

TIDES OF THE PACIFIC COAST.

On the Pacific coast, there is, as a general rule, one large and one small tide during each day; the height of two successive high-waters occurring one A. M., the other P. M. of the same twenty-four hours, and the intervals from the next preceding transit of the moon are very different. The inequalities depend upon the moon's declination; they disappear near the time of the moon's declination, being nothing, and are greatest about the time of its being greatest. The inequalities for low water are not the same as for high, though they disappear and have the greatest value at nearly the same times.

In *Puget Sound*, the inequalities for the interval of high water and for the height of low water follow this rule, but those for the interval of low water and height of high water disappear about one day before the moon's declination is greatest, and are greatest about four or five days before the greatest declination.

When the moon's declination is north, the highest of the two tides of the twenty-four hours occurs at *San Francisco* about eleven and one-half hours after the moon's southing (transit), and when the declination is south, the lowest of the two high tides occurs about that interval. The lowest of the two low waters of the day is the one which follows next the highest high water.

To obtain the times of high or low water for *Monterey*, *South Farallone*, *Mare Island*, *Benicia*, *Ravenswood*, and *Bodega*, find the time for *San Francisco*, then subtract 1 h. 44 m. for *Monterey*, 1 h. 29 m. for the *South Farallone*, and 49 m. for *Bodega*; and add 34 m. for *Mare Island*, 1 h. 4 m. for *Benicia*, and 80 m. for *Ravenswood*.

For *Humboldt Bay*, *Port Orford* and *Neeah Bay*, find the time for *Astoria*, then subtract 40 m. for *Humboldt Bay*, 1 h. 16 m. for *Port Orford*, and 9 m. for *Neeah Bay*.

For *Steilacoom* and *Semiahmoo Bay*, find the time for *Port Townsend*, and add to it 57 m. for *Steilacoom*, and 1 hour for *Semiahmoo*. The approximation will only be a rough one for *Steilacoom*.