Project Overview 2013-2015

Structured Decision Making for Climate Change Adaptation to Conserve
San Francisco Bay Estuarine Ecosystems

Motivation: In October 2011, a structured decision making workshop led to the development of a <u>report</u> describing a decision analytic tool that identified a robust climate adaptation strategy at the Bay-wide scale. This created an open challenge to refine the tool to inform decisions at subregional and refuge scales.

Project funding sources: California Landscape Conservation Cooperative, US Fish & Wildlife Service Region 8 Inventory and Monitoring.

Overarching goal of SFB SDM: Develop decision-analytic tools for identifying optimal multi-scale conservation strategies within the Bay area while accounting for uncertainties about climate change, management effectiveness, and budgets.

Subregional Tool: Identify optimal actions among subregions (Suisun, North Bay, Central Bay, South Bay) to maximize conservation benefits across the Bay.

Project-Scale Tool: identify optimal actions within a particular project to maximize conservation benefits at subregional and Bay-wide scales, using San Pablo Bay Refuge as a case study.

Approach: Series of webinars leading up to a spring 2014 workshop to develop Subregional Tool followed by second workshop to develop Project Tool in fall 2014. Using quantitative decision-analytic techniques, the tools will integrate whenever possible existing models that predict effects of management actions on species of concern and ecosystem services.

Expected outcomes: Each tool will identify optimal strategies across space and time by integrating decision-maker values with probabilistic outcomes of management actions and external drivers. Possible future outcomes and management actions will be evaluated at multiple spatial scales including project, subregional, and regional scales. Results will also inform monitoring and research needs to be integrated into adaptive management.

Participation: Comprehensive representation of regional decision-makers, local resource managers and scientists engaged in conservation practice and research within the Bay will attend webinars and workshops to inform development of the decision-analytic tools. Set of participants will be customized to suit the focus of each workshop.

Relationship to Bayland Goals Update: Whereas the Update will identify a suite of management recommendations for each subregion based on future scenarios for climate impacts, SFB SDM will evaluate and prioritize these recommendations considering their linkage to critical factors, focus and effectiveness in achieving goals, feasibility in light of available resources, and potential impact within and among subregions over time.