

DESCRIPTION

A portion of Elkhorn Slough below mean high water (MHW) is in the Elkhorn Slough State Marine Reserve with that area above MHW in the Elkhorn Slough Ecological Reserve, both administered by the California Department of Fish and Game (CDFG). The primary water quality concerns currently confronting the Elkhorn Slough watershed are erosion, pesticides, bacteria and scour. The surrounding agricultural lands are a major source of eroded soils and agricultural chemicals. Several Moss Landing Harbor activities, including ongoing dredging, impact the slough at its confluence with the harbor.

Soil loss from strawberry and cropped lands has resulted in sediment deposition on roads, drainage channels, and ultimately in wetland habitat in the slough area. Existing economic and social conditions of many growers in the area have prevented effective erosion control systems from being implemented on the most erodible lands in the watershed. Publicly sponsored soil conservation programs have also been largely ineffective in financially assisting the most limited-resource growers.

Moss Landing Harbor harbors over 600 vessels year round, many of which contain liveboards/stayboards who utilize substandard wastewater storage and disposal systems that contaminate waters. Coupled with the presence of a large dairy and dairy waste lagoons, and residential on-site septic systems, coliform levels in the lagoon are significantly affecting overall water quality in the slough.

Chemical analysis studies conducted by CDFG have also revealed increased levels of DDT, DDE, DDD, and toxaphene in tissues and eggshells of the Caspian tern. CDFG has postulated these chemicals are introduced through remobilization and transportation of sediment by heavy water flows from both Salinas and Pajaro Rivers. These pollution sources and other factors influencing water quality have restricted shellfish growing in the slough, and substantially reduced overall water quality for the area.



Elkhorn Slough at Moss Landing

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For more photos, visit: www.californiacoastline.org.

REASON FOR CCA IDENTIFICATION

The Elkhorn Slough was one of the original CCAs identified in 1995 as an **impaired waterbody that flows into an estuary**.

POLLUTED RUNOFF CONDITIONS

Selected Coastal Zone Waterbodies	Top 5 Runoff Pollutants of Concern					Efforts to Address Pollutants (See next page)
	2002 303(d)-Listed Pollutants TMDL Priority (& Proposed Completion if available)			Other Pollutants of Concern		
	Pathogens	Pesticides	Sediment	?	?	
Elkhorn Slough ▲	▲ Low	▲ Low	▲ Low			
Moss Landing Harbor ■	■ Low	■ Low	■ Low			
Vierra Canyon ●						
Strawberry Canyon ◆						
Other Waterbodies □						
Potential Sources of Pollutants in Coastal Waterbodies						
Agriculture	■	▲ ■	▲ ■			b, c

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Potential Sources of Pollutants, continued	Pathogens	Pesticides	Sediment	?	?	Efforts to Address Pollutants
➤ Crop Production		▲ ■	▲ ■			
➤ Agricultural Storm Runoff		▲	▲ ■			b
➤ Agricultural Return Flows		▲				
Forestry (Silviculture)						
Urban Areas						c
Marinas & Boating						
➤ Boat Discharges/ Vessel Wastes	■					
Hydromodification			■			
➤ Dredging			■			
Wetlands & Riparian Areas						a
Erosion/Siltation		▲	■			c
Channel Erosion			▲ ■			
Contaminated Sediments		▲				
Unspecified Nonpoint Source	▲ ■	▲	▲ ■			b, c
Natural Sources	▲					

MAJOR EFFORTS TO IMPLEMENT NPS MANAGEMENT MEASURES

a)	Elkhorn Slough National Estuarine Research Reserve			www.elkhornslough.org
	National Oceanic and Atmospheric Administration, and California Department of Fish and Game (CDFG)	Kerstin Wasson & John Haskins; Becky Christiansen (CDFG)	(831) 728-5939	research@elkhornslough.org john@elkhornslough.org
	➤ The 1400-acre Reserve is a hub of activity and hosts programs that promote education, research, and conservation in Elkhorn Slough.			
b)	Elkhorn Slough Conservation Plan			http://www.elkhornslough.org/esf.htm
	Elkhorn Slough Foundation	Mark Silberstein	(831) 761-1719	silbermud@aol.com
	➤ Implementing plan to reduce agricultural nonpoint source pollution through acquisition and management of agricultural lands and through outreach and education to farmers.			
c)	Elkhorn Slough Water Quality: Non Point Source Pollution Control Through Soil Conservation and Ecosystem Restoration			http://www.carcd.org/wisp/monterey/
	Monterey County Resource Conservation District		(831) 424-1036	
	➤ The Resource Conservation District's mission is to conserve and improve our natural resources, integrating the demand for environmental quality with the needs of agricultural and urban users.			
d)	Measurement of Persistent Organic Pollutants in Sea Otter Tissues			http://www.cclean.org/html/Special_Studies.html
	Central Coast Long-term Environmental Assessment Network		(925) 373-7142	hardin@amarine.com
	➤ Study seeks to determine whether otters with higher concentrations of chemical contaminants might be more susceptible to diseases.			

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REGULATORY/PLANNING JURISDICTIONS

➤ Monterey County Water Resources Agency	http://www.mcwra.co.monterey.ca.us/	Manuel Quezada	(831) 755-4874	quezadam@co.monterey.ca.us
➤ Calif. Coastal Commission, Water Quality Unit	http://www.coastal.ca.gov/nps/npsndx.html	Ross Clark	(831) 427-4873	rclark@coastal.ca.gov
➤ Central Coast Regional Water Quality Control Board	http://www.waterboards.ca.gov/centralcoast/	Amanda Bern	(805) 594-6197	abern@waterboards.ca.gov
➤ State Water Resources Control Board	http://www.swrcb.ca.gov/v/	Steve Fagundes	(916) 341-5487	sfagundes@waterboards.ca.gov
➤ California Coastal Conservancy	http://www.coastalconservancy.ca.gov/	Terri Nevins	(510) 286-4161	tnevins@scc.ca.gov
➤ Calif. Dept. of Fish & Game, Elkhorn Slough Ecological Reserve, and Elkhorn Slough State Marine Reserve	http://www.dfg.ca.gov/mrd/mlpa/	Becky Christensen & Paul Reilly	(831) 728-2822 & 649-2879	bchristensen@dfg.ca.gov & preilly@dfg.ca.gov
➤ Calif. State Parks, Monterey District	http://www.parks.ca.gov/v/parkindex/region_info.asp?regiontab=0&id=6	Tom Moss	(831) 649-2854	tmoss@parks.ca.gov
➤ NOAA, Elkhorn Slough National Estuarine Research Reserve	www.elkhornslough.org	Kerstin Wasson	(831) 728-5939	research@elkhornslough.org