

CO-OPS External Evaluation Process

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IOOS Advisory Committee Public Meeting
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Purpose:

The Center for Operational Oceanographic Products and Services' (CO-OPS) recently underwent our first ever External Review. Our goal was to receive an independent, third-party assessment of the quality, relevance, and performance of CO-OPS' products and services that serve the broader marine navigation community; inputs on CO-OPS' unique risks and challenges that can be used to better position the program in the future; assistance in prioritizing competing program priorities and allocation of resources; and insights into CO-OPS' strategy and success in achieving its mission. The External Review Panel Members were invited to examine the following three themes and make recommendations:

1. **Theme 1, CO-OPS Observing Systems:** CO-OPS maintains an extensive coastal ocean observation infrastructure, including more than 200 long-term water-level stations on the U.S. coasts and Great Lakes, an integrated system of real-time sensors concentrated in busy seaports, and temporary current meters that collect observations for tidal current prediction updates. These systems provide the foundation for historical and real-time data, predictions, forecasts, scientific analyses, and decision support tools that protect life, the economy, and the environment on the coast.
2. **Theme 2, CO-OPS Maritime Products and Services:** CO-OPS provides:
(1) oceanographic predictions, real-time observations, and forecast guidance to support safe and efficient marine navigation and other associated commercial and recreational activities; and (2) tidal and Great Lakes datums and other water-level products that support accurate coastal mapping, nautical charts, and marine boundary determinations.
3. **Theme 3, CO-OPS Future Directions:** CO-OPS seeks input that can help position CO-OPS for the future; assist in prioritizing competing program priorities and allocation of resources; and enhance CO-OPS' reach to underserved communities.

Review Panel:

To form a panel, CO-OPS invited experienced professionals, leaders and information users who represent federal and non-federal affiliations, multiple areas of scientific expertise, and a variety of stakeholder groups. While Panel Members brought significant expertise and experience, no single Panel Member was expected to bring comprehensive knowledge of the material specified in this Charge. Rather, the Panel Members were invited based on individual expertise and

experience such that their collective wisdom completely addressed the scope of the requested evaluation. The panel members were:

1. Captain George Haynes - Lake Pilots Association
2. Captain Greg Hitchen - U.S. Coast Guard - Vessel Traffic Service Director (New York)
3. Nicole Kinsman, Ph.D. - NOAA - National Geodetic Survey, Alaska Regional Advisor
(*Panel Chair*)
4. Gerald Kunkle - U.S. Geological Survey - Instrument Evaluations Chief
5. Captain Carolyn Kurtz - Tampa Bay Pilots Association
6. Joyce Miller - University of Hawai'i (retired)
7. Josie Quintrell - IOOS Association

Criteria:

Based on CO-OPS' history—including its mandates and current organizational structure and budget—the Panel Members were charged to provide an independent assessment of the quality, relevance, and performance of (Theme 1) CO-OPS Observing Systems; and (Theme 2) CO-OPS Maritime Products and Services, where quality, relevance, and performance are defined as follows:

1. **QUALITY** is a measure of the accuracy, reliability, timeliness, and completeness (e.g., coverage/gaps and frequency) of CO-OPS' delivery of oceanographic observations and associated products and services. Quality also reflects CO-OPS' scientific and technical approach to its mission, including its approach to sustainability and modernization.
2. **RELEVANCE** serves as a measure of the value and significance of CO-OPS' observations and associated products and services are given the organization's mandates, and the direct and indirect benefits to stakeholders and broader society. In this context, relevance refers to the "impact" of a program (e.g., measurable analysis of how CO-OPS' observations and associated products and services accrue societal benefits, as well as who is using products and how).
3. **PERFORMANCE** is a measure of the effectiveness and efficiency of CO-OPS' overall service delivery (e.g., observations and associated products and services), and includes: (1) how current program management structures are informed by stakeholder input and feedback; (2) the use of mutually beneficial partnerships; and (3) its approach to innovation.

Conducting the review:

- Planning for the review began in the Spring of 2022 and the panel began its work in August. CO-OPS engaged a contractor to help us develop slide decks and read-ahead

material to share with the panel. The panel met several times to review all the materials and develop their questions. Not counting the initial planning, executing the external review took four months of intensive work.

- The panel met virtually with CO-OPS on the afternoons of 11, 26 and 27 October 2022. CO-OPS subject matter experts provided presentations and the panel asked questions. Then the panel met in closed session to discuss their findings and recommendations.
- A final report will be provided to CO-OPS in late December.

Lessons Learned:

- Hiring a contractor with a lot of experience in facilitating external reviews was a great help and saved CO-OPS considerable time and heartache.
- Having an organized and highly energetic chair was critical to making the review successful.
- The exercise of “telling our story” and developing a set of slides to articulate what we do and what we need was very helpful. Many CO-OPS members were engaged in the review process and appeared energized by the experience. The review was a beneficial exercise regardless of the final report.
- It was important that our first review be reasonable in scope and include only those activities under CO-OPS’ direct control. We see value in future reviews where mission accomplishment requires coordination with other program offices (e.g. coastal modeling; products and services to support coastal resilience).
- Virtual panel meetings seemed to work well and were cost effective.
- CO-OPS prioritized geographic and professional diversity in its panel. Other aspects of diversity are also important and should be taken into account depending on the subject matter. The panel members raised issues of diversity and equity a number of times; this is clearly a concern in the maritime community that we serve.
- It helped that our panel was a reasonable size and that it included a NOAA employee. Seven panel members allowed a good balance of focus and diversity and including a NOAA member helped steer the panel away from recommendations that would be unworkable.