

COORDINATED WETLAND MANAGEMENT THROUGH
CONSERVATION, RESEARCH AND RESTORATION



ABOUT CCWG

CCWG is a collaborative organization of wetland scientists, educators, land managers, governmental and non-governmental organizations working to protect and enhance Central Coast wetlands. CCWG provides tools for building regional capacity, monitoring wetland health, sharing data, and tracking restoration success. The Group acts as a regional voice to State and Federal agencies regarding the unique needs of the Central Coast. CCWG is housed at Moss Landing Marine Labs and is currently funded by the USEPA.



Regional Need

California's Central Coast is unique in its diversity of wetland habitats. The region includes two major estuary systems and unique coastal lagoon and depressional wetlands. Many of these systems have been impaired by various land uses including forestry, agriculture, grazing, and urbanization. Currently, regional partners are working to restore many of these degraded systems. As the Central Coast responds to urban growth pressure, wetland management and restoration are becoming ever more important activities. The wetland monitoring tools, as well as the focus on collaboration and a regional dialog, are intended to enhance local efforts and support the regional success of wetland protection activities.

Objectives

Program objectives have been developed by CCWG members to improve the region's ability to protect and enhance wetland health. These common goals support collaboration among Central Coast scientists allowing regional partners to accomplish more together than individually.

Mission Statement

To coordinate the advancement of wetland science and management on the Central Coast.

Over the past five years, San Francisco Bay, Southern California, and Central Coast scientists have worked together to develop a common technical framework and cost-effective tool set for empirical assessment of wetland health and function. These tools are being used to monitor wetland resources, evaluate project success, and integrate habitat condition information within the State as a whole. Much of the current success is based on the strong partnership of regional entities and programs (SFEI, CCWG & SCCWRP). It is imperative that Central Coast scientists continue the collaborative efforts to support the development of regional goals and long-term wetland research and management strategies.

Objectives

- 1 Provide resources to advance the science of wetland restoration and management on the Central Coast.
- 2 Support standard monitoring and assessment techniques and the creation of a Central Coast wetland monitoring program.
- 3 Provide a regional voice to state decision makers.
- 4 Provide regional perspective in developing restoration objectives and policy.
- 5 Build capacity for long-term wetland management.
- 6 Support stronger wetland conservation policies and reduce the threat from future land use changes.

CURRENT ACTIVITIES

Successful collaboration begins with common tools and a standardized method of communication. The tools below were developed by state wetland scientists including members of CCWG. These tools have enabled the Central Coast wetland scientists to quantify and report the cumulative success of the many local programs and emphasize the need for continued financial support of ongoing activities.

California Rapid Assessment Method (CRAM)

CRAM is a standardized tool that is used to quantify the condition of wetlands throughout California. Moss Landing Marine Laboratories, the California Coastal Commission, and the Central Coast Wetlands Group have participated in the development and calibration of the tool as part of a larger effort led by the USEPA, San Francisco Estuary Institute and Southern California Coastal Water Research Project. CCWG is currently working to integrate CRAM into the regional monitoring framework to quantify wetland management and restoration success. www.cramwetlands.org



Wetland Mapper

The Central Coast Wetland Mapper is an internet-based, interactive, GIS planning tool that provides descriptive and spatial wetland and watershed data for California's Central Coast. This tool is used to distribute information about wetland habitat, help analyze permits, and identify and prioritize wetlands for conservation. www.centralcoastwetlands.org



Wetland Project Tracker

Emulating the success of the Bay Area Wetland Project Tracker, the Central Coast Wetlands Group has developed a regional wetland project tracker that provides access to information regarding the location, size, habitat, and status of Central Coast restoration and enhancement projects. Over 100 projects are currently inventoried, providing historic information on project objectives and results. www.wetlandtracker.org



California Statewide Wetlands Inventory Initiative

The California Statewide Wetlands Inventory Initiative is updating U.S. Fish & Wildlife Service's National Wetlands Inventory data throughout the State. Until recently most of the Central Coast had not been mapped. Quadrangles have been updated for most of the region. www.nwi.fws.gov



Regional Historical Ecology Program

Historical ecology not only informs us of past conditions but also allows us to understand the current landscape in a broader context so that we can make more informed management decisions in terms of research and restoration. www.centralcoastwetlands.org



HISTORICAL ECOLOGY PROGRAM

CCWG and Moss Landing Marine Laboratories have initiated a Historic Ecology Program to compile current and historic maps and data on wetland resources to expand those efforts begun by SFEI and Elkhorn Slough National Estuarine Research Reserve throughout the Central Coast Watersheds. The CCWG hosted a practitioner orientation that focused on wetland management questions and available historic data resources that can help address these issues.

"Understanding the form and function of a slough prior to the late 1800s can inform interpretation of the current hydrologic regime and perhaps aid recovery and restoration in progress today." SFEI 2007



AUTHOR: United States Geological Survey

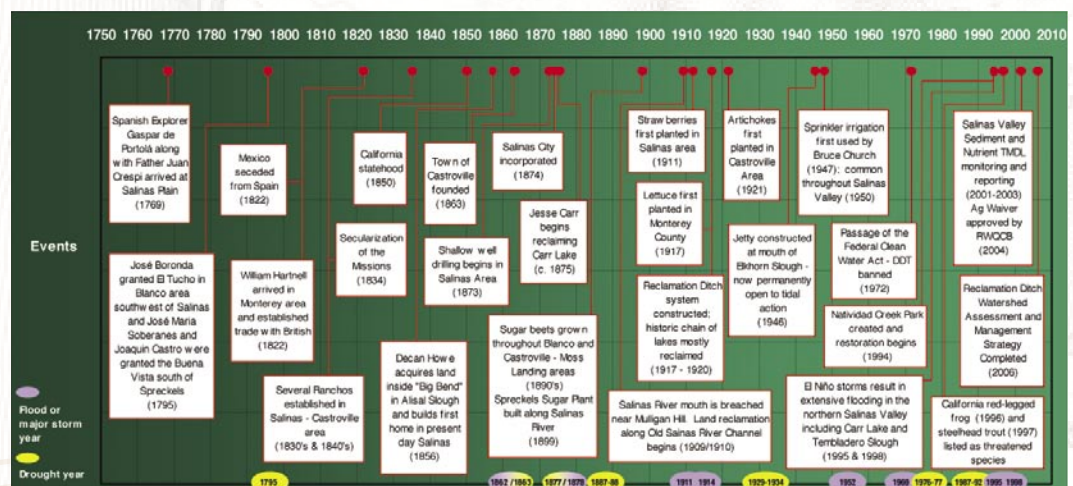
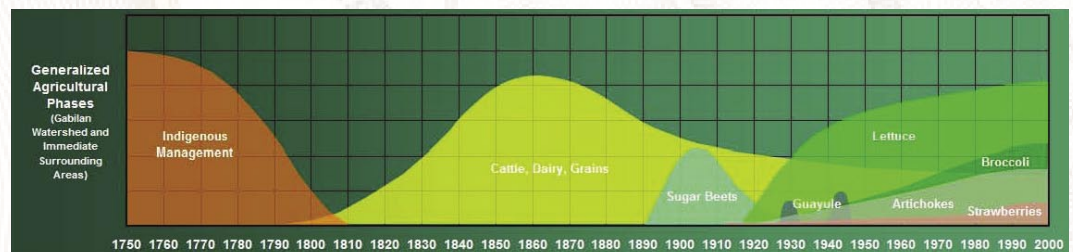
TITLE: Capitola 15 minute Quadrangle

DESCRIPTION: 1914 Historic topographic map showing Moss Landing, Elkhorn Slough, Old Salinas River Channel, Castroville and surrounding areas.

COURTESY: UC, Berkeley Earth Sciences & Map Library

For the initial pilot project, CCWG collaborated with Joel Casagrande from Central Coast Watershed Studies at Cal State Monterey Bay, to compile historic maps and literature for the Gabilan Watershed. This information will help direct

possible restoration efforts through better understanding of coastal wetland function in the absence of significant human management. Visit our website for more detailed information about Historical Ecology.



Gabilan Watershed Area Timeline 1750-2006 November 2008 Joel Casagrande

2008 WETLAND SCIENCE SYMPOSIUM

On September 24th 2008, CCWG hosted the first Central Coast Wetland Science Symposium where professionals concerned with the protection and enhancement of wetlands gathered to share information and network.

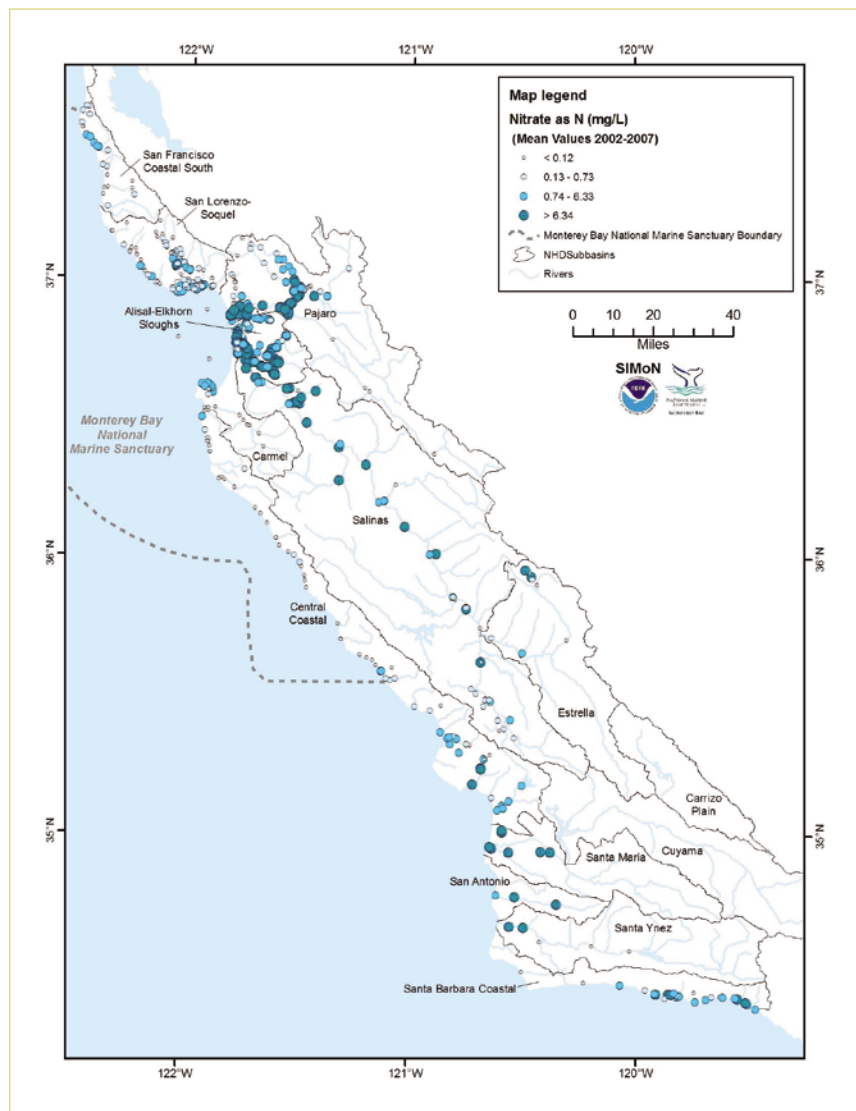
Presentations were organized into three sessions spanning different phases of wetland preservation and restoration:

- 1| *Goal Setting and Planning*
- 2| *Implementation*
- 3| *Evaluating and Monitoring Program Success.*

Presenters and Topics Covered at the Symposium:

Session 1: <i>Setting Goals For Wetland Restoration</i>	<p>Kerstin Wasson <i>Elkhorn Slough National Estuarine Research Reserve</i> Introduction—Setting Goals for Wetland Restoration</p> <p>Peter Von Langen <i>Central Coast Water Board</i> Water Board Efforts to Protect and Improve Watersheds and Aquatic Habitat Health</p> <p>Bryan Largay <i>Elkhorn Slough National Estuary Research Reserve</i> Setting Goals for Elkhorn Slough: The Importance of Multiple Conservation Targets</p>	<p>Joel Casagrande <i>Central Coast Watershed Studies, Watershed Institute CSUMB</i> Mapping California's Central Coast Wetlands: A Foundation for Regional Wetland Restoration and Monitoring</p> <p>Nicole Beck <i>Second Nature</i> Evaluating Indicators for Ecosystem Health in Coastal Lagoons</p>
Session 2: <i>Implementation of Goals</i>	<p>Ross Clark <i>California Coastal Commission</i> Introduction—Implementation of Goals</p> <p>Daniel Mountjoy <i>United States Department of Agriculture</i> Wetlands Within Watersheds: Partnership Approaches to Incremental Restoration</p>	<p>Chris Coburn <i>Santa Cruz County</i> Implementation of an Integrated Regional Watershed Management Plan</p> <p>Gage Dayton <i>Moss Landing Marine Laboratories and UC Santa Cruz</i> Implementing the Moro Cojo Restoration and Management Plan</p>
Session 3: <i>Evaluating and Monitoring</i>	<p>Cara Clark <i>Masters Student, Cal State Monterey Bay</i> Evaluating River Restoration Success Using The California Rapid Assessment Method</p> <p>Gary Conley <i>Monterey Bay National Marine Sanctuary</i> Measuring Temporal Changes in Water Quality Conditions on the Central Coast</p> <p>Nina D'amore <i>Elkhorn Slough Nation Estuarine Research Reserve</i> Using Amphibians to Identify and Measure Anthropogenic Impacts to Wetlands</p>	<p>Peter Meertens <i>Regional Water Quality Control Board</i> Assessing the Effectiveness of Water Quality Management of Irrigated Agricultural Lands</p> <p>Fred Watson <i>Assistant Professor, CSU Monterey Bay</i> Measuring and Modeling the Effect of Wetlands on Water Quality</p>
Session 4: <i>In Depth Perspectives</i>	<p>Dan Berman <i>Morro Bay NEP</i> The Ideal And The Real Deal—A Morro Bay Experiment in Balancing Among Planning, Implementing and Monitoring Efforts</p>	<p>J. Letitia Grenier <i>San Francisco Estuary Institute</i> Regional Collaboration: A Perspective from Another Region</p>

CENTRAL COAST SAM



CCWG partners lead the Central Coast Water Quality Data Synthesis, Assessment, and Management (SAM) Project, a regional collaboration that has identified critical water quality knowledge gaps and developed a plan to fill them. The SAM Project addresses fundamental non-point source (NPS) pollution issues in the region via technical and programmatic activities. Key goals of SAM are:

- enhancement of the regional water quality monitoring network
- improved data sharing
- providing technical support for scientific studies
- better access to information for managing coastal waterways

SAM is a partnership between the Monterey Bay National Marine Sanctuary, the Central Coast Regional Water Quality Control Board, and the California Coastal Commission with primary funding provided by the California Non-point Source Pollution Control Program (U.S. EPA/SWRCB) and the Resources Legacy Fund Foundation. Activities are directed by a Technical Advisory Committee of scientists and resource managers from across the state that represent universities, research institutes, government agencies, and private firms.

More information is on the web at:
http://www.ccamp.net/sam/index.php/Main_Page

Integrated Nitrate data for the Central Coast shown as quartiles of mean values 2002-2007. The CCAMP Attention Level = 2.25 mg/L. COURTESY: MBNMS SAM Project.

Synthesis

Water quality and other spatially referenced data sets are stored at disparate locations in diverse formats throughout the region. The SAM project brings these data together in a centralized database/GIS system that serves as a model for ongoing data integration and access, and facilitates regional water quality analysis.

Assessment

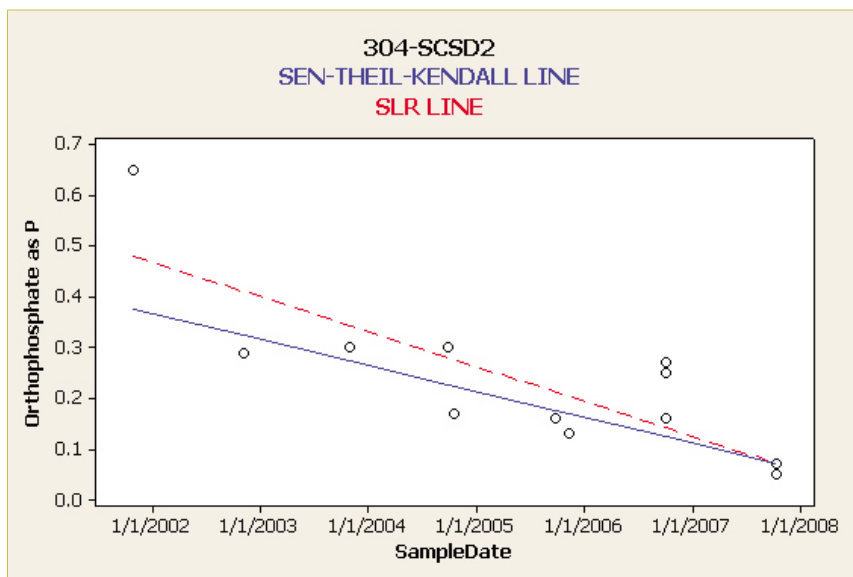
Ongoing water quality data analysis provides information to assess the health of coastal waterways. Analyses are geared toward fulfilling knowledge needs identified at the regional and state levels for understanding pollution problems and mitigation effectiveness. Examples include comparisons with regulatory criteria, temporal trends detection, and spatial statistical analysis of water quality and land-use variables.

Management

Sound data management allows us to share data with one another and coordinate monitoring activities in the region. SAM facilitates transformation of data storage formats to the statewide standards developed by the Surface Water Ambient Monitoring Program (SWAMP). The recently finalized SAM Strategic Plan outlines a framework for ongoing monitoring collaboration and building the regional data sharing infrastructure.



Center for Integrated Marine Technology sampling survey.
PHOTO: Sanctuary Integrated Monitoring Network (SIMoN)



The trend lines model a statistically significant decrease ($p < 0.05$) in orthophosphate levels during first flush events at a Santa Cruz city storm drain from 2002-2008.
COURTESY: MBNMS, First Flush Monitoring

THANKS

To Our Central Coast Partners

The Association of Monterey Bay
Area Governments

California Coastal Commission

California Department of Fish and
Game

California Conservation Corps

California Polytechnic State University,
San Luis Obispo

California State University,
Monterey Bay

County of Santa Cruz, Planning

Elkhorn Slough Foundation

Elkhorn Slough National Estuarine
Research Reserve

Monterey Bay National Marine
Sanctuary

Morro Bay National Estuary Program

Moss Landing Marine Laboratories

Regional Water Quality Control
Board, Region3

2nd Nature

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