051	1.5	46
	2343	1.4	43						1746	-0.4	-12
10 F	0513	0.5	15	25 Sa	0035	1.9	58	10 W	0122	2.7	82
	1203	2.3	70		0614	0.7	21		0750	1.1	34
	1840	0.5	15		1211	2.1	64		1139	1.4	43
					1840	0.1	3		1825	-0.6	-18
11 Sa	0019	1.7	52	26 Su	0110	2.2	67	11 Th	0204	2.9	88
	0600	0.5	15		0700	0.7	21		0841	1.0	30
	1225	2.3	70		1235	2.0	61		1225	1.4	43
	1852	0.3	9		1859	0.0	0		1907	-0.7	-21
12 Su	0055	2.0	61	27 M	0143	2.4	73	12 F	0247	3.1	94
	0643	0.5	15		0742	0.8	24		0929	0.9	27
	1248	2.3	70		1257	1.9	58		1311	1.3	40
	1911	0.1	3		1919	-0.1	-3		1950	-0.8	-24
13 M	0131	2.3	70	28 Tu	0214	2.6	79	13 Sa	0331	3.1	94
	0726	0.5	15		0822	0.8	24		1016	0.9	27
	1312	2.2	67		1319	1.8	55		1358	1.3	40
	1933	-0.1	-3		1940	-0.2	-6		2034	-0.7	-21
14 Tu	0209	2.5	76	29 W	0246	2.6	79	14 Su	0415	3.0	91
	0809	0.6	18		0900	0.9	27		1105	0.9	27
	1337	2.1	64		1339	1.6	49		1446	1.2	37
	1958	-0.3	-9		2003	-0.2	-6		2117	-0.5	-15
15 W	0249	2.7	82	30 Th	0319	2.6	79	15 M	0459	2.9	88
	0855	0.7	21		0940	1.0	30		1155	0.8	24
	1401	1.9	58		1358	1.5	46		1540	1.2	37
	2027	-0.4	-12		2028	-0.2	-6		2201	-0.3	-9
				31 F	0354	2.6	79	30 Tu	0436	2.6	79
					1023	1.1	34		1122	0.8	24
					1414	1.4	43		1526	1.2	37
					2053	-0.1	-3		2136	-0.1	-3
								31 W	0503	2.5	76
									1155	0.7	21
									1613	1.2	37
									2205	0.2	6

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

Hilo, Hawaii Island, Hawaii, 2008

Times and Heights of High and Low Waters

January					February					March																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Time		Height			Time		Height			Time		Height			Time		Height																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
1 Tu	0436	1.3	40		16 Sa	0032	2.5	76		1 Sa	1633	0.2	6		16 Su	0007	2.3	70																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
	0839	1.5	46			1612	0.2	6																																							2 W	0008	2.0	61		17 Su	0120	2.7	82		2 Su	0038	2.1	64		17 M	0053	2.4	73		0643	1.2	37		0934	1.3	40		1656	0.1	3																																			3 Th	0052	2.3	70		18 M	0159	2.8	85		3 M	0112	2.3	70		18 Tu	0129	2.4	73		0752	1.1	34		1048	1.2	37		1741	0.0	0																																			4 F	0130	2.5	76		19 Tu	0234	2.8	85		4 Tu	0142	2.5	76		19 W	0159	2.4	73		0829	1.0	30		1154	1.2	37		1824	-0.1	-3																																			5 Sa	0204	2.6	79		20 W	0304	2.8	85		5 W	0210	2.6	79		20 Th	0226	2.3	70		0857	0.9	27		1247	1.2	37		1905	-0.2	-6																																			6 Su	0237	2.7	82		21 Th	0332	2.7	82		6 Th	0237	2.6	79		21 F	0251	2.2	67		0924	0.8	24		1332	1.2	37		1943	-0.3	-9																																			7 M	0309	2.8	85		22 F	0358	2.5	76		7 F	0305	2.6	79		22 Sa	0314	2.1	64		0952	0.7	21		1413	1.3	40		2020	-0.4	-12																																			8 Tu	0341	2.9	88		23 Sa	0421	2.3	70		8 Sa	0333	2.5	76		23 Su	0336	1.9	58		1021	0.6	18		1452	1.3	40		2056	-0.4	-12																																			9 W	0412	2.9	88		24 Su	0442	2.1	64		9 Su	0401	2.2	67		24 M	0357	1.7	52		1052	0.5	15		1533	1.4	43		2132	-0.3	-9																																			10 Th	0443	2.9	88		25 M	0501	1.8	55		10 M	0428	2.0	61		25 Tu	0416	1.5	46		1124	0.5	15		1616	1.4	43		2208	-0.2	-6																																			11 F	0514	2.8	85		26 Tu	0006	0.8	24		11 Tu	0456	1.6	49		26 W	0003	0.8	24		1157	0.4	12		1705	1.4	43		2247	0.1	3																																			12 Sa	0544	2.6	79		27 W	0107	1.1	34		12 W	0056	0.9	27		27 Th	0110	0.9	27		1231	0.3	9		1802	1.5	46		2332	0.4	12																																			13 Su	0615	2.4	73		28 Th	1317	0.2	6		13 Th	0302	1.0	30		28 F	1219	0.2	6		1308	0.2	6		1913	1.6	49																																							14 M	0028	0.7	21		29 F	1447	0.3	9		14 F	1428	0.1	3		29 Sa	1344	0.3	9		0647	2.1	64		1350	0.2	6		2041	1.7	52																																			15 Tu	0152	1.1	34		30 W	1445	0.3	9		15 Sa	0701	0.6	18		30 Su	0700	0.6	18		0721	1.8	55		1439	0.1	3		2218	2.0	61																																			16 W	0412	1.3	40		31 Th	1556	0.2	6													0806	1.5	46																	1537	-0.1	-3																	2340	2.3	70																																																																					
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	0752	1.1	34			1048	1.2	37			1741	0.0	0																																				4 F	0130	2.5	76		19 Tu	0234	2.8	85		4 Tu	0142	2.5	76		19 W	0159	2.4	73		0829	1.0	30		1154	1.2	37		1824	-0.1	-3																																			5 Sa	0204	2.6	79		20 W	0304	2.8	85		5 W	0210	2.6	79		20 Th	0226	2.3	70		0857	0.9	27		1247	1.2	37		1905	-0.2	-6																																			6 Su	0237	2.7	82		21 Th	0332	2.7	82		6 Th	0237	2.6	79		21 F	0251	2.2	67		0924	0.8	24		1332	1.2	37		1943	-0.3	-9																																			7 M	0309	2.8	85		22 F	0358	2.5	76		7 F	0305	2.6	79		22 Sa	0314	2.1	64		0952	0.7	21		1413	1.3	40		2020	-0.4	-12																																			8 Tu	0341	2.9	88		23 Sa	0421	2.3	70		8 Sa	0333	2.5	76		23 Su	0336	1.9	58		1021	0.6	18		1452	1.3	40		2056	-0.4	-12																																			9 W	0412	2.9	88		24 Su	0442	2.1	64		9 Su	0401	2.2	67		24 M	0357	1.7	52		1052	0.5	15		1533	1.4	43		2132	-0.3	-9																																			10 Th	0443	2.9	88		25 M	0501	1.8	55		10 M	0428	2.0	61		25 Tu	0416	1.5	46		1124	0.5	15		1616	1.4	43		2208	-0.2	-6																																			11 F	0514	2.8	85		26 Tu	0006	0.8	24		11 Tu	0456	1.6	49		26 W	0003	0.8	24		1157	0.4	12		1705	1.4	43		2247	0.1	3																																			12 Sa	0544	2.6	79		27 W	0107	1.1	34		12 W	0056	0.9	27		27 Th	0110	0.9	27		1231	0.3	9		1802	1.5	46		2332	0.4	12																																			13 Su	0615	2.4	73		28 Th	1317	0.2	6		13 Th	0302	1.0	30		28 F	1219	0.2	6		1308	0.2	6		1913	1.6	49																																							14 M	0028	0.7	21		29 F	1447	0.3	9		14 F	1428	0.1	3		29 Sa	1344	0.3	9		0647	2.1	64		1350	0.2	6		2041	1.7	52																																			15 Tu	0152	1.1	34		30 W	1445	0.3	9		15 Sa	0701	0.6	18		30 Su	0700	0.6	18		0721	1.8	55		1439	0.1	3		2218	2.0	61																																			16 W	0412	1.3	40		31 Th	1556	0.2	6													0806	1.5	46																	1537	-0.1	-3																	2340	2.3	70																																																																																																																																																																																																					
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Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

Hilo, Hawaii Island, Hawaii, 2008

Times and Heights of High and Low Waters

July				August				September															
Time		Height		Time		Height		Time		Height		Time		Height									
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm									
1 Tu	0047	1.2	37	16 W	0120	1.2	37	1 F	0241	1.5	46	16 Sa	0234	1.7	52	1 M	0358	2.2	67	16 Tu	0339	2.5	76
	0709	-0.7	-21		0731	-0.3	-9		0842	-0.5	-15		0831	-0.2	-6		0953	0.3	9		0939	0.3	76
	1443	3.1	94		1459	2.7	82		1545	3.1	94		1523	2.8	85		1602	2.4	73		1533	2.4	73
	2134	0.6	18		2143	0.7	21		2218	0.3	9		2150	0.4	12		2222	0.1	3		2152	-0.1	-3
2 W	0146	1.2	37	17 Th	0202	1.2	37	2 Sa	0328	1.7	52	17 Su	0312	1.8	55	2 Tu	0438	2.3	70	17 W	0423	2.6	79
	0759	-0.8	-24		0809	-0.3	-9		0925	-0.3	-9		0907	-0.1	-3		1033	0.5	15		1025	0.6	18
	1528	3.2	98		1529	2.8	85		1618	2.9	88		1549	2.8	85		1625	2.2	67		1601	2.1	64
	2216	0.5	15		2210	0.6	18		2249	0.2	6		2215	0.3	9		2247	0.1	3		2222	-0.2	-6
3 Th	0241	1.2	37	18 F	0242	1.3	40	3 Su	0415	1.8	55	18 M	0353	1.9	58	3 W	0520	2.3	70	18 Th	0511	2.6	79
	0847	-0.7	-21		0844	-0.3	-9		1007	-0.1	-3		0944	0.1	3		1115	0.8	24		1118	0.8	24
	1610	3.2	98		1559	2.8	85		1648	2.7	82		1615	2.7	82		1645	1.9	58		1628	1.9	58
	2257	0.4	12		2238	0.5	15		2320	0.2	6		2242	0.2	6		2312	0.1	3		2255	-0.1	-3
4 F	0334	1.3	40	19 Sa	0322	1.4	43	4 M	0503	1.8	55	19 Tu	0436	2.0	61	4 Th	0606	2.2	67	19 F	0607	2.5	76
	0934	-0.6	-18		0919	-0.3	-9		1048	0.2	6		1024	0.3	9		1204	1.0	30		1226	1.0	30
	1651	3.1	94		1627	2.8	85		1716	2.5	76		1641	2.5	76		1701	1.7	52		1654	1.6	49
	2337	0.3	9		2306	0.4	12		2350	0.2	6		2310	0.1	3		2339	0.2	6		2335	0.0	0
5 Sa	0428	1.3	40	20 Su	0404	1.4	43	5 Tu	0554	1.8	55	20 W	0525	2.1	64	5 F	0702	2.1	64	20 Sa	0718	2.5	76
	1020	-0.3	-9		0954	-0.1	-3		1131	0.6	18		1110	0.6	18		1314	1.3	40		1416	1.2	37
	1730	2.9	88		1655	2.8	85		1740	2.2	67		1706	2.2	67		1706	1.5	46		1717	1.3	40
					2336	0.4	12						2342	0.0	0								
6 Su	0016	0.3	9	21 M	0449	1.5	46	6 W	0021	0.2	6	21 Th	0622	2.1	64	6 Sa	0013	0.3	9	21 Su	0027	0.1	3
	0525	1.4	43		1031	0.1	3		0651	1.8	55		1206	0.9	27		0822	2.0	61		0850	2.4	73
	1106	0.0	0		1723	2.6	79		1220	0.9	27		1732	1.9	58								
	1805	2.6	79																				
7 M	0056	0.3	9	22 Tu	0007	0.3	9	7 Th	0054	0.2	6	22 F	0018	0.0	0	7 Su	0103	0.5	15	22 M	0148	0.3	9
	0627	1.4	43		0541	1.5	46		0801	1.8	55		0734	2.1	64		1009	2.0	61		1023	2.5	76
	1153	0.4	12		1112	0.4	12		1329	1.2	37		1328	1.2	37						1827	0.9	27
	1838	2.3	70		1751	2.4	73		1815	1.6	49		1756	1.6	49						2135	1.0	30
8 Tu	0135	0.2	6	23 W	0040	0.2	6	8 F	0132	0.3	9	23 Sa	0106	0.1	3	8 M	0237	0.5	15	23 Tu	0335	0.3	9
	0740	1.5	46		0643	1.6	49		0931	1.9	58		0907	2.2	67		1130	2.1	64		1131	2.6	79
	1248	0.8	24		1202	0.7	21		1600	1.3	40						1944	0.9	27		1847	0.7	21
	1909	2.0	61		1819	2.2	67		1802	1.4	43						2214	1.0	30		2323	1.2	37
9 W	0215	0.2	6	24 Th	0116	0.1	3	9 Sa	0223	0.3	9	24 Su	0213	0.1	3	9 Tu	0421	0.5	15	24 W	0503	0.3	9
	0904	1.6	49		0759	1.7	52		1105	2.0	61		1044	2.4	73		1218	2.3	70		1221	2.7	82
	1402	1.1	34		1312	1.0	30						1941	0.7	21		1931	0.9	27		1911	0.5	15
	1937	1.8	55		1849	1.9	58										2341	1.2	37				
10 Th	0257	0.2	6	25 F	0200	0.0	0	10 Su	0335	0.3	9	25 M	0340	0.1	3	10 W	0529	0.3	9	25 Th	0023	1.5	46
	1032	1.8	55		0930	1.9	58		1211	2.2	67		1156	2.6	79		1253	2.5	76		0607	0.2	6
	1600	1.3	40		1507	1.3	40						1926	0.9	27		1941	0.7	21		1259	2.7	82
	2006	1.5	46		1925	1.6	49						2247	1.1	34						1934	0.4	12
11 F	0341	0.1	3	26 Sa	0255	0.0	0	11 M	0450	0.2	6	26 Tu	0504	0.0	0	11 Th	0028	1.4	43	26 F	0109	1.8	55
	1144	2.0	61		1058	2.2	67		1256	2.3	70		1249	2.8	85		0618	0.2	6		0658	0.2	6
	1831	1.2	37		1748	1.2	37		2016	0.9	27		1949	0.7	21		1322	2.6	79		1332	2.7	82
	2046	1.3	40		2023	1.3	40		2336	1.1	34						1956	0.6	18		1957	0.2	6
12 Sa	0429	0.1	3	27 Su	0359	-0.1	-3	12 Tu	0551	0.1	3	27 W	0010	1.2	37	12 F	0107	1.6	49	27 Sa	0150	2.1	64
	1236	2.2	67		1208	2.5	76		1332	2.5	76		0610	-0.1	-3		0659	0.1	3		0743	0.2	6
	1957	1.0	30		1923	1.0	30		2027	0.8	24		1331	2.9	88		1348	2.7	82		1400	2.6	79
	2206	1.1	34		2210	1.1	34						2014	0.5	15		2015	0.4	12		2020	0.1	3
13 Su	0518	0.0	0	28 M	0507	-0.3	-9	13 W	0034	1.2	37	28 Th	0106	1.5	46	13 Sa	0144	1.8	55	28 Su	0227	2.3	70
	1318	2.4	73		1302	2.8	85		0639	0.0	0		0704	-0.2	-6		0738	0.1	3		0825	0.3	9
	2031	0.9	27		2008	0.8	24		1402	2.6	79		1407	2.9	88		1414	2.7	82		1427	2.4	73
	2329	1.1	34		2345	1.1	34		2044	0.7	21		2040	0.4	12		2036	0.3	9			2042	0.0	0
14 M	0606	-0.1	-3	29 Tu	0609	-0.4	-12	14 Th	0117	1.3	40	29 F	0153	1.7	52	14 Su	0221	2.1	64	29 M	0303	2.5	76
	1354	2.5	76		1349	3.0	91		0719	-0.1	-3		0750	-0.2	-6		0816	0.1	3		0905	0.4	12
	2055	0.8	24		2042	0.7	21		1430	2.7	82		1440	2.9	88		1440	2.7	82		1451	2.3	70
					2104	0.6	18		2105	0.3	9		2105	0.3	9		2059	0.1	3		2105	-0.1	-3
15 Tu	0031	1.1	34	30 W	0055	1.2	37	15 F	0156	1.5	46	30 Sa	0236	1.9	58	15 M	0259	2.3	70	30 Tu	0339	2.6	79
	0650	-0.2	-6		0705	-0.5	-15		0756	-0.2	-6		0833	-0.1	-3		0856	0.2	6		0944	0.6	18
	1427	2.6	79		1431	3.1	94		1457	2.8	85		1509	2.8	85		1506	2.6	79		1515	2.1	64
	2118	0.7	21		2115	0.5	15		2126	0.5	15		2131	0.2	6		2125	0.0	0		2128	-0.1	-3
			31 Th	0151	1.4	43				31 Su	0317	2.1	64										
				0755	-0.6	-18					0913	0.0	0										
				1510	3.1	94					1537	2.7	82										
				2147	0.4	12					2157	0.1	3										

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

Hilo, Hawaii Island, Hawaii, 2008

Times and Heights of High and Low Waters

October					November					December																			
Time		Height			Time		Height			Time		Height			Time		Height												
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm										
1 W	0414	2.6	79		16 Th	0412	3.0	91		1 Sa	0511	2.6	79		16 Su	0550	3.1	94		1 M	0536	2.7	82		16 Tu	0618	2.9	88	
	1025	0.7	21			1034	0.7	21			1202	1.0	30			1256	0.8	24			1241	0.9	27			1317	0.5	15	
	1537	1.9	58			1528	1.8	55			1552	1.3	40			1651	1.2	37			1634	1.2	37			1811	1.3	40	
	2152	0.0	0			2146	-0.4	-12			2213	0.1	3			2301	-0.1	-3			2236	0.1	3			2349	0.2	6	
2 Th	0451	2.6	79		17 F	0501	3.0	91		2 Su	0557	2.5	76		17 M	0648	2.9	88		2 Tu	0617	2.6	79		17 W	0702	2.6	79	
	1108	0.9	27			1135	0.9	27			1311	1.1	34			1411	0.8	24			1334	0.8	24			1408	0.5	15	
	1558	1.6	49			1602	1.5	46			1618	1.2	37			1808	1.1	34			1729	1.1	34			1936	1.3	40	
	2217	0.1	3			2224	-0.3	-9			2248	0.3	9								2316	0.3	9						
3 F	0532	2.5	76		18 Sa	0558	2.9	88		3 M	0651	2.4	73		18 Tu	0000	0.2	6		3 W	0659	2.4	73		18 Th	0050	0.6	18	
	1200	1.1	34			1254	1.0	30			2332	0.4	12			0749	2.7	82			1426	0.8	24			0746	2.3	70	
	1615	1.5	46			1639	1.3	40								1521	0.7	21			1849	1.1	34			1458	0.4	12	
	2244	0.2	6			2310	-0.1	-3			1959	1.1	34			1959	1.1	34								2115	1.5	46	
4 Sa	0621	2.3	70		19 Su	0706	2.7	82		4 Tu	0755	2.3	70		19 W	0116	0.5	15		4 Th	0004	0.6	18		19 F	0210	2.0	30	
	1316	1.2	37			1445	1.0	30			1626	0.9	27			0850	2.5	76			0742	2.3	70			0829	2.0	61	
	1623	1.3	40			1731	1.1	34			1852	1.0	30			1615	0.5	15			1513	0.7	21			1544	0.3	9	
	2316	0.3	9													2154	1.3	40			2035	1.2	37			2248	1.8	55	
5 Su	0729	2.2	67		20 M	0008	0.2	6		5 W	0038	0.6	18		20 Th	0251	0.8	24		5 F	0114	0.8	24		20 Sa	0400	1.2	37	
						0826	2.6	79			0900	2.2	67			0947	2.3	70			0827	2.2	67			0914	1.8	55	
						1634	0.9	27			1657	0.8	24			1656	0.4	12			1552	0.5	15			1627	0.2	6	
						1939	1.0	30			2134	1.1	34			2317	1.6	49			2212	1.5	46			2356	2.1	64	
6 M	0003	0.5	15		21 Tu	0135	0.4	12		6 Th	0217	0.8	24		21 F	0428	0.9	27		6 Sa	0253	1.1	34		21 Su	0554	1.2	37	
	0900	2.1	64			0945	2.5	76			0956	2.2	67			1036	2.1	64			0914	2.1	64			1003	1.5	46	
						1724	0.7	21			1719	0.7	21			1730	0.2	6			1627	0.3	9			1706	0.1	3	
						2207	1.1	34			2258	1.3	40								2321	1.8	55						
7 Tu	0132	0.6	18		22 W	0322	0.6	18		7 F	0354	0.9	27		22 Sa	0014	2.0	61		7 Su	0438	1.1	34		22 M	0045	2.3	70	
	1024	2.2	67			1048	2.5	76			1041	2.2	67			0549	1.0	30			1004	1.9	58			0718	1.1	34	
	1830	0.9	27			1757	0.5	15			1740	0.5	15			1118	2.0	61			1703	0.1	3			1057	1.4	43	
	2215	1.0	30			2329	1.4	43			2350	1.7	52			1759	0.1	3								1744	0.0	0	
8 W	0330	0.7	21		23 Th	0451	0.6	18		8 Sa	0511	0.9	27		23 Su	0057	2.3	70		8 M	0013	2.2	67		23 Tu	0124	2.5	76	
	1118	2.3	70			1136	2.4	73			1121	2.2	67			0654	1.0	30			0606	1.1	34			0812	1.0	30	
	1832	0.8	24			1824	0.4	12			1804	0.2	6			1155	1.8	55			1056	1.8	55			1151	1.3	40	
	2328	1.3	40											1827		0.0	0		1741		-0.2	-6		1821		-0.1	-3		
9 Th	0450	0.6	18		24 F	0023	1.8	55		9 Su	0032	2.1	64		24 M	0134	2.6	79		9 Tu	0059	2.6	79		24 W	0159	2.7	82	
	1156	2.4	73			0558	0.6	18			0614	0.8	24			0747	1.0	30			0717	1.0	30			0851	0.9	27	
	1845	0.6	18			1215	2.4	73			1158	2.2	67			1229	1.7	52			1148	1.6	49			1240	1.2	37	
						1848	0.2	6			1830	0.0	0			1853	-0.1	-3			1821	-0.4	-12			1858	-0.2	-6	
10 F	0013	1.5	46		25 Sa	0106	2.1	64		10 M	0113	2.5	76		25 Tu	0207	2.7	82		10 W	0144	2.9	88		25 Th	0231	2.8	85	
	0547	0.5	15			0652	0.6	18			0711	0.8	24			0833	0.9	27			0816	0.8	24			0922	0.8	24	
	1227	2.4	73			1247	2.3	70			1235	2.1	64			1303	1.6	49			1239	1.5	46			1324	1.2	37	
	1902	0.4	12			1912	0.1	3			1859	-0.2	-6			1901	-0.2	-6			1903	-0.6	-18			1935	-0.2	-6	
11 Sa	0051	1.9	58		26 Su	0143	2.4	73		11 Tu	0153	2.8	85		26 W	0239	2.8	85		11 Th	0228	3.2	98		26 F	0303	2.8	85	
	0635	0.4	12			0740	0.7	21			0805	0.7	21			0913	0.9	27			0909	0.7	21			0951	0.7	21	
	1256	2.5	76			1315	2.1	64			1312	1.9	58			1336	1.5	46			1330	1.4	43			1404	1.3	40	
	1922	0.2	6			1934	-0.1	-3			1931	-0.4	-12			1950	-0.2	-6			1947	-0.7	-21			2011	-0.3	-9	
12 Su	0128	2.2	67		27 M	0217	2.6	79		12 W	0235	3.1	94		27 Th	0311	2.9	88		12 F	0314	3.3	101		27 Sa	0335	2.8	85	
	0721	0.4	12			0823	0.7	21			0857	0.7	21			0951	0.8	24			0958	0.6	18			1020	0.7	21	
	1325	2.4	73			1342	2.0	61			1350	1.8	55			1409	1.4	43			1419	1.4	43			1441	1.3	40	
	1945	0.0	0			1957	-0.1	-3			2006	-0.5	-15			2021	-0.2	-6			2033	-0.7	-21			2046	-0.3	-9	
13 M	0206	2.5	76		28 Tu	0250	2.8	85		13 Th	0319	3.2	98		28 F	0345	2.9	88		13 Sa	0400	3.4	104		28 Su	0407	2.8	85	
	0806	0.4	12			0904	0.7	21			1029	0.8	24			1047	0.6	18			1051	0.7	21						
	1355	2.4	73			1408	1.8	55			1429	1.6	49			1510	1.4	43			1519	1.3	40						
	2011	-0.2	-6			2021	-0.2	-6			2045	-0.6	-18			2053	-0.2	-6			2120	-0.6	-18			2120	-0.2	-6	
14 Tu	0246	2.8	85		29 W	0322	2.8	85		14 F	0406	3.3	101		29 Sa	0420	2.8	85		14 Su	0446	3.3	101		29 M	0439	2.8	85	
	0852	0.5	15			0944	0.8	24			1047	0.7	21			1109	0.8	24			1136	0.6	18			1123	0.6	18	
	1425	2.2	67			1434	1.7	52			1511	1.5	46			1517	1.3	40			1603	1.3	40			1557	1.3	40	
	2040	-0.3	-9			2046	-0.2	-6			2126	-0.5	-15			2127	-0.1	-3			2207	-0.4	-12			2153	-0.1	-3	
15 W	0327	2.9	88		30 Th	0356	2.8	85		15 Sa	0456	3.2	98		30 Su	0457	2.7	82		15 M	0532	3.1	94		30 Tu	0510	2.7	82	
	0941	0.6	18			1025	0.8	24			1147	0.8	24			1152	0.8	24			1226	0.6	18			1157	0.6	18	
	1456	2.0	61			1501	1.5	46			1556	1.3	40			1553	1.2	37			1702	1.3	40			1639	1.3	40	
	2111	-0.4	-12			2113	-0.1	-3			2211	-0.4	-12			2201	0.0	0			2256	-0.2	-6			2227	0.0	0	
				31 F	0431	2.8	85																						
					1110	0.9	27																						
					1527	1.4	43																						
					2142	0.0	0																						

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to mean lower low water which is the chart datum of soundings.

Johnston Island, 2008

Times and Heights of High and Low Waters

January					February					March																			
Time		Height			Time		Height			Time		Height			Time		Height												
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm										
1 Tu	0005	1.9	58		16 W	0626	0.5	15		1 F	0114	1.7	52		16 Sa	0156	1.9	58		1 Sa	0018	1.5	46		16 Su	0143	1.7	52	
	0652	0.8	24			1149	1.3	40			0843	0.5	15			0907	0.1	3			0800	0.5	15			0846	0.0	0	
	1200	1.3	40			1747	0.3	9			1407	1.0	30			1504	1.2	37			1328	0.9	27			1457	1.3	40	
	1804	0.5	15				1938	0.5	15			1938	0.5	15			2036	0.3	9			1900	0.6	18			2038	0.3	9
2 W	0106	1.9	58		17 Th	0053	2.2	67		2 Sa	0230	1.8	55		17 Su	0309	2.1	64		2 Su	0153	1.6	49		17 M	0254	1.8	55	
	0812	0.6	18			0801	0.4	12			0938	0.3	9			0959	-0.1	-3			0904	0.3	9			0934	-0.1	-3	
	1324	1.2	37			1327	1.2	37			1523	1.2	37			1603	1.5	46			1456	1.1	34			1548	1.6	49	
	1912	0.5	15			1913	0.3	9			2052	0.4	12			2140	0.1	3			2030	0.4	12			2136	0.1	3	
3 Th	0206	2.0	61		18 F	0208	2.2	67		3 Su	0327	2.0	61		18 M	0403	2.2	67		3 M	0258	1.8	55		18 Tu	0345	1.9	58	
	0910	0.5	15			0913	0.1	3			1017	0.1	3			1040	-0.3	-9			0945	0.1	3			1011	-0.3	-9	
	1441	1.3	40			1457	1.3	40			1611	1.3	40			1647	1.7	52			1545	1.4	43			1626	1.8	55	
	2017	0.5	15			2033	0.3	9			2145	0.2	6			2230	0.0	0			2126	0.2	6			2220	0.0	0	
4 F	0259	2.1	64		19 Sa	0314	2.3	70		4 M	0412	2.1	64		19 Tu	0447	2.3	70		4 Tu	0345	2.0	61		19 W	0426	2.0	61	
	0955	0.3	9			1008	-0.1	-3			1051	-0.1	-3			1115	-0.4	-12			1018	-0.1	-3			1043	-0.3	-9	
	1539	1.3	40			1604	1.5	46			1649	1.5	46			1724	1.9	58			1623	1.6	49			1659	2.0	61	
	2111	0.4	12			2138	0.1	3			2228	0.1	3			2312	-0.1	-3			2210	0.0	0			2258	-0.1	-3	
5 Sa	0346	2.2	67		20 Su	0410	2.5	76		5 Tu	0450	2.3	70		20 W	0525	2.4	73		5 W	0424	2.2	67		20 Th	0501	2.1	64	
	1034	0.1	3			1054	-0.3	-9			1122	-0.3	-9			1146	-0.5	-15			1049	-0.3	-9			1112	-0.4	-12	
	1625	1.5	46			1655	1.7	52			1724	1.7	52			1758	2.1	64			1657	1.9	58			1728	2.2	67	
	2157	0.3	9			2232	0.0	0			2307	0.0	0			2349	-0.2	-6			2251	-0.2	-6			2332	-0.2	-6	
6 Su	0427	2.3	70		21 M	0458	2.5	76		6 W	0525	2.4	73		21 Th	0558	2.4	73		6 Th	0500	2.3	70		21 F	0533	2.1	64	
	1109	0.0	0			1134	-0.4	-12			1153	-0.4	-12			1215	-0.5	-15			1119	-0.5	-15			1138	-0.4	-12	
	1704	1.6	49			1739	1.8	55			1758	1.9	58			1829	2.2	67			1731	-0.2	67			1757	2.3	70	
	2239	0.2	6			2319	-0.1	-3	●		2344	-0.1	-3								2330	-0.3	-9	○					
7 M	0505	2.4	73		22 Tu	0540	2.6	79		7 Th	0559	2.5	76		22 F	0025	-0.2	-6		7 F	0536	2.3	70		22 Sa	0005	-0.3	-9	
	1142	-0.1	-3			1211	-0.5	-15			1222	-0.5	-15			0630	2.3	70			1150	-0.6	-18			0604	2.0	61	
	1740	1.7	52			1819	2.0	61			1832	2.1	64			1242	-0.4	-12			1806	2.4	73			1204	-0.4	-12	
	2317	0.1	3	○							1859	2.3	70			1859	2.3	70	●					1824		2.3	70		
8 Tu	0541	2.5	76		23 W	0001	-0.1	-3		8 F	0022	-0.2	-6		23 Sa	0058	-0.1	-3		8 Sa	0009	-0.4	-12		23 Su	0036	-0.3	-9	
	1215	-0.2	-6			0618	2.6	79			0632	2.5	76			0700	2.1	64			0612	2.3	70			0633	1.9	58	
	1815	1.8	55			1245	-0.5	-15			1252	-0.5	-15			1307	-0.4	-12			1221	-0.6	-18			1229	-0.3	-9	
	2353	0.1	3	●		1856	2.0	61			1907	2.2	67			1928	2.3	70			1841	2.5	76			1851	2.3	70	
9 W	0616	2.5	76		24 Th	0041	0.0	0		9 Sa	0101	-0.1	-3		24 Su	0131	-0.1	-3		9 Su	0049	-0.4	-12		24 M	0107	-0.2	-6	
	1247	-0.3	-9			0654	2.5	76			0707	2.4	73			0729	2.0	61			0649	2.2	67			0703	1.8	55	
	1851	1.9	58			1317	-0.4	-12			1323	-0.5	-15			1332	-0.2	-6			1253	-0.6	-18			1254	-0.2	-6	
						1932	2.1	64			1944	2.3	70			1957	2.2	67			1917	2.5	76			1919	2.2	67	
10 Th	0031	0.1	3		25 F	0119	0.0	0		10 Su	0143	-0.1	-3		25 M	0205	0.0	0		10 M	0131	-0.3	-9		25 Tu	0139	-0.1	-3	
	0650	2.5	76			0727	2.3	70			0743	2.2	67			0759	1.8	55			0727	2.0	61			0733	1.6	49	
	1319	-0.3	-9			1346	-0.3	-9			1355	-0.4	-12			1357	-0.1	-3			1327	-0.4	-12			1320	-0.1	-3	
	1928	2.0	61			2006	2.1	64			2023	2.3	70			2028	2.1	64			1956	2.5	76			1949	2.1	64	
11 F	0110	0.1	3		26 Sa	0157	0.2	6		11 M	0228	0.0	0		26 Tu	0240	0.2	6		11 Tu	0216	-0.2	-6		26 W	0212	0.0	0	
	0725	2.4	73			0759	2.1	64			0822	1.9	58			0829	1.5	46			0809	1.7	52			0804	1.4	43	
	1351	-0.3	-9			1415	-0.2	-6			1429	-0.3	-9			1423	0.0	0			1403	-0.3	-9			1348	0.0	0	
	2008	2.0	61			2041	2.1	64			2106	2.3	70			2102	1.9	58			2040	2.3	70			2023	1.9	58	
12 Sa	0152	0.2	6		27 Su	0236	0.3	9		12 Tu	0320	0.2	6		27 W	0322	0.3	9		12 W	0307	0.0	0		27 Th	0251	0.1	3	
	0801	2.3	70			0832	1.9	58			0907	1.6	49			0905	1.3	40			0857	1.4	43			0841	1.2	37	
	1426	-0.2	-6			1442	0.0	0			1508	-0.1	-3			1453	0.2	6			1443	0.0	0			1420	0.2	6	
	2051	2.1	64			2117	2.0	61			2157	2.1	64			2145	1.8	55			2131	2.1	64			2105	1.7	52	
13 Su	0240	0.3	9		28 M	0318	0.4	12		13 W	0426	0.3	9		28 Th	0417	0.5	15		13 Th	0412	0.2	6		28 F	0341	0.3	9	
	0842	2.1	64			0906	1.6	49			1004	1.3	40			0952	1.1	34			0959	1.2	37			0931	1.1	34	
	1503	-0.1	-3			1511	0.1	3			1557	0.1	3			1532	0.4	12			1535	0.2	6			1502	0.3	9	
	2138	2.1	64			2157	1.9	58	○		2302	2.0	61			2247	1.6	49	○		2238	1.8	55			2204	1.6	49	
14 M	0338	0.4	12		29 Tu	0411	0.6	18		14 Th	0602	0.4	12		29 F	0557	0.6	18		14 F	0547	0.3	9		29 Sa	0501	0.4	12	
	0929	1.8	55			0946	1.4	43			1129	1.1	34			1117	0.9	27			1133	1.0	30			1053	1.0	30	
	1545	0.0	0			1545	0.3	9			1711	0.3	9			1643	0.5	15			1702	0.4	12			1612	0.5	15	
	2234	2.1	64	○		2247	1.8	55														2328	1.5	46					
15 Tu	0451	0.5	15		30 W	0526	0.7	21		15 F	0026	1.9	58		15 Sa	0008	1.7	52		15 Su	0653	0.4	12						
	1029	1.6	49			1043	1.2	37			0751	0.3	9			0734	0.2	6			1247	1.0	30						
	1638	0.2	6			1632	0.5	15			1327	1.1	34			1334	1.1	34			1822	0.5	15						
	2339	2.1	64			2352	1.7	52			1903	0.4	12			1910	0.5	15											
				31 Th	0715	0.6	18														31 M	0100	1.5	46					
					1214	1.0	30															0807	0.2	6					
					1753	0.6	18															1412	1.2	37					
																						1959	0.4	12					

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

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Times and Heights of High and Low Waters

Papeete Harbor, Tahiti Island, 2008

Times and Heights of High and Low Waters

January				February				March																			
Time		Height		Time		Height		Time		Height		Time		Height													
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm												
1 Tu	0943	0.5	15	16 W	0532	0.5	15	1 F	0008	0.4	12	16 Sa	0532	0.1	3	1 Su	0523	0.0	0								
	1713	0.3	9		0937	0.4	12		0549	0.2	6		1149	0.6	18		1133	0.5	15								
	2143	0.4	12		1316	0.5	15		1159	0.5	15		1739	0.1	3		1209	0.5	15								
2 W	0344	0.3	9	17 Th	0245	0.3	9	2 Sa	1806	0.1	3	17 Su	0544	0.0	0	2 Su	0552	0.0	0	17 M	0530	-0.1	-3				
	1039	0.5	15		1100	0.5	15		1159	0.6	18		1155	0.6	18		1135	0.6	18								
	1710	0.3	9		1733	0.3	9		1802	0.0	0		1745	0.0	0		1721	0.0	0								
	2241	0.5	15		2232	0.4	12		2358	0.6	18		2346	0.7	21		2344	0.6	18		2328	0.8	22				
3 Th	0440	0.2	6	18 F	0444	0.2	6	3 Su	0603	0.0	0	18 M	0603	-0.1	-3	3 M	0554	-0.1	-3	18 Tu	0545	-0.1	-3				
	1108	0.6	18		1121	0.6	18		1209	0.6	18		1209	0.7	21		1156	0.6	18		1147	0.7	21				
	1727	0.2	6		1727	0.2	6		1809	0.0	0		1801	-0.1	-3		1747	0.0	0		1738	-0.1	-3				
	2313	0.5	15		2309	0.6	18						2352	0.8	24		2352	0.8	24		2349	0.9	27				
4 F	0515	0.1	3	19 Sa	0524	0.0	0	4 M	0011	0.7	21	19 Tu	0009	0.9	27	4 Tu	0604	-0.1	-3	19 W	0603	-0.2	-6				
	1133	0.6	18		1145	0.6	18		0619	-0.1	-3		0624	-0.2	-6		1204	0.7	21		1202	0.8	24				
	1746	0.1	3		1744	0.1	3		1223	0.7	21		1226	0.8	24		1756	-0.1	-3		1757	-0.2	-6				
	2340	0.6	18		2340	0.7	21		1821	-0.1	-3		1820	-0.2	-6												
5 Sa	0544	0.0	0	20 Su	0558	-0.1	-3	5 Tu	0027	0.8	24	20 W	0032	0.9	27	5 W	0005	0.9	27	20 Th	0010	1.0	30				
	1157	0.6	18		1210	0.7	21		0637	-0.2	-6		0645	-0.2	-6		0617	-0.2	-6		0621	-0.2	-6				
	1806	0.0	0		1807	0.0	0		1239	0.7	21		1244	0.8	24		1216	0.8	24		1218	0.9	27				
6 Su	0005	0.6	18	21 M	0011	0.8	24	6 W	1835	-0.1	-3	21 Th	1841	-0.2	-6	6 Th	0022	1.0	30	21 F	1809	-0.1	-3	21 O	1817	-0.2	-6
	0611	-0.1	-3		0628	-0.2	-6		0045	0.9	27		0055	1.0	30		0633	-0.2	-6		0031	1.0	30				
	1220	0.7	21		1234	0.7	21		0656	-0.2	-6		0705	-0.2	-6		1229	0.8	24		0638	-0.1	-3				
	1825	-0.1	-3		1831	-0.1	-3		1255	0.8	24		1301	0.9	27		1825	-0.2	-6		1234	0.9	27				
7 M	0029	0.7	21	22 Tu	0041	0.8	24	7 Th	1851	-0.2	-6	22 F	1902	-0.2	-6	7 F	0040	1.0	30	22 Sa	1837	-0.2	-6	22 Sa	0050	1.0	30
	0637	-0.1	-3		0657	-0.2	-6		0105	0.9	27		0117	1.0	30		0650	-0.2	-6		0654	-0.1	-3				
	1243	0.7	21		1258	0.8	24		0715	-0.2	-6		0723	-0.1	-3		1244	0.9	27		1250	0.9	27				
	1845	-0.1	-3		1855	-0.2	-6		1311	0.8	24		1318	0.9	27		1844	-0.2	-6		1856	-0.2	-6				
8 Tu	0053	0.7	21	23 W	0109	0.9	27	8 F	1909	-0.2	-6	23 Sa	1922	-0.2	-6	8 Sa	0100	1.1	34	23 Su	0108	1.0	30				
	0702	-0.1	-3		0723	-0.2	-6		0125	1.0	30		0137	1.0	30		0707	-0.1	-3		0709	-0.1	-3				
	1305	0.7	21		1321	0.8	24		0734	-0.1	-3		0740	-0.1	-3		1300	0.9	27		1304	0.9	27				
	1904	-0.1	-3		1920	-0.2	-6		1328	0.8	24		1334	0.9	27		1904	-0.2	-6		1913	-0.2	-6				
9 W	0117	0.8	24	24 Th	0137	0.9	27	9 Sa	1928	-0.2	-6	24 Su	1941	-0.2	-6	9 Su	0121	1.0	30	24 M	0124	0.9	27				
	0727	-0.1	-3		0747	-0.1	-3		0147	1.0	30		0155	0.9	27		0725	-0.1	-3		0723	-0.1	-3				
	1326	0.7	21		1342	0.8	24		0753	-0.1	-3		0754	0.0	0		1317	0.9	27		1318	0.8	24				
	1924	-0.1	-3		1944	-0.2	-6		1344	0.8	24		1347	0.8	24		1925	-0.2	-6		1929	-0.1	-3				
10 Th	0141	0.8	24	25 F	0203	0.9	27	10 Su	1949	-0.2	-6	25 M	2011	-0.1	-3	10 M	0142	1.0	30	25 Tu	0137	0.8	24				
	0751	-0.1	-3		0809	0.0	0		0209	1.0	30		0210	0.8	24		0742	0.0	0		0734	0.0	0				
	1346	0.7	21		1402	0.8	24		0812	0.0	0		0805	0.0	0		1334	0.9	27		1330	0.8	24				
	1945	-0.1	-3		2008	-0.1	-3		1400	0.8	24		1358	0.8	24		1946	-0.2	-6		1941	-0.1	-3				
11 F	0206	0.8	24	26 Sa	0227	0.9	27	11 M	2010	-0.1	-3	26 Tu	2019	0.0	0	11 Tu	0202	0.9	27	26 W	0146	0.7	21				
	0816	0.0	0		0828	0.0	0		0231	0.9	27		0220	0.7	21		0758	0.0	0		0741	0.0	0				
	1405	0.7	21		1419	0.8	24		0829	0.1	3		0811	0.1	3		1351	0.8	24		1338	0.7	21				
	2007	-0.1	-3		2029	-0.1	-3		1416	0.8	24		1404	0.7	21		2007	-0.1	-3		1949	0.0	0				
12 Sa	0233	0.8	24	27 Su	0248	0.8	24	12 Tu	2031	-0.1	-3	27 W	2031	0.0	0	12 W	0219	0.7	21	27 Th	0149	0.6	18				
	0840	0.1	3		0844	0.1	3		0252	0.8	24		0223	0.6	18		0808	0.1	3		0740	0.1	3				
	1424	0.7	21		1433	0.7	21		0842	0.2	6		0808	0.1	3		1403	0.7	21		1339	0.6	18				
	2031	0.0	0		2048	0.0	0		1427	0.7	21		1400	0.6	18		2023	0.0	0		1946	0.1	3				
13 Su	0301	0.8	24	28 M	0306	0.7	21	13 W	2050	0.0	0	28 Th	2059	0.1	3	13 Th	0226	0.6	18	28 F	0135	0.5	15				
	0904	0.2	6		0854	0.2	6		0308	0.6	18		0208	0.5	15		0805	0.2	6		0722	0.1	3				
	1443	0.7	21		1440	0.6	18		0844	0.2	6		0745	0.2	6		1404	0.6	18		1323	0.5	15				
	2057	0.0	0		2100	0.1	3		1428	0.6	18		1336	0.5	15		2024	0.2	6		1918	0.2	6				
14 M	0333	0.7	21	29 Tu	0315	0.6	18	14 Th				29 F				14 F	0157	0.4	12	29 Sa	0050	0.4	12				
	0928	0.3	9		0850	0.3	9		0302	0.5	15		0120	0.4	12		0717	0.2	6		0637	0.1	3				
	1458	0.6	18		1432	0.6	18		0800	0.3	9		0653	0.2	6		1323	0.5	15		1239	0.4	12				
	2126	0.1	3		2059	0.2	6		1347	0.5	15		1248	0.5	15		1912	0.3	9		1813	0.2	6				
15 Tu	0411	0.6	18	30 W	0303	0.5	15	15 F	2014	0.3	9	30 Sa	2014	0.3	9	15 Sa	2357	0.4	12	30 Su	2344	0.4	12				
	0950	0.4	12		0809	0.3	9		0057	0.4	12		0547	0.1	3		0547	0.1	3		0547	0.1	3				
	1503	0.5	15		1345	0.5	15		0558	0.2	6		1200	0.5	15		2305	0.5	15		1150	0.5	15				
	2159	0.2	6		2011	0.2	6		1216	0.5	15		1731	0.2	6						1720	0.2	6				
16 W	0532	0.5	15	31 Th	0532	0.5	15	31 Th	2325	0.5	15									31 M	0526	0.0	0				
	0937	0.4	12		0629	0.3	9											1128	0.5		15						
	1316	0.5	15		1228	0.5	15											1704	0.1		3						
					1842	0.2	6											2308	0.7		21						

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

Papeete Harbor, Tahiti Island, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu	0525 0.0 0 1124 0.6 18 1707 0.0 0 2317 0.8 24	16 W	0516 0.0 0 1112 0.7 21 1706 -0.1 -3 2321 0.9 27	1 Th	0457 0.1 3 1045 0.6 18 1634 0.0 0 2256 0.9 27	16 F	0506 0.1 3 1058 0.7 21 1701 0.0 0 2320 0.8 24	1 Su	0512 0.1 3 1058 0.7 21 1708 0.0 0 2332 0.8 24	16 M	0552 0.0 0 1148 0.6 18 1756 0.0 0
2 W	0534 -0.1 -3 1130 0.7 21 1718 0.0 0 2333 0.9 27	17 Th	0534 -0.1 -3 1130 0.8 24 1728 -0.1 -3 2344 0.9 27	2 F	0513 0.0 0 1101 0.7 21 1658 0.0 0 2320 0.9 27	17 Sa	0529 0.0 0 1122 0.7 21 1728 -0.1 -3 2344 0.8 24	2 M	0540 0.0 0 1133 0.7 21 1747 -0.1 -3	17 Tu	0009 0.7 21 0618 0.0 0 1218 0.6 18 1826 -0.1 -3
3 Th	0547 -0.1 -3 1141 0.8 24 1735 -0.1 -3 2351 1.0 30	18 F	0553 -0.1 -3 1148 0.8 24 1750 -0.1 -3	3 Sa	0533 0.0 0 1122 0.8 24 1725 -0.1 -3 2346 1.0 30	18 Su	0552 0.0 0 1146 0.7 21 1754 -0.1 -3	3 Tu	0005 0.8 24 0609 0.0 0 1209 0.8 24 1826 -0.1 -3	18 W	0036 0.6 18 0642 0.0 0 1247 0.6 18 1856 -0.1 -3
4 F	0603 -0.1 -3 1156 0.9 27 1754 -0.2 -6	19 Sa	0005 0.9 27 0611 -0.1 -3 1206 0.9 27 1811 -0.2 -6	4 Su	0554 0.0 0 1145 0.8 24 1754 -0.2 -6	19 M	0008 0.8 24 0614 0.0 0 1210 0.7 21 1819 -0.1 -3	4 W	0039 0.7 21 0640 0.0 0 1247 0.8 24 1905 -0.1 -3	19 Th	0102 0.6 18 0706 -0.1 -3 1315 0.6 18 1925 -0.1 -3
5 Sa	0012 1.0 30 0621 -0.1 -3 1213 0.9 27 1816 -0.2 -6	20 Su	0025 0.9 27 0629 -0.1 -3 1224 0.8 24 1832 -0.2 -6	5 M	0012 0.9 27 0617 0.0 0 1212 0.8 24 1824 -0.2 -6	20 Tu	0030 0.7 21 0636 0.0 0 1235 0.7 21 1844 -0.1 -3	5 Th	0112 0.7 21 0712 0.0 0 1326 0.8 24 1946 -0.1 -3	20 F	0127 0.6 18 0729 0.0 0 1344 0.7 21 1955 0.0 0
6 Su	0033 1.0 30 0639 -0.1 -3 1232 0.9 27 1840 -0.2 -6	21 M	0043 0.9 27 0645 -0.1 -3 1241 0.8 24 1851 -0.1 -3	6 Tu	0039 0.9 27 0642 0.0 0 1240 0.8 24 1855 -0.1 -3	21 W	0053 0.7 21 0657 0.0 0 1300 0.6 18 1909 0.0 0	6 F	0147 0.6 18 0746 0.0 0 1408 0.7 21 2028 0.0 0	21 Sa	0152 0.6 18 0752 0.0 0 1413 0.7 21 2025 0.0 0
7 M	0056 1.0 30 0659 -0.1 -3 1253 0.9 27 1904 -0.2 -6	22 Tu	0100 0.8 24 0701 0.0 0 1259 0.7 21 1908 -0.1 -3	7 W	0107 0.8 24 0707 0.0 0 1311 0.8 24 1929 -0.1 -3	22 Th	0115 0.6 18 0718 0.0 0 1326 0.6 18 1936 0.0 0	7 Sa	0223 0.6 18 0822 0.0 0 1453 0.7 21 2115 0.1 3	22 Su	0217 0.6 18 0817 0.0 0 1445 0.7 21 2057 0.1 3
8 Tu	0119 0.9 27 0718 0.0 0 1315 0.8 24 1929 -0.1 -3	23 W	0116 0.7 21 0716 0.0 0 1316 0.7 21 1925 0.0 0	8 Th	0135 0.7 21 0733 0.0 0 1345 0.7 21 2005 0.0 0	23 F	0137 0.5 15 0739 0.0 0 1355 0.6 18 2006 0.1 3	8 Su	0301 0.5 15 0903 0.1 3 1548 0.6 18 2211 0.2 6	23 M	0241 0.6 18 0844 0.1 3 1521 0.7 21 2132 0.2 6
9 W	0140 0.8 24 0736 0.0 0 1337 0.8 24 1954 -0.1 -3	24 Th	0129 0.6 18 0728 0.0 0 1331 0.6 18 1940 0.0 0	9 F	0203 0.5 15 0759 0.1 3 1423 0.6 18 2048 0.1 3	24 Sa	0159 0.5 15 0801 0.1 3 1429 0.5 15 2042 0.2 6	9 M	0347 0.5 15 0956 0.2 6 1702 0.6 18 2339 0.3 9	24 Tu	0306 0.5 15 0915 0.1 3 1605 0.7 21 2215 0.3 9
10 Th	0158 0.6 18 0750 0.1 3 1357 0.7 21 2016 0.1 3	25 F	0137 0.5 15 0734 0.1 3 1345 0.5 15 1949 0.1 3	10 Sa	0231 0.4 12 0826 0.1 3 1518 0.5 15 2208 0.2 6	25 Su	0222 0.4 12 0824 0.1 3 1516 0.5 15 2138 0.3 9	10 Tu	0458 0.4 12 1120 0.2 6 1859 0.6 18	25 W	0333 0.5 15 0955 0.2 6 1706 0.6 18 2323 0.4 12
11 F	0206 0.5 15 0750 0.1 3 1408 0.5 15 2023 0.2 6	26 Sa	0132 0.4 12 0727 0.1 3 1350 0.4 12 1936 0.2 6	11 Su	0300 0.3 9 0853 0.2 6 1840 0.5 15	26 M	0245 0.4 12 0856 0.2 6 1650 0.5 15	11 W	0159 0.3 9 0714 0.4 12 1331 0.2 6 2050 0.6 18	26 Th	0409 0.5 15 1059 0.2 6 1856 0.6 18
12 Sa	0120 0.4 12 0651 0.2 6 1320 0.4 12 1759 0.3 9 2228 0.4 12	27 Su	0040 0.4 12 0641 0.2 6 1313 0.4 12 1734 0.3 9 2239 0.4 12	12 M	0324 0.2 6 0915 0.4 12 1406 0.3 9 2103 0.6 18	27 Tu	1029 0.3 9 1947 0.5 15	12 Th	0330 0.3 9 0900 0.5 15 1506 0.2 6 2154 0.6 18	27 F	0210 0.3 9 0553 0.4 12 1311 0.3 9 2109 0.6 18
13 Su	0501 0.2 6 1112 0.4 12 1618 0.2 6 2216 0.6 18	28 M	0516 0.2 6 1120 0.4 12 1558 0.3 9 2208 0.5 15	13 Tu	0351 0.2 6 0942 0.5 15 1518 0.2 6 2149 0.7 21	28 W	0330 0.3 9 0830 0.4 12 1346 0.3 9 2103 0.6 18	13 F	0418 0.2 6 0958 0.5 15 1605 0.1 3 2237 0.7 21	28 Sa	0402 0.3 9 0858 0.4 12 1519 0.2 6 2219 0.6 18
14 M	0447 0.1 3 1050 0.5 15 1624 0.1 3 2235 0.7 21	29 Tu	0444 0.1 3 1038 0.5 15 1556 0.2 6 2216 0.7 21	14 W	0417 0.1 3 1008 0.6 18 1558 0.1 3 2224 0.8 24	29 Th	0354 0.3 9 0918 0.5 15 1500 0.2 6 2148 0.7 21	14 Sa	0454 0.2 6 1040 0.6 18 1648 0.1 3 2311 0.7 21	29 Su	0442 0.2 6 1013 0.5 15 1629 0.1 3 2304 0.7 21
15 Tu	0458 0.0 0 1058 0.6 18 1644 0.0 0 2258 0.8 24	30 W	0445 0.1 3 1035 0.6 18 1612 0.1 3 2234 0.8 24	15 Th	0442 0.1 3 1033 0.6 18 1631 0.0 0 2253 0.8 24	30 F	0419 0.2 6 0952 0.5 15 1548 0.1 3 2225 0.8 24	15 Su	0524 0.1 3 1115 0.6 18 1724 0.0 0 2342 0.7 21	30 M	0514 0.2 6 1102 0.6 18 1719 0.0 0 2342 0.7 21
						31 Sa	0445 0.2 6 1025 0.6 18 1629 0.0 0 2259 0.8 24				

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to mean lower low water which is the chart datum of soundings.

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to mean lower low water which is the chart datum of soundings.

Papeete Harbor, Tahiti Island, 2008

Times and Heights of High and Low Waters

October					November					December													
Time		Height			Time		Height			Time		Height			Time		Height						
	h m	ft	cm			h m	ft	cm			h m	ft	cm			h m	ft	cm					
1 W	0044	0.9	27	16 Th	0030	0.9	27	1 Sa	0100	0.7	21	16 Su	0124	0.7	21	1 M	0143	0.6	18	16 Tu	0227	0.7	21
	0654	-0.2	-6		0640	-0.2	-6		0710	0.0	0		0742	0.0	0		0753	0.1	3		0844	0.1	3
	1305	0.9	27		1254	0.9	27		1311	0.6	18		1341	0.6	18		1346	0.5	15		1432	0.6	18
	1903	0.0	0		1855	0.0	0		1910	0.0	0		1939	0.0	0		1948	0.0	0		2035	0.0	0
2 Th	0059	0.8	24	17 F	0051	0.8	24	2 Su	0117	0.6	18	17 M	0202	0.6	18	2 Tu	0214	0.6	18	17 W	0312	0.7	21
	0711	-0.1	-3		0705	-0.1	-3		0725	0.0	0		0823	0.1	3		0824	0.1	3		0928	0.2	6
	1319	0.8	24		1316	0.8	24		1319	0.5	15		1410	0.5	15		1406	0.5	15		1507	0.5	15
	1915	0.0	0		1913	0.0	0		1918	0.1	3		2007	0.1	3		2010	0.1	3		2116	0.1	3
3 F	0112	0.7	21	18 Sa	0114	0.8	24	3 M	0132	0.5	15	18 Tu	0252	0.6	18	3 W	0253	0.5	15	18 Th	0407	0.6	18
	0725	-0.1	-3		0730	-0.1	-3		0735	0.1	3		0926	0.2	6		0904	0.2	6		1024	0.3	9
	1328	0.6	18		1335	0.6	18		1313	0.4	12		1441	0.4	12		1424	0.4	12		1548	0.5	15
	1922	0.0	0		1929	0.1	3		1912	0.1	3		2041	0.2	6		2035	0.2	6		2212	0.2	6
4 Sa	0121	0.6	18	19 Su	0136	0.7	21	4 Tu	0138	0.4	12	19 W	0454	0.5	15	4 Th	0356	0.5	15	19 F	0538	0.6	18
	0733	0.0	0		0754	0.1	3		0719	0.3	9		1450	0.2	6		1034	0.3	9		1225	0.3	9
	1329	0.5	15		1346	0.5	15		1218	0.4	12		2014	0.3	9		1420	0.4	12		1708	0.4	12
	1921	0.1	3		1934	0.1	3		1824	0.2	6		●	2113	0.3		9	●	2034		0.4	12	
5 Su	0122	0.5	15	20 M	0154	0.5	15	5 W	0057	0.4	12	20 Th	0042	0.2	6	5 F	0658	0.5	15	20 Sa	0011	0.3	9
	0728	0.1	3		0811	0.2	6		0504	0.3	9		0826	0.6	18		1614	0.2	6		0823	0.6	18
	1312	0.4	12		1317	0.4	12		1018	0.4	12		1529	0.2	6		2004	0.3	9		1530	0.3	9
	1900	0.1	3		1853	0.2	6		●	1657	0.2		6	2115	0.4		12	●	2034		0.4	12	
6 M	0103	0.5	15	21 Tu	0135	0.4	12	6 Th	0337	0.3	9	21 F	0246	0.2	6	6 Sa	0058	0.2	6	21 Su	0249	0.2	6
	0652	0.2	6		0610	0.3	9		0950	0.5	15		0925	0.7	21		0855	0.6	18		0952	0.6	18
	1217	0.4	12		0959	0.4	12		1627	0.2	6		1557	0.2	6		1601	0.3	9		1623	0.3	9
	1808	0.1	3		●	1643	0.2		6	2220	0.5		15	2145	0.5		15	2114	0.4		12	2154	0.5	15
7 Tu	0011	0.4	12	22 W	0342	0.3	9	7 F	0338	0.2	6	22 Sa	0334	0.1	3	7 Su	0246	0.2	6	22 M	0402	0.2	6
	0536	0.2	6		0944	0.6	18		0959	0.7	21		1003	0.8	24		0941	0.7	21		1039	0.6	18
	1110	0.4	12		1620	0.1	3		1628	0.1	3		1624	0.1	3		1618	0.2	6		1656	0.2	6
	1719	0.1	3		2222	0.5	15		2218	0.5	15		2213	0.6	18		2146	0.5	15		2239	0.6	18
8 W	0449	0.2	6	23 Th	0352	0.2	6	8 Sa	0355	0.1	3	23 Su	0411	0.1	3	8 M	0337	0.2	6	23 Tu	0448	0.1	3
	1044	0.5	15		1006	0.7	21		1017	0.8	24		1036	0.8	24		1017	0.7	21		1112	0.7	21
	1701	0.0	0		1632	0.0	0		1640	0.1	3		1650	0.1	3		1640	0.2	6		1724	0.1	3
	2301	0.5	15		2230	0.6	18		2228	0.6	18		2240	0.7	21		2217	0.6	18		2314	0.6	18
9 Th	0438	0.1	3	24 F	0414	0.1	3	9 Su	0416	0.1	3	24 M	0444	0.0	0	9 Tu	0419	0.1	3	24 W	0524	0.0	0
	1045	0.7	21		1031	0.8	24		1038	0.9	27		1105	0.8	24		1049	0.8	24		1141	0.7	21
	1702	0.0	0		1650	0.0	0		1656	0.0	0		1714	0.0	0		1704	0.1	3		1749	0.0	0
	2301	0.6	18		2246	0.7	21		2243	0.7	21		2306	0.7	21		2249	0.6	18		2346	0.6	18
10 F	0444	0.0	0	25 Sa	0439	0.0	0	10 M	0439	0.0	0	25 Tu	0513	-0.1	-3	10 W	0457	0.0	0	25 Th	0555	0.0	0
	1055	0.8	24		1056	0.9	27		1102	0.9	27		1131	0.8	24		1121	0.8	24		1207	0.7	21
	1712	-0.1	-3		1710	0.0	0		1715	0.0	0		1738	0.0	0		1729	0.0	0		1813	0.0	0
	2308	0.7	21		2304	0.8	24		2303	0.8	24		2332	0.7	21		2321	0.7	21				
11 Sa	0456	0.0	0	26 Su	0504	-0.1	-3	11 Tu	0505	-0.1	-3	26 W	0541	-0.1	-3	11 Th	0534	-0.1	-3	26 F	0014	0.7	21
	1111	0.9	27		1120	1.0	30		1126	0.9	27		1155	0.8	24		1152	0.8	24		0624	-0.1	-3
	1726	-0.1	-3		1730	-0.1	-3		1735	0.0	0		1801	0.0	0		1756	0.0	0		1231	0.7	21
	2320	0.8	24		2324	0.8	24		2326	0.8	24		2358	0.7	21		2356	0.7	21		1836	-0.1	-3
12 Su	0513	-0.1	-3	27 M	0528	-0.1	-3	12 W	0533	-0.1	-3	27 Th	0608	-0.1	-3	12 F	0611	-0.1	-3	27 Sa	0041	0.7	21
	1129	1.0	30		1143	1.0	30		1152	0.9	27		1219	0.7	21		1223	0.7	21		0650	-0.1	-3
	1741	-0.1	-3		1750	-0.1	-3		1758	0.0	0		1823	0.0	0		1825	-0.1	-3		1255	0.7	21
	2334	0.8	24		2344	0.9	27		○	2352	0.8		24	●				○	1858		-0.1	-3	
13 M	0532	-0.1	-3	28 Tu	0551	-0.2	-6	13 Th	0602	-0.2	-6	28 F	0023	0.7	21	13 Sa	0031	0.8	24	28 Su	0107	0.7	21
	1149	1.0	30		1205	0.9	27		0633	-0.1	-3		1241	0.7	21		0648	-0.1	-3		0716	-0.1	-3
	1759	-0.1	-3		1808	-0.1	-3		1821	-0.1	-3		1844	-0.1	-3		1255	0.7	21		1317	0.6	18
	2351	0.9	27		●										1855		-0.1	-3	1919		-0.1	-3	
14 Tu	0553	-0.2	-6	29 W	0004	0.8	24	14 F	0020	0.8	24	29 Sa	0049	0.7	21	14 Su	0108	0.8	24	29 M	0132	0.7	21
	1211	1.0	30		0613	-0.2	-6		0634	-0.1	-3		0659	-0.1	-3		0725	-0.1	-3		0741	-0.1	-3
	1817	-0.1	-3		1225	0.9	27		1245	0.8	24		1303	0.6	18		1327	0.7	21		1339	0.6	18
					1826	-0.1	-3		1846	-0.1	-3		1906	0.0	0		1926	-0.1	-3		1940	-0.1	-3
15 W	0009	0.9	27	30 Th	0023	0.8	24	15 Sa	0050	0.8	24	30 Su	0115	0.6	18	15 M	0146	0.8	24	30 Tu	0157	0.7	21
	0616	-0.2	-6		0633	-0.1	-3		0707	-0.1	-3		0725	0.0	0		0804	0.0	0		0807	0.0	0
	1232	1.0	30		1242	0.8	24		1313	0.7	21		1324	0.6	18		1359	0.6	18		1400	0.6	18
	1836	-0.1	-3		1843	0.0	0		1912	0.0	0		1927	0.0	0		2000	0.0	0		2001	0.0	0
				31 F	0042	0.7	21												31 W	0224	0.7	21	
					0653	-0.1	-3													0832	0.1	3	
					1258	0.7	21													1419	0.6	18	
					1858	0.0	0													2022	0.0	0	

Time meridian 150° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to mean lower low water which is the chart datum of soundings.

Apia, Samoa Islands, 2008

Times and Heights of High and Low Waters

January					February					March																			
Time		Height			Time		Height			Time		Height			Time		Height												
	h	m	ft	cm		h	m	ft	cm			h	m	ft	cm		h	m	ft	cm									
1 Tu	0144	2.3	70		16 W	0107	2.6	79		1 F	0304	2.2	67		16 Sa	0323	2.7	82		1 Sa	0229	2.2	67		16 Su	0313	2.7	82	
	0815	0.8	24			0733	0.5	15			0920	0.8	24			0936	0.4	12			0846	0.9	27			0925	0.4	12	
	1419	2.6	79			1344	3.0	91			1519	2.7	82			1542	3.3	101			1442	2.7	82			1530	3.2	98	
	2104	0.8	24			2032	0.4	12			2210	0.6	18			2223	0.0	0			2135	0.6	18			2205	0.1	3	
2 W	0241	2.3	70		17 Th	0219	2.6	79		2 Sa	0351	2.3	70		17 Su	0418	2.8	85		2 Su	0318	2.4	73		17 M	0404	2.9	88	
	0904	0.8	24			0841	0.4	12			1002	0.7	21			1029	0.2	6			0931	0.8	24			1016	0.3	9	
	1507	2.7	82			1450	3.2	98			1601	2.9	88			1634	3.4	104			1527	2.9	88			1619	3.3	101	
	2153	0.7	21			2136	0.2	6			2248	0.4	12			2311	-0.1	-3			2212	0.4	12			2250	0.1	3	
3 Th	0331	2.3	70		18 F	0326	2.7	82		3 Su	0431	2.5	76		18 M	0506	3.0	91		3 M	0358	2.6	79		18 Tu	0447	3.0	91	
	0947	0.7	21			0941	0.3	9			1040	0.6	18			1117	0.1	3			1011	0.6	18			1101	0.2	6	
	1549	2.8	85			1550	3.4	104			1639	3.1	94			1721	3.5	107			1608	3.1	94			1702	3.3	101	
	2235	0.6	18			2233	0.0	0			2322	0.3	9			2354	-0.1	-3			2247	0.3	9			2329	0.0	0	
4 F	0415	2.4	73		19 Sa	0425	2.8	85		4 M	0507	2.6	79		19 Tu	0548	3.1	94		4 Tu	0435	2.8	85		19 W	0526	3.1	94	
	1027	0.7	21			1037	0.2	6			1116	0.4	12			1201	0.0	0			1048	0.4	12			1143	0.1	3	
	1628	3.0	91			1644	3.5	107			1717	3.2	98			1803	3.5	107			1647	3.3	101			1740	3.3	101	
	2314	0.4	12			2324	-0.2	-6			2355	0.1	3								2321	0.1	3						
5 Sa	0454	2.5	76		20 Su	0517	2.9	88		5 Tu	0543	2.8	85		20 W	0034	-0.1	-3		5 W	0512	3.0	91		20 Th	0006	0.1	3	
	1104	0.6	18			1128	0.0	0			1152	0.3	9			0628	3.1	94			1126	0.2	6			0601	3.2	98	
	1705	3.1	94			1734	3.6	110			1754	3.4	104			1243	0.1	3			1727	3.4	104			1222	0.2	6	
	2350	0.3	9													1843	3.4	104			2355	0.0	0			1817	3.2	98	
6 Su	0532	2.6	79		21 M	0012	-0.2	-6		6 W	0029	0.0	0		21 Th	0112	0.0	0		6 Th	0550	3.2	98		21 F	0041	0.2	6	
	1140	0.5	15			0605	3.0	91			0620	2.9	88			0706	3.1	94			1205	0.1	3			0636	3.2	98	
	1741	3.2	98			1216	0.0	0			1228	0.2	6			1324	0.1	3			1807	3.5	107			1300	0.2	6	
						1821	3.6	110			1832	3.4	104			1921	3.3	101								1852	3.1	94	
7 M	0024	0.2	6		22 Tu	0057	-0.2	-6		7 Th	0103	0.0	0		22 F	0149	0.1	3		7 F	0031	0.0	0		22 Sa	0115	0.3	9	
	0609	2.6	79			0651	3.1	94			0657	3.1	94			0744	3.1	94			0630	3.4	104			0711	3.1	94	
	1215	0.5	15			1302	0.0	0			1307	0.2	6			1405	0.3	9			1246	0.0	0			1338	0.4	12	
	1818	3.3	101			1905	3.6	110			1912	3.4	104			1958	3.1	94			1849	3.5	107			1928	2.9	88	
8 Tu	0058	0.2	6		23 W	0141	-0.2	-6		8 F	0139	0.0	0		23 Sa	0226	0.3	9		8 Sa	0109	0.0	0		23 Su	0148	0.4	12	
	0646	2.7	82			0735	3.0	91			0737	3.1	94			0822	3.0	91			0712	3.4	104			0746	3.0	91	
	1251	0.4	12			1348	0.1	3			1348	0.2	6			1447	0.5	15			1330	0.0	0			1418	0.5	15	
	1856	3.3	101			1949	3.4	104			1954	3.3	101			2037	2.8	85			1934	3.4	104			2005	2.7	82	
9 W	0133	0.2	6		24 Th	0223	0.0	0		9 Sa	0217	0.1	3		24 Su	0303	0.5	15		9 Su	0151	0.1	3		24 M	0223	0.6	18	
	0724	2.8	85			0818	3.0	91			0820	3.1	94			0902	2.8	85			0757	3.4	104			0825	2.9	88	
	1328	0.4	12			1434	0.3	9			1434	0.2	6			1532	0.7	21			1419	0.1	3			1501	0.7	21	
	1935	3.3	101			2031	3.2	98			2040	3.2	98			2118	2.6	79			2022	3.2	98			2045	2.5	76	
10 Th	0209	0.2	6		25 F	0306	0.2	6		10 Su	0301	0.2	6		25 M	0344	0.7	21		10 M	0238	0.2	6		25 Tu	0300	0.8	24	
	0804	2.8	85			0901	2.9	88			0908	3.1	94			0946	2.7	82			0847	3.3	101			0906	2.8	85	
	1408	0.4	12			1521	0.4	12			1527	0.3	9			1626	0.9	27			1516	0.3	9			1551	0.8	24	
	2017	3.2	98			2114	2.9	88			2131	3.0	91			2205	2.4	73			2116	3.0	91			2131	2.4	73	
11 F	0248	0.2	6		26 Sa	0350	0.4	12		11 M	0350	0.4	12		26 Tu	0431	0.9	27		11 Tu	0331	0.4	12		26 W	0345	1.0	30	
	0847	2.8	85			0946	2.7	82			1002	3.0	91			1036	2.6	79			0944	3.2	98			0955	2.7	82	
	1454	0.4	12			1613	0.6	18			1631	0.5	15			1732	1.0	30			1623	0.4	12			1651	1.0	30	
	2102	3.1	94			2159	2.6	79			2229	2.7	82			2301	2.2	67			2218	2.7	82			2227	2.2	67	
12 Sa	0331	0.3	9		27 Su	0436	0.6	18		12 Tu	0451	0.5	15		27 W	0532	1.0	30		12 W	0437	0.6	18		27 Th	0443	1.1	34	
	0935	2.8	85			1034	2.6	79			1105	2.9	88			1136	2.5	76			1049	3.1	94			1051	2.6	79	
	1546	0.5	15			1711	0.8	24			1748	0.6	18			1847	1.0	30			1741	0.5	15			1801	1.0	30	
	2153	3.0	91			2250	2.4	73			2339	2.5	76								2332	2.5	76			2333	2.1	64	
13 Su	0420	0.4	12		28 M	0529	0.8	24		13 W	0604	0.6	18		28 Th	0011	2.1	64		13 Th	0555	0.7	21		28 F	0555	1.2	37	
	1028	2.8	85			1129	2.5	76			1216	2.9	88			0644	1.1	34			1204	3.0	91			1155	2.5	76	
	1648	0.6	18			1819	0.9	27			1911	0.5	15			1243	2.5	76			1903	0.5	15			1908	0.9	27	
	2250	2.8	85			2348	2.2	67			●					1956	0.9	27			●								
14 M	0517	0.5	15		29 Tu	0628	0.9	27		14 Th	0057	2.5	76		29 F	0126	2.1	64		14 F	0054	2.5	76		29 Sa	0043	2.2	67	
	1128	2.8	85			1230	2.5	76			0722	0.6	18			0752	1.1	34			0715	0.7	21			0706	1.1	34	
	1801	0.6	18			1930	0.9	27			1332	3.0	91			1348	2.6	79			1322	3.0	91			1259	2.6	79	
	2355	2.6	79			●					2026	0.4	12			2051	0.8	24			2015	0.4	12			●	2004	0.8	24
15 Tu	0623	0.5	15		30 W	0056	2.1	64		15 F	0216	2.5	76		15 Sa	0211	2.6	79		15 Sa	0211	2.6	79		30 Su	0144	2.3	70	
	1235	2.9	88			0731	0.9	27			0834	0.5	15			0826	0.6	18			0826	0.6	18			0804	1.0	30	
	1919	0.5	15			1333	2.5	76			1442	3.1	94			1432	3.1	94			1432	3.1	94			1356	2.7	82	
						2034	0.9	27			2130	0.2	6								2115	0.3	9			2049	0.7	21	
				31 Th	0205	2.1	64														31 M	0234	2.5	76					
					0830	0.9	27															0853	0.8	24					
					1431	2.6	79															1446	2.9	88					
					2127	0.7	21															2129	0.5	15					

Time meridian 165° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 165° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Apia, Samoa Islands, 2008

Times and Heights of High and Low Waters

July				August				September															
Time		Height		Time		Height		Time		Height		Time		Height									
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm									
1 Tu	0516	3.4	104	16 W	0530	2.9	88	1 F	0037	-0.3	-9	16 Sa	0013	0.1	3	1 M	0147	0.1	3	16 Tu	0105	0.1	3
	1156	-0.4	-12		1214	0.1	3		0642	3.4	104		0614	3.2	98		0742	3.0	91		0708	3.3	101
	1749	2.8	85		1758	2.4	73		1316	-0.4	-12		1245	0.0	0		1408	0.1	3		1323	0.1	3
									1911	-0.0	91		1838	2.8	85		2005	3.0	91		1930	3.3	101
2 W	0000	-0.2	-6	17 Th	0005	0.3	9	2 Sa	0125	-0.2	-6	17 Su	0049	0.1	3	2 Tu	0232	0.3	9	17 W	0152	0.1	3
	0608	3.5	107		0606	2.9	88		0727	3.3	101		0652	3.2	98		0823	2.8	85		0754	3.1	94
	1248	-0.5	-15		1247	0.0	0		1400	-0.3	-9		1318	0.0	0		1448	0.4	12		1407	0.2	6
●	1842	2.9	88	○	1834	2.4	73		1956	2.9	88		1916	2.9	88		2047	2.8	85		2017	3.3	101
3 Th	0053	-0.2	-6	18 F	0040	0.2	6	3 Su	0213	-0.1	-3	18 M	0127	0.1	3	3 W	0320	0.5	15	18 Th	0245	0.2	6
	0659	3.5	107		0642	3.0	91		0812	3.1	94		0732	3.1	94		0907	2.5	76		0845	2.9	88
	1338	-0.5	-15		1320	0.0	0		1445	-0.1	-3		1354	0.0	0		1532	0.6	18		1457	0.4	12
	1933	2.9	88		1910	2.5	76		2041	2.8	85		1956	2.9	88		2133	2.7	82		2111	3.2	98
4 F	0145	-0.2	-6	19 Sa	0115	0.2	6	4 M	0303	0.1	3	19 Tu	0210	0.1	3	4 Th	0416	0.7	21	19 F	0348	0.4	12
	0750	3.4	104		0719	3.0	91		0858	2.8	85		0815	3.0	91		0956	-2.3	70		0945	2.7	82
	1429	-0.4	-12		1354	0.0	0		1530	0.1	3		1433	0.1	3		1623	0.8	24		1559	0.6	18
	2024	2.8	85		1947	2.6	79		2128	2.7	82		2041	2.9	88		2225	2.5	76		2214	3.1	94
5 Sa	0238	-0.1	-3	20 Su	0153	0.2	6	5 Tu	0355	0.3	9	20 W	0258	0.2	6	5 F	0522	0.8	24	20 Sa	0503	0.5	15
	0840	3.2	98		0759	2.9	88		0945	2.6	79		0903	2.8	85		1054	2.1	64		1055	2.5	76
	1519	-0.3	-9		1429	0.0	0		1619	0.3	9		1519	0.2	6		1725	0.9	27		1714	0.7	21
	2116	2.7	82		2027	2.6	79		2218	2.5	76		2131	2.9	88		2326	2.4	73		2326	3.0	91
6 Su	0333	0.1	3	21 M	0234	0.2	6	6 W	0454	0.5	15	21 Th	0357	0.3	9	6 Sa	0635	0.9	27	21 Su	0623	0.5	15
	0931	2.9	88		0841	2.8	85		1036	2.3	70		0958	2.6	79		1205	2.0	61		1213	2.5	76
	1611	-0.1	-3		1507	0.1	3		1712	0.5	15		1614	0.4	12		1836	1.0	30		1835	0.7	21
	2208	2.6	79		2111	2.6	79		2313	2.4	73		2230	2.8	85					○			
7 M	0431	0.2	6	22 Tu	0320	0.3	9	7 Th	0601	0.7	21	22 F	0508	0.4	12	7 Su	0033	2.4	73	22 M	0042	3.0	91
	1024	2.7	82		0927	2.7	82		1136	2.1	64		1102	2.4	73		0742	0.8	24		0737	0.4	12
	1704	0.1	3		1551	0.2	6		1812	0.7	21		1723	0.5	15		1320	2.0	61		1331	2.6	79
	2304	2.5	76		2159	2.6	79					2338	2.8	85	●	1942	1.0	30		1949	0.6	18	
8 Tu	0533	0.4	12	23 W	0416	0.4	12	8 F	0014	2.3	70	23 Sa	0630	0.5	15	8 M	0137	2.5	76	23 Tu	0154	3.1	94
	1120	2.4	73		0712	0.7	21		1217	2.3	70		0837	0.7	21		0840	0.3	9				
	1800	0.3	9		1642	0.3	9		1841	0.5	15		1421	2.2	67		1437	2.7	82				
				2255	2.6	79	○	1916	0.7	21	○				2035	0.9	27		2052	0.4	12		
9 W	0002	2.4	73	24 Th	0522	0.4	12	9 Sa	0119	2.3	70	24 Su	0052	2.8	85	9 Tu	0230	2.6	79	24 W	0255	3.2	98
	0639	0.5	15		0817	0.7	21		0747	0.3	9		0921	0.6	18		0933	0.1	3				
	1220	2.2	67		1354	1.9	58		1335	2.4	73		1507	2.3	70		1531	2.9	88				
○	1857	0.4	12		2357	2.6	79		2015	0.7	21		1956	0.4	12		2120	0.7	21		2146	0.3	9
10 Th	0101	2.4	73	25 F	0638	0.4	12	10 Su	0218	2.4	73	25 M	0204	3.0	91	10 W	0313	2.8	85	25 Th	0348	3.3	101
	0744	0.5	15		1228	2.3	70		0912	0.6	18		0854	0.2	6		0958	0.4	12		1020	0.0	0
	1323	2.1	64		1852	0.4	12		1454	2.0	61		1445	2.5	76		1544	2.5	76		1618	3.1	94
	1954	0.5	15	○				2107	0.7	21		2101	0.3	9		2158	0.6	18		2234	0.1	3	
11 F	0159	2.4	73	26 Sa	0105	2.7	82	11 M	0307	2.5	76	26 Tu	0307	3.2	98	11 Th	0352	3.0	91	26 F	0435	3.4	104
	0845	0.5	15		0753	0.3	9		0957	0.4	12		0950	0.0	0		1031	0.3	9		1102	0.0	0
	1425	2.0	61		1340	2.3	70		1540	2.1	64		1544	2.7	82		1619	2.7	82		1659	3.2	98
	2046	0.5	15		2001	0.3	9		2150	0.6	18		2157	0.1	3		2234	0.4	12		2318	0.1	3
12 Sa	0251	2.5	76	27 Su	0212	2.9	88	12 Tu	0349	2.7	82	27 W	0402	3.3	101	12 F	0430	3.1	94	27 Sa	0517	3.4	104
	0938	0.4	12		1035	0.3	9		1040	-0.2	-6		1103	0.2	6		1142	0.0	0				
	1519	2.0	61		1619	2.3	70		1635	2.9	88		1654	2.9	88		1738	3.3	101				
	2133	0.5	15		2106	0.2	6		2229	0.5	15		2248	0.0	0		2309	0.3	9				
13 Su	0337	2.5	76	28 M	0315	3.1	94	13 W	0426	2.8	85	28 Th	0452	3.4	104	13 Sa	0507	3.3	101	28 Su	0000	0.1	3
	1023	0.3	9		1109	0.2	6		1125	-0.3	-9		1135	0.1	3		0556	3.3	101				
	1605	2.1	64		1654	2.4	73		1720	3.0	91		1730	3.1	94		1219	0.1	3				
	2216	0.5	15		2204	0.0	0		2304	0.3	9		2335	-0.1	-3		2345	0.1	3	●	1816	3.3	101
14 M	0417	2.7	82	29 Tu	0413	-0.3	101	14 Th	0502	3.0	91	29 F	0537	3.5	107	14 Su	0545	3.3	101	29 M	0041	0.2	6
	1103	0.2	6		1141	0.1	3		1208	-0.3	-9		1209	0.0	0		0634	3.1	94				
	1645	2.2	67		1728	2.6	79		1803	3.1	94		1807	3.2	98		1256	0.3	9				
	2254	0.4	12		2258	-0.1	-3		2339	0.2	6					○				1853	3.2	98	
15 Tu	0454	2.8	85	30 W	0505	3.4	104	15 F	0538	3.1	94	30 Sa	0019	-0.1	-3	15 M	0024	0.1	3	30 Tu	0122	0.3	9
	1140	0.1	3		1213	0.0	0		0620	3.4	104		0625	3.3	101		0712	3.0	91				
	1722	2.3	70		1803	2.7	82		1248	-0.2	-6		1244	0.0	0		1332	0.4	12				
	2331	0.3	9		2349	-0.2	-6				●	1844	3.1	94		1847	3.3	101		1931	3.1	94	
				31 Th	0555	3.5	107				31 Su	0103	-0.1	-3									
					1230	-0.5	-15						0701	3.2	98								
					1825	2.9	88						1328	-0.1	-3								
				●								1924	3.1	94									

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Suva, Suva Harbor, 2008

Times and Heights of High and Low Waters

January								February								March							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm			
1 Tu	0045	3.6	110	16 W	0601	0.5	15	1 F	0206	3.1	94	16 Sa	0202	3.6	110	1 Sa	0125	3.0	91	16 Su	0154	3.6	110
	0652	0.8	24		1230	4.5	137		0751	1.3	40		0752	0.9	27		0710	1.4	43		0747	0.8	24
	1318	4.1	125		1859	0.6	18		1413	3.9	119		1415	4.4	134		1329	3.7	113		1405	4.2	128
	1945	1.0	30		2056	0.9	27		2057	0.1	3		2013	0.9	27		2043	0.1	3				
2 W	0146	3.4	104	17 Th	0101	3.7	113	2 Sa	0308	3.1	94	17 Su	0312	3.7	113	2 Su	0229	3.0	91	17 M	0301	3.7	113
	0743	1.0	30		0659	0.7	21		0848	1.4	43		0900	0.8	24		0811	1.4	43		0856	0.7	21
	1408	4.1	125		1328	4.6	140		1506	3.9	119		1520	4.5	137		1427	3.7	113		1510	4.3	131
	2042	0.9	27		2005	0.4	12		2149	0.7	21		2159	0.0	0		2109	0.8	24		2143	0.0	0
3 Th	0246	3.3	101	18 F	0210	3.7	113	3 Su	0403	3.2	98	18 M	0414	3.8	116	3 M	0325	3.2	98	18 Tu	0400	3.9	119
	0835	1.2	37		0802	0.8	24		0942	1.3	40		1004	0.7	21		0908	1.2	37		0957	0.6	18
	1456	4.1	125		1429	4.6	140		1556	4.0	122		1620	4.6	140		1521	3.9	119		1609	4.3	131
	2135	0.8	24		2109	0.2	6		2236	0.6	18		2254	-0.2	-6		2157	0.6	18		2235	-0.1	-3
4 F	0343	3.3	101	19 Sa	0319	3.7	113	4 M	0450	3.4	104	19 Tu	0509	4.0	122	4 Tu	0413	3.4	104	19 W	0451	4.1	125
	0925	1.2	37		0907	0.8	24		1030	1.2	37		1101	0.5	15		0959	1.1	34		1051	0.5	15
	1543	4.1	125		1529	4.7	143		1642	4.2	128		1714	4.7	143		1609	4.1	125		1700	4.4	134
	2223	0.7	21		2210	-0.1	-3		2318	0.4	12		2343	-0.3	-9		2240	0.4	12		2322	-0.1	-3
5 Sa	0434	3.3	101	20 Su	0422	3.9	119	5 Tu	0532	3.6	110	20 W	0558	4.2	128	5 W	0455	3.6	110	20 Th	0536	4.3	131
	1013	1.2	37		1010	0.7	21		1115	1.0	30		1153	0.4	12		1045	0.8	24		1139	0.3	9
	1627	4.2	128		1628	4.9	149		1724	4.3	131		1803	4.8	146		1654	4.3	131		1747	4.4	134
	2307	0.5	15		2306	-0.3	-9		2357	0.2	6						2320	0.1	3				
6 Su	0520	3.4	104	21 M	0521	4.1	125	6 W	0611	3.8	116	21 Th	0029	-0.3	-9	6 Th	0535	3.9	119	21 F	0004	-0.1	-3
	1058	1.2	37		1109	0.6	18		1158	0.8	24		0643	4.4	134		1130	0.6	18		0617	4.4	134
	1709	4.3	131		1723	5.0	152		1805	4.5	137		1241	0.3	9		1737	4.5	137		1223	0.3	9
	2347	0.3	9		2359	-0.5	-15						1849	4.8	146		2359	0.0	0		1830	4.4	134
7 M	0601	3.5	107	22 Tu	0614	4.2	128	7 Th	0034	0.0	0	22 F	0111	-0.3	-9	7 F	0614	4.3	131	22 Sa	0043	0.0	0
	1141	1.1	34		1204	0.4	12		0650	4.0	122		0726	4.5	137		1214	0.4	12		0656	4.5	137
	1750	4.3	131		1816	5.0	152		1240	0.7	21		1326	0.3	9		1819	4.6	140		1305	0.2	6
					1846	4.6	140		1846	4.6	140		1933	4.6	140						1912	4.3	131
8 Tu	0026	0.2	6	23 W	0048	-0.5	-15	8 F	0112	-0.1	-3	23 Sa	0151	-0.2	-6	8 Sa	0038	-0.2	-6	23 Su	0120	0.1	3
	0641	3.7	113		0728	4.2	128		0806	4.5	137		0653	4.5	137		0732	4.5	137				
	1223	1.0	30		1322	0.6	18		1411	0.3	9		1258	0.2	6		1346	0.2	6				
	1830	4.4	134		1927	4.7	143		2016	4.5	137		1903	4.7	143		1953	4.1	125				
9 W	0104	0.1	3	24 Th	0135	-0.5	-15	9 Sa	0149	-0.1	-3	24 Su	0231	0.0	0	9 Su	0118	-0.2	-6	24 M	0157	0.3	9
	0720	3.8	116		0807	4.4	134		0846	4.5	137		0734	4.7	143		0809	4.4	134				
	1304	0.9	27		1406	0.5	15		1454	0.4	12		1344	0.0	0		1426	0.3	9				
	1910	4.5	137		2010	4.6	140		2059	4.2	128		1949	4.6	140		2034	3.9	119				
10 Th	0141	0.0	0	25 F	0220	-0.4	-12	10 Su	0228	-0.1	-3	25 M	0309	0.3	9	10 M	0159	-0.2	-6	25 Tu	0234	0.5	15
	0759	3.9	119		0837	4.5	137		0848	4.6	140		0925	4.4	134		0816	4.8	146		0846	4.2	128
	1345	0.9	27		1435	0.5	15		1453	0.4	12		1539	0.6	18		1432	-0.1	-3		1507	0.4	12
	1950	4.5	137		2041	4.7	143		2055	4.5	137		2143	3.9	119		2038	4.5	137		2116	3.7	113
11 F	0219	0.0	0	26 Sa	0304	-0.2	-6	11 M	0310	0.0	0	26 Tu	0349	0.6	18	11 Tu	0244	0.0	0	26 W	0313	0.7	21
	0838	4.1	125		0922	4.5	137		0931	4.6	140		1006	4.2	128		0902	4.8	146		0925	4.1	125
	1428	0.8	24		1524	0.6	18		1542	0.4	12		1625	0.7	21		1524	-0.1	-3		1550	0.5	15
	2031	4.5	137		2128	4.4	134		2144	4.3	131		2230	3.6	110		2130	4.3	131		2201	3.4	104
12 Sa	0258	0.0	0	27 Su	0347	0.1	3	12 Tu	0354	0.2	6	27 W	0431	0.9	27	12 W	0332	0.2	6	27 Th	0354	0.9	27
	0919	4.2	128		1006	4.4	134		1017	4.6	140		1049	4.0	122		0951	4.7	143		1007	3.9	119
	1514	0.8	24		1613	0.7	21		1637	0.4	12		1716	0.8	24		1619	0.0	0		1638	0.6	18
	2115	4.4	134		2216	4.1	125		2239	4.1	125		2322	3.3	101		2228	4.0	122		2250	3.2	98
13 Su	0338	0.1	3	28 M	0430	0.4	12	13 W	0443	0.4	12	28 Th	0517	1.1	34	13 Th	0426	0.4	12	28 F	0441	1.1	34
	1002	4.3	131		1051	4.3	131		1108	4.6	140		1137	3.8	116		1046	4.6	140		1054	3.7	113
	1603	0.8	24		1705	0.8	24		1736	0.4	12		1811	0.9	27		1720	0.0	0		1730	0.7	21
	2203	4.2	128		2306	3.8	116		2340	3.8	116						2332	3.8	116		2346	3.1	94
14 M	0421	0.2	6	29 Tu	0514	0.7	21	14 Th	0539	0.6	18	29 F	0021	3.1	94	14 F	0527	0.6	18	29 Sa	0533	1.2	37
	1047	4.4	134		1138	4.2	128		1206	4.5	137		0610	1.3	40		1148	4.4	134		1148	3.6	110
	1657	0.8	24		1800	1.0	30		1841	0.4	12		1231	3.7	113		1827	0.1	3		1827	0.8	24
	2255	4.1	125						●				1912	0.9	27		●						
15 Tu	0508	0.4	12	30 W	0001	3.5	107	15 F	0049	3.6	110	15 Sa	0042	3.6	110	15 Sa	0042	3.6	110	30 Su	0046	3.0	91
	1137	4.4	134		0602	1.0	30		0643	0.8	24		0635	0.8	24		0635	0.8	24		0632	1.3	40
	1756	0.7	21		1227	4.0	122		1309	4.4	134		1256	4.3	131		1256	4.3	131		1246	3.5	107
	2355	3.9	119		1858	1.0	30		1950	0.3	9		1936	0.1	3		1936	0.1	3		1926	0.8	24
				31 Th	0102	3.3	101												31 M	0147	3.1	94	
					0654	1.2	37													0734	1.3	40	
					1319	3.9	119													1345	3.6	110	
					1958	1.0	30													2021	0.7	21	

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Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Suva, Suva Harbor, 2008

Times and Heights of High and Low Waters

July				August				September															
Time		Height		Time		Height		Time		Height		Time		Height									
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm									
1 Tu	0409	4.5	137	16 W	0459	3.8	116	1 F	0549	4.7	143	16 Sa	0553	4.0	122	1 M	0102	-0.2	-6	16 Tu	0039	0.0	0
	1046	-0.6	-18		1134	0.0	0		1219	-0.9	-27		1219	-0.1	-3		0712	4.5	137		0644	4.3	131
	1658	3.7	113		1748	3.1	94		1834	4.1	125		1832	3.6	110		1327	-0.5	-15		1254	-0.2	-6
	2248	0.1	3		2331	0.7	21		●								1940	4.4	134		1909	4.4	134
2 W	0505	4.7	143	17 Th	0540	3.9	119	2 Sa	0028	-0.1	-3	17 Su	0025	0.4	12	2 Tu	0149	-0.1	-3	17 W	0121	-0.1	-3
	1141	-0.9	-27		1214	-0.1	-3		0641	4.7	143		0632	4.1	125		0757	4.3	131		0728	4.3	131
	1755	3.9	119		1827	3.2	98		1308	-0.9	-27		1254	-0.2	-6		1409	-0.2	-6		1334	-0.1	-3
	2345	0.0	0		1923	4.2	128		1908	3.8	116		1908	3.8	116		2022	4.4	134		1949	4.5	134
3 Th	0600	4.8	146	18 F	0012	0.6	18	3 Su	0120	-0.2	-6	18 M	0105	0.3	9	3 W	0234	-0.1	-3	18 Th	0207	-0.2	-6
	1235	-1.0	-30		0620	3.9	119		0731	4.6	140		0711	4.2	128		0843	4.1	125		0814	4.2	128
	1850	4.0	122		1251	-0.2	-6		1355	-0.8	-24		1330	-0.3	-9		1450	0.0	0		1417	0.0	0
	●				1905	3.4	104		2010	4.3	131		1945	4.0	122		2104	4.2	128		2032	4.6	140
4 F	0041	-0.1	-3	19 Sa	0052	0.5	15	4 M	0211	-0.1	-3	19 Tu	0146	0.2	6	4 Th	0320	0.1	3	19 F	0255	-0.3	-9
	0654	4.8	146		0659	4.0	122		0820	4.5	137		0751	4.2	128		0929	3.8	116		0904	4.0	122
	1327	-1.1	-34		1328	-0.2	-6		1440	-0.6	-18		1407	-0.2	-6		1533	0.3	9		1503	0.1	3
	1943	4.1	125		1943	3.5	107		2056	4.3	131		2023	4.1	125		2146	4.0	122		2119	4.5	137
5 Sa	0136	-0.1	-3	20 Su	0132	0.5	15	5 Tu	0301	0.0	0	20 W	0230	0.1	3	5 F	0408	0.2	6	20 Sa	0348	-0.2	-6
	0748	4.7	143		0737	4.0	122		0908	4.2	128		0834	4.1	125		1018	3.5	107		0959	3.8	116
	1418	-1.0	-30		1404	-0.2	-6		1526	-0.4	-12		1446	-0.2	-6		1618	0.6	18		1555	0.3	9
	2035	4.2	128		2020	3.6	110		2143	4.2	128		2103	4.2	128		2231	3.8	116		2212	4.3	131
6 Su	0231	-0.1	-3	21 M	0212	0.5	15	6 W	0352	0.1	3	21 Th	0316	0.1	3	6 Sa	0459	0.4	12	21 Su	0446	-0.1	-3
	0841	4.6	140		0816	4.0	122		0958	3.9	119		0920	3.9	119		1112	3.2	98		1100	3.6	110
	1509	-0.8	-24		1440	-0.2	-6		1611	0.0	0		1528	0.0	0		1707	0.9	27		1654	0.5	15
	2127	4.2	128		2058	3.7	113		2229	4.1	125		2147	4.2	128		2321	3.6	110		2312	4.2	128
7 M	0326	0.0	0	22 Tu	0255	0.4	12	7 Th	0444	0.3	9	22 F	0406	0.1	3	7 Su	0555	0.6	18	22 M	0550	-0.1	-3
	0934	4.3	131		0857	4.0	122		1050	3.6	110		1011	3.7	113		1212	3.0	91		1208	3.5	107
	1559	-0.6	-18		1518	-0.2	-6		1658	0.3	9		1615	0.2	6		1803	1.1	34		1801	0.7	21
	2219	4.1	125		2138	3.8	116		2317	3.9	119		2236	4.2	128						●		
8 Tu	0422	0.2	6	23 W	0340	0.4	12	8 F	0539	0.4	12	23 Sa	0502	0.1	3	8 M	0017	3.4	104	23 Tu	0019	4.1	125
	1028	4.0	122		0941	3.8	116		1147	3.3	101		1109	3.5	107		0656	0.6	18		0658	0.0	0
	1649	-0.3	-9		1558	-0.1	-3		1748	0.6	18		1708	0.4	12		1316	2.9	88		1318	3.5	107
	2310	4.0	122		2220	3.9	119						2331	4.1	125		1904	1.1	34		1913	0.7	21
9 W	0520	0.3	9	24 Th	0429	0.4	12	9 Sa	0008	3.7	113	24 Su	0605	0.1	3	9 Tu	0117	3.4	104	24 W	0129	4.0	122
	1124	3.7	113		1030	3.7	113		0638	0.5	15		1215	3.4	104		0757	0.6	18		0805	-0.1	-3
	1739	0.0	0		1642	0.1	3		1248	3.0	91		1809	0.5	15		1418	2.9	88		1426	3.6	110
					2306	3.9	119		1843	0.8	24		●				2006	1.1	34		2023	0.6	18
10 Th	0002	3.9	119	25 F	0524	0.4	12	10 Su	0102	3.6	110	25 M	0032	4.0	122	10 W	0217	3.4	104	25 Th	0237	4.1	125
	0619	0.4	12		1125	3.5	107		0739	0.6	18		0712	0.0	0		0854	0.6	18		0907	-0.1	-3
	1223	3.4	104		1731	0.2	6		1352	2.9	88		1325	3.3	101		1513	3.0	91		1526	3.8	116
	1831	0.3	9		2357	4.0	122		1941	1.0	30		1917	0.6	18		2102	1.0	30		2127	0.4	12
11 F	0055	3.8	116	26 Sa	0624	0.3	9	11 M	0159	3.5	107	26 Tu	0139	4.0	122	11 Th	0311	3.5	107	26 F	0338	4.2	128
	0720	0.5	15		1226	3.4	104		0839	0.5	15		0819	-0.1	-3		0942	0.4	12		1002	-0.2	-6
	1324	3.2	98		1826	0.3	9		1454	2.9	88		1435	3.4	104		1559	3.2	98		1619	4.1	125
	1924	0.6	18		●				2039	1.0	30		2027	0.5	15		2150	0.8	24		2223	0.2	6
12 Sa	0147	3.8	116	27 Su	0053	4.0	122	12 Tu	0254	3.5	107	27 W	0246	4.1	125	12 F	0358	3.7	113	27 Sa	0433	4.3	131
	0819	0.5	15		0728	0.1	3		0934	4.4	12		0923	-0.3	-9		1025	0.3	9		1051	-0.2	-6
	1426	3.0	91		1334	3.1	101		1549	2.9	88		1539	3.6	110		1640	3.5	107		1706	4.3	131
	2018	0.7	21		1928	0.4	12		2133	0.9	27		2132	0.4	12		2235	0.6	18		2313	0.1	3
13 Su	0238	3.7	113	28 M	0154	4.1	125	13 W	0345	3.6	110	28 Th	0348	4.3	131	13 Sa	0441	3.9	119	28 Su	0522	4.3	131
	0915	0.4	12		0832	-0.1	-3		1022	0.3	9		1020	-0.4	-12		1103	0.1	3		1136	-0.2	-6
	1525	3.0	91		1442	3.3	101		1636	3.1	94		1636	3.8	116		1718	3.7	113		1750	4.4	134
	2111	0.8	24		2033	0.4	12		2221	0.8	24		2231	0.2	6		2316	0.4	12				
14 M	0328	3.7	113	29 Tu	0256	4.2	128	14 Th	0431	3.7	113	29 F	0445	4.4	134	14 Su	0522	4.1	125	29 M	0000	0.0	0
	1006	0.3	9		0935	-0.3	-9		1104	0.1	3		1112	-0.6	-18		1140	0.0	0		0609	4.3	131
	1619	3.0	91		1547	3.5	107		1718	3.2	98		1727	4.0	122		1754	4.0	122		1218	-0.1	-3
	2201	0.8	24		2137	0.3	9		2305	0.6	18		2325	0.0	0		2357	0.2	6		●	1830	4.5	137
15 Tu	0415	3.7	113	30 W	0356	4.4	134	15 F	0514	3.9	119	30 Sa	0537	4.5	137	15 M	0603	4.2	128	30 Tu	0044	-0.1	-3
	1052	0.2	6		1034	-0.6	-18		1142	0.0	0		1200	-0.6	-18		1217	-0.1	-3		0653	4.2	128
	1706	3.0	91		1647	3.7	113		1756	3.4	104		1814	4.2	128		1831	4.2	128		1258	0.0	0
	2248	0.8	24		2238	0.1	3		2346	0.5	15						●				1909	4.5	137
16 W	0454	4.5	137	31 Th	1128	-0.8	-24	31 Su	0015	-0.1	-3	31 Sa	0015	-0.1	-3	31 M	0015	-0.1	-3	31 Tu	0015	-0.1	-3
	1742	3.9	119		0625	4.6	140		0625	4.6	140		0625	4.6	140		0625	4.6	140		0625	4.6	140
	2335	0.0	0		1245	-0.6	-18		1245	-0.6	-18		1245	-0.6	-18		1245	-0.6	-18		1245	-0.6	-18
					1858	4.4	134		1858	4.4	134		1858	4.4	134		1858	4.4	134		1858	4.4	134

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Suva, Suva Harbor, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height			Time	Height			Time	Height		
	h	m	ft		h	m	ft		h	m	ft
1 W	0126	-0.1	-3	16 Th	0059	-0.4	-12	1 M	0244	0.2	6
	0736	4.1	125		0708	4.3	131		0904	3.6	110
	1337	0.2	6		1306	0.0	0		1448	1.1	34
	1947	4.4	134		1920	4.9	149		2051	4.1	125
2 Th	0208	0.0	0	17 F	0147	-0.5	-15	2 Tu	0324	0.3	9
	0819	3.9	119		0758	4.3	131		0947	3.6	110
	1417	0.4	12		1353	0.1	3		1532	1.2	37
	2026	4.2	128		2007	4.9	149		2133	3.9	119
3 F	0250	0.1	3	18 Sa	0238	-0.5	-15	3 W	0406	0.4	12
	0903	3.7	113		0851	4.1	125		1031	3.6	110
	1458	0.7	21		1445	0.3	9		1619	1.3	40
	2106	4.0	122		2058	4.7	143		2218	3.8	116
4 Sa	0334	0.2	6	19 Su	0332	-0.5	-15	4 Th	0449	0.5	15
	0950	3.4	104		0949	4.0	122		1117	3.6	110
	1542	0.9	27		1542	0.5	15		1710	1.3	40
	2150	3.8	116		2155	4.5	137		2306	3.7	113
5 Su	0422	0.4	12	20 M	0432	-0.3	-9	5 F	0533	0.6	18
	1041	3.2	98		1052	3.9	119		1203	3.7	113
	1631	1.1	34		1645	0.6	18		1804	1.3	40
	2239	3.6	110		2258	4.3	131		2358	3.7	113
6 M	0515	0.6	18	21 Tu	0535	-0.2	-6	6 Sa	0619	0.7	21
	1137	3.1	94		1158	3.8	116		1250	3.9	119
	1726	1.2	37		1754	0.7	21		1900	1.2	37
	2334	3.4	104								
7 Tu	0612	0.7	21	22 W	0006	4.2	128	7 Su	0054	3.6	110
	1238	3.0	91		0641	-0.1	-3		0707	0.7	21
	1827	1.3	40		1305	3.9	119		1338	4.1	125
8 W	0034	3.4	104		1905	0.7	21		1957	1.0	30
	0711	0.7	21	23 Th	0115	4.1	125	8 M	0153	3.6	110
	1337	3.1	94		0745	0.0	0		0757	0.7	21
	1928	1.2	37		1409	4.0	122		1426	4.3	131
9 Th	0133	3.4	104		2013	0.6	18		2052	0.6	18
	0805	0.7	21	24 F	0222	4.1	125	9 Tu	0252	3.7	113
	1429	3.3	101		0844	0.1	3		0849	0.6	18
	2024	1.1	34		1506	4.2	128		1515	4.6	140
10 F	0228	3.5	107		2115	0.5	15		2146	0.3	9
	0854	0.6	18	25 Sa	0322	4.1	125	10 W	0350	3.9	119
	1515	3.5	107		0937	0.1	3		0943	0.6	18
	2115	0.9	27		1556	4.3	131		1604	4.8	146
11 Sa	0318	3.7	113		2210	0.3	9		2239	-0.1	-3
	0937	0.4	12	26 Su	0417	4.1	125	11 Th	0447	4.0	122
	1557	3.8	116		1025	0.2	6		1037	0.5	15
	2201	0.7	21		1641	4.5	137		1655	5.0	152
12 Su	0404	3.9	119		2259	0.2	6		2331	-0.4	-12
	1018	0.3	9	27 M	0506	4.1	125	12 F	0543	4.2	128
	1636	4.1	125		1109	0.3	9		1131	0.4	12
	2245	0.4	12		1723	4.5	137		1747	5.2	158
13 M	0449	4.1	125		2343	0.1	3	13 Sa	0023	-0.6	-18
	1058	0.1	3	28 Tu	0552	4.0	122		0637	4.3	131
	1714	4.4	134		1150	0.4	12		1226	0.3	9
	2329	0.1	3		1801	4.6	140		1840	5.2	158
14 Tu	0534	4.2	128	29 W	0025	0.0	0	14 Su	0116	-0.8	-24
	1139	0.0	0		0635	4.0	122		0732	4.4	134
	1754	4.6	140		1229	0.5	15		1322	0.3	9
15 W	0013	-0.2	-6		1839	4.5	137		1934	5.2	158
	0620	4.3	131	30 Th	0105	0.0	0	15 M	0208	-0.8	-24
	1221	0.0	0		0717	3.9	119		0826	4.5	137
	1836	4.8	146		1308	0.6	18		1418	0.3	9
					1916	4.4	134		2029	5.1	155
				31 F	0145	0.0	0	30 Tu	0219	0.2	6
					0759	3.8	116		0838	3.8	116
					1348	0.8	24		1424	1.1	34
					1954	4.2	128		2026	4.2	128
								31 W	0256	0.2	6
									0917	3.8	116
									1505	1.1	34
									2105	4.2	128

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 165° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Pago Pago, 2008

Times and Heights of High and Low Waters

April								May								June								
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height						
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm					
1 Tu	0337	2.2	67	16 W	0441	2.6	79	1 Th	0342	2.6	79	16 F	0455	2.6	79	1 Su	0453	3.2	98	16 M	0542	2.5	76	
	0936	0.2	6			1050	0.1		3		0950		0.0	0			1113	0.2	6			1210	0.2	6
	1549	2.6	79			1701	2.7		82		1558		2.7	82			1717	2.3	70			1811	2.1	64
	2208	0.1	3			2311	0.0		0		2211		-0.1	-3			2317	0.2	6			2323	-0.3	-9
2 W	0418	2.5	76	17 Th	0521	2.7	82	2 F	0428	2.9	88	17 Sa	0531	2.6	79	2 M	0547	3.3	101	17 Tu	0002	0.3	9	
	1021	0.1	3			1133	0.1		3		1041		-0.1	-3			1152	0.2	6			0620	2.5	76
	1632	2.8	85			1741	2.6		79		1647		2.8	85			1755	2.3	70			1248	0.2	6
	2248	-0.1	-3			2347	0.1		3		2257		-0.2	-6			2352	0.2	6			1849	2.1	64
3 Th	0500	2.7	82	18 F	0558	2.7	82	3 Sa	0515	3.1	94	18 Su	0607	2.6	79	3 Tu	0018	-0.4	-12	18 W	0041	0.3	9	
	1106	-0.1	-3			1212	0.1		3		1132		-0.3	-9			1230	0.2	6			0658	2.5	76
	1716	2.9	88			1819	2.5		76		1738		2.9	88			1833	2.2	67			1326	0.2	6
	2330	-0.2	-6							2345	-0.3		-9						1912		2.8	85		1929	2.1	64
4 F	0543	2.9	88	19 Sa	0022	0.1	3	4 Su	0605	3.2	98	19 M	0027	0.3	9	4 W	0113	-0.4	-12	19 Th	0120	0.3	9	
	1154	-0.2	-6			1225	-0.4		-12		0643		2.6	79			0737	3.3	101			0738	2.5	76
	1802	3.0	91			1831	2.9		88		1308		0.2	6			1404	-0.6	-18			1405	0.2	6
										1911	2.1		64		1911		2.1	64			2010	2.7	82		2010	2.1	64
5 Sa	0014	-0.3	-9	20 Su	0057	0.2	6	5 M	0036	-0.4	-12	20 Tu	0105	0.3	9	5 Th	0211	-0.3	-9	20 F	0201	0.3	9	
	0629	3.1	94			0709	2.6		79		0721		2.5	76			0835	3.3	101			0818	2.5	76
	1243	-0.3	-9			1329	0.2		6		1348		0.2	6			1503	-0.5	-15			1445	0.2	6
	1851	3.0	91			1934	2.3		70		1952		2.0	61			2110	2.7	82			2052	2.1	64
6 Su	0100	-0.3	-9	21 M	0133	0.2	6	6 Tu	0130	-0.3	-9	21 W	0144	0.3	9	6 F	0311	-0.2	-6	21 Sa	0243	0.3	9	
	0717	3.2	98			0747	2.5		76		0801		2.5	76			0934	3.2	98			0859	2.5	76
	1335	-0.4	-12			1409	0.2		6		1430		0.2	6			1602	-0.4	-12			1526	0.2	6
	1942	2.9	88			2015	2.1		64		2034		2.0	61			2211	2.6	79			2135	2.1	64
7 M	0149	-0.3	-9	22 Tu	0212	0.3	9	7 W	0227	-0.3	-9	22 Th	0226	0.4	12	7 Sa	0413	-0.1	-3	22 Su	0328	0.4	12	
	0809	3.2	98			0827	2.4		73		0844		2.4	73			1035	3.0	91			0942	2.5	76
	1430	-0.4	-12			1452	0.3		9		1513		0.3	9			1701	-0.3	-9			1609	0.2	6
	2037	2.8	85			2058	2.0		61		2120		1.9	58			2313	2.5	76			2221	2.1	64
8 Tu	0243	-0.2	-6	23 W	0254	0.4	12	8 Th	0328	-0.2	-6	23 F	0311	0.4	12	8 Su	0517	0.1	3	23 M	0416	0.4	12	
	0906	3.1	94			0910	2.3		70		0928		2.4	73			1136	2.8	85			1028	2.5	76
	1530	-0.3	-9			1539	0.4		12		1559		0.3	9			1801	-0.1	-3			1653	0.3	9
	2137	2.6	79			2146	1.9		58		2207		1.9	58							2309	2.2	67	
9 W	0342	-0.1	-3	24 Th	0340	0.5	15	9 F	0432	-0.1	-3	24 Sa	0358	0.5	15	9 M	0015	2.5	76	24 Tu	0508	0.5	15	
	1007	3.0	91			0958	2.2		67		1015		2.3	70			0622	0.2	6			1117	2.4	73
	1635	-0.2	-6			1630	0.4		12		1646		0.4	12			1238	2.7	82			1740	0.3	9
	2243	2.5	76			2238	1.8		55		2257		1.9	58			1858	0.0	0					
10 Th	0447	0.0	0	25 F	0430	0.6	18	10 Sa	0540	0.0	0	25 Su	0448	0.5	15	10 Tu	0115	2.5	76	25 W	0000	2.3	70	
	1113	2.9	88			1049	2.2		67		1103		2.3	70			0726	0.3	9			0605	0.4	12
	1743	-0.1	-3			1724	0.5		15		1734		0.4	12			1337	2.5	76			1211	2.4	73
	2352	2.4	73			2334	1.8		55		2348		2.0	61			1953	0.1	3			1830	0.2	6
11 F	0556	0.1	3	26 Sa	0525	0.6	18	11 Su	0043	2.4	73	26 M	0542	0.5	15	11 W	0211	2.5	76	26 Th	0054	2.5	76	
	1223	2.8	85			0648	0.1		3		1154		2.3	70			0826	0.3	9			0706	0.3	9
	1852	-0.1	-3			1308	2.8		85		1822		0.3	9			1433	2.4	73			1309	2.4	73
						1932	-0.1		-3								2043	0.2	6			1924	0.2	6
12 Sa	0102	2.3	70	27 Su	0030	1.8	55	12 M	0145	2.5	76	27 Tu	0038	2.1	64	12 Th	0302	2.5	76	27 F	0149	2.6	79	
	0706	0.1	3			0752	0.2		6		0637		0.5	15			0921	0.3	9			0807	0.2	6
	1330	2.8	85			1408	2.7		82		1247		2.4	73			1525	2.3	70			1409	2.4	73
	1957	-0.1	-3			2027	0.0		0		1910		0.3	9			2128	0.3	9			2019	0.1	3
13 Su	0208	2.4	73	28 M	0122	2.0	61	13 Tu	0242	2.5	76	28 W	0129	2.3	70	13 F	0347	2.5	76	28 Sa	0246	2.8	85	
	0812	0.1	3			0852	0.2		6		0733		0.4	12			1009	0.3	9			0907	0.0	0
	1433	2.8	85			1503	2.6		79		1340		2.5	76			1611	2.2	67			1509	2.5	76
	2055	-0.1	-3			2117	0.0		0		1958		0.2	6			2209	0.3	9			2115	-0.1	-3
14 M	0306	2.5	76	29 Tu	0210	2.2	67	14 W	0332	2.6	79	29 Th	0219	2.5	76	14 Sa	0427	2.5	76	29 Su	0342	3.0	91	
	0912	0.1	3			0944	0.2		6		0829		0.2	6			1053	0.3	9			1006	-0.2	-6
	1528	2.8	85			1553	2.5		76		1434		2.5	76			1653	2.1	64			1608	2.6	79
	2146	-0.1	-3			2201	0.1		3		2048		0.0	0			2247	0.3	9			2212	-0.2	-6
15 Tu	0357	2.6	79	30 W	0256	2.4	73	15 Th	0416	2.6	79	30 F	0310	2.8	85	15 Su	0505	2.5	76	30 M	0437	3.2	98	
	1004	0.1	3			1031	0.2		6		0925		0.0	0			1132	0.3	9			1103	-0.4	-12
	1617	2.7	82			1637	2.4		73		1529		2.6	79			1732	2.1	64			1705	2.6	79
	2231	-0.1	-3			2240	0.2		6		2138		-0.1	-3			2325	0.3	9			2307	-0.3	-9

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Time meridian 165° W. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Pago Pago, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 W	0220 0828 1430 2044	0.2 2.3 0.2 2.5	6 70 6 76	16 Th	0201 0806 1411 2033	-0.3 2.7 -0.2 3.1	-9 82 -6 94	1 Sa	0327 0933 1526 2144	0.3 1.9 0.5 2.3	9 58 15 70
2 Th	0307 0915 1514 2131	0.3 2.1 0.4 2.4	9 64 12 73	17 F	0258 0904 1508 2133	-0.3 2.6 -0.1 3.0	-9 79 -3 91	2 Su	0418 1027 1618 2236	0.4 1.8 0.6 2.2	12 55 18 67
3 F	0358 1006 1603 2222	0.4 2.0 0.5 2.2	12 61 15 67	18 Sa	0401 1008 1611 2238	-0.2 2.4 0.0 2.9	-6 73 0 88	3 M	0512 1124 1713 2331	0.5 1.8 0.6 2.2	15 55 18 67
4 Sa	0455 1104 1659 2319	0.5 1.8 0.6 2.1	15 55 18 64	19 Su	0508 1117 1719 2346	-0.2 2.4 0.1 2.8	-6 73 3 85	4 Tu	0607 1220 1810	0.5 1.8 0.6	15 55 18
5 Su	0557 1207 1759	0.5 1.8 0.6	15 55 18	20 M	0617 1227 1830	-0.1 2.4 0.1	-3 73 3	5 W	0025 0657 1312 1905	2.2 0.5 1.9 0.6	67 15 58 18
6 M	0019 0657 1307 1858	2.1 0.5 1.8 0.6	64 15 55 18	21 Tu	0054 0722 1333 1938	2.8 -0.1 2.4 0.1	85 -3 73 3	6 Th	0116 0743 1358 1956	2.2 0.4 2.1 0.5	67 12 64 15
7 Tu	0117 0751 1400 1952	2.1 0.5 1.9 0.5	64 15 58 15	22 W	0158 0822 1433 2039	2.8 -0.1 2.5 0.0	85 -3 76 0	7 F	0204 0825 1441 2044	2.4 0.3 2.3 0.4	73 9 70 12
8 W	0207 0836 1445 2039	2.2 0.4 2.0 0.4	67 12 61 12	23 Th	0256 0915 1527 2135	2.8 -0.2 2.6 0.0	85 -6 79 0	8 Sa	0251 0907 1524 2132	2.5 0.2 2.5 0.2	76 6 76 6
9 Th	0252 0915 1525 2123	2.4 0.3 2.2 0.3	73 9 67 9	24 F	0349 1003 1614 2225	2.8 -0.1 2.7 0.0	85 -3 82 0	9 Su	0337 0948 1607 2219	2.6 0.0 2.8 0.0	79 0 85 0
10 F	0333 0952 1603 2205	2.5 0.2 2.4 0.2	76 6 73 6	25 Sa	0436 1046 1657 2311	2.8 -0.1 2.8 0.0	85 -3 85 0	10 M	0424 1032 1651 2308	2.7 -0.1 3.0 -0.2	82 -3 91 -6
11 Sa	0414 1029 1641 2247	2.7 0.0 2.6 0.0	82 0 79 0	26 Su	0519 1125 1737 2353	2.7 0.0 2.8 0.0	82 0 85 0	11 Tu	0512 1118 1739 2359	2.8 -0.2 3.1 -0.3	85 -6 94 -9
12 Su	0455 1107 1721 2331	2.8 -0.1 2.8 -0.1	85 -3 85 -3	27 M	0600 1203 1815	2.6 0.0 2.8	79 0 85	12 W	0603 1207 1829	2.8 -0.3 3.2	85 -9 98
13 M	0538 1148 1804	2.8 -0.2 3.0	85 -6 91	28 Tu	0034 0640 1239 1853	0.1 2.4 0.1 2.7	3 73 3 82	13 Th	0052 0656 1259 1922	-0.4 2.8 -0.3 3.3	-12 85 -9 101
14 Tu	0018 0624 1232 1850	-0.2 2.8 -0.2 3.1	-6 85 -6 94	29 W	0114 0719 1317 1931	0.1 2.3 0.2 2.6	3 70 6 79	14 F	0147 0752 1354 2018	-0.5 2.7 -0.3 3.2	-15 82 -9 98
15 W	0107 0713 1319 1939	-0.3 2.8 -0.2 3.1	-9 85 -6 94	30 Th	0156 0801 1356 2012	0.2 2.1 0.3 2.5	6 64 9 76	15 Sa	0246 0852 1453 2118	-0.4 2.6 -0.2 3.1	-12 79 -6 94
				31 F	0239 0845 1439 2056	0.3 2.0 0.4 2.4	9 61 12 73				
16 M	0343 0951 1541 2157	0.3 1.9 0.5 2.3	9 58 15 70	17 Tu	0427 1038 1642 2303	-0.4 2.6 0.0 2.9	-12 79 0 88	16 Su	0347 0955 1557 2222	-0.4 2.5 -0.1 3.0	-12 76 -3 91
17 Tu	0429 1040 1631 2245	0.4 1.9 0.6 2.3	12 58 18 70	18 W	0527 1141 1748	-0.2 2.6 0.1	-6 79 3	17 M	0451 1101 1704 2327	-0.3 2.5 0.0 2.9	-9 76 0 88
18 Th	0516 1130 1723 2334	0.4 2.0 0.6 2.3	12 61 18 70	19 F	0005 0627 1244 1855	2.8 -0.1 2.6 0.2	85 -3 79 6	18 Tu	0556 1208 1812	-0.2 2.5 0.1	-6 76 3
19 F	0602 1220 1818	0.4 2.1 0.6	12 64 18	20 Sa	0108 0725 1344 2000	2.6 0.1 2.6 0.3	79 3 79 9	19 W	0033 0658 1312 1920	2.8 -0.1 2.5 0.1	85 -3 76 3
20 Sa	0026 0649 1310 1913	2.3 0.4 2.2 0.5	70 12 67 15	21 Su	0209 0820 1440 2101	2.4 0.1 2.6 0.3	73 3 79 9	20 Th	0136 0757 1412 2023	2.8 -0.1 2.6 0.1	85 -3 79 3
21 Su	0118 0736 1359 2008	2.3 0.3 2.4 0.4	70 9 73 12	22 M	0306 0910 1530 2155	2.3 0.2 2.6 0.3	70 6 79 9	21 Tu	0235 0850 1506 2120	2.7 0.0 2.7 0.1	82 0 82 3
22 M	0211 0824 1447 2102	2.4 0.2 2.6 0.2	73 6 79 6	23 Tu	0357 0955 1615 2242	2.2 0.3 2.6 0.3	67 9 79 9	22 W	0329 0938 1554 2211	2.6 0.0 2.7 0.1	79 0 82 3
23 Tu	0304 0913 1537 2156	2.5 0.0 2.8 0.0	76 0 85 0	24 W	0442 1037 1655 2323	2.2 0.3 2.6 0.2	67 9 79 6	23 Th	0417 1021 1637 2257	2.5 0.1 2.7 0.1	76 3 82 3
24 W	0358 1004 1627 2250	2.6 -0.1 3.0 -0.2	79 -3 91 -6	25 Th	0523 1115 1733	2.1 0.3 2.6	64 9 79	24 F	0500 1100 1716 2338	2.4 0.1 2.7 0.1	73 3 82 3
25 Th	0452 1055 1719 2343	2.6 -0.2 3.2 -0.4	79 -6 98 -12	26 F	0001 0601 1152 1809	0.2 2.1 0.2 2.6	6 64 6 79	25 Sa	0541 1137 1753	2.3 0.2 2.7	70 6 82
26 F	0547 1148 1812	2.7 -0.3 3.3	82 -9 101	27 Sa	0037 0638 1229 1846	0.2 2.1 0.2 2.6	6 64 6 79	26 Su	0018 0620 1213 1830	0.1 2.2 0.2 2.6	3 67 6 79
27 Sa	0038 0642 1243 1907	-0.5 2.7 -0.4 3.4	-15 82 -12 104	28 Su	0114 0716 1307 1924	0.1 2.1 0.2 2.6	3 64 6 79	27 M	0056 0658 1251 1907	0.2 2.1 0.2 2.6	6 64 6 79
28 Su	0134 0738 1339 2003	-0.6 2.7 -0.4 3.3	-18 82 -12 101	29 M	0151 0754 1346 2002	0.1 2.1 0.3 2.6	3 64 9 79	28 Tu	0135 0738 1330 1947	0.2 2.1 0.3 2.5	6 64 9 76
29 M	0230 0836 1438 2101	-0.6 2.7 -0.3 3.3	-18 82 -9 101	30 Tu	0229 0834 1426 2041	0.2 2.1 0.3 2.5	6 64 9 76	29 W	0215 0820 1411 2028	0.2 2.0 0.3 2.4	6 61 9 73
30 Tu	0328 0936 1539 2201	-0.5 2.7 -0.2 3.1	-15 82 -6 94	31 W	0307 0915 1508 2122	0.2 2.1 0.4 2.5	6 64 12 76	30 Th	0258 0904 1454 2112	0.3 2.0 0.4 2.4	9 61 12 73
31 W					0347 0958 1554 2205	0.3 2.1 0.5 2.4	9 64 15 73	31 M			

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Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

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Wellington, New Zealand, 2008

Times and Heights of High and Low Waters

October								November								December							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm				
1 W	0606	5.2	160	16 Th	0524	5.2	160	1 Sa	0103	2.3	70	16 Su	0041	1.6	50	1 M	0109	2.3	70	16 Tu	0115	1.3	40
	1225	2.0	60		1142	2.0	60		0714	4.9	150		0652	5.9	180		0722	4.9	150		0728	5.9	180
	1829	4.9	150		1757	5.2	160		1345	2.0	60		1324	1.6	50		1400	2.3	70		1402	1.3	40
									1940	4.9	150		1930	5.6	170		1951	4.6	140		2004	5.6	170
2 Th	0049	2.3	70	17 F	0011	2.0	60	2 Su	0147	2.3	70	17 M	0138	1.6	50	2 Tu	0151	2.3	70	17 W	0213	1.3	40
	0657	5.2	160		0620	5.6	170		0759	4.9	150		0749	5.9	180		0804	4.9	150		0825	5.9	180
	1319	2.0	60		1243	1.6	50		1431	2.0	60		1423	1.3	40		1443	2.3	70		1459	1.3	40
	1921	4.9	150		1855	5.2	160		2024	4.9	150		2025	5.6	170		2033	4.9	150		2059	5.6	170
3 F	0138	2.3	70	18 Sa	0108	2.0	60	3 M	0229	2.3	70	18 Tu	0235	1.3	40	3 W	0233	2.3	70	18 Th	0311	1.3	40
	0745	5.2	160		0715	5.6	170		0842	4.9	150		0846	5.9	180		0846	4.9	150		0923	5.9	180
	1411	2.0	60		1343	1.6	50		1515	2.0	60		1519	1.3	40		1524	2.3	70		1553	1.3	40
	2010	4.9	150		1951	5.2	160		2107	4.9	150		2120	5.6	170		2114	4.9	150		2153	5.6	170
4 Sa	0223	2.3	70	19 Su	0202	1.6	50	4 Tu	0309	2.3	70	19 W	0330	1.3	40	4 Th	0314	2.3	70	19 F	0407	1.6	50
	0833	5.2	160		0810	5.9	180		0923	4.9	150		0943	5.9	180		0927	4.9	150		1019	5.6	170
	1500	2.0	60		1441	1.6	50		1556	2.0	60		1613	1.3	40		1602	2.0	60		1645	1.6	50
	2056	4.9	150		2046	5.2	160		2147	4.9	150		2214	5.6	170		2153	4.9	150		2248	5.6	170
5 Su	0306	2.3	70	20 M	0256	1.6	50	5 W	0349	2.3	70	20 Th	0425	1.3	40	5 F	0355	2.3	70	20 Sa	0504	1.6	50
	0918	5.2	160		0906	5.9	180		1004	4.9	150		1039	5.9	180		1009	4.9	150		1114	5.6	170
	1546	2.0	60		1537	1.3	40		1634	2.0	60		1705	1.3	40		1639	2.0	60		1735	1.6	50
	2140	4.9	150		2139	5.6	170		2226	4.9	150		2308	5.6	170		2232	4.9	150		2342	5.2	160
6 M	0348	2.3	70	21 Tu	0350	1.6	50	6 Th	0428	2.3	70	21 F	0521	1.6	50	6 Sa	0436	2.3	70	21 Su	0559	1.6	50
	1002	4.9	150		1001	5.9	180		1044	4.9	150		1134	5.6	170		1051	4.9	150		1207	5.2	160
	1628	2.0	60		1631	1.3	40		1711	2.0	60		1756	1.6	50		1715	2.0	60		1823	2.0	60
	2222	4.9	150		2232	5.6	170		2305	4.9	150				2314		4.9	150					
7 Tu	0427	2.3	70	22 W	0443	1.6	50	7 F	0508	2.3	70	22 Sa	0002	5.2	160	7 Su	0520	2.0	60	22 M	0035	5.2	160
	1043	4.9	150		1057	5.9	180		1124	4.9	150		0616	1.6	50		1134	4.9	150		0652	2.0	60
	1708	2.0	60		1723	1.3	40		1748	2.0	60		1228	5.6	170		1754	2.0	60		1258	5.2	160
	2302	4.9	150		2326	5.2	160		2345	4.9	150		1846	1.6	50		2358	4.9	150		1910	2.0	60
8 W	0506	2.3	70	23 Th	0537	1.6	50	8 Sa	0549	2.3	70	23 Su	0056	5.2	160	8 M	0606	2.0	60	23 Tu	0127	5.2	160
	1124	4.9	150		1152	5.9	180		1206	4.9	150		0712	2.0	60		1221	4.9	150		0744	2.0	60
	1747	2.0	60		1814	1.6	50		1825	2.0	60		1322	5.2	160		1835	2.0	60		1348	4.9	150
	2342	4.9	150							1935	2.0		60						1956		2.0	60	
9 Th	0545	2.3	70	24 F	0020	5.2	160	9 Su	0028	4.9	150	24 M	0151	5.2	160	9 Tu	0046	5.2	160	24 W	0217	5.2	160
	1203	4.9	150		0632	1.6	50		0633	2.0	60		0806	2.0	60		0656	2.0	60		0833	2.0	60
	1824	2.0	60		1247	5.6	170		1251	4.9	150		1414	4.9	150		1312	5.2	160		1437	4.9	150
					1905	1.6	50		1906	2.0	60		2025	2.0	60		1922	2.0	60		2041	2.3	70
10 F	0023	4.9	150	25 Sa	0115	5.2	160	10 M	0115	4.9	150	25 Tu	0244	5.2	160	10 W	0139	5.2	160	25 Th	0304	4.9	150
	0625	2.3	70		0728	1.6	50		0721	2.0	60		0900	2.0	60		0750	2.0	60		0922	2.3	70
	1244	4.9	150		1341	5.6	170		1340	4.9	150		1505	4.9	150		1407	5.2	160		1525	4.6	140
	1902	2.3	70		1957	2.0	60		1952	2.0	60		2114	2.3	70		2014	2.0	60		2126	2.3	70
11 Sa	0105	4.9	150	26 Su	0211	5.2	160	11 Tu	0206	5.2	160	26 W	0335	4.9	150	11 Th	0235	5.6	170	26 F	0350	4.9	150
	0708	2.3	70		0824	2.0	60		0814	2.0	60		0953	2.3	70		0848	1.6	50		1011	2.3	70
	1327	4.9	150		1435	5.2	160		1434	4.9	150		1556	4.9	150		1506	5.2	160		1612	4.6	140
	1943	2.3	70		2049	2.0	60		2043	2.0	60		2204	2.3	70		2112	2.0	60		2212	2.3	70
12 Su	0151	4.9	150	27 M	0306	5.2	160	12 W	0302	5.2	160	27 Th	0423	4.9	150	12 F	0333	5.6	170	27 Sa	0433	4.9	150
	0754	2.3	70		0920	2.0	60		0913	2.0	60		1045	2.3	70		0951	1.6	50		1100	2.3	70
	1414	4.9	150		1529	5.2	160		1532	5.2	160		1646	4.6	140		1608	5.2	160		1700	4.6	140
	2028	2.3	70		2143	2.3	70		2141	2.0	60		2252	2.3	70		2214	1.6	50		2258	2.3	70
13 M	0241	4.9	150	28 Tu	0400	5.2	160	13 Th	0359	5.2	160	28 F	0510	4.9	150	13 Sa	0432	5.9	180	28 Su	0517	4.9	150
	0845	2.0	60		1016	2.0	60		1015	2.0	60		1136	2.3	70		1055	1.6	50		1149	2.3	70
	1505	4.9	150		1622	4.9	150		1633	5.2	160		1735	4.6	140		1710	5.2	160		1747	4.6	140
	2118	2.3	70		2236	2.3	70		2242	2.0	60		2339	2.3	70		2315	1.6	50		2343	2.3	70
14 Tu	0334	4.9	150	29 W	0451	4.9	150	14 F	0457	5.6	170	29 Sa	0555	4.9	150	14 Su	0531	5.9	180	29 M	0600	4.9	150
	0940	2.0	60		1111	2.0	60		1119	1.6	50		1226	2.3	70		1200	1.6	50		1237	2.3	70
	1601	5.2	160		1714	4.9	150		1734	5.2	160		1822	4.6	140		1809	5.2	160		1832	4.6	140
	2214	2.3	70		2328	2.3	70		2342	1.6	50												
15 W	0429	5.2	160	30 Th	0541	4.9	150	15 Sa	0555	5.6	170	30 Su	0025	2.3	70	15 M	0016	1.6	50	30 Tu	0029	2.3	70
	1040	2.0	60		1204	2.3	70		1223	1.6	50		0639	4.9	150		0629	5.9	180		0644	4.9	150
	1659	5.2	160		1805	4.9	150		1833	5.2	160		1314	2.3	70		1302	1.6	50		1324	2.3	70
	2313	2.0	60							1908	4.6		140		1907		5.6	170			1917	4.6	140
				31 F	0017	2.3	70																
					0628	4.9	150																
					1256	2.3	70																
					1854	4.9	150																

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Auckland, New Zealand, 2008

Times and Heights of High and Low Waters

January				February				March															
Time		Height		Time		Height		Time		Height		Time		Height									
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm								
1 Tu	0122	9.2	280	16 W ●	0041	9.8	300	1 F	0222	8.9	270	16 Sa	0221	9.8	300	1 Sa	0136	8.9	270	16 Su	0208	9.8	300
	0718	3.0	90		0641	2.3	70		0821	3.6	110		0828	3.0	90		0738	3.9	120		0816	3.0	90
	1342	9.5	290		1310	10.2	310		1430	8.9	270		1447	9.5	290		1346	8.9	270		1435	9.5	290
	1952	3.0	90		1915	2.0	60		2044	3.3	100		2055	2.3	70		1956	3.6	110		2040	2.6	80
2 W	0214	8.9	270	17 Th	0136	9.8	300	2 Sa	0320	8.5	260	17 Su	0329	9.5	290	2 Su	0234	8.9	270	17 M	0314	9.8	300
	0813	3.3	100		0740	2.6	80		0919	3.9	120		0935	3.0	90		0836	3.9	120		0923	3.0	90
	1431	9.2	280		1404	9.8	300		1524	8.5	260		1553	9.5	290		1439	8.5	260		1541	9.5	290
	2043	3.0	90		2011	2.0	60		2142	3.3	100		2202	2.6	80		2055	3.6	110		2148	2.6	80
3 Th	0310	8.9	270	18 F	0238	9.5	290	3 Su	0420	8.9	270	18 M	0436	9.8	300	3 M	0335	8.9	270	18 Tu	0419	9.8	300
	0910	3.6	110		0844	3.0	90		1016	3.9	120		1041	3.0	90		0935	3.9	120		1027	3.0	90
	1521	8.9	270		1504	9.8	300		1622	8.5	260		1700	9.5	290		1539	8.5	260		1646	9.5	290
	2136	3.3	100		2113	2.3	70		2241	3.3	100		2308	2.3	70		2158	3.6	110		2253	2.6	80
4 F	0407	8.9	270	19 Sa	0345	9.5	290	4 M	0515	8.9	270	19 Tu	0538	10.2	310	4 Tu	0433	8.9	270	19 W	0518	9.8	300
	1005	3.6	110		0950	3.0	90		1110	3.6	110		1142	2.6	80		1031	3.6	110		1126	2.6	80
	1612	8.9	270		1607	9.8	300		1720	8.5	260		1803	9.8	300		1642	8.5	260		1747	9.5	290
	2229	3.3	100		2218	2.0	60		2334	3.3	100						2256	3.3	100		2350	2.6	80
5 Sa	0503	8.9	270	20 Su	0451	9.8	300	5 Tu	0605	9.2	280	20 W	0007	2.0	60	5 W	0526	9.2	280	20 Th	0612	10.2	310
	1057	3.6	110		1054	2.6	80		1200	3.3	100		0634	10.5	320		1123	3.3	100		1220	2.6	80
	1705	8.9	270		1713	9.8	300		1815	8.9	270		1239	2.3	70		1740	8.9	270		1842	9.8	300
	2321	3.0	90		2322	2.0	60						1901	10.2	310		2348	3.0	90				
6 Su	0553	9.2	280	21 M	0553	10.2	310	6 W	0023	3.0	90	21 Th	0100	2.0	60	6 Th	0614	9.8	300	21 F	0040	2.3	70
	1146	3.6	110		1155	2.3	70		0651	9.5	290		0725	10.5	320		1213	3.0	90		0701	10.2	310
	1756	8.9	270		1816	9.8	300		1246	3.0	90		1330	2.3	70		1833	9.5	290		1308	2.3	70
									1905	9.2	280		1952	10.2	310						1931	10.2	310
7 M	0009	3.0	90	22 Tu	0021	1.6	50	7 Th	0107	2.3	70	22 F	0148	1.6	50	7 F	0035	2.6	80	22 Sa	0125	2.0	60
	0640	9.2	280		0651	10.5	320		0734	10.2	310		0813	10.8	330		0700	10.2	310		0746	10.5	320
	1232	3.3	100		1253	2.3	70		1331	2.6	80		1418	2.0	60		1300	2.3	70		1352	2.3	70
	1846	8.9	270		1915	10.2	310		●	1951	9.5		290	2040	10.5		320	1922	9.8		300	○	2015	10.2	310
8 Tu	0053	2.6	80	23 W	0116	1.3	40	8 F	0149	2.0	60	23 Sa	0232	1.6	50	8 Sa	0120	2.0	60	23 Su	0206	2.0	60
	0723	9.5	290		0744	10.8	330		0816	10.5	320		0857	10.8	330		0745	10.5	320		0829	10.5	320
	1316	3.0	90		1348	2.0	60		1415	2.3	70		1502	2.0	60		1346	2.0	60		1433	2.0	60
	1932	9.2	280		○	2010	10.5		320	2035	10.2		310	2123	10.5		320	●	2008		10.5	320	2056	10.5	320
9 W	0135	2.3	70	24 Th	0207	1.3	40	9 Sa	0231	1.6	50	24 Su	0314	1.6	50	9 Su	0205	1.6	50	24 M	0246	2.3	70
	0804	9.8	300		0834	11.2	340		0858	10.5	320		0940	10.5	320		0830	10.8	330		0909	10.2	310
	1358	2.6	80		1439	1.6	50		1459	2.0	60		1544	2.0	60		1432	1.3	40		1511	2.0	60
	2016	9.5	290		2101	10.5	320		2118	10.5	320		2204	10.5	320		2053	10.8	330		2135	10.2	310
10 Th	0215	2.0	60	25 F	0254	1.3	40	10 Su	0313	1.6	50	25 M	0354	2.0	60	10 M	0250	1.3	40	25 Tu	0324	2.3	70
	0844	10.2	310		0922	11.2	340		0941	10.8	330		1020	10.5	320		0916	11.2	340		0947	10.2	310
	1441	2.6	80		1528	1.6	50		1543	1.6	50		1623	2.0	60		1518	1.3	40		1548	2.3	70
	2059	9.5	290		2148	10.5	320		2201	10.5	320		2244	10.2	310		2139	11.2	340		2212	10.2	310
11 F	0255	2.0	60	26 Sa	0339	1.3	40	11 M	0356	1.6	50	26 Tu	0434	2.3	70	11 Tu	0336	1.3	40	26 W	0403	2.6	80
	0924	10.2	310		1008	10.8	330		1025	10.8	330		1059	10.2	310		1003	11.2	340		1025	9.8	300
	1523	2.3	70		1613	2.0	60		1627	1.3	40		1701	2.3	70		1604	1.0	30		1624	2.3	70
	2141	9.8	300		2232	10.5	320		2246	10.5	320		2322	9.8	300		2226	11.2	340		2249	9.8	300
12 Sa	0335	2.0	60	27 Su	0423	1.6	50	12 Tu	0442	1.6	50	27 W	0514	2.6	80	12 W	0424	1.6	50	27 Th	0442	3.0	90
	1005	10.5	320		1051	10.5	320		1111	10.8	330		1137	9.8	300		1051	10.8	330		1102	9.5	290
	1606	2.0	60		1657	2.0	60		1713	1.6	50		1739	2.6	80		1652	1.3	40		1702	2.6	80
	2223	9.8	300		2315	10.2	310		2332	10.5	320						2314	10.8	330		2328	9.5	290
13 Su	0417	2.0	60	28 M	0506	2.3	70	13 W	0530	2.0	60	28 Th	0003	9.5	290	13 Th	0515	2.0	60	28 F	0525	3.3	100
	1048	10.5	320		1134	10.2	310		1159	10.5	320		0557	3.3	100		1142	10.8	330		1141	9.2	280
	1650	2.0	60		1739	2.3	70		1801	1.6	50		1217	9.5	290		1741	1.6	50		1741	3.0	90
	2306	10.2	310		2358	9.8	300						1820	3.0	90								
14 M	0501	2.0	60	29 Tu	0550	2.6	80	14 Th	0022	10.2	310	29 F	0046	9.2	280	14 F	0007	10.5	320	29 Sa	0011	9.2	280
	1132	10.5	320		1216	9.8	300		0624	2.3	70		0645	3.6	110		0610	2.3	70		0611	3.6	110
	1736	2.0	60		1821	2.6	80		1250	10.2	310		1259	9.2	280		1235	10.2	310		1224	9.6	280
	2351	9.8	300		○	1853	2.0		60	1853	2.0		60	1904	3.3		100	○	1835		2.0	60	1824	3.3	100
15 Tu	0548	2.3	70	30 W	0042	9.5	290	15 F	0118	9.8	300					15 Sa	0104	10.2	310	30 Su	0059	9.2	280
	1219	10.2	310		0636	3.0	90		0723	2.6	80						0711	2.6	80		0702	3.6	110
	1823	2.0	60		1258	9.5	290		1346	9.8	300						1333	9.8	300		1310	8.9	270
					1904	3.0	90		1951	2.3	70						1934	2.3	70		○	1914	3.6	110
			31 Th	0129	8.9	270										31 M	0153	8.9	270				
				0726	3.6	110											0757	3.9	120				
				1342	9.2	280											1403	8.5	260				
				1952	3.3	100											2012	3.6	110				

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

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Auckland, New Zealand, 2008

Times and Heights of High and Low Waters

October					November					December													
Time		Height			Time		Height			Time		Height			Time		Height						
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm				
1 W	0210	1.6	50	16 Th	0140	1.0	30	1 Sa	0300	2.0	60	16 Su	0256	0.7	20	1 M	0312	2.0	60	16 Tu	0331	0.7	20
	0834	10.5	320		0804	10.8	330		0928	10.2	310		0923	11.5	350		0942	9.8	300		1000	11.5	350
	1426	1.6	50		1401	1.3	40		1519	2.3	70		1524	1.3	40		1538	2.6	80		1606	1.3	40
	2048	10.2	310		2024	10.8	330		2139	9.5	290		2149	10.8	330		2155	9.2	280		2228	10.8	330
2 Th	0251	1.6	50	17 F	0227	0.7	20	2 Su	0337	2.0	60	17 M	0347	0.7	20	2 Tu	0349	2.3	70	17 W	0422	1.0	30
	0915	10.5	320		0851	11.2	340		1006	9.8	300		1015	11.2	340		1020	9.8	300		1053	11.2	340
	1506	2.0	60		1449	1.3	40		1600	2.6	80		1619	1.3	40		1619	2.6	80		1700	1.3	40
	2128	10.2	310		2113	10.8	330		2218	9.2	280		2243	10.5	320		2234	9.2	280		2321	10.5	320
3 F	0329	1.6	50	18 Sa	0314	0.7	20	3 M	0414	2.3	70	18 Tu	0438	1.0	30	3 W	0427	2.3	70	18 Th	0515	1.3	40
	0954	10.2	310		0939	11.2	340		1045	9.5	290		1109	10.8	330		1100	9.5	290		1146	10.8	330
	1545	2.3	70		1538	1.3	40		1642	3.0	90		1715	1.6	50		1701	3.0	90		1754	1.6	50
	2207	9.8	300		2204	10.8	330		2258	9.2	280		2338	10.2	310		2314	9.2	280		2314	9.2	280
4 Sa	0407	2.0	60	19 Su	0403	0.7	20	4 Tu	0453	2.6	80	19 W	0532	1.3	40	4 Th	0507	2.6	80	19 F	0608	2.0	60
	1033	9.8	300		1029	10.8	330		1126	9.5	290		1205	10.5	320		1141	9.5	290		1239	10.5	320
	1626	2.6	80		1631	1.6	50		1727	3.0	90		1814	2.0	60		1744	3.0	90		1848	2.0	60
	2246	9.5	290		2256	10.5	320		2339	8.9	270		1913	2.3	70		2355	8.9	270		1943	2.3	70
5 Su	0445	2.3	70	20 M	0454	1.0	30	5 W	0535	3.0	90	20 Th	0634	9.8	300	5 F	0550	3.0	90	20 Sa	0107	9.8	300
	1113	9.5	290		1122	10.8	330		1210	9.2	280		0030	2.0	60		1225	9.5	290		0705	2.3	70
	1709	3.0	90		1727	2.0	60		1814	3.3	100		1302	10.2	310		1830	3.0	90		1332	10.2	310
	2326	9.2	280		2351	10.2	310		1913	2.3	70		1913	2.3	70		1913	2.3	70		1943	2.3	70
6 M	0525	2.6	80	21 Tu	0547	1.6	50	6 Th	0024	8.5	260	21 F	0132	9.5	290	6 Sa	0040	8.9	270	21 Su	0203	9.5	290
	1155	9.2	280		1219	10.2	310		0621	3.0	90		0731	2.3	70		0638	3.0	90		0803	2.6	80
	1755	3.3	100		1827	2.3	70		1259	8.9	270		1401	9.8	300		1311	9.2	280		1425	9.8	300
									1905	3.3	100		2013	2.3	70		1918	3.0	90		2037	2.6	80
7 Tu	0009	8.9	270	22 W	0049	9.8	300	7 F	0113	8.5	260	22 Sa	0232	9.5	290	7 Su	0130	8.9	270	22 M	0301	9.2	280
	0608	3.0	90		0646	2.0	60		0714	3.3	100		0835	2.6	80		0732	3.3	100		0903	3.0	90
	1243	8.9	270		1320	9.8	300		1351	8.9	270		1459	9.8	300		1401	9.2	280		1519	9.5	290
	1846	3.3	100		1931	2.3	70		1957	3.3	100		2112	2.3	70		2009	2.6	80		2133	2.6	80
8 W	0056	8.5	260	23 Th	0150	9.5	290	8 Sa	0207	8.5	260	23 Su	0333	9.2	280	8 M	0225	8.9	270	23 Tu	0400	9.2	280
	0658	3.3	100		0751	2.3	70		0813	3.3	100		0937	2.6	80		0831	3.3	100		1000	3.3	100
	1337	8.9	270		1424	9.8	300		1444	8.9	270		1555	9.5	290		1454	9.2	280		1612	9.2	280
	1942	3.6	110		2035	2.6	80		2051	3.0	90		2208	2.3	70		2104	2.6	80		2227	2.6	80
9 Th	0149	8.2	250	24 F	0254	9.2	280	9 Su	0305	8.5	260	24 M	0432	9.2	280	9 Tu	0326	9.2	280	24 W	0456	9.2	280
	0756	3.6	110		0859	2.6	80		0914	3.3	100		1033	2.6	80		0933	3.0	90		1054	3.3	100
	1435	8.5	260		1526	9.8	300		1538	9.2	280		1648	9.5	290		1550	9.5	290		1704	9.2	280
	2040	3.6	110		2138	2.6	80		2145	2.6	80		2301	2.3	70		2202	2.3	70		2319	2.6	80
10 F	0247	8.2	250	25 Sa	0358	9.2	280	10 M	0405	8.9	270	25 Tu	0527	9.5	290	10 W	0428	9.5	290	25 Th	0549	9.2	280
	0859	3.6	110		1003	2.6	80		1013	3.0	90		1125	2.6	80		1033	2.6	80		1143	3.3	100
	1532	8.9	270		1624	9.8	300		1631	9.5	290		1738	9.5	290		1649	9.8	300		1756	8.9	270
	2136	3.3	100		2236	2.3	70		2239	2.3	70		2350	2.3	70		2300	2.0	60				
11 Sa	0348	8.5	260	26 Su	0458	9.5	290	11 Tu	0503	9.5	290	26 W	0617	9.5	290	11 Th	0529	9.8	300	26 F	0008	2.6	80
	1000	3.3	100		1101	2.3	70		1107	2.6	80		1212	2.6	80		1131	2.3	70		0637	9.5	290
	1625	9.2	280		1718	9.8	300		1724	9.8	300		1826	9.5	290		1748	10.2	310		1230	3.0	90
	2228	3.0	90		2329	2.3	70		2332	2.0	60						2357	1.3	40		1844	9.2	280
12 Su	0446	8.9	270	27 M	0553	9.8	300	12 W	0558	9.8	300	27 Th	0035	2.3	70	12 F	0626	10.5	320	27 Sa	0052	2.6	80
	1054	3.0	90		1151	2.3	70		1159	2.0	60		0703	9.8	300		1226	2.0	60		0721	9.8	300
	1715	9.5	290		1808	9.8	300		1816	10.2	310		1255	2.6	80		1847	10.5	320		1313	3.0	90
	2318	2.6	80								1911		9.5	290					1930		9.2	280	
13 M	0540	9.2	280	28 Tu	0018	2.0	60	13 Th	0023	1.3	40	28 F	0118	2.0	60	13 Sa	0053	1.0	30	28 Su	0133	2.3	70
	1143	2.6	80		0642	9.8	300		0650	10.5	320		0745	9.8	300		0721	10.8	330		0802	9.8	300
	1802	9.8	300		1237	2.0	60		1249	1.6	50		1337	2.6	80		1322	1.6	50		1355	3.0	90
					1855	9.8	300		1909	10.5	320		1955	9.5	290		1944	10.5	320		2014	9.2	280
14 Tu	0006	2.0	60	29 W	0102	2.0	60	14 F	0114	1.0	30	29 Sa	0157	2.0	60	14 Su	0147	0.7	20	29 M	0212	2.3	70
	0630	9.8	300		0728	10.2	310		0741	10.8	330		0826	9.8	300		0815	11.5	350		0841	9.8	300
	1229	2.0	60		1320	2.0	60		1340	1.3	40		1417	2.6	80		1416	1.3	40		1436	2.6	80
	1849	10.2	310		1938	9.8	300		2002	10.8	330		2036	9.5	290		2040	10.8	330		2054	9.2	280
15 W	0053	1.6	50	30 Th	0144	1.6	50	15 Sa	0205	0.7	20	30 Su	0235	2.0	60	15 M	0239	0.7	20	30 Tu	0249	2.3	70
	0717	10.5	320		0810	10.2	310		0832	11.2	340		0904	9.8	300		0908	11.5	350		0919	10.2	310
	1315	1.6	50		1401	2.0	60		1431	1.3	40		1457	2.6	80		1511	1.3	40		1516	2.6	80
	1936	10.5	320		2020	9.8	300		2056	10.8	330		2116	9.2	280		2135	10.8	330		2133	9.5	290
16 Th	0223	1.6	50	31 F	0223	1.6	50										31 W	0326	2.3	70			
	0849	10.2	310		0849	10.2	310											0957	10.2	310			
	1440	2.3	70		1440	2.3	70											1556	2.6	80			
	2100	9.8	300		2100	9.8	300											2211	9.5	290			

Time meridian 180° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Dreger Harbor, New Guinea, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height			Time	Height			Time	Height		
h m	ft	cm		h m	ft	cm		h m	ft	cm	
1 W	0319 0851 1605 2300	3.9 3.0 4.9 3.3	120 90 150 100	16 Th	0401 0836 1537 2343	3.6 3.3 5.2 3.0	110 100 160 90	1 M	0039 1615	2.6 5.2	80 160
2 Th	0333 0852 1621 2335	3.6 3.0 5.2 3.0	110 90 160 90	17 F	0432 0828 1554	3.3 3.3 5.2	100 100 160	16 Su	0134 1544	2.6 5.6	80 170
3 F	0350 0855 1641	3.6 3.0 5.2	110 90 160	18 Sa	0044 0448 0745 1614	3.0 3.0 3.0 5.6	90 90 90 170	17 M	0315 1608	2.6 5.6	80 170
4 Sa	0015 0406 0857 1704	3.0 3.3 3.0 5.2	90 100 90 160	19 Su	0628 1636	3.0 5.6	90 170	18 Tu	0454 1631	2.6 5.2	80 160
5 Su	0111 0419 0854 1729	3.0 3.3 2.6 5.2	90 100 80 160	20 M	0647 1659	2.6 5.2	80 160	19 W	0145 1715	2.6 4.9	80 150
6 M	0848 1753	2.6 4.9	80 150	21 Tu	0718 1721	2.3 5.2	70 160	20 Th	0222 1742	2.6 4.9	80 150
7 Tu	0845 1815	2.6 4.9	80 150	22 W	0748 1740	2.3 4.9	70 150	21 F	0222 1742	2.6 4.9	80 150
8 W	0841 1833	2.6 4.9	80 150	23 Th	0816 1750	2.6 4.6	80 140	22 Sa	0257 1759	3.0 4.6	90 140
9 Th	0837 1834	2.6 4.6	80 140	24 F	0838 1707 2335	2.6 4.6 3.9	80 140 120	23 Su	0329 1733	3.0 4.3	90 130
10 F	0833 1630 2223	2.6 4.6 4.3	80 140 130	25 Sa	0109 0849 1517 2303	3.9 3.0 4.6 3.6	120 90 140 110	24 M	0406 1330 2343	3.3 4.6 3.3	100 140 100
11 Sa	0028 0832 1604 2127	4.3 2.6 4.3 3.9	130 80 130 120	26 Su	0212 0836 1456 2257	3.9 3.3 4.6 3.6	120 100 140 110	25 Tu	0259 0354 1324 2250	3.3 3.3 4.6 3.0	100 100 140 90
12 Su	0132 0832 1546 2125	4.3 3.0 4.6 3.6	130 90 140 110	27 M	0244 0731 1452 2253	3.6 3.3 4.9 3.3	110 100 150 100	26 W	1333 2304	4.9 2.6	150 80
13 M	0215 0834 1531 2147	4.3 3.0 4.6 3.6	130 90 140 110	28 Tu	0301 0706 1456 2253	3.6 3.3 4.9 3.3	110 100 150 100	27 Th	1353 2332	5.2 2.3	160 70
14 Tu	0253 0836 1524 2219	4.3 3.0 4.9 3.3	130 90 150 100	29 W	0310 0705 1506 2303	3.6 3.3 5.2 3.0	110 100 160 90	28 F	1417 1417	5.2 5.2	160 160
15 W	0328 0837 1527 2258	3.9 3.3 4.9 3.0	120 100 150 90	30 Th	0318 0713 1522 2326	3.3 3.3 5.2 3.0	100 100 160 90	29 Sa	1452 2348	5.2 2.3	160 70
16 Th	0332 0721 1542 2357	3.3 3.0 5.2 3.0	100 90 160 90	31 F	0332 0721 1542 2357	3.3 3.0 5.2 3.0	100 90 160 90	30 Su	0006 1444	2.3 5.6	70 170
								31 M	0044 1511	2.3 5.6	70 170
								1 Tu	0122 1538	2.3 5.2	70 160
								2 W	0030 1650	2.6 5.2	80 160

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 142° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Darwin, Australia, 2008

Times and Heights of High and Low Waters

April										May										June				
Time		Height			Time		Height			Time		Height			Time		Height			Time		Height		
	h m	ft	cm			h m	ft	cm			h m	ft	cm			h m	ft	cm			h m	ft	cm	
1 Tu	0736	10.8	330	16 W	0327	17.4	530	1 Th	0213	15.7	480	16 F	0353	18.7	570	1 Su	0350	19.7	600	16 M	0508	20.0	610	
	1531	17.4	530		0945	9.2	280		0817	10.2	310		0954	10.2	310		0943	10.2	310		1103	10.8	330	
	2223	12.8	390		1601	19.7	600		1450	18.4	560		1542	19.0	580		1525	19.4	590		1616	17.7	540	
					2239	8.9	270		2139	9.8	300		2231	6.6	200		2222	4.6	140		2304	5.6	170	
2 W	0316	15.4	470	17 Th	0426	19.0	580	2 F	0329	17.7	540	17 Sa	0445	20.0	610	2 M	0452	21.7	660	17 Tu	0552	20.7	630	
	0933	9.8	300		1043	8.5	260		0936	9.5	290		1046	9.8	300		1043	9.5	290		1145	10.5	320	
	1620	19.0	580		1645	20.7	630		1545	19.7	600		1623	19.4	590		1615	20.3	620		1656	18.4	560	
	2245	10.8	330		2317	6.9	210		2224	7.5	230		2308	5.6	170		2311	3.0	90		2342	4.9	150	
3 Th	0412	17.7	540	18 F	0514	20.7	630	3 Sa	0426	20.0	610	18 Su	0530	21.3	650	3 Tu	0548	23.3	710	18 W	0630	21.7	660	
	1035	8.2	250		1126	7.9	240		1032	8.5	260		1128	9.5	290		1133	8.9	270		1217	9.8	300	
	1656	20.7	630		1720	21.3	650		1627	21.0	640		1656	19.7	600		1700	21.0	640		1732	18.7	570	
	2315	8.9	270		2350	5.6	170		2305	5.2	160		2340	4.9	150		2358	1.6	50					
4 F	0458	20.0	610	19 Sa	0555	22.0	670	4 Su	0516	22.3	680	19 M	0611	22.0	670	4 W	0639	24.3	740	19 Th	0017	4.6	140	
	1119	6.9	210		1200	7.5	230		1119	7.5	230		1202	9.2	280		1219	8.5	260		0706	22.0	670	
	1728	22.3	680		1747	22.0	670		1703	22.0	670		1726	20.0	610		1744	21.7	660		1245	9.2	280	
	2348	6.6	200				2345		3.3	100							●				1807	19.4	590	
5 Sa	0542	22.0	670	20 Su	0018	4.6	140	5 M	0605	24.0	730	20 Tu	0009	4.3	130	5 Th	0044	1.0	30	20 F	0053	4.3	130	
	1157	5.9	180		0631	23.0	700		0646	22.6	690		0718	23.0	700		0728	24.6	750		0738	22.0	670	
	1759	23.3	710		1230	7.2	220		1231	8.9	270		1259	8.9	270		1305	8.2	250		1315	8.9	270	
					1811	22.3	680		●	1756	20.3		620	1826	20.3		620	1830	22.0		670	1843	19.7	600
6 Su	0023	4.6	140	21 M	0045	3.9	120	6 Tu	0024	1.6	50	21 W	0039	3.9	120	6 F	0130	1.0	30	21 Sa	0127	4.3	130	
	0625	24.0	730		0705	23.6	720		0651	24.9	760		0718	23.0	700		0813	24.6	750		0810	22.3	680	
	1231	5.2	160		1256	7.2	220		1238	7.2	220		1259	8.9	270		1351	8.2	250		1346	8.9	270	
	1826	24.3	740		1832	22.3	680		1811	23.3	710		1826	20.3	620		1916	21.7	660		1918	20.0	610	
7 M	0057	2.6	80	22 Tu	0111	3.3	100	7 W	0103	0.7	20	22 Th	0109	3.6	110	7 Sa	0217	2.0	60	22 Su	0201	4.3	130	
	0707	25.3	770		0736	23.6	720		0734	25.6	780		0748	22.6	690		0856	24.0	730		0840	22.0	670	
	1303	5.2	160		1320	7.5	230		1315	7.2	220		1326	8.9	270		1441	8.2	250		1422	8.5	260	
	1851	24.6	750		1856	22.0	670		1846	23.3	710		1857	20.3	620		2006	21.0	640		1956	19.7	600	
8 Tu	0131	1.3	40	23 W	0137	3.3	100	8 Th	0144	0.7	20	23 F	0142	3.9	120	8 Su	0304	3.0	90	23 M	0235	4.6	140	
	0746	25.6	780		0804	23.3	710		0816	25.3	770		0818	22.3	680		0938	23.3	710		0910	22.0	670	
	1334	5.9	180		1345	8.2	250		1355	7.9	240		1354	9.2	280		1535	8.2	250		1501	8.5	260	
	1917	24.6	750		1920	21.7	660		1925	22.6	690		1929	20.0	610		2101	20.0	610		2036	19.4	590	
9 W	0206	1.0	30	24 Th	0205	3.6	110	9 F	0226	1.3	40	24 Sa	0215	4.6	140	9 M	0352	4.9	150	24 Tu	0309	5.6	170	
	0825	25.6	780		0831	23.0	700		0900	24.3	740		0848	22.0	670		1019	22.0	670		0940	21.7	660	
	1407	6.9	210		1409	8.9	270		1437	8.9	270		1427	9.5	290		1634	8.5	260		1546	8.5	260	
	1946	24.0	730		1946	21.0	640		2006	21.3	650		2001	19.4	590		2205	18.7	570		2121	19.0	580	
10 Th	0243	1.3	40	25 F	0236	4.6	140	10 Sa	0311	3.0	90	25 Su	0250	5.2	160	10 Tu	0441	6.9	210	25 W	0345	6.6	200	
	0905	24.6	750		0900	22.0	670		0945	23.0	700		0921	21.3	650		1101	21.0	640		1011	21.0	640	
	1442	8.2	250		1436	9.5	290		1527	9.8	300		1503	9.8	300		1736	8.9	270		1636	8.5	260	
	2018	22.6	690		2013	20.0	610		2052	20.0	610		2037	18.7	570		2316	17.7	540		2215	18.4	560	
11 F	0323	2.6	80	26 Sa	0308	5.6	170	11 Su	0400	4.9	150	26 M	0327	6.6	200	11 W	0532	8.9	270	26 Th	0426	7.5	230	
	0947	23.0	700		0932	21.0	640		1032	21.3	650		0957	20.7	630		1144	19.7	600		1045	20.3	620	
	1521	9.8	300		1506	10.8	330		1631	10.8	330		1548	10.5	320		1840	8.5	260		1729	8.2	250	
	2052	20.7	630		2039	18.7	570		2152	18.0	550		2120	17.7	540		●				2318	18.0	550	
12 Sa	0407	4.9	150	27 Su	0345	6.9	210	12 M	0457	7.2	220	27 Tu	0408	7.5	230	12 Th	0031	17.1	520	27 F	0515	9.2	280	
	1036	21.0	640		1010	20.0	610		1128	20.0	610		1038	19.7	600		0630	10.2	310		1123	19.4	590	
	1610	11.5	350		1544	11.8	360		1800	11.2	340		1650	10.8	330		1230	18.7	570		1826	7.5	230	
	2132	18.7	570		2110	17.4	530		●	2326	16.4		500	2219	16.7		510	1943	8.2		250			
13 Su	0500	7.2	220	28 M	0428	8.5	260	13 Tu	0605	8.9	270	28 W	0457	8.5	260	13 F	0151	17.1	520	28 Sa	0030	17.7	540	
	1139	19.0	580		1057	18.7	570		1230	19.0	580		1126	19.0	580		0735	11.5	350		0618	10.5	320	
	1743	13.1	400		1649	12.8	390		1930	10.5	320		1807	10.8	330		1325	17.7	540		1211	18.7	570	
	2241	16.4	500		2200	16.1	490						2342	16.4	500		2044	7.9	240		1930	6.9	210	
14 M	0619	9.2	280	29 Tu	0526	9.5	290	14 W	0122	16.4	500	29 Th	0559	9.5	290	14 Sa	0309	17.7	540	29 Su	0150	18.0	550	
	1309	18.0	550		1202	17.7	540		0724	10.2	310		1222	18.7	570		0851	11.8	360		0737	11.5	350	
	2010	12.5	380		1849	13.1	400		1342	18.4	560													

Darwin, Australia, 2008

Times and Heights of High and Low Waters

July					August					September																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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1 Tu	0437	20.7	630		16 W	0539	19.7	600		1 F	0628	23.0	700		16 Tu	0038	4.3	130																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
	1019	10.8	330			1543	18.4	560			2249	3.6	110			1224	8.2	250		0646	23.6	720																		1304	3.9	120																					1900	23.6	720		2 W	0539	22.0	670		17 Th	0618	20.7	630		2 Sa	0035	2.3	70		17 Su	0031	4.3	130		2 Tu	0131	3.6	110		17 W	0106	4.3	130		1122	10.2	310		1643	19.4	590		2345	2.3	70		0711	24.0	730		0700	22.6	690		0742	24.3	740		0710	24.0	730																					1359	3.0	90		1334	2.6	80																					1957	23.3	710		1937	24.3	740		3 Th	0634	23.3	710		18 F	0008	4.9	150		3 Su	0118	2.0	60		18 M	0102	3.6	110		3 W	0200	4.6	140		18 Th	0134	4.6	140		1215	8.9	270		1736	20.3	620			0747	24.6	750		0728	23.3	710		0802	24.0	730		0731	24.0	730																					1429	3.0	90		1406	1.6	50																					2031	23.0	700		2014	24.3	740		4 F	0037	1.6	50		19 Sa	0045	4.3	130		4 M	0156	2.3	70		19 Tu	0131	3.6	110		4 Th	0225	5.9	180		19 F	0202	5.6	170		0722	24.0	730		1306	7.9	240		1828	21.0	640		0819	24.6	750		0752	24.0	730		0821	23.0	700		0754	23.6	720																					1457	3.3	100		1439	1.6	50																					2104	22.0	670		2052	24.0	730		5 Sa	0126	1.6	50		20 Su	0118	3.9	120		5 Tu	0230	3.3	100		20 W	0158	3.9	120		5 F	0245	7.2	220		20 Sa	0234	6.9	210		0806	24.3	740		1354	7.2	220		1919	21.7	660		0847	24.3	740		0814	24.0	730		0839	22.0	670		0818	22.6	690																					1524	4.3	130		1515	2.3	70																					2136	21.0	640		2132	22.6	690		6 Su	0211	2.0	60		21 M	0149	3.6	110		6 W	0301	4.9	150		21 Th	0225	4.6	140		6 Sa	0303	8.9	270		21 Su	0310	8.5	260		0845	24.3	740		1441	6.6	200		2012	21.3	650		0823	23.0	700		0833	23.6	720		0856	20.3	620		0845	21.3	650																					1552	5.2	160		1554	3.9	120																					2211	19.4	590		2220	21.0	640		7 M	0253	3.0	90		22 Tu	0218	3.9	120		7 Th	0327	6.9	210		22 F	0254	5.9	180		7 Su	0323	10.5	320		22 M	0350	10.5	320		0919	24.0	730		1527	6.2	190		2103	20.7	630		0848	23.0	700		0855	22.6	690		0914	18.7	570		0915	19.4	590																					1626	6.9	210		1642	5.9	180																					2252	18.0	550		2318	19.0	580		8 Tu	0332	4.6	140		23 W	0248	4.6	140		8 F	0346	8.5	260		23 Sa	0327	7.5	230		8 M	0353	12.1	370		23 Tu	0453	12.5	380		0952	23.0	700		1613	6.2	190		2154	20.0	610		0912	22.6	690		0918	21.7	660		0926	16.7	510		0953	17.1	520																					1715	8.5	260		1751	7.9	240																					2350	16.7	510						9 W	0409	6.6	200		24 Th	0318	5.9	180		9 Sa	0409	10.5	320		24 Su	0404	9.8	300		9 Tu	0534	13.8	420		24 W	0046	17.7	540		1020	21.7	660		1657	6.6	200		2245	18.7	570		0935	22.0	670		0944	20.0	610		0919	15.1	460		0709	13.5	410																					1830	9.8	300		1134	14.8	450																												1945	8.9	270		10 Th	0444	8.5	260		25 F	0353	7.2	220		10 Su	0458	12.1	370		25 M	0458	11.8	360		10 W	0139	15.7	480		25 Th	0251	18.0	550		1047	20.3	620		1742	7.2	220		2338	17.7	540		1000	21.3	650		1016	18.0	550		1138	13.1	400		0943	11.8	360																					1336	13.5	410		1511	15.7	480																					2023	9.8	300		2133	7.9	240		11 F	0522	10.5	320		26 Sa	0435	9.2	280		11 M	0048	16.1	490		26 Tu	0054	17.7	540		11 Th	0419	17.4	530		26 F	0406	19.7	600		1115	18.7	570		1830	7.5	230						1029	20.0	610		0639	13.5	410		1110	11.8	360		1040	9.2	280																					1556	15.1	460		1615	18.4	560																					2201	8.9	270		2238	6.9	210		12 Sa	0042	16.7	510		27 Su	0530	10.8	330		12 Tu	0325	16.4	500		27 W	0307	18.0	550		12 F	0452	18.7	570		27 Sa	0455	21.3	650		0620	12.1	370		1152	17.1	520		1927	7.9	240		1105	18.7	570		0915	13.1	400		1120	10.5	320		1120	7.2	220																					1634	17.1	520		1706	20.3	620																					2253	7.2	220		2325	5.9	180		13 Su	0208	16.7	510		28 M	0115	18.0	550		13 W	0445	17.7	540		28 Th	0431	19.7	600		13 Sa	0522	20.3	620		28 Su	0533	22.3	680		0743	12.8	390		1259	15.7	480		2033	7.9	240		0655	12.5	380		1050	10.8	330		1140	8.9	270		1156	5.2	160																					1709	19.0	580		1750	22.0	670																					2332	5.9	180						14 M	0348	17.4	530		29 Tu	0305	18.4	560		14 Th	0525	19.0	580		29 F	0525	21.3	650		14 Su	0551	21.7	660		29 M	0002	5.2	160		0933	12.8	390		1442	15.4	470		2143	7.5	230		0846	12.8	390		1705	19.4	590		1205	7.2	220		0606	23.3	710																												1228	3.9	120																												1830	23.3	710		15 Tu	0453	18.7	570		30 W	0434	19.7	600		15 F	0558	20.3	620		30 Sa	0608	23.0	700		15 M	0006	4.9	150		30 Tu	0034	5.2	160		1105	11.8	360		1554	16.1	490		2240	6.6	200		1024	11.8	360		1218	6.9	210		0620	22.6	690		0632	23.6	720																												1257	3.0	90																												1906	24.0	730							31 Th	0536	21.7	660																																																																																																																																																																																																	
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4 F	0037	1.6	50		19 Sa	0045	4.3	130		4 M	0156	2.3	70		19 Tu	0131	3.6	110		4 Th	0225	5.9	180		19 F	0202	5.6	170																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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6 Su	0211	2.0	60		21 M	0149	3.6	110		6 W	0301	4.9	150		21 Th	0225	4.6	140		6 Sa	0303	8.9	270		21 Su	0310	8.5	260																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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	1105	11.8	360			1554	16.1	490			2240	6.6	200			1024	11.8	360			1218	6.9	210			0620	22.6	690		0632	23.6	720																												1257	3.0	90																												1906	24.0	730							31 Th	0536	21.7	660																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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	2240	6.6	200			1024	11.8	360			1218	6.9	210			0620	22.6	690			0632	23.6	720																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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Time meridian 142° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Darwin, Australia, 2008

Times and Heights of High and Low Waters

October								November								December							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm				
1 W	0103	5.6	170	16 Th	0040	5.9	180	1 Sa	0131	8.5	260	16 Su	0134	8.2	250	1 M	0146	9.5	290	16 Tu	0223	8.2	250
	0654	23.3	710		0624	23.6	720		0702	21.3	650		0701	22.3	680		0715	20.0	610		0745	21.7	660
	1325	2.3	70		1304	1.0	30		1345	3.0	90		1359	1.0	30		1356	4.3	130		1437	2.3	70
	1939	24.0	730		1925	25.3	770		2020	23.0	700		2039	24.9	760		2039	22.6	690		2117	24.9	760
2 Th	0130	6.2	190	17 F	0112	6.2	190	2 Su	0158	8.9	270	17 M	0218	8.9	270	2 Tu	0218	9.8	300	17 W	0315	8.2	250
	0715	23.0	700		0651	23.6	720		0730	20.7	630		0744	21.7	660		0749	19.7	600		0838	21.0	640
	1351	2.3	70		1339	0.7	20		1414	3.9	120		1442	2.3	70		1428	4.9	150		1521	3.9	120
	2010	23.6	720		2002	25.3	770		2050	22.3	680		2123	23.6	720		2109	22.0	670		2157	24.0	730
3 F	0154	7.2	220	18 Sa	0145	6.9	210	3 M	0227	9.8	300	18 Tu	0308	9.5	290	3 W	0256	10.2	310	18 Th	0410	8.2	250
	0736	22.3	680		0721	23.3	710		0759	19.7	600		0830	20.3	620		0824	19.0	580		0936	19.7	600
	1417	3.0	90		1415	1.0	30		1445	5.2	160		1529	4.3	130		1459	6.2	190		1605	6.2	190
	2040	22.6	690		2043	24.6	750		2121	21.0	640		2210	22.3	680		2142	21.3	650		2235	22.6	690
4 Sa	0216	8.2	250	19 Su	0222	8.2	250	4 Tu	0259	10.5	320	19 W	0409	10.2	310	4 Th	0340	10.5	320	19 F	0507	8.2	250
	0758	21.3	650		0754	22.3	680		0828	18.4	560		0925	18.7	570		0903	18.0	550		1041	18.4	560
	1444	3.9	120		1453	2.3	70		1518	6.9	210		1622	6.6	200		1532	7.5	230		1651	8.5	260
	2109	21.7	660		2125	23.3	710		2158	20.0	610		2301	21.0	640		2217	20.7	630		2314	21.3	650
5 Su	0240	9.5	290	20 M	0303	9.5	290	5 W	0340	11.5	350	20 Th	0528	10.5	320	5 F	0435	10.8	330	20 Sa	0606	8.2	250
	0819	20.0	610		0830	20.7	630		0900	17.1	520		1045	17.1	520		0954	17.1	520		1151	17.4	530
	1513	5.2	160		1537	4.3	130		1600	8.2	250		1727	8.5	260		1614	8.9	270		1744	10.5	320
	2141	20.3	620		2214	21.3	650		2243	19.0	580		2359	20.0	610		2257	20.0	610		2354	20.0	610
6 M	0305	10.8	330	21 Tu	0354	10.8	330	6 Th	0447	12.5	380	21 F	0652	10.2	310	6 Sa	0543	10.8	330	21 Su	0708	8.2	250
	0841	18.4	560		0911	18.7	570		0947	15.4	470		1237	16.1	490		1106	16.1	490		1312	17.1	520
	1546	6.9	210		1630	6.6	200		1659	9.8	300		1845	10.2	310		1713	10.2	310		1851	12.5	380
	2219	19.0	580		2314	19.7	600		2341	18.0	550						2344	19.4	590				
7 Tu	0339	12.1	370	22 W	0516	12.1	370	7 F	0639	12.5	380	22 Sa	0100	19.4	590	7 Su	0654	10.2	310	22 M	0041	18.7	570
	0858	16.7	510		1013	16.4	500		1134	14.4	440		0812	8.9	270		1236	16.1	490		0815	7.9	240
	1633	8.5	260		1745	8.5	260		1819	10.8	330		1415	17.1	520		1829	11.5	350		1446	17.4	530
	2311	17.7	540								2007		11.2	340					2015		13.1	400	
8 W	0458	13.5	410	23 Th	0030	18.7	570	8 Sa	0054	17.7	540	23 Su	0205	19.0	580	8 M	0040	18.7	570	23 Tu	0145	17.7	540
	0909	15.1	460		0723	11.8	360		0821	11.5	350		0917	7.5	230		0802	8.9	270		0919	7.2	220
	1745	10.2	310		1300	15.1	460		1404	15.1	460		1531	18.4	560		1413	17.1	520		1608	18.7	570
					1927	9.5	290		1952	10.8	330		2122	11.2	340		1954	11.8	360		2146	13.1	400
9 Th	0029	16.7	510	24 F	0201	18.7	570	9 Su	0210	18.4	560	24 M	0303	19.0	580	9 Tu	0143	18.7	570	24 W	0257	17.4	530
	1029	13.5	410		0906	10.2	310		0921	9.5	290		1009	6.2	190		0906	7.2	220		1015	6.6	200
	1212	13.5	410		1458	16.7	510		1523	17.1	520		1630	20.0	610		1535	19.0	580		1704	20.0	610
	1927	10.8	330		2102	9.5	290		2110	10.5	320		2222	10.8	330		2115	11.8	360		2258	12.5	380
10 F	0242	17.1	520	25 Sa	0315	19.4	590	10 M	0311	19.0	580	25 Tu	0352	19.4	590	10 W	0247	19.0	580	25 Th	0356	17.7	540
	1008	11.8	360		1005	7.9	240		1004	7.5	230		1050	5.2	160		1001	5.2	160		1100	5.9	180
	1529	15.1	460		1601	19.0	580		1615	19.4	590		1717	21.3	650		1638	21.0	640		1748	21.3	650
	2111	9.8	300		2208	8.9	270		2208	9.5	290		2309	10.5	320		2219	11.2	340		2345	11.5	350
11 Sa	0349	18.4	560	26 Su	0406	20.3	620	11 Tu	0356	20.0	610	26 W	0431	19.7	600	11 Th	0345	19.7	600	26 F	0443	18.4	560
	1030	9.8	300		1048	6.2	190		1045	5.2	160		1125	4.3	130		1051	3.6	110		1139	5.2	160
	1609	17.4	530		1651	20.7	630		1701	21.7	660		1759	22.3	680		1731	23.0	700		1827	22.3	680
	2212	8.5	260		2256	8.2	250		2256	8.9	270		2348	9.8	300		2314	10.5	320				
12 Su	0426	19.7	600	27 M	0445	21.0	640	12 W	0435	21.0	640	27 Th	0505	20.0	610	12 F	0435	20.3	620	27 Sa	0021	10.8	330
	1057	8.2	250		1125	4.6	140		1123	3.3	100		1156	3.6	110		1138	2.0	60		0522	19.0	580
	1646	19.4	590		1734	22.3	680		1746	23.6	720		1835	23.0	700		1821	24.3	740		1213	4.6	140
	2255	7.5	230		2335	7.9	240		2338	8.2	250								1901		22.6	690	
13 M	0459	21.0	640	28 Tu	0517	21.7	660	13 Th	0511	22.0	670	28 F	0021	9.5	290	13 Sa	0002	9.8	300	28 Su	0050	10.2	310
	1127	5.9	180		1156	3.6	110		1200	1.6	50		0538	20.3	620		0522	21.3	650		0558	19.7	600
	1726	21.7	660		1814	23.3	710		1830	24.9	760		1225	3.3	100		1224	1.0	30		1245	4.3	130
	2333	6.6	200								1909		23.3	710	1909		25.3	770	1933		23.0	700	
14 Tu	0530	22.3	680	29 W	0008	7.5	230	14 F	0016	7.9	240	29 Sa	0050	9.5	290	14 Su	0048	9.2	280	29 M	0117	9.8	300
	1159	3.9	120																				

Townsville, Australia, 2008

Times and Heights of High and Low Waters

January					February					March																				
Time		Height			Time		Height			Time		Height			Time		Height													
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm											
1 Tu	0604	8.2	250		16 W O	0430	8.2	250		1 F	0013	4.3	130		16 Sa	0632	11.2	340		1 Sa	0636	9.5	290		16 Su	0616	11.5	350		
	1153	5.6	170			1030	5.9	180			0700	9.5	290			1312	4.3	130			1307	4.9	150			1259	3.6	110		
	1658	7.9	240			1546	8.2	250			1328	4.9	150			1830	8.2	250			1817	7.2	220			1830	8.5	260		
2 W	0006	3.6	110		17 Th	0541	9.2	280		2 Sa	0038	3.6	110		17 Su	0044	2.3	70		2 Su	0014	4.3	130		17 M	0035	2.6	80		
	0642	8.9	270			1203	5.2	160			0720	9.8	300			0709	11.8	360			0652	10.2	310			0650	11.8	360		
	1249	5.2	160			1705	8.2	250			1352	4.9	150			1349	3.6	110			1325	4.6	140			1332	3.0	90		
3 Th	1745	7.9	240		18 F	2359	2.6	80		3 Su	1848	7.9	240		18 M	1907	8.9	270		3 M	1835	7.9	240		18 Tu	1901	9.2	280		
	0034	3.3	100			0631	10.5	320			0100	3.3	100			0123	1.6	50			0038	3.6	110			0114	2.3	70		
	0710	9.5	290			1303	4.6	140			0741	10.5	320			0742	12.5	380			0711	10.5	320			0720	12.1	370		
4 F	1331	5.2	160		19 Sa	1805	8.2	250		4 M	1414	4.6	140		19 Tu	1423	3.3	100		4 Tu	1345	4.3	130		19 W	1402	3.0	90		
	1821	7.9	240			0044	2.0	60			1909	8.2	250			1940	9.5	290			1853	8.5	260			1930	9.8	300		
	0055	3.3	100			0714	11.5	350			0121	3.0	90			0157	1.3	40			0100	3.0	90			0145	2.3	70		
5 Sa	0735	9.8	300		20 Su	1350	3.9	120		5 Tu	0802	10.8	330		20 W	0814	12.8	390		5 W	0731	11.2	340		20 Th	0748	12.1	370		
	1404	4.9	150			1853	8.9	270			1435	4.3	130			1521	3.0	90			1404	3.9	120			1428	3.0	90		
	1848	7.9	240			0124	1.3	40			1930	8.5	260			2012	9.8	300			1914	9.2	280			2000	10.2	310		
6 Su	0113	3.0	90		21 M	0752	12.1	370		6 W	0143	2.3	70		21 Th	0228	1.3	40		6 Th	0123	2.6	80		21 F	0212	2.3	70		
	0759	10.2	310			0826	11.2	340			0814	12.8	390			0753	11.5	350			0815	11.8	360							
	1431	4.9	150			1432	3.6	110			1521	3.0	90			1426	3.6	110			1447	3.3	100			1448	3.0	90		
7 M	1912	7.9	240		22 Tu	1937	9.2	280		7 Th	1955	8.9	270		22 F	2045	10.2	310		7 F	1939	9.8	300		22 Sa	2030	10.2	310		
	0130	2.6	80			0202	1.0	30			0234	1.6	50			0320	2.3	70			0215	1.6	50			0259	3.3	100		
	0823	10.5	320			0830	12.8	390			0918	11.8	360			0947	11.8	360			0842	12.1	370			0906	10.8	330		
8 Tu	1457	4.6	140		23 W	1512	3.3	100		8 F	1548	3.9	120		23 Sa	1609	3.6	110		8 Sa	1510	3.0	90		23 Su	1514	3.3	100		
	1936	7.9	240			2018	9.2	280			2100	9.5	290			2150	9.5	290			2045	10.8	330			2129	10.2	310		
	0152	2.3	70			0239	1.0	30			0234	1.6	50			0320	2.3	70			0215	1.6	50			0259	3.3	100		
9 W	0848	10.8	330		24 Th	0909	12.8	390		9 Sa	0918	11.8	360		24 Su	0947	11.8	360		9 Su	0842	12.1	370		24 M	0906	10.8	330		
	1453	4.6	140			1549	3.3	100			1548	3.9	120			1609	3.6	110			1510	3.0	90			1514	3.3	100		
	2002	8.2	250			2059	9.5	290			2100	9.5	290			2150	9.5	290			2045	10.8	330			2129	10.2	310		
10 Th	0217	2.0	60		25 F	0315	1.0	30		10 Su	0303	1.6	50		25 M	0342	3.0	90		10 M	0245	2.0	60		25 Tu	0319	3.9	120		
	0916	10.8	330			0946	12.8	390			0948	11.8	360			1015	10.8	330			0911	12.1	370			0928	10.2	310		
	1551	4.6	140			1627	3.6	110			1617	3.9	120			1625	4.3	130			1534	2.6	80			1523	3.6	110		
11 F	2034	8.2	250		26 Sa	2139	9.2	280		11 M	2140	9.5	290		26 Tu	2222	9.2	280		11 Tu	2126	10.8	330		26 W	2159	9.8	300		
	0246	2.0	60			0347	1.6	50			0334	2.0	60			0400	4.3	130			0318	2.3	70			0337	4.9	150		
	0946	11.2	340			1023	12.1	370			1020	11.5	350			1040	9.8	300			0942	11.5	350			0945	9.2	280		
12 Sa	1625	4.6	140		27 Su	1705	3.9	120		12 Tu	1651	3.9	120		27 W	1637	4.6	140		12 W	1601	3.0	90		27 Th	1536	3.6	110		
	2110	8.2	250			2217	8.9	270			2224	9.5	290			2257	8.5	260			2211	10.8	330			2230	9.2	280		
	0317	2.0	60			0416	2.6	80			0408	3.0	90			0413	5.2	160			0357	3.3	100			0351	5.9	180		
13 Su	1020	10.8	330		28 M	1059	11.5	350		13 W	1054	10.8	330		28 Th	1101	8.9	270		13 Th	1015	10.8	330		28 F	0956	8.2	250		
	1702	4.9	150			1744	4.6	140			1732	4.3	130			1647	4.9	150			1635	3.3	100			1552	4.3	130		
	2151	8.2	250			2258	8.2	250			2315	8.9	270			2340	7.9	240			2300	10.2	310			2307	8.9	270		
14 M	0351	2.3	70		29 Tu	0443	3.6	110		14 Th	0448	3.9	120		29 F	0417	6.2	190		14 F	0446	4.6	140		29 Sa	0400	6.6	200		
	1056	10.8	330			1134	10.5	320			1131	10.2	310			1115	7.9	240			1053	9.5	290			0955	7.5	230		
	1748	4.9	150			1829	4.9	150			1830	4.3	130			1701	5.2	160			1721	3.6	110			1609	4.6	140		
15 Tu	2240	7.9	240		30 W	2343	7.5	230		15 F	2255	3.9	120		30 Sa	2222	9.2	280		15 Sa	2359	8.2	250		31 M	2359	8.2	250		
	0427	3.0	90			0505	4.9	150			0016	8.5	260			0053	7.2	220			0318	8.9	270			0531	8.2	250		
	1134	10.5	320			1209	9.2	280			0551	5.2	160			0341	7.2	220			0925	6.2	190			1457	5.9	180		
16 W	1842	4.9	150		31 Th	1930	5.2	160		16 Sa	1215	8.9	270		31 Su	0619	7.5	230		16 Su	1139	8.2	250		31 O	1830	5.9	180		
	2338	7.5	230			0048	6.9	210			1716	5.9	180			1850	4.6	140			1927	5.9	180							
	0510	3.9	120			0516	5.9	180			1835*	5.9	180																	
17 Th	1217	9.8	300		1 F	1250	8.2	250		17 Su	0827	6.2	190		2 M	0616	8.2	250		2 M	0139	8.9	270		3 Tu	0531	8.2	250		
	1945	4.9	150			1323	7.9	240			1248	6.2	190			1310	6.9	210			1457	5.9	180							
						2125	4.6	140			1743	6.2	190			2054	4.6	140			1830	5.9	180							
18 F					2 Sa					2 Sa					3 Su					3 Su					4 M					
19 Sa					3 Su					3 Su					4 M					4 M					5 Tu					
20 Su					4 M					4 M					5 Tu					5 Tu					6 W					
21 M					5 Tu					5 Tu					6 W					6 W					7 Th					
22 Tu					6 W					6 W					7 Th					7 Th					8 F					
23 W																														

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Heights are referred to the chart datum of soundings.

* See Page 384 for the remaining tides on this day.

Times and Heights of High and Low Waters

April						May						June																	
Time			Height			Time			Height			Time			Height			Time			Height								
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm					
1 Tu	0001	4.3	130		16 W	0058	3.3	100		1 Th	0558	10.5	320		16 F	0126	4.3	130		1 Su	0108	3.9	120		16 M	0243	4.6	140	
	0629	10.5	320			0650	11.2	340			1246	3.0	90			0646	9.5	290			0622	9.8	300			0718	7.5	230	
	1307	3.9	120			1335	3.0	90			1825	9.5	290			1330	3.0	90			1310	1.3	40			1336	3.0	90	
	1825	8.5	260			1917	9.8	300								1942	9.8	300			1933	11.5	350			2034	10.2	310	
2 W	0030	3.6	110		17 Th	0132	3.3	100		2 F	0030	3.6	110		17 Sa	0202	4.6	140		2 M	0200	3.6	110		17 Tu	0311	4.6	140	
	0648	10.8	330			0717	10.8	330			0624	10.8	330			0712	9.2	280			0704	9.5	290			0743	7.5	230	
	1328	3.3	100			1359	3.0	90			1311	2.3	70			1344	3.0	90			1345	1.0	30			1354	2.6	80	
	1849	9.5	290			1947	10.2	310			1900	10.5	320			2012	10.2	310			2019	12.1	370			2101	10.2	310	
3 Th	0057	3.0	90		18 F	0201	3.6	110		3 Sa	0109	3.3	100		18 Su	0235	4.6	140		3 Tu	0252	3.6	110		18 W	0339	4.6	140	
	0710	11.5	350			0742	10.5	320			0653	11.2	340			0734	8.9	270			0751	9.2	280			0809	7.5	230	
	1348	3.0	90			1415	3.0	90			1335	1.6	50			1353	3.0	90			1427	1.0	30			1418	2.6	80	
	1919	10.2	310			2017	10.2	310			1940	11.2	340			2041	10.2	310			2107	12.5	380			2129	10.2	310	
4 F	0125	2.6	80		19 Sa	0229	3.9	120		4 Su	0149	3.0	90		19 M	0305	4.9	150		4 W	0346	3.6	110		19 Th	0408	4.9	150	
	0734	11.8	360			0805	10.2	310			0726	10.8	330			0755	8.2	250			0843	8.9	270			0838	7.5	230	
	1410	2.3	70			1423	3.0	90			1403	1.3	40			1405	3.0	90			1514	1.0	30			1449	2.6	80	
	1953	10.8	330			2047	10.2	310			2023	11.8	360			2109	10.2	310			● 2157	12.5	380			○ 2159	10.2	310	
5 Sa	0157	2.3	70		20 Su	0255	4.3	130		5 M	0237	3.3	100		20 Tu	0337	5.2	160		5 Th	0445	3.6	110		20 F	0442	4.9	150	
	0801	11.8	360			0826	9.5	290			0804	10.5	320			0817	7.9	240			0940	8.2	250			0913	7.2	220	
	1433	2.0	60			1432	3.0	90			1436	1.0	30			1426	3.0	90			1606	1.3	40			1522	2.6	80	
	2032	11.5	350			● 2116	10.2	310			● 2109	12.1	370			○ 2138	10.2	310			2247	12.1	370			2231	10.2	310	
6 Su	0232	2.6	80		21 M	0321	4.9	150		6 Tu	0332	3.6	110		21 W	0413	5.2	160		6 F	0546	3.9	120		21 Sa	0523	4.9	150	
	0833	11.5	350			0844	8.9	270			0847	9.8	300			0843	7.5	230			1043	7.9	240			0954	7.2	220	
	1500	1.6	50			1445	3.0	90			1515	1.3	40			1453	3.0	90			1701	2.0	60			1558	3.0	90	
	● 2115	11.8	360			2145	9.8	300			2200	12.1	370			2210	9.8	300			2341	11.5	350			2307	9.8	300	
7 M	0314	3.0	90		22 Tu	0354	5.2	160		7 W	0438	4.3	130		22 Th	0457	5.6	170		7 Sa	0657	3.9	120		22 Su	0614	5.2	160	
	0908	10.8	330			0901	8.2	250			0936	8.9	270			0913	7.2	220			1151	7.2	220			1045	6.9	210	
	1530	2.0	60			1505	3.3	100			1603	2.0	60			1524	3.3	100			1802	3.0	90			1635	3.3	100	
	2202	11.5	350			2217	9.8	300			2253	11.8	360			2245	9.8	300								2345	9.5	290	
8 Tu	0409	3.9	120		23 W	0444	5.9	180		8 Th	0552	4.6	140		23 F	0552	5.9	180		8 Su	0039	10.8	330		23 M	0712	4.9	150	
	0947	9.8	300			0919	7.5	230			1036	7.9	240			0949	6.9	210			0810	3.9	120			1146	6.6	200	
	1607	2.3	70			1528	3.6	110			1705	2.6	80			1600	3.6	110			1315	6.9	210			1718	3.9	120	
	2255	11.2	340			2254	9.2	280			2355	11.2	340			2328	9.2	280			1915	3.6	110						
9 W	0532	4.9	150		24 Th	0600	6.2	190		9 F	0722	4.9	150		24 Sa	0709	5.9	180		9 M	0146	10.2	310		24 Tu	0028	9.2	280	
	1032	8.5	260			0936	6.9	210			1156	6.9	210			1045	6.6	200			0921	3.9	120			0815	4.9	150	
	1700	3.3	100			1553	4.3	130			1821	3.3	100			1643	3.9	120			1451	7.2	220			1258	6.6	200	
	2358	10.5	320			2340	8.9	270									2045	4.6	140			2045	4.6	140			1815	4.6	140
10 Th	0716	5.6	170		25 F	1625	4.6	140		10 Sa	0114	10.5	320		25 Su	0016	9.2	280		10 Tu	0302	9.5	290		25 W	0117	8.9	270	
	1137	7.2	220			0856	4.6	140			0846	5.6	170			1027	3.6	110			0915	4.6	140						
	1829	3.9	120			1401	6.6	200			1215	6.2	190			1616	7.5	230			1425	6.9	210						
						1959	3.9	120			1745	4.6	140			2215	4.9	150			1942	4.9	150						
11 F	0134	9.8	300		26 Sa	0047	8.2	250		11 Su	0252	10.2	310		26 M	0120	8.9	270		11 W	0411	9.2	280		26 Th	0217	8.9	270	
	0932	5.2	160			1127	5.9	180			0949	5.2	160			1122	3.3	100			1008	3.9	120						
	1415	6.6	200			1228	5.9	180			1400	6.2	190			1730	8.2	250			1555	7.5	230						
	2030	4.6	140			1748	5.2	160			2135	4.3	130			1910	4.9	150			● 2337	4.9	150			● 2128	5.2	160	
12 Sa	0346	10.2	310		27 Su	0335	8.5	260		12 M	0409	10.2	310		27 Tu	0240	8.9	270		12 Th	0506	8.9	270		27 F	0328	8.5	260	
	1100	4.6	140			1118	5.2	160			1113	3.6	110			1031	4.6	140			1206	3.3	100			1054	3.3	100	
	1630	7.2	220			1556	6.2	190			1655	7.9	240			1534	6.6	200			1825	8.9	270			1704	8.2	250	
	2215	4.3	130			2024	5.6	170			● 2252	4.3	130			2045	5.2	160								2311	5.2	160	
13 Su	0500	10.5	320		28 M	0439	8.9	270		13 Tu	0504	10.2	310		28 W	0345	9.2	280		13 F	0040	4.9	150		28 Sa	0430	8.5	260	
	1152	3.6	110			1138	4.6	140			1159	3.0	90			1105	3.9	120			0548	8.5	260			1136	2.6	80	
	1730	7.9	240			1646	6.9	210			1748	8.5	260			1634	7.5	230			1240	3.0	90			1800	9.2	280	
	● 2325	3.6	110			2212	5.2	160			2354	4.3	130			● 2212	4.9	150			1906	9.2	280						
14 M	0545	11.2	340		29 Tu	0508	9.5	290		14 W	0545	10.2	310		29 Th	0430	9.2	280		14 Sa	0130	4.9	150		29 Su	0026	4.9	150	
	1232	3.3	100			1200	4.3	130			1237	3.0	90			1137	3.3	100			0623	8.2	250			0523	8.5	260	
	1813	8.9	270			1720	7.5	230			1831	9.2	280			1722	8.2	250			1305	3.0	90			1217	2.0	60	
						● 2310	4.6	140								2319	4.6	140			1939	9.5	290			1848	10.5	320	
15 Tu	0016	3.3	100		30 W	0533	10.2	310		15 Th	0045	4.3	130		30 F	0508	9.5	290		15 Su	0209	4.6	140		30 M	0122	4.3	130	
	0621	11.2	340			1223	3.6	110			0618	9.8	300			1207	2.6	80			0653	7.9	240			0613	8.5	260	
	1307	3.0	90			1752	8.5	260			1307	3.0	90			1806	9.2	280			1322	3.0	90			1259	1.3	40	
	1846	9.2	280			2352	3.9	120			1908	9.5	290								2008	9.8	300			1934	11.5	350	

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Townsville, Australia, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu	0212 0702 1341 2018	3.6 8.5 1.0 12.1	110 260 30 370	16 W	0300 0738 1346 2045	4.3 7.5 2.6 10.5	130 230 80 320	1 M	0354 0939 1539 2158	2.6 9.2 2.6 10.5	80 280 80 320
2 W	0258 0754 1426 2102	3.3 8.9 0.7 12.8	100 270 20 390	17 Th	0321 0802 1411 2111	4.3 7.5 2.3 10.5	130 230 70 320	2 Tu	0415 1017 1607 2225	3.0 8.9 3.6 9.5	90 270 110 290
3 Th	0345 0845 1511 ● 2146	3.0 8.9 0.7 12.8	90 270 20 390	18 F	0345 0830 1439 ○ 2138	4.3 7.9 2.0 10.5	130 240 60 320	3 W	0431 1100 1634 2249	3.6 8.2 4.9 8.2	110 250 150 250
4 F	0431 0938 1557 2230	3.0 8.5 1.0 12.5	90 260 30 380	19 Sa	0412 0902 1508 2206	4.3 7.9 2.0 10.5	130 240 60 320	4 Th	0444 1152 1815 2307	3.9 7.5 5.9 7.2	120 230 180 220
5 Sa	0521 1030 1643 2314	3.3 8.2 1.6 11.8	100 250 50 360	20 Su	0444 0941 1539 2236	4.3 7.9 2.3 10.5	130 240 70 320	5 F	0457 1345 1602 1719	4.6 7.2 6.9 6.9	140 220 210 210
6 Su	0615 1124 1729 2359	3.6 7.9 2.6 10.8	110 240 80 330	21 M	0521 1026 1612 2307	4.3 7.5 3.0 10.2	130 230 90 310	6 Sa	0746 1742	4.9 7.9	150 240
7 M	0716 1226 1822	3.9 7.2 3.6	120 220 110	22 Tu	0606 1118 1648 2342	4.3 7.5 3.6 9.5	130 230 110 290	7 Su	0024 0523 1028 1800	5.2 5.6 4.6 8.5	160 170 140 260
8 Tu	0045 0824 1351 1943	9.8 3.9 6.9 4.9	300 120 210 150	23 W	0701 1219 1736	4.3 7.2 4.6	130 220 140	8 M	0036 0546 1122 ● 1819	4.6 6.2 4.3 9.2	140 190 130 280
9 W	0140 0934 1543 2143	8.5 3.9 7.2 5.6	260 120 220 170	24 Th	0021 0805 1336 1911	8.9 4.3 7.2 5.2	270 130 220 160	9 Tu	0056 0607 1157 1839	3.9 6.6 3.6 9.5	120 200 110 290
10 Th	0258 1043 1729 ● 2338	7.9 3.9 7.9 5.6	240 120 240 170	25 F	0113 0915 1534 2130	8.2 3.9 7.5 5.9	250 120 230 180	10 W	0115 0626 1223 1900	3.6 7.2 3.3 9.8	110 220 100 300
11 F	0429 1136 1830	7.2 3.6 8.5	220 110 260	26 Sa	0237 1022 1706 ● 2341	7.5 3.3 8.5 5.2	230 100 260 160	11 Th	0135 0644 1245 1919	3.3 7.5 2.6 10.2	100 230 80 310
12 Sa	0048 0534 1216 1905	5.2 7.2 3.3 9.2	160 220 100 280	27 Su	0426 1120 1805	7.2 2.6 9.5	220 80 290	12 F	0154 0703 1307 1940	3.3 8.2 2.3 10.5	100 250 70 320
13 Su	0133 0617 1245 1932	4.9 7.2 3.3 9.5	150 220 100 290	28 M	0045 0537 1211 1851	4.6 7.5 2.0 10.8	140 230 60 330	13 Sa	0214 0726 1330 2000	3.0 8.9 2.0 10.8	90 270 60 330
14 M	0208 0650 1307 1957	4.6 7.2 3.0 9.8	140 220 90 300	29 Tu	0131 0630 1257 1931	3.6 7.9 1.3 11.5	110 240 40 350	14 Su	0232 0753 1355 2022	2.6 9.2 2.0 11.2	80 280 60 340
15 Tu	0236 0715 1326 2021	4.3 7.2 2.6 10.2	130 220 80 310	30 W	0212 0714 1339 2010	3.0 8.2 1.0 12.5	90 250 30 380	15 M	0251 0825 1423 ○ 2046	2.3 9.5 2.0 10.8	70 290 60 330
				31 Th	0250 0757 1418 2048	2.6 8.9 0.7 12.8	80 270 20 390	16 Su	0329 0900 1509 ● 2128	2.3 9.5 1.6 11.5	70 290 50 350

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Townsville, Australia, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
1 W	h m 0312 2.6 80 0953 9.2 280 1550 4.6 140 2132 8.5 260	16 Th	h m 0300 1.3 40 0938 10.8 330 1545 3.6 110 2116 9.2 280	1 Sa	h m 0315 3.0 90 1054 8.9 270 1815 5.9 180 2133 6.6 200	16 Su	h m 0427 2.0 60 1128 10.8 330 1843 4.6 140 2315 6.9 210	1 M	h m 0343 3.3 100 1117 9.2 280 1848 5.6 170 2220 6.2 190	16 Tu	h m 0521 2.3 70 1206 11.5 350 1924 3.9 120
2 Th	0323 3.0 90 1030 8.5 260 1643 5.6 170 2147 7.5 230	17 F	0334 2.0 60 1031 10.5 320 1709 4.6 140 2200 7.9 240	2 Su	0341 3.6 110 1144 8.2 250 2056 5.9 180 2135 5.9 180	17 M	0544 3.0 90 1239 10.5 320 2013 4.3 130	2 Tu	0418 3.9 120 1205 8.9 270 2023 5.6 170 2335 5.9 180	17 W	0018 7.2 220 0631 3.3 100 1307 10.5 320 2038 3.9 120
3 F	0339 3.6 110 1115 8.2 250 1824 6.2 190 2151 6.6 200	18 Sa	0420 2.6 80 1134 9.8 300 1844 4.9 150 2300 6.9 210	3 M	0412 4.3 130 1259 7.9 240 2308 5.2 160	18 Tu	0057 6.2 190 0718 3.6 110 1407 10.2 310 2134 3.9 120	3 W	0504 4.3 130 1303 8.5 260 2137 5.2 160	18 Th	0159 6.9 210 0803 4.3 130 1419 9.8 300 2151 3.9 120
4 Sa	0356 3.9 120 1219 7.5 230	19 Su	0552 3.3 100 1259 9.5 290 2047 4.9 150	4 Tu	0029 5.2 160 0553 4.9 150 1526 8.2 250 2310 4.6 140	19 W	0305 6.6 200 0857 3.6 110 1529 10.2 310 2241 3.3 100	4 Th	0128 5.9 180 0636 4.9 150 1417 8.5 260 2225 4.6 140	19 F	0345 7.2 220 0939 4.9 150 1535 9.2 280 2257 3.3 100
5 Su	0408 4.6 140 1654 7.9 240	20 M	0057 5.9 180 0751 3.9 120 1501 9.5 290 2224 3.9 120	5 W	0413 5.6 170 0830 4.9 150 1625 8.5 260 2330 4.3 130	20 Th	0426 7.5 230 1015 3.9 120 1631 10.2 310 2332 2.6 80	5 F	0333 6.2 190 0827 5.2 160 1525 8.9 270 2300 3.9 120	20 Sa	0510 8.2 250 1107 4.9 150 1642 8.9 270 2349 3.0 90
6 M	0008 4.9 150 0538 5.2 160 0813 5.2 160 1715 8.2 250	21 Tu	0354 6.2 190 0936 3.6 110 1622 10.2 310 2322 3.3 100	6 Th	0452 6.6 200 1009 4.9 150 1656 9.2 280 2351 3.6 110	21 F	0525 8.2 250 1122 3.6 110 1718 9.8 300	6 Sa	0437 6.9 210 0959 5.2 160 1613 8.9 270 2330 3.3 100	21 Su	0611 8.9 270 1218 4.9 150 1733 8.5 260
7 Tu	0001 4.6 140 0523 5.9 180 1032 4.6 140 1736 8.9 270	22 W	0500 7.2 220 1047 3.0 90 1714 10.5 320	7 F	0521 7.2 220 1100 4.3 130 1720 9.5 290	22 Sa	0014 2.3 70 0612 8.9 270 1218 3.9 120 1757 9.8 300	7 Su	0521 7.9 240 1106 4.9 150 1650 9.2 280 2358 3.0 90	22 M	0030 3.0 90 0654 9.5 290 1313 4.6 140 1815 8.2 250
8 W	0017 3.9 120 0538 6.6 200 1115 4.3 130 1757 9.2 280	23 Th	0004 2.6 80 0545 8.2 250 1143 2.6 80 1753 10.8 330	8 Sa	0014 3.3 100 0548 7.9 240 1139 3.9 120 1743 9.8 300	23 Su	0048 2.3 70 0651 9.5 290 1306 3.9 120 1829 9.5 290	8 M	0600 8.9 270 1201 4.6 140 1726 9.2 280	23 Tu	0100 2.6 80 0728 9.8 300 1356 4.6 140 1848 8.2 250
9 Th	0036 3.6 110 0557 7.2 220 1146 3.6 110 1815 9.8 300	24 F	0041 2.3 70 0622 8.9 270 1228 2.6 80 1826 10.8 330	9 Su	0035 2.6 80 0616 8.9 270 1215 3.6 110 1806 9.8 300	24 M	0115 2.3 70 0725 9.8 300 1347 4.3 130 1858 8.9 270	9 Tu	0026 2.0 60 0637 9.8 300 1251 4.3 130 1802 9.2 280	24 W	0123 2.6 80 0756 10.2 310 1431 4.6 140 1917 7.9 240
10 F	0056 3.3 100 0616 7.9 240 1214 3.3 100 1834 10.2 310	25 Sa	0112 2.0 60 0656 9.5 290 1308 2.6 80 1855 10.5 320	10 M	0057 2.0 60 0647 9.8 300 1251 3.3 100 1831 10.2 310	25 Tu	0135 2.3 70 0758 10.2 310 1425 4.3 130 1924 8.5 260	10 W	0056 1.6 50 0716 10.8 330 1340 3.9 120 1843 9.2 280	25 Th	0139 2.6 80 0823 10.5 320 1502 4.6 140 1944 7.9 240
11 Sa	0115 3.0 90 0639 8.5 260 1240 3.0 90 1854 10.5 320	26 Su	0138 2.0 60 0728 9.8 300 1343 3.0 90 1922 10.2 310	11 Tu	0119 1.6 50 0722 10.5 320 1330 3.3 100 1901 10.2 310	26 W	0148 2.3 70 0828 10.2 310 1500 4.6 140 1948 8.2 250	11 Th	0128 1.0 30 0759 11.8 360 1430 3.6 110 1927 9.2 280	26 F	0154 2.6 80 0849 10.5 320 1529 4.6 140 2008 7.9 240
12 Su	0134 2.3 70 0704 9.2 280 1307 2.6 80 1915 10.8 330	27 M	0158 2.0 60 0800 9.8 300 1416 3.3 100 1948 9.8 300	12 W	0143 1.0 30 0801 11.2 340 1415 3.3 100 1938 9.8 300	27 Th	0200 2.3 70 0858 10.2 310 1534 4.9 150 2012 7.9 240	12 F	0205 0.7 20 0844 12.5 380 1521 3.6 110 2015 9.2 280	27 Sa	0214 2.3 70 0916 10.5 320 1555 4.9 150 2034 7.9 240
13 M	0153 2.0 60 0735 9.8 300 1336 2.6 80 1938 10.8 330	28 Tu	0212 2.0 60 0832 9.8 300 1449 3.9 120 2012 9.2 280	13 Th	0212 1.0 30 0845 11.5 350 1509 3.6 110 2019 9.2 280	28 F	0218 2.3 70 0929 10.2 310 1609 4.9 150 2037 7.5 230	13 Sa	0246 0.7 20 0930 12.5 380 1615 3.6 110 2109 8.9 270	28 Su	0239 2.3 70 0945 10.5 320 1624 4.9 150 2102 7.9 240
14 Tu	0212 1.6 50 0810 10.5 320 1410 2.6 80 2006 10.5 320	29 W	0221 2.3 70 0905 9.8 300 1525 4.6 140 2032 8.5 260	14 F	0247 1.0 30 0934 11.8 360 1613 3.9 120 2106 8.5 260	29 Sa	0243 2.6 80 1000 9.8 300 1650 5.2 160 2106 7.2 220	14 Su	0333 1.0 30 1020 12.5 380 1712 3.6 110 2206 8.2 250	29 M	0307 2.6 80 1016 10.5 320 1659 5.2 160 2134 7.5 230
15 W	0234 1.3 40 0851 10.8 330 1450 3.0 90 2039 9.8 300	30 Th	0234 2.3 70 0938 9.5 290 1606 4.9 150 2052 7.5 230	15 Sa	0330 1.3 40 1029 11.5 350 1722 4.3 130 2202 7.5 230	30 Su	0311 3.0 90 1037 9.5 290 1740 5.6 170 2139 6.9 210	15 M	0424 1.3 40 1112 12.1 370 1815 3.9 120 2308 7.9 240	30 Tu	0336 3.0 90 1048 10.2 310 1741 5.2 160 2212 7.2 220
		31 F	0253 2.6 80 1014 9.2 280 1700 5.6 170 2113 7.2 220							31 W	0406 3.3 100 1123 9.8 300 1832 5.2 160 2300 6.9 210

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Brisbane Bar, Australia, 2008

Times and Heights of High and Low Waters

January						February						March											
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm			
1 Tu	0350	5.9	180	16 W O	0308	6.2	190	1 F	0511	6.2	190	16 Sa	0523	7.2	220	1 Sa	0405	6.2	190	16 Su	0506	7.2	220
	0941	3.0	90		0909	2.6	80		1142	3.3	100		1214	2.6	80		1102	3.3	100		1209	2.3	70
	1529	5.9	180		1501	6.2	190		1649	4.9	150		1739	4.9	150		1610	4.6	140		1747	5.2	160
	2213	2.0	60		2143	1.6	50		2308	2.3	70		2342	2.0	60		2212	2.6	80		2336	2.3	70
2 W	0459	5.9	180	17 Th	0423	6.6	200	2 Sa	0616	6.6	200	17 Su	0637	7.5	230	2 Su	0530	6.2	190	17 M	0618	7.2	220
	1100	3.3	100		1034	2.6	80		1255	3.0	90		1330	2.3	70		1222	3.0	90		1312	2.0	60
	1629	5.6	170		1614	5.9	180		1806	4.9	150		1859	5.2	160		1740	4.9	150		1854	5.6	170
	2305	2.0	60		2247	1.6	50										2334	2.6	80				
3 Th	0600	6.6	200	18 F	0538	6.9	210	3 Su	0013	2.0	60	18 M	0057	1.6	50	3 M	0632	6.9	210	18 Tu	0049	2.0	60
	1214	3.0	90		1206	2.6	80		0710	6.9	210		0737	7.9	240		1317	2.6	80		0716	7.5	230
	1733	5.2	160		1732	5.6	170		1349	2.6	80		1427	2.0	60		1843	5.2	160		1401	1.6	50
	2359	2.0	60		2356	1.3	40		1907	5.2	160		1959	5.9	180						1945	6.2	190
4 F	0651	6.9	210	19 Sa	0647	7.5	230	4 M	0109	2.0	60	19 Tu	0159	1.3	40	4 Tu	0040	2.0	60	19 W	0147	1.6	50
	1316	2.6	80		1329	2.3	70		0755	7.2	220		0828	8.2	250		0722	7.2	220		0803	7.5	230
	1833	5.2	160		1850	5.2	160		1434	2.3	70		1514	1.6	50		1401	2.3	70		1443	1.6	50
									1955	5.6	170		2047	6.2	190		1931	5.6	170		2029	6.6	200
5 Sa	0048	1.6	50	20 Su	0101	1.3	40	5 Tu	0157	1.6	50	20 W	0249	1.0	30	5 W	0133	1.6	50	20 Th	0234	1.3	40
	0737	7.2	220		0747	7.9	240		0836	7.5	230		0911	8.2	250		0804	7.5	230		0843	7.5	230
	1409	2.3	70		1435	2.0	60		1515	2.0	60		1553	1.3	40		1442	2.0	60		1517	1.3	40
	1927	5.2	160		1959	5.6	170		2038	5.9	180		2130	6.6	200		2015	6.2	190		2107	6.9	210
6 Su	0134	1.3	40	21 M	0201	1.0	30	6 W	0241	1.3	40	21 Th O	0333	1.0	30	6 Th	0221	1.3	40	21 F	0316	1.3	40
	0819	7.5	230		0841	8.2	250		0915	7.9	240		0949	8.2	250		0844	7.9	240		0918	7.5	230
	1455	2.3	70		1530	1.6	50		1553	2.0	60		1629	1.3	40		1520	1.6	50		1548	1.3	40
	2013	5.6	170		2055	5.9	180		2118	6.2	190		2207	6.6	200		2057	6.6	200		2142	7.2	220
7 M	0215	1.3	40	22 Tu O	0255	1.0	30	7 Th ●	0322	1.0	30	22 F	0413	1.0	30	7 F	0306	1.0	30	22 Sa O	0354	1.3	40
	0859	7.5	230		0929	8.5	260		0951	8.2	250		1024	7.9	240		0921	8.2	250		0950	7.2	220
	1537	2.0	60		1617	1.3	40		1630	1.6	50		1659	1.3	40		1557	1.3	40		1615	1.3	40
	2054	5.6	170		2144	5.9	180		2159	6.2	190		2243	6.6	200		2139	6.9	210		2215	7.2	220
8 Tu ●	0256	1.3	40	23 W	0343	1.0	30	8 F	0403	1.0	30	23 Sa	0448	1.3	40	8 Sa ●	0349	1.0	30	23 Su	0430	1.6	50
	0936	7.9	240		1012	8.5	260		1027	8.2	250		1056	7.5	230		0958	8.2	250		1020	7.2	220
	1616	2.0	60		1700	1.3	40		1705	1.3	40		1725	1.3	40		1632	1.0	30		1639	1.3	40
	2134	5.6	170		2228	6.2	190		2240	6.6	200		2316	6.9	210		2220	7.2	220		2247	7.2	220
9 W	0334	1.0	30	24 Th	0426	1.0	30	9 Sa	0444	1.0	30	24 Su	0523	1.6	50	9 Su	0433	1.0	30	24 M	0503	1.6	50
	1013	7.9	240		1051	8.5	260		1101	8.2	250		1125	7.2	220		1034	7.9	240		1049	6.6	200
	1654	2.0	60		1736	1.6	50		1740	1.3	40		1749	1.3	40		1705	1.0	30		1703	1.3	40
	2214	5.9	180		2308	6.2	190		2321	6.6	200		2350	6.9	210		2302	7.5	230		2319	7.2	220
10 Th	0412	1.0	30	25 F	0506	1.0	30	10 Su	0524	1.3	40	25 M	0558	2.0	60	10 M	0516	1.3	40	25 Tu	0537	2.0	60
	1049	8.2	250		1128	8.2	250		1136	7.9	240		1153	6.9	210		1111	7.5	230		1118	6.2	190
	1731	2.0	60		1809	1.6	50		1813	1.3	40		1814	1.6	50		1738	1.0	30		1729	1.6	50
	2254	5.9	180		2346	6.2	190								2345		7.5	230	2351		7.2	220	
11 F	0451	1.0	30	26 Sa	0544	1.3	40	11 M	0003	6.9	210	26 Tu	0025	6.9	210	11 Tu	0601	1.6	50	26 W	0612	2.3	70
	1125	8.2	250		1201	7.5	230		0607	1.3	40		0633	2.3	70		1150	6.9	210		1148	5.9	180
	1808	1.6	50		1838	1.6	50		1212	7.5	230		1223	6.2	190		1811	1.3	40		1756	1.6	50
	2336	5.9	180						1845	1.3	40		1841	1.6	50								
12 Sa	0531	1.3	40	27 Su	0025	6.2	190	12 Tu	0048	6.9	210	27 W	0102	6.6	200	12 W	0030	7.5	230	27 Th	0027	7.2	220
	1200	7.9	240		0621	2.0	60		0654	2.0	60		0715	2.6	80		0651	2.0	60		0650	2.6	80
	1844	1.6	50		1233	7.2	220		1251	6.9	210		1256	5.9	180		1232	6.2	190		1222	5.6	170
					1907	1.6	50		1921	1.3	40		1913	2.0	60		1847	1.3	40		1827	2.0	60
13 Su	0020	6.2	190	28 M	0104	6.2	190	13 W	0139	6.9	210	28 Th	0146	6.6	200	13 Th	0121	7.5	230	28 F	0106	6.9	210
	0615	1.6	50		0701	2.3	70		0748	2.3	70		0805	3.0	90		0751	2.3	70		0736	3.0	90
	1237	7.5	230		1305	6.6	200		1336	6.2	190		1337	5.2	160		1323	5.6	170		1303	4.9	150
	1920	1.6	50		1937	2.0	60		2004	1.6	50		1952	2.3	70		1933	2.0	60		1905	2.3	70
14 M	0109	6.2	190	29 Tu	0147	6.2	190	14 Th O	0240	6.9	210	29 F O	0245	6.2	190	14 F O	0223	7.2	220	29 Sa	0156	6.6	200
	0702	2.0	60		0747	3.0	90		0900	2.6	80		0919	3.3	100		0910	2.6	80		0842	3.3	100
	1317	7.2	220		1342	6.2	190		1437	5.6	170		1437	4.9	150		1436	4.9	150		1402	4.9	150
	2000	1.6	50		2012	2.0	60		2102	2.0	60		2050	2.6	80		2037	2.3	70		1959	2.6	80
15 Tu	0203	6.2	190	30 W O	0242	5.9	180	15 F	0359	6.9	210					15 Sa	0342	6.9	210	30 Su O	0304	6.2	190
	0800	2.3	70		0847	3.3	100		1036	3.0	90						1045	2.6	80		1013	3.3	100
	1404	6.9	210		1426	5.6	170		1603	5.2	160						1616	4.9	150		1532	4.6	140
	2047	1.6	50		2058	2.3	70		2218	2.0	60						2205	2.3	70		2119	3.0	90
			31 Th	0351	5.9	180										31 M	0429	6.2	190				
				1009	3.3	100											1131	3.0	90				
				1529	4.9	150											1704	4.9	150				
				2158	2.3	70											2248	2.6	80				

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Brisbane Bar, Australia, 2008

Times and Heights of High and Low Waters

April										May										June								
Time		Height			Time		Height			Time		Height			Time		Height			Time		Height						
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm					
1 Tu	0539	6.6	200		16 W	0029	2.0	60		1 Th	0539	6.9	210		16 F	0056	2.3	70		1 Su	0103	2.0	60		16 M	0214	2.3	70
	1229	2.6	80			0642	7.2	220			1224	1.6	50			0643	6.6	200			0644	6.6	200			0734	5.6	170
	1809	5.6	170			1322	1.6	50			1826	6.6	200			1311	1.6	50			1314	1.0	30			1342	1.3	40
						1920	6.6	200							1932	7.2	220			1941	7.9	240			2024	7.5	230	
2 W	0001	2.3	70		17 Th	0125	2.0	60		2 F	0026	2.0	60		17 Sa	0147	2.3	70		2 M	0209	1.6	50		17 Tu	0259	2.0	60
	0634	7.2	220			0727	7.2	220			0631	7.2	220			0726	6.2	190			0740	6.2	190			0817	5.6	170
	1316	2.0	60			1400	1.6	50			1312	1.3	40			1346	1.3	40			1401	1.0	30			1419	1.3	40
	1900	5.9	180			2002	6.9	210			1916	6.9	210			2012	7.5	230			2032	8.5	260			2101	7.5	230
3 Th	0101	2.0	60		18 F	0213	2.0	60		3 Sa	0127	2.0	60		18 Su	0233	2.0	60		3 Tu	0309	1.6	50		18 W	0339	2.0	60
	0720	7.5	230			0807	7.2	220			0720	7.2	220			0805	6.2	190			0835	6.2	190			0857	5.6	170
	1400	1.6	50			1434	1.3	40			1356	1.0	30			1419	1.3	40			1449	0.7	20			1456	1.3	40
	1947	6.6	200			2040	7.2	220			2004	7.5	230			2047	7.5	230			2123	8.9	270			2138	7.9	240
4 F	0155	1.6	50		19 Sa	0255	1.6	50		4 Su	0224	1.6	50		19 M	0315	2.0	60		4 W	0407	1.3	40		19 Th	0417	2.0	60
	0803	7.5	230			0842	6.9	210			0808	7.2	220			0843	5.9	180			0931	5.9	180			0935	5.6	170
	1440	1.3	40			1503	1.3	40			1437	1.0	30			1450	1.3	40			1536	0.7	20			1531	1.3	40
	2031	7.2	220			2115	7.5	230			2052	8.2	250			2122	7.9	240		●	2214	8.9	270		○	2213	7.9	240
5 Sa	0245	1.3	40		20 Su	0334	1.6	50		5 M	0319	1.3	40		20 Tu	0354	2.0	60		5 Th	0503	1.3	40		20 F	0454	2.0	60
	0845	7.5	230			0915	6.6	200			0856	6.9	210			0917	5.9	180			1027	5.9	180			1012	5.6	170
	1518	1.0	30			1530	1.3	40			1518	0.7	20			1521	1.3	40			1624	1.0	30			1607	1.3	40
	2115	7.5	230		○	2147	7.5	230		●	2139	8.5	260		○	2157	7.9	240			2303	8.9	270			2247	7.9	240
6 Su	0333	1.3	40		21 M	0411	2.0	60		6 Tu	0413	1.3	40		21 W	0431	2.0	60		6 F	0557	1.3	40		21 Sa	0530	2.0	60
	0926	7.5	230			0946	6.6	200			0945	6.6	200			0952	5.9	180			1122	5.9	180			1050	5.6	170
	1555	1.0	30			1557	1.3	40			1559	0.7	20			1552	1.3	40			1713	1.0	30			1645	1.3	40
	● 2159	7.9	240			2219	7.5	230			2226	8.9	270			2230	7.9	240			2352	8.5	260			2323	7.5	230
7 M	0421	1.3	40		22 Tu	0445	2.0	60		7 W	0506	1.3	40		22 Th	0506	2.0	60		7 Sa	0649	1.6	50		22 Su	0605	2.0	60
	1007	7.2	220			1017	6.2	190			1035	6.2	190			1028	5.6	170			1216	5.6	170			1131	5.6	170
	1630	1.0	30			1623	1.3	40			1640	1.0	30			1625	1.6	50			1802	1.3	40			1723	1.6	50
	2243	8.2	250			2251	7.5	230			2315	8.5	260			2304	7.5	230						2359	7.5	230		
8 Tu	0510	1.3	40		23 W	0520	2.0	60		8 Th	0601	1.6	50		23 F	0542	2.3	70		8 Su	0041	8.2	250		23 M	0643	2.0	60
	1049	6.9	210			1049	5.9	180			1128	5.9	180			1104	5.6	170			0739	1.6	50			1215	5.6	170
	1705	1.0	30			1651	1.6	50			1723	1.3	40			1659	1.6	50			1312	5.6	170			1805	2.0	60
	2329	8.2	250			2324	7.5	230							2339	7.5	230											
9 W	0600	1.6	50		24 Th	0555	2.3	70		9 F	0005	8.5	260		24 Sa	0619	2.3	70		9 M	0129	7.9	240		24 Tu	0035	7.5	230
	1135	6.2	190			1122	5.6	170			0700	1.6	50			1145	5.2	160			0828	2.0	60			0723	2.0	60
	1743	1.3	40			1722	1.6	50			1224	5.6	170			1735	2.0	60			1410	5.6	170			1304	5.6	170
						2359	7.2	220			1811	1.6	50							1953	2.3	70			1852	2.0	60	
10 Th	0016	8.2	250		25 F	0632	2.6	80		10 Sa	0058	8.2	250		25 Su	0017	7.2	220		10 Tu	0218	7.2	220		25 W	0116	7.2	220
	0656	2.0	60			1200	5.2	160			0800	2.0	60			0701	2.6	80			0915	2.0	60			0805	2.0	60
	1225	5.6	170			1756	2.0	60			1328	5.2	160			1230	5.2	160			1513	5.9	180			1400	5.9	180
	1824	1.6	50							1907	2.0	60			1817	2.0	60			2058	2.6	80			1947	2.3	70	
11 F	0109	7.9	240		26 Sa	0037	7.2	220		11 Su	0155	7.5	230		26 M	0100	7.2	220		11 W	0310	6.6	200		26 Th	0203	6.9	210
	0801	2.3	70			0717	2.6	80			0901	2.0	60			0750	2.6	80			1001	2.0	60			0853	1.6	50
	1327	5.2	160			1244	4.9	150			1439	5.2	160			1324	5.2	160			1617	5.9	180			1502	5.9	180
	1915	2.0	60			1836	2.3	70			2015	2.3	70			1909	2.3	70		○	2209	3.0	90		●	2054	2.6	80
12 Sa	0211	7.5	230		27 Su	0123	6.9	210		12 M	0256	7.2	220		27 Tu	0147	7.2	220		12 Th	0405	6.2	190		27 F	0259	6.6	200
	0918	2.6	80			0815	3.0	90			1000	2.0	60			0845	2.3	70			1048	2.0	60			0946	1.6	50
	1448	4.9	150			1341	4.9	150			1553	5.6	170			1428	5.2	160			1719	6.2	190			1612	6.2	190
	2026	2.3	70			1929	2.6	80		○	2133	2.6	80			2012	2.6	80			2320	3.0	90			2211	2.6	80
13 Su	0323	7.2	220		28 M	0221	6.6	200		13 Tu	0400	6.9	210		28 W	0243	6.9	210		13 F	0501	5.9	180		28 Sa	0403	6.2	190
	1034	2.3	70			0925	3.0	90			1056	2.0	60			0941	2.3	70			1134	1.6	50			1044	1.3	40
	1617	5.2	160			1500	4.9	150			1700	5.9	180			1540	5.6	170			1814	6.6	200			1720	6.9	210
	● 2156	2.6	80			2040	2.6	80			2249	2.6	80		○	2124	2.6	80						2332	2.6	80		
14 M	0439	7.2	220		29 Tu	0330	6.6	200		14 W	0500	6.9	210		29 Th	0345	6.9	210		14 Sa	0027	2.6	80		29 Su	0512	5.9	180
	1141	2.3	70			1034	2.6	80			1146	2.0	60			1037	2.0	60			0556	5.9	180			1143	1.3	40
	1732	5.6	170			1622	5.2	160			1759	6.2	190			1648	6.2	190			1219	1.6	50			1824	7.5	230
	2320	2.3	70		○	2203	2.6	80			2358	2.6	80			2240	2.6	80			1901	7.2	220					
15 Tu	0546	7.2	220		30 W	0439	6.9	210		15 Th	0555	6.6	200		30 F	0446	6.9	210		15 Su	0124	2.6	80		30 M	0051	2.3	70
	1236	2.0	60			1132	2.3	70			1231	1.6	50			1131	1.6	50			06							

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Brisbane Bar, Australia, 2008

Times and Heights of High and Low Waters

July				August				September																					
Time		Height		Time		Height		Time		Height		Time		Height															
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm										
1 Tu	0203	2.0	60		16 W	0242	2.0	60		1 F	0350	1.0	30		16 Sa	0332	1.6	50		1 M	0436	1.0	30		16 Tu	0405	0.7	20	
	0726	5.6	170			0800	5.2	160			0919	5.9	180			0900	5.9	180			1025	6.6	200			0958	6.9	210	
	1338	1.0	30			1358	1.3	40			1519	0.7	20			1503	1.0	30			1633	1.0	30			1610	1.0	30	
	2020	8.5	260			2043	7.5	230			2146	8.5	260			2130	7.9	240			2234	7.5	230			2207	7.5	230	
2 W	0306	1.6	50		17 Th	0321	2.0	60		2 Sa	0434	1.0	30		17 Su	0407	1.3	40		2 Tu	0505	1.0	30		17 W	0438	0.7	20	
	0829	5.6	170			0841	5.6	170			1006	6.2	190			0939	6.2	190			1101	6.9	210			1038	7.2	220	
	1433	0.7	20			1439	1.3	40			1607	0.7	20			1544	1.0	30			1711	1.3	40			1653	1.0	30	
	2113	8.9	270			2119	7.5	230			2229	8.5	260			2203	7.9	240			2306	7.2	220			2243	6.9	210	
3 Th	0402	1.3	40		18 F	0359	2.0	60		3 Su	0513	1.0	30		18 M	0440	1.3	40		3 W	0531	1.0	30		18 Th	0510	0.7	20	
	0926	5.9	180			0919	5.6	170			1049	6.2	190			1018	6.2	190			1137	6.9	210			1120	7.2	220	
	1526	0.7	20			1517	1.3	40			1650	1.0	30			1623	1.0	30			1747	1.6	50			1738	1.3	40	
	2202	8.9	270			2155	7.9	240			2306	8.2	250			2236	7.9	240			2336	6.6	200			2320	6.6	200	
4 F	0454	1.3	40		19 Sa	0434	1.6	50		4 M	0548	1.0	30		19 Tu	0513	1.0	30		4 Th	0557	1.0	30		19 F	0543	1.0	30	
	1019	5.9	180			0958	5.9	180			1130	6.2	190			1059	6.6	200			1214	6.6	200			1205	7.2	220	
	1615	0.7	20			1556	1.0	30			1731	1.3	40			1703	1.0	30			1826	2.0	60			1826	1.6	50	
	2248	8.9	270			2229	7.9	240			2342	7.5	230			2309	7.5	230											
5 Sa	0541	1.3	40		20 Su	0509	1.6	50		5 Tu	0619	1.3	40		20 W	0545	1.0	30		5 F	0006	5.9	180		20 Sa	0001	5.9	180	
	1109	5.9	180			1036	5.9	180			1211	6.2	190			1140	6.6	200			0623	1.3	40			0618	1.0	30	
	1703	1.0	30			1634	1.3	40			1812	1.6	50			1745	1.3	40			1252	6.6	200			1254	7.2	220	
	2333	8.5	260			2302	7.9	240						2343		7.2	220		1907		2.6	80		1922		2.0	60		
6 Su	0624	1.3	40		21 M	0543	1.6	50		6 W	0015	7.2	220		21 Th	0615	1.0	30		6 Sa	0039	5.2	160		21 Su	0051	5.2	160	
	1157	5.9	180			1116	5.9	180			0648	1.3	40			1223	6.6	200			0655	1.6	50			0702	1.3	40	
	1749	1.3	40			1713	1.3	40			1252	6.2	190			1829	1.6	50			1336	6.2	190			1353	6.9	210	
						2335	7.5	230			1853	2.0	60						1959		3.0	90		2037		2.3	70		
7 M	0015	8.2	250		22 Tu	0616	1.6	50		7 Th	0048	6.6	200		22 F	0019	6.6	200		7 Su	0120	4.9	150		22 M	0159	4.9	150	
	0703	1.3	40			1159	6.2	190			0718	1.3	40			0649	1.3	40			0735	2.0	60			0803	1.6	50	
	1244	5.9	180			1754	1.6	50			1336	6.2	190			1310	6.6	200			1433	6.2	190			1506	6.9	210	
	1835	1.6	50						1939		2.6	80		1920		2.3	70		2116		3.0	90		2210		2.3	70		
8 Tu	0055	7.5	230		23 W	0009	7.5	230		8 F	0123	5.9	180		23 Sa	0102	5.9	180		8 M	0222	4.3	130		23 Tu	0337	4.6	140	
	0741	1.6	50			0650	1.3	40			0752	1.6	50			0730	1.3	40			0831	2.3	70			0927	2.0	60	
	1332	5.9	180			1244	6.2	190			1427	6.2	190			1407	6.6	200			1550	5.9	180			1628	6.9	210	
	1924	2.0	60			1838	2.0	60			2038	3.0	90			2027	2.6	80			2300	3.0	90			2334	2.0	60	
9 W	0134	6.9	210		24 Th	0045	7.2	220		9 Sa	0207	5.2	160		24 Su	0159	5.2	160		9 Tu	0401	4.3	130		24 W	0512	4.9	150	
	0818	1.6	50			0727	1.3	40			0835	2.0	60			0825	1.6	50			0953	2.3	70			1057	2.0	60	
	1425	5.9	180			1332	6.2	190			1532	6.2	190			1519	6.6	200			1712	6.2	190			1742	7.2	220	
	2017	2.6	80			1930	2.3	70			2200	3.3	100			2158	2.6	80											
10 Th	0215	6.2	190		25 F	0128	6.6	200		10 Su	0310	4.6	140		25 M	0323	4.9	150		10 W	0012	2.6	80		25 Th	0040	1.6	50	
	0858	1.6	50			0809	1.3	40			0932	2.0	60			0939	1.6	50			0533	4.6	140			0622	5.2	160	
	1525	5.9	180			1430	6.2	190			1648	6.2	190			1643	6.9	210			1115	2.3	70			1213	1.6	50	
	2123	3.0	90			2033	2.6	80			2335	3.0	90			2337	2.3	70			1814	6.6	200			1843	7.5	230	
11 F	0304	5.9	180		26 Sa	0221	5.9	180		11 M	0437	4.6	140		26 Tu	0501	4.9	150		11 Th	0101	2.3	70		26 F	0131	1.3	40	
	0944	2.0	60			0900	1.3	40			1044	2.0	60			1101	1.6	50			0631	4.9	150			0716	5.9	180	
	1630	6.2	190			1541	6.6	200			1757	6.6	200			1800	7.2	220			1220	2.0	60			1315	1.3	40	
	2241	3.0	90			2155	2.6	80										1902	6.9		210		1933	7.5		230			
12 Sa	0405	5.2	160		27 Su	0332	5.6	170		12 Tu	0045	2.6	80		27 W	0056	2.0	60		12 F	0143	2.0	60		27 Sa	0215	1.0	30	
	1035	2.0	60			1004	1.6	50			0559	4.6	140			0625	4.9	150			0716	5.2	160			0803	6.2	190	
	1735	6.6	200			1657	6.9	210			1151	2.0	60			1219	1.3	40			1313	1.6	50			1408	1.0	30	
						2327	2.6	80			1852	6.9	210			1904	7.5	230			1944	7.2	220			2016	7.5	230	
13 Su	0000	3.0	90		28 M	0455	5.2	160		13 W	0135	2.3	70		28 Th	0156	1.6	50		13 Sa	0221	1.3	40		28 Su	0252	1.0	30	
	0514	4.9	150			1115	1.3	40			0657	4.9	150			0729	5.6	170			0758	5.9	180			0845	6.6	200	
	1130	2.0	60			1810	7.2	220			1249	1.6	50			1326	1.0	30			1400	1.3	40			1454	1.0	30	
	1830	6.9	210						1937		7.2	220		1958		7.9	240		2021		7.5	230		2054		7.5	230		
14 M	0105	2.6	80		29 Tu	0054	2.3	70		14 Th	0218	2.0	60		29 F	0245	1.0	30		14 Su	0257	1.3	40		29 M	0325	1.0	30	
	0618	4.9	150			0615	5.2	160			0743	5.2	160			0820	5.9	180			0837	6.2	190			0922	6.9	210	
	1224	1.6	50			1224	1.3	40			1338	1.3	40			1421	1.0	30			1444	1.0	30			1535	1.0	30	
	1919	7.2	220			1915	7.9	240			2018	7.5	230			2044	8.2	250			2057	7.5	230			2129	7.2	220	
15 Tu	0157	2.3	70		30 W	0204	1.6	50		15 F	0256	1.6	50		30 Sa	0327	1.0	30		15 M	0331	1.0	30		30 Tu	0354	0.7	20	
	0715	5.2	160			0727	5.2	160			0822	5.6	170			0905	6.2	190			0917	6.6	200			0958	7.2	220	
	1314	1.6	50			1329	1.0	30			1422	1.3	40			1510	0.7	20			1527	1.0	30			1615	1.3	40	
	2002	7.5	230			2011	8.2	250			2055	7.5	230			2124	8.2	250			2132	7.5	230			2200	6.9	210	
				31 Th	0301	1.3	40																						
					0827	5.6	170																						
					1428	0.7	20																						
					2101	8.5	260																						

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Brisbane Bar, Australia, 2008

Times and Heights of High and Low Waters

October						November						December																
Time			Height			Time			Height			Time			Height			Time			Height							
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm				
1 W	0420	1.0	30		16 Th	0403	0.3	10		1 Sa	0435	1.0	30		16 Su	0500	0.7	20		1 M	0445	1.3	40		16 Tu	0541	1.0	30
	1032	7.2	220			1018	7.9	240			1114	7.2	220			1142	8.2	250			1130	7.5	230			1218	8.5	260
	1651	1.6	50			1645	1.3	40			1746	2.0	60			1833	1.3	40			1809	2.3	70			1913	1.3	40
	2231	6.6	200			2221	6.6	200			2308	5.2	160			2356	5.2	160			2330	5.2	160					
2 Th	0445	1.0	30		17 F	0439	0.7	20		2 Su	0506	1.3	40		17 M	0547	1.0	30		2 Tu	0521	1.6	50		17 W	0043	5.9	180
	1106	7.2	220			1104	7.9	240			1149	7.2	220			1233	8.2	250			1206	7.2	220			0632	1.3	40
	1728	2.0	60			1736	1.3	40			1824	2.3	70			1932	1.6	50			1848	2.3	70			1305	7.9	240
	2301	5.9	180			2306	5.9	180			2345	4.9	150											1959		1.6	50	
3 F	0511	1.0	30		18 Sa	0515	0.7	20		3 M	0541	1.6	50		18 Tu	0056	5.2	160		3 W	0012	5.2	160		18 Th	0138	5.6	170
	1140	7.2	220			1151	7.9	240			1228	6.9	210			0641	1.3	40			0601	2.0	60			0727	1.6	50
	1803	2.0	60			1830	1.6	50			1907	2.6	80			1328	7.9	240			1245	7.2	220			1353	7.5	230
	2332	5.6	170			2356	5.6	170								2031	1.6	50			1930	2.3	70			2045	1.6	50
4 Sa	0539	1.3	40		19 Su	0558	1.0	30		4 Tu	0028	4.9	150		19 W	0203	5.2	160		4 Th	0100	5.2	160		19 F	0238	5.9	180
	1216	6.9	210			1244	7.5	230			0620	2.0	60			0745	2.0	60			0647	2.0	60			0828	2.3	70
	1842	2.3	70			1933	2.0	60			1312	6.6	200			1426	7.5	230			1327	6.9	210			1442	6.9	210
											2001	2.6	80			2130	1.6	50			2018	2.3	70			2131	1.6	50
5 Su	0007	4.9	150		20 M	0054	4.9	150		5 W	0122	4.6	140		20 Th	0316	5.2	160		5 F	0159	5.2	160		20 Sa	0345	5.9	180
	0611	1.6	50			0647	1.3	40			0711	2.3	70			0858	2.0	60			0744	2.3	70			0936	2.6	80
	1257	6.6	200			1343	7.5	230			1405	6.6	200			1526	7.2	220			1415	6.9	210			1534	6.2	190
	1930	2.6	80			2046	2.0	60			2107	2.6	80			2225	1.6	50			2111	2.0	60			2220	1.6	50
6 M	0048	4.6	140		21 Tu	0210	4.6	140		6 Th	0235	4.6	140		21 F	0428	5.6	170		6 Sa	0307	5.2	160		21 Su	0451	6.2	190
	0650	2.0	60			0754	2.0	60			0817	2.6	80			1015	2.3	70			0851	2.6	80			1050	3.0	90
	1346	6.2	190			1450	7.2	220			1507	6.6	200			1627	6.9	210			1511	6.6	200			1632	5.9	180
	2035	3.0	90			2200	2.0	60			2213	2.3	70			2318	1.6	50			2207	2.0	60			2311	1.6	50
7 Tu	0147	4.3	130		22 W	0340	4.9	150		7 F	0400	4.9	150		22 Sa	0531	5.9	180		7 Su	0419	5.6	170		22 M	0553	6.6	200
	0744	2.3	70			0918	2.0	60			0936	2.6	80			1126	2.3	70			1007	2.6	80			1203	2.6	80
	1452	6.2	190			1603	6.9	210			1612	6.6	200			1725	6.6	200			1612	6.6	200			1732	5.6	170
	2205	3.0	90			2308	2.0	60			2311	2.0	60								2302	1.6	50					
8 W	0319	4.3	130		23 Th	0459	5.2	160		8 Sa	0509	5.2	160		23 Su	0006	1.3	40		8 M	0525	6.2	190		23 Tu	0000	1.6	50
	0900	2.6	80			1043	2.0	60			1053	2.3	70			0627	6.6	200			1122	2.6	80			0646	6.9	210
	1610	6.2	190			1711	6.9	210			1711	6.6	200			1230	2.3	70			1715	6.2	190			1308	2.6	80
	2318	2.6	80													1817	6.2	190			2357	1.3	40			1830	5.6	170
9 Th	0452	4.6	140		24 F	0005	1.6	50		9 Su	0001	1.6	50		24 M	0050	1.3	40		9 Tu	0624	6.9	210		24 W	0048	1.3	40
	1029	2.6	80			0602	5.9	180			0606	5.9	180			0714	6.9	210			1235	2.3	70			0732	7.2	220
	1718	6.2	190			1155	2.0	60			1200	2.0	60			1328	2.0	60			1815	6.2	190			1402	2.3	70
						1809	6.9	210			1804	6.6	200			1905	6.2	190								1924	5.2	160
10 F	0012	2.0	60		25 Sa	0054	1.3	40		10 M	0047	1.3	40		25 Tu	0129	1.0	30		10 W	0048	1.0	30		25 Th	0131	1.3	40
	0555	5.2	160			0655	6.2	190			0656	6.6	200			0756	7.2	220			0718	7.5	230			0815	7.5	230
	1140	2.0	60			1256	1.6	50			1301	2.0	60			1417	2.0	60			1343	2.0	60			1450	2.3	70
	1812	6.6	200			1859	6.9	210			1854	6.6	200			1948	5.9	180			1913	6.2	190			2011	5.6	170
11 Sa	0057	1.6	50		26 Su	0135	1.0	30		11 Tu	0130	1.0	30		26 W	0203	1.0	30		11 Th	0138	0.7	20		26 F	0212	1.3	40
	0644	5.6	170			0740	6.6	200			0743	7.2	220			0834	7.5	230			0811	8.2	250			0854	7.5	230
	1239	1.6	50			1348	1.6	50			1400	1.6	50			1502	2.0	60			1445	1.6	50			1532	2.0	60
	1858	6.9	210			1942	6.9	210			1942	6.6	200			2029	5.9	180			2011	5.9	180			2051	5.6	170
12 Su	0137	1.3	40		27 M	0212	1.0	30		12 W	0213	0.7	20		27 Th	0237	1.0	30		12 F	0227	0.7	20		27 Sa	0249	1.3	40
	0728	6.2	190			0820	7.2	220			0830	7.9	240			0912	7.5	230			0901	8.5	260			0930	7.5	230
	1331	1.3	40			1435	1.3	40			1455	1.3	40			1545	2.0	60			1544	1.3	40			1610	2.0	60
	1939	7.2	220			2020	6.6	200			2030	6.6	200			2106	5.6	170			2107	5.9	180			2129	5.6	170
13 M	0215	1.0	30		28 Tu	0244	1.0	30		13 Th	0253	0.7	20		28 F	0308	1.0	30		13 Sa	0315	0.7	20		28 Su	0324	1.3	40
	0811	6.9	210			0858	7.2	220			0915	8.2	250			0946	7.5	230			0952	8.9	270			1005	7.9	240
	1421	1.3	40			1518	1.6	50			1548	1.3	40			1623	2.0	60			1640	1.3	40			1645	2.0	60
	2019	7.2	220			2056	6.2	190			2118	6.2	190			2142	5.6	170			2202	5.9	180			2203	5.6	170
14 Tu	0252	0.7	20		29 W	0312	1.0	30		14 F	0334	0.3	10		29 Sa	0340	1.0	30		14 Su	0403	0.7	20		29 M	0359	1.3	40
	0853	7.2	220			0932	7.5	230			1003	8.5	260			1020	7.5	230			1042	8.9	270			1039	7.9	240
	1510	1.0	30			1558	1.6	50			1642	1.3	40			1700	2.0	60			1733	1.3	40			1718	2.0	60
	2059	7.2	220			2130	6.2	190			2208	5.9	180			2216	5.6	170			2256	5.9	180			2239	5.6	170
15 W	0328	0.7	20		30 Th	0340	1.0	30		15 Sa	0415	0.7	20		30 Su	0412	1.3	40		15 M	0451	0.7	20		30 Tu	0433	1.3	40
	0935	7.5	230			1006	7.5	230			1051	8.5	260			1055	7.5	230			1130	8.9	270			1112	7.5	230
	1558	1.0	30			1635	1.6	50			1737	1.3	40			1734	2.0	60			1824	1.3	40			1751	2.0	60
	2140	6.9	210			2202	5.9	180			2300	5.6	170			2252	5.2	160			2349	5.9	180			2315	5.9	180
16 Th	0407	1.0	30		31 F	0407	1.0	30																				
	1040	7.5	230			1040	7.5	230																				
	1711	2.0	60			1711	2.0	60																				
	2234	5.6	170			2234																						

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Sydney, Australia, 2008

Times and Heights of High and Low Waters

January						February						March																	
Time			Height			Time			Height			Time			Height			Time			Height								
1 Tu	h	m	ft	cm	16 W O	h	m	ft	cm	1 F	h	m	ft	cm	16 Sa	h	m	ft	cm	1 Sa	h	m	ft	cm	16 Su	h	m	ft	cm
	0236	4.3	130	0152		4.9	150	0330	4.6		140	0342	5.2	160		0234	4.6	140	0332		5.2	160							
	0843	2.3	70	0800		2.0	60	1029	2.3		70	1046	1.6	50		0945	2.3	70	1039		1.6	50							
	1428	3.9	120	1359		4.3	130	1604	3.3		100	1645	3.6	110		1530	3.3	100	1646		3.9	120							
	2045	2.0	60	2013		1.3	40	2138	2.3		70	2211	2.0	60		2054	2.6	80	2209		2.0	60							
2 W	0329	4.6	140	0252	4.9	150	0432	4.9	150	0454	5.6	170	0348	4.6	140	0445	5.2	160											
	0956	2.3	70	0922	2.0	60	1136	2.0	60	1157	1.3	40	1059	2.0	60	1140	1.3	40											
	1532	3.6	110	1515	3.9	120	1719	3.6	110	1755	3.9	120	1653	3.6	110	1745	4.3	130											
	2132	2.0	60	2114	1.6	50	2242	2.3	70	2320	2.0	60	2212	2.3	70	2316	2.0	60											
3 Th	0421	4.9	150	0357	5.2	160	0529	4.9	150	0558	5.6	170	0454	4.9	150	0545	5.6	170											
	1105	2.3	70	1045	1.6	50	1228	1.6	50	1251	1.0	30	1153	1.6	50	1229	1.3	40											
	1639	3.6	110	1637	3.9	120	1815	3.6	110	1848	4.3	130	1748	3.6	110	1832	4.6	140											
	2223	2.0	60	2218	1.6	50	2337	2.0	60				2312	2.3	70														
4 F	0511	4.9	150	0501	5.6	170	0617	5.2	160	0019	1.6	50	0545	5.2	160	0014	1.6	50											
	1203	2.0	60	1159	1.3	40	1309	1.3	40	0652	5.9	180	1234	1.3	40	0634	5.6	170											
	1741	3.6	110	1751	3.9	120	1859	3.9	120	1337	1.0	30	1830	3.9	120	1310	1.0	30											
	2313	2.0	60	2322	1.6	50			1934	4.6	140				1913	4.6	140												
5 Sa	0558	5.2	160	0603	5.9	180	0024	2.0	60	0112	1.3	40	0000	2.0	60	0102	1.3	40											
	1250	1.6	50	1300	1.0	30	0700	5.6	170	0739	5.9	180	0630	5.6	170	0718	5.6	170											
	1833	3.9	120	1854	4.3	130	1346	1.3	40	1418	0.7	20	1311	1.3	40	1345	1.0	30											
	2359	2.0	60				1936	4.3	130	2015	4.6	140	1907	4.3	130	1950	4.9	150											
6 Su	0641	5.2	160	0022	1.6	50	0106	1.6	50	0159	1.3	40	0045	1.6	50	0146	1.3	40											
	1330	1.3	40	0700	6.2	190	0740	5.9	180	0822	5.9	180	0710	5.6	170	0758	5.6	170											
	1917	3.9	120	1352	0.7	20	1421	1.0	30	1455	0.7	20	1345	1.0	30	1416	1.0	30											
				1947	4.3	130	2013	4.3	130	2055	4.9	150	1944	4.6	140	2026	5.2	160											
7 M	0042	2.0	60	0116	1.3	40	0147	1.3	40	0243	1.3	40	0129	1.3	40	0228	1.3	40											
	0721	5.6	170	0752	6.2	190	0818	5.9	180	0902	5.9	180	0750	5.9	180	0835	5.2	160											
	1409	1.3	40	1439	0.7	20	1455	1.0	30	1528	1.0	30	1419	0.7	20	1445	1.3	40											
	1958	3.9	120	2035	4.6	140	2050	4.6	140	2131	4.9	150	2021	4.9	150	2059	5.2	160											
8 Tu ●	0122	1.6	50	0208	1.3	40	0229	1.3	40	0325	1.3	40	0213	1.0	30	0307	1.3	40											
	0800	5.9	180	0840	6.2	190	0857	5.9	180	0940	5.6	170	0831	5.9	180	0911	4.9	150											
	1445	1.0	30	1522	0.7	20	1530	0.7	20	1559	1.0	30	1454	0.7	20	1513	1.3	40											
	2035	4.3	130	2119	4.6	140	2128	4.6	140	2207	4.9	150	2100	5.2	160	2130	5.2	160											
9 W	0202	1.6	50	0257	1.3	40	0313	1.3	40	0407	1.3	40	0300	1.0	30	0345	1.3	40											
	0839	5.9	180	0925	6.2	190	0936	5.9	180	1015	5.2	160	0915	5.6	170	0945	4.6	140											
	1521	1.0	30	1602	0.7	20	1604	0.7	20	1627	1.3	40	1530	0.7	20	1539	1.6	50											
	2114	4.3	130	2202	4.6	140	2208	4.9	150	2242	4.9	150	2141	5.6	170	2202	5.2	160											
10 Th	0243	1.6	50	0344	1.3	40	0359	1.0	30	0448	1.6	50	0349	1.0	30	0425	1.6	50											
	0917	5.9	180	1007	5.9	180	1016	5.6	170	1050	4.6	140	1000	5.6	170	1022	4.6	140											
	1558	1.0	30	1640	1.0	30	1641	0.7	20	1654	1.3	40	1607	1.0	30	1607	1.6	50											
	2153	4.3	130	2244	4.6	140	2251	4.9	150	2317	4.9	150	2225	5.6	170	2235	5.2	160											
11 F	0326	1.6	50	0430	1.3	40	0448	1.3	40	0531	1.6	50	0442	1.0	30	0506	1.6	50											
	0956	5.9	180	1045	5.6	170	1100	5.2	160	1126	4.3	130	1047	4.9	150	1100	4.3	130											
	1635	1.0	30	1715	1.0	30	1718	1.0	30	1722	1.6	50	1647	1.0	30	1636	2.0	60											
	2234	4.3	130	2325	4.6	140	2336	5.2	160	2355	4.9	150	2311	5.6	170	2311	5.2	160											
12 Sa	0410	1.6	50	0515	1.6	50	0543	1.3	40	0619	2.0	60	0538	1.0	30	0551	2.0	60											
	1035	5.9	180	1123	4.9	150	1147	4.9	150	1206	3.9	120	1141	4.6	140	1142	3.9	120											
	1714	1.0	30	1746	1.3	40	1759	1.3	40	1754	2.0	60	1730	1.6	50	1711	2.3	70											
	2318	4.6	140											2351	4.9	150													
13 Su	0459	1.6	50	0005	4.6	140	0026	5.2	160	0037	4.6	140	0002	5.6	170	0644	2.0	60											
	1117	5.6	170	0602	2.0	60	0643	1.6	50	0715	2.3	70	0643	1.3	40	1230	3.6	110											
	1753	1.0	30	1200	4.6	140	1242	4.3	130	1256	3.6	110	1241	4.3	130	1754	2.3	70											
				1818	1.6	50	1845	1.6	50	1835	2.3	70	1821	2.0	60														
14 M	0006	4.6	140	0047	4.6	140	0122	5.2	160	0130	4.6	140	0101	5.2	160	0042	4.9	150											
	0552	1.6	50	0654	2.0	60	0756	1.6	50	0825	2.3	70	0759	1.6	50	0747	2.3	70											
	1203	5.2	160	1242	4.3	130	1348	3.9	120	1401	3.6	110	1354	3.6	110	1333	3.6	110											
	1835	1.0	30	1852	2.0	60	1941	2.0	60	1934	2.3	70	1926	2.0	60	1852	2.6	80											
15 Tu	0057	4.6	140	0134	4.6	140	0228	5.2	160	0130	4.6	140	0213	5.2	160	0145	4.6	140											
	0651	2.0	60	0755	2.3	70	0921	1.6	50	0825	2.3	70	0922	1.6	50	0900	2.3	70											
	1256	4.6	140	1333	3.6	110	1514	3.6	110	1401	3.6	110	1525	3.6	110	1452	3.6	110											
	1921	1.3	40	1935	2.0	60	2053	2.0	60	1934	2.3	70	2048	2.3	70	2011	2.6	80											
16 Su				0229	4.6	140										0259	4.6	140											
				0909	2.3	70										1008	2.0	60											
				1442	3.6	110										1611	3.6	110											
				2031	2.3	70										2131	2.6	80											
17 M																													
18 Tu																													
19 W																													
20 Th																													
21 F																													
22 Sa																													
23 Su																													
24 M																													
25 Tu																													

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Sydney, Australia, 2008

Times and Heights of High and Low Waters

July					August					September														
Time		Height			Time		Height			Time		Height			Time		Height							
1 Tu	h	m	ft	cm	16 W	h	m	ft	cm	16 Sa	h	m	ft	cm	1 M	h	m	ft	cm	16 Tu	h	m	ft	cm
	0029	1.3	40	0117		1.6	50	0210	0.7		20	0201	1.0	30		0302	0.7	20	0226		0.7	20		
	0620	4.3	130	0701		3.9	120	0805	4.6		140	0754	4.3	130		0909	4.9	150	0834		5.2	160		
	1158	1.6	50	1225		2.0	60	1341	1.0		30	1329	1.3	40		1505	1.0	30	1435		1.0	30		
2 W	1838	6.6	200	1908	5.6	170	2014	6.6	200	2100	6.2	190	1959	5.9	180	2118	5.6	170	2047	5.2	160			
	3 Th	0128	1.0	30	17 Th	0154	1.3	40	2 Sa	0255	0.7	20	17 Su	0233	1.0	30	2 Tu	0336	1.0	30	17 W	0300	0.7	20
		0721	4.6	140		0742	3.9	120		0853	4.6	140		0829	4.6	140		0947	4.9	150		0914	5.2	160
		1254	1.3	40		1306	2.0	60		1432	1.0	30		1409	1.3	40		1550	1.0	30		1522	1.0	30
1933		6.6	200	1946		5.6	170	2100		6.2	190	2034		5.9	180	2157		4.9	150	2130		5.2	160	
3 Th	0222	0.7	20	18 F	0230	1.3	40	3 Su	0337	0.7	20	18 M	0305	0.7	20	3 W	0407	1.0	30	18 Th	0337	0.7	20	
	0818	4.6	140		0819	4.3	130		0939	4.6	140		0905	4.6	140		1026	4.9	150		0956	5.6	170	
	1349	1.3	40		1346	1.6	50		1522	1.0	30		1450	1.3	40		1635	1.3	40		1613	1.0	30	
	2027	6.9	210		2023	5.9	180		2145	6.2	190		2111	5.6	170		2235	4.6	140		2217	4.9	150	
4 F	0315	0.7	20	19 Sa	0304	1.3	40	4 M	0417	0.7	20	19 Tu	0338	0.7	20	4 Th	0437	1.3	40	19 F	0416	1.0	30	
	0912	4.6	140		0856	4.3	130		1023	4.9	150		0944	4.9	150		1103	4.9	150		1042	5.6	170	
	1444	1.3	40		1426	1.6	50		1611	1.3	40		1534	1.3	40		1721	1.6	50		1707	1.0	30	
	2117	6.6	200		2059	5.9	180		2228	5.6	170		2150	5.6	170		2314	4.3	130		2309	4.6	140	
5 Sa	0404	0.7	20	20 Su	0339	1.0	30	5 Tu	0455	1.0	30	20 W	0413	0.7	20	5 F	0507	1.6	50	20 Sa	0500	1.3	40	
	1004	4.6	140		0933	4.3	130		1106	4.9	150		1024	4.9	150		1142	4.9	150		1131	5.6	170	
	1538	1.3	40		1506	1.6	50		1700	1.6	50		1622	1.3	40		1810	2.0	60		1809	1.3	40	
	2207	6.6	200		2135	5.9	180		2308	4.9	150		2231	5.2	160		2356	3.9	120					
6 Su	0452	0.7	20	21 M	0414	1.0	30	6 W	0530	1.3	40	21 Th	0448	1.0	30	6 Sa	0541	2.0	60	21 Su	0008	3.9	120	
	1055	4.6	140		1013	4.3	130		1149	4.9	150		1108	4.9	150		1225	4.6	140		0551	1.6	50	
	1631	1.6	50		1548	1.6	50		1750	1.6	50		1714	1.3	40		1906	2.0	60		1229	5.2	160	
	2256	6.2	190		2213	5.6	170		2348	4.6	140		2317	4.9	150						1920	1.3	40	
7 M	0538	1.0	30	22 Tu	0449	1.0	30	7 Th	0603	1.6	50	22 F	0528	1.0	30	7 Su	0046	3.6	110	22 M	0117	3.6	110	
	1145	4.6	140		1054	4.6	140		1232	4.6	140		1155	5.2	160		0625	2.0	60		0653	2.0	60	
	1726	1.6	50		1634	1.6	50		1844	2.0	60		1811	1.6	50		1316	4.6	140		1335	5.2	160	
	2342	5.6	170		2252	5.2	160							2015	2.0		60	2015	2.0		60	2042	1.3	40
8 Tu	0621	1.3	40	23 W	0526	1.0	30	8 F	0032	3.9	120	23 Sa	0010	4.3	130	8 M	0153	3.3	100	23 Tu	0242	3.6	110	
	1233	4.6	140		1138	4.6	140		0638	1.6	50		0613	1.3	40		0724	2.3	70		0810	2.0	60	
	1821	2.0	60		1724	1.6	50		1319	4.6	140		1248	5.2	160		1420	4.6	140		1453	5.2	160	
					2335	5.2	160		1945	2.3	70		1919	1.6	50		2132	2.0	60		2159	1.3	40	
9 W	0029	4.9	150	24 Th	0604	1.3	40	9 Sa	0123	3.6	110	24 Su	0114	3.9	120	9 Tu	0316	3.3	100	24 W	0404	3.6	110	
	0701	1.6	50		1226	4.9	150		0720	2.0	60		0707	1.6	50		0841	2.3	70		0930	2.0	60	
	1323	4.6	140		1820	2.0	60		1412	4.6	140		1351	5.2	160		1532	4.6	140		1608	5.2	160	
	1920	2.3	70						2059	2.3	70		2042	1.6	50		2241	2.0	60		2302	1.0	30	
10 Th	0117	4.6	140	25 F	0024	4.6	140	10 Su	0230	3.6	110	25 M	0232	3.6	110	10 W	0433	3.3	100	25 Th	0507	3.9	120	
	0742	1.6	50		0647	1.3	40		0815	2.0	60		0815	2.0	60		0954	2.3	70		1041	1.6	50	
	1415	4.6	140		1317	4.9	150		1513	4.6	140		1503	5.2	160		1638	4.6	140		1711	5.2	160	
	2026	2.3	70		1925	2.0	60		2215	2.3	70		2207	1.6	50		2333	1.6	50		2354	1.0	30	
11 F	0211	3.9	120	26 Sa	0122	4.3	130	11 M	0349	3.3	100	26 Tu	0401	3.6	110	11 Th	0528	3.6	110	26 F	0558	4.3	130	
	0823	2.0	60		0736	1.6	50		0919	2.3	70		0932	2.0	60		1054	2.0	60		1142	1.3	40	
	1507	4.6	140		1415	4.9	150		1615	4.9	150		1617	5.2	160		1730	4.9	150		1803	5.6	170	
	2139	2.3	70		2042	2.0	60		2320	2.0	60		2318	1.3	40									
12 Sa	0314	3.9	120	27 Su	0234	3.9	120	12 Tu	0502	3.6	110	27 W	0516	3.9	120	12 F	0015	1.3	40	27 Sa	0037	1.0	30	
	0910	2.0	60		0834	1.6	50		1024	2.0	60		1044	1.6	50		0610	3.9	120		0642	4.6	140	
	1601	4.9	150		1519	5.2	160		1714	4.9	150		1724	5.6	170		1144	1.6	50		1234	1.0	30	
	2250	2.3	70		2206	1.6	50							1812	5.2		160	1812	5.2		160	1850	5.6	170
13 Su	0420	3.6	110	28 M	0355	3.9	120	13 W	0011	1.6	50	28 Th	0016	1.0	30	13 Sa	0049	1.0	30	28 Su	0115	0.7	20	
	1000	2.0	60		0940	1.6	50		0557	3.6	110		0614	4.3	130		0646	4.3	130		0722	4.9	150	
	1654	4.9	150		1626	5.6	170		1119	2.0	60		1146	1.3	40		1228	1.3	40		1322	1.0	30	
	2348	2.0	60		2322	1.3	40		1802	5.2	160		1820	5.9	180		1851	5.2	160		1932	5.2	160	
14 M	0523	3.6	110	29 Tu	0513	3.9	120	14 Th	0052	1.3	40	29 F	0104	0.7	20	14 Su	0122	1.0	30	29 M	0149	0.7	20	
	1052	2.0	60		1046	1.6	50		0641	3.9	120		0702	4.3	130		0721	4.6	140		0800	5.2	160	
	1743	5.2	160		1730	5.9	180		1207	2.0	60		1242	1.0	30		1309	1.3	40		1407	1.0	30	
					1845	5.2	160		1845	5.2	160		1910	5.9	180		1929	5.6	170		2013	5.2	160	
15 Tu	0036	2.0	60	30 W	0026	1.0	30	15 F	0128	1.3	40	30 Sa	0147	0.7	20	15 M	0154	0.7	20	30 Tu	0221	1.0	30	
	0616	3.9	120		0619	4.3	130		0718	3.9	120		0746	4.6	140		0758	4.9	150		0837	5.2	160	
	1141	2.0	60		1149	1.6	50		1248	1.6	50		1331	1.0	30		1351	1.0	30		1449	1.0	30	
	1827	5.2	160		1830	6.2	190		1922	5.6	170		1955	5.9	180		2007	5.6	170		2051	4.9	150	
			31 Th	0120	0.7	20				31 Su	0226	0.7	20											
				0715	4.3	130					0829	4.9	150											
				1246	1.3	40					1419	1.0	30											
				1923	6.6	200					2038	5.9	180											

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Sydney, Australia, 2008

Times and Heights of High and Low Waters

October					November					December													
Time		Height			Time		Height			Time		Height			Time		Height						
	h m	ft cm			h m	ft cm			h m	ft cm		h m	ft cm		h m	ft cm							
1 W	0251	1.0	30	16 Th	0224	1.0	30	1 Sa	0314	1.6	50	16 Su	0335	1.3	40	1 M	0328	2.0	60	16 Tu	0422	1.3	40
	0912	5.2	160		0846	5.9	180		0948	5.6	170		1009	6.6	200		1003	5.6	170		1050	6.2	190
	1530	1.0	30		1513	0.7	20		1630	1.3	40		1658	0.7	20		1649	1.3	40		1738	0.7	20
	2129	4.6	140		2115	4.9	150		2225	3.9	120		2301	4.3	130		2245	3.9	120		2343	4.6	140
2 Th	0320	1.3	40	17 F	0306	1.0	30	2 Su	0349	2.0	60	17 M	0431	1.6	50	2 Tu	0409	2.0	60	17 W	0520	1.6	50
	0946	5.2	160		0932	6.2	190		1025	5.2	160		1103	6.2	190		1042	5.2	160		1143	5.9	180
	1612	1.3	40		1606	0.7	20		1713	1.3	40		1758	0.7	20		1730	1.3	40		1830	1.0	30
	2207	4.3	130		2209	4.6	140		2307	3.9	120						2330	3.9	120				
3 F	0349	1.6	50	18 Sa	0351	1.3	40	3 M	0430	2.0	60	18 Tu	0002	4.3	130	3 W	0453	2.0	60	18 Th	0039	4.3	130
	1021	5.2	160		1022	5.9	180		1106	5.2	160		0532	1.6	50		1122	5.2	160		0620	1.6	50
	1653	1.3	40		1703	0.7	20		1800	1.6	50		1201	5.9	180		1815	1.3	40		1236	5.2	160
	2246	3.9	120		2306	4.3	130		2355	3.6	110		1900	1.0	30				1919		1.0	30	
4 Sa	0422	1.6	50	19 Su	0442	1.6	50	4 Tu	0516	2.3	70	19 W	0107	4.3	130	4 Th	0017	3.9	120	19 F	0135	4.6	140
	1058	4.9	150		1115	5.9	180		1151	4.9	150		0638	2.0	60		0543	2.3	70		0724	2.0	60
	1739	1.6	50		1807	1.0	30		1852	1.6	50		1303	5.6	170		1207	4.9	150		1332	4.9	150
	2330	3.6	110								2000		1.0	30	1900		1.6	50	2007		1.3	40	
5 Su	0459	2.0	60	20 M	0009	3.9	120	5 W	0050	3.6	110	20 Th	0212	4.3	130	5 F	0111	3.9	120	20 Sa	0232	4.6	140
	1139	4.9	150		0540	1.6	50		0611	2.3	70		0749	2.0	60		0639	2.3	70		0833	2.0	60
	1830	1.6	50		1215	5.6	170		1245	4.6	140		1409	4.9	150		1257	4.9	150		1431	4.3	130
					1916	1.0	30		1950	1.6	50		2057	1.3	40		1948	1.6	50		2055	1.6	50
6 M	0019	3.6	110	21 Tu	0120	3.9	120	6 Th	0154	3.6	110	21 F	0315	4.3	130	6 Sa	0207	4.3	130	21 Su	0329	4.6	140
	0545	2.3	70		0648	2.0	60		0716	2.3	70		0901	2.0	60		0744	2.3	70		0946	2.0	60
	1229	4.6	140		1322	5.2	160		1345	4.6	140		1514	4.9	150		1355	4.6	140		1534	3.9	120
	1932	2.0	60		2029	1.3	40		2048	1.6	50		2147	1.3	40		2037	1.3	40		2141	1.6	50
7 Tu	0122	3.3	100	22 W	0237	3.9	120	7 F	0300	3.9	120	22 Sa	0410	4.6	140	7 Su	0302	4.3	130	22 M	0422	4.9	150
	0645	2.3	70		0805	2.0	60		0829	2.3	70		1013	2.0	60		0854	2.3	70		1058	2.0	60
	1330	4.6	140		1436	5.2	160		1450	4.6	140		1615	4.6	140		1458	4.6	140		1638	3.9	120
	2043	2.0	60		2135	1.3	40		2140	1.6	50		2233	1.3	40		2126	1.3	40		2228	2.0	60
8 W	0238	3.3	100	23 Th	0346	3.9	120	8 Sa	0355	4.3	130	23 Su	0500	4.9	150	8 M	0356	4.9	150	23 Tu	0512	4.9	150
	0759	2.3	70		0921	2.0	60		0937	2.3	70		1117	1.6	50		1005	2.0	60		1159	2.0	60
	1440	4.6	140		1547	4.9	150		1551	4.6	140		1711	4.3	130		1602	4.3	130		1737	3.6	110
	2148	2.0	60		2230	1.3	40		2225	1.3	40		2315	1.3	40		2215	1.3	40		2313	2.0	60
9 Th	0350	3.6	110	24 F	0444	4.3	130	9 Su	0443	4.6	140	24 M	0545	5.2	160	9 Tu	0446	5.2	160	24 W	0558	5.2	160
	0915	2.3	70		1030	1.6	50		1040	2.0	60		1213	1.6	50		1112	1.6	50		1247	1.6	50
	1549	4.6	140		1647	4.9	150		1646	4.6	140		1800	4.3	130		1706	4.3	130		1829	3.9	120
	2241	1.6	50		2318	1.0	30		2306	1.3	40		2352	1.6	50		2303	1.3	40		2356	2.0	60
10 F	0445	3.9	120	25 Sa	0531	4.6	140	10 M	0527	4.9	150	25 Tu	0625	5.2	160	10 W	0536	5.6	170	25 Th	0639	5.2	160
	1020	2.0	60		1131	1.6	50		1136	1.6	50		1300	1.3	40		1213	1.3	40		1328	1.3	40
	1645	4.9	150		1740	4.9	150		1737	4.9	150		1846	4.3	130		1806	4.6	140		1914	3.9	120
	2323	1.3	40		2359	1.0	30		2346	1.0	30						2353	1.3	40				
11 Sa	0530	4.3	130	26 Su	0615	4.9	150	11 Tu	0609	5.2	160	26 W	0027	1.6	50	11 Th	0628	6.2	190	26 F	0037	2.0	60
	1114	1.6	50		1225	1.3	40		1229	1.0	30		0702	5.6	170		1310	1.0	30		0718	5.6	170
	1731	4.9	150		1826	4.9	150		1828	4.9	150		1342	1.3	40		1905	4.6	140		1405	1.3	40
											1929		4.3	130				1954	3.9		120		
12 Su	0000	1.0	30	27 M	0034	1.0	30	12 W	0027	1.0	30	27 Th	0101	1.6	50	12 F	0044	1.3	40	27 Sa	0116	1.6	50
	0608	4.6	140		0654	5.2	160		0652	5.9	180		0739	5.6	170		0719	6.6	200		0757	5.6	170
	1202	1.3	40		1312	1.3	40		1320	1.0	30		1419	1.3	40		1405	0.7	20		1441	1.3	40
	1815	5.2	160		1909	4.6	140		1919	4.9	150		2009	4.3	130		2002	4.6	140		2031	3.9	120
13 M	0035	1.0	30	28 Tu	0107	1.3	40	13 Th	0110	1.0	30	28 F	0136	1.6	50	13 Sa	0136	1.3	40	28 Su	0155	1.6	50
	0645	4.9	150		0730	5.2	160		0738	6.2	190		0814	5.6	170		0812	6.6	200		0832	5.6	170
	1248	1.0	30		1354	1.0	30		1413	0.7	20		1456	1.3	40		1459	0.3	10		1515	1.3	40
	1857	5.2	160		1948	4.6	140		2012	4.6	140		2047	4.3	130		2058	4.6	140		2107	4.3	130
14 Tu	0110	0.7	20	29 W	0138	1.3	40	14 F	0155	1.0	30	29 Sa	0213	1.6	50	14 Su	0230	1.3	40	29 M	0233	1.6	50
	0724	5.2	160		0805	5.6	170		0826	6.6	200		0849	5.6	170		0905	6.6	200		0909	5.6	170
	1334	1.0	30		1433	1.0	30		1505	0.3	10		1532	1.3	40		1552	0.3	10		1550	1.0	30
	1941	5.2	160		2028	4.3	130		2106	4.6	140		2126	3.9	120		2153	4.6	140		2144	4.3	130
15 W	0145	0.7	20	30 Th	0209	1.3	40	15 Sa	0244	1.3	40	30 Su	0249	2.0	60	15 M	0325	1.3	40	30 Tu	0312	1.6	50
	0804	5.9	180		0839	5.6	170		0916	6.6	200		0926	5.6	170		0958	6.6	200		0945	5.6	170
	1422	0.7	20		1512	1.0	30		1600	0.3	10		1610	1.3	40		1645	0.3	10		1625	1.0	30
	2027	4.9	150		2106	4.3	130		2202	4.6	140		2205	3.9	120		2247	4.6	140		2221	4.3	130
16 Th	0145	0.7	20	31 F	0240	1.6	50																
	0804	5.9	180		0913	5.6	170																
	1422	0.7	20		1550	1.3	40																
	2027	4.9	150		2145	4.3	130																

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Port Phillip, Point Lonsdale, Australia, 2008

Times and Heights of High and Low Waters

January						February						March																	
Time			Height			Time			Height			Time			Height			Time			Height								
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm					
1 Tu	0535		4.6	140	16 W O	0456		4.6	140	1 F	0553		4.3	130	16 Sa	0546		4.3	130	1 Sa	0516		4.3	130	16 Su	0529		4.3	130
	1135	1.0	30	1055		0.7	20	1211	0.7		20	1202	0.3	10		1131	0.7	20	1145		0.3	10							
	1816	3.9	120	1732		4.3	130	1911	3.9		120	1912	4.3	130		1819	4.3	130	1855		4.3	130							
	2331	1.6	50	2302		1.3	40									2345	2.0	60											
2 W	0608		4.3	130	17 Th	0531		4.6	140	2 Sa	0018	2.0	60	17 Su	0019	2.0	60	2 Su	0549	3.9	120	17 M	0002	2.0	60				
	1214	1.0	30	1135		0.3	10	0626	3.9		120	0630	4.3		130	1206	0.7		20	0618	4.3		130						
	1914	3.9	120	1829		4.3	130	1247	0.7		20	1250	0.3		10	1905	3.9		120	1233	0.7		20						
				2348		1.6	50	2000	3.9		120	2018	3.9		120					2000	3.9		120						
3 Th	0013	2.0	60	18 F	0609	4.3	130	3 Su	0100	2.3	70	18 M	0110	2.3	70	3 M	0022	2.0	60	18 Tu	0054	2.0	60						
	0640	4.3	130		1220	0.3	10		0705	3.6	110		0726	3.9	120		0627	3.9	120		0720	3.9	120						
	1253	1.0	30		1931	4.3	130		1330	1.0	30		1347	0.7	20		1244	1.0	30		1330	1.0	30						
	2009	3.9	120						2059	3.6	110		2130	3.9	120		2000	3.6	110		2109	3.9	120						
4 F	0057	2.0	60	19 Sa	0038	2.0	60	4 M	0151	2.6	80	19 Tu	0215	2.3	70	4 Tu	0105	2.3	70	19 W	0203	2.3	70						
	0716	3.9	120		0654	4.3	130		0755	3.6	110		0839	3.6	110		0714	3.6	110		0845	3.6	110						
	1336	1.0	30		1310	0.3	10		1423	1.0	30		1502	0.7	20		1329	1.0	30		1446	1.3	40						
	2105	3.9	120		2041	4.3	130		2203	3.6	110		2243	3.9	120		2106	3.6	110		2215	3.9	120						
5 Sa	0148	2.3	70	20 Su	0133	2.3	70	5 Tu	0257	2.6	80	20 W	0345	2.3	70	5 W	0201	2.6	80	20 Th	0340	2.0	60						
	0800	3.6	110		0747	3.9	120		0859	3.3	100		1011	3.6	110		0818	3.3	100		1016	3.6	110						
	1427	1.0	30		1408	0.3	10		1530	1.0	30		1630	0.7	20		1428	1.0	30		1613	1.3	40						
	2203	3.9	120		2153	4.3	130		2308	3.9	120		2348	4.3	130		2215	3.6	110		2317	3.9	120						
6 Su	0251	2.6	80	21 M	0241	2.6	80	6 W	0420	2.6	80	21 Th O	0518	2.0	60	6 Th	0317	2.6	80	21 F	0508	1.6	50						
	0853	3.6	110		0855	3.9	120		1015	3.3	100		1132	3.6	110		0940	3.3	100		1133	3.9	120						
	1528	1.0	30		1521	0.3	10		1645	1.0	30		1744	0.7	20		1541	1.3	40		1729	1.3	40						
	2300	3.9	120		2303	4.3	130										2317	3.9	120										
7 M	0407	2.6	80	22 Tu O	0403	2.6	80	7 Th ●	0005	3.9	120	22 F	0046	4.3	130	7 F	0449	2.3	70	22 Sa O	0013	4.3	130						
	0955	3.6	110		1016	3.9	120		0542	2.3	70		0630	1.6	50		1106	3.6	110		0610	1.3	40						
	1632	1.0	30		1641	0.3	10		1130	3.3	100		1242	3.9	120		1703	1.3	40		1240	4.3	130						
	2354	4.3	130						1748	1.0	30		1844	0.7	20						1830	1.3	40						
8 Tu ●	0519	2.6	80	23 W	0010	4.6	140	8 F	0054	4.3	130	23 Sa	0134	4.6	140	8 Sa ●	0011	3.9	120	23 Su	0059	4.3	130						
	1100	3.6	110		0526	2.3	70		0640	2.0	60		0726	1.3	40		0600	1.6	50		0657	1.0	30						
	1730	0.7	20		1135	3.9	120		1232	3.6	110		1342	4.3	130		1216	3.9	120		1334	4.6	140						
					1752	0.3	10		1839	0.7	20		1934	0.7	20		1811	1.0	30		1917	1.3	40						
9 W	0042	4.3	130	24 Th	0108	4.6	140	9 Sa	0135	4.6	140	24 Su	0215	4.6	140	9 Su	0057	4.3	130	24 M	0137	4.3	130						
	0617	2.3	70		0637	2.0	60		0724	1.6	50		0809	1.0	30		0646	1.3	40		0736	0.7	20						
	1159	3.6	110		1243	3.9	120		1328	3.9	120		1433	4.6	140		1315	4.3	130		1419	4.6	140						
	1819	0.7	20		1853	0.3	10		1923	0.7	20		2017	1.0	30		1902	1.0	30		1957	1.3	40						
10 Th	0124	4.6	140	25 F	0200	4.9	150	10 Su	0214	4.6	140	25 M	0249	4.6	140	10 M	0137	4.6	140	25 Tu	0210	4.3	130						
	0704	2.0	60		0737	1.6	50		0802	1.3	40		0847	0.7	20		0728	1.0	30		0811	0.7	20						
	1251	3.6	110		1344	4.3	130		1417	4.3	130		1517	4.6	140		1406	4.6	140		1457	4.9	150						
	1901	0.7	20		1945	0.3	10		2004	0.7	20		2055	1.0	30		1948	1.0	30		2031	1.3	40						
11 F	0203	4.6	140	26 Sa	0244	4.9	150	11 M	0249	4.6	140	26 Tu	0320	4.6	140	11 Tu	0216	4.6	140	26 W	0240	4.3	130						
	0745	2.0	60		0830	1.0	30		0840	1.0	30		0922	0.7	20		0809	0.3	10		0844	0.3	10						
	1340	3.9	120		1439	4.3	130		1504	4.6	140		1557	4.6	140		1454	4.9	150		1530	4.9	150						
	1940	0.7	20		2032	0.7	20		2045	0.7	20		2130	1.0	30		2031	1.0	30		2103	1.3	40						
12 Sa	0240	4.9	150	27 Su	0322	4.9	150	12 Tu	0324	4.9	150	27 W	0348	4.6	140	12 W	0253	4.6	140	27 Th	0310	4.3	130						
	0824	1.6	50		0914	1.0	30		0918	0.7	20		0954	0.3	10		0850	0.0	0		0917	0.3	10						
	1427	3.9	120		1530	4.3	130		1549	4.6	140		1632	4.6	140		1539	4.9	150		1600	4.9	150						
	2017	0.7	20		2115	0.7	20		2128	1.0	30		2202	1.3	40		2113	1.3	40		2136	1.3	40						
13 Su	0315	4.9	150	28 M	0357	4.9	150	13 W	0357	4.6	140	28 Th	0416	4.6	140	13 Th	0330	4.6	140	28 F	0340	4.3	130						
	0901	1.3	40		0954	0.7	20		0957	0.3	10		1026	0.3	10		0933	0.0	0		0950	0.3	10						
	1511	4.3	130		1616	4.3	130		1635	4.6	140		1706	4.6	140		1624	4.9	150		1632	4.6	140						
	2055	0.7	20		2153	1.0	30		2210	1.0	30		2236	1.3	40		2155	1.3	40		2209	1.6	50						
14 M	0350	4.9	150	29 Tu	0427	4.6	140	14 Th O	0431	4.6	140	29 F O	0445	4.3	130	14 F O	0407	4.6	140	29 Sa	0413	4.3	130						
	0938	1.0	30		1030	0.7	20		1037	0.0	0		1059	0.3	10		1016	0.0	0		1023	0.7	20						
	1556	4.3	130		1700	4.3	130		1723	4.6	140		1741	4.3	130		1710	4.9	150		1705	4.6	140						
	2135	0.7	20		2229	1.3	40		2252	1.3	40		2310	1.6	50		2236	1.3	40		2242	1.6	50						
15 Tu	0423	4.9	150	30 W O	0455	4.6	140	15 F	0507	4.6	140	15 Sa	0445	4.6	140	15 Sa	0445	4.6	140	30 Su O	0445	4.3	130						
	1015	0.7	20		1103	0.7	20		1118	0.0	0		1100	0.0	0		1056	0.7	20										
	1643	4.3	130		1743	4.3	130		1814	4.6	140		1800	4.6	140		1743	4.3	130		1743	4.3	130						
	2217	1.0	30		2304	1.3	40		2334	1.6	50		2317	1.6	50		2315	2.0	60										
16 W	0523	4.3	130	31 Th	1136	0.7	20	31 M	1826	3.9	120	31 M	0520	3.9	120	31 M	0520	3.9	120										
	1826	3.9	120		2340	1.6	50		2350	2.0	60																		

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 150° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 142° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 142° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 142° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 142° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Port Lincoln, Australia, 2008

Times and Heights of High and Low Waters

January						February						March					
Time			Height			Time			Height			Time			Height		
	h	m	ft	cm			h	m	ft	cm			h	m	ft	cm	
1 Tu	0449	3.3	100			16 W	0456	3.3	100			1 Sa	0002	3.0	90		
	1141	1.3	40				1116	1.3	40				0217	3.0	90		
	1913	3.6	110			16 O	1827	3.9	120				0956	1.0	30		
2 W	0054	3.0	90										1745	3.9	120		
	0254	3.0	90			17 Th	0101	3.0	90			2 Su	0931	1.3	40		
	1154	1.6	50				0230	3.0	90				1808	3.6	110		
	2154	3.9	120				1057	1.3	40				1935	3.6	110		
3 Th	1106	1.6	50				2119	3.9	120				2315	3.9	120		
	2300	4.3	130			18 F	1009	1.3	40			3 M	0834	1.3	40		
							2300	4.3	130								
4 F	0936	1.6	50			19 Sa	0930	1.0	30			4 Tu	0031	4.3	130		
	2345	4.6	140										0813	1.0	30		
5 Sa	0826	1.3	40										1437	3.0	90		
	1424	2.3	70			20 Su	0013	4.9	150				1900	2.6	80		
	1629	2.3	70				0912	0.7	20			5 W	0109	4.9	150		
6 Su	0025	4.9	150										0814	1.0	30		
	0823	1.3	40			21 M	0109	5.2	160				1427	3.3	100		
	1426	2.3	70				0916	0.7	20				1930	2.0	60		
	1737	2.0	60				1518	2.3	70			6 Th	0140	4.9	150		
7 M	0103	5.2	160				1747	2.0	60				0826	0.7	20		
	0839	1.0	30			22 Tu	0151	5.6	170				1432	3.6	110		
	1442	2.6	80				0927	0.7	20				2000	1.3	40		
	1832	2.0	60				1518	2.3	70			7 F	0210	5.2	160		
8 Tu	0140	5.6	170				1925	1.6	50				0844	0.7	20		
	0900	1.0	30			23 W	0225	5.6	170				1445	3.9	120		
	1501	2.6	80				0935	0.7	20				2030	1.0	30		
	1922	1.6	50				1528	2.6	80			8 Sa	0237	5.2	160		
9 W	0215	5.6	170				2016	1.3	40				0900	0.3	10		
	0925	0.7	20			24 Th	0250	5.6	170				1500	4.3	130		
	1523	3.0	90				0945	1.0	30				2100	0.7	20		
	2005	1.3	40				1538	3.0	90			9 Su	0302	4.9	150		
10 Th	0246	5.6	170				2052	1.3	40				0915	0.7	20		
	0950	0.7	20			25 F	0311	5.2	160				1516	4.6	140		
	1545	3.0	90				0957	1.0	30				2129	0.7	20		
	2042	1.3	40				1548	3.3	100			10 M	0323	4.6	140		
11 F	0316	5.6	170				2122	1.0	30				0926	0.7	20		
	1014	0.7	20			26 Sa	0329	4.9	150				1532	4.9	150		
	1606	3.0	90				1008	0.7	20				2156	1.0	30		
	2116	1.3	40				1602	3.6	110			11 Tu	0338	3.9	120		
12 Sa	0344	5.2	160				2150	1.3	40				0930	0.7	20		
	1034	0.7	20			27 Su	0348	4.6	140				1549	5.2	160		
	1628	3.3	100				1018	0.7	20				2222	1.3	40		
	2151	1.3	40				1624	3.9	120			12 W	0347	3.3	100		
13 Su	0409	4.9	150				2219	1.3	40				0927	0.7	20		
	1053	1.0	30			28 M	0409	4.3	130				1609	5.2	160		
	1651	3.3	100				1030	0.7	20				2247	1.6	50		
	2226	1.6	50				1650	4.3	130			13 Th	0924	0.7	20		
14 M	0431	4.6	140				2250	1.6	50				1630	5.2	160		
	1108	1.0	30			29 Tu	0427	3.9	120				2312	2.3	70		
	1716	3.6	110				1044	0.7	20			14 F	0209	3.0	90		
	2304	2.0	60				1718	4.3	130				0925	0.7	20		
15 Tu	0449	3.9	120				2323	2.3	70				1655	4.9	150		
	1117	1.0	30			30 W	0438	3.6	110				2336	3.0	90		
	1746	3.6	110				1053	1.0	30			15 Sa	0142	3.0	90		
	2350	2.3	70				1748	4.3	130				0920	0.7	20		
													1717	4.3	130		
						31 Th	0000	2.6	80								
							0315	3.0	90			30 Su	0200	3.0	90		
							1049	1.0	30				0924	1.3	40		
							1821	3.9	120				1712	4.3	130		
												31 M	0846	1.6	50		
													1731	3.9	120		
													1941	3.6	110		
													2200	3.6	110		

Time meridian 142° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Heights are referred to the chart datum of soundings.

* See Page 384 for the remaining tides on this day.

Port Lincoln, Australia, 2008

Times and Heights of High and Low Waters

April							May							June																
Time			Height				Time			Height				Time			Height				Time			Height						
	h	m	ft	cm			h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm
1 Tu	0736	1.6	50		16 W	0002	3.9	120		1 Th	0614	2.0	60		16 F	0515	2.3	70		1 Su	0022	3.3	100		16 M	0054	3.0	90		
	1735	3.3	100			0700	2.0	60			1256	3.6	110			1219	4.6	140			0459	2.3	70			0444	2.3	70		
	1849	3.3	100			1324	3.6	110			1822	3.0	90			1900	2.3	70			1215	5.2	160			1224	5.6	170		
	2353	4.3	130			1858	2.6	80			2353	3.9	120								1932	2.0	60			1954	2.0	60		
2 W	0724	1.3	40		17 Th	0033	3.9	120		2 F	0630	1.6	50		17 Sa	0015	3.3	100		2 M	0123	3.0	90		17 Tu	0137	3.0	90		
	1355	3.3	100			0700	1.6	50			1252	4.3	130			0539	2.0	60			0525	2.3	70			0535	2.3	70		
	1850	2.6	80			1315	3.9	120			1858	2.3	70			1234	4.9	150			1246	5.9	180			1258	5.9	180		
						1915	2.0	60								1923	2.0	60			2014	1.6	50			2020	2.0	60		
3 Th	0039	4.6	140		18 F	0100	3.9	120		3 Sa	0045	3.9	120		18 Su	0054	3.3	100		3 Tu	0210	3.0	90		18 W	0211	3.0	90		
	0730	1.0	30			0708	1.6	50			0648	1.6	50			0609	2.0	60			0552	2.3	70			0621	2.3	70		
	1346	3.6	110			1324	4.6	140			1304	4.9	150			1256	5.6	170			1318	6.2	190			1331	5.9	180		
	1917	2.0	60			1937	1.6	50			1933	1.6	50			1949	1.6	50			2055	1.3	40			2047	1.6	50		
4 F	0115	4.6	140		19 Sa	0124	3.9	120		4 Su	0126	3.9	120		19 M	0129	3.3	100		4 W	0249	2.6	80		19 Th	0240	3.0	90		
	0745	1.0	30			0722	1.3	40			0705	1.6	50			0637	2.0	60			0618	2.0	60			0702	2.0	60		
	1353	4.3	130			1337	4.9	150			1324	5.2	160			1321	5.9	180			1351	6.6	200			1404	6.2	190		
	1947	1.3	40			2002	1.3	40			2008	1.3	40			2016	1.6	50			2134	1.6	50			2116	1.6	50		
5 Sa	0148	4.6	140		20 Su	0149	3.9	120		5 M	0202	3.6	110		20 Tu	0200	3.3	100		5 Th	0318	2.6	80		20 F	0306	3.3	100		
	0802	1.0	30			0739	1.3	40			0717	1.6	50			0704	1.6	50			0645	2.0	60			0739	2.0	60		
	1407	4.6	140			1355	5.2	160			1345	5.9	180			1347	5.9	180			1423	6.6	200			1436	6.2	190		
	2019	1.0	30			2028	1.0	30			2043	1.0	30			2045	1.3	40			2210	1.6	50			2145	1.6	50		
6 Su	0218	4.6	140		21 M	0214	3.9	120		6 Tu	0232	3.3	100		21 W	0229	3.3	100		6 F	0335	2.3	70		21 Sa	0331	3.3	100		
	0818	1.0	30			0756	1.3	40			0725	1.6	50			0729	1.6	50			0714	1.6	50			0812	2.0	60		
	1424	5.2	160			1415	5.9	180			1409	6.2	190			1415	6.2	190			1454	6.2	190			1506	5.9	180		
	2049	0.7	20			2054	1.0	30			2116	1.3	40			2113	1.6	50			2240	2.0	60			2213	1.6	50		
7 M	0244	4.3	130		22 Tu	0237	3.6	110		7 W	0254	3.0	90		22 Th	0254	3.3	100		7 Sa	0330	2.3	70		22 Su	0357	3.3	100		
	0829	1.0	30			0811	1.0	30			0730	1.3	40			0751	1.6	50			0745	1.6	50			0844	2.0	60		
	1442	5.6	170			1438	5.9	180			1433	6.2	190			1441	6.2	190			1523	5.9	180			1536	5.9	180		
	2119	1.0	30			2119	1.0	30			2148	1.3	40			2141	1.6	50			2300	2.3	70			2240	1.6	50		
8 Tu	0304	3.6	110		23 W	0300	3.6	110		8 Th	0301	2.6	80		23 F	0317	3.3	100		8 Su	0338	2.6	80		23 M	0423	3.3	100		
	0833	1.0	30			0826	1.0	30			0738	1.3	40			0812	1.6	50			0820	2.0	60			0915	2.0	60		
	1500	5.9	180			1500	5.9	180			1459	6.2	190			1508	5.9	180			1551	5.2	160			1604	5.6	170		
	2148	1.0	30			2145	1.3	40			2219	2.0	60			2210	1.6	50			2315	2.6	80			2306	2.0	60		
9 W	0315	3.3	100		24 Th	0320	3.3	100		9 F	0259	2.3	70		24 Sa	0340	3.0	90		9 M	0412	3.0	90		24 Tu	0453	3.3	100		
	0832	1.0	30			0839	1.3	40			0752	1.3	40			0831	1.6	50			0858	2.0	60			0951	2.3	70		
	1519	5.9	180			1523	5.9	180			1525	5.9	180			1534	5.9	180			1618	4.9	150			1632	5.2	160		
	2215	1.6	50			2210	1.6	50			2248	2.3	70			2240	2.0	60			2330	2.6	80			2331	2.0	60		
10 Th	0319	3.0	90		25 F	0337	3.3	100		10 Sa	0045	2.6	80		25 Su	0404	3.0	90		10 Tu	0503	3.0	90		25 W	0528	3.6	110		
	0832	1.0	30			0851	1.3	40			0811	1.3	40			0850	2.0	60			0939	2.6	80			1033	2.6	80		
	1542	5.9	180			1546	5.6	170			1552	5.6	170			1601	5.6	170			1645	4.6	140			1700	4.9	150		
	2241	2.0	60			2237	2.0	60			2315	2.6	80			2315	2.0	60			2351	2.3	70			2358	2.0	60		
11 F	0154	2.6	80		26 Sa	0350	3.0	90		11 Su	0047	2.6	80		26 M	0434	3.0	90		11 W	0615	3.3	100		26 Th	0610	3.6	110		
	0207	2.6	80			0900	1.3	40			0827	1.6	50			0908	2.0	60			1047	3.0	90			1131	3.0	90		
	0304	2.6	80			1609	5.2	160			1620	4.9	150			1630	5.2	160			1704	3.9	120			1728	4.3	130		
	0839	1.0	30			2308	2.3	70			2346	3.0	90			2359	2.3	70												
12 Sa	1606*	5.6	170		27 Su	0353	3.0	90		12 M	0052	3.0	90		27 Tu	0522	3.0	90		12 Th	0024	2.3	70		27 F	0024	2.3	70		
	0117	3.0	90			0907	1.6	50			0832	2.0	60			0921	2.3	70			0815	3.6	110			0717	3.9	120		
	0845	1.0	30			1633	4.9	150			1645	4.3	130			1703	4.9	150			1310	3.6	110			1255	3.3	100		
	1631	4.9	150			2352	2.6	80													1556	3.6	110			1751	3.6	110		
13 Su	0106	3.0	90		28 M	0156	2.6	80		13 Tu	0811	2.3	70		28 W	0105	2.3	70		13 F	0109	2.3	70		28 Sa	0048	2.3	70		
	0843	1.3	40			0904	2.0	60			0917	3.0	90			0721	3.0	90			1041	4.3	130			0934	4.3	130		
	1653	4.3	130			1659	4.6	140								0917	3.0	90												
14 M	0826	1.6	50		29 Tu	0723	2.3	70		14 W	0518	2.6	80		29 Th	0257	2.6	80		14 Sa										

Port Lincoln, Australia, 2008

Times and Heights of High and Low Waters

July			August			September		
Time	Height		Time	Height		Time	Height	
	h	m		h	m		h	m
1 Tu	0249	2.6	16 W	0225	3.0	1 F	0247	3.9
	0349	2.6		0505	2.6	Sa	0843	1.0
	1231	5.9		1255	5.6	M	1445	4.9
	2055	1.3		2035	1.6		2101	1.0
2 W	0302	2.6	17 Th	0233	3.0	2 Tu	0300	4.6
	0501	2.6		0611	2.3		0909	1.0
	1318	6.2		1333	5.6		1500	4.6
	2127	1.3		2052	1.6		2112	1.0
3 Th	0321	2.6	18 F	0250	3.3	3 W	0315	4.9
	0559	2.3		0715	2.3		0932	1.0
	1401	6.2		1408	5.9		1516	4.6
	2153	1.3		2114	1.3		2119	1.0
4 F	0338	2.6	19 Sa	0309	3.3	4 Th	0334	4.9
	0654	2.0		0804	2.0		0956	1.3
	1438	6.2		1440	5.9		1533	4.3
	2211	1.6		2137	1.3		2129	1.0
5 Sa	0352	2.6	20 Su	0330	3.6	5 F	0357	5.2
	0750	2.0		0842	1.6		1020	1.6
	1507	5.9		1509	5.9		1551	3.9
	2223	2.0		2159	1.3		2139	1.0
6 Su	0401	3.0	21 M	0350	3.6	6 Sa	0421	4.9
	0839	2.0		0915	1.6		1046	2.0
	1530	5.6		1535	5.9		1601	3.3
	2234	2.0		2219	1.3		2146	1.0
7 M	0409	3.3	22 Tu	0411	3.9	7 Su	0444	4.9
	0921	2.0		0945	1.6		1114	2.3
	1550	5.2		1559	5.6		1430	3.3
	2243	2.0		2236	1.3		2144	1.3
8 Tu	0429	3.6	23 W	0433	3.9	8 M	0506	4.6
	1000	2.3		1017	2.0		1145	3.0
	1612	4.9		1621	4.9		1403	3.0
	2252	2.0		2251	1.3		2133	1.6
9 W	0500	3.9	24 Th	0456	4.3	9 Tu	0528	3.9
	1041	2.6		1051	2.3		1237	3.3
	1632	4.6		1640	4.6		1313	3.3
	2306	1.6		2302	1.6		2059	1.6
10 Th	0538	4.3	25 F	0522	4.3	10 W	0548	3.6
	1125	3.0		1129	2.6		0725	3.6
	1648	3.9		1653	3.9		1116	3.9
	2324	1.6		2306	1.6		1958	1.6
11 F	0624	4.3	26 Sa	0554	4.6	11 Th	0252	3.0
	1217	3.3		1217	3.0		0357	3.0
	1618	3.6		1515	3.3		0600	3.0
	2341	2.0		2259	1.6		0644	3.0
12 Sa	0754	4.3	27 Su	0638	4.6		1219*	4.3
	2337	2.0		2228	1.6		0202	3.0
							0647	2.6
							1252	4.6
							1947	1.3
13 Su	1018	4.6	28 M	1014	4.6	13 Sa	0155	3.3
	2248	2.3		2132	1.6		0713	2.0
							1321	4.9
							2000	1.0
14 M	1122	4.9	29 Tu	1145	4.9	14 Su	0202	3.6
	2105	2.3		2100	1.3		0742	1.6
							1349	5.2
							2016	1.0
15 Tu	1211	5.2	30 W	1255	5.6	15 M	0215	4.3
	2030	2.0		2100	1.3		0812	1.0
							1416	5.2
							2034	1.0
			31 Th	0311	2.6			
				0519	2.6			
				1342	5.9			
				2112	1.3			
						31 Su	0236	3.6
							0816	1.3
							1427	5.2
							2050	1.0

Time meridian 142° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.

Heights are referred to the chart datum of soundings.

* See Page 384 for the remaining tides on this day.

Time meridian 142° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Port Hedland, Australia, 2008

Times and Heights of High and Low Waters

April				May				June			
Time	Height			Time	Height			Time	Height		
	h	m	ft		h	m	ft		h	m	ft
1 Tu	1117	13.5	410	16 W	0224	9.8	300	1 Su	0202	8.9	270
	1243	13.5	410		0903	16.7	510		0817	18.7	570
	1923	14.4	440		1458	9.8	300		1445	6.9	210
					2112	17.4	530		2105	17.7	540
2 W	0247	10.8	330	17 Th	0316	8.2	250	2 M	0259	7.9	240
	0933	15.4	470		0940	18.4	560		0910	20.0	610
	1511	11.5	350		1539	7.9	240		1536	5.2	160
	2111	16.4	500		2154	18.7	570		2200	18.7	570
3 Th	0330	8.9	270	18 F	0352	6.9	210	3 Tu	0348	6.6	200
	0955	17.4	530		1010	20.0	610		1000	21.0	640
	1545	9.2	280		1613	5.9	180		1623	3.6	110
	2153	18.4	560		2228	20.0	610		2247	19.4	590
4 F	0400	7.2	220	19 Sa	0424	5.6	170	4 W	0434	5.9	180
	1019	19.4	590		1039	21.0	640		1046	22.0	670
	1615	6.9	210		1644	4.6	140		1709	3.0	90
	2228	20.0	610		2300	20.7	630	●	2331	20.0	610
5 Sa	0429	5.2	160	20 Su	0453	4.9	150	5 Th	0519	5.2	160
	1046	21.0	640		1107	22.0	670		1133	22.3	680
	1646	4.6	140		1713	3.6	110		1753	2.6	80
	2301	21.7	660	○	2329	21.0	640				
6 Su	0458	3.9	120	21 M	0521	4.6	140	6 F	0015	20.3	620
	1116	22.6	690		1133	22.3	680		0604	4.9	150
	1717	2.6	80		1740	3.3	100		1218	22.3	680
●	2335	22.3	680		2357	21.0	640		1836	2.6	80
7 M	0529	3.0	90	22 Tu	0546	4.6	140	7 Sa	0056	20.0	610
	1146	23.6	720		1159	22.3	680		0648	5.2	160
	1750	1.6	50		1806	3.3	100		1302	22.0	670
8 Tu	0009	22.6	690	23 W	0022	21.0	640		1918	3.3	100
	0600	2.6	80		0611	4.9	150	8 Su	0136	19.7	600
	1216	24.3	740		1223	22.3	680		0732	5.9	180
	1823	1.3	40		1830	3.6	110		1345	21.0	640
9 W	0041	22.3	680	24 Th	0046	20.7	630		2001	4.6	140
	0631	3.0	90		0634	5.6	170	9 M	0217	19.4	590
	1246	24.3	740		1246	22.0	670		0818	6.6	200
	1856	1.6	50		1855	4.3	130		1430	20.0	610
10 Th	0112	21.7	660	25 F	0109	20.0	610		2044	5.9	180
	0702	3.9	120		0658	6.2	190	10 Tu	0300	18.7	570
	1315	23.6	720		1310	21.0	640		0907	7.5	230
	1929	3.0	90		1919	5.2	160		1515	18.4	560
11 F	0142	20.3	620	26 Sa	0132	19.0	580	○	2130	7.2	220
	0734	5.2	160		0722	7.2	220	11 W	0347	17.7	540
	1347	22.3	680		1334	20.3	620		1002	8.5	260
	2003	4.9	150		1945	6.2	190		1606	17.1	520
12 Sa	0215	18.7	570	27 Su	0158	18.0	550		2220	8.5	260
	0808	7.2	220		0747	8.2	250	12 Th	0445	17.4	530
	1423	20.3	620		1400	19.0	580		1112	9.2	280
	2044	7.2	220		2015	7.5	230		1714	15.7	480
13 Su	0254	17.1	520	28 M	0227	16.7	510		2329	9.5	290
	0847	9.5	290		0817	9.8	300	13 F	0602	16.7	510
	1507	18.0	550		1432	17.7	540		1239	9.5	290
○	2142	9.5	290	●	2054	9.2	280		1848	15.4	470
14 M	0356	15.1	460	29 Tu	0310	15.4	470	14 Sa	0056	10.2	310
	1002	11.5	350		0901	11.2	340		0720	17.1	520
	1623	15.7	480		1521	16.1	490		1359	8.9	270
					2208	10.8	330		2017	15.4	470
15 Tu	0007	10.8	330	30 W	0502	14.4	440	15 Su	0215	9.8	300
	0733	14.8	450		1119	12.1	370		0825	17.4	530
	1315	11.8	360		1733	15.1	460		1500	8.2	250
	1949	15.7	480						2124	16.1	490
				15 Th	0104	9.8	300	30 M	0100	9.5	290
					0744	16.7	510		0721	17.7	540
					1400	9.5	290		1400	7.5	230
					2016	16.4	500		2028	15.7	480
								31 Sa	0050	9.5	290
									0716	17.4	530
									1344	8.5	260
									1958	16.4	500

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Port Hedland, Australia, 2008

Times and Heights of High and Low Waters

July				August				September															
Time		Height		Time		Height		Time		Height		Time		Height									
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm								
1 Tu	0218	9.2	280	16 W	0350	9.8	300	1 F	0437	6.9	210	16 Sa	0456	6.9	210	1 M	0542	2.3	70	16 Tu	0526	3.0	90
	0834	18.7	570		0947	17.4	530		1047	20.3	620		1100	19.4	590		1159	22.3	680		1141	21.7	660
	1512	6.2	190		1624	7.2	220		1707	3.6	110		1715	4.6	140		1757	1.6	50		1739	2.6	80
	2145	17.1	520		2244	16.7	510		2329	19.4	590		2330	19.4	590						2355	22.3	680
2 W	0329	8.2	250	17 Th	0432	8.5	260	2 Sa	0520	4.9	150	17 Su	0523	5.2	160	2 Tu	0015	22.6	690	17 W	0555	1.6	50
	0941	19.7	600		1031	18.4	560		1133	21.3	650		1131	20.7	630		0614	1.6	50		1212	22.3	680
	1615	4.9	150		1700	5.9	180		1745	2.6	80		1741	3.3	100		1230	22.3	680		1806	2.0	60
	2243	18.0	550		2315	17.7	540						2357	20.3	620		1826	1.6	50				
3 Th	0429	6.9	210	18 F	0507	7.5	230	3 Su	0005	20.7	630	18 M	0551	4.3	130	3 W	0043	22.6	690	18 Th	0022	23.0	700
	1041	20.7	630		1109	19.4	590		0559	3.6	110		1203	21.3	650		0643	1.6	50		0625	1.0	30
	1706	3.6	110		1731	4.9	150		1215	22.3	680		1807	2.6	80		1259	22.0	670		1241	22.0	670
	2330	19.0	580		2346	18.7	570		1820	2.0	60						1853	2.3	70		1835	2.0	60
4 F	0520	5.6	170	19 Sa	0538	6.2	190	4 M	0040	21.7	660	19 Tu	0025	21.3	650	4 Th	0107	22.6	690	19 F	0048	23.3	710
	1132	21.7	660		1145	20.3	620		0635	3.0	90		0620	3.0	90		0711	2.3	70		0654	1.0	30
	1752	3.0	90		1800	4.3	130		1251	22.3	680		1234	21.7	660		1324	21.0	640		1310	21.7	660
					1853	1.6	50						1834	2.3	70		1918	3.3	100		1902	3.0	90
5 Sa	0014	20.0	610	20 Su	0016	19.4	590	5 Tu	0111	22.0	670	20 W	0052	22.0	670	5 F	0130	22.0	670	20 Sa	0114	22.6	690
	0605	4.9	150		0609	5.6	170		0709	2.6	80		0649	2.6	80		0736	3.3	100		0724	2.0	60
	1219	22.0	670		1217	20.7	630		1324	22.0	670		1303	21.7	660		1347	20.0	610		1336	20.3	620
	1833	2.6	80		1829	3.6	110		1923	2.3	70		1901	2.3	70		1941	4.6	140		1930	3.9	120
6 Su	0053	20.7	630	21 M	0045	20.0	610	6 W	0140	22.0	670	21 Th	0117	22.3	680	6 Sa	0151	21.0	640	21 Su	0140	22.0	670
	0647	4.3	130		0639	4.9	150		0740	3.0	90		0718	2.3	70		0800	4.6	140		0755	3.3	100
	1302	22.0	670		1249	21.0	640		1354	21.0	640		1332	21.3	650		1409	18.7	570		1404	19.0	580
	1912	2.6	80		1858	3.3	100		1951	3.3	100		1929	3.0	90		2002	5.9	180		1959	5.9	180
7 M	0130	20.7	630	22 Tu	0115	20.3	620	7 Th	0206	21.3	650	22 F	0143	22.0	670	7 Su	0213	19.7	600	22 M	0209	20.3	620
	0728	4.3	130		0709	4.6	140		0811	3.9	120		0748	3.0	90		0824	5.9	180		0829	5.6	170
	1342	21.3	650		1320	21.0	640		1421	19.7	600		1400	20.3	620		1430	17.1	520		1436	17.1	520
	1947	3.3	100		1926	3.3	100		2018	4.6	140		1957	3.9	120		2021	7.5	230		2029	7.9	240
8 Tu	0205	20.7	630	23 W	0143	20.7	630	8 F	0231	20.3	620	23 Sa	0207	21.3	650	8 M	0234	18.0	550	23 Tu	0244	18.4	560
	0805	4.9	150		0740	4.6	140		0840	5.2	160		0819	3.9	120		0847	7.9	240		0911	7.9	240
	1418	20.3	620		1351	20.7	630		1447	18.4	560		1428	19.0	580		1453	15.4	470		1520	15.1	460
	2022	4.3	130		1954	3.6	110		2043	6.2	190		2024	5.2	160		2038	9.5	290		2106	10.2	310
9 W	0239	20.0	610	24 Th	0210	20.7	630	9 Sa	0257	19.0	580	24 Su	0235	20.3	620	9 Tu	0256	16.4	500	24 W	0337	16.1	490
	0844	5.6	170		0812	4.6	140		0909	6.9	210		0853	5.2	160		0916	9.8	300		1052	10.2	310
	1453	19.4	590		1421	20.0	610		1515	16.7	510		1459	17.4	530		1519	13.8	420		1809	13.1	400
	2056	5.6	170		2024	4.6	140		2106	7.9	240		2053	7.2	220		2046	11.2	340				
10 Th	0313	19.4	590	25 F	0238	20.3	620	10 Su	0323	17.7	540	25 M	0308	18.7	570	10 W	0324	14.4	440	25 Th	0023	12.1	370
	0922	6.9	210		0846	5.2	160		0943	8.5	260		0935	7.5	230		1255	11.5	350		0707	14.8	450
	1529	17.7	540		1454	19.0	580		1545	15.1	460		1540	15.4	470		2241	13.5	410		1418	9.8	300
	2130	7.2	220		2055	5.9	180		2129	9.8	300		2128	9.2	280						2113	15.4	470
11 F	0348	18.4	560	26 Sa	0310	19.7	600	11 M	0357	16.1	490	26 Tu	0357	16.7	510	11 Th	0301	12.5	380	26 F	0258	10.2	310
	1006	8.2	250		0926	6.2	190		1042	10.2	310		1059	9.5	290		0831	14.1	430		0908	16.4	500
	1608	16.4	500		1532	17.4	530		1637	13.5	410		1713	13.5	410		1531	9.8	300		1523	7.5	230
	2207	8.9	270		2130	7.2	220		2156	11.5	350		2300	11.5	350		2202	15.1	460		2148	17.4	530
12 Sa	0430	17.1	520	27 Su	0349	18.7	570	12 Tu	0527	14.4	440	27 W	0622	15.1	460	12 F	0343	10.5	320	27 Sa	0342	7.5	230
	1107	9.2	280		1017	7.5	230		1337	10.5	320		1353	9.5	290		0937	16.1	490		0955	18.7	570
	1703	14.8	450		1622	15.7	480		2138	13.5	410		2118	14.1	430		1558	7.9	240		1559	5.6	170
	2301	10.2	310		2215	8.9	270								2216		16.7	510	2218		19.7	600	
13 Su	0538	16.1	490	28 M	0447	17.4	530	13 W	0239	11.8	360	28 Th	0244	10.8	330	13 Sa	0407	8.5	260	28 Su	0416	5.2	160
	1242	9.8	300		1146	8.5	260		0835	14.8	450		0858	16.4	500		1010	17.7	540		1030	20.3	620
	1902	14.1	430		1758	14.4	440		1543	9.2	280		1538	7.5	230		1621	6.2	190		1630	4.3	130
					2358	10.5	320		2215	15.1	460		2208	16.4	500		2237	18.4	560		2247	21.0	640
14 M	0057	11.2	340	29 Tu	0637	16.4	500	14 Th	0355	10.2	310	29 F	0354	8.2	250	14 Su	0431	6.6	200	29 M	0448	3.3	100
	0723	15.7	480		1336	8.5	260		0947	16.4	500		1002	18.4	560		1040	19.4	590		1104	21.3	650
	1418	9.5	290		2023	14.4	440		1620	7.5	230		1619	5.6	170		1645	4.6	140		1700	3.0	90
	2101	14.4	440						2239	16.4	500		2242	18.7	570		2301	20.0	610		2316	22.3	680
15 Tu	0242	10.8	330	30 W	0202	10.5	320	15 F	0428	8.5	260	30 Sa	0433	5.9	180	15 M	0458	4.6	140	30 Tu	0518	2.3	70
	0846	16.1	490		0827	17.1	520		1027	18.0	550		1045	20.3	620		1110	20.7	630		1135	22.0	670
	1537	8.2	250		1518	7.5	230		1648	5.9	180		1654	3.6	110		1712	3.3	100		1730	2.6	80
	2206	15.7	480		2200	16.1	490		2304	18.0	550		2314	20.7	630		2328	21.3	650		2344	22.6	690
				31 Th	0340	8.9	270					31 Su	0509	3.9	120								
					0950	18.7	570						1123	21.7	660								
					1623	5.6	170						1726	2.3	70								
					2248	17.7	540						2345	22.0	670								

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Port Hedland, Australia, 2008

Times and Heights of High and Low Waters

October					November					December													
Time		Height			Time		Height			Time		Height			Time		Height						
	h m	ft	cm			h m	ft	cm			h m	ft	cm			h m	ft	cm					
1 W	0548	1.6	50	16 Th	0528	1.3	40	1 Sa	0005	22.0	670	16 Su	0002	23.0	700	1 M	0018	21.0	640	16 Tu	0044	22.3	680
	1205	21.7	660		1147	22.0	670		0617	3.0	90		0620	1.6	50		0635	4.3	130		0701	2.6	80
	1758	3.0	90		1738	3.0	90		1234	20.0	610		1241	20.7	630		1253	19.4	590		1322	20.7	630
					2350	23.6	720		1822	5.2	160		1830	4.9	150		1841	6.9	210		1915	5.2	160
2 Th	0010	22.6	690	17 F	0600	0.7	20	2 Su	0030	21.3	650	17 M	0041	22.3	680	2 Tu	0047	20.7	630	17 W	0127	21.7	660
	0615	1.6	50		1219	21.7	660		0644	3.6	110		0700	2.6	80		0704	4.6	140		0742	3.3	100
	1231	21.3	650		1809	3.0	90		1259	19.7	600		1318	20.0	610		1321	19.0	580		1401	20.3	620
	1823	3.3	100			1846	6.2		190	1846	6.2		190	1910	5.9		180	1910	7.2		220	2000	5.9	180
3 F	0033	22.3	680	18 Sa	0020	23.6	720	3 M	0055	20.7	630	18 Tu	0120	21.3	650	3 W	0116	20.0	610	18 Th	0209	20.7	630
	0641	2.3	70		0633	1.0	30		0709	4.6	140		0741	3.9	120		0732	5.2	160		0822	4.6	140
	1256	20.7	630		1250	21.0	640		1323	18.7	570		1358	19.0	580		1350	18.7	570		1441	20.0	610
	1846	4.3	130		1841	3.6	110		1912	7.2	220		1955	6.9	210		1941	7.9	240		2045	6.9	210
4 Sa	0056	22.0	670	19 Su	0050	23.0	700	4 Tu	0120	19.7	600	19 W	0204	20.0	610	4 Th	0146	19.0	580	19 F	0252	19.4	590
	0705	3.0	90		0706	2.0	60		0734	5.9	180		0827	5.6	170		0803	6.2	190		0902	5.9	180
	1317	20.0	610		1321	20.0	610		1349	17.7	540		1444	18.0	550		1422	18.0	550		1522	19.4	590
	1909	5.2	160		1913	4.9	150		1938	8.2	250		2047	8.5	260		2017	8.5	260		2133	7.9	240
5 Su	0117	21.0	640	20 M	0122	21.7	660	5 W	0147	18.7	570	20 Th	0254	18.4	560	5 F	0222	18.0	550	20 Sa	0338	17.7	540
	0729	4.3	130		0741	3.6	110		0803	7.2	220		0919	7.5	230		0839	7.2	220		0945	7.5	230
	1339	18.7	570		1354	18.7	570		1419	16.7	510		1540	17.1	520		1500	17.4	530		1609	18.4	560
	1930	6.6	200		1947	6.6	200		2008	9.5	290		2156	9.8	300		2102	9.5	290		2231	8.9	270
6 M	0139	19.7	600	21 Tu	0158	20.0	610	6 Th	0218	17.1	520	21 F	0359	16.4	500	6 Sa	0304	17.1	520	21 Su	0431	16.4	500
	0751	5.9	180		0820	5.9	180		0839	8.5	260		1026	8.9	270		0921	8.2	250		1036	8.9	270
	1401	17.4	530		1433	17.1	520		1501	15.4	470		1703	16.4	500		1550	17.1	520		1710	17.7	540
	1951	7.9	240		2028	8.9	270		2052	10.8	330		2335	10.2	310		2203	10.2	310		2354	9.5	290
7 Tu	0201	18.4	560	22 W	0242	17.7	540	7 F	0304	15.7	480	22 Sa	0541	15.4	470	7 Su	0403	16.1	490	22 M	0553	15.1	460
	0815	7.5	230		0913	8.2	250		0936	10.2	310		1201	9.8	300		1017	9.5	290		1152	10.2	310
	1426	16.1	490		1530	15.4	470		1628	14.4	440		1853	16.7	510		1701	16.7	510		1832	17.1	520
	2012	9.5	290		2138	10.8	330		2259	12.1	370						2339	10.2	310				
8 W	0226	16.7	510	23 Th	0353	15.7	480	8 Sa	0452	14.4	440	23 Su	0123	9.5	290	8 M	0536	15.1	460	23 Tu	0127	9.5	290
	0844	9.2	280		1100	9.8	300		1214	10.8	330		0736	15.7	480		1148	10.2	310		0742	14.8	450
	1456	14.4	440		1825	14.4	440		1918	15.1	460		1339	9.5	290		1835	17.1	520		1333	10.8	330
	2034	11.2	340						2006	17.7	540		2067	10.7	540						1954	17.4	530
9 Th	0257	14.8	450	24 F	0031	11.2	340	9 Su	0129	10.8	330	24 M	0232	8.2	250	9 Tu	0115	9.2	280	24 W	0244	8.5	260
	0939	11.2	340		0656	15.1	460		0737	15.1	460		0852	16.7	510		0725	15.4	470		0915	15.7	480
	1944	13.1	400		1331	9.8	300		1348	9.8	300		1442	8.9	270		1324	9.8	300		1454	10.2	310
					2023	16.1	490		2020	16.7	510		2057	18.7	570		1947	18.0	550		2100	17.7	540
10 F	0110	12.5	380	25 Sa	0225	9.5	290	10 M	0231	8.9	270	25 Tu	0319	6.6	200	10 W	0219	7.9	240	25 Th	0340	7.5	230
	0726	13.8	420		0842	16.4	500		0847	16.4	500		0941	17.7	540		0845	16.4	500		1009	16.7	510
	1421	10.5	320		1445	8.2	250		1442	8.5	260		1528	7.9	240		1430	9.2	280		1550	9.5	290
	2108	15.1	460		2109	18.0	550		2100	18.4	560		2137	19.7	600		2045	19.0	580		2151	18.7	570
11 Sa	0258	10.8	330	26 Su	0315	7.2	220	11 Tu	0314	6.9	210	26 W	0358	5.6	170	11 Th	0315	5.9	180	26 F	0424	6.6	200
	0900	15.4	470		0930	18.0	550		0933	18.0	550		1019	18.4	560		0944	17.7	540		1047	17.7	540
	1511	8.9	270		1526	6.9	210		1522	7.2	220		1606	7.2	220		1524	7.9	240		1632	8.5	260
	2132	17.1	520		2143	19.7	600		2136	20.0	610		2213	20.3	620		2136	20.3	620		2233	19.4	590
12 Su	0330	8.5	260	27 M	0350	5.6	170	12 W	0351	4.9	150	27 Th	0433	4.6	140	12 F	0404	4.6	140	27 Sa	0500	5.6	170
	0938	17.4	530		1007	19.4	590		1012	19.4	590		1054	19.0	580		1032	18.7	570		1121	18.4	560
	1541	7.2	220		1600	5.6	170		1600	5.9	180		1641	6.6	200		1615	6.9	210		1708	7.9	240
	2157	18.7	570		2214	21.0	640		2211	21.7	660		2246	20.7	630		2225	21.7	660		2310	20.0	610
13 M	0358	6.2	190	28 Tu	0423	3.9	120	13 Th	0427	3.0	90	28 F	0506	3.9	120	13 Sa	0450	3.3	100	28 Su	0533	4.9	150
	1011	19.0	580		1041	20.3	620		1049	20.3	620		1126	19.4	590		1117	19.7	600		1152	19.0	580
	1608	5.6	170		1632	4.9	150		1636	4.9	150		1713	6.6	200		1701	5.9	180		1741	7.2	220
	2223	20.3	620		2244	21.7	660		2247	22.6	690		2318	21.0	640		2313	22.3	680		2344	20.7	630
14 Tu	0427	4.3	130	29 W	0454	3.0	90	14 F	0504	2.0	60	29 Sa	0537	3.9	120	14 Su	0536	2.6	80	29 M	0604	4.3	130
	1043	20.3	620		1112	20.7	630		1127	21.0	640		1156	19.7	600		1200	20.3	620		1222	19.7	600
	1637	4.3	130		1702	4.6	140		1714	4.6	140		1743	6.2	190		1747	5.2	160		1812	6.6	200
	2251	22.0	670		2312	22.0	670		2325	23.0	700		2349	21.0	640		2359	22.6	690				
15 W	0457	2.6	80	30 Th	0523	2.6	80	15 Sa	0542	1.3	40	30 Su	0607	3.9	120	15 M	0619	2.3	70	30 Tu	0016	21.0	640
	1115	21.3	650		1142	20.7	630		1204	21.0	640		1225	19.7	600		1242	20.7	630		0633	4.3	130
	1707	3.3	100		1730	4.6	140		1751	4.3	130		1812	6.6	200		1831	5.2	160		1251	20.0	610
	2320	23.0	700		2339	22.0	670												1841		6.6	200	
15 O				31 F	0551	2.6	80												31 W	0046	21.0	640	
					1209	20.7	630											0701		4.3	130		
					1758	4.9	150											1319		20.0	610		
																		1910		6.2	190		

Time meridian 120° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Mergui, Burma, 2008

Times and Heights of High and Low Waters

January					February					March														
Time		Height			Time		Height			Time		Height			Time		Height							
1 Tu	h	m	ft	cm	16 W ●	h	m	ft	cm	1 F	h	m	ft	cm	16 Sa	h	m	ft	cm	16 Su	h	m	ft	cm
	0315	11.6	354	0300		13.3	406	0339	9.6		292	0502	10.0	304		0230	10.0	305	0526		9.6	292		
	0941	5.3	163	0915		3.2	99	0956	6.6		200	1109	6.2	190		0839	6.1	187	1134		7.1	217		
	1621	11.6	355	1534		13.4	408	1819	10.6		322	1835	11.4	348		1517	10.2	310	1842		11.2	340		
	2240	6.6	201	2200		4.9	150									2333	7.3	221						
2 W	0427	10.6	323	17 Th	0359	12.1	368	2 Sa	0050	6.6	200	17 Su	0135	5.5	169	2 Su	0608	8.7	265	17 M	0148	5.6	170	
	1059	6.0	184		1013	4.4	133		0703	9.4	286		0740	10.5	320		1227	7.3	224		0754	10.9	332	
	1803	11.6	354		1654	12.7	387		1316	6.4	196		1359	5.5	167		1913	10.6	323		1411	5.6	171	
					2347	5.4	165		1945	11.5	351		2020	12.9	392				2020		12.9	394		
3 Th	0028	6.4	194	18 F	0542	11.2	342	3 Su	0212	5.4	166	18 M	0303	3.6	111	3 M	0152	6.1	187	18 Tu	0254	3.5	106	
	0627	10.4	317		1201	5.1	155		0826	10.5	321		0904	12.4	377		0809	10.0	305		0857	13.1	398	
	1246	5.9	181		1849	12.9	392		1430	5.2	158		1517	3.5	107		1415	5.9	180		1508	3.5	107	
	1917	12.3	374				2046		12.9	392	2124		14.8	450	2023		12.3	374	2111		14.8	451		
4 F	0140	5.5	168	19 Sa	0135	4.7	144	4 M	0311	4.0	123	19 Tu	0356	1.6	50	4 Tu	0254	4.4	134	19 W	0336	1.6	50	
	0744	11.0	335		0733	11.5	352		0919	11.9	364		0955	14.3	437		0903	11.9	362		0936	15.0	457	
	1354	5.2	159		1352	4.5	138		1524	3.7	114		1607	1.6	49		1508	4.1	124		1549	1.7	53	
	2012	13.2	402		2013	13.9	424		2132	14.3	437		2210	16.4	501		2111	14.1	430		2149	16.2	494	
5 Sa	0233	4.5	136	20 Su	0253	3.4	103	5 Tu	0357	2.6	78	20 W	0438	0.0	0	5 W	0336	2.5	77	20 Th	0413	0.3	9	
	0840	11.9	362		0853	12.7	388		1002	13.4	408		1035	15.9	485		0941	13.8	420		1012	16.4	500	
	1446	4.3	131		1508	3.2	99		1607	2.3	69		1648	0.2	6		1549	2.3	69		1626	0.6	17	
	2058	14.2	432		2119	15.3	465		2213	15.7	480		2248	17.5	534		2150	15.8	483		2223	17.1	520	
6 Su	0321	3.4	105	21 M	0356	1.8	55	6 W	0437	1.1	34	21 Th	0513	-1.0	-32	6 Th	0414	0.8	23	21 F	0445	-0.5	-15	
	0927	12.8	390		0956	14.1	431		1038	14.8	450		1111	16.9	516		1016	15.6	475		1042	17.3	527	
	1532	3.3	101		1609	1.8	55		1647	1.0	29		1723	-0.6	-17		1627	0.6	18		1657	-0.1	-2	
	2142	15.1	460		2216	16.6	506		2249	17.0	517		2322	17.9	547		2227	17.3	527		2254	17.3	528	
7 M	0404	2.5	75	22 Tu	0448	0.4	11	7 Th	0512	-0.2	-5	22 F	0546	-1.5	-45	7 F	0449	-0.8	-24	22 Sa	0513	-0.8	-23	
	1010	13.7	417		1047	15.5	471		1112	16.0	487		1142	17.4	530		1049	17.1	521		1111	17.7	539	
	1616	2.4	72		1658	0.6	18		1723	-0.1	-3		1754	-0.7	-22		1704	-0.7	-21		1726	-0.2	-6	
	2223	16.0	487		2302	17.6	535		2325	17.8	543		2350	17.8	542		2302	18.2	556		2320	17.2	524	
8 Tu ●	0445	1.6	48	23 W	0532	-0.7	-20	8 F	0546	-1.1	-35	23 Sa	0612	-1.3	-40	8 Sa	0522	-1.9	-57	23 Su	0539	-0.6	-19	
	1048	14.5	442		1129	16.3	498		1146	16.9	514		1207	17.4	529		1123	18.1	553		1136	17.7	538	
	1655	1.5	47		1739	-0.1	-4		1757	-0.7	-22		1819	-0.4	-12		1739	-1.5	-45		1751	0.0	-1	
	2301	16.7	509		2342	18.0	549		2357	18.2	555						2336	18.7	569		2344	16.8	511	
9 W	0523	0.8	24	24 Th	0608	-1.1	-33	9 Sa	0617	-1.6	-50	24 Su	0014	17.2	525	9 Su	0554	-2.4	-72	24 M	0601	-0.2	-7	
	1125	15.2	462		1205	16.7	510		1215	17.3	527		0634	-0.8	-23		1153	18.6	568		1157	17.4	529	
	1732	1.0	29		1815	-0.3	-8		1829	-0.8	-25		1229	16.9	516		1811	-1.6	-50		1814	0.4	12	
	2336	17.2	523								1842		0.3	8										
10 Th	0558	0.2	7	25 F	0015	17.8	543	10 Su	0027	18.0	550	25 M	0035	16.4	500	10 M	0007	18.4	562	25 Tu	0005	16.2	493	
	1158	15.6	475		0639	-0.9	-28		0646	-1.6	-48		0652	0.0	1		0624	-2.2	-66		0621	0.3	10	
	1807	0.7	21		1236	16.6	506		1243	17.3	527		1249	16.3	497		1222	18.5	563		1218	16.8	512	
					1845	0.2	6		1900	-0.4	-12		1903	1.0	32		1842	-1.1	-35		1835	1.0	30	
11 F	0010	17.3	527	26 Sa	0043	17.2	523	11 M	0055	17.4	530	26 Tu	0053	15.4	470	11 Tu	0035	17.7	538	26 W	0025	15.4	470	
	0632	0.0	0		0706	-0.3	-8		0714	-1.0	-30		0709	0.9	28		0652	-1.3	-41		0639	1.0	32	
	1231	15.8	481		1303	16.1	490		1310	16.9	514		1306	15.5	472		1248	17.8	543		1236	16.0	489	
	1841	0.8	25		1912	1.0	31		1930	0.5	14		1921	2.0	61		1910	-0.1	-4		1855	1.8	55	
12 Sa	0041	17.1	520	27 Su	0106	16.1	492	12 Tu	0123	16.3	498	27 W	0110	14.3	437	12 W	0103	16.4	500	27 Th	0045	14.5	441	
	0703	0.1	3		0728	0.7	20		0740	0.0	0		0724	1.9	59		0717	-0.1	-2		0657	2.0	61	
	1302	15.7	478		1326	15.3	467		1337	16.1	490		1324	14.5	441		1313	16.7	508		1256	15.1	460	
	1913	1.3	40		1934	2.0	62		1958	1.6	49		1942	3.1	95		1938	1.3	40		1917	2.9	87	
13 Su	0112	16.5	502	28 M	0126	15.0	457	13 W	0151	15.0	457	28 Th	0131	13.1	398	13 Th	0130	14.9	453	28 F	0106	13.4	407	
	0734	0.6	17		0745	1.7	52		0805	1.3	40		0742	3.1	96		0741	1.5	47		0717	3.1	95	
	1331	15.4	468		1345	14.4	440		1406	15.0	456		1347	13.2	402		1340	15.2	463		1319	13.9	423	
	1947	2.1	63		1957	3.1	95		2030	3.0	91		2008	4.5	136		2008	3.0	92		1942	4.2	127	
14 M	0142	15.6	476	29 Tu	0147	13.8	420	14 Th	0223	13.4	409	29 F	0157	11.6	354	14 F	0201	13.0	397	29 Sa	0131	12.0	367	
	0804	1.2	38		0804	2.8	85		0834	2.9	87		0806	4.6	139		0808	3.4	104		0740	4.5	137	
	1404	14.9	453		1408	13.5	410		1443	13.5	413		1418	11.7	357		1413	13.4	408		1348	12.5	380	
	2020	3.0	91		2020	4.2	129		2112	4.6	140		2046	6.0	182		2049	5.0	152		2018	5.6	172	
15 Tu	0218	14.6	444	30 W	0209	12.4	379	15 F	0308	11.6	354	15 Sa	0246	11.0	336	15 Sa	0246	11.0	336	30 Su	0206	10.6	322	
	0836	2.2	67		0825	4.0	121		0917	4.6	141		0847	5.5	167		0847	5.5	167		0812	6.1	185	
	1443	14.2	432		1437	12.3	375		1548	11.9	364		1521	11.4	347		1521	11.4	347		1443	11.0	334	
	2103	4.0	121		2056	5.4	166		2251															

Mergui, Burma, 2008

Times and Heights of High and Low Waters

April						May						June																
Time			Height			Time			Height			Time			Height			Time			Height							
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm				
1 Tu	0102	6.5	197		16 W	0220	3.8	116		1 Th	0113	5.0	152		16 F	0213	3.9	120		1 Su	0213	3.1	95		16 M	0256	4.5	137
	0724	10.3	314			0826	13.7	417			0731	13.0	397			0822	14.9	453			0825	16.4	499			0904	15.3	467
	1335	6.5	197			1439	4.1	124			1348	5.1	156			1439	4.2	127			1453	3.0	91			1525	4.2	127
	1940	12.2	373			2039	14.5	441			1942	14.0	426			2036	14.3	435			2046	15.5	472			2127	13.9	424
2 W	0215	4.7	143		17 Th	0301	2.5	75		2 F	0211	3.3	102		17 Sa	0254	3.3	100		2 M	0307	2.2	66		17 Tu	0338	3.9	119
	0826	12.3	376			0904	15.3	465			0822	15.0	456			0900	15.7	480			0915	17.5	532			0945	15.9	485
	1436	4.6	139			1518	2.7	83			1442	3.3	102			1517	3.3	102			1543	1.9	58			1606	3.6	109
	2034	14.1	429			2117	15.5	472			2034	15.4	469			2115	14.7	449			2139	16.1	492			2207	14.4	439
3 Th	0300	2.8	84		18 F	0338	1.5	46		3 Sa	0258	1.8	55		18 Su	0331	2.8	86		3 Tu	0357	1.4	43		18 W	0417	3.3	102
	0907	14.5	441			0938	16.4	500			0905	16.7	510			0935	16.4	499			1003	18.2	555			1023	16.4	500
	1519	2.6	80			1553	1.8	54			1527	1.7	53			1553	2.8	85			1633	1.1	35			1645	3.1	93
	2117	15.8	481			2150	16.0	489			2121	16.6	505			2150	15.0	458			2230	16.6	506			2245	14.8	452
4 F	0341	1.0	29		19 Sa	0410	1.0	29		4 Su	0342	0.6	18		19 M	0406	2.5	75		4 W	0445	1.0	29		19 Th	0454	2.9	87
	0945	16.4	500			1009	17.1	521			0946	18.1	551			1007	16.7	510			1051	18.6	566			1059	16.8	513
	1600	0.9	27			1626	1.2	38			1610	0.5	16			1627	2.4	74			1720	0.8	23			1722	2.7	81
	2156	17.2	524			2221	16.3	496			2204	17.3	528			2226	15.2	464			● 2319	16.7	510			○ 2320	15.2	462
5 Sa	0417	-0.6	-17		20 Su	0440	0.8	23		5 M	0424	-0.2	-7		20 Tu	0438	2.3	69		5 Th	0532	0.9	26		20 F	0527	2.5	77
	1020	17.9	547			1038	17.4	531			1027	18.9	576			1040	16.9	515			1137	18.6	566			1134	17.1	521
	1638	-0.5	-14			1657	1.0	31			1651	-0.2	-6			1701	2.2	67			1807	0.8	23			1756	2.4	72
	2234	18.1	552			○ 2251	16.2	495			● 2247	17.6	537			○ 2258	15.3	465								2354	15.4	468
6 Su	0454	-1.5	-47		21 M	0506	0.8	23		6 Tu	0504	-0.5	-16		21 W	0509	2.2	66		6 F	0005	16.6	506		21 Sa	0601	2.4	74
	1055	18.9	577			1105	17.5	532			1105	19.1	583			1112	16.9	516			0615	1.2	36			1207	17.2	523
	1715	-1.2	-38			1723	1.0	31			1732	-0.3	-10			1732	2.2	66			1221	18.2	554			1828	2.3	70
	2311	18.4	562			2318	16.0	488			2327	17.4	531			2329	15.2	463			1850	1.1	35					
7 M	0527	-1.9	-58		22 Tu	0532	0.9	28		7 W	0542	-0.3	-9		22 Th	0537	2.2	67		7 Sa	0050	16.1	492		22 Su	0025	15.4	469
	1129	19.3	588			1130	17.3	526			1143	18.8	573			1142	16.8	512			0656	1.9	58			0634	2.6	79
	1750	-1.4	-42			1750	1.2	37			1811	0.1	3			1801	2.3	70			1304	17.4	531			1238	17.0	517
	2346	18.2	554			2343	15.6	477								2358	15.0	456			1934	1.9	59			1900	2.4	74
8 Tu	0601	-1.6	-48		23 W	0556	1.3	39		8 Th	0007	16.8	511		23 F	0605	2.4	74		8 Su	0134	15.4	469		23 M	0056	15.2	464
	1200	19.0	578			1154	16.9	514			0618	0.5	15			1211	16.5	503			0738	3.0	91			0706	3.1	93
	1824	-0.8	-25			1814	1.6	49			1221	18.0	548			1831	2.7	81			1345	16.3	498			1309	16.5	504
											1850	1.0	32								2016	3.0	90			1933	2.8	84
9 W	0018	17.3	528		24 Th	0008	15.1	461		9 F	0048	15.7	480		24 Sa	0028	14.6	444		9 M	0218	14.5	442		24 Tu	0130	14.9	455
	0631	-0.7	-20			0618	1.8	55			0655	1.7	52			0634	2.9	89			0820	4.2	129			0740	3.7	114
	1229	18.1	551			1218	16.2	495			1300	16.8	511			1241	16.0	488			1429	15.1	461			1342	15.9	484
	1856	0.3	9			1838	2.3	69			1931	2.4	72			1902	3.2	97			2058	4.0	123			2006	3.3	100
10 Th	0049	16.0	489		25 F	0031	14.4	439		10 Sa	0130	14.5	441		25 Su	0057	14.0	428		10 Tu	0305	13.6	416		25 W	0206	14.6	444
	0700	0.8	23			0639	2.6	78			0734	3.2	99			0703	3.7	112			0908	5.5	167			0819	4.6	139
	1259	16.7	510			1242	15.5	471			1342	15.4	468			1312	15.3	467			1517	13.9	424			1422	15.1	460
	1928	1.9	57			1904	3.1	96			2018	3.8	116			1937	3.9	118			2149	5.1	154			2044	3.9	118
11 F	0121	14.4	440		26 Sa	0056	13.5	412		11 Su	0220	13.1	400		26 M	0133	13.5	410		11 W	0404	13.0	396		26 Th	0251	14.2	432
	0730	2.5	76			0703	3.5	108			0819	4.9	148			0738	4.6	140			1009	6.4	196			0907	5.3	163
	1331	15.1	459			1309	14.5	441			1437	13.9	423			1351	14.5	443			1616	12.9	393			1511	14.3	435
	2005	3.7	112			1934	4.2	128			2119	5.1	154			2018	4.6	139			2251	5.7	174			● 2132	4.5	136
12 Sa	0202	12.7	386		27 Su	0126	12.5	381		12 M	0332	12.1	369		27 Tu	0219	12.8	391		12 Th	0520	12.8	390		27 F	0349	13.9	423
	0804	4.5	136			0733	4.7	144			0928	6.3	191			0825	5.6	171			1132	6.8	206			1010	5.9	180
	1415	13.2	402			1345	13.3	406			1556	12.8	389			1443	13.7	418			1734	12.4	377			1613	13.6	414
	2103	5.5	168			2015	5.4	164			2242	5.7	175			2112	5.2	158								2233	4.9	150
13 Su	0314	10.9	333		28 M	0212	11.4	347		13 Tu	0504	11.8	361		28 W	0325	12.4	379		13 F	0008	5.9	180		28 Sa	0506	13.9	424
	0903	6.4	196			0815	6.1	186			1109	6.9	209			0934	6.4	195			0635	13.2	402			1143	6.0	182
	1602	11.6	353			1449	12.2	372			1729	12.4	379			1553	13.2	401			1253	6.4	194			1736	13.3	404
	2315	6.4	196			2131	6.4	194								2224	5.4	165			1852	12.4	379					
14 M	0537	10.5	320		29 Tu	0352	10.6	323		14 W	0015	5.5	169		29 Th	0451	12.6	385		14 Sa	0116	5.6	170		29 Su	0001	5.1	154
	1149	7.2	218			0953	7.3	221			0635	12.5	382			1113	6.5	198			0734	13.9	423			0638	14.4	440
	1824	11.7	358			1649	11.7	358			1249	6.2	190			1718	13.2	401			1352	5.6	171			1314	5.3	161
						2339	6.3	191			1852	12.9	393			2351	5.1	155			1952	12.9	392			1906	13.5	412
15 Tu	0119	5.4	165		30 W	0611	11.3	343		15 Th	0124	4.8	145		30 F	0622	13.6	415		15 Su	0209	5.1	154		30 M	0130	4.6	139
	0730	11.9	362			1231	6.8	206			0737	13.7	418			1250	5.6	171			0822	14.6	446			0751	15.4	469
	1345	5.7	175			1834	12.6	384			1352	5.2	157			1841	13.7	418			1442	4.9	148			1425	4.3	130
	1949	13.1	400								1951	13.6	415								2043	13.4	408			2020	14.2	433

Time meridian 97° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Mergui, Burma, 2008

Times and Heights of High and Low Waters

July				August				September			
Time		Height		Time		Height		Time		Height	
	h m	ft	cm		h m	ft	cm		h m	ft	cm
1 Tu	0240	3.7	113	16 W	0319	4.7	144	1 M	0532	0.1	2
	0853	16.4	501		0929	15.4	468		1129	19.3	587
	1527	3.1	96		1552	4.1	126		1751	-0.3	-10
	2125	15.1	460		2156	14.1	430		2347	18.8	573
2 W	0342	2.8	84	17 Th	0403	3.7	114	2 Tu	0603	0.4	12
	0952	17.5	532		1010	16.3	498		1157	18.6	567
	1626	2.0	62		1634	3.2	98		1818	0.3	9
	2223	16.0	488		2234	15.0	456				
3 Th	0438	1.8	55	18 F	0442	2.9	87	3 W	0012	18.3	557
	1045	18.3	558		1048	17.2	524		0628	1.2	36
	1716	1.1	33		1711	2.3	71		1221	17.6	537
●	2315	16.8	511	○	2309	15.7	480		1839	1.2	38
4 F	0527	1.1	35	19 Sa	0519	2.1	65	4 Th	0034	17.5	532
	1133	18.8	573		1123	17.8	543		0650	2.2	66
	1803	0.5	15		1744	1.6	50		1241	16.5	502
					2343	16.3	498		1857	2.3	71
5 Sa	0001	17.2	524	20 Su	0553	1.7	51	5 F	0052	16.4	501
	0611	1.0	29		1156	18.1	553		0710	3.3	100
	1215	18.8	574		1817	1.2	36		1257	15.2	464
	1843	0.5	14						1913	3.5	106
6 Su	0041	17.2	523	21 M	0014	16.7	509	6 Sa	0110	15.3	465
	0649	1.3	39		0625	1.6	49		0728	4.5	138
	1253	18.3	559		1225	18.1	552		1317	13.9	423
	1920	1.0	29		1848	1.1	34		1930	4.8	145
7 M	0117	16.7	509	22 Tu	0043	16.8	511	7 Su	0130	13.9	424
	0726	2.1	65		0657	1.9	59		0752	5.9	180
	1326	17.4	529		1255	17.7	538		1340	12.4	378
	1951	1.9	58		1916	1.4	43	○	1951	6.1	187
8 Tu	0151	15.9	484	23 W	0113	16.5	504	8 M	0158	12.4	377
	0758	3.3	100		0728	2.6	79		0827	7.4	226
	1357	16.1	491		1324	16.9	516		1412	10.8	330
	2020	3.1	94		1945	2.0	61		2023	7.7	234
9 W	0222	14.9	455	24 Th	0142	16.1	491	9 Tu	0305	10.8	330
	0829	4.6	139		0759	3.4	105		1151	8.5	258
	1426	14.7	448		1355	15.9	486		1819	10.0	304
	2050	4.3	132		2015	2.9	87				
10 Th	0258	13.9	424	25 F	0215	15.5	471	10 W	0039	8.4	255
	0905	5.8	177		0834	4.4	135		0706	11.8	359
	1501	13.3	406		1432	14.8	452		1342	7.2	218
○	2122	5.5	169		2049	3.9	118		1954	11.4	347
11 F	0346	13.0	395	26 Sa	0257	14.6	446	11 Th	0201	6.8	207
	0959	6.9	209		0921	5.5	167		0808	13.4	409
	1552	12.1	368		1521	13.6	414		1433	5.5	168
	2217	6.6	200	○	2135	5.0	152		2040	13.2	401
12 Sa	0516	12.4	377	27 Su	0400	13.8	420	12 F	0246	5.1	154
	1139	7.3	223		1038	6.4	195		0850	15.2	462
	1739	11.3	345		1640	12.5	381		1512	3.8	116
					2255	6.0	183		2115	14.9	454
13 Su	0007	7.0	213	28 M	0554	13.4	409	13 Sa	0325	3.4	103
	0648	12.6	385		1245	6.3	193		0927	16.7	510
	1309	6.9	210		1843	12.3	376		1548	2.2	68
	1914	11.5	352						2149	16.5	504
14 M	0130	6.5	199	29 Tu	0104	5.9	180	14 Su	0402	1.9	57
	0752	13.4	408		0735	14.3	435		1002	18.0	549
	1412	6.0	184		1415	5.2	158		1623	0.8	25
	2020	12.3	374		2015	13.3	406		2223	17.9	546
15 Tu	0230	5.7	174	30 W	0233	4.7	144	15 M	0438	0.7	21
	0844	14.4	438		0849	15.7	479		1037	18.9	576
	1505	5.1	155		1525	3.6	109		1657	-0.2	-5
	2112	13.2	402		2125	14.8	452	○	2255	18.9	575
				31 Th	0341	3.2	97				
					0949	17.3	527				
					1621	1.9	58				
					2219	16.3	498				
								31 Su	0458	0.3	10
									1057	19.4	590
								●	1722	-0.5	-14
									2316	18.9	575

Time meridian 97° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 97° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Rangoon, Burma, 2008

Times and Heights of High and Low Waters

January				February				March															
Time		Height		Time		Height		Time		Height		Time		Height									
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm								
1 Tu	0619	3.9	118	16 W ☉	0625	3.9	120	1 F	0004	15.8	483	16 Sa	0041	18.8	573	1 Sa	0700	2.9	89	16 Su	0032	19.2	586
	1123	14.2	434		1126	14.8	452		0724	2.6	79		0759	-0.5	-14		1218	15.6	475		0736	-0.4	-13
	1819	3.4	104		1825	3.2	97		1242	15.1	459		1317	18.2	556		1854	4.5	136		1307	19.2	584
	2344	15.6	476		2350	16.9	514		1913	3.7	112		1956	0.9	26						1941	1.3	39
2 W	0700	3.1	95	17 Th	0720	1.6	50	2 Sa	0039	16.9	514	17 Su	0119	20.0	610	2 Su	0015	16.9	515	17 M	0107	20.1	614
	1213	14.4	440		1228	16.1	490		0759	1.5	46		0845	-1.5	-45		0727	1.8	55		0817	-1.0	-32
	1853	3.2	98		1914	1.6	50		1319	15.9	485		1358	19.2	584		1252	16.6	507		1345	19.9	606
									1953	2.6	80		2046	0.1	4		1930	3.2	98		2029	0.8	23
3 Th	0021	16.2	494	18 F	0038	18.3	558	3 Su	0115	17.9	545	18 M	0153	20.8	634	3 M	0051	18.1	552	18 Tu	0142	20.7	631
	0742	2.3	71		0810	-0.1	-4		0844	0.7	20		0937	-1.5	-47		0810	1.0	29		0906	-0.8	-25
	1258	14.9	454		1317	17.2	525		1358	16.8	512		1436	19.7	600		1331	17.7	538		1418	20.2	617
	1930	2.8	85		2003	0.5	16		2042	1.7	51		2140	0.1	2		2019	2.1	65		2121	0.9	26
4 F	0056	16.9	515	19 Sa	0119	19.5	594	4 M	0155	18.8	573	19 Tu	0229	21.1	644	4 Tu	0128	19.2	584	19 W	0213	20.9	636
	0826	1.6	48		0903	-1.2	-36		0937	0.2	6		1028	-0.9	-26		0903	0.5	15		0956	0.1	2
	1338	15.5	471		1402	18.1	552		1439	17.5	533		1510	19.8	602		1410	18.5	564		1447	20.3	619
	2014	2.2	67		2056	-0.1	-2		2136	1.0	32		2231	0.7	20		2114	1.5	46		2210	1.6	48
5 Sa	0133	17.6	536	20 Su	0159	20.2	616	5 Tu	0232	19.4	590	20 W	0301	20.9	638	5 W	0205	19.9	606	20 Th	0242	20.6	628
	0913	1.0	29		0957	-1.4	-43		1029	0.3	8		1116	0.4	13		1000	0.6	18		1040	1.3	41
	1419	16.0	487		1445	18.6	566		1514	17.8	543		1542	19.4	592		1445	19.0	578		1510	20.0	609
	2103	1.6	48		2152	-0.1	-4		2227	1.1	34		2314	1.8	54		2209	1.6	49		2253	2.7	82
6 Su	0213	18.1	553	21 M	0239	20.5	625	6 W	0305	19.4	592	21 Th	0333	20.2	615	6 Th	0235	20.0	609	21 F	0310	19.9	606
	1001	0.6	18		1051	-0.9	-27		1117	1.0	32		1154	2.0	61		1052	1.4	44		1116	2.8	86
	1458	16.4	499		1526	18.6	568		1544	17.6	537		1610	18.7	569		1509	18.9	577		1530	19.3	589
	2154	1.1	35		2244	0.4	11		2314	2.0	61		2354	3.3	100		2300	2.6	78		2329	4.1	124
7 M	0254	18.4	561	22 Tu	0319	20.3	618	7 Th	0325	18.9	575	22 F	0408	19.0	578	7 F	0249	19.4	592	22 Sa	0340	18.7	571
	1049	0.7	21		1140	0.1	4		1200	2.4	74		1225	3.6	111		1136	2.9	87		1144	4.3	130
	1537	16.4	500		1607	18.3	557		1610	17.0	517		1641	17.6	537		1513	18.3	558		1555	18.4	560
	2241	1.2	38		2333	1.3	41		●	2358	3.6		110	●	2348		4.2	128	○				
8 Tu	0332	18.3	557	23 W	0402	19.6	598	8 F	0330	17.8	543	23 Sa	0030	4.9	149	8 Sa	0254	18.3	557	23 Su	0001	5.5	167
	1133	1.3	40		1224	1.5	45		1240	4.2	127		0455	17.4	530		1217	4.7	142		0424	17.2	524
	1614	16.0	489		1649	17.6	536		1650	15.9	486		1253	5.2	157		1508	17.4	529		1208	5.6	170
	2325	2.0	62							1722	16.4		500					1635	17.2		523		
9 W	0405	17.7	539	24 Th	0018	2.6	80	9 Sa	0043	5.5	168	24 Su	0106	6.4	196	9 Su	0034	6.1	186	24 M	0034	6.7	205
	1216	2.5	75		0449	18.5	565		0341	16.3	498		0550	15.7	480		0312	16.7	508		0521	15.6	475
	1654	15.4	468		1304	2.9	89		1320	5.9	180		1323	6.4	196		1255	6.5	198		1234	6.7	204
					1732	16.7	508		1747	14.9	455		1811	15.3	465		1533	16.0	489		1729	15.9	485
10 Th	0007	3.4	103	25 F	0101	4.1	125	10 Su	0132	7.3	222	25 M	0145	7.6	232	10 M	0125	7.8	238	25 Tu	0112	7.7	234
	0440	16.6	507		0541	17.3	526		0611	14.8	450		0647	14.3	436		0556	15.0	458		0621	14.2	432
	1259	3.9	118		1342	4.3	130		1405	7.3	221		1353	7.4	227		1339	8.0	243		1306	7.7	234
	1741	14.5	442		1819	15.7	480		1845	14.2	434		1904	14.4	438		1819	15.2	464		1828	14.9	454
11 F	0051	5.0	153	26 Sa	0145	5.5	168	11 M	0228	8.4	255	26 Tu	0229	8.4	255	11 Tu	0221	8.8	269	26 W	0153	8.3	252
	0542	15.5	471		0634	15.9	485		0717	13.8	422		0748	13.2	403		0706	14.1	430		0723	13.2	403
	1343	5.2	159		1421	5.3	163		1453	7.9	242		1429	8.2	250		1429	8.8	269		1343	8.5	259
	1832	13.8	421		1907	14.9	454		1952	14.1	429		2004	13.8	421		1930	14.8	452		1928	14.2	433
12 Sa	0141	6.5	198	27 Su	0232	6.7	203	12 Tu	0334	8.5	259	27 W	0601	7.9	242	12 W	0329	8.8	269	27 Th	0557	8.2	250
	0641	14.4	440		0729	14.7	448		0832	13.5	410		0918	12.8	390		0833	13.9	425		0853	13.0	395
	1430	6.1	187		1502	6.2	188		1555	7.8	238		1744	8.3	252		1537	8.8	267		1735	9.2	281
	1925	13.5	412		2000	14.3	436		2109	14.4	440		2125	13.8	420		2101	15.1	461		2037	14.0	428
13 Su	0237	7.4	225	28 M	0337	7.3	221	13 W	0519	7.2	218	28 Th	0629	5.9	181	13 Th	0537	7.0	213	28 F	0615	6.3	191
	0739	13.8	421		0828	13.7	419		1016	14.0	426		1112	13.6	414		1033	15.0	458		1048	13.9	423
	1522	6.4	196		1604	6.6	201		1728	6.5	197		1812	6.9	211		1728	7.0	214		1752	7.8	237
	2023	13.7	417		2101	14.0	427		2249	15.6	475		2305	14.6	446		2249	16.4	499		2219	14.6	445
14 M	0345	7.3	223	29 Tu	0532	6.7	203	14 Th	0639	4.2	128	29 F	0643	4.3	130	14 F	0631	3.8	115	29 Sa	0621	4.8	145
	0844	13.6	415		0947	13.3	404		1144	15.5	471		1148	14.6	445		1141	16.7	509		1118	14.9	454
	1621	6.0	182		1731	6.2	190		1830	4.2	129		1831	5.7	173		1821	4.5	138		1805	6.5	197
	2128	14.3	436		2218	14.2	433		●	2358	17.3		526	●	2343		15.7	480	●		2349	17.9	547	●	2306	15.6	477
15 Tu	0509	6.1	187	30 W	0623	5.2	159	15 F	0719	1.5	45				15 Sa	0702	1.2	36	30 Su	0630	3.5	107	
	1002	13.9	423		1113	13.5	412		1235	17.0	518					1227	18.1	552		1146	15.9	486	
	1727	4.8	146		1813	5.4	166		1913	2.2	68					1859	2.5	77		1826	5.2	157	
	2244	15.4	470		2323	14.9	455		●											2339	16.8	511	
				31 Th	0653	3.8	117											31 M	0652	2.5	76		
			1203		14.2	433													1218	17.0	519		
			1840	4.6	141													1901	3.9	118			

Time meridian 97° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Rangoon, Burma, 2008

Times and Heights of High and Low Waters

April						May						June																
Time			Height			Time			Height			Time			Height			Time			Height							
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm				
1 Tu	0017	17.9	546		16 W	0120	19.8	602		1 Th	0020	18.1	553		16 F	0129	18.1	551		1 Su	0146	18.2	555		16 M	0222	16.9	516
	0730	1.7	51			0825	0.5	14			0739	2.0	60			0826	2.7	81			0859	2.2	67			0911	3.7	113
	1256	18.1	553			1351	20.1	612			1254	19.2	585			1342	19.4	592			1353	20.3	618			1412	19.1	583
	1951	2.8	85			2054	1.9	59			2020	2.7	81			2110	3.3	100			2159	2.1	65			2210	3.2	98
2 W	0057	19.0	578		17 Th	0153	19.7	601		2 F	0107	18.8	572		17 Sa	0205	17.9	547		2 M	0238	18.3	559		17 Tu	0302	17.1	520
	0823	1.2	36			0913	1.3	41			0836	1.8	55			0908	3.2	98			0956	2.5	75			0954	3.5	107
	1334	19.1	582			1417	20.1	613			1333	19.8	605			1407	19.4	592			1440	20.3	620			1452	19.2	586
	2048	2.1	65			2144	2.6	78			2121	2.5	75			2155	3.6	110			2257	2.5	77			2251	3.2	98
3 Th	0135	19.6	598		18 F	0224	19.5	593		3 Sa	0155	18.9	577		18 Su	0240	17.7	540		3 Tu	0328	18.2	554		18 W	0343	17.0	518
	0920	1.2	38			0956	2.4	72			0934	2.2	66			0947	3.6	111			1051	3.1	94			1035	3.5	107
	1408	19.7	599			1438	19.9	607			1412	20.0	611			1436	19.3	589			1530	20.0	611			1534	19.0	580
	2146	2.2	67			2226	3.4	104			2220	2.9	88			2234	4.0	121			2350	3.2	98			2332	3.5	108
4 F	0209	19.7	601		19 Sa	0254	18.9	576		4 Su	0245	18.6	566		19 M	0319	17.3	528		4 W	0421	17.8	543		19 Th	0425	16.6	507
	1015	1.9	58			1032	3.4	104			1028	3.0	90			1023	4.0	122			1142	3.9	119			1115	3.9	120
	1435	19.7	601			1500	19.5	594			1454	19.8	602			1511	19.0	579			1624	19.6	597			1617	18.5	564
	2241	3.0	91			2302	4.4	133			2315	3.8	115			2311	4.4	134			●					○		
5 Sa	0238	19.2	584		20 Su	0328	18.0	548		5 M	0339	17.9	545		20 Tu	0400	16.7	509		5 Th	0044	4.0	122		20 F	0012	4.2	127
	1104	3.1	95			1100	4.4	133			1117	4.1	125			1057	4.4	134			0519	17.4	531			0511	16.0	489
	1452	19.2	585			1527	18.8	572			1544	19.1	582			1554	18.4	561			1233	4.8	147			1154	4.8	147
	2332	4.4	134			2335	5.3	161			●					○	2347	4.8	147			1724	19.1	581			1703	17.7	539
6 Su	0331	18.0	548		21 M	0412	16.8	513		6 Tu	0006	4.9	149		21 W	0449	15.9	486		6 F	0140	4.6	140		21 Sa	0054	5.1	154
	1148	4.7	144			1127	5.2	159			0434	17.0	519			1132	5.0	152			0623	17.2	524			0559	15.4	469
	1543	18.2	556			1610	17.8	542			1204	5.3	162			1644	17.6	536			1325	5.6	170			1233	6.1	185
											1642	18.3	559								1829	18.6	568			1751	16.7	510
7 M	0022	6.0	183		22 Tu	0008	6.1	186		7 W	0100	5.9	179		22 Th	0027	5.3	163		7 Sa	0238	4.8	145		22 Su	0137	6.0	182
	0442	16.6	506			0505	15.6	475			0536	16.3	497			0541	15.2	462			0728	17.2	524			0648	14.8	452
	1230	6.3	193			1157	6.1	186			1253	6.4	196			1209	5.8	176			1424	6.0	183			1319	7.3	223
	1654	17.2	523			1704	16.7	509			1747	17.7	540			1737	16.7	510			1933	18.3	558			1840	15.9	485
8 Tu	0114	7.4	225		23 W	0048	6.8	206		8 Th	0158	6.4	195		23 F	0111	5.9	181		8 Su	0339	4.5	137		23 M	0225	6.7	205
	0547	15.5	472			0602	14.5	441			0647	16.0	489			0637	14.5	443			0833	17.4	529			0735	14.6	445
	1314	7.7	234			1233	7.0	212			1347	7.1	216			1249	6.8	206			1529	5.9	181			1409	8.2	251
	1802	16.4	499			1803	15.7	479			1858	17.4	531			1832	16.0	487			2035	18.0	548			1928	15.3	467
9 W	0213	8.1	247		24 Th	0130	7.3	221		9 F	0309	6.1	187		24 Sa	0158	6.4	196		9 M	0434	3.9	119		24 Tu	0312	7.0	214
	0659	14.9	454			0704	13.7	418			0810	16.3	498			0735	14.2	434			0934	17.5	534			0821	14.7	449
	1407	8.5	258			1311	7.8	238			1457	7.1	215			1334	7.7	234			1628	5.4	166			1510	8.4	257
	1917	16.0	489			1902	15.0	458			2018	17.6	535			1924	15.5	472			2133	17.6	536			2016	15.1	459
10 Th	0326	7.9	240		25 F	0505	8.3	253		10 Sa	0428	4.9	148		25 Su	0254	6.7	204		10 Tu	0518	3.4	104		25 W	0404	6.7	205
	0831	15.1	460			0817	13.5	412			0928	17.1	521			0830	14.3	437			1028	17.7	538			0910	15.3	466
	1522	8.3	254			1359	8.5	260			1615	6.0	182			1436	8.2	249			1721	4.9	150			1623	7.8	237
	2047	16.3	498			2001	14.7	448			2132	17.9	546			2014	15.3	466			2230	17.1	522			2122	15.1	460
11 F	0513	5.9	180		26 Sa	0533	6.8	207		11 Su	0521	3.1	95		26 M	0407	6.4	194		11 W	0554	3.2	99		26 Th	0457	6.0	182
	1011	16.3	496			0947	14.0	428			1031	17.9	545			0919	14.8	452			1117	17.7	541			1005	16.2	493
	1701	6.6	201			1656	8.4	256			1711	4.6	139			1601	7.8	239			1810	4.5	136			1737	6.3	193
	2219	17.3	528			2108	14.9	454			2231	18.2	556			2103	15.4	469			2325	16.8	511			2223	15.5	471
12 Sa	0603	3.2	97		27 Su	0543	5.5	168		12 M	0557	1.8	56		27 Tu	0458	5.5	169		12 Th	0628	3.4	103		27 F	0550	4.9	148
	1115	17.6	537			1028	14.9	454			1122	18.5	563			1003	15.6	476			1159	17.9	547			1104	17.3	528
	1750	4.4	134			1720	7.2	219			1754	3.5	108			1704	6.8	207			1859	4.1	126			1841	4.5	138
	2320	18.3	559			2206	15.5	473			2322	18.3	559			2155	15.8	482								2338	16.2	495
13 Su	0632	1.2	36		28 M	0553	4.4	134		13 Tu	0628	1.3	41		28 W	0533	4.6	139		13 F	0017	16.6	505		28 Sa	0644	3.7	113
	1202	18.7	569			1101	15.9	484			1206	18.8	574			1047	16.7	508			0703	3.6	111			1201	18.6	566
	1829	2.8	86			1748	5.9	180			1839	3.0	92			1757	5.4	165			1234	18.2	555			1942	2.9	87
						2250	16.4	499			●					○	2250	16.4	500			1949	3.9	118				
14 M	0005	19.1	582		29 Tu	0614	3.4	104		14 W	0008	18.3	557		29 Th	0615	3.6	110		14 Sa	0102	16.6	505		29 Su	0042	17.2	524
	0703	0.1	4			1136	17.0	518			0703	1.5	45			1133	17.8	543			0744	3.9	118			0738	2.7	83
	1243	19.4	590			1827	4.6	140			1242	19.1	582			1853	4.1	124			1306	18.5	564			1251	19.7	601
	1913	1.9	59			2334	17.3	527			1929	2.9	88			2351	17.1	521			2038	3.6	109			2042	1.6	50
15 Tu	0044	19.5	595		30 W	0651	2.6	78		15 Th	0050	18.2	554		30 F	0704	2.8	86		15 Su	0144	16.7	510		30 M	0135	18.0	550
	0741	0.0	-1			1214	18.2	554			0742	2.0	61			1220	18.9	577			0826	3.9	118			0836	2.1	63
	1319	19.8	604			1919	3.4	105			1314	19.3	588			1955	3.0	90			1338	18.9	575			1336	20.5	626
	2002	1.7	52								2020	3.0	92								2125	3.3	102			2140	1.1	33

Time meridian 97° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Rangoon, Burma, 2008

Times and Heights of High and Low Waters

July				August				September															
Time		Height		Time		Height		Time		Height		Time		Height									
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm									
1 Tu	0225	18.6	568	16 W	0238	17.3	526	1 F	0337	19.5	594	16 Sa	0314	18.0	548	1 M	0010	4.2	128	16 Tu	0230	16.9	516
	0934	1.8	56		0932	3.1	96		1108	2.3	71		1048	3.3	102		0411	18.0	549		1207	6.4	194
	1421	21.0	639		1427	19.5	594		1525	21.0	641		1452	19.3	588		1213	5.6	170		1427	16.3	498
	2239	1.1	35		2230	2.4	72		●	2337	3.5		108	1619	17.8		543	1619	17.8		543		
2 W	0313	18.9	575	17 Th	0317	17.5	534	2 Sa	0002	2.3	70	17 Su	0340	17.4	531	2 Tu	0044	5.8	176	17 W	0033	6.7	203
	1030	2.1	64		1018	3.0	90		0418	19.0	579		1131	4.7	142		0452	16.8	513		0249	15.7	480
	1508	21.0	640		1504	19.6	597		1154	3.6	110		1455	18.3	558		1253	7.2	218		1256	8.0	244
	2333	1.7	53		2315	2.7	83		1612	20.0	611		○	1713	16.2		494	1713	16.2		494	1452	14.5	442
3 Th	0403	18.8	572	18 F	0354	17.4	530	3 Su	0045	3.7	114	18 M	0016	5.1	155	3 W	0115	7.1	215	18 Th	0115	8.1	248
	1125	2.8	85		1101	3.4	104		0501	18.2	554		0418	16.4	501		0542	15.7	479		0541	14.7	447
	1557	20.6	628		1538	19.2	584		1216	6.4	196		1216	6.4	196		1334	8.3	254		1350	9.1	278
	●	○	2357		3.6	110	1701		18.8	573	1459		16.9	516	1812		14.8	451	1819		13.6	414	
4 F	0025	2.7	81	19 Sa	0432	16.9	514	4 M	0124	5.2	157	19 Tu	0057	6.8	206	4 Th	0150	8.0	244	19 F	0203	9.0	275
	0453	18.4	561		1142	4.5	138		0545	17.3	526		0325	15.3	465		0637	14.8	452		0650	14.3	436
	1214	3.7	114		1612	18.2	556		1323	6.6	201		1302	8.2	250		1422	9.0	274		1452	9.3	284
	1651	19.9	608		1753	17.4	531		1519	15.3	466		1519	15.3	466		1915	13.7	419		1938	13.4	408
5 Sa	0114	3.6	111	20 Su	0036	4.9	149	5 Tu	0203	6.4	194	20 W	0138	8.2	250	5 F	0228	8.6	263	20 Sa	0303	9.2	279
	0545	17.9	547		0513	16.0	489		0634	16.4	499		0607	14.6	445		0738	14.3	436		0811	14.6	445
	1302	4.9	148		1224	6.1	185		1409	7.8	238		1354	9.5	289		1725	8.6	262		1634	8.0	245
	1747	19.1	583		1701	17.0	518		1848	16.1	492		1830	14.1	431		2038	13.3	406		2125	14.3	435
6 Su	0202	4.5	138	21 M	0118	6.3	191	6 W	0245	7.3	221	21 Th	0224	9.1	276	6 Sa	0511	8.7	266	21 Su	0442	7.9	241
	0639	17.5	533		0557	15.2	464		0727	15.7	478		0707	14.3	436		0857	14.2	433		0949	15.7	478
	1352	5.9	180		1308	7.7	234		1505	8.5	259		1453	9.9	301		1805	6.5	199		1801	5.0	151
	1841	18.2	556		1758	15.8	481		1947	15.1	459		1937	13.6	416		2225	13.8	422		2243	15.8	483
7 M	0250	5.2	158	22 Tu	0200	7.4	227	7 Th	0334	7.7	236	22 F	0316	9.2	280	7 Su	0555	7.3	223	22 M	0552	5.4	165
	0732	17.0	519		0646	14.7	447		0825	15.3	465		0817	14.5	443		1030	14.8	452		1058	17.2	524
	1446	6.7	204		1357	8.9	271		1650	8.2	251		1614	9.1	277		1822	4.9	148		1833	2.1	65
	1937	17.3	528		1852	14.9	453		2058	14.4	438		2105	13.9	423		●	2307	14.6		446	●	2334	17.3	527
8 Tu	0340	5.5	169	23 W	0244	8.1	247	8 F	0501	7.6	233	23 Sa	0435	8.4	255	8 M	0615	6.2	189	23 Tu	0631	3.2	97
	0827	16.7	509		0738	14.5	443		0938	15.2	464		0945	15.4	470		1108	15.7	478		1143	18.5	565
	1549	7.0	214		1454	9.3	284		1800	6.7	205		1804	6.4	196		1838	3.7	112		1903	0.2	6
	2035	16.4	501		1949	14.3	437		2230	14.4	438		2244	15.1	461		2340	15.4	469				
9 W	0432	5.7	173	24 Th	0333	8.1	247	9 Sa	0557	6.9	209	24 Su	0558	6.3	191	9 Tu	0637	5.2	159	24 W	0017	18.4	562
	0925	16.5	502		0834	14.9	453		1050	15.6	477		1105	17.0	517		1139	16.6	505		0712	1.6	50
	1657	6.7	204		1607	8.8	267		1834	5.3	161		1846	3.5	107		1902	2.8	85		1220	19.5	595
	2138	15.7	479		2056	14.3	436		●	2328	14.8		452	●	2342		16.7	508				1942	-0.8	-23
10 Th	0523	5.6	170	25 F	0435	7.4	227	10 Su	0628	6.1	185	25 M	0643	4.0	123	10 W	0011	16.2	493	25 Th	0057	19.2	586
	1024	16.5	502		0943	15.6	477		1134	16.4	499		1153	18.5	565		0708	4.3	130		0800	0.9	27
	1755	5.9	181		1744	6.9	211		1903	4.1	125		1923	1.2	38		1211	17.5	533		1255	20.1	614
	2247	15.4	468		2226	14.9	453										1939	2.2	66		2031	-0.8	-23
11 F	0603	5.4	164	26 Sa	0547	6.0	183	11 M	0009	15.5	471	26 Tu	0028	18.0	549	11 Th	0049	17.0	518	26 F	0133	19.7	600
	1119	16.7	510		1059	16.9	516		0657	5.3	161		0725	2.3	71		0752	3.3	102		0851	0.9	26
	1841	5.1	154		1845	4.5	136		1209	17.2	523		1233	19.9	606		1247	18.4	560		1329	20.3	620
	2348	15.4	469		●	2341	16.1		490	1937	3.2		97	2008	-0.1		-4	2029	1.8		54	2123	0.0
12 Sa	0638	5.2	157	27 Su	0641	4.3	130	12 Tu	0047	16.1	492	27 W	0112	19.1	581	12 F	0129	17.7	541	27 Sa	0207	19.8	603
	1201	17.2	524		1156	18.4	562		0733	4.5	136		0814	1.3	40		0844	2.7	83		0943	1.4	44
	1923	4.2	129		1935	2.3	69		1241	18.0	550		1308	20.8	635		1324	19.0	580		1401	20.1	612
									2019	2.5	75		2100	-0.6	-17		2126	1.7	53		2212	1.2	36
13 Su	0036	15.7	479	28 M	0036	17.4	530	13 W	0125	16.9	515	28 Th	0154	19.8	602	13 Sa	0203	18.2	556	28 Su	0235	19.5	594
	0716	4.8	147		0731	2.8	84		0820	3.6	110		0908	1.0	30		0939	2.6	80		1030	2.6	78
	1236	17.7	541		1241	19.8	604		1318	18.9	576		1345	21.3	649		1355	19.2	585		1430	19.3	589
	2009	3.5	107		2027	0.8	23		2110	2.0	61		2156	-0.1	-3		2220	2.3	70		2256	2.7	81
14 M	0117	16.2	494	29 Tu	0125	18.5	564	14 Th	0205	17.6	536	29 F	0231	20.0	609	14 Su	0231	18.3	557	29 M	0258	18.8	573
	0758	4.3	132		0825	1.7	53		0909	2.9	89		1002	1.4	43		1030	3.3	100		1111	4.0	121
	1311	18.4	561		1322	20.9	636		1355	19.5	595		1420	21.2	647		1409	18.8	572		1502	18.1	553
	2056	2.9	88		2123	0.1	3		2202	1.9	59		2248	1.0	30		2309	3.4	104		●	2329	4.2	127
15 Tu	0158	16.8	511	30 W	0210	19.3	587	15 F	0243	18.0	548	30 Sa	0306	19.8	602	15 M	0234	17.8	542	30 Tu	0324	17.8	542
	0844	3.7	113		0920	1.3	41		1000	2.8	84		1051	2.5	75		1119	4.6	141		1146	5.4	166
	1347	19.0	580		1402	21.5	654		1429	19.7	600		1454	20.6	627		1412	17.8	542		1547	16.7	508
	2144	2.5	75		2220	0.2	7		2252	2.5	75		2333	2.5	77		●	2352	5.0		151	2359	5.5	168
			31 Th	0255	19.6	598																	
				1016	1.5	47																	
				1444	21.5	655																	
				2314	1.0	31																	

Time meridian 97° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Rangoon, Burma, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height			Time	Height			Time	Height		
	h	m	ft		h	m	ft		h	m	ft
1 W	0406	16.6	506	16 Th	0007	5.5	168	1 M	0038	4.8	146
	1223	6.7	204		0417	16.0	487		0609	14.6	445
	1645	15.1	460		1246	6.6	200		1335	4.9	149
					1704	14.3	436		1903	12.8	391
2 Th	0029	6.6	201	17 F	0054	6.8	208	2 Tu	0122	5.8	177
	0502	15.4	469		0527	15.2	463		0706	13.9	424
	1302	7.6	232		1342	7.4	226		1429	5.3	163
	1747	13.8	420		1814	13.7	418		2000	12.7	388
3 F	0101	7.4	226	18 Sa	0145	7.7	234	3 W	0219	6.5	199
	0603	14.4	439		0640	14.9	453		0758	13.5	413
	1344	8.1	246		1449	7.4	226		1537	5.4	164
	1853	12.9	393		1938	13.8	422		2050	13.0	396
4 Sa	0140	8.1	246	19 Su	0250	7.7	236	4 Th	0338	6.6	201
	0706	13.8	420		0803	15.2	463		0847	13.5	411
	1723	7.9	246		1623	6.0	183		1638	4.8	147
	2024	12.7	386		2114	14.9	454		2137	13.6	415
5 Su	0504	8.6	261	20 M	0423	6.4	196	5 F	0451	5.8	177
	0820	13.6	416		0930	16.1	492		0938	13.7	418
	1751	5.9	179		1732	3.4	103		1716	4.0	121
	2204	13.4	409		2224	16.3	496		2221	14.5	442
6 M	0536	7.1	217	21 Tu	0525	4.3	130	6 Sa	0541	4.5	138
	0952	14.2	432		1035	17.2	525		1032	14.2	434
	1802	4.4	134		1807	1.1	34		1753	3.0	91
	2239	14.2	434		2316	17.4	531		2308	15.6	477
7 Tu	0551	6.0	182	22 W	0607	2.4	73	7 Su	0634	3.1	93
	1033	14.9	455		1122	18.0	550		1130	15.0	457
	1810	3.4	103		1838	-0.3	-9		1838	2.0	61
	2306	15.0	458		2359	18.2	556		2355	16.8	513
8 W	0608	5.0	151	23 Th	0648	1.2	37	8 M	0730	1.7	51
	1104	15.7	480		1203	18.5	565		1228	15.8	482
	1827	2.6	79		1913	-0.8	-24		1931	1.1	35
	2337	15.9	484								
9 Th	0638	4.0	121	24 F	0039	18.8	573	9 Tu	0043	17.8	544
	1137	16.6	506		0736	0.7	22		0831	0.7	20
	1859	2.0	61		1242	18.7	571		1321	16.5	502
					1956	-0.5	-16		2029	0.7	20
10 F	0012	16.8	512	25 Sa	0112	19.1	581	10 W	0130	18.6	566
	0722	3.0	92		0829	0.9	26		0932	0.2	5
	1215	17.4	531		1317	18.7	569		1412	16.9	515
	1946	1.5	47		2044	0.3	8		2129	0.5	16
11 Sa	0050	17.6	537	26 Su	0141	19.1	582	11 Th	0217	18.9	576
	0816	2.4	72		0920	1.4	43		1030	0.3	9
	1254	18.0	549		1350	18.4	560		1501	17.0	517
	2043	1.5	45		2131	1.3	40		2227	0.9	27
12 Su	0127	18.2	554	27 M	0207	18.9	575	12 F	0304	18.8	574
	0914	2.2	67		1006	2.3	70		1125	0.9	27
	1329	18.2	554		1420	17.7	541		1552	16.7	509
	2140	1.8	56		2212	2.4	73		2322	1.6	49
13 M	0155	18.3	559	28 Tu	0230	18.4	560	13 Sa	0357	18.4	561
	1011	2.7	82		1045	3.3	101		1219	1.8	54
	1356	17.7	541		1454	16.9	514		1646	16.3	497
	2234	2.8	84		2247	3.4	104				
14 Tu	0209	17.9	547	29 W	0258	17.6	537	14 Su	0014	2.6	78
	1103	3.8	116		1121	4.3	132		0455	17.8	543
	1409	16.8	511		1536	15.7	480		1312	2.7	82
	2322	4.1	124		2317	4.3	131		1745	15.9	485
15 W	0223	17.1	522	30 Th	0340	16.7	508	15 M	0107	3.6	109
	1154	5.2	159		1155	5.2	157		0559	17.3	526
	1558	15.4	470		1629	14.6	444		1407	3.3	101
					2349	5.1	154		1848	15.7	479
16 O				31 F	0435	15.6	476	30 Tu	0019	3.9	119
					1232	5.8	176		0526	15.6	475
					1727	13.5	411		1311	4.3	130
									1816	13.6	416
								31 W	0101	5.3	163
									0620	14.4	440
									1355	5.3	163
									1905	13.1	398

Time meridian 97° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Sagar, Hooghly River, India, 2008

Times and Heights of High and Low Waters

January						February						March											
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm			
1 Tu	0303	12.9	392	16 W O	0241	14.2	434	1 F	0340	10.7	326	16 Sa	0455	11.2	340	1 Sa	0220	10.8	329	16 Su	0459	10.7	325
	0927	6.1	186		0916	4.1	124		1024	6.7	204		1123	5.8	177		0902	6.4	196		1126	6.4	196
	1547	12.7	386		1515	14.0	426		1725	11.3	345		1805	12.4	378		1550	11.0	334		1807	12.3	374
	2159	7.5	228		2151	5.8	177		2357	7.8	237						2225	7.8	238				
2 W	0402	12.0	367	17 Th	0342	13.2	403	2 Sa	0544	10.1	308	17 Su	0108	6.3	192	2 Su	0403	9.7	296	17 M	0111	6.1	187
	1030	6.6	200		1018	4.8	145		1230	6.7	203		0653	11.3	344		1124	7.0	213		0704	11.3	344
	1702	12.4	377		1638	13.4	409		1914	11.9	362		1322	5.4	166		1826	11.3	344		1322	5.7	175
	2333	7.8	237		2316	6.3	193						1938	13.4	408						1931	13.4	408
3 Th	0520	11.5	350	18 F	0513	12.4	379	3 Su	0148	7.1	215	18 M	0245	5.1	154	3 M	0109	7.2	220	18 Tu	0229	4.8	147
	1157	6.7	204		1142	5.2	160		0743	10.6	324		0816	12.3	376		0710	10.1	309		0811	12.7	386
	1831	12.6	384		1812	13.5	411		1358	5.9	179		1448	4.4	133		1320	6.2	189		1439	4.6	140
					2014	12.9	394		2039	14.6	445		1939	12.5	381		2023	14.5	443				
4 F	0104	7.4	226	19 Sa	0100	6.2	188	4 M	0256	6.0	183	19 Tu	0341	3.7	114	4 Tu	0229	5.9	180	19 W	0320	3.7	112
	0649	11.5	349		0645	12.4	377		0836	11.6	353		0909	13.5	412		0811	11.5	349		0855	13.9	424
	1318	6.3	192		1318	5.1	155		1500	4.9	150		1546	3.3	102		1431	5.0	153		1529	3.6	110
	1941	13.3	404		1932	14.2	432		2056	13.9	425		2127	15.6	474		2024	13.8	420		2105	15.3	467
5 Sa	0214	6.7	205	20 Su	0236	5.3	162	5 Tu	0342	5.0	151	20 W	0424	2.8	84	5 W	0317	4.6	139	20 Th	0358	2.9	88
	0759	11.9	362		0803	12.9	393		0913	12.6	383		0949	14.5	442		0848	12.9	392		0929	14.9	453
	1424	5.6	172		1441	4.4	134		1545	4.0	123		1629	2.6	79		1522	3.9	119		1606	3.0	92
	2031	14.0	426		2037	15.1	460		2131	14.9	453		2206	16.1	492		2101	15.0	456		2139	15.7	480
6 Su	0308	6.0	183	21 M	0341	4.3	131	6 W	0419	4.0	122	21 Th	0457	2.2	67	6 Th	0356	3.3	102	21 F	0428	2.5	75
	0846	12.4	379		0905	13.7	418		0944	13.5	413		1024	15.2	462		0921	14.2	433		0957	15.5	473
	1515	5.0	151		1545	3.6	109		1623	3.2	98		1704	2.3	69		1602	3.0	90		1637	2.8	84
	2111	14.6	446		2130	15.9	484		2202	15.7	478		2238	16.3	497		2135	16.0	487		2208	15.9	484
7 M	0351	5.4	164	22 Tu	0431	3.4	104	7 Th	0451	3.1	95	22 F	0526	2.0	61	7 F	0427	2.2	68	22 Sa	0452	2.3	69
	0923	13.0	396		0955	14.5	441		1015	14.5	443		1054	15.5	472		0951	15.5	471		1021	15.9	485
	1557	4.4	133		1635	3.0	90		1656	2.6	78		1733	2.3	70		1636	2.1	65		1702	2.7	83
	2146	15.2	462		2216	16.4	500		2233	16.3	497		2306	16.2	493		2205	16.8	511		2233	15.8	482
8 Tu	0427	4.8	147	23 W	0512	2.8	86	8 F	0522	2.3	71	23 Sa	0550	2.1	64	8 Sa	0458	1.3	41	23 Su	0512	2.2	68
	0956	13.5	413		1037	15.0	456		1048	15.4	468		1121	15.6	475		1023	16.5	503		1046	16.0	489
	1630	3.8	117		1716	2.6	80		1729	2.1	64		1756	2.5	77		1709	1.5	47		1724	2.9	87
	2217	15.6	475		2257	16.6	505		2304	16.7	509		2332	15.8	482		2238	17.2	525		2255	15.6	475
9 W	0500	4.3	131	24 Th	0549	2.6	80	9 Sa	0555	1.8	54	24 Su	0610	2.3	70	9 Su	0528	0.8	25	24 M	0531	2.3	70
	1029	14.1	429		1115	15.2	463		1124	15.9	486		1146	15.6	474		1057	17.1	522		1109	16.0	488
	1703	3.4	105		1752	2.7	82		1802	2.0	60		1817	2.9	87		1742	1.4	42		1744	3.1	93
	2248	15.9	485		2331	16.3	498		2338	16.7	510		2354	15.4	469		2312	17.2	525		2318	15.3	465
10 Th	0535	3.8	117	25 F	0621	2.8	84	10 Su	0628	1.6	48	25 M	0631	2.5	76	10 M	0601	0.7	22	25 Tu	0554	2.5	75
	1104	14.5	443		1151	15.2	462		1200	16.2	493		1212	15.4	468		1132	17.2	525		1135	15.7	480
	1738	3.2	99		1822	3.1	93		1835	2.2	66		1839	3.2	99		1816	1.6	50		1806	3.4	103
	2323	16.0	489												2348		16.7	510	2342		14.8	452	
11 F	0610	3.5	106	26 Sa	0003	15.9	484	11 M	0013	16.4	501	26 Tu	0018	14.8	452	11 Tu	0633	1.1	33	26 W	0616	2.8	86
	1142	14.8	452		0648	3.1	93		0700	1.7	51		0653	2.8	86		1208	16.8	512		1202	15.3	466
	1811	3.3	100		1222	15.0	457		1236	16.1	490		1238	14.9	455		1850	2.3	71		1833	3.9	120
	2359	16.0	489		1847	3.5	107		1907	2.7	81		1903	3.8	117								
12 Sa	0647	3.3	100	27 Su	0032	15.3	467	12 Tu	0050	15.8	483	27 W	0045	14.1	430	12 W	0027	15.8	483	27 Th	0009	14.2	432
	1219	15.0	458		0712	3.4	103		0732	2.1	63		0716	3.4	104		0705	1.9	57		0641	3.5	106
	1845	3.5	108		1250	14.8	450		1312	15.6	476		1306	14.2	433		1247	16.0	487		1231	14.5	443
					1912	4.0	123		1942	3.4	104		1929	4.7	143		1925	3.3	101		1858	4.8	145
13 Su	0036	15.9	484	28 M	0058	14.7	449	13 W	0128	15.0	456	28 Th	0111	13.2	401	13 Th	0105	14.6	446	28 F	0036	13.3	406
	0721	3.2	99		0733	3.7	113		0804	2.8	85		0742	4.3	131		0739	3.0	91		0705	4.4	133
	1258	15.1	459		1320	14.4	438		1350	14.8	452		1336	13.2	401		1326	14.8	450		1300	13.6	416
	1921	3.9	119		1937	4.6	141		2023	4.4	134		1959	5.8	177		2006	4.6	140		1926	5.8	176
14 M	0114	15.6	474	29 Tu	0127	14.0	426	14 Th	0210	13.8	420	29 F	0139	12.0	367	14 F	0149	13.2	401	29 Sa	0106	12.3	376
	0755	3.3	101		0757	4.2	128		0844	3.8	115		0810	5.3	163		0820	4.3	132		0730	5.3	163
	1338	15.0	456		1352	13.7	418		1436	13.7	417		1417	12.0	365		1415	13.4	407		1338	12.7	386
	2002	4.4	135		2008	5.4	166		2118	5.5	169		2045	7.0	213		2102	5.9	181		2007	6.8	206
15 Tu	0155	15.0	458	30 W	0158	13.0	397	15 F	0307	12.3	376	15 Sa	0251	11.6	353	15 Sa	0251	11.6	353	30 Su	0147	11.3	345
	0832	3.5	108		0827	4.9	150		0942	5.0	151		0922	5.7	174		0922	5.7	174		0812	6.4	194
	1421	14.6	445		1431	12.8	390		1603	12.5	381		1600	12.1	369		1600	12.1	369		1447	11.8	359
	2049	5.1	154		2048	6.5	197		2248	6.5	199		2257	6.8	207		2257	6.8	207		2130	7.5	229
			31 Th	0237	11.9	362												31 M	0315	10.4	316		
				0908	5.9	179														1005	7.1	217	
				1531	11.8	359													1709	11.7	357		
				2152	7.4	227													2354	7.2	219		

Time meridian 82° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 82° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Sagar, Hooghly River, India, 2008

Times and Heights of High and Low Waters

July						August						September																	
Time			Height			Time			Height			Time			Height			Time			Height								
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm					
1 Tu	0150	4.8	147		16 W	0244	5.9	179		1 F	0349	3.7	113		16 Sa	0348	4.5	137		1 M	0455	3.3	102		16 Tu	0431	3.2	99	
	0750	17.1	522			0843	16.0	488			0931	18.5	565			0928	17.5	534			1028	18.4	562			1000	18.6	567	
	1438	5.1	156			1514	6.1	185			1620	3.4	105	●		1606	4.3	131			1705	3.1	95			1641	2.6	79	
	2016	15.9	484			2101	14.6	446			2157	17.4	530			2144	16.6	506			2246	18.1	553			2219	18.9	576	
2 W	0254	4.2	127		17 Th	0326	5.2	160		2 Sa	0434	3.3	101		17 Su	0419	4.0	121		2 Tu	0521	3.7	113		17 W	0501	3.1	93	
	0844	17.9	546			0917	16.6	507			1013	18.8	573			0955	18.0	550			1054	17.9	546			1031	18.6	568	
	1534	4.4	134			1550	5.5	168			1659	3.2	97			1634	3.7	113	○		1730	3.5	107			1713	2.5	75	
	2111	16.5	502			2131	15.2	463			2237	17.7	539			2212	17.3	528			2314	17.9	545			2252	19.0	581	
3 Th	0349	3.6	111		18 F	0401	4.8	145		3 Su	0511	3.3	102		18 M	0448	3.6	110		3 W	0545	4.2	129		18 Th	0533	3.2	99	
	0933	18.4	561			0946	17.1	521			1049	18.6	567			1023	18.3	559			1119	17.3	527			1106	18.2	556	
	1624	3.9	119			1620	5.1	154			1733	3.3	101			1704	3.3	100			1751	4.0	121			1745	2.8	84	
	2202	16.9	515			2200	15.7	479	○		2313	17.7	538			2243	17.8	544			2339	17.4	531			2329	18.7	569	
4 F	0437	3.4	104		19 Sa	0430	4.4	134		4 M	0544	3.8	115		19 Tu	0517	3.5	106		4 Th	0606	4.8	145		19 F	0607	3.8	116	
	1020	18.5	565			1015	17.4	531			1123	18.0	550			1053	18.3	559			1144	16.6	506			1143	17.5	532	
	1711	3.7	114			1651	4.7	142			1805	3.8	115			1736	3.1	95			1813	4.5	137			1818	3.4	105	
	2249	17.0	518			2231	16.1	492			2346	17.3	528			2317	18.1	551											
5 Sa	0521	3.6	109		20 Su	0500	4.2	128		5 Tu	0613	4.4	134		20 W	0549	3.6	111		5 F	0006	16.8	513		20 Sa	0005	17.9	545	
	1106	18.2	556			1044	17.6	535			1126	18.0	550			1126	18.0	550			0628	5.4	165			0642	4.7	144	
	1756	3.9	119			1723	4.4	133			1807	3.2	99			1807	3.2	99			1210	15.8	481			1223	16.3	498	
	2334	16.8	512			2305	16.5	502			2352	18.0	548			2352	18.0	548			1838	5.2	158			1854	4.5	137	
6 Su	0601	4.1	124		21 M	0530	4.2	128		6 W	0016	16.9	515		21 Th	0619	4.1	125		6 Sa	0033	16.0	487		21 Su	0046	16.7	508	
	1149	17.7	538			1116	17.5	534			0639	5.1	155			1201	17.5	534			0653	6.3	191			0723	5.9	179	
	1837	4.3	132			1758	4.2	129			1222	16.5	504			1838	3.6	111			1238	14.8	450			1307	15.0	457	
						2340	16.6	507			1855	4.9	148								1904	6.1	186			1936	5.8	176	
7 M	0016	16.4	500		22 Tu	0602	4.4	135		7 Th	0047	16.3	498		22 F	0025	17.6	535		7 Su	0103	14.9	454		22 M	0131	15.3	465	
	0639	4.8	147			1151	17.3	528			0701	5.8	177			0652	4.8	146			0724	7.3	224			0817	7.1	217	
	1229	16.9	515			1832	4.3	130			1251	15.7	479			1239	16.7	509			1310	13.6	414			1410	13.5	411	
	1913	4.9	149								1919	5.5	167			1911	4.3	131			1911	4.3	131	●		2038	7.1	217	
8 Tu	0056	15.9	485		23 W	0016	16.7	509		8 F	0116	15.6	475		23 Sa	0103	16.8	512		8 M	0143	13.6	415		23 Tu	0300	13.9	423	
	0712	5.6	171			0634	4.8	147			0730	6.7	203			0730	5.7	174			0813	8.5	259			0958	8.0	243	
	1307	16.1	491			1226	17.0	518			1324	14.7	449			1319	15.6	477			1357	12.3	376			1616	16.2	384	
	1945	5.4	166			1903	4.4	134			1948	6.3	192			1951	5.2	159			2035	8.4	255			2238	7.9	241	
9 W	0134	15.4	469		24 Th	0052	16.6	506		9 Sa	0153	14.6	445		24 Su	0145	15.7	479		9 Tu	0334	12.5	382		24 W	0517	13.9	423	
	0745	6.4	195			0710	5.3	162			0807	7.7	234			0821	6.8	207			1010	9.2	281			1211	7.3	221	
	1345	15.3	466			1304	16.5	504			1403	13.5	413			1412	14.3	437			1636	11.5	349			1820	13.3	406	
	2014	6.0	183			1938	4.7	142			2029	7.3	223	○		2047	6.4	194	○		2047	6.4	194			2318	8.7	265	
10 Th	0214	14.8	452		25 F	0129	16.3	496		10 Su	0250	13.5	411		25 M	0256	14.5	441		10 W	0612	13.2	401		25 Th	0036	7.1	216	
	0823	7.2	220			0752	5.9	181			0910	8.7	264			0944	7.7	236			1244	8.3	253			0648	15.0	458	
	1426	14.4	439			1346	15.8	483			1509	12.4	377			1557	13.2	401			1907	12.4	379			1332	5.9	180	
	2049	6.6	202			2018	5.1	156			2149	8.2	250			2223	7.2	220								1934	14.8	452	
11 F	0304	14.2	433		26 Sa	0217	15.7	479		11 M	0459	13.0	395		26 Tu	0511	14.2	433		11 Th	0103	7.6	232		26 F	0154	5.8	178	
	0914	8.0	243			0845	6.7	203			1127	9.0	273			1203	7.5	230			0715	14.4	440			0744	16.3	496	
	1521	13.5	412			1440	14.9	455			1744	12.0	365			1804	13.4	407			1349	6.9	211			1430	4.7	143	
	2144	7.3	222			2114	5.8	177	○										1952		13.8	421		2020		16.2	494		
12 Sa	0417	13.7	417		27 Su	0328	15.0	457		12 Tu	0005	8.0	245		27 W	0028	6.8	207		12 F	0205	6.4	194		27 Sa	0250	4.8	145	
	1041	8.5	258			0650	13.7	418			0649	15.3	465			0757	15.7	478			0827	17.2	523						
	1640	12.8	391			1314	8.0	245			1341	6.2	189			1434	5.7	173			1512	3.9	118						
	2312	7.6	232			1929	12.9	392			1933	14.6	446			1933	14.6	446			2026	15.2	462			2056	17.2	525	
13 Su	0553	13.7	419		28 M	0513	14.9	454		13 W	0130	7.1	216		28 Th	0156	5.6	171		13 Sa	0251	5.3	161		28 Su	0332	4.1	125	
	1217	8.3	252			0745	14.9	453			0753	16.6	507			0753	16.6	507			0831	16.7	510			0904	17.6	537	
	1821	12.8	389			1417	6.9	210			1444	4.8	146			1444	4.8	146			1512	4.6	141			1547	3.5	106	
						2015	13.9	424			2028	16.0	488			2028	16.0	488			2055	16.3	498			2126	17.8	544	
14 M	0039	7.3	223		29 Tu	0018	6.2	189		14 Th	0228	6.1	185		29 F	0259	4.5	136		14 Su	0328	4.4	135		29 M	0407	3.8	117	
	0711	14.4	439			0639	15.6	477			0826	15.9	486			0842	17.7	541			0901	17.6	535			0935	17.7	540	
	1334	7.6	231			1329	6.4	194			1500	5.8	178			1531	3.7	113			1544	3.7	114			1614	3.4	103	
	1937	13.3	406			1915	14.7	447			2048	14.9	454			2110	17.2	523			2122	17.4	531			●	2154	18.1	553
15 Tu	0150	6.6	202		30 W	0146	5.4	165		15 F	0313	5.2	158		30 Sa	0346	3.6	111		15 M	0400	3.7	114		30 Tu	0433	3.9	118	
	0803	15.3	465			0750	16.8	511			0859	16.8	513			0923	18.4	562			0930	18.2	555			1003	17.6	535	
	1431	6.8	207			1443	5.2	159			1536	5.0	152			1608	3.1	94			1613	3.1	93			1636	3.4	105	
	2025	14.0	427			2022	15.7	479			2116	15.8	481			2145	17.9	545			○	2149	18.3	558			2219	18.1	553
				31 Th	0255	4.5	136																						
					0845	17.8	543																						
					1536	4.2	127																						

Time meridian 82° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Sagar, Hooghly River, India, 2008

Times and Heights of High and Low Waters

October						November						December																
Time			Height			Time			Height			Time			Height			Time			Height							
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm				
1 W	0457	4.1	125		16 Th	0445	3.2	97		1 Sa	0525	5.2	157		16 Su	0601	4.0	123		1 M	0551	5.3	163		16 Tu	0655	3.8	115
	1028	17.2	524			1013	18.2	554			1100	15.4	469			1134	16.2	495			1128	14.3	437			1228	15.4	469
	1658	3.7	112			1653	2.4	73			1725	4.6	140			1804	3.8	116			1751	4.8	146			1853	4.1	125
	2243	17.9	545			2233	19.2	586			2320	16.4	499			2355	17.1	521			2349	15.5	471					
2 Th	0519	4.4	135		17 F	0521	3.3	102		2 Su	0552	5.5	169		17 M	0650	4.8	145		2 Tu	0625	5.5	169		17 W	0049	16.1	492
	1053	16.7	510			1051	17.8	542			1130	14.8	452			1227	15.3	465			1204	14.0	428			0743	4.3	130
	1720	4.0	122			1728	2.8	85			1754	5.2	157			1849	4.9	149			1823	5.3	162			1319	14.8	450
	2309	17.5	532			2311	18.6	568			2352	15.7	479											1939		5.0	152	
3 F	0541	4.8	147		18 Sa	0600	4.0	121		3 M	0624	6.1	186		18 Tu	0049	16.0	487		3 W	0026	15.0	458		18 Th	0138	15.3	466
	1117	16.2	493			1134	16.9	516			1204	14.2	432			1325	14.3	436			1242	13.7	418			0826	4.8	146
	1744	4.5	136			1805	3.7	112			1823	5.9	180			1941	6.0	184			1859	5.9	180			1410	14.2	432
	2337	16.8	513			2354	17.6	535																2028		5.8	178	
4 Sa	0605	5.4	165		19 Su	0642	4.9	150		4 Tu	0028	15.0	456		19 W	0152	14.9	455		4 Th	0104	14.6	446		19 F	0228	14.4	440
	1144	15.4	470			1220	15.7	478			0740	7.3	224			0954	6.5	197			0740	6.0	183			0910	5.3	163
	1809	5.2	157			1847	4.9	149			1241	13.5	410			1547	13.2	402			1326	13.5	410			1501	13.6	416
											1856	6.7	205			2045	7.0	213			1941	6.5	198			2121	6.6	202
5 Su	0005	16.0	488		20 M	0041	16.2	495		5 W	0108	14.2	434		20 Th	0302	14.1	431		5 F	0146	14.3	436		20 Sa	0320	13.6	415
	0631	6.2	189			0730	6.0	184			0740	7.3	224			0954	6.5	197			0824	6.1	187			0957	5.8	178
	1212	14.5	443			1313	14.3	436			1329	12.8	390			1547	13.2	402			1416	13.3	406			1600	13.2	403
	1834	6.0	184			1935	6.3	191			1942	7.6	231			2212	7.5	229			2037	7.0	213			2226	7.2	220
6 M	0036	15.0	457		21 Tu	0140	14.8	452		6 Th	0203	13.6	415		21 F	0417	13.7	419		6 Sa	0240	13.9	425		21 Su	0419	12.8	391
	0700	7.2	218			0831	7.1	215			0844	7.7	235			1102	6.4	196			0918	6.1	186			1054	6.3	192
	1245	13.5	412			1430	13.1	400			1442	12.4	377			1707	13.4	407			1522	13.3	406			1710	13.0	396
	1902	7.1	216			2044	7.5	228			2106	8.2	250			2335	7.5	228			2147	7.3	221			2342	7.5	228
7 Tu	0114	13.9	425		22 W	0316	13.8	421		7 F	0330	13.3	405		22 Sa	0530	13.6	416		7 Su	0348	13.6	416		22 M	0530	12.3	374
	0743	8.1	248			1016	7.4	227			1009	7.6	231			1204	6.3	191			1023	6.0	182			1200	6.5	199
	1332	12.5	380			1616	12.7	388			1627	12.6	384			1823	13.9	424			1642	13.6	415			1828	13.2	401
	1949	8.1	248			2243	8.0	243			2251	8.1	248								2309	7.2	218					
8 W	0223	12.9	394		23 Th	0459	13.8	422		8 Sa	0501	13.6	415		23 Su	0047	7.1	217		8 M	0505	13.6	415		23 Tu	0100	7.3	223
	0911	8.8	268			1148	6.8	208			1134	6.9	210			0636	13.8	420			1135	5.6	172			0649	12.1	369
	1510	11.6	354			1759	13.4	409			1755	13.6	415			1304	6.0	184			1759	14.3	437			1311	6.4	195
	2154	8.8	269														1919	14.7	447					1933		13.6	416	
9 Th	0455	12.9	393		24 F	0018	7.3	223		9 Su	0020	7.3	224		24 M	0152	6.6	201		9 Tu	0031	6.6	201		24 W	0212	6.8	208
	1136	8.3	254			0622	14.5	443			0610	14.3	436			0730	14.0	427			0615	13.9	424			0753	12.4	377
	1753	12.2	373			1258	6.0	183			1244	5.9	180			1400	5.7	175			1249	5.1	156			1416	5.9	181
						1909	14.6	446			1856	15.0	456			2003	15.3	467			1902	15.3	466			2022	14.3	435
10 F	0011	8.1	248		25 Sa	0132	6.4	195		10 M	0130	6.3	192		25 Tu	0244	6.1	186		10 W	0143	5.8	177		25 Th	0307	6.2	189
	0618	13.9	424			0718	15.3	466			0705	15.1	460			0813	14.2	433			0717	14.4	439			0841	12.8	390
	1255	7.1	216			1357	5.2	160			1344	5.0	151			1446	5.4	164			1358	4.4	134			1509	5.3	163
	1905	13.7	418			1956	15.7	480			1944	16.2	495			2041	15.8	483			1956	16.2	495			2105	14.9	453
11 Sa	0125	6.9	210		26 Su	0229	5.6	171		11 Tu	0224	5.3	162		26 W	0322	5.7	173		11 Th	0246	4.9	150		26 F	0347	5.6	172
	0711	15.1	460			0802	15.8	482			0751	15.8	483			0851	14.4	439			0813	15.0	458			0920	13.2	403
	1351	5.8	176			1443	4.8	145			1435	4.0	123			1525	5.0	153			1457	3.7	112			1549	4.8	145
	1947	15.2	464			2033	16.6	506			2025	17.4	530			2113	16.2	494			2046	17.1	521			2141	15.3	466
12 Su	0219	5.7	174		27 M	0311	5.1	154		12 W	0311	4.5	136		27 Th	0354	5.4	164		12 F	0339	4.2	127		27 Sa	0421	5.2	158
	0752	16.1	491			0839	16.1	491			0836	16.5	503			0924	14.6	444			0905	15.6	477			0953	13.6	415
	1435	4.7	142			1519	4.4	135			1520	3.3	101			1556	4.7	142			1549	3.1	94			1624	4.3	131
	2022	16.6	506			2103	17.2	523			2102	18.2	555			2144	16.4	499			2133	17.7	538			2213	15.6	474
13 M	0301	4.7	144		28 Tu	0345	4.8	145		13 Th	0351	3.9	118		28 F	0424	5.2	159		13 Sa	0429	3.6	110		28 Su	0451	4.9	148
	0829	17.0	517			0910	16.2	493			0917	17.0	518			0955	14.7	447			0956	16.0	489			1023	13.9	425
	1514	3.7	114			1548	4.2	129			1601	2.8	85			1625	4.4	135			1636	2.8	84			1654	4.0	121
	2054	17.8	542			2131	17.5	532			2140	18.7	569			2214	16.4	499			2219	17.8	544			2241	15.7	478
14 Tu	0338	4.0	121		29 W	0412	4.7	142		14 F	0433	3.5	108		29 Sa	0452	5.2	157		14 Su	0517	3.3	102		29 M	0519	4.6	139
	0902	17.7	538			0941	16.2	493			0959	17.2	524			1025	14.7	447			1047	16.1	492			1052	14.2	432
	1548	3.0	91			1613	4.1	126			1640	2.7	81			1652	4.4	133			1722	2.8	86			1721	3.8	117
	2125	18.7	570			2157	17.5	533			2221	18.6	568			2243	16.2	493			2308	17.6	536			2311	15.6	477
15 W	0411	3.4	104		30 Th	0436	4.7	144		15 Sa	0515	3.6	110		30 Su	0519	5.2	159		15 M	0606	3.4	104		30 Tu	0551	4.4	133
	0936	18.1	552			1007	16.0	488			1045	16.9	516	</														

Time meridian 82° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

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Madras, India, 2008

Times and Heights of High and Low Waters

July						August						September																	
Time			Height			Time			Height			Time			Height			Time			Height								
1 Tu	h	m	ft	cm	16 W	h	m	ft	cm	1 F	h	m	ft	cm	16 Sa	h	m	ft	cm	1 M	h	m	ft	cm	16 Tu	h	m	ft	cm
	0005	0.5	14	0053		0.7	22	0149	0.2		7	0151	0.5	14		0303	0.4	13	0239		0.7	20							
	0659	3.5	107	0738		3.1	94	0822	3.7		114	0816	3.4	104		0911	3.8	115	0842		3.9	119							
	1310	1.1	34	1402		1.1	35	1453	0.4		12	1442	0.7	20		1534	0.4	12	1503		0.4	12							
	1900	3.0	90	1933		2.4	74	2037	3.1		94	2025	2.9	89		2131	3.5	108	2110		3.9	119							
2 W	0102	0.3	9	0133	0.6	17	0236	0.2	5	0225	0.4	11	0336	0.5	16	0312	0.7	20											
	0749	3.7	114	0811	3.3	100	0901	3.8	117	0844	3.6	109	0941	3.6	111	0914	3.9	119											
	1411	0.9	26	1436	1.0	30	1532	0.3	9	1510	0.5	14	1600	0.5	14	1535	0.3	10											
	1957	3.1	94	2008	2.6	78	2118	3.2	97	2058	3.1	96	2203	3.5	107	2146	3.9	123											
3 Th	0155	0.2	7	0208	0.4	13	0318	0.2	7	0257	0.3	10	0410	0.7	20	0350	0.7	22											
	0834	3.9	119	0842	3.4	105	0938	3.8	116	0912	3.7	112	1010	3.5	106	0949	3.8	116											
	1504	0.6	19	1507	0.8	25	1607	0.3	9	1539	0.3	10	1630	0.6	17	1609	0.3	10											
	2047	3.1	96	2042	2.7	83	2157	3.2	98	2132	3.3	101	2235	3.4	104	2224	3.9	118											
4 F	0244	0.2	6	0242	0.4	11	0357	0.4	11	0332	0.4	12	0444	0.8	25	0431	0.9	26											
	0919	4.0	122	0912	3.6	109	1013	3.7	112	0943	3.7	113	1041	3.2	99	1028	3.6	111											
	1552	0.5	15	1538	0.7	21	1640	0.4	11	1610	0.2	7	1701	0.7	20	1648	0.5	14											
	2135	3.1	96	2118	2.9	87	2234	3.2	97	2209	3.4	103	2311	3.2	99	2308	3.7	112											
5 Sa	0332	0.3	9	0315	0.4	11	0435	0.5	16	0407	0.5	14	0520	1.0	31	0518	1.0	32											
	1002	4.0	121	0943	3.6	111	1047	3.5	106	1016	3.6	111	1111	3.0	91	1112	3.4	103											
	1637	0.5	15	1612	0.6	18	1712	0.5	14	1641	0.2	7	1732	0.8	25	1730	0.7	21											
	2221	3.1	95	2155	3.0	91	2312	3.1	95	2247	3.4	103	2349	3.1	93	2357	3.4	105											
6 Su	0419	0.5	14	0350	0.4	13	0513	0.7	22	0445	0.6	19	0558	1.2	38	0612	1.3	39											
	1044	3.8	117	1014	3.7	112	1120	3.2	99	1049	3.5	107	1139	2.7	83	1203	3.1	93											
	1718	0.5	16	1644	0.5	15	1744	0.6	18	1716	0.3	8	1805	1.0	30	1821	1.0	29											
	2308	3.1	93	2233	3.1	93	2351	3.0	91	2326	3.2	99																	
7 M	0502	0.7	21	0428	0.5	16	0551	0.9	28	0525	0.8	24	0032	2.8	85	0100	3.2	99											
	1126	3.6	111	1047	3.6	110	1154	3.0	91	1126	3.3	101	0643	1.5	45	0731	1.5	46											
	1758	0.7	20	1718	0.5	14	1819	0.7	22	1754	0.4	11	1204	2.5	75	1313	2.7	83											
	2356	3.0	91	2312	3.1	93						1843	1.2	37	1937	1.2	38												
8 Tu	0547	0.9	28	0506	0.7	21	0035	2.8	86	0012	3.1	94	0137	2.6	78	0227	3.1	95											
	1208	3.4	104	1120	3.5	107	0634	1.1	35	0611	1.0	31	0757	1.7	53	0914	1.6	48											
	1836	0.8	24	1751	0.4	13	1227	2.7	82	1210	3.1	93	1232	2.2	67	1503	2.6	78											
				2356	3.1	93	1857	0.9	27	1841	0.5	16	1947	1.4	43	2115	1.4	43											
9 W	0045	2.9	88	0547	0.9	26	0127	2.6	79	0110	2.9	89	0319	2.5	75	0410	3.1	96											
	0632	1.1	35	1157	3.4	103	0724	1.4	42	0714	1.2	38	1006	1.8	55	1057	1.4	44											
	1249	3.1	96	1829	0.4	13	1300	2.4	73	1304	2.7	83	1335	2.0	60	1657	2.7	83											
	1917	0.9	28				1947	1.0	32	1944	0.7	22	2150	1.5	45	2249	1.4	42											
10 Th	0137	2.8	85	0045	3.0	90	0236	2.4	73	0229	2.8	84	0501	2.6	79	0530	3.4	103											
	0724	1.4	42	0632	1.0	32	0847	1.6	48	0856	1.4	43	1149	1.6	50	1208	1.2	37											
	1333	2.9	88	1238	3.2	97	1341	2.1	64	1427	2.4	74	1723	2.1	64	1810	3.1	93											
	2002	1.0	32	1914	0.5	15	2105	1.1	35	2114	0.9	26	2318	1.3	41														
11 F	0234	2.7	82	0144	2.9	87	0416	2.3	71	0413	2.8	85	0601	2.8	86	0004	1.2	38											
	0829	1.6	48	0731	1.2	38	1034	1.6	50	1040	1.3	41	1238	1.4	43	0627	3.6	110											
	1420	2.6	79	1330	2.9	89	1534	1.9	58	1630	2.3	71	1821	2.4	74	1256	1.0	30											
	2057	1.1	35	2015	0.6	17	2231	1.1	34	2241	0.9	26				1859	3.4	104											
12 Sa	0343	2.6	80	0256	2.8	85	0544	2.5	75	0542	3.0	92	0015	1.2	36	0057	1.1	33											
	0948	1.7	51	0858	1.4	43	1214	1.5	46	1215	1.1	33	0641	3.1	95	0709	3.8	116											
	1517	2.4	72	1439	2.7	81	1742	1.9	59	1803	2.5	77	1312	1.2	36	1334	0.9	26											
	2202	1.1	35	2131	0.6	19	2343	1.0	30				1859	2.8	85	1935	3.7	112											
13 Su	0505	2.6	80	0423	2.8	85	0641	2.7	82	0000	0.7	22	0057	1.0	30	0138	1.0	30											
	1109	1.7	51	1031	1.4	42	1309	1.3	39	0642	3.3	101	0713	3.4	103	0744	3.9	119											
	1638	2.2	68	1609	2.5	75	1839	2.1	65	1314	0.8	24	1340	1.0	29	1405	0.8	24											
	2308	1.1	33	2245	0.6	18				1903	2.9	87	1931	3.2	97	2008	3.9	119											
14 M	0612	2.7	83	0547	3.0	91	0036	0.8	24	0100	0.6	17	0133	0.8	25	0213	1.0	29											
	1227	1.5	47	1201	1.2	36	0717	3.0	90	0728	3.6	109	0742	3.6	110	0815	3.9	119											
	1800	2.2	68	1751	2.5	76	1344	1.0	32	1358	0.6	17	1406	0.7	22	1432	0.8	24											
				2354	0.5	14	1919	2.4	73	1948	3.1	96	2004	3.5	107	2036	4.0	123											
15 Tu	0007	0.9	28	0650	3.3	100	0116	0.6	18	0148	0.5	14	0205	0.7	22	0246	1.0	29											
	0702	2.9	88	1316	0.9	27	0747	3.2	98	0806	3.7	114	0811	3.8	116	0843	3.8	117											
	1321	1.3	41	1900	2.7	82	1413	0.9	26	1433	0.4	12	1433	0.5	16	1457	0.8	24											
	1853	2.3	70				1952	2.7	81	2025	3.4	103	2036	3.8	115	2105	4.0	123											
16 W				0057	0.3	10				0227	0.4	13																	
				0740	3.5	108				0839	3.8	116																	
				1409	0.6	18				1505	0.4	11																	
				1952	2.9	89				2058	3.5	107																	

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Colombo, Sri Lanka, 2008

Times and Heights of High and Low Waters

January				February				March			
Time	Height			Time	Height			Time	Height		
h m	ft	cm	h m	ft	cm	h m	ft	cm	h m	ft	cm
1 Tu	0039 0641 1301 2030	1.4 1.9 0.9 1.9	42 58 26 59	16 W O	0037 0543 1241 1956	1.3 1.9 0.6 2.1	39 59 19 64	1 Sa	0018 0424 1150 2037	1.2 1.5 0.9 1.7	38 47 26 51
2 W	0200 0731 1354 2158	1.5 1.7 1.0 2.0	46 52 30 60	17 Th	0152 0558 1333 2156	1.5 1.7 0.8 2.1	45 53 24 63	16 Su	0011 0850 1328 1746	2.0 1.1 1.3 1.1	60 35 41 34
3 Th	0603 0905 1524 2326	1.4 1.5 1.0 2.1	44 47 30 64	18 F	1505 2358	1.0 2.2	29 68	2 Su	0135 0330 1041 2358	1.5 1.5 1.1 1.8	45 45 33 54
4 F	0709 1115 1713	1.2 1.5 1.0	38 45 32	19 Sa	0748 1209 1711	1.3 1.4 1.0	39 42 30	3 M	0815 1320 1845	1.0 1.4 1.1	31 42 35
5 Sa	0024 0748 1239 1815	2.3 1.1 1.6 1.0	69 33 48 30	20 Su	0100 0754 1326 1835	2.4 1.0 1.6 0.9	73 32 48 27	4 Tu	0052 0807 1333 1915	2.0 0.9 1.6 0.9	61 26 50 28
6 Su	0109 0816 1331 1858	2.4 1.0 1.7 0.9	74 29 51 27	21 M	0141 0816 1409 1933	2.6 0.9 1.8 0.8	78 26 61 23	5 W	0128 0807 1356 1939	2.2 0.7 0.9 0.7	68 22 59 22
7 M	0148 0841 1413 1933	2.6 0.8 1.5 0.8	78 25 55 24	22 Tu	0216 0845 1445 2018	2.7 0.7 2.0 0.7	81 20 61 20	6 Th	0158 0811 1422 2005	2.4 0.6 2.2 0.6	72 17 66 17
8 Tu	0224 0900 1448 ● 2005	2.7 0.8 1.9 0.7	81 23 57 22	23 W	0246 0913 1516 2058	2.7 0.5 2.2 0.6	82 16 66 19	7 F	0226 0824 1448 ● 2031	2.5 0.4 2.4 0.4	75 12 72 13
9 W	0258 0916 1520 2039	2.7 0.7 2.0 0.7	82 20 60 20	24 Th	0315 0939 1546 2133	2.7 0.4 2.3 0.6	82 12 69 19	8 Sa	0252 0843 1515 2101	2.5 0.2 2.5 0.4	75 7 77 12
10 Th	0328 0935 1552 2113	2.7 0.6 2.0 0.7	81 18 62 20	25 F	0343 1005 1616 2205	2.6 0.3 2.3 0.7	80 10 70 20	9 Su	0315 0907 1541 2133	2.4 0.1 2.6 0.4	74 4 80 12
11 F	0356 1000 1622 2148	2.6 0.5 2.1 0.7	80 16 64 20	26 Sa	0409 1030 1646 2231	2.6 0.3 2.3 0.7	78 10 70 22	10 M	0335 0933 1609 2203	2.4 0.1 2.7 0.5	72 2 81 14
12 Sa	0422 1026 1652 2226	2.5 0.5 2.2 0.7	77 14 66 22	27 Su	0435 1052 1716 2256	2.4 0.4 2.3 0.8	74 11 69 25	11 Tu	0356 1001 1637 2235	2.3 0.1 2.6 0.6	69 2 80 19
13 Su	0443 1056 1726 2305	2.4 0.4 2.2 0.9	73 13 67 26	28 M	0501 1113 1748 2320	2.3 0.4 2.2 0.9	70 12 67 28	12 W	0415 1028 1705 2307	2.1 0.2 2.5 0.8	65 5 76 25
14 M	0503 1128 1803 2346	2.3 0.5 2.2 1.0	69 14 67 32	29 Tu	0528 1133 1824 2348	2.1 0.5 2.1 1.1	65 15 64 33	13 Th	0431 1054 1737 2341	2.0 0.3 2.3 1.0	61 10 71 31
15 Tu	0522 1201 1850	2.1 0.5 2.2	64 16 66	30 W O	0548 1158 1909	1.9 0.6 2.0	59 19 60	14 F O	0448 1118 1813	1.8 0.6 2.1	56 17 63
				31 Th	0022 0558 1224 2015	1.2 1.7 0.8 1.8	38 52 24 56	15 Sa	0020 0456 1128 1909	1.3 1.6 0.9 1.8	39 50 26 55
								16 Su	0003 0731 1330 1822	1.8 1.1 1.5 1.2	54 34 47 36
								17 M	0052 0718 1337 1909	1.9 0.9 1.8 0.9	59 27 56 28
								18 Tu	0122 0737 1356 1945	2.1 0.7 2.1 0.7	64 20 64 22
								19 W	0146 0758 1416 2015	2.2 0.5 2.3 0.6	68 14 71 17
								20 Th	0209 0822 1437 2043	2.3 0.3 2.5 0.5	71 10 75 15
								21 F	0233 0843 1500 2107	2.4 0.2 2.6 0.4	72 7 78 13
								22 Sa	0258 0903 1522 2128	2.4 0.2 2.6 0.4	72 6 79 13
								23 Su	0322 0922 1548 2146	2.3 0.2 2.6 0.5	71 6 79 14
								24 M	0346 0939 1613 2207	2.2 0.2 2.5 0.5	68 7 77 16
								25 Tu	0409 0958 1639 2228	2.1 0.3 2.4 0.6	65 9 74 19
								26 W	0430 1018 1705 2252	2.0 0.4 2.3 0.7	60 11 69 22
								27 Th	0443 1039 1731 2322	1.8 0.5 2.1 0.9	55 15 64 27
								28 F	0443 1101 1800	1.6 0.7 1.9	50 20 58
								29 Sa	0000 0424 1122 1850	1.1 1.5 0.9 1.7	33 46 27 51
								30 Su	0105 0356 1045 2250	1.3 1.4 1.1 1.6	40 43 35 50

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Colombo, Sri Lanka, 2008

Times and Heights of High and Low Waters

July								August								September							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm				
1 Tu	0020	1.0	31	16 W	0116	1.0	29	1 F	0231	1.3	40	16 Sa	0226	1.3	40	1 M	0309	1.9	58	16 Tu	0252	2.0	62
	0548	0.3	9		0648	0.4	11		0801	0.1	3		0801	0.1	3		0907	0.0	-1		0839	0.0	1
	1318	2.1	63		1335	1.8	54		1433	2.0	60		1430	1.9	57		1503	1.9	58		1454	1.9	58
	1956	0.5	15		2041	0.3	8		2054	-0.1	-2		2046	-0.1	-2		2116	-0.3	-10		2043	-0.2	-6
2 W	0133	1.1	35	17 Th	0203	1.1	33	2 Sa	0305	1.5	46	17 Su	0256	1.5	45	2 Tu	0335	2.0	60	17 W	0320	2.2	66
	0654	0.2	7		0730	0.3	8		0845	0.0	0		0830	0.0	0		0935	0.0	0		0911	0.0	1
	1403	2.2	66		1413	1.9	58		1503	2.0	60		1500	1.9	57		1530	1.9	57		1516	1.8	56
	2033	0.3	10		2101	0.2	5		2124	-0.2	-6		2100	-0.2	-5		2139	-0.3	-10		2109	-0.3	-
3 Th	0224	1.3	40	18 F	0241	1.2	37	3 Su	0337	1.6	50	18 M	0324	1.6	50	3 W	0401	2.0	60	18 Th	0348	2.2	67
	0750	0.2	5		0803	0.2	6		0924	0.0	0		0858	-0.1	-2		1001	0.0	1		0943	0.1	3
	1443	2.2	67		1448	2.0	60		1531	1.9	59		1526	1.9	57		1554	1.8	55		1537	1.7	53
	2109	0.2	5		2118	0.1	2		2152	-0.3	-9		2120	-0.3	-8		2201	-0.3	-9		2137	-0.3	-8
4 F	0309	1.4	44	19 Sa	0315	1.3	40	4 M	0407	1.7	52	19 Tu	0350	1.7	53	4 Th	0430	1.9	59	19 F	0416	2.2	66
	0841	0.1	4		0835	0.1	4		0958	0.0	0		0928	-0.1	-3		1024	0.1	4		1015	0.2	7
	1518	2.2	67		1520	2.0	60		1600	1.9	57		1548	1.8	54		1620	1.7	51		1556	1.6	50
	2143	0.0	1		2133	0.0	0		2218	-0.3	-10		2143	-0.3	-10		2222	-0.2	-7		2205	-0.2	-5
5 Sa	0348	1.5	47	20 Su	0346	1.4	43	5 Tu	0435	1.7	53	20 W	0418	1.8	55	5 F	0458	1.8	56	20 Sa	0446	2.1	64
	0926	0.2	5		0907	0.1	2		1028	0.1	2		1000	0.0	-1		1045	0.2	7		1050	0.4	12
	1550	2.1	65		1550	1.9	59		1626	1.8	54		1609	1.7	52		1645	1.5	47		1615	1.5	47
	2216	0.0	-1		2152	-0.1	-3		2243	-0.3	-10		2209	-0.4	-12		2241	-0.1	-3		2235	0.0	-1
6 Su	0426	1.6	49	21 M	0416	1.5	45	6 W	0507	1.7	53	21 Th	0446	1.8	56	6 Sa	0530	1.7	52	21 Su	0518	1.9	59
	1007	0.2	6		0941	0.0	1		1056	0.2	5		1033	0.1	2		1109	0.4	11		1128	0.6	18
	1622	2.0	62		1616	1.9	57		1652	1.7	51		1626	1.6	48		1707	1.4	42		1635	1.4	43
	2248	-0.1	-3		2215	-0.2	-5		2305	-0.3	-9		2237	-0.4	-11		2301	0.0	1		2305	0.2	6
7 M	0501	1.6	50	22 Tu	0446	1.6	48	7 Th	0537	1.7	51	22 F	0516	1.8	55	7 Su	0603	1.6	48	22 M	0558	1.7	53
	1046	0.3	9		1015	0.1	2		1120	0.3	8		1109	0.2	7		1137	0.5	16		1213	0.8	24
	1652	1.9	58		1639	1.8	54		1718	1.5	46		1643	1.5	45		1722	1.2	36		1656	1.2	38
	2318	-0.1	-3		2241	-0.2	-7		2328	-0.2	-6		2307	-0.3	-9		2307	0.2	6		2331	0.5	15
8 Tu	0539	1.6	50	23 W	0516	1.6	49	8 F	0613	1.6	48	23 Sa	0548	1.7	53	8 M	0648	1.4	42	23 Tu	0654	1.5	46
	1122	0.4	12		1052	0.1	4		1146	0.4	12		1146	0.4	13		1215	0.7	21		1348	1.0	30
	1722	1.7	53		1658	1.6	50		1745	1.3	41		1700	1.3	40		1648	1.0	30		1700	1.0	32
	2346	-0.1	-2		2311	-0.3	-8		2350	-0.1	-2		2337	-0.1	-4		2348	0.4	12		2326	0.8	25
9 W	0616	1.6	49	24 Th	0548	1.6	50	9 Sa	0652	1.4	44	24 Su	0631	1.6	48	9 Tu	0815	1.2	37	24 W	1020	1.4	42
	1158	0.5	16		1130	0.3	8		1218	0.5	16		1233	0.7	20		1333	0.9	27		1816	0.8	25
	1752	1.6	48		1716	1.5	46		1807	1.1	35		1715	1.2	36		1524	0.9	28				
					2343	-0.2	-7		2305	-0.3	-9		2237	-0.4	-11		2301	0.0	1				
10 Th	0015	0.0	0	25 F	0626	1.6	49	10 Su	0015	0.1	3	25 M	0011	0.1	3	10 W	0016	0.7	20	25 Th	0035	1.1	35
	0700	1.5	47		1213	0.5	14		0746	1.3	39		0733	1.4	43		1056	1.2	38		0530	0.9	26
	1235	0.7	20		1733	1.3	41		1303	0.7	22		1358	0.9	27		1930	0.6	18		1203	1.5	47
	1824	1.4	43		1813	0.9	28		1813	0.9	28		1711	1.0	30						1831	0.6	18
11 F	0045	0.1	3	26 Sa	0018	-0.1	-4	11 M	0045	0.3	8	26 Tu	0056	0.4	12	11 Th	0035	0.9	28	26 F	0100	1.5	45
	0750	1.4	44		0715	1.5	47		0916	1.2	36		1035	1.3	40		0615	0.7	21		0635	0.7	20
	1322	0.8	24		1307	0.7	21						2135	0.7	20		1215	1.4	44		1245	1.7	52
	1901	1.2	37		1754	1.2	36								1933		0.4	13	1856		0.4	11	
12 Sa	0120	0.2	7	27 Su	0100	0.0	1	12 Tu	0141	0.5	14	27 W	0033	0.7	22	12 F	0103	1.2	36	27 Sa	0124	1.8	54
	0856	1.4	43		0828	1.5	45		1124	1.3	39		0424	0.6	18		0654	0.5	15		0715	0.5	14
	1516	0.9	27		1437	0.9	26		1952	0.5	15		1224	1.5	45		1258	1.6	50		1316	1.8	55
	1954	1.0	31		1809	1.0	30						1920	0.5	15		1939	0.3	9		1924	0.2	5
13 Su	0213	0.4	11	28 M	0200	0.2	6	13 W	0026	0.7	22	28 Th	0118	1.0	32	13 Sa	0130	1.4	44	28 Su	0148	2.0	61
	1024	1.4	43		1041	1.5	45		0556	0.5	16		0626	0.4	13		0720	0.3	10		0748	0.3	9
	1841	0.8	23		1237	1.4	44		1237	1.4	44		1311	1.6	50		1331	1.8	55		1343	1.9	58
	2139	0.9	26		2007	0.3	10		2007	0.3	10		1935	0.3	8		1946	0.2	5		1950	0.0	1
14 M	0348	0.5	14	29 Tu	0354	0.4	11	14 Th	0122	0.9	28	29 F	0148	1.3	41	14 Su	0158	1.7	51	29 M	0213	2.2	66
	1150	1.5	46		1222	1.6	49		0658	0.4	11		0720	0.3	8		0745	0.2	6		0818	0.2	7
	1937	0.6	17		1939	0.6	17		1322	1.6	50		1343	1.8	55		1401	1.9	58		1407	2.0	60
					2022	0.2	5		2022	0.2	5		2000	0.0	1		2000	0.0	1		2015	0.0	-1
15 Tu	0001	0.9	26	30 W	0058	0.8	25	15 F	0156	1.1	34	30 Sa	0216	1.6	49	15 M	0226	1.9	58	30 Tu	0237	2.3	70
	0545	0.5	14		0554	0.3	10		0731	0.2	7		0801	0.1	3		0811	0.1	2		0846	0.2	6
	1250	1.6	50		1318	1.8	54		1358	1.8	54		1413	1.9	57		1430	1.9	58		1433	2.0	60
	2013	0.4	12		2000	0.3	10		2035	0.1	2		2026	-0.1	-4		2018	-0.1	-3		2039	-0.1	-2
			31 Th	0152	1.1	33																	
				0707	0.2	6																	
				1358	1.9	58																	
				2026	0.1	3																	

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Bombay, India, 2008

Times and Heights of High and Low Waters

January					February					March													
Time		Height			Time		Height			Time		Height			Time		Height						
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm				
1 Tu	0538	11.9	364	16 W O	0451	13.4	407	1 F	0041	9.1	277	16 Sa	0132	8.4	255	1 Sa	0433	9.4	288	16 Su	0159	7.9	242
	1233	5.2	157		1143	3.3	102		0541	9.8	300		0553	10.4	318		1209	5.5	168		0628	9.4	288
	1937	10.2	311		1847	11.8	360		1311	5.1	156		1331	3.9	119		2009	10.1	308		1326	4.8	147
					2148	10.7	326		2123	12.0	367						2103	11.7	358				
2 W	0036	8.6	263	17 Th	0002	7.4	225	2 Sa	0435	8.7	264	17 Su	0331	7.8	239	2 Su	0428	8.6	261	17 M	0329	7.0	214
	0617	11.1	339		0533	12.4	379		0723	9.3	282		0811	10.0	306		0626	8.7	265		0847	9.8	298
	1327	5.0	151		1246	3.3	100		1421	4.8	147		1459	3.5	108		1336	5.4	166		1455	4.4	135
	2123	10.8	328		2015	12.0	367		2237	11.5	351		2227	13.0	395		2158	10.9	333		2205	12.6	384
3 Th	0230	8.8	269	18 F	0131	8.1	247	3 Su	0515	7.9	240	18 M	0436	6.7	204	3 M	0447	7.7	236	18 Tu	0422	5.7	175
	0711	10.4	317		0634	11.5	352		0909	9.4	286		0955	10.9	332		0844	9.0	274		1006	11.1	337
	1420	4.6	140		1357	3.1	93		1525	4.2	129		1610	2.8	85		1450	4.9	148		1600	3.7	114
	2217	11.5	352		2136	12.7	388		2308	12.3	376		2313	14.0	427		2231	11.8	361		2249	13.5	412
4 F	0422	8.5	258	19 Sa	0312	8.0	245	4 M	0536	7.2	220	19 Tu	0520	5.4	165	4 Tu	0453	6.9	210	19 W	0501	4.5	136
	0820	10.0	304		0806	11.0	336		1018	10.1	307		1100	12.1	370		0953	10.0	304		1056	12.3	376
	1510	4.1	126		1508	2.6	79		1618	3.5	106		1707	2.0	62		1551	4.0	121		1649	3.1	96
	2256	12.3	375		2238	13.7	417		2335	13.1	399		2351	14.9	455		2258	12.8	391		2325	14.2	434
5 Sa	0516	7.9	240	20 Su	0436	7.3	222	5 Tu	0552	6.6	201	20 W	0600	4.3	131	5 W	0508	5.9	181	20 Th	0534	3.4	103
	0941	10.0	305		0942	11.3	344		1101	10.9	333		1150	13.2	403		1038	11.1	339		1139	13.3	405
	1559	3.6	110		1615	2.0	60		1701	2.7	83		1753	1.6	50		1637	3.1	96		1731	3.0	91
	2328	12.9	394		2326	14.6	446								2325		13.7	419	2359		14.6	444	
6 Su	0552	7.3	224	21 M	0533	6.3	191	6 W	0002	13.8	421	21 Th	0026	15.5	471	6 Th	0533	4.9	149	21 F	0604	2.7	81
	1041	10.4	317		1058	12.1	370		0612	5.9	181		0637	3.4	105		1121	12.3	375		1219	13.8	422
	1642	3.1	93		1715	1.3	41		1140	11.8	361		1236	13.8	422		1716	2.5	76		1807	3.2	97
	2358	13.5	411				1737		2.1	64	1832		1.7	52	2353		14.5	443					
7 M	0619	6.9	210	22 Tu	0010	15.5	471	7 Th	0027	14.5	442	22 F	0059	15.6	474	7 F	0602	3.7	113	22 Sa	0027	14.5	442
	1124	11.0	335		0620	5.3	161		0640	5.2	157		0711	2.9	89		1201	13.5	410		0633	2.2	67
	1720	2.6	78		1156	13.1	398		1219	12.7	388		1316	14.0	427		1754	2.1	65		1255	14.0	428
					1807	1.0	29		1812	1.7	51		1904	2.2	68		●		1837		3.7	112	
8 Tu	0026	14.0	426	23 W	0049	16.0	487	8 F	0056	15.1	460	23 Sa	0130	15.3	465	8 Sa	0023	15.1	460	23 Su	0054	14.1	431
	0647	6.5	197		0703	4.4	135		0709	4.2	129		0742	2.6	80		0636	2.5	76		0658	1.9	59
	1200	11.6	354		1247	13.6	416		1257	13.5	411		1352	13.8	421		1243	14.4	439		1328	14.0	427
	1755	2.2	66		1850	1.0	29		1849	1.6	48		1931	3.1	94		1834	2.1	64		1904	4.2	129
9 W	0057	14.4	439	24 Th	0127	16.1	491	9 Sa	0126	15.5	473	24 Su	0159	14.7	448	9 Su	0053	15.4	470	24 M	0118	13.6	416
	0713	6.0	184		0744	3.9	118		0745	3.3	100		0808	2.6	78		0710	1.4	43		0721	1.8	55
	1235	12.2	372		1332	13.8	421		1338	14.0	427		1427	13.4	408		1326	15.1	459		1359	13.8	422
	1828	1.9	58		1928	1.4	44		1927	1.8	56		1955	4.0	123		1915	2.4	74		1930	4.8	146
10 Th	0125	14.8	450	25 F	0204	15.9	486	10 Su	0159	15.7	478	25 M	0225	13.9	425	10 M	0126	15.4	470	25 Tu	0140	13.1	400
	0743	5.5	169		0822	3.6	109		0820	2.4	74		0830	2.6	80		0746	0.7	21		0744	1.9	57
	1312	12.6	385		1415	13.5	413		1421	14.2	433		1457	12.8	391		1409	15.3	467		1425	13.5	413
	1903	1.9	57		2003	2.4	73		2009	2.5	77		2017	5.1	154		1956	3.1	95		1955	5.3	163
11 F	0157	15.1	459	26 Sa	0239	15.4	470	11 M	0233	15.5	472	26 Tu	0245	13.2	401	11 Tu	0200	15.0	458	26 W	0202	12.6	383
	0815	5.0	153		0855	3.5	107		0855	1.9	58		0850	2.9	88		0821	0.5	14		0806	2.2	68
	1351	12.9	393		1456	12.9	394		1509	14.0	428		1524	12.2	373		1455	15.1	459		1452	13.1	399
	1942	2.1	65		2033	3.6	110		2054	3.6	111		2043	6.0	183		2041	4.1	126		2027	6.0	183
12 Sa	0229	15.2	463	27 Su	0312	14.6	446	12 Tu	0308	14.9	454	27 W	0302	12.3	376	12 W	0235	14.3	435	27 Th	0230	11.8	361
	0851	4.5	136		0925	3.7	112		0932	1.8	56		0914	3.4	103		0857	0.9	27		0834	3.0	90
	1434	12.9	393		1536	12.1	370		1600	13.5	412		1553	11.6	354		1546	14.3	436		1523	12.4	378
	2023	2.8	84		2058	5.0	152		2142	5.0	153		2117	7.0	212		2129	5.4	165		2106	6.8	207
13 Su	0305	15.1	461	28 M	0340	13.7	417	13 W	0341	13.9	425	28 Th	0326	11.5	349	13 Th	0310	13.2	402	28 F	0259	11.0	335
	0929	4.0	121		0951	4.0	121		1011	2.2	68		0949	4.1	125		0935	1.9	57		0908	3.9	120
	1522	12.7	387		1615	11.4	347		1703	12.7	387		1634	10.9	332		1644	13.2	401		1604	11.6	353
	2107	3.7	113		2123	6.3	191		2233	6.5	198		2205	7.9	241		2224	6.8	206		2159	7.6	233
14 M	0339	14.8	450	29 Tu	0401	12.7	388	14 Th	0412	12.8	390	29 F	0354	10.5	319	14 F	0345	11.9	362	29 Sa	0331	10.1	308
	1009	3.6	110		1018	4.3	132		1058	2.9	89		1043	5.0	151		1023	3.1	96		0955	5.0	152
	1617	12.4	377		1658	10.7	327		1821	11.9	363		1745	10.2	312		1759	12.0	367		1659	10.7	327
	2157	4.9	150		2153	7.4	226		●	2341	7.7		236	●	2343		8.7	265	●		2343	7.8	238	2327	8.3	254
15 Tu	0415	14.2	432	30 W	0419	11.8	359	15 F	0450	11.5	352					15 Sa	0428	10.5	320	30 Su	0408	9.3	282
	1052	3.4	104		1056	4.7	143		1202	3.6	111						1138	4.4	133		1117	5.7	175
	1725	12.0	365		1754	10.2	312		1952	11.6	354						1928	11.5	349		1842	10.3	315
	2254	6.2	190		2245	8.4	257														●		
			31 Th	0447	10.8	329												31 M	0126	8.4	255		
				1156	5.0	153													0524	8.6	263		
				1924	10.1	308													1250	5.9	180		
																			2028	10.8	328		

Time meridian 82° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 82° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Bombay, India, 2008

Times and Heights of High and Low Waters

July				August				September															
Time		Height		Time		Height		Time		Height		Time		Height									
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm								
1 Tu	0346	1.8	55	16 W	0421	3.5	106	1 F	0532	1.0	32	16 Sa	0518	2.6	78	1 M	0057	14.1	429	16 Tu	0023	13.7	418
	1101	14.2	433		1142	12.7	386		1220	15.4	468		1209	13.6	415		0638	2.2	67		0606	2.7	83
	1651	6.7	204		1802	6.8	208		1830	4.3	132		1817	5.1	155		1307	15.0	458		1231	14.4	440
	2228	12.2	373		2316	10.7	327		●						1920		2.2	67	1845		1.8	55	
2 W	0443	1.2	36	17 Th	0503	3.0	90	2 Sa	0025	13.6	415	17 Su	0006	12.2	372	2 Tu	0136	13.9	425	17 W	0102	14.4	438
	1152	15.0	457		1212	13.1	399		0619	0.9	26		0549	2.2	67		0709	3.0	92		0644	3.0	90
	1754	6.0	183		1830	6.5	197		1302	15.7	480		1237	14.1	431		1340	14.4	440		1303	14.5	441
	2333	12.9	392		2353	11.4	346		1915	3.6	109		1848	4.3	131		1950	2.2	66		1920	1.1	34
3 Th	0539	0.7	22	18 F	0540	2.5	77	3 Su	0112	14.0	426	18 M	0040	12.9	392	3 W	0211	13.5	411	18 Th	0143	14.7	448
	1238	15.6	474		1243	13.5	411		0701	1.2	37		0621	2.1	64		0738	4.0	123		0724	3.4	105
	1848	5.3	161		1856	6.1	185		1341	15.7	479		1306	14.5	442		1412	13.6	415		1339	14.2	434
	●				1957	3.1	95		1919	3.4	105		1919	3.4	105		2017	2.4	72		1955	0.9	26
4 F	0029	13.5	410	19 Sa	0026	11.9	363	4 M	0155	13.8	422	19 Tu	0116	13.4	408	4 Th	0245	12.9	392	19 F	0226	14.6	445
	0631	0.6	18		0611	2.3	69		0738	2.1	63		0657	2.3	70		0803	5.1	156		0808	4.2	129
	1325	15.8	483		1312	13.8	422		1420	15.3	465		1338	14.7	447		1439	12.7	387		1415	13.7	417
	1940	4.6	141		1924	5.6	171		2034	3.0	91		1954	2.7	81		2039	2.8	86		2031	1.1	34
5 Sa	0120	13.7	419	20 Su	0059	12.3	376	5 Tu	0237	13.3	405	20 W	0156	13.7	417	5 F	0316	12.1	369	20 Sa	0312	14.0	428
	0720	0.9	27		0642	2.2	67		0812	3.3	100		0737	2.8	86		0830	6.1	187		0855	5.2	160
	1410	15.9	484		1343	14.2	432		1458	14.5	442		1413	14.6	444		1502	11.7	358		1454	12.8	391
	2026	4.2	127		1955	5.1	154		2108	3.1	96		2029	2.1	64		2103	3.4	105		2109	1.9	58
6 Su	0208	13.6	416	21 M	0132	12.6	385	6 W	0319	12.5	381	21 Th	0239	13.6	416	6 Sa	0347	11.4	346	21 Su	0407	13.1	399
	0804	1.6	49		0717	2.4	72		0842	4.7	143		0820	3.7	112		0903	7.1	216		0951	6.4	195
	1454	15.6	475		1414	14.4	438		1532	13.5	411		1449	14.1	431		1526	10.8	330		1534	11.7	358
	2110	4.0	121		2028	4.5	137		2137	3.6	109		2105	2.0	60		2135	4.3	131		2156	3.1	93
7 M	0256	13.1	400	22 Tu	0211	12.7	387	7 Th	0402	11.6	354	22 F	0327	13.3	405	7 Su	0425	10.6	322	22 M	0517	12.0	367
	0846	2.8	85		0754	2.8	86		0913	6.1	185		0908	4.8	147		0955	8.0	243		1105	7.4	225
	1537	15.0	457		1450	14.4	439		1601	12.4	377		1525	13.4	408		1558	9.9	301		1621	10.6	323
	2152	4.1	124		2104	4.0	121		2205	4.1	125		2142	2.3	70		2232	5.2	158		2306	4.2	128
8 Tu	0347	12.3	375	23 W	0254	12.6	384	8 F	0446	10.8	330	23 Sa	0424	12.6	383	8 M	0536	9.9	302	23 Tu	0638	11.4	348
	0927	4.2	129		0838	3.6	109		0946	7.3	222		1002	6.1	186		1138	8.6	262		1308	7.7	234
	1619	14.1	431		1525	14.2	432		1624	11.3	344		1600	12.4	378		1646	9.0	274		1755	9.6	293
	2235	4.4	133		2142	3.6	110		2241	4.6	141		2227	2.9	89		2355	5.7	175				
9 W	0440	11.5	349	24 Th	0345	12.3	376	9 Sa	0542	10.2	311	24 Su	0535	11.8	359	9 Tu	0748	9.8	298	24 W	0050	4.8	145
	1009	5.8	176		0927	4.6	141		1041	8.3	252		1105	7.3	222		1545	8.3	254		0806	11.5	350
	1657	13.1	399		1601	13.7	417		1651	10.3	314		1638	11.4	346		1844	8.4	257		1437	7.0	213
	2318	4.7	143		2222	3.5	106		2335	5.1	155		2326	3.6	110		2326	3.6	110		2005	9.7	296
10 Th	0539	10.7	327	25 F	0443	11.9	364	10 Su	0701	9.9	303	25 M	0700	11.3	345	10 W	0118	5.7	173	25 Th	0219	4.5	138
	1059	7.1	217		1020	5.8	176		1235	8.8	268		1240	8.0	243		0931	10.5	319		0917	12.2	371
	1735	12.0	366		1637	13.0	395		1747	9.4	288		1733	10.4	316		1618	7.5	229		1540	5.8	176
					2307	3.5	106										2045	8.8	269		2138	10.9	331
11 F	0005	4.9	150	26 Sa	0557	11.6	354	11 M	0046	5.2	160	26 Tu	0049	4.0	122	11 Th	0232	5.1	156	26 F	0325	3.9	119
	0651	10.4	316		1125	6.9	210		0908	10.2	312		0830	11.5	350		1005	11.3	345		1008	13.1	398
	1215	8.1	246		1716	12.1	370		1556	8.4	256		1436	7.7	235		1631	6.7	204		1624	4.4	134
	1813	11.1	337		1923	9.0	273		1936	9.9	301		1936	9.9	301		2148	9.7	297		2235	12.2	371
12 Sa	0056	5.0	151	27 Su	0004	3.5	107	12 Tu	0155	5.1	154	27 W	0218	3.7	114	12 F	0332	4.3	132	27 Sa	0417	3.3	102
	0828	10.5	320		0719	11.5	352		1008	10.9	333		0942	12.3	374		1033	12.2	372		1052	13.8	422
	1350	8.4	257		1241	7.6	233		1645	7.6	232		1550	6.7	205		1648	5.8	176		1704	3.2	98
	1903	10.3	313		1807	11.4	347		2105	9.1	278		2121	10.6	322		2230	10.8	329		2320	13.3	405
13 Su	0150	4.8	146	28 M	0112	3.4	103	13 W	0302	4.5	137	28 Th	0330	3.0	92	13 Sa	0416	3.6	110	28 Su	0503	3.1	95
	0940	11.0	336		0842	11.9	363		1046	11.7	356		1034	13.3	406		1102	13.0	397		1129	14.3	435
	1544	8.2	251		1414	7.8	238		1713	7.0	212		1641	5.4	166		1712	4.8	145		1739	2.3	71
	2009	9.8	299		1928	10.9	331		2212	9.8	299		2233	11.8	360		2309	11.8	361				
14 M	0243	4.5	136	29 Tu	0223	3.0	91	14 Th	0358	3.8	116	29 F	0429	2.2	68	14 Su	0455	3.1	93	29 M	0001	13.9	425
	1030	11.6	355		0954	12.7	387		1115	12.4	377		1117	14.3	437		1130	13.7	418		0543	3.3	101
	1651	7.7	235		1541	7.3	223		1732	6.4	194		1724	4.2	128		1741	3.7	114		1203	14.3	435
	2130	9.8	298		2104	11.0	335		2254	10.6	324		2327	13.0	396		2347	12.8	391		●	1811	1.9	57
15 Tu	0333	4.0	122	30 W	0332	2.3	71	15 F	0443	3.1	95	30 Sa	0519	1.7	53	15 M	0530	2.8	85	30 Tu	0039	14.2	432
	1108	12.2	371		1049	13.7	417		1142	13.0	397		1157	15.1	459		1201	14.2	433		0617	7.8	115
	1733	7.2	220		1648	6.4	194		1753	5.8	176		1805	3.2	97		1812	2.7	83		1234	13.9	423
	2233	10.1	309		2228	11.8	359		2331	11.4	348						●				1841	1.7	52
			31 Th	0436	1.6	49				31 Su	0015	13.8	420										
				1137	14.6	446					0602	1.7	52										
				1741	5.3	162					1233	15.3	466										
				2331	12.8	391					1844	2.5	76										

Time meridian 82° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Bombay, India, 2008

Times and Heights of High and Low Waters

October				November				December			
Time	Height			Time	Height			Time	Height		
	h	m	ft		h	m	ft		h	m	ft
1 W	0114	14.1	430	16 Th	0049	15.3	466	1 M	0216	14.0	427
	0647	4.4	133		0636	4.1	126		0832	6.0	184
	1302	13.4	407		1233	13.9	423		1359	11.7	357
	1906	1.7	52		1849	0.4	11		1949	3.2	97
2 Th	0144	13.8	421	17 F	0132	15.5	473	2 Tu	0247	13.7	418
	0716	5.0	151		0719	4.4	134		0907	6.2	189
	1330	12.8	389		1312	13.6	416		1433	11.3	345
	1930	1.9	59		1927	0.4	12		2022	3.9	119
3 F	0215	13.4	409	18 Sa	0217	15.3	467	3 W	0319	13.3	406
	0743	5.5	168		0806	4.9	149		0944	6.4	195
	1358	12.1	370		1353	13.2	402		1511	10.8	329
	1955	2.4	74		2007	1.0	31		2056	4.7	144
4 Sa	0243	12.9	392	19 Su	0305	14.7	449	4 Th	0353	12.9	394
	0815	6.1	187		0857	5.5	169		1028	6.5	199
	1427	11.4	347		1439	12.4	379		1555	10.3	314
	2024	3.2	98		2053	2.1	64		2135	5.5	168
5 Su	0313	12.1	370	20 M	0358	13.8	420	5 F	0431	12.6	383
	0855	6.9	210		1000	6.3	192		1119	6.4	195
	1501	10.6	322		1532	11.5	349		1654	10.0	304
	2100	4.3	130		2149	3.4	105		2231	6.3	193
6 M	0349	11.3	343	21 Tu	0459	12.8	391	6 Sa	0517	12.3	374
	0952	7.6	233		1122	6.8	208		1220	5.9	181
	1537	9.7	296		1643	10.4	318		1829	10.1	307
	2151	5.3	163	☉	2304	4.7	144	☉	2344	7.0	214
7 Tu	0445	10.5	319	22 W	0607	12.2	371	7 Su	0610	12.1	368
☉	1118	8.2	250		1257	6.7	204		1322	5.2	157
	1624	9.0	273		1824	9.9	301		1957	10.8	330
	2311	6.1	186								
8 W	0620	10.1	307	23 Th	0042	5.4	165	8 M	0112	7.4	226
	1315	8.2	250		0721	12.0	365		0706	11.9	364
	1757	8.4	257		1413	5.9	181		1418	4.1	125
					2020	10.3	314		2109	12.0	366
9 Th	0038	6.3	192	24 F	0206	5.5	167	9 Tu	0235	7.4	227
	0753	10.4	317		0833	12.2	373		0805	11.9	363
	1502	7.4	226		1513	4.9	148		1507	3.0	91
	2011	8.9	270		2140	11.4	348		2207	13.3	405
10 F	0158	5.9	181	25 Sa	0310	5.2	159	10 W	0342	7.2	219
	0851	11.2	340		0931	12.7	386		0906	12.0	367
	1533	6.4	194		1558	3.7	113		1551	2.0	60
	2119	9.9	303		2229	12.6	384		2257	14.4	440
11 Sa	0300	5.3	162	26 Su	0403	5.0	153	11 Th	0441	6.8	207
	0935	12.0	366		1018	13.0	395		1009	12.3	375
	1603	5.1	156		1637	2.8	85		1638	1.1	34
	2206	11.2	342		2311	13.5	411		2344	15.4	468
12 Su	0349	4.7	144	27 M	0450	5.0	152	12 F	0538	6.3	192
	1013	12.8	390		1058	13.0	397		1109	12.7	388
	1634	3.8	117		1709	2.2	67		1726	0.6	17
	2248	12.5	381		2347	14.0	428	☉			
13 M	0432	4.3	130	28 Tu	0532	5.2	158	13 Sa	0029	16.0	488
	1050	13.4	408		1133	12.9	392		0634	5.7	174
	1707	2.6	80		1739	1.9	58		1205	13.2	403
	2328	13.7	417						1816	0.3	9
14 Tu	0512	4.1	124	29 W	0021	14.2	434	14 Su	0114	16.4	499
	1124	13.7	419		0609	5.4	166		0726	5.1	156
	1740	1.6	48	☉	1205	12.6	384		1258	13.6	415
					1804	1.8	54		1907	0.5	14
15 W	0009	14.6	446	30 Th	0053	14.2	434	15 M	0159	16.5	502
☉	0554	4.0	122		0641	5.6	172		0816	4.6	140
	1158	13.9	424		1233	12.3	376		1350	13.7	417
	1813	0.8	24		1830	1.8	55		1959	1.0	31
				31 F	0124	14.1	431	30 Tu	0156	14.4	439
					0714	5.8	176		0814	5.6	170
					1303	12.1	370		1341	12.3	374
					1857	2.0	61		1930	2.7	83
								31 W	0223	14.4	439
									0843	5.3	163
									1414	12.1	370
									2001	3.2	98

Time meridian 82° 30' E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 75° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 75° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
Heights are referred to the chart datum of soundings.

Karachi, Pakistan, 2008

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
1 Tu	h m 0241 0.0 0 0941 9.2 280 1522 5.2 160 2018 8.9 270	16 W	h m 0315 1.3 40 1027 8.9 270 1620 4.9 150 2110 7.5 230	1 F	h m 0417 -0.7 -20 1054 9.8 300 1701 3.0 90 2228 8.5 260	16 Sa	h m 0415 1.0 30 1058 9.2 280 1655 3.3 100 2233 8.5 260	1 M	h m 0519 1.0 30 1127 9.8 300 1754 1.0 30 2346 8.9 270	16 Tu	h m 0449 1.6 50 1058 9.5 290 1712 1.3 40 2331 9.5 290
2 W	0334 -0.3 -10 1031 9.5 290 1621 4.6 140 2121 8.5 260	17 Th	0356 1.0 30 1104 9.2 280 1657 4.6 140 2200 7.9 240	2 Sa	0502 -0.3 -10 1132 10.2 310 1744 2.3 70 2317 8.5 260	17 Su	0450 1.0 30 1124 9.2 280 1724 3.0 90 2313 8.9 270	2 Tu	0554 1.6 50 1158 9.5 290 1829 1.0 30	17 W	0521 2.0 60 1126 9.5 290 1746 0.7 20
3 Th	0425 -0.7 -20 1117 10.2 310 1712 4.3 130 2222 8.5 260	18 F	0436 1.0 30 1138 9.5 290 1729 4.3 130 2244 8.2 250	3 Su	0543 0.0 0 1207 10.2 310 1825 2.0 60	18 M	0524 1.0 30 1149 9.5 290 1753 2.3 70 2350 8.9 270	3 W	0623 8.9 270 0625 2.6 80 1227 9.2 280 1900 1.3 40	18 Th	0008 9.5 290 0554 2.3 70 1154 9.5 290 1822 0.7 20
4 F	0512 -0.7 -20 1158 10.5 320 1759 3.6 110 2316 8.5 260	19 Sa	0514 0.7 20 1209 9.5 290 1759 3.9 120 2325 8.2 250	4 M	0602 8.5 260 0622 0.7 20 1242 10.2 310 1905 2.0 60	19 Tu	0556 1.3 40 1214 9.5 290 1825 2.0 60	4 Th	0100 8.2 250 0652 3.6 110 1254 8.9 270 1931 1.6 50	19 F	0045 9.2 280 0629 3.0 90 1221 9.5 290 1901 0.7 20
5 Sa	0557 -0.3 -10 1238 10.5 320 1844 3.3 100	20 Su	0550 1.0 30 1237 9.5 290 1829 3.6 110	5 Tu	0645 8.5 260 0700 1.6 50 1316 9.8 300 1945 2.0 60	20 W	0627 8.9 270 0627 2.0 60 1241 9.5 290 1859 1.6 50	5 F	0137 7.9 240 0719 4.3 130 1318 8.2 250 2002 2.0 60	20 Sa	0125 8.5 260 0708 3.6 110 1250 9.2 280 1946 0.7 20
6 Su	0605 8.5 260 0640 0.3 10 1319 10.5 320 1930 3.0 90	21 M	0603 8.5 260 0624 1.3 40 1302 9.5 290 1901 3.3 100	6 W	0127 8.2 250 0737 2.6 80 1349 9.2 280 2027 2.0 60	21 Th	0106 8.9 270 0701 2.6 80 1308 9.5 290 1938 1.6 50	6 Sa	0219 7.2 220 0749 5.2 160 1340 7.5 230 2040 2.6 80	21 Su	0218 7.9 240 0756 4.6 140 1321 8.5 260 2041 1.0 30
7 M	0654 8.2 250 0724 1.0 30 1359 10.2 310 2019 3.0 90	22 Tu	0642 8.5 260 0658 1.6 50 1327 9.5 290 1937 3.0 90	7 Th	0215 7.5 230 0815 3.9 120 1423 8.5 260 2110 2.3 70	22 F	0149 8.2 250 0740 3.3 100 1337 9.2 280 2023 1.3 40	7 Su	0324 6.6 200 0831 5.9 180 1402 6.9 210 2127 3.0 90	22 M	0341 7.2 220 0900 4.9 150 1401 7.9 240 2150 1.6 50
8 Tu	0146 7.5 230 0810 2.3 70 1439 9.5 290 2111 3.0 90	23 W	0124 8.2 250 0734 2.3 70 1355 9.5 290 2017 2.6 80	8 F	0313 6.9 210 0855 4.9 150 1457 7.9 240 2158 2.6 80	23 Sa	0246 7.5 230 0827 4.3 130 1410 8.9 270 2118 1.6 50	8 M	0648 6.6 200 1100 6.2 190 1435 6.6 200 2234 3.3 100	23 Tu	0526 7.2 220 1030 5.2 160 1504 6.9 210 2317 2.0 60
9 W	0249 7.2 220 0858 3.3 100 1520 9.2 280 2204 3.0 90	24 Th	0213 7.9 240 0814 3.3 100 1427 9.2 280 2105 2.6 80	9 Sa	0451 6.6 200 0948 5.6 170 1535 7.5 230 2255 3.0 90	24 Su	0410 7.2 220 0926 4.9 150 1453 8.2 250 2226 1.6 50	9 Tu	0753 6.9 210 1405 5.9 180 1617 5.9 180	24 W	0655 7.5 230 1233 4.9 150 1744 6.6 200
10 Th	0409 6.9 210 0952 4.3 130 1602 8.5 260 2302 3.0 90	25 F	0316 7.5 230 0900 3.9 120 1504 9.2 280 2201 2.3 70	10 Su	0658 6.9 210 1205 5.9 180 1627 6.9 210	25 M	0600 7.2 220 1045 5.6 170 1554 7.5 230 2353 1.3 40	10 W	0016 3.3 100 0824 7.5 230 1431 5.2 160 1835 6.2 190	25 Th	0047 1.6 50 0747 8.2 250 1348 3.9 120 1925 6.9 210
11 F	0542 6.9 210 1058 5.2 160 1647 8.2 250	26 Sa	0439 7.2 220 0955 4.9 150 1547 8.9 270 2308 2.0 60	11 M	0009 3.0 90 0807 7.2 220 1343 5.9 180 1746 6.6 200	26 Tu	0726 7.5 230 1251 5.2 160 1735 7.2 220	11 Th	0134 2.6 80 0850 7.9 240 1450 4.6 140 1944 6.9 210	26 F	0155 1.6 50 0827 8.5 260 1440 3.0 90 2030 7.5 230
12 Sa	0003 2.6 80 0704 7.2 220 1220 5.6 170 1737 7.9 240	27 Su	0617 7.2 220 1109 5.2 160 1642 8.5 260	12 Tu	0120 2.6 80 0849 7.5 230 1442 5.6 170 1902 6.6 200	27 W	0116 1.0 30 0820 8.2 250 1409 4.6 140 1914 7.2 220	12 F	0223 2.3 70 0914 8.2 250 1514 3.9 120 2039 7.5 230	27 Sa	0248 1.3 40 0904 8.9 270 1525 2.0 60 2123 8.2 250
13 Su	0102 2.6 80 0809 7.5 230 1337 5.9 180 1833 7.5 230	28 M	0024 1.3 40 0737 7.9 240 1257 5.6 170 1752 8.2 250	13 W	0213 2.3 70 0925 8.2 250 1522 4.9 150 2004 6.9 210	28 Th	0220 0.7 20 0903 8.9 270 1506 3.6 110 2029 7.5 230	13 Sa	0304 2.0 60 0937 8.5 260 1540 3.3 100 2128 8.2 250	28 Su	0333 1.6 50 0939 9.2 280 1606 1.3 40 2210 8.9 270
14 M	0151 2.3 70 0902 7.9 240 1442 5.6 170 1926 7.5 230	29 Tu	0134 0.7 20 0837 8.5 260 1417 5.2 160 1907 7.9 240	14 Th	0256 1.6 50 0958 8.5 260 1555 4.6 140 2059 7.5 230	29 F	0313 0.3 10 0943 9.2 280 1554 2.6 80 2131 8.2 250	14 Su	0341 1.6 50 1003 8.9 270 1608 2.6 80 2212 8.9 270	29 M	0415 2.0 60 1013 9.5 290 1643 1.0 30 2251 9.2 280
15 Tu	0234 1.6 50 0947 8.2 250 1536 5.6 170 2018 7.5 230	30 W	0234 0.0 0 0928 8.9 270 1521 4.6 140 2020 8.2 250	15 F	0337 1.3 40 1029 8.9 270 1626 3.9 120 2149 7.9 240	30 Sa	0359 0.3 10 1020 9.5 290 1637 2.0 60 2222 8.5 260	15 M	0416 1.6 50 1030 9.2 280 1639 2.0 60 2253 9.2 280	30 Tu	0451 2.3 70 1044 9.2 280 1716 0.7 20 2328 9.2 280
		31 Th	0328 -0.3 -10 1014 9.5 290 1615 3.6 110 2129 8.2 250			31 Su	0441 0.7 20 1055 9.8 300 1717 1.3 40 2307 8.9 270				

Time meridian 75° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 75° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Shatt Al Arab (Outer Bar), Iraq, 2008

Times and Heights of High and Low Waters

January						February						March																
Time			Height			Time			Height			Time			Height			Time			Height							
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm				
1 Tu	0348	6.9	210		16 W	0320	7.5	230		1 F	0009	3.0	90		16 Sa	0013	1.3	40		1 Sa	0603	5.2	160		16 Su	0000	1.3	40
	1023	2.3	70			0945	2.3	70			0634	5.2	160			0723	5.6	170			0736	5.9	180					
	1653	8.9	270			1554	9.5	290			1028	4.6	140			1046	4.9	150			1042	5.6	170					
	2345	3.3	100			2305	2.3	70			1655	8.5	260			1655	9.2	280			1537	8.9	270			1621	8.5	260
2 W	0513	5.9	180		17 Th	0441	6.2	190		2 Sa	0139	2.6	80		17 Su	0151	1.0	30		2 Su	0044	2.3	70		17 M	0129	1.0	30
	1059	3.3	100			1030	3.3	100			0839	5.6	170			0901	6.2	190			0840	5.6	170			0843	6.9	210
	1742	8.9	270			1643	9.5	290			1118	5.2	160			1214	5.6	170			1027	5.6	170			1231	5.6	170
											1802	8.5	260			1833	8.9	270			1626	8.2	250			1828	8.2	250
3 Th	0058	3.0	90		18 F	0027	2.0	60		3 Su	0300	2.0	60		18 M	0310	0.3	10		3 M	0208	2.0	60		18 Tu	0241	0.7	20
	0711	5.6	170			0701	5.6	170			0945	6.2	190			0952	7.2	220			0928	6.6	200			0922	7.5	230
	1140	3.9	120			1125	4.3	130			1226	5.9	180			1357	5.6	170			1204	6.2	190			1416	5.2	160
	1836	8.9	270			1744	9.5	290			1925	8.5	260			2010	9.2	280			1818	8.2	250			2014	8.5	260
4 F	0219	2.3	70		19 Sa	0159	1.0	30		4 M	0354	1.3	40		19 Tu	0407	-0.3	-10		4 Tu	0307	1.3	40		19 W	0335	0.3	10
	0840	5.9	180			0850	6.2	190			1027	6.9	210			1030	7.9	240			0955	7.2	220			0954	8.2	250
	1226	4.6	140			1231	4.9	150			1341	6.2	190			1528	4.9	150			1338	5.9	180			1530	4.3	130
	1929	8.9	270			1900	9.5	290			2028	8.9	270			2118	9.5	290			2005	8.2	250			2117	8.9	270
5 Sa	0327	1.6	50		20 Su	0320	0.3	10		5 Tu	0434	0.7	20		20 W	0453	-0.7	-20		5 W	0348	1.0	30		20 Th	0419	0.3	10
	0944	6.6	200			0957	6.9	210			1059	7.2	220			1103	8.5	260			1019	7.5	230			1023	8.9	270
	1316	5.2	160			1348	5.2	160			1455	5.9	180			1634	4.3	130			1454	5.6	170			1624	3.3	100
	2015	9.2	280			2014	9.8	300			2117	9.2	280			2211	9.8	300			2104	8.9	270			2206	9.2	280
6 Su	0419	1.0	30		21 M	0423	-0.7	-20		6 W	0508	0.3	10		21 Th	0533	-0.7	-20		6 Th	0423	0.7	20		21 F	0456	0.7	20
	1034	6.9	210			1048	7.5	230			1126	7.9	240			1133	8.9	270			1042	8.2	250			1052	9.5	290
	1408	5.6	170			1512	5.6	170			1559	5.6	170			1725	3.6	110			1552	4.9	150			1708	2.6	80
	2056	9.5	290			2116	10.2	310			2201	9.5	290			2258	9.8	300			2152	9.2	280			2249	9.5	290
7 M	0501	0.7	20		22 Tu	0514	-1.0	-30		7 Th	0538	0.0	0		22 F	0608	-0.3	-10		7 F	0455	0.7	20		22 Sa	0528	1.0	30
	1117	7.2	220			1130	7.9	240			1151	8.2	250			1203	9.2	280			1105	8.5	260			1120	9.8	300
	1502	5.9	180			1630	5.2	160			1651	5.2	160			1810	3.0	90			1640	3.9	120			1749	2.0	60
	2134	9.5	290			2211	10.2	310	●		2242	9.8	300			2341	9.8	300	●		2235	9.5	290			2330	9.2	280
8 Tu	0537	0.3	10		23 W	0558	-1.3	-40		8 F	0607	0.0	0		23 Sa	0640	0.0	0		8 Sa	0525	0.7	20		23 Su	0557	1.6	50
	1154	7.5	230			1208	8.5	260			1214	8.5	260			1231	9.5	290			1128	9.2	280			1147	9.8	300
	1556	6.2	190			1733	4.6	140			1738	4.6	140			1851	2.6	80			1725	3.0	90			1828	1.6	50
	2211	9.8	300			2301	10.2	310			2324	10.2	310								2318	9.8	300					
9 W	0610	0.0	0		24 Th	0638	-1.3	-40		9 Sa	0635	0.0	0		24 Su	0021	9.5	290		9 Su	0555	1.0	30		24 M	0008	8.9	270
	1226	7.9	240			1242	8.9	270			1237	8.9	270			0707	0.7	20			1153	9.5	290			0622	2.3	70
	1650	5.9	180			1825	4.3	130			1822	3.6	110			1259	9.8	300			1809	2.3	70			1213	10.2	310
	2248	10.2	310			2347	10.2	310								1929	2.3	70								1905	1.3	40
10 Th	0640	-0.3	-10		25 F	0714	-1.0	-30		10 Su	0005	9.8	300		25 M	0100	8.9	270		10 M	0001	9.5	290		25 Tu	0047	8.5	260
	1253	8.2	250			1314	9.2	280			0702	0.3	10			0730	1.3	40			0625	1.3	40			0644	2.6	80
	1742	5.6	170			1912	3.6	110			1302	9.5	290			1324	9.8	300			1221	10.2	310			1238	10.2	310
	2328	10.2	310								1905	3.0	90			2006	2.0	60			1853	1.6	50			1941	1.3	40
11 F	0708	-0.3	-10		26 Sa	0031	9.8	300		11 M	0048	9.5	290		26 Tu	0137	8.2	250		11 Tu	0045	9.2	280		26 W	0124	7.9	240
	1318	8.2	250			0745	-0.3	-10			0730	0.7	20			0751	2.0	60			0655	2.0	60			0704	3.3	100
	1830	4.9	150			1344	9.2	280			1329	9.8	300			1349	9.8	300			1249	10.5	320			1302	10.2	310
						1953	3.3	100			1950	2.3	70			2044	2.0	60			1939	1.0	30			2017	1.3	40
12 Sa	0009	10.2	310		27 Su	0112	9.2	280		12 Tu	0132	8.9	270		27 W	0215	7.5	230		12 W	0131	8.5	260		27 Th	0202	7.5	230
	0735	-0.3	-10			0812	0.3	10			0758	1.3	40			0810	2.6	80			0725	2.3	70			0723	3.6	110
	1343	8.5	260			1412	9.5	290			1358	10.2	310			1413	9.5	290			1321	10.8	330			1325	9.8	300
	1916	4.3	130			2034	3.0	90			2039	2.0	60			2126	2.3	70			2029	0.7	20			2056	1.6	50
13 Su	0051	9.8	300		28 M	0152	8.5	260		13 W	0219	8.2	250		28 Th	0256	6.6	200		13 Th	0220	7.5	230		28 F	0244	6.9	210
	0803	0.0	0			0837	1.0	30			0829	2.0	60			0830	3.3	100			0756	3.3	100			0744	4.3	130
	1410	9.2	280			1440	9.5	290			1431	10.2	310			1437	9.5	290			1354	10.5	320			1349	9.8	300
	2004	3.6	110			2116	3.0	90			2136	1.6	50			2216	2.3	70			2126	1.0	30			2141	2.0	60
14 M	0136	9.5	290		29 Tu	0233	7.9	240		14 Th	0315	6.9	210		29 F	0351	5.9	180		14 F	0320	6.6	200		29 Sa	0339	6.2	190
	0834	0.7	20			0900	2.0	60			0903	3.0	90			0853	4.3	130			0831	3.9	120			0809	4.9	150
	1440	9.2	280			1508	9.2	280			1508	10.2	310			1504	9.2	280			1432	10.2	310			1417	9.5	290
	2056	3.3	100			2203	3.0	90	○		2246	1.6	50	○		2321	2.6	80	○		2236	1.0	30			2237	2.0	60
15 Tu	0223	8.5	260		30 W	0319	6.9	210		15 F	0439	5.9	180		15 Sa	0458	5.9	180		15 Sa	0458	5.9	180		30 Su	0528	5.9	180
	0907	1.3	40			0924	2.6	80			0944	3.9	120			0920	4.9	150			0848	5.6	170					
	1514	9.5	290			1538	9.2	280			1553	9.8	300			1517	9.5	290			1451	8.9	270					
	2155	2.6	80	○		2259	3.0	90	○												2345	2.3	70					
				31 Th	0422	5.9	180														31 M	0753	6.2	190				
					0952	3.6	110															1015	5.9	180				
					1612	8.9	270															1539	8.2	250				

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Shatt Al Arab (Outer Bar), Iraq, 2008

Times and Heights of High and Low Waters

April				May				June			
Time		Height		Time		Height		Time		Height	
	h m	ft	cm		h m	ft	cm		h m	ft	cm
1 Tu	0056 0834 1159 1720	2.0 6.9 5.9 7.9	60 210 180 240	16 W	0153 0836 1411 2006	1.3 8.2 4.3 7.9	40 250 130 240	1 Su	0124 0757 1458 2120	3.6 10.2 2.0 7.9	110 310 60 240
2 W	0157 0901 1329 1939	1.6 7.5 5.6 7.9	50 230 170 240	17 Th	0247 0909 1515 2106	1.6 8.9 3.3 8.2	50 270 100 250	2 M	0215 0841 1602 2219	4.3 10.8 1.0 8.2	130 330 30 250
3 Th	0245 0925 1439 2047	1.6 8.2 4.6 8.5	50 250 140 260	18 F	0330 0939 1605 2154	1.6 9.5 2.6 8.5	50 290 80 260	3 Tu	0307 0924 1701 2314	4.6 11.2 0.3 8.2	140 340 10 250
4 F	0325 0949 1535 2139	1.3 8.9 3.6 8.9	40 270 80 270	19 Sa	0407 1008 1649 2237	2.3 9.8 1.6 8.9	70 300 50 270	4 W	0400 1008 1756	4.9 11.5 -0.3	150 350 -10
5 Sa	0402 1015 1624 2227	1.6 9.5 2.6 9.2	50 290 80 280	20 Su	0439 1037 1730 2318	2.6 10.2 1.3 8.5	80 310 40 260	5 Th	0006 0457 1052 1846	8.5 5.6 11.5 -0.7	260 170 350 -20
6 Su	0438 1042 1711 2313	2.0 9.8 1.6 9.2	60 300 50 280	21 M	0507 1104 1809 2357	3.3 10.2 1.0 8.5	100 310 30 260	6 F	0057 0557 1137 1934	8.5 5.6 11.5 -0.7	260 170 350 -20
7 M	0513 1111 1758 2359	2.3 10.5 1.0 8.9	70 320 30 270	22 Tu	0533 1130 1847	3.6 10.5 1.0	110 320 30	7 Sa	0145 0657 1223 2018	8.5 5.6 11.2 -0.7	260 170 340 -20
8 Tu	0547 1142 1846	2.6 10.8 0.3	80 330 10	23 W	0037 0556 1156 1923	8.2 4.3 10.5 1.0	250 130 320 30	8 Su	0230 0754 1309 2059	8.5 5.2 10.5 0.0	260 160 320 0
9 W	0046 0622 1215 1935	8.5 3.3 11.2 0.0	260 100 340 0	24 Th	0117 0619 1221 1959	7.9 4.6 10.5 1.0	240 140 320 30	9 M	0313 0849 1357 2139	8.5 5.2 9.8 0.7	260 160 300 20
10 Th	0136 0658 1250 2027	7.9 3.9 10.8 0.0	240 120 330 0	25 F	0157 0644 1247 2035	7.5 4.9 10.2 1.3	230 150 310 40	10 Tu	0357 0946 1448 2219	8.5 4.9 8.9 1.3	260 150 270 40
11 F	0229 0737 1327 2124	7.2 4.6 10.5 0.3	220 140 320 10	26 Sa	0239 0712 1314 2114	7.2 5.2 10.2 1.3	220 160 310 40	11 W	0444 1046 1551 2259	8.9 4.6 7.9 2.3	270 140 240 70
12 Sa	0335 0825 1408 2227	6.9 4.9 9.8 0.7	210 150 300 20	27 Su	0329 0751 1347 2159	6.9 5.6 9.8 1.6	210 170 300 50	12 Th	0535 1154 1723 2342	8.9 4.3 7.2 3.0	270 130 220 90
13 Su	0512 0933 1457 2336	6.6 5.6 9.2 1.0	200 170 280 30	28 M	0437 0851 1426 2252	6.6 5.9 9.2 1.6	200 180 280 50	13 F	0628 1307 1910	9.2 3.6 6.9	280 110 210
14 M	0659 1104 1609	6.9 5.6 8.2	210 170 250	29 Tu	0606 1016 1520 2348	6.9 5.9 8.5 2.0	210 180 260 60	14 Sa	0027 0718 1422 2028	3.9 9.5 3.0 6.9	120 290 90 210
15 Tu	0048 0757 1243 1826	1.3 7.5 5.2 7.5	40 230 160 230	30 W	0708 1144 1650	7.2 5.6 7.9	220 240	15 Su	0114 0803 1526 2128	4.6 9.8 2.3 7.2	140 300 70 220
				31 Th	0050 0738 1345 1943	2.3 8.9 3.9 7.2	70 270 120 220	31 Sa	0032 0710 1349 2009	3.0 9.5 3.3 7.5	90 290 100 230

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Shatt Al Arab (Outer Bar), Iraq, 2008

Times and Heights of High and Low Waters

July					August					September																			
Time		Height			Time		Height			Time		Height			Time		Height												
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm										
1 Tu	0134	5.2	160		16 W	0159	6.2	190		1 F	0402	5.6	170		16 Sa	0355	6.2	190		1 M	0546	3.0	90		16 Tu	0504	3.6	110	
	0805	10.8	330			0851	9.8	300			0954	10.8	330			0958	9.8	300			1127	10.5	320			1105	9.8	300	
	1601	0.7	20			1651	1.3	40			1736	-0.3	-10			1725	1.3	40			1819	1.0	30			1731	2.0	60	
	2224	7.9	240			2301	7.9	240			2342	9.2	280	●		2331	8.9	270			2327	10.2	310			2327	10.2	310	
2 W	0240	5.6	170		17 Th	0259	6.6	200		2 Sa	0507	4.9	150		17 Su	0441	5.6	170		2 Tu	0005	10.2	310		17 W	0544	2.6	80	
	0902	11.2	340			0932	10.2	310			1046	11.2	340			1036	10.2	310			0628	2.6	80			1146	9.8	300	
	1700	0.0	0			1728	1.0	30			1817	-0.3	-10			1751	1.3	40			1209	10.2	310			1800	2.3	70	
	2316	8.2	250			2338	8.2	250						○		2353	9.2	280			1849	1.6	50			2353	10.5	320	
3 Th	0351	5.9	180		18 F	0356	6.6	200		3 Su	0016	9.5	290		18 M	0521	4.9	150		3 W	0034	10.5	320		18 Th	0626	2.0	60	
	0955	11.2	340			1009	10.5	320			0601	4.6	140			1114	10.5	320			0709	2.3	70			1228	9.5	290	
	1751	-0.7	-20			1801	1.0	30			1134	11.2	340			1817	1.3	40			1249	9.8	300			1829	3.0	90	
						○					1853	0.0	0								1915	2.3	70						
4 F	0003	8.5	260		19 Sa	0009	8.5	260		4 M	0048	9.8	300		19 Tu	0014	9.5	290		4 Th	0101	10.5	320		19 F	0022	10.8	330	
	0501	5.6	170			0446	6.2	190			0648	3.9	120			0600	4.3	130			0747	2.0	60			0710	1.3	40	
	1046	11.5	350			1046	10.5	320			1218	10.8	330			1152	10.5	320			1327	9.2	280			1312	9.2	280	
	1837	-0.7	-20			1829	0.7	20			1927	0.3	10			1841	1.3	40			1938	3.0	90			1859	3.3	100	
5 Sa	0046	8.9	270		20 Su	0036	8.5	260		5 Tu	0118	9.8	300		20 W	0037	9.8	300		5 F	0128	10.5	320		20 Sa	0053	11.2	340	
	0604	5.6	170			0531	5.9	180			0731	3.3	100			0639	3.6	110			0826	2.0	60			0758	1.3	40	
	1135	11.2	340			1122	10.8	330			1300	10.5	320			1232	10.2	310			1406	8.5	260			1359	8.5	260	
	1919	-0.7	-20			1855	0.7	20			1956	1.0	30			1907	1.6	50			2000	3.6	110			1932	3.9	120	
6 Su	0124	9.2	280		21 M	0100	8.9	270		6 W	0147	10.2	310		21 Th	0102	10.5	320		6 Sa	0154	10.2	310		21 Su	0127	11.2	340	
	0700	4.9	150			0613	5.6	170			0813	3.0	90			0721	3.0	90			0907	2.3	70			0852	1.3	40	
	1222	10.8	330			1159	10.8	330			1341	9.8	300			1313	9.8	300			1449	7.9	240			1453	7.5	230	
	1957	-0.3	-10			1919	1.0	30			2022	2.0	60			1933	2.3	70			2023	4.3	130			2009	4.6	140	
7 M	0200	9.5	290		22 Tu	0122	9.2	280		7 Th	0215	10.2	310		22 F	0130	10.8	330		7 Su	0220	10.2	310		22 M	0205	10.8	330	
	0749	4.6	140			0654	4.9	150			0854	3.0	90			0806	2.3	70			0955	2.6	80			0956	1.3	40	
	1307	10.5	320			1237	10.5	320			1422	8.9	270			1356	9.2	280			1542	6.9	210			1609	6.9	210	
	2031	0.3	10			1944	1.0	30			2046	2.6	80			2003	3.0	90			●	2050	4.9	150			●	2100	5.2	160
8 Tu	0233	9.5	290		23 W	0145	9.5	290		8 F	0244	10.2	310		23 Sa	0201	10.8	330		8 M	0248	9.5	290		23 Tu	0249	10.2	310	
	0836	4.3	130			0736	4.3	130			0939	3.0	90			0858	2.3	70			1056	3.0	90			1113	1.6	50	
	1352	9.8	300			1318	10.2	310			1506	7.9	240			1446	8.2	250			1719	6.2	190			1824	6.6	200	
	2103	1.0	30			2010	1.3	40			●	2110	3.3	100			2035	3.6	110			2127	5.6	170			2218	5.9	180
9 W	0306	9.5	290		24 Th	0212	9.8	300		9 Sa	0314	9.8	300		24 Su	0237	10.8	330		9 Tu	0321	9.2	280		24 W	0348	9.2	280	
	0923	3.9	120			0823	3.9	120			1032	3.3	100			1002	2.3	70			1213	3.0	90			1239	1.6	50	
	1438	8.9	270			1401	9.5	290			1603	6.9	210			1553	6.9	210			1952	6.6	200			2000	7.2	220	
	2133	2.0	60			2040	2.0	60			2138	4.3	130			●	2115	4.6	140			2231	6.2	190					
10 Th	0340	9.5	290		25 F	0243	10.2	310		10 Su	0347	9.5	290		25 M	0319	10.5	320		10 W	0408	8.5	260		25 Th	0000	5.9	180	
	1014	3.9	120			0916	3.3	100			1139	3.3	100			1124	2.3	70			1336	3.0	90			0536	8.5	260	
	1529	7.9	240			1450	8.5	260			1748	6.2	190			1806	6.2	190			2056	7.2	220			1358	1.3	40	
	2203	3.0	90			2114	2.6	80			2214	4.9	150			2214	5.2	160								2047	7.9	240	
11 F	0418	9.5	290		26 Sa	0319	10.5	320		11 M	0430	9.2	280		26 Tu	0415	9.8	300		11 Th	0002	6.6	200		26 F	0141	5.2	160	
	1113	3.6	110			1020	3.3	100			1306	3.3	100			1301	2.0	60			0609	8.2	250			0745	8.5	260	
	1638	6.9	210			1553	7.5	230			2007	6.2	190			2022	6.9	210			1443	2.3	70			1459	1.3	40	
	2236	3.6	110			2155	3.6	110			2306	5.9	180			2342	5.9	180			2130	7.9	240			2122	8.5	260	
12 Sa	0505	9.5	290		27 Su	0403	10.5	320		12 Tu	0538	8.9	270		27 W	0545	9.5	290		12 F	0135	6.2	190		27 Sa	0300	4.3	130	
	1224	3.6	110			1139	3.0	90			1436	2.6	80			1431	1.3	40			0803	8.5	260			0857	9.2	280	
	1829	6.6	200			1747	6.6	200			2121	6.9	210			2121	7.5	230			1528	2.0	60			1548	1.3	40	
	2316	4.6	140			2246	4.6	140											2156		8.2	250		2154		9.2	280		
13 Su	0602	9.5	290		28 M	0459	10.2	310		13 W	0018	6.2	190		28 Th	0125	5.9	180		13 Sa	0248	5.9	180		28 Su	0357	3.3	100	
	1348	3.3	100			1313	2.3	70			0719	8.9	270			0741	9.5	290			0900	8.9	270			0949	9.5	290	
	2013	6.6	200			2012	6.6	200			1538	2.3	70			1536	0.7	20			1603	2.0	60			1629	1.3	40	
						2353	5.6	170			2205	7.5	230			2200	8.2	250			2220	8.9	270			2224	9.8	300	
14 M	0004	5.2	160		29 Tu	0617	10.2	310		14 Th	0140	6.6	200		29 F	0258	5.6	170		14 Su	0341	5.2	160		29 M	0444	2.3	70	
	0705	9.5	290			1445	1.6	50			0828	9.2	280			0858	9.8	300			0944	9.5	290</						

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Shatt Al Arab (Outer Bar), Iraq, 2008

Times and Heights of High and Low Waters

October						November						December					
Time			Height			Time			Height			Time			Height		
	h	m	ft	cm			h	m	ft	cm			h	m	ft	cm	
1 W	0609	1.3	40			16 Th	0533	1.3	40			1 M	0734	0.3	10		
	1157	9.5	290				1143	9.2	280				1344	7.9	240		16 Tu
	1805	3.0	90				1719	3.6	110				1832	5.9	180		
	2350	10.5	320				2314	10.8	330								1937
2 Th	0648	1.3	40			17 F	0621	0.7	20			2 Tu	0011	9.8	300		
	1237	9.2	280				1229	8.9	270				0804	0.3	10		17 W
	1831	3.6	110				1756	3.9	120				1419	7.9	240		
							2348	11.2	340				1913	5.6	170		2031
3 F	0017	10.5	320			18 Sa	0710	0.3	10			3 W	0045	9.8	300		
	0726	1.3	40				1317	8.5	260				0833	0.7	20		18 Th
	1316	8.5	260				1835	4.6	140				1452	7.9	240		
	1855	3.9	120										1958	5.6	170		2125
4 Sa	0044	10.5	320			19 Su	0024	11.2	340			4 Th	0120	9.5	290		
	0804	1.3	40				0800	0.0	0				0903	1.0	30		19 F
	1356	8.2	250				1409	7.9	240				1524	7.9	240		0948
	1919	4.3	130				1918	4.9	150				2048	5.2	160		1604
5 Su	0110	10.2	310			20 M	0103	10.8	330			5 F	0200	8.9	270		
	0843	1.6	50				0853	0.3	10				0936	1.3	40		20 Sa
	1439	7.5	230				1507	7.5	230				1600	8.2	250		1026
	1945	4.9	150				2010	5.2	160				2146	4.9	150		1648
6 M	0137	9.8	300			21 Tu	0145	10.2	310			6 Sa	0247	8.2	250		
	0926	2.0	60				0951	0.7	20				1015	1.6	50		21 Su
	1532	6.9	210				1621	7.2	220				1642	8.2	250		1106
	2017	5.2	160				2117	5.6	170				2252	4.6	140		1739
7 Tu	0205	9.5	290			22 W	0234	9.5	290			7 Su	0351	7.2	220		
	1016	2.3	70				1055	1.0	30				1100	2.3	70		22 M
	1652	6.6	200				1755	7.2	220				1731	8.5	260		0635
	2104	5.9	180				2239	5.6	170								1150
8 W	0237	8.9	270			23 Th	0339	8.5	260			8 M	0004	3.9	120		
	1116	2.6	80				1202	1.3	40				0536	6.6	200		23 Tu
	1855	6.9	210				1908	7.5	230				1150	3.0	90		0808
	2220	6.2	190										1823	9.2	280		1238
9 Th	0322	8.2	250			24 F	0009	5.2	160			9 Tu	0118	3.0	90		
	1222	2.6	80				0534	7.5	230				0741	6.6	200		24 W
	1958	7.2	220				1308	1.6	50				1242	3.6	110		0916
	2351	6.2	190				1956	8.2	250				1915	9.5	290		1329
10 F	0451	7.5	230			25 Sa	0135	4.3	130			10 W	0230	2.0	60		
	1323	2.6	80				0735	7.9	240				0902	6.9	210		25 Th
	2033	7.9	240				1407	2.0	60				1335	4.3	130		1010
							2034	8.9	270				2005	10.2	310		1421
11 Sa	0115	5.6	170			26 Su	0245	3.3	100			11 Th	0336	1.0	30		
	0725	7.9	240				0845	8.2	250				1003	7.2	220		26 F
	1414	2.3	70				1456	2.3	70				1430	4.6	140		1057
	2059	8.5	260				2108	9.5	290				2052	10.5	320		1514
12 Su	0224	4.9	150			27 M	0339	2.3	70			12 F	0436	0.0	0		
	0836	8.2	250				0937	8.5	260				1058	7.5	230		27 Sa
	1456	2.3	70				1538	2.6	80				1527	4.9	150		1140
	2124	8.9	270				2140	9.8	300				2140	10.8	330		1607
13 M	0316	3.9	120			28 Tu	0427	1.3	40			13 Sa	0531	-0.7	-20		
	0927	8.9	270				1023	8.9	270				1150	7.9	240		28 Su
	1533	2.6	80				1614	3.3	100				1630	5.2	160		1219
	2148	9.5	290				2211	10.2	310				2227	10.8	330		1658
14 Tu	0403	3.0	90			29 W	0511	1.0	30			14 Su	0622	-1.3	-40		
	1013	8.9	270				1106	8.9	270				1238	8.2	250		29 M
	1608	3.0	90				1647	3.6	110				1736	5.2	160		1253
	2215	10.2	310				2241	10.5	320				2315	10.8	330		1744
15 W	0448	2.0	60			30 Th	0553	0.7	20			15 M	0709	-1.3	-40		
	1057	9.2	280				1148	8.5	260				1323	8.5	260		30 Tu
	1643	3.3	100				1718	4.3	130				1839	5.2	160		1322
	2243	10.5	320				2310	10.5	320								1826
																	2358
						31 F	0633	0.7	20			31 W	0737	0.0	0		
							1229	8.5	260				1347	8.2	250		31 Th
							1748	4.6	140				1905	5.2	160		
							2339	10.5	320								

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Mina Al Ahmandi, Kuwait, 2008

Times and Heights of High and Low Waters

January						February						March																	
Time			Height			Time			Height			Time			Height			Time			Height								
1 Tu	h	m	ft	cm	16 W	h	m	ft	cm	1 F	h	m	ft	cm	16 Sa	h	m	ft	cm	1 Sa	h	m	ft	cm	16 Su	h	m	ft	cm
	0507	6.9	210	0433		7.5	230	0106	3.9		120	0109	2.6	80		0000	3.3	100	0053		1.6	50							
	1114	3.6	110	1021		3.6	110	0810	6.2		190	0839	6.6	200		0856	6.6	200											
	1808	8.5	260	1711		9.2	280	1036	5.9		180	1114	6.2	190		1121	6.6	200											
				2352	3.6	110			1759	9.2	280			1800	9.8	300			1732	8.9	270			1732	8.9	270			
2 W	0046	4.6	140	0600	6.9	210	0236	3.6	110	0246	2.0	60	0138	3.0	90	0224	1.3	40											
	0639	6.2	190	1105	4.3	130	1854	9.2	280	1035	6.9	210	1732	8.9	270	1009	7.2	220											
	1155	4.3	130	1753	9.5	290				1255	6.9	210				1335	6.6	200											
	1847	8.5	260							1919	9.5	290				1913	8.5	260											
3 Th	0209	3.9	120	0121	3.0	90	0346	3.0	90	0359	1.3	40	0259	2.6	80	0331	1.3	40											
	0831	6.2	190	0759	6.6	200	1212	7.2	220	1129	7.5	230	1159	7.2	220	1051	7.5	230											
	1244	5.2	160	1159	5.2	160	1346	7.2	220	1454	6.6	200	1253	7.2	220	1516	5.9	180											
	1928	8.9	270	1844	9.8	300	2000	9.2	280	2046	9.5	290	1855	8.5	260	2053	8.5	260											
4 F	0317	3.3	100	0250	2.3	70	0437	2.3	70	0453	1.0	30	0354	2.0	60	0419	1.3	40											
	1015	6.2	190	1000	6.6	200	1216	7.5	230	1206	7.9	240	1131	7.5	230	1122	7.9	240											
	1347	5.9	180	1313	5.9	180	1531	7.2	220	1611	6.2	190	1517	6.9	210	1617	4.9	150											
	2011	8.9	270	1945	9.8	300	2103	9.2	280	2201	9.8	300	2027	8.5	260	2206	8.5	260											
5 Sa	0412	2.6	80	0404	1.6	50	0516	1.6	50	0535	1.0	30	0433	1.6	50	0457	1.3	40											
	1131	6.9	210	1125	7.2	220	1235	7.9	240	1236	8.2	250	1145	7.9	240	1148	8.2	250											
	1454	6.2	190	1442	6.6	200	1626	6.9	210	1705	5.6	170	1610	6.2	190	1703	4.3	130											
	2055	9.2	280	2052	10.2	310	2158	9.5	290	2302	9.8	300	2138	8.9	270	2304	8.5	260											
6 Su	0458	2.3	70	0504	1.0	30	0549	1.3	40	0610	1.0	30	0504	1.6	50	0529	1.6	50											
	1219	7.2	220	1219	7.5	230	1256	8.2	250	1302	8.5	260	1203	8.2	250	1208	8.5	260											
	1553	6.6	200	1600	6.2	190	1707	6.2	190	1750	4.9	150	1650	5.2	160	1741	3.6	110											
	2137	9.2	280	2157	10.2	310	2245	9.8	300	2354	9.8	300	2233	9.2	280	2354	8.5	260											
7 M	0537	1.6	50	0553	0.7	20	0617	1.3	40	0639	1.3	40	0530	1.3	40	0557	2.3	70											
	1254	7.5	230	1301	7.9	240	1317	8.2	250	1324	8.5	260	1221	8.5	260	1226	8.9	270											
	1640	6.6	200	1702	5.9	180	1744	5.6	170	1830	4.3	130	1727	4.6	140	1816	3.0	90											
	2217	9.5	290	2257	10.5	320	2330	9.8	300				2322	9.2	280														
8 Tu	0613	1.3	40	0636	0.7	20	0641	1.3	40	0040	9.5	290	0556	1.6	50	0039	8.5	260											
	1324	7.9	240	1337	8.2	250	1337	8.5	260	0705	1.6	50	1239	8.9	270	0622	2.6	80											
	1719	6.2	190	1754	5.6	170	1820	5.2	160	1343	8.9	270	1803	3.6	110	1243	8.9	270											
	2256	9.5	290	2352	10.5	320			1907	3.9	120				1847	2.3	70												
9 W	0645	1.0	30	0712	0.7	20	0013	10.2	310	0123	9.2	280	0010	9.2	280	0120	8.2	250											
	1352	7.9	240	1407	8.2	250	0704	1.3	40	0730	2.3	70	0622	2.0	60	0647	3.3	100											
	1755	6.2	190	1840	4.9	150	1357	8.9	270	1401	9.2	280	1259	9.2	280	1300	9.2	280											
	2336	9.8	300				1858	4.6	140	1943	3.6	110	1841	3.0	90	1918	2.0	60											
10 Th	0714	1.0	30	0042	10.2	310	0058	9.8	300	0203	8.9	270	0059	9.2	280	0200	7.9	240											
	1419	7.9	240	0744	1.0	30	0730	1.6	50	0754	3.0	90	0651	2.3	70	0710	3.9	120											
	1832	5.9	180	1435	8.5	260	1418	9.2	280	1420	9.5	290	1320	9.5	290	1318	9.2	280											
				1923	4.6	140	1939	3.9	120	2020	3.3	100	1921	2.3	70	1951	2.0	60											
11 F	0016	9.8	300	0129	9.8	300	0145	9.5	290	0242	8.2	250	0149	8.9	270	0239	7.5	230											
	0740	1.0	30	0814	1.6	50	0759	2.0	60	0817	3.6	110	0722	3.0	90	0732	4.6	140											
	1445	7.9	240	1500	8.5	260	1440	9.5	290	1439	9.5	290	1344	9.8	300	1337	9.2	280											
	1910	5.6	170	2006	4.6	140	2024	3.6	110	2100	3.3	100	2007	1.6	50	2027	2.0	60											
12 Sa	0058	9.8	300	0212	9.2	280	0235	8.9	270	0324	7.5	230	0244	8.2	250	0322	7.2	220											
	0807	1.0	30	0842	2.0	60	0830	3.0	90	0839	4.3	130	0756	3.6	110	0754	4.9	150											
	1511	8.2	250	1523	8.9	270	1506	9.5	290	1501	9.5	290	1413	9.8	300	1359	9.2	280											
	1952	5.2	160	2049	4.3	130	2115	3.3	100	2145	3.3	100	2059	1.6	50	2108	2.0	60											
13 Su	0143	9.5	290	0255	8.5	260	0332	8.2	250	0415	6.9	210	0347	7.5	230	0414	6.6	200											
	0836	1.3	40	0909	3.0	90	0904	3.6	110	0857	4.9	150	0833	4.6	140	0815	5.2	160											
	1537	8.5	260	1548	9.2	280	1536	9.8	300	1526	9.5	290	1447	9.8	300	1425	9.2	280											
	2040	4.9	150	2136	4.3	130	2216	3.0	90	2243	3.3	100	2202	1.6	50	2200	2.0	60											
14 M	0232	9.2	280	0339	7.9	240	0442	7.2	220	0530	6.2	190	0504	6.9	210	0527	6.2	190											
	0908	2.0	60	0935	3.6	110	0940	4.6	140	0912	5.6	170	0912	5.2	160	0836	5.9	180											
	1604	8.5	260	1614	9.2	280	1613	9.8	300	1556	9.2	280	1528	9.8	300	1457	8.9	270											
	2133	4.6	140	2231	4.3	130	2333	2.6	80				2320	1.6	50	2308	2.3	70											
15 Tu	0327	8.5	260	0432	7.2	220	0618	6.6	200	0530	6.2	190	0649	6.6	200	0734	6.2	190											
	0943	2.6	80	1000	4.3	130	1021	5.6	170	0912	5.6	170	1000	5.9	180	0855	6.2	190											
	1635	8.9	270	1643	9.2	280	1659	9.8	300				1619	9.2	280	1538	8.5	260											
	2236	4.3	130	2339	4.3	130																							
31 Th	0551	6.6	200	0551	6.6	200																							
	1022	5.2	160	1022	5.2	160																							
	1717	9.2	280	1717	9.2	280																							

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
Heights are referred to the chart datum of soundings.

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
Heights are referred to the chart datum of soundings.

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Mina Al Ahmandi, Kuwait, 2008

Times and Heights of High and Low Waters

October						November						December																	
Time			Height			Time			Height			Time			Height			Time			Height								
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm					
1 W	0015	8.9	270		16 Th	0600	1.0	30		1 Sa	0009	8.9	270		16 Su	0000	9.8	300		1 M	0013	8.9	270		16 Tu	0049	9.8	300	
	0630	2.0	60			1244	7.9	240			0717	0.7	20			0723	-0.3	-10			0749	1.0	30			0818	0.0	0	
	1309	8.2	250			1749	3.6	110			1435	7.2	220			1445	7.5	230			1505	7.2	220			1526	7.9	240	
	1825	3.3	100			2355	9.5	290			1850	4.9	150			1858	4.9	150			1910	5.6	170			1951	4.9	150	
2 Th	0035	9.2	280		17 F	0640	0.3	10		2 Su	0034	8.9	270		17 M	0045	9.5	290		2 Tu	0045	8.9	270		17 W	0145	9.5	290	
	0703	1.6	50			1338	7.9	240			0753	1.0	30			0819	-0.3	-10			0824	1.0	30			0905	0.3	10	
	1352	7.9	240			1825	3.9	120			1516	6.9	210			1542	7.2	220			1541	6.9	210			1609	7.9	240	
	1852	3.9	120			1919	5.2	160			1951	5.2	160			1951	5.2	160			1947	5.6	170			2048	4.9	150	
3 F	0055	9.2	280		18 Sa	0025	9.5	290		3 M	0101	8.9	270		18 Tu	0136	9.2	280		3 W	0121	8.9	270		18 Th	0243	9.2	280	
	0737	1.3	40			0724	0.0	0			0833	1.0	30			0918	0.0	0			0900	1.3	40			0951	1.0	30	
	1434	7.5	230			1436	7.5	230			1601	6.6	200			1640	7.2	220			1619	6.9	210			1652	7.9	240	
	1917	4.6	140			1904	4.6	140			1950	5.6	170			2052	5.2	160			2030	5.6	170			2149	4.6	140	
4 Sa	0116	9.2	280		19 Su	0101	9.5	290		4 Tu	0132	8.5	260		19 W	0234	8.5	260		4 Th	0201	8.5	260		19 F	0344	8.2	250	
	0813	1.3	40			0817	0.0	0			0920	1.3	40			1017	0.3	10			0936	1.6	50			1035	1.6	50	
	1519	6.9	210			1539	7.2	220			1655	6.6	200			1739	7.2	220			1658	6.9	210			1734	8.2	250	
	1942	4.9	150			1949	4.9	150			2031	5.6	170			2202	5.2	160			2123	5.2	160			2300	4.6	140	
5 Su	0140	9.2	280		20 M	0141	9.5	290		5 W	0208	8.2	250		20 Th	0341	7.9	240		5 F	0248	7.9	240		20 Sa	0454	7.5	230	
	0855	1.6	50			0919	0.3	10			1011	1.6	50			1117	1.0	30			1013	2.0	60			1120	2.6	80	
	1611	6.6	200			1650	6.9	210			1758	6.6	200			1836	7.2	220			1738	7.2	220			1816	8.2	250	
	2006	5.2	160			2042	5.6	170			2130	5.9	180			2325	4.9	150			2226	5.2	160			1816	8.2	250	
6 M	0206	8.9	270		21 Tu	0230	8.9	270		6 Th	0253	7.5	230		21 F	0503	7.2	220		6 Sa	0344	7.2	220		21 Su	0026	4.3	130	
	0946	2.0	60			1031	0.7	20			1106	1.6	50			1216	1.6	50			1053	2.3	70			0620	6.6	200	
	1720	6.2	190			1811	6.6	200			1900	6.6	200			1926	7.5	230			1817	7.5	230			1208	3.3	100	
	2031	5.9	180			2152	5.6	170			2251	5.9	180				2343	4.9	150			2343	4.9	150			1857	8.5	260
7 Tu	0238	8.5	260		22 W	0331	8.2	250		7 F	0353	7.2	220		22 Sa	0103	6.6	140		7 Su	0457	6.6	200		22 M	0154	3.6	110	
	1051	2.0	60			1147	0.7	20			1204	2.0	60			0642	4.6	200			1137	3.0	90			0759	6.2	190	
	1903	6.2	190			1931	6.9	210			1948	6.9	210			1313	2.3	70			1854	7.9	240			1300	4.3	130	
	2107	6.2	190			2325	5.6	170								2008	7.9	240								1939	8.9	270	
8 W	0318	8.2	250		23 Th	0455	7.5	230		8 Sa	0033	5.6	170		23 Su	0228	3.6	110		8 M	0106	4.3	130		23 Tu	0307	3.0	90	
	1208	2.3	70			1303	1.0	30			0517	6.6	200			0819	6.6	200			0635	6.2	190			0934	6.2	190	
	2041	6.6	200			2031	7.2	220			1300	2.3	70			1405	3.0	90			1228	3.6	110			1357	4.9	150	
	2244	6.6	200			2023	7.2	220			2023	7.2	220			2044	8.2	250			1930	8.2	250			2021	8.9	270	
9 Th	0417	7.5	230		24 F	0118	5.2	160		9 Su	0202	4.6	140		24 M	0329	3.0	90		9 Tu	0219	3.3	100		24 W	0404	2.6	80	
	1325	2.3	70			0644	7.2	220			0709	6.2	190			0939	6.6	200			0825	6.2	190			1055	6.6	200	
	2119	6.9	210			1407	1.3	40			1351	2.6	80			1453	3.6	110			1324	4.3	130			1456	5.6	170	
						2113	7.5	230			2052	7.9	240			2117	8.5	260			2007	8.9	270			2103	9.2	280	
10 F	0120	6.2	190		25 Sa	0247	4.3	130		10 M	0259	3.6	110		25 Tu	0418	2.0	60		10 W	0317	2.3	70		25 Th	0452	2.0	60	
	0548	7.2	220			0826	6.9	210			0846	6.2	190			1048	6.9	210			0954	6.6	200			1157	7.2	220	
	1425	2.0	60			1459	1.6	50			1436	3.0	90			1537	4.3	130			1424	4.6	140			1551	5.9	180	
	2145	7.2	220			2146	7.9	240			2117	8.2	250			2148	8.5	260			2047	9.2	280			2143	9.2	280	
11 Sa	0247	5.6	170		26 Su	0345	3.3	100		11 Tu	0344	2.6	80		26 W	0459	1.6	50		11 Th	0409	1.3	40		26 F	0532	1.6	50	
	0744	6.9	210			0942	7.2	220			0958	6.6	200			1147	6.9	210			1107	6.9	210			1242	7.5	230	
	1508	2.0	60			1540	2.3	70			1518	3.3	100			1618	4.6	140			1522	4.9	150			1640	5.9	180	
	2208	7.5	230			2214	8.2	250			2143	8.5	260			2217	8.9	270			2130	9.5	290			2221	9.2	280	
12 Su	0335	4.6	140		27 M	0430	2.6	80		12 W	0424	1.6	50		27 Th	0535	1.3	40		12 F	0459	0.7	20		27 Sa	0608	1.3	40	
	0907	7.2	220			1045	7.2	220			1059	6.9	210			1237	7.2	220			1209	7.2	220			1318	7.5	230	
	1543	2.3	70			1617	2.6	80			1559	3.9	120			1657	4.9	150			1617	5.2	160			1721	5.9	180	
	2228	7.9	240			2238	8.5	260			2212	9.2	280			2245	8.9	270			2216	9.8	300			2258	9.2	280	
13 M	0413	3.6	110		28 Tu	0509	1.6	50		13 Th	0504	0.7	20		28 F	0608	1.0	30		13 Sa	0549	0.0	0		28 Su	0641	1.3	40	
	1008	7.5	230			1140	7.2	220			1157	7.2	220			1319	7.2	220			1304	7.5	230			1348	7.5	230	
	1613	2.3	70			1651	3.3	100			1641	4.3	130			1733	5.2	160			1711	5.2	160			1756	5.9	180	
	2247	8.5	260			2301	8.9	270			2244	9.5	290			2314	8.9	270			2304	10.2	310			2333	9.5	290	
14 Tu	0448	2.6	80		29 W	0543	1.3	40		14 F	0547	0.0	0		29 Sa	0641	1.0	30		14 Su	0639	-0.3	-10		29 M	0712	1.3	40	
	1101	7.5	230			1229	7.5	230			1254	7.5	230			1356	7.2	220			1354	7.5	230			1416	7.5	230	
	1643	2.6	80			1723	3.9	120			1724	4.6	140			1806	5.2	160			1804	5.2	160			1829	5.9	180	
	2307	8.9	270			2323	8.9	270			2320	9.5	290			2342	8.9	270			2355	10.2	310						
15 W	0523	1.6	50		30 Th	0614	1.0	30		15 Sa	0633	-0.3	-10		30 Su	0715	1.0	30		15 M	0730	-0.3	-10		30 Tu	0007	9.5	290	
	1152	7.9	240			1314	7.2	220			1349	7.5	230			1430	7.2	220			1								

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
Heights are referred to the chart datum of soundings.

Ras At Tannurah, Persian Gulf, Saudi Arabia, 2008

Times and Heights of High and Low Waters

January								February								March							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm				
1 Tu	0455	2.0	61	16 W	0350	1.5	46	1 F	0529	2.0	61	16 Sa	0529	1.5	46	1 Sa	0428	2.0	61	16 Su	0525	1.7	52
	1046	5.1	155		1002	5.7	174		1202	4.8	146		1227	5.4	165		1104	4.9	149		1231	5.5	168
	1642	2.4	73		1545	2.0	61		1752	3.4	104		1847	3.6	110		1655	3.6	110		1925	3.5	107
	2307	5.4	165		2214	5.8	177		2341	4.6	140						2239	4.6	140				
2 W	0545	2.0	61	17 Th	0445	1.5	46	2 Sa	0640	2.0	61	17 Su	0012	4.9	149	2 Su	0545	2.1	64	17 M	0016	4.9	149
	1152	5.0	152		1109	5.5	168		1343	4.8	146		0702	1.6	49		1248	4.8	146		0702	1.7	52
	1744	2.8	85		1649	2.6	79		1959	3.6	110		1412	5.6	171		1922	3.7	113		1409	5.7	174
					2311	5.4	165						2056	3.4	104						2049	3.1	94
3 Th	0000	5.0	152	18 F	0553	1.5	46	3 Su	0113	4.5	137	18 M	0150	5.0	152	3 M	0018	4.4	134	18 Tu	0148	5.1	155
	0640	1.9	58		0754	1.9	58		0828	1.3	40		0712	2.0	61		0823	1.4	43				
	1307	5.0	152		1508	5.2	158		1528	6.1	186		1431	5.0	152		1514	6.1	186				
	1902	3.1	94		2130	3.4	104		2202	2.9	88		2055	3.4	104		2141	2.6	79				
4 F	0103	4.8	146	19 Sa	0026	5.2	158	4 M	0233	4.7	143	19 Tu	0305	5.3	162	4 Tu	0153	4.6	140	19 W	0256	5.4	165
	0737	1.9	58		0710	1.4	43		0859	1.6	49		0935	0.9	27		0824	1.7	52		0924	1.1	34
	1423	5.2	158		1404	5.7	174		1601	5.6	171		1620	6.5	198		1527	5.4	165		1559	6.3	192
	2029	3.3	101		2025	3.4	104		2221	3.1	94		2248	2.5	76		2144	2.9	88		2221	2.1	64
5 Sa	0208	4.8	146	20 Su	0151	5.2	158	5 Tu	0329	5.0	152	20 W	0402	5.7	174	5 W	0255	5.0	152	20 Th	0348	5.8	177
	0833	1.7	52		0826	1.2	37		0950	1.3	40		1027	0.6	18		0918	1.3	40		1011	0.9	27
	1526	5.5	168		1523	6.2	189		1640	6.0	183		1702	6.8	207		1604	5.8	177		1637	6.5	198
	2142	3.2	98		2156	3.1	94		2258	2.7	82		2325	2.0	61		2220	2.5	76		2255	1.7	52
6 Su	0305	4.9	149	21 M	0306	5.4	165	6 W	0412	5.3	162	21 Th	0448	6.1	186	6 Th	0342	5.4	165	21 F	0432	6.1	186
	0924	1.5	46		0934	0.9	27		1032	0.9	27		1109	0.4	12		1001	0.9	27		1049	0.8	24
	1616	5.8	177		1624	6.6	201		1712	6.3	192		1738	6.9	210		1636	6.2	189		1709	6.6	201
	2236	3.1	94		2255	2.8	85		2330	2.4	73		○	2357	1.7		52	2251	2.0		61	○	2324	1.3	40
7 M	0353	5.1	155	22 Tu	0407	5.8	177	7 Th	0450	5.7	174	22 F	0530	6.3	192	7 F	0423	5.8	177	22 Sa	0510	6.3	192
	1009	1.3	40		1031	0.6	18		1108	0.6	18		1145	0.4	12		1038	0.6	18		1122	0.9	27
	1656	6.2	189		1714	7.0	213		1742	6.5	198		1811	6.9	210		1707	6.5	198		1739	6.5	198
	2317	2.9	88		○	2341	2.4		73	●	2358		2.1	64	●		2320	1.6	49		●	2350	1.1	34
8 Tu	0434	5.4	165	23 W	0458	6.1	186	8 F	0526	6.0	183	23 Sa	0026	1.4	43	8 Sa	0502	6.2	189	23 Su	0545	6.5	198
	1050	1.1	34		1119	0.3	9		1141	0.4	12		0608	6.4	195		1113	0.4	12		1152	1.0	30
	1732	6.4	195		1757	7.2	219		1811	6.7	204		1218	0.5	15		1737	0.7	204		1806	6.4	195
	2352	2.7	82								1841		6.8	207	2348		1.2	37					
9 W	0511	5.6	171	24 Th	0021	2.1	64	9 Sa	0025	1.8	55	24 Su	0053	1.2	37	9 Su	0540	6.6	201	24 M	0015	1.0	30
	1126	0.9	27		0545	6.3	192		0602	6.2	189		0643	6.4	195		1147	0.5	15		0619	6.5	198
	1804	6.6	201		1202	0.2	6		1212	0.3	9		1248	0.7	21		1808	6.8	207		1220	1.3	40
					1836	7.2	219		1840	6.8	207		1909	6.6	201						1833	6.3	192
10 Th	0024	2.6	79	25 F	0056	1.9	58	10 Su	0053	1.5	46	25 M	0120	1.1	34	10 M	0018	0.9	27	25 Tu	0040	1.0	30
	0546	5.8	177		0627	6.4	195		0639	6.4	195		0718	6.3	192		0620	6.8	207		0651	6.4	195
	1200	0.7	21		1241	0.3	9		1244	0.4	12		1316	1.1	34		1222	0.7	21		1247	1.6	49
	1835	6.7	204		1912	7.1	216		1911	6.8	207		1936	6.3	192		1841	6.8	207		1858	6.1	186
11 F	0053	2.4	73	26 Sa	0130	1.7	52	11 M	0122	1.2	37	26 Tu	0147	1.1	34	11 Tu	0050	0.7	21	26 W	0106	1.0	30
	0621	5.9	180		0707	6.3	192		0719	6.4	195		0752	6.1	186		0702	6.9	210		0724	6.3	192
	1232	0.6	18		1316	0.5	15		1317	0.6	18		1346	1.5	46		1259	1.1	34		1316	2.0	61
	1907	6.8	207		1946	6.8	207		1944	6.7	204		2003	6.0	183		1916	6.6	201		1925	5.9	180
12 Sa	0122	2.2	67	27 Su	0202	1.6	49	12 Tu	0155	1.1	34	27 W	0217	1.2	37	12 W	0126	0.6	18	27 Th	0136	1.2	37
	0657	6.0	183		0746	6.2	189		0801	6.4	195		0828	5.9	180		0747	6.8	207		0759	6.1	186
	1304	0.6	18		1350	0.9	27		1353	1.1	34		1417	2.0	61		1338	1.6	49		1348	2.4	73
	1939	6.7	204		2018	6.5	198		2019	6.4	195		2031	5.7	174		1954	6.3	192		1954	5.7	174
13 Su	0152	2.0	61	28 M	0234	1.5	46	13 W	0232	1.0	30	28 Th	0251	1.4	43	13 Th	0207	0.8	24	28 F	0210	1.4	43
	0736	6.0	183		0825	5.9	180		0848	6.2	189		0908	5.5	168		0836	6.5	198		0838	5.8	177
	1338	0.7	21		1423	1.3	40		1433	1.7	52		1452	2.5	76		1423	2.3	70		1424	2.8	85
	2013	6.6	201		2049	6.1	186		2058	6.1	186		2101	5.3	162		2036	6.0	183		2027	5.4	165
14 M	0226	1.8	55	29 Tu	0308	1.5	46	14 Th	0317	1.1	34	29 F	0332	1.7	52	14 F	0256	1.1	34	29 Sa	0252	1.7	52
	0819	6.0	183		0906	5.6	171		0943	5.9	180		0956	5.2	158		0935	6.1	186		0924	5.5	168
	1415	1.0	30		1458	1.8	55		1521	2.4	73		1536	3.1	94		1520	3.0	91		1512	3.3	101
	2049	6.4	195		2120	5.7	174		○	2143	5.6		171	○	2140		5.0	152	○		2127	5.5	168	○	2109	5.1	155
15 Tu	0304	1.6	49	30 W	0346	1.6	49	15 F	0414	1.3	40				15 Sa	0359	1.4	43	30 Su	0347	1.9	58	
	0906	5.8	177		0951	5.3	162		1053	5.5	168					1050	5.7	174		1026	5.2	158	
	1456	1.4	43		1538	2.4	73		1630	3.2	98					1702	3.5	107		1633	3.6	110	
	2129	6.1	186		2155	5.3	162		2243	5.2	158					2238	5.1	155		○	2209	4.8	146
				31 Th	0432	1.8	55										31 M	0500	2.1	64			
					1047	5.0	152												1151	5.0	152		
					1629	2.9	88											1833	3.6	110			
					2237	4.9	149											2335	4.6	140			

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
Heights are referred to the chart datum of soundings.

Ras At Tannurah, Persian Gulf, Saudi Arabia, 2008

Times and Heights of High and Low Waters

July								August								September							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm			
1 Tu	0240	6.6	201	16 W	0403	6.3	192	1 F	0445	7.5	229	16 Sa	0458	6.9	210	1 M	0546	7.7	235	16 Tu	0516	7.1	216
	0846	3.5	107		1022	3.7	113		1109	3.3	101		1111	3.1	94		1200	2.1	64		1125	1.9	58
	1435	6.1	186		1541	5.8	177		1630	6.8	207		1638	6.5	198		1746	7.4	226		1721	7.3	223
	2100	1.5	46		2158	2.1	64		2254	1.1	34		2255	1.6	49		2359	1.3	40		2328	1.4	43
2 W	0349	7.1	216	17 Th	0447	6.6	201	2 Sa	0531	7.8	238	17 Su	0526	7.1	216	2 Tu	0619	7.5	229	17 W	0545	7.2	219
	1005	3.5	107		1105	3.6	110		1152	2.9	88		1139	2.8	85		1230	1.9	58		1152	1.7	52
	1539	6.4	195		1624	6.0	183		1720	7.1	216		1712	6.7	204		1825	7.4	226		1758	7.5	229
	2201	1.2	37		2240	1.9	58		2340	0.9	27		2327	1.4	43								
3 Th	0448	7.5	229	18 F	0523	6.8	207	3 Su	0613	7.9	241	18 M	0554	7.2	219	3 W	0032	1.5	46	18 Th	0001	1.6	49
	1110	3.3	101		1140	3.4	104		1231	2.6	79		1205	2.5	76		0651	7.3	223		0616	7.2	219
	1637	6.7	204		1701	6.2	189		1805	7.3	223		1746	7.0	213		1259	1.8	55		1222	1.5	46
	2257	1.0	30		2318	1.6	49				2357		1.3	40	1902		7.3	223	1838		7.6	232	
4 F	0541	7.8	238	19 Sa	0555	7.0	213	4 M	0022	1.0	30	19 Tu	0622	7.3	223	4 Th	0104	1.9	58	19 F	0035	1.9	58
	1204	3.1	94		1211	3.2	98		0651	7.8	238		1231	2.3	70		0720	7.1	216		0650	7.2	219
	1730	6.9	210		1735	6.4	195		1307	2.3	70		1820	7.1	216		1328	1.9	58		1256	1.4	43
	2350	0.8	24		2351	1.5	46		1848	7.3	223						1938	7.1	216		1920	7.6	232
5 Sa	0630	7.9	241	20 Su	0625	7.1	216	5 Tu	0101	1.2	37	20 W	0026	1.4	43	5 F	0135	2.4	73	20 Sa	0112	2.4	73
	1252	2.9	88		1239	3.0	91		0727	7.6	232		0650	7.3	223		0750	6.7	204		0726	6.9	210
	1819	7.0	213		1809	6.6	201		1341	2.2	67		1258	2.1	64		1359	2.0	61		1334	1.5	46
					1929	7.2	219				1857		7.2	219				2016	6.8		207	2007	7.3	223
6 Su	0039	0.8	24	21 M	0022	1.4	43	6 W	0137	1.5	46	21 Th	0057	1.6	49	6 Sa	0208	2.9	88	21 Su	0154	3.0	91
	0715	7.9	241		0654	7.2	219		0802	7.3	223		0721	7.3	223		0820	6.4	195		0807	6.6	201
	1337	2.8	85		1307	2.8	85		1416	2.2	67		1328	1.9	58		1434	2.3	70		1420	1.8	55
	1907	7.0	213		1843	6.7	204		2010	6.9	210		1937	7.2	219		2057	6.5	198		2101	7.0	213
7 M	0125	1.0	30	22 Tu	0053	1.3	40	7 Th	0213	2.0	61	22 F	0130	1.9	58	7 Su	0246	3.4	104	22 M	0248	3.6	110
	0759	7.7	235		0723	7.2	219		0835	6.9	210		0754	7.1	216		0853	6.0	183		0856	6.2	189
	1420	2.6	79		1335	2.6	79		1451	2.2	67		1402	1.9	58		1517	2.6	79		1518	2.1	64
	1954	6.9	210		1919	6.7	204		2052	6.6	201		2021	7.1	216		2146	6.1	186		2209	6.6	201
8 Tu	0209	1.3	40	23 W	0123	1.4	43	8 F	0250	2.6	79	23 Sa	0208	2.4	73	8 M	0337	3.9	119	23 Tu	0414	4.1	125
	0841	7.3	223		0754	7.2	219		0909	6.5	198		0830	6.8	207		0936	5.6	171		1003	5.8	177
	1503	2.5	76		1404	2.4	73		1530	2.4	73		1443	2.0	61		1615	2.8	85		1639	2.4	73
	2042	6.6	201		1958	6.7	204		2138	6.2	189		2111	6.8	207		2253	5.7	174		2339	6.3	192
9 W	0253	1.7	52	24 Th	0156	1.6	49	9 Sa	0331	3.1	94	24 Su	0252	3.1	94	9 Tu	0508	4.3	131	24 W	0632	4.2	128
	0922	6.9	210		0827	7.0	213		0946	6.1	186		0913	6.5	198		1042	5.3	162		1134	5.6	171
	1546	2.5	76		1438	2.3	70		1615	2.6	79		1535	2.1	64		1735	3.0	91		1817	2.4	73
	2131	6.3	192		2041	6.6	201		2232	5.9	180		2214	6.5	198								
10 Th	0337	2.2	67	25 F	0234	2.0	61	10 Su	0423	3.7	113	25 M	0353	3.7	113	10 W	0036	5.6	171	25 Th	0119	6.4	195
	1004	6.5	198		0903	6.8	207		1031	5.7	174		1009	6.1	186		0717	4.3	131		0805	3.8	116
	1632	2.5	76		1518	2.2	67		1712	2.8	85		1644	2.4	73		1221	5.2	158		1309	5.8	177
	2225	6.0	183		2131	6.5	198		2345	5.7	174		2336	6.3	192		1901	2.9	88		1944	2.2	67
11 F	0426	2.8	85	26 Sa	0317	2.5	76	11 M	0547	4.1	125	26 Tu	0540	4.3	131	11 Th	0214	5.8	177	26 F	0233	6.7	204
	1049	6.1	186		0945	6.6	201		1136	5.4	165		1129	5.8	177		0835	4.0	122		0903	3.3	101
	1721	2.5	76		1608	2.2	67		1824	2.9	88		1815	2.4	73		1347	5.4	165		1423	6.1	186
	2327	5.7	174		2230	6.3	192								2011		2.6	79	2050		1.9	58	
12 Sa	0524	3.3	101	27 Su	0412	3.1	94	12 Tu	0124	5.7	174	27 W	0118	6.3	192	12 F	0309	6.1	186	27 Sa	0325	6.9	210
	1140	5.7	174		1035	6.3	192		0745	4.3	131		0800	4.2	128		0923	3.6	110		0947	2.7	82
	1816	2.5	76		1709	2.2	67		1306	5.3	162		1307	5.8	177		1445	5.8	177		1520	6.6	201
					2344	6.2	189		1940	2.8	85		1946	2.2	67		2104	2.2	67		2142	1.6	49
13 Su	0040	5.6	171	28 M	0527	3.7	113	13 W	0251	5.9	180	28 Th	0245	6.7	204	13 Sa	0347	6.5	198	28 Su	0406	7.1	216
	0638	3.7	113		1142	6.0	183		0911	4.1	125		0919	3.8	116		0958	3.1	94		1024	2.2	67
	1242	5.5	168		1823	2.2	67		1423	5.5	168		1428	6.1	186		1529	6.2	189		1607	6.9	210
	1915	2.5	76				2045		2.5	76	2059		1.9	58	2146		1.8	55	2225		1.5	46	
14 M	0159	5.7	174	29 Tu	0113	6.3	192	14 Th	0346	6.3	192	29 F	0345	7.1	216	14 Su	0418	6.7	204	29 M	0442	7.2	219
	0807	3.9	119		0719	4.1	125		1002	3.8	116		1011	3.3	101		1029	2.7	82		1056	1.9	58
	1349	5.4	165		1305	5.9	180		1518	5.8	177		1530	6.6	201		1608	6.6	201		1648	7.2	219
	2014	2.4	73		1943	2.1	64		2137	2.2	67		2156	1.5	46		2223	1.6	49		2302	1.6	49
15 Tu	0309	6.0	183	30 W	0241	6.6	201	15 F	0426	6.6	201	30 Sa	0431	7.4	226	15 M	0447	7.0	213	30 Tu	0515	7.1	216
	0925	3.9	119		0907	4.0	122		1039	3.5	107		1052	2.8	85		1057	2.3	70		1125	1.6	49
	1451	5.5	168		1427	6.1	186		1601	6.1	186		1621	7.0	213		1644	6.9	210		1727	7.3	223
	2109	2.3	70		2057	1.8	55		2219	1.8	55		2243	1.2	37		2256	1.4	43		2335	1.8	55
			31 Th	0350	7.1	216				31 Su	0511	7.6	232										
				1017	3.6	110					1127	2.4	73										
				1534	6.4	195					1706	7.3	223										
				2200	1.4	43					2323	1.2	37										

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Ras At Tannurah, Persian Gulf, Saudi Arabia, 2008

Times and Heights of High and Low Waters

October						November						December											
Time			Height			Time			Height			Time			Height			Time			Height		
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm
1 W	0545	7.0	213	16 Th	0510	6.9	210	1 Sa	0021	2.8	85	16 Su	0024	2.7	82	1 M	0056	3.0	91	16 Tu	0125	2.6	79
	1153	1.5	46		1118	1.1	34		0614	6.2	189		0611	6.6	201		0630	5.8	177		0654	6.5	198
	1802	7.3	223		1739	7.6	232		1219	1.5	46		1223	0.7	21		1239	1.3	40		1310	0.4	12
					2341	2.0	61		1853	7.0	213		1906	7.7	235		1918	6.7	204		1951	7.4	226
2 Th	0006	2.1	64	17 F	0546	7.0	213	2 Su	0054	3.0	91	17 M	0119	2.9	88	2 Tu	0131	3.0	91	17 W	0216	2.5	76
	0614	6.9	210		1154	1.0	30		0645	6.1	186		0700	6.5	198		0705	5.8	177		0745	6.4	195
	1219	1.5	46		1823	7.8	238		1252	1.6	49		1314	0.9	27		1315	1.4	43		1401	0.7	21
	1837	7.3	223				1928		6.8	207	1959		7.4	226	1953		6.5	198	2040		7.1	216	
3 F	0036	2.4	73	18 Sa	0022	2.4	73	3 M	0130	3.2	98	18 Tu	0220	3.1	94	3 W	0209	3.0	91	18 Th	0308	2.4	73
	0643	6.7	204		0625	6.9	210		0718	5.9	180		0752	6.3	192		0742	5.7	174		0838	6.1	186
	1247	1.6	49		1233	1.0	30		1329	1.8	55		1409	1.1	34		1352	1.4	43		1453	1.0	30
	1911	7.1	216		1910	7.7	235		2007	6.5	198		2056	7.1	216		2031	6.4	195		2130	6.7	204
4 Sa	0107	2.8	85	19 Su	0108	2.8	85	4 Tu	0213	3.4	104	19 W	0327	3.2	98	4 Th	0250	3.0	91	19 F	0402	2.3	70
	0711	6.4	195		0708	6.7	204		0757	5.7	174		0851	6.0	183		0823	5.6	171		0935	5.8	177
	1318	1.8	55		1318	1.2	37		1411	2.0	61		1511	1.5	46		1433	1.6	49		1547	1.5	46
	1947	6.9	210		2001	7.4	226		2051	6.3	192		2157	6.7	204		2111	6.2	189		2221	6.3	192
5 Su	0140	3.2	98	20 M	0202	3.3	101	5 W	0306	3.6	110	20 Th	0439	3.1	94	5 F	0335	2.9	88	20 Sa	0458	2.2	67
	0742	6.2	189		0756	6.4	195		0842	5.5	168		0957	5.7	174		0909	5.4	165		1038	5.5	168
	1353	2.1	64		1411	1.5	46		1501	2.2	67		1620	1.8	55		1517	1.7	52		1646	2.0	61
	2026	6.5	198		2059	7.0	213		2142	6.0	183		2303	6.4	195		2154	6.0	183		2315	5.8	177
6 M	0220	3.5	107	21 Tu	0314	3.7	113	6 Th	0414	3.6	110	21 F	0549	2.9	88	6 Sa	0425	2.7	82	21 Su	0554	2.0	61
	0817	5.9	180		0853	6.0	183		0937	5.3	162		1111	5.5	168		1003	5.3	162		1148	5.3	162
	1436	2.4	73		1516	1.9	58		1600	2.3	70		1733	2.1	64		1607	1.9	58		1753	2.5	76
	2113	6.2	189		2209	6.6	201		2242	5.8	177						2242	5.8	177				
7 Tu	0314	3.9	119	22 W	0452	3.8	116	7 F	0527	3.4	104	22 Sa	0011	6.1	186	7 Su	0519	2.5	76	22 M	0013	5.5	168
	0902	5.6	171		1005	5.7	174		1044	5.2	158		0651	2.5	76		1104	5.2	158		0651	1.9	58
	1532	2.6	79		1637	2.2	67		1707	2.4	73		1228	5.5	168		1704	2.2	67		1304	5.3	162
	2214	5.8	177		2332	6.4	195		2346	5.7	174		1847	2.3	70		2334	5.6	171		1910	2.9	88
8 W	0444	4.1	125	23 Th	0626	3.6	110	8 Sa	0631	3.1	94	23 Su	0113	6.0	183	8 M	0614	2.2	67	23 Tu	0114	5.2	158
	1006	5.3	162		1132	5.6	171		1157	5.2	158		0746	2.1	64		1213	5.3	162		0747	1.7	52
	1647	2.8	85		1806	2.3	70		1814	2.3	70		1340	5.7	174		1810	2.4	73		1417	5.4	165
	2337	5.6	171								1955		2.4	73					2030		3.0	91	
9 Th	0628	4.0	122	24 F	0055	6.3	192	9 Su	0048	5.7	174	24 M	0208	5.9	180	9 Tu	0032	5.6	171	24 W	0214	5.1	155
	1131	5.2	158		0737	3.1	94		0724	2.7	82		0833	1.8	55		0708	1.8	55		0838	1.6	49
	1809	2.7	82		1257	5.7	174		1306	5.4	165		1441	5.9	180		1324	5.6	171		1520	5.7	174
					1924	2.2	67		1916	2.3	70		2055	2.5	76		1920	2.6	79		2139	3.1	94
10 F	0105	5.7	174	25 Sa	0201	6.4	195	10 M	0142	5.8	177	25 Tu	0255	5.8	177	10 W	0132	5.6	171	25 Th	0307	5.2	158
	0740	3.6	110		0830	2.6	79		0809	2.2	67		0915	1.6	49		0802	1.5	46		0925	1.5	46
	1255	5.3	162		1407	6.0	183		1406	5.8	177		1533	6.2	189		1431	6.1	186		1610	6.0	183
	1920	2.5	76		2028	2.1	64		2013	2.2	67		2147	2.6	79		2031	2.7	82		2233	3.0	91
11 Sa	0207	5.9	180	26 Su	0251	6.5	198	11 Tu	0230	6.0	183	26 W	0337	5.8	177	11 Th	0231	5.7	174	26 F	0354	5.3	162
	0829	3.2	98		0914	2.1	64		0850	1.8	55		0952	1.4	43		0854	1.1	34		1008	1.4	43
	1359	5.6	171		1503	6.3	192		1500	6.3	192		1618	6.4	195		1532	6.6	201		1653	6.2	189
	2016	2.2	67		2121	2.0	61		2105	2.2	67		2232	2.7	82		2139	2.8	85		2315	2.9	88
12 Su	0251	6.2	189	27 M	0333	6.5	198	12 W	0314	6.2	189	27 Th	0415	5.8	177	12 F	0327	5.9	180	27 Sa	0434	5.4	165
	0907	2.7	82		0951	1.8	55		0930	1.3	40		1026	1.3	40		0946	0.8	24		1046	1.2	37
	1450	6.1	186		1550	6.6	201		1551	6.8	207		1658	6.6	201		1629	7.0	213		1730	6.4	195
	2103	1.9	58		2205	2.0	61		2155	2.2	67		2312	2.8	85		2241	2.7	82		2351	2.9	88
13 M	0327	6.4	195	28 Tu	0409	6.5	198	13 Th	0357	6.4	195	28 F	0450	5.8	177	13 Sa	0421	6.2	189	28 Su	0511	5.6	171
	0941	2.2	67		1023	1.5	46		1010	1.0	30		1058	1.3	40		1038	0.5	15		1122	1.1	34
	1534	6.5	198		1631	6.8	207		1639	7.3	223		1734	6.7	204		1722	7.4	226		1803	6.6	201
	2144	1.8	55		2243	2.1	64		2244	2.3	70		2347	2.9	88		2339	2.7	82				
14 Tu	0401	6.6	201	29 W	0443	6.5	198	14 F	0440	6.5	198	29 Sa	0524	5.8	177	14 Su	0513	6.3	192	29 M	0022	2.8	85
	1013	1.8	55		1053	1.4	43		1052	0.7	21		1131	1.3	40		1129	0.4	12		0545	5.7	174
	1616	7.0	213		1709	7.0	213		1727	7.6	232		1809	6.8	207		1813	7.6	232		1156	1.0	30
	2223	1.7	52		2317	2.3	70		2333	2.5	76								1834		6.6	201	
15 W	0435	6.8	207	30 Th	0514	6.4	195	15 Sa	0525	6.6	201	30 Su	0022	5.0	91	15 M	0032	2.6	79	30 Tu	0052	2.6	79
	1045	1.4	43		1121	1.3	40		1136	0.6	18		0557	3.9	180		0603	6.5	198		0618	5.8	177
	1657	7.4	226		1744	7.1	216		1816	7.7	235		1204	1.3	40		1219	0.3	9		1228	0.9	27
	2302	1.8	55		2349	2.6	79				1843		6.8	207	1902		7.6	232	1904		6.6	201	
				31 F	0544	6.3	192												31 W	0121	2.5	76	
			1149		1.4	43	1819	7.0	213											0650	5.8	177	
																				1300	0.9	27	
																				1934	6.6	201	

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
Heights are referred to the chart datum of soundings.

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
Heights are referred to the chart datum of soundings.

Mina Salman, Bahrain, Persian Gulf, 2008

Times and Heights of High and Low Waters

July				August				September															
Time		Height		Time		Height		Time		Height		Time		Height									
1 Tu	h	m	ft	cm	16 W	h	m	ft	cm	1 F	h	m	ft	cm	16 Tu	h	m	ft	cm				
	0307	7.2	220	0427		6.6	200	0516	7.5		230	0533	7.2	220		0018	1.3	40	0557	7.9	240		
	0926	3.3	100	1029		3.9	120	1129	3.3		100	1135	3.3	100		0622	8.2	250	1210	2.3	70		
	1524	7.9	240	1617		7.2	220	1710	8.5		260	1719	7.9	240		1235	2.0	60	1802	8.2	250		
	2204	2.3	70	2257	3.0	90	●	2356	1.6	50	2352	2.0	60	1825	8.5	260							
2 W	0415	7.5	230	17 Th	0515	6.6	200	2 Sa	0605	7.9	240	17 Su	0604	7.5	230	2 Tu	0054	1.3	40	17 W	0029	1.6	50
	1034	3.3	100		1116	3.9	120		1217	3.0	90		1208	3.3	100		0654	8.2	250		0625	8.2	250
	1622	8.2	250		1700	7.5	230		1759	8.9	270		1753	7.9	240		1310	2.0	60		1244	2.0	60
	2305	2.0	60		2336	2.6	80						○	1902	8.5		260	1902	8.5		260	1836	8.2	250
3 Th	0516	7.5	230	18 F	0555	6.9	210	3 Su	0040	1.3	40	18 M	0023	2.0	60	3 W	0127	1.6	50	18 Th	0103	1.6	50
	1135	3.3	100		1156	3.6	110		0647	8.2	250		0631	7.5	230		0725	8.2	250		0655	8.2	250
	1716	8.5	260		1738	7.5	230		1301	2.6	80		1240	3.0	90		1344	2.0	60		1318	1.6	50
					○	1843	8.9		270	1825	8.2		250	1937	8.2		250	1912	8.2		250		
4 F	0001	1.6	50	19 Sa	0011	2.3	70	4 M	0121	1.3	40	19 Tu	0055	1.6	50	4 Th	0158	2.0	60	19 F	0137	2.0	60
	0611	7.9	240		0628	7.2	220		0726	8.2	250		0658	7.9	240		0755	7.9	240		0729	8.2	250
	1229	3.0	90		1232	3.6	110		1341	2.6	80		1312	2.6	80		1418	2.3	70		1355	1.6	50
	1807	8.5	260		1812	7.9	240		1925	8.9	270		1857	8.2	250		2011	7.5	230		1953	7.9	240
5 Sa	0052	1.6	50	20 Su	0044	2.3	70	5 Tu	0159	1.6	50	20 W	0127	1.6	50	5 F	0229	2.3	70	20 Sa	0214	2.3	70
	0701	8.2	250		0658	7.5	230		0802	8.2	250		0726	8.2	250		0826	7.9	240		0807	8.2	250
	1319	3.0	90		1305	3.6	110		1420	2.6	80		1344	2.6	80		1451	2.3	70		1435	2.0	60
	1857	8.9	270		1844	7.9	240		2005	8.5	260		1931	8.2	250		2046	7.2	220		2039	7.5	230
6 Su	0140	1.6	50	21 M	0116	2.3	70	6 W	0235	2.0	60	21 Th	0200	2.0	60	6 Sa	0259	2.6	80	21 Su	0254	2.6	80
	0749	8.2	250		0726	7.5	230		0838	8.2	250		0757	8.2	250		0900	7.5	230		0851	7.9	240
	1407	3.0	90		1338	3.3	100		1458	2.6	80		1418	2.3	70		1526	2.6	80		1522	2.0	60
	1944	8.5	260		1917	8.2	250		2045	7.9	240		2008	8.2	250		2125	6.6	200		2133	7.2	220
7 M	0225	1.6	50	22 Tu	0149	2.0	60	7 Th	0310	2.3	70	22 F	0234	2.0	60	7 Su	0330	3.3	100	22 M	0341	3.3	100
	0835	8.2	250		0755	7.9	240		0913	7.9	240		0833	8.2	250		0939	7.2	220		0944	7.5	230
	1452	3.0	90		1411	3.3	100		1536	3.0	90		1456	2.3	70		1607	3.0	90		1620	2.6	80
	2031	8.2	250		1951	8.2	250		2125	7.5	230		2051	7.9	240		●	2214	6.2		190	●	2243	6.6	200
8 Tu	0309	2.0	60	23 W	0223	2.0	60	8 F	0344	2.6	80	23 Sa	0312	2.3	70	8 M	0407	3.6	110	23 Tu	0442	3.6	110
	0919	7.9	240		0827	7.9	240		0952	7.5	230		0915	7.9	240		1027	6.6	200		1051	7.2	220
	1537	3.0	90		1446	3.0	90		1616	3.0	90		1541	2.6	80		1701	3.3	100		1739	2.6	80
	2118	7.9	240		2029	8.2	250		●	2208	6.9		210	2141	7.2		220	2323	5.6		170		
9 W	0351	2.3	70	24 Th	0259	2.3	70	9 Sa	0419	3.3	100	24 Su	0355	3.0	90	9 Tu	0501	4.3	130	24 W	0018	6.2	190
	1004	7.9	240		0904	7.9	240		1035	7.2	220		1005	7.5	230		1133	6.2	190		0615	3.9	120
	1623	3.3	100		1525	3.0	90		1702	3.3	100		1634	2.6	80		1826	3.6	110		1217	6.9	210
	2206	7.5	230		2111	7.9	240		2300	6.2	190		●	2243	6.9		210					1927	2.6	80
10 Th	0434	3.0	90	25 F	0338	2.3	70	10 Su	0459	3.6	110	25 M	0447	3.3	100	10 W	0107	5.6	170	25 Th	0202	6.6	200
	1050	7.5	230		0946	7.9	240		1128	6.9	210		1107	7.2	220		0649	4.3	130		0809	3.9	120
	1711	3.3	100		1609	3.0	90		1759	3.6	110		1742	3.0	90		1302	6.2	190		1350	6.9	210
	2259	6.9	210		●	2201	7.5		230					2014	3.3		100	2053	2.3		70		
11 F	0519	3.3	100	26 Sa	0422	2.6	80	11 M	0010	5.9	180	26 Tu	0006	6.2	190	11 Th	0243	5.9	180	26 F	0313	6.9	210
	1141	7.2	220		1036	7.5	230		0554	3.9	120		0600	3.9	120		0844	4.3	130		0921	3.3	100
	1803	3.3	100		1701	3.0	90		1235	6.6	200		1226	7.2	220		1424	6.6	200		1504	7.2	220
	2358	6.6	200		2300	7.2	220		1920	3.6	110		1917	3.0	90		2122	3.0	90		2151	2.0	60
12 Sa	0608	3.6	110	27 Su	0514	3.3	100	12 Tu	0143	5.6	170	27 W	0147	6.2	190	12 F	0342	6.2	190	27 Sa	0404	7.2	220
	1236	7.2	220		1136	7.5	230		0727	4.3	130		0750	3.9	120		0944	3.9	120		1012	2.6	80
	1902	3.6	110		1804	3.0	90		1351	6.6	200		1353	7.2	220		1525	6.9	210		1601	7.9	240
									2051	3.3	100		2058	2.6	80		2208	2.6	80		2237	1.6	50
13 Su	0107	6.2	190	28 M	0013	6.9	210	13 W	0309	5.9	180	28 Th	0317	6.6	200	13 Sa	0424	6.9	210	28 Su	0446	7.5	230
	0708	3.9	120		0619	3.6	110		0909	4.3	130		0926	3.6	110		1027	3.3	100		1055	2.3	70
	1335	6.9	210		1246	7.5	230		1459	6.9	210		1509	7.5	230		1612	7.2	220		1649	8.2	250
	2008	3.6	110		1921	3.0	90		2155	3.0	90		2207	2.0	60		2246	2.0	60		2316	1.3	40
14 M	0221	6.2	190	29 Tu	0139	6.6	200	14 Th	0411	6.2	190	29 F	0419	7.2	220	14 Su	0458	7.2	220	29 M	0521	7.9	240
	0819	3.9	120		0744	3.9	120		1013	3.9	120		1028	3.3	100		1104	3.0	90		1132	2.0	60
	1434	6.9	210		1401	7.5	230		1555	7.2	220		1611	7.9	240		1652	7.5	230		1729	8.2	250
	2114	3.3	100		2048	3.0	90		2241	2.6	80		2257	1.6	50		2321	1.6	50		●	2351	1.3	40
15 Tu	0329	6.2	190	30 W	0305	6.9	210	15 F	0457	6.6	200	30 Sa	0507	7.5	230	15 M	0528	7.5	230	30 Tu	0553	8.2	250
	0930	3.9	120		0918	3.9	120		1058	3.6	110		1116	2.6	80		1138	2.6	80		1207	1.6	50
	1528	7.2	220		1512	7.9	240		1640	7.5	230		1702	8.5	260		1727	7.9	240		1806	8.2	250
	2211	3.0	90		2205	2.3	70		2318	2.3	70		●	2340	1.3		40	○	2355		1.6	50	
				31 Th	0418	7.2	220				31 Su	0547	7.9	240									
					1032	3.6	110						1157	2.3	70								
					1615	8.2	250						1746	8.5	260								
					2306	2.0	60																

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Musay'id Outer Channel Entrance, Qatar, 2008

Times and Heights of High and Low Waters

January						February						March												
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height						
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm					
1 Tu	0304	3.9	120	16 W	0116	3.6	110	1 F	0257	5.2	160	16 Sa	0223	5.6	170	1 Sa	0126	5.2	160	16 Su	0138	6.2	190	
	0419	3.9	120		0434	3.3	100		1757	1.6	50		1833	1.3	40		1602	2.0	60		1751	2.0	60	
	1002	4.9	150		0905	4.9	150																	
	1823	2.0	60		1743	1.3	40																	
2 W	0328	4.6	140	17 Th	0218	4.6	140	2 Sa	0330	5.6	170	17 Su	0316	6.2	190	2 Su	0217	5.6	170	17 M	0236	6.2	190	
	0552	4.3	130		0557	3.9	120		1829	1.6	50		1933	1.3	40		1649	2.0	60		1913	2.0	60	
	0810	4.6	140		0917	4.3	130																	
	1855	2.0	60		1824	1.3	40																	
3 Th	0349	4.9	150	18 F	0302	5.2	160	3 Su	0359	5.9	180	18 M	0401	6.6	200	3 M	0259	5.9	180	18 Tu	0325	6.2	190	
	1926	1.6	50		1910	1.3	40		1916	1.6	50		1157	2.6	80		1827	2.0	60		1105	2.3	70	
4 F	0411	5.6	170	19 Sa	0342	5.9	180	4 M	0428	6.2	190	19 Tu	1330	2.6	80	4 Tu	0335	6.2	190	19 W	1524	2.6	80	
	1955	1.6	50		1959	1.0	30		2013	1.6	50		1448	2.6	80		1952	2.0	60		1615	3.0	90	
5 Sa	0435	5.9	180	20 Su	0422	6.6	200	5 Tu	0456	6.6	200	20 W	2043	1.3	40	5 W	0409	6.2	190	20 Th	2048	2.0	60	
	2021	1.6	50		1211	3.3	100		1312	2.6	80		0519	6.9	210		1206	2.6	80		1151	2.0	60	
6 Su	0501	6.2	190	21 M	1319	3.3	100	6 W	1437	2.6	80	21 Th	1558	3.0	90	6 Th	1449	2.6	80	21 F	1656	3.3	100	
	2046	1.6	50		2052	1.0	30		2112	1.3	40		2242	1.3	40		2107	1.6	50		2246	2.0	60	
					0501	7.2	220		0523	6.6	200		0552	6.6	200		0441	6.2	190		0512	5.6	170	
					1234	3.0	90		1319	2.6	80		1303	2.0	60		1209	2.3	70		1210	1.6	50	
7 M	0528	6.6	200	22 Tu	1436	3.0	90	7 Th	1536	3.0	90	22 F	1704	3.0	90	7 F	1553	3.0	90	22 Sa	1733	3.6	110	
	1347	3.0	90		2146	1.0	30		2209	1.3	40		2330	1.3	40		2212	1.6	50		2333	2.0	60	
	1441	3.0	90		0540	7.5	230		0551	6.6	200		0620	6.2	190		0513	6.2	190		0532	5.2	160	
	2119	1.3	40		1306	2.6	80		1329	2.3	70		1326	2.0	60		1222	2.0	60		1228	1.6	50	
8 Tu	0554	6.9	210	23 W	1538	3.0	90	8 F	1629	3.0	90	23 Sa	1803	3.3	100	8 Sa	1650	3.3	100	23 Su	1810	3.9	120	
	1401	3.0	90		2239	1.3	40		2304	1.3	40		1856	3.6	110		2309	1.6	50		1848	4.6	140	
	1540	3.0	90		0618	7.5	230		0620	6.6	200		0015	1.6	50		0545	5.9	180		0017	2.3	70	
	2200	1.3	40		1341	2.3	70		1344	2.3	70		0642	5.9	180		1244	1.6	50		0548	4.6	140	
9 W	0620	6.9	210	24 Th	1635	3.0	90	9 Sa	1720	3.0	90	24 Su	1856	3.6	110	9 Su	1745	3.6	110	24 M	1246	1.6	50	
	1421	2.6	80		2328	1.3	40		0650	6.2	190		0058	2.0	60		0003	1.6	50		0101	2.3	70	
	1631	3.0	90		0653	7.2	220		1406	2.0	60		0701	5.2	160		0614	5.6	170		0606	4.3	130	
	2246	1.3	40		1414	2.0	60		1814	3.3	100		1410	1.6	50		1313	1.6	50		1304	1.6	50	
10 Th	0647	6.9	210	25 F	1734	3.0	90	10 Su	1949	3.9	120	25 M	1949	3.9	120	10 M	1841	3.9	120	25 Tu	1929	4.6	140	
	1440	2.6	80		0014	1.6	50		0049	1.6	50		0141	2.3	70		0056	2.0	60		0146	2.6	80	
	1720	3.0	90		0723	6.9	210		0719	5.9	180		0718	4.9	150		0639	5.2	160		0619	3.9	120	
	2334	1.3	40		1444	2.0	60		1435	1.6	50		1432	1.6	50		1344	1.3	40		1321	1.6	50	
11 F	0716	6.9	210	26 Sa	1841	3.0	90	11 M	1918	3.3	100	26 Tu	2045	3.9	120	11 Tu	1939	4.6	140	26 W	2011	4.9	150	
	1501	2.3	70		0059	2.0	60		0142	2.0	60		0226	3.0	90		0150	2.3	70		0234	3.0	90	
	1809	3.0	90		0748	6.2	190		0745	5.6	170		0721	4.3	130		0652	4.9	150		0618	3.9	120	
					1512	2.0	60		1506	1.6	50		1454	1.6	50		1418	1.3	40		1337	1.6	50	
12 Sa	0026	1.6	50	27 Su	2007	3.3	100	12 Tu	2040	3.6	110	27 W	2146	4.3	130	12 W	2041	4.9	150	27 Th	2058	5.2	160	
	0748	6.6	200		0143	2.3	70		0236	2.3	70		0316	3.3	100		0249	2.6	80		0332	3.3	100	
	1528	2.0	60		0810	5.9	180		0757	4.9	150		0705	4.3	130		0659	4.6	140		0616	3.6	110	
	1902	3.0	90		1539	2.0	60		1541	1.3	40		1513	1.6	50		1453	1.3	40		1350	1.6	50	
13 Su	0123	2.0	60	28 M	2128	3.3	100	13 W	2201	3.9	120	28 Th	2300	4.6	140	13 Th	2150	5.2	160	28 F	2151	5.2	160	
	0819	6.2	190		0228	3.0	90		0337	3.0	90		0420	3.6	110		0357	3.3	100		0456	3.6	110	
	1557	2.0	60		0826	5.2	160		0756	4.6	140		0658	3.9	120		0716	3.9	120		0603	3.6	110	
	2014	3.0	90		1607	2.0	60		1617	1.3	40		1529	1.6	50		1530	1.3	40		1356	1.6	50	
14 M	0223	2.3	70	29 Tu	2306	3.6	110	14 Th	2334	4.6	140	29 F				14 F	2309	5.6	170	29 Sa	2253	5.6	170	
	0847	5.6	170		0317	3.3	100		0450	3.6	110		0401	6.6	200		0525	3.6	110		1354	2.0	60	
	1630	1.6	50		0821	4.6	140		0808	4.3	130		0658	3.9	120		0728	3.6	110					
	2210	3.3	100		1635	2.0	60		1657	1.3	40		1529	1.6	50		1608	1.6	50					
15 Tu	0326	3.0	90	30 W				15 F				30 Sa				15 Sa				30 Su				
	0901	5.2	160		0053	4.3	130		0113	4.9	150		0029	5.9	180		0000	5.6	170					
	1705	1.6	50		0414	3.9	120		0636	3.9	120		1653	1.6	50		1404	2.0	60					
					0747	4.6	140		0807	3.9	120													
15 O				31 Th	1703	2.0	60		1742	1.3	40									31 M				
					0212	4.6	140																	
					0553	4.3	130																	
					0722	4.3	130																	
					1731	1.6	50																	

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
Heights are referred to the chart datum of soundings.

Musay'id Outer Channel Entrance, Qatar, 2008

Times and Heights of High and Low Waters

July					August					September																			
Time		Height			Time		Height			Time		Height			Time		Height												
1 Tu	h	m	ft	cm	16 W	h	m	ft	cm	1 F	h	m	ft	cm	16 Sa	h	m	ft	cm	1 M	h	m	ft	cm	16 Tu	h	m	ft	cm
	0025	4.6	140	0845		2.0	60	0041	3.3		100	0059	3.3	100		0051	2.3	70	0010		2.3	70							
	0852	1.6	50	1717		7.5	230	0317	3.6		110	0326	3.3	100		0600	4.3	130	0542		4.3	130							
	1653	7.9	240				1015	1.6	50		0957	2.0	60	1200		2.3	70	1147	2.3		70								
2 W	0013	4.3	130	17 Th	0918	2.0	60	2 Sa	0112	3.0	90	17 Su	0104	3.0	90	2 Tu	0114	2.3	70	17 W	0036	2.0	60						
	0156	4.3	130		1742	7.5	230		0421	3.6	110		0420	3.6	110		0649	4.6	140		0628	4.9	150						
	0939	1.6	50		1108	2.0	60		1051	2.0	60		1248	2.6	80		1240	2.6	80										
	1732	8.2	250		1825	7.9	240		1756	6.9	210		1837	5.6	170		1800	5.2	160										
3 Th	0057	3.6	110	18 F	0201	3.6	110	3 Su	0144	3.0	90	18 M	0112	3.0	90	3 W	0137	2.3	70	18 Th	0106	1.6	50						
	0309	3.9	120		0323	3.6	110		0526	3.9	120		0511	3.9	120		0739	4.9	150		0719	5.2	160						
	1026	1.6	50		0958	2.0	60		1158	2.0	60		1142	2.0	60		1337	3.0	90		1335	3.0	90						
	1812	8.5	260		1806	7.5	230		1858	7.5	230		1824	6.6	200		1853	5.2	160		1802	4.9	150						
4 F	0140	3.6	110	19 Sa	0214	3.3	100	4 M	0213	2.6	80	19 Tu	0130	2.6	80	4 Th	0200	2.0	60	19 F	0136	1.6	50						
	0410	3.9	120		0417	3.6	110		0636	3.9	120		0604	3.9	120		0832	4.9	150		0815	5.6	170						
	1113	1.6	50		1042	2.0	60		1246	2.6	80		1233	2.3	70		1430	3.6	110		1434	3.3	100						
	1853	8.5	260		1830	7.5	230		1927	6.9	210		1851	6.2	190		1855	4.6	140		1812	4.6	140						
5 Sa	0222	3.3	100	20 Su	0225	3.3	100	5 Tu	0241	2.6	80	20 W	0156	2.3	70	5 F	0222	2.3	70	20 Sa	0205	1.6	50						
	0507	3.6	110		0506	3.6	110		0749	4.3	130		0705	4.3	130		0931	5.2	160		0916	5.9	180						
	1200	2.0	60		1129	2.0	60		1335	3.0	90		1324	2.6	80		1533	3.9	120		1545	3.6	110						
	1932	8.5	260		1857	7.2	220		1950	6.2	190		1913	5.9	180		1831	4.3	130		1832	4.3	130						
6 Su	0303	3.0	90	21 M	0237	3.0	90	6 W	0310	2.6	80	21 Th	0224	2.3	70	6 Sa	0238	2.3	70	21 Su	0234	1.6	50						
	0605	3.6	110		0555	3.6	110		0902	4.3	130		0813	4.6	140		1041	5.6	170		1026	6.2	190						
	1247	2.3	70		1217	2.3	70		1425	3.6	110		1419	3.0	90				1721		3.9	120							
	2009	7.9	240		1926	6.9	210		2006	5.9	180		1914	5.2	160		1839	3.9	120										
7 M	0343	3.0	90	22 Tu	0256	3.0	90	7 Th	0339	2.3	70	22 F	0255	2.0	60	7 Su	0245	2.3	70	22 M	0303	2.0	60						
	0714	3.6	110		0646	3.6	110		1034	4.6	140		0926	4.9	150		1157	5.9	180		1144	6.6	200						
	1334	3.0	90		1308	2.6	80		1521	4.3	130		1520	3.6	110														
	2041	7.5	230		1954	6.6	200		2006	5.2	160		1914	4.9	150														
8 Tu	0419	2.6	80	23 W	0322	2.6	80	8 F	0409	2.3	70	23 Sa	0328	2.0	60	8 M	0242	2.3	70	23 Tu	0335	2.0	60						
	0929	3.6	110		0750	3.9	120		1219	5.2	160		1049	5.2	160		1300	6.2	190		1253	6.9	210						
	1424	3.3	100		1403	3.0	90		1640	4.6	140		1637	4.3	130														
	2106	6.6	200		2016	6.2	190		1921	4.9	150		1930	4.6	140														
9 W	0453	2.6	80	24 Th	0352	2.3	70	9 Sa	0439	2.3	70	24 Su	0404	2.0	60	9 Tu	0243	2.3	70	24 W	0430	2.3	70						
	1247	4.3	130		0927	3.9	120		1336	5.6	170		1230	5.9	180		1350	6.2	190		1352	6.9	210						
	1518	3.9	120		1503	3.6	110				1843		4.3	130				2215	2.6		80								
	2125	5.9	180		2017	5.6	170				1921		4.3	130															
10 Th	0527	2.6	80	25 F	0425	2.3	70	10 Su	0503	2.6	80	25 M	0445	2.0	60	10 W	0321	2.3	70	25 Th	0243	2.6	80						
	1424	4.6	140		1119	4.6	140		1429	6.2	190		1342	6.6	200		1431	6.6	200		0602	2.3	70						
	1626	4.6	140		1610	4.3	130							1443	6.9		210	1443	6.9		210								
	2134	5.6	170		2021	5.2	160							2226	2.3		70	2226	2.3		70								
11 F	0602	2.6	80	26 Sa	0502	2.0	60	11 M	0518	2.6	80	26 Tu	0537	2.0	60	11 Th	0452	2.6	80	26 F	0333	3.0	90						
	1504	5.2	160		1352	5.2	160		1507	6.6	200		1436	6.9	210		1507	6.6	200		0800	2.6	80						
	1841	5.2	160		1738	4.6	140							2345	3.0		90	1527	6.6		200								
	1949	5.2	160		2038	4.9	150										2250	2.0	60										
12 Sa	0638	2.3	70	27 Su	0544	2.0	60	12 Tu	0538	2.3	70	27 W	0642	2.0	60	12 F	0150	3.0	90	27 Sa	0412	3.3	100						
	1533	5.9	180		1436	5.9	180		1538	6.9	210		1522	7.2	220		0715	2.6	80		0927	2.6	80						
											2331		3.0	90			1541	6.6	200		1605	6.2	190						
																	2336	2.6	80		2315	2.0	60						
13 Su	0714	2.3	70	28 M	0631	2.0	60	13 W	0641	2.3	70	28 Th	0053	3.0	90	13 Sa	0348	3.3	100	28 Su	0449	3.9	120						
	1559	6.6	200		1515	6.9	210		1607	7.2	220		0800	2.0	60		0845	2.6	80		1026	2.6	80						
											1604		7.5	230			1614	6.6	200		1637	5.9	180						
											2336		2.6	80			2340	2.6	80		2336	2.0	60						
14 M	0747	2.3	70	29 Tu	0723	1.6	50	14 Th	0752	2.3	70	29 F	0244	3.3	100	14 Su	0422	3.6	110	29 M	0526	4.3	130						
	1625	6.9	210		1554	7.5	230		1635	7.2	220		0917	2.0	60		0956	2.3	70		1117	2.6	80						
											1643		7.5	230			1644	6.2	190		1701	5.2	160						
																	2350	2.3	70		2356	2.0	60						
15 Tu	0817	2.3	70	30 W	0820	1.6	50	15 F	0059	3.3	100	30 Sa	0001	2.6	80	15 M	0500	3.9	120	30 Tu	0603	4.9	150						
	1651	7.2	220		1632	7.9	240		0223	3.3	100		0408	3.3	100		1054	2.3	70		1207	2.6	80						
									0857	2.3	70		1018	2.0	60		1714	5.9	180		1719	4.9	150						
									1702	7.2	220		1718	7.2	220														
15 Tu	0016	3.6	110	31 Th	0203	3.6	110	31 Su	0027	2.3	70	31 Su	0027	2.3	70	31 Su	0027	2.3	70	31 Su	0027	2.3	70						
	0203	3.6	110		0919	1.6	50		0509	3.6	110		0509	3.6	110		0509	3.6	110		0509	3.6	110						
	0919	1.6	50		1711	8.2	250		1111	2.0	60		1111	2.0	60		1111	2.0	60		1111	2.0	60						
	1711	8.2	250							1749	6.9		210	1749	6.9		210	1749	6.9		210	1749	6.9	210					

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Musay'id Outer Channel Entrance, Qatar, 2008

Times and Heights of High and Low Waters

October								November								December								
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height						
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm				
1 W	0016	1.6	50	16 Th	0629	5.9	180	1 Sa	0732	6.6	200	16 Su	0006	1.3	40	1 M	0734	6.9	210	16 Tu	0032	1.6	50	
	0641	5.2	160		1249	3.0	90		1507	3.3	100		0749	7.5	230		0814	7.9	240					
	1256	3.0	90		1641	4.6	140		1653	3.3	100		1507	3.0	90		1742	3.0	90		1548	2.3	70	
	1735	4.6	140				2335		1.6	50	1736		3.3	100	2311		1.6	50	1843		3.0	90		
2 Th	0037	1.6	50	17 F	0020	1.3	40	2 Su	0807	6.6	200	17 M	0037	1.6	50	2 Tu	0804	6.6	200	17 W	0123	2.0	60	
	0720	5.6	170		0714	6.2	190		2318	1.6	50		0839	7.5	230		1649	2.6	80		0856	7.5	230	
	1348	3.3	100		1349	3.3	100				1616		2.6	80	1827		2.6	80	1636		2.0	60		
	1744	4.3	130		1708	4.3	130				1829		3.0	90	2311		2.0	60	2018		2.6	80		
3 F	0054	2.0	60	18 Sa	0049	1.3	40	3 M	0843	6.6	200	18 Tu	0049	2.0	60	3 W	0836	6.6	200	18 Th	0217	2.6	80	
	0801	5.9	180		0805	6.9	210		2324	2.0	60		0930	7.5	230		1720	2.6	80		0937	6.9	210	
	1445	3.3	100		1454	3.3	100				1736		2.6	80	1924		2.6	80	1723		3.0	60		
	1738	3.9	120		1740	3.9	120				1935		2.6	80	2310		2.3	70	2310		2.3	70		
4 Sa	0105	2.0	60	19 Su	0116	1.6	50	4 Tu	0922	6.6	200	19 W	0014	2.3	70	4 Th	0910	6.2	190	19 F	0146	3.0	90	
	0845	5.9	180		0900	6.9	210		2334	2.0	60		1022	7.2	220		1738	2.3	70		0315	3.0	90	
	1600	3.6	110		1611	3.3	100				1844		2.3	70	2039		2.6	80	1013		6.2	190		
	1723	3.6	110		1809	3.6	110							2314	2.3		70	1805	2.0		60			
5 Su	0104	2.0	60	20 M	0137	1.6	50	5 W	1004	6.2	190	20 Th	1113	6.6	200	5 F	0944	5.9	180	20 Sa	0237	3.6	110	
	0933	6.2	190		1001	6.9	210		2336	2.3	70		1933	2.0	60		1800	2.3	70		0418	3.6	110	
6 M	0023	2.0	60	21 Tu	0127	2.0	60	6 Th	1049	6.2	190	21 F	1200	5.9	180	6 Sa	1016	5.6	170	21 Su	0315	4.3	130	
	1027	6.2	190		1105	6.9	210		2043	2.3	70		2013	1.6	50		1830	2.0	60		0541	3.9	120	
7 Tu	0030	2.0	60	22 W	0032	2.3	70	7 F	1135	5.9	180	22 Sa	0352	3.6	110	7 Su	0314	3.6	110	22 M	0343	4.9	150	
	1127	6.2	190		1207	6.9	210		2040	2.3	70		0540	3.6	110		0456	3.6	110		0947	4.3	130	
					2039	2.3	70							1240	5.6		170	1047	5.2		160	1140	4.3	130
														2044	1.6		50	1904	2.0		60	1952	1.6	50
8 W	0040	2.3	70	23 Th	1303	6.6	200	8 Sa	1220	5.6	170	23 Su	0405	4.3	130	8 M	0327	4.3	130	23 Tu	0408	5.2	160	
	1224	6.2	190		2107	2.0	60		2043	2.3	70		0826	3.9	120		0621	3.9	120		1114	3.9	120	
9 Th	0035	2.3	70	24 F	0415	3.0	90	9 Su	0356	3.9	120	24 M	0423	4.9	150	9 Tu	0346	4.9	150	24 W	0435	5.9	180	
	1314	6.2	190		0540	3.0	90		0633	3.6	110		1007	3.6	110		0826	3.9	120		1218	3.6	110	
	2217	2.6	80		1354	6.2	190		1301	5.2	160		1336	4.3	130		1207	4.6	140		1251	3.6	110	
					2138	1.6	50		2059	2.0	60		2128	1.6	50		2017	1.3	40		2057	1.6	50	
10 F	1359	5.9	180	25 Sa	0405	3.6	110	10 M	0405	4.3	130	25 Tu	0449	5.2	160	10 W	0411	5.9	180	25 Th	0504	6.2	190	
	2212	2.3	70		0816	3.3	100		0828	3.6	110		1113	3.6	110		1014	3.9	120		1257	3.3	100	
11 Sa	0403	3.3	100	26 Su	1436	5.6	170	11 Tu	1336	4.9	150	26 W	1406	3.9	120	11 Th	1300	4.3	130	26 F	1345	3.3	100	
	0649	3.0	90		2204	1.6	50		2125	1.6	50		2151	1.6	50		2056	1.3	40		2121	1.6	50	
	1439	5.9	180		0426	3.9	120		0428	4.9	150		0518	5.9	180		0444	6.6	200		0532	6.6	200	
	2217	2.3	70		0938	3.3	100		0957	3.6	110		1208	3.3	100		1128	3.6	110		1327	3.0	90	
12 Su	0415	3.6	110	27 M	1508	5.2	160	12 W	1409	4.9	150	27 Th	1439	3.6	110	12 F	1357	3.9	120	27 Sa	1439	3.0	90	
	0836	3.0	90		2225	1.6	50		2156	1.6	50		2214	1.6	50		2135	1.3	40		2130	1.6	50	
	1514	5.6	170		0454	4.6	140		0500	5.6	170		0546	6.2	190		0444	6.6	200		0532	6.6	200	
	2229	2.0	60		1039	3.0	90		1103	3.3	100		1257	3.3	100		1128	3.6	110		1327	3.0	90	
13 M	0439	4.3	130	28 Tu	1528	4.6	140	13 Th	1443	4.6	140	28 F	1513	3.3	100	13 Sa	1357	3.9	120	28 Su	1439	3.0	90	
	0955	3.0	90		2244	1.6	50		2229	1.3	40		2231	1.6	50		2135	1.3	40		2130	1.6	50	
	1545	5.6	170		0525	4.9	150		0537	6.6	200		0613	6.6	200		0444	6.6	200		0532	6.6	200	
	2251	2.0	60		1133	3.0	90		1204	3.3	100		1344	3.0	90		1128	3.6	110		1327	3.0	90	
14 Tu	0510	4.6	140	29 W	1546	4.3	130	14 F	1522	4.3	130	29 Sa	1548	3.3	100	14 Su	1357	3.9	120	29 M	1439	3.0	90	
	1056	3.0	90		2304	1.6	50		2301	1.3	40		2231	1.6	50		2135	1.3	40		2130	1.6	50	
	1610	5.2	160		0556	5.6	170		0618	6.9	210		0639	6.6	200		0444	6.6	200		0532	6.6	200	
	2319	1.6	50		1224	3.0	90		1304	3.3	100		1430	3.0	90		0647	7.9	240		1327	3.0	90	
15 W	0547	5.2	160	30 Th	1608	3.9	120	15 Sa	1603	3.9	120	30 Su	1439	3.0	90	15 M	1647	3.3	100	30 Tu	1448	2.6	80	
	1152	3.0	90		2324	1.6	50		2334	1.3	40		2233	1.6	50		2345	1.3	40		1704	3.0	90	
	1625	4.9	150		0627	5.9	180		0703	7.5	230		0706	6.9	210		0647	7.9	240		2302	1.6	50	
	2349	1.6	50		1315	3.0	90		1404	3.0	90		1517	3.0	90		0730	7.9	240		0642	6.9	210	
16 Th	0629	5.9	180	31 F	1629	3.6	110	16 Sa	1648	3.6	110	31 Su	1702	3.0	90	16 M	1458	2.6	80	31 Tu	1448	2.6	80	
	1249	3.0	90		2339	1.6	50				2252		1.6	50	2345		1.3	40	1704		3.0	90		
	1641	4.6	140		0659	6.2	190										2345	1.3	40		2302	1.6	50	
					1408	3.3	100														2302	1.6	50	
17 F	0020	1.3	40	1 Sa	0714	6.2	190	2 Su	0807	6.6	200	17 M	0037	1.6	50	2 Tu	0804	6.6	200	17 W	0123	2.0	60	
	0714	6.2	190		2318	1.6	50		0839	7.5	230		1649	2.6	80		0856	7.5	230					
	1348	3.3	100							1616	2.6		80	1827	2.6		80	1636	2.0		60			
	1744	4.3	130							1829	3.0		90	2311	2.0		60	2018	2.6		80			
18 Sa	0049	1.3	40	3 M	0805	6.9	210	4 Tu	0843	6.6	200	18 Tu	0049	2.0	60	3 W	0836	6.6	200	18 Th	0217	2.6	80	
	0805	6.9	210		2324	2.0	60		0930	7.5	230		1720	2.6	80		0937	6.9	210					
	1445	3.3	100							1736	2.6		80	1924	2.6		80	1723	3.0		60			
	1740	3.9	120							1935	2.6		80	2310	2.3		70	2310	2.3		70			
19 Su	0116	1.6	50	4 Tu	0116	1.6	50	5 W	0922	6.6	200	19 W	0014	2.3	70	4 Th	0910	6.2	190	19 F	0146	3.0	90	
	0900	6.9	210		2334	2.0	60		1022	7.2	220		1738	2.3	70		0315	3.0	90					
	1611	3.3	100							1844	2.3		70											

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Mina Jebel Ali, United Arab Emirates, 2008

Times and Heights of High and Low Waters

January						February						March					
Time			Height			Time			Height			Time			Height		
	h	m	ft	cm			h	m	ft	cm			h	m	ft	cm	
1 Tu	0641	4.9	150			16 W	0540	4.9	150			1 Sa	0540	4.6	140		
	1324	3.0	90				1203	2.0	60				1431	1.6	50		
	1827	3.6	110				1757	3.9	120				1954	2.6	80		
							2353	2.0	60				2105	2.6	80		
2 W	0016	2.0	60			17 Th	0628	5.2	160			2 Su	0651	4.6	140		
	0725	4.9	150				1348	1.6	50				1545	1.3	40		
	1521	2.6	80				1938	3.3	100								
	1952	3.3	100														
3 Th	0054	2.3	70			18 F	0040	2.3	70			3 M	0820	4.6	140		
	0816	4.9	150				0726	5.2	160				1639	1.0	30		
	1624	2.0	60				1537	1.3	40				2340	3.3	100		
	2146	3.0	90				2143	3.3	100								
4 F	0141	2.6	80			19 Sa	0146	2.6	80			4 Tu	0237	3.0	90		
	0912	4.9	150				0839	5.2	160				0936	4.9	150		
	1709	1.6	50				1650	0.7	20				1721	0.7	20		
	2314	3.3	100				2317	3.6	110				2359	3.6	110		
5 Sa	0240	3.0	90			20 Su	0301	3.0	90			5 W	0409	3.0	90		
	1003	5.2	160				0953	5.6	170				1035	5.2	160		
	1748	1.0	30				1749	0.3	10				1755	0.3	10		
6 Su	0007	3.3	100			21 M	0020	3.9	120			6 Th	0022	3.9	120		
	0337	3.0	90				0407	3.0	90				0457	2.6	80		
	1048	5.6	170				1058	5.9	180				1125	5.6	170		
	1824	0.7	20				1838	0.0	0				1826	0.3	10		
7 M	0047	3.6	110			22 Tu	0106	4.3	130			7 F	0045	4.3	130		
	0424	3.0	90				0505	2.6	80				0541	2.0	60		
	1128	5.6	170				1154	5.9	180				1211	5.9	180		
	1858	0.3	10				1922	-0.3	-10				1857	0.3	10		
8 Tu	0122	3.9	120			23 W	0145	4.3	130			8 Sa	0109	4.6	140		
	0506	3.0	90				0600	2.6	80				0625	1.6	50		
	1205	5.9	180				1245	6.2	190				1255	5.9	180		
	1932	0.3	10				1959	-0.3	-10				1927	0.7	20		
9 W	0154	3.9	120			24 Th	0220	4.6	140			9 Su	0134	4.9	150		
	0547	3.0	90				0653	2.3	70				0710	1.3	40		
	1242	5.9	180				1331	6.2	190				1337	5.9	180		
	2004	0.0	0				2031	0.0	0				1956	0.7	20		
10 Th	0224	4.3	130			25 F	0252	4.9	150			10 M	0202	5.2	160		
	0630	2.6	80				0743	2.3	70				0756	1.0	30		
	1318	6.2	190				1412	5.9	180				1419	5.6	170		
	2036	0.0	0				2100	0.3	10				2020	1.0	30		
11 F	0253	4.3	130			26 Sa	0323	4.9	150			11 Tu	0232	5.6	170		
	0717	2.6	80				0830	2.3	70				0844	0.7	20		
	1355	5.9	180				1450	5.6	170				1501	5.2	160		
	2107	0.3	10				2125	0.7	20				2041	1.3	40		
12 Sa	0320	4.6	140			27 Su	0354	4.9	150			12 W	0305	5.6	170		
	0805	2.6	80				0915	2.3	70				0935	0.7	20		
	1433	5.9	180				1527	5.2	160				1546	4.6	140		
	2139	0.3	10				2148	1.0	30				2103	1.6	50		
13 Su	0349	4.6	140			28 M	0425	4.9	150			13 Th	0341	5.6	170		
	0855	2.3	70				1001	2.3	70				1036	0.7	20		
	1514	5.6	170				1602	4.6	140				1639	3.9	120		
	2211	0.7	20				2207	1.3	40				2131	2.0	60		
14 M	0422	4.9	150			29 Tu	0456	4.9	150			14 F	0424	5.6	170		
	0949	2.3	70				1051	2.3	70				1157	1.0	30		
	1559	5.2	160				1639	3.9	120				1754	3.3	100		
	2243	1.0	30				2226	1.6	50				2208	2.6	80		
15 Tu	0459	4.9	150			30 W	0527	4.9	150			15 Sa	0517	5.2	160		
	1050	2.0	60				1206	2.3	70				1332	1.0	30		
	1651	4.6	140				1724	3.3	100				2015	3.0	90		
	2316	1.6	50				2246	2.0	60				2304	3.0	90		
						31 Th	0603	4.9	150								
							1402	2.3	70								
							1834	3.0	90								
							2307	2.3	70								

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Mina Jebel Ali, United Arab Emirates, 2008

Times and Heights of High and Low Waters

July					August					September																		
Time		Height			Time		Height			Time		Height			Time		Height											
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm									
1 Tu	0524	1.0	30	16 W	0614	1.3	40	1 F	0656	0.3	10	16 Sa	0646	0.7	20	1 M	0103	6.2	190	16 Tu	0033	5.9	180					
	1128	4.3	130			1240	3.9		120		1316		4.9	150			1311	4.6	140			0737	0.7	20		0703	1.0	30
	1545	3.0	90			1613	3.3		100		1739		3.0	90			1739	3.0	90			1350	5.6	170		1313	5.6	170
	2235	6.6	200			2315	6.2		190	●											1925	2.0	60		1858	1.6	50	
2 W	0618	0.7	20	17 Th	0647	1.0	30	2 Sa	0021	6.9	210	17 Su	0010	6.2	190	2 Tu	0144	6.2	190	17 W	0115	5.9	180					
	1231	4.6	140			1311	4.3		130		0735		0.3	10			0714	0.7	20			0802	1.0	30		0730	1.3	40
	1640	3.0	90			1656	3.3		100		1352		5.2	160			1334	4.9	150			1418	5.6	170		1339	5.9	180
	2332	6.9	210			2353	6.2		190		1833		2.6	80	○		1820	2.6	80			2009	1.6	50		1941	1.3	40
3 Th	0708	0.3	10	18 F	0718	0.7	20	3 Su	0111	6.9	210	18 M	0049	6.6	200	3 W	0222	5.6	170	18 Th	0156	5.6	170					
	1325	4.6	140			1341	4.6		140		0810		0.3	10			0742	0.7	20			0822	1.6	50		0751	1.6	50
	1734	3.0	90			1738	3.3		100		1426		5.2	160			1355	5.2	160			1447	5.6	170		1407	5.9	180
	●					○					1926		2.6	80			1902	2.3	70			2051	1.6	50		2027	1.0	30
4 F	0025	6.9	210	19 Sa	0029	6.6	200	4 M	0156	6.6	200	19 Tu	0128	6.2	190	4 Th	0257	5.2	160	19 F	0237	5.2	160					
	0753	0.0	0			0748	0.7		20		0841		0.7	20			0810	1.0	30			0835	1.6	50		0809	2.0	60
	1413	4.9	150			1409	4.6		140		1459		5.6	170			1418	5.2	160			1514	5.6	170		1438	6.2	190
	1829	3.0	90			1820	3.3		100		2017		2.3	70			1946	2.3	70			2134	1.6	50		2118	1.0	30
5 Sa	0116	7.2	220	20 Su	0105	6.6	200	5 Tu	0238	6.2	190	20 W	0205	6.2	190	5 F	0332	4.6	140	20 Sa	0321	4.9	150					
	0835	0.0	0			0817	0.7		20		0909		1.0	30			0835	1.3	40			0847	2.0	60		0830	2.3	70
	1455	5.2	160			1434	4.9		150		1531		5.6	170			1444	5.6	170			1540	5.6	170		1513	6.2	190
	1925	3.0	90			1904	3.0		90		2105		2.3	70			2031	2.0	60			2221	1.6	50		2217	1.0	30
6 Su	0204	6.9	210	21 M	0140	6.6	200	6 W	0317	5.9	180	21 Th	0244	5.9	180	6 Sa	0408	4.3	130	21 Su	0414	4.3	130					
	0914	0.3	10			0846	1.0		30		0932		1.6	50			0856	1.6	50			0902	2.3	70		0858	2.6	80
	1536	5.2	160			1459	4.9		150		1604		5.6	170			1513	5.6	170			1607	5.6	170		1553	5.9	180
	2021	3.0	90			1950	3.0		90		2155		2.3	70			2120	1.6	50			2324	2.0	60		2332	1.3	40
7 M	0249	6.6	200	22 Tu	0216	6.2	190	7 Th	0356	5.2	160	22 F	0325	5.2	160	7 Su	0451	3.6	110	22 M	0530	3.6	110					
	0951	0.7	20			0916	1.0		30		0949		2.0	60			0915	2.6	80			0933	3.0	90				
	1616	5.2	160			1525	5.2		160		1636		5.6	170			1547	5.9	180		●	1645	5.9	180				
	2116	3.0	90			2038	2.6		80		2251		2.3	70			2214	1.6	50			○						
8 Tu	0335	6.2	190	23 W	0253	5.9	180	8 F	0436	4.6	140	23 Sa	0411	4.6	140	8 M	0050	2.0	60	23 Tu	0100	1.3	40					
	1026	1.3	40			0944	1.3		40		1002		2.3	70			0936	2.3	70			0559	3.3	100		0744	3.6	110
	1655	5.2	160			1554	5.2		160		1709		5.6	170			1626	5.9	180			0902	3.0	90		1026	3.3	100
	2213	3.0	90			2128	2.6		80	●							2324	1.6	50			1724	5.2	160		1800	5.6	170
9 W	0422	5.6	170	24 Th	0334	5.6	170	9 Sa	0005	2.6	80	24 Su	0512	3.9	120	9 Tu	0216	2.0	60	24 W	0228	1.3	40					
	1058	1.6	50			1011	1.6		50		0523		3.9	120			1005	2.6	80			0957	3.9	120				
	1735	5.2	160			1628	5.6		170		1016		2.6	80			1714	5.9	180			1242	3.6	110				
	2318	3.0	90			2223	2.3		70		1745		5.6	170	●						1834	4.9	150		1938	5.2	160	
10 Th	0513	4.9	150	25 F	0420	5.2	160	10 Su	0141	2.6	80	25 M	0100	1.6	50	10 W	0331	1.6	50	25 Th	0344	1.0	30					
	1127	2.3	70			1037	2.0		60		0659		3.6	110			2000	4.9	150			1042	4.3	130				
	1815	5.6	170			1707	5.6		170		1048		3.0	90							1512	3.6	110		1506	3.3	100	
	○					2327	2.3		70		1831		5.2	160			1816	5.6	170			2110	5.2	160				
11 F	0042	3.0	90	26 Sa	0517	4.6	140	11 M	0313	2.3	70	26 Tu	0245	1.6	50	11 Th	0425	1.3	40	26 F	0441	1.0	30					
	0611	4.3	130			1109	2.3		70		0953		3.6	110			1134	3.9	120			1117	4.6	140				
	1155	2.6	80			1753	5.6		170		1217		3.3	100			1512	3.6	110			1620	3.0	90				
	1857	5.6	170							1941	5.6		170		2117		5.2	160			2221	5.6	170					
12 Sa	0235	3.0	90	27 Su	0052	2.3	70	12 Tu	0423	2.0	60	27 W	0405	1.0	30	12 F	0504	1.0	30	27 Sa	0525	1.0	30					
	0730	3.6	110			0641	3.9		120		1105		3.9	120			1147	4.3	130			1147	4.9	150				
	1225	3.0	90			1153	2.6		80		1435		3.6	110			1613	3.3	100			1713	2.3	70				
	1945	5.6	170			1847	5.9		180		2111		5.9	180			2217	5.6	170			2318	5.6	170				
13 Su	0402	2.3	70	28 M	0251	2.0	60	13 W	0511	1.3	40	28 Th	0505	0.7	20	13 Sa	0536	1.0	30	28 Su	0603	1.0	30					
	0937	3.6	110			1202	3.9		120		1145		4.3	130			1207	4.6	140			1215	5.2	160				
	1305	3.3	100			1509	3.6		110		1556		3.3	100			1656	3.0	90			1759	2.0	60				
	2043	5.6	170			2155	5.6		170		2224		5.9	180			2306	5.9	180									
14 M	0457	2.0	60	29 Tu	0416	1.3	40	14 Th	0547	1.0	30	29 F	0552	0.3	10	14 Su	0606	0.7	20	29 M	0007	5.6	170					
	1113	3.6	110			1040	3.9		120		1219		4.9	150			1228	4.9	150			0634	1.3	40				
	1410	3.3	100			1424	3.3		100		1656		3.0	90			1736	2.6	80			1243	5.6	170				
	2142	5.6	170			2115	6.2		190		2324		6.2	190			2350	5.9	180		●	1841	1.6	50				
15 Tu	0539	1.6	50	30 W	0519	1.0	30	15 F	0618	1.0	30	30 Sa	0633	0.3	10	15 M	0635	1.0	30	30 Tu	0051	5.6	170					
	1203	3.9	120			1148	4.3		130		1250		5.2	160			1249	5.2	160			0659	1.3	40				
	1520	3.6	110			1540	3.3		100		1749		2.6	80			1816	2.0	60			1311	5.6	170				
	2232	5.9	180			2226	6.2		190		●						○					1921	1.3	40				
			31 Th	0610	0.3	10																						
					1236	4.6	140																					
					1642	3.3	100																					
					2326	6.6	200																					

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Mina Jebel Ali, United Arab Emirates, 2008

Times and Heights of High and Low Waters

October						November						December					
Time			Height			Time			Height			Time			Height		
	h	m	ft	cm			h	m	ft	cm			h	m	ft	cm	
1 W	0130	5.2	160			16 Th	0106	5.2	160			1 M	0300	3.9	120		
	0718	1.6	50				0642	1.6	50				0713	3.0	90		
	1339	5.6	170				1302	6.2	190				1355	5.6	170		
	2000	1.0	30				1940	0.7	20				2120	0.7	20		
2 Th	0206	4.9	150			17 F	0151	5.2	160			2 Tu	0338	3.9	120		
	0730	2.0	60				0705	2.0	60				0751	3.0	90		
	1406	5.9	180				1335	6.2	190				1422	5.6	170		
	2039	1.0	30				2029	0.3	10				2155	0.7	20		
3 F	0239	4.6	140			18 Sa	0238	4.9	150			3 W	0420	3.9	120		
	0745	2.0	60				0731	2.3	70				0832	3.0	90		
	1430	5.6	170				1410	6.6	200				1454	5.6	170		
	2116	1.0	30				2122	0.3	10				2233	0.7	20		
4 Sa	0314	4.3	130			19 Su	0328	4.3	130			4 Th	0503	4.3	130		
	0804	2.3	70				0803	2.6	80				0919	3.3	100		
	1452	5.6	170				1449	6.2	190				1532	5.2	160		
	2156	1.3	40				2222	0.7	20				2315	1.0	30		
5 Su	0351	3.9	120			20 M	0431	3.9	120			5 F	0548	4.3	130		
	0824	2.6	80				0842	3.0	90				1019	3.3	100		
	1515	5.6	170				1534	5.9	180				1623	4.9	150		
	2245	1.3	40				2330	0.7	20				2359	1.3	40		
6 M	0437	3.6	110			21 Tu	0555	3.9	120			6 Sa	0631	4.3	130		
	0840	2.6	80				0932	3.3	100				1132	3.0	90		
	1543	5.2	160				1632	5.6	170				1730	4.3	130		
	2350	1.6	50														
7 Tu	0546	3.3	100			22 W	0042	1.0	30			7 Su	0043	1.6	50		
	0838	3.0	90				0741	3.9	120				0715	4.6	140		
	1622	4.9	150				1053	3.6	110				1300	3.0	90		
							1754	5.2	160				1854	3.9	120		
8 W	0104	1.6	50			23 Th	0157	1.0	30			8 M	0129	1.6	50		
	1737	4.9	150				0906	4.3	130				0802	4.6	140		
							1335	3.6	110				1506	2.3	70		
							1931	4.9	150				2034	3.9	120		
9 Th	0217	1.6	50			24 F	0307	1.3	40			9 Tu	0217	2.0	60		
	1914	4.6	140				0956	4.6	140				0853	4.9	150		
							1537	3.0	90				1622	1.6	50		
							2101	4.9	150				2200	3.9	120		
10 F	0318	1.3	40			25 Sa	0404	1.3	40			10 W	0305	2.3	70		
	1036	3.9	120				1033	4.9	150				0945	5.6	170		
	1456	3.6	110				1637	2.6	80				1715	1.0	30		
	2038	4.9	150				2213	4.9	150				2309	3.9	120		
11 Sa	0405	1.3	40			26 Su	0447	1.6	50			11 Th	0351	2.3	70		
	1051	4.3	130				1105	5.2	160				1035	5.9	180		
	1604	3.3	100				1721	2.0	60				1805	0.3	10		
	2146	4.9	150				2310	4.9	150								
12 Su	0443	1.3	40			27 M	0521	1.6	50			12 F	0010	4.3	130		
	1112	4.6	140				1134	5.2	160				0437	2.6	80		
	1648	2.6	80				1801	1.6	50				1124	6.2	190		
	2242	5.2	160				2358	4.9	150				1852	0.0	0		
13 M	0516	1.3	40			28 Tu	0548	2.0	60			13 Sa	0107	4.3	130		
	1136	5.2	160				1204	5.6	170				0523	2.6	80		
	1729	2.0	60				1838	1.3	40				1211	6.6	200		
	2331	5.2	160										1939	-0.3	-10		
14 Tu	0548	1.3	40			29 W	0041	4.9	150			14 Su	0158	4.6	140		
	1203	5.6	170				0606	2.3	70				0612	2.6	80		
	1811	1.3	40				1234	5.6	170				1259	6.6	200		
							1915	1.0	30				2025	-0.3	-10		
15 W	0019	5.6	170			30 Th	0119	4.6	140			15 M	0247	4.6	140		
	0617	1.6	50				0622	2.3	70				0705	2.6	80		
	1231	5.9	180				1303	5.9	180				1346	6.6	200		
	1854	1.0	30				1952	0.7	20				2110	-0.3	-10		
						31 F	0154	4.6	140			31 W	0320	4.3	130		
							0641	2.3	70				0747	2.6	80		
							1330	5.9	180				1414	5.6	170		
							2027	0.7	20				2127	0.3	10		

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Aden, Yemen, 2008

Times and Heights of High and Low Waters

January					February					March																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
Time		Height			Time		Height			Time		Height			Time		Height																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
1 Tu	h	m	ft	cm	16 W	h	m	ft	cm	1 F	h	m	ft	cm	16 Sa	h	m	ft	cm	1 Sa	h	m	ft	cm	16 Su	h	m	ft	cm																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	0120	6.6	200	0028		7.5	230	0021	6.6		200	0141	6.9	210		0910	2.3	70	0131		6.2	190																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	0930	3.0	90	0816		2.3	70	1017	2.3		70	1027	1.3	40		2332	6.2	190	1008		1.6	50																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
				1453		4.6	140					1852	6.2	190					1805		5.6	200																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Times and Heights of High and Low Waters

April								May								June							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm			
1 Tu	0236	5.6	170	16 W	0532	5.9	180	1 Th	0357	5.6	170	16 F	0634	5.6	170	1 Su	0622	5.9	180	16 M	0028	1.3	40
	1007	2.3	70		1124	3.3	100		0952	3.0	90		1110	4.6	140		1048	4.3	130		0804	5.6	170
	1750	6.2	190		1755	7.2	220		1636	6.9	210		1712	7.2	220		1652	7.9	240		1142	5.2	160
	2327	4.6	140				2317		3.0	90									1714		6.9	210	
2 W	0413	5.9	180	17 Th	0023	3.0	90	2 F	0514	5.9	180	17 Sa	0024	2.0	60	2 M	0020	0.3	10	17 Tu	0059	1.3	40
	1055	2.3	70		0624	6.2	190		1043	3.3	100		0711	5.9	180		0719	6.2	190		0822	5.9	180
	1755	6.9	210		1201	3.3	100		1706	7.5	230		1146	4.6	140		1147	4.6	140		1229	5.2	160
	2354	3.9	120		1815	7.2	220		2356	2.0	60		1737	7.2	220		1738	8.2	250		1750	6.9	210
3 Th	0520	6.2	190	18 F	0053	2.6	80	3 Sa	0615	6.2	190	18 Su	0054	1.6	50	3 Tu	0108	-0.3	-10	18 W	0130	1.0	30
	1136	2.3	70		0704	6.2	190		1130	3.6	110		0743	5.9	180		0813	6.6	200		0847	5.9	180
	1810	7.2	220		1232	3.6	110		1741	7.9	240		1218	4.9	150		1246	4.6	140		1313	5.2	160
					1834	7.5	230				1802		7.2	220	●		1825	8.2	250		○	1826	6.9	210
4 F	0025	3.0	90	19 Sa	0120	2.0	60	4 Su	0037	1.0	30	19 M	0122	1.3	40	4 W	0156	-0.7	-20	19 Th	0201	0.7	20
	0614	6.6	200		0739	6.6	200		0709	6.6	200		0815	6.2	190		0904	6.9	210		0915	6.2	190
	1215	2.3	70		1259	3.9	120		1215	3.6	110		1248	4.9	150		1345	4.9	150		1355	4.9	150
	1834	7.5	230		1855	7.5	230		1816	8.2	250		1827	7.2	220		1913	8.2	250		1902	6.9	210
5 Sa	0100	2.0	60	20 Su	0147	1.6	50	5 M	0120	0.3	10	20 Tu	0149	1.3	40	5 Th	0243	-0.7	-20	20 F	0232	0.7	20
	0705	6.9	210		0813	6.6	200		0802	6.9	210		0847	6.2	190		0954	6.9	210		0944	6.2	190
	1252	2.6	80		1323	4.3	130		1301	3.9	120		1318	4.9	150		1445	4.9	150		1436	4.9	150
	1902	8.2	250		○	1915	7.5		230	●	1853		8.5	260	○		1852	7.2	220		2003	7.9	240	1939	6.6	200
6 Su	0138	1.3	40	21 M	0213	1.6	50	6 Tu	0205	-0.3	-10	21 W	0217	1.0	30	6 F	0331	-0.3	-10	21 Sa	0304	1.0	30
	0754	7.2	220		0846	6.2	190		0856	6.9	210		0923	6.2	190		1043	7.2	220		1014	6.2	190
	1328	3.0	90		1345	4.3	130		1348	4.3	130		1349	4.9	150		1550	4.6	140		1517	4.9	150
	1933	8.5	260		1935	7.5	230		1932	8.5	260		1917	7.2	220		2055	7.2	220		2018	6.6	200
7 M	0219	0.7	20	22 Tu	0239	1.3	40	7 W	0252	-0.3	-10	22 Th	0247	1.0	30	7 Sa	0419	0.3	10	22 Su	0337	1.0	30
	0845	6.9	210		0922	6.2	190		0952	6.9	210		1000	6.2	190		1132	7.2	220		1042	6.6	200
	1406	3.3	100		1405	4.6	140		1438	4.6	140		1424	5.2	160		1659	4.6	140		1602	4.6	140
	2004	8.5	260		1953	7.5	230		2012	8.2	250		1945	6.9	210		2151	6.6	200		2100	6.2	190
8 Tu	0303	0.3	10	23 W	0307	1.3	40	8 Th	0340	0.0	0	23 F	0320	1.0	30	8 Su	0506	1.0	30	23 M	0411	1.3	40
	0939	6.9	210		1000	5.9	180		1051	6.9	210		1040	6.2	190		1218	6.9	210		1109	6.6	200
	1445	3.9	120		1427	4.6	140		1535	4.9	150		1503	5.2	160		1813	4.3	130		1651	4.6	140
	2037	8.5	260		2012	7.2	220		2055	7.5	230		2016	6.9	210		2255	5.9	180		2148	5.9	180
9 W	0351	0.3	10	24 Th	0339	1.6	50	9 F	0432	0.3	10	24 Sa	0355	1.3	40	9 M	0553	2.0	60	24 Tu	0443	2.0	60
	1040	6.6	200		1044	5.9	180		1154	6.9	210		1121	6.2	190		1303	6.9	210		1137	6.6	200
	1527	4.6	140		1451	4.9	150		1644	5.2	160		1550	5.2	160		1931	3.9	120		1748	4.3	130
	2111	8.2	250		2034	6.9	210		2142	6.9	210		2051	6.6	200				2244		5.6	170	
10 Th	0444	0.7	20	25 F	0414	1.6	50	10 Sa	0527	1.0	30	25 Su	0433	1.6	50	10 Tu	0017	5.2	160	25 W	0516	2.3	70
	1152	6.2	190		1137	5.6	170		1302	6.6	200		1201	6.2	190		0639	3.0	90		1209	6.6	200
	1617	4.9	150		1519	5.2	160		1814	5.2	160		1651	5.2	160		1345	6.9	210		1853	3.6	110
	2149	7.5	230		2059	6.6	200		2240	6.2	190		2134	6.2	190		●	2043	3.6		110	2356	5.2	160
11 F	0543	1.0	30	26 Sa	0456	2.0	60	11 Su	0626	1.6	50	26 M	0514	2.0	60	11 W	0159	4.9	150	26 Th	0552	3.0	90
	1324	5.9	180		1253	5.6	170		1409	6.6	200		1240	6.2	190		0726	3.6	110		1246	6.9	210
	1731	5.6	170		1558	5.6	170		2003	4.9	150		1812	4.9	150		1423	6.6	200		2003	3.0	90
	2234	6.9	210		2125	6.2	190				2232		5.6	170	2146		3.0	90	○				
12 Sa	0652	1.6	50	27 Su	0546	2.3	70	12 M	0011	5.6	170	27 Tu	0559	2.3	70	12 Th	0424	4.9	150	27 F	0133	4.6	140
	1516	6.2	190		1449	5.6	170		0730	2.6	80		1319	6.2	190		0815	4.3	130		0636	3.6	110
	1938	5.6	170		1728	5.6	170		1506	6.9	210		1940	4.6	140		1459	6.6	200		1330	7.2	220
	2341	6.2	190		2158	5.9	180		○	2131	4.3		130				2238	2.6	80		2111	2.3	70
13 Su	0812	2.0	60	28 M	0645	2.3	70	13 Tu	0222	5.2	160	28 W	0000	5.2	160	13 F	0624	4.9	150	28 Sa	0344	4.6	140
	1624	6.6	200		1534	5.9	180		0837	3.3	100		0649	3.0	90		0905	4.9	150		0737	4.3	130
	2202	4.9	150		2048	5.2	160		1548	6.9	210		1358	6.6	200		1532	6.6	200		1420	7.2	220
					2325	5.6	170		2233	3.6	110		○	2052	3.9		120	2320	2.0		60	2216	1.3	40
14 M	0208	5.6	170	29 Tu	0752	2.6	80	14 W	0422	5.2	160	29 Th	0150	4.9	150	14 Sa	0723	5.2	160	29 Su	0528	5.2	160
	0932	2.6	80		1552	6.2	190		0938	3.9	120		0745	3.3	100		0959	5.2	160		0857	4.6	140
	1703	6.9	210		2200	4.6	140		1620	6.9	210		1439	6.3	210		1605	6.6	200		1516	7.5	230
	2308	4.3	130				2317		3.0	90				2151	3.0		90	2355	1.6		50	2315	0.7	20
15 Tu	0415	5.6	170	30 W	0212	5.2	160	15 Th	0543	5.6	170	30 F	0344	5.2	160	15 Su	0752	5.6	170	30 M	0637	5.6	170
	1036	3.0	90		0855	3.0	90		1029	4.3	130		0846	3.6	110		1052	5.2	160		1022	4.9	150
	1732	6.9	210		1610	6.6	200		1647	6.9	210		1522	7.2	220		1639	6.9	210		1616	7.5	230
	2349	3.6	110		2239	3.9	120		2353	2.3	70				2243		2.0	60					

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Aden, Yemen, 2008

Times and Heights of High and Low Waters

July				August				September															
Time		Height		Time		Height		Time		Height		Time		Height									
h	m	ft	cm	h	m	ft	cm	h	m	ft	cm	h	m	ft	cm								
1 Tu	0008	0.0	0	16 W	0038	1.0	30	1 F	0135	-0.3	-10	16 Sa	0115	1.0	30	1 M	0223	1.6	50	16 Tu	0141	2.0	60
	0729	6.2	190		0815	5.6	170		0832	6.9	210		0802	6.2	190		0840	7.2	220		0750	7.2	220
	1140	4.9	150		1233	4.9	150		1353	3.6	110		1334	3.6	110		1456	2.0	60		1414	1.3	40
	1715	7.5	230		1734	6.2	190		1916	6.9	210		1900	6.6	200		2051	6.2	190		2024	6.6	200
2 W	0059	-0.7	-20	17 Th	0111	0.7	20	2 Sa	0216	0.0	0	17 Su	0144	1.0	30	2 Tu	0251	2.3	70	17 W	0212	2.3	70
	0815	6.6	200		0828	5.9	180		0902	7.2	220		0820	6.6	200		0902	6.9	210		0814	7.2	220
	1249	4.6	140		1316	4.9	150		1440	3.3	100		1405	3.3	100		1531	1.6	50		1452	1.0	30
	1814	7.5	230		1819	6.6	200		2008	6.9	210		1942	6.6	200		2132	5.9	180		2110	6.2	190
3 Th	0147	-0.7	-20	18 F	0142	0.7	20	3 Su	0253	0.7	20	18 M	0214	1.0	30	3 W	0314	2.6	80	18 Th	0243	2.6	80
	0858	6.9	210		0847	6.2	190		0931	7.2	220		0841	6.9	210		0921	6.9	210		0840	7.5	230
	1352	4.6	140		1352	4.6	140		1525	3.0	90		1438	2.6	80		1605	1.6	50		1536	0.7	20
	1910	7.5	230		1902	6.6	200		2057	6.6	200		2024	6.6	200		2213	5.6	170		2202	5.9	180
4 F	0233	-0.7	-20	19 Sa	0212	0.7	20	4 M	0327	1.3	40	19 Tu	0244	1.3	40	4 Th	0331	3.3	100	19 F	0314	3.3	100
	0937	7.2	220		0908	6.2	190		0957	6.9	210		0903	6.9	210		0937	6.6	200		0910	7.5	230
	1450	4.3	130		1428	4.3	130		1608	2.6	80		1516	2.3	70		1640	2.0	60		1624	0.7	20
	2005	7.2	220		1943	6.6	200		2144	5.9	180		2106	6.2	190		2257	4.9	150		2303	5.6	170
5 Sa	0316	0.0	0	20 Su	0243	0.7	20	5 Tu	0357	2.0	60	20 W	0312	2.0	60	5 F	0334	3.6	110	20 Sa	0344	3.9	120
	1014	7.2	220		0931	6.6	200		1023	6.9	210		0926	7.2	220		0949	6.6	200		0944	7.2	220
	1546	3.9	120		1504	3.9	120		1652	2.6	80		1558	2.0	60		1718	2.0	60		1721	1.0	30
	2059	6.9	210		2023	6.6	200		2232	5.6	170		2153	5.9	180		2352	4.6	140				
6 Su	0357	0.7	20	21 M	0314	1.0	30	6 W	0421	2.6	80	21 Th	0338	2.6	80	6 Sa	0317	3.9	120	21 Su	0026	5.2	160
	1050	7.2	220		0954	6.6	200		1046	6.6	200		0952	7.2	220		1002	6.2	190		0415	4.6	140
	1642	3.6	110		1542	3.6	110		1737	2.6	80		1646	1.6	50		1807	2.3	70		1024	6.9	210
	2153	6.2	190		2105	6.2	190		2323	4.9	150		2247	5.2	160						1829	1.0	30
7 M	0435	1.3	40	22 Tu	0343	1.6	50	7 Th	0434	3.3	100	22 F	0400	3.0	90	7 Su	1015	5.9	180	22 M	0226	5.2	160
	1123	6.9	210		1017	6.9	210		1104	6.6	200		1023	7.2	220		1914	2.3	70		0541	4.9	150
	1739	3.3	100		1625	3.3	100		1828	2.6	80		1744	1.6	50						1118	6.2	190
	2250	5.6	170		2151	5.9	180												1951		1.3	40	
8 Tu	0510	2.3	70	23 W	0411	2.0	60	8 F	0028	4.3	130	23 Sa	0000	4.9	150	8 M	1021	5.6	170	23 Tu	0446	5.6	170
	1155	6.9	210		1043	6.9	210		0403	3.9	120		0417	3.6	110		2041	2.3	70		0816	5.2	160
	1838	3.3	100		1716	3.0	90		1119	6.2	190		1101	6.9	210						1252	5.6	170
	2354	4.9	150		2244	5.6	170		1929	2.6	80		1853	1.3	40						2123	1.6	50
9 W	0540	3.3	100	24 Th	0435	2.6	80	9 Sa	1135	6.2	190	24 Su	0204	4.6	140	9 Tu	0835	5.2	160	24 W	0519	5.9	180
	1225	6.6	200		1112	6.9	210		2044	2.3	70		0432	4.3	130		2200	2.0	60		1049	4.6	140
	1942	3.0	90		1815	2.6	80						1149	6.6	200						1510	5.6	170
					2352	4.9	150						2015	1.3	40						2238	1.6	50
10 Th	0115	4.6	140	25 F	0459	3.3	100	10 Su	1202	5.9	180	25 M	1259	6.2	190	10 W	0645	5.2	160	25 Th	0549	6.2	190
	0559	3.9	120		1149	6.9	210		2158	2.0	60		2143	1.0	30		1203	4.9	150		1140	3.6	110
	1254	6.6	200		1924	2.0	60							1453	4.9		150	1655	5.6		170		
	2048	2.6	80										2015	1.3	40		2253	2.0	60		2333	1.6	50
11 F	1322	6.2	190	26 Sa	0134	4.6	140	11 M	1308	5.6	170	26 Tu	0610	5.6	170	11 Th	0635	5.6	170	26 F	0617	6.6	200
	2150	2.3	70		0527	3.9	120		2255	1.6	50		0930	4.9	150		1202	4.3	130		1218	3.0	90
					1234	6.9	210						1437	6.2	190		1623	5.2	160		1801	5.9	180
					2040	1.6	50						2256	0.7	20		2332	1.6	50				
12 Sa	1357	6.2	190	27 Su	0411	4.6	140	12 Tu	0813	5.2	160	27 W	0631	5.9	180	12 F	0642	5.9	180	27 Sa	0015	2.0	60
	2244	2.0	60		0610	4.6	140		1057	5.2	160		1119	4.6	140		1218	3.9	120		0643	6.9	210
					1332	6.9	210		1513	5.6	170		1618	6.2	190		1724	5.6	170		1253	2.3	70
					2157	1.0	30		2337	1.3	40		2352	0.7	20						1850	6.2	190
13 Su	1447	6.2	190	28 M	0602	5.2	160	13 W	0737	5.6	170	28 Th	0659	6.6	200	13 Sa	0006	1.6	50	28 Su	0051	2.3	70
	2327	1.6	50		0843	4.9	150		1159	4.9	150		1218	3.9	120		0653	6.2	190		0706	6.9	210
					1444	6.9	210		1631	5.6	170		1736	6.2	190		1242	3.3	100		1325	1.6	50
					2304	0.3	10								1812		6.2	190	1933		6.6	200	
14 M	0856	5.2	160	29 Tu	0648	5.6	170	14 Th	0012	1.0	30	29 F	0037	0.7	20	14 Su	0039	1.6	50	29 M	0122	2.6	80
	1011	5.2	160		1035	4.9	150		0737	5.9	180		0726	6.9	210		0708	6.6	200		0727	7.2	220
	1547	6.2	190		1603	6.9	210		1235	4.6	140		1303	3.3	100		1309	2.6	80		1357	1.3	40
									1728	5.9	180		1834	6.6	200		1857	6.6	200				
15 Tu	0004	1.3	40	30 W	0001	0.0	0	15 F	0044	1.0	30	30 Sa	0117	0.7	20	15 M	0110	1.6	50	30 Tu	0150	3.0	90
	0820	5.6	170		0725	6.2	190		0747	5.9	180		0753	6.9	210		0727	6.9	210		0747	7.2	220
	1139	5.2	160		1158	4.6	140		1305	3.9	120		1343	2.6	80		1339	2.0	60		1427	1.3	40
	1643	6.2	190		1715	6.9	210		1816	6.2	190						1940	6.6	200		2048	6.2	190
			31 Th	0051	-0.3	-10				31 Su	0152	1.0	30										
				0759	6.6	200					0817	7.2	220										
				1301	4.3	130					1420	2.3	70										
				1819	7.2	220					2009	6.6	200										

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Dar Es Salaam, Tanzania, 2008

Times and Heights of High and Low Waters

January						February						March					
Time			Height			Time			Height			Time			Height		
	h	m	ft	cm			h	m	ft	cm			h	m	ft	cm	
1 Tu	0357	4.9	150			16 W	0310	3.6	110			1 Sa	0400	5.6	170		
	0957	8.2	250				0908	8.9	270				0916	6.9	210		
	1559	4.3	130				1510	3.3	100				1515	5.6	170		
	2248	9.2	280				2159	10.2	310				2300	8.2	250		
2 W	0521	4.9	150			17 Th	0426	4.3	130			2 Su	0717	5.6	170		
	1118	7.5	230				1019	7.9	240				1332	6.9	210		
	1706	4.6	140				1614	3.9	120				1835	5.9	180		
							2319	9.8	300								
3 Th	0006	9.2	280			18 F	0610	4.3	130			3 M	0120	8.9	270		
	0645	4.9	150				1205	7.5	230				0828	4.6	140		
	1246	7.5	230				1747	4.3	130				1437	7.9	240		
	1826	4.9	150										2010	4.9	150		
4 F	0116	9.2	280			19 Sa	0051	10.2	310			4 Tu	0223	9.5	290		
	0757	4.3	130				0745	3.6	110				0901	3.6	110		
	1402	7.5	230				1349	7.9	240				1509	8.9	270		
	1938	4.6	140				1930	3.9	120				2053	3.9	120		
5 Sa	0210	9.8	300			20 Su	0209	10.8	330			5 W	0303	10.8	330		
	0849	3.6	110				0855	3.0	90				0928	2.6	80		
	1456	8.2	250				1502	8.5	260				1536	10.2	310		
	2032	3.9	120				2044	3.3	100				2127	3.0	90		
6 Su	0254	10.5	320			21 M	0309	11.5	350			6 Th	0336	11.5	350		
	0928	3.0	90				0944	2.0	60				0953	2.0	60		
	1537	8.9	270				1553	9.5	290				1603	11.2	340		
	2114	3.6	110				2137	2.6	80				2158	2.0	60		
7 M	0332	10.8	330			22 Tu	0357	12.1	370			7 F	0407	12.1	370		
	1002	2.3	70				1024	1.3	40				1018	1.3	40		
	1611	9.2	280				1634	10.5	320				1630	12.1	370		
	2151	3.0	90				2221	2.0	60				2228	1.3	40		
8 Tu	0406	11.5	350			23 W	0439	12.5	380			8 Sa	0438	12.5	380		
	1034	2.0	60				1059	1.0	30				1044	0.7	20		
	1642	9.8	300				1711	11.2	340				1659	12.8	390		
	2224	2.6	80				2301	1.6	50				2300	0.7	20		
9 W	0439	11.8	360			24 Th	0517	12.5	380			9 Su	0510	12.8	390		
	1103	1.6	50				1133	1.0	30				1112	0.7	20		
	1712	10.2	310				1746	11.5	350				1730	13.1	400		
	2256	2.3	70				2338	1.6	50				2334	0.7	20		
10 Th	0511	12.1	370			25 F	0553	12.1	370			10 M	0542	12.5	380		
	1133	1.3	40				1205	1.0	30				1142	0.7	20		
	1742	10.5	320				1820	11.5	350				1802	13.1	400		
	2329	2.3	70														
11 F	0544	12.1	370			26 Sa	0014	2.0	60			11 Tu	0010	1.0	30		
	1202	1.3	40				0627	11.8	360				0615	11.8	360		
	1814	10.8	330				1237	1.3	40				1215	1.0	30		
							1852	11.5	350				1837	12.8	390		
12 Sa	0004	2.3	70			27 Su	0051	2.3	70			12 W	0049	1.6	50		
	0618	11.8	360				0700	10.8	330				0651	10.8	330		
	1234	1.3	40				1308	2.0	60				1249	1.6	50		
	1848	11.2	340				1926	10.8	330				1915	12.1	370		
13 Su	0043	2.3	70			28 M	0128	3.0	90			13 Th	0132	2.3	70		
	0655	11.2	340				0732	10.2	310				0729	9.8	300		
	1307	1.6	50				1339	2.3	70				1327	2.6	80		
	1926	11.2	340				2000	10.5	320				1959	11.2	340		
14 M	0126	2.6	80			29 Tu	0206	3.6	110			14 F	0221	3.6	110		
	0734	10.5	320				0803	9.2	280				0815	8.5	260		
	1343	2.0	60				1411	3.3	100				1410	3.6	110		
	2008	10.8	330				2036	9.8	300				2056	10.2	310		
15 Tu	0214	3.3	100			30 W	0250	4.3	130			15 Sa	0330	4.6	140		
	0817	9.8	300				0837	8.2	250				0931	7.5	230		
	1423	2.6	80				1445	3.9	120				1512	4.9	150		
	2057	10.5	320				2122	9.2	280				2228	9.2	280		
16 W						31 Th	0348	4.9	150			30 Su	0316	5.2	160		
							0923	7.2	220				0856	7.2	220		
							1528	4.6	140				1449	5.6	170		
							2230	8.5	260				2159	8.5	260		
												31 M	0537	5.6	170		
													1210	7.2	220		
													1736	6.2	190		

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Dar Es Salaam, Tanzania, 2008

Times and Heights of High and Low Waters

October					November					December													
Time		Height			Time		Height			Time		Height			Time		Height						
	h m	ft cm			h m	ft cm			h m	ft cm		h m	ft cm		h m	ft cm							
1 W	0459	12.8	390	16 Th	0428	13.8	420	1 Sa	0527	11.8	360	16 Su	0527	13.1	400	1 M	0543	11.5	350	16 Tu	0611	12.1	370
	1105	1.3	40		1039	0.3	10		1143	2.3	70		1147	1.3	40		1205	2.3	70		1230	1.3	40
	1714	11.5	350		1646	11.8	360		1746	9.8	300		1755	10.5	320		1811	9.8	300		1817	10.5	320
	2308	1.6	50		2239	1.0	30		2334	3.0	90		2343	2.3	70		2355	3.3	100				
2 Th	0526	12.5	380	17 F	0502	13.5	410	2 Su	0553	11.5	350	17 M	0612	12.1	370	2 Tu	0614	11.2	340	17 W	0038	2.6	80
	1134	1.6	50		1115	0.7	20		1213	2.6	80		1234	2.0	60		1237	3.0	90		0658	11.5	350
	1740	10.8	330		1721	11.5	350		1812	9.5	290		1845	9.8	300		1844	9.5	290		1317	2.0	60
	2334	2.0	60		2313	1.3	40												1937		10.5	320	
3 F	0552	11.8	360	18 Sa	0538	13.1	400	3 M	0001	3.3	100	18 Tu	0033	3.0	90	3 W	0030	3.6	110	18 Th	0133	3.3	100
	1203	2.0	60		0621	10.8	330		0702	11.2	340		0649	10.5	320		0750	10.5	320				
	1804	10.2	310		1246	3.3	100		1327	3.0	90		1313	3.3	100		1406	2.6	80				
	2359	2.6	80		1843	8.9	270		1944	9.5	290		1923	9.2	280		2032	10.2	310				
4 Sa	0618	11.2	340	19 Su	0619	12.1	370	4 Tu	0034	3.9	120	19 W	0134	3.9	120	4 Th	0113	4.3	130	19 F	0234	3.9	120
	1232	3.0	90		0655	10.2	310		0803	10.2	310		0730	9.8	300		0848	9.5	290				
	1828	9.5	290		1325	3.9	120		1429	3.6	110		1353	3.6	110		1459	3.3	100				
					1925	8.5	260		2055	9.2	280		2011	9.2	280		2133	9.8	300				
5 Su	0024	3.3	100	20 M	0032	3.0	90	5 W	0116	4.9	150	20 Th	0251	4.6	140	5 F	0206	4.6	140	20 Sa	0346	4.3	130
	0643	10.5	320		0706	11.2	340		0920	9.5	290		0820	9.5	290		0956	8.9	270				
	1305	3.6	110		1330	3.3	100		1544	4.3	130		1441	3.9	120		1558	3.9	120				
	1854	8.9	270		1936	8.9	270		2220	9.2	280		2110	9.2	280		2245	9.5	290				
6 M	0052	3.9	120	21 Tu	0125	3.9	120	6 Th	0222	5.2	160	21 F	0434	4.9	150	6 Sa	0314	4.9	150	21 Su	0512	4.6	140
	0714	9.8	300		0807	10.2	310		054	8.9	270		0923	8.9	270		1116	8.2	250				
	1344	4.6	140		1438	4.3	130		1709	4.3	130		1541	4.3	130		1709	4.3	130				
	1930	7.9	240		2057	8.2	250		2351	9.5	290		2221	9.2	280								
7 Tu	0126	4.9	150	22 W	0244	4.9	150	7 F	0407	5.6	170	22 Sa	0613	4.6	140	7 Su	0440	4.9	150	22 M	0003	9.5	290
	0801	8.9	270		0934	9.2	280		1219	8.9	270		1041	8.5	260		0636	4.3	130				
	1447	5.2	160		1621	4.9	150		1827	4.3	130		1653	4.3	130		1239	7.9	240				
	2039	7.2	220		2253	8.2	250		2340	8.5	260		2334	9.8	300		1826	4.3	130				
8 W	0230	5.6	170	23 Th	0459	5.2	160	8 Sa	0558	5.2	160	23 Su	0058	10.2	310	8 M	0606	4.3	130	23 Tu	0112	9.8	300
	0933	8.2	250		1137	8.9	270		0721	3.9	120		1205	8.5	260		0748	3.9	120				
	1659	5.6	170		1815	4.6	140		1327	9.2	280		1804	3.9	120		1352	8.2	250				
	2324	7.2	220		1822	4.3	130		1925	3.9	120						1935	4.3	130				
9 Th	0514	5.9	180	24 F	0041	8.9	270	9 Su	0045	9.5	290	24 M	0151	10.5	320	9 Tu	0041	10.5	320	24 W	0208	10.2	310
	1158	8.5	260		0652	4.6	140		0813	3.3	100		0712	3.6	110		0843	3.6	110				
	1850	4.9	150		1304	9.5	290		1420	9.5	290		1314	8.9	270		1450	8.5	260				
					1924	3.9	120		2011	3.3	100		1905	3.3	100		2029	3.9	120				
10 F	0104	8.2	250	25 Sa	0142	9.8	300	10 M	0133	10.8	330	25 Tu	0234	11.2	340	10 W	0138	11.5	350	25 Th	0254	10.5	320
	0701	5.2	160		0754	3.6	110		0855	2.6	80		0806	2.6	80		0925	3.0	90				
	1311	9.2	280		1403	10.2	310		1503	9.8	300		1411	9.5	290		1534	8.9	270				
	1937	3.9	120		2010	3.3	100		2050	3.0	90		1958	2.6	80		2112	3.6	110				
11 Sa	0147	9.5	290	26 Su	0226	10.8	330	11 Tu	0213	11.8	360	26 W	0311	11.5	350	11 Th	0228	12.1	370	26 F	0332	11.2	340
	0749	3.9	120		0838	2.6	80		0829	2.0	60		0931	2.3	70		0853	1.6	50		1001	2.3	70
	1357	10.2	310		1447	10.5	320		1437	10.8	330		1540	9.8	300		1501	9.8	300		1609	9.2	280
	2009	3.3	100		2047	2.6	80		2030	2.0	60		2125	2.6	80		2046	2.0	60		2149	3.3	100
12 Su	0221	10.5	320	27 M	0303	11.8	360	12 W	0252	12.8	390	27 Th	0344	11.8	360	12 F	0314	12.8	390	27 Sa	0406	11.5	350
	0825	3.0	90		0914	2.0	60		0908	1.3	40		1004	2.0	60		0937	1.0	30		1032	2.0	60
	1435	10.8	330		1524	10.8	330		1516	11.2	340		1612	10.2	310		1547	10.5	320		1640	9.5	290
	2038	2.3	70		2119	2.3	70		2106	1.3	40		2157	2.6	80		2131	1.6	50		2223	3.0	90
13 M	0252	11.8	360	28 Tu	0335	12.1	370	13 Th	0329	13.5	410	28 F	0415	11.8	360	13 Sa	0357	13.1	400	28 Su	0437	11.5	350
	0858	2.0	60		0947	1.6	50		0946	0.7	20		1035	2.0	60		1019	0.7	20		1102	2.0	60
	1508	11.5	350		1556	11.2	340		1554	11.2	340		1643	10.2	310		1631	10.8	330		1709	9.8	300
	2107	1.6	50		2148	2.0	60		2143	1.3	40		2227	2.6	80		2216	1.6	50		2253	2.6	80
14 Tu	0323	12.8	390	29 W	0405	12.5	380	14 F	0407	13.8	420	29 Sa	0444	11.8	360	14 Su	0441	13.1	400	29 M	0507	11.8	360
	0931	1.0	30		1016	1.6	50		1024	0.7	20		1105	2.0	60		1102	0.7	20		1130	1.6	50
	1541	11.8	360		1626	11.2	340		1632	11.2	340		1712	9.8	300		1714	10.8	330		1738	10.2	310
	2137	1.0	30		2215	2.0	60		2220	1.3	40		2255	2.6	80		2300	1.6	50		2323	2.6	80
15 W	0355	13.5	410	30 Th	0433	12.5	380	15 Sa	0446	13.5	410	30 Su	0513	11.8	360	15 M	0525	12.8	390	30 Tu	0536	11.5	350
	1005	0.7	20		1045	1.6	50		1104	0.7	20		1134	2.3	70		1145	1.0	30		1157	2.0	60
	1613	12.1	370		1653	10.8	330		1712	10.8	330		1741	9.8	300		1759	10.8	330		1806	10.2	310
	2207	0.7	20		2242	2.0	60		2300	1.6	50		2324	3.0	90		2347	2.0	60		2353	2.6	80
				31 F	0500	12.1	370												31 W	0606	11.5	350	
					1114	1.6	50													1225	2.0	60	
					1720	10.5	320													1836	10.5	320	
					2308	2.3	70																

Time meridian 45° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Beira, Mozambique, 2008

Times and Heights of High and Low Waters

January						February						March											
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm		h m	ft cm			
1 Tu	0308	8.2	250	16 W	0305	6.2	190	1 F	0318	9.8	300	16 Sa	0609	9.8	300	1 Sa	0214	9.2	280	16 Su	0626	10.8	330
	1016	15.1	460		0936	17.1	520		1148	13.5	410		1208	14.1	430		0810	13.5	410		1154	13.5	410
	1611	8.9	270		1508	7.5	230		1839	10.8	330		1955	10.5	320		1433	10.5	320		2018	10.8	330
	2233	15.1	460		2210	16.1	490										2235	13.1	400				
2 W	0436	9.2	280	17 Th	0417	7.9	240	2 Sa	0016	13.8	420	17 Su	0132	14.8	450	2 Su	0259	11.2	340	17 M	0137	14.8	450
	1139	14.4	440		1056	15.7	480		0821	10.2	310		0827	8.5	260		0547	11.8	360		0827	8.9	270
	1810	9.2	280		1630	9.2	280		1352	14.1	430		1412	15.1	460		0903	11.5	350		1414	15.1	460
	2356	14.8	450		2352	15.4	470		2030	9.5	290		2115	8.5	260		1323	12.8	390		2106	8.2	250
3 Th	0708	8.9	270	18 F	0634	8.2	250	3 Su	0202	14.8	450	18 M	0254	16.7	510	3 M	0135	14.1	430	18 Tu	0248	17.1	520
	1306	15.1	460		1238	15.4	470		0921	8.5	260		0928	6.6	200		0917	9.2	280		0913	6.9	210
	1938	8.5	260		1929	9.2	280		1457	15.7	480		1514	17.4	530		1443	15.1	460		1502	17.4	530
					2125	7.9	240						2201	6.6	200		2107	8.5	260		2141	6.2	190
4 F	0119	15.4	470	19 Sa	0135	15.7	480	4 M	0302	16.4	500	19 Tu	0341	19.0	580	4 Tu	0243	16.1	490	19 W	0325	19.0	580
	0822	7.9	240		0814	7.5	230		1002	6.9	210		1013	4.9	150		0942	7.5	230		0950	4.9	150
	1415	15.7	480		1409	16.1	490		1538	17.4	530		1555	19.0	580		1519	17.4	530		1535	19.4	590
	2040	7.5	230		2059	7.9	240		2208	6.2	190		2240	4.9	150		2143	6.6	200		2215	4.6	140
5 Sa	0224	16.4	500	20 Su	0249	17.4	530	5 Tu	0343	18.4	560	20 W	0419	20.3	620	5 W	0322	18.4	560	20 Th	0358	20.7	630
	0917	6.9	210		0924	5.9	180		1037	5.6	170		1052	3.6	110		1010	5.9	180		1025	3.6	110
	1505	17.1	520		1512	17.7	540		1613	19.0	580		1629	20.7	630		1551	19.4	590		1606	21.0	640
	2132	6.6	200		2201	6.6	200		2245	4.9	150		2315	3.6	110		2217	4.9	150		2247	3.6	110
6 Su	0313	17.4	530	21 M	0343	18.7	570	6 W	0419	20.0	610	21 Th	0453	21.7	660	6 Th	0357	20.7	630	21 F	0429	22.0	670
	1005	5.9	180		1020	4.9	150		1109	4.6	140		1127	3.0	90		1040	4.3	130		1058	3.0	90
	1547	18.0	550		1600	19.0	580		1645	20.3	620		1702	21.7	660		1622	21.3	650		1636	22.3	680
	2219	5.6	170		2250	4.9	150		2319	3.9	120		2347	3.0	90		2251	3.3	100		2319	3.0	90
7 M	0354	18.4	560	22 Tu	0428	20.0	610	7 Th	0453	21.3	650	22 F	0525	22.3	680	7 F	0430	22.3	680	22 Sa	0459	22.6	690
	1048	5.2	160		1107	3.9	120		1139	3.6	110		1159	2.6	80		1110	3.3	100		1130	2.6	80
	1624	18.7	570		1641	20.0	610		1717	21.3	650		1732	22.3	680		1653	22.6	690		1706	22.6	690
	2300	4.9	150		2331	4.3	130		2350	3.0	90						2324	2.3	70		2347	3.0	90
8 Tu	0432	19.4	590	23 W	0507	20.7	630	8 F	0525	22.3	680	23 Sa	0015	2.6	80	8 Sa	0503	23.3	710	23 Su	0527	22.6	690
	1124	4.6	140		1147	3.3	100		1205	3.0	90		0555	22.3	680		1139	2.6	80		1159	2.6	80
	1659	19.4	590		1719	20.7	630		1747	22.3	680		1226	2.6	80		1724	23.6	720		1734	22.6	690
	2337	4.3	130										1801	22.6	690		2355	1.6	50				
9 W	0506	20.0	610	24 Th	0007	3.6	110	9 Sa	0018	2.3	70	24 Su	0039	3.0	90	9 Su	0535	24.0	730	24 M	0012	3.0	90
	1155	4.3	130		0544	21.3	650		0556	23.0	700		0622	22.0	670		1207	2.3	70		0554	2.3	680
	1731	20.0	610		1221	3.0	90		1229	2.6	80		1250	3.0	90		1755	23.6	720		1224	3.0	90
					1753	21.0	640		1816	22.6	690		1828	22.3	680						1800	22.3	680
10 Th	0008	3.6	110	25 F	0037	3.3	100	10 Su	0044	2.0	60	25 M	0058	3.6	110	10 M	0023	1.3	40	25 Tu	0032	3.6	110
	0539	20.7	630		0618	21.3	650		0627	23.0	700		0647	21.3	650		0607	24.0	730		0619	21.3	650
	1221	3.9	120		1251	3.0	90		1251	2.6	80		1310	3.6	110		1231	2.3	70		1244	3.9	120
	1802	20.3	620		1825	21.3	650		1845	22.3	680		1852	21.3	650		1824	23.3	710		1824	21.7	660
11 F	0035	3.3	100	26 Sa	0103	3.6	110	11 M	0109	2.3	70	26 Tu	0112	4.3	130	11 Tu	0050	2.0	60	26 W	0046	4.3	130
	0611	21.0	640		0648	21.0	640		0658	22.3	680		0709	20.3	620		0637	23.0	700		0639	20.3	620
	1244	3.6	110		1316	3.6	110		1312	3.3	100		1325	4.6	140		1254	3.0	90		1258	4.9	150
	1832	20.7	630		1854	21.0	640		1915	21.7	660		1915	20.3	620		1853	22.3	680		1845	20.3	620
12 Sa	0059	3.3	100	27 Su	0124	3.9	120	12 Tu	0133	3.0	90	27 W	0121	5.2	160	12 W	0116	3.0	90	27 Th	0054	5.2	160
	0643	21.0	640		0717	20.0	610		0731	21.3	650		0729	18.7	570		0708	21.7	660		0656	19.0	580
	1304	3.6	110		1338	4.3	130		1333	3.9	120		1336	5.9	180		1314	4.3	130		1308	5.9	180
	1902	20.7	630		1923	20.3	620		1945	20.3	620		1938	18.7	570		1922	20.7	630		1906	19.0	580
13 Su	0124	3.3	100	28 M	0140	4.9	150	13 W	0159	4.3	130	28 Th	0132	6.2	190	13 Th	0140	4.6	140	28 F	0103	5.9	180
	0716	20.7	630		0745	19.0	580		0806	19.7	600		0746	17.1	520		0740	19.4	590		0710	17.4	530
	1326	3.9	120		1357	5.2	160		1356	5.6	170		1348	7.2	220		1333	5.9	180		1318	6.9	210
	1935	20.0	610		1952	19.0	580		2021	18.7	570		2002	17.1	520		1952	18.7	570		1927	17.4	530
14 M	0150	3.9	120	29 Tu	0155	5.9	180	14 Th	0229	5.9	180	29 F	0149	7.5	230	14 F	0205	6.6	200	29 Sa	0120	7.2	220
	0753	20.0	610		0813	17.7	540		0850	17.4	530		0802	15.4	470		0817	17.1	520		0723	15.7	480
	1352	4.6	140		1415	6.6	200		1425	7.5	230		1405	8.9	270		1354	7.5	230		1335	8.2	250
	2013	19.0	580		2024	17.7	540		2110	16.4	500		2036	15.1	460		2032	16.1					

Time meridian 30° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 30° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
Heights are referred to the chart datum of soundings.

Beira, Mozambique, 2008

Times and Heights of High and Low Waters

July						August						September																
Time			Height			Time			Height			Time			Height			Time			Height							
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm				
1 Tu	0241	17.4	530		16 W	0328	16.4	500		1 F	0419	18.4	560		16 Sa	0429	18.7	570		1 M	0513	21.0	640		16 Tu	0503	21.7	660
	0914	5.6	170			0959	5.2	160			1109	3.6	110			1103	3.3	100			1157	2.3	70			1133	1.6	50
	1517	18.4	560			1539	17.4	530			1648	19.7	600			1637	19.7	600			1738	21.3	650			1715	22.6	690
	2149	4.3	130			2237	5.2	160			2329	3.0	90	●		2327	3.6	110	○							2348	2.0	60
2 W	0336	18.0	550		17 Th	0410	17.4	530		2 Sa	0500	19.4	590		17 Su	0501	19.7	600		2 Tu	0012	2.0	60		17 W	0534	22.3	680
	1019	4.9	150			1046	4.6	140			1149	3.0	90			1135	2.6	80			0544	21.3	650			1203	1.3	40
	1608	19.0	580			1619	18.0	550			1728	20.3	620			1709	20.7	630			1225	2.3	70			1746	22.6	690
	2249	3.6	110			2318	4.6	140								2354	3.0	90			1807	21.0	640					
3 Th	0425	18.7	570		18 F	0447	17.7	540		3 Su	0007	2.3	70		18 M	0531	20.3	620		3 W	0039	2.3	70		18 Th	0014	2.0	60
	1115	4.3	130			1126	3.9	120			0537	20.0	610			1203	2.0	60			0613	21.0	640			0603	22.0	670
	1655	19.4	590			1656	18.7	570			1224	2.6	80			1740	21.3	650			1247	2.6	80			1231	1.3	40
	2341	3.0	90	○		2352	3.9	120			1804	20.3	620								1834	20.7	630			1817	22.3	680
4 F	0510	19.0	580		19 Sa	0521	18.4	560		4 M	0040	2.3	70		19 Tu	0017	2.6	80		4 Th	0102	3.0	90		19 F	0037	2.6	80
	1201	3.6	110			1200	3.3	100			0612	20.0	610			0600	21.0	640			0639	20.3	620			0633	21.3	650
	1739	19.7	600			1729	19.4	590			1253	2.6	80			1229	1.6	50			1305	3.6	110			1257	2.0	60
						1837	20.3	620			1810	21.7	660			1810	21.7	660			1859	19.4	590			1848	21.0	640
5 Sa	0024	3.0	90		20 Su	0019	3.6	110		5 Tu	0108	2.6	80		20 W	0039	2.3	70		5 F	0121	3.9	120		20 Sa	0059	3.3	100
	0552	19.0	580			0553	19.0	580			0643	20.0	610			0628	21.0	640			0705	19.4	590			0703	20.0	610
	1240	3.3	100			1228	3.0	90			1317	3.0	90			1253	1.6	50			1317	4.6	140			1323	3.3	100
	1821	19.7	600			1801	20.0	610			1907	19.7	600			1840	21.7	660			1922	18.0	550			1921	19.4	590
6 Su	0100	3.0	90		21 M	0042	3.3	100		6 W	0133	3.3	100		21 Th	0059	2.3	70		6 Sa	0136	4.9	150		21 Su	0121	4.6	140
	0631	19.0	580			0622	19.0	580			0713	19.4	590			0657	20.7	630			0731	17.7	540			0735	18.0	550
	1312	3.6	110			1252	3.0	90			1337	3.6	110			1317	2.0	60			1328	5.6	170			1350	5.2	160
	1900	19.0	580			1832	20.0	610			1937	18.7	570			1912	20.7	630			1943	16.4	500			1958	17.1	520
7 M	0132	3.3	100		22 Tu	0101	3.3	100		7 Th	0154	4.3	130		22 F	0120	3.0	90		7 Su	0149	6.2	190		22 M	0146	6.2	190
	0709	18.7	570			0651	19.4	590			0743	18.4	560			0727	19.7	600			0759	16.1	490			0818	16.1	490
	1340	4.3	130			1315	2.6	80			1353	4.6	140			1342	3.0	90			1343	6.9	210			1425	7.2	220
	1937	18.4	560			1903	20.0	610			2006	17.4	530			1946	19.4	590			2005	14.8	450	●		2054	14.8	450
8 Tu	0201	4.3	130		23 W	0120	3.3	100		8 F	0215	5.2	160		23 Sa	0144	3.9	120		8 M	0207	7.9	240		23 Tu	0218	8.2	250
	0745	18.0	550			0722	19.0	580			0816	17.1	520			0802	18.4	560			0840	14.1	430			0959	13.8	420
	1406	4.9	150			1338	3.0	90			1410	5.9	180			1411	4.6	140			1406	8.5	260			1602	9.5	290
	2015	17.4	530			1937	19.7	600			2041	16.1	490	●		2027	17.4	530			2040	12.8	390			2255	13.1	400
9 W	0229	4.9	150		24 Th	0142	3.6	110		9 Sa	0238	6.6	200		24 Su	0213	5.6	170		9 Tu	0238	9.5	290		24 W	0654	10.2	310
	0824	17.1	520			0756	18.7	570			0858	15.7	480			0848	16.4	500			1034	12.5	380			1238	13.8	420
	1430	5.9	180			1406	3.6	110			1432	7.2	220			1451	6.6	200			1448	10.5	320			1941	8.5	260
	2057	16.4	500			2016	18.7	570			2131	14.4	440			2125	15.4	470	●		1735	10.8	330					
10 Th	0301	6.2	190		25 F	0211	4.3	130		10 Su	0313	8.2	250		25 M	0252	7.5	230		10 W	0037	12.1	370		25 Th	0113	13.8	420
	0910	16.1	490			0838	17.4	530			1000	14.1	430			1013	14.4	440			0745	9.5	290			0826	7.9	240
	1501	6.9	210			1441	4.6	140			1510	8.9	270			1616	8.5	260			1308	13.1	400			1412	15.7	480
	2149	15.4	470	●		2105	17.4	530			2305	13.1	400			2306	13.8	420			2055	8.9	270			2040	6.6	200
11 F	0347	7.2	220		26 Sa	0248	5.6	170		11 M	0528	9.2	280		26 Tu	0441	9.5	290		11 Th	0216	13.8	420		26 F	0226	16.1	490
	1006	15.1	460			0934	16.1	490			1141	13.1	400			1232	13.8	420			0841	7.5	230			0909	5.9	180
	1553	7.9	240			1533	5.9	180			1929	9.5	290			1931	8.2	250			1423	15.1	460			1459	18.0	550
	2256	14.4	440			2210	15.7	480													2123	6.9	210			2122	4.9	150
12 Sa	0510	7.9	240		27 Su	0344	6.9	210		12 Tu	0106	13.1	400		27 W	0112	13.8	420		12 F	0258	15.7	480		27 Sa	0307	18.0	550
	1117	14.4	440			1056	15.1	460			0752	8.5	260			0825	8.2	250			0919	5.9	180			0945	4.3	130
	1756	8.5	260			1710	7.2	220			1331	13.8	420			1415	15.4	470			1504	17.4	530			1534	19.7	600
						2337	14.8	450			2056	8.2	250			2051	6.6	200			2151	5.6	170			2159	3.6	110
13 Su	0016	14.1	430		28 M	0545	8.2	250		13 W	0229	14.4	440		28 Th	0236	15.7	480		13 Sa	0331	17.7	540		28 Su	0342	19.7	600
	0650	7.9	240			1239	14.8	450			0858	7.2	220			0925	6.2	190			0954	4.3	130			1021	3.0	90
	1238	14.4	440			1916	7.2	220			1441	15.4	470			1513	17.4	530			1538	19.0	580			1607	21.0	640
	1941	7.9	240								2143	6.6	200			2143	4.9	150			2221	4.3	130			2235	2.6	80
14 M	0136	14.8	450		29 Tu	0115	14.8	450		14 Th	0318	15.7	480		29 F	0326	17.4	530		14 Su	0402	19.7	600		29 M	0414	21.0	640
	0804	7.2	220			0801	7.5	230			0946	5.6	170															

Time meridian 30° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 30° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
Heights are referred to the chart datum of soundings.

Durban, South Africa, 2008

Times and Heights of High and Low Waters

January								February								March							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm		h m	ft	cm				
1 Tu	0252	2.5	75	16 W	0229	2.0	62	1 F	0438	3.1	94	16 Sa	0530	2.8	86	1 Sa	0256	3.1	95	16 Su	0537	2.9	89
	0938	4.7	143		0914	5.3	161		1133	4.4	135		1214	4.9	148		0945	4.3	130		1206	4.6	141
	1600	2.9	88		1530	2.5	77		1821	3.0	91		1842	2.6	79		1639	3.2	99		1828	2.7	81
	2205	4.2	128		2138	4.7	142								2344		4.1	125					
2 W	0419	2.8	84	17 Th	0347	2.4	74	2 Sa	0047	4.2	129	17 Su	0105	4.9	148	2 Su	0605	3.1	96	17 M	0056	4.9	149
	1116	4.6	141		1047	5.1	155		0647	2.9	88		0716	2.4	73		1227	4.4	135		0713	2.5	75
	1748	2.9	87		1713	2.6	79		1306	4.8	145		1333	5.3	161		1903	2.9	88		1323	5.1	155
					2331	4.6	140		1935	2.6	78		1951	2.0	62						1936	2.1	64
3 Th	0004	4.2	129	18 F	0541	2.5	76	3 Su	0150	4.7	144	18 M	0207	5.5	167	3 M	0121	4.6	140	18 Tu	0153	5.5	167
	0606	2.7	83		1223	5.2	160		0746	2.5	75		0813	1.9	57		0723	2.7	82		0803	1.9	58
	1238	4.8	147		1849	2.3	69		1357	5.2	158		1425	5.8	177		1332	5.0	151		1411	5.6	170
	1905	2.5	77		2018	2.1	64		2037	1.4	44		2037	1.4	44		1952	2.3	71		2019	1.6	48
4 F	0120	4.6	139	19 Sa	0106	5.0	151	4 M	0229	5.2	160	19 Tu	0251	6.0	184	4 Tu	0203	5.2	158	19 W	0233	6.0	183
	0715	2.4	74		0711	2.1	65		0826	2.0	61		0856	1.4	42		0805	2.1	65		0840	1.4	44
	1332	5.2	157		1334	5.6	171		1434	5.6	172		1506	6.2	190		1412	5.5	168		1449	6.0	183
	1955	2.1	65		1954	1.8	54		2051	1.6	50		2115	1.0	30		2027	1.8	54		2054	1.1	34
5 Sa	0207	5.0	151	20 Su	0209	5.5	167	5 Tu	0301	5.7	175	20 W	0328	6.5	198	5 W	0236	5.8	176	20 Th	0307	6.4	195
	0802	2.1	64		0813	1.7	51		0901	1.6	48		0932	1.0	31		0840	1.6	49		0913	1.1	33
	1413	5.5	167		1428	6.0	184		1508	6.1	185		1542	6.5	199		1446	6.0	184		1522	6.3	193
	2032	1.7	53		2044	1.3	39		2122	1.2	37		2149	0.6	19		2058	1.2	38		2125	0.8	24
6 Su	0244	5.3	163	21 M	0258	6.0	183	6 W	0332	6.2	188	21 Th	0402	6.8	206	6 Th	0308	6.3	193	21 F	0338	6.7	203
	0840	1.8	54		0901	1.2	38		0933	1.2	37		1005	0.8	24		0913	1.1	34		0943	0.8	25
	1448	5.8	177		1514	6.4	194		1540	6.4	195		1615	6.7	203		1519	6.5	197		1553	6.5	198
	2106	1.4	43		2126	0.9	26		2152	0.9	26		2220	0.5	14		2129	0.8	24		2155	0.6	19
7 M	0316	5.7	174	22 Tu	0341	6.4	196	7 Th	0403	6.6	200	22 F	0433	6.9	210	7 F	0340	6.8	207	22 Sa	0407	6.8	206
	0914	1.5	45		0943	1.0	29		1006	1.0	29		1036	0.8	23		0946	0.7	22		1012	0.7	22
	1521	6.1	185		1555	6.6	201		1612	6.7	203		1645	6.7	203		1553	6.8	207		1621	6.5	199
	2137	1.1	34		2205	0.6	17		2223	0.6	18		2249	0.4	13		2201	0.4	13		2223	0.6	17
8 Tu	0348	6.0	183	23 W	0420	6.7	204	8 F	0435	6.8	208	23 Sa	0502	6.8	208	8 Sa	0413	7.1	217	23 Su	0434	6.7	205
	0946	1.2	38		1021	0.8	25		1039	0.8	24		1105	0.8	25		1019	0.5	15		1039	0.8	23
	1553	6.3	191		1633	6.7	203		1645	6.8	207		1713	6.5	199		1627	7.0	212		1648	6.5	197
	2207	0.9	27		2240	0.4	13		2254	0.4	13		2317	0.6	17		2233	0.2	7		2250	0.7	20
9 W	0419	6.3	191	24 Th	0455	6.8	206	9 Sa	0508	6.9	211	24 Su	0530	6.7	203	9 Su	0446	7.3	221	24 M	0459	6.6	201
	1019	1.1	34		1057	0.8	25		1112	0.8	23		1133	1.0	30		1053	0.4	13		1106	0.9	26
	1626	6.4	195		1707	6.6	200		1719	6.8	206		1740	6.3	192		1701	7.0	212		1714	6.3	192
	2239	0.8	23		2313	0.5	14		2326	0.5	14		2344	0.8	25		2306	0.3	8		2317	0.9	26
10 Th	0451	6.4	195	25 F	0529	6.7	204	10 Su	0542	6.9	210	25 M	0556	6.4	194	10 M	0521	7.2	219	25 Tu	0525	6.4	194
	1052	1.0	32		1130	1.0	30		1147	0.9	26		1201	1.2	38		1128	0.6	17		1132	1.1	33
	1659	6.5	197		1739	6.4	194		1754	6.6	200		1806	6.0	183		1736	6.8	206		1740	6.1	185
	2310	0.7	22		2344	0.6	19		2359	0.6	19						2340	0.5	15		2343	1.1	35
11 F	0525	6.5	197	26 Sa	0559	6.5	197	11 M	0618	6.7	204	26 Tu	0011	1.1	35	11 Tu	0557	6.9	209	26 W	0551	6.1	185
	1126	1.1	34		1201	1.2	37		1223	1.1	34		0622	6.0	183		1204	0.9	26		1159	1.3	41
	1733	6.4	194		1808	6.1	186		1829	6.2	190		1228	1.6	49		1812	6.4	195		1806	5.8	176
	2343	0.8	23								1832		5.6	172									
12 Sa	0559	6.4	195	27 Su	0014	0.9	28	12 Tu	0034	1.0	29	27 W	0038	1.6	48	12 W	0015	0.9	27	27 Th	0011	1.5	46
	1203	1.2	38		0630	6.2	188		0655	6.3	192		0649	5.6	171		0634	6.4	195		0618	5.7	173
	1809	6.2	188		1232	1.5	47		1302	1.5	46		1258	2.0	61		1242	1.3	40		1227	1.7	53
					1836	5.7	175		1907	5.8	177		1900	5.2	159		1851	5.9	180		1834	5.4	164
13 Su	0017	1.0	29	28 M	0043	1.3	39	13 W	0112	1.4	44	28 Th	0108	2.1	63	13 Th	0054	1.4	44	28 F	0040	2.0	60
	0637	6.2	190		0659	5.8	176		0738	5.8	177		0721	5.2	157		0716	5.8	176		0649	5.2	160
	1241	1.5	46		1304	1.9	59		1347	2.0	61		1332	2.5	75		1324	1.9	57		1259	2.2	66
	1847	5.9	179		1905	5.3	162		1952	5.2	160		1935	4.7	144		1935	5.3	162		1908	5.0	151
14 M	0054	1.2	37	29 Tu	0114	1.7	53	14 Th	0158	2.0	61	29 F	0145	2.6	79	14 F	0140	2.1	64	29 Sa	0116	2.5	75
	0718	5.9	181		0732	5.3	163		0833	5.2	160		0807	4.7	142		0809	5.1	156		0729	4.8	146
	1325	1.8	56		1340	2.3	71		1447	2.5	77		1423	2.9	89		1420	2.5	75		1342	2.6	80
	1929	5.5	167		1939	4.9	149		2058	4.7	144		2032	4.3	130		2041	4.7	144		1958	4.5	137
15 Tu	0136	1.6	49	30 W	0150	2.2	68	15 F	0308	2.6	79	15 Sa	0253	2.8	84	15 Sa	0253	2.8	84	30 Su	0213	3.0	90
	0808	5.6	171		0814	4.9	150		1008	4.8	147		0946	4.6	139		0946	4.6	139		0840	4.4	133
	1418	2.2	67		1427	2.8	84		1633	2.8	86		1605	2.9	88		1605	2.9	88		1503	3.1	93
	2022	5.1	154		2025	4.4	135		2309	4.5	136		2303	4.5	136		2303	4.5	136		2202	4.2	128
			31 Th	0241	2.8	84																	
				0922	4.5	138																	
				1553	3.1	94																	
				2208	4.1	124																	

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Durban, South Africa, 2008

Times and Heights of High and Low Waters

July								August								September							
Time		Height		Time		Height		Time		Height		Time		Height		Time		Height					
	h	m	cm		h	m	cm		h	m	cm		h	m	cm		h	m	cm				
1 Tu	0204	6.0	183	16 W	0238	5.5	167	1 F	0333	6.5	197	16 Sa	0325	6.2	188	1 M	0427	6.6	202	16 Tu	0404	6.8	206
	0821	1.2	36		0853	1.5	47		0942	0.6	18		0935	1.0	29		1029	0.4	11		1010	0.4	11
	1436	5.9	181		1507	5.6	171		1558	6.8	206		1547	6.5	197		1644	7.0	213		1622	7.2	219
	2040	1.2	36		2106	1.6	49		2203	0.7	22		2151	1.0	31		2249	0.7	20		2231	0.5	14
2 W	0255	6.3	192	17 Th	0311	5.8	176	2 Sa	0413	6.6	201	17 Su	0356	6.4	196	2 Tu	0458	6.5	199	17 W	0438	6.8	207
	0908	0.8	25		0924	1.2	38		1019	0.4	12		1005	0.7	21		1059	0.5	15		1041	0.4	11
	1524	6.3	193		1538	5.9	181		1636	6.9	211		1616	6.7	205		1713	6.8	207		1655	7.2	218
	2128	0.9	26		2138	1.3	41		2241	0.7	20		2222	0.8	25		2319	0.9	26		2305	0.5	15
3 Th	0342	6.5	198	18 F	0343	6.0	183	3 Su	0450	6.6	201	18 M	0427	6.6	200	3 W	0526	6.3	191	18 Th	0512	6.7	203
	0953	0.6	17		0955	1.0	31		1054	0.4	11		1034	0.6	17		1128	0.8	23		1114	0.5	15
	1609	6.6	202		1607	6.2	189		1711	6.9	210		1647	6.9	210		1740	6.5	197		1730	6.9	211
	2213	0.7	22		2210	1.1	35		2316	0.8	23		2254	0.8	23		2348	1.1	34		2340	0.7	22
4 F	0426	6.5	199	19 Sa	0414	6.2	188	4 M	0525	6.4	196	19 Tu	0459	6.6	201	4 Th	0554	6.0	182	19 F	0548	6.4	194
	1034	0.4	13		1025	0.9	26		1127	0.5	15		1105	0.5	16		1156	1.1	34		1149	0.9	26
	1652	6.7	205		1638	6.4	194		1745	6.7	204		1719	6.9	210		1807	6.1	185		1806	6.5	198
	2256	0.7	22		2241	1.0	32		2349	1.0	30		2327	0.8	24								
5 Sa	0508	6.4	196	20 Su	0446	6.3	191	5 Tu	0557	6.2	188	20 W	0532	6.5	198	5 F	0016	1.5	45	20 Sa	0017	1.1	34
	1114	0.5	14		1055	0.8	24		1159	0.8	24		1136	0.7	20		0621	5.6	170		0626	5.9	181
	1733	6.7	203		1709	6.5	197		1816	6.4	194		1753	6.7	205		1224	1.6	48		1226	1.4	42
	2337	0.9	27		2313	1.0	32							1834	5.6		171	1846	5.9		180		
6 Su	0548	6.2	190	21 M	0519	6.3	191	6 W	0021	1.3	40	21 Th	0001	1.0	30	6 Sa	0046	1.9	57	21 Su	0058	1.6	50
	1152	0.7	20		1126	0.8	24		0627	5.8	177		0607	6.2	190		0651	5.2	157		0710	5.4	165
	1812	6.4	196		1741	6.4	196		1230	1.2	36		1209	1.0	29		1254	2.1	64		1311	2.0	61
					2347	1.1	35		1846	5.9	181		1828	6.4	195		1905	5.1	156		1935	5.3	161
7 M	0016	1.2	36	22 Tu	0552	6.1	187	7 Th	0053	1.7	52	22 F	0038	1.3	40	7 Su	0120	2.3	71	22 M	0150	2.2	67
	0626	5.9	180		1158	0.9	28		0658	5.4	164		0644	5.8	178		0726	4.7	143		0811	4.9	148
	1228	1.0	29		1816	6.3	192		1301	1.7	51		1245	1.3	41		1331	2.7	81		1415	2.6	80
	1850	6.1	186				1918		5.5	167	1907		6.0	182	1947		4.6	141	2054		4.7	143	
8 Tu	0054	1.5	47	23 W	0023	1.3	40	8 F	0128	2.1	64	23 Sa	0119	1.7	53	8 M	0210	2.8	85	23 Tu	0315	2.7	82
	0702	5.5	168		0628	5.9	180		0732	4.9	150		0727	5.4	164		0827	4.2	129		1011	4.5	138
	1304	1.3	41		1233	1.1	35		1336	2.2	66		1328	1.9	58		1442	3.1	96		1640	3.0	90
	1928	5.7	173		1853	6.1	185		1955	5.0	152		1956	5.4	165		2118	4.2	128		2315	4.5	138
9 W	0134	1.9	59	24 Th	0102	1.6	48	9 Sa	0212	2.5	77	24 Su	0212	2.2	68	9 Tu	0415	3.1	95	24 W	0539	2.7	81
	0741	5.1	155		0707	5.6	171		0817	4.5	136		0825	4.9	148		1141	4.1	125		1219	4.9	148
	1343	1.8	55		1310	1.5	46		1423	2.7	83		1428	2.5	76		1758	3.2	97		1841	2.6	78
	2010	5.2	160		1935	5.8	176		2053	4.5	138		2112	4.9	149								
10 Th	0220	2.3	71	25 F	0148	1.9	58	10 Su	0323	2.9	89	25 M	0336	2.7	81	10 W	0010	4.3	131	25 Th	0047	4.9	150
	0826	4.7	142		0754	5.2	159		0949	4.1	125		1012	4.5	137		0642	2.8	86		0701	2.1	65
	1429	2.3	69		1356	1.9	58		1606	3.1	95		1627	2.9	87		1311	4.6	141		1323	5.5	167
	2104	4.9	148		2029	5.4	164		2255	4.3	131		2319	4.7	144		1913	2.7	83		1937	2.0	60
11 F	0322	2.6	80	26 Sa	0247	2.3	69	11 M	0545	3.0	90	26 Tu	0549	2.6	80	11 Th	0117	4.8	146	26 F	0142	5.4	166
	0934	4.3	132		0856	4.8	147		1230	4.2	129		1225	4.8	145		0734	2.3	71		0749	1.6	48
	1539	2.7	82		1459	2.3	71		1832	3.0	91		1840	2.6	78		1350	5.2	158		1407	6.0	184
	2225	4.6	140		2147	5.1	155							1954	2.2		66	1954	2.2		66	2017	1.4	44
12 Sa	0457	2.8	84	27 Su	0412	2.5	76	12 Tu	0047	4.5	138	27 W	0056	5.1	155	12 F	0157	5.3	162	27 Sa	0223	5.9	180
	1125	4.2	128		1033	4.6	140		0714	2.6	79		0715	5.1	64		0809	1.8	55		0828	1.1	34
	1729	2.8	86		1642	2.6	79		1338	4.7	143		1336	5.4	164		1422	5.7	175		1443	6.5	198
					2330	5.0	153		1936	2.6	78		1946	2.0	60		2026	1.7	51		2052	1.0	31
13 Su	0002	4.6	140	28 M	0558	2.4	72	13 W	0143	5.0	151	28 Th	0155	5.6	171	13 Sa	0230	5.8	177	28 Su	0259	6.2	190
	0632	2.6	79		1223	4.8	146		0801	2.1	65		0807	1.5	47		0840	1.3	40		0902	0.8	23
	1259	4.5	136		1833	2.4	72		1417	5.2	159		1424	6.0	183		1451	6.3	191		1516	6.8	207
	1856	2.6	79				2016		2.1	64	2032		1.4	43	2057		1.2	37	2124		0.8	23	
14 M	0112	4.9	148	29 Tu	0056	5.3	162	14 Th	0221	5.4	165	29 F	0240	6.1	185	14 Su	0301	6.2	190	29 M	0332	6.4	196
	0734	2.2	68		0718	1.9	59		0835	1.7	52		0848	1.0	31		0909	0.9	27		0933	0.6	17
	1354	4.9	148		1338	5.3	162		1449	5.7	173		1504	6.5	199		1520	6.7	204		1546	6.9	210
	1951	2.3	69		1945	1.9	57		2050	1.7	51		2111	1.0	30		2127	0.8	25		2154	0.6	19
15 Tu	0159	5.2	158	30 W	0159	5.7	175	15 F	0254	5.8	177	30 Sa	0319	6.4	196	15 M	0332	6.6	200	30 Tu	0402	6.5	198
	0817	1.9	57		0815	1.4	44		0906	1.3	39		0924	0.6	19		0939	0.6	17		1003	0.5	16
	1434	5.2	160		1432	5.9	180		1518	6.1	186		1539	6.9	210		1551	7.0	214		1615	6.9	209
	2031	1.9	58		2038	1.4	42		2121	1.3	40		2146	0.7	22		2159	0.6	17		2223	0.6	19
			31 Th	0249	6.1	187																	
				0901	1.0	29																	
				1517	6.4	196																	
				2123	1.0	30																	

Time meridian 30° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time. Heights are referred to the chart datum of soundings.

Diego Garcia Island, 2008

Times and Heights of High and Low Waters

January					February					March																			
Time		Height			Time		Height			Time		Height			Time		Height												
	h	m	ft	cm		h	m	ft	cm		h	m	ft	cm		h	m	ft	cm										
1 Tu	0211	1.8	55		16 W ●	0144	1.5	46		1 F	0247	2.4	73		16 Sa	0428	2.4	73		1 Sa	0103	2.3	70		16 Su	0450	2.4	73	
	0831	3.7	113			0800	4.1	125			0932	3.2	98			1107	3.5	107			0732	3.3	101			1125	3.4	104	
	1504	1.8	55			1432	1.4	43			1712	2.1	64			1815	1.7	52			1515	2.3	70			1820	1.8	55	
	2125	3.3	101			2055	3.6	110																					
2 W	0328	2.1	64		17 Th	0257	1.9	58		2 Sa	0017	3.1	94		17 Su	0054	3.5	107		2 Su	0005	2.8	85		17 M	0051	3.5	107	
	0952	3.5	107			0921	3.8	116			0605	2.4	73			0651	2.0	61			0540	2.6	79			0651	1.9	58	
	1640	1.9	58			1613	1.6	49			1214	3.4	104			1259	3.9	119			1154	3.1	94			1258	3.9	119	
	2311	3.3	101			2251	3.4	104			1902	1.7	52			1930	1.2	37			1850	2.0	61			1921	1.3	40	
3 Th	0509	2.2	67		18 F	0452	2.0	61		3 Su	0133	3.5	107		18 M	0150	4.0	122		3 M	0122	3.4	104		18 Tu	0135	4.1	125	
	1125	3.6	110			1114	3.8	116			0724	2.0	61			0748	1.4	43			0713	2.1	64			0737	1.3	40	
	1807	1.7	52			1804	1.4	43			1323	3.8	116			1354	4.4	134			1311	3.7	113			1344	4.4	134	
											1949	1.3	40			2014	0.7	21			1933	1.4	43			1958	0.8	24	
4 F	0035	3.5	107		19 Sa	0037	3.7	113		4 M	0209	3.9	119		19 Tu	0227	4.5	137		4 Tu	0149	3.9	119		19 W	0207	4.5	137	
	0631	2.0	61			0635	1.8	55			0804	1.6	49			0827	0.9	27			0746	1.6	49			0810	0.8	24	
	1236	3.8	116			1245	4.1	125			1404	4.2	128			1433	4.9	149			1348	4.2	128			1418	4.9	149	
	1908	1.4	43			1920	1.0	30			2023	0.9	27			2048	0.3	9			2003	0.9	27			2028	0.5	15	
5 Sa	0130	3.8	116		20 Su	0143	4.1	125		5 Tu	0238	4.3	131		20 W	0258	4.9	149		5 W	0214	4.4	134		20 Th	0234	4.9	149	
	0725	1.7	52			0741	1.4	43			0835	1.2	37			0900	0.5	15			0814	1.0	30			0839	0.4	12	
	1327	4.1	125			1347	4.5	137			1437	4.6	140			1507	5.2	158			1418	4.7	143			1447	5.2	158	
	1952	1.1	34			2012	0.6	18			2053	0.5	15			2118	0.1	3			2031	0.5	15			2055	0.3	9	
6 Su	0210	4.1	125		21 M	0229	4.5	137		6 W	0304	4.7	143		21 Th	0326	5.2	158		6 Th	0239	4.8	146		21 F	0300	5.2	158	
	0806	1.5	46			0828	1.0	30			0903	0.8	24			0930	0.2	6			0841	0.5	15			0906	0.1	3	
	1407	4.4	134			1434	4.9	149			1507	5.0	152			1536	5.4	165			1448	5.2	158			1514	5.3	162	
	2028	0.8	24			2054	0.3	9			2121	0.2	6			2146	0.0	0			2058	0.2	6			2119	0.1	3	
7 M	0244	4.4	134		22 Tu	0308	4.8	146		7 Th	0330	5.0	152		22 F	0352	5.3	162		7 F	0304	5.2	158		22 Sa	0323	5.3	162	
	0840	1.2	37			0908	0.6	18			0931	0.4	12			0957	0.0	0			0908	0.1	3			0931	-0.1	-3	
	1442	4.6	140			1514	5.2	158			1537	5.3	162			1604	5.5	168			1517	5.5	168			1539	5.4	165	
	2101	0.5	15			2131	0.1	3			2148	0.0	0			2211	0.0	0			2125	-0.1	-3			2142	0.1	3	
8 Tu ●	0314	4.6	140		23 W	0342	5.1	155		8 F	0356	5.2	158		23 Sa	0417	5.4	165		8 Sa	0330	5.5	168		23 Su	0346	5.4	165	
	0912	0.9	27			0943	0.4	12			0959	0.1	3			1023	0.0	0			0937	-0.2	-6			0955	-0.1	-3	
	1515	4.9	149			1550	5.3	162			1606	5.5	168			1630	5.4	165			1546	5.7	174			1603	5.3	162	
	2132	0.3	9			2204	0.0	0			2216	-0.1	-3			2235	0.1	3			2153	-0.2	-6			2205	0.2	6	
9 W	0343	4.8	146		24 Th	0413	5.2	158		9 Sa	0423	5.4	165		24 Su	0441	5.4	165		9 Su	0358	5.7	174		24 M	0409	5.4	165	
	0942	0.7	21			1016	0.3	9			1029	0.0	0			1048	0.0	0			1007	-0.4	-12			1019	0.0	0	
	1546	5.0	152			1623	5.3	162			1637	5.5	168			1655	5.2	158			1617	5.7	174			1626	5.2	158	
	2202	0.2	6			2234	0.0	0			2245	0.0	0			2259	0.3	9			2222	-0.1	-3			2227	0.3	9	
10 Th	0412	4.9	149		25 F	0443	5.2	158		10 Su	0452	5.4	165		25 M	0504	5.2	158		10 M	0427	5.7	174		25 Tu	0431	5.2	158	
	1012	0.6	18			1047	0.2	6			1100	-0.1	-3			1114	0.2	6			1038	-0.4	-12			1043	0.1	3	
	1618	5.1	155			1654	5.2	158			1709	5.4	165			1720	4.9	149			1648	5.5	168			1650	4.9	149	
	2232	0.2	6			2303	0.2	6			2315	0.1	3			2322	0.5	15			2251	0.1	3			2249	0.6	18	
11 F	0442	5.0	152		26 Sa	0511	5.1	155		11 M	0522	5.3	162		26 Tu	0528	5.0	152		11 Tu	0457	5.5	168		26 W	0454	5.0	152	
	1044	0.5	15			1117	0.3	9			1133	0.1	3			1139	0.5	15			1111	-0.1	-3			1107	0.4	12	
	1651	5.1	155			1724	5.0	152			1742	5.1	155			1745	4.6	140			1721	5.2	158			1715	4.6	140	
	2303	0.3	9			2331	0.4	12			2347	0.4	12			2345	0.9	27			2322	0.4	12			2312	0.9	27	
12 Sa	0512	5.0	152		27 Su	0539	4.9	149		12 Tu	0554	5.1	155		27 W	0552	4.6	140		12 W	0529	5.2	158		27 Th	0518	4.7	143	
	1117	0.5	15			1147	0.5	15			1209	0.4	12			1206	0.9	27			1146	0.3	9			1134	0.8	24	
	1726	5.0	152			1754	4.7	143			1819	4.7	143			1811	4.2	128			1756	4.7	143			1741	4.2	128	
	2337	0.4	12			2358	0.7	21													2355	0.9	27			2337	1.3	40	
13 Su	0546	4.9	149		28 M	0607	4.7	143		13 W	0021	0.9	27		28 Th	0008	1.3	40		13 Th	0604	4.7	143		28 F	0544	4.3	131	
	1154	0.5	15			1218	0.8	24			0630	4.7	143			0617	4.2	128			1226	0.8	24			1203	1.2	37	
	1804	4.8	146			1824	4.3	131			1250	0.8	24			1236	1.3	40			1836	4.0	122			1811	3.8	116	
											1901	4.1	125			1841	3.7	113											
14 M	0013	0.7	21		29 Tu	0026	1.1	34		14 Th	0100	1.4	43		29 F	0033	1.8	55		14 F	0033	1.5	46		29 Sa	0004	1.7	52	
	0622	4																											

Time meridian 90° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
Heights are referred to the chart datum of soundings.

Diego Garcia Island, 2008

Times and Heights of High and Low Waters

July						August						September					
Time			Height			Time			Height			Time			Height		
	h	m	ft	cm			h	m	ft	cm			h	m	ft	cm	
1 Tu	0112	4.5	137			1 F	0253	5.1	155			1 Sa	0253	4.9	149		
	0740	0.6	18				0911	0.1	3				0906	0.4	12		
	1359	4.5	137				1522	5.0	152				1514	4.9	149		
	1958	1.1	34			●	2124	0.4	12				2116	0.5	15		
2 W	0206	4.8	146			2 Sa	0332	5.3	162			2 Su	0321	5.2	158		
	0830	0.3	9				0946	0.0	0				0932	0.2	6		
	1447	4.7	143				1556	5.2	158				1539	5.1	155		
	2046	0.8	24				2159	0.2	6			○	2142	0.2	6		
3 Th	0254	5.1	155			3 Su	0407	5.4	165			3 M	0349	5.4	165		
	0915	0.1	3				1019	0.0	0				0959	0.0	0		
●	1529	4.9	149				1627	5.2	158				1605	5.3	162		
	2130	0.6	18			○	2232	0.2	6				2210	0.0	0		
4 F	0338	5.2	158			4 M	0440	5.3	162			4 Tu	0418	5.4	165		
	0957	0.1	3				1049	0.1	3				1026	0.0	0		
	1609	5.0	152				1657	5.2	158				1632	5.3	162		
	2211	0.5	15				2304	0.2	6				2239	0.0	0		
5 Sa	0419	5.2	158			5 Tu	0512	5.1	155			5 W	0448	5.3	162		
	1036	0.1	3				1119	0.4	12				1054	0.2	6		
	1648	5.0	152				1726	5.0	152				1700	5.3	162		
	2251	0.5	15				2335	0.4	12				2311	0.1	3		
6 Su	0459	5.1	155			6 W	0542	4.8	146			6 Th	0520	5.1	155		
	1114	0.3	9				1147	0.7	21				1124	0.4	12		
	1725	4.9	149				1755	4.8	146				1731	5.1	155		
	2330	0.6	18										2345	0.3	9		
7 M	0538	4.9	149			7 Th	0606	0.7	21			7 F	0555	4.8	146		
	1151	0.6	18				0613	4.4	134				1157	0.8	24		
	1801	4.7	143				1215	1.0	30				1806	4.8	146		
							1824	4.5	137								
8 Tu	0009	0.8	24			8 F	0039	1.1	34			8 Sa	0024	0.7	21		
	0618	4.6	140				0646	4.0	122				0635	4.3	131		
	1228	0.9	27				1245	1.4	43				1234	1.3	40		
	1839	4.5	137				1856	4.1	125				1847	4.4	134		
9 W	0050	1.0	30			9 Sa	0118	1.5	46			9 Su	0114	1.2	37		
	0659	4.2	128				0727	3.6	110				0728	3.7	113		
	1306	1.3	40			○	1321	1.9	58			○	1324	1.8	55		
	1919	4.2	128				1938	3.7	113				1946	3.8	116		
10 Th	0136	1.3	40			10 Su	0217	1.9	58			10 M	0237	1.7	52		
	0747	3.8	116				0836	3.1	94				0912	3.2	98		
○	1351	1.6	49				1425	2.3	70				1513	2.3	70		
	2006	3.9	119				2102	3.3	101				2156	3.5	107		
11 F	0233	1.6	49			11 M	0432	2.1	64			11 Tu	0516	3.8	116		
	0849	3.5	107				1140	3.0	91				1203	3.4	104		
	1450	2.0	61				1731	2.5	76				1802	2.1	64		
	2111	3.6	110			○	2347	3.3	101								
12 Sa	0353	1.8	55			12 Tu	0641	1.8	55			12 W	0016	3.8	116		
	1020	3.3	101				1314	3.4	104				0653	1.3	40		
	1617	2.2	67				1907	2.1	64				1316	3.9	119		
	2239	3.5	107										1915	1.5	46		
13 Su	0529	1.8	55			13 W	0107	3.7	113			13 Th	0123	4.3	131		
	1201	3.4	104				0734	1.4	43				0745	0.8	24		
	1756	2.1	64				1354	3.8	116				1359	4.4	134		
							1950	1.7	52				2000	1.0	30		
14 M	0006	3.6	110			14 Th	0150	4.1	125			14 F	0207	4.8	146		
	0645	1.5	46				0809	1.0	30				0823	0.4	12		
	1311	3.6	110				1423	4.2	128				1433	4.8	146		
	1905	1.9	58				2021	1.2	37				2036	0.5	15		
15 Tu	0109	3.9	119			15 F	0223	4.5	137			15 Sa	0244	5.2	158		
	0737	1.2	37				0839	0.6	18				0856	0.1	3		
	1358	3.9	119				1449	4.6	140				1503	5.2	158		
	1953	1.6	49				2049	0.8	24				2108	0.2	6		
						31 Th	0209	4.8	146			31 Su	0316	5.4	165		
							0831	0.4	12			●	0925	0.0	0		
							1445	4.7	143				1532	5.4	165		
							2046	0.7	21				2137	0.0	0		

Time meridian 90° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
 Heights are referred to the chart datum of soundings.

Time meridian 90° E. 0000 is midnight. 1200 is noon. Times are not adjusted for Daylight Saving Time.
Heights are referred to the chart datum of soundings.

EXTRA TIDES, 2008

Port Lincoln, Australia					Townsville, Australia				
February					February				
18	1902	2.4	80		27	1908	5.5	180	
April									
11	2304	2.4	80						
September									
11	1944	1.2	40						

TABLE 2. - TIDAL DIFFERENCES AND OTHER CONSTANTS

EXPLANATION OF TABLE

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

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

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

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

Height differences.—The height of the tide, referred to the datum of charts, is obtained by means of the height differences or ratios. A plus (+) sign indicates that the difference should be added to the height at the reference station, and a minus (–) sign indicates that it should be subtracted. All height differences, ranges, and levels in Table 2 are in feet but may be converted to centimeters by the use of table 6.

Ratio. — For some stations, use of predicted height difference would give unsatisfactory predictions. In such cases they have been omitted and one or two ratios are given (*). Where two ratios are given, one in the "height of high water" column and one in the "height of low water" column, the high waters and low waters at the reference station should be multiplied by these respective ratios. Where only one is given, the omitted ratio is either unreliable or unknown. For some subordinate stations there is given in parentheses a ratio as well as a correction in feet. In those instances, each predicted high and low water at the reference station should first be multiplied by the ratio and then the correction in feet is added to or subtracted from each product as indicated.

As an example, at Porto Grande, the values in the time and height difference columns in Table 2 are given as –1 02, –0 13, and (*0.73 + 0.7) as referred to the reference station at Hong Kong. If we assume that the tide predictions in column (1) below are those of Hong Kong on a particular day,

TABLE 2. - TIDAL DIFFERENCES AND OTHER CONSTANTS

application of the time and height corrections in columns (2) and (3) would result in the tide predictions for Chino Bay in column (4).

(1)		(2)	(3)	(4)	
<i>Time</i> h.m.	<i>Height</i> ft.	<i>Time</i> Corrections	<i>Height</i> Corrections	<i>Time</i> h.m.	<i>ft.</i> <i>Height</i> centimeters
0230	3.6	-0 ^h 13 ^m	x0.73 + 0.7	0217	3.3 101
0926	7.2	-1 ^h 02 ^m	x0.73 + 0.7	0824	6.0 183
1645	1.0	-0 ^h 13 ^m	x0.73 + 0.7	1632	1.4 43
2318	4.3	-1 ^h 02 ^m	x0.73 + 0.7	2216	3.8 116

Range. —The *mean range* is the difference in height between mean high water (MHW) and mean low water (MLW). The *spring range* is the average semidiurnal range occurring semimonthly as a result of the Moon being new or full. It is larger than the mean range where the type of tide is either semidiurnal or mixed, and is of no practical significance where the type of tide is diurnal. The *diurnal range* is the difference in height between mean higher high water and mean lower low water. Mean higher high water is the average of the higher of the two high water and mean lower low water is the average of the lower of the two low waters. the *tropic range*, which is given for some stations, is the increased diurnal range occurring semimonthly when the effects of the Moon's maximum-declination is greatest.

Caution. —For stations where the tide is chiefly diurnal the time difference and the height differences and ratios are intended primarily for predicting the higher high and lower low waters. When the lower high water and the higher low water at the reference station are nearly the same height the corresponding tides often cannot be obtained satisfactorily by means of the tidal differences.

Datum. — The datum of the predictions obtained through the height differences or ratios is also the datum of the largest scale chart for the locality. To obtain the depth at the time of high or low water, the predicted height should be added to the depth on the chart unless such height is negative (–), when it should be subtracted. To find the height at times between high and low water see table 3. On some foreign charts the depths are given in meters and in such cases the heights of the tide can be converted to centimeters by the use of table 6. Chart datums for the Hawaiian and Philippines Islands is *mean lower low water*. For the rest of the area covered by these tables the datums generally used are approximately *mean low water springs*, *Indian spring low water*, or the *lowest possible low water*.

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

NOTE¹.— Dashes are entered in the place of data which are unknown, unreliable, or not applicable.

NOTE².— Place Names. - For the convenience of the mariner, places names are chosen to correspond to the place names on National Imagery and Mapping Agency nautical charts. The place names are also reviewed by the United States Board on Geographic Names.

NOTE³.— Subordinate locations referencing the Philippines of Jolo, San Fernando Harbor, and Legaspi Port were included only for future considerations, See the IMPORTANT NOTICE on page VI.

This edition includes an extensive revision of the tidal information for locations along the coast of mainland China. All such place names now use the new spelling convention. Where applicable, place names from the 1994 edition appear in hard brackets [] after the new spelling.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Spring	
				High Water	Low Water	High Water	Low Water			
	SIBERIA, Arctic Ocean <1> Time meridian, 120° E	North	East	h m	h m	ft	ft	ft	ft	
				on Pusan, p.48						
1	Domashnii I., Severnaya Zemlya Time meridian, 105° E	79° 30'	91° 08'	+6 38	+6 48	*0.26	*0.29	0.7	1.0	0.6
3	Zarya Road	76° 08'	95° 08'	+5 30	+5 43	(*0.46+0.3)		1.3	1.7	1.3
5	Bonevi Island	76° 10'	95° 10'	+4 01	+4 14	(*0.46+0.1)		1.3	1.8	1.1
7	Dzhekman Island	76° 25'	95° 06'	+4 25	+4 55	(*0.46+0.3)		1.3	1.8	1.3
9	Russki Island Time meridian, 120° E	77° 11'	96° 24'	+5 16	+5 32	(*0.39+0.3)		1.1	1.5	1.1
11	Taimyra River mouth	76° 15'	98° 52'	+5 47	+6 11	(*0.54+0.4)		1.5	2.0	1.5
13	Cape Olovyanyn, Shokalskogo Strait	78° 56'	99° 56'	+4 24	+4 34	(*0.36+0.1)		1.0	1.4	0.9
15	Gansena (Hansen) Island	77° 31'	102° 30'	+5 59	+6 09	*0.17 *0.14		0.5	0.6	0.4
17	Cape Chelyuskina	77° 43'	104° 17'	+3 28	+3 59	*0.34 *0.34		0.9	1.2	0.8
19	Samuila I., Komsomolskoi Pravdy Island	77° 25'	106° 54'	+2 48	+3 23	*0.40 *0.40		1.0	1.4	0.9
21	Starokadomskogo Island	78° 14'	105° 58'	+3 32	+3 51	(*0.61+0.2)		1.7	2.1	1.5
23	Pronchishchevoi Bay Time meridian, 135° E	75° 34'	113° 22'	-6 37	-6 36	+1.4 +0.9		3.3	4.4	3.3
25	Preobrazheniya Island	74° 40'	112° 45'	-3 41	-3 28	+0.7 +0.4		3.1	4.4	2.7
27	Mali (Small) Begichev Island	74° 18'	111° 04'	-2 32	-2 19	+1.4 +0.6		3.6	5.1	3.1
29	Nordvik Bay <2> Time meridian, 120° E	74° 01'	111° 40'	-2 54	-2 48	(*2.14+0.7)		6.0	8.5	5.2
31	Khara-Tumus Peninsula	74° 01'	110° 06'	-3 27	-2 36	+0.4 +0.4		2.8	3.6	2.5
33	Kozhevnikova Bay	73° 26'	109° 42'	+1 15	+1 36	(*0.68+0.5)		1.9	2.6	1.9
35	Syndaska Bay entrance	73° 14'	108° 09'	+1 40	+1 56	+0.8 +0.7		2.9	3.9	2.9
37	Cape Bolshaya Karga	73° 11'	106° 22'	+2 44	+3 53	(*0.82+0.6)		2.3	3.1	2.3
39	Kresty Peninsula, Khatanga River Time meridian, 135° E	72° 45'	105° 15'	+6 20	+8 08	*0.60 *0.60		1.6	2.1	1.3
41	Cape Khorgo, Anabarski Bay	73° 31'	113° 24'	-2 04	-1 42	(*1.50+0.4)		4.2	6.0	3.6
43	Bykovskoe, Lena River mouth	71° 59'	129° 09'	---	---	---	---	0.5	0.7	0.4
45	Bulunkan Bay, Tiksi Bay Time meridian, 150° E	71° 40'	128° 58'	+1 58	+2 08	*0.34 *0.34		0.9	1.2	0.8
47	Omloi River entrance	71° 14'	132° 10'	+4 09	+4 33	(*0.39+0.2)		1.1	1.4	1.0
49	Yana River mouth	71° 31'	136° 25'	---	---	---	---	Negligible		
51	Kotel'nyy Island Polar Station	75° 58'	137° 59'	+4 47	+5 03	(*0.50+0.4)		1.4	1.9	1.4
53	Nerpalakh Lagoon, Kotel'nyy Island	75° 22'	137° 10'	+5 27	+5 25	*0.20 *0.20		0.5	0.8	0.5
55	Cape Medvezhi, Kotel'nyy Island Bolshoi Lyakhovski Island	74° 38'	139° 04'	+1 07	+1 23	*0.26 *0.26		0.6	0.8	0.6
57	Kigilyakh Peninsula	73° 26'	139° 55'	---	---	---	---	0.4	0.5	0.3
59	Cape Shalaurova Time meridian, 180° E	73° 12'	143° 34'	-5 24	-5 10	*0.34 *0.34		0.9	1.1	0.8
61	Chetyrehstolbovoi I., Medvezhi Island Time meridian, 165° E	70° 38'	162° 30'	---	---	---	---	Negligible		
63	Kolyma River mouth Time meridian, 180° E	69° 38'	162° 00'	---	---	---	---	Negligible		
65	Ayon Island	69° 53'	167° 52'	---	---	---	---	Negligible		
67	Cape Shelagski Time meridian, 195° E	70° 05'	170° 34'	---	---	---	---	Negligible		
69	Cape Billingsa	69° 53'	176° 06'	+5 37	+5 50	*0.20 *0.20		0.5	0.8	0.5
71	Wrangell Island	70° 58'	181° 27'	+3 53	+4 06	*0.57 *0.71		1.5	2.1	1.3
73	Cape Shmidt	68° 55'	180° 31'	+5 42	+5 58	(*0.61+0.4)		1.7	2.2	1.7
75	Kolychino Polar Station	67° 04'	186° 13'	---	---	---	---	0.3	0.4	0.3
77	Cape Serdtse-Kamen	66° 57'	188° 22'	---	---	---	---	0.3	0.4	0.2
79	Cape Uelen	66° 10'	190° 10'	---	---	---	---	0.4	0.5	0.4
	Bering Sea									
81	Alera Bay, Penkegnei Bay	64° 49'	187° 05'	-0 54	-0 50	*0.26 *0.29		0.7	0.9	0.6
83	Plover Bay, Provideniya Bay	64° 22'	186° 38'	-2 03	-1 46	(*0.82+0.2)		2.3	2.9	1.9
85	Emma Bay, Provideniya Bay	64° 25'	186° 47'	-2 16	-2 06	(*0.82+0.3)		2.3	3.1	2.0
87	Cape Razdelny, Kresta Bay	66° 11'	181° 00'	+0 55	+1 09	+5.8 +1.9		6.7	8.4	6.0
89	Engaugin Bay, Kresta Bay Anadyr Bay	66° 09'	180° 26'	+0 52	+0 56	+5.4 +1.4		6.8	8.5	5.5
91	Russkaya Koshka Spit	64° 35'	178° 31'	+2 48	+2 52	+2.6 +0.7		4.7	6.0	3.8
93	Salomatova Spit	64° 38'	178° 01'	+3 19	+3 27	+3.1 +0.9		5.0	6.3	4.1
95	Melkaya Bay	64° 47'	177° 34'	+4 15	+4 25	+1.7 +0.6		3.9	5.3	3.3
97	Anadyr River entrance	64° 44'	177° 26'	+3 37	+3 47	+1.0 +0.3		3.5	4.4	2.8
99	Strelka Spit, Anadyr Gulf	64° 25'	178° 15'	+4 22	+5 11	+0.1 +0.2		2.7	3.6	2.3
101	Ugolnaya Bay	63° 04'	179° 23'	+4 04	+4 14	*0.49 *0.57		1.3	1.7	1.1
	Time meridian, 180° E			on Paramushir Island, p.8				Diurnal	Tropic	
103	Anastasii Bay †	61° 25'	172° 56'	-1 00	-0 29	+1.0 +0.9		4.6	5.4	4.8
105	Imatra Bay, Glubokaya Bay †	61° 00'	172° 07'	-0 55	-0 37	(*0.96+0.8)		4.3	5.0	4.4
107	Cape Olyutorski † Kamchatka	59° 55'	170° 20'	-0 29	-0 23	(*0.84+0.8)		3.8	4.5	4.0
109	Lavora Harbor †	60° 23'	167° 04'	-1 14	-0 35	(*0.80+1.2)		3.6	4.2	4.2
111	Sibir Harbor †	60° 27'	166° 14'	-0 39	-0 33	+1.3 +1.0		4.8	5.6	5.0
113	Cape Kryugera †	56° 01'	161° 57'	-0 21	-0 18	(*0.87+1.0)		3.9	4.7	4.3
115	Nikolski, Bering Island †	55° 12'	165° 59'	-1 17	-0 10	(*0.82+1.2)		3.7	4.4	4.3
117	Morzhovaya Bay †	53° 14'	159° 57'	+0 01	+0 32	(*0.91+0.9)		4.1	5.1	4.4
119	Petropavlovsk †	53° 01'	158° 39'	+1 23	+0 55	(*0.93+1.0)		4.2	4.9	4.5
121	Tarya Bay †	52° 55'	158° 30'	+1 33	+1 05	+0.9 +0.9		4.4	5.1	4.7
123	Akhomten Bay †	52° 26'	158° 28'	+1 08	+0 40	(*0.89+0.9)		4.0	4.7	4.3
125	Vestnik Bay †	51° 33'	157° 42'	+1 43	+1 15	(*0.84+0.9)		3.8	4.4	4.1

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Diurnal	Tropic	
				High Water	Low Water	High Water	Low Water			
	SIBERIA, Sea of Okhotsk Time meridian, 180° E	North	East	h m	h m	ft	ft	ft	ft	ft
	<i>Kamchatka-cont.</i>									
127	Golygina River entrance †	51° 53'	156° 31'	+1 28	+1 34	+1.3	+1.0	4.8	5.6	5.0
129	Ust Bolsheretsk, Bolshaya River †	52° 46'	156° 14'	+4 35	+4 21	+1.6	+1.1	5.0	5.8	5.2
131	Kompakova River entrance †	54° 40'	155° 42'	+3 43	+3 49	(*2.98+2.7)		13.4	15.7	14.0
133	Oblukovina River entrance †	55° 19'	155° 34'	+4 53	+4 59	(*2.36+1.9)		10.6	12.3	10.9
	on Paramushir Island, p.8									
	on Musi River, p.152									
135	Cape Astronomicheski †	62° 23'	164° 28'	-10 42	-9 27	*3.14	*2.72	24.1	30.1	17.8
	<i>Penjinski Bay</i>									
137	Matugin Point †	61° 41'	160° 15'	+8 10	+9 18	+13.4	+2.7	18.0	22.2	13.5
139	Gizhiga River entrance †	61° 58'	160° 24'	+8 08	+10 26	+12.8	+2.1	18.0	22.2	14.0
141	Nayakhanskaya Bay †	61° 54'	159° 00'	+8 15	+10 04	+11.6	+1.4	17.5	21.7	13.1
	Time meridian, 165° E									
143	Udacha Bay †	59° 13'	155° 10'	+9 23	+7 11	+3.2	+0.8	9.7	13.5	8.2
	on Moji, p.36									
								Mean	Spring	
145	Ola Anchorage, Tauiskaya Bay	59° 34'	151° 16'	+0 12	+0 24	*1.50	*1.50	6.9	8.9	7.4
147	Nagaeva Bay, Tauiskaya Bay	59° 31'	150° 41'	-0 09	-0 18	*1.89	*1.89	8.7	11.3	9.4
	Time meridian, 150° E									
149	Okhotsk	59° 21'	143° 10'	+3 02	+2 55	*1.50	*1.50	6.9	8.9	7.4
	on Brisbane Bar, p.284									
151	Ayan Bay	56° 27'	138° 09'	+3 33	+3 25	+2.2	+1.3	5.9	7.9	5.7
153	Udskaya Bay	54° 42'	135° 18'	+7 08	+6 59	+2.7	+1.0	6.7	9.5	5.8
155	Levyazhya Bay, Feklistov Island	54° 54'	136° 46'	+6 37	+6 29	(*2.50+0.7)		12.5	16.4	10.5
157	Abrek Bay, Little Shantar Island	54° 24'	137° 37'	+6 50	+6 42	(*2.12+0.2)		10.6	13.5	8.5
	on Jolo, p.172									
								Diurnal	Tropic	
159	Baldukov Island †	53° 18'	141° 28'	-1 41	-1 40	+2.7	+1.2	4.3	5.4	2.8
	Time meridian, 165° E									
	<i>Sakhalin Island</i>									
161	Cape Tamlevo †	53° 21'	141° 46'	-0 24	-0 25	+2.3	+1.1	4.0	5.0	2.6
163	Baikal Bay †	53° 32'	142° 14'	+0 12	+0 10	+2.6	+1.1	4.3	5.3	2.7
165	Kuegda Bay †	54° 19'	142° 36'	+1 06	+1 05	(*0.61+0.5)		1.7	2.2	1.2
	on Yamato Wan, p.12									
167	Urkt Bay entrance †	53° 34'	143° 04'	-1 12	+3 44	+0.1	0.0	3.2	4.0	2.4
169	Kyakrvo Anchorage †	52° 52'	143° 19'	-0 12	+4 46	+0.4	+0.3	3.2	4.4	2.7
171	Chaivo Bay †	52° 23'	143° 12'	+3 11	+6 07	+0.8	+0.5	3.4	4.8	3.1
173	Niski Bay †	51° 58'	143° 11'	+3 07	+8 01	+1.4	+0.2	4.3	5.3	3.2
175	Luniski Bay entrance †	51° 18'	143° 30'	+5 33	+6 59	*0.42	*0.42	1.3	1.8	1.1
	KARAFUTO, Sakhalin Island									
	on Otomari, p.4									
177	Mys Popova †	49° 03'	144° 24'	-0 25	-0 25	(*0.50+0.2)		1.5	2.0	1.4
179	Tyulenyi †	48° 30'	144° 38'	-0 55	-0 58	(*0.87+0.1)		2.6	3.1	2.2
181	Mys Obshirnyy †	48° 42'	144° 39'	-0 45	-1 04	*0.87	*0.87	2.6	3.1	2.1
183	Noto †	49° 07'	144° 15'	-0 36	-1 02	*0.97	*0.97	2.9	3.3	2.3
185	Ozero Nevskoye †	49° 19'	143° 19'	-0 14	-0 49	*0.93	*0.93	2.8	3.2	2.2
187	Shikuka †	49° 14'	143° 08'	-0 10	-0 49	*0.97	*0.97	2.9	3.4	2.3
189	Higashi Chutoru †	48° 38'	142° 48'	-0 03	-0 32	(*0.93+0.1)		2.8	3.3	2.3
191	Buruny †	48° 06'	142° 34'	-0 09	-0 31	*0.87	*0.87	2.6	3.0	2.1
193	Sakayehama †	47° 25'	142° 49'	-0 13	-0 30	(*0.90-0.1)		2.7	3.1	2.1
195	Noho Misaki †	47° 15'	143° 01'	-0 25	-0 25	(*0.83+0.1)		2.5	3.1	2.1
197	Onto Numa †	46° 52'	143° 08'	+1 51	+1 51	(*0.47+0.1)		1.4	1.8	1.2
199	Tomunai Hakuchi †	46° 51'	143° 10'	-0 24	-0 22	(*0.83+0.1)		2.5	3.1	2.1
201	Airo Wan †	46° 49'	143° 25'	-0 23	-0 17	*0.87	*0.87	2.6	3.2	2.1
203	Mys Menaputsky †	46° 23'	143° 35'	-0 56	-0 39	(*0.93+0.1)		2.8	3.4	2.3
205	Tobuchi Ko †	46° 30'	143° 20'	+0 32	+0 54	(*0.83+0.1)		2.5	3.1	2.1
207	OTOMARI †	46° 39'	142° 45'					3.0	3.7	2.4
209	Nishi Notoro Misaki, East coast †	45° 54'	142° 05'	+0 30	+1 15	(*0.93+0.2)		2.8	3.6	2.4
211	Nishi Notoro Misaki, West coast †	45° 54'	142° 05'	+1 18	+2 04	(*0.60+0.1)		1.8	2.3	1.5
213	Soni Misaki †	46° 03'	141° 55'	+2 53	---	(*0.40+0.1)		1.2	1.6	1.1
215	Kaiba To (Todo Shima) †	46° 15'	141° 16'	---	---	---	---	0.5	---	0.4
217	Tokombo Road †	46° 40'	141° 51'	---	---	---	---	0.8	---	0.7
219	Port Kholmnsk †	41° 03'	142° 02'	---	---	---	---	0.7	---	0.6
221	Nodasan (Noda) †	47° 26'	141° 58'	---	---	---	---	0.7	---	0.6
	on Pusan, p.48									
								Mean	Spring	
223	Yatsu Misaki	48° 08'	142° 10'	-11 47	-11 39	(*0.29+0.2)		0.8	1.0	0.8
225	Ushiro Wan	48° 54'	141° 58'	-10 55	-10 46	(*0.57+0.2)		1.6	2.1	1.4
227	Toro Numa	49° 10'	142° 04'	-10 40	-10 32	(*0.71+0.1)		2.0	2.6	1.6
229	Lesogorsk	49° 27'	142° 07'	-10 13	-10 05	(*0.71+0.1)		2.0	2.6	1.6
231	Mys Polevogo	49° 46'	142° 09'	-10 22	-10 13	+0.1	+0.1	2.8	3.7	2.2
233	Anbetsu	49° 59'	142° 10'	-10 20	-10 12	+0.5	+0.1	3.2	4.1	2.4

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES			Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	SIBERIA, Sakhalin Island Time meridian, 165° E	North	East	h m	h m	ft	ft	ft	ft	ft	
	<i>Gulf of Tartary</i>										
235	Pilevo Bay	50° 02'	142° 09'	−10 03	−9 59	+0.5	+0.2	3.1	3.9	2.5	
237	Alexandrovski	50° 54'	142° 08'	−10 03	−9 57	+2.3	+0.5	4.6	6.3	3.5	
239	Viyakhtu Bay	51° 35'	141° 54'	−9 52	−9 48	+4.1	+1.0	5.9	7.4	4.7	
241	Cape Tik	51° 44'	141° 41'	−9 48	−9 38	+3.6	+0.9	5.5	6.9	4.4	
243	Cape Pogobi, Strait of Tartary	52° 13'	141° 39'	−7 52	−7 48	+1.2	+0.3	3.7	4.6	2.9	
	Gulf of Amur Time meridian, 150° E										
								Diurnal	Tropic		
245	Amur River entrance †	52° 52'	141° 14'	+4 55	+4 55	(*0.54+0.7)		1.5	1.9	1.3	
247	Nikolayevsk, Amur River †	53° 08'	140° 45'	+6 15	+6 15	(*0.32+2.7)		0.9	1.1	3.1	
249	Uyuzut Island †	52° 49'	141° 12'	+4 50	+4 50	(*0.71+0.9)		2.0	2.5	1.7	
251	Cape Dzhaore †	52° 40'	141° 17'	+5 10	+5 10	(*0.93+1.1)		2.6	3.3	2.1	
								Mean	Spring		
253	Cape Lazareva	52° 14'	141° 31'	−8 50	−8 10	+1.3	+0.9	3.2	4.1	3.2	
	Gulf of Tartary										
255	Cape Muraveva	52° 09'	141° 33'	−9 38	−9 21	+1.4	+0.4	3.8	4.7	3.0	
257	Cape Chikacheva	51° 47'	141° 11'	−10 20	−10 16	+3.3	+0.8	5.3	6.7	4.2	
259	Cape Sushcheva	51° 42'	141° 07'	−10 58	−10 55	+2.2	+0.6	4.4	5.5	3.5	
261	Taba Bay	51° 37'	140° 53'	−10 42	−10 38	+3.1	+0.8	5.1	6.4	4.1	
263	Zaliv Chikacheva	51° 27'	140° 50'	−10 37	−10 33	+3.1	+0.8	5.1	6.4	4.1	
265	Starka Bay	50° 08'	140° 34'	−10 30	−10 26	+0.9	+0.3	3.4	4.3	2.7	
267	Datta Bay	49° 17'	140° 24'	−10 17	−10 13	*0.68	*0.71	1.9	2.4	1.5	
269	Vanina Bay	49° 06'	140° 17'	−10 08	−10 04	*0.46		1.3	1.6	1.0	
271	Sovetskaya Harbor	48° 59'	140° 17'	−10 00	−9 51	(*0.43+0.2)		1.2	1.6	1.1	
273	Vetrychnui Point	48° 08'	139° 43'	− − −	− − −	− −	− −	0.2	− −	0.3	
	Japan Sea										
275	Tyutikha Bay	44° 21'	135° 51'	− − −	− − −	− −	− −	0.4	0.6	1.1	
277	St. Vladimir Bay	43° 53'	135° 27'	− − −	− − −	− −	− −	0.5	0.6	1.2	
279	Olga Bay	43° 43'	135° 15'	− − −	− − −	− −	− −	0.5	0.6	1.2	
281	Syaukhu Bay	42° 54'	133° 53'	− − −	− − −	− −	− −	0.6	0.7	1.4	
283	Nakhodka Bay, America Bay	42° 49'	132° 54'	− − −	− − −	− −	− −	0.5	0.7	1.3	
285	Sukhodol Bay, Ussuri Bay	43° 10'	132° 22'	− − −	− − −	− −	− −	0.5	0.7	1.3	
287	Vladivostok	43° 07'	131° 54'	− − −	− − −	− −	− −	0.6	0.7	1.4	
289	Reineke Island, Peter the Great Bay	42° 55'	133° 44'	− − −	− − −	− −	− −	0.6	0.7	1.4	
291	Slavyanski Bay	42° 52'	131° 23'	− − −	− − −	− −	− −	0.5	0.7	1.3	
293	Furugelma Island	42° 28'	130° 56'	− − −	− − −	− −	− −	0.6	0.7	1.5	
295	Posiet, Gulf of Posiet	42° 39'	130° 48'	− − −	− − −	− −	− −	0.6	0.7	1.4	
	CHISHIMA RETTO Time meridian, 165° E										
								Diurnal	Tropic		
	<i>Shumshu</i>										
297	Kotomari Zaki †	50° 50'	156° 30'	+0 40	+0 40	*0.85	*0.85	3.8	4.8	3.4	
299	Nakagawa Wan †	50° 39'	156° 24'	−0 20	−0 20	*0.91	*0.91	4.1	5.0	3.5	
301	Kozyrevskoye †	50° 43'	156° 12'	+1 20	+1 20	+0.2	+0.2	4.5	5.7	3.9	
303	Araido To †	50° 50'	155° 39'	+1 55	+1 55	+1.2	+0.3	5.4	6.7	4.4	
305	Banjo Zaki †	50° 45'	156° 08'	+1 35	+1 35	+0.6	+0.2	4.9	6.1	4.1	
307	Yotsuiwa †	50° 17'	155° 55'	−0 25	−0 25	*0.89	*0.80	4.1	4.9	3.4	
309	PARAMUSHIR ISLAND †	50° 11'	155° 39'			<i>Daily predictions</i>		4.5	5.2	3.8	
311	Mys Kapustnyy †	50° 04'	155° 13'	+1 25	+1 25	+0.3	+0.2	4.6	5.7	3.9	
313	Kujira Wan †	50° 17'	155° 20'	+1 30	+1 30	+0.2	+0.1	4.6	5.6	4.0	
315	Kakumabetsu Wan †	50° 23'	155° 35'	+1 40	+1 40	+0.9	+0.2	5.2	6.5	4.3	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Diurnal	Tropic	
				High Water	Low Water	High Water	Low Water			
	CHISHIMA RETTO—cont. Time meridian, 165° E	North	East	h m	h m	ft	ft	ft	ft	ft
	<i>Uruppu To</i>			on Paramushir Island, p.8						
337	Yosinohama	46° 12'	150° 31'	+0 15	+0 15	*0.58	*0.58	2.6	3.0	2.2
339	Garan Zaki	45° 48'	149° 56'	+0 15	+0 15	*0.67	*0.60	3.1	3.6	2.5
				on Otomari, p.4						
341	Tokotan Wan	45° 51'	149° 44'	−0 15	−0 15	+0.1	+0.1	3.0	3.8	2.5
343	Tsurigane Wan	46° 06'	150° 10'	−0 15	−0 15	*0.87	*0.87	2.6	3.3	2.1
	<i>Yetorofu Jima</i>			on Paramushir Island, p.8						
345	Zaliv Kasatka	44° 56'	147° 38'	+0 30	+0 30	*0.69	*0.60	3.2	3.7	2.8
347	Kodnyy	44° 43'	147° 21'	+0 25	+0 25	(*0.78+0.2)		3.5	4.2	3.2
				on Otomari, p.4						
349	Naibo Wan	44° 46'	147° 12'	−0 15	−0 15	*0.95	*0.95	2.8	3.5	2.3
351	Kitovyy	45° 15'	147° 53'	−0 20	−0 20	*0.90	*0.90	2.7	3.4	2.2
353	Shamambe Byochi	45° 20'	148° 01'	−0 20	−0 20	*0.97	*0.97	2.8	3.6	2.3
355	Shibetoro	45° 30'	148° 37'	−0 15	−0 15	*0.87	*0.87	2.6	3.2	2.1
357	Moyoro Wan	45° 26'	148° 51'	−0 25	−0 25	*0.90	*0.78	2.8	3.2	2.1
	<i>Kunashiri Jima</i>			on Paramushir Island, p.8						
359	Yuzhno Kurilsk	44° 02'	145° 51'	+0 15	+0 15	*0.73	*0.70	3.3	3.8	2.9
361	Tomari Wan	43° 44'	145° 27'	+0 50	+0 50	*0.78	*0.78	3.5	4.1	3.0
363	Shakotan Ko, Shikotan Jima	43° 52'	146° 49'	+0 30	+0 30	*0.67	*0.67	3.1	3.5	2.6
365	Taraku Jima	43° 38'	146° 21'	+0 25	+0 25	*0.73	*0.73	3.2	3.8	2.8
367	Suisho To	43° 25'	145° 54'	+0 35	+0 35	*0.80	*0.80	3.6	4.1	2.9
	JAPAN Hokkaido Time meridian, 135° E			on Kamaisi, p.16						Mean Spring
369	Rausu Hakuchi	44° 01'	145° 12'	−0 47	−0 47	(*0.65+0.4)		1.5	2.0	2.3
371	Nemuro Ko	43° 20'	145° 35'	−0 32	−0 34	+0.1	0.0	2.4	3.1	2.9
373	Hanasaki	43° 17'	145° 35'	−0 07	−0 05	−0.3	−0.1	2.1	2.7	2.7
375	Ochiishi Wan	43° 10'	145° 31'	−0 22	−0 25	−0.1	0.0	2.2	2.9	2.8
377	Kiritappu Jima, Hamanaka Wan	43° 04'	145° 10'	−0 28	−0 30	−0.2	−0.1	2.2	2.8	2.7
379	Akkeshi Wan	43° 02'	144° 51'	−0 23	−0 25	−0.2	−0.2	2.3	2.9	2.7
381	Kushiro Ko	42° 58'	144° 22'	−0 08	−0 15	0.0	0.0	2.3	3.0	2.9
383	Rubeshibetsu Saki	42° 12'	143° 20'	−0 26	−0 28	−0.2	−0.1	2.2	2.7	2.7
385	Utaru	41° 58'	143° 12'	−0 16	−0 18	0.0	−0.1	2.4	3.1	2.8
387	Muroran Ko	42° 19'	140° 58'	−0 29	−0 19	+0.6	+0.3	2.6	3.6	3.3
389	Usu Wan, Iburu Wan	42° 31'	140° 46'	−0 14	−0 16	+0.3	0.0	2.6	3.5	3.0
391	Mori Ko, Iburu Wan	42° 07'	140° 36'	−0 19	−0 21	0.0	−0.1	2.4	3.2	2.8
393	Usujiri Wan	41° 56'	140° 57'	−0 15	−0 17	−0.2	−0.1	2.2	2.9	2.7
395	Shiokubi Saki	41° 43'	140° 58'	+0 16	+0 14	0.0	0.0	2.3	3.0	2.9
397	Hakodate Ko	41° 47'	140° 43'	+0 00	+0 10	(*0.74−0.2)		1.7	2.3	1.9
399	Wakimoto	41° 34'	140° 26'	+0 09	+0 07	(*0.65−0.1)		1.5	2.0	1.8
401	Yoshioka	41° 27'	140° 14'	+0 38	+0 35	(*0.48−0.1)		1.1	1.4	1.3
403	Fukuyama Byochi	41° 26'	140° 07'	---	---	---	---	0.5	---	0.7
405	Kamome Jima, Yesashi Ko	41° 52'	140° 06'	---	---	---	---	0.5	---	0.8
407	Aonai Wan, Okushiri Shima	42° 04'	139° 27'	---	---	---	---	0.5	---	0.7
409	Setana Ko	42° 28'	139° 50'	---	---	---	---	0.4	---	0.7
411	Sutsu Ko	42° 47'	140° 16'	---	---	---	---	0.4	---	0.6
413	Iwanai Byochi	42° 59'	140° 30'	---	---	---	---	0.5	---	0.6
415	Kamoi Misaki	43° 20'	140° 21'	---	---	---	---	0.4	---	0.6
417	Otaru Ko	43° 13'	141° 01'	---	---	---	---	0.4	---	0.5
419	Moye	43° 36'	141° 23'	---	---	---	---	0.4	---	0.6
421	Rumoi Ko	43° 57'	141° 39'	---	---	---	---	0.3	---	0.5
423	Tomamai	44° 19'	141° 39'	---	---	---	---	0.4	---	0.6
425	Rishiri To	45° 14'	141° 14'	---	---	---	---	0.4	---	0.6
427	Wakkanai Ko	45° 25'	141° 41'	---	---	---	---	0.4	---	0.6
429	Soya Misaki	45° 31'	141° 57'	---	---	---	---	0.5	---	0.6
				on Otomari, p.4						Diurnal Tropic
431	Esashi Byochi	44° 56'	142° 35'	−2 35	−2 35	*0.80	*0.80	2.4	2.9	1.9
433	Omu Ko	44° 35'	142° 58'	−2 30	−2 30	(*0.83+0.1)		2.5	3.2	2.1
435	Monbetsu Byochi	44° 21'	143° 22'	−2 58	−2 46	*0.97	*0.97	2.8	3.4	2.4
437	Abashiri Byochi	44° 01'	144° 16'	−2 15	−2 15	*0.90	*0.90	2.7	3.4	2.2
439	Koiseboi	44° 02'	144° 56'	−2 30	−2 30	*0.87	*0.87	2.6	3.2	2.1
	Honshu, North Coast			on Naha, p.44						Mean Spring
441	Tappi Saki	41° 15'	140° 21'	−3 53	−3 53	(*0.24+0.2)		1.0	1.4	1.1
443	Mimmaya, Mimmaya Wan	41° 12'	140° 26'	−4 07	−4 08	*0.24	*0.24	1.0	1.4	0.9
445	Aomori Ko, Mutsu Kaiwan	40° 50'	140° 44'	−4 11	−4 12	*0.34	*0.34	1.4	2.0	1.3
447	Shiranai Wan, Mutsu Kaiwan	40° 57'	140° 58'	−4 09	−4 10	*0.32	*0.32	1.3	1.8	1.2
449	Ominato Ko, Mutsu Kaiwan	41° 15'	141° 09'	−4 12	−3 49	*0.32	*0.28	1.4	2.0	1.2
451	Oma	41° 32'	140° 54'	−4 09	−4 10	*0.37	*0.37	1.5	2.0	1.5
453	Ohata	41° 24'	141° 10'	−4 11	−4 12	(*0.49+0.4)		2.0	2.6	2.3

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Spring	
				High Water	Low Water	High Water	Low Water			
	JAPAN Honshu, East Coast Time meridian, 135° E	North	East	h m	h m	ft	ft	ft	ft	ft
				on Kamaisi, p.16						
455	Shiriya	41° 24'	141° 27'	-0 12	-0 15	+0.4	+0.2	2.5	3.2	3.2
457	Tomari	41° 05'	141° 24'	-0 10	-0 13	+0.1	-0.1	2.5	3.2	2.9
459	Hachinohe Ko	40° 32'	141° 33'	-0 16	-0 15	-0.2	-0.1	2.2	2.9	2.7
461	Kuji Wan	40° 11'	141° 49'	-0 10	-0 13	+0.1	0.0	2.4	3.1	2.9
463	Miyako Ko <3>	39° 38'	141° 58'	+0 00	+0 06	-0.2	-0.1	2.2	2.9	2.7
465	Yamada Ko	39° 28'	141° 58'	-0 09	-0 11	-0.1	-0.1	2.3	3.0	2.8
467	KAMAISI	39° 16'	141° 54'	Daily predictions				2.3	3.0	2.9
469	Kesennuma Wan	38° 53'	141° 37'	+0 02	+0 00	-0.1	-0.1	2.3	3.0	2.8
471	Oginohama Ko	38° 23'	141° 26'	+0 08	+0 06	+0.4	+0.1	2.6	3.4	3.1
473	Same Ura, Nobiru Wan	38° 21'	141° 10'	+0 14	+0 12	+0.2	+0.1	2.4	3.3	3.0
475	Hirakata Wan	36° 51'	140° 48'	+0 11	+0 08	-0.1	-0.1	2.3	3.0	2.8
477	Choshi Ko (inside)	35° 44'	140° 50'	+0 48	+0 45	*0.65	*0.65	1.5	1.9	1.9
479	Nagasaki, Inubo Saki	35° 42'	140° 52'	+0 45	+0 43	+0.1	0.0	2.4	3.2	2.9
				on Yokohama, p.20						
481	Katsuura Wan	35° 08'	140° 18'	-0 43	-0 35	*0.78	*0.80	2.7	3.5	3.0
483	Kamogawa, Kamogawa Wan	35° 06'	140° 06'	-0 31	-0 22	(*0.74+0.2)		2.6	3.5	3.0
485	Otohamo	34° 55'	139° 56'	-0 31	-0 22	(*0.74+0.1)		2.6	3.4	2.9
	Honshu, South Coast									
	Tokyo Wan									
487	Tateyama Wan	35° 01'	139° 51'	-0 22	-0 14	*0.83	*0.83	2.9	3.9	3.2
489	Uraga Ko	35° 14'	139° 43'	-0 12	-0 04	(*0.83+0.1)		2.9	3.8	3.3
491	Yokosuka Ko	35° 17'	139° 40'	-0 04	-0 04	*0.91	*0.91	3.2	4.3	3.5
493	YOKOHAMA <4>	35° 26'	139° 40'	Daily predictions				3.5	4.7	3.8
495	Shinagawa, Tokyo Ko	35° 37'	139° 45'	+0 02	+0 11	0.0	-0.1	3.6	4.8	3.7
497	Chiba	35° 36'	140° 07'	-0 06	+0 02	+0.4	+0.1	3.8	5.1	4.0
499	Aburatsubo <5>	35° 09'	139° 37'	-0 08	+0 00	(*0.77+0.1)		2.7	3.6	3.0
501	Koto Wan	35° 13'	139° 37'	-0 23	-0 14	*0.80	*0.80	2.8	3.7	3.0
503	Ajiro Ko	35° 03'	139° 05'	-0 21	-0 12	(*0.77+0.1)		2.7	3.5	3.0
505	Shimoda Ko <6>	34° 40'	138° 57'	+0 05	+0 14	*0.86	*0.86	3.0	3.9	3.3
507	Merakoura Ko	34° 40'	138° 47'	+0 23	+0 31	*0.85	*0.85	3.0	3.9	3.2
509	Tago Minato	34° 48'	138° 46'	+0 25	+0 33	(*0.89-0.1)		3.1	4.2	3.3
511	Eno Ura	35° 01'	138° 53'	+0 32	+0 41	*0.80	*0.80	2.8	3.8	3.0
513	Shimizu Ko	35° 00'	138° 30'	+0 32	+0 36	*0.85	*0.85	3.0	4.1	3.2
515	Omai Saki	34° 36'	138° 13'	+0 18	+0 27	*0.89	*0.85	3.2	4.3	3.3
517	Shino Shima, Mikawa Wan	34° 41'	137° 00'	+0 54	+1 03	+0.8	0.0	4.3	5.8	4.2
519	Gamagori, Mikawa Wan	34° 49'	137° 14'	+0 56	+1 04	+1.3	+0.1	4.7	6.3	4.5
521	Nagoya Ko, Iseno Umi	35° 05'	136° 53'	+1 01	+1 05	(*1.40-0.6)		4.9	6.8	4.7
523	Yokkaichi Ko, Iseno Umi	34° 57'	136° 38'	+1 01	+1 10	+1.0	0.0	4.5	6.0	4.3
525	Tsu Ko, Iseno Umi	34° 43'	136° 32'	+0 59	+1 07	+1.2	+0.1	4.6	6.2	4.4
527	Toba Ko	34° 29'	136° 51'	+0 54	+1 08	+0.3	-0.1	3.9	5.3	3.9
529	Matoya Ko	34° 22'	136° 52'	+0 40	+0 49	*0.89	*0.85	3.2	4.3	3.3
531	Hamashima, Ago Wan	34° 17'	136° 45'	+0 49	+0 58	*0.91	*0.85	3.3	4.4	3.4
533	Gokasho Ko	34° 19'	136° 40'	+0 31	+0 39	*0.91	*0.85	3.3	4.5	3.4
535	Hikimoto Ura, Owashi Wan	34° 05'	136° 15'	+0 44	+0 49	*0.93	*0.90	3.3	4.5	3.5
537	Katsuura Wan	33° 37'	135° 57'	+0 42	+0 51	*0.91	*0.85	3.3	4.3	3.4
539	Urakami Ko	33° 33'	135° 54'	+0 44	+0 53	-0.4	-0.3	3.4	4.5	3.4
541	Kushimoto, Fukuro Ko	33° 28'	135° 46'	+0 53	+1 02	*0.91	*0.85	3.3	4.5	3.4
543	Susami	33° 33'	135° 30'	+0 56	+1 05	-0.1	-0.1	3.5	4.7	3.7
545	Tanabe Ko	33° 43'	135° 22'	+0 47	+0 56	-0.1	-0.3	3.7	4.8	3.6
547	Mio	33° 53'	135° 05'	+0 50	+0 58	-0.2	-0.2	3.5	4.7	3.6
	Nanpo Shoto (Southern Islands)									
549	Habu Ko, O Shima	34° 41'	139° 26'	-0 28	-0 20	(*0.77+0.2)		2.7	3.5	3.1
551	Shikine Shima	34° 19'	139° 13'	+0 06	+0 15	(*0.80+0.2)		2.8	3.8	3.2
553	Kaminato Hakuchi, Hachijo Jima	33° 08'	139° 48'	-0 05	+0 04	(*0.66+0.2)		2.3	3.1	2.7
555	Tori Shima	30° 29'	140° 19'	+0 39	+0 47	(*0.63+0.1)		2.2	3.0	2.5
557	Muko Jima, Ogasawara Gunto	27° 41'	142° 08'	+0 50	+0 50	(*0.63-0.1)		2.2	2.8	2.3
559	Futami Ko, Ogasawara Gunto <7>	27° 05'	142° 11'	+0 47	+0 55	*0.57	*0.57	2.0	2.8	2.2
561	Okimura, Ogasawara Gunto	26° 38'	142° 09'	+1 05	+1 13	(*0.63-0.1)		2.2	2.8	2.3
563	Ishino, Kita Iwo Jima, Kazan Retto	25° 26'	141° 18'	+1 39	+1 39	*0.51	*0.51	1.8	2.3	1.9
565	Nishi, Iwo Jima, Kazan Retto	24° 48'	141° 18'	+1 35	+1 43	*0.51	*0.51	1.8	2.3	1.9
	Shikoku, South Coast									
				on Naha, p.44						
567	Kannoura Ko	33° 33'	134° 18'	-1 25	-1 25	-0.5	0.0	3.6	4.8	3.6
569	Muroto Saki	33° 17'	134° 09'	-1 22	-1 23	0.0	+0.1	4.0	5.2	3.9
571	Urado Ko	33° 30'	133° 34'	-1 15	-1 12	*0.92	*0.92	3.6	4.8	3.6
573	Susaki Ko <8>	33° 24'	133° 17'	-1 19	-1 20	-0.3	0.0	3.8	5.0	3.7
	Naikai (Inland Sea)									
				on Yokohama, p.20						
	Kii Suido									
575	Hii Wan	33° 55'	135° 05'	+1 08	+1 17	-0.3	-0.2	3.4	4.6	3.5
577	Shimotsu Ura, Osaki Wan	34° 07'	135° 08'	+1 15	+1 23	-0.2	-0.1	3.4	4.8	3.6
579	Wakanoura Wan	34° 11'	135° 11'	+1 44	+1 46	(*0.89+0.2)		3.1	4.3	3.6
581	Tachibana Ura	33° 52'	134° 39'	+0 55	+1 04	-0.4	-0.3	3.4	4.5	3.4
583	Komatsushima Ko	34° 01'	134° 36'	+1 03	+1 11	*0.87	*0.85	3.1	4.2	3.3

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Spring	
				High Water	Low Water	High Water	Low Water			
	JAPAN Naikai (Inland Sea)—cont. Time meridian, 135° E	North	East	h m	h m	ft	ft	ft	ft	ft
				on Kobe, p.24						
585	Tomoga Shima, Tomogashima Suido	34° 17'	135° 00'	−0 46	−0 44	+0.6	+0.1	3.0	4.5	3.4
587	Yura Ko, Tomogashima Suido	34° 16'	134° 57'	−0 48	−0 48	0.0	−0.1	2.6	3.6	3.0
	Izumi Nada <9>									
589	Sumoto	34° 20'	134° 54'	−0 27	−0 42	*0.98	*0.98	2.4	3.4	3.0
591	Osaka Ko	34° 39'	135° 26'	−0 06	−0 11	+0.2	+0.1	2.6	3.7	3.2
593	KOBE	34° 41'	135° 12'	Daily predictions				2.5	3.6	3.1
595	Karumo Jima	34° 39'	135° 10'	+0 05	−0 04	+0.1	+0.1	2.5	3.4	3.2
597	Akashi Ko, Akashi Seto <10>	34° 39'	135° 00'	− − −	+0 48	*0.67	*0.67	− −	2.4	2.2
599	E Saki, Awaji, Akashi Seto <11>	34° 36'	134° 59'	− − −	+0 55	*0.65	*0.65	− −	2.3	2.2
				on Sakate, p.28						
601	Murotsu, Awaji	34° 31'	134° 52'	+0 19	+0 23	(*0.64+0.5)		1.8	2.2	2.6
603	Ei, Awaji	34° 28'	134° 50'	+0 19	+0 09	(*0.68+0.4)		1.9	2.2	2.6
605	Anaga Ura, Awaji	34° 16'	134° 40'	+0 29	+0 37	(*0.86+0.2)		2.4	2.6	3.0
607	Ajiro, Naruto	34° 14'	134° 38'	+0 53	+0 57	*0.92	*0.89	2.6	3.1	3.0
				on Yokohama, p.20						
609	Fukura Ura, Awaji	34° 15'	134° 42'	+1 29	+1 36	(*0.94−0.1)		3.3	4.5	3.5
				on Kobe, p.24						
611	Tosadomari, Muiyano Seto	34° 11'	134° 37'	−0 11	−0 19	+0.1	0.0	2.6	3.6	3.1
613	Kita−tomariura, Muiyano Seto <10>	34° 14'	134° 35'	− − −	+1 46	−1.2	−0.3	− −	2.8	2.4
615	Aziro	34° 14'	134° 38'	+4 31	+4 18	0.0	−0.1	2.6	3.4	3.0
				on Sakate, p.28						
617	Hikeda, Harima Nada	34° 14'	134° 24'	+0 22	+0 23	*0.93	*0.93	2.6	2.8	3.1
619	SAKATE, Shodo Shima	34° 27'	134° 19'	Daily predictions				2.8	3.1	3.3
621	Ikedo Wan, Shodo Shima	34° 29'	134° 12'	−0 11	−0 06	+1.0	+0.2	3.6	4.5	3.9
	Harima Nada									
623	Takasago Ko	34° 45'	134° 49'	−0 29	−0 25	(*0.75+0.4)		2.1	2.5	2.9
625	Shikama Ko	34° 47'	134° 41'	−0 24	−0 28	(*0.82+0.6)		2.3	2.4	3.3
627	Ie Shima	34° 41'	134° 32'	−0 16	−0 16	(*0.82+0.2)		2.3	2.5	2.9
629	O−O Wan	34° 47'	134° 28'	−0 20	−0 16	(*0.93+0.2)		2.6	3.1	3.3
631	Otabu Shima	34° 41'	134° 18'	−0 12	−0 08	−0.1	−0.1	2.8	3.3	3.2
633	Ushimado Ko	34° 36'	134° 09'	−0 01	+0 03	+0.8	+0.1	3.5	4.4	3.8
635	Kogushi, Okayama Suido	34° 36'	134° 02'	+0 01	+0 05	+1.0	+0.1	3.7	4.6	3.9
				on Kure, p.32						
637	Nao Shima	34° 27'	133° 58'	+1 29	+1 26	(*0.67+0.4)		5.0	6.2	4.8
639	Ogi Shima	34° 26'	134° 03'	+1 25	+1 46	(*0.56+0.6)		4.2	5.0	4.3
641	Takamatsu Ko	34° 21'	134° 02'	+1 25	+1 26	(*0.60+0.4)		4.5	5.3	4.4
643	Nabe Shima	34° 23'	133° 50'	+1 40	+1 37	(*0.84+0.3)		6.3	8.1	5.8
645	Shimotsui	34° 26'	133° 48'	+1 32	+1 28	(*0.80+0.3)		6.0	7.8	5.6
647	Awashima, Awa Shima	34° 16'	133° 38'	+1 46	+1 46	+0.2	0.0	7.7	9.6	6.7
649	Tomo Tsu, Bingo Nada	34° 23'	133° 23'	+1 25	+1 26	+0.5	0.0	8.0	9.9	6.8
651	Tachibana, Mekari Seto	34° 21'	133° 12'	+1 25	+1 21	+0.1	+0.1	7.5	9.7	6.7
653	Onomichi Seto	34° 24'	133° 12'	+1 16	+1 13	+0.1	0.0	7.6	9.2	6.6
655	Itosaki, Mihara Wan	34° 23'	133° 06'	+1 08	+1 04	−0.3	−0.1	7.3	9.2	6.4
657	Setoda, Ikuchi Jima	34° 18'	133° 05'	+0 49	+0 46	−0.2	−0.2	7.5	9.6	6.4
659	Tadanomi, Mihara Seto	34° 20'	132° 59'	+0 31	+0 27	+0.6	+0.3	7.8	10.3	7.0
661	Takihama, Hiuchi Nada	33° 59'	133° 21'	+1 24	+1 20	+0.5	+0.1	7.9	10.4	6.9
663	Imabari, Kurushima Kaikyo	34° 04'	133° 00'	+1 06	+1 03	−0.3	0.0	7.2	9.4	6.4
665	Hashihama, Kurushima Kaikyo	34° 07'	132° 58'	+0 28	+0 22	+0.3	+0.1	7.7	9.9	6.8
667	Mitarai, Osaki Shimo Shima	34° 11'	132° 52'	+0 11	+0 08	+0.3	+0.1	7.7	10.1	6.8
669	Koyo, Aki Nada	34° 14'	132° 43'	+0 16	+0 13	−1.0	−0.2	6.7	8.9	6.0
671	Mutsuki Seto, Naka Shima	33° 59'	132° 38'	−0 21	−0 25	−0.7	−0.1	6.9	9.0	6.2
	Hiroshima Wan									
673	Karoto Koseto	34° 04'	132° 33'	−0 13	−0 16	(*0.88+0.1)		6.6	8.7	5.9
675	Ondo Seto	34° 12'	132° 32'	−0 04	−0 08	(*0.88+0.1)		6.6	8.6	5.9
677	KURE	34° 14'	132° 33'	Daily predictions				7.5	9.9	6.6
679	Yeta Uchi	34° 15'	132° 28'	−0 05	−0 09	0.0	+0.1	7.4	9.8	6.6
681	Nasami Seto	34° 15'	132° 23'	−0 18	−0 21	−0.8	−0.1	6.8	9.3	6.1
683	Hiroshima Ko (Ujina Ko)	34° 21'	132° 28'	−0 09	−0 13	−0.2	0.0	7.3	9.7	6.5
685	Itsuku Shima	34° 18'	132° 19'	−0 09	−0 13	−0.2	0.0	7.3	9.6	6.5
687	Shimminato	34° 11'	132° 14'	−0 12	−0 15	−0.8	−0.1	6.8	9.1	6.1
689	Moro Shima Suido	33° 57'	132° 28'	−0 35	−0 38	−0.5	0.0	7.0	9.1	6.3
691	Yashiro Jima	33° 55'	132° 18'	−0 09	−0 13	(*0.88+0.1)		6.6	8.8	5.9
693	Obatake Seto	33° 57'	132° 10'	−0 50	−0 53	(*0.85+0.2)		6.4	8.5	5.8
	Iyo Nada									
695	Okikamuro Shima	33° 51'	132° 22'	−0 41	−0 44	(*0.85+0.2)		6.4	8.3	5.8
697	Kaminoseki Kaikyo	33° 50'	132° 07'	−0 58	−1 02	(*0.79+0.2)		5.9	8.0	5.4
699	Mitsugahama Hakuchi	33° 52'	132° 42'	−0 31	−0 33	−0.4	0.0	7.1	9.3	6.4
701	Ao Shima	33° 44'	132° 29'	−0 55	−0 59	(*0.88+0.2)		6.6	8.7	6.0
703	Nagahama Ko	33° 37'	132° 29'	−1 16	−1 20	(*0.85+0.1)		6.4	8.5	5.7
705	Mitsukuye Ko	33° 27'	132° 14'	−1 12	−1 15	(*0.83+0.3)		6.2	8.2	5.8
707	Saganoseki	33° 15'	131° 53'	−1 16	−1 19	(*0.52+0.6)		3.9	5.1	4.0
709	Beppu Ko	33° 17'	131° 30'	−1 20	−1 24	(*0.59+0.4)		4.4	5.7	4.3

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES			Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	JAPAN Naikai (Inland Sea)—cont. Time meridian, 135° E	North	East	h m	h m	ft	ft	ft	ft	ft	
	Bungo Suido										
711	Yawatahama Ko	33° 27'	132° 24'	+0 10	+0 09	+0.5	+0.3	4.3	5.7	4.3	
713	Okuchi Wan	33° 20'	132° 23'	+0 08	+0 07	+0.4	+0.2	4.3	5.7	4.2	
715	Hiburi Shima	33° 10'	132° 16'	+0 00	-0 01	+0.1	+0.2	4.0	5.3	4.0	
717	Mizugaura, Uwajima Wan	33° 12'	132° 27'	+0 03	+0 03	+0.4	+0.3	4.2	5.6	4.2	
719	Uwajima Ko	33° 14'	132° 33'	+0 05	+0 04	(*0.90+0.8)		3.7	5.2	4.3	
721	Kashiwa	33° 01'	132° 30'	-0 47	-0 47	0.0	+0.1	4.0	5.2	3.9	
723	Sukumo Ko	32° 54'	132° 42'	-1 08	-1 08	-0.2	0.0	3.9	5.2	3.8	
725	Katsura, Saeki Wan	32° 59'	131° 54'	-0 05	-0 02	(*0.80+0.3)		3.3	4.4	3.4	
727	Saganoseki, Shita Ura	33° 14'	131° 53'	+0 35	+0 26	+0.1	+0.2	4.0	5.4	4.0	
	Suo Nada										
729	Hime Shima	33° 44'	131° 38'	-0 48	-0 47	(*0.84+0.2)		6.3	8.5	5.7	
731	Kakaji	33° 41'	131° 31'	-0 45	-0 49	-0.8	-0.1	6.8	9.1	6.1	
733	Unoshima Ko	33° 38'	131° 08'	-0 52	-0 56	+0.5	+0.2	7.8	10.4	6.9	
735	Tokuyama Wan	34° 01'	131° 49'	-1 02	-1 01	(*0.84+0.4)		6.3	8.5	5.9	
737	Mitajiri Ko	34° 02'	131° 35'	-0 54	-0 58	(*0.84+0.1)		6.3	8.5	5.6	
739	Ube Ko	33° 56'	131° 15'	-0 52	-0 51	+0.6	+0.3	7.8	10.5	7.0	
	Shimonoseki Kaikyo										
741	Aohama, Kyushu	33° 57'	131° 01'	-0 47	-0 47	+0.6	+0.1	8.0	10.8	6.9	
743	Iwakuro, Honshu	33° 58'	130° 59'	-0 37	-0 41	+0.3	+0.1	7.7	10.4	6.8	
	on Moji, p.36										
745	Shimonoseki, Honshu	33° 58'	130° 57'	+0 00	+0 00	*1.07	*1.07	5.4	7.2	4.4	
747	Isakimachi	33° 57'	130° 55'	+0 09	+0 02	*1.02	*1.02	4.7	6.4	4.1	
749	Moji, Kyushu	33° 57'	130° 58'			Daily predictions		4.59	6.56	4.27	
751	Tanokubi	33° 55'	130° 55'	+0 35	+0 22	*0.74	*0.74	3.4	4.8	3.0	
753	Haidomari	33° 57'	130° 53'	+0 38	+0 39	*0.59	*0.59	2.7	3.8	2.6	
755	Wakamatsu Ko	33° 55'	130° 49'	+0 54	+0 48	*0.59	*0.59	2.7	3.7	2.6	
	Honshu, Northwest Coast										
757	Yoshimo	34° 05'	130° 52'	+0 46	+0 39	*0.50	*0.50	2.3	3.2	2.3	
759	Kottoi	34° 19'	130° 54'	+1 05	+0 58	*0.52	*0.52	2.4	3.2	2.4	
761	Yuya Wan (Aburatani Wan)	34° 24'	130° 57'	+1 11	+1 04	*0.39	*0.39	1.8	2.5	1.9	
	on Hong Kong, p.120										
763	Senzaki Ko	34° 24'	131° 12'	+1 07	+1 17	*0.39	*0.32	1.5	2.0	1.7	
765	Hagi Ko	34° 26'	131° 25'	+1 27	+1 37	*0.36	*0.32	1.3	1.8	1.6	
767	Esaki Ko	34° 38'	131° 39'	+2 05	+2 15	*0.26	*0.25	0.9	1.2	1.2	
769	Hamada Ko (Tono Ura entrance) <12>	34° 55'	132° 04'	+2 41	+2 50	*0.20	*0.18	0.7	0.9	0.9	
771	Sagi Ura	35° 27'	132° 41'	---	---	---	---	0.5	---	---	
773	Kaka Ura	35° 35'	133° 03'	---	---	---	---	0.5	---	---	
775	Sakai Ko, Miho Wan	35° 33'	133° 14'	---	---	---	---	0.3	---	---	
777	Yonago Nakami	35° 26'	133° 19'	---	---	---	---	0.3	---	---	
779	Hinotso Ura, Dozen, Oki Retto	36° 05'	133° 04'	---	---	---	---	0.4	---	---	
781	Saigo Ko, Dogo, Oki Retto	36° 12'	133° 20'	---	---	---	---	0.5	---	---	
783	Shibayama Ko	35° 40'	134° 40'	---	---	---	---	0.5	---	---	
785	Ine Ko, Wakasa Wan	35° 40'	135° 17'	---	---	---	---	0.5	---	---	
787	Maizuru Ko, Wakasa Wan <13>	35° 27'	135° 19'	---	---	---	---	0.5	---	---	
789	Tsuruga Ko, Wakasa Wan <14>	35° 40'	136° 04'	---	---	---	---	0.5	---	---	
791	Mikuni Ko	36° 15'	136° 08'	---	---	---	---	0.5	---	---	
793	Wajima Ko	37° 24'	136° 54'	---	---	---	---	0.5	---	0.6	
795	Nanao, Nanao Wan	37° 03'	136° 58'	---	---	---	---	0.5	---	---	
797	Fushiki Ko, Toyama Wan	36° 48'	137° 04'	---	---	---	---	0.5	---	---	
799	Naoetsu Ko	37° 11'	138° 15'	---	---	---	---	0.5	---	---	
801	Niigata Ko	37° 57'	139° 04'	---	---	---	---	0.4	---	---	
803	Ogi Ko, Sado Shima	37° 49'	138° 17'	---	---	---	---	0.5	---	---	
805	Ryo Zu Ko, Sado Shima	38° 05'	138° 26'	---	---	---	---	0.5	---	---	
807	Kamo Ko	38° 46'	139° 44'	---	---	---	---	0.4	---	---	
809	Tsuchizaki	39° 45'	140° 03'	---	---	---	---	0.4	---	---	
811	Funakawa Wan	39° 53'	139° 52'	---	---	---	---	0.5	---	---	
813	Iwasaki	40° 35'	139° 54'	---	---	---	---	0.4	---	---	
815	Fuka Ura	40° 39'	139° 55'	---	---	---	---	0.4	---	---	
817	Kodomari Wan	41° 08'	140° 18'	---	---	---	---	0.6	---	---	
	Kyushu, East Coast										
	on Naha, p.44										
819	Inokushi Ko <15>	32° 48'	131° 54'	-1 07	-1 07	(*0.88+0.2)		3.6	4.8	3.6	
821	Todoro Ko	32° 30'	131° 41'	-1 04	-1 04	*0.97	*0.97	3.9	5.3	3.8	
823	Hososhima <16>	32° 26'	131° 40'	-0 51	-0 43	*0.90	*0.90	3.6	4.8	3.5	
825	Mimitsu	32° 20'	131° 37'	-0 57	-0 58	*0.92	*0.92	3.7	4.9	3.6	
827	Uchiumi <17>	31° 45'	131° 28'	-1 07	-1 07	(*0.93+0.2)		3.8	5.0	3.8	
829	Tonoura	31° 31'	131° 22'	-1 09	-1 09	(*0.95+0.2)		3.9	5.2	3.9	
831	Fukushima Inamachi, Ariake Wan	31° 27'	131° 12'	-0 59	-1 00	-0.1	0.0	4.0	5.3	3.8	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Spring	
				High Water	Low Water	High Water	Low Water			
	JAPAN Kyushu, South Coast Time meridian, 135° E	North	East	h m	h m	ft	ft	ft	ft	ft
				on Naha, p.44						
833	Odomari Wan	31° 01'	130° 41'	-0 24	-0 25	+1.3	+0.4	5.0	6.6	4.7
835	Yamagawa Ko, Kagoshima Kaiwan	31° 12'	130° 38'	-0 02	-0 02	+1.9	+0.5	5.5	7.3	5.1
837	Furue Ko, Kagoshima Kaiwan	31° 23'	130° 46'	-0 02	-0 02	+2.1	+0.5	5.7	7.5	5.2
839	Kagoshima Ko, Kagoshima Kaiwan	31° 36'	130° 34'	-0 01	+0 07	+2.1	+0.7	5.5	7.5	5.3
841	Bono Tsu, Tomari Ura	31° 16'	130° 13'	+0 09	+0 08	+1.6	+0.4	5.3	7.1	4.9
	Kyushu, West Coast			on Sasebo, p.40						
843	Nakagawara Ura <18>	31° 51'	129° 51'	-0 40	-0 42	(*0.90+0.3)		5.5	7.3	5.2
845	Akune	32° 01'	130° 11'	-0 47	-0 49	-0.2	0.0	5.9	7.8	5.3
847	Fukuro Oki, Yatsushiro Kai	32° 11'	130° 22'	+0 15	+0 14	+1.7	+0.4	7.4	9.9	6.4
849	Kaga Shima, Yatsushiro Kai	32° 31'	130° 33'	+0 19	+0 18	+2.7	+0.6	8.2	11.0	7.0
851	Yanagino Seto, Yatsushiro Kai	32° 33'	130° 25'	+0 19	+0 18	+2.9	+0.5	8.5	11.3	7.1
853	Misumi Ko, Misumi No Seto	32° 37'	130° 27'	+0 24	+0 22	*1.39	*1.22	8.9	11.8	7.3
855	Ushibuka, Amakusa Shimo Shima	32° 12'	130° 01'	-0 32	-0 34	+0.1	+0.1	6.1	8.1	5.5
857	Sakitsu Wan, Amakusa Shimo Shima	32° 19'	130° 01'	-0 36	-0 38	0.0	+0.1	6.0	8.2	5.4
859	Tomioaka Wan, Amakusa Shimo Shima	32° 32'	130° 02'	-0 24	-0 26	+1.1	+0.3	6.9	9.3	6.1
861	Kuchinotsu Wan	32° 36'	130° 11'	+0 23	+0 21	+1.7	+0.4	7.4	9.7	6.4
863	Shimabara, Shimabara Kaiwan	32° 47'	130° 23'	+0 32	+0 30	*1.58	*1.26	10.4	13.6	8.1
865	Miike Ko, Shimabara Kaiwan	33° 01'	130° 25'	+0 36	+0 37	*1.76	*1.57	11.2	14.9	9.2
867	Kabashima Suido	32° 34'	129° 47'	-0 25	-0 27	+0.1	0.0	6.2	8.2	5.4
869	Fukahori	32° 41'	129° 49'	-0 26	-0 23	+0.1	+0.2	6.0	8.3	5.5
871	Nagasaki Ko <19>	32° 43'	129° 51'	-0 24	-0 26	-0.6	-0.1	5.6	7.5	5.0
873	Terashima Suido	33° 02'	129° 38'	-0 12	-0 14	+0.1	+0.1	6.1	8.3	5.5
875	Omodake	33° 05'	129° 41'	-0 06	-0 08	+0.4	+0.2	6.3	8.5	5.7
877	SASEBO <20>	33° 10'	129° 43'	Daily predictions				6.1	8.4	5.4
879	Kogushi Wan, Omura Wan	33° 04'	129° 49'	+2 51	+2 49	(*0.26+0.1)		1.6	1.9	1.5
881	Omura, Omura Wan	32° 54'	129° 57'	+2 55	+2 53	(*0.28+0.2)		1.7	2.2	1.7
883	Kusudomari	33° 13'	129° 35'	-0 05	-0 07	0.0	+0.1	6.0	8.1	5.4
885	Shijiki Wan, Hirado Shima	33° 12'	129° 23'	+0 19	+0 18	-0.3	0.0	5.8	7.7	5.2
887	Usuka Wan, Hirado Shima	33° 23'	129° 32'	+0 42	+0 40	*0.88	*0.88	5.4	7.3	4.7
	Goto Retto									
889	Me Shima, Danjo Gunto	32° 00'	128° 21'	-0 21	-0 22	(*0.85+0.7)		5.2	7.1	5.3
891	Tamano Ura, Fukaye Jima	32° 37'	128° 37'	+0 07	+0 05	-0.1	+0.1	5.9	8.1	5.4
893	Fukaye, Fukaye Jima	32° 42'	128° 51'	+0 04	+0 02	-0.3	0.0	5.8	7.8	5.2
895	Wakamatsu Ura, Wakamatsu Shima	32° 53'	129° 01'	+0 21	+0 20	-0.1	0.0	6.0	8.0	5.3
897	Arikawa Wan, Nakadori Shima	32° 59'	129° 07'	+0 08	+0 07	*0.87	*0.87	5.3	7.1	4.7
899	Kono Ura, Uku Shima	33° 16'	129° 05'	+0 25	+0 24	-0.7	-0.2	5.6	7.6	4.9
	Kyushu, Northwest Coast			on Moji, p.36						
901	Kazamoto Ura, Iki Shima	33° 51'	129° 41'	+0 22	+0 15	*0.96	*0.96	4.4	5.9	3.8
903	Gono Ura, Iki Shima	33° 45'	129° 41'	+0 26	+0 19	*1.05	*1.05	4.8	6.6	4.2
905	Mikuriya, Imari Wan	33° 22'	129° 40'	+0 07	+0 01	*1.18	*1.18	5.4	7.6	5.0
907	Kariya Ko	33° 29'	129° 50'	+0 25	+0 18	*1.00	*1.00	4.6	6.2	4.2
909	Yobuko Ko <21>	33° 33'	129° 53'	+0 06	+0 00	*0.94	*0.94	4.3	6.1	3.9
911	Fukuoka Wan	33° 36'	130° 23'	+0 41	+0 35	*0.87	*0.87	4.0	5.6	3.7
913	Konominato Ura	33° 51'	130° 29'	+0 41	+0 35	*0.72	*0.72	3.3	4.5	3.1
915	Iwaya	33° 56'	130° 41'	+0 45	+0 38	*0.59	*0.59	2.7	3.7	2.7
	Tsushima			on Sasebo, p.40						
917	Mikata, Aso Wan	34° 18'	129° 16'	+0 33	+0 31	(*0.79-0.4)		4.8	6.5	3.9
919	Tsuna Shima	34° 25'	129° 16'	+0 33	+0 31	(*0.72-0.4)		4.4	6.0	3.5
921	Sasuna Ko	34° 39'	129° 23'	+0 16	+0 14	*0.51	*0.43	3.3	4.5	2.7
				on Moji, p.36						
923	Ajiro, Nishitomari Wan	34° 39'	129° 29'	-0 19	-0 25	*0.54	*0.54	2.5	3.5	1.9
925	Oshika	34° 31'	129° 26'	-0 16	-0 23	*0.63	*0.63	2.9	4.0	2.2
927	Miura Wan	34° 18'	129° 23'	-0 16	-0 23	*0.76	*0.76	3.5	4.8	2.8
929	Izuhara Ko	34° 12'	129° 17'	-0 10	-0 23	*0.83	*0.83	3.8	5.4	3.0
	Nansei Shoto (Southwestern Islands)			on Naha, p.44						
931	Nishinoomote Wan, Tanega Shima	30° 44'	130° 59'	-0 24	-0 24	+0.5	+0.2	4.4	5.8	4.2
933	O Ura, Tanega Shima	30° 27'	130° 58'	-0 52	-0 53	0.0	0.0	4.1	5.4	3.9
935	Isso, Yaku Shima	30° 27'	130° 30'	-0 07	-0 08	+0.7	+0.2	4.6	6.1	4.3
937	Kuchinoerabu Shima	30° 28'	130° 11'	-0 08	-0 09	+0.7	+0.2	4.6	6.2	4.3
939	Nakano Shima	29° 50'	129° 51'	-0 15	-0 16	+0.1	0.0	4.2	5.5	3.9
941	Takara Shima	29° 09'	129° 12'	+0 10	+0 10	-0.1	0.0	4.0	5.3	3.8
943	Somachi Hakuchi, Kikai Jima Amami O Shima	28° 20'	130° 00'	+0 30	+0 30	(*0.76+0.3)		3.1	4.3	3.3
945	Sumiyo Wan	28° 14'	129° 25'	-0 36	-0 37	0.0	0.0	4.1	5.2	3.9
947	Koniya	28° 09'	129° 18'	-0 10	-0 11	-0.1	0.0	4.0	5.4	3.8
949	Nishikomi	28° 14'	129° 10'	-0 08	-0 09	+0.1	0.0	4.2	5.5	3.9
951	Uken, Yakiuchi Wan	28° 18'	129° 14'	-0 04	-0 05	0.0	0.0	4.1	5.4	3.9
953	Kasari Wan	28° 27'	129° 39'	-0 04	-0 05	+0.1	-0.1	4.3	5.6	3.9
955	Uke Shima	28° 02'	129° 14'	-0 24	-0 26	0.0	+0.1	4.0	5.3	3.9
957	Sammura Wan, Tokuno Shima	27° 52'	128° 58'	-0 32	-0 32	*0.93	*0.93	3.8	5.0	3.6
959	Wadomari, Okinoyerabu Jima	27° 24'	128° 40'	-0 31	-0 31	*0.90	*0.90	3.6	4.7	3.5

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES			Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	JAPAN Nansei Shoto (Southwestern Islands)–cont. Time meridian, 135° E	North	East	h m	h m	ft	ft	ft	ft	ft	
						on Naha, p.44					
961	Gakiya, Iheya Jima Okinawa Shima	27° 03'	127° 58'	–0 09	–0 10	*0.90	*0.90	3.8	5.0	3.5	
963	Sukku, Ora Wan	26° 33'	128° 02'	–0 39	–0 39	0.0	0.0	4.1	5.5	3.9	
965	Yonabaru, Buckner Bay	26° 12'	127° 46'	–0 44	–0 42	–0.1	–0.1	4.1	5.4	3.7	
967	NAHA	26° 12'	127° 40'			Daily predictions				4.1 5.6 3.9	
969	Sesoko Byochi	26° 38'	127° 53'	+0 11	+0 11	–0.2	–0.2	4.1	5.4	3.7	
971	Unten Ko	26° 40'	128° 01'	–0 07	–0 08	*0.93	*0.93	3.8	5.0	3.6	
973	Zamami Jima, Kerama Kaikyo	26° 13'	127° 18'	–0 06	–0 07	–0.1	–0.1	4.1	5.4	3.8	
975	Gima Ko, Kume Shima	26° 20'	126° 44'	–0 07	–0 07	–0.1	–0.1	4.1	5.4	3.8	
977	Minami Daito Jima	25° 49'	131° 14'	–0 35	–0 35	*0.81	*0.81	3.3	4.4	3.2	
979	Miyako Hakuchi, Miyako Jima	24° 48'	125° 17'	+0 08	+0 07	*0.90	*0.90	3.8	4.9	3.5	
981	Ishigaki, Ishigaki Shima	24° 20'	124° 10'	+0 03	+0 02	(*0.83+0.2)		3.4	4.4	3.4	
983	Funauke, Iriomote Jima	24° 20'	123° 44'	+0 19	+0 18	(*0.83+0.2)		3.3	4.4	3.4	
985	Yonakuni Jima	24° 26'	123° 00'	–0 03	–0 03	(*0.76+0.2)		3.1	4.2	3.2	
987	Kobi Sho, Sento Shosho	25° 56'	123° 41'	+0 44	+0 43	(*0.80+0.4)		3.3	4.5	3.5	
	KOREA Korea, Japan Sea					on Pusan, p.48					
989	Unggi–hang	42° 20'	130° 25'	– – –	– – –	– –	– –	0.5	– –	0.7	
991	Sajin–man	41° 59'	130° 00'	– – –	– – –	– –	– –	0.5	– –	0.7	
993	Taeryanghwa–man	41° 12'	129° 44'	– – –	– – –	– –	– –	0.5	– –	0.7	
995	Songjin–hang	40° 40'	129° 13'	– – –	– – –	– –	– –	0.6	– –	0.8	
997	Ch'aho–hang	40° 12'	128° 39'	– – –	– – –	– –	– –	0.5	– –	0.7	
999	Sinp'o–hang	40° 01'	128° 12'	– – –	– – –	– –	– –	0.6	– –	0.7	
1001	Sohojin–hang	39° 49'	127° 38'	– – –	– – –	– –	– –	0.6	– –	0.7	
1003	Wonsan–hang, Yonghung–man	39° 10'	127° 26'	– – –	– – –	– –	– –	0.6	– –	0.7	
1005	Changjon–hang	38° 44'	128° 12'	– – –	– – –	– –	– –	0.5	– –	0.7	
1007	Chumunjin–hang	37° 54'	128° 50'	– – –	– – –	– –	– –	0.5	– –	0.6	
1009	Ullung–do	37° 29'	130° 54'	– – –	– – –	– –	– –	0.3	– –	0.4	
1011	Chukpyon–man	37° 04'	129° 26'	– – –	– – –	– –	– –	0.4	– –	0.5	
1013	Ch'uksan–hand	36° 30'	129° 27'	– – –	– – –	– –	– –	0.3	– –	0.4	
1015	Yongil–man	36° 03'	129° 23'	– – –	– – –	– –	– –	0.3	– –	0.4	
1017	Ulsan	35° 30'	129° 23'	–0 52	–0 44	(*0.46+0.1)		1.3	1.8	1.1	
1019	T'aehwa–gang	35° 28'	129° 25'	–1 00	–0 52	(*0.43+0.2)		1.2	1.7	1.1	
1021	PUSAN	35° 06'	129° 02'			Daily predictions				2.8 4.0 2.1	
1023	Yong–do	35° 05'	129° 03'	–0 11	–0 03	0.0	–0.1	2.9	3.9	2.1	
1025	Ch'onsong–man, Kadok–to	35° 01'	128° 49'	+0 07	+0 15	*1.50	*1.50	4.1	5.6	3.2	
1027	Masan–man	35° 10'	128° 34'	+0 10	+0 18	*1.60	*1.60	4.4	6.1	3.4	
1029	Unp'ung–p'o, Chinhae–man	35° 06'	128° 29'	+0 08	+0 16	*1.74	*1.74	4.8	6.6	3.7	
1031	Hyonnaeryang–haehyop, Chinhae–man	34° 53'	128° 28'	+0 20	+0 29	*1.80	*1.80	5.0	6.8	3.8	
1033	Chise–p'o, Koje–do	34° 50'	128° 43'	+0 03	+0 11	*1.54	*1.54	4.3	5.7	3.3	
						on Ch'ang Chiang Approach, p.92					
1035	Choguri–man, Koje–do	34° 43'	128° 36'	–1 10	–1 23	(*0.63–1.6)		5.4	7.3	4.4	
1037	Koje–man, Koje–do	34° 50'	128° 35'	–1 08	–1 20	(*0.67–1.7)		5.8	7.8	4.7	
1039	Ch'ungmu–hang	34° 51'	128° 25'	–0 49	–1 12	(*0.67–1.7)		5.8	8.1	4.7	
1041	Yokchi–do	34° 39'	128° 16'	–0 59	–1 11	(*0.71–1.9)		6.1	8.2	4.9	
1043	Wis–som, Saryang–do	34° 51'	128° 14'	–1 01	–1 13	(*0.74–1.9)		6.4	8.7	5.2	
1045	Kosong–man	34° 55'	128° 21'	–0 55	–1 07	(*0.77–2.2)		6.6	8.8	5.2	
1047	Mijo–man, Namhae–do	34° 43'	128° 03'	–1 04	–1 16	(*0.74–1.8)		6.4	8.8	5.3	
1049	Samch'onp'o	34° 56'	128° 04'	–1 00	–1 12	(*0.77–2.1)		6.6	8.9	5.3	
1051	Ch'ojon–ni	35° 03'	128° 03'	–0 31	–0 43	–3.9	–2.9	7.6	10.4	6.2	
1053	P'yongsan–ni, Namhae–do	34° 46'	127° 51'	–0 59	–1 11	–4.4	–3.0	7.2	10.0	5.9	
1055	Yosu	34° 45'	127° 46'	–0 43	–1 08	–4.3	–3.1	7.4	10.2	5.9	
1057	Kwangyang–man	34° 51'	127° 45'	–0 40	–0 53	–3.7	–2.9	7.8	10.7	6.3	
1059	Noryang–ni	34° 57'	127° 53'	–0 43	–0 55	–3.9	–2.9	7.6	10.4	6.2	
1061	Chobal–to, Yoja–man	34° 38'	127° 34'	–0 18	–0 31	–3.3	–2.7	8.0	11.0	6.6	
1063	Tonae–hae, Komun–do	34° 01'	127° 19'	–0 21	–0 34	(*0.77–1.6)		6.6	9.0	5.8	
1065	Sonjuk–to, Sonjuk–yolto	34° 17'	127° 22'	–0 01	–0 13	(*0.79–1.6)		6.8	9.4	6.0	
1067	Sayang–do, Naro–yolto	34° 28'	127° 27'	–0 35	–0 47	–3.7	–2.7	7.6	10.2	6.4	
1069	Kogum–sudo	34° 30'	127° 09'	–0 02	–0 14	–3.0	–2.4	8.0	10.9	6.9	
1071	Mato–sudo	34° 26'	126° 51'	+0 20	+0 07	–2.7	–2.4	8.3	11.5	7.1	
1073	Wando	34° 18'	126° 46'	+1 09	+1 09	–3.8	–2.5	7.3	9.9	6.5	
1075	Soan–hang, Soan–do	34° 09'	126° 38'	+0 44	+0 31	–3.9	–2.6	7.3	9.8	6.4	
	KOREA, Yellow Sea										
1077	Sangch'uja–do, Ch'uja–kundo Cheju–do	33° 57'	126° 17'	+1 24	+1 12	(*0.70–1.3)		6.0	7.9	5.4	
1079	Udo–sudo	33° 30'	126° 55'	–0 03	–0 16	(*0.56–0.9)		4.8	6.5	4.5	
1081	Sogwi–p'o	33° 14'	126° 33'	–0 08	–0 21	(*0.65–1.2)		5.6	7.5	5.0	
1083	Ch'agwi–do	33° 18'	126° 09'	+1 02	+0 50	(*0.63–1.0)		5.4	7.1	5.0	
1085	Cheju Harbor	33° 31'	126° 32'	+0 56	+0 54	(*0.59–1.1)		5.1	6.9	4.6	
1087	Hwabuk–ni	33° 31'	126° 35'	+0 54	+0 41	(*0.56–0.8)		4.8	6.4	4.6	
1089	Oran–ni, Maro–hae	34° 21'	126° 29'	+1 23	+1 11	–3.6	–2.5	7.5	9.9	6.6	
1091	Sangma–do, Samma–do	34° 27'	126° 25'	+1 24	+1 12	–2.8	–2.4	8.2	10.8	7.0	
1093	Hachodo	34° 18'	126° 03'	+3 40	+3 01	(*0.72–1.9)		6.2	8.1	5.0	
1095	Hat'ae–do, Naju–kundo	34° 32'	126° 03'	+3 08	+2 56	(*0.90–2.0)		7.7	9.9	6.6	
1097	Chin–do	34° 30'	126° 12'	+4 02	+3 50	–3.1	–2.5	8.0	10.3	6.8	
1099	Baikpachin	34° 32'	126° 21'	+1 40	+2 03	–3.7	–2.7	7.6	10.0	6.4	
1101	Usuyong	34° 35'	126° 18'	+3 50	+3 21	–3.6	–3.0	8.0	10.0	6.3	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Spring	
				High Water	Low Water	High Water	Low Water			
	KOREA, Yellow Sea—cont. Time meridian, 135° E	North	East	h m	h m	ft	ft	ft	ft	ft
				on Ch'ang Chiang Approach, p.92						
1103	Siha—do	34° 42'	126° 15'	+4 28	+3 36	−2.5	−2.5	8.6	10.6	7.1
1105	Mokp'o	34° 47'	126° 23'	+5 26	+4 36	−3.0	−3.3	8.9	11.2	6.5
1107	Yongsan—dong	34° 53'	126° 32'	+6 02	+5 50	*0.88	*0.60	9.0	11.2	7.7
1109	Taehuksan—do, Taehuksan—kundo	34° 41'	125° 26'	+4 01	+3 49	*0.68	*0.43	7.2	9.2	5.9
1111	Pigum—sido, Naju—kundo	34° 43'	125° 56'	+3 40	+3 28	−2.4	−2.5	8.7	11.2	7.2
1113	Chaun—do, Naju—kundo	34° 53'	126° 06'	+4 08	+3 56	−0.8	−2.2	10.0	12.8	8.1
1115	Imja—do	35° 03'	126° 05'	+4 31	+4 19	−0.9	−2.4	10.1	13.5	8.0
				on Inch'on, p.52						
1117	Hamp'yong—man	35° 09'	126° 21'	−2 35	−2 30	(*0.63+0.7)		13.1	16.6	10.3
1119	Anma—do, Anma—kundo	35° 21'	126° 01'	−2 28	−2 23	(*0.57+0.5)		11.8	15.1	9.2
1121	Kogunsan—kundo	35° 49'	126° 24'	−1 58	−1 53	(*0.69+0.5)		14.3	18.4	11.0
1123	Chuk—to, Kunsan—hang	36° 02'	126° 32'	−1 50	−1 46	(*0.72+0.7)		15.0	19.6	11.6
1125	Kunsan, Kum—gang	35° 59'	126° 43'	−1 36	−0 54	*0.73 *0.75		15.1	19.0	11.2
1127	Ochongdo	36° 07'	125° 59'	−1 44	−1 39	(*0.64+0.8)		13.2	17.3	10.5
1129	Oeyon—do, Oeyon—yolto	36° 13'	126° 04'	−1 36	−1 32	(*0.60+1.1)		12.5	16.7	10.2
1131	So—do, Ch'onsu—man	36° 24'	126° 26'	−1 10	−1 06	(*0.77+0.6)		15.9	20.8	12.3
1133	Mohang—ni	36° 47'	126° 08'	−0 57	−0 52	(*0.74+0.7)		15.4	20.0	11.9
1135	Umo—do	37° 02'	126° 27'	−0 27	−0 23	*0.91 *0.98		18.4	23.7	13.9
1137	Asan	36° 58'	126° 47'	+0 02	+0 02	+0.3	+0.3	20.7	27.4	15.5
1139	Soya—do, So—sido	37° 14'	126° 10'	−0 15	−0 11	(*0.85+0.6)		17.6	22.9	13.5
1141	Taemuui—do, (Marie Fortunee Arch.)	37° 23'	126° 27'	−0 09	−0 04	−0.8	+0.3	19.6	25.6	14.9
1143	INCH'ON, Yom—ha	37° 28'	126° 37'	Daily predictions				20.7	27.1	15.2
1145	Yongjong—do, Yom—ha	37° 30'	126° 34'	+0 06	+0 06	+0.4	+0.4	20.7	27.2	15.6
1147	Sinan—ni, Yom—ha	37° 40'	126° 32'	+0 55	− − −	+1.2	− − −	− − −	− − −	− − −
1149	Chumun—do, Songmo—sido	37° 39'	126° 15'	+0 15	+0 20	(*0.92+0.4)		19.0	24.8	14.4
1151	Taeyonp'yong—do, Yonp'yong—yolto	37° 40'	125° 43'	+0 14	+0 18	(*0.76+0.5)		15.7	20.3	12.1
1153	Mu—do, Haeju—man	37° 44'	125° 35'	+0 16	+0 20	(*0.72+0.9)		15.0	19.7	11.8
1155	Haeju, Haeju—man	38° 00'	125° 42'	+0 44	+0 49	(*0.82+0.5)		16.9	22.0	13.0
1157	Tungsan—got	37° 41'	125° 22'	+0 21	+0 25	(*0.62+1.1)		12.8	16.8	10.5
1159	Sunwi—do, Sunwido—myoji	37° 45'	125° 20'	+0 31	+0 36	(*0.53+1.1)		10.9	14.3	9.2
				on Dalian, p.60						
1161	Kirin—do	37° 50'	125° 03'	−4 22	−4 26	*1.41	*1.55	9.4	12.4	8.1
1163	Taech'ong—do, Taech'ong—kundo	37° 50'	124° 43'	−4 02	−4 05	+1.4	+0.8	7.5	9.7	6.8
1165	Wollae—do	38° 03'	124° 49'	−3 59	−4 02	+1.3	+0.7	7.5	9.5	6.7
1167	Ch'angam—dong	38° 07'	124° 43'	−3 24	−3 28	+1.6	+0.8	7.7	10.0	6.9
1169	Monggum—do	38° 11'	124° 47'	−2 28	−2 31	+1.9	+0.8	8.0	10.1	7.0
1171	Chin po Ki	38° 27'	124° 56'	−2 15	−2 19	*1.41	*1.45	9.6	12.3	8.0
				on Namp'O—Hang, p.56						
1173	Taedong—gang									
1175	Sok—to	38° 38'	125° 00'	−0 40	−0 44	−1.9	−0.2	11.0	14.0	8.9
1177	P'i—do	38° 41'	125° 11'	−0 27	−0 24	+1.0	+0.1	13.6	16.8	10.5
1179	NAMP'O—HANG	38° 43'	125° 24'	Daily predictions				12.7	15.6	10.0
1181	Ch'ol—do	38° 39'	125° 38'	+0 20	+0 24	+1.7	+0.2	14.2	17.9	10.9
1183	Kyomip'o	38° 44'	125° 38'	+0 31	+0 30	(*1.21−0.3)		15.4	19.3	11.8
1185	Sokhojong	38° 57'	125° 38'	+1 16	+2 05	+1.6	+0.4	13.9	16.9	11.0
1187	P'yongyang	39° 01'	125° 45'	+3 01	+4 52	(*0.18+0.6)		2.3	3.0	2.4
1189	Sokhae—dong	38° 31'	125° 40'	+0 06	+0 28	(*1.31−0.4)		16.6	20.5	12.7
1191	Unmu—do	39° 25'	125° 07'	+0 08	+0 11	*1.23 *1.23		15.6	20.0	12.3
1193	Nap—to	39° 16'	124° 43'	−0 07	−0 03	+1.2	+0.4	13.5	17.6	10.8
1195	Taehwa—do	39° 27'	124° 37'	+0 06	+0 09	*1.10	*1.10	13.8	17.6	11.0
1195	Ka—do	39° 31'	124° 40'	+0 10	+0 13	(*1.15−0.2)		14.6	18.5	11.3
	Yalu River and Approach									
1197	Suun—do	39° 42'	124° 25'	+0 11	+0 19	+2.0	+0.3	14.4	18.2	11.1
1199	Tasa—do	39° 48'	124° 25'	+0 17	+0 39	(*1.19−0.3)		15.1	19.3	11.6
1201	Shinto Islands	39° 48'	124° 16'	+0 28	+0 32	(*1.17−0.2)		14.9	19.2	11.5
1203	Yongamp'o	39° 56'	124° 21'	+1 38	+1 41	−1.7	−0.2	11.2	14.0	9.0
	CHINA									
	CHINA, Yellow Sea, North Shore Time meridian, 120° E									
	Yalu River and Approach—cont.									
1205	Zhaoshigou [Chao—shin—kou]	39° 53'	124° 12'	−0 52	+0 08	(*1.09+0.7)		13.5	17.4	11.5
1207	Dandong [Tan—tung]	40° 07'	124° 24'	+1 21	+3 20	(*0.59−0.3)		8.5	8.9	4.9
1209	Dalu Dao [Talu Tao]	39° 45'	123° 45'	−0 47	−0 26	(*1.01+0.7)		12.5	15.7	10.8
	CHINA, Liaoning, South Coast									
	Dayang He									
1211	Shishanzi	39° 58'	123° 40'	+0 06	+1 25	(*1.07+1.0)		8.2	8.9	6.6
1213	Dagushan [Takushan Road]	39° 46'	123° 33'	−0 59	−1 03	(*1.92−0.3)		13.1	15.4	9.8
	Shicheng Liedao									
1215	Xiaowangjia Dao	39° 32'	123° 05'	−1 06	−1 09	(*1.62+0.7)		10.8	13.8	9.2
1217	Dawangjia Dao [Ta—wang—chia Tao]	39° 27'	123° 04'	−1 16	−1 09	(*1.60+0.0)		10.8	13.8	8.5
	Waichangshan Liedao									
1219	Zhangzi Dao [Changtze Tao, Blonde Group]	39° 03'	122° 45'	−0 52	−0 55	(*1.21+0.0)		8.2	10.2	6.6
	Lichangshan Liedao									
1221	Xiaochangshan Dao	39° 14'	122° 40'	−0 54	−0 54	(*1.29+0.7)		8.5	10.8	7.5
1223	Dachangshan Dao [Tachangshan Tao]	39° 16'	122° 35'	−0 43	−0 46	(*1.35+0.3)		9.2	11.5	7.5

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		
		Latitude	Longitude	Time		Height		Mean	Spring	Mean Tide Level
				High Water	Low Water	High Water	Low Water			
	CHINA, Liaoning, South Coast—cont. Time meridian, 120° E	North	East	h m	h m	ft	ft	ft	ft	ft
				on Dalian, p.60						
1225	Guanglu Dao [Hu—lu Tao, Lump Island]	39° 12'	122° 18'	−0 29	−0 32	(*1.34+0.3)		10.5	10.8	7.5
1227	Changjiang Ao	39° 05'	122° 03'	−0 22	−0 26	(*1.18+0.0)		7.9	9.8	6.2
1229	Dagukou [Ta—ku K'ou, Dairen Wan]	38° 58'	121° 50'	−0 06	−0 09	(*1.03+0.3)		6.9	8.5	5.9
1231	Sanshan Dao	38° 53'	121° 49'	−0 32	−0 32	(*1.01−0.3)		6.9	8.5	6.3
1233	DALIAN [Dairen Ko]	38° 55'	121° 40'	Daily predictions				6.6	8.5	6.3
1235	Yuyan	38° 34'	121° 19'	+1 07	+1 03	(*0.92−0.3)		6.2	7.9	4.6
	Gulfs of Liaodong and Bohai									
1237	Yangtouwua [Yang—tou Wan]	38° 47'	121° 08'	+1 15	+1 16	(*0.61+0.7)		5.3	5.6	3.9
1239	Yingchengzi Wan [Eijoshi Wan, Yingchengtze]	38° 58'	121° 19'	+2 26	+2 02	(*0.59+0.7)		5.3	5.6	3.9
1241	Hulutao [Hu—Li—T'ao, Pulantien Chiang]	39° 16'	121° 36'	+3 11	+2 36	(*0.65+0.7)		5.9	6.2	4.3
	Pulandian									
1243	Changshan Dao	39° 19'	121° 40'	+3 40	+3 07	(*0.69+0.7)		5.9	6.6	4.3
1245	Boqi Dao [Pochi Tao, Pulantien Chiang]	39° 23'	121° 45'	+3 59	+3 43	(*0.74+0.7)		6.2	6.9	4.6
1247	Xizhong Dao	39° 23'	121° 14'	+3 51	+3 06	(*0.53+1.0)		4.9	5.9	3.9
1249	Changxing Dao [Changhing Tao, Fuchou Bay]	39° 39'	121° 28'	+5 21	+5 00	(*0.58+1.3)		5.3	5.9	4.3
1251	Bayuquan	40° 18'	122° 05'	+6 44	+6 56	(*1.22+0.0)		9.8	10.2	6.2
	Liao He									
1253	Sidaogou [Bar Signal Station, Liao Ho]	40° 38'	122° 10'	+8 04	+8 46	(*1.22+0.3)		9.5	9.8	6.6
1255	Yingkou Neigang	40° 40'	122° 13'	+7 43	+8 25	(*1.26+0.0)		9.8	10.2	6.9
1257	Bar	40° 32'	122° 04'	+8 11	+8 06	(*1.13+0.7)		8.9	9.5	6.6
1259	Changshansi [Chang—shan—ssu Chiao]	40° 23'	120° 35'	+8 06	+7 30	(*0.63+0.7)		5.3	5.6	3.9
				on Qinhuangdao, p.64						
1261	Ninghai	39° 58'	119° 48'	−1 20	+1 20	(*0.99+0.0)		2.6	3.9	2.6
1263	Qinhuangdao	39° 55'	119° 37'	Daily predictions				2.6	3.6	3.0
1265	Dapu He (Bar)	39° 40'	119° 21'	+2 41	+1 00	(*1.39−1.3)		3.6	4.3	3.0
				on Tanggu, p.68						
1267	Daqinghekou	39° 10'	118° 52'	−1 22	−1 22	(*0.43+1.3)		4.6	5.3	4.6
	Caojidian Tan									
1269	Off Choushui Gou	38° 58'	119° 26'	−2 06	−1 50	(*0.26+2.6)		2.6	2.6	4.6
1271	Caojidian	38° 57'	118° 31'	−0 19	−0 40	(*0.63+1.0)		6.2	6.9	5.9
1273	Nangoutuo	39° 00'	118° 34'	−0 41	−0 25	(*0.53+1.6)		4.9	5.3	5.9
1275	Nanbao	39° 03'	118° 19'	+0 05	+0 30	(*0.52+1.0)		4.9	5.3	4.9
1277	Jianhekou	39° 14'	118° 04'	−0 15	−0 12	(*1.04+0.0)		9.8	10.5	8.2
	Hai He									
1279	Bar	38° 56'	117° 50'	+0 02	−0 01	(*0.90+1.0)		8.5	9.2	7.9
1281	TANGGU (Xingang)	39° 00'	117° 43'	Daily predictions				9.5	10.2	7.9
1283	Dagu	39° 00'	117° 43'	+0 07	+0 31	(*0.77+2.0)		7.2	7.2	7.9
	Qi He									
1285	Bar	38° 34'	117° 35'	+1 01	+0 34	(*0.82+2.0)		7.9	8.2	8.2
1287	Qikou	38° 36'	117° 43'	+0 03	+0 19	(*1.03+0.0)		9.8	10.5	8.2
1289	Off Chengkou	38° 27'	118° 26'	+0 56	−0 11	(*0.56+2.3)		5.9	6.6	6.6
1291	Dakou He (Bar)	38° 15'	117° 51'	+0 43	+0 37	(*0.95+0.3)		9.2	9.8	7.9
1293	Dongfeng Gang	38° 15'	118° 10'	+2 17	+2 15	(*0.71+0.0)		6.9	7.2	5.6
1295	Wanwangoukou	38° 11'	118° 27'	+1 24	+0 03	(*0.62−0.3)		6.6	7.2	4.3
1297	Huanghekou (east)	38° 09'	118° 52'	+2 34	−0 31	(*0.20+1.6)		3.0	3.6	3.0
	CHINA, Shandong, North Coast			on Dalian, p.60						
1299	Tianshuigoukou	37° 43'	119° 05'	+13 11	+13 34	(*0.50−0.3)		4.3	4.6	2.3
	Laizhou Wan									
1301	Xiaoqinghekou	37° 20'	119° 03'	+10 41	+10 25	(*0.47+0.3)		3.9	4.6	3.0
1303	Weihekou	37° 11'	119° 31'	+13 15	+14 22	(*0.53+0.0)		4.6	4.9	3.0
1305	Huhekou	37° 19'	119° 48'	+12 04	+11 48	(*0.47+0.3)		3.9	4.6	3.0
1307	Longkou	37° 39'	120° 19'	+13 45	+13 35	(*0.43+0.0)		3.6	3.9	2.3
1309	Jimu Dao (Gaojiao) [Mu—chi—tao Chiao]	37° 41'	120° 13'	+12 23	+12 13	(*0.47+0.3)		3.9	4.3	3.0
	Miaodao Liedao									
1311	Beihuangcheng Dao	38° 22'	120° 54'	+0 27	+0 28	(*0.60+0.0)		4.3	5.3	3.3
				on Yantai, p.72						
1313	Tuoji Dao	38° 10'	120° 45'	+0 18	+0 19	(*0.70−0.7)		3.6	4.6	3.0
1315	Tangluanzi [Tangluan Anchorage, Miao—tao Group]	37° 59'	120° 41'	−0 12	−0 28	(*0.72−0.7)		3.6	4.6	3.0
1317	Nanchangshan Dao	37° 55'	120° 43'	+0 11	−0 09	(*0.69−0.3)		3.6	4.6	3.0
1319	Penglai	37° 50'	120° 44'	+0 18	+0 22	(*0.65+0.0)		3.3	4.3	3.3
1321	Bajiao	37° 39'	121° 08'	+0 04	+0 00	(*0.98−0.3)		5.3	6.2	4.3
1323	YANTAI [Chefoo Harbor]	37° 33'	121° 23'	Daily Predictions				5.3	6.6	4.9
1325	Kongdong Dao	37° 33'	121° 30'	+0 10	+0 04	(*0.98−0.3)		5.3	6.2	4.6
1327	Yangma Dao [White Rock Point]	37° 29'	121° 38'	+0 30	+0 32	(*0.81−0.3)		5.3	5.6	3.6
1329	Chu Dao	37° 34'	122° 05'	+0 10	+0 07	(*0.90−0.3)		4.6	5.9	3.9
1331	Jiming Dao (Wangjia Zhuang)	37° 25'	122° 28'	+0 34	+1 01	(*0.74+0.3)		4.9	5.3	3.9
				on Tanggu, p.68						
1333	Hailu Dao	37° 27'	122° 40'	+8 11	+8 30	(*0.33+0.3)		3.6	4.3	3.0
1335	Malan Wan [Malan Cove]	37° 25'	122° 39'	+8 33	+8 31	(*0.38+0.7)		4.3	4.9	3.6

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Spring	
				High Water	Low Water	High Water	Low Water			
	CHINA, Shandong, Southeast Coast Time meridian, 120° E	North	East	h m	h m	ft	ft	ft	ft	ft
				on Tanggu, p.68						
1337	Chengshan Jiao [Dove Cove, Jungcheng Bay]	37° 23'	122° 40'	+8 56	+9 18	(*0.32+0.3)		3.6	4.3	3.0
1339	Lidao Wan [Litao Bay]	37° 16'	122° 33'	+9 50	+9 40	(*0.46-0.7)		4.9	5.6	3.0
				on Qingdao, p.76						
1341	Jinghai Jiao [Chinghai Point]	36° 51'	122° 11'	-1 52	-2 26	(*0.72+1.0)		7.5	7.9	6.6
1343	Gulongzui [Niao-tsui Head]	36° 45'	121° 38'	-1 41	-2 08	(*0.84+0.3)		7.5	9.5	6.9
1345	Haiyang [Haiyanghsein]	36° 41'	121° 14'	-1 08	-1 32	(*0.85+0.3)		8.5	9.2	6.9
1347	Quinliyan	36° 15'	121° 23'	-1 10	-1 25	(*0.72+0.3)		6.6	8.2	5.9
	Jiaozhou Wan									
1349	Nu Dao [Star Reef, Lao Shan Bay]	36° 23'	120° 50'	-0 24	-0 57	(*0.90-0.3)		9.2	9.5	6.6
1351	Dongjia Wan [Tung-chai Harbor]	36° 06'	120° 32'	-0 05	-0 37	(*0.96-0.7)		9.8	10.2	6.9
1353	Mai Dao	36° 04'	120° 25'	-0 12	-0 15	(*0.90+0.0)		7.9	9.8	7.2
1355	Qingdao (Qianhai)	36° 03'	120° 19'	-0 05	-0 09	(*0.93+0.7)		8.2	10.5	7.9
1357	Huang Dao	36° 05'	120° 19'	-0 07	-0 03	(*0.98+0.0)		8.5	10.8	7.5
1359	QINGDAO (DA GANG) [Chingtao, Kaochou Wan]	36° 05'	120° 19'	Daily predictions				8.9	11.2	7.9
1361	Tangdao Wan	35° 55'	120° 09'	+0 13	+0 06	(*0.91+0.7)		7.9	10.5	7.9
1363	Lingshan Dao	35° 46'	120° 10'	+0 21	+0 08	(*0.86+0.7)		7.5	9.5	7.5
1365	Huangjiatang Wan [Huangchiatang Wan]	35° 32'	119° 45'	+0 39	+0 07	(*0.93-0.3)		8.2	10.5	6.9
1367	Shijiu Suo	35° 25'	119° 35'	+1 07	+0 54	(*1.09+0.3)		9.5	12.1	8.9
				on Lianyung Gang, p.80						
1369	Pingshan Dao	35° 08'	119° 54'	-0 21	-0 41	(*0.75+0.0)		8.2	10.5	7.2
	CHINA, East Coast									
1371	Qinshan Dao	34° 52'	119° 17'	-0 04	+0 03	(*1.02-0.7)		11.2	14.4	9.2
1373	LIANYUN GANG	34° 45'	119° 28'	Daily predictions				10.8	14.1	9.5
1375	Kaishan Dao	34° 32'	119° 52'	+0 20	+0 16	(*0.85+1.0)		10.8	11.5	8.9
1377	Kuataokou	34° 04'	120° 22'	+1 54	+2 41	(*0.57-0.3)		7.2	7.9	4.9
1379	Xinyang Gang	33° 37'	120° 28'	+5 41	+6 46	(*0.52+1.6)		5.9	7.2	6.6
1381	Chenjiawu	33° 06'	121° 13'	+5 34	+5 22	(*1.00+0.3)		11.2	14.4	9.8
1383	Off Chuanshui Gang	32° 58'	121° 07'	+6 26	+6 04	(*1.22+0.3)		13.1	17.1	11.8
1385	Xiaoyangkou	32° 33'	120° 59'	+4 27	+3 55	(*0.69+3.0)		7.5	9.8	9.5
1387	Lusi	32° 08'	121° 35'	+6 11	+5 41	(*1.06+0.0)		11.8	16.1	10.2
				on Wusong, p.84						
	Changjiangkou									
1389	Tongsha Shazui	31° 06'	122° 01'	-1 57	-2 21	(*1.21+0.7)		9.2	11.8	8.5
1391	She Shan	31° 25'	122° 14'	-1 38	-2 26	(*1.09+0.3)		8.2	11.2	7.5
1393	ZHONGJUN, CHANGJIANG APPROACH	31° 07'	121° 54'	Daily predictions, p.88				8.5	11.8	7.5
1395	Jiuduan Beacon	31° 16'	121° 43'	-0 50	-1 20	(*1.05+0.7)		7.9	10.5	7.5
1397	Hengsha	31° 17'	121° 51'	-0 49	-1 01	(*1.11-0.3)		8.2	11.2	6.9
	Chongming Dao									
1399	Laomihung	31° 30'	121° 40'	-0 40	-0 49	(*1.15-0.7)		8.5	9.8	6.9
1401	Qixiao Gang	31° 28'	121° 44'	-0 38	-0 47	(*1.12-0.7)		8.2	11.2	6.9
1403	Shixiao Gang	31° 28'	121° 47'	-0 22	-0 30	(*1.12-0.7)		8.2	11.2	6.6
1405	Bao Zhen	31° 32'	121° 38'	+0 28	+0 23	(*0.95-0.7)		6.9	9.5	5.6
	Huangpu Jiang									
1407	Gaoqiao	31° 22'	121° 35'	-0 06	-0 21	(*1.05-0.7)		7.9	10.5	6.6
1409	WUSONG [Shanghai, Wusung Bar]	31° 24'	121° 31'	Daily predictions				7.5	9.8	6.6
1411	Shanghai Gang [Shanghai, Huangpu River]	31° 15'	121° 29'	+0 41	+0 45	(*0.83+0.7)		6.2	8.2	5.9
1413	Jianguan Dock	31° 12'	121° 30'	+0 55	+1 06	*0.80	--	--	--	--
	Chang Jiang									
1415	Xulujing	31° 46'	120° 56'	+2 58	+3 02	(*0.82-0.7)		6.2	8.2	4.9
1417	Jiangyin	31° 57'	120° 18'	+5 14	+5 36	(*0.68-0.7)		4.9	6.9	3.9
	Hangzhou Wan									
1419	Jinshanzui	30° 44'	121° 22'	-0 10	-0 38	(*1.61-1.0)		11.8	15.7	10.2
1421	Zhapu	30° 36'	121° 05'	+0 43	-0 04	(*1.97-2.0)		14.8	19.4	11.5
1423	Haining	30° 25'	120° 32'	+1 59	+4 46	(*1.69+0.0)		12.8	16.7	11.2
1425	CH'ANG CHIANG APPROACH (Side Saddle) <41> . . .	30° 49'	122° 38'	Daily predictions, p.92				8.6	11.7	9.6
1427	KANMEN (Yuhuan Dao)	28° 05'	121° 17'	Daily predictions, p.96				13.1	17.1	10.8
	TAIWAN, East Coast			on Naha, p.44						
1429	KEELUNG (CHI-LUNG CHIANG) <25>	25° 09'	121° 45'	Daily predictions, p.112				1.5	2.4	1.9
1431	Su-ao Kang	24° 35'	121° 52'	-1 13	-1 13	(*0.78+0.2)		3.2	4.2	3.2
1433	Hua-lien Kang	23° 58'	121° 37'	-1 15	-1 15	*0.83 *0.83		3.4	4.5	3.2
1435	Ch'eng-kuang-ao Po-ti	23° 08'	121° 24'	-1 19	-1 20	*0.86 *0.83		3.6	4.8	3.3
1437	Tu-lan Wan	22° 50'	121° 11'	-1 17	-1 17	*0.76 *0.76		3.1	4.1	3.0
1439	Nan-liao Wan, Lu Tao	22° 40'	121° 28'	-1 22	-1 22	*0.73 *0.72		3.0	4.1	2.8
1441	Pa-tai Wan, Lan Yu	22° 02'	121° 34'	-1 03	-1 04	(*0.80-0.2)		3.3	4.4	2.9
	TAIWAN, West Coast			on Hong Kong, p.120						
1443	Ta-pan-lieh Mao-ti	21° 58'	120° 45'	-2 55	-2 46	*0.59 *0.57		2.0	2.6	2.6
1445	Ch'e-ch'eng Po-ti	22° 04'	120° 42'	-2 31	-2 21	*0.51 *0.54		1.6	2.1	2.3
1447	Tung-kang Po-ti	22° 28'	120° 26'	-1 31	-1 22	*0.48 *0.46		1.6	1.9	2.1
1449	Kao-hsiung <26>	22° 37'	120° 16'	-1 16	-1 07	*0.38 *0.39		1.2	1.5	1.7
1451	An-p'ing Kang	23° 00'	120° 09'	-0 09	+0 00	*0.43 *0.39		1.5	1.9	1.9
1453	Ting-t'ou-o-shan	23° 06'	120° 04'	+0 45	+0 54	*0.54 *0.43		2.1	2.3	2.3

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES			Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	P'ENG-HU CH'UN-TAO Time meridian, 120° E (Pescadores Islands)	North	East	h m	h m	ft	ft	ft	ft	ft	
				on PengHu (Ma-Kung Kang), p.108							
1455	Ch'i-mei Yu	23° 13'	119° 25'	+0 07	+0 11	(*0.62+0.5)		3.8	4.5	3.7	
1457	Pa-chao Yu	23° 22'	119° 31'	-0 04	+0 00	*0.72	*0.72	4.2	4.9	3.7	
1459	Tung-p'an Hsu	23° 31'	119° 31'	+0 06	+0 10	+0.1	+0.1	6.1	7.1	5.2	
1461	PENGHU (MA-KUNG KANG)	23° 33'	119° 34'			Daily predictions		6.1	7.1	5.1	
1463	Pei-liao	23° 36'	119° 40'	-0 01	+0 03	+1.1	+0.1	7.1	8.9	5.7	
1465	Hsiao-men Hsu, Niu-kung Wan	23° 39'	119° 31'	+0 21	+0 24	*1.31	*1.20				
1467	Chi-pei Tao	23° 44'	119° 36'	+0 13	+0 16	*1.30	*1.10	8.3	10.1	6.4	
	TAIWAN, West Coast-cont.										
1469	Pu-tai Po-ti	23° 23'	120° 09'	-0 29	-0 25	*0.72	*0.72	4.2	5.0	3.7	
1471	Hai-k'ou Po-ti	23° 42'	120° 10'	+0 12	+0 15	+1.5	-0.2	7.8	9.4	5.7	
1473	Fang-yuan Po-ti	23° 55'	120° 18'	+0 12	+0 15	(*1.61-1.1)		9.8	11.8	7.1	
1475	T'u-ko-k'u Kang	24° 11'	120° 29'	+0 02	+0 06	(*1.67-1.3)		10.2	12.4	7.2	
1477	Ta-an Kang	24° 23'	120° 34'	-0 06	-0 03	(*2.00-1.5)		12.0	15.0	8.7	
1479	Hou-lung Po-ti	24° 37'	120° 45'	-0 05	-0 01	(*1.85-1.2)		11.3	14.3	8.2	
1481	Tan-shui Kang	25° 11'	121° 26'	-0 14	-0 10	+0.9	0.0	7.0	8.8	5.5	
	CHINA, East Coast-cont.										
				on Xiamen, p.100							
1483	Shizhen (Zhongwai Yu)	24° 33'	118° 30'	-0 55	-0 42	(*0.99+0.0)		12.5	15.7	10.8	
1485	Wutongdao	24° 32'	118° 11'	-0 04	-0 03	(*1.03-0.3)		12.8	15.7	10.8	
1487	Dadan Dao [Amoy, outer harbor]	24° 23'	118° 10'	-0 04	+0 02	(*0.99-0.3)		12.5	15.1	10.8	
1489	XIAMEN [Amoy, inner harbor]	24° 27'	118° 04'			Daily predictions		12.5	15.7	10.8	
1491	Qianyan [Knob Rock]	23° 55'	117° 52'	+0 07	+0 12	(*0.80-1.0)		11.5	11.8	7.9	
				on Shantou, p.104							
1493	Nanao Dao (Yunao Wan)	23° 24'	117° 03'	-0 46	-0 34	(*1.17-0.3)		5.3	5.9	4.9	
1495	SHANTOU (MAYU) [Swatow, Double Island]	23° 20'	116° 45'			Daily predictions		4.3	4.9	4.6	
1497	Dahao	23° 15'	116° 55'	-0 11	+0 21	(*0.74-0.3)		3.3	4.3	3.0	
1499	Biaojiao	23° 15'	116° 45'	+0 09	-0 05	(*1.04+0.0)		4.6	5.6	4.6	
1501	Dahao Dock	23° 15'	116° 45'	+0 15	-0 19	(*2.00-0.3)		3.9	4.9	3.6	
1503	Haimen Wan	23° 11'	116° 37'	+0 26	-0 27	(*0.73+0.3)		3.3	4.3	3.6	
	CHINA, South Coast										
1505	Shibeshan Jiao	22° 56'	116° 29'	-0 09	-0 26	(*0.74-0.3)		3.3	3.9	3.0	
				on Hong Kong, p.120							
	Mirs Bay										
1507	Peng Chau	22° 33'	114° 26'	+0 03	-0 04	-0.6	-0.3	3.0	5.3	4.0	
1509	Jones Cove	22° 28'	114° 20'	-0 27	-0 16	-0.4	-0.1	3.0	4.9	4.2	
1511	Tide Cove	22° 24'	114° 12'	-0 12	-0 15	-0.2	+0.1	3.0	5.3	4.4	
1513	Port Shelter	22° 23'	114° 17'	-0 33	-0 27	-0.4	-0.1	3.0	5.3	4.2	
	Hong Kong Island										
1515	Taitam Bay	22° 14'	114° 14'	-0 07	-0 07	-0.6	-0.1	2.8	4.6	4.1	
1517	Aberdeen Harbor	22° 15'	114° 09'	-0 04	-0 01	-0.6	-0.1	2.8	4.6	4.1	
1519	HONG KONG	22° 18'	114° 12'			Daily predictions		3.3	5.1	4.5	
	Canton River approach										
1521	Wen Wei Rock	21° 49'	113° 56'	+0 08	+0 21	(*0.88-1.0)		2.2	4.5	3.0	
1523	Wai-ling-ting	22° 06'	114° 02'	+0 11	+0 01	-0.4	-0.3	3.2	5.0	4.1	
1525	Kapshui Mun	22° 21'	114° 03'	+0 16	+0 06	+0.5	+0.4	3.4	5.8	4.9	
1527	West Brother	22° 20'	113° 58'	+0 53	+0 52	+0.7	+0.3	3.7	5.9	5.0	
1529	Macao Harbor	22° 11'	113° 33'	+0 45	+0 49	+3.3	+3.0	3.6	5.5	7.6	
				on Huangpu, p.116							
1531	Sishengwei	22° 55'	113° 36'	-0 59	-1 07	(*1.01+0.3)		7.2	8.2	5.6	
1533	Sanshakou	22° 53'	113° 31'	-0 49	-0 51	(*0.97+0.7)		6.9	7.9	5.6	
1535	Nizhoutou	22° 54'	113° 34'	-0 35	-0 56	(*1.03+0.7)		7.2	8.2	6.2	
1537	Haixin	22° 58'	113° 32'	-0 46	-0 54	(*0.99+0.7)		7.2	8.2	5.9	
1539	Dasheng	23° 03'	113° 32'	-0 14	-0 20	(*0.96+0.3)		6.9	7.5	5.3	
1541	Chisha (Lighthouse)	23° 03'	113° 30'	+0 07	-0 27	(*1.00+0.0)		6.9	7.9	5.3	
1543	HUANGPU	23° 06'	113° 27'			Daily predictions		6.9	7.9	5.3	
1545	Bazhou	23° 07'	113° 22'	+0 43	+0 14	(*0.90+0.3)		6.2	7.2	4.9	
				on Haikou, p.124							
1547	Leizhou Bandao										
	Chikanzi (Hongkan Wan)	20° 19'	110° 24'	+1 13	+0 05	(*0.79+0.3)		3.6	4.3	4.6	
1549	Haian	20° 16'	110° 13'	+0 04	+0 04	(*0.87+1.0)		4.3	5.6	5.6	
	Hainan Island										
	Hainan Dao North Coast										
1551	Dengmai Wan	19° 57'	110° 07'	-1 15	-0 25	(*1.32+0.3)		6.2	9.2	6.6	
1553	HAIKOU (XIUYING)	20° 01'	110° 16'			Daily predictions		4.6	6.6	4.9	
1555	Haikoushi [Hai-k'ou, Hoihow]	20° 03'	110° 20'	+0 52	+0 30	(*0.65+1.3)		3.3	4.3	4.6	
1557	Puqian	20° 02'	110° 34'	+2 05	+1 05	(*0.73+0.3)		3.6	4.3	4.3	
1559	Dongxicon	20° 02'	110° 37'	+2 30	+1 13	(*0.79-0.3)		3.9	4.3	3.9	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Spring	
				High Water	Low Water	High Water	Low Water			
	CHINA Hainan Island—cont. Time meridian, 120° E	North	East	h m	h m	ft	ft	ft	ft	ft
1561	Hainan Dao, West Coast Yinggehai	18° 30'	108° 43'	−5 30	−6 14	(*0.38−0.3)		3.6	4.9	2.3
	CHINA, South Coast—cont.									
1563	Reizhou Bandao Kuwei Jiao	20° 13'	109° 56'	−1 51	−0 21	(*1.14+0.7)		5.6	7.9	6.2
	Beibu Wan									
1565	Weizhou Dao	21° 02'	109° 07'	−0 19	−0 07	(*0.91+0.3)		8.5	12.5	7.9
1567	BEIHAI	21° 29'	109° 05'			Daily predictions		9.5	13.1	8.5
1569	Off Beihai	21° 29'	108° 59'	−0 02	+0 04	(*1.11+0.3)		10.5	14.4	9.5
1571	Dafeng Jiang	21° 38'	108° 52'	+0 15	+0 31	(*0.98−0.3)		9.2	13.1	7.9
1573	Sanniang Wan	21° 38'	108° 47'	−0 10	−0 03	(*0.99+1.6)		9.2	13.1	10.2
	VIETNAM Time meridian, 105° E									
1575	Lochuc San \$	21° 15'	107° 57'	−1 48	−1 41	(*0.74+0.5)		7.8	10.8	7.8
1577	Cu Xu, Kao Tao \$	20° 59'	107° 45'	−1 55	−1 11	(*0.68−0.3)		7.2	10.2	6.4
1579	Tsieng Mun \$	21° 08'	107° 37'	−1 40	−0 59	*0.68	*0.68	7.2	10.2	6.8
1581	Cai Bau, Cai Bau Island \$	21° 07'	107° 30'	+0 18	−1 32	+1.2	+0.9	6.8	10.8	7.1
1583	Campha Port \$	21° 02'	107° 22'	+0 06	−1 44	+1.1	+0.9	6.7	9.6	7.1
1585	Norway Islands \$	20° 37'	107° 09'	+0 05	−0 29	+0.1	+0.1	6.5	9.7	6.2
1587	Hon Gai, Halong Bay \$	20° 57'	107° 04'	+0 21	−0 09	+2.9	+1.7	7.7	11.4	8.4
1589	Cat Ba, Isle de la Cat Ba \$	20° 43'	107° 03'	+0 05	−0 24	(*0.97+0.7)		6.3	9.3	6.6
1591	DO SON (Hon Dau) \$	20° 40'	106° 49'			Daily predictions, p.132		6.5	9.7	6.1
1593	Cua Namtrieu \$	20° 46'	106° 50'	+0 00	+0 44	−0.1	−0.1	6.5	9.7	6.0
1595	Haiphong, Cua Cam \$	20° 52'	106° 40'	+1 11	+1 04	*0.97	*0.97	6.1	9.0	6.0
1597	Bach Long Vi Island \$	20° 08'	107° 43'	−0 23	−2 11	(*0.95+0.6)		6.2	9.2	6.4
1599	Balat River entrance \$	20° 18'	106° 32'	−0 47	+0 12	(*0.95+0.5)		6.2	9.2	6.3
1601	Hon Ne \$	19° 55'	106° 00'	−1 00	+0 07	+0.2	+0.2	6.5	9.3	6.5
1603	Hon Me \$	19° 23'	105° 55'	−1 05	+0 46	−0.1	−0.3	6.7	8.6	6.2
1605	Hon Nieu \$	18° 48'	105° 46'	−1 27	+1 00	*0.93	*0.93	6.1	7.8	6.0
1607	Hoi River entrance \$	18° 46'	105° 45'	−0 14	+1 45	*0.72	*0.69	4.8	6.4	4.8
1609	Sot River entrance \$	18° 28'	105° 55'	−1 14	+1 39	(*0.54+0.7)		3.5	4.5	4.0
1611	Vung Chua Bay \$	17° 56'	106° 30'	−1 12	+1 21	*0.39	*0.34	2.7	3.4	2.5
1613	Nhat Le River entrance \$	17° 30'	106° 37'	−1 12	+1 21	*0.32	*0.28	2.2	2.8	2.0
1615	Paracel Islands <27> †	16° 33'	111° 37'	−1 20	−1 16	+2.1	+2.1	3.1	3.8	3.9
1617	Chon May Bay <27> †	16° 20'	108° 01'	+0 29	−0 29	(*0.48+1.8)		1.6	2.0	2.5
1619	Da Nang <27> †	16° 07'	108° 13'	−0 12	−0 57	(*0.70+1.9)		2.3	2.7	3.0
1621	Culao Cham <27> †	15° 57'	108° 30'	−0 27	−0 36	(*0.85+2.2)		2.8	3.5	3.6
1623	Dung Quat Bay <27> †	15° 24'	108° 45'	−0 38	−0 30	+2.2	+2.1	3.4	4.4	3.9
1625	Tam Quan <27> †	14° 35'	109° 04'	−0 51	−0 31	+2.2	+2.2	3.2	4.3	4.0
1627	Qui Nhon <27> †	13° 45'	109° 13'	−0 53	−0 29	+2.8	+2.5	3.6	4.5	4.3
1629	Vung Xuan Dai <27> †	13° 23'	109° 16'	−0 54	−0 39	+2.3	+2.3	3.2	4.3	4.1
1631	Vung Ro <27> †	12° 52'	109° 25'	−1 01	−0 42	+2.6	+2.5	3.4	4.6	4.3
1633	Port Van <27> †	12° 40'	109° 23'	−1 03	−0 45	+2.6	+2.5	3.4	4.6	4.3
1635	Nha Trang, Baie de <27> †	12° 15'	109° 13'	−1 15	−0 46	+2.7	+2.4	3.6	4.6	4.3
1637	Cam Ranh Bay <27> †	11° 53'	109° 12'	−1 18	−0 53	+2.4	+1.9	3.8	4.8	4.1
1639	Mui Dinh <27> †	11° 22'	109° 01'	−0 39	−0 30	+1.7	+1.4	3.6	4.8	3.3
1641	Pointe Lagan <27> †	11° 10'	108° 42'	−0 50	−0 23	+5.3	+4.5	4.1	5.2	6.8
1643	Poulo Cecir de Mer <27> †	10° 32'	108° 56'	−0 36	−0 24	+3.5	+3.4	3.4	4.2	5.3
1645	Phan Thiet <27> †	10° 55'	108° 06'	+0 13	+0 14	+5.7	+4.7	4.3	5.8	7.0
1647	Mui Ke Ga	10° 42'	107° 59'	−1 28	−1 27	(*0.59+2.5)		3.0	5.1	7.2
1649	Mui Ba Kiem	10° 30'	107° 30'	−0 31	−0 31	(*0.85+0.8)		5.0	7.3	7.5
	Saigon River									
1651	MUI VUNG TAU	10° 20'	107° 05'			Daily predictions		5.9	8.6	7.9
1653	Coral Bank	10° 37'	106° 51'	+0 51	+1 23	(*0.97+1.6)		5.6	8.3	9.3
1655	Ho Chi Minh City	10° 46'	106° 42'	+2 10	+2 39	−0.4	<28>	6.9	8.6	7.5
1657	Nha Be River entrance	10° 23'	106° 48'	+0 28	+1 25	0.0	0.0	5.9	8.6	7.9
1659	Cua Tieu entrance	10° 15'	106° 47'	+0 43	+0 42	(*1.10−0.3)		6.6	9.5	8.4
1661	My Tho, Cua Tieu	10° 21'	106° 21'	+1 30	+2 49	−1.3	−	−	−	−
1663	Hau Giang River entrance	9° 24'	106° 27'	+0 40	+1 00	0.0	0.0	5.9	8.6	7.9
1665	Mac Bat, Hau Giang River	9° 43'	106° 09'	+1 30	+2 29	+0.9	−	−	−	−
1667	Con Son	8° 41'	106° 36'	+0 33	+0 33	−0.4	−0.4	5.9	8.7	7.5
1669	Cau Lon River entrance	8° 39'	104° 45'	−	−	−	−	−	2.9	2.5
1671	Pulau Panjang, Gulf of Siam	9° 18'	103° 28'	−	−	−	−	−	1.0	1.5
1673	Rai Island, Gulf of Siam	9° 50'	104° 40'	−	−	−	−	−	2.1	3.0

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No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Spring	
				High Water	Low Water	High Water	Low Water			
		North	East	h	m	h	m	ft	ft	
	INDONESIA—cont. Time meridian, 105° E			on Davao, p.176						
	Sumatra Island, Malacca Strait—cont.									
1755	Balai Point, Gelam Strait	0° 59'	103° 26'	−7 33	−7 30	(*1.32+2.2)		5.8	8.1	5.6
1757	Pulo Kenipaan, Gelam Strait	0° 55'	103° 20'	−7 17	−7 14	+3.9 +1.5		6.7	8.7	5.2
1759	Bandung, Pulo Mendol	0° 32'	103° 18'	−6 50	−6 47	(*1.74+2.5)		7.5	10.5	6.9
1761	Pulo Muda, Kampar River	0° 22'	102° 53'	−5 04	−5 02	(*2.14+1.5)		9.2	12.3	6.9
				on Kamaisi, p.16				Diurnal	Tropic	
1763	Bojan, Bulan Strait	1° 01'	103° 55'	−4 45	−4 48	*1.32	*1.32	4.4	5.4	3.6
1765	Oeban Point, Bintan Island	1° 04'	104° 13'	−5 31	−5 33	*1.77	*1.44	6.3	6.9	4.9
1767	Tanjungpinang, Bintan Island	0° 55'	104° 26'	−4 35	−4 37	*1.42	*1.67	4.6	5.5	3.9
1769	Dendang, Kidjang Strait	0° 51'	104° 37'	−5 06	−5 09	*1.40	*1.67	4.5	5.5	4.1
				on Hong Kong, p.120						
1771	Sungaiguntung	0° 18'	103° 36'	−9 00	−8.51	+1.6	−0.4	7.1	8.0	5.3
		South	East	on Mui Vung Tau, p.136						
	Sumatra, East Coast									
1773	Pulo Beralas, Berhala Strait	0° 30'	104° 02'	−11 42	−11 42	(*0.93−0.7)		8.0	9.7	6.6
1775	Kwala Ladjau, Indragiri River	0° 24'	103° 34'	−10 25	−10 25	+0.7 +0.1		9.2	10.4	8.2
1777	Tembilahan, Indragiri River	0° 19'	103° 14'	−8 42	−8 42	+3.3 +0.4		11.5	12.6	9.8
1779	Kwala Niur	1° 00'	103° 49'	−10 50	−10 50	+0.4 +0.3		8.7	10.1	8.2
				on Musi River, p.152						
1781	Tandjung Butun, Linga Island †	0° 15'	104° 36'	+0 38	−2 09	*0.69	*0.59	5.3	7.2	4.6
1783	Kotadabok, Singkep Island †	0° 30'	104° 34'	−0 06	−1 42	(*0.73+0.2)		5.3	7.2	5.3
1785	Pulo Berhala, Berhala Strait †	0° 52'	104° 24'	−2 49	−1 29	−1.0	−1.1	7.4	9.4	6.2
1787	Chebia, Tudjuh Islands †	1° 13'	105° 16'	−0 22	−1 14	*0.75	*0.72	5.6	8.0	4.9
1789	Sungai Merawang ent., Bangka Island †	2° 05'	106° 10'	−0 07	−1 50	*0.59	*0.59	4.2	6.3	3.9
1791	Klabat Bay, Bangka Island †	1° 42'	105° 42'	+1 02	+0 03	*0.77	*0.69	5.9	8.4	4.9
1793	Sungai Kampa, Bangka Island †	1° 45'	105° 24'	−0 04	−0 22	*0.90	*0.79	6.9	9.7	5.6
1795	MUSI RIVER (outer bar) †	2° 14'	104° 56'	Daily predictions				7.3	10.0	6.2
1797	Soengsang, Palembang River †	2° 22'	104° 54'	+0 42	+1 09	0.0	−0.2	7.5	10.2	6.2
1799	Peradjin, Palembang River †	2° 56'	104° 53'	+3 44	+4 17	*0.83	*0.83	6.1	8.3	5.3
1801	Palembang, Palembang River †	2° 59'	104° 43'	+4 12	+4 56	*0.75	*0.66	5.7	7.8	4.6
1803	Tandjung Kelian, Bangka Strait †	2° 05'	105° 07'	+0 03	+0 12	−0.2	−0.3	7.4	10.3	6.2
1805	Muntok, Bangka Island †	2° 05'	105° 10'	−0 13	+0 09	0.0	−0.3	7.6	10.5	6.2
1807	Nangka Island, Bangka Strait †	2° 23'	105° 46'	−0 12	+0 48	*1.12	*0.97	8.6	10.7	6.9
1809	Besar Island, Bangka Strait †	2° 53'	106° 08'	−0 12	+0 19	*0.86	*0.86	5.8	8.1	5.9
				on Surabaya Strait, p.160						
1811	Dapur Island, Banka Island §	3° 08'	106° 31'	+11 43	+14 02	+0.8	−0.1	4.6	6.3	3.9
1813	Tjelaka, Liat Island §	2° 52'	107° 01'	+11 59	+13 00	+0.7	−0.4	4.8	6.9	3.6
1815	Tulangbawang River entrance §	4° 25'	105° 51'	+11 39	+13 42	*0.85	*0.62	3.5	4.0	3.0
	Time meridian, 120° E									
	Gaspar Strait									
1817	Simedang Island §	3° 19'	107° 13'	+13 52	+14 09	+0.3	+0.3	3.7	5.3	3.9
1819	Tandjungpandan, Belitung Island §	2° 45'	107° 38'	+13 01	+13 51	+2.1	+0.6	5.2	7.5	4.9
1821	Langkuas Island §	2° 32'	107° 37'	+13 13	+13 26	+1.2	+0.4	4.5	6.7	4.3
	Time meridian, 105° E			on Davao, p.176				Mean	Spring	
	Sumatra, Sunda Strait									
1823	Bangkai Anchorage, Sebuku Island	5° 52'	105° 31'	+1 45	+1 48	(*0.51+1.0)		2.2	3.0	2.3
1825	Tulukbetung, Lampung Bay	5° 27'	105° 16'	+1 56	+1 58	(*0.53+1.3)		2.3	3.1	2.6
				on Kutei River Ent., p.164						
1827	Kotaagung, Semangka Bay	5° 30'	104° 37'	+1 20	+1 21	*0.54	*0.54	2.3	3.2	2.6
	Sumatra, West Coast									
1829	Enggano Bay, Enggano Island	5° 28'	102° 22'	+0 23	+0 23	*0.49	*0.49	2.2	2.8	2.3
1831	Benkulu	3° 47'	102° 15'	+1 02	+1 02	*0.49	*0.49	2.3	3.1	2.3
1833	Sawangtungku, North Pagai Island	2° 47'	100° 13'	+0 20	+0 21	*0.49	*0.49	2.3	3.0	2.3
1835	Siberut Bay, Siberut Island	1° 35'	99° 13'	+0 19	+0 19	*0.49	*0.49	2.2	2.8	2.3
1837	Padang	0° 58'	100° 21'	+0 23	+0 23	*0.52	*0.45	2.6	3.4	2.3
1839	Telo Island, Batoe Islands	0° 04'	98° 17'	+0 02	+0 02	(*0.38+0.6)		1.8	2.6	2.3
		North	East							
1841	Ajerbangis	0° 12'	99° 22'	−0 08	−0 08	*0.48	*0.48	2.0	2.8	2.3
1843	Natal	0° 33'	99° 06'	+0 20	+0 21	*0.48	*0.48	2.0	2.8	2.3
1845	Telukdalem, Nias Island	0° 34'	97° 49'	−0 02	−0 02	(*0.34+0.7)		1.6	2.1	2.3
1847	Simanari Bay, Nias Island	1° 24'	97° 11'	+0 06	+0 06	(*0.32+0.8)		1.5	2.2	2.3
1849	Sibolga, Sibolga Bay	1° 45'	98° 46'	+0 06	+0 06	(*0.26+1.1)		1.2	1.7	2.3
1851	Barus	2° 01'	98° 23'	+0 08	+0 09	(*0.40+0.5)		1.9	2.7	2.3
1853	Singkil	2° 17'	97° 47'	+0 39	+0 39	(*0.34+0.7)		1.6	2.3	2.3
1855	Sinabang Bay, Pulo Simalur	2° 30'	96° 23'	+0 08	+0 09	*0.26	*0.26	1.0	1.4	1.3
1857	Tapaktuan	3° 15'	97° 11'	+0 52	+0 52	*0.23	*0.14	1.3	1.8	1.0

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No.	PLACE	POSITION		DIFFERENCES				RANGES			Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	INDONESIA—cont. Time meridian, 105° E	North	East	h m	h m	ft	ft	ft	ft	ft	
	<i>Sumatra, West Coast—cont.</i>			on Kutei River Ent., p.164							
1859	Meulaboh	4° 08'	96° 08'	+1 12	+1 12	*0.20	*0.20	0.8	1.2	1.0	
1861	Tjalang Bay	4° 37'	95° 35'	+1 53	+1 54	*0.22	*0.18	1.1	1.6	1.0	
1863	Pulau Raja	4° 52'	95° 23'	— —	— —	— —	— —	0.4	0.6	0.7	
1865	Pulau Rusa	5° 17'	95° 12'	+2 50	+2 50	*0.26	*0.18	1.4	1.9	1.1	
	<i>Java</i>	South	East	on Djakarta, p.156				Diurnal	Tropic		
1867	DJAKARTA (Tandjungpriok) §	6° 06'	106° 53'	Daily predictions				2.0	2.6	2.0	
1869	Tjirebon	6° 43'	108° 34'	— — — —				1.9	2.0	2.0	
1871	Semarang §	6° 58'	110° 25'	+10 44	+9 15	(*0.85+0.3)		1.7	2.2	2.0	
				on Surabaya Strait, p.160							
1873	Rembang §	6° 42'	111° 20'	+0 31	−0 10	*0.66	*0.62	2.5	3.7	2.3	
1875	Ujung Pangah §	6° 54'	112° 34'	−0 14	+0 38	(*0.92+0.3)		3.4	4.9	3.5	
1877	SURABAJA STRAIT (Djamuang Reef) §	6° 56'	112° 44'	Daily predictions				3.7	5.3	3.6	
1879	Sembilangan, Surabaya Strait §	7° 03'	112° 41'	+1 39	−0 58	+0.5	+0.3	3.9	5.1	3.9	
				on Hong Kong, p.120							
1881	Surabaya, Surabaya Strait	7° 13'	112° 44'	+1 55	+2 04	+0.6	+0.3	5.8	6.7	4.9	
1883	Surabaya Strait, east entrance	7° 20'	112° 52'	+1 34	+1 43	+1.0	−0.2	6.6	7.4	4.9	
1885	Pasuruan, Madura Strait	7° 38'	112° 55'	+1 31	+1 40	+1.5	+0.2	6.7	7.4	5.3	
1887	Gading, Madura Island	7° 12'	112° 55'	+1 39	+1 49	+1.0	−0.2	6.7	7.3	4.9	
1889	Kalianget, Madura Island	7° 03'	113° 56'	+0 25	+0 34	0.0	+0.2	5.1	5.9	4.6	
				on Manila, p.184							
1891	Sapudi Island, Sapudi Strait †	7° 05'	114° 16'	−0 01	−0 23	+2.1	+1.5	3.9	4.8	3.6	
1893	Pulau Karangmas, Madura Strait †	7° 41'	114° 26'	−0 22	−0 43	+1.8	+1.3	3.8	4.7	3.3	
1895	Tabuan Island, Bali Strait †	8° 02'	114° 28'	−0 45	−1 00	(*0.88+2.9)		2.9	3.6	4.3	
				on Belawan Channel, p.148				Mean	Spring		
1897	Banjuwangi, Bali Strait	8° 13'	114° 23'	−4 19	−4 19	(*0.80+1.3)		3.6	4.9	5.2	
1899	Tjilatjap	7° 44'	109° 00'	−5 25	−5 25	*0.76	*0.65	3.7	5.0	3.6	
1901	Genteng Bay	7° 24'	106° 24'	−5 53	−5 54	(*0.60+0.4)		2.7	3.7	3.3	
1903	Labuhan, Sunda Strait	6° 22'	105° 49'	−6 22	−6 22	*0.49	*0.38	2.5	3.2	2.3	
1905	Tandjung Tjikongeng, Sunda Strait	6° 04'	105° 53'	−6 33	−6 33	(*0.40−0.7)		1.8	2.4	1.3	
	Time meridian, 120° E										
1907	Bali Benoa	8° 45'	115° 13'	−3 36	−3 37	−0.2	−0.9	5.2	7.0	4.3	
				on Hong Kong, p.120							
1909	Buleleng	8° 06'	115° 05'	+2 10	+2 20	−1.7	−0.7	2.3	3.0	3.3	
	Time meridian, 105° E			on Manila, p.184				Diurnal	Tropic		
1911	Lombok Ampanan †	8° 34'	116° 04'	−0 55	−0 51	(*0.85+2.2)		2.8	3.6	3.6	
1913	Labuan, Tring Bay †	8° 43'	116° 03'	−0 35	−1 06	+2.0	+1.2	3.8	4.7	3.6	
	Time meridian, 120° E			on Shatt Al Arab, p.336				Mean	Spring		
1915	Sumbawa Bima Bay	8° 27'	118° 43'	+2 05	+1 52	(*0.41+0.7)		2.5	3.1	3.0	
1917	Sape Bay	8° 34'	119° 02'	+1 32	+1 19	(*0.57+0.7)		3.5	4.5	3.9	
				on Belawan Channel, p.148							
1919	Sumba Sendikari Bay	9° 46'	119° 37'	−3 52	−3 52	+1.4	−0.8	6.7	9.4	5.2	
1921	Nangamesi Bay	9° 38'	120° 15'	−3 12	−3 12	+1.1	−0.4	6.0	8.3	5.2	
	<i>Flores Island</i>										
1923	Tuluk Perapat	8° 47'	119° 50'	−3 05	−3 06	+2.3	+0.4	6.4	8.4	6.2	
1925	Ende Bay	8° 47'	121° 24'	−3 17	−3 17	+1.9	+0.2	6.2	8.6	5.9	
	<i>Alor Island</i>										
1927	Kalabahi	8° 14'	124° 31'	−1 40	−1 40	−0.3	−0.9	5.1	6.7	4.3	
	<i>Timor</i>										
1929	Kupang Bay	10° 10'	123° 34'	−3 05	−3 05	*0.75	*0.73	3.4	4.8	3.6	
1931	Atapupu	9° 00'	124° 52'	−2 31	−2 31	*0.90	*0.85	4.2	5.8	4.3	
	Time meridian, 135° E										
1933	Tanimbar Islands Ritabel Bay, Larat Island	7° 09'	131° 43'	+0 49	+0 49	*0.90	*0.85	4.2	5.2	4.3	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Spring	
				High Water	Low Water	High Water	Low Water			
	INDONESIA—cont. Time meridian, 135° E	South	East	h m	h m	ft	ft	ft	ft	ft
				on Belawan Channel, p.148						
1935	Moluccas Islands Dobo, Wamar Island, Aru Islands	5° 45'	134° 13'	+0 23	+0 23	*0.90	*0.81	4.3	5.4	4.3
				on Shatt Al Arab, p.336						
1937	Naira, Banda Islands	4° 32'	129° 53'	+3 13	+3 03	(*0.67+0.5)		4.1	5.3	4.3
1939	Ambon Bay, Ambon Island	3° 41'	128° 11'	+3 20	+3 08	(*0.56+0.4)		3.4	4.4	3.6
1941	Namelea, Kajeli Bay, Buru Island	3° 16'	127° 06'	+2 58	+2 46	(*0.39+1.4)		2.4	3.1	3.6
				on Shantou, p.104						
1943	Taniwel, Seram Island	2° 51'	128° 28'	+0 44	+1 17	*0.64	*0.61	2.2	3.0	3.6
1945	Sanana, Sula Sanana, Sula Islands	2° 03'	125° 59'	+1 11	+1 43	*0.64	*0.61	2.2	2.8	3.6
		North	East	on Belawan Channel, p.148						
1947	Galela Bay, Halmahera Island	1° 49'	127° 51'	−7 04	−7 04	(*0.67+0.3)		3.0	4.3	3.6
				on Kutei River Ent., p.164						
1949	Ternate, Halmahera Island	0° 47'	127° 23'	+0 13	+0 13	(*0.47+0.8)		2.2	3.3	3.0
1951	Taruna Bay, Sangi Island	3° 37'	125° 29'	+0 16	+0 16	*0.84	*0.84	3.9	5.7	3.9
	Time meridian, 120° E	South	East	on Surabaya Strait, p.160				Diurnal	Tropic	
1953	Celebes (Sulawesi) Makasar §	5° 09'	119° 24'	−1 37	+0 24	(*0.59+0.5)		2.2	3.0	2.6
				on Shatt Al Arab, p.336				Mean	Spring	
1955	Kolaka, Gulf of Boni	4° 04'	121° 36'	+2 09	+1 57	*0.67	*0.70	4.0	4.9	3.9
1957	Tampunawu, Muna Island	5° 13'	122° 18'	+2 14	+2 02	(*0.67+0.8)		4.1	5.0	4.6
1959	Baubau, Buton Island	5° 28'	122° 37'	+2 10	+1 58	*0.66	*0.66	3.8	4.7	3.9
1961	Lasolo Bay	3° 43'	122° 19'	+2 52	+2 40	(*0.57+0.6)		3.5	4.5	3.9
				on Shantou, p.104						
1963	Lingkobu	2° 04'	121° 32'	−1 18	−0 45	−2.1	−2.2	3.4	4.3	3.6
1965	Teluk Lamala, Peling Strait	0° 54'	123° 09'	−0 08	+0 24	*0.58	*0.56	2.0	2.7	3.3
				on Kutei River Ent., p.164						
1967	Poso	1° 22'	120° 45'	−1 56	−1 55	(*0.45+0.5)		2.1	3.0	2.6
		North	East	on Jolo, p.172				Diurnal	Tropic	
1969	Gorontalo River entrance †	0° 30'	123° 03'	— — —	— — —	— —	— —	2.9	— —	2.6
				on Kutei River Ent., p.164				Mean	Spring	
1971	Lembeh Strait	1° 27'	125° 12'	−0 48	−0 48	*0.58	*0.50	2.9	4.2	2.6
1973	Manado	1° 30'	124° 50'	−0 23	−0 22	*0.87	*0.82	4.2	6.1	3.9
1975	Tolitoli Bay	1° 02'	120° 49'	−0 37	−0 36	(*0.72+0.6)		3.4	5.2	3.9
		South	East							
1977	Donggala	0° 40'	119° 44'	−0 37	−0 36	*0.84	*0.84	3.9	5.8	3.9
		North	East							
	Borneo, East Coast									
1979	Bakapit, Darvel Bay	4° 57'	118° 35'	−0 21	−0 21	*0.75	*0.64	3.8	5.4	3.3
1981	Lahad Datu, Darvel Bay	5° 02'	118° 20'	−0 27	−0 37	*0.74	*0.59	3.8	5.0	3.2
1983	Semporna, Darvel Bay	4° 29'	118° 37'	−0 28	−0 19	*0.74	*0.59	3.8	5.2	3.2
1985	Tawau	4° 15'	117° 53'	+0 02	−0 26	+0.9	−0.1	5.7	8.0	5.0
1987	Lingkas, Tarakan Island	3° 17'	117° 35'	−0 49	−0 48	+1.9	+0.1	6.5	9.3	5.6
1989	Biwan Mouth, Kajan River	2° 55'	117° 42'	+0 01	+0 02	*1.29	*1.29	6.0	8.7	5.9
1991	Tandjungselor, Kahan River	2° 49'	117° 22'	+2 11	+2 11	*0.46	*0.36	2.4	3.4	2.0
1993	Kasseimouth, Berau River	2° 10'	117° 52'	−0 06	−0 05	*1.30	*1.23	6.3	9.1	5.9
1995	Haji Bank, Beraoe River	2° 11'	117° 32'	+1 30	+2 14	0.0	−0.6	5.3	7.4	4.3
1997	Miang Besar, Sangkulirang Bay	0° 45'	118° 00'	−0 39	−0 39	*0.86	*0.86	4.0	5.8	3.9
1999	Sangkulirang, Sangkulirang River	0° 59'	117° 59'	−0 17	−0 16	−0.2	−1.1	5.6	8.4	3.9
		South	East							
2001	KUTEI RIVER ENTRANCE	0° 42'	117° 30'		Daily predictions			4.7	6.8	4.6
2003	Samarinda, Kutei River	0° 30'	117° 08'	+1 18	+1 18	(*0.68+1.2)		3.2	4.6	4.3
2005	Balik Papan	1° 16'	116° 48'	−0 43	−0 43	+0.3	−0.2	5.2	7.9	4.6
2007	Tanahgrogot, Pasir River	1° 55'	116° 12'	+0 55	+0 55	+0.4	−0.3	5.4	7.8	4.6
2009	Aru Bank	2° 15'	116° 40'	−0 49	−0 48	(*0.32+0.5)		1.5	2.3	2.0
2011	Pamukan Bay	2° 36'	116° 30'	−0 38	−0 37	+0.1	−0.1	4.9	7.1	4.6
2013	Klumpeng Bay	3° 01'	116° 13'	−1 10	−1 09	*0.99	*0.99	4.4	6.7	4.6
2015	Kampung Baru, Laut Strait	3° 25'	116° 01'	−0 19	−0 18	(*0.72+1.0)		3.4	5.1	4.3

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Diurnal	Tropic	
				High Water	Low Water	High Water	Low Water			
	INDONESIA—cont. Time meridian, 120° E	South	East	h m	h m	ft	ft	ft	ft	ft
	<i>Borneo, South Coast</i>									
	on Barito River, p.168									
	<i>Daily predictions</i>									
2017	BARITO RIVER (outer bar) †	3° 34'	114° 29'					5.9	7.5	4.3
2019	Banjermasin, Martapura River †	3° 20'	114° 36'	+1 17	+1 14	(*0.93+0.3)		5.5	7.0	4.3
2021	Pangkoh, Kahajan River †	3° 04'	114° 10'	+1 29	+1 59	(*0.95+0.8)		5.6	6.9	4.9
2023	Pegatan, Mendawai River †	3° 17'	113° 21'	+0 05	+0 29	+0.5	+0.1	6.3	7.8	4.3
2025	Sampit Bay †	3° 00'	113° 03'	+0 16	+0 57	+0.8	+0.1	6.6	8.0	4.6
2027	Pembuang River entrance †	3° 25'	112° 34'	+0 17	+0 25	(*0.64+1.5)		3.8	4.8	4.3
	on Jolo, p.172									
2029	Sungai Aru Tobal, Kumai Bay †	3° 10'	111° 48'	−0 03	−0 03	+1.4	+1.0	3.2	4.0	2.3
2031	Lurah, Kota Waringin River entrance †	2° 54'	111° 26'	−0 30	−0 30	+2.5	+2.2	3.1	3.8	3.3
2033	Djelai River entrance †	2° 59'	110° 44'	−0 04	−0 04	(*0.57+1.0)		1.6	1.9	1.6
	on Djakarta, p.156									
2035	<i>Borneo, West Coast</i> Pawan River entrance	1° 46'	109° 54'	−0 02	−0 46	(*2.20−0.8)		4.4	6.2	3.6
2037	Sukadana, Sukadana Bay §	1° 14'	109° 57'	−0 31	−0 21	(*2.30−0.7)		4.6	6.4	3.9
	on Musi River, p.152									
2039	Pontianak, Little Kapuas River §	0° 01'	109° 20'	−0 20	−0 09	(*0.38+0.2)		2.8	3.8	2.6
	North East									
2041	Kapuas−ketjil River entrance	0° 05'	109° 08'	−1 07	−0 34	*0.48	*0.45	3.6	4.9	3.0
	on Cebu, p.180							Mean Spring		
2043	Pamangkat, Sambas−besar River	1° 11'	108° 59'	+5 45	+5 43	(*0.55+0.7)		1.8	2.1	2.0
	on Darwin, p.276									
	<i>Borneo, northwest coast</i>									
2045	Tanjung Datu	2° 05'	109° 39'	−1 42	−1 47	*0.41	*0.30	6.2	7.2	5.2
2047	Kuching, Sarawak River	1° 34'	110° 21'	−1 18	−0 56	*0.72	*0.72	9.7	12.1	9.9
2049	Pulau Lakei	1° 45'	110° 30'	−1 52	−1 53	*0.71	*0.86	8.6	11.1	10.2
	on Manila, p.184							Diurnal	Tropic	
2051	Kuala Similajau §	3° 31'	113° 18'	−0 19	+0 18	+2.2	+1.8	3.7	5.0	3.8
2053	Kuala Niah §	3° 58'	113° 42'	+0 18	+1 03	+2.1	+1.7	3.7	5.1	3.7
2055	Miri †	4° 23'	113° 59'	+0 27	+1 09	+2.1	+1.8	3.6	4.8	3.7
2057	Baram River entrance †	4° 35'	113° 59'	+0 08	+0 29	+1.4	+1.4	3.2	4.2	3.1
2059	Sapo Point, Brunei Bay †	5° 00'	115° 08'	+0 50	+0 30	+3.6	+2.0	4.9	6.0	4.6
2061	Sipitang, Brunei Bay †	5° 05'	115° 33'	+0 22	+0 24	+3.4	+2.0	4.7	5.8	4.5
2063	Victoria Harbor, Labuan Island †	5° 16'	115° 15'	+0 26	+0 19	+3.9	+2.6	4.6	5.8	5.0
2065	Kuala Papar, Kimanis Bay †	5° 45'	115° 54'	−0 09	−0 03	+2.1	+1.5	3.9	4.9	3.5
2067	Kota Kinabalu †	5° 59'	116° 04'	+0 19	+0 17	+2.4	+1.6	4.1	5.2	3.7
2069	Kudat, Marudu Bay †	6° 53'	116° 51'	+0 21	+0 00	+2.9	+1.7	4.5	5.6	4.0
	on Cebu, p.180							Mean Diurnal		
2071	Tigabu Island	6° 53'	117° 29'	−0 13	−0 15	(*0.94+1.7)		2.8	4.8	3.9
2073	Lankayan Island	6° 30'	117° 55'	−0 18	−0 19	(*0.90+1.9)		2.8	4.6	4.0
2075	Sandakan	5° 50'	118° 07'	−0 01	−0 20	+1.2	+1.2	3.1	5.1	3.6
	PHILIPPINE ISLANDS									
	Sulu Islands									
	on Davao, p.176									
2077	Tumindao Channel	4° 47'	119° 25'	+0 06	+0 14	*0.70	*0.70	3.1	3.8	1.7
2079	Port Bongao, Tawitawi Island	5° 02'	119° 46'	+0 07	+0 16	*0.74	*0.74	3.3	4.2	1.8
2081	Batu Batu Bay, Tawitawi Island	5° 04'	119° 53'	+0 05	−0 08	*0.80	*0.80	3.4	4.4	2.0
2083	Banaran Island	5° 02'	120° 06'	+0 15	−0 15	+0.4	−0.1	4.8	5.6	2.6
2085	Gallo Malo Channel, south entrance	5° 08'	120° 14'	+0 26	+0 27	+0.7	−0.1	5.1	5.9	2.7
2087	Tandugan Channel, Tawitawi Island	5° 13'	120° 19'	+0 25	+0 20	*0.80	*0.80	3.4	4.4	2.0
2089	South Ubian Usland	5° 12'	120° 30'	−0 34	−0 17	*0.61	*0.61	2.6	3.4	1.5
2091	Maimbung, Jolo Island	5° 55'	121° 01'	−0 08	+0 45	*0.72	*0.72	3.2	3.9	1.7
	on Jolo, p.172									
2093	Tataan Pass, Tawitawi Island †	5° 15'	119° 57'	−0 31	−0 31	*0.86	*0.86	—	2.4	1.0
2095	Basbas Channel, Tawitawi Island †	5° 21'	120° 13'	−0 39	−0 39	*0.89	*0.89	—	2.5	1.2
2097	Lahatlahat Island †	5° 39'	120° 17'	−0 33	−0 33	*0.93	*0.93	—	2.6	1.3
2099	Pearl Bank †	5° 51'	119° 44'	+1 12	+1 12	+0.6	0.0	—	3.4	1.7
2101	Pangutaran Island †	6° 15'	120° 30'	+1 25	+1 25	+0.7	0.0	—	3.5	1.7
2103	Port Siasi, Siasi Island †	5° 33'	120° 49'	−1 33	−1 33	+1.3	0.0	—	4.1	2.0
2105	Banting, Tapul Island †	5° 42'	120° 53'	−1 29	−0 58	+0.3	0.0	—	3.1	1.3
2107	JOLO, Jolo Island †	6° 04'	121° 00'					—	2.8	0.9
2109	Tulayan Island †	6° 01'	121° 19'	−1 55	−1 55	*0.86	*0.86	—	2.4	1.0
2111	Dassalan Island †	6° 44'	121° 28'	+0 20	+0 20	+0.5	0.0	—	3.3	1.6

Endnotes can be found at the end of table 2.

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No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Diurnal	
				High Water	Low Water	High Water	Low Water			
	PHILIPPINE ISLANDS Sulu Islands—cont. Time meridian, 120° E	North	East	h m	h m	ft	ft	ft	ft	
				on Davao, p.176						
2113	Capual Island	6° 01'	121° 25'	−0 15	+0 24	*0.89	*0.89	3.9	4.9	2.2
2115	Simisa Island	5° 58'	121° 34'	−0 02	−0 01	*0.78	*0.78	3.5	4.2	1.9
2117	Bulan Island	6° 09'	121° 50'	−0 07	+0 04	*0.91	*0.91	4.0	4.7	2.2
2119	Linawan Island	6° 19'	121° 56'	−0 29	−0 12	*0.78	*0.78	3.5	4.1	1.9
2121	Balas, Basilan Island	6° 41'	122° 08'	+0 13	+0 20	*0.83	*0.83	3.6	4.3	2.0
2123	Bojelebung, Basilan Island	6° 31'	122° 12'	+0 11	−0 17	+0.2	0.0	4.5	5.2	2.5
2125	Amoyloi, Basilan Island	6° 26'	122° 08'	−0 08	+0 52	+0.9	−0.2	5.4	6.2	2.8
				on Jolo, p.172						
2127	Port Holland, Basilan Island †	6° 33'	121° 52'	−1 49	−1 49	+0.2	0.0	—	3.0	1.3
2129	Isabela, Basilan Island †	6° 42'	121° 58'	+0 01	+0 01	*0.79	*0.79	—	2.2	1.1
	Mindanao Island									
2131	Zamboanga †	6° 54'	122° 04'	−1 54	−1 54	+0.5	0.0	—	3.3	1.4
				on Cebu, p.180						
2133	Sibuco Bay	7° 19'	122° 04'	−0 40	−0 40	*0.76	*0.76	2.5	4.0	1.8
2135	Panabutan Bay	7° 35'	122° 08'	−0 40	−0 40	*0.76	*0.76	2.5	4.1	1.8
2137	Port Santa Maria	7° 46'	122° 07'	−0 40	−0 40	*0.76	*0.76	2.5	4.2	1.8
2139	Dapitan	8° 40'	123° 25'	−0 40	−0 40	*0.79	*0.79	2.6	4.4	1.9
2141	Murcielagos	8° 38'	123° 34'	−0 08	−0 13	*0.85	*0.85	2.8	4.2	2.0
2143	Plaridel (Langaran)	8° 37'	123° 43'	−0 25	−0 25	*0.79	*0.79	2.6	4.1	1.9
	Iligan Bay									
2145	Oroquieta	8° 29'	123° 48'	−0 15	−0 15	*0.82	*0.82	2.7	4.0	1.8
2147	Jiminez	8° 20'	123° 51'	−0 05	−0 05	*0.82	*0.82	2.7	4.1	1.8
2149	Misamis	8° 09'	123° 51'	+0 00	−0 04	*0.88	*0.88	2.9	4.4	2.0
2151	Iligan	8° 14'	124° 14'	−0 10	−0 10	*0.79	*0.79	2.6	4.2	2.0
2153	Macabalan Pt., Macajalar Bay	8° 30'	124° 40'	−0 15	−0 15	*0.82	*0.82	2.7	4.2	1.8
2155	Canauyor Anchorage	9° 00'	124° 51'	−0 15	−0 15	*0.79	*0.79	2.6	4.1	1.8
2157	Mambajao, Camiguin Island	9° 15'	124° 43'	−0 15	−0 15	*0.76	*0.76	2.5	4.1	1.8
2159	Nasipit Harbor, Butuan Bay	8° 59'	125° 20'	−0 13	−0 21	*0.82	*0.71	2.8	4.1	1.9
2161	Agusan River ent., Butuan Bay	9° 00'	125° 31'	−0 09	−0 13	*0.72	*0.57	2.5	3.8	1.6
				on Manila, p.184						
2163	Surigao †	9° 48'	125° 29'	+0 45	+0 45	+0.1	0.0	—	3.4	1.7
2165	Dinagat, Dinagat Island †	9° 58'	125° 35'	+0 20	+0 20	+0.1	0.0	—	3.4	1.7
2167	Melgar, Dinagat Island †	10° 04'	125° 31'	+0 00	+0 00	+0.1	0.0	—	3.4	1.7
2169	San Roque, Dinagat Island †	10° 06'	125° 29'	−0 20	−0 20	+0.2	0.0	—	3.5	1.8
				on Legaspi Port, p.192						
2171	Malinao Inlet, Dinagat Island	10° 15'	125° 38'	+0 40	+0 40	*0.88	*0.88	3.2	4.0	2.2
2173	Gaas Bay, Dinagat Island	10° 11'	125° 39'	+0 40	+0 40	*0.88	*0.88	3.2	4.0	2.2
2175	Cuyomongan, Talavera Island	9° 45'	125° 41'	+0 40	+0 40	+0.1	+0.1	3.8	4.6	2.5
2177	Tayanan, Kangbangyo Island	9° 54'	125° 54'	+0 35	+0 35	−0.1	0.0	3.7	4.4	2.4
2179	Port Pilar, Siargao Island	9° 52'	126° 06'	+0 25	+0 25	*0.86	*0.86	3.2	4.0	2.1
2181	San Miguel, East Bugas Island	9° 44'	126° 02'	+0 30	+0 30	*0.88	*0.88	3.2	4.1	2.2
2183	Sohutan Bay, Bucas Grande Island	9° 36'	125° 55'	+0 30	+0 30	+0.1	+0.1	3.8	4.6	2.5
2185	Tugas Point	9° 29'	125° 57'	+0 20	+0 20	+0.1	+0.1	3.8	4.6	2.5
2187	Dahikan Bay	9° 27'	125° 56'	+0 27	+0 22	+0.2	+0.2	3.8	4.7	2.6
2189	Buenavista, General Island	9° 25'	126° 00'	+0 20	+0 20	+0.1	+0.1	3.8	4.6	2.5
2191	Tandag	9° 05'	126° 12'	+0 15	+0 15	+0.2	+0.1	3.9	4.7	2.6
2193	Hinatuan	8° 22'	126° 20'	+0 15	+0 15	+0.3	+0.1	4.0	4.9	2.6
2195	Caraga Bay	7° 17'	126° 35'	+0 10	+0 10	+0.4	+0.1	4.1	5.0	2.6
2197	Mati, Pujada Bay	6° 57'	126° 13'	+0 10	+0 10	+0.2	0.0	4.0	4.8	2.5
				on Davao, p.176						
2199	Davao Gulf									
2199	Lavigan Anchorage	6° 18'	126° 11'	+0 04	+0 04	−0.1	+0.1	4.1	4.9	2.4
2201	Sigaboy Island	6° 38'	126° 04'	+0 04	+0 05	0.0	+0.1	4.2	5.0	2.5
2203	DAVAO	7° 05'	125° 38'	Daily predictions				4.3	5.1	2.5
2205	Malalag	6° 36'	125° 25'	+0 04	+0 04	−0.1	+0.1	4.1	4.9	2.4
2207	Malita	6° 25'	125° 37'	−0 04	−0 06	0.0	+0.2	4.1	5.1	2.5
2209	Sarangani Island	5° 25'	125° 27'	−0 01	+0 06	0.0	0.0	4.3	5.2	2.4
2211	Sarangani Bay	5° 50'	125° 12'	+0 03	+0 06	+0.2	0.0	4.5	5.3	2.5
2213	Port Lebak	6° 32'	124° 03'	+0 07	+0 10	+0.7	0.0	5.0	5.8	2.8
2215	Cotabato, Mindanao River	7° 13'	124° 15'	+1 01	+1 42	*0.67	*0.67	3.0	3.5	1.6
	Illana Bay									
2217	Polloc Harbor	7° 21'	124° 13'	+0 14	+0 14	+0.4	−0.1	4.8	5.6	2.6
2219	Port Baras	7° 38'	124° 01'	+0 14	+0 14	+0.5	0.0	4.8	5.6	2.7
2221	Tukuran	7° 51'	123° 35'	+0 19	+0 19	+0.5	0.0	4.8	5.6	2.7
2223	Pagadian	7° 49'	123° 27'	+0 19	+0 19	+0.6	0.0	4.9	5.7	2.8
2225	Port Sambulauan	7° 32'	123° 24'	+0 19	+0 19	+0.5	0.0	4.8	5.6	2.7
2227	Limbug Cove	7° 28'	123° 24'	+0 19	+0 19	+0.4	0.0	4.7	5.5	2.6
2229	Maligay Bay	7° 32'	123° 15'	+0 19	+0 19	+0.5	0.0	4.8	5.6	2.7
2231	Margosatubig, Dumanquilas Bay	7° 35'	123° 10'	+0 11	+0 15	+0.2	−0.1	4.6	5.3	2.5
2233	Port Sibulan	7° 26'	122° 53'	+0 19	+0 19	+0.6	0.0	4.9	5.8	2.8

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		
		Latitude	Longitude	Time		Height		Mean	Diurnal	Mean Tide Level
				High Water	Low Water	High Water	Low Water			
	PHILIPPINE ISLANDS Mindanao Island—cont. Time meridian, 120° E	North	East	h m	h m	ft	ft	ft	ft	ft
				on Davao, p.176						
2235	Taba Bay, Sibuguey Bay	7° 35'	122° 47'	+0 24	+0 24	+0.8	0.0	5.1	6.0	2.8
2237	Ticauan Point, Sibuguey Bay	7° 45'	122° 44'	+0 24	+0 24	+0.9	0.0	5.2	6.1	2.9
2239	Port Banga, Sibuguey Bay	7° 31'	122° 25'	+0 24	+0 24	+0.7	0.0	5.0	5.9	2.8
2241	Landang, Sacol Island	6° 57'	122° 15'	+0 17	+0 20	-0.7	-0.2	3.8	4.6	2.0
	Palawan and Vicinity			on Manila, p.184						
2243	Balabac, Balabac Island †	8° 00'	117° 04'	+0 10	+0 10	+1.0	0.0	--	4.3	2.1
2245	Secam Island, N. Balabac Strait †	8° 11'	117° 01'	+0 10	+0 10	+0.7	0.0	--	4.0	2.0
2247	Tagbita Bay †	8° 42'	117° 20'	-0 24	+0 17	+0.5	0.0	--	3.8	1.9
2249	Eran Bay †	9° 05'	117° 42'	+0 05	+0 05	+0.7	0.0	--	4.0	2.0
2251	Ulugan Bay †	10° 06'	118° 47'	-0 05	-0 05	+0.7	0.0	--	4.0	2.0
2253	Port Barton †	10° 28'	119° 08'	-0 10	-0 10	+0.7	0.0	--	4.0	2.0
2255	Boayan Island †	10° 34'	119° 11'	-0 05	+0 01	+0.4	0.0	--	3.7	1.8
2257	Bolalo Bay, Malampaya Sound †	10° 56'	119° 14'	-0 07	-0 14	0.0	0.0	--	3.3	1.6
2259	Alligator Bay, Malampaya Sound †	10° 52'	119° 17'	-0 04	+0 02	+0.2	0.0	--	3.5	1.8
2261	Bacuit †	11° 11'	119° 23'	+0 20	-0 29	*0.97	*0.97	--	3.2	1.6
2263	Northwest Bay, Linapacan Island †	11° 28'	119° 46'	-0 05	-0 05	+0.8	0.0	--	4.1	2.0
2265	San Nicolas, Linapacan Island †	11° 27'	119° 49'	-0 05	-0 05	+0.9	0.0	--	4.2	2.1
2267	San Miguel, Linapacan Island †	11° 30'	119° 52'	+0 10	+0 10	+1.1	0.0	--	4.4	2.2
2269	Batas Island †	11° 10'	119° 36'	+0 10	+0 10	+1.3	0.0	--	4.6	2.3
2271	Taytay †	10° 50'	119° 31'	+0 15	+0 15	+1.3	0.0	--	4.6	2.3
2273	Paly Island †	10° 42'	119° 42'	+0 15	+0 15	+1.3	0.0	--	4.6	2.3
2275	Araceli, Dumaran Island †	10° 33'	119° 59'	+0 15	+0 15	+1.3	0.0	--	4.6	2.3
2277	Tinitian, Green Island Bay †	10° 04'	119° 12'	+0 40	+0 40	+1.1	0.0	--	4.4	2.2
2279	Puerto Princesa †	9° 44'	118° 43'	+0 05	+0 05	+1.1	0.0	--	4.4	2.2
2281	Island Bay †	9° 06'	118° 07'	+0 15	+0 15	+0.8	0.0	--	4.1	2.0
2283	Sir J. Brooke Point †	8° 46'	117° 50'	+0 10	+0 10	+0.9	0.0	--	4.2	2.1
2285	Cuyo, Cuyo Island †	10° 51'	121° 00'	+0 05	+0 05	+1.2	0.0	--	4.5	2.2
2287	Halsey Harbor, Culion Island †	11° 47'	119° 58'	+0 05	+0 05	+0.7	0.0	--	4.0	2.0
2289	Culion, Culion Island †	11° 53'	120° 01'	+0 05	+0 05	+1.2	0.0	--	4.5	2.2
2291	Coron, Busuanga Island †	12° 01'	120° 12'	+0 10	+0 10	+1.2	0.0	--	4.5	2.2
2293	Apo Island, Mindoro Strait †	12° 40'	120° 24'	-0 05	-0 05	+0.3	0.0	--	3.6	1.8
				on Cebu, p.180						
2295	Cagayan Anchorage, Cagayan Island	9° 35'	121° 14'	-0 29	-0 37	*0.80	*0.80	2.6	4.0	1.9
2297	Cagayan Sulu Island	6° 59'	118° 32'	-3 00	-3 00	*0.80	*0.80	2.7	4.2	2.1
	Panay and Guimaras Islands									
2299	Aniniy	10° 26'	121° 55'	-0 25	-0 25	*0.95	*0.95	3.0	4.9	2.3
2301	San Jose	10° 44'	121° 56'	-0 30	-0 30	*0.88	*0.88	2.7	4.6	2.1
2303	Tibiao	11° 17'	122° 02'	-0 35	-0 35	+0.3	+0.1	3.5	5.4	2.5
2305	Borocay Island	11° 57'	121° 56'	-0 25	-0 25	+0.3	0.0	3.6	5.3	2.5
2307	Aclan River entrance	11° 44'	122° 22'	-0 05	-0 05	+0.3	0.0	3.6	5.3	2.5
2309	Port Batan	11° 36'	122° 30'	+0 00	+0 00	+0.4	0.0	3.7	5.4	2.5
2311	Libas (Capiz Landing)	11° 36'	122° 43'	+0 00	+0 00	+0.4	+0.1	3.6	5.4	2.6
2313	Estancia	11° 28'	123° 09'	+0 15	+0 15	+1.8	+0.2	4.9	6.9	3.4
2315	Concepcion	11° 13'	123° 06'	+0 15	+0 15	+1.9	+0.2	5.0	7.0	3.4
2317	Banate	11° 00'	122° 49'	+0 25	+0 25	+2.0	+0.2	5.1	7.1	3.4
2319	Navalvas, Guimaras Island	10° 44'	122° 41'	+0 15	+0 15	+1.3	+0.2	4.4	6.4	3.1
2321	Inampulugan I., Guimaras Island	10° 27'	122° 43'	-0 10	-0 10	0.0	0.0	3.3	5.1	2.3
2323	Lugmayan Point, Guimaras Island	10° 25'	122° 32'	-0 20	-0 20	*0.85	*0.85	2.7	4.5	2.0
2325	Liloilo	10° 42'	122° 34'	+0 05	+0 05	+0.3	+0.1	3.5	5.4	2.6
2327	Miagao	10° 38'	122° 14'	-0 20	-0 20	*0.88	*0.88	2.7	4.6	2.2
	Negros Island									
2329	Cadiz	10° 57'	123° 19'	+0 30	+0 30	+1.6	+0.1	4.8	6.6	3.2
2331	Himugaan River entrance	10° 57'	123° 24'	+0 25	+0 25	+1.3	+0.1	4.5	6.3	3.0
2333	Danao River entrance	10° 49'	123° 33'	+0 15	+0 15	+0.7	0.0	4.0	5.8	2.7
2335	San Carlos	10° 29'	123° 25'	+0 15	+0 15	+0.8	0.0	4.1	5.8	2.7
2337	Calagcalag Bay	9° 49'	123° 08'	+0 10	+0 10	+0.4	0.0	3.7	5.4	2.6
2339	Bais	9° 36'	123° 08'	+0 10	+0 10	+0.3	0.0	3.6	5.3	2.5
2341	Dumaguete	9° 18'	123° 18'	-0 25	-0 25	*0.92	*0.71	3.2	4.8	2.1
2343	Larena, Siquijor Island	9° 15'	123° 35'	-0 25	-0 25	*0.80	*0.71	2.7	4.2	1.8
2345	Port Bonbonon	9° 03'	123° 07'	-0 30	-0 30	*0.88	*0.71	3.0	4.5	2.0
2347	Campomanes Bay	9° 42'	122° 25'	-0 30	-0 30	*0.90	*0.71	3.1	4.5	2.0
2349	Himamaylan	10° 06'	122° 52'	-0 30	-0 30	0.0	0.0	3.3	5.0	2.3
2351	Bacolod	10° 40'	122° 57'	+0 10	+0 10	+1.0	+0.1	4.2	6.1	2.9
	Cebu Island									
2353	Moalboal	9° 56'	123° 24'	+0 10	+0 10	+0.4	0.0	3.7	5.5	2.6
2355	Barili Bay	10° 07'	123° 29'	+0 10	+0 10	+0.4	0.0	3.7	5.5	2.6
2357	Balamban Bay	10° 30'	123° 43'	+0 10	+0 10	+0.6	0.0	3.9	5.7	2.6
2359	Tuburan	10° 44'	123° 49'	+0 15	+0 15	+0.7	+0.1	3.9	5.8	2.7
2361	Medellin	11° 08'	123° 58'	+0 20	+0 20	+0.9	0.0	4.2	6.0	2.8
2363	Bantayan, Bantayan Island	11° 10'	123° 43'	+0 20	+0 20	+0.9	0.0	4.2	6.0	2.8
2365	Bogo Bay	11° 04'	124° 00'	+0 20	+0 20	+0.4	0.0	3.7	5.4	2.6

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Diurnal	
				High Water	Low Water	High Water	Low Water			
	PHILIPPINE ISLANDS Cebu Island—cont. Time meridian, 120° E	North	East	h m	h m	ft	ft	ft	ft	ft
				on Cebu, p.180						
2367	Carmen	10° 35'	124° 01'	+0 10	+0 10	+0.3	0.0	3.6	5.3	2.5
2369	CEBU, Fort San Pedro	10° 18'	123° 54'	Daily predictions				3.3	5.1	2.3
2371	Carcar Bay	10° 05'	123° 39'	−0 05	−0 05	0.0	0.0	3.3	5.0	2.3
2373	Boljoon	9° 38'	123° 29'	−0 15	−0 15	*0.91	*0.91	3.0	4.5	2.1
	Bohol Island									
2375	Maribojoc	9° 44'	123° 50'	−0 15	−0 15	*0.91	*0.91	3.0	4.6	2.1
2377	Tubigon	9° 57'	123° 58'	−0 10	−0 10	0.0	0.0	3.3	5.1	2.3
2379	Ubay	10° 04'	124° 28'	+0 00	+0 00	+0.1	0.0	3.4	5.1	2.4
2381	Cogton Bay	9° 50'	124° 31'	−0 15	−0 15	*0.76	*0.76	2.5	4.0	1.8
2383	Garcia Hernandez	9° 37'	124° 18'	−0 20	−0 20	*0.79	*0.79	2.6	4.1	1.8
	Leyte Island									
2385	Liloan, Sogod Bay	10° 09'	125° 07'	−0 40	−0 40	*0.76	*0.76	2.5	4.1	1.8
2387	Maasin	10° 08'	124° 50'	−0 15	−0 15	*0.91	*0.91	3.0	4.6	2.1
2389	Baybay	10° 41'	124° 48'	+0 00	+0 00	+0.6	0.0	3.9	5.6	2.6
2391	Ormoc	11° 00'	124° 36'	+0 05	+0 05	+0.6	0.0	3.9	5.6	2.6
2393	Palompon	11° 03'	124° 23'	+0 10	+0 10	+0.5	0.0	3.8	5.6	2.6
2395	Genuruan Island, Biliran Island	11° 42'	124° 21'	+0 05	+0 05	+0.5	0.0	3.8	5.5	2.6
2397	Poro Island, Biliran Strait	11° 28'	124° 29'	+0 10	+0 10	+0.5	0.0	3.8	5.5	2.6
2399	Carigara	11° 18'	124° 41'	+0 15	+0 15	+0.2	0.0	3.5	5.2	2.4
2401	Canauay Island, Janabatas Channel	11° 26'	124° 51'	+0 15	+0 15	*0.97	*0.97	3.2	4.8	2.2
2403	Santa Rita I., San Juanico Strait	11° 26'	124° 58'	+0 24	+0 06	*0.88	*0.88	2.9	4.3	2.0
2405	Uban Point, San Juanico Strait	11° 22'	124° 59'	−1 10	−1 10	*0.67	*0.67	2.2	3.6	1.5
				on Jolo, p.172						
2407	Tacloban, San Juanico Strait †	11° 15'	125° 00'	−1 25	−1 25	*0.82	*0.82	—	2.3	0.9
2409	Abuyog †	10° 45'	125° 01'	−1 40	−1 40	*0.79	*0.79	—	2.2	0.8
2411	Hinunangan †	10° 24'	125° 12'	−0 20	−0 20	*0.82	*0.82	—	2.3	0.9
	Samar Island			on Cebu, p.180						
2413	Talalora	11° 32'	124° 50'	+0 15	+0 15	−0.1	−0.2	3.4	4.9	2.2
2415	Parasan Harbor, Daram Island	11° 42'	124° 45'	+0 10	+0 10	+0.2	−0.2	3.7	5.2	2.4
2417	Catbalogan	11° 47'	124° 53'	+0 10	+0 10	+0.2	−0.2	3.7	5.2	2.4
2419	Santo Nino, Santo Nino Island	11° 56'	124° 27'	+0 05	+0 05	0.0	−0.2	3.5	4.8	2.2
2421	Calbayog	12° 04'	124° 35'	+0 05	+0 05	*0.82	*0.82	2.7	4.1	1.8
				on Manila, p.184						
2423	Mauo †	12° 26'	124° 19'	+0 25	+0 25	*0.73	*0.73	—	2.4	1.2
				on Davao, p.176						
2425	Biri Island	12° 39'	124° 22'	−0 20	−0 08	*0.46	*0.46	2.0	2.4	1.1
2427	Talisay Island	12° 39'	124° 25'	+0 13	+0 15	*0.58	*0.58	2.5	2.9	1.5
				on Legaspi Port, p.192						
2429	Catarman River entrance	12° 31'	124° 39'	+0 24	+0 21	*0.93	*0.93	3.6	4.2	2.2
2431	Laoang, Laoang Island	12° 34'	125° 01'	+0 23	+0 20	+0.1	0.0	3.9	4.6	2.4
2433	Helm Harbor, Gamay Bay	12° 18'	125° 21'	+0 15	+0 18	+0.3	0.0	4.1	4.8	2.5
2435	Hilaban Island	12° 02'	125° 34'	+0 13	+0 16	+0.1	+0.1	3.8	4.7	2.5
2437	Andis Island, Port Borongan	11° 39'	125° 29'	+0 17	+0 20	+0.3	+0.1	4.0	4.9	2.6
2439	Matarinao Bay	11° 14'	125° 35'	+0 19	+0 18	+0.4	+0.1	4.1	5.0	2.6
2441	Guiuan	11° 02'	125° 43'	+0 30	+0 01	*0.51	*0.51	2.1	2.6	1.1
	Masbate Island			on Cebu, p.180						
2443	Port Cataingan	12° 00'	124° 00'	+0 00	+0 00	−0.1	−0.2	3.4	4.6	2.2
2445	Nin Bay	12° 14'	123° 17'	+0 00	+0 00	+0.3	0.0	3.6	5.3	2.5
2447	Port Barrera	12° 30'	123° 22'	+0 05	+0 05	+0.3	0.0	3.6	5.3	2.5
2449	Masbate	12° 22'	123° 37'	+0 00	+0 00	+0.3	0.0	3.6	5.3	2.5
2451	Dimasalang, Naro Bay	12° 12'	123° 51'	+0 00	+0 00	+0.1	−0.1	3.5	5.0	2.4
	Ticao and Burias Islands									
2453	Port San Miguel, Ticao Island	12° 40'	123° 35'	+0 00	+0 00	+0.3	0.0	3.6	5.3	2.5
2455	San Jacinto, Ticao Island	12° 34'	123° 44'	+0 00	+0 00	*0.95	*0.95	3.2	4.6	2.2
2457	Batuan Bay, Ticao Island	12° 25'	123° 47'	+0 10	+0 10	*0.80	*0.80	2.6	3.9	1.9
2459	Port Boca Engano, Burias Island	12° 47'	123° 19'	+0 05	+0 05	+0.4	0.0	3.7	5.3	2.6
2461	San Pascual, Burias Island	13° 08'	122° 59'	+0 00	+0 00	+0.7	+0.1	3.9	5.6	2.8
	Romblon and Vicinity									
2463	Cangouac Point, Sibuyan Island	12° 30'	122° 30'	−0 25	−0 25	+0.7	+0.1	3.9	5.8	2.7
2465	Romblon, Romblon Island	12° 35'	122° 16'	−0 05	−0 05	+0.5	+0.1	3.7	5.5	2.6
2467	Guimbiravan, Tablas Island	12° 10'	122° 02'	+0 00	+0 00	+0.7	+0.1	3.9	5.6	2.8
2469	Looc, Tablas Island	12° 16'	122° 00'	−0 07	−0 08	+0.3	+0.1	3.5	5.2	2.5
2471	Port Concepcion, Maestre de Campo I.	12° 55'	121° 44'	−0 10	−0 10	+0.1	+0.1	3.3	5.1	2.4

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Diurnal	
				High Water	Low Water	High Water	Low Water			
	PHILIPPINE ISLANDS Marinduque Island Time meridian, 120° E	North	East	h m	h m	ft	ft	ft	ft	ft
						on Cebu, p.180				
2473	Port Balanacan	13° 32'	121° 52'	-0 10	-0 10	*0.95	*0.95	3.0	4.9	2.3
2475	Santa Cruz Harbor	13° 30'	122° 04'	+0 00	+0 00	*0.98	*0.98	3.1	5.0	2.4
2477	Torrijos	13° 19'	122° 05'	-0 05	-0 05	+0.1	+0.1	3.3	5.2	2.4
	Mindoro Island									
2479	Port Galera	13° 31'	120° 58'	-0 30	-0 30	*0.75	*0.75	2.2	4.0	1.9
2481	Calapan Bay	13° 26'	121° 11'	-0 20	-0 20	*0.90	*0.90	2.8	4.7	2.2
2483	Mansalay	12° 31'	121° 26'	-0 10	-0 10	+0.1	+0.1	3.3	5.1	2.4
						on Manila, p.184				
2485	Mangarin †	12° 21'	121° 06'	+0 05	+0 05	+0.4	0.0	--	3.7	1.8
2487	Sablayan †	12° 50'	120° 46'	-0 05	-0 05	+0.3	0.0	--	3.6	1.8
2489	Paluan †	13° 25'	120° 28'	-0 10	-0 10	+0.3	0.0	--	3.6	1.8
2491	Port Tilig, Lubang Island †	13° 49'	120° 12'	-0 10	-0 10	+0.2	0.0	--	3.5	1.7
	Luzon Island, West Coast									
2493	Anilao, Balayan Bay †	13° 46'	120° 55'	+0 14	+0 20	+0.4	0.0	--	3.7	1.7
2495	Corregidor Island, Manila Bay †	14° 23'	120° 36'	-0 10	-0 10	0.0	0.0	--	3.3	1.6
2497	Cavite, Manila Bay †	14° 29'	120° 55'	+0 14	+0 13	*0.97	*0.97	--	3.2	1.6
2499	MANILA, Pasig River entrance †	14° 35'	120° 58'			Daily predictions		--	3.3	1.6
2501	Olongapo, Subic Bay †	14° 49'	120° 17'	-0 04	+0 03	*0.91	*0.91	--	3.0	1.5
2503	Port Silanguin †	14° 46'	120° 07'	-0 20	-0 20	*0.91	*0.91	--	3.0	1.5
2505	Port Masinloc †	15° 31'	119° 55'	-0 31	-0 34	*0.85	*0.85	--	2.8	1.4
2507	Santa Cruz †	15° 46'	119° 54'	-0 41	-0 42	*0.82	*0.82	--	2.7	1.3
						on San Fernando Harbor, p.188				
2509	Bolinao, Lingayen Gulf §	16° 24'	119° 54'	+0 07	-0 51	+0.3	0.0	--	2.5	1.2
2511	Sual, Lingayen Gulf §	16° 04'	120° 06'	+0 17	-0 47	+0.3	0.0	--	2.5	1.2
2513	Santo Tomas, Lingayen Gulf §	16° 17'	120° 23'	+0 11	-0 47	+0.3	0.0	--	2.5	1.2
2515	SAN FERNANDO HARBOR §	16° 37'	120° 18'			Daily predictions		--	2.2	1.1
2517	Solvec Cove §	17° 27'	120° 27'	-0 35	-1 09	+0.1	0.0	--	2.3	1.1
2519	Salomague §	17° 47'	120° 25'	-1 18	-1 34	*0.91	*0.91	--	2.0	1.0
2521	Laoag River entrance §	18° 13'	120° 31'	-1 30	-1 46	*0.86	*0.86	--	1.9	0.9
2523	Nagabungan Bay §	18° 29'	120° 34'	-1 32	+4 13	*0.91	*0.91	--	2.0	1.0
	Luzon Island, North Coast					on Legaspi Port, p.192				
2525	Claveria Bay	18° 37'	121° 06'	+1 25	+1 05	*0.37	*0.37	1.5	2.1	0.8
2527	Aparri, Cagayan River	18° 21'	121° 38'	+0 34	+0 44	*0.71	*0.71	2.7	3.5	1.7
2529	Camalaniugan, Cagayan River	18° 17'	121° 40'	+0 44	+0 53	*0.74	*0.74	2.8	3.6	1.8
2531	Port San Vicente	18° 31'	122° 08'	-0 03	-0 07	*0.79	*0.79	2.9	3.6	1.9
2533	Port San Pio Quinto, Camiguin Island	18° 54'	121° 52'	+0 34	+0 32	*0.70	*0.70	2.7	3.2	1.6
2535	Musa Bay, Fuga Island	18° 52'	121° 17'	+0 47	+0 44	*0.47	*0.47	1.8	2.3	1.0
2537	Calayan Island	19° 16'	121° 30'	+0 05	-0 01	*0.71	*0.71	2.7	3.4	1.5
2539	Babuyan Island	19° 34'	121° 56'	+0 16	+0 08	*0.79	*0.79	3.2	3.8	1.8
2541	Basco, Batan Island	20° 27'	121° 58'	+0 55	+1 06	*0.53	*0.53	2.0	2.5	1.3
	Luzon Island, East Coast									
2543	Patunungan Bay	18° 24'	122° 18'	+0 05	+0 01	*0.84	*0.84	3.2	3.9	2.0
2545	Divilacan Bay	17° 25'	122° 14'	-0 26	-0 29	*0.84	*0.84	3.2	3.8	2.0
2547	Port Bicobian	17° 17'	122° 25'	+0 35	+0 26	*0.88	*0.88	3.4	4.0	2.1
2549	Diapitan Bay	16° 24'	122° 13'	+0 18	+0 14	*0.87	*0.87	3.3	4.0	2.1
2551	Casiguran Bay	16° 14'	122° 08'	+0 06	+0 02	-0.1	-0.1	3.7	4.4	2.3
2553	Baler Bay	15° 45'	121° 35'	+0 12	+0 16	-0.1	0.0	3.7	4.4	2.3
2555	Umiray River ent., Dingalan Bay	15° 12'	121° 26'	+0 12	+0 10	-0.2	-0.1	3.7	4.3	2.2
2557	Hook Bay, Polillo Island	14° 57'	121° 50'	+0 10	+0 13	0.0	0.0	3.8	4.5	2.4
2559	Burdeos Bay, Polillo Island	14° 54'	121° 58'	+0 22	+0 20	0.0	-0.1	3.9	4.5	2.3
2561	Polillo, Polillo Island	14° 43'	121° 56'	+0 10	+0 06	+0.3	0.0	4.1	4.8	2.5
	Lamon Bay									
2563	Port Lampon	14° 40'	121° 37'	+0 23	+0 20	+0.4	0.0	4.2	4.9	2.6
2565	Sangirin Bay	14° 12'	121° 55'	+0 22	+0 16	+0.7	0.0	4.5	5.2	2.7
2567	Atimonan	14° 00'	121° 55'	+0 24	+0 19	+0.7	0.0	4.5	5.2	2.7
2569	Apat Bay	14° 01'	122° 19'	+0 25	+0 20	+0.7	0.0	4.5	5.2	2.7
2571	Capalonga	14° 20'	122° 29'	+0 19	+0 12	+0.3	0.0	4.1	4.9	2.5
2573	Port Jose Panganiban	14° 18'	122° 41'	+0 21	+0 17	+0.4	0.0	4.2	4.9	2.6
2575	Guintinua Island, Calagua Islands	14° 25'	122° 56'	+0 08	+0 11	+0.3	0.0	4.1	4.9	2.5
2577	Mercedes	14° 07'	123° 01'	+0 26	+0 24	+0.2	0.0	4.0	4.8	2.5
2579	Cabgan Island, San Miguel Bay	13° 46'	123° 16'	+0 25	+0 26	+1.4	+0.2	5.0	5.9	3.2
2581	Sisiran Bay	13° 56'	123° 39'	+0 23	+0 27	+0.2	0.0	4.0	4.8	2.5
2583	Tabgon Bay	13° 50'	123° 49'	+0 21	+0 23	+0.3	+0.1	4.0	4.8	2.6
2585	Hitoma, Catanduanes Island	13° 47'	124° 08'	+0 18	+0 19	+0.2	0.0	4.0	4.8	2.5
2587	Port Anajao, Catanduanes Island	13° 57'	124° 20'	+0 13	+0 14	+0.1	0.0	3.9	4.7	2.4
2589	Virac, Catanduanes Island	13° 35'	124° 14'	+0 25	+0 15	+0.4	0.0	4.2	5.0	2.6
2591	Tabaco, Tabaco Bay	13° 22'	123° 44'	+0 07	+0 05	+0.1	0.0	3.9	4.7	2.4
2593	Batan Island	13° 14'	124° 03'	+0 04	+0 03	+0.1	-0.1	4.0	4.7	2.4
2595	LEGASPI PORT, Albay Gulf	13° 09'	123° 45'			Daily predictions		3.8	4.6	2.4
2597	Gubat	12° 55'	124° 08'	-0 04	+0 02	-0.1	0.0	3.7	4.5	2.3
2599	San Bernardino Island	12° 45'	124° 17'	-0 12	+0 00	*0.72	*0.72	2.6	3.4	1.8

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Diurnal	
				High Water	Low Water	High Water	Low Water			
	PHILIPPINE ISLANDS Luzon Island, South Coast Time meridian, 120° E	North	East	h m	h m	ft	ft	ft	ft	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Spring	
				High Water	Low Water	High Water	Low Water			
	MARSHALL ISLANDS—cont. Time meridian, 180° E	North	East	h m	h m	ft	ft	ft	ft	ft
				on Kwajalein Atoll, p.216						
2705	Ailinglapalap Atoll	7° 17'	168° 45'	+0 08	+0 07	+0.4	+0.3	3.6	5.2	3.3
2707	Jaluit Atoll (SE Pass)	5° 55'	169° 39'	−0 12	−0 08	−0.1	−0.1	3.5	4.9	2.9
2709	Ebon (Boston) Atoll	4° 36'	168° 41'	−0 10	−0 10	+0.1	+0.1	3.4	4.8	3.0
2711	Taongi Atoll	14° 34'	168° 57'	−0 20	−0 20	0.0	0.0	3.3	4.7	3.0
2713	Bikar (Dawson) Atoll	12° 15'	170° 08'	−0 10	−0 10	0.0	0.0	3.5	4.9	3.0
2715	Ailuk Atoll	10° 13'	169° 59'	−0 10	−0 10	0.0	0.0	3.5	4.9	3.0
2717	Likiep Atoll	9° 49'	169° 19'	+0 00	−0 01	+0.1	0.0	3.6	5.0	3.0
2719	Wotje Atoll	9° 28'	170° 14'	−0 11	−0 11	−0.2	−0.2	3.4	4.7	2.8
2721	Erikub Atoll	9° 12'	169° 55'	−0 10	−0 10	0.0	0.0	3.5	4.9	3.0
2723	Maloelap Atoll	8° 43'	171° 14'	−0 04	−0 05	+0.1	−0.1	3.7	5.1	3.0
2725	Majuro Atoll	7° 07'	171° 22'	−0 05	−0 06	+0.3	+0.1	3.7	5.3	3.2
2727	Arno Atoll	7° 08'	171° 42'	−0 04	−0 05	+0.6	−0.1	4.2	5.7	3.2
2729	Port Rhin, Mili Atoll	6° 14'	171° 48'	+0 04	+0 04	+0.7	0.0	4.2	5.9	3.3
	HAWAIIAN ISLANDS Time meridian, 165° W	North	West	on Honolulu, p.228				Mean Diurnal		
2731	SAND ISLAND, MIDWAY ISLANDS	28° 12.7'	177° 21.6'	Daily predictions, p.220				0.9	1.3	0.7
2733	Lisianski Island	26° 04'	173° 58'	− − −	− − −	− −	− −	0.5	0.8	0.3
	Time meridian, 150° W									
2735	Laysan Island	25° 46'	171° 45'	+1 02	+1 12	*0.53	*0.50	0.7	1.0	0.4
2737	East Island, French Frigate Shoals	23° 47'	166° 13'	+0 03	+0 08	*0.73	*0.73	0.9	1.4	0.6
2739	Nonopapa, Niihau Island	21° 52'	160° 14'	−0 16	−0 11	*0.77	*0.77	1.0	1.6	0.7
	Kauai Island			on Nawiliwili, p.224						
2741	Waimea Bay	21° 57'	159° 40'	+0 07	+0 18	*0.86	*0.91	1.0	1.6	0.7
2743	Port Allen, Hanapepe Bay	21° 54.2'	159° 35.5'	−0 15	−0 10	*1.01	*1.00	1.24	1.84	0.82
2745	NAWILIWILI	21° 57.3'	159° 21.4'	Daily predictions				1.22	1.83	0.81
2747	Hanamaulu Bay	22° 00'	159° 20'	+0 10	+0 04	*1.00	*0.91	0.0	1.2	1.8
2749	Hanalei Bay	22° 13'	159° 30'	−1 01	−1 22	*1.07	*0.91	1.3	1.8	0.8
	Oahu Island			on Honolulu, p.228						
2751	Haleiwa, Waialua Bay †	21° 36'	158° 07'	−1 02	−2 05	*0.80	*0.80	− −	1.6	0.7
2753	Waianae	21° 27'	158° 12'	+0 20	+0 18	*0.93	*1.00	1.2	1.8	0.8
2755	Pearl Harbor Entrance, Bishop Point	21° 19.8'	157° 58.0'	+0 15	+0 06	*1.00	*0.88	1.30	1.66	0.79
2757	Pearl Harbor, Ford Island Ferry	21° 22.1'	157° 56.4'	+0 16	+0 08	*1.03	*0.88	1.35	1.73	0.82
2759	HONOLULU	21° 18.5'	157° 52.0'	Daily predictions				1.28	1.64	0.80
2761	Hanauma Bay	21° 17'	157° 42'	−0 59	−0 45	*1.00	*1.00	1.3	1.9	0.8
				on Moku O Loe, p.232						
2763	Waimanalo	21° 20'	157° 42'	+0 11	+0 05	*0.88	*0.75	1.1	1.8	0.8
2765	MOKU O LOE	21° 26.2'	157° 47.6'	Daily predictions				1.5	2.1	1.0
2767	Waikane, Kaneohe Bay	21° 30'	157° 51'	−0 22	−0 04	*1.13	*1.00	1.4	2.2	1.1
2769	Laie Bay	21° 39'	157° 56'	−0 21	−0 32	*1.00	*0.75	1.3	2.2	0.9
	Molokai Island			on Honolulu, p.228						
2771	Kolo	21° 06'	157° 12'	+0 05	+0 01	0.0	0.0	1.3	2.0	0.8
2773	Kaunakakai	21° 05.1'	157° 01.9'	−0 10	−0 14	*1.13	*1.25	1.42	1.82	0.91
2775	Kamalo Harbor	21° 03'	156° 53'	−0 37	−0 16	+0.1	0.0	1.4	2.1	0.9
2777	Pukoo Harbor	21° 04'	156° 48'	−1 03	−0 48	+0.1	0.0	1.4	2.1	0.9
2779	Kaumalapau, Lanai Island	20° 47'	157° 00'	+0 02	+0 03	+0.2	0.0	1.5	2.2	0.9
	Kahoolawe Island			on Kahului, p.236						
2781	Kuheia Bay	20° 36'	156° 36'	−0 09	−0 09	+0.2	0.0	1.5	2.1	0.9
2783	Smuggler Cove	20° 31'	156° 41'	−0 15	+0 03	+0.2	0.0	1.5	2.2	0.9
	Maui Island			on Hilo, p.236						
2785	KAHULUI	20° 53.9'	156° 28.3'	Daily predictions				1.6	2.3	1.1
2787	Hana	20° 46'	155° 59'	+0 40	+0 18	*1.05	*0.54	1.8	2.5	1.1
2789	Makena	20° 39'	156° 27'	+1 21	+1 09	*0.73	*0.54	1.2	1.8	0.8
2791	Kihei, Maalaea Bay	20° 47'	156° 28'	+1 52	+1 19	*0.94	*0.54	1.6	2.3	1.0
2793	Lahaina	20° 53'	156° 41'	+1 18	+1 01	*0.89	*0.81	1.4	2.2	1.0
	Hawaii Island			on Hilo, p.240						
2795	Mahukona	20° 11'	155° 54'	+0 38	+0 42	*0.80	*0.67	1.4	2.1	0.9
2797	Kawaihae	20° 02.4'	155° 49.9'	+1 01	+0 57	*0.83	*0.60	1.46	2.14	0.91
2799	Kailua Kona	19° 39'	156° 00'	+0 38	+0 37	*0.80	*0.67	1.4	2.1	0.9
2801	Napoopoo, Kealahou Bay	19° 28'	155° 55'	+0 48	+0 47	*0.80	*0.67	1.4	2.1	0.9
2803	Honuaipo	19° 05'	155° 33'	+0 38	+0 33	*1.01	*1.00	1.7	2.5	1.1
2805	HILO	19° 43.8'	155° 03.4'	Daily predictions				1.67	2.40	1.13
2807	JOHNSTON ATOLL	16° 44.3'	169° 31.8'	Daily predictions, p.244				1.9	2.2	1.1

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Spring	
				High Water	Low Water	High Water	Low Water			
	HAWAIIAN ISLANDS—cont. Time meridian, 150° W	North	West	h m	h m	ft	ft	ft	ft	ft
				on Honolulu, p.228						
2809	Palmyra Island	5° 53'	162° 05'	+1 19	+1 13	+0.6	−0.2	2.0	2.7	1.0
2811	Howland Island	0° 48'	176° 38'	+3 48	+3 46	+4.2	+0.4	5.0	6.2	3.1
	Time meridian, 105° W	South	West	on Apia, p.252						
2813	Easter Island (Chile)	27° 09'	109° 27'	−1 22	−1 46	−0.7	+0.4	1.5	1.9	1.5
	FRENCH POLYNESIA Time meridian, 142° 30' W									
	Marquesas Islands									
2815	Taio Hae Bay, Nuku Hiva Island	8° 56'	140° 06'	−3 10	−3 38	+1.1	+0.5	3.2	3.8	2.4
2817	Vai Tahu, Tahu Ata Island	9° 56'	139° 06'	−4 42	−5 08	+0.8	+0.9	2.5	3.1	2.4
	Time meridian, 135° W									
2819	Tuamotu Archipelago Mangareva Island	23° 08'	134° 58'	−4 29	−4 57	−0.7	+0.1	1.8	2.3	1.3
	Time meridian, 150° W									
2821	Hao (Bow or La Harpe) Island	18° 04'	140° 59'	−4 54	−5 20	−0.2	+0.5	1.9	2.4	1.7
2823	Rahiroa (Rangiroa) Island	14° 57'	147° 44'	−2 36	−3 04	−0.3	+0.6	1.7	2.1	1.7
	Society Islands			on Papeete, p.248						
2825	PAPEETE HARBOR, Tahiti Island <30>	17° 32'	149° 34'	Daily predictions				0.8	1.1	0.5
2827	Papeari Harbor, Tahiti Island <30>	17° 45'	149° 22'	—	—	*0.31	*0.31	0.8	1.1	0.5
2829	Borabora Island <30>	16° 30'	151° 46'	—	—	—	—	0.5	0.7	—
	Tubuai or Asutral Islands			on Apia, p.252						
2831	Rapa (Oparo) Island	27° 36'	144° 17'	−7 11	−7 37	−0.2	+0.5	1.9	2.4	1.7
2833	Tubuai Island	23° 22'	149° 28'	−4 13	−4 41	−0.2	+0.5	1.9	2.4	1.7
	COOK ISLANDS									
2835	Penrhyn (Tongareva) Island	9° 00'	157° 59'	−0 13	−0 15	(*0.27+0.9)		0.7	0.8	1.3
	Time meridian, 157° 30' W									
2837	Manihiki	10° 25'	161° 01'	—	—	—	—	0.3	0.4	1.0
2839	Aitutaki Island	18° 51'	159° 47'	+1 51	+1 19	(*0.46+0.8)		1.2	1.4	1.5
2841	Avarua, Rarotonga	21° 12'	159° 46'	+2 04	+1 35	−1.0	−0.2	1.8	2.2	1.0
	Time meridian, 165° W									
2843	Pukapuka	10° 52'	165° 53'	+0 26	+0 28	−0.9	+0.3	1.0	1.2	1.5
	Time meridian, local									
2845	Suvarov Island	13° 13'	163° 09'	+0 32	−0 05	(*0.54+0.6)		1.4	1.9	1.5
	TOKELAU Time meridian, 165° W									
2847	Fakaofu Island	9° 23'	171° 15'	−0 29	−0 57	−0.2	+0.5	1.9	2.4	1.7
	SAMOA and AMERICAN SAMOA									
2849	Asau Harbor, Savaii Island	13° 30'	172° 38'	−0 03	−0 32	+0.2	−0.3	3.1	3.9	1.6
2851	APIA (Observatory), Upolu Island	13° 48'	171° 46'	Daily predictions				2.6	3.2	1.6
2853	PAGO PAGO Harbor, Tutuila Island	14° 16.8'	170° 41.4'	Daily predictions, p.260				2.51	2.72	1.32
2855	Tau Island, Manua Islands	14° 13'	169° 32'	−0 04	−0 34	+0.8	−0.3	3.7	4.6	1.8
2857	Niue Island (N.Z.)	19° 02'	169° 55'	+1 09	+0 37	+0.6	+1.0	2.2	2.4	2.4
	Time meridian, 180° E	South	East							
2859	Wallis Islands (France)	13° 22'	176° 11'	−1 38	−1 51	(*1.42+0.5)		3.7	4.6	2.8
	TONGA Time meridian, 195° E			on Apia, p.252						
2861	Neiafu	18° 39'	186° 01'	+0 04	−0 21	+1.9	+1.5	3.0	3.4	3.3
2863	Lifuka Island	19° 48'	185° 39'	−0 09	−0 45	+1.7	+1.4	2.9	3.2	3.2
2865	Nomuka	20° 16'	185° 12'	+0 09	−0 16	+1.8	+1.1	3.3	3.8	3.1
2867	Nukualofa	21° 08'	184° 48'	+0 09	−0 13	+1.8	+0.9	3.5	4.0	3.0
	Time meridian, 180° E									
2869	Raoul or Sunday Island	29° 15'	182° 03'	−1 52	−2 20	+1.9	+1.5	3.0	3.3	3.3
	FIJI			on Suva, p.256						
2871	Tailevu, Viti Levu Island	17° 39'	178° 35'	+0 00	−0 06	+0.8	+1.0	3.6	4.4	3.0
2873	Nandi Waters, Viti Levu	17° 45'	177° 26'	−0 03	−0 08	+1.3	+1.0	4.1	4.9	3.3
2875	Ngaloa Harbor, Kandavu Island	19° 05'	178° 11'	−0 07	+0 01	+0.8	+0.2	4.4	5.1	2.6
2877	Matuku Island	19° 10'	179° 45'	−0 04	−0 01	+0.7	+1.1	3.4	4.1	3.0
2879	Totoya Island	18° 59'	180° 07'	+1 00	+0 51	+0.9	+0.9	3.8	4.1	3.0
2881	Moala Island	18° 32'	179° 58'	−0 49	−0 38	+1.2	+0.6	4.4	4.9	3.0

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		
		Latitude	Longitude	Time		Height		Mean	Spring	Mean Tide Level
				High Water	Low Water	High Water	Low Water			
	FIJI-cont. Time meridian, 180° E	South	East	h m	h m	ft	ft	ft	ft	ft
				on Suva, p.256						
2883	SUVA HARBOR, Viti Levu Island	18° 09'	178° 26'	Daily predictions				3.82	4.27	2.15
2885	Ngau Island	18° 00'	179° 14'	+0 14	-0 12	+0.4	+0.8	3.4	3.7	2.7
2887	Nairai Island	17° 48'	179° 23'	-0 11	+0 08	-0.1	+0.3	3.4	3.7	2.2
2889	Levuka, Ovalau Island	17° 41'	178° 51'	-0 14	-0 12	+0.9	+1.1	3.6	4.3	3.1
2891	Nandi, Vanua Levu Island	16° 58'	178° 47'	+0 01	+0 09	+0.3	+0.9	3.2	3.9	2.7
				on Davao, p.176						
2893	Rotumah Island	12° 29'	177° 07'	-0 15	+0 00	(*0.81+1.0)		3.5	4.7	2.9
	TUVALU									
2895	Fongafale, Funafuti Atoll	8° 32'	179° 12'	-0 37	-0 30	+0.2	+0.4	4.1	5.6	2.8
	KIRIBATI Time meridian, 150° W	North	West	on Honolulu, p.228						
	Line Islands									
2897	Christmas Island	1° 59'	157° 28'	+0 49	+0 39	+0.7	0.0	1.9	2.3	1.2
2899	Fanning Island	3° 51'	159° 22'	+2 38	+2 39	+0.4	+0.4	1.2	1.6	1.2
		South	West	on Apia, p.252						
2901	Caroline Island	10° 00'	150° 14'	-2 56	-3 23	(*0.35+0.4)		0.9	1.1	0.9
	Time meridian, 165° W									
2903	Phoenix Islands Canton Island	2° 48'	171° 43'	-0 01	-0 40	+0.4	+0.5	2.5	3.4	2.1
	Time meridian, 180° E	North	East	on Kwajalein Atoll, p.126						
	Gilbert Islands									
2905	Makin Atoll	3° 02'	172° 48'	+0 12	+0 15	+0.7	-0.1	4.3	6.1	3.3
2907	Tarawa Atoll	1° 22'	172° 56'	+0 19	+0 21	+0.8	-0.1	4.4	6.2	3.3
2909	Abemama Atoll	0° 28'	173° 50'	+0 27	+1 03	+0.7	-0.1	4.3	6.1	3.3
		South	East	on Auckland, p.268						
2911	Nonouti Atoll	0° 40'	174° 27'	-0 05	-0 05	+1.0	+0.1	4.4	6.2	3.5
	Time meridian, 165° E									
2913	Ocean Island	0° 52'	169° 35'	-0 21	-0 18	+0.5	+0.3	3.7	5.2	3.4
	NEW ZEALAND, South Island Time meridian, 180° E			on Auckland, p.268						
2915	Paterson Inlet, Stewart Island	46° 54'	168° 07'	-5 42	-5 37	-1.9	+0.6	5.5	6.4	5.2
2917	Akaroa	43° 48'	172° 55'	-3 31	-3 12	*0.65	*0.33	5.8	6.3	3.5
2919	Timaru	44° 24'	171° 15'	-4 24	-4 13	*0.72	*1.00	5.3	5.8	4.5
2921	Oamaru	45° 06'	170° 58'	-4 06	-3 55	*0.66	*1.06	4.6	5.3	4.2
2923	Otago Harbor entrance	45° 47'	170° 44'	-4 33	-3 50	*0.58	*0.33	5.1	5.6	3.2
2925	Port Chalmers, Otago Harbor	45° 49'	170° 39'	-3 35	-3 23	*0.58	*0.33	5.1	5.7	3.2
2927	Dunedin, Otago Harbor	45° 53'	170° 33'	-3 00	-2 11	-4.0	-1.2	5.2	5.7	3.2
2929	Nugget Point	46° 26'	169° 48'	-4 52	-4 32	-2.4	+0.5	5.1	5.8	4.9
2931	Waipapa Point	46° 39'	168° 51'	-5 17	-5 11	-1.3	+0.6	6.1	6.8	5.5
2933	Bluff	46° 36'	168° 20'	-5 34	-5 27	-1.4	+0.5	6.1	7.2	5.4
2935	New River	46° 32'	168° 15'	-5 56	-5 49	-1.1	-0.1	7.0	7.9	5.2
2937	Colac Bay	46° 22'	167° 54'	-7 16	-6 56	-2.6	-0.2	5.6	6.8	4.4
2939	Preservation Inlet	46° 04'	166° 41'	+4 59	+5 08	-2.9	-0.6	5.7	6.7	4.0
2941	Dusky Sound	45° 47'	166° 32'	+4 49	+4 58	-3.1	-0.4	5.3	6.4	4.0
2943	Deep Cove	45° 27'	167° 10'	+4 42	+4 49	-3.6	-0.3	4.7	5.4	3.9
2945	Bligh Sound	44° 53'	167° 32'	+4 29	+4 38	-3.2	-0.3	5.1	6.1	4.0
2947	Milford Sound	44° 40'	167° 56'	+4 24	+4 33	-3.2	-0.3	5.1	6.1	4.0
2949	Jackson's Bay	43° 59'	168° 37'	+4 09	+4 18	-3.1	-0.4	5.3	6.4	4.0
2951	Haast River entrance	43° 50'	169° 03'	+3 59	+4 08	-3.1	-0.4	5.3	6.4	4.0
2953	Bruce Bay	43° 35'	169° 36'	+3 49	+3 58	-3.0	-0.5	5.5	6.6	4.0
2955	Okarito	43° 13'	170° 11'	+3 44	+3 53	-2.9	-0.5	5.6	6.7	4.1
2957	Hokitika Bar	42° 43'	170° 58'	+3 39	+3 48	-2.9	-0.6	5.7	7.0	4.0
2959	Greymouth	42° 26'	171° 13'	+3 34	+3 43	-2.8	-0.7	5.9	7.3	4.0
2961	Westport	41° 44'	171° 36'	+3 29	+3 38	-0.1	+0.1	7.8	9.8	5.8
2963	West Haven Inlet	40° 35'	172° 32'	+2 24	+2 33	-1.1	-0.6	7.5	9.0	4.9
2965	Motupipi River entrance	40° 50'	172° 51'	+1 48	+1 41	*1.43	*1.28	11.7	14.0	8.2
2967	Astrolabe Road	40° 58'	173° 03'	+1 53	+1 46	+4.5	+0.2	12.3	15.4	8.2
2969	Nelson	41° 16'	173° 16'	+2 13	+2 06	+1.2	+0.2	9.0	11.6	6.5
2971	Croixilles Harbor	41° 05'	173° 42'	+1 58	+1 51	+2.4	+0.1	10.3	12.1	7.1
2973	Greville Harbor, D'Urville Island	40° 52'	173° 48'	+2 17	+2 20	-0.4	-0.6	8.2	10.8	5.3
2975	Stephens Island	40° 40'	174° 01'	+1 43	+1 36	-2.2	-0.3	6.1	7.0	4.6
2977	Elmslie Bay	40° 56'	173° 51'	+1 23	+1 06	-1.8	-1.5	7.7	8.9	4.2
2979	Pelorus Sound entrance	40° 55'	173° 59'	+1 13	+0 46	-2.4	-0.5	6.1	7.2	4.4
2981	Queen Charlotte Sound entrance	41° 07'	174° 17'	+1 16	+0 53	-5.7	-1.2	3.5	4.7	2.4
2983	Picton, Queen Charlotte Sound	41° 17'	174° 00'	+1 20	+0 50	-5.8	-1.3	3.5	4.8	2.3

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Spring	
				High Water	Low Water	High Water	Low Water			
	NEW ZEALAND, South Island—cont. Time meridian, 180° E	South	East	h m	h m	ft	ft	ft	ft	ft
				on Wellington, p.264						
2985	Cape Campbell	41° 44'	174° 15'	+0 38	+0 35	+1.1	0.0	4.3	4.6	3.5
2987	Kaikoura Peninsula	42° 24'	173° 42'	+0 13	+0 15	+1.3	−0.1	4.6	4.9	3.5
2989	Lyttelton	43° 37'	172° 43'	−0 17	−0 15	+1.7	−1.1	6.0	6.4	3.2
	NEW ZEALAND, North Island									
2991	Gisborne	38° 41'	178° 02'	+1 05	+1 08	+1.5	+0.3	4.4	4.8	3.8
2993	Clyde, Wairoa River	39° 03'	177° 26'	+1 00	+0 51	+0.8	−0.5	4.5	4.8	3.0
2995	Napier	39° 29'	176° 55'	+0 58	+0 49	+0.7	−0.5	4.4	4.6	3.0
2997	Cape Palliser	41° 37'	175° 17'	+0 10	+0 10	+0.2	−0.1	3.5	3.7	3.0
2999	WELLINGTON	41° 17'	174° 47'	Daily predictions				3.2	3.4	2.9
				on Auckland, p.268						
3001	Porirua Harbor	41° 04'	174° 51'	+2 05	+2 02	−4.6	0.0	3.4	4.8	3.5
3003	Manawatu River entrance	40° 28'	175° 13'	+1 43	+1 36	−2.9	−0.2	5.3	6.8	4.3
3005	Wanganui River entrance	39° 57'	174° 49'	+2 38	+2 31	−1.9	+0.5	5.6	7.2	5.1
3007	Opunake Bay	39° 28'	173° 51'	+1 58	+1 51	+0.1	+0.2	7.9	10.1	6.0
3009	Port Taranaki	39° 04'	174° 02'	+2 21	+2 39	+0.5	+0.1	8.4	10.6	6.1
3011	Waitara River entrance	38° 59'	174° 14'	+2 22	+2 40	+0.9	+0.5	8.4	10.5	6.5
3013	Kawhia	38° 04'	174° 49'	+2 39	+2 57	−0.6	−0.5	7.9	10.0	5.3
3015	Raglan	37° 48'	174° 53'	+2 47	+3 05	−0.6	−0.6	8.0	10.2	5.2
3017	Waikato River	37° 24'	174° 45'	+2 17	+2 35	+1.5	+0.9	8.6	10.9	7.0
3019	Manukau Harbor entrance	37° 03'	174° 31'	+2 49	+2 48	−0.3	+0.4	7.3	9.0	5.9
3021	Cornwallis, Manukau Harbor	37° 00'	174° 36'	+2 52	+3 10	+0.7	+0.6	8.1	10.0	6.5
3023	Onehunga, Manukau Harbor	36° 56'	174° 47'	+3 21	+3 30	+2.1	+1.1	9.0	11.1	7.4
3025	Pouto Point, Kaipara Harbor	36° 22'	174° 11'	+3 07	+3 25	+0.4	+0.5	7.9	9.9	6.2
3027	Martins Bay, Hokianga River	35° 32'	173° 23'	+2 22	+2 40	+0.2	−0.3	8.5	10.8	5.8
3029	Cape Maria van Diemen	34° 29'	172° 38'	+1 47	+2 05	−2.1	−0.5	6.4	7.4	4.5
3031	Parengarenga	34° 32'	173° 00'	+0 50	+0 50	−2.2	0.0	5.8	6.9	4.7
3033	Awanui River	34° 54'	173° 18'	+0 50	+0 30	−3.9	−1.3	5.4	6.3	3.2
3035	Whangaroa	35° 02'	173° 47'	+0 20	+0 20	−2.7	−0.1	5.4	6.2	4.4
3037	Port Russell	35° 16'	174° 07'	+0 12	+0 12	−2.4	0.0	5.6	6.4	4.6
3039	Whangarei Heads	35° 49'	174° 30'	+0 20	+0 20	−2.3	−0.1	5.8	6.7	4.6
3041	Port Whangarei, railway wharf	35° 45'	174° 20'	+0 40	+0 40	−1.1	+0.3	6.6	7.7	5.4
3043	Bon Accord Harbor, Kawau Island	36° 27'	174° 50'	+0 15	+0 25	−1.0	−0.1	7.1	8.0	5.2
3045	Nagle Cove, Great Barrier Island	36° 09'	175° 21'	−0 24	−0 11	−2.6	−0.4	5.8	6.6	4.3
3047	AUCKLAND	36° 51'	174° 46'	Daily predictions				8.0	9.2	5.8
3049	Waiheke	36° 47'	175° 09'	−0 06	−0 06	−0.4	0.0	7.6	8.6	5.6
3051	Coromandel	36° 46'	175° 30'	−0 15	−0 15	+0.6	+0.2	8.4	9.7	6.2
3053	Mercury Bay	36° 50'	175° 43'	−0 20	−0 20	−3.0	+0.2	4.8	5.4	4.4
3055	Tauranga Harbor entrance	37° 39'	176° 11'	−0 12	−0 01	−3.9	−0.6	4.7	5.2	3.6
3057	Ohiwa	37° 59'	177° 07'	+0 17	−0 03	−3.7	−0.6	4.9	5.3	3.7
3059	East Cape	37° 41'	178° 33'	−0 55	−0 45	−3.3	+0.2	4.5	5.0	4.2
	NEW CALEDONIA Time meridian, 165° E			on Yokohama, p.20						
3061	Port Goro, Toemo Island	22° 20'	167° 01'	+2 06	+2 07	(*0.57+0.5)		2.0	2.6	2.7
3063	Noumea	22° 16'	166° 27'	+3 05	+3 16	(*0.83+0.8)		2.9	3.8	4.0
3065	Port Nepui	21° 21'	164° 58'	+3 11	+3 35	(*0.89+0.3)		3.1	4.0	3.7
3067	Paagoumene	20° 29'	164° 11'	+3 10	+3 18	(*0.91−0.2)		3.2	4.1	3.3
3069	Loyalty Islands Shepenehe Anchorage	20° 47'	167° 08'	+1 23	+1 23	+0.3	−0.4	4.2	5.4	3.7
	VANUATU									
3071	Vila Harbor, Efate Island	17° 44'	168° 19'	+0 49	+0 59	(*0.80−0.7)		2.8	3.5	2.3
3073	Havannah Harbor, Efate Island	17° 35'	168° 15'	+0 55	+0 59	*0.70	*0.70	2.4	3.0	2.6
3075	Port Sandwich, Malekula Island	16° 26'	167° 47'	+0 03	+0 11	(*0.80−0.7)		2.8	3.8	2.3
3077	Tangoa Island	15° 35'	166° 59'	+1 07	+1 11	*0.56	*0.50	2.1	2.6	2.1
3079	Espiritu Santo Island, Pekoa Chan	15° 31'	167° 10'	+0 23	+0 28	*0.76	*0.65	2.9	3.6	2.8
3081	Aesi	15° 26'	167° 14'	−0 22	−0 15	*0.80	*0.70	3.0	3.8	2.9
3083	Port Patteson, Banks Islands	13° 51'	167° 34'	+1 31	+1 31	+0.55	*0.45	2.1	2.6	2.0
	SOLOMON ISLANDS									
3085	Santa Cruz Islands Manevai Bay	11° 38'	166° 55'	−0 14	−0 14	*0.55	*0.45	2.1	2.6	2.0
				on Dreger Harbor, p.272				Diurnal	Tropic	
3087	Kukum, Guadalcanal Island §	9° 25'	160° 01'	+0 25	+0 00	−2.5	−2.5	1.6	2.3	1.4
3089	Port Purvis, Florida Island §	9° 09'	160° 15'	+1 30	+0 15	−2.0	−2.3	2.0	2.3	1.7
3091	Tulagi Island §	9° 06'	160° 09'	+0 38	−0 35	−2.0	−2.3	2.0	2.3	1.7
				on Cebu, p.180				Mean	Spring	
3093	Auki Harbor, Malaita Island	8° 47'	160° 42'	−7 20	−7 10	(*0.88+0.6)		2.9	4.1	2.6

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TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Diurnal	Tropic	
				High Water	Low Water	High Water	Low Water			
	SOLOMON ISLANDS—cont. Time meridian, 165° E	South	East	h m	h m	ft	ft	ft	ft	ft
				on Dreger Harbor, p.272						
3095	Karunohu Island §	8° 30'	157° 58'	+0 14	+1 05	−2.4	−2.3	1.6	2.3	1.5
3097	Nususonga, New Georgia Island §	8° 20'	157° 15'	−0 01	+1 56	−2.7	−2.7	1.7	2.4	1.2
3099	Gizo Harbor, New Georgia Group §	8° 06'	156° 51'	−0 40	+1 22	−2.0	−1.8	1.5	2.2	1.9
	PAPUA NEW GUINEA Time meridian, 150° E									
	<i>Bismark Archipelago</i>									
3101	Kokopo, New Britain Island §	4° 21'	152° 17'	+0 23	+0 48	−2.1	−2.1	1.7	2.4	1.8
3103	Rabaul, New Britain Island §	4° 12'	152° 12'	−0 24	+0 18	−2.7	−2.7	1.5	2.1	1.0
3105	Bagaterre Haven, New Ireland I §	2° 47'	151° 00'	−8 49	−6 46	−2.7	−2.7	1.7	2.4	1.2
3107	West Harbor, New Hanover Island §	2° 28'	149° 58'	−9 04	−7 01	−2.8	−2.8	1.6	2.3	1.1
				on Chuuk, p.204						
3109	Emirau Island §	1° 40'	149° 55'	−0 39	−0 23	*1.17	*1.17	1.7	2.2	2.0
				on Djakarta, p.156						
3111	Seeadler Harbor, Manus Island §	2° 01'	147° 16'	+5 36	+5 18	−0.4	−0.4	2.0	2.6	1.7
				on Dreger Harbor, p.272						
3113	Finsch Harbor §	6° 33'	147° 52'	−0 12	−0 40	−1.8	−1.8	1.7	2.2	2.0
3115	DREGER HARBOR §	6° 39'	147° 53'	<i>Daily predictions</i>				1.7	2.4	3.8
3117	East Ape (Goschen Strait) §	10° 14'	150° 53'	−1 43	+0 04	−2.5	−2.4	1.6	2.3	1.4
3119	Blakeney Island §	10° 25'	151° 13'	−1 37	+1 28	−1.8	−2.0	—	2.6	1.9
				on Townsville, p.280				Mean Spring		
3121	South Cape	10° 43'	150° 16'	−0 03	−0 19	(*0.48+1.2)		2.6	3.7	3.7
3123	Dedeke Point	10° 14'	148° 43'	+0 21	+0 21	*0.78	*0.78	4.2	6.0	4.1
3125	Port Moresby	9° 29'	147° 08'	+0 17	−0 04	(*0.67+1.2)		3.6	5.2	4.8
				on Darwin, p.276						
3127	Fly River entrance	8° 42'	143° 37'	+2 55	+2 47	*0.54	*0.43	7.9	11.2	7.0
	INDONESIA, NEW GUINEA Time meridian, 135° E			on Singapore, p.144				Mean Spring		
3129	Merauke	8° 29'	140° 23'	+1 36	+1 50	+7.2	+4.5	8.4	10.7	11.0
				on Bangkok Bar, p.140				Diurnal Tropic		
3131	Digul River entrance §	7° 07'	138° 45'	−7 00	−7 03	*1.94	*1.65	15.9	19.3	14.5
				on Singapore, p.144				Mean Spring		
3133	Etna Bay	3° 56'	134° 40'	−8 36	−8 36	−0.4	−0.1	5.4	6.7	4.9
				on Yokohama, p.20						
3135	Sekar Bay, Berau Gulf	2° 42'	132° 25'	−0 36	−0 28	(*0.74+2.1)		2.6	3.3	4.9
				on Bombay, p.328						
3137	Wasian River entrance, Berau Gulf	2° 13'	133° 33'	−5 20	−5 17	+1.4	+0.3	9.8	12.3	9.2
3139	Modan, Berau Gulf	2° 23'	133° 54'	−5 21	−5 18	+5.6	+1.3	13.0	16.4	11.8
				on Yokohama, p.20						
3141	Saonek, Dampier Strait	0° 27'	130° 46'	+1 53	+2 02	(*0.94+0.3)		3.3	4.5	3.9
3143	Manokwari	0° 52'	134° 05'	+1 50	+1 59	−0.2	−0.1	3.4	4.6	3.6
3145	Mios Woendi Lagoon, Schouten Islands	1° 16'	136° 23'	+1 52	+1 44	*0.95	*0.95	3.3	4.2	3.6
3147	Kajo Bay	2° 32'	140° 44'	+1 51	+1 59	(*0.51+1.1)		1.8	2.0	3.0
	AUSTRALIA, North Coast Time meridian, 142° 30' E			on Darwin, p.276						
3149	Tapa Bay, Bynoe Harbor	12° 27'	130° 36'	−0 04	−0 04	*0.88	*0.90	11.6	16.8	12.0
3151	East Point, Bynoe Harbor	12° 35'	130° 34'	+0 04	+0 04	*0.91	*0.96	11.9	17.0	12.6
3153	Night Cliff, Point Darwin	12° 23'	130° 50'	+0 06	+0 06	−1.6	−0.5	12.3	17.6	12.6
3155	DARWIN	12° 28'	130° 51'	<i>Daily predictions</i>				13.4	18.8	13.6
3157	Cape Hotham	12° 03'	131° 17'	+1 14	+1 14	*0.64	*0.67	8.3	11.2	8.8
	Time meridian, 120° E									
3159	Cape Keith, Melville Island	11° 36'	131° 28'	+0 03	+0 03	*0.54	*0.55	7.2	9.6	7.4
3161	Cape Don Boat Harbor	11° 19'	131° 46'	−1 02	−1 19	*0.33	*0.33	4.0	5.6	4.6
	Time meridian, 142° 30' E									
3163	Arnhem Bay	12° 11'	136° 06'	+4 15	+4 10	(*0.85−3.0)		11.4	13.6	8.6

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Spring	
				High Water	Low Water	High Water	Low Water			
	AUSTRALIA, East Coast Time meridian, 150° E	South	East	h m	h m	ft	ft	ft	ft	ft
				on Townsville, p.280						
3165	Thursday Island, Torres Strait <31>	10° 35'	142° 13'	-- --	-- --	--	--	--	6.1	--
3167	Tern Island	11° 00'	142° 45'	+1 38	+1 36	+1.1	+0.9	5.6	8.4	6.3
3169	Hannibal Island	11° 36'	142° 56'	+1 02	+1 01	0.0	0.0	5.4	8.0	5.3
3171	Piper Island	12° 15'	143° 15'	+0 27	+0 28	*0.86	*0.96	4.4	6.6	4.7
3173	Restoration Island	12° 37'	143° 28'	+0 23	+0 23	(*0.70+1.0)		3.8	5.8	4.7
3175	Flinders Islands	14° 10'	144° 15'	+0 15	+0 15	(*0.78+1.9)		4.2	6.2	6.0
3177	Low Wooded Isle	15° 05'	145° 24'	-0 12	-0 12	(*0.72+1.0)		3.9	5.8	4.8
3179	Cooktown	15° 28'	145° 15'	+0 10	+0 10	(*0.72+0.4)		3.9	5.8	4.2
3181	Low Isles	16° 23'	145° 34'	+0 00	+0 00	(*0.70+1.1)		3.8	5.6	4.8
3183	Cairns	16° 55'	145° 47'	-0 02	-0 02	(*0.76+0.6)		4.1	6.0	4.6
3185	Green Island	16° 46'	145° 58'	-0 18	-0 18	(*0.72+0.7)		3.9	5.6	4.5
3187	High Island	17° 10'	146° 01'	-0 06	-0 06	(*0.72+0.7)		3.9	5.8	4.5
3189	North Barnard Island	17° 41'	146° 11'	-0 04	-0 04	(*0.76+0.9)		4.1	6.0	4.9
3191	Dunk Island	17° 56'	146° 09'	-0 06	-0 06	(*0.81+2.3)		4.4	6.4	6.6
3193	Dungeness (Lucinda)	18° 31'	146° 19'	+0 15	+0 15	+0.3	0.0	5.7	8.0	5.5
3195	TOWNSVILLE	19° 15'	146° 50'	Daily predictions				5.4	7.6	5.3
3197	Bowen	20° 01'	148° 15'	+0 52	+0 52	-0.2	0.0	5.2	7.0	5.2
				on Brisbane Bar, p.284						
3199	Hook Island	20° 04'	148° 56'	+1 10	+1 05	+1.9	+1.0	5.9	7.9	5.4
3201	Molle Island	20° 15'	148° 50'	+1 23	+1 18	*1.36	*1.43	6.7	8.8	5.4
3203	East Repulse Island	20° 35'	148° 53'	+1 39	+1 34	(*1.82+2.0)		9.1	12.1	9.1
3205	Carlisle Island	20° 47'	149° 18'	+1 26	+1 21	(*1.88+2.0)		9.4	12.7	9.3
3207	St. Bees Island	20° 54'	149° 27'	+1 31	+1 26	(*2.10+1.7)		10.5	14.1	9.9
3209	Refuge Bay, Scawfell Island	20° 52'	149° 37'	+1 26	+1 21	(*1.96+2.5)		9.8	13.1	10.1
3211	MacKay, Queensland	21° 07'	149° 14'	+1 35	+1 30	(*2.44+0.3)		12.2	16.0	9.8
3213	Sarina Inlet	21° 24'	149° 20'	+1 43	+1 38	(*2.58+1.1)		12.9	16.8	11.2
3215	Dove Point, Shoalwater Bay	22° 14'	150° 28'	+0 58	+0 53	(*2.58+0.8)		12.9	17.1	10.9
3217	High Peak Island	21° 57'	150° 41'	+0 40	+0 35	(*2.00+0.8)		10.0	13.4	8.6
3219	Port Clinton, Coral Sea	22° 32'	150° 45'	+0 15	+0 10	*1.84	*1.64	9.5	12.8	7.1
3221	Tryon Island	23° 15'	151° 47'	-0 38	-0 43	+1.9	+1.1	5.8	7.6	5.4
3223	Port Alma, Fitzroy River	23° 34'	150° 52'	-0 10	-0 15	(*1.88+1.2)		9.4	12.5	8.5
3225	Gladstone, Port Curtis	23° 50'	151° 15'	-0 10	-0 15	+4.2	+1.4	7.8	10.2	6.7
3227	Lady Musgrave Island	23° 54'	152° 23'	-1 25	-1 25	0.0	+0.6	4.4	5.9	4.2
3229	Pancake Creek	24° 01'	151° 45'	-0 56	-1 02	+2.3	+1.1	6.2	8.2	5.6
3231	Lady Elliot Island	24° 07'	152° 43'	-1 19	-1 19	0.0	+0.8	4.2	5.6	4.3
3233	Burnett Heads	24° 46'	152° 23'	-0 41	-0 41	+1.1	+0.9	5.2	6.6	4.9
3235	Urangan Jetty	25° 17'	152° 55'	-0 48	-0 48	+3.5	+0.7	7.8	10.2	6.0
3237	Mary River, Middle Bank	25° 30'	152° 52'	+0 20	+1 00	+3.2	+0.1	8.1	10.5	5.6
3239	BRISBANE BAR	27° 19'	153° 10'	Daily predictions				5.0	5.9	4.0
3241	Ballina	28° 52'	153° 35'	-0 59	-0 58	(*0.46+0.7)		2.3	2.9	2.5
3243	Iluka	29° 25'	153° 22'	-1 15	-1 15	(*0.56+0.8)		2.8	3.6	3.0
3245	Lord Howe Island	31° 32'	159° 04'	-1 25	-1 20	-0.6	+0.3	4.1	5.3	3.8
	Time meridian, 172° 30' E									
3247	Norfolk Island	29° 04'	167° 56'	-1 17	-1 29	-1.3	-0.4	4.1	5.0	2.9
	Time meridian, 150° E			on Sydney, p.288						
3249	Coffs Harbor	30° 18'	153° 09'	-0 22	-0 20	0.0	-0.1	3.7	4.7	3.0
3251	Port Macquarie bar	31° 26'	152° 56'	+0 12	+0 11	-0.3	-0.1	3.2	4.0	2.8
3253	Nelson's Bay	32° 43'	152° 09'	+0 16	+0 17	+0.1	+0.3	3.4	4.2	3.2
3255	Newcastle	32° 56'	151° 47'	-0 04	-0 09	0.0	+0.2	3.4	4.2	3.1
3257	SYDNEY (Fort Denison)	33° 51'	151° 14'	Daily predictions				3.6	4.5	3.0
3259	Port Kembla	34° 29'	150° 55'	+0 00	+0 00	-0.4	-0.2	3.4	4.0	2.7
3261	Moruya River bar	35° 54'	150° 08'	+0 10	+0 10	-0.4	+0.1	3.1	3.9	2.9
3263	Eden	37° 04'	149° 54'	+0 00	+0 00	-0.8	-0.1	2.9	3.6	2.5
3265	Gabo Island	37° 34'	149° 55'	-0 10	-0 01	+0.2	+1.2	2.6	3.0	3.7
	Tasmania			on Port Phillip, p.292						
3267	Stack Island	40° 36'	144° 47'	+0 46	+1 32	(*1.81-1.1)		5.6	6.2	4.1
3269	Devonport	41° 09'	146° 23'	-0 14	+0 32	+4.8	+0.1	7.8	8.5	5.4
3271	Port Dalrymple entrance	41° 04'	146° 48'	-0 34	+0 12	(*2.26-1.1)		7.0	8.0	5.5
3273	Launceston, Tamar River	41° 26'	147° 08'	+1 26	+3 17	(*3.13-0.9)		9.7	10.8	8.2
				on Hong Kong, p.120						
3275	Parsons Bay	43° 06'	147° 45'	+11 22	+11 31	(*0.52+0.8)		1.7	1.8	3.1
3277	Hobart	42° 53'	147° 20'	+11 09	+11 14	(*0.55+0.9)		1.8	1.9	3.4
				on Port Adelaide, p.296						
3279	Bramble Cove, Port Davey	43° 19'	146° 00'	-3 40	-3 40	(*0.19+1.4)		0.9	1.1	2.3
	AUSTRALIA, South Coast			on Port Phillip, p.292						
3281	Rabbit Island	38° 55'	146° 31'	+0 01	+0 47	*1.47	*1.00	5.2	6.0	4.0
3283	Winter Cove, Kent Islands	39° 28'	147° 21'	-0 34	+0 12	*1.67	*1.07	6.0	7.0	4.5
3285	Great Glennie Island	39° 05'	146° 14'	-0 24	+0 22	*1.67	*1.07	6.0	6.8	4.5
3287	Venus Bay	38° 40'	145° 44'	+0 00	--	+2.3	--	--	--	--
3289	Mussel Rock, Westemport	38° 27'	145° 15'	+0 25	-0 10	*1.94	*1.94	6.0	7.5	5.6
3291	PORT PHILLIP (Point Lonsdale)	38° 18'	144° 37'	Daily predictions				3.1	3.9	2.9

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES			Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	AUSTRALIA, South Coast—cont. Time meridian, 150° E	South	East	h m	h m	ft	ft	ft	ft	ft	
				on Port Phillip, p.292							
3293	Queenscliff, Port Phillip	38° 19'	144° 40'	+0 24	+0 24	*0.61	*0.61	1.9	2.1	1.8	
3295	Melbourne (Williamstown)	37° 52'	144° 55'	+2 58	+3 41	(*0.55+0.2)		1.7	1.9	1.8	
3297	Geelong, Port Phillip	38° 07'	144° 25'	+3 22	+3 22	*0.60	*0.60	1.8	2.0	1.8	
3299	Port Campbell	38° 38'	143° 00'	-1 18	-0 53	(*0.45+0.4)		1.4	2.0	1.7	
3301	Warrnambool	38° 24'	142° 29'	+0 20	+0 20	(*0.52+0.7)		1.6	2.4	2.2	
				on Port Adelaide, p.296							
3303	Portland Time meridian, 142° 30' E	38° 21'	141° 37'	-4 47	-4 48	(*0.28+0.7)		1.3	1.7	2.0	
3305	Port MacDonnell	38° 04'	140° 42'	-5 16	-5 14	*0.62	*0.62	2.9	4.1	3.0	
3307	Kingston	36° 50'	139° 51'	-3 59	-4 15	(*0.47+0.9)		1.6	2.2	3.2	
3309	Second Valley	35° 31'	138° 13'	-0 25	-0 26	*0.63	*0.67	2.9	4.0	3.1	
3311	Hog Bay, Kangaroo Island	35° 44'	137° 57'	-1 16	-0 59	(*0.53+1.3)		2.2	3.1	3.8	
3313	PORT ADELAIDE	34° 51'	138° 30'	Daily predictions				4.7	6.6	4.8	
3315	Port Wakefield	34° 16'	138° 06'	- - -	- - -	+1.9	- -	- -	- -	6.3	
3317	PORT LINCOLN	34° 43'	135° 52'	Daily predictions, p.300				2.2	3.1	2.9	
3319	Ardrossan, Gulf of St. Vincent	34° 26'	137° 55'	-0 23	-0 15	+1.4	+1.4	5.5	7.8	5.8	
3321	Edithburg, Gulf of St. Vincent	35° 05'	137° 45'	-0 52	-0 48	*0.79	*0.79	3.7	5.2	3.8	
3323	Port Victoria, Spencer Gulf	34° 30'	137° 27'	-2 37	-2 37	*0.59	*0.59	2.8	4.0	2.8	
3325	Wallaroo, Spencer Gulf	33° 55'	137° 37'	+0 28	+0 34	*0.59	*0.59	2.7	3.8	2.9	
3327	Port Pirie, Spencer Gulf	33° 10'	138° 01'	+2 40	+2 48	+0.8	+0.2	5.3	7.4	5.3	
3329	Port Augusta, Spencer Gulf	32° 30'	137° 46'	+3 08	+3 16	+1.2	-0.1	6.0	8.4	5.3	
3331	Coffin Bay	34° 30'	135° 20'	-4 32	-4 26	*0.70	*0.67	3.4	4.8	3.3	
3333	Port Eyre	32° 00'	132° 27'	-5 17	-5 17	*0.70	*0.67	3.4	4.8	3.3	
	Time meridian, 120° E			on Djakarta, p.156				Mean Tropic			
3335	Albany, Princess Royal Harbor †	35° 02'	117° 53'	+12 28	+12 11	(*0.85+0.4)		- -	2.2	2.1	
	AUSTRALIA, West and Northwest Coasts							Diurnal Tropic			
3337	Bunbury Harbor §	33° 19'	115° 39'	+11 04	+10 43	+1.0	+1.6	- -	1.9	3.3	
3339	Fremantle, Swan River entrance †	32° 03'	115° 45'	+10 52	+10 20	(*0.81+0.5)		- -	2.1	2.1	
3341	Champion Bay †	28° 47'	114° 35'	+10 41	+9 51	-1.3	-0.8	- -	2.0	0.9	
				on Davao, p.176				Mean Spring			
3343	Carnarvon, Shark Bay	24° 52'	113° 39'	+5 08	+4 51	(*0.49+2.3)		2.1	2.9	3.5	
3345	Red Cliff Bay, Shark Bay	25° 48'	113° 40'	+7 32	+7 30	(*0.63+1.6)		2.7	3.5	3.2	
3347	Learmonth, Exmouth Gulf	22° 11'	114° 05'	+5 17	+5 19	+2.7	+2.1	4.9	6.8	4.9	
3349	Long Island	21° 38'	114° 41'	+4 34	+4 28	(*0.84+1.3)		3.6	5.0	3.4	
3351	Beadon Point	21° 38'	115° 06'	+4 58	+4 48	+1.0	+1.1	4.2	5.8	3.5	
				on Port Hedland, p.304							
3353	Large Islet	21° 18'	115° 30'	+0 23	+0 28	(*0.51+0.9)		6.7	9.7	5.9	
3355	Trimouille Island, Monte Bello Islands	20° 23'	115° 33'	-0 04	+0 02	(*0.42+1.5)		5.6	8.1	5.7	
3357	Point Samson	20° 38'	117° 12'	-0 27	-0 16	(*0.81+1.3)		10.7	15.3	9.3	
3359	PORT HEDLAND	20° 18'	118° 35'	Daily predictions				13.2	19.0	9.9	
3361	Broome	18° 00'	122° 13'	-0 22	-0 12	*1.41	*1.41	18.4	27.2	14.0	
3363	Red Bluff	17° 04'	122° 19'	+0 01	+0 10	(*1.08+0.7)		14.3	21.6	11.4	
3365	Pender Bay	16° 42'	122° 43'	+0 15	+0 15	(*1.23-1.2)		16.2	23.4	11.0	
3367	Karrakatta Bay	16° 22'	123° 02'	+1 05	+0 51	(*1.26-0.6)		16.6	23.6	11.9	
3369	Bedford Island	16° 09'	123° 19'	+0 43	+0 48	(*1.41+0.2)		18.6	26.8	14.2	
3371	Cockatoo Island	16° 05'	123° 35'	+0 21	+0 26	(*1.44+1.4)		19.0	27.3	15.7	
3373	Hall Point, Kid Islet	15° 40'	124° 24'	+0 17	+0 22	(*1.54-0.9)		20.3	29.4	14.3	
3375	Prince Frederick Harbor	15° 05'	125° 18'	+0 00	+0 00	*1.48	*1.48	19.5	28.1	14.8	
3377	Baudin Island	14° 08'	125° 36'	-0 23	-0 18	+1.5	+1.5	13.0	18.8	11.4	
3379	Troughton Island	13° 46'	126° 08'	-0 35	-0 35	*1.10	*1.10	14.5	20.9	11.0	
				on Port Adelaide, p.296							
3381	Geranium Hbr., Napier Broome Bay	13° 56'	126° 35'	-6 45	-7 21	0.0	-0.5	5.2	7.5	4.5	
				on Darwin, p.276							
3383	Reveley Island	14° 22'	127° 50'	-0 49	-0 54	*0.80	*0.80	10.7	14.6	11.0	
3385	Lacrosse I., Cambridge Gulf	14° 45'	128° 20'	-0 22	-0 28	-1.3	-0.3	12.4	16.9	12.8	
	LESSER ISLANDS, Detached Islands Time meridian, 191° 15' E			on Apia, p.252							
3387	Chatham Islands Time meridian, 180° E	43° 55'	183° 23'	-1 17	-1 17	+1.4	+0.6	3.4	3.9	2.6	
3389	Auckland Island	50° 52'	166° 05'	+6 06	+5 21	+0.2	+0.3	2.5	3.2	1.9	
3391	Perseverance Harbor, Campbell Island Time meridian, 165° E	52° 34'	169° 07'	+6 57	+6 35	+0.9	+0.5	3.0	3.5	2.3	
3393	Macquarie Island	54° 31'	158° 58'	+5 36	+5 08	-0.2	+0.5	1.9	2.4	1.8	

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No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Spring	
				High Water	Low Water	High Water	Low Water			
	Islands, Bay of Bengal Time meridian, 82° 30' E	North	East	h m	h m	ft	ft	ft	ft	ft
	<i>Nicobar Islands</i>			on Mergui, p.308						
3395	Galathea Bay	6° 47'	93° 51'	-2 08	-2 17	(*0.27+0.5)		3.4	4.6	3.0
3397	Nankauri Harbor	8° 02'	93° 33'	-1 50	-1 58	(*0.29+1.7)		3.6	5.0	4.3
3399	Car Nicobar	9° 10'	92° 50'	-2 05	-2 05	(*0.31+0.5)		3.8	5.3	3.3
	<i>Andaman Islands</i>									
3401	Sisters Island	11° 09'	92° 44'	-1 54	-1 49	(*0.35+0.3)		4.3	5.8	3.5
3403	Port Blair	11° 41'	92° 46'	-1 38	-1 42	(*0.35+0.3)		4.4	6.1	3.5
3405	Port Cornwallis	13° 19'	93° 03'	-1 03	-1 17	(*0.41+0.9)		5.1	7.2	4.6
	BURMA <32> Time meridian, 97° 30' E									
3407	Pulo Besin	9° 59'	98° 29'	-0 32	-0 43	(*0.67+1.1)		8.3	11.5	7.2
3409	Hastings harbor	10° 07'	98° 17'	-0 35	-0 42	*0.60 *0.52		7.7	10.8	5.4
3411	Lanbi Island	10° 46'	98° 18'	-0 24	-0 36	*0.73 *0.76		9.0	12.5	6.7
3413	Owen Island	11° 12'	98° 15'	-0 24	-0 36	(*0.69+0.9)		8.5	11.9	7.2
3415	Pigeon Island	11° 47'	98° 13'	-0 32	-0 44	*0.69 *0.69		8.6	12.0	6.3
3417	MERGUI	12° 26'	98° 36'			<i>Daily predictions</i>		12.4	17.5	9.1
3419	Padaw Sound	12° 37'	98° 25'	-0 17	-0 17	-0.2 +1.5		10.7	15.1	9.8
3421	Myinkwa Aw, Tavoy R. entrance	13° 33'	98° 08'	-0 11	-0 16	(*0.78+1.1)		9.7	13.6	8.2
3423	Heinze Bok (Long Island)	14° 24'	97° 47'	+0 31	+0 31	(*0.72+1.0)		8.9	12.6	7.6
3425	Wa Kyun	15° 12'	97° 44'	+1 44	+1 46	(*0.78+4.4)		9.7	14.0	11.5
3427	Double Island	15° 52'	97° 35'	+3 17	+3 43	0.0 +0.5		11.9	17.2	9.4
3429	Kyaikkami, Moulmein River	16° 05'	97° 34'	+4 02	+4 15	+2.0 0.0		14.4	20.0	10.1
	on Rangoon, p.312									
3431	Moulmein, Moulmein River <33>	16° 29'	97° 37'	-0 53	-0 03	-6.0 <34>		9.5	12.2	6.2
	on Mergui, p.308									
3433	Elephant Point, Rangoon River	16° 28'	96° 19'	+5 26	+5 52	+3.7 +2.1		14.0	18.9	12.0
	on Rangoon, p.312									
3435	RANGOON, Rangoon River	16° 46'	96° 10'			<i>Daily predictions</i>		13.4	17.0	10.3
	on Mergui, p.308									
3437	China Bakir (Old Lighthouse)	16° 17'	96° 12'	+5 04	+5 05	(*0.82+1.1)		10.2	14.2	8.6
3439	Pymbong Beacon	15° 47'	95° 31'	+0 42	+0 33	(*0.35+1.2)		4.3	6.2	4.4
	on Sagar, p.316									
3441	Diamond Island, Bassein River	15° 52'	94° 17'	+0 14	+0 00	*0.48 *0.46		4.8	6.5	4.7
3443	Bassein, Bassein River <35>	16° 47'	94° 47'	+4 34	+4 53	*0.52 *0.54		4.9	5.7	5.2
3445	Chaungtha River entrance	16° 57'	94° 26'	-0 23	-0 36	*0.42 *0.32		4.6	6.4	3.9
3447	Andrew Bay	18° 21'	94° 21'	-0 26	-0 42	*0.47 *0.34		5.2	7.2	4.3
3449	Searle Point, Cheduba Island	18° 55'	93° 37'	-0 03	-0 15	+0.56 *0.48		5.8	8.0	5.3
3451	Kyaukpyu, Ramree Island	19° 26'	93° 33'	-0 06	-0 33	*0.58 *0.40		6.5	9.0	5.3
3453	Sittwe	20° 08'	92° 54'	+0 13	-0 05	*0.48 *0.28		5.6	7.6	4.2
3455	St. Martins Island	20° 37'	92° 19'	-0 12	-0 31	*0.62 *0.56		6.3	8.8	6.0
	BANGLADESH <36> Time meridian, 90° E									
3457	Cox's Bazar	21° 27'	91° 59'	+0 47	+0 26	*0.67 *0.52		7.2	8.9	6.2
3459	Pusur River	21° 43'	89° 33'	+0 19	+0 12	*0.61 *0.64		5.7	7.5	6.1
3461	Kutubdia Island	21° 52'	91° 50'	+1 45	+1 44	*0.76 *0.44		8.9	11.0	6.7
3463	Chittagong	22° 20'	91° 50'	+3 37	+4 06	*0.80 *0.42		9.6	11.9	6.9
	INDIA <36> Bay of Bengal Time meridian, 82° 30' E									
3465	Matla River Approach	20° 58'	88° 35'	-0 22	-0 42	*0.63 *0.54		6.5	8.8	6.0
3467	SAGAR, Hooghly River	21° 39'	88° 03'			<i>Daily predictions</i>		9.7	14.1	9.9
3469	Diamond Harbor, Hooghly River	22° 11'	88° 11'	+1 35	+2 34	*1.11 *0.88		12.0	16.0	10.4
3471	Calcutta (Garden Reach) Hooghly River	22° 33'	88° 18'	+3 56	+5 38	*1.06 *1.00		10.6	13.7	10.3
3473	Shortt Island	20° 47'	87° 04'	-0 31	-0 36	*0.63 *0.52		6.6	9.0	5.9
3475	Chandbali	20° 46'	86° 44'	+1 22	+1 58	*0.54 +0.52		5.3	6.4	5.3
	on Madras, p.320									
3477	False Point	20° 25'	86° 47'	+0 35	+0 31	(*2.04+0.8)		4.9	6.8	5.1
3479	Gopalpur	19° 16'	84° 55'	+0 05	+0 05	*1.52 *1.52		3.7	5.2	3.2
3481	Vizagapatam	17° 41'	83° 17'	+0 06	+0 05	+0.9 0.0		3.3	4.6	2.6
3483	Cocanada	16° 56'	82° 15'	+0 17	+0 27	+1.1 +0.2		3.3	4.4	2.8
3485	Sacramento Shoal	16° 36'	82° 19'	+0 03	+0 18	+0.7 +0.1		3.0	4.0	2.5
3487	MADRAS	13° 06'	80° 18'			<i>Daily predictions</i>		2.4	3.2	2.1
3489	Cuddalore	11° 43'	79° 47'	-0 01	+0 05	-0.3 +0.2		1.9	2.5	2.1
3491	Negapatam	10° 45'	79° 51'	+0 19	+0 36	*0.55 +0.33		1.5	2.0	1.1

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES			Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	INDIA Bay of Bengal—cont. Time meridian, 82° 30' E	North	East	h m	h m	ft	ft	ft	ft	ft	
				on Colombo, p.324							
3493	Pamban Channel, Gulf of Mannar	9° 16'	79° 12'	−0 07	−0 09	+0.1	+0.1	1.4	1.9	1.3	
3495	Tuticorin, Gulf of Mannar	8° 48'	78° 10'	−0 15	−0 15	+0.8	+0.6	1.6	2.3	1.9	
3497	Sri Lanka										
	Point Pedro	9° 50'	80° 14'	−5 46	−5 42	0.0	−0.1	1.5	2.0	1.2	
3499	Trincomalee	8° 33'	81° 13'	−5 54	−5 50	0.0	0.0	1.2	1.7	1.3	
3501	Galle	6° 02'	80° 13'	+0 14	+0 19	*0.89	*0.89	1.2	1.8	1.1	
3503	COLOMBO	6° 57'	79° 51'			Daily predictions		1.4	2.0	1.2	
3505	Jaffna	9° 39'	80° 01'	+0 57	+1 13	(*0.71+0.4)		1.0	1.4	1.3	
	Arabian Sea										
3507	Quilon	8° 53'	76° 34'	−1 43	−1 52	+1.1	+0.8	1.7	2.3	2.2	
3509	Cochin	9° 58'	76° 15'	−2 22	−2 24	+0.8	+0.6	1.6	2.0	1.9	
3511	Bey pore	11° 10'	75° 48'	−2 34	−2 32	+2.0	+1.3	2.1	2.7	2.9	
				on Karachi, p.332							
3513	Calicut	11° 15'	75° 46'	+0 43	+0 20	(*0.40+1.3)		2.3	2.9	3.5	
3515	Tellicherry	11° 45'	75° 29'	+0 29	+0 28	(*0.48+0.8)		2.8	3.1	3.4	
3517	Cannanore	11° 51'	75° 22'	+0 31	+0 22	(*0.47+0.7)		2.7	3.2	3.2	
3519	Mangalore	12° 51'	74° 50'	+0 43	+0 38	(*0.48+0.5)		2.8	3.5	3.1	
3521	Malpe	13° 21'	74° 41'	+0 09	+0 01	(*0.55+0.4)		3.2	4.0	3.4	
3523	Bhatkal	13° 58'	74° 32'	+0 36	+0 38	*0.43	*0.40	2.6	3.5	2.3	
3525	Karwar Bay	14° 48'	74° 06'	+0 22	+0 10	*0.67	*0.67	3.8	4.9	3.7	
3527	Mormugao	15° 25'	73° 48'	+0 18	+0 08	*0.66	*0.60	4.0	5.2	3.5	
				on Bombay, p.328							
3529	Rajapur River entrance	16° 37'	73° 20'	−1 00	−1 00	*0.56	*0.72	4.2	5.7	5.0	
3531	BOMBAY (Apollo Bandar)	18° 55'	72° 50'			Daily predictions		8.7	11.8	8.4	
3533	Bassein	19° 18'	72° 48'	+0 30	+1 04	−0.9	−0.8	8.6	11.1	7.5	
3535	Dahanu	19° 58'	72° 43'	+1 40	+1 40	+1.1	+0.7	9.1	12.4	9.3	
3537	Bhavnagar, Gulf of Cambay	21° 45'	72° 14'	+5 03	+5 41	*2.40	*1.90	22.9	29.0	19.1	
3539	Port Albert Victor, Gulf of Cambay	20° 57'	71° 32'	+3 06	+2 49	*0.71	*0.62	6.5	8.7	5.8	
3541	Navabandar	20° 45'	71° 05'	+1 20	+1 10	(*0.44+2.2)		3.8	5.4	5.9	
				on Karachi, p.332							
3543	Porbandar	21° 38'	69° 37'	+0 14	+0 17	(*0.79+1.6)		4.6	6.0	5.9	
				on Bombay, p.328							
3545	Gulf of Kutch										
	Okha Point	22° 28'	69° 05'	+0 54	+0 46	*0.84	*0.68	8.0	9.8	6.7	
3547	Navinar Point	22° 45'	69° 43'	+1 57	+2 06	+4.9	+0.6	13.0	15.5	11.1	
3549	Kandla	23° 02'	70° 14'	+2 39	+3 08	+7.8	−0.2	16.7	19.4	12.2	
3551	Khori Creek	22° 58'	70° 14'	+2 28	+2 58	+7.4	+0.1	16.0	18.2	12.1	
3553	Hansthal Point	22° 56'	70° 21'	+2 33	+3 20	+5.6	−0.2	14.5	16.8	11.1	
3555	Navlakhi	22° 58'	70° 27'	+3 02	+3 33	+9.2	+0.4	17.5	20.2	13.2	
3557	Navi Wat	23° 05'	70° 20'	+3 09	+3 55	+7.2	+0.1	15.8	17.6	12.0	
				on Karachi, p.332							
3559	Kori Creek entrance	23° 31'	68° 21'	+0 25	+0 25	+0.4	0.0	6.2	8.1	5.6	
	Arabian Sea Islands Time meridian, 75° E			on Madras, p.320							
3561	Suvadiva Atoll, Maldiv Islands	0° 50'	73° 09'	+5 10	+5 10	0.0	+0.2	2.2	2.9	2.2	
				on Colombo, p.324							
3563	Horsburgh Atoll, Maldiv Islands	4° 54'	72° 57'	−1 50	−1 35	(*0.86+1.1)		1.2	1.7	2.1	
3565	Ihavandu, Maldiv Islands	6° 57'	72° 55'	−2 32	−2 24	+1.1	+0.9	1.6	2.3	2.2	
3567	Minicoy Island	8° 16'	73° 01'	−2 50	−2 41	+2.3	+1.7	2.0	2.5	3.2	
	Time meridian, 82° 30' E			on Karachi, p.332							
3569	Kardamum Island, Laccadive Islands	11° 13'	72° 46'	+1 15	+1 15	(*0.38+1.3)		1.8	2.9	3.4	
3571	Cherbaniani Reef, Laccadive Islands	12° 21'	71° 53'	+0 25	+0 25	(*0.45+1.6)		2.2	3.4	4.0	
	PAKISTAN Time meridian, 75° E										
	Indus River Delta										
3573	Hajamro River mouth	24° 06'	67° 19'	+0 00	+0 00	+1.0	+0.2	6.6	8.6	6.0	
3575	Jhari Creek	24° 44'	67° 19'	0 30	1 02	+1.6	+0.7	—	—	—	
3577	Port Muhammad Bin Qasim	24° 47'	67° 21'	0 23	0 23	+2.3	+1.0	—	—	—	
3579	Hasan Point	24° 47'	67° 14'	0 13	0 15	+1.6	+0.7	—	—	—	
3581	Bundal Island	24° 42'	67° 08'	+0 00	+0 00	+1.0	+0.3	—	—	—	
3583	Ghizri Creek	24° 46'	67° 06'	−0 02	0 01	+0.7	+0.3	—	—	—	
3585	KARACHI	24° 48'	66° 58'			Daily predictions		5.8	7.6	5.4	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Spring	
				High Water	Low Water	High Water	Low Water			
	PAKISTAN—cont. Time meridian, 75° E	North	East	h m	h m	ft	ft	ft	ft	ft
				on Colombo, p.324						
3587	Sonmiani Harbor	25° 23'	66° 33'	−0 50	−0 50	0.0	−0.2	6.0	7.8	5.3
3589	Ormara	25° 11'	64° 41'	−0 08	−0 10	*0.86	*0.72	5.3	7.0	4.5
3591	Pasni	25° 12'	63° 30'	+0 09	+0 08	+0.2	+0.9	5.1	6.6	6.0
3593	Gwatar Bay	25° 09'	61° 33'	+0 35	+0 35	(*0.90+0.2)		5.2	6.8	5.1
	IRAN Time meridian, 52° 30' E									
3595	Chah Bahar	25° 17'	60° 37'	−1 47	−1 43	+0.7	+0.7	--	--	--
3597	Ras Tang	25° 21'	59° 54'	−1 38	−1 43	+0.7	+1.6	--	--	--
3599	Koksar	25° 32'	58° 50'	−1 42	−1 38	−0.3	+0.7	--	--	--
3601	Khalij-e Jask	25° 38'	57° 46'	−1 42	−1 40	−1.0	−0.3	--	--	--
3603	Jask Bay, Gulf of Oman	25° 39'	57° 45'	−1 20	−1 20	(*0.93+0.3)		5.4	7.0	5.3
3605	Ras al Kuh	25° 47'	57° 19'	−1 34	−1 31	−0.7	−0.3	--	--	--
3607	Gonari Creek	26° 18'	57° 06'	−0 36	−0 28	+1.0	+0.3	--	--	--
3609	Bandar-e Sirik	26° 31'	57° 05'	−0 46	−0 37	+1.3	+0.3	--	--	--
3611	Hengam, Persian Gulf	26° 41'	55° 54'	−0 02	+0 06	−1.0	−0.4	5.2	6.7	4.7
3613	Bandar Abbas, Persian Gulf	27° 11'	56° 17'	−0 40	−0 40	+1.5	+0.6	6.7	9.4	6.5
				on Hong Kong, p.120				Mean Diurnal		
3615	Jazirat Farur, Persian Gulf	26° 15'	54° 31'	−9 30	−9 12	−0.3	−0.4	3.4	5.1	4.1
3617	Bushahr, Persian Gulf	28° 59'	50° 51'	−0 44	−0 37	*0.64	*0.43	2.7	4.5	2.6
3619	Jazirat Kharg, Persian Gulf	29° 16'	50° 20'	−0 39	−0 41	*0.87	*0.96	2.6	4.4	4.0
	IRAQ, Persian Gulf Time meridian, 45° E			on Shatt Al Arab, p.336						
3621	SHATT AL ARAB (outer bar)	29° 50'	48° 43'	Daily predictions				6.1	8.5	5.7
3623	Basra Reach <37>	30° 31'	47° 51'	+5 38	+6 41	(*0.54+2.0)		3.3	3.9	5.1
3625	Abadan	30° 20'	48° 16'	+2 50	+3 45	−3.3	+0.7	--	--	--
3627	Al Faw	29° 58'	48° 29'	+1 00	+1 00	0.0	+1.0	--	--	--
	KUWAIT, Persian Gulf									
3629	Um Qasr	30° 01'	47° 57'	+1 52	+2 01	+5.5	+1.5	10.1	12.8	9.3
3631	Um Al-Aseed (Beacon No. 12)	29° 56'	48° 02'	+1 20	+1 10	+4.6	+1.3	--	--	--
3633	Warba Spit	29° 59'	48° 09'	+1 20	+1 13	+3.7	+0.7	9.1	12.2	8.0
3635	Ras al Barshah (Beacon No. 2)	29° 33'	48° 14'	+0 41	+0 43	+1.3	+1.3	--	--	--
3637	Mina ad Dawhah	29° 23'	47° 48'	+1 09	+1 03	+1.6	+1.0	--	--	--
3639	Ash Shuwaykh	29° 21'	47° 55'	+1 11	+1 07	+1.6	+1.6	--	--	--
3641	Kuwait	29° 21'	47° 56'	+1 12	+1 08	+1.4	+0.9	6.6	8.9	6.9
3643	Fahayhil	29° 04'	48° 10'	+1 12	+0 46	(*0.78+0.6)		4.5	6.6	5.0
				on Mina Al Ahmadi, p.340						
3645	Jazirat Auhah	29° 22'	48° 26'	−0 12	−0 14	+0.3	+0.7	--	--	--
3647	MINA AL AHMADI	29° 04'	48° 10'	Daily Predictions				--	--	--
3649	Ras al Qulai'ah	28° 52'	48° 17'	+0 00	+0 16	−1.6	−0.3	--	--	--
3651	Jazirat Kubbar	29° 04'	48° 30'	−0 12	−0 19	−1.3	+0.3	--	--	--
3653	Jazirat Qaruh	28° 49'	48° 47'	−0 37	−0 13	−2.3	0.0	--	--	--
3655	Jazirat Umm al Maradim	28° 41'	48° 39'	−0 15	+0 08	−3.0	0.0	--	--	--
3657	Ras al Khafji	28° 25'	48° 31'	−0 04	+0 19	−3.3	−0.3	--	--	--
	SAUDI ARABIA, Persian Gulf			on Yamato Wan, p.12				Diurnal Tropic		
3659	Ras Al Mishab †	28° 07'	48° 37'	+8 40	+7 58	+1.2	+0.3	4.0	4.7	3.5
3661	Safaniya †	28° 00'	48° 46'	+8 39	+8 29	+1.0	+0.2	3.9	4.8	3.5
				on Bangkok Bar, p.140						
3663	Munifah <38> †	27° 35'	48° 54'	+10 27	+10 51	(*0.46−0.8)		3.6	4.3	2.7
				on Mina Salman, p.348				Mean Spring		
3665	Fasht Gharibah	26° 59'	50° 13'	−0 30	−0 42	−2.6	−1.3	--	--	--
3667	Abu Sa'fah	26° 57'	50° 30'	−0 35	−0 40	−2.0	−0.7	--	--	--
3669	RAS AT TANNURAH	26° 38'	50° 10'	Daily predictions, p.344				4.2	5.3	4.2
3671	Dawhat at Tarut	26° 39'	50° 02'	−0 31	−0 07	−1.6	−1.0	--	--	--
3673	Ad Dammam (K.A.A.P.)	26° 30'	50° 12'	−0 25	−0 28	−0.3	0.0	--	--	--
3675	Al Kubar	26° 17'	50° 13'	−0 10	−0 20	−3.9	−0.7	--	--	--
	BAHRAIN, Persian Gulf									
3677	Malik Fahd Causway	26° 11'	50° 20'	+0 25	+0 20	−4.3	−1.0	--	--	--
3679	Khawr Fasht	26° 20'	50° 26'	−0 02	+0 11	−1.3	−0.3	--	--	--
3681	Al Manamah Harbor	26° 14'	50° 35'	−0 18	−0 25	−0.3	+0.2	4.4	5.8	4.1
3683	MINA SALMAN, Bahrain Island	26° 13'	50° 36'	Daily predictions				4.9	6.4	4.2
3685	Sitra	26° 10'	50° 40'	+0 05	+0 05	−0.3	0.0	--	--	--
3687	Bahrain Approach Bouy	26° 22'	50° 47'	−0 17	−0 13	−1.0	−0.7	--	--	--
3689	Ras Ashairiq	25° 59'	51° 00'	+0 15	+0 02	*0.62	*0.76	2.8	3.5	2.7
3691	Jabal Fuwaira	26° 03'	51° 22'	−0 49	−1 10	(*0.61+0.3)		3.0	3.8	2.9

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No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Spring	
				High Water	Low Water	High Water	Low Water			
	QATAR, Persian Gulf Time meridian, 45° E	North	East	h m	h m	ft	ft	ft	ft	ft
				on Mina Salman, p.348						
3693	Ra's 'Ushayriq	25° 59'	51° 00'	+0 22	+0 22	-3.6	-1.0	--	--	--
3695	Ar Ru'ays	26° 10'	51° 11'	-0 11	-0 06	-2.3	-1.0	--	--	--
				on Musay'id, p.352				Mean Diurnal		
3697	Al Wakrah	25° 10'	51° 37'	-0 03	+0 15	-1.3	-0.7	--	--	--
	Musay'id									
3699	Harbour	24° 54'	51° 39'	+0 50	+0 40	0.0	0.0	--	--	--
3701	OUTER CHANNEL ENTRANCE	25° 02'	51° 39'	Daily predictions				--	--	--
3703	Khawr al Udayd	24° 42'	51° 27'	+1 00	+0 50	+0.3	0.0	--	--	--
3705	Ras Abu Qumayyis	24° 34'	51° 30'	+1 03	+1 00	+0.7	+0.3	--	--	--
3707	Jazirat Halul	25° 40'	52° 25'	-1 16	-1 17	-2.0	-0.7	--	--	--
	UNITED ARAB EMIRATES, Persian Gulf Time meridian, 60° E									
3709	Jazair Ghaghah	24° 24'	51° 33'	+2 18	+2 17	+0.7	0.0	--	--	--
				on Surabaya Strait, p.160						
3711	Jazirat Yas §	24° 17'	52° 37'	-10 51	-10 53	*0.86	*0.86	3.2	4.5	3.1
3713	Jazirat Das §	25° 09'	52° 53'	-11 08	-11 04	(*0.68+0.7)		2.5	3.5	3.1
				on Mina Jebel Ali, p.356						
3715	Ras Zubayyah	24° 20'	54° 10'	+1 24	+1 34	+1.0	+1.0	--	--	--
				on Mina Al Ahmadi, p.340						
3717	Sir Abu Nu'ayr	25° 13'	54° 13'	-10 30	-10 40	-3.3	0.0	--	--	--
3719	Umm an Nar	24° 26'	54° 30'	-8 11	-8 12	-4.3	0.0	--	--	--
3721	Mina Zayed Approaches	24° 38'	54° 17'	-10 32	-10 34	-2.0	0.0	--	--	--
3723	Mina Zayed	24° 31'	54° 09'	-10 12	-10 09	-2.0	0.0	--	--	--
3725	Umm ad Dalkh	24° 35'	54° 09'	-10 28	-10 33	-2.3	+0.3	--	--	--
				on Mina Jebel Ali, p.356						
3727	Khawr Ghurabi	24° 49'	54° 43'	+0 16	+0 18	-0.7	0.0	--	--	--
3729	Khawr Ghanadah	24° 50'	54° 46'	+0 36	+0 35	-0.3	-0.3	--	--	--
3731	MINA JEBEL ALI	25° 00'	55° 03'	Daily predictions				--	--	--
3733	Mina Rashid	25° 15'	55° 16'	-0 11	-0 15	0.0	0.0	--	--	--
3735	Dubayy (Al Maktoum Bridge)	25° 15'	55° 19'	+0 16	+0 07	+0.3	0.0	--	--	--
3737	Ash Sharaqah	25° 22'	55° 23'	-0 16	-0 22	+0.7	+0.3	--	--	--
3739	Ajman	25° 25'	55° 26'	+0 10	+0 00	+0.3	+0.7	--	--	--
3741	Umm al Qaywayn	25° 35'	55° 35'	-0 23	-0 34	+0.3	+0.3	--	--	--
				on Karachi, p.332				Mean Spring		
3743	Ras al Khaymah	25° 49'	55° 57'	+0 35	+0 45	-1.3	+1.0	--	--	--
3745	Mina Saqr	25° 58'	56° 03'	+0 35	+0 45	-1.0	+0.7	--	--	--
	OMAN									
	Strait of Hormoz									
3747	Bukha	26° 09'	56° 09'	+0 25	+0 34	-0.7	+0.7	--	--	--
3749	Ghubbat Dabshun	26° 12'	56° 24'	+0 15	+0 22	-0.7	+0.7	--	--	--
3751	Khasab	26° 12'	56° 15'	+0 10	+0 15	-0.3	+1.0	--	--	--
3753	Khawr al Quway	26° 22'	56° 22'	+0 05	+0 10	-0.7	+0.7	--	--	--
3755	Khor Kuwai	26° 21'	56° 22'	+0 09	-0 03	(*0.84+1.1)		4.9	6.4	5.6
3757	Little Quoin I.	26° 29'	56° 32'	-0 04	-0 21	(*0.95-0.6)		5.5	7.0	4.5
3759	Masqat, Gulf of Oman	23° 37'	58° 36'	-1 07	-1 03	(*0.79+0.5)		4.6	6.1	4.8
3761	Ras Dillah	26° 08'	56° 29'	-0 30	-0 30	+0.7	+1.3	--	--	--
3763	Khawr Niad (Khawr Habalayn)	26° 08'	56° 24'	-0 35	-0 35	-0.3	+0.7	--	--	--
3765	Mina Daba	25° 39'	56° 16'	-0 50	-0 50	+0.3	+1.0	--	--	--
3767	Ras al Hadd	22° 31'	59° 48'	-0 54	-0 54	(*0.72+1.5)		4.2	5.8	5.4
3769	Rounders Bay, Masira Island	20° 13'	58° 38'	-1 04	-1 05	(*0.69+0.7)		4.0	5.2	4.4
				on Aden, p.360				Mean Diurnal		
3771	Marbat	16° 59'	54° 42'	+1 16	+1 16	(*0.92+0.1)		3.3	4.9	4.2
	YEMEN Time meridian, 45° E									
3773	Mukalla	14° 31'	49° 08'	-0 10	+0 00	(*0.75+0.7)		2.4	4.0	4.1
3775	ADEN	12° 47'	44° 59'	Daily predictions				3.6	5.3	4.5

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Diurnal	
				High Water	Low Water	High Water	Low Water			
	SAUDI ARABIA, Red Sea Time meridian, 45° E	North	East	h m	h m	ft	ft	ft	ft	ft
3777 3779	Perim, Bab el Mandeb Strait	12° 39'	43° 24'	+0 03	+0 10	(*0.78+1.0)		2.8	4.4	4.5
	Al Mukha	13° 19'	43° 14'	+4 53	+4 53	(*0.39+0.2)		1.4	2.2	2.0
				on Aden, p.360						
				on Suez, p.364				Mean Spring		
3781	Kamaran Passage	15° 17'	42° 38'	+1 48	+1 53	-1.1	+0.4	2.3	2.8	3.4
				on Aden, p.360						
3783	Juddah	21° 28'	39° 11'	+11 25	+11 25	--	--	0.5	--	--
	Time meridian, local			on Suez, p.364						
3785	Sherm Rabegh	22° 45'	38° 58'	-5 00	-5 00	(*0.34+1.5)		1.3	1.6	2.8
3787	Aqaba, Gulf of Aqaba	29° 31'	35° 00'	-5 12	-5 07	(*0.53+0.5)		2.0	2.6	2.5
	EGYPT to ERITREA <39>									
	Gulf of Suez									
3789	At Tur	28° 14'	33° 37'	-2 37	-2 33	--	--	0.6	0.7	--
3791	SUEZ	29° 56'	32° 33'			Daily predictions		3.8	4.7	3.7
3793	Zafarana	29° 06'	32° 40'	+0 00	+0 04	-1.2	-0.2	2.8	3.5	3.0
3795	Ras Gharib	28° 21'	33° 06'	-0 21	+0 02	*0.30	*0.22	1.3	1.7	1.0
3797	Ashrafi Island	27° 47'	33° 43'	-5 38	-5 34	*0.29	*0.39	0.9	1.2	1.2
3799	Shadwan Island	27° 27'	34° 02'	-5 37	-5 33	*0.45	*0.45	1.7	2.0	1.7
3801	Al Qusayr	26° 06'	34° 17'	-5 48	-5 44	*0.40	*0.40	1.5	1.8	1.5
3803	Muhammad Qol	20° 54'	37° 10'	-4 59	-5 23	--	--	0.4	0.4	1.2
3805	Port Sudan	19° 36'	37° 15'	--	--	--	--	0.1	--	0.5
3807	Trinkitat	18° 41'	37° 45'	--	--	--	--	0.1	--	0.5
	Time meridian, 45° E									
3809	Harmil Island	16° 29'	40° 11'	+2 00	+2 42	*0.25	*0.28	0.9	1.1	1.0
3811	Massaua	15° 37'	39° 28'	+2 38	+2 43	(*0.63-0.8)		2.4	3.1	1.5
				on Aden, p.360				Mean Diurnal		
3813	Assab	13° 00'	42° 44'	--	--	--	--	0.8	1.6	1.0
	REPUBLIC OF DJIBOUTI									
				on Aden, p.360						
3815	Djibouti, Gulf of Aden	11° 35'	43° 08'	+0 05	+0 04	+1.3	+1.3	3.6	5.4	5.8
	SOMALIA									
3817	Zeila, Gulf of Aden	11° 24'	43° 28'	+0 00	+0 00	+0.8	+0.8	3.6	5.3	5.3
3819	Berbera, Gulf of Aden	10° 26'	45° 01'	+0 03	+0 02	+0.6	+0.6	3.6	5.6	5.1
3821	Cape Guardafui (Ras Asir)	11° 50'	51° 16'	-1 40	-1 40	*0.90	*0.85	3.4	5.0	4.0
				on Pohnpei Harbor, p.208				Mean Spring		
3823	Obbia	5° 21'	48° 32'	-11 23	-11 25	+1.0	-0.3	3.6	5.3	2.6
				on Dar Es Salaam, p.368						
3825	Warsheik	2° 18'	45° 48'	+0 03	+0 06	*0.57	*0.58	4.3	5.8	2.9
3827	Mogadishu	2° 02'	45° 21'	-0 11	-0 07	*0.63	*0.75	4.6	6.3	3.2
3829	Brava	1° 06'	44° 02'	-0 12	-0 10	*0.71	*0.83	5.2	7.1	3.6
		South	East							
3831	Giuba River	0° 15'	42° 38'	+0 14	+0 17	*0.95	*1.33	6.7	9.0	5.0
3833	Chisimaio	0° 22'	42° 33'	-0 15	-0 12	*0.74	*0.83	5.4	7.5	3.7
3835	Rirakau River entrance	1° 17'	41° 54'	-0 09	-0 07	*0.89	*1.00	6.5	9.0	4.5
	KENYA and TANGANYIKA									
3837	Malindi	3° 13'	40° 08'	-0 14	-0 13	(*0.89+1.8)		6.7	9.5	6.2
3839	Port Mombasa (Kilindini)	4° 04'	39° 40'	-0 09	-0 08	(*1.03+1.0)		7.7	10.4	6.1
3841	Wasin Island	4° 39'	39° 21'	-0 11	-0 12	(*1.05+1.0)		7.9	10.9	6.3
3843	Mkoani, Pemba Island	5° 21'	39° 38'	-0 14	-0 14	(*1.05+0.6)		7.9	10.9	5.8
3845	Mesale Island, Pemba Island	5° 14'	39° 36'	-0 16	-0 12	(*1.08+0.6)		8.1	11.2	6.0
3847	Mkokotoni Harbor, Zanzibar Island	5° 52'	39° 16'	-0 13	-0 14	(*1.09+0.9)		8.2	11.3	6.4
3849	Zanzibar, Zanzibar Island	6° 09'	39° 11'	-0 21	-0 19	(*1.16+1.0)		8.7	12.3	6.8
3851	DAR ES SALAAM	6° 50'	39° 17'			Daily Predictions		7.5	10.6	5.0
3853	Lindi River	9° 59'	39° 45'	+0 07	+0 09	*0.97	*1.33	6.8	9.4	5.0
	MOZAMBIQUE Time meridian, 30° E									
3855	Tunghi Bay	10° 45'	40° 35'	-1 16	-1 14	+2.8	+2.2	8.1	11.3	7.5
3857	Porto de Mocimboa	11° 20'	40° 22'	-1 04	-0 56	+4.1	+3.0	8.6	12.0	8.5
3859	Ibo	12° 21'	40° 35'	-1 30	-1 24	+3.1	+0.6	8.3	11.7	7.7
3861	Porto Amelia	12° 58'	40° 29'	-1 13	-0 59	+2.9	+2.0	8.4	11.7	7.4
3863	Porto de Mozambique	15° 02'	40° 44'	-1 00	-0 56	+2.9	+2.0	8.4	11.8	7.4
3865	Antonio Enes	16° 14'	39° 54'	-0 17	-0 05	+2.8	+2.0	8.3	11.7	7.4
3867	Porto de Quelimane	18° 00'	36° 54'	-0 30	-0 14	+3.6	+2.5	8.6	12.2	8.0

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES			Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Spring		
				High Water	Low Water	High Water	Low Water				
	MOZAMBIQUE—cont. Time meridian, 30° E	South	East	h m	h m	ft	ft	ft	ft	ft	
				on Beira, p.372							
3869	Porto do Chinde	18° 32'	36° 30'	−0 38	−0 31	−7.5	−2.3	8.0	11.1	6.8	
3871	BEIRA, Pungoe River	19° 49'	34° 50'	Daily predictions				13.2	18.6	11.7	
3873	Ilha de Chiloane	20° 37'	34° 53'	−0 19	−0 37	−0.5	+0.2	12.5	17.6	11.6	
3875	Bartolomeu Dias	21° 10'	35° 07'	−0 18	−0 23	*0.67	*0.71	8.6	12.0	7.9	
3877	Bahia de Bazaruto	21° 39'	35° 26'	−0 39	−0 33	*0.67	*0.71	8.7	12.5	8.0	
				on Durban, p.376							
3879	Inhambane Bay	23° 44'	35° 24'	+0 29	+0 48	+3.7	+2.0	5.6	8.0	6.4	
3881	Porto de Inhambane	23° 51'	35° 23'	+1 12	+1 23	+4.1	+1.4	6.6	9.0	6.3	
3883	Inhampura	25° 11'	33° 31'	+0 35	+1 09	(*0.62+1.2)		2.4	3.4	3.4	
3885	Maputo	25° 58'	32° 34'	+0 47	+0 54	(*1.79+0.2)		7.0	9.8	6.6	
	SOUTH AFRICA <40>										
3887	Richards Bay	28° 47'	32° 05'	+0 00	−0 02	+0.1	−0.1	4.1	5.9	3.6	
3889	DURBAN	29° 52'	31° 03'	Daily predictions				3.9	5.6	3.6	
3891	East London	33° 02'	27° 55'	+0 02	+0 01	+0.3	+0.4	3.8	5.4	3.9	
3893	Port Elizabeth	33° 58'	25° 38'	+0 00	−0 02	−0.1	+0.1	3.7	5.2	3.6	
	INDIAN OCEAN ISLANDS Madagascar Time meridian, 45° E			on Dar Es Salaam, p.368							
3895	Hellville, Nosi Be	13° 24'	48° 18'	−0 17	−0 14	+2.7	+2.0	8.2	11.2	7.3	
3897	Baie du Courrier	12° 11'	49° 08'	−0 29	−0 25	+0.3	+1.6	6.2	8.4	5.9	
3899	Diego Suarez	12° 16'	49° 18'	−0 41	−0 38	(*0.61+1.3)		4.6	6.2	4.4	
3901	Mangerivy Bay (Port Leven)	12° 48'	49° 49'	−0 49	−1 01	(*0.53+1.4)		4.0	5.2	4.1	
3903	Vohemar	13° 21'	50° 01'	−1 21	−1 18	(*0.41+1.4)		3.1	4.2	3.5	
3905	Maroantsetra	15° 27'	49° 49'	−0 51	−0 49	(*0.40+0.9)		3.0	4.2	2.9	
				on Colombo, p.324							
3907	Fenerive	17° 22'	49° 24'	−0 19	−0 06	+2.1	+1.8	1.7	2.3	3.2	
3909	Tamatave	18° 09'	49° 26'	−0 13	−0 09	+0.8	+0.7	1.5	2.0	2.0	
				on Dar Es Salaam, p.368							
3911	Fort Dauphin	25° 01'	47° 00'	+4 10	+4 41	(*0.19+0.4)		1.4	2.0	1.4	
3913	Androka	25° 04'	44° 07'	+1 10	+1 13	(*0.75+3.4)		5.6	8.0	7.2	
3915	Tulear	23° 21'	43° 40'	+0 46	+0 50	(*0.77+3.0)		5.8	8.4	6.9	
3917	Cap Ankarana	20° 29'	44° 07'	+0 30	+0 33	+3.0	+2.6	7.9	11.3	7.8	
3919	Nosi Maroantaly	18° 25'	43° 56'	+0 26	+0 30	+3.4	+2.3	8.6	12.1	7.8	
3921	Majunga	15° 44'	46° 19'	−0 12	−0 09	+5.4	+3.8	9.1	12.7	9.6	
	Lesser Islands										
3923	Moroni, Comoro Island	11° 41'	43° 15'	+0 24	+0 26	*1.03	− −	− −	− −	− −	
3925	Zaudzi, Ile Mayotte	12° 47'	45° 16'	−0 04	+0 00	+3.5	+2.8	8.2	11.2	8.1	
	Time meridian, 60° E			on Yokohama, p.20							
3927	Point des Galets, Reunion Island	20° 55'	55° 17'	−2 49	−2 40	(*0.34+0.3)		1.2	1.6	1.6	
3929	Port Louis, Mauritius Island	20° 09'	57° 29'	−3 58	−3 49	(*0.31+0.8)		1.1	1.6	2.0	
				on Apia, p.252							
3931	Cargados Carajos Shoal	16° 49'	59° 31'	−5 34	−6 02	+0.5	+0.3	2.8	4.0	2.0	
3933	Rodriguez Island	19° 40'	63° 26'	−7 21	−7 50	+1.7	+0.5	3.8	4.7	2.7	
	Time meridian, local			on Dar Es Salaam, p.368							
3935	Providence Island	9° 13'	51° 01'	+1 36	+1 40	(*0.72+0.3)		5.4	7.8	3.9	
3937	Port Victoria, Seychelle Islands	4° 37'	55° 27'	+0 18	+0 25	(*0.39+1.4)		2.9	4.0	3.4	
	Time meridian, 75° E			Daily predictions, p.380				3.8	5.5	3.3	
3939	DIEGO GARCIA ISLAND, Chagos Archipelago. . .	7° 21'	72° 28'	on Davao, p.176							
3941	Port Refuge, Cocos Islands	12° 05'	96° 53'	−0 39	−0 36	(*0.42+1.3)		1.8	2.4	2.3	
3943	Christmas Island	10° 25'	105° 43'	+1 48	+1 46	(*0.60+2.1)		2.6	3.4	3.6	
	Time meridian, 75° E			on Durban, p.376							
3945	Amsterdam Island	37° 50'	77° 33'	−5 25	−5 22	*0.51	*0.31	2.3	3.3	1.6	
3947	St. Paul Island	38° 43'	77° 35'	−2 54	−2 52	(*0.72+1.0)		2.8	3.9	3.6	

Endnotes can be found at the end of table 2.

TABLE 2 – TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Spring	
				High Water	Low Water	High Water	Low Water			
	INDIAN OCEAN ISLANDS Kerguelen Island Time meridian, 75° E	South	East	h m	h m	ft	ft	ft	ft	ft
				on Durban, p.376						
3949	Betsy Cove	49° 09'	70° 12'	−3 06	−2 55	−0.9	−0.2	3.2	4.6	3.0
3951	Baie du Morbihan	49° 21'	70° 13'	−4 38	−4 36	+0.3	+0.4	3.8	5.1	3.9
3953	Observatory Bay	49° 25'	69° 53'	−4 32	−4 30	−0.2	+0.1	3.6	5.2	3.5
				on Mui Vung Tau, p.136						
3955	Heard Island (Atlas Cove)	53° 01'	73° 23'	−1 56	−1 56	*0.31	*0.31	1.8	2.3	2.4
	ANTARCTICA Time meridian, local			on Cebu, p.180				Diurnal	Tropic	
3957	Gauss Station, Wilhelm II Coast	66° 02'	89° 38'	+2 00	+1 52	—	—	2.8	3.3	—
3959	Mc Donald Bay	66° 33'	93° 01'	+1 03	+1 01	—	—	3.6	4.3	—
3961	Wilkes Station	66° 15'	110° 31'	+0 58	+1 03	—	—	3.6	4.2	—
				on Jolo, p.172						
3963	Pointe Geologie, Adelie Coast †	66° 41'	139° 55'	+3 47	+4 42	—	—	3.7	4.5	—
3965	Cape Margerie (Port Martin) †	66° 50'	141° 25'	+3 38	+4 19	—	—	3.8	5.2	—
3967	Cade Denison, George V Coast †	67° 00'	142° 40'	+3 25	+4 21	—	—	3.9	4.7	—
				on Do Son, p.132						
3969	Cape Armitage, Ross Island §	77° 49'	166° 45'	−3 47	−4 15	—	—	2.2	3.1	—
3971	Scott Base, Ross Sea §	77° 52'	166° 48'	−4 34	−4 49	—	—	2.7	3.9	5.5
	ANTARCTIC PENINSULA	South	West	on Manila, p.184						
3973	Marguerite Bay (East Base) †	68° 12'	67° 03'	+5 50	+6 43	—	—	3.8	4.1	—
				on Yamato Wan, p.12						
3975	Lent Islands, Graham Land †	66° 53'	66° 48'	−11 16	−10 48	—	—	3.6	4.1	—
3977	Ferin Head, Graham Land †	66° 01'	65° 21'	−11 15	−10 47	—	—	3.8	4.4	—
3979	Argentine Islands (Stella Creek) †	65° 15'	64° 16'	−10 52	−10 43	—	—	4.6	5.4	—
3981	Port Circoncision †	65° 10'	64° 14'	−10 35	−10 41	—	—	3.8	4.5	—
3983	Port Charcot, Booth Island †	65° 04'	64° 02'	−10 55	−11 04	—	—	3.5	4.1	—
3985	Lemaire Channel, De Gerlache Strait †	64° 47'	62° 43'	−10 32	−11 03	—	—	4.1	4.8	—
3987	Neko Harbor †	64° 48'	62° 23'	−9 26	−10 01	—	—	4.4	5.1	—
3989	Nansen Island, De Gerlache Strait †	64° 33'	61° 57'	−10 18	−11 14	—	—	5.0	5.7	—
3991	Melchior Harbor, Dallman Bay †	64° 20'	62° 59'	−10 34	−11 04	—	—	4.1	4.8	4.0
				on Yokohama, p.20						
3993	Puerto Soberania	62° 29'	59° 38'	+13 12	+13 19	+1.3	+1.2	5.1	5.5	5.0
3995	Shackleton Base, Vahsel Bay	77° 59'	37° 10'	−10 12	−10 03	—	—	6.2	—	—

Endnotes can be found at the end of table 2.

ENDNOTES

* **RATIO.** If the ratio is accompanied by a correction factor multiply the heights of the high and low waters at the reference station by the ratio and then apply the correction factor. See note and example on pages 385 and 386.

† The tide at this location is chiefly diurnal.

§ The tide at this location is diurnal.

< 1> For other places in Siberia, Arctic Ocean, see "Tide Tables, Europe and West Coast of Africa."

< 2> Apply differences to predictions for Pusan 2 days earlier than the date desired.

< 3> There is a seiche at Miyako Ko with a period of about 22 minutes and a range of about 1 foot.

< 4> At YOKOHAMA, winds from the south may raise the level of the water 1 foot above normal.

< 5> There is a seiche at Aburatsubo with a period of about 15 minutes and a range of about 1 foot during storms.

< 6> There is a seiche at Shimoda Ko with a period of about 16 minutes. When the barometric pressure is low, the range is about 0.7 foot.

< 7> There is a seiche at Futami Ko with a period of 16 to 20 minutes and a range of about 1 foot.

< 8> There are seiches at Susaki Ko with periods of 18 to 40 minutes and ranges of about 0.7 foot.

< 9> In Izumi Nada with a strong SW wind and a falling barometer, sea level may rise as much as 2 feet.

<10> Tide is frequently diurnal. Apply height ratios to HHW and LLW, and time difference to LLW only. Diurnal range is given.

<11> Tide is frequently diurnal. Apply height ratios to HHW and LLW, and time difference to LLW only. HHW occurs about 14 hours after LLW. Diurnal range is given.

<12> There is a seiche at Hamada Ko with a period of about 12 minutes and range of about 0.7 foot.

<13> There are seiches at Maizuru Ko with periods from 16 to 90 minutes and ranges up to 3 feet during storms.

<14> There are seiches at Tsuruga Ko with periods from 10 to 65 minutes and ranges of about 0.7 foot.

<15> There is a seiche in nearby Kamae Ko, with a period of about 20 minutes and a range of up to 1 foot.

<16> There is a seiche in Hososhima with a period of about 10 minutes and ranges of up to 0.7 foot in calm weather and 2 feet during storms.

<17> There is a seiche at Uchiumi with a period of about 10 minutes and a range of up to 1.3 feet.

<18> A seiche occurs in Nakagawara Ura before and after rough weather. During late spring or early summer, when there is a heavy sea in the offing the range may be 2 to 3 feet.

<19> A seiche occurs in Nagasaki Ko with a period of about 35 minutes and may have a range of up to 2 feet. The most pronounced oscillations usually occur with two localized low pressure areas.

<20> Sasebo has a seiche with periods from 64 to 83 minutes and may have ranges as much as 0.7 foot.

<21> There is a seiche in Yobuko Ko with a period of about 10 minutes which may have a range as much as 1 foot.

<25> Mean and diurnal ranges given.

<26> There is a marked seiche at Kao-hsiung with a period of 13 to 25 minutes.

<27> Seasonal height corrections-May through August, subtract 0.6 foot; November through January, add 0.6 foot.

<28> Low water heights at Mui Vung Tau.	10	8	6	4	2	0	-2
Corresponding LW heights at Ho Chi Minh City	8.4	6.3	4.5	3.1	2.0	0.9	0.0

<29> Heights of low waters are about 1.5 feet.

<30> Except near times of the moon's quadrature when the range of tide is negligible the high waters occur about noon and midnight and the low waters about 6 a.m. and 6 p.m.

<31> Predictions through differences for stations in Torres Strait are not feasible. Diurnal range given for Thursday Island.

- <32> Bores occur in the following estuaries immediately after low water when the range of tide is large.
 Sittang River: Information is meager.
 Pegu River: Bore is said to reach a height of 3 feet.
- <33> Neap difference, -3.7; Spring difference, -0.5.
- <34> Seasonal height corrections— December through April, -0.7; July through September, +1.0.
- <35> Seasonal height corrections— December through April, -1.0; May, -0.5; June, +0.2; July, +1.2; August and September, +2.0; October, +1.0.
- <36> Bores occur in the following estuaries immediately after low water when the range of tide is large.
 Meghna River: In the outer channel the bore is particularly dangerous March through October.
 Hooghly River: The bore commences near Diamond Harbor but is of little importance until it enters the narrow reaches above Hooghly Point; it may attain a height of 4 feet at Kidderpore and 5 feet above that place.
 Cambay Channel and Mahi River.
- <37> Seasonal corrections to be applied to predictions for Basra Reach are: Jan., -0.9; Feb., -0.4; Mar., +0.5; Apr., +1.6; May, +2.3; June, +1.9; July, +0.8; Aug., -0.6; Sept., -1.3; Oct., -1.4; Nov., -1.3; Dec., -1.1.
- <38> Seasonal corrections to be applied to predictions for Munifah are: Jan., -0.2; Feb., -0.3; Mar., -0.4; Apr., -0.3; May, -0.1; June, +0.2; July, +0.4; Aug., +0.4; Sept., +0.3; Oct., +0.1; Nov., 0.0; Dec., -0.1.
- <39> For places on the Mediterranean Sea, see "Tide Tables, Europe and West Coast of Africa."
- <40> For places on the south and west coast, see "Tide Tables, Europe and West Coast of Africa."
- <41> Predictions at this station are not intended for use in navigating Ch'ang Chiang Approach. They are intended only for use in computing tides at designated Table 2 stations in Korea and Sumatra.

TABLE 3. —HEIGHT OF TIDE AT ANY TIME

EXPLANATION OF TABLE

Although the footnote of table 3 may contain sufficient explanation for finding the height of tide at any time, two examples are given here to illustrate its use.

Example 1.—Find the height of the tide at 0735 at Namp'o-hang, Korea, on a day when the predicted tides from table 1 are given as:

<i>Low Water</i>		<i>High Water</i>	
<i>Time</i>	<i>Height</i>	<i>Time</i>	<i>Height</i>
<i>h.m.</i>	<i>ft</i>	<i>h.m.</i>	<i>ft</i>
0418	2.5	1105	4.4
1721	3.6	2324	15.2

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

The duration of rise is $11^{\text{h}} 05^{\text{m}} - 4^{\text{h}} 18^{\text{m}} = 6^{\text{h}} 47^{\text{m}}$.

The time after low water for which the height is required is $7^{\text{h}} 35^{\text{m}} - 4^{\text{h}} 18^{\text{m}} = 3^{\text{h}} 17^{\text{m}}$.

The range of tide is $20.5 - 2.5 = 18.0$ feet.

The duration of rise or fall in table 3 is given in heavy-faced type for each 20 minutes from $4^{\text{h}} 00^{\text{m}}$ to $10^{\text{h}} 40^{\text{m}}$. The nearest tabular value to $6^{\text{h}} 47^{\text{m}}$, the above duration of rise, is $6^{\text{h}} 40^{\text{m}}$; and on the horizontal line of $6^{\text{h}} 40^{\text{m}}$, the nearest tabular time to $3^{\text{h}} 17^{\text{m}}$ after low water for which the height is required is $3^{\text{h}} 20^{\text{m}}$. Following down the column in which this $3^{\text{h}} 20^{\text{m}}$ is found to its intersection with the line of the range 18.0 feet, the correction is 9.0 feet, which being reckoned from low water, must be added, making $2.5 + 9.0 = 11.5$ feet or 351 centimeters which is the required height above the chart datum for Namp'o-hang.

Example 2. —Find the height of the tide at 1045 at Manila, Philippines on a day when the predicted tides from table 1 are given as:

<i>High Water</i>		<i>Low Water</i>	
<i>Time</i>	<i>Height</i>	<i>Time</i>	<i>Height</i>
<i>h.m.</i>	<i>ft</i>	<i>h.m.</i>	<i>ft</i>
0728	4.2	1633	- 0.9

The duration of fall is $16^{\text{h}} 33^{\text{m}} - 07^{\text{h}} 28^{\text{m}} = 9^{\text{h}} 05^{\text{m}}$.

The time after high water for which the height is required is $10^{\text{h}} 45^{\text{m}} - 7^{\text{h}} 28^{\text{m}} = 3^{\text{h}} 17^{\text{m}}$.

The range of tide is $4.2 - (-0.9) = 5.1$ feet.

Entering table 3 at the duration of fall of $9^{\text{h}} 00^{\text{m}}$, which is the nearest value to $9^{\text{h}} 05^{\text{m}}$, the nearest value on the horizontal line to $3^{\text{h}} 17^{\text{m}}$ is $3^{\text{h}} 18^{\text{m}}$ after high water. Following down this column to its intersection with a range of 5.0 feet which is the nearest tabular value to 5.1 feet, one obtains 1.5 which, being calculated from high water, must be subtracted from it. The approximate height at $10^{\text{h}} 45^{\text{m}}$ is, therefore, $4.2 - 1.5 = 2.7$ feet or 82 centimeters.

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

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

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

GRAPHIC METHOD

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

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

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

An example of the use of the graphical method is illustrated below. Using the same predicted tides as in example 2, the approximate height at 10^h 45^m could be determined as shown below.

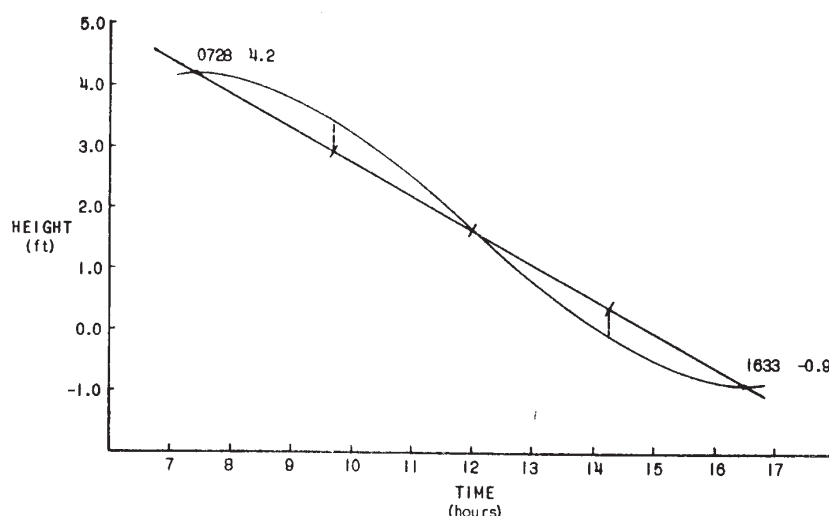


TABLE 3. —HEIGHT OF TIDE AT ANYTIME

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

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

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

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

When the nearest tide is low, add the correction.

TABLE 4.—LOCAL MEAN TIME OF SUNRISE AND SUNSET

EXPLANATION OF TABLE

This table gives the local mean time of the rising and setting of the Sun's upper limb for every fifth day of the year. The times were computed for the instant when the true zenith distance of the Sun's center is $90^{\circ} 50', 34''$ having been allowed for horizontal refraction and $16'$ for semidiameter. No allowance has been made for elevation of the observer.

Because of the sensible variations which may be made in the time of rising or setting of the Sun by a difference in elevation of the observer, and by changes in the refraction, any great refinement in the interpolation of intermediate dates or latitudes in this table is unnecessary.

The value obtained from table 4 may be converted to standard time by means of table 5, which follows it.

TABLE 4.-SUNRISE AND SUNSET, 2008

Date	0°		5° N.		10° N.		15° N.		20° N.		25° N.	
	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.
Jan. 1	06 00	18 07	06 08	17 59	06 17	17 50	06 26	17 41	06 35	17 32	06 45	17 22
6	06 02	18 09	06 10	18 01	06 19	17 53	06 27	17 44	06 36	17 35	06 46	17 25
11	06 04	18 11	06 12	18 03	06 20	17 55	06 29	17 47	06 37	17 38	06 47	17 29
16	06 06	18 13	06 14	18 06	06 21	17 58	06 29	17 50	06 38	17 41	06 47	17 33
21	06 08	18 15	06 15	18 08	06 22	18 00	06 30	17 53	06 38	17 45	06 46	17 36
26	06 09	18 16	06 16	18 09	06 23	18 02	06 30	17 55	06 37	17 48	06 45	17 40
31	06 10	18 17	06 16	18 11	06 23	18 04	06 29	17 58	06 36	17 51	06 43	17 44
Feb. 5	06 10	18 17	06 16	18 12	06 22	18 06	06 28	18 00	06 34	17 54	06 41	17 47
10	06 11	18 18	06 16	18 13	06 21	18 07	06 27	18 02	06 32	17 57	06 38	17 51
15	06 11	18 18	06 15	18 13	06 20	18 09	06 25	18 04	06 30	17 59	06 35	17 54
20	06 10	18 17	06 14	18 13	06 18	18 09	06 22	18 05	06 27	18 01	06 31	17 57
25	06 10	18 16	06 13	18 13	06 16	18 10	06 20	18 07	06 23	18 03	06 27	18 00
Mar. 1	06 09	18 16	06 12	18 13	06 14	18 10	06 17	18 08	06 20	18 05	06 23	18 02
6	06 08	18 14	06 10	18 13	06 12	18 11	06 14	18 09	06 16	18 07	06 18	18 05
11	06 07	18 13	06 08	18 12	06 09	18 11	06 10	18 10	06 12	18 09	06 13	18 07
16	06 05	18 12	06 06	18 11	06 06	18 11	06 07	18 10	06 07	18 10	06 08	18 10
21	06 04	18 10	06 04	18 11	06 03	18 11	06 03	18 11	06 03	18 11	06 03	18 12
26	06 02	18 09	06 01	18 10	06 01	18 11	06 00	18 12	05 59	18 13	05 58	18 14
31	06 01	18 07	05 59	18 09	05 58	18 11	05 56	18 12	05 54	18 14	05 52	18 16
Apr. 5	05 59	18 06	05 57	18 08	05 55	18 10	05 53	18 13	05 50	18 15	05 47	18 18
10	05 58	18 05	05 55	18 07	05 52	18 10	05 49	18 14	05 46	18 17	05 42	18 20
15	05 57	18 03	05 53	18 07	05 50	18 11	05 46	18 14	05 42	18 18	05 38	18 23
20	05 55	18 02	05 51	18 06	05 47	18 11	05 43	18 15	05 38	18 20	05 33	18 25
25	05 55	18 01	05 50	18 06	05 45	18 11	05 40	18 16	05 35	18 22	05 29	18 27
30	05 54	18 01	05 48	18 06	05 43	18 11	05 37	18 17	05 31	18 23	05 25	18 30
May 5	05 53	18 00	05 47	18 06	05 41	18 12	05 35	18 18	05 28	18 25	05 21	18 32
10	05 53	18 00	05 46	18 06	05 40	18 13	05 33	18 20	05 26	18 27	05 18	18 35
15	05 53	18 00	05 46	18 07	05 39	18 14	05 32	18 21	05 24	18 29	05 16	18 37
20	05 53	18 00	05 46	18 07	05 38	18 15	05 30	18 23	05 22	18 31	05 13	18 40
25	05 53	18 01	05 46	18 08	05 38	18 16	05 30	18 24	05 21	18 33	05 12	18 42
30	05 54	18 01	05 46	18 09	05 38	18 18	05 29	18 26	05 20	18 35	05 10	18 45
June 4	05 55	18 02	05 46	18 10	05 38	18 19	05 29	18 28	05 20	18 37	05 10	18 47
9	05 56	18 03	05 47	18 11	05 38	18 20	05 29	18 29	05 20	18 39	05 10	18 49
14	05 57	18 04	05 48	18 13	05 39	18 21	05 30	18 31	05 20	18 40	05 10	18 51
19	05 58	18 05	05 49	18 14	05 40	18 23	05 31	18 32	05 21	18 42	05 11	18 52
24	05 59	18 06	05 50	18 15	05 41	18 24	05 32	18 33	05 22	18 43	05 12	18 53
29	06 00	18 07	05 51	18 16	05 42	18 25	05 33	18 34	05 24	18 43	05 13	18 54
July 4	06 01	18 08	05 52	18 17	05 44	18 25	05 35	18 34	05 25	18 44	05 15	18 54
9	06 02	18 09	05 53	18 17	05 45	18 26	05 36	18 34	05 27	18 43	05 17	18 53
14	06 02	18 09	05 54	18 17	05 46	18 26	05 38	18 34	05 29	18 43	05 19	18 52
19	06 03	18 10	05 55	18 17	05 47	18 25	05 39	18 33	05 31	18 42	05 22	18 51
24	06 03	18 10	05 56	18 17	05 48	18 25	05 41	18 32	05 33	18 40	05 24	18 49
29	06 03	18 10	05 56	18 17	05 49	18 24	05 42	18 31	05 34	18 38	05 26	18 46
Aug. 3	06 03	18 10	05 56	18 16	05 50	18 22	05 43	18 29	05 36	18 36	05 29	18 43
8	06 02	18 09	05 56	18 15	05 51	18 21	05 44	18 27	05 38	18 33	05 31	18 40
13	06 01	18 08	05 56	18 13	05 51	18 19	05 45	18 24	05 39	18 30	05 33	18 36
18	06 00	18 07	05 56	18 12	05 51	18 16	05 46	18 21	05 41	18 26	05 35	18 32
23	05 59	18 06	05 55	18 10	05 51	18 14	05 47	18 18	05 42	18 22	05 37	18 27
28	05 58	18 04	05 54	18 08	05 51	18 11	05 47	18 15	05 44	18 18	05 39	18 22
Sept. 2	05 56	18 03	05 54	18 05	05 51	18 08	05 48	18 11	05 45	18 14	05 41	18 17
7	05 55	18 01	05 53	18 03	05 50	18 05	05 48	18 07	05 46	18 10	05 43	18 12
12	05 53	17 59	05 51	18 01	05 50	18 02	05 48	18 04	05 47	18 05	05 45	18 07
17	05 51	17 58	05 50	17 58	05 50	17 59	05 49	18 00	05 48	18 01	05 47	18 01
22	05 49	17 56	05 49	17 56	05 49	17 56	05 49	17 56	05 49	17 56	05 49	17 56
27	05 48	17 54	05 48	17 53	05 49	17 53	05 49	17 52	05 50	17 51	05 51	17 51
Oct. 2	05 46	17 52	05 47	17 51	05 49	17 50	05 50	17 48	05 51	17 47	05 53	17 45
7	05 44	17 51	05 46	17 49	05 48	17 47	05 50	17 45	05 52	17 43	05 55	17 40
12	05 43	17 50	05 46	17 47	05 48	17 44	05 51	17 41	05 54	17 39	05 57	17 36
17	05 42	17 49	05 45	17 45	05 49	17 42	05 52	17 38	05 56	17 35	05 59	17 31
22	05 41	17 48	05 45	17 44	05 49	17 40	05 53	17 36	05 57	17 31	06 02	17 27
27	05 40	17 47	05 45	17 43	05 50	17 38	05 54	17 33	05 59	17 28	06 05	17 23
Nov. 1	05 40	17 47	05 45	17 42	05 51	17 36	05 56	17 31	06 02	17 25	06 08	17 19
6	05 40	17 47	05 46	17 41	05 52	17 35	05 58	17 29	06 04	17 23	06 11	17 16
11	05 41	17 48	05 47	17 41	05 53	17 35	06 00	17 28	06 07	17 21	06 14	17 14
16	05 41	17 48	05 48	17 42	05 55	17 35	06 02	17 27	06 10	17 20	06 17	17 12
21	05 42	17 50	05 50	17 42	05 57	17 35	06 05	17 27	06 13	17 19	06 21	17 11
26	05 44	17 51	05 51	17 43	05 59	17 36	06 07	17 27	06 16	17 19	06 25	17 10
Dec. 1	05 45	17 53	05 54	17 45	06 02	17 37	06 10	17 28	06 19	17 19	06 28	17 10
6	05 47	17 55	05 56	17 47	06 04	17 38	06 13	17 29	06 22	17 20	06 32	17 11
11	05 50	17 57	05 58	17 49	06 07	17 40	06 16	17 31	06 25	17 22	06 35	17 12
16	05 52	18 00	06 01	17 51	06 09	17 42	06 18	17 33	06 28	17 24	06 38	17 14
21	05 54	18 02	06 03	17 53	06 12	17 45	06 21	17 35	06 31	17 26	06 41	17 16
26	05 57	18 05	06 06	17 56	06 14	17 47	06 23	17 38	06 33	17 29	06 43	17 19
31	05 59	18 07	06 08	17 58	06 17	17 50	06 26	17 41	06 35	17 32	06 45	17 22
Jan. 1	06 00	18 07	06 08	17 59	06 17	17 50	06 26	17 41	06 35	17 32	06 45	17 22

Local mean time. To obtain standard time of rise or set, see table 5.

TABLE 4.-SUNRISE AND SUNSET, 2008

Date	30° N.		32° N.		34° N.		36° N.		38° N.		40° N.	
	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.
Jan. 1	06 56	17 11	07 00	17 06	07 05	17 01	07 11	16 56	07 16	16 51	07 22	16 45
6	06 57	17 15	07 01	17 10	07 06	17 05	07 11	17 00	07 16	16 55	07 22	16 49
11	06 57	17 19	07 01	17 14	07 06	17 10	07 11	17 05	07 16	17 00	07 21	16 54
16	06 57	17 23	07 01	17 19	07 05	17 14	07 10	17 10	07 15	17 05	07 20	17 00
21	06 56	17 27	06 59	17 23	07 04	17 19	07 08	17 15	07 13	17 10	07 17	17 05
26	06 54	17 31	06 57	17 28	07 01	17 24	07 05	17 20	07 10	17 16	07 14	17 11
31	06 51	17 36	06 55	17 32	06 58	17 29	07 02	17 25	07 06	17 21	07 10	17 17
Feb. 5	06 48	17 40	06 51	17 37	06 55	17 34	06 58	17 30	07 02	17 27	07 05	17 23
10	06 45	17 44	06 47	17 41	06 50	17 39	06 53	17 36	06 56	17 32	07 00	17 29
15	06 41	17 48	06 43	17 46	06 45	17 43	06 48	17 41	06 51	17 38	06 54	17 35
20	06 36	17 52	06 38	17 50	06 40	17 48	06 42	17 46	06 45	17 43	06 47	17 41
25	06 31	17 56	06 33	17 54	06 34	17 52	06 36	17 51	06 38	17 49	06 40	17 47
Mar. 1	06 26	17 59	06 27	17 58	06 28	17 57	06 30	17 55	06 31	17 54	06 33	17 52
6	06 20	18 03	06 21	18 02	06 22	18 01	06 23	18 00	06 24	17 59	06 25	17 58
11	06 14	18 06	06 15	18 05	06 16	18 05	06 16	18 04	06 17	18 04	06 18	18 03
16	06 08	18 09	06 09	18 09	06 09	18 09	06 09	18 09	06 09	18 08	06 10	18 08
21	06 02	18 12	06 02	18 12	06 02	18 13	06 02	18 13	06 02	18 13	06 01	18 13
26	05 56	18 15	05 56	18 16	05 55	18 16	05 55	18 17	05 54	18 18	05 53	18 18
31	05 50	18 18	05 49	18 19	05 48	18 20	05 47	18 21	05 46	18 22	05 45	18 24
Apr. 5	05 44	18 21	05 43	18 23	05 42	18 24	05 40	18 25	05 39	18 27	05 37	18 29
10	05 39	18 24	05 37	18 26	05 35	18 28	05 33	18 30	05 31	18 32	05 29	18 34
15	05 33	18 27	05 31	18 29	05 29	18 32	05 27	18 34	05 24	18 36	05 22	18 39
20	05 28	18 31	05 25	18 33	05 23	18 35	05 20	18 38	05 17	18 41	05 15	18 44
25	05 23	18 34	05 20	18 36	05 17	18 39	05 14	18 42	05 11	18 45	05 08	18 49
30	05 18	18 37	05 15	18 40	05 12	18 43	05 08	18 47	05 05	18 50	05 01	18 54
May 5	05 14	18 40	05 10	18 44	05 07	18 47	05 03	18 51	04 59	18 55	04 55	18 59
10	05 10	18 43	05 06	18 47	05 02	18 51	04 58	18 55	04 54	18 59	04 49	19 04
15	05 06	18 47	05 03	18 51	04 58	18 55	04 54	18 59	04 49	19 04	04 45	19 09
20	05 04	18 50	04 59	18 54	04 55	18 58	04 50	19 03	04 46	19 08	04 40	19 13
25	05 01	18 53	04 57	18 57	04 52	19 02	04 48	19 07	04 42	19 12	04 37	19 18
30	05 00	18 56	04 55	19 00	04 50	19 05	04 45	19 10	04 40	19 16	04 34	19 21
June 4	04 59	18 58	04 54	19 03	04 49	19 08	04 44	19 13	04 38	19 19	04 32	19 25
9	04 58	19 00	04 53	19 05	04 48	19 10	04 43	19 16	04 37	19 22	04 31	19 28
14	04 58	19 02	04 53	19 07	04 48	19 13	04 43	19 18	04 37	19 24	04 31	19 30
19	04 59	19 04	04 54	19 09	04 49	19 14	04 43	19 20	04 37	19 26	04 31	19 32
24	05 00	19 05	04 55	19 10	04 50	19 15	04 44	19 21	04 38	19 26	04 32	19 33
29	05 02	19 05	04 57	19 10	04 52	19 15	04 46	19 21	04 40	19 27	04 34	19 33
July 4	05 04	19 05	04 59	19 10	04 54	19 15	04 48	19 20	04 43	19 26	04 37	19 32
9	05 06	19 04	05 01	19 09	04 56	19 14	04 51	19 19	04 46	19 25	04 40	19 31
14	05 09	19 03	05 04	19 07	04 59	19 12	04 54	19 17	04 49	19 22	04 43	19 28
19	05 11	19 01	05 07	19 05	05 03	19 10	04 58	19 15	04 53	19 20	04 47	19 25
24	05 14	18 58	05 10	19 02	05 06	19 07	05 01	19 11	04 57	19 16	04 51	19 21
29	05 17	18 55	05 14	18 59	05 09	19 03	05 05	19 07	05 01	19 12	04 56	19 16
Aug. 3	05 20	18 52	05 17	18 55	05 13	18 59	05 09	19 03	05 05	19 07	05 00	19 11
8	05 23	18 47	05 20	18 51	05 17	18 54	05 13	18 58	05 09	19 01	05 05	19 05
13	05 26	18 43	05 23	18 46	05 20	18 49	05 17	18 52	05 14	18 55	05 10	18 59
18	05 29	18 38	05 27	18 40	05 24	18 43	05 21	18 46	05 18	18 49	05 15	18 52
23	05 32	18 32	05 30	18 35	05 27	18 37	05 25	18 39	05 22	18 42	05 19	18 45
28	05 35	18 27	05 33	18 29	05 31	18 31	05 29	18 33	05 27	18 35	05 24	18 37
Sept. 2	05 38	18 21	05 36	18 22	05 34	18 24	05 33	18 26	05 31	18 28	05 29	18 29
7	05 40	18 15	05 39	18 16	05 38	18 17	05 37	18 19	05 35	18 20	05 34	18 21
12	05 43	18 09	05 42	18 10	05 41	18 10	05 40	18 11	05 39	18 12	05 38	18 13
17	05 46	18 02	05 45	18 03	05 45	18 03	05 44	18 04	05 44	18 04	05 43	18 05
22	05 48	17 56	05 48	17 56	05 48	17 56	05 48	17 56	05 48	17 57	05 48	17 57
27	05 51	17 50	05 51	17 50	05 52	17 49	05 52	17 49	05 52	17 49	05 53	17 48
Oct. 2	05 54	17 44	05 55	17 43	05 55	17 43	05 56	17 42	05 57	17 41	05 57	17 40
7	05 57	17 38	05 58	17 37	05 59	17 36	06 00	17 35	06 01	17 34	06 02	17 32
12	06 00	17 32	06 01	17 31	06 03	17 29	06 04	17 28	06 06	17 26	06 08	17 25
17	06 03	17 27	06 05	17 25	06 07	17 23	06 09	17 21	06 11	17 19	06 13	17 17
22	06 07	17 22	06 09	17 20	06 11	17 17	06 13	17 15	06 16	17 13	06 18	17 10
27	06 10	17 17	06 13	17 15	06 15	17 12	06 18	17 09	06 21	17 06	06 24	17 03
Nov. 1	06 14	17 13	06 17	17 10	06 20	17 07	06 23	17 04	06 26	17 01	06 29	16 57
6	06 18	17 09	06 21	17 06	06 24	17 03	06 28	16 59	06 31	16 56	06 35	16 52
11	06 22	17 06	06 25	17 02	06 29	16 59	06 33	16 55	06 37	16 51	06 41	16 47
16	06 26	17 03	06 30	17 00	06 34	16 56	06 38	16 52	06 42	16 47	06 47	16 43
21	06 30	17 01	06 34	16 57	06 38	16 53	06 43	16 49	06 47	16 44	06 52	16 39
26	06 34	17 00	06 39	16 56	06 43	16 52	06 48	16 47	06 52	16 42	06 58	16 37
Dec. 1	06 38	17 00	06 43	16 55	06 47	16 51	06 52	16 46	06 57	16 41	07 03	16 35
6	06 42	17 00	06 47	16 55	06 52	16 51	06 57	16 46	07 02	16 40	07 08	16 35
11	06 46	17 01	06 51	16 56	06 55	16 51	07 01	16 46	07 06	16 41	07 12	16 35
16	06 49	17 02	06 54	16 58	06 59	16 53	07 04	16 48	07 10	16 42	07 16	16 36
21	06 52	17 05	06 57	17 00	07 02	16 55	07 07	16 50	07 12	16 44	07 18	16 38
26	06 54	17 08	06 59	17 03	07 04	16 58	07 09	16 53	07 15	16 47	07 21	16 41
31	06 56	17 11	07 00	17 06	07 05	17 01	07 10	16 56	07 16	16 51	07 22	16 45
Jan. 1	06 56	17 11	07 01	17 07	07 06	17 02	07 11	16 57	07 16	16 51	07 22	16 46

Local mean time. To obtain standard time of rise or set, see table 5.

TABLE 4. -SUNRISE AND SUNSET, 2008

Date	42° N.		44° N.		46° N.		48° N.		50° N.		52° N.	
	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.
Jan. 1	07 28	16 39	07 35	16 32	07 42	16 25	07 50	16 17	07 59	16 08	08 08	15 59
6	07 28	16 43	07 35	16 37	07 42	16 30	07 49	16 22	07 58	16 14	08 07	16 04
11	07 27	16 48	07 34	16 42	07 40	16 35	07 48	16 28	07 56	16 20	08 05	16 11
16	07 25	16 54	07 31	16 48	07 38	16 42	07 45	16 35	07 52	16 27	08 01	16 19
21	07 23	17 00	07 28	16 54	07 34	16 48	07 41	16 42	07 48	16 35	07 56	16 27
26	07 19	17 06	07 24	17 01	07 30	16 56	07 36	16 50	07 42	16 43	07 50	16 36
31	07 15	17 13	07 19	17 08	07 24	17 03	07 30	16 57	07 36	16 51	07 43	16 45
Feb. 5	07 09	17 19	07 14	17 15	07 18	17 10	07 23	17 05	07 29	17 00	07 35	16 54
10	07 03	17 26	07 07	17 22	07 11	17 18	07 16	17 13	07 21	17 09	07 26	17 03
15	06 57	17 32	07 00	17 29	07 04	17 25	07 08	17 21	07 12	17 17	07 16	17 13
20	06 50	17 38	06 53	17 35	06 56	17 32	06 59	17 29	07 03	17 26	07 06	17 22
25	06 43	17 44	06 45	17 42	06 47	17 40	06 50	17 37	06 53	17 34	06 56	17 31
Mar. 1	06 35	17 50	06 37	17 49	06 38	17 47	06 41	17 45	06 43	17 43	06 45	17 40
6	06 27	17 56	06 28	17 55	06 29	17 54	06 31	17 52	06 32	17 51	06 34	17 49
11	06 18	18 02	06 19	18 02	06 20	18 01	06 21	18 00	06 22	17 59	06 23	17 58
16	06 10	18 08	06 10	18 08	06 10	18 08	06 11	18 07	06 11	18 07	06 11	18 07
21	06 01	18 14	06 01	18 14	06 01	18 14	06 00	18 15	06 00	18 15	06 00	18 15
26	05 53	18 19	05 52	18 20	05 51	18 21	05 50	18 22	05 49	18 23	05 48	18 24
31	05 44	18 25	05 43	18 26	05 41	18 28	05 40	18 29	05 38	18 31	05 37	18 33
Apr. 5	05 36	18 30	05 34	18 32	05 32	18 34	05 30	18 36	05 28	18 39	05 25	18 41
10	05 27	18 36	05 25	18 38	05 23	18 41	05 20	18 44	05 17	18 46	05 14	18 50
15	05 19	18 41	05 16	18 44	05 13	18 47	05 10	18 51	05 07	18 54	05 03	18 58
20	05 11	18 47	05 08	18 50	05 05	18 54	05 01	18 58	04 57	19 02	04 52	19 07
25	05 04	18 52	05 00	18 56	04 56	19 01	04 52	19 05	04 47	19 10	04 42	19 15
30	04 57	18 58	04 53	19 02	04 48	19 07	04 43	19 12	04 38	19 18	04 32	19 24
May 5	04 51	19 03	04 46	19 08	04 41	19 13	04 35	19 19	04 29	19 25	04 22	19 32
10	04 45	19 09	04 39	19 14	04 34	19 20	04 28	19 26	04 21	19 33	04 14	19 40
15	04 39	19 14	04 34	19 20	04 28	19 26	04 21	19 33	04 14	19 40	04 06	19 48
20	04 35	19 19	04 29	19 25	04 22	19 32	04 15	19 39	04 07	19 47	03 59	19 55
25	04 31	19 24	04 24	19 30	04 18	19 37	04 10	19 45	04 02	19 53	03 52	20 02
30	04 28	19 28	04 21	19 34	04 14	19 42	04 06	19 50	03 57	19 59	03 47	20 08
June 4	04 26	19 31	04 19	19 38	04 11	19 46	04 03	19 54	03 54	20 04	03 44	20 14
9	04 24	19 35	04 17	19 42	04 09	19 50	04 01	19 58	03 51	20 08	03 41	20 18
14	04 24	19 37	04 17	19 44	04 09	19 52	04 00	20 01	03 50	20 11	03 40	20 21
19	04 24	19 39	04 17	19 46	04 09	19 54	04 00	20 03	03 50	20 13	03 39	20 23
24	04 25	19 40	04 18	19 47	04 10	19 55	04 01	20 04	03 52	20 13	03 41	20 24
29	04 27	19 40	04 20	19 47	04 12	19 55	04 04	20 03	03 54	20 13	03 43	20 24
July 4	04 30	19 39	04 23	19 46	04 15	19 53	04 07	20 02	03 57	20 11	03 47	20 22
9	04 33	19 37	04 26	19 44	04 19	19 51	04 11	19 59	04 02	20 08	03 52	20 18
14	04 37	19 34	04 30	19 41	04 23	19 48	04 15	19 56	04 07	20 04	03 57	20 14
19	04 41	19 31	04 35	19 37	04 28	19 44	04 21	19 51	04 13	19 59	04 03	20 08
24	04 46	19 27	04 40	19 32	04 33	19 39	04 26	19 46	04 19	19 53	04 10	20 02
29	04 51	19 22	04 45	19 27	04 39	19 33	04 33	19 39	04 26	19 46	04 18	19 54
Aug. 3	04 56	19 16	04 51	19 21	04 45	19 26	04 39	19 32	04 33	19 39	04 25	19 46
8	05 01	19 10	04 56	19 14	04 51	19 19	04 46	19 25	04 40	19 30	04 33	19 37
13	05 06	19 03	05 02	19 07	04 57	19 11	04 52	19 16	04 47	19 21	04 41	19 27
18	05 11	18 56	05 08	18 59	05 04	19 03	04 59	19 07	04 55	19 12	04 49	19 17
23	05 16	18 48	05 13	18 51	05 10	18 54	05 06	18 58	05 02	19 02	04 58	19 06
28	05 22	18 40	05 19	18 42	05 16	18 45	05 13	18 48	05 09	18 52	05 06	18 55
Sept. 2	05 27	18 31	05 25	18 34	05 22	18 36	05 20	18 38	05 17	18 41	05 14	18 44
7	05 32	18 23	05 30	18 25	05 28	18 26	05 26	18 28	05 24	18 30	05 22	18 33
12	05 37	18 14	05 36	18 15	05 35	18 17	05 33	18 18	05 32	18 19	05 30	18 21
17	05 42	18 06	05 42	18 06	05 41	18 07	05 40	18 08	05 39	18 08	05 38	18 09
22	05 48	17 57	05 47	17 57	05 47	17 57	05 47	17 57	05 47	17 57	05 46	17 58
27	05 53	17 48	05 53	17 48	05 54	17 47	05 54	17 47	05 54	17 46	05 55	17 46
Oct. 2	05 58	17 39	05 59	17 39	06 00	17 38	06 01	17 37	06 02	17 36	06 03	17 34
7	06 04	17 31	06 05	17 30	06 06	17 28	06 08	17 27	06 10	17 25	06 11	17 23
12	06 09	17 23	06 11	17 21	06 13	17 19	06 15	17 17	06 18	17 14	06 20	17 12
17	06 15	17 15	06 17	17 12	06 20	17 10	06 23	17 07	06 25	17 04	06 29	17 01
22	06 21	17 07	06 24	17 04	06 27	17 01	06 30	16 58	06 34	16 54	06 37	16 50
27	06 27	17 00	06 30	16 57	06 34	16 53	06 38	16 49	06 42	16 45	06 46	16 40
Nov. 1	06 33	16 54	06 37	16 50	06 41	16 46	06 45	16 41	06 50	16 36	06 55	16 31
6	06 39	16 48	06 43	16 43	06 48	16 39	06 53	16 34	06 58	16 28	07 04	16 22
11	06 45	16 42	06 50	16 38	06 55	16 32	07 01	16 27	07 07	16 21	07 13	16 14
16	06 51	16 38	06 57	16 33	07 02	16 27	07 08	16 21	07 15	16 14	07 22	16 07
21	06 57	16 34	07 03	16 29	07 09	16 22	07 16	16 16	07 23	16 09	07 31	16 01
26	07 03	16 31	07 09	16 25	07 16	16 19	07 23	16 12	07 30	16 04	07 39	15 56
Dec. 1	07 09	16 29	07 15	16 23	07 22	16 16	07 29	16 09	07 37	16 01	07 46	15 52
6	07 14	16 29	07 20	16 22	07 27	16 15	07 35	16 07	07 43	15 59	07 53	15 49
11	07 18	16 29	07 25	16 22	07 32	16 15	07 40	16 07	07 49	15 58	07 58	15 48
16	07 22	16 30	07 29	16 23	07 36	16 15	07 44	16 07	07 53	15 59	08 03	15 49
21	07 25	16 32	07 32	16 25	07 39	16 17	07 47	16 09	07 56	16 00	08 06	15 51
26	07 27	16 35	07 34	16 28	07 41	16 21	07 49	16 12	07 58	16 04	08 08	15 54
31	07 28	16 39	07 35	16 32	07 42	16 25	07 50	16 17	07 59	16 08	08 08	15 58
Jan. 1	07 28	16 39	07 35	16 33	07 42	16 25	07 50	16 18	07 59	16 09	08 08	15 59

Local mean time. To obtain standard time of rise or set, see table 5.

TABLE 4.-SUNRISE AND SUNSET, 2008

Date	54° N.		56° N.		58° N.		60° N.		62° N.		64° N.	
	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.
Jan. 1	08 19	15 48	08 31	15 35	08 46	15 21	09 03	15 04	09 23	14 44	09 50	14 17
6	08 18	15 54	08 29	15 42	08 43	15 28	08 59	15 12	09 19	14 53	09 44	14 28
11	08 15	16 01	08 26	15 50	08 39	15 37	08 54	15 22	09 12	15 03	09 35	14 41
16	08 10	16 09	08 21	15 59	08 33	15 47	08 47	15 33	09 04	15 16	09 25	14 55
21	08 05	16 18	08 14	16 09	08 26	15 57	08 39	15 44	08 54	15 29	09 12	15 11
26	07 58	16 28	08 07	16 19	08 17	16 09	08 29	15 57	08 42	15 43	08 59	15 27
31	07 50	16 38	07 58	16 29	08 07	16 20	08 18	16 10	08 30	15 58	08 44	15 43
Feb. 5	07 41	16 48	07 48	16 40	07 56	16 32	08 06	16 23	08 16	16 12	08 29	16 00
10	07 32	16 58	07 38	16 51	07 45	16 44	07 53	16 36	08 02	16 27	08 13	16 16
15	07 21	17 08	07 27	17 02	07 33	16 56	07 40	16 49	07 48	16 42	07 57	16 33
20	07 11	17 18	07 15	17 13	07 20	17 08	07 26	17 03	07 33	16 56	07 40	16 49
25	06 59	17 28	07 03	17 24	07 07	17 20	07 12	17 15	07 17	17 10	07 23	17 04
Mar. 1	06 48	17 38	06 51	17 35	06 54	17 32	06 58	17 28	07 02	17 24	07 06	17 20
6	06 36	17 47	06 38	17 45	06 40	17 43	06 43	17 41	06 46	17 38	06 49	17 35
11	06 24	17 57	06 25	17 56	06 26	17 55	06 28	17 53	06 30	17 52	06 31	17 50
16	06 12	18 07	06 12	18 06	06 12	18 06	06 13	18 06	06 13	18 05	06 14	18 05
21	05 59	18 16	05 59	18 17	05 58	18 17	05 58	18 18	05 57	18 19	05 56	18 20
26	05 47	18 25	05 46	18 27	05 44	18 28	05 43	18 30	05 41	18 32	05 39	18 34
31	05 35	18 35	05 32	18 37	05 30	18 39	05 27	18 42	05 24	18 45	05 21	18 49
Apr. 5	05 22	18 44	05 19	18 47	05 16	18 51	05 12	18 54	05 08	18 59	05 03	19 04
10	05 10	18 53	05 06	18 57	05 02	19 02	04 57	19 07	04 52	19 12	04 46	19 19
15	04 59	19 03	04 54	19 07	04 49	19 13	04 43	19 19	04 36	19 26	04 28	19 34
20	04 47	19 12	04 41	19 18	04 35	19 24	04 28	19 31	04 20	19 40	04 10	19 49
25	04 36	19 21	04 29	19 28	04 22	19 35	04 14	19 44	04 04	19 54	03 53	20 05
30	04 25	19 30	04 18	19 38	04 09	19 46	04 00	19 56	03 49	20 07	03 36	20 21
May 5	04 15	19 40	04 07	19 48	03 57	19 58	03 46	20 09	03 34	20 21	03 19	20 37
10	04 05	19 48	03 56	19 58	03 46	20 08	03 34	20 21	03 19	20 35	03 02	20 53
15	03 57	19 57	03 47	20 07	03 35	20 19	03 22	20 33	03 06	20 49	02 46	21 09
20	03 49	20 05	03 38	20 16	03 25	20 29	03 11	20 44	02 53	21 02	02 30	21 25
25	03 42	20 13	03 30	20 25	03 17	20 38	03 01	20 55	02 41	21 15	02 16	21 41
30	03 36	20 19	03 24	20 32	03 09	20 47	02 52	21 05	02 30	21 26	02 02	21 55
June 4	03 32	20 25	03 19	20 39	03 03	20 54	02 45	21 13	02 22	21 37	01 50	22 09
9	03 29	20 30	03 15	20 44	02 59	21 00	02 40	21 20	02 15	21 45	01 40	22 20
14	03 27	20 34	03 13	20 48	02 57	21 04	02 36	21 25	02 11	21 51	01 34	22 28
19	03 27	20 36	03 13	20 50	02 56	21 07	02 36	21 27	02 09	21 54	01 31	22 32
24	03 28	20 36	03 14	20 51	02 57	21 07	02 37	21 28	02 11	21 54	01 33	22 32
29	03 31	20 36	03 17	20 50	03 01	21 06	02 41	21 26	02 15	21 51	01 38	22 27
July 4	03 35	20 33	03 21	20 47	03 05	21 03	02 46	21 22	02 22	21 46	01 48	22 19
9	03 40	20 30	03 27	20 43	03 12	20 58	02 53	21 16	02 31	21 39	02 00	22 09
14	03 46	20 25	03 34	20 37	03 19	20 51	03 02	21 08	02 41	21 29	02 14	21 56
19	03 53	20 18	03 42	20 30	03 28	20 43	03 12	20 59	02 53	21 18	02 28	21 42
24	04 01	20 11	03 50	20 22	03 38	20 34	03 23	20 48	03 06	21 05	02 44	21 27
29	04 09	20 03	03 59	20 13	03 48	20 24	03 34	20 37	03 19	20 52	03 00	21 11
Aug. 3	04 17	19 54	04 08	20 03	03 58	20 13	03 46	20 24	03 32	20 38	03 15	20 54
8	04 26	19 44	04 18	19 52	04 09	20 01	03 58	20 11	03 46	20 23	03 31	20 38
13	04 35	19 34	04 28	19 41	04 19	19 49	04 10	19 58	03 59	20 08	03 47	20 21
18	04 44	19 23	04 37	19 29	04 30	19 36	04 22	19 44	04 13	19 53	04 02	20 03
23	04 53	19 11	04 47	19 16	04 41	19 22	04 34	19 29	04 26	19 37	04 17	19 46
28	05 02	18 59	04 57	19 04	04 52	19 09	04 46	19 14	04 40	19 21	04 32	19 28
Sept. 2	05 10	18 47	05 07	18 51	05 03	18 55	04 58	19 00	04 53	19 05	04 47	19 11
7	05 19	18 35	05 17	18 38	05 13	18 41	05 10	18 44	05 06	18 48	05 01	18 53
12	05 28	18 23	05 26	18 25	05 24	18 27	05 21	18 29	05 19	18 32	05 15	18 35
17	05 37	18 10	05 36	18 11	05 35	18 13	05 33	18 14	05 31	18 16	05 30	18 17
22	05 46	17 58	05 46	17 58	05 45	17 58	05 45	17 59	05 44	17 59	05 44	18 00
27	05 55	17 45	05 56	17 45	05 56	17 44	05 57	17 44	05 57	17 43	05 58	17 42
Oct. 2	06 04	17 33	06 06	17 32	06 07	17 30	06 09	17 29	06 10	17 27	06 12	17 25
7	06 13	17 21	06 16	17 19	06 18	17 16	06 21	17 14	06 24	17 11	06 27	17 07
12	06 23	17 09	06 26	17 06	06 29	17 03	06 33	16 59	06 37	16 55	06 42	16 50
17	06 32	16 57	06 36	16 54	06 40	16 49	06 45	16 44	06 50	16 39	06 57	16 33
22	06 42	16 46	06 46	16 41	06 52	16 36	06 58	16 30	07 04	16 23	07 12	16 16
27	06 51	16 35	06 57	16 30	07 03	16 24	07 10	16 16	07 18	16 08	07 27	15 59
Nov. 1	07 01	16 25	07 08	16 19	07 15	16 11	07 23	16 03	07 32	15 54	07 43	15 43
6	07 11	16 16	07 18	16 08	07 26	16 00	07 36	15 51	07 47	15 40	07 59	15 27
11	07 21	16 07	07 29	15 59	07 38	15 49	07 49	15 39	08 01	15 26	08 16	15 12
16	07 30	15 59	07 39	15 50	07 49	15 40	08 01	15 28	08 15	15 14	08 32	14 57
21	07 39	15 52	07 49	15 42	08 00	15 31	08 13	15 18	08 29	15 02	08 47	14 44
26	07 48	15 46	07 59	15 36	08 11	15 23	08 25	15 09	08 42	14 52	09 03	14 31
Dec. 1	07 56	15 42	08 07	15 31	08 20	15 18	08 36	15 02	08 54	14 44	09 17	14 21
6	08 03	15 39	08 15	15 27	08 29	15 13	08 45	14 57	09 05	14 37	09 30	14 12
11	08 09	15 38	08 21	15 25	08 36	15 11	08 53	14 54	09 13	14 33	09 40	14 06
16	08 14	15 38	08 26	15 25	08 41	15 10	08 58	14 53	09 20	14 32	09 48	14 04
21	08 17	15 39	08 30	15 27	08 45	15 12	09 02	14 54	09 24	14 33	09 52	14 04
26	08 19	15 43	08 31	15 30	08 46	15 15	09 04	14 58	09 25	14 37	09 53	14 09
31	08 19	15 48	08 31	15 35	08 46	15 21	09 03	15 04	09 23	14 43	09 50	14 16
Jan. 1	08 19	15 49	08 31	15 36	08 45	15 22	09 02	15 05	09 23	14 45	09 49	14 18

Local mean time. To obtain standard time of rise or set, see table 5.

TABLE 4.-SUNRISE AND SUNSET, 2008

Date	66° N.		68° N.		70° N.		72° N.		74° N.		76° N.	
	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.
Jan. 1	10 29	13 38	Rises 3 Jan.		Sun does not rise until 17 January		Sun does not rise until 26 January		Sun does not rise until 2 February		Sun does not rise until 9 February	
6	10 19	13 53	11 26	12 46	10 56	13 20	10 31	13 49	11 01	13 22	10 24	14 01
11	09 52	14 10	10 31	13 49	10 24	14 01	11 57	12 29	10 41	13 47	10 54	14 34
16	09 36	14 47	10 08	14 15	10 54	14 34	11 57	12 29	10 41	13 47	10 54	14 34
21	09 19	15 06	09 46	14 40	09 54	14 34	11 57	12 29	10 41	13 47	10 54	14 34
26	09 02	15 26	09 24	15 04	09 54	14 34	11 57	12 29	10 41	13 47	10 54	14 34
31	09 02	15 26	09 24	15 04	09 54	14 34	11 57	12 29	10 41	13 47	10 54	14 34
Feb. 5	08 44	15 45	09 03	15 26	09 27	15 02	10 01	14 28	10 59	13 30	11 21	13 10
10	08 26	16 04	08 42	15 48	09 01	15 28	09 28	15 02	10 05	14 25	10 07	14 23
15	08 08	16 22	08 21	16 09	08 37	15 53	08 57	15 33	09 25	15 05	09 19	15 10
20	07 49	16 40	08 00	16 29	08 13	16 17	08 29	16 01	08 50	15 40	08 39	15 50
25	07 30	16 57	07 39	16 49	07 49	16 39	08 01	16 27	08 17	16 11	08 39	15 50
Mar. 1	07 12	17 14	07 18	17 08	07 26	17 01	07 35	16 52	07 47	16 40	08 02	16 25
6	06 53	17 31	06 57	17 27	07 02	17 22	07 09	17 16	07 17	17 08	07 27	16 58
11	06 34	17 48	06 36	17 45	06 39	17 43	06 43	17 39	06 47	17 35	06 53	17 29
16	06 15	18 04	06 15	18 04	06 16	18 03	06 17	18 02	06 18	18 01	06 20	18 00
21	05 55	18 21	05 54	18 22	05 53	18 23	05 52	18 25	05 50	18 27	05 47	18 30
26	05 36	18 37	05 33	18 40	05 30	18 44	05 26	18 48	05 20	18 54	05 14	19 01
31	05 17	18 53	05 12	18 58	05 06	19 04	05 00	19 12	04 51	19 21	04 39	19 33
Apr. 5	04 58	19 10	04 51	19 17	04 43	19 25	04 33	19 36	04 20	19 49	04 04	20 06
10	04 38	19 27	04 29	19 36	04 19	19 47	04 06	20 00	03 49	20 18	03 26	20 43
15	04 19	19 44	04 08	19 55	03 54	20 09	03 37	20 27	03 15	20 50	02 43	21 24
20	03 59	20 01	03 46	20 15	03 29	20 32	03 07	20 55	02 37	21 26	01 50	22 18
25	03 40	20 19	03 23	20 35	03 03	20 57	02 35	21 26	01 53	22 11	.. ..	.. ..
30	03 20	20 37	03 01	20 57	02 35	21 24	01 58	22 03	00 46	23 38	.. ..	.. ..
May 5	03 00	20 56	02 37	21 20	02 04	21 54	01 10	22 55	.. ..	.. ..	.. ..	.. ..
10	02 41	21 15	02 12	21 45	01 29	22 32	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
15	02 21	21 35	01 45	22 12	00 35	23 42	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
20	02 01	21 56	01 14	22 45	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
25	01 40	22 17	00 29	23 46	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
30	01 20	22 40	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
June 4	00 58	23 04	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
9	00 32	23 32	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
14	Sun rises 12 June		Sun rises 27 May		Sun rises 16 May		Sun rises 8 May		Sun rises 1 May		Sun rises 24 April	
19	Sun sets 12 June		Sun sets 17 July		Sun sets 27 July		Sun sets 4 August		Sun sets 12 August		Sun sets 17 August	
24	.. ..		.. ..		.. ..		.. ..		.. ..		.. ..	
29	23 56		.. ..		.. ..		.. ..		.. ..		.. ..	
July 4	00 44	23 20	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
9	01 09	22 57	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
14	01 32	22 36	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
19	01 54	22 15	00 50	23 13	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
24	02 15	21 55	01 31	22 36	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
29	02 35	21 35	02 01	22 07	00 58	23 04	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
Aug. 3	02 54	21 15	02 27	21 42	01 46	22 20	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
8	03 13	20 55	02 50	21 17	02 19	21 47	01 28	22 34	.. ..	.. ..	.. ..	.. ..
13	03 31	20 35	03 12	20 54	02 48	21 18	02 12	21 51	01 08	22 48	.. ..	.. ..
18	03 49	20 16	03 33	20 31	03 13	20 51	02 46	21 16	02 07	21 53	00 37	23 05
23	04 06	19 56	03 53	20 09	03 37	20 25	03 16	20 45	02 47	21 12	02 02	21 54
28	04 23	19 37	04 12	19 47	03 59	20 00	03 43	20 16	03 21	20 36	02 50	21 05
Sept. 2	04 39	19 17	04 31	19 26	04 21	19 36	04 08	19 48	03 51	20 03	03 29	20 24
7	04 56	18 58	04 49	19 04	04 41	19 12	04 32	19 21	04 20	19 32	04 04	19 47
12	05 11	18 39	05 07	18 43	05 02	18 48	04 55	18 54	04 47	19 02	04 36	19 12
17	05 27	18 20	05 25	18 22	05 21	18 25	05 18	18 28	05 13	18 33	05 06	18 39
22	05 43	18 00	05 42	18 01	05 41	18 02	05 40	18 03	05 38	18 04	05 36	18 06
27	05 59	17 41	06 00	17 40	06 01	17 39	06 02	17 37	06 04	17 35	06 06	17 33
Oct. 2	06 15	17 22	06 18	17 19	06 21	17 16	06 25	17 12	06 30	17 06	06 36	17 00
7	06 31	17 03	06 35	16 58	06 41	16 53	06 48	16 46	06 56	16 37	07 07	16 26
12	06 47	16 44	06 54	16 37	07 02	16 29	07 11	16 20	07 23	16 07	07 39	15 51
17	07 04	16 25	07 12	16 17	07 23	16 06	07 36	15 53	07 52	15 36	08 14	15 14
22	07 21	16 07	07 32	15 56	07 45	15 42	08 01	15 26	08 23	15 04	08 54	14 33
27	07 38	15 48	07 52	15 35	08 08	15 18	08 29	14 57	08 58	14 28	09 42	13 44
Nov. 1	07 56	15 30	08 12	15 14	08 32	14 54	08 59	14 27	09 38	13 47	11 03	12 22
6	08 15	15 12	08 34	14 53	08 58	14 28	09 33	13 53	10 35	12 51	.. ..	.. ..
11	08 33	14 54	08 56	14 31	09 27	14 00	10 15	13 12	.. ..	.. ..	.. ..	.. ..
16	08 52	14 37	09 19	14 10	09 59	13 30	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
21	09 11	14 20	09 44	13 47	10 38	12 53	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
26	09 30	14 04	10 10	13 24	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
Dec. 1	09 48	13 50	10 38	12 59	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
6	10 05	13 37	11 13	12 29	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
11	10 19	13 28	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
16	10 30	13 22	Sun does not rise after 8 December		Sun does not rise after 24 November		Sun does not rise after 15 November		Sun does not rise after 9 November		Sun does not rise after 1 November	
21	10 35	13 22	.. ..		.. ..		.. ..		.. ..		.. ..	
26	10 35	13 27	.. ..		.. ..		.. ..		.. ..		.. ..	
31	10 29	13 38	.. ..		.. ..		.. ..		.. ..		.. ..	
Jan. 1	10 27	13 40	.. ..		.. ..		.. ..		.. ..		.. ..	

Local mean time. To obtain standard time of rise or set, see table 5.

TABLE 4.-SUNRISE AND SUNSET, 2008

Date	0°		5° S.		10° S.		15° S.		20° S.		25° S.	
	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.
Jan. 1	06 00	18 07	05 51	18 16	05 42	18 24	05 33	18 33	05 24	18 43	05 13	18 53
6	06 02	18 09	05 54	18 18	05 45	18 26	05 36	18 35	05 27	18 44	05 17	18 54
11	06 04	18 11	05 56	18 19	05 48	18 28	05 39	18 36	05 30	18 45	05 20	18 55
16	06 06	18 13	05 58	18 21	05 50	18 29	05 42	18 37	05 33	18 46	05 24	18 55
21	06 08	18 15	06 00	18 22	05 53	18 30	05 45	18 37	05 37	18 45	05 28	18 54
26	06 09	18 16	06 02	18 23	05 55	18 30	05 48	18 37	05 40	18 45	05 32	18 53
31	06 10	18 17	06 03	18 23	05 57	18 30	05 50	18 36	05 43	18 43	05 35	18 51
Feb. 5	06 10	18 17	06 05	18 23	05 59	18 29	05 53	18 35	05 46	18 42	05 39	18 48
10	06 11	18 18	06 06	18 23	06 00	18 28	05 55	18 34	05 49	18 39	05 43	18 46
15	06 11	18 18	06 06	18 22	06 01	18 27	05 57	18 32	05 51	18 37	05 46	18 42
20	06 10	18 17	06 06	18 21	06 02	18 25	05 58	18 29	05 54	18 34	05 49	18 38
25	06 10	18 16	06 07	18 20	06 03	18 23	06 00	18 26	05 56	18 30	05 52	18 34
Mar. 1	06 09	18 16	06 06	18 18	06 04	18 21	06 01	18 23	05 58	18 26	05 55	18 29
6	06 08	18 14	06 06	18 16	06 04	18 18	06 02	18 20	06 00	18 22	05 57	18 25
11	06 07	18 13	06 05	18 14	06 04	18 16	06 03	18 17	06 01	18 18	06 00	18 20
16	06 05	18 12	06 05	18 12	06 04	18 13	06 03	18 13	06 03	18 14	06 02	18 15
21	06 04	18 10	06 04	18 10	06 04	18 10	06 04	18 10	06 04	18 10	06 04	18 10
26	06 02	18 09	06 03	18 08	06 04	18 07	06 05	18 06	06 06	18 05	06 06	18 04
31	06 01	18 07	06 02	18 06	06 04	18 04	06 05	18 03	06 07	18 01	06 09	17 59
Apr. 5	05 59	18 06	06 02	18 04	06 04	18 01	06 06	17 59	06 08	17 57	06 11	17 54
10	05 58	18 05	06 01	18 02	06 04	17 59	06 07	17 56	06 10	17 53	06 13	17 49
15	05 57	18 03	06 00	18 00	06 04	17 56	06 07	17 52	06 11	17 49	06 15	17 45
20	05 55	18 02	06 00	17 58	06 04	17 54	06 08	17 49	06 13	17 45	06 17	17 40
25	05 55	18 01	05 59	17 56	06 04	17 52	06 09	17 47	06 14	17 41	06 20	17 36
30	05 54	18 01	05 59	17 55	06 04	17 50	06 10	17 44	06 16	17 38	06 22	17 32
May 5	05 53	18 00	05 59	17 54	06 05	17 48	06 11	17 42	06 18	17 36	06 24	17 29
10	05 53	18 00	05 59	17 53	06 06	17 47	06 12	17 40	06 19	17 33	06 27	17 26
15	05 53	18 00	06 00	17 53	06 07	17 46	06 14	17 39	06 21	17 31	06 29	17 23
20	05 53	18 00	06 00	17 53	06 08	17 45	06 15	17 38	06 23	17 30	06 32	17 21
25	05 53	18 01	06 01	17 53	06 09	17 45	06 17	17 37	06 25	17 28	06 34	17 19
30	05 54	18 01	06 02	17 53	06 10	17 45	06 18	17 37	06 27	17 28	06 37	17 18
June 4	05 55	18 02	06 03	17 54	06 11	17 45	06 20	17 37	06 29	17 28	06 39	17 18
9	05 56	18 03	06 04	17 54	06 13	17 46	06 22	17 37	06 31	17 28	06 41	17 18
14	05 57	18 04	06 05	17 55	06 14	17 47	06 23	17 38	06 32	17 28	06 43	17 18
19	05 58	18 05	06 06	17 56	06 15	17 48	06 24	17 39	06 34	17 29	06 44	17 19
24	05 59	18 06	06 08	17 57	06 16	17 49	06 25	17 40	06 35	17 30	06 45	17 20
29	06 00	18 07	06 08	17 59	06 17	17 50	06 26	17 41	06 36	17 32	06 46	17 22
July 4	06 01	18 08	06 09	18 00	06 18	17 51	06 27	17 42	06 36	17 33	06 46	17 23
9	06 02	18 09	06 10	18 01	06 18	17 52	06 27	17 44	06 36	17 35	06 45	17 25
14	06 02	18 09	06 10	18 02	06 18	17 54	06 27	17 45	06 35	17 37	06 44	17 27
19	06 03	18 10	06 10	18 02	06 18	17 55	06 26	17 47	06 34	17 39	06 43	17 30
24	06 03	18 10	06 10	18 03	06 17	17 56	06 25	17 48	06 33	17 40	06 41	17 32
29	06 03	18 10	06 10	18 03	06 17	17 56	06 24	17 49	06 31	17 42	06 39	17 34
Aug. 3	06 03	18 10	06 09	18 03	06 15	17 57	06 22	17 51	06 29	17 44	06 36	17 37
8	06 02	18 09	06 08	18 03	06 14	17 58	06 20	17 52	06 26	17 45	06 33	17 39
13	06 01	18 08	06 07	18 03	06 12	17 58	06 17	17 53	06 23	17 47	06 29	17 41
18	06 00	18 07	06 05	18 03	06 10	17 58	06 14	17 53	06 19	17 48	06 25	17 43
23	05 59	18 06	06 03	18 02	06 07	17 58	06 11	17 54	06 16	17 50	06 20	17 45
28	05 58	18 04	06 01	18 01	06 05	17 58	06 08	17 54	06 12	17 51	06 15	17 47
Sept. 2	05 56	18 03	05 59	18 00	06 02	17 57	06 05	17 55	06 07	17 52	06 10	17 49
7	05 55	18 01	05 57	17 59	05 59	17 57	06 01	17 55	06 03	17 53	06 05	17 51
12	05 53	17 59	05 54	17 58	05 56	17 57	05 57	17 55	05 59	17 54	06 00	17 53
17	05 51	17 58	05 52	17 57	05 53	17 56	05 53	17 56	05 54	17 55	05 55	17 54
22	05 49	17 56	05 49	17 56	05 49	17 56	05 49	17 56	05 49	17 56	05 49	17 56
27	05 48	17 54	05 47	17 55	05 46	17 56	05 46	17 56	05 45	17 57	05 44	17 58
Oct. 2	05 46	17 52	05 45	17 54	05 43	17 55	05 42	17 57	05 40	17 58	05 39	18 00
7	05 44	17 51	05 42	17 53	05 40	17 55	05 38	17 57	05 36	18 00	05 34	18 02
12	05 43	17 50	05 40	17 52	05 38	17 55	05 35	17 58	05 32	18 01	05 29	18 05
17	05 42	17 49	05 39	17 52	05 35	17 55	05 32	17 59	05 28	18 03	05 24	18 07
22	05 41	17 48	05 37	17 52	05 33	17 56	05 29	18 00	05 24	18 05	05 20	18 10
27	05 40	17 47	05 36	17 52	05 31	17 57	05 26	18 02	05 21	18 07	05 16	18 12
Nov. 1	05 40	17 47	05 35	17 52	05 30	17 58	05 24	18 03	05 18	18 09	05 12	18 16
6	05 40	17 47	05 34	17 53	05 28	17 59	05 22	18 05	05 16	18 12	05 09	18 19
11	05 41	17 48	05 34	17 54	05 28	18 01	05 21	18 07	05 14	18 14	05 06	18 22
16	05 41	17 48	05 34	17 55	05 27	18 02	05 20	18 10	05 12	18 17	05 04	18 26
21	05 42	17 50	05 35	17 57	05 28	18 04	05 20	18 12	05 12	18 20	05 03	18 29
26	05 44	17 51	05 36	17 59	05 28	18 07	05 20	18 15	05 11	18 24	05 02	18 33
Dec. 1	05 45	17 53	05 37	18 01	05 29	18 09	05 21	18 18	05 12	18 27	05 02	18 37
6	05 47	17 55	05 39	18 03	05 31	18 12	05 22	18 21	05 12	18 30	05 02	18 40
11	05 50	17 57	05 41	18 06	05 32	18 14	05 23	18 24	05 14	18 33	05 03	18 43
16	05 52	18 00	05 43	18 08	05 35	18 17	05 25	18 26	05 16	18 36	05 05	18 46
21	05 54	18 02	05 46	18 11	05 37	18 20	05 28	18 29	05 18	18 39	05 07	18 49
26	05 57	18 05	05 48	18 13	05 39	18 22	05 30	18 31	05 21	18 41	05 10	18 51
31	05 59	18 07	05 51	18 15	05 42	18 24	05 33	18 33	05 23	18 43	05 13	18 53
Jan. 1	06 00	18 07	05 51	18 16	05 43	18 25	05 34	18 34	05 24	18 43	05 14	18 53

Local mean time. To obtain standard time of rise or set, see table 5.

TABLE 4. - SUNRISE AND SUNSET, 2008

Date	30° S.		32° S.		34° S.		36° S.		38° S.		40° S.	
	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.
Jan. 1	05 02	19 05	04 57	19 09	04 52	19 15	04 46	19 20	04 41	19 26	04 34	19 32
6	05 06	19 05	05 01	19 10	04 56	19 15	04 50	19 20	04 45	19 26	04 39	19 32
11	05 10	19 06	05 05	19 10	05 00	19 15	04 55	19 20	04 50	19 26	04 44	19 31
16	05 14	19 05	05 09	19 09	05 05	19 14	05 00	19 19	04 55	19 24	04 49	19 30
21	05 18	19 04	05 14	19 08	05 10	19 12	05 05	19 17	05 00	19 22	04 55	19 27
26	05 23	19 02	05 19	19 06	05 15	19 10	05 10	19 14	05 06	19 19	05 01	19 23
31	05 27	18 59	05 24	19 03	05 20	19 07	05 16	19 10	05 11	19 15	05 07	19 19
Feb. 5	05 31	18 56	05 28	18 59	05 25	19 03	05 21	19 06	05 17	19 10	05 13	19 14
10	05 36	18 52	05 33	18 55	05 30	18 58	05 26	19 01	05 23	19 05	05 19	19 08
15	05 40	18 48	05 37	18 51	05 35	18 53	05 32	18 56	05 29	18 59	05 25	19 02
20	05 44	18 43	05 42	18 46	05 39	18 48	05 37	18 50	05 34	18 53	05 31	18 56
25	05 48	18 38	05 46	18 40	05 44	18 42	05 42	18 44	05 39	18 46	05 37	18 48
Mar. 1	05 51	18 33	05 50	18 34	05 48	18 36	05 46	18 38	05 45	18 39	05 43	18 41
6	05 55	18 27	05 53	18 28	05 52	18 30	05 51	18 31	05 50	18 32	05 48	18 33
11	05 58	18 21	05 57	18 22	05 56	18 23	05 56	18 24	05 55	18 25	05 54	18 25
16	06 01	18 15	06 01	18 16	06 00	18 16	06 00	18 17	05 59	18 17	05 59	18 17
21	06 04	18 09	06 04	18 09	06 04	18 09	06 04	18 09	06 04	18 09	06 04	18 09
26	06 07	18 03	06 08	18 03	06 08	18 03	06 08	18 02	06 09	18 02	06 09	18 01
31	06 10	17 57	06 11	17 57	06 12	17 56	06 13	17 55	06 13	17 54	06 14	17 53
Apr. 5	06 13	17 52	06 14	17 50	06 16	17 49	06 17	17 48	06 18	17 47	06 19	17 45
10	06 16	17 46	06 18	17 44	06 19	17 43	06 21	17 41	06 23	17 39	06 24	17 38
15	06 19	17 40	06 21	17 38	06 23	17 36	06 25	17 34	06 27	17 32	06 29	17 30
20	06 22	17 35	06 25	17 33	06 27	17 30	06 29	17 28	06 32	17 25	06 34	17 23
25	06 25	17 30	06 28	17 27	06 31	17 25	06 33	17 22	06 36	17 19	06 39	17 16
30	06 29	17 25	06 31	17 23	06 34	17 20	06 37	17 16	06 41	17 13	06 44	17 10
May 5	06 32	17 21	06 35	17 18	06 38	17 15	06 42	17 11	06 45	17 08	06 49	17 04
10	06 35	17 18	06 38	17 14	06 42	17 10	06 46	17 07	06 50	17 03	06 54	16 58
15	06 38	17 14	06 42	17 11	06 46	17 07	06 50	17 03	06 54	16 58	06 59	16 54
20	06 41	17 12	06 45	17 08	06 49	17 04	06 54	16 59	06 58	16 55	07 03	16 50
25	06 44	17 10	06 48	17 05	06 53	17 01	06 57	16 56	07 02	16 51	07 07	16 46
30	06 47	17 08	06 51	17 04	06 56	16 59	07 01	16 54	07 06	16 49	07 11	16 44
June 4	06 49	17 07	06 54	17 03	06 59	16 58	07 04	16 53	07 09	16 48	07 15	16 42
9	06 52	17 07	06 56	17 02	07 01	16 57	07 06	16 52	07 12	16 47	07 18	16 41
14	06 54	17 07	06 58	17 02	07 03	16 57	07 09	16 52	07 14	16 47	07 20	16 41
19	06 55	17 08	07 00	17 03	07 05	16 58	07 10	16 53	07 16	16 47	07 22	16 41
24	06 56	17 09	07 01	17 04	07 06	16 59	07 11	16 54	07 17	16 48	07 23	16 42
29	06 57	17 11	07 01	17 06	07 06	17 01	07 11	16 56	07 17	16 50	07 23	16 44
July 4	06 56	17 13	07 01	17 08	07 06	17 03	07 11	16 58	07 16	16 53	07 22	16 47
9	06 56	17 15	07 00	17 10	07 05	17 06	07 10	17 01	07 15	16 56	07 21	16 50
14	06 55	17 17	06 59	17 13	07 03	17 09	07 08	17 04	07 13	16 59	07 19	16 53
19	06 53	17 20	06 57	17 16	07 01	17 12	07 06	17 07	07 11	17 02	07 16	16 57
24	06 50	17 23	06 54	17 19	06 58	17 15	07 03	17 11	07 07	17 06	07 12	17 01
29	06 47	17 26	06 51	17 22	06 55	17 18	06 59	17 14	07 03	17 10	07 07	17 06
Aug. 3	06 44	17 29	06 47	17 25	06 51	17 22	06 54	17 18	06 58	17 14	07 02	17 10
8	06 40	17 32	06 43	17 29	06 46	17 26	06 49	17 22	06 53	17 19	06 57	17 15
13	06 35	17 35	06 38	17 32	06 41	17 29	06 44	17 26	06 47	17 23	06 51	17 20
18	06 30	17 37	06 33	17 35	06 35	17 33	06 38	17 30	06 41	17 27	06 44	17 24
23	06 25	17 40	06 27	17 38	06 29	17 36	06 32	17 34	06 34	17 31	06 37	17 29
28	06 20	17 43	06 21	17 41	06 23	17 39	06 25	17 38	06 27	17 36	06 29	17 34
Sept. 2	06 14	17 46	06 15	17 44	06 17	17 43	06 18	17 41	06 20	17 40	06 21	17 38
7	06 08	17 48	06 09	17 47	06 10	17 46	06 11	17 45	06 12	17 44	06 14	17 43
12	06 02	17 51	06 02	17 50	06 03	17 50	06 04	17 49	06 05	17 48	06 05	17 47
17	05 55	17 54	05 56	17 53	05 56	17 53	05 56	17 53	05 57	17 52	05 57	17 52
22	05 49	17 56	05 49	17 56	05 49	17 57	05 49	17 57	05 49	17 57	05 49	17 57
27	05 43	17 59	05 43	18 00	05 42	18 00	05 42	18 01	05 41	18 01	05 41	18 02
Oct. 2	05 37	18 02	05 36	18 03	05 35	18 04	05 34	18 05	05 33	18 06	05 32	18 07
7	05 31	18 05	05 30	18 06	05 28	18 08	05 27	18 09	05 26	18 10	05 24	18 12
12	05 25	18 08	05 23	18 10	05 22	18 11	05 20	18 13	05 18	18 15	05 17	18 17
17	05 19	18 11	05 18	18 13	05 16	18 15	05 14	18 18	05 11	18 20	05 09	18 22
22	05 14	18 15	05 12	18 17	05 10	18 20	05 07	18 22	05 05	18 25	05 02	18 28
27	05 09	18 19	05 07	18 21	05 04	18 24	05 01	18 27	04 58	18 30	04 55	18 33
Nov. 1	05 05	18 22	05 02	18 25	04 59	18 29	04 56	18 32	04 52	18 35	04 49	18 39
6	05 01	18 26	04 58	18 30	04 54	18 33	04 51	18 37	04 47	18 41	04 43	18 45
11	04 58	18 31	04 54	18 34	04 51	18 38	04 47	18 42	04 42	18 46	04 38	18 51
16	04 55	18 35	04 51	18 39	04 47	18 43	04 43	18 47	04 38	18 52	04 33	18 57
21	04 53	18 39	04 49	18 43	04 45	18 48	04 40	18 52	04 35	18 57	04 30	19 03
26	04 52	18 43	04 47	18 48	04 43	18 52	04 38	18 57	04 33	19 03	04 27	19 08
Dec. 1	04 51	18 47	04 47	18 52	04 42	18 57	04 37	19 02	04 31	19 08	04 25	19 13
6	04 51	18 51	04 47	18 56	04 42	19 01	04 36	19 06	04 31	19 12	04 25	19 18
11	04 52	18 55	04 47	19 00	04 42	19 05	04 37	19 10	04 31	19 16	04 25	19 22
16	04 54	18 58	04 49	19 03	04 43	19 08	04 38	19 14	04 32	19 20	04 26	19 26
21	04 56	19 01	04 51	19 06	04 45	19 11	04 40	19 17	04 34	19 23	04 28	19 29
26	04 59	19 03	04 54	19 08	04 48	19 13	04 43	19 19	04 37	19 25	04 31	19 31
31	05 02	19 04	04 57	19 09	04 52	19 15	04 46	19 20	04 40	19 26	04 34	19 32
Jan. 1	05 02	19 05	04 58	19 10	04 52	19 15	04 47	19 20	04 41	19 26	04 35	19 32

Local mean time. To obtain standard time of rise or set, see table 5.

TABLE 4.-SUNRISE AND SUNSET, 2008

Date	42° S.		44° S.		46° S.		48° S.		50° S.		52° S.	
	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.
Jan. 1	04 28	19 39	04 21	19 46	04 13	19 54	04 04	20 02	03 55	20 12	03 44	20 22
6	04 32	19 39	04 25	19 46	04 18	19 53	04 09	20 01	04 00	20 11	03 50	20 21
11	04 37	19 38	04 31	19 44	04 23	19 51	04 15	19 59	04 07	20 08	03 57	20 18
16	04 43	19 35	04 37	19 42	04 30	19 49	04 22	19 56	04 14	20 05	04 05	20 14
21	04 49	19 32	04 43	19 38	04 37	19 45	04 30	19 52	04 22	20 00	04 13	20 08
26	04 56	19 29	04 50	19 34	04 44	19 40	04 37	19 47	04 30	19 54	04 22	20 02
31	05 02	19 24	04 57	19 29	04 51	19 34	04 45	19 40	04 39	19 47	04 31	19 54
Feb. 5	05 09	19 18	05 04	19 23	04 59	19 28	04 54	19 33	04 48	19 39	04 41	19 46
10	05 15	19 12	05 11	19 16	05 07	19 21	05 02	19 26	04 56	19 31	04 51	19 37
15	05 22	19 06	05 18	19 09	05 14	19 13	05 10	19 17	05 05	19 22	05 00	19 27
20	05 28	18 58	05 25	19 02	05 22	19 05	05 18	19 09	05 14	19 12	05 10	19 17
25	05 35	18 51	05 32	18 53	05 29	18 56	05 26	18 59	05 23	19 03	05 19	19 06
Mar. 1	05 41	18 43	05 39	18 45	05 36	18 47	05 34	18 50	05 31	18 52	05 28	18 55
6	05 47	18 35	05 45	18 36	05 43	18 38	05 42	18 40	05 40	18 42	05 37	18 44
11	05 53	18 26	05 52	18 27	05 50	18 29	05 49	18 30	05 48	18 31	05 46	18 32
16	05 58	18 18	05 58	18 18	05 57	18 19	05 57	18 20	05 56	18 20	05 55	18 21
21	06 04	18 09	06 04	18 09	06 04	18 09	06 04	18 09	06 04	18 09	06 04	18 09
26	06 10	18 01	06 10	18 00	06 11	18 00	06 11	17 59	06 12	17 58	06 12	17 58
31	06 15	17 52	06 16	17 51	06 17	17 50	06 18	17 49	06 20	17 48	06 21	17 46
Apr. 5	06 21	17 44	06 22	17 42	06 24	17 41	06 26	17 39	06 27	17 37	06 29	17 35
10	06 26	17 36	06 28	17 34	06 30	17 31	06 33	17 29	06 35	17 27	06 38	17 24
15	06 32	17 28	06 34	17 25	06 37	17 22	06 40	17 19	06 43	17 16	06 46	17 13
20	06 37	17 20	06 40	17 17	06 43	17 14	06 47	17 10	06 50	17 06	06 55	17 02
25	06 43	17 13	06 46	17 09	06 50	17 05	06 54	17 01	06 58	16 57	07 03	16 52
30	06 48	17 06	06 52	17 02	06 56	16 58	07 01	16 53	07 06	16 48	07 11	16 43
May 5	06 53	17 00	06 58	16 55	07 02	16 50	07 07	16 45	07 13	16 40	07 19	16 34
10	06 58	16 54	07 03	16 49	07 09	16 44	07 14	16 38	07 20	16 32	07 27	16 25
15	07 04	16 49	07 09	16 44	07 14	16 38	07 21	16 32	07 27	16 25	07 35	16 18
20	07 08	16 44	07 14	16 39	07 20	16 33	07 27	16 26	07 34	16 19	07 42	16 11
25	07 13	16 41	07 19	16 35	07 25	16 28	07 32	16 21	07 40	16 14	07 48	16 05
30	07 17	16 38	07 23	16 32	07 30	16 25	07 37	16 17	07 45	16 09	07 54	16 00
June 4	07 21	16 36	07 27	16 29	07 34	16 22	07 42	16 15	07 50	16 06	08 00	15 57
9	07 24	16 35	07 30	16 28	07 38	16 21	07 46	16 13	07 54	16 04	08 04	15 55
14	07 26	16 34	07 33	16 28	07 40	16 20	07 48	16 12	07 57	16 03	08 07	15 54
19	07 28	16 35	07 35	16 28	07 42	16 21	07 50	16 12	07 59	16 04	08 09	15 54
24	07 29	16 36	07 36	16 29	07 43	16 22	07 51	16 14	08 00	16 05	08 10	15 55
29	07 29	16 38	07 36	16 31	07 43	16 24	07 51	16 16	08 00	16 07	08 10	15 58
July 4	07 28	16 41	07 35	16 34	07 42	16 27	07 50	16 19	07 59	16 11	08 08	16 01
9	07 27	16 44	07 33	16 38	07 40	16 31	07 48	16 23	07 56	16 15	08 05	16 06
14	07 24	16 48	07 31	16 42	07 37	16 35	07 44	16 28	07 52	16 20	08 01	16 11
19	07 21	16 52	07 27	16 46	07 33	16 40	07 40	16 33	07 48	16 25	07 56	16 17
24	07 17	16 56	07 23	16 51	07 28	16 45	07 35	16 39	07 42	16 32	07 50	16 24
29	07 12	17 01	07 17	16 56	07 23	16 50	07 29	16 45	07 35	16 38	07 42	16 31
Aug. 3	07 07	17 06	07 12	17 01	07 17	16 56	07 22	16 51	07 28	16 45	07 34	16 38
8	07 01	17 11	07 05	17 07	07 10	17 02	07 15	16 57	07 20	16 52	07 26	16 46
13	06 54	17 16	06 58	17 12	07 02	17 08	07 06	17 04	07 11	16 59	07 16	16 54
18	06 47	17 21	06 50	17 18	06 54	17 14	06 58	17 10	07 02	17 06	07 07	17 02
23	06 39	17 26	06 42	17 23	06 45	17 20	06 49	17 17	06 52	17 14	06 56	17 10
28	06 31	17 31	06 34	17 29	06 36	17 26	06 39	17 24	06 42	17 21	06 45	17 18
Sept. 2	06 23	17 36	06 25	17 35	06 27	17 33	06 29	17 30	06 32	17 28	06 34	17 26
7	06 15	17 42	06 16	17 40	06 18	17 39	06 19	17 37	06 21	17 36	06 23	17 34
12	06 06	17 47	06 07	17 46	06 08	17 45	06 09	17 44	06 10	17 43	06 11	17 42
17	05 58	17 52	05 58	17 51	05 58	17 51	05 59	17 51	05 59	17 50	06 00	17 50
22	05 49	17 57	05 49	17 57	05 49	17 57	05 48	17 58	05 48	17 58	05 48	17 58
27	05 40	18 02	05 39	18 03	05 39	18 04	05 38	18 05	05 37	18 05	05 36	18 06
Oct. 2	05 31	18 08	05 30	18 09	05 29	18 10	05 28	18 12	05 26	18 13	05 25	18 15
7	05 23	18 13	05 21	18 15	05 19	18 17	05 18	18 19	05 15	18 21	05 13	18 23
12	05 15	18 19	05 12	18 21	05 10	18 24	05 08	18 26	05 05	18 29	05 02	18 32
17	05 06	18 25	05 04	18 28	05 01	18 30	04 58	18 34	04 55	18 37	04 51	18 41
22	04 59	18 31	04 56	18 34	04 52	18 37	04 49	18 41	04 45	18 45	04 40	18 50
27	04 52	18 37	04 48	18 41	04 44	18 45	04 40	18 49	04 35	18 54	04 30	18 59
Nov. 1	04 45	18 43	04 41	18 47	04 36	18 52	04 31	18 57	04 26	19 02	04 20	19 08
6	04 39	18 49	04 34	18 54	04 29	18 59	04 23	19 05	04 17	19 11	04 11	19 17
11	04 33	18 56	04 28	19 01	04 22	19 07	04 16	19 13	04 10	19 19	04 03	19 27
16	04 28	19 02	04 23	19 08	04 17	19 14	04 10	19 20	04 03	19 28	03 55	19 36
21	04 24	19 08	04 18	19 14	04 12	19 21	04 05	19 28	03 57	19 36	03 48	19 44
26	04 21	19 14	04 15	19 20	04 08	19 27	04 00	19 35	03 52	19 43	03 43	19 53
Dec. 1	04 19	19 20	04 12	19 26	04 05	19 34	03 57	19 42	03 48	19 51	03 39	20 00
6	04 18	19 25	04 11	19 32	04 03	19 39	03 55	19 48	03 46	19 57	03 36	20 07
11	04 18	19 29	04 11	19 36	04 03	19 44	03 54	19 53	03 45	20 02	03 34	20 13
16	04 19	19 33	04 12	19 40	04 04	19 48	03 55	19 57	03 45	20 07	03 34	20 17
21	04 21	19 36	04 13	19 43	04 05	19 51	03 57	20 00	03 47	20 10	03 36	20 20
26	04 24	19 38	04 16	19 45	04 08	19 53	04 00	20 02	03 50	20 11	03 39	20 22
31	04 28	19 39	04 20	19 46	04 12	19 54	04 04	20 02	03 54	20 12	03 44	20 22
Jan. 1	04 28	19 39	04 21	19 46	04 13	19 54	04 05	20 02	03 55	20 12	03 45	20 22

Local mean time. To obtain standard time of rise or set, see table 5.

TABLE 4.-SUNRISE AND SUNSET, 2008

Date	54° S.		56° S.		58° S.		60° S.	
	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.	Rise h. m.	Set h. m.
Jan. 1-----	03 32	20 34	03 18	20 48	03 02	21 04	02 42	21 24
6-----	03 38	20 32	03 25	20 46	03 09	21 01	02 50	21 20
11-----	03 46	20 29	03 32	20 41	03 18	20 56	03 01	21 13
16-----	03 54	20 24	03 42	20 36	03 29	20 49	03 12	21 05
21-----	04 03	20 18	03 52	20 29	03 40	20 41	03 25	20 56
26-----	04 13	20 10	04 03	20 20	03 52	20 32	03 38	20 45
31-----	04 23	20 02	04 14	20 11	04 04	20 21	03 52	20 33
Feb. 5-----	04 34	19 53	04 26	20 01	04 16	20 10	04 06	20 20
10-----	04 44	19 43	04 37	19 50	04 29	19 58	04 19	20 07
15-----	04 55	19 32	04 48	19 39	04 41	19 46	04 33	19 53
20-----	05 05	19 21	05 00	19 27	04 54	19 33	04 47	19 39
25-----	05 15	19 10	05 11	19 14	05 06	19 19	05 00	19 25
Mar. 1-----	05 25	18 58	05 22	19 02	05 18	19 06	05 13	19 10
6-----	05 35	18 46	05 32	18 49	05 29	18 52	05 26	18 55
11-----	05 45	18 34	05 43	18 36	05 41	18 38	05 39	18 40
16-----	05 54	18 22	05 53	18 23	05 52	18 24	05 51	18 25
21-----	06 04	18 09	06 04	18 09	06 03	18 09	06 03	18 10
26-----	06 13	17 57	06 14	17 56	06 15	17 55	06 15	17 54
31-----	06 22	17 45	06 24	17 43	06 26	17 41	06 27	17 39
Apr. 5-----	06 32	17 33	06 34	17 30	06 37	17 27	06 40	17 24
10-----	06 41	17 21	06 44	17 17	06 48	17 14	06 52	17 10
15-----	06 50	17 09	06 54	17 05	06 58	17 00	07 04	16 55
20-----	06 59	16 58	07 04	16 53	07 09	16 47	07 16	16 41
25-----	07 08	16 47	07 14	16 41	07 20	16 35	07 28	16 27
30-----	07 17	16 37	07 24	16 30	07 31	16 22	07 39	16 14
May 5-----	07 26	16 27	07 33	16 19	07 42	16 11	07 51	16 01
10-----	07 34	16 18	07 43	16 09	07 52	16 00	08 03	15 49
15-----	07 43	16 09	07 52	16 00	08 02	15 50	08 14	15 38
20-----	07 50	16 02	08 00	15 52	08 12	15 41	08 25	15 28
25-----	07 58	15 56	08 08	15 45	08 21	15 33	08 35	15 19
30-----	08 04	15 51	08 16	15 39	08 29	15 26	08 44	15 11
June 4-----	08 10	15 47	08 22	15 35	08 35	15 21	08 52	15 05
9-----	08 15	15 44	08 27	15 32	08 41	15 17	08 58	15 00
14-----	08 18	15 42	08 31	15 30	08 45	15 15	09 03	14 58
19-----	08 20	15 43	08 33	15 30	08 48	15 15	09 05	14 57
24-----	08 21	15 44	08 34	15 31	08 49	15 17	09 06	14 59
29-----	08 21	15 47	08 33	15 34	08 48	15 20	09 05	15 02
July 4-----	08 19	15 50	08 31	15 38	08 45	15 24	09 01	15 08
9-----	08 15	15 55	08 27	15 44	08 40	15 30	08 56	15 15
14-----	08 11	16 01	08 22	15 50	08 35	15 38	08 49	15 23
19-----	08 05	16 08	08 15	15 58	08 27	15 46	08 41	15 32
24-----	07 58	16 15	08 08	16 06	08 19	15 55	08 32	15 42
29-----	07 50	16 23	07 59	16 14	08 09	16 04	08 21	15 53
Aug. 3-----	07 42	16 31	07 50	16 23	07 59	16 14	08 09	16 04
8-----	07 32	16 40	07 39	16 32	07 48	16 24	07 57	16 15
13-----	07 22	16 48	07 29	16 42	07 36	16 35	07 44	16 27
18-----	07 12	16 57	07 17	16 51	07 23	16 45	07 30	16 38
23-----	07 00	17 05	07 05	17 01	07 10	16 56	07 16	16 50
28-----	06 49	17 14	06 53	17 10	06 57	17 06	07 02	17 01
Sept. 2-----	06 37	17 23	06 40	17 20	06 44	17 17	06 47	17 13
7-----	06 25	17 32	06 27	17 30	06 30	17 27	06 32	17 24
12-----	06 13	17 41	06 14	17 39	06 16	17 38	06 17	17 36
17-----	06 00	17 49	06 01	17 49	06 02	17 48	06 02	17 48
22-----	05 48	17 58	05 48	17 59	05 47	17 59	05 47	17 59
27-----	05 35	18 07	05 34	18 08	05 33	18 10	05 32	18 11
Oct. 2-----	05 23	18 17	05 21	18 18	05 19	18 21	05 17	18 23
7-----	05 11	18 26	05 08	18 29	05 05	18 32	05 02	18 35
12-----	04 59	18 35	04 55	18 39	04 51	18 43	04 47	18 48
17-----	04 47	18 45	04 42	18 49	04 37	18 55	04 32	19 00
22-----	04 35	18 55	04 30	19 00	04 24	19 06	04 17	19 13
27-----	04 24	19 05	04 18	19 11	04 11	19 18	04 03	19 26
Nov. 1-----	04 14	19 15	04 06	19 22	03 58	19 30	03 49	19 40
6-----	04 04	19 25	03 56	19 33	03 46	19 43	03 36	19 53
11-----	03 54	19 35	03 45	19 44	03 35	19 55	03 23	20 07
16-----	03 46	19 45	03 36	19 55	03 25	20 07	03 11	20 20
21-----	03 39	19 54	03 28	20 05	03 15	20 18	03 01	20 33
26-----	03 33	20 03	03 21	20 15	03 07	20 29	02 51	20 45
Dec. 1-----	03 28	20 12	03 15	20 24	03 00	20 39	02 43	20 57
6-----	03 24	20 19	03 11	20 32	02 55	20 48	02 37	21 07
11-----	03 22	20 25	03 09	20 39	02 52	20 55	02 33	21 15
16-----	03 22	20 30	03 08	20 44	02 51	21 01	02 31	21 21
21-----	03 24	20 33	03 09	20 47	02 53	21 04	02 32	21 24
26-----	03 27	20 34	03 13	20 48	02 56	21 05	02 36	21 25
31-----	03 32	20 34	03 18	20 48	03 02	21 04	02 42	21 24
Jan. 1-----	03 33	20 34	03 19	20 48	03 03	21 04	02 43	21 23

Local mean time. To obtain standard time of rise or set, see table 5.

TABLE 5. —REDUCTION OF LOCAL MEAN TIME TO STANDARD TIME

Difference of longitude between local and standard meridian	Correction to local mean time to obtain standard time	Difference of longitude between local and standard meridian	Correction to local mean time to obtain standard time	Difference of longitude between local and standard meridian	Correction to local mean time to obtain standard time
° ' ° '	Minutes	° ' ° '	Minutes	°	Hours
0 00 to 0 07	0	7 23 to 7 37	30	15	1
0 08 to 0 22	1	7 38 to 7 52	31	30	2
0 23 to 0 37	2	7 53 to 8 07	32	45	3
0 38 to 0 52	3	8 08 to 8 22	33	60	4
0 53 to 1 07	4	8 23 to 8 37	34	75	5
1 08 to 1 22	5	8 38 to 8 52	35	90	6
1 23 to 1 37	6	8 53 to 9 07	36	105	7
1 38 to 1 52	7	9 08 to 9 22	37	120	8
1 53 to 2 07	8	9 23 to 9 37	38	135	9
2 08 to 2 22	9	9 38 to 9 52	39	150	10
2 23 to 2 37	10	9 53 to 10 07	40	165	11
2 38 to 2 52	11	10 08 to 10 22	4	180	12
2 53 to 3 07	12	10 23 to 10 37	42		
3 08 to 3 22	13	10 38 to 10 52	43		
3 23 to 3 37	14	10 53 to 11 07	44		
3 38 to 3 52	15	11 08 to 11 22	45		
3 53 to 4 07	16	11 23 to 11 37	46		
4 08 to 4 22	17	11 38 to 11 52	47		
4 23 to 4 37	18	11 53 to 12 07	48		
4 38 to 4 52	19	12 08 to 12 22	49		
4 53 to 5 07	20	12 23 to 12 37	50		
5 08 to 5 22	21	12 38 to 12 52	51		
5 23 to 5 37	22	12 53 to 13 07	52		
5 38 to 5 52	23	13 08 to 13 22	53		
5 53 to 6 07	24	13 23 to 13 37	54		
6 08 to 6 22	25	13 38 to 13 52	55		
6 23 to 6 37	26	13 53 to 14 07	56		
6 38 to 6 52	27	14 08 to 14 22	57		
6 53 to 7 07	28	14 23 to 14 37	58		
7 08 to 7 22	29	14 38 to 14 52	59		

If local meridian is east of standard meridian, subtract the correction from local time.

If local meridian is west of standard meridian, add the correction to local time.

For differences of longitude less than 15° , use the first part of the table. For greater differences use both parts thus: 47° 23' is equivalent to 45°+ 2° 23', the correction for 45° is 3 hours, the correction for 2° 23' is 10 minutes; therefore the total correction for the difference in longitude 47° 23' is 3 hours and 10 minutes.

TABLE 6. — CONVERSION OF FEET TO CENTIMETERS

Feet	Tenths of a Foot										Feet
	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	
0	0	3	6	9	12	15	18	21	24	27	0
1	30	34	37	40	43	46	49	52	55	58	1
2	61	64	67	70	73	76	79	82	85	88	2
3	91	94	98	101	104	107	110	113	116	119	3
4	122	125	128	131	134	137	140	143	146	149	4
5	152	155	158	162	165	168	171	174	177	180	5
6	183	186	189	192	195	198	201	204	207	210	6
7	213	216	219	223	226	229	232	235	238	241	7
8	244	247	250	253	256	259	262	265	268	271	8
9	274	277	280	283	287	290	293	296	299	302	9
10	305	308	311	314	317	320	323	326	329	332	10
11	335	338	341	344	347	351	354	357	360	363	11
12	366	369	372	375	378	381	384	387	390	393	12
13	396	399	402	405	408	411	415	418	421	424	13
14	427	430	433	436	439	442	445	448	451	454	14
15	457	460	463	466	469	472	475	479	482	485	15
16	488	491	494	497	500	503	506	509	512	515	16
17	518	521	524	527	530	533	536	539	543	546	17
18	549	552	555	558	561	564	567	570	573	576	18
19	579	582	585	588	591	594	597	600	604	607	19
20	610	613	616	619	622	625	628	631	634	637	20
21	640	643	646	649	652	655	658	661	664	668	21
22	671	674	677	680	683	686	689	692	695	698	22
23	701	704	707	710	713	716	719	722	725	728	23
24	732	735	738	741	744	747	750	753	756	759	24
25	762	765	768	771	774	777	780	783	786	789	25
26	792	796	799	802	805	808	811	814	817	820	26
27	823	826	829	832	835	838	841	844	847	850	27
28	853	856	860	863	866	869	872	875	878	881	28
29	884	887	890	893	896	899	902	905	908	911	29
30	914	917	920	924	927	930	933	936	939	942	30
31	945	948	951	954	957	960	963	966	969	972	31
32	975	978	981	985	988	991	994	997	1000	1003	32
33	1006	1009	1012	1015	1018	1021	1024	1027	1030	1033	33
34	1036	1039	1042	1045	1049	1052	1055	1058	1061	1064	34
35	1067	1070	1073	1076	1079	1082	1085	1088	1091	1094	35
36	1097	1100	1103	1106	1109	1113	1116	1119	1122	1125	36
37	1128	1131	1134	1137	1140	1143	1146	1149	1152	1155	37
38	1158	1161	1164	1167	1170	1173	1177	1180	1183	1186	38
39	1189	1192	1195	1198	1201	1204	1207	1210	1213	1216	39
40	1219	1222	1225	1228	1231	1234	1237	1241	1244	1247	40
41	1250	1253	1256	1259	1262	1265	1268	1271	1274	1277	41
42	1280	1283	1286	1289	1292	1295	1298	1301	1305	1308	42
43	1311	1314	1317	1320	1323	1326	1329	1332	1335	1338	43
44	1341	1344	1347	1350	1353	1356	1359	1362	1366	1369	44
45	1372	1375	1378	1381	1384	1387	1390	1393	1396	1399	45
46	1402	1405	1408	1411	1414	1417	1420	1423	1426	1430	46
47	1433	1436	1439	1442	1445	1448	1451	1454	1457	1460	47
48	1463	1466	1469	1472	1475	1478	1481	1484	1487	1490	48
49	1494	1497	1500	1503	1506	1509	1512	1515	1518	1521	49

Feet to Meters = Centimeters divided by 100 (from above table)

Example: 09.40 feet = (287 centimeters) / (100) = 02.87 meters.

1 Meter = 100 centimeters

1 Foot = 0.30480061 meters

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.

TIDAL CIRCULATION AND WATER LEVEL FORECAST ATLAS

This atlas series provides a composite view of the total tidal phenomenon for major estuaries of the United States. Twelve pairs of hourly charts are used to depict the information. The first of each pair presents contours of mean tidal height throughout the specified estuary. Inserts and a vertical section provide additional tidal information. The second chart presents the speed and direction of the tidal current throughout the area. Corange, cotidal, cospeed, and cophase charts are shown in the following section. Finally, daily tide predictions are provided for important locations, in tabular form, for several years in advance.

Tidal Circulation and Water Level Forecast Atlas, Delaware River and Bay.

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:

Greenwich interval = 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 $y=A \cos (at+\alpha)$, 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 $(at+\alpha)$ 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 α 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° 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.

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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* (Np) of the tide is the average semidiurnal range occurring at the time of neap tides and is most conveniently computed from the harmonic constants. It is smaller than the mean range where the type of tide is either semidiurnal or mixed and is of no practical significance where the type of tide is diurnal. The average height of the high waters of the neap tides is called *neap high water* or *high water neaps* (MHWN) and the average height of the corresponding low waters is called *neap low water* or *low water neaps* (MLWN).

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

RANGE OF TIDE—The difference in height between consecutive high and low waters, the *mean range* is the difference in height between mean high water and mean low water. Where the type of tide is diurnal the mean range is the same as the diurnal range. For

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other ranges, see great diurnal, spring, neap, perigean, apogean, and tropic tides.

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

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

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

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

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

SLACK WATER—The state of a tidal current when its speed is near zero, especially the moment when a

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

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

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

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

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

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be shown that the average speed for an entire flood or ebb period is equal to $2/\pi$ or 0.6366 of the speed of the corresponding strength of current.

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

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

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

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

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

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LUNAR DATA

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

SOLAR DATA

⊙ _a	– March equinox
⊙ _b	– June solstice
⊙ _c	– September equinox
⊙ _d	– December solstice

Greenwich mean time (GMT) or universal time (UT) is the mean solar time on the Greenwich meridian reckoned in days of 24 mean solar hours written as 00^h at midnight and 12^h at noon. To convert the above times to those of other standard time meridians, add 1 hour for each 15° of east longitude of the desired meridian and subtract 1 hour for each 15° of west longitude. This table was compiled from data supplied by the Nautical Almanac Office, United States Naval Observatory.