

MARINERS GUIDE

2026



THE PORT
OF LOS ANGELES 



**THE PORT
OF LOS ANGELES**

PORT OF LOS ANGELES
425 S. Palos Verdes Street
San Pedro, CA 90731
Phone/TDD: (310) 732-3508
portoflosangeles.org



@portofla

***A special thank you to the Port of Los Angeles employees
whose Calendar Contest photo submissions were selected
for the 2026 Mariners Guide.***

The data contained herein is provided only for general informational purposes and no reliance should be placed upon it for determining the course of conduct by any user of the Port of Los Angeles. The accuracy of statistical data is not assured by this Port, as it has been furnished by outside agencies and sources.

Acceptance of Port of Los Angeles Pilot Service is pursuant to all the terms, conditions and restrictions of the Port of Los Angeles Tariff and any amendments thereto.

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INTRODUCTION



WELCOME TO THE PORT OF LOS ANGELES

The Port of Los Angeles is America's Port®, serving as the nation's premier gateway for international trade and is the busiest seaport in the Western Hemisphere. Located in San Pedro Bay, just 25 miles south of downtown Los Angeles, the Port spans 7,500 acres of land and water along 43 miles of scenic waterfront.

From avocados to zinc, the Port processes a wide variety of commodities through its advanced cargo and passenger terminals, including cruise, container, automobile, breakbulk, dry and liquid bulk, as well as warehouse facilities, which collectively process billions of dollars' worth of cargo each year.

The Port of Los Angeles is dedicated to managing resources and conducting development and operations in a sustainable and financially responsible manner. The port uses the latest digital technologies to enhance information flow across the supply chain. This vibrant seaport is also recognized for its commitment to innovative environmental initiatives and sustainable resource management and growth.

For more than twenty years, the Port has focused on revitalizing the LA Waterfront, improving public access to the harbor, creating public-friendly amenities and infrastructure, and transforming the shoreline into a world-class visitor destination.



For more information on Port of Los Angeles:
portoflosangeles.org

WELCOME TO THE LA WATERFRONT

Spanning nearly 400 acres along the water's edge, the LA Waterfront has undergone a major transformation over the past two decades through significant investments and improvements by the Port of Los Angeles and local stakeholders. The LA Waterfront spans the communities of Wilmington and San Pedro, with a combined population of over 100,000 residents. Home to dozens of unique attractions and historic landmarks, with more than 100 events and concerts each year, the LA Waterfront offers more opportunities for sightseeing, entertainment, and experiences than ever before.

As a key cruise embarkation port, nearly 250 cruise calls and 1.4 million cruise passengers were welcomed in 2025. The highly anticipated opening of the West Harbor waterside development is scheduled for 2026, bringing premier dining, nightlife, recreation, entertainment venues, an open-air amphitheater, and the largest observation wheel on the West Coast to San Pedro's waterfront.

The LA Waterfront is emerging as a seaside destination for international culture and entertainment, offering a diverse range of dining options, immersive art galleries, and world-class sports venues, including the LA28 Olympic sailing events. With iconic historical landmarks and museums alongside coastline promenades and parks, the LA Waterfront is a revitalized hub for discovery, entertainment, and adventure.



For more information on LA Waterfront:
lawaterfront.org

LOS ANGELES PILOT SERVICE

Berth 68 • San Pedro
(310) 732-3805 dispatcher@portla.org
VHF Radio Channel 73 (156.675 MHz)
Call: KEB260 Los Angeles Pilots

Chief Port Pilots

John Betz
John Dwyer

Boat Captains

Raymond Maese
Lindsay Magnall
Ryan Ruppert
Alex Suarez

Deck Hands

Robin Craigen
Garrick Gilham
John Kostich
Michael Johnson

Port Pilots

Paul Calvin
Jacob Crawford
Richard Crowley
Erik Cutforth
Ciro Ferrigno
William Fitzpatrick
Kyle Hamill
Justin Jabuka
Casey Kaercher
Josh Knight
John Mayer
Joseph Mayer
Aaron Nystrom
Scott Phelps
Brett Ruppert
Jeffery White

Dispatchers

Beth Adamik
Briana Garcia
Jacquelyn Martin
Arthur Tovar
Mayra White
Naveid Zarkeshfard

Senior Management Analyst

Jeremy Karmelich

LOS ANGELES PILOTS ARE AVAILABLE 24 HOURS A DAY.

Pilots board arriving vessels from the pilot boat in the vicinity of Los Angeles Channel RACON Buoy #3. Tank vessels will be boarded at least two nautical miles from the Los Angeles entrance. Deep-draft vessels (more than 55 feet) will be boarded in the vicinity of Los Angeles Channel Buoy #1.

Under normal weather conditions, the pilot ladder should be rigged on the starboard side two meters above water.



Los Angeles Pilot Traffic:
lapilots.org

PILOTS REQUIRE A MINIMUM OF TWO HOURS NOTICE FOR PORT SERVICE.

Masters or agents are requested to advise the Los Angeles Pilot Station when there is a change in the arrival or sailing time.

Founded in 1907, the Los Angeles Pilot Service is a team of 30 dedicated professionals including pilots, dispatchers, boat captains, and deck hands whose mission is to provide safe, reliable and efficient vessel movements for Port of Los Angeles customers. The Service provides around-the-clock pilotage services 365 days per year.

The Los Angeles Pilot Service is the only pilotage group in the nation operated by a City and staffed by City employees. Pilot candidates, recruited by the service, are highly experienced captains from both the offshore shipping and local tugboat sectors of the maritime industry. After a rigorous two-year training program, pilots continue to enhance their skills through both biennial ship simulator training at domestic training facilities, and manned model ship handling training, conducted every four years, in Grenoble, France. Over the past decade, these highly trained professionals have safely completed more than 40,000 vessel movements within Los Angeles Harbor.



TELEPHONE DIRECTORY

EMERGENCY 911

Los Angeles Port Police (310) 732-3500

Los Angeles Fire Department 911

Fire Station 49 (Berths 194-195) (310) 548-7549

Fire Station 110 (Berth 44) (310) 548-7545

Fire Station 111 (Fish Harbor). (310) 548-7541

Fire Station 112 (Berths 85-86). (310) 548-7542

Pilots

Los Angeles Pilot Service. (310) 732-3805

Long Beach Pilots c/o Jacobsen Pilot Service (562) 432-0664

Marine Exchange of So Cal. (310) 519-3134

Port of Los Angeles Administration

Executive Offices (310) 732-3456

Environmental Management (310) 732-3675

Public Relations. (310) 732-3508

Real Estate (310) 732-3860

Security. (310) 732-3223

Wharfinger (310) 732-3810

Pacific Harbor Lines

Badger Avenue Bridge (310) 830-0660

California Department of Fish & Wildlife

South Coast Region 5 (858) 467-4201

South Coast Marine Region 7 (831) 649-2870

U.S. Coast Guard

24-Hour Emergency (800) 221-USCG

Commander Sector L.A./Long Beach (310) 521-3600

Environmental Response (310) 521-3780

Facilities/Container Inspections. (310) 521-3745

Investigations (310) 521-3770

Regional Exam Center (562) 495-1480

Vessel Inspections (Domestic) (310) 521-3725

Vessel Inspections (International) (310) 521-3705

Waterways Management (310) 521-3860

U.S. Department of Homeland Security

Customs and Border Protection-Service Port (562) 366-5454
Customs-Marine Section (562) 366-3200

U.S. Department of Agriculture

Long Beach (562) 628-8900
El Segundo (310) 955-3258

Vessel Services

Jankovich Company (310) 547-3305

FACILITIES FOR VISITING SEAFARERS

Catholic Maritime Ministry

(c/o Mary Star of the Sea Catholic Church)
World Cruise Center
Berth 93A, Level 1
(310) 833-3541

Norwegian and Swedish Seamen's Church

1035 South Beacon Street
San Pedro, CA 90731
(310) 832-6800





A large AP ship is shown from a low angle, moving through choppy water. The ship's hull is white with a large, semi-transparent 'AP' logo. The sky is a mix of orange and blue, suggesting a sunset or sunrise. A red semi-transparent banner is overlaid on the top part of the image, containing the word 'SAFETY' in white capital letters. The water is dark with white foam from the ship's wake.

SAFETY

BOATING SAFETY INFORMATION

The California Department of Boating and Waterways offers a home study boating course. The course, which includes a colorful handbook, can be completed at one's own pace. Upon successful completion of the optional final examination, the student will receive a certificate from the State of California.

California Division of Boating and Waterways
One Capitol Mall, Suite 500
Sacramento CA 95814
(888) 326-2822



California Division of Boating and Waterways:
email: pubinfo@parks.ca.gov
dbw.ca.gov

Those interested in taking boating safety classes in Southern California may contact the U.S. Coast Guard Auxiliary at (310) 521-6172, or U.S. Power Squadron at (888) 367-8777. Most courses have received approval from the National Association of State Boating Law Administrators (NASBLA). Many marine insurance providers will honor a NASBLA approved course to reduce their clients' premiums.

For general safety information, contact the Los Angeles Port Police, (310) 732-3500.

SMALL (RECREATIONAL) VESSEL SAFETY

Recreational vessels should follow the Standards of Care (listed on page 22) to ensure the safe operation of craft while in and around the Port. Recreational vessel operators should be sensitive to the fact that large commercial vessels are severely limited in the ability to stop or alter course, and many times are limited in the ability to see small vessels due to "blind spots" that extend more than 1/2 mile ahead. These large commercial vessels cannot easily avoid a collision with a smaller, more maneuverable recreational vessel.

1. Ensure vessel is safe before getting underway.
2. Ensure vessel is seaworthy.
3. Keep flares and distress calling equipment readily accessible.
4. Be extra careful in fog.
5. Comply with “Rules of the Road, Rule 9”: Small vessels remain clear of large vessels that must navigate within a narrow channel.
6. Avoid passing larger vessels close aboard.
7. Pass tugs with caution.
8. Know the locations of traffic lanes and the regulated navigational area.
9. Know how and when to monitor VHF Channels 16, 14, and 13.
10. Know vessel’s position.
11. Be an informed mariner: Know the “Rules of the Road,” read Coast Guard Notices to Mariners, monitor the weather and listen to Channel 16 for Coast Guard information broadcasts.

DIVING SAFETY

Swimming or diving for recreational purposes is prohibited in the Port of Los Angeles. Any diving for commercial, environmental, or scientific purposes within the Port jurisdiction requires a diving permit. All requirements are outlined in the dive permit application. To apply, divers will need to provide identification, a photo and their applicable diving certification. Fees apply for first-time applicants and for renewals. Permits are non-transferable and must be renewed annually. You can find the diving permit application at portoflosangeles.org/business/permits.

Mariners are required to report diving incidents to Coast Guard Sector Los Angeles-Long Beach via VHF channel 16 or by calling (310) 521-3815.

MARINERS GUIDE FOR EMERGENCY CALLS FOR SERVICE

Be prepared to provide the following information

Your Name/Name of Vessel

Phone number or VHF channel

Location of Incident i.e GPS/Berth/Terminal/Waterway

What is the emergency?

Be prepared to answer the following questions

1. Persons involved or Person on Board
(clothing, physical features)
2. Vessel Description
(type of vessel, length, color, unique features)
3. What happened or is occurring?

Types of activity Los Angeles Port Police respond to, but are not limited to, include suspicious activity, drone/plane activity, security breaches or attempts, USCG safety/security/protection zone violations, crimes on land and water, navigation rule violation, vessels in distress, rescues, fires and emergencies.

See Something, Say Something

Los Angeles Port Police

VHF 16 or (310) 732-3500

HORIZONTAL AND VERTICAL CLEARANCES

Vertical clearances are given above Mean High Water (+4.7 feet)

Vincent Thomas Bridge

Horizontal usable width (of channel): 1150 feet

Vertical clearance: 165 feet

Middle 500 feet width: Vertical clearance 185 feet

Cerritos Channel Drawbridge Consolidated Requirements

The U.S. Coast Guard has consolidated the requirements for drawbridge operations, including Cerritos Channel, as contained in Code 33 of Federal Regulations, Part 117.

Radio telephones are installed to enable the drawtender at the Henry Ford Avenue Railroad Bridge to communicate with vessels on radio telephone frequency 156.65 MHz (Channel 13), or such other frequency as may be assigned by the Federal Communications Commission.

Henry Ford (Badger Avenue) Railroad Bridge

(310) 830-0660 VHF Channels 13 and 16 Call Sign: WXJ-947

Horizontal clearance: 180 feet

Vertical clearance: 6.7 feet (bridge down); 165 feet (bridge up)

Draw to remain in the open-to-navigation position except when a train is crossing or maintenance work is being performed.

Whistle Signals

Opening signal:	2 short, 1 long	- - —
Acknowledging Signal:	2 long, 1 short	— — - - -
Bridge cannot open:	5 short	- - - - -

Notice: The Henry Ford (Badger Avenue) Bridge will be temporarily closed to marine vessel traffic in 2026 for maintenance.

For updates and specific closure dates, visit portoflosangeles.org/news in the spring of 2026.

Long Beach International Gateway Bridge

Horizontal usable width (of channel): 220 feet

Vertical clearance: 205 feet

Southern California Edison Co. Overhead Power Cables

Vertical clearance: 155 feet

Commodore Schuyler F. Heim Highway Bridge

Horizontal usable width (of channel): 75 feet

Vertical clearance: 45 feet @ MHHW

UNDERKEEL CLEARANCE

Underkeel clearance (UKC) is the minimum clearance available between the deepest point on the vessel and the bottom in still water.

$$\text{UKC} = (\text{Charted Depth of Water} + \text{Height of Tide}) - (\text{Static Deep Draft})$$

Masters and pilots should use their vessel's deepest draft in still water when calculating UKC. Masters and pilots should apply a plus or minus allowance for the tide when calculating depth of water, and consider the following factors:

1. Vessel's trim and list characteristics
2. Depth of the transit area
3. Depth at the facility or anchorage
4. Tide and current conditions
5. Weather impact on water depth

The master should discuss the vessel's anticipated UKC with the pilot. Within the ports of Los Angeles and Long Beach, actual tide heights do not normally vary significantly from predicted tide heights.



NOAA Tides & Currents:
Meteorological information for Los Angeles/Long
Beach PORTS®
tidesandcurrents.noaa.gov/ports/

Minimum Underkeel Clearance Guidelines for All Vessels

These guidelines for minimum UKC apply during normal weather for the ports of Los Angeles and Long Beach (POLA/POLB). Severe weather or other abnormal conditions may demand case-by-case evaluation. Masters and pilots shall use prudent seamanship at all times when piloting vessels in the POLA/POLB harbors and approaches.

Port of Los Angeles

Between the Los Angeles Approach Channel Lighted Buoy #1 and the Los Angeles Main Channel Buoy #11, minimum underkeel

clearance before correction for roll and pitch is 10% of the vessel's draft.

In the channel between the Los Angeles Main Channel Buoy #11 and a position off the designated berth, minimum underkeel clearance is:

- 2.0' (.61m)
- In the final approach to the berth, and while at berth, the vessel must always remain afloat.

At anchorages inside the breakwater, minimum underkeel clearance is 2.5' (.76m).

For shifts via outer harbor between Los Angeles and Long Beach, minimum underkeel clearance is 3' (.91m).

Port of Long Beach

Between the Long Beach Seabuoy and the Long Beach Channel Buoy #3, minimum underkeel clearance before correction for roll and pitch is 10% of the vessel's draft.

In the channel between the Long Beach Channel Buoy #3 and a position off the designated berth, minimum underkeel clearance is:

- 2.0' (.61m)
- In the final approach to the berth, and while at berth, the vessel must always remain afloat.

At anchorages inside the breakwater, minimum underkeel clearance is:

- 4' (1.22m) for anchorages B-7 and B-11 when vessels draft is 50' (15.24m) or more
- 2.5' (0.76m) for all other anchorages

For shifts via outer harbor between Long Beach and Los Angeles, minimum underkeel clearance is 3' (.91m).

Tank Vessels

The above guidelines are intended to include safety margins for sinkage due to squat and for an increase in draft due to pitch and roll during the weather and sea state conditions normally encountered in the Los Angeles and Long Beach harbors and approaches.

The pilot organization management, the vessel's master/operator,

Port of Los Angeles

and the USCG Captain of the Port (COTP) should concur with any deviation below the above guidelines. Terminal or vessel operators may require minimum underkeel clearances that are more restrictive than the above guidelines. Vessel masters should be aware of this and should consider terminal policy, fleet operating requirements, and the guidelines contained in the Los Angeles/Long Beach Harbor Safety Plan when deciding upon their minimum allowable underkeel clearances. Tank vessel masters and operators should also be guided by the underkeel clearance regulations for tank vessels contained in 33 CFR 157.455. C.

The pilot organization management, the vessel's master/operator, and the USCG Captain of the Port (COTP) should concur with any deviation below the above guidelines.

Terminal or vessel operators may require minimum underkeel clearances that are more restrictive than the above guidelines. Vessel masters should be aware of this and should consider terminal policy, fleet operating requirements, and the guidelines contained in the Los Angeles Long Beach Harbor Safety Plan when deciding upon their minimum allowable underkeel clearances.

Evaluating Underkeel Clearance

While the above guidelines should ensure adequate UKC under normally encountered circumstances of weather, sea state and vessel configuration, the LA/LB Harbor Safety Committee recommends that all vessel masters should estimate the anticipated UKC that they expect their vessel will encounter during the various phases of the transit, particularly during severe weather or other abnormal conditions. In complying with the above guidelines, the master should consider sea state conditions that might cause an increase in draft due to pitch and roll and plan/adjust transit speeds with regard to vessel squat characteristics. Studies indicate that swell crests and troughs affect vessel immersion (heave) when a vessel is rising and falling with swells off the beam. However, the studies also indicate that vessels will normally experience significant and measurable roll before increased draft due to heave becomes a problem. Therefore, the sound practice of measuring roll and calculating the corresponding increase to vessel draft before entering port helps the master evaluate safe underkeel clearance.

CONTROLLED NAVIGATION AREAS

Controlled Navigation Areas (CNAs) have been added to Tariff No. 4, restricting entry into certain areas of the Port by recreational boats without a Port Police-issued permit. Creation of the CNAs will help to ensure navigational safety for large commercial vessels by reducing non-essential boating traffic, while also increasing waterside security by limiting access to commercial or permitted vessels. The Main Channel and other primary waterways will remain open to recreational boaters, but those areas best kept for commercial-only vessels will be restricted. (See map on pages 44-45.)

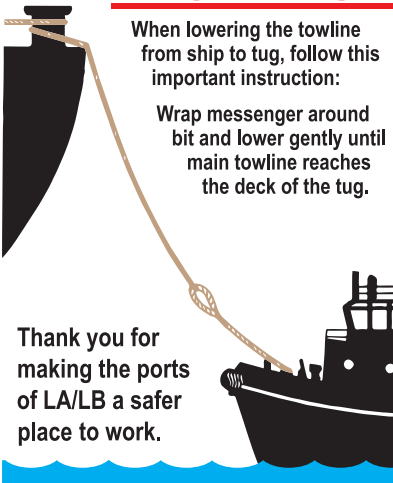
Controlled Navigation Areas, part of the Port of Los Angeles Responsible Marina Program, are identified with posted signs and enforced by the Los Angeles Port Police. Recreational vessel owners/operators may request to enter a CNA by contacting the Port Police at (310) 732-3500.

BEWARE- BE CAREFUL.

**When lowering the towline
from ship to tug, follow this
important instruction:**

**Wrap messenger around
bit and lower gently until
main towline reaches
the deck of the tug.**

**Thank you for
making the ports
of LA/LB a safer
place to work.**



DEPTH OF WATER ALONGSIDE BERTHS

(In Feet) Mean Lower Low Water = 0.0 Feet

Berth	Depth	Berth	Depth	Berth	Depth
45/47	47.2	163	37.0	235/236	39.6
49/50	48.6	164	37.5	238	33.6
51/52	36.1	165	34.8/37.1	239	34.0
53	35.2	168	40.0	240B	34.3
54	36.0	169	40.0	240C	26.4
55	34.5	171/172	28.4	240Z	26.1
68	19.5	173	30.2	301	44.7
70/71	32.4	174/176	45.3	302	49.2
72	14.5	177/179	32.2	303	47.4
73A	18.0	180/181	32.9	304	46.0
74	24.5	187	36.0	305	47.2
87/89	38.4	189	44.1	306	52.2
90/92	37.0	191	30.4	401	51.5
93 A-E	34.4	195/197	31.5	402	50.8
100	48.4	198	32.2	403	50.1
102	49.8	199	32.3	404	55.3
118	35.8	200 A-B	30.7	405	51.6
120	31.4	200 C-D	4.2	406	55.4
121/124	43.8	207	42.9	Fish Harbor	15.7
126/127	39.8	209	39.9	POLB 76	31.5
127/129	40.8	210	35.6	POLB 77	40.0
130/131	39.8	212	44.3	POLB 78	40.8
136/137	45.0	214	52.3		
138/139	44.8	216/217	44.9		
142	27.1	218/219	45.7	Channel	Depth
143	33.2	220	40.8	Main Channel	53.0
144	52.0	221	32.9	East Basin Ch.	52.0
146/147	52.4	222/223	27.5		
149	33.4/36.2	224/225	29.8		
150	31.2/32.7	226/227	52.8		
153	34.1	230	45.9		
154	34.0	231	47.5		
155	34.0	232/234	39.5		

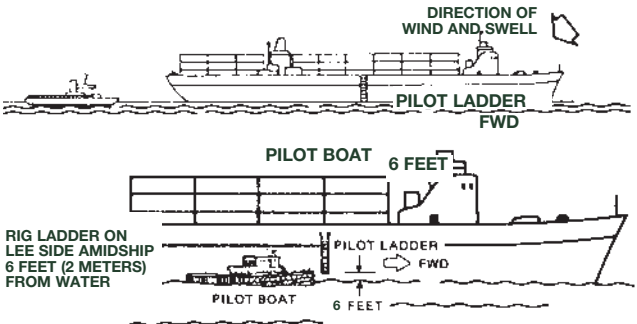
The information provided here is based upon sources deemed to be reliable and is believed to be correct as of September 2025, but the accuracy is not guaranteed.

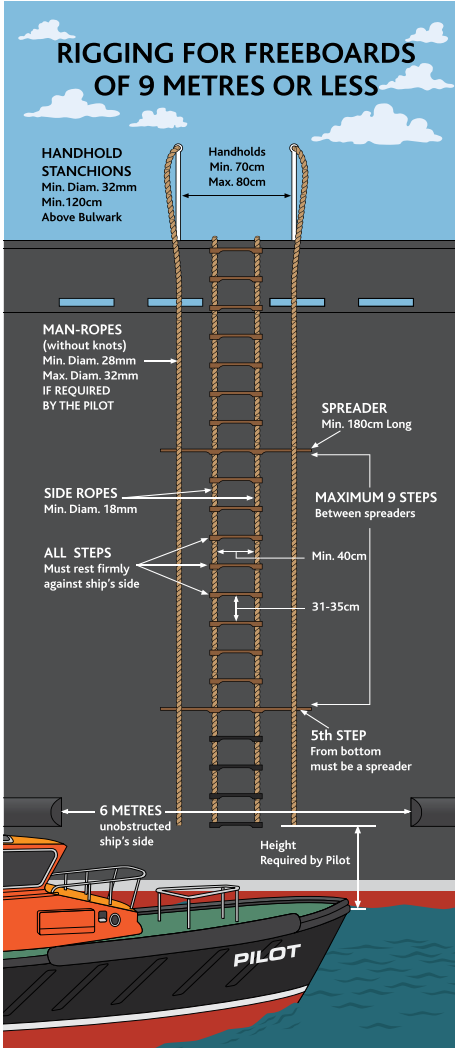
Whenever a vessel is scheduled which would approach the depth of a particular berth, the Pilot Station management should be contacted so that an individual judgment can be made.

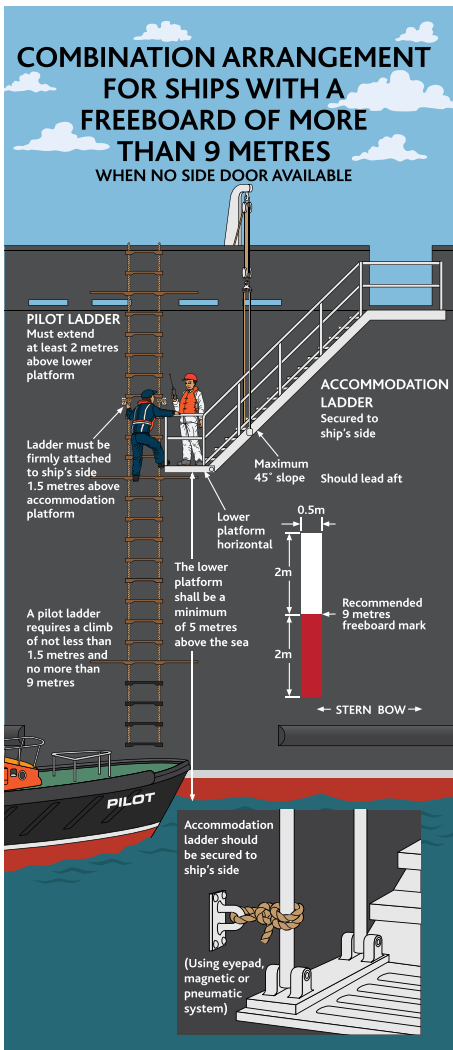
PILOT LADDER REQUIREMENTS

Pilot Ladder Requirements for Los Angeles Pilots in Addition to SOLAS Regulation 17, Chapter 5.

- a) Please contact Los Angeles Pilots KEB260 by VHF Radio Channel 73 a minimum of two hours prior to arrival to confirm estimated time of arrival and for information regarding desired lee.
- b) Rigging of the pilot ladder, as well as the embarking or disembarking of the pilot, should be under supervision of a responsible officer.
- c) The ladder should be made in one length and fitted with spreaders approximately 10 feet apart to comply with SOLAS, Chapter V, Regulation 23.
- d) The area of the deck where the pilot boards should be clear of obstacles to ensure a safe passage for the pilot.
- e) Trailing lines or retrieving lines should not be attached to the lower end of the ladder.
- f) Ladders should be rigged well clear of discharge and water outlets and at a place near midship clear of the finer lines of the vessel. At no time should the ladder be rigged near the stern of the ship.
- g) The ladder should be in good condition and rigged so that the steps remain horizontal when used.
- h) Accommodation ladders must not be used for pilot boarding or disembarking.







NOTE: – The pilot ladder is required to be rigged two (2) meters above the water.

INCLEMENT WEATHER STANDARDS OF CARE FOR VESSEL MOVEMENTS

Inclement weather requires heightened awareness and vigilance. This section is intended to provide clear guidance to mariners as to what is expected of them when navigating in inclement weather in the area covered by the LA-LB Harbor Safety Plan (HSP). Nothing in this section shall be construed to require the master of a vessel to commence a transit during inclement weather, nor does this section replace compliance with the Convention on the International Regulations for Preventing Collisions at Sea, 1972 (72 COLREGS). It is recognized, however, under certain circumstances, vessels may safely transit during inclement weather provided that equivalent safety levels are applied.

This section defines inclement weather (both reduced visibility and high winds), provides guidance for determining whether or not to commence a vessel transit, and outlines minimum equivalent safety levels to be applied when transiting during inclement weather.

Standards of Care for Vessel Movements During Reduced Visibility

Reduced visibility requires that all mariners apply extra vigilant attention. This section is intended to provide clear guidance to mariners as to what is expected of them when navigating in reduced visibility in the area covered by the HSP. Nothing in this section shall be construed to require the Master of a vessel to commence a transit in reduced visibility, nor does this section replace compliance with 72 COLREGS. It is recognized, however, that under certain circumstances, vessels may safely transit in reduced visibility provided that equivalent safety levels are employed. This section defines reduced visibility, provides guidance for use in determining whether or not to commence a vessel transit and outlines minimum equivalent levels of safety to be used when transiting in reduced visibility.

Background

It is important to understand the dynamics of the ports of Los Angeles and Long Beach, and their vessel traffic systems in order to anticipate what is expected from all levels of port users. Under a memorandum of agreement, vessel traffic management in the LA-LB area is divided into three zones, each handled by a separate vessel traffic center (VTC). The jointly operated Marine Exchange of Southern California/U.S. Coast Guard Vessel Traffic Service functions as the VTC for traffic outside the federal breakwater, and out to 25 nautical miles from Point Fermin. Each respective pilot station (LA and LB) function as the VTC for traffic inside the breakwater.

Definition of Inclement Weather

High Winds

Whenever the National Weather Service issues a “small craft advisory” for sustained winds of 21 to 33 knots potentially in combination with wave heights exceeding 10 feet (or wave steepness values exceeding local thresholds).

Restricted Visibility

Whenever conditions of visibility fall below the following:

- Tankers 150,000 DWT or greater: 1 nautical mile
- Tankers greater than 60,000 DWT, but less than 150,000 DWT: .75 nautical mile
- All other vessels 45’ draft or more: .75 nautical mile
- All other tankers and petroleum barges: 0.5 nautical mile
- All other vessels: 3 times vessel’s LOA

Guidelines for Commencing a Transit During Inclement Weather

Vessel characteristics, navigational equipment and the availability of shoreside support must be considered when a movement is undertaken during inclement weather. Conditions of visibility and wind can vary considerably throughout the port complex at any given time and may impact the decision to proceed. While specific movement parameters are difficult, if not impossible, to define, it is recommended that mariners carefully consider commencing vessel movements inside the federal breakwater when conditions reach the defined thresholds listed above.

Piloted Vessel Guidelines

When inclement weather exists along a vessel’s intended route: The respective pilot station management will be notified, and prior to commencing a transit, the operating pilot will conduct a risk analysis that includes consultation with a second pilot. This expanded participation is a key risk reduction measure.

Reduced Visibility

When visibility inside the federal breakwater is less than 0.5 mile, the respective vessel traffic center (VTC) will impose one-way traffic restrictions when and where appropriate.

When commencing a vessel movement in reduced visibility, as defined above, shoreside radar assistance and carry-on enhanced navigational tools, such as a Portable Pilot Unit (PPU) shall be readily available for use.

When reduced visibility is encountered after commencing a transit, the operating pilot should take appropriate precautions to minimize

Port of Los Angeles

the risk of collision. Precautions may include but are not limited to: continuing the transit, anchoring, reducing speed, enlisting shore-based radar support, and securing additional tug assistance.

High Winds

Vessel movements will proceed on a case by case basis. Depending on direction and force of wind, type and characteristics of the vessel, movements requiring more than 50 tons of force to hold the vessel against a wind on the beam shall be carefully considered.

Below are examples of wind velocities acting on corresponding sail areas that would require 50 tons of counter force exerted by tugs and/or thrusters [formula: $(\text{total area}/1000) \times (V^2/18) = \text{wind effect in tons}$ where "V" is the wind speed in meters/second]:

1000 square meters – 60 knots
5000 square meters – 28 knots
10,000 square meters – 18 knots

Non-Piloted Vessel Guidelines

It is recommended all vessels develop and follow their own internal operating guidelines for inclement weather transits, including a provision for second opinion consultation.

Application of Equivalent Safety Levels

When a vessel master intends to commence a transit during inclement weather, at minimum, the following equivalent safety levels should be adhered to:

Vessels 1600 Gross Tons (GT) or greater:

When operating inside the federal breakwater, be under the control of a USCG-licensed pilot with the appropriate endorsement for the vessel and area of operation, and have shore-based radar immediately available to assist the vessel.

All vessel masters and pilots (if employed) should make a positive evaluation of the following:

- Number of vessels transiting within the harbor and expected traffic concentrations
- Planned transit speeds appropriate for prevailing conditions
- Maneuvering characteristics of the vessel
- Quality of the vessel's radar and navigation systems
- Vessel's size and draft in relation to the area to be transited
- Number, type, and power of assist tugs
- Number and power of bow/stern thrusters available

- Maneuvering room at various stages of the transit
- Quality of the vessel's bridge team
- Special circumstances to be encountered (e.g. dredging projects, obstructions)
- Wind direction in relation to planned maneuvers

“Captain of the Port” (COTP) Notification of Intention to Move in Inclement Weather Without Applying Equivalent Safety Levels

Vessels 1600 GT or greater that intend to commence a vessel transit during inclement weather without complying with the “Application of Equivalent Safety Levels” section above (including shore based radar support) shall make the following broadcast to the VTC on VHF Channel 14 at least 15 minutes prior to getting underway:

“Vessel name/call sign, making our inclement weather Captain of the Port notification, as per guidance within the Harbor Safety Plan, that we intend to transit from vessel location to intended destination.”

In addition, a safety broadcast will be made on Channel 13 and the vessel will coordinate its movement with the appropriate vessel traffic center.

Summary of Other Existing Measures

The following are non-encompassing examples of regulations or internal standards of care already followed by entities within the port during inclement weather:

- Federal Anchorage Regulations under 33 CFR 110.210, require all vessels greater than 1600 GT to have a licensed deck officer on watch at all times and to maintain a continuous radio listening watch. When wind conditions exceed 35 knots forecast or observed, these vessels shall ensure their propulsion plant is placed in immediate standby and a second anchor is made ready to let go. Vessels unable to comply are required to notify the COTP and may be required to have stand-by tugs.
- When winds exceed 35 knots, VTC will maintain a heightened awareness for dragging anchors in federal anchorages.
- VTS LA-LB will make an hourly broadcast on VHF Ch. 14, advising vessels when Restricted Visibility has been reported in the VTS AOR (<1nm) and recommend vessels maintain at least 1/2nm separation.

Port of Los Angeles

The following organizations have their own internal guidelines for inclement weather:

Pilots: Pilot Operations Manuals prescribe a variety of criteria specific to vessel size and berth/port area.

Ferry operators: High Speed Craft Operations Manuals contain guidance on wave heights.

Small passenger vessels: Some of these vessels have internal guidelines to curtail operations in heavy winds.

Facilities regulated under 33 CFR Part 154 have wind criteria in their individual operations manuals for ceasing cargo operations and disconnecting cargo transfer equipment. In addition, the State of California has specific Marine Oil Terminal Engineering and Maintenance Standards (MOTEMS) that include inclement weather guidelines.

NATIONAL WEATHER SERVICE

VHF Radio

Frequency 162.55 MHz; Station KW037 – Continuous, taped broadcast of public and marine forecasts and observations. Updated hourly.

Channel W1-Channel W10 – Reserved for weather transmissions. Channels W1-W4 are receive-only channels with weather broadcasts from NOAA.

National Oceanic and Atmospheric Administration (NOAA)

National Weather Service Los Angeles/Oxnard
Local forecast (recorded): (805) 988-6610



NOAA Tides & Currents:

Meteorological information for Los Angeles/
Long Beach PORTS®

tidesandcurrents.noaa.gov/ports/

National Weather Service Los Angeles/Oxnard:

weather.gov/lox

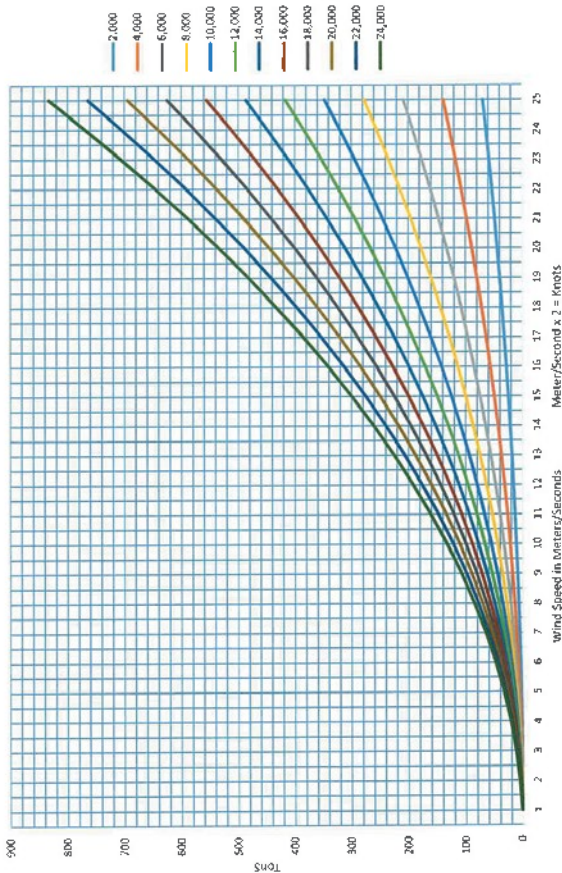
United States Voluntary Observing

Ship Program: *vos.noaa.gov*

WIND FORCE CHART

“Force necessary to counter lateral wind pressure”

Wind Force in Tons



Sail Area in Square Meters

Wind Speed in m/s	2,000	4,000	6,000	8,000	10,000	12,000	14,000	16,000	18,000	20,000	22,000	24,000
1	0	0	0	0	1	1	1	1	1	1	1	1
2	0	1	1	2	2	3	3	4	4	4	4	5
3	1	2	3	4	5	6	7	8	9	10	11	12
4	2	4	5	7	9	11	12	14	16	18	20	21
5	3	6	8	11	14	17	19	22	25	28	31	33
6	4	8	12	16	20	24	28	32	36	40	44	48
7	5	11	16	22	27	33	38	44	49	54	60	65
8	7	14	21	28	36	43	50	57	64	71	78	85
9	9	18	27	36	45	54	63	72	81	90	99	108
10	11	22	33	44	56	67	78	89	100	111	122	133
11	13	27	40	54	67	81	94	108	121	134	148	161
12	16	32	48	64	80	96	112	128	144	160	176	192
13	19	38	56	75	94	113	131	150	169	188	207	225
14	22	44	65	87	109	131	152	174	196	218	240	261
15	25	50	75	100	125	150	175	200	225	250	275	300
16	28	57	85	114	142	171	199	228	256	284	313	341
17	32	64	96	128	161	193	225	257	289	321	353	385
18	36	72	108	144	180	216	252	288	324	360	396	432
19	40	80	120	160	201	241	281	321	361	401	441	481
20	44	89	133	178	222	267	311	356	400	444	489	533
21	49	98	147	196	245	294	343	392	441	490	539	588
22	54	108	161	215	269	323	376	430	484	538	592	645
23	59	118	176	235	294	353	411	470	529	588	647	705
24	64	128	192	256	320	384	448	512	576	640	704	768
25	69	139	208	278	347	417	486	556	625	694	764	833

TUG ESCORT/ASSIST INFORMATION



TUG ESCORT/ASSISTANCE

“Tug Escort” refers to stationing tugs in proximity to a vessel during port transits to provide immediate assistance should a steering or propulsion failure occur. “Tug Assist” refers to positioning tugs alongside a vessel and applying force to assist making turns, reducing speed, providing propulsion and docking.

TUG ESCORT/ASSISTANCE FOR TANK VESSELS

Tug Escort Applicability

State regulations require escort tug(s) to meet inbound, laden tank vessels (carrying 5,000 or more metric tons of oil in bulk as cargo) at the seaward limit of the applicable Tank Vessel Escort Zone. Also, all tank vessels shifting within the harbor(s) – including dock to anchor, anchor to anchor and dock to dock – must comply with the escort requirements. Assist tugs, in addition to the prescribed escort tugs, may be required during port transits. Outbound laden tank vessels are not required to use escort tugs once they have safely cleared the breakwater. Arrangements should be made via the vessel agent, tug company, or appropriate pilot service to ensure compliance with these regulations.

Three Tank Vessel Escort Zones are established as follows:

Zone 1: Upon all waters within 2.0 nautical miles to seaward of the Federal Breakwater, escort tugs required for all laden tank vessels.

Zone 2: Upon all waters in the approaches to the Port of Long Beach within 3.5 nautical miles to seaward of the Federal Breakwater, escort tugs required for all laden tank vessels with static deep draft greater than 16.5 meters.

Zone 3: Upon all waters in the approaches to the Port of Los Angeles within 4.0 nautical miles to seaward of the Federal Breakwater, escort tugs required for all laden tank vessels with static deep draft greater than 14.0 meters.

Except for tank barge/primary towing units that have total displacements of 20,000 metric tons or less, escort tugs must be tethered.

Inbound, laden Oil and Chemical Tank Vessels shall not proceed closer than the seaward limit of the applicable Tank Vessel Escort Zone, as described in 851.22(c), unless the prescribed escort tug(s) are in position at the seaward limit of the applicable Tank Vessel Escort Zone. Masters shall also ensure that anchors are ready for letting go prior to entering the applicable Tank Vessel Escort Zone.

Prior to commencing an escorted transit, the tank vessel master/pilot shall hold a “pre-escort conference” that should at a minimum include:

- Contacting the escort tug operator to confirm the number and position of escort tug(s)
- Establishing the radio frequency to be used
- Establishing the destination of the tank vessel
- Discussing any other pertinent information the master/pilot and escort tug operator deem necessary



TANKER FORCE SELECTION MATRIX

Tanker Displacement	Forces for Tug(s)* Tethered at the Stern**
Metric Tons	Short Tons
0 to < 60,000	10
60,000 to < 100,000	20
100,000 to < 140,000	30
140,000 to < 180,000	40
180,000 to < 220,000	50
220,000 to < 260,000	62
260,000 to < 300,000	75
300,000 to < 340,000	87
340,000 to < 380,000	105
380,000 to < 420,000	128

*Note 1: Ahead forces for tugs using stern lines, e.g., Voith-Schneider Propeller (VSP) tugs. Astern forces for tugs using headlines, e.g., Azimuth Stern Drive (ASD) tugs.

**Note 2: The “Forces For Tugs” described in the Tanker Force Selection Matrix were evaluated in a water depth equal to 1.2 times the tanker’s deep draft for tankers with a displacement of less than 260,000 metric tons, and in a water depth equal to 1.1 times the tanker’s deep draft for tankers with a displacement equal to or greater than 260,000 metric tons.

All the escort tugs required to satisfy the Tanker Force Selection Matrix shall be tethered on the tanker’s stern.

The force requirements contained in this subchapter reflect favorable circumstances and conditions. The tanker master/pilot shall arrange for additional escort tug(s) should adverse weather conditions, unusual port congestion, contemplated movement of the vessel, or as other conditions or circumstances occur.

TUGS EMPLOYED IN LOS ANGELES/LONG BEACH

Company Name Tug Name	Total HP (ADV)	Bollard Pull Ahead (Short Tons)	Bollard Pull Astern (Short Tons)
AMNAV Maritime Corporation			
Independence	5080	67.90	65.40
Michelle Sloan	5150	67.08	65.40
Sarah Averick	6866	96.73	93.37
Patricia Ann	4732		62.20
Bay Delta Maritime Corporation			
Delta Teresa	7032	90.31	88.68
Delta Audrey	6670	89.20	88.40
Delta Billie	NR	93.70	93.70
Centerline Logistics Corp			
Millennium Dawn	4400	60.60	56.30
Millennium Falcon	4200	54.50	49.70
Crowley Maritime Corporation			
Admiral	4730	54.40	44.72
Hercules	6008	88.19	84.77
Leader	4730	58.90	45.44
Master	4730	52.30	43.80
Foss Maritime Company			
Edith Foss	1800	24.80	13.80
Jamie Ann	6866	92.46	90.68
Lela Franco	5150	66.20	63.30
Lilian Foss	5350	71.00	63.00
Starlight Marine Services Inc.			
Barbara Jean Mullholland	6850	91.00	89.00
Jamie Renea	6850	89.80	91.60
John Quigg	4022	52.30	48.30
Millennium Maverick	4200	51.70	49.80
Tim Quigg	3600	52.60	50.00

TUGS, WATER TAXIS, AND SALVAGE

American Marine Corp (310) 832-3321
Berths 270-271, 1500 S. Barracuda Street, Terminal Island

AmNav Marine Services (310) 901-3383
201 Burma Road, Oakland, CA

Baydelta Maritime (415) 693-5800
Pier 17, #300, San Francisco, CA 94111

Centerline Logistics Corp. (310) 831-9200
1610 Barracuda Street, San Pedro

Crowley Maritime Corporation (206) 332-8202
Berth 86, 300 S. Harbor Blvd., San Pedro

Curtin Maritime Corp. (562) 983-7257
725 Pier T Avenue, Long Beach

Foss Maritime Company (562) 435-0171
Berth 35, Pier D Avenue, Long Beach

Harbor Fleet Services (310) 988-1870
(Dispatch for AMNAV and Foss Tugboats).
235 East Broadway, Suite 1080 Long Beach, CA

Pacific Tugboat Service, Inc. (562) 590-8188
Berth C-58, 1512 W. Pier C Street, Long Beach

Sause Bros. Ocean Towing (562) 901-0365
1607 W. Pier D Street, Long Beach

SoCal Ship Services (310) 519-8411
Berth 240X, 971 S. Seaside Avenue, Terminal Island

SubSea Global Solutions (562) 436-2701
1725 W. Pier D. Street, Long Beach

U.S. Water Taxi (310) 519-8230
Berth 50, San Pedro



VESSEL OPERATING PROCEDURES



RADIO COMMUNICATIONS

Operational communications in the Los Angeles-Long Beach harbor area are conducted by marine VHF radio and commercial telephone from five principal nodes: VTS, Los Angeles Port Pilot Service, Long Beach Pilots, Port of Long Beach Security, and U.S. Coast Guard Los Angeles-Long Beach. All users are encouraged to minimize voice traffic on all channels, maintain circuit discipline and broadcast on “low power” whenever possible.

FIRE ALARM SIGNAL

All Vessels Except Those Underway

Five prolonged blasts on whistle or siren. Repeat at intervals to attract attention.

In a non-emergency, call the Los Angeles Fire Department Dispatch Center at (213) 485-6185

IN AN EMERGENCY, CALL 911

PRINCIPAL OPERATING CHANNELS

Los Angeles/Long Beach Area VHF Radio

Station	Channel	Frequency
Bridge-to-Bridge	13	156.650 MHz
Distress Safety and Calling	16	156.800 MHz
Harbor Tugs	77 (Primary LA) 5A (Primary LB) 65A (Secondary)	156.875 MHz 156.250 MHz 156.275 MHz
Intership Safety	6	156.300 MHz
Los Angeles Port Pilots	73 63A	156.675 MHz 156.175 MHz
Los Angeles Port Police	16	156.800 MHz
Long Beach Port Pilots	74 12 65A (Secondary)	156.725 MHz 156.600 MHz 156.275 MHz
Noncommercial Calling	9	156.450 MHz
Vessel Traffic Information Service	14	156.700 MHz
U.S. Coast Guard	16 (Primary) 12 (Secondary)	156.800 MHz 156.600 MHz
U.S. Navy	12 (Primary)	156.600 MHz

VESSEL OPERATING PROCEDURES

The LA/LB Harbor Safety Plan (HSP) contains operating procedures for vessels. An electronic copy of the HSP can be seen on the Marine Exchange website at mxsocal.org. All of the procedures are considered Good Marine Practice, but some are regulations (local, state, and/or federal) while others are non-regulatory “Standards of Care.” These Vessel Operating Procedures have been extracted from the main text of the HSP in order to create a helpful “Quick Reference Guide” containing the most important information necessary for safe, reliable and environmentally sound vessel movements in and around the port area. These Vessel Operating Procedures list only the basics. Additional and more detailed information can be found in HSP chapters addressing each topic. Port tariffs also contain requirements for vessels operating in and around the port. Familiarization and compliance with the Harbor Safety Plan and the port tariff(s) are a must! Nothing in these procedures precludes a master and/or pilot from taking necessary and prudent actions to avoid or mitigate unsafe conditions.

Pilot Requirements

Local port tariffs require vessels of greater than 300 GT to use a federally-licensed pilot whenever navigating inside the Federal Breakwater. In most circumstances, vessels employ the services of a federally-licensed local pilot from the Los Angeles Pilot Service (for the Port of Los Angeles) or Jacobsen Pilot Service (for the Port of Long Beach). In instances where a local pilot is not used, Masters must have a local federal pilot license and receive approval from the U.S. Coast Guard Captain of the Port (COTP) prior to entering or departing port. Outbound vessels are required 15 minutes prior to getting underway and inbound vessels are required 15 minutes prior to entering the Federal Breakwater to establish communications and coordinate movements with the appropriate local pilot organization and Vessel Traffic Service (VTS).

Equipment Failures

Vessels are required by law to report navigational equipment, propulsion, steering, or other vital system failures as soon as possible to the U.S. Coast Guard via the COTP office or COTP representative

Port of Los Angeles

at VTS on Channel 14. The COTP will require appropriate “equivalent levels of safety” provided by:

- Directing vessels to outside anchorage pending verification of repairs
- Proceeding into port at safest slow speed with suitable tug escort/assist
- Second licensed navigation officer on the bridge for radar plotting, etc.
- Sea trials performed to the satisfaction of the Master, pilot and COTP



Vessel Traffic Service (VTS):

mxsocal.org

VESSEL TRAFFIC MANAGEMENT

Vessel traffic in the ports of and approaches to Los Angeles and Long Beach is managed by three entities:

1. Vessel Traffic Service for the port approaches (25 nautical miles from Point Fermin to the Federal Breakwater).
2. Los Angeles Pilot Service for the Port of Los Angeles.
3. Jacobsen Pilot Service for the Port of Long Beach.

Vessel Traffic Service (VTS)

A VTS is in operation on the approaches to Los Angeles and Long Beach harbors. Operated jointly by the U.S. Coast Guard and the Marine Exchange, the VTS provides information about commercial, other vessel traffic and navigation safety. Covered vessels are required to participate in the VTS.

“Covered Mandatory Full Participant” Vessels:

- Every power-driven vessel of 40 meters (131 feet) or more in length, while navigating.
- Commercial vessels 8 meters (26 feet) or more in length that are towing alongside, astern or by pushing ahead.
- Every vessel certificated to carry 50 or more passengers for hire, while engaged in trade, under sail or power.

“Mandatory Passive Participants” Vessels:

Every power-driven vessel 20 meters (65 feet) or more in length, every vessel 100 gross tons or more carrying one or more passengers for hire and every dredge or floating plant are required to monitor Channel 14 VHF/FM when operating in the VTS area.

Arriving Vessels Upon Entering the 25-Mile Outer Limit

The outer limit of the VTS AOR is defined by a 25-nm arc from Point Fermin (LAT 33 42.3’N, 118 17.6’W).

Call “San Pedro Traffic” on VHF/FM Channel 14 and provide the following information:

1. Vessel name/call sign
2. Position, course and speed
3. Vessel destination
4. State whether or not taking a pilot
5. Estimated time of arrival to the breakwater/anchorage
6. Tank vessels report their displacement

Contact Los Angeles Pilots on Channel 73 or Long Beach Pilots on Channel 12 to arrange pilot service. Limit speed to 12 knots or less upon entry to the Precautionary Area.

Upon Entering the Precautionary Area

Call “San Pedro Traffic” and provide the following information:

1. Confirm vessel speed is 12 knots or less.
2. Confirm master is on the bridge.
3. Confirm vessel is in hand steering.
4. Confirm main propulsion has been successfully tested ahead and astern.
5. Maintain a minimum vessel separation of 1/4 nm.

Code of Federal Regulations, CFR 33, Part 165, Subsection 165.1109, identifies portions of the Precautionary Area as a Regulated Navigation Area. A minimum vessel separation of 1/4 nm is required in the Precautionary Area.

Port of Los Angeles

Departing Vessels from Inside the Breakwater

15 minutes prior to getting underway, contact Los Angeles Pilots on Channel 73 or Long Beach Pilots on Channel 12 (depending on which harbor the vessel is in) to check into the traffic system. Provide vessel name, type, departure point, destination and intended route.

15 minutes prior to the breakwater entrance, call “San Pedro Traffic” on VHF/FM Channel 14. Breakwater entrances include Los Angeles Gate (LA), Long Beach Gate (LB) and Anaheim Bay (Naval Weapons Support Facility, Seal Beach).

Provide the following:

1. Vessel name/call sign
2. Destination
3. Acknowledge VTS traffic report
4. Report departure from Precautionary Area to VTS
5. If outbound, ETA to 25 nm from Point Fermin
6. Report departure from VTS at 25 nm limit

Maintain speed at 12 knots or less through Precautionary Area.

Sea Approaches – CAUTION

The Master’s attention is directed to NOAA Chart Nos. 18746 & 18749 or BA 1063 & 1082 regarding regulations for:

- Passage of Los Angeles and Long Beach sea buoys
- Transit of Los Angeles and Long Beach pilot boarding areas
- Anchorage G, outside the Breakwater



VESSEL SPEED LIMITS

These speed restrictions do not preclude the master or pilot from adjusting speeds to avoid or mitigate unsafe conditions. Weather, vessel-maneuvering characteristics, traffic density, construction/ dredging and other possible items should also be taken into account.

Tank Vessels

Precautionary area (approach to port) 12.0 kts

Between the seaward limits of the tank vessel escort zones and anywhere inside the Federal Breakwater (except where lower speed limits apply):

Less than 60,000 metric tonne displacement 8.0 kts

60,000 metric tonnes displacement, or more. 6.0 kts

Other Than Tank Vessels

Precautionary area (approach to port) 12.0 kts

Port of Los Angeles

Between the breakwater and Reservation Point (if draft is greater than 1.5 meters):

Outer Harbor 10.0 kts

Inner Harbor 6.0 kts

Fish Harbor, West Channel, marinas, and yacht anchorages. . 4.4kts

No Wake Zone 5 kts

No Wake Zone includes the portion of the Cabrillo Beach recreation area extending from the launch ramp to an imaginary line extending northwesterly from the west end of the municipal fishing pier to the west end of Berth 47.

Port of Long Beach

Within the Main Channel, between the breakwater and Long Beach Channel Lights 10.0 kts

Everywhere else in the harbor 6.0 kts



U.S. Coast Guard Los Angeles-Long Beach
dcm.uscg.mil/Our-Organization/Director-of-Operational-Logistics-DOL/Bases/Base-Los-Angeles-Long-Beach/

FOREIGN QUARANTINE

U.S. Public Health Service Center for Disease Control (CDC),
National Center for Infectious Diseases (NCID)

Division of Quarantine Los Angeles Quarantine Station

380 World Way, Box N-19, Los Angeles, CA 90045

Phone: (310) 215-2365 (24 hours) Fax: (310) 215-2285

Standard Procedures

Radio Free Pratique may clear a vessel to enter the harbor without inspection.

Inspection officer will board a vessel based on the following criteria:

1. 15 days prior to entering a U.S. port, if any crew member or passenger exhibits these symptoms:
 - Temperature of 100 degrees or higher for 48 hours, or any temperature accompanied by rash, jaundice, or glandular swelling.
 - Diarrhea severe enough to prevent performing normal duties.
 - Death aboard ship. Any ship visiting a plague-infested country within 60 days prior to entering a U.S. port.
2. Any ship that has requested a deratting inspection/exemption certificate.

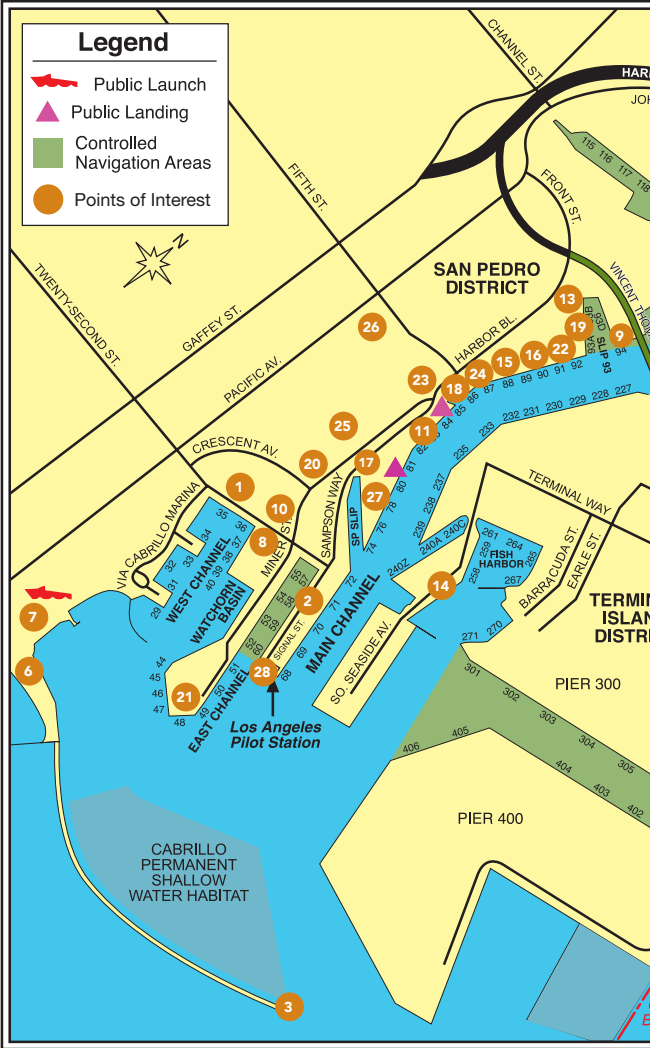
If subject to inspection, regular vessel boarding hours are 0600 to 1800, Monday-Saturday. Overtime hours are 1800-0600, including Sundays and holidays.

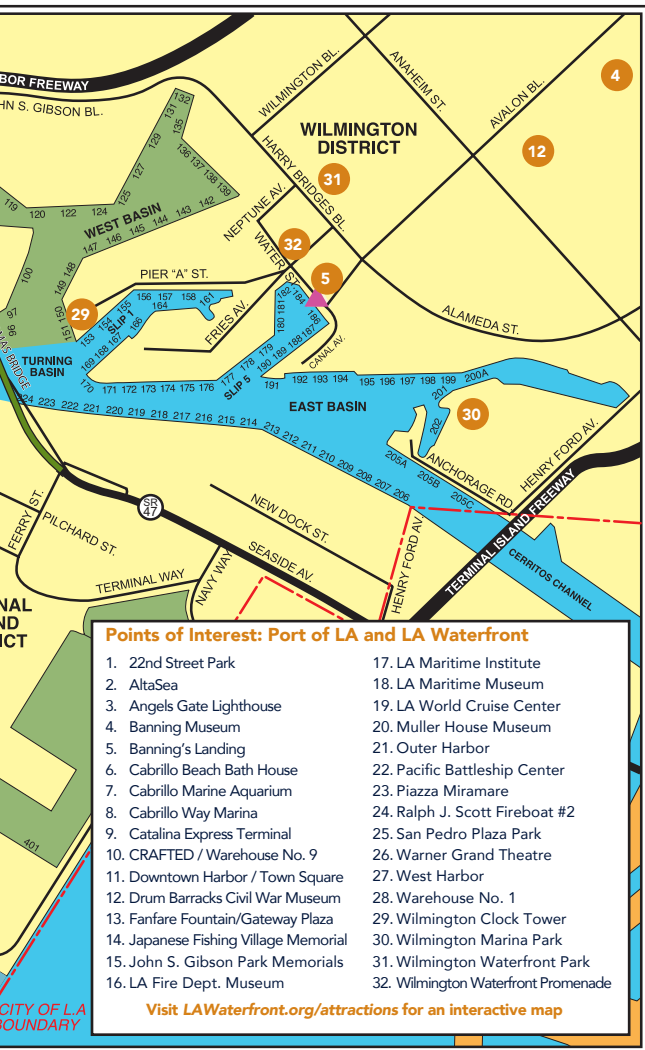
Reporting or request for boarding must be relayed and received by the office 24 hours prior to a ship's arrival. Under conditions A and B above, the quarantine flag may be ordered flown.



CDC Los Angeles Quarantine Station:
cdc.gov/quarantine/stations/los-angeles.html











ENVIRONMENTAL POLICIES

ENVIRONMENTAL NOTICES TO SHIPS

Excessive Smoke/Boiler Tube Blowing

If boiler tube blowing results in soot being deposited in such quantities as to create a nuisance, Section 41700 of the California Health and Safety Code will be enforced. Section 41700 provides that no person shall discharge from any source whatsoever such quantities of air contaminants or other material, which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

Furthermore, as provided in Section 41701 of the California Health and Safety Code, it shall be unlawful for any person from any source whatsoever to discharge into the atmosphere any contaminant, other than uncombined water vapor, for a period or periods aggregating more than three minutes in any one hour, which is as dark, or darker in shade as that designated as No. 2 on the Ringelmann Chart, as published by the United States Bureau of Mines.

Ballast Water and Biofouling Management

The introduction of non-native organisms can create serious ecological, human health, and economic impacts in receiving environments. California state law requires ballast water and biofouling management for ships that arrive at California ports unless safety is threatened. A Ballast Water Management Report must be submitted in advance of each arrival at a California port. If a voyage is greater than 24 hours, the Ballast Water Management Report must be submitted 24 hours in advance of arrival. If the voyage is less than 24 hours, the Ballast Water Management Report must be submitted prior to departing the port of departure. Additionally, the Marine Invasive Species Program Annual Vessel Reporting Form must be submitted at <https://MISP.IO> at least 24 hours in advance of the first arrival of each calendar year. A Ballast Water Management Plan and Ballast Water Logbook must be

maintained on board the vessel and made available for inspection. Vessels that are newly delivered or have a regularly scheduled out-of-water maintenance on or after January 1, 2018, must also maintain a Biofouling Management Plan and Biofouling Record Book, and manage biofouling on wetted surfaces and niche areas. The California Department of Tax and Fee Administration collects a \$1,000 fee for each qualifying voyage arrival. Contact the California State Lands Commission (562-499-6312) or go to slc.ca.gov/misp/ for further information on state requirements.

In addition, a Ballast Water Management Report must be filed with the U.S. Coast Guard at every U.S. port of call. Federal ballast water discharge performance standards are in effect and other federal requirements may apply. Contact the U.S. Coast Guard at (310) 521-3600 or go to dco.uscg.mil for more information.

Water Pollution Regulation

Los Angeles Harbor is one of the cleanest in the world due to extensive efforts to combat water pollution. Source control and anti-pollution regulations to protect water and sediment quality at the Port of Los Angeles are strictly enforced through a variety of Federal, State and Regional permits. It is unlawful to discharge anything besides clean water into the harbor without a permit or permission from the Harbor Master. Please refer to Vessel Discharge Rules and Regulations for specifics as there are many restrictions and non-allowable discharges regarding deck washing, maintenance, contact water, and wastewater portofla.org/vessel-discharge. For questions please contact the Watch Commander at (310) 732-3491. All discharges of pollutants (or unauthorized discharges) must be reported immediately to the Watch Commander. For large spills please call the National Response Center (NRC) at (800) 424-8802. If unable to reach NRC, you can contact the local Coast Guard unit at (310) 521-3780 or on VHF/FM Channel 16. Also notify the California Office of Emergency Services at (800) 852-7550.

Port of Los Angeles

Low Sulfur Fuel Regulation

Beginning January 2014, the California Air Resources Board (CARB) requires vessels to use less than or equal to 0.1% sulfur fuel within 24 nm of the California coastline in main engines, auxiliary engines and boilers.

Shore Power Regulation

In July 2020, the California Air Resources Board (CARB) updated their At-Berth Regulation. Vessel operators (shipping lines) and terminal operators are responsible for complying with the regulation. All fleets calling at California ports must shut down their auxiliary engines and plug into the electrical grid while at berth or use a CARB approved emission control system. This regulation applies to container ships, cruise ships, refrigerated cargo; auto carrier ships, roll-on/roll-off ships (Ro-Ro), and tanker ships that call to the Ports of Los Angeles and Long Beach as of January 1, 2025.

Shore power at the Port of Los Angeles, is otherwise known as Alternative Maritime Power® (AMP®), the time-honored air quality program that focuses on reducing emissions from vessels docked at the Port of Los Angeles. The Port of Los Angeles became the first port in the world to use AMP® technology for in-service container ships in 2004. To schedule an AMP connection, please submit a High Voltage Shore Connection System (HVSC) Schedule Request Form at least 7 days before vessel arrival. The HVSC Schedule Request Form can be found on the Port of Los Angeles AMP webpage. For more information visit portoflosangeles.org.



Shore Power Regulations

arb.ca.gov/ports/shorepower/shorepower.htm

Commercial Harbor Craft Regulation

In July 2022, CARB approved updates to the Commercial Harbor Craft (CHC) Regulation. The revised CHC Regulation went into effect January 1, 2023. Requirements include annual reporting for all commercial harbor craft operators, a new Unique Vessel Identifier labeling on vessels, idling limits of 15 minutes while docked at a facility, use of renewable diesel and upgrading older tiered engines to newer, cleaner engines.



Commercial Harbor Craft Regulation

<https://ww2.arb.ca.gov/our-work/programs/commercial-harbor-craft>

North American Emission Control Area

The North American Emission Control Area requires the use of less than or equal to 0.1% sulfur (in main engines, auxiliary engines and boilers) fuel 200 nm from the North America coastline, excluding Mexico.

PORT OF LOS ANGELES ENVIRONMENTAL PROGRAMS**Vessel Speed Reduction Program**

First established in 2001, the Vessel Speed Reduction Program is a voluntary program designed to reduce smog-forming emissions from ocean-going vessels that slow their speeds as they approach or depart the Port, at 20 nautical miles (nm) or 40 nm from Point Fermin. Vessel fleet operators are rewarded incentive funding by meeting annual VSR compliance at either 20 nm or 40 nm. No registration is required. Vessel speeds are monitored by the Marine Exchange of Southern California. For more information, visit portoflosangeles.org.

Environmental Ship Index Program

The Port of Los Angeles' voluntary Environmental Ship Index (ESI) program has been developed to reward vessel operators for reducing Diesel Particulate Matter (DPM) and nitrogen oxide (NOx) emissions from their ocean-going vessels (OGVs). This program rewards operators for going beyond compliance by bringing their newest and cleanest vessels to the Port and demonstrating technologies onboard their vessels. It also encourages use of cleaner technology and practices in advance of regulations. OGVs are the single largest source of Southern California goods movement air emissions and make up approximately half of all port-related air emissions. Since 2005, voluntary emission reduction programs have yielded substantial reductions.

To be eligible for these incentives, operators must register with the international ESI (<https://environmentalshipindex.org/>). To receive the incentive payment, operators also must register with the Los Angeles Harbor Department (LAHD). The incentive grant is paid on a quarterly basis.

For registration information, visit portoflosangeles.org.

PORT OF LOS ANGELES CLEAN MARINA PROGRAM

The Port of Los Angeles, in partnership with the California State Parks Division of Boating and Waterways, developed the Clean Marina Guidebook as part of the Port's Clean Marina Program. The guidebook provides best management practices (BMPs) for recreational boaters and marina owners/managers, local and regional resources, educational material, an overview of applicable government regulations, as well as information needed to obtain certification under the industry-developed Clean Marine Program.

The Port guidebook and industry Clean Marine certification are intended to educate the boating community about environmentally-sound boating practices with the ultimate goal of improving Los Angeles Harbor water quality through the community's use of these recommendations and compliance with established regulations. The Port encourages marina managers and staff to help educate boaters about BMPs and to implement BMPs specific to their marina's particular environmental needs.



Boater and Mariner Information
at the Port of Los Angeles:

portoflosangeles.org/community/boaters

PORT OF LOS ANGELES MARINA DIRECTORY

Al Larson Marina	Berth 257	(310) 832-0526
Cabrillo Beach Yacht Club	Berth 35	(310) 519-1694
Cabrillo Way Marina	Berths 37-43	(310) 514-4985
California Yacht Marina - Cabrillo	Berth 29-33	(310) 732-2252
California Yacht Marina - Wilmington	Berth 202	(310) 834-7113
Cerritos Yacht Anchorage	Berth 205C	(310) 834-4737
Holiday Harbor - Cabrillo Marina	Berth 34	(310) 833-4468
Holiday Harbor - Wilmington	Berth 201	(310) 835-3952
Island Yacht Anchorage I	Berth 205D	(310) 830-1111
Island Yacht Anchorage II	Berth 200V-X	(310) 830-1111
Leeward Bay Marina	Berth 200-I	(310) 830-5621

Lighthouse Yacht Landing	Berth 205B	(310) 834-9595
Pacific Yacht Landing	Berth 203	(310) 830-0260
Yacht Centre - Newmarks	Berth 204	(310) 834-2830
Yacht Haven Marina	Berth 202	(310) 834-6892

MARINE MAMMAL VIEWING GUIDELINES

The following information is from NOAA Fisheries Marine Life Viewing Guide <https://www.fisheries.noaa.gov/>

Observing marine mammals in the wild can be a rewarding and educational experience, but we must respect them and their habitat. Whales, dolphins and pinnipeds are protected under the Endangered Species Act of 1973 and the Marine Mammal Protection Act of 1972. It is a violation of Federal law to harass or harm them and penalties can include up to one year imprisonment and fines of up to \$20,000. Harassment includes pursuit, torment, or annoyance of a marine mammal or attempting to do so.

Distance

You should remain at least 100 yards (300 feet) from whales and at least 50 yards (150 feet) from dolphins, seals, and sea lions. Other species-specific rules may apply - know before you go.

Observation

When observing marine mammals at sea, make sure your actions do not cause any change in their behavior.

- Upon sighting marine mammals, stop your vessel, observe, and then attempt to parallel the animal's course. Do not approach head on.
- Avoid sudden changes to vessel speed and direction. Dolphins and whales may surface unpredictably at any time or location.
- Do not feed, or attempt to feed, any marine mammals. It is harmful and illegal.
- Do not swim with, ride, pet, touch, or attempt to interact with marine mammals in the wild.

Limit viewing time to 30 minutes to avoid creating unnecessary stress for the animals. They need our help to survive and flourish.

Port of Los Angeles

Ocean Friends in Peril

The ocean is a remarkable ecosystem, full of life and resources, but it's also a fragile world. Pollution, climate change and overfishing are only a few of the problems affecting our waters, but the real issue is the cumulative human impact on our oceans. Today, numerous species of marine mammals are threatened, endangered, or critically endangered and a few have already disappeared within the past several decades. Another significant threat to whales is vessel strikes. In recent years, endangered Blue Whales – reaching up to 90 feet in length – have become regular visitors to the Southern California Bight using this area as foraging grounds. These whales, unfortunately, tend to move along the same routes used by ships in commercial shipping lanes.

You can help marine mammals in distress. If you see a stranded animal, keep your distance and call National Marine Fisheries Service (NMFS) California Stranding Coordinator, Justin Viezbicke (562) 980-3230.

Please report injured, entangled or ship-struck marine mammals to the 24-hour WET hotline at (877) SOS-WHALE (877-767-9425) and to the U.S. Coast Guard at VHF Channel 16.





NAVIGATOR *of the* SEAS
NASSAU

REFERENCE

METRIC CONVERSION TABLE

Meters	Feet	Meters	Feet	Meters	Feet
3.0	9.84	6.0	19.69	9.0	29.53
3.1	10.17	6.1	20.01	9.1	29.86
3.2	10.50	6.2	20.34	9.2	30.18
3.3	10.83	6.3	20.67	9.3	30.51
3.4	11.15	6.4	21.00	9.4	30.84
3.5	11.48	6.5	21.33	9.5	31.17
3.6	11.81	6.6	21.65	9.6	31.50
3.7	12.14	6.7	21.98	9.7	31.82
3.8	12.47	6.8	22.31	9.8	32.15
3.9	12.80	6.9	22.64	9.9	32.48
4.0	13.12	7.0	22.97	10.0	32.81
4.1	13.45	7.1	23.29	10.1	33.14
4.2	13.78	7.2	23.62	10.2	33.46
4.3	14.11	7.3	23.95	10.3	33.79
4.4	14.44	7.4	24.28	10.4	34.12
4.5	14.76	7.5	24.61	10.5	34.45
4.6	15.09	7.6	24.93	10.6	34.78
4.7	15.42	7.7	25.26	10.7	35.10
4.8	15.75	7.8	25.59	10.8	35.43
4.9	16.08	7.9	25.92	10.9	35.76
5.0	16.40	8.0	25.92	11.0	36.09
5.1	16.73	8.1	26.57	11.1	36.42
5.2	17.06	8.2	26.90	11.2	36.75
5.3	17.39	8.3	27.23	11.3	37.07
5.4	17.72	8.4	27.56	11.4	37.40
5.5	18.04	8.5	27.89	11.5	37.73
5.6	18.37	8.6	28.22	11.6	38.06
5.7	18.70	8.7	28.54	11.7	38.39
5.8	19.03	8.8	28.87	11.8	38.71
5.9	19.36	8.9	29.20	11.9	39.04

METRIC CONVERSION TABLE

Meters	Feet	Meters	Feet	Meters	Feet
12.0	39.37	15.0	49.21	18.0	59.06
12.1	39.70	15.1	49.54	18.1	59.38
12.2	40.03	15.2	49.87	18.2	59.71
12.3	40.35	15.3	50.20	18.3	60.04
12.4	40.68	15.4	50.52	18.4	60.37
12.5	41.01	15.5	50.85	18.5	60.70
12.6	41.34	15.6	51.18	18.6	61.02
12.7	41.67	15.7	51.51	18.7	61.35
12.8	41.99	15.8	51.84	18.8	61.68
12.9	42.32	15.9	52.17	18.9	62.01
13.0	42.65	16.0	52.49	19.0	62.34
13.1	42.98	16.1	52.82	19.1	62.66
13.2	43.31	16.2	53.15	19.2	62.99
13.3	43.64	16.3	53.48	19.3	63.32
13.4	43.96	16.4	53.81	19.4	63.65
13.5	44.29	16.5	54.13	19.5	63.98
13.6	44.62	16.6	54.46	19.6	64.30
13.7	44.95	16.7	54.79	19.7	64.63
13.8	45.28	16.8	55.12	19.8	64.96
13.9	45.60	16.9	55.45	19.9	65.29
14.0	45.93	17.0	55.77	20.0	65.62
14.1	46.26	17.1	56.10	20.1	65.94
14.2	46.59	17.2	56.43	20.2	66.27
14.3	46.92	17.3	56.76	20.3	66.60
14.4	47.24	17.4	57.09	20.4	66.93
14.5	47.57	17.5	57.41	20.5	67.26
14.6	47.90	17.6	57.74	20.6	67.59
14.7	48.23	17.7	58.07	20.7	67.91
14.8	48.56	17.8	58.40	20.8	68.24
14.9	48.88	17.9	58.73	20.9	68.57

METRIC CONVERSION TABLE

Meters	Feet	Meters	Feet	Meters	Feet
21.0	68.90	24.0	78.74	45.0	147.64
21.1	69.23	24.1	79.07	46.0	150.92
21.2	69.55	24.2	79.40	47.0	154.20
21.3	69.88	24.3	79.72	48.0	157.48
21.4	70.21	24.4	80.05	49.0	160.76
21.5	70.54	24.5	80.38	50.0	164.04
21.6	70.87	24.6	80.71	51.0	167.32
21.7	71.19	24.7	81.04	52.0	170.60
21.8	71.52	24.8	81.36	53.0	173.88
21.9	71.85	24.9	81.69	54.0	177.17
22.0	72.18	25.0	82.02	55.0	180.45
22.1	72.51	26.0	85.30	56.0	183.73
22.2	72.83	27.0	88.58	57.0	187.01
22.3	73.16	28.0	91.86	58.0	190.29
22.4	73.49	29.0	95.14	59.0	193.57
22.5	73.82	30.0	98.43	60.0	196.85
22.6	74.15	31.0	101.71	61.0	200.13
22.7	74.48	32.0	104.99	62.0	203.41
22.8	74.80	33.0	108.27	63.0	206.69
22.9	75.13	34.0	111.55	64.0	209.97
23.0	75.46	35.0	114.83	65.0	213.25
23.1	75.79	36.0	118.11	66.0	216.54
23.2	76.12	37.0	121.39	67.0	219.82
23.3	76.44	38.0	124.67	68.0	223.10
23.4	76.77	39.0	127.95	69.0	226.38
23.5	77.10	40.0	131.23	70.0	229.66
23.6	77.43	41.0	134.51	71.0	232.94
23.7	77.76	42.0	137.80	72.0	236.22
23.8	78.08	43.0	141.08	73.0	239.50
23.9	78.41	44.0	144.36	74.0	242.78

METRIC CONVERSION TABLE

Meters	Feet	Meters	Feet	Meters	Feet
75.0	246.06	105.0	344.49	135.0	442.91
76.0	249.34	106.0	347.77	136.0	446.19
77.0	252.62	107.0	351.05	137.0	449.48
78.0	255.91	108.0	354.33	138.0	452.76
79.0	259.19	109.0	357.61	139.0	456.04
80.0	262.47	110.0	360.89	140.0	459.32
81.0	265.75	111.0	364.17	141.0	462.60
82.0	269.03	112.0	367.45	142.0	465.88
83.0	272.31	113.0	370.73	143.0	469.16
84.0	275.59	114.0	374.02	144.0	472.44
85.0	278.87	115.0	377.30	145.0	475.72
86.0	282.15	116.0	380.58	146.0	479.00
87.0	285.43	117.0	383.86	147.0	482.28
88.0	288.71	118.0	387.14	148.0	485.56
89.0	291.99	119.0	390.42	149.0	488.85
90.0	295.28	120.0	393.70	150.0	492.13
91.0	298.56	121.0	396.98	151.0	495.41
92.0	301.84	122.0	400.26	152.0	498.69
93.0	305.12	123.0	403.54	153.0	501.97
94.0	308.40	124.0	406.82	154.0	505.25
95.0	311.68	125.0	410.11	155.0	508.53
96.0	314.96	126.0	413.39	156.0	511.81
97.0	318.24	127.0	416.67	157.0	515.09
98.0	321.52	128.0	419.95	158.0	518.37
99.0	324.80	129.0	423.23	159.0	521.65
100.0	328.08	130.0	426.51	160.0	524.93
101.0	331.36	131.0	429.79	161.0	528.22
102.0	334.65	132.0	433.07	162.0	531.50
103.0	337.93	133.0	436.35	163.0	534.78
104.0	341.21	134.0	439.63	164.0	538.06

METRIC CONVERSION TABLE

Meters	Feet	Meters	Feet	Meters	Feet
165.0	541.34	195.0	639.76	225.0	738.19
166.0	544.62	196.0	643.04	226.0	741.47
167.0	547.90	197.0	646.33	227.0	744.75
168.0	551.18	198.0	649.61	228.0	748.03
169.0	554.46	199.0	652.89	229.0	751.31
170.0	557.74	200.0	656.17	230.0	754.59
171.0	561.02	201.0	659.45	231.0	757.87
172.0	564.30	202.0	662.73	232.0	761.15
173.0	567.59	203.0	666.01	233.0	764.44
174.0	570.87	204.0	669.29	234.0	767.72
175.0	574.15	205.0	672.57	235.0	771.00
176.0	577.43	206.0	675.85	236.0	774.28
177.0	580.71	207.0	679.13	237.0	777.56
178.0	583.99	208.0	682.41	238.0	780.84
179.0	587.27	209.0	685.70	239.0	784.12
180.0	590.55	210.0	688.98	240.0	787.40
181.0	593.83	211.0	692.26	241.0	790.68
182.0	597.11	212.0	695.54	242.0	793.96
183.0	600.39	213.0	698.82	243.0	797.24
184.0	603.67	214.0	702.10	244.0	800.52
185.0	606.96	215.0	705.38	245.0	803.81
186.0	610.24	216.0	708.66	246.0	807.09
187.0	613.52	217.0	711.94	247.0	810.37
188.0	616.80	218.0	715.22	248.0	813.65
189.0	620.08	219.0	718.50	249.0	816.93
190.0	623.36	220.0	721.78	250.0	820.21
191.0	626.64	221.0	725.07	251.0	823.49
192.0	629.92	222.0	728.35	252.0	826.77
193.0	633.20	223.0	731.63	253.0	830.05
194.0	636.48	224.0	734.91	254.0	833.33

METRIC CONVERSION TABLE

Meters	Feet	Meters	Feet	Meters	Feet
255.0	836.61	285.0	935.04	315.0	1033.46
256.0	839.90	286.0	938.32	316.0	1036.75
257.0	843.18	287.0	941.60	317.0	1040.03
258.0	846.46	288.0	944.88	318.0	1043.31
259.0	849.74	289.0	948.16	319.0	1046.59
260.0	853.02	290.0	951.44	320.0	1049.87
261.0	856.30	291.0	954.72	321.0	1053.15
262.0	859.58	292.0	958.01	322.0	1056.43
263.0	862.86	293.0	961.29	323.0	1059.71
264.0	866.14	294.0	964.57	324.0	1062.99
265.0	869.42	295.0	967.85	325.0	1066.27
266.0	872.70	296.0	971.13	326.0	1069.55
267.0	875.98	297.0	974.41	327.0	1072.83
268.0	879.27	298.0	977.69	328.0	1076.12
269.0	882.55	299.0	980.97	329.0	1079.40
270.0	885.83	300.0	984.25	330.0	1082.68
271.0	889.11	301.0	987.53	331.0	1085.96
272.0	892.39	302.0	990.81	332.0	1089.24
273.0	895.67	303.0	994.09	333.0	1092.52
274.0	898.95	304.0	997.38	334.0	1095.80
275.0	902.23	305.0	1000.66	335.0	1099.08
276.0	905.51	306.0	1003.94	336.0	1102.36
277.0	908.79	307.0	1007.22	337.0	1105.64
278.0	912.07	308.0	1010.50	338.0	1108.92
279.0	915.35	309.0	1013.78	339.0	1112.20
280.0	918.64	310.0	1017.06	340.0	1115.49
281.0	921.92	311.0	1020.34	341.0	1118.77
282.0	925.20	312.0	1023.62	342.0	1122.05
283.0	928.48	313.0	1026.90	343.0	1125.33
284.0	931.76	314.0	1030.18	344.0	1128.61

METRIC CONVERSION TABLE

Meters	Feet	Meters	Feet
345.0	1131.89	375.0	1230.32
346.0	1135.17	376.0	1233.60
347.0	1138.45	377.0	1236.88
348.0	1141.73	378.0	1240.16
349.0	1145.01	379.0	1243.44
350.0	1148.29	380.0	1246.72
351.0	1151.57	381.0	1250.00
352.0	1154.86	382.0	1253.28
353.0	1158.14	383.0	1256.56
354.0	1161.42	384.0	1259.84
355.0	1164.70	385.0	1263.12
356.0	1167.98	386.0	1266.40
357.0	1171.26	387.0	1269.69
358.0	1174.54	388.0	1272.97
359.0	1177.82	389.0	1276.25
360.0	1181.10	390.0	1279.53
361.0	1184.38	391.0	1282.81
362.0	1187.66	392.0	1286.09
363.0	1190.94	393.0	1289.37
364.0	1194.23	394.0	1292.65
365.0	1197.51	395.0	1295.93
366.0	1200.79	396.0	1299.21
367.0	1204.07	397.0	1302.49
368.0	1207.35	398.0	1305.77
369.0	1210.63	399.0	1309.06
370.0	1213.91	400.0	1312.34
371.0	1217.19		
372.0	1220.47		
373.0	1223.75		
374.0	1227.03		

SUNRISE AND SUNSET TABLE

LOS ANGELES, CALIFORNIA

Pacific Standard Time (Time Meridian 120° West for
Latitude 33° 43' N., Longitude 118° 16' W.)

This table gives the time of the rising and setting of the sun's upper limb for every fifth day of the year. An allowance of five meters has been made for the elevation of the observer. The table is approximately correct for any year, as the declination of the sun varies but little from its mean value from year to year.

Add one hour for daylight-saving time where applicable.

Date	Sunrise	Sunset	Date	Sunrise	Sunset
Jan.	1 0659	1655	July	5 0547	2008
	6 0700	1659		10 0550	2007
	11 0659	1703		15 0553	2005
	16 0658	1708		20 0556	2003
	21 0657	1713		25 0600	1959
	26 0654	1718		30 0603	1956
31 0651	1723				
Feb.	5 0647	1728	Aug.	4 0607	1951
	10 0643	1732		9 0610	1946
	15 0638	1737		14 0614	1941
	20 0632	1742		19 0618	1935
	25 0627	1746		24 0621	1929
		29 0625	1923		
March	2 0620	1751	Sept.	3 0628	1916
	7 0614	1755		8 0632	1909
	12 0707	1859		13 0635	1902
	17 0701	1903		18 0639	1855
	22 0654	1907		23 0642	1848
	27 0647	1910		28 0646	1841
April	1 0640	1914	Oct.	3 0649	1834
	6 0634	1918		8 0653	1828
	11 0627	1922		13 0657	1821
	16 0621	1926		18 0701	1815
	21 0615	1930		23 0705	1809
	26 0609	1933		28 0709	1804
May	1 0604	1937	Nov.	2 0614	1659
	6 0559	1941		7 0619	1655
	11 0554	1945		12 0623	1651
	16 0551	1949		17 0628	1648
	21 0547	1953		22 0633	1646
	26 0545	1956		27 0637	1644
31 0543	1959				
June	5 0542	2002	Dec.	2 0642	1644
	10 0541	2004		7 0646	1644
	15 0541	2006		12 0650	1644
	20 0542	2008		17 0653	1646
	25 0543	2009		22 0656	1648
	30 0545	2009		27 0658	1651

The information provided here has been compiled from reliable government sources. The Port assumes no responsibility for its accuracy.

San Pedro
WEST HARBOR
Port of Los Angeles

OPENING IN 2026



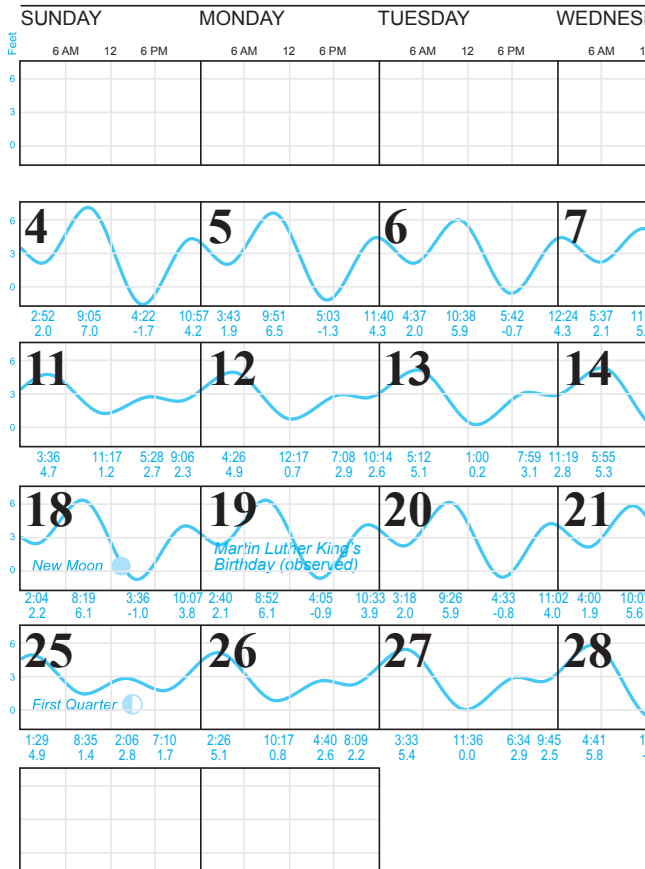


TIDE TABLES

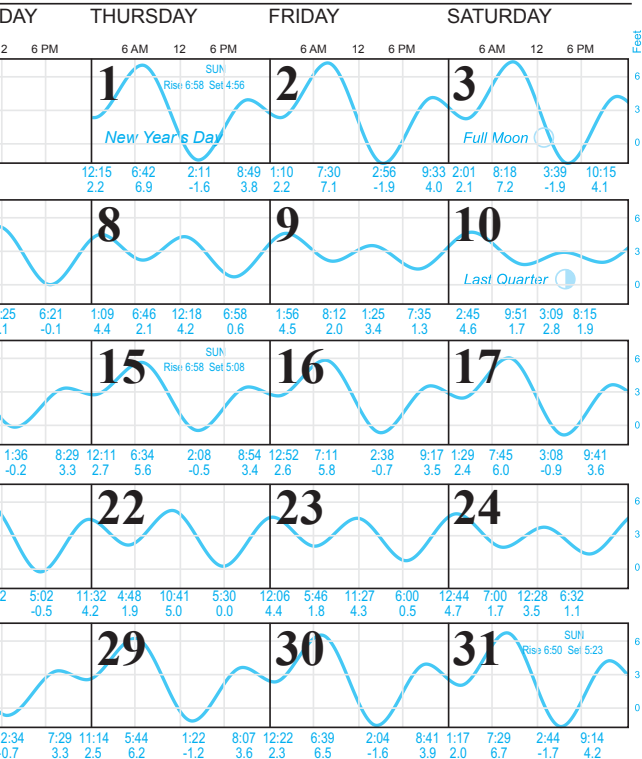
Tide Tables

LOS ANGELES
(Outer Harbor)
CALIFORNIA

Times and Heights of
High and Low Water
(heights in feet)



January 2026



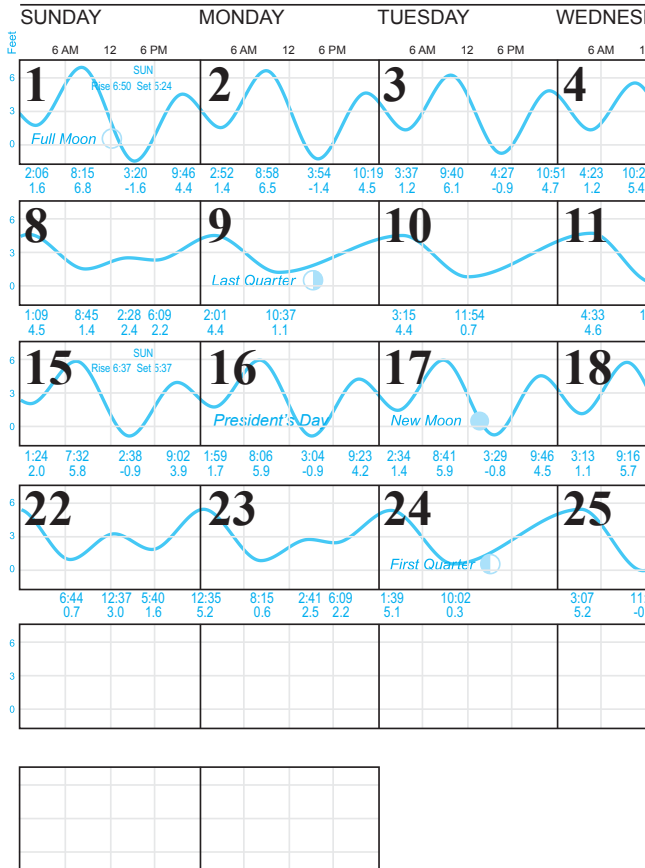
DECEMBER 2025
 S M T W T F S
 1 2 3 4 5 6
 7 8 9 10 11 12 13
 14 15 16 17 18 19 20
 21 22 23 24 25 26 27
 28 29 30 31

FEBRUARY
 S M T W T F S
 1 2 3 4 5 6 7
 8 9 10 11 12 13 14
 15 16 17 18 19 20 21
 22 23 24 25 26 27 28

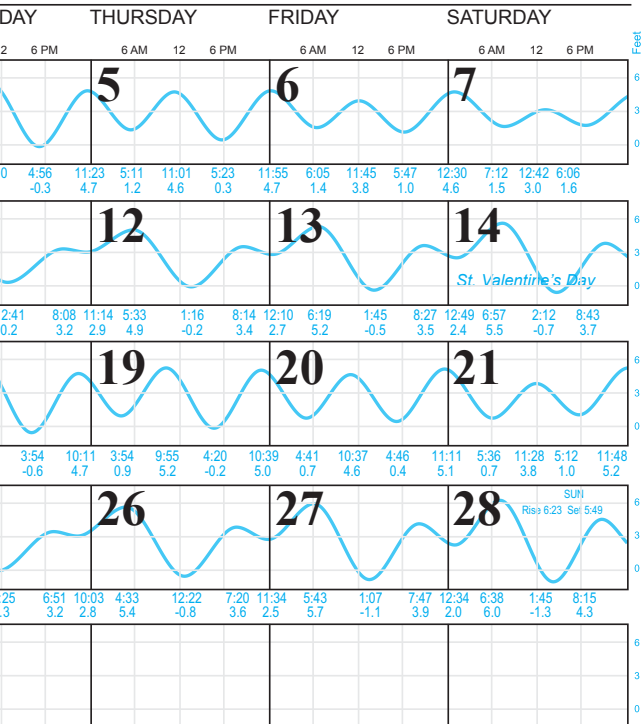
Tide Tables

LOS ANGELES
(Outer Harbor)
CALIFORNIA

Times and Heights of
High and Low Water
(heights in feet)



February 2026



JANUARY

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

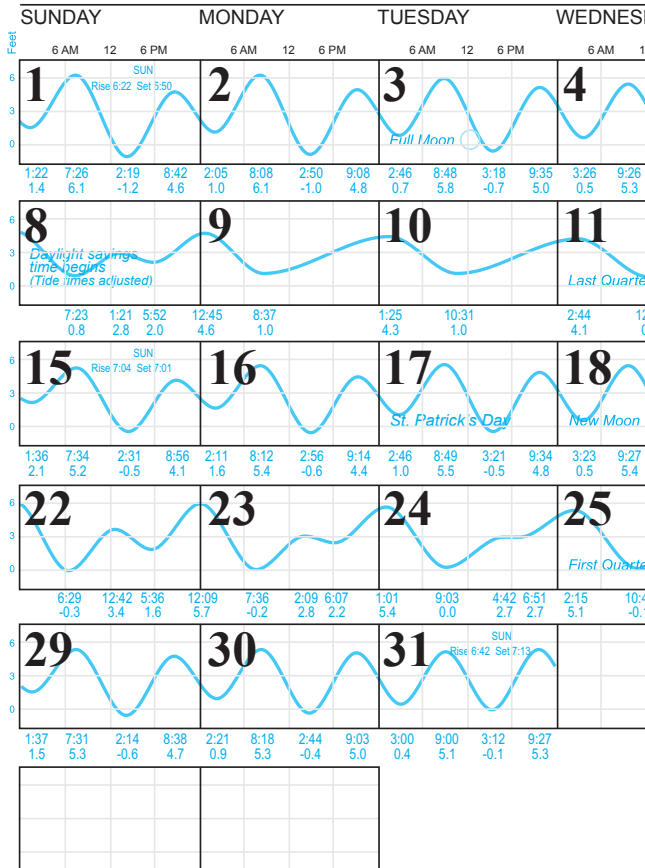
MARCH

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

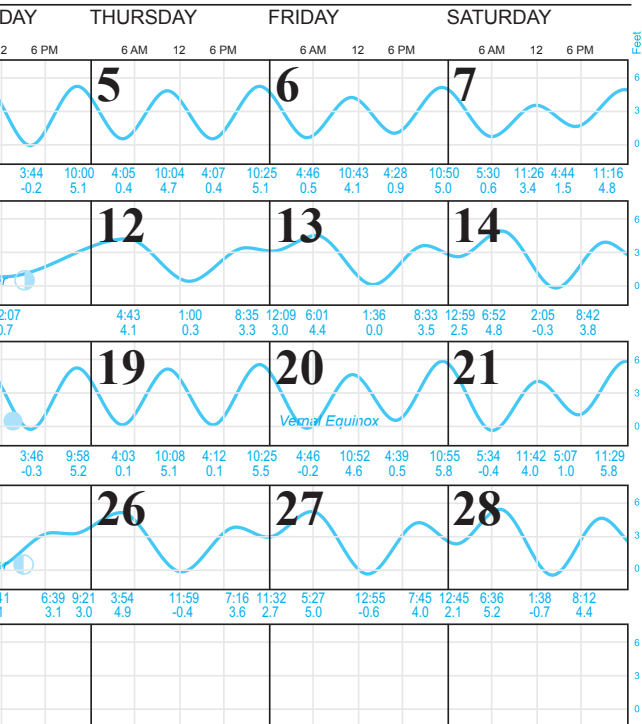
Tide Tables

LOS ANGELES
(Outer Harbor)
CALIFORNIA

Times and Heights of
High and Low Water
(heights in feet)



March 2026



FEBRUARY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

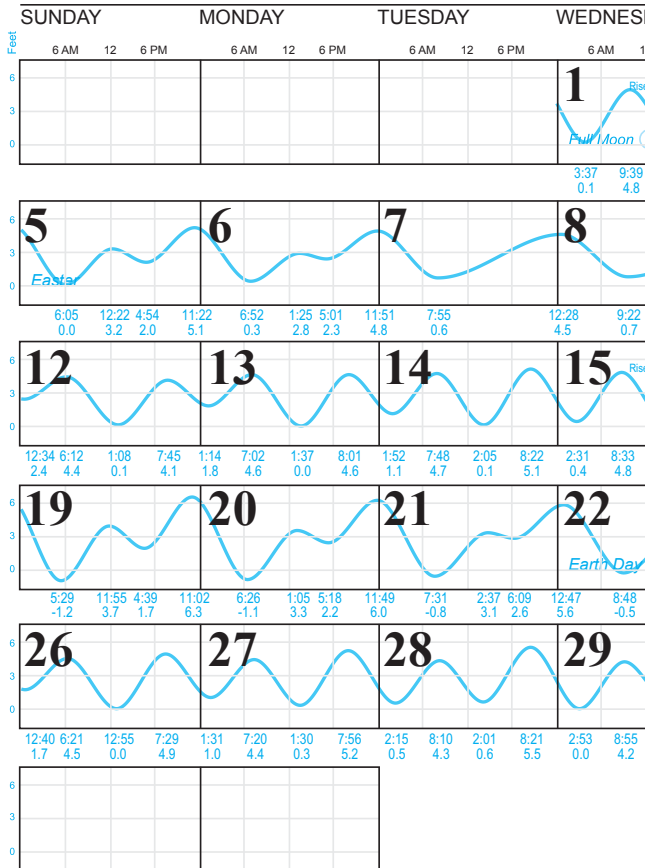
APRIL

S	M	T	W	T	F	S
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5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

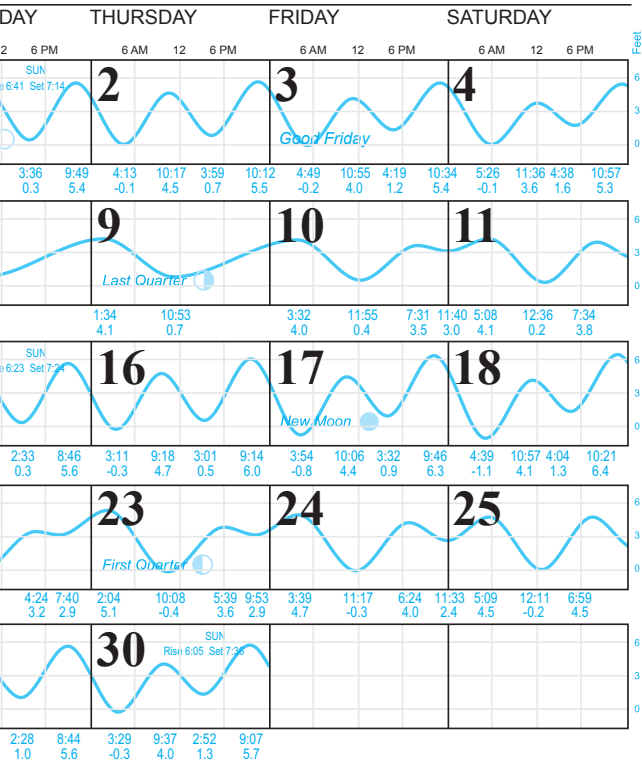
Tide Tables

LOS ANGELES
(Outer Harbor)
CALIFORNIA

Times and Heights of
High and Low Water
(heights in feet)



April 2026



MARCH

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 1 2 3 4 5 6 7
 8 9 10 11 12 13 14
 15 16 17 18 19 20 21
 22 23 24 25 26 27 28
 29 30 31

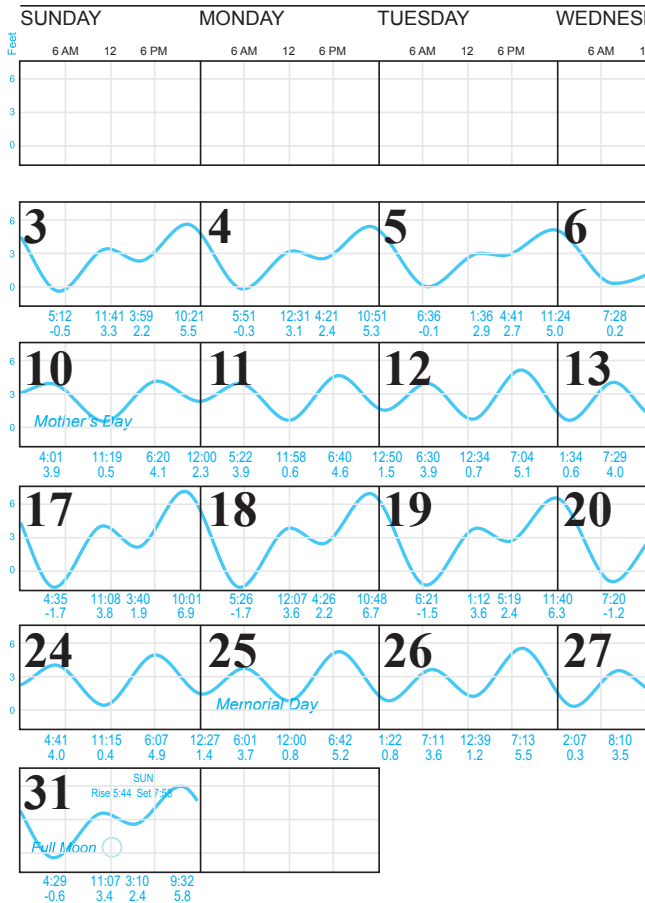
MAY

S M T W T F S
 1 2
 3 4 5 6 7 8 9
 10 11 12 13 14 15 16
 17 18 19 20 21 22 23
 24 25 26 27 28 29 30
 31

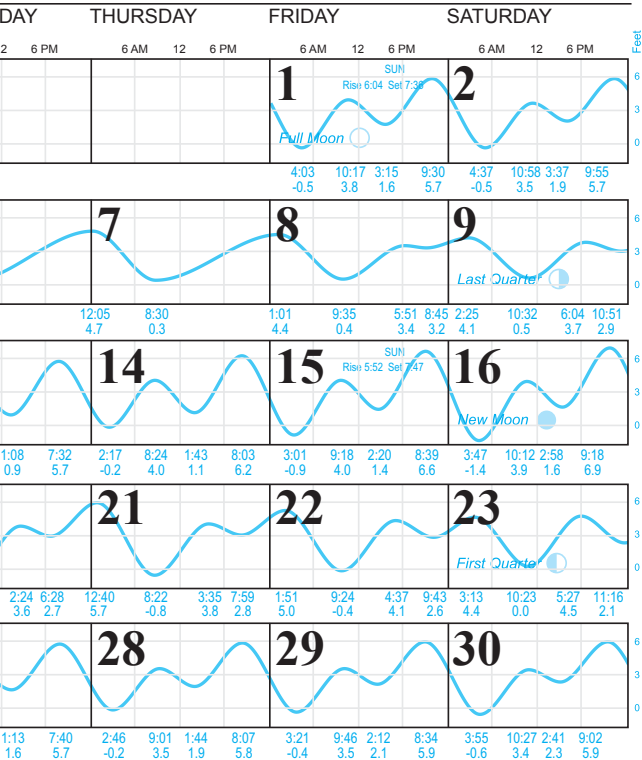
Tide Tables

LOS ANGELES
(Outer Harbor)
CALIFORNIA

Times and Heights of
High and Low Water
(heights in feet)



May 2026



APRIL

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1 2 3 4
5 6 7 8 9 10 11
12 13 14 15 16 17 18
19 20 21 22 23 24 25
26 27 28 29 30

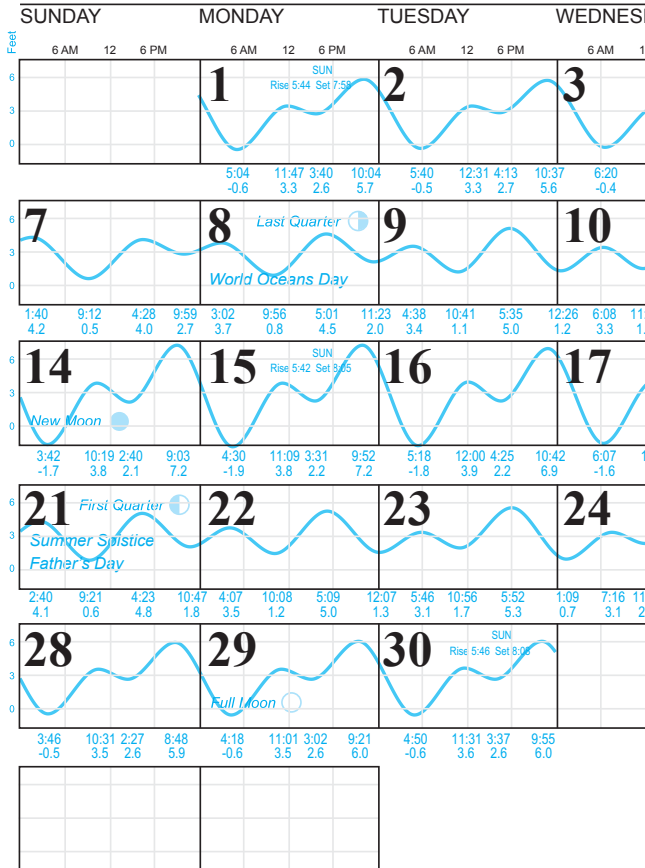
JUNE

S M T W T F S
1 2 3 4 5 6
7 8 9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30

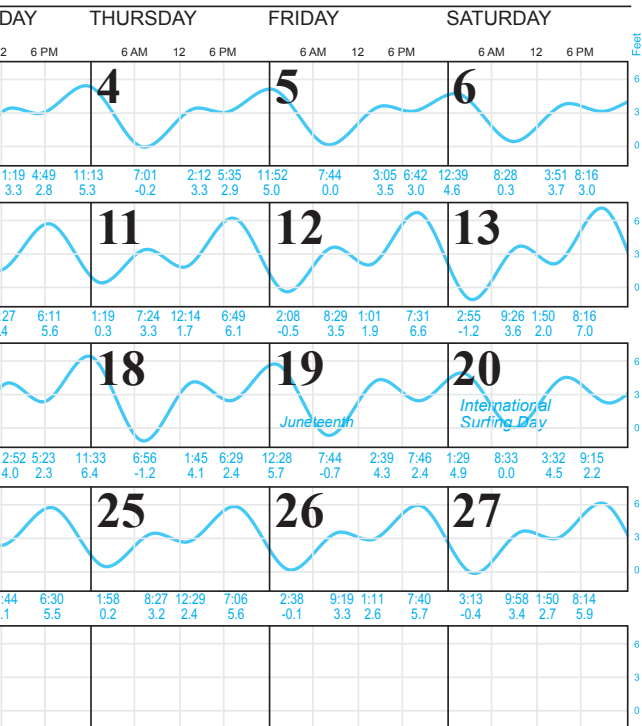
Tide Tables

LOS ANGELES
(Outer Harbor)
CALIFORNIA

Times and Heights of
High and Low Water
(heights in feet)



June 2026



MAY

S	M	T	W	T	F	S
				1	2	
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
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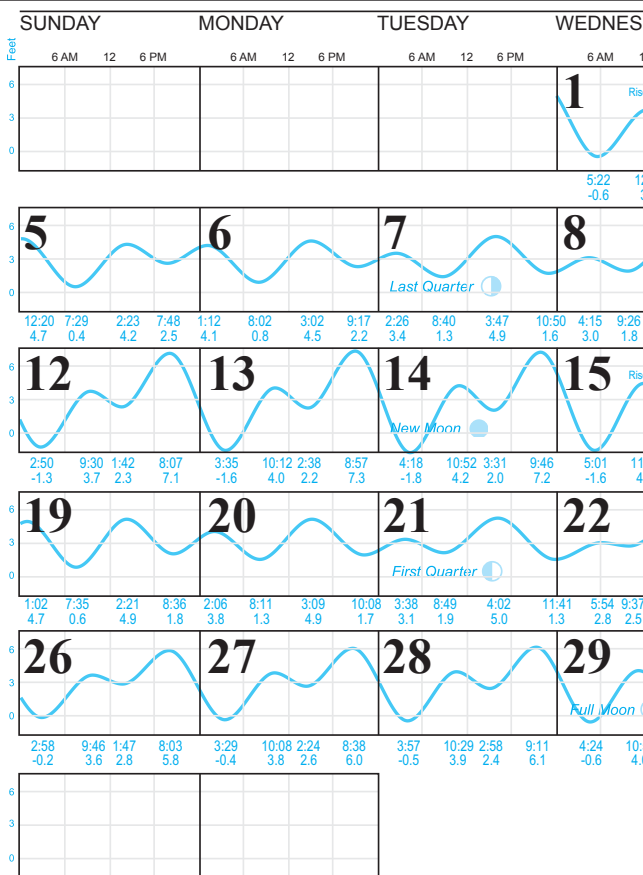
JULY

S	M	T	W	T	F	S	
				1	2	3	4
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12	13	14	15	16	17	18	
19	20	21	22	23	24	25	
26	27	28	29	30	31		

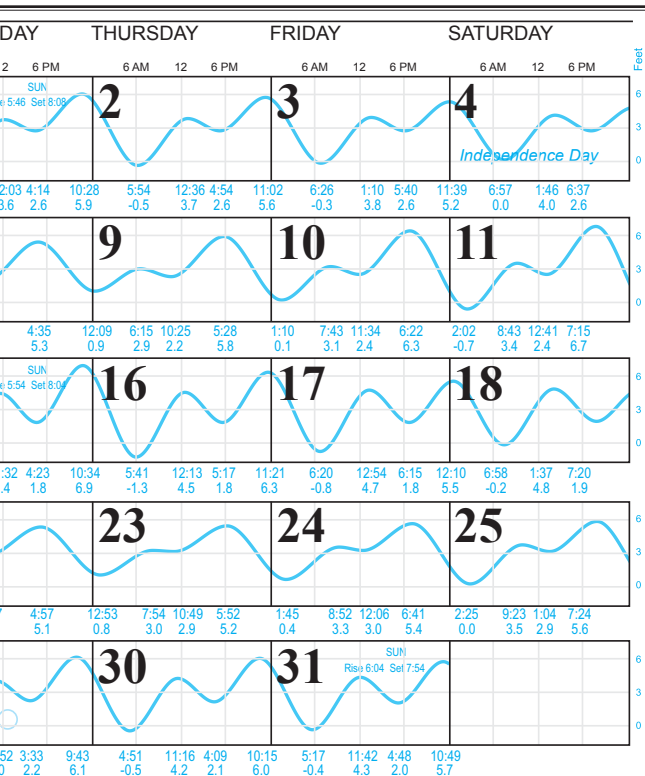
Tide Tables

LOS ANGELES
(Outer Harbor)
CALIFORNIA

Times and Heights of
High and Low Water
(heights in feet)



July 2026



JUNE

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 1 2 3 4 5 6
 7 8 9 10 11 12 13
 14 15 16 17 18 19 20
 21 22 23 24 25 26 27
 28 29 30

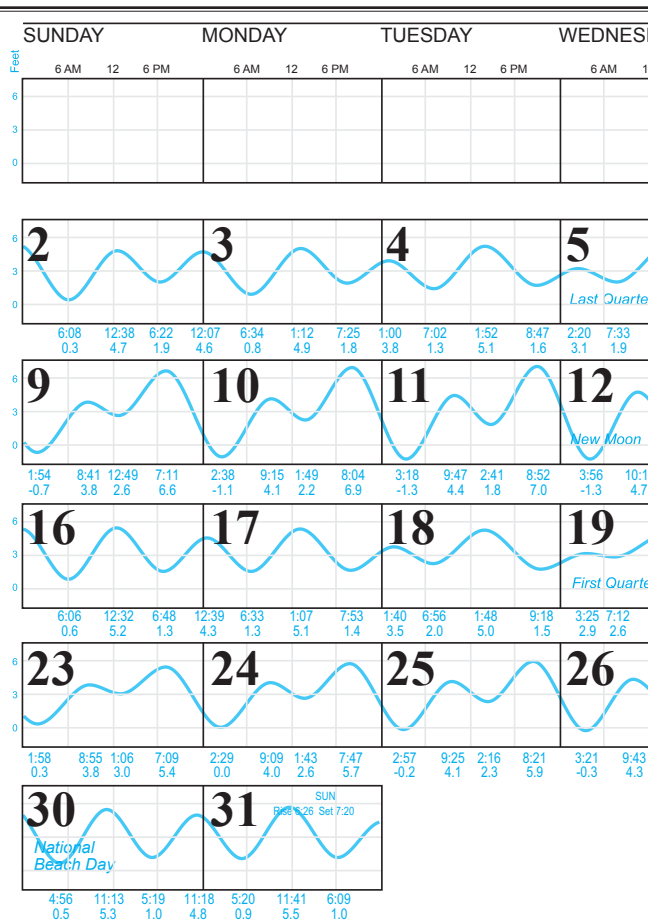
AUGUST

S M T W T F S
 1
 2 3 4 5 6 7 8
 9 10 11 12 13 14 15
 16 17 18 19 20 21 22
 23 24 25 26 27 28 29
 30 31

Tide Tables

LOS ANGELES
(Outer Harbor)
CALIFORNIA

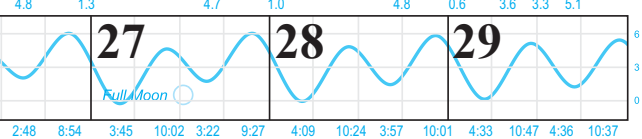
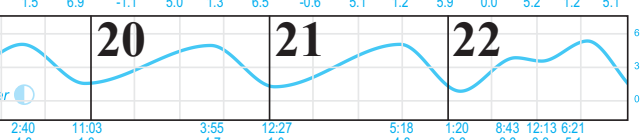
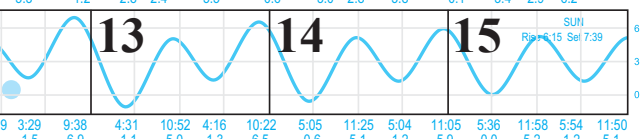
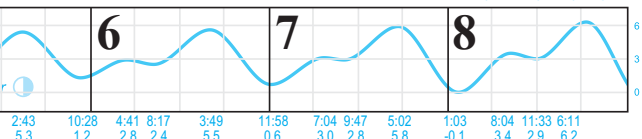
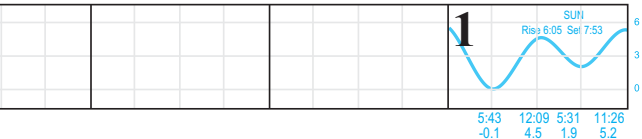
Times and Heights of
High and Low Water
(heights in feet)



August 2026

DAY THURSDAY FRIDAY SATURDAY

2 6 PM 6 AM 12 6 PM 6 AM 12 6 PM 6 AM 12 6 PM



JULY

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

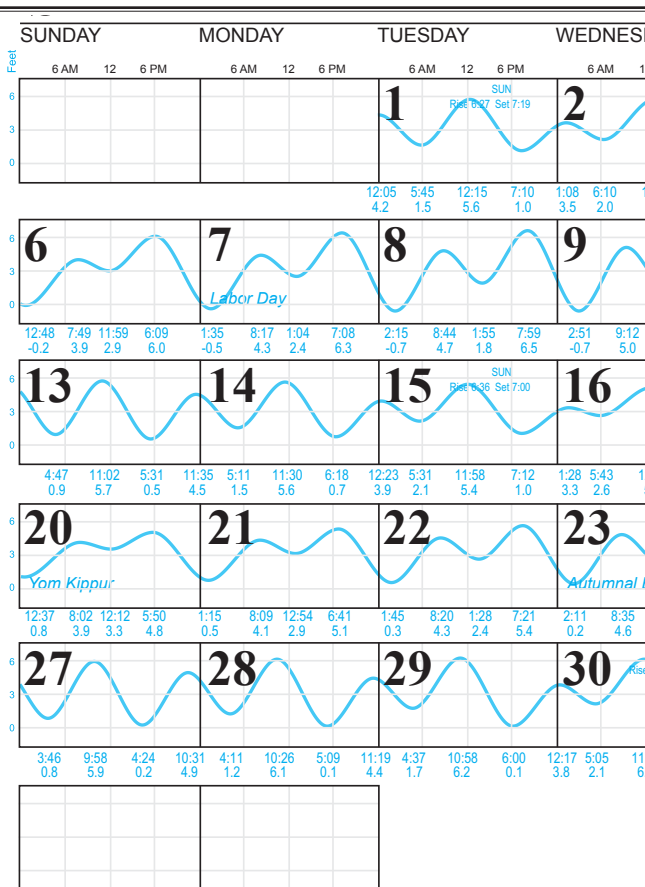
SEPTEMBER

S	M	T	W	T	F	S
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12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

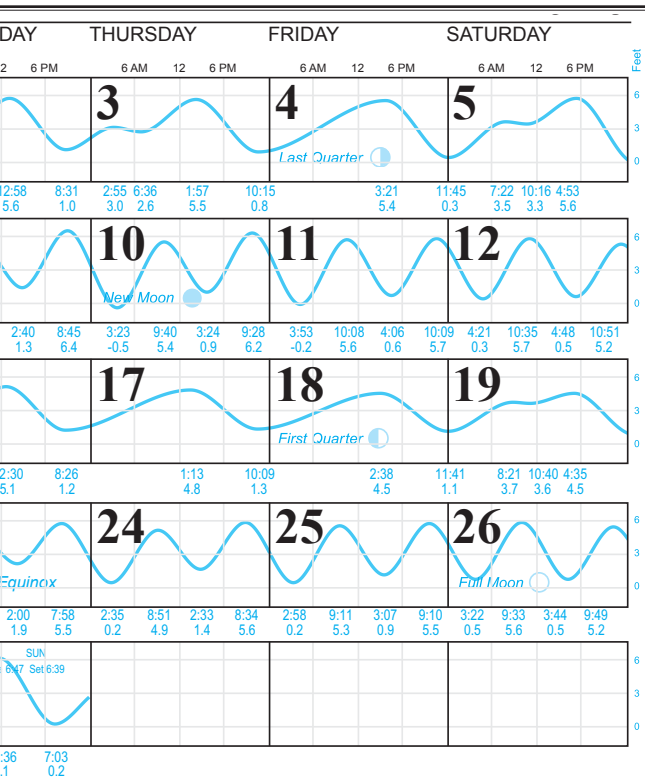
Tide Tables

LOS ANGELES
(Outer Harbor)
CALIFORNIA

Times and Heights of
High and Low Water
(heights in feet)



September 2026



AUGUST

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

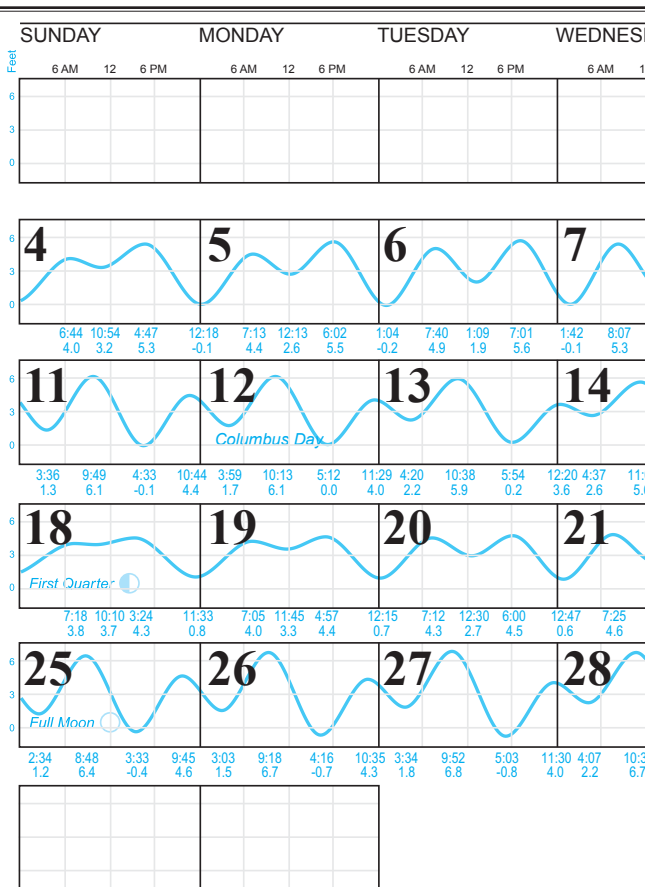
OCTOBER

S	M	T	W	T	F	S
						1 2 3
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11	12	13	14	15	16	17
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25	26	27	28	29	30	31

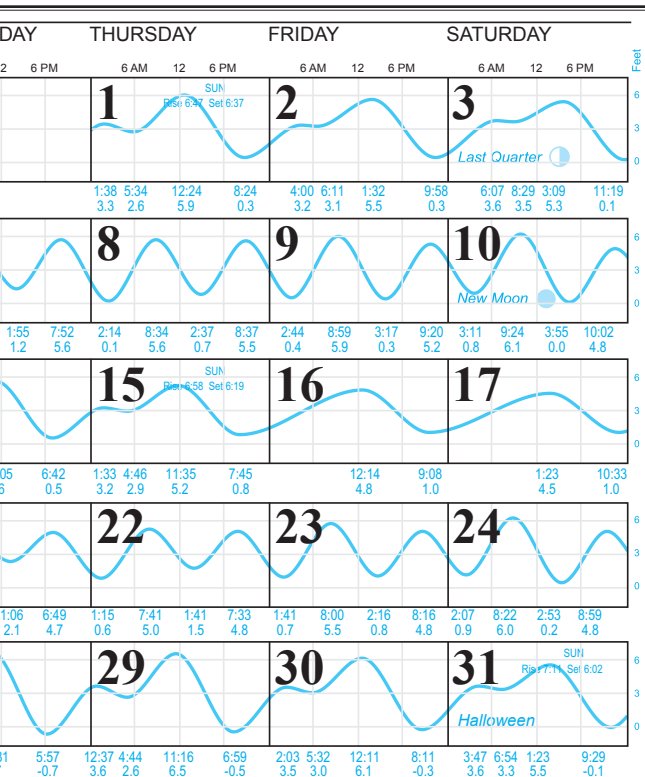
Tide Tables

LOS ANGELES
(Outer Harbor)
CALIFORNIA

Times and Heights of
High and Low Water
(heights in feet)



October 2026



SEPTEMBER

S	M	T	W	T	F	S
	1	2	3	4	5	
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

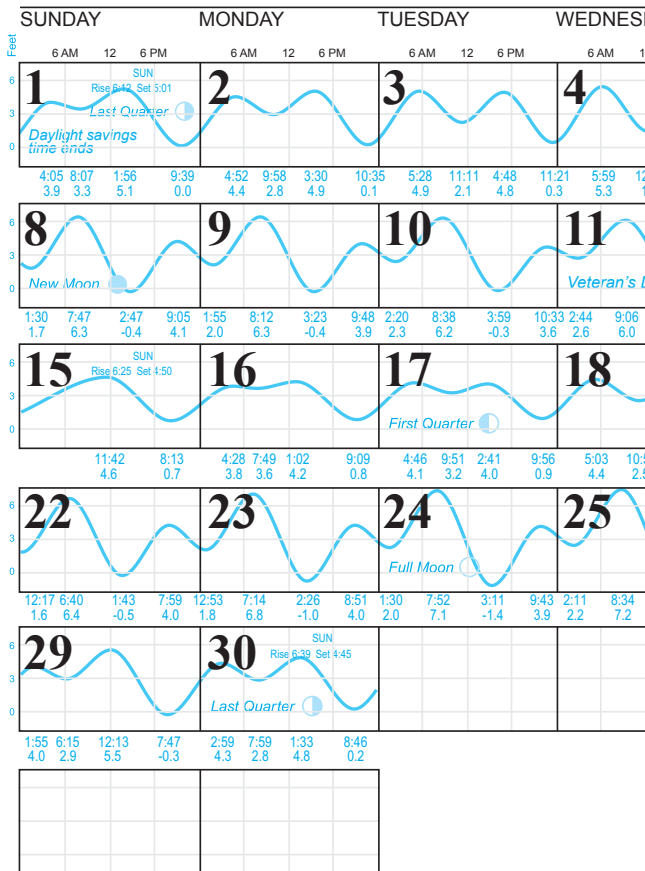
NOVEMBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
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29	30					

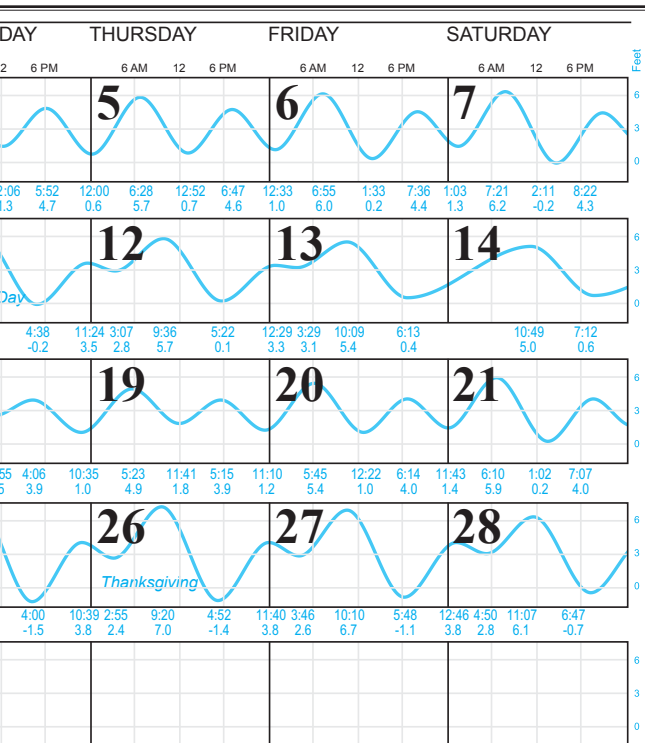
Tide Tables

LOS ANGELES
(Outer Harbor)
CALIFORNIA

Times and Heights of
High and Low Water
(heights in feet)



November 2026



OCTOBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

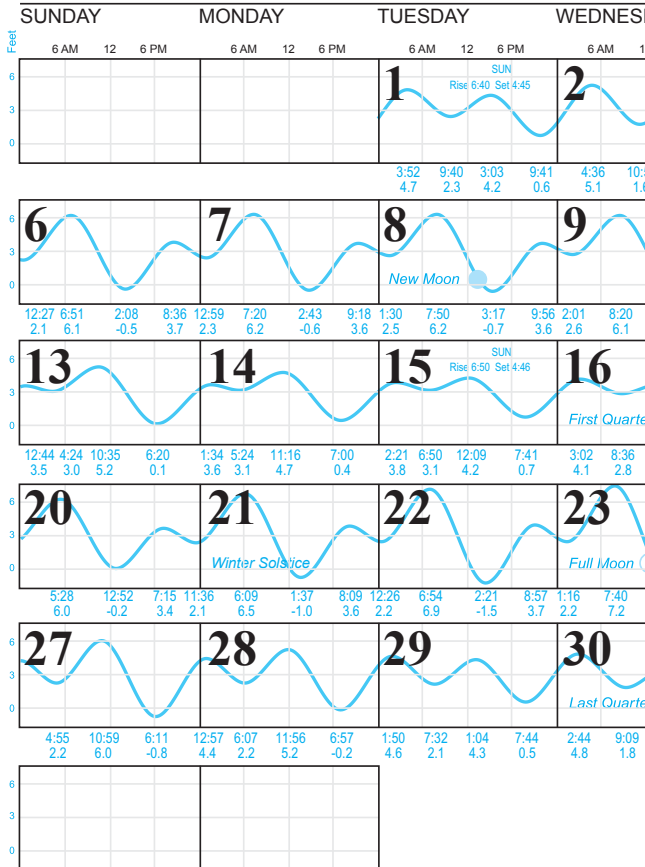
DECEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
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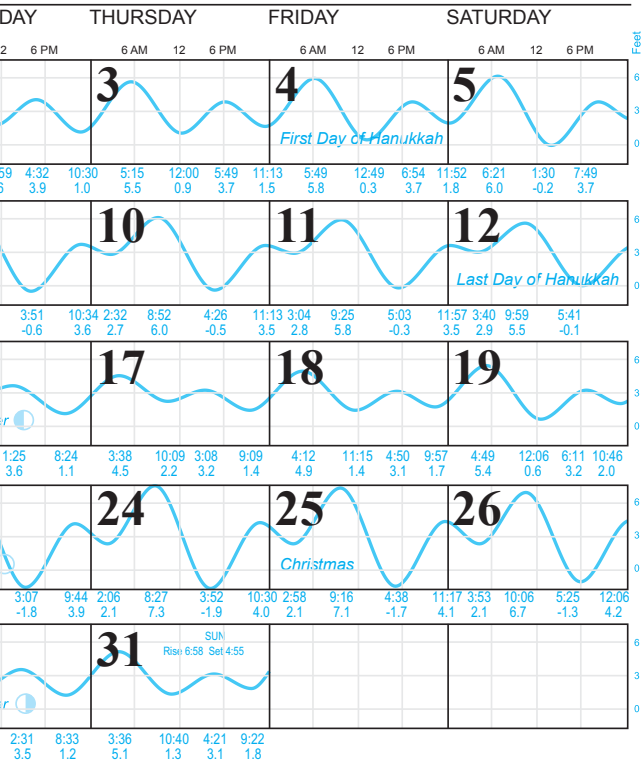
Tide Tables

LOS ANGELES
(Outer Harbor)
CALIFORNIA

Times and Heights of
High and Low Water
(heights in feet)



December 2026



NOVEMBER

S M T W T F S
 1 2 3 4 5 6 7
 8 9 10 11 12 13 14
 15 16 17 18 19 20 21
 22 23 24 25 26 27 28
 29 30

JANUARY 2027

S M T W T F S
 1 2
 3 4 5 6 7 8 9
 10 11 12 13 14 15 16
 17 18 19 20 21 22 23
 24 25 26 27 28 29 30
 31

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NOTES

NOTES

THE PORT OF LOS ANGELES



Port of Los Angeles

425 S. Palos Verdes Street, P.O. Box 151

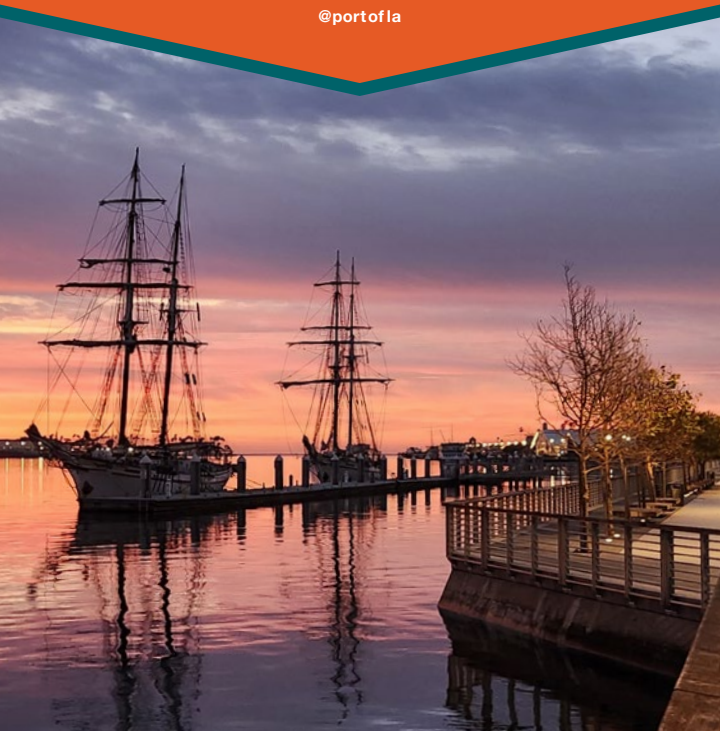
San Pedro, California 90733-0151

Tel/TDD: (310) SEA-PORT

portoflosangeles.org



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