

- **Monitoring Climate Change** — 200 years of careful operation of the tide and water level station network around the US coast and Great Lakes has yielded historical data that helps us understand trends in sea level rise, the impact of coastal storms and El Nino type events, and the impact of long-term water level fluctuations in the Great Lakes.

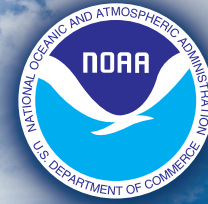


CO-OPS combines its trademark reliability and proven approaches to oceanographic measurement with visionary ideas that anticipate and respond to customer needs. By listening to its customers, CO-OPS documents user requirements and sets the standards for data collection, processing, and analysis. It adds value by integrating data products with practical applications that represent the total solution. CO-OPS' commitment to innovation is realized through the development of new and improved oceanographic observing systems to meet emerging needs and strengthen day-to-day operational activities.



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## CENTER *for* OPERATIONAL OCEANOGRAPHIC PRODUCTS *and* SERVICES (CO-OPS)



[www.tidesandcurrents.noaa.gov](http://www.tidesandcurrents.noaa.gov)



**F**or 200 years CO-OPS and its predecessors have gathered oceanographic data along our nation's coasts and turned those data into meaningful information to protect life, property, and the environment. Serving both the public at large and other government agencies, CO-OPS is the authoritative source for accurate, reliable, and timely water level and current measurements that support safe and efficient maritime commerce, sound coastal management, and recreation. The collective knowledge and experience of CO-OPS' technicians, scientists, and engineers working to carry out this mission has created a *center of expertise* for coastal physical oceanography. Guided by the principles of science, service, and stewardship, CO-OPS is at the center of NOAA's vision for *an informed society that uses a comprehensive understanding of the role of the oceans, coasts and atmosphere in the global ecosystem to make the best social and economic decisions.*

CO-OPS' mission of collecting, analyzing, and communicating oceanographic information is as relevant today as it was 200 years ago. CO-OPS initiatives return significant benefits for people and communities whose livelihood depends on the coastal environment.

- Enhancing Navigation** — Over 95% of US international trade moves through U.S. ports and harbors. CO-OPS' products contribute to the nation's economic competitiveness, while reducing risks to life, property, and the coastal environment. For example, the Physical Oceanographic Real-Time System (PORTS®) helps mariners by integrating real-time environmental observations and forecasts. Similarly, CO-OPS Tide and Tidal Current Tables are used daily to plan voyages, while CO-OPS provides the reference for dredging and charting projects.



- Supporting Coastal Zone Management** — Armed with CO-OPS tide data and analyses, coastal zone managers and engineers are well-equipped to plan and successfully accomplish beach renourishment and marsh restoration projects, as well as to guide coastal development risk assessments and land-use planning.

- Assisting Coastal Hazard Mitigation** — From monitoring storm tide, to providing information for tsunami detection and warning, to distributing real-time data for search-and-rescue or oil-spill clean up operations, CO-OPS provides time-critical information that impacts the nation's ability to prepare for and confront coastal hazards.

