Data Life Cycle

Samples are collected by 4 agencies at 6 sites over the course of a water year from Oct. 1 - Sept 31.

Sample collection information is submitted to SFEI in a required template.

Each collection template includes built-in data validation, and every agency receives training and documentation about the template's use.

Samples are shipped to up to 8 different labs and analyzed for 280 analytes which include Mercury, PCBs, SSC, TOC, and nutrients.

Results are submitted by the labs to SFEI in a standardized template, referred to as an an Expected Data Deliverable (EDD), within 30 days of sample collection. The EDDs are

uploaded to the project database. Preliminary results are made available to project stakeholders through a custom Data Review and Access tool.

Once all samples have been collected and results received, samples are formatted using standard

> business rules and controlled vocabulary approved by the California Environmental Data Exchange Network (CEDEN).

Results are internally reviewed according to the projects QA/QC protocol and are evaluated for accuracy, completeness, contamination, precision, and sensitivity.

Finalized results are reviewed by project stakeholders and, once approved, are made available to the public through the CEDEN Advanced

WINTER STORMWATER SAMPLING:

Data Management Challenges and Solutions

Authors: Amy Franz, Adam Wong, Jen Hunt and Cristina Grosso http://www.sfei.org/NWQMC-Stormwater-Sampling

PROJECT BACKGROUND

San Francisco Estuary Institute (SFEI) has been leading a multi-year stormwater monitoring project within the San Francisco Bay area, fulfilling monitoring requirements under the Municipal Regional Stormwater Permit. The sampling design requires collection of stormwater samples by four agencies at six sites for up to 7 storm events throughout the wet season. This scope provided data management challenges in managing field and laboratory data transfer and storage, as well as facilitating communication and progress tracking between our various partners. These challenges were addressed by developing a communication plan with all parties involved, designing a project oriented database, and developing tracking systems and data access tools to support internal and external needs. Results are validated, uploaded to a centralized database, and made available online for project funders and the public.









In 2013

Data managment team had 125 discrete collaborative communication points for this project.

DATA DELIVERABLES

Chain of Custody (COC) Tool

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Chain of Custody

4-SunCh-2011 2014-02-26 16:10:00 2014-02-26 16:10:00 Grab

14-SunCh-2013 2014-02-26 16:10:00 2014-02-26 16:10:00 Grab 1

14-SunCh-2030 2014-02-26 16:48:00 2014-02-26 16:48:00 Grab 1 14-SunCh-2031 2014-02-26 17:06:00 2014-02-26 17:06:00 Grab 1

Lab

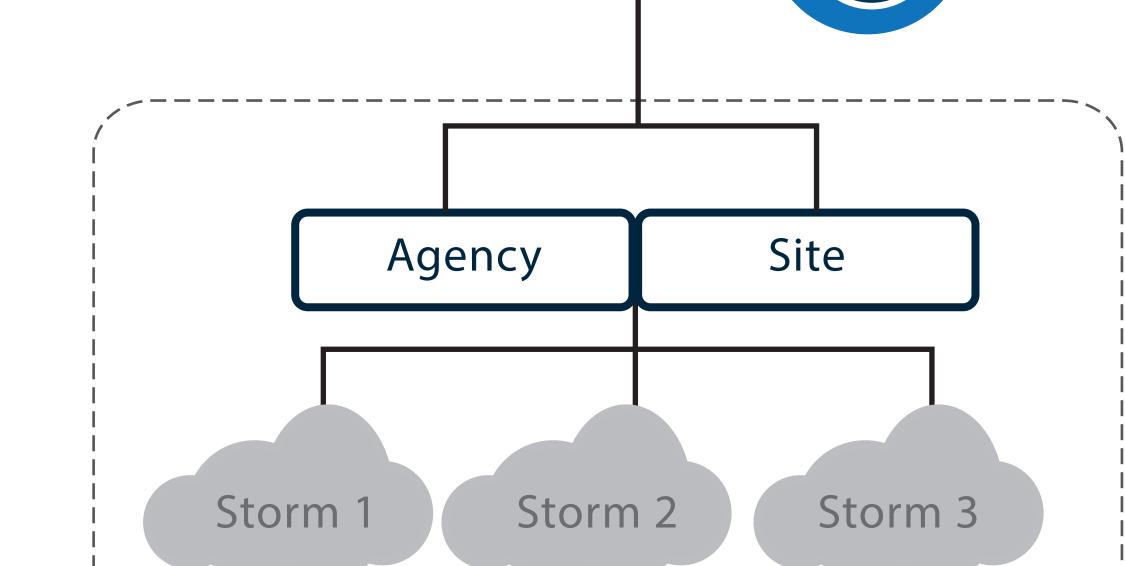
Collaborative communication includes sending EDD template, receiving data, and corresponding on questions about data.

Municipal Regional Permit



Sampling Plan

Documentation is maintained for data management of the project



Field Datasheet Template



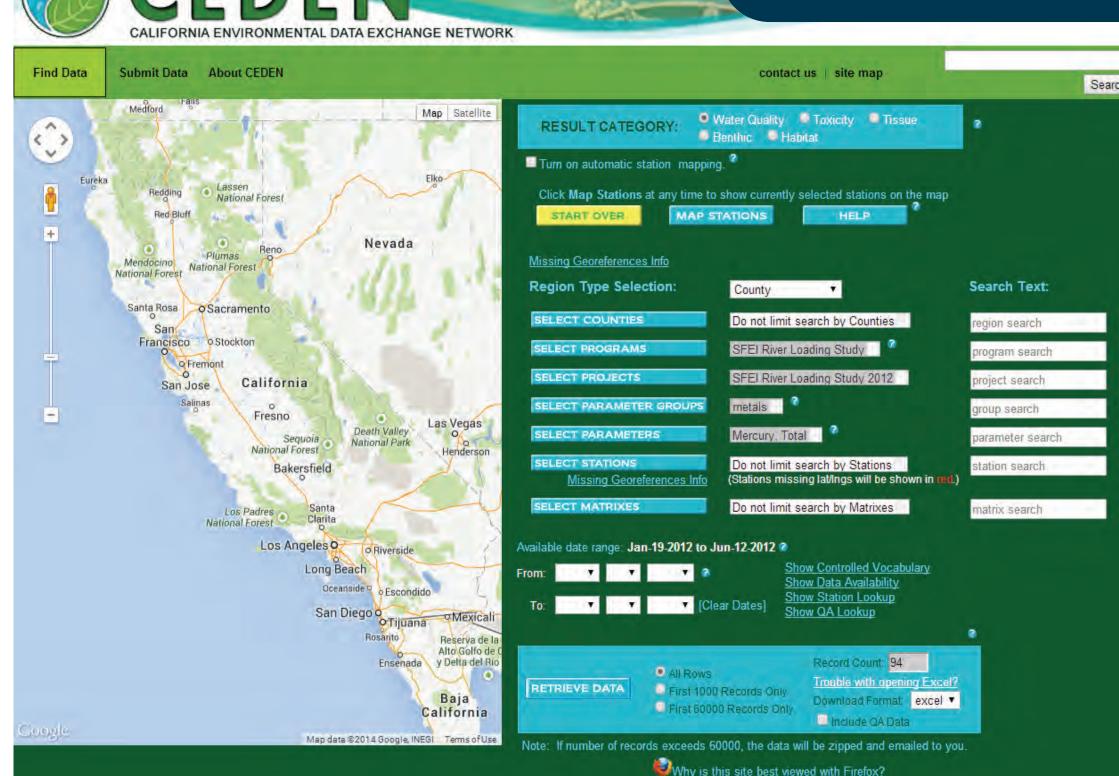
Database



Project Database

Collection templates and lab results are uploaded into our

Final Data



www.ceden.us/AdvancedQueryTool

QA Review 🗏

All data are evaluated for the following data quality criteria:

Accuracy. Did lab reliably measure known concentrations?

Completeness. Were contract expectations met?

Contamination. Was there contamination present in any of the sample batches?

Precision. Was the lab able to repeatedly get the same concentrations?

Sensitivity. Were the analytical methods sensitive enough to get reliable results?

Preliminary Data

Pollutants Of Concern (POC)

Data Review Tool provides on-line access to preliminary and final data to project stakeholders

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• SFEI | ASC DESIGN and COMMUNICATIONS Prepared by: Joanne Cabling, joannec@sfei.org