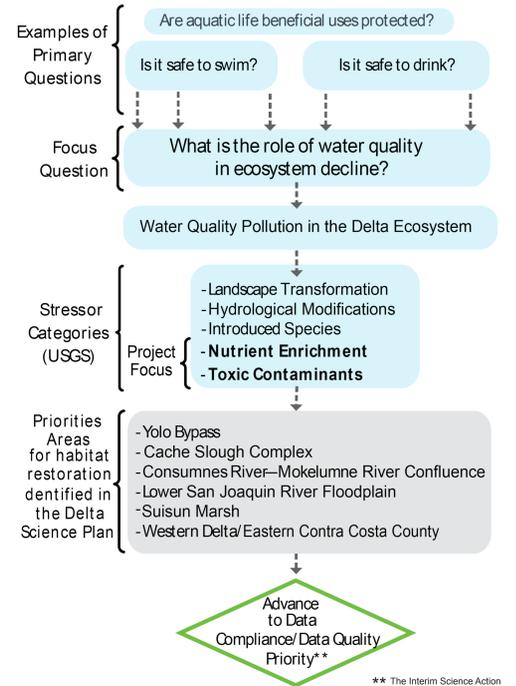


## OBJECTIVES

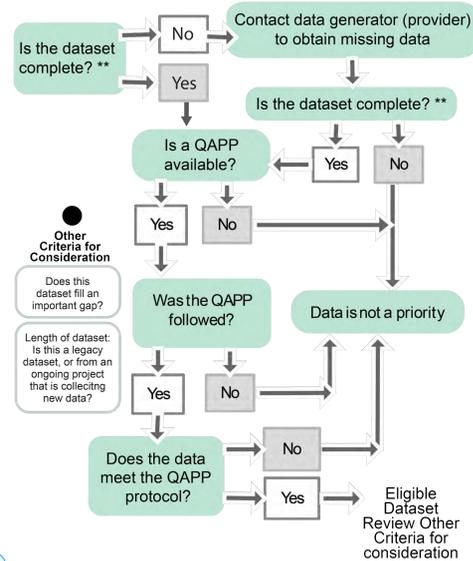
- ➔ Expand the existing infrastructure to house water quality data from the Delta to address management questions
- ➔ Leverage established pathways for uploading and displaying data in tools such as the California Monitoring Council's My Water Quality Portals, the Contaminant Data Display and Download 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



\*\* The Interim Science Action Agenda and 2014 Data Summit serve as operational drivers to improve data and information accessibility and exchange

## 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

# ESTUARY-WIDE DATA REPOSITORY

## for Delta Environmental Data to Understand a California Estuary

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

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. An Environmental Data Summit held in 2014 created a new era in information management and knowledge discoveries, and shed light on challenges associated with the use of disparate datasets.

The Delta Environmental Data for the Understanding a California Estuary (DEDUCE), a collaborative project, builds upon the Data Summit vision and initiated a forum to integrate disparate data from multiple sources and legacy data that are currently not in any of the State's data sharing systems. DEDUCE expanded the existing infrastructure to house water quality data from the Delta to address management questions by identifying and collecting high priority data according to rigorous business rules and mapping these data to a central system. This important step of harmonizing the data improves its interoperability and increases the access to and exchange of high-quality environmental data. DEDUCE facilitates the upload, aggregation and display of data in tools such as those created under the auspices of the California Water Quality Monitoring Council, including EcoAtlas and My Water Quality Portals, and CD3: Contaminant Data Display and Download tool for accessing and visualizing data comparable to State standards.

DEDUCE achieved collecting and uploading the legacy and toxic contaminant data, and established design standards to exchange future datasets from the initial data storage or database to California Environmental Data Exchange Network (CEDEN). This data integration effort created accurate, accessible, and synthesized data for scientists and decision-makers as a foundation to inform management actions with the best available science.

## PROJECT PHASES

- ➔ Identified priority datasets that address water quality pollution in the Delta ecosystem and focus on nutrient enrichment and toxic contaminants
- ➔ Established a support framework—training, helpdesk, outreach materials—for data providers
- ➔ Ensure data integrity for all collected data
- ➔ Create new web services for geospatial 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)

## 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

**My 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

