



## TIDE INFORMATION

On the east coast of North America there are normally two high and two low tides each lunar day, called a **semidiurnal** tide. The tide clock movements used in Coastal Tide Clocks products are semidiurnal and will rotate every 12 hours and 25 minutes, or twice each day. In other areas, such as the Pacific Coast, the west coast of Florida, and the Gulf of Mexico, tides are diurnal or mixed, making Coastal Tide Clocks products inaccurate in these locations. Our tide clocks work in all areas marked in **GREEN** on the above map.

Tides are the alternating rise and fall of sea level with respect to land, as influenced by the gravitational attraction of the moon and sun. cTc tide clocks will stay in step with the moon, as the moon has the dominating effect on the Earth's tides. However, the sun also generates considerable tidal forces at the time of the new or full moon when the sun, moon, and earth are in alignment creating the effect of extra-high tides and very shallow low tides. Additional factors that influence day-to-day tide times and heights in your area are barometric pressure, onshore winds, shapes of bays and inlets, coastline configuration, and local water depth. Coastal Tide Clocks products are designed to be used as an additional instrument to gauge your tides.

**If an exact tide time is of the essence or if your safety is at risk, please do not rely on this instrument.**

## TIDAL PERIODS

- No two places have identical tidal curves, but tides everywhere have a fundamental period of 24 hours and 50 minutes, the length of time between successive passes of the moon overhead.
- Tidal day = 24 hours 50 minutes (vs. solar day = 24 hours)
- Tidal period = length of time between successive high or low tides
- Tidal periods at all locations on earth are either 24 hours 50 minutes or 12 hours 25 minutes

## TYPES OF TIDES

The NOAA education website states three basic tidal patterns occur along the Earth's major shorelines. In general, most areas have two high tides and two low tides each day. When the two high and the two low tides are about the same height, the pattern is called a semi-daily or **semidiurnal** tide. This pattern is typical of the East Coast of the United States. If the high and low tides differ in height, the pattern is called a **mixed semidiurnal** tide. The U.S. West Coast, as well as the Gulf Coast of Florida from the Keys to Apalachicola, Florida, has mixed tides. These tides are not simply related to passage of the moon overhead. Some areas, such as the Gulf of Mexico, West of Apalachicola, Florida, have only one high and low tide each day, called a **diurnal** tide.