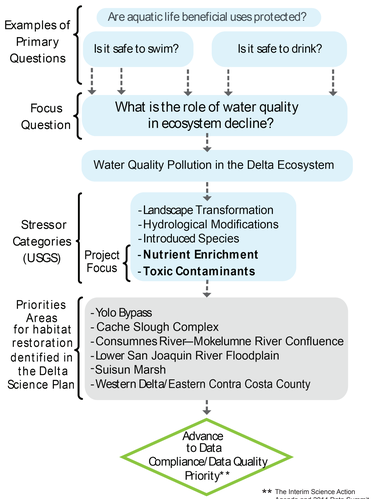
ESTUARY-WIDE DATA REPOSITORY

AUTHORS: Shakoora Azimi-Gaylon[1], Tony Hale[2], Rainer Hoenicke[3], Cristina Grosso[2], Kathryn Kynett[1]
1) Sacramento-San Joaquin Delta Conservancy 2) Aquatic Science Center/San Francisco Estuary Institute 3) Delta Stewardship Council, Delta Science Program

The Sacramento-San Joaquin Delta (Delta) is the backdrop for some of the most pressing water supply and natural resource management issues facing California. To navigate such matters comprehensively with transparency, and rigor, it is important to ensure broad dissemination of data to support the State's mandates for water resources and ecological management. In 2014, a Data Summit was held to discuss the vision for an open community of science with interoperability standards, state of the art data exchange and access tools, and the documentation to correctly interpret the data. To support this goal, the Sacramento-San Joaquin Delta Conservancy is collaborating with the Aquatic Science Center and Delta Science Program to integrate disparate data from multiple sources and legacy data that are currently not in any of the State's data sharing systems. This project is expanding the existing infrastructure to house water quality data from the Delta to address management questions. Ultimately, this makes it possible for data to be uploaded, aggregated and displayed in tools such as those created under the auspices of the California Water Quality Monitoring Council, such as EcoAtlas and the My Water Quality Portals. The project presents an opportunity to provide accurate, accessible, and synthesized data for scientists and decision-makers as a foundation to inform management actions with the best available science.

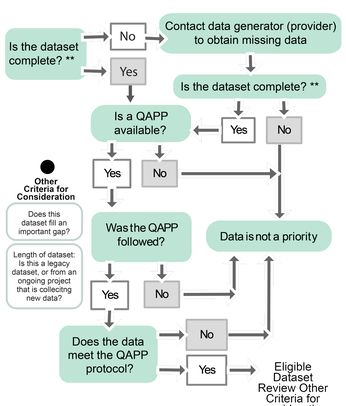
OBJECTIVES

- Expand the existing infrastructure to house water quality data from the Delta to address management questions
- Leverage established pathways for uploading and displaying data in tools such as the California Monitoring Council's My Water Quality Portals, the Contaminant Data Display and Download Tool (CD3), CEDEN's query tool and EcoAtlas
- Provide accurate, accessible, and synthesized data for scientists and decision-makers as a foundation for comprehensive management actions



DATA COMPLIANCE / DATA QUALITY

- Check priority data for completeness based on CEDEN's minimum data elements and the QAPP data quality objectives, or ensure standardized procedures were used
- Ensure data integrity by following CEDEN's business rules. The validity of geospatial data and accurate presentation will be ensured by contacting project managers to assist with the verification steps as needed.
- Ensure data remain comparable to state and federal standards for water quality data



CONTACT: shakoora.azimi-gaylon@deltaconservancy.ca.gov

SFEI AQUATIC SCIENCE CENTER | SACRAMENTO - SAN JOAQUIN DELTA CONSERVANCY A California State Agency | California Water Boards

BENEFITS OF AN ESTUARY-WIDE DATA REPOSITORY

cd3 — Generate charts and filter by area of interest – cd3.sfei.org

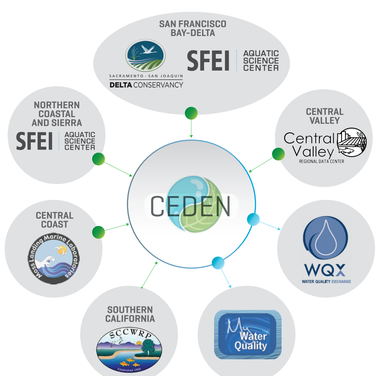
CEDEN — Access water quality data across the state – ceden.org

EcoAtlas — Aggregate multiple data sources at the landscape scale – ecoatlas.org

Water Quality — Explore data summarized by theme-based questions - mywaterquality.ca.gov

- Provides a central source for Delta water quality data that meets stringent state and EPA standards
- Uploads data to CEDEN and WQX
- Uses consistent business rules based on the state's Surface Water Ambient Monitoring Program (SWAMP)
- Ensures data remain comparable to state standards
- Represents an effective tool for communicating highly credible and relevant science needed to guide comprehensive policy solutions
- Uses visualization tools to share data from the Delta and accelerates the discovery and communication of new information
- Supports management actions to balance the coequal goals of a more reliable water supply and protecting the Delta ecosystem

PROJECT PHASES



- Convene engaged workgroup of scientists and resource managers to help set priorities for data collection
- Develop decision frameworks for how data will be prioritized based on how data address management questions and meet data quality/data assurance measures
- Prioritize datasets that address water quality pollution in the Delta ecosystem and focus on nutrient enrichment and toxic contaminants in priority habitat restoration areas
- Solicit and assemble data from authorized sources
- Establish a support framework—training, helpdesk, outreach materials—for data providers
- Ensure data integrity for all collected data
- Upload collected data to the California Environmental Data Exchange Network (CEDEN), a contributor to the US Environmental Protection Agency's (EPA) Water Quality Exchange (WQX)
- Create new web services for geospatial data

RELATED PROJECTS

Several other projects will also improve the accessibility of data and information:

- Expanding EcoAtlas to track and display habitat restoration projects in the Delta
- Integrating new visualization features for sharing data in EcoAtlas
- Coordinating a monitoring and data management strategy for the Delta RMP
- Displaying interactive factsheets for TMDLs in the Delta on the Estuaries Portal
- Developing watershed indicators by the Delta Watershed Initiative Network (Delta WIN)