WINTER STORMWATER SAMPLING: Data Management Challenges and Solutions

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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.

Field Datasheet Template

Chain of Custody (COC) Tool

COC Tool is used to generate COCs based on Field Datasheets

Preliminary Data

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

Final Data Review

All data are evaluated for the following data quality criteria:

- Accuracy: Did lab reliably measure known concentrations?
- Compatibilities: 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 results are made available to project stakeholders through a custom Data Review and Access tool.

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In 2013

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

STORMS: 27

DATA DELIVERABLES: 98

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