

NCEI Use Case for the *Benefits of Ocean Observation Catalog (BOOC)*

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Product Name: Coastal Water Temperature Guide

Website: <https://www.ncei.noaa.gov/products/coastal-water-temperature-guide>

1. Sources and type of data and information used

- Near real-time temperatures are from NOAA's National Ocean Service (NOS) [tidal stations](#) and [Physical Oceanographic Real-Time System \(PORTS®\)](#).
- Recent and near real-time water temperatures are also from NOAA's National Data Buoy Center ([NDBC](#)) moored buoys.
- Daily Averaged Sea Surface Temperature (SST) is from NOAA NCEI's [1/4° Daily Optimum Interpolation Sea Surface Temperature \(OISST\)](#) data set. It is a blended SST file of buoy, ship, Argo, and satellite observations.

2. Transformation into an actionable information service

The CWTG utilizes an Esri-based GIS map to create an intuitive format for accessing data from about 300 stations across the United States and its territories. These stations allow the user to compare the area's current ocean temperature to past averages and to view other information collected by each station. In addition to water temperature, you can click through to the stations, which collect data on water levels, air temperature and pressure, wave heights, and wind speed. The addition of a sea surface temperature climatology layer fills in the water temperature gaps between physical stations. The Coastal Water Temperature Guide access portal includes:

- [Near real-time water temperatures on a GIS map](#)
- Daily Averaged Sea Surface Temperatures (SST)
- [Table of monthly averages](#)

3. Describing the Benefits

[NCEI News article](#)

The CWTG provides an easy-to-use interactive map with recent ocean and Great Lakes temperatures. Swimmers, boaters, surfers, beach-goers, and anglers all use the guide for various reasons, and while mostly for recreational purposes, the usage increases during times of hurricane activity due to the effect that ocean temperatures have on hurricane strength. Scientists can also use the CWTG for invasive species determination or hypothermia estimates, as well. The CWTG also enables users to see the effects of short-term influences on ocean temperatures. Certain events can influence the temperature of coastal waters, such as upwelling, changes in weather and river runoff. A feature that makes it stand out from its many uses of real-time Water temperatures are the calculated monthly means, which allows users to plan recreational decisions in advance.