California State Wildlife Action Plan Update 2015

North-Central Coast Marine

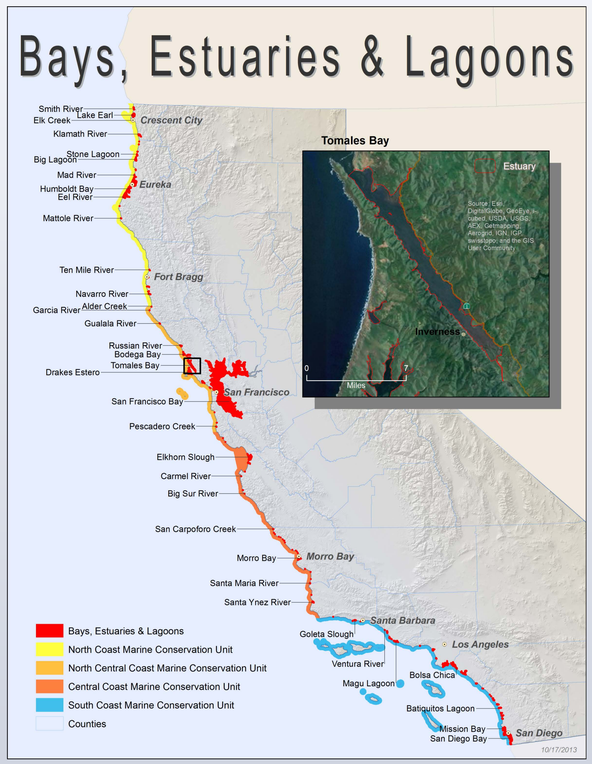
DRAFT STRATEGY: Bays, Estuaries and Lagoons

CALIFORNIA DEPARTMENT OF FISH and WILDLIFE

SWAP California State Wildlife Action Plan

GOALS

1. Area/extent : In coordination with partners, the sea level rise buffer area is increased by at least 5% by 2025.
2. Biotic assemblage: By 2025, reproductive success of native shore birds and shore bird habitat protection are increased by 5% and native oyster populations are increased by 10%.
3. Biotic interactions: By 2025, invasive species populations are reduced by 10%.
4. Biogenic habitat: By 2025, native seagrass (eelgrass) bed acreage is increased by 10%.
5. Surface water flow regime: In coordination with partners, surface water flow (both ephemeral and permanent) is increased by at least 5% into these water bodies by 2025.
6. Watershed water quality: In coordination with State Water Boards and other partners, TMDLs for 10-25% of the tributaries into estuaries/lagoons/bays are met by 2025.
7. Soil/sediment quality: In coordination with State Water Boards and other partners, the sediment quality objectives for 25% of these water bodies are met by 2025.
8. Circulation/connectivity: In coordination with partners, restoration activities to improve circulation and connectivity are completed by 2025 year for 20% of these water bodies.
9. Estuary/bay/lagoon water quality: In coordination with State Water Boards and other partners, the water standards for 50% of water bodies are met by 2025.



The State Wildlife Action Plan examines the health of wildlife and prescribes actions to conserve wildlife and vital habitat before they become more rare and more costly to protect. The plan also promotes wildlife conservation while furthering responsible development and addressing the needs of a growing human population.

SPECIES OF INTEREST

Seagrass (Eelgrass)

Native Bivalves

Dungeness Crab

Longfin Smelt

Tidewater Goby

Eulachon

Coho and Chinook Salmon

Green Sturgeon

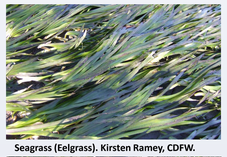
Sevengill Shark

California Halibut

Brown Pelican

California Clapper and Black Rails

Snowy Plover


Seagrass (Eelgrass). Kirsten Ramey, CDFW.


Olympia Oysters. Tom Moore, CDFW retired.


Dungeness Crab. Vicki Frey, CDFW.


Tidewater Goby. Mike Wallace, CDFW.


Green Sturgeon. Ed Roberts, CDFW.


California Halibut. Travis Tanaka, CDFW.


Brown Pelican. Dave Feliz, CDFW.

ENVIRONMENTAL STRESSES

Reduction in area

Decrease in native species populations, including shorebirds and bivalves

Decrease in seagrass bed acreage

Altered sand deposition patterns

Change in freshwater flow into water bodies

Decrease in water quality of freshwater flow

Change in circulation pattern

Altered residence time

Altered tidal mixing

Change or loss in connectivity within water bodies

Decrease in water quality of water bodies

Decrease in quality of sediments


Snowy Plovers. Jenny Erbes, Point Blue Conservation Science.

HUMAN RELATED IMPACTS

Climate Change and Ocean Acidification (Rank: 1)

Shoreline Development (2)

Diversion/Control of Freshwater (3)

Agricultural Runoff (4)

Point Discharges (5)

Hazardous Spills (6)

Modification of Mouth/Channels (7)

Invasive Species (8)

Urban Runoff (9)

Pathogens (10)

Artificial Structures (12)

Aquaculture (14)

Ocean/Estuary Water Diversion/Control (16)

Timber Harvest (17)

Ballast Water (19)

Fishing (20)


Flooding at high tide, Humboldt Bay. Linda Miller.


Mouth of Estero Americano. Google Earth.


Russian River watershed. Google Earth.


Bodega Bay. Google Earth.


Tar spill at Batiquitos Lagoon. Tim Dillingham, CDFW.


Zostera japonica. Vicki Frey, CDFW.

TEAM


Drakes Estero. Kirsten Ramey, CDFW.

Name	Organization	Position	Roles
Debbie Aseltine-Neilson	CDFW-R7	Staff Environmental Scientist	Leader; Team Member
Vicki Frey	CDFW-R7	Senior Environmental Scientist	Team Member
Holly Gellerman	CDFW-OSPR	Staff Environmental Scientist	Team Member
Jerry Kashiwada	CDFW-R7	Environmental Scientist	Team Member
Bill Paznokas	CDFW-R7	Staff Environmental Scientist	Team Member
Kirsten Ramey	CDFW-R7	Environmental Scientist	Team Member
Paulo Serpa	CDFW-R7	Research Analyst II	Team Member; GIS support
Travis Tanaka	CDFW-R7	Environmental Scientist	Team Member
Paul Ton	CDFW-R7	Environmental Scientist	Team Member
Terry Tillman	CDFW-R7	Staff Environmental Scientist	Team Member


Russian River. Joe Pisciotto, CDFW

STRATEGIES, OBJECTIVES AND ACTIVITIES

I. Improve engagement in decision-making process
- a. Objectives
  - i. Increase capacity
  - ii. Increase internal and external communication and coordination
  - iii. Develop collaborations
  - iv. Increase review of CEQA documents and local coastal plans
  - v. Review and provide input on all relevant permits and monitoring plans
  - vi. Develop criteria and standards for reviewing above documents
- b. Activities
  - i. Analyze staffing needs and identify priorities
  - ii. Identify funding sources and apply for funding for new positions
  - iii. Identify state and local groups and staff that are involved in priority efforts
  - iv. Communicate and coordinate with identified groups to determine priorities and update management plans
  - v. Participate in state and local planning meetings and decisions to ensure that efforts address Marine Region concerns/issues
  - vi. Through internal taskforce, identify key habitats within this target and coordinate management of these habitats and the associated watersheds
  - vii. Integrate Marine Region needs into other CDFW planning efforts
  - viii. Identify and prioritize efforts that would benefit from increased collaboration
  - ix. Consider cooperative agreements with regulatory agencies to promote consistent resource protection
  - x. Coordinate with local and state agencies on review of proposals, permits, monitoring plans, and project recommendations
  - xi. Encourage and support local agency implementation of permits
  - xii. Determine what criteria and standards should be used for reviewing documents and provide these to staff

II. Advocate for policies and practices that minimize impacts on shorelines and wetlands
- a. Objectives
  - i. Identify and implement incentives that encourage, and practices that result in, minimal impacts on resources
- b. Activities
  - i. Determine what types of practices and incentives are available, or develop new ones
  - ii. Incorporate practices, including smart growth, into permit process
  - iii. Develop incentives for low growth/impact development

III. Improve rapid response capabilities to events that degrade target
- a. Objectives
  - i. Increase response to hazardous spills of less than 42 gallons
  - ii. Create early detection rapid response program for new invasive species
- b. Activities
  - i. Identify funding sources and secure funds to support rapid response activities
  - ii. Review existing rapid response programs for invasive species
  - iii. Develop list of target species
  - iv. In collaboration with partners, develop procedure for how to prepare and respond to new invasion of non-native species
  - v. Identify funding sources for invasive species rapid response pilot study and in collaboration with partners, apply for funding
  - vi. With partners, develop and implement pilot study

IV. Expand restoration activities
- a. Objectives
  - i. Increase development and implementation of restoration projects
- b. Activities
  - i. Identify and prioritize areas where seagrass (eelgrass) restoration needed
  - ii. Finalize list of water bodies that need improved water circulation
  - iii. Identify additional restoration efforts for Olympia (native) oysters
  - iv. Following events that degrade target (e.g., hazardous spills), evaluate damage and identify appropriate restoration activities
  - iv. Identify partners and form partnerships
  - v. In coordination with partners, find and apply for funding, design restoration plans, and implement restoration projects

V. Incorporate considerations of the vulnerability of marine resources to climate change and ocean acidification into management
- a. Objectives
  - i. Generate climate vulnerability assessment
  - ii. Develop and implement plan to incorporate vulnerability information into management actions
  - iii. Incorporate climate tools into management toolbox
- b. Activities
  - i. Develop work plan
  - ii. Identify collaborators
  - iii. Identify funding source and apply for funding
  - iv. Work with collaborators to develop vulnerability assessment
  - v. Using information from assessment, identify management actions that will decrease vulnerability of sensitive resources and incorporate these into the appropriate management plans
  - vi. Identify useful climate tools and work with tool developers to incorporate into management