Use Cases and Effective Communication

- NOAA data scrape
- Tampa Bay community mapping efforts

NOAA data scrape

In 2025, NOAA Hydrographic Systems and Technology Branch, in collaboration with University of New Hampshire Center for Coastal and Ocean Mapping, and the IHO Data Center for Digital Bathymetry, began investigating operationalization of CSB data for safety of navigation applications. Early research indicates that CSB data, when corrected for vessel sensor offsets and tidal heights, can be used to inform chart updates and danger to navigation (DTON) reports. A research project is underway to automate this processing of CSB data to provide a map service of corrected CSB data for use in various applications.

Tampa Bay community mapping efforts

NOAA’s hydrographic health model is a risk-based framework that evaluates the safety of navigation by combining factors such as ship traffic, records of groundings, the quality and age of existing data, and the rate of seafloor change. The model produces a “hydrographic health score,” which highlights areas where re-surveying may be most critical. In Tampa Bay, Florida, CSB data collected by the University of South Florida Center for Ocean Mapping and Innovative Technologies' (COMIT) ‘Crowd the Bay’ program revealed southward shoal movement in Bunces Pass. This shoal migration was not reflected on existing NOAA charts but was confirmed in NOAA’s BlueTopo product. Bunces Pass is a heavily transited tidal inlet that experiences frequent sediment exchange and shoaling – creating potential hazard for vessels and underscoring the importance of updated depth information on navigational charts. By contributing timely depth data, CSB could help NOAA’s hydrographic health model capture the likelihood of incidents and identify areas that require updated surveys or ENC revisions, ultimately improving efficiency and navigational safety.