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Q1 2012 Program Plan & Budget Update

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Budget Updates

Introduction

Beginning with the first quarter of 2012, each Program Plan Update will be accompanied by a comparison of the 2012 Budget (based on a number of assumptions and uncertainties that are gradually reduced throughout the year) with actual revenue and expense data.

This first Program Plan Update contains five new projects that have come online through SFEI, and one new project through the Aquatic Science Center, since the 2012 Program Plan was approved by the Board in December of 2011.

The second Program Plan Update in June is likely to contain a larger number of new proposals that will have been awarded or have a greater than 80% likelihood of starting up in 2012.

PRIMARY CLIENT

Bay Area IRWM Plan

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Project Description

Sea level rise and climate change for the San Francisco Bay Area is a high exposure problem and must be a critical component to integrated regional watershed planning. In the face of growing anticipation of the impacts of climate change, the science predicts rising a sea level, increased precipitation, increased flooding hazards especially in low lying areas, and an overall vulnerability of the San Francisco Bay shoreline especially the tidal marshes over the next 100 years. Furthermore, disadvantaged communities in low lying areas around the Bay, will be disproportionately impacted by sea level rise.

Tidal marshes historically provided flood control and wave attenuation benefits, as well as habitat, migration corridors, and the transition zone between aquatic and terrestrial habitat. They are also extremely vulnerable to sea level rise. Adaptive strategies are needed that will improve the resiliency of tidal wetlands to sea level rise, or prioritization of restoration areas so that the flood control and wave attenuation benefits are maintained, thereby protecting adjacent communities and providing multiple ecosystem benefits.

The Bay Area currently lacks a regional understanding of shoreline vulnerability for specific locations, detailing historical change of shoreline and marsh extent and condition, as well as a regional adaptive strategy for addressing shoreline vulnerability, marsh dynamics and community impacts.

IRWM projects, especially those close to the Bay shoreline, will need to integrate sea level rise and climate change planning into their implementation strategies in order to maintain feasibility and compliance over time.

Work Products

We propose address this gap in the Bay Area IRWM Plan by focusing on marshes and shorelines of the Bay margin, in order to pilot a study identifying shoreline typologies and their projected trajectories, and using this information to identify regional strategies for creatively addressing sea level rise.

Tasks/deliverables include:

1. Extending the shoreline change analysis and to hone in on real rates of marsh retreat or progradation on a regional scale.
2. Comparison of shoreline change conditions, geomorphic interpretation of shoreline change patterns, watershed conditions, sediment supply, wave/fetch influences from historical conditions to current.
3. Installation of SET monitoring (USGS) in order to measure 3 years of shallow subsidence, or marsh accretion rates, in order to better understand marsh dynamics with regards to lateral AND vertical migration and sea level rise and field validate marsh change typologies.
4. Creation of regional toolkit based on case studies of different marsh typologies historical conditions, as well as observed and measured trends to suggest both site specific and regionally applicable adaptation strategies and for sea level rise and marsh migration

Plans for 2012

Work plan development, project set-up

Project Status

Will apply for funding for IRWM update on March 9, 2012
