

CA Estuaries Workgroup

Triennial Audit 2010-1013

Background

The California Estuaries Monitoring Workgroup (CEMW) was established in December 2010. The CEMW developed Roles and Responsibilities in December 2011 and established a Charter in June 2012. The main mission of the CEMW is to enhance existing estuarine resource monitoring, assessment and reporting efforts. The CEMW endeavors to improve the monitoring, assessment, and reporting of estuarine resources by increasing cooperation, coordination, and collaboration among local, state, and federal agencies, tribes, and non-governmental organizations involved in the monitoring of water quality and ecosystem health of California's estuaries. Two focal products of the CEMW are the Estuaries Workgroup Website that was started in 2011, a password-protected virtual world for scientists to analyze data and develop stories to be presented on the Estuaries Portal and elsewhere, and the Estuaries Portal that was launched in October, where information about the health of CA's estuaries is displayed for general consumption as well as access to the data used in those presentations.

Monitoring Program Elements

Strategy, Objectives, Design

The Estuaries Portal is currently focused on the San Francisco Estuary (SFE), populated as a pilot, with the intention to expand statewide. Because the SFE section was the pilot, it will act as a template and framework for additional estuaries to follow as they are incorporated, recognizing the SFE "template" may not be the best or applicable in all cases for other estuaries. It follows core questions of, "What is it and why is it important, How and where is it monitored, What are the trends, and What's being done about it?" as applied to various topics that relay information about the health of an estuary (e.g., phytoplankton, benthics, zooplankton). Those core questions are organized by five key attributes (Water, Habitat, Living Resources, Ecological Processes, and Stewardship), and the amount of technical detail found in answering those questions increases as a person ventures into the site (public focus in the first couple levels, with increasing data and technical information for those more interested in specifics).

Rating: Medium The organization of the Portal and content to be developed have a pretty strong grounding, but we lack much of the documentation that would aid in consistency and broader understanding of the path as understood by the core group. Coordination with many groups has been established or identified, and different pieces are geared toward different audiences. The structure leaves placeholders and a framework for additional estuaries to be brought in. The objectives and design will continue to be refined and are likely to become more developed as there is more involvement from scientists working in other CA estuaries. The current challenge is bringing in new partners from other estuaries and ensuring their participation.

Indicators and Methods

We rely on the participation of fifteen, currently contributing organizations to vet indicators and methods used in our assessments. We call on the organizations that generated the data to participate in the use and assessment of their data, which helps us know the quality of the data as well as have deeper understanding of groupings for assessments. Some of the major data suppliers we are working with (e.g., CEDEN, CDEC, and WQS) are SFE-centric, but others are statewide and nationwide sources. There are current plans to incorporate additional datasets, but funding to accomplish this is not yet sustainable.

Rating: Low Although we have a fair amount of coordination within Sacramento-San Joaquin Delta participants, we lack participation from other estuaries at this point. An additional challenge is getting data from other groups to enable broader, more robust analyses. Even when partners are willing, the disparate state of data sets is a real IT challenge.

Data Management

Data used by the CEMW are either data that have web services with our website, provide data batch uploads, or are published information. We rely on the documentation of the entities collecting the data and the databases they use (e.g., CDEC and CEDEN), and prioritize the use of data that is well documented with metadata and quality assurance measures. We've chosen to start with large data sources that are well coordinated. Because of the very different types of data used to evaluate estuarine health (i.e., blending fish health and abundance estimates with zooplankton health, abundance, and species composition with phytoplankton abundance, location, and composition with water quality data and GIS information) understanding limitations, minimizing assumptions, and determining the most useful ways to present the data have been a challenge. Not only are the types of data a challenge to work with, but the frequency in which it's collected also poses challenges.

Rating: Medium Although we have access to some of the larger data sources, we do not have full web services established, resulting in static figures on the Portal. Currently, our greatest limiting factor is financial support for additional web services to be established. Specific datasets we are currently focusing on in the SFE are the Interagency Ecological Program (IEP) fish survey datasets. Data in live presentations on the Portal can be directly downloaded and imported into software for data analysis. Management of data from other regions will have to be addressed as other groups with differing reporting requirements or formats present themselves.

Consistency and Assessment Endpoints

Currently, the Estuaries Portal is predominantly presenting trends that do not include much analysis, but in cases where averages or groupings are included in the trends, captions are included to let the reader know how they were derived. The captions act as documentation, but there has been little coordination between sections, primarily due to the wide variety of the types of data used. Future coordination with other estuaries will call for additional comparisons and possible adjustments to analyses performed. The Sacramento San Joaquin Water Quality Conditions Report is the first report the CEMW has incorporated into a fully functional and exploratory format. Plans to incorporate other reports in the area are under discussion, and we are mindful of assessments and endpoints that are commonly used across multiple groups. As other estuaries and groups are incorporated, consistency will be a focus where deemed appropriate.

Rating: Medium Validation of assessment tools has been internal to the group's participants at this point. Not only has the Portal been live since October 29th, but it's also been presented at four different scientific conferences as work has progressed.

Reporting

The Estuaries Portal is a continual work in progress with the last date each page was updated stamped at the bottom of each page. Many of the graphs are live graphs that get updated automatically, as new data is loaded via web services and this also allowed the graphs to be dynamic, and augmented to the reader's interest. Readers can also download the data and use it in their own analyses. All static information (e.g., photos and tables) references the source, so the reader can contact the source for additional information. In addition, we have a staff person dedicated to overall look and feel issues and publically friendly language across the entire Portal. It is the intent of the CEMW to ensure that all data and analyses presented are done so in plain language without jargon, sources are credit, and metadata is included to enable users to have confidence in what was used and how. Transparency is paramount.

Rating: Medium Not all of our data is fully automated, but we are striving to make it so.

Program Sustainability

We are in the process of formalizing many of our group's roles and interactions, coordination and tools for implementation. We are in the middle of developing a Strategic Workplan to guide both short-term and long-term goals of the workgroup. We continually reach out to others to financially support IT services as well as provide staff time to develop Portal pages. Currently, there is coordination with IEP and the Delta Science Program to explore avenues of cost-sharing and enhancement of collaboration for sustained participation. We use scientific conferences and press releases to promote our efforts, and we have plans to pursue local partners and possible grant funding to enable more balanced and sustainable participation.

Rating: Low We are a relatively young workgroup, and are in the middle of our first internal review as part of developing our Strategic Plan. We don't have reliable funding yet, but have been pursuing multiple options and continue to brainstorm needs and planning based on recent lessons learned.

Recommended Actions

- Additional documentation to improve communication and accountability of participants, also enabling people to pre-determine time and resource needs before committing.
- Carefully lay out guidelines for assessments and conflict resolution.
- Fully vet content as well as presentation before Portal pages are mocked up and IT funds are spent.
- Carefully plan and prioritize IT projects rather than implement as ideas come.
- Work closely with potential data sharers to better understand potential roadblocks before initiating data acquisition.
- Engage management earlier to ensure staff availability and commitment of time and participation. If not recognized as a priority, these efforts will fail.