



A Guide to Tides and Tidal Currents Predictions

For Interactive Predictions for Tides and Currents:

See CO-OPS <https://tidesandcurrents.noaa.gov/> click [Map] select and click state, center map and zoom in. On right menu Require Type [Tide Predictions] or [Current Predictions]

Select pushpin (Harmonic Station) or white square (Substation)
For Substations, see offsets and reference station.

Definitions and Notes:

CO-OPS: Center for Operational Oceanographic Products and Services
ODIN: Observational Data Interactive Navigation
[x]: Note x, found at end of document

Reference Master Documentation (NOAA Tables are basis for all other commercial products):

Tide Tables {for year} yyyy, Tables 1,2,3,4 et.al. [2]
Tidal Current Tables {for year} yyyy, Tables 1,2,3, et.al. [2]

Process for Prediction of Tide & Currents

Step 1, get the “Harmonic” Station Prediction from (any of the following);

- CO-OPS ODIN (Interactive Map) [01]
- Table 1 [02]
- App(lication)s & Tables (various printed, PC & smart phone) [03]
- Logs (Limited Area but most relevant data) [04]
- Annual Publications [05]

Step 2, get Subordinate Station Corrections from (any of the following;

- CO-OPS ODIN Graphical for Tides & Currents, Numerical for Tides Only)
- Table 2 [02]
- App(lication)s (Typically via GPS reference to nearest Subordinate)
- Logs (Limited Area) [04]
- Annual Publications [05]

Step 3, Estimate Tidal Data Within Cycle When Required;

- Table 3 (and Est of Slack Duration for Currents Table 4) [02] Part of Table 2
- Tide Height: One-quarter One-tenth rule, Rule of 12ths,
- Current Speed: 50/90 Rule

Step 4, Understand and Account for Localized Effects (Local Knowledge & Notices)

- Known Changes in Bathymetry
- Documented Channel Restrictions

Step 5, Be Prepared to Understand and Adapt to Weather Impacts such as;

- Wind
- Precipitation
- Drought

Notes:

[01] Google: NOAA Tides and Currents or <https://tidesandcurrents.noaa.gov/>

[02] Current year, in tabular form for \$90, past years free to download

[03] Nominal or free, most without current and limited corrections for substations

[04] e.g. Tidelog.com @ \$16/yr,

[05] Publishers List @ NOAA Tides Prediction FAQs Q#19, typically \$20 up

Use of Obsolete Data:

Although past year's Table 1 actual tide and current data cannot be used for prediction, Table 2 tends to remain relatively constant. Changes due to addition and removal of subordinate stations are relatively rare.