

CLIMATE ACTION TEAM

Biodiversity Working Group

Near-Term Implementation Plan

Strategy #4: Enhance and Sustain Ecosystems

CAT Working Group Overview: The Biodiversity working group provides a forum among state agencies to guide adaptation and integration efforts within the Biodiversity sector. Specifically, the working group provides a forum within the CAT to focus on integration and implementation of biodiversity adaptation strategies with a focus on cross sector issues, increasing cooperation, and minimizing conflicts during adaptation strategy implementation. The Department of Fish and Game (DFG) is the lead on this group. The DFG has established an on-going process to address climate change adaptation for biodiversity through an engaged and active group of stakeholders that can serve as a resource to the CAT if appropriate.

Working Group Agencies: Department of Fish and Game (lead), Department of Forestry and Fire Protection, Department of Public Health, Department of Transportation, Department of Water Resources, Energy Commission, State Coastal Conservancy, and State Parks.

Measure / Strategy: Enhance and Sustain Ecosystems

- A. Description: Statewide, adaptation strategies aim to fundamentally improve water and flood management systems and, at the same time, enhance and sustain ecosystems. Near-term actions include providing the habitat range for tidal wetlands to adapt to sea-level rise at the SF Bay/Delta boundary, expanding Delta island subsidence reversal and land accretion projects, protecting enhancing and restoring upper watershed forests and meadow systems that act as natural water and snow storage and reestablishing natural hydrologic connectivity between rivers and their historic floodplains in flood management systems.
- B. Agencies Involved: Department of Water Resources (lead), Department of Fish and Game
- C. Scoping Plan/Adaptation Plan Reference: CAS Water Sector Strategy # 5
- D. Metrics: Increase in habitat range for tidal wetlands; reduction of land subsidence on Delta islands; restoration and improvement in upper watershed functions; and improve floodplain functions. Formal, long-term monitoring will be required to evaluate each task's performance.
- E. Crosscutting Issues: These projects could in part, address other priority measures/strategies in the Agricultural, WETCAT, Coastal and Oceans (CO-CAT), Energy, Forestry, Land Use and Infrastructure, and Public Health working groups.

F. Tasks and Deliverables:

Task 1: Expand Delta island subsidence reversal and land accretion projects

- 1) Description: In the 1990's DWR and USGS constructed a 15 acres managed wetland on Twitchell Island to evaluate the potential for land surface accretion using wetlands. This Demonstration Project has shown that land surface elevation accretion rates of 1.3-2.2 in/yr are possible and that there is significant potential for GHG sequestration if lands are managed as permanently flooded wetlands. DWR currently has a proposal to continue these research activities on a larger (600-acre) parcel.
- 2) Deliverables: Secure funding and initiate research activities on the 600-acre parcel.
- 3) Agency Role: DWR is the lead for this project in concert with USGS.
- 4) Timeline: The project as proposed would last for 5 years once funding is secured.

Task 2: Provide the habitat range for tidal wetlands to adapt to sea-level rise at the SF Bay/Delta boundary

- 1) Description: Dutch Slough Tidal Marsh Restoration Project began in 2003, with funds from CALFED and State Coastal Conservancy. DWR purchased three leveed parcels for a total of 1166 acres which border on Dutch Slough in eastern Contra Costa County. DWR plans to restore tidal action to the three parcels and create tidal wetlands and associated aquatic and terrestrial habitats. The Final EIR was certified and approved in March 2010. Currently, final conceptual designs are being developed. The first phase of construction is expected to begin in 2011; breaching is expected by 2014.
- 2) Deliverables: Final conceptual designs and starting first phase of construction.
- 3) Agency Role: DWR is the lead with support from other state agencies.
- 4) Timeline: Final conceptual designs are being developed with the first phase of construction expected to begin in 2011. The levee breaching is expected to occur by 2014.

Task 3: Protect, enhance and restore upper watershed forests and meadow systems that act as natural water and snow storage

- 1) Description: DWR is contracting with USFS to fund three years of investigations on how ecological restoration of Sierra Nevada meadows can influence runoff hydrology, and improve water management and play a part in system reoperations. Fieldwork will begin in May 2010,

with UC Davis and UC Merced participating, and first progress report is due in December 2010.

- 2) Deliverables: Completion of study and final report.
- 3) Agency Role: DWR and USFS are the leads for the study along with participation from UC Davis and UC Merced.
- 4) Timeline: DWR completed a contract with USFS on April 19, 2010 and fieldwork will begin in May 2010. The first progress report is due in December 2010.

Task 4: Reestablish natural hydrologic connectivity between rivers and their historic floodplains in flood management systems.

- 1) Description: DWR’s Flood Protection Corridor grant program focuses on the acquisition, restoration, enhancement and protection of real property while preserving sustainable agriculture and enhancing wildlife habitat in and near flood corridors throughout the state. As part of this program DWR will have a conservation easement on Knaggs Ranch of 320 acres for shaded riverine, elderberry, and giant garter snake habitat restoration.
- 2) Deliverables: Fund and initiate restoration activities on Knaggs Ranch easement.
- 3) Agency Role: DWR is the lead agency for the restoration activities.
- 4) Timeline: Proposition 84 funding for the program is currently on hold but work will resume once bond sales are reinitiated.

Summary Table:

<u>Deliverable</u>	<u>Agencies</u>	<u>Deadline</u>
Twitchell Island Demonstration Project (600 acres)	DWR, USGS	Project completed by 2015
Dutch Slough Tidal Marsh Restoration Project	DWR	Construction to begin by 2011
Upper Meadows Restoration	DWR, USFS	First progress report due December 2010. Project completed by 2013