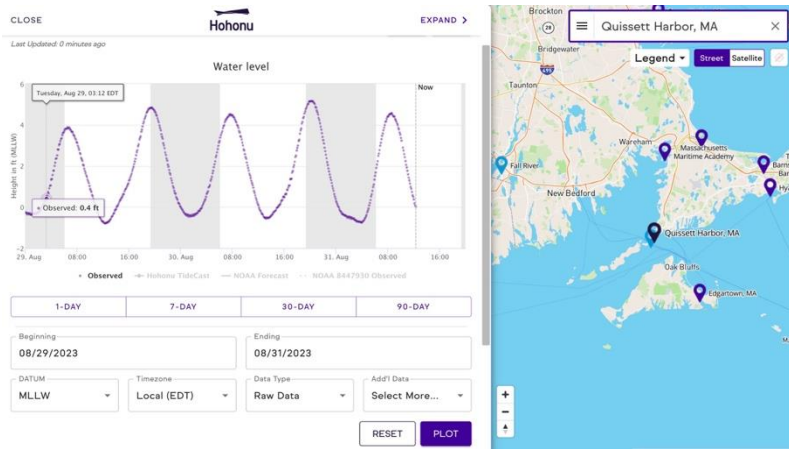


Quissett real-time sea level monitoring to inform community-level action

Coastal communities need accurate, reliable, and accessible information on tides, particularly as they confront changing sea levels and need to adapt to flooding events. However, Federal gauges are spread out on the U.S. coastline, which leaves extensive areas in-between without precise predictions and real-time tracking of tide levels. With more local water level sensors, real-time information is now available 24/7 to everyone, from recreational boaters needing information to avoid groundings, to coastal planners whose marsh restoration efforts must consider changing water levels, as well as the destructive potential of hurricane storm tides.



Quissett can now compare our real-time water levels against defined thresholds to inform actions and decision-making such as closing roads, moving cars, or sending alerts, such as when Quissett Harbor Road begins to flood.

In addition to these community-level actions, having more measurements of water levels along the coastline (and the data being shared with NOAA and others) is helpful to check if NOAA models of flooding and long-term sea level change are accurate. Quissett is now part of a growing network of sensors around Buzzards Bay and the region. Tabor Academy in Marion also has an installation.



The water level sensor (left) aims ultrasonic sound pulses at the water's surface. It measures the time that it takes to detect the echo from each pulse and from this it can measure how far away the water surface is, and hence calculate the water's height. This means millimeter accuracy (enabled by NOAA-grade Quality Assurance) on every data point. The manufacturer takes care of sensor calibration,

maintenance, and data delivery. As the database grows, plans are being made to undertake more extensive data analytics.

