



# Final Report

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*Submitted by*

Moss Landing Marine Laboratories in Partnership with the California Coastal Commission  
and the Central Coast Wetlands Group

for

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## Document Intent

This document is intended to chronicle the efforts of the Central Coast Wetlands Group (CCWG) to meet the EPA grant objectives for the grant titled “Support of the CCWG Program Objectives”. This report will also outline CCWG’s success in building the capacity of regional scientists and growing our collaborative community. This document will describe the Historic Ecology Program that was developed to improve current wetland restoration and management issues through the better understanding of historical ecological processes. Finally it will report on the progress CCWG has made in becoming a fully functioning, formal organization capable of supporting local restoration and research, and providing a regional voice to state and federal resource managers.

In addition to this document, several reports, letters, plans and data inventories have been completed and are provided as appendices and made available online for easy access and use at [www.centralcoastwetlands.org](http://www.centralcoastwetlands.org).

## Project Summary

The Central Coast Wetlands Group (CCWG), in partnership with Moss Landing Marine Laboratories, and the California Coastal Commission has successfully established a collaborative framework that supports the development of regional goals and long-term wetland research and management strategies. Over the course of this contract CCWG was able to accomplish the following primary objectives of this project: 1) support the Central Coast Wetlands Group (CCWG) as a representative to the State Wetland Monitoring program, 2) advance the science of wetland restoration and management, 3) provide regional perspective for restoration objectives and policy, and 4) build capacity for long term wetland management.

CCWG, previously an informal collaboration of partners from the Central Coast region, has flourished into a well established, formalized partnership of agencies, scientists, non-governmental and private organizations guided by a defined mission statement and a clear set of goals and objectives. The funding for this project supported several important steps in capacity building for

CCWG including, 1) hosting a symposium specifically designed for Central Coast wetland experts to share their work with peers and regional partner entities, 2) establishing a regional Historical Ecology Project by collaborating with Bay Area experts and local scientists, 3) developing a well organized easy-to navigate website that acts as a clearing house of wetland research and management information, 4) engaging in several face to face meetings with Central Coast organizations to share standardized wetland assessment tools and management ideas that have been developed by CCWG and its partners. The Group also produced an informational brochure ready for distribution throughout the state to build capacity and inform people about the resources CCWG provides.

Over the past five years, San Francisco Bay, Southern California, and Central Coast scientists and agency staff have worked together to develop a common technical framework and cost-effective tool set for the empirical assessment of wetland health and performance, data management strategies, and public reporting avenues. These tools can be used to monitor wetland resources for individual projects, watersheds, regions of the State, and for the State as a whole. Much of the current success is based on the strong partnership of regional entities and programs (MLML, SFEI, CCWG, and SCCWRP). The Central Coast, however, has struggled to fully participate due to infrastructure limitations and minimal support for the regional partnership. CCWG is filling this gap providing a regional voice and a broader perspective for restoration and wetland management on the Central Coast.

## **TASK 1. Engage in project administration support**

**Task Description.** The purpose of this task is to regularly monitor progress and success on each project task, manage grant funds and deliverables, provide quarterly written updates to the EPA Project Manager, and submit a final report upon project completion. Deliverables include quarterly reports and the final report.

**Project Management and Quarterly Reports, Final Report, Evaluations with Program Manager** Quarterly reports were submitted promptly each quarter and the final report, this document, is being submitted on time as a deliverable. The budget was carefully managed throughout the project to ensure funds were being spent appropriately and costs were reported on a quarterly basis. CCWG

met with Suzanne Marr, who replaced Cheryl McGovern during the middle of our contract. CCWG and Suzanne Marr maintained regular correspondence throughout the contract period.

## **TASK 2. Expand Membership of the Existing Working Group and Establish the CCWG Coordinating Committee and Science Group.**

**Task Description:** There are several watershed groups working on wetland and stream restoration activities on the Central Coast. Many of these groups were encouraged to participate on the Coordinating Committee to provide perspective as to how their programmatic objectives support, and can be integrated with, other regional objectives. Key partners that were actively involved in our effort include: Moro Bay National Estuary Program, Elkhorn Slough National Estuarine Research Reserve, Monterey Regional IRWMP, California State University Monterey Bay, University of California Santa Cruz, the Regional Water Quality Control Board and the Monterey Bay National Marine Sanctuary Water Quality Protection Program. Each partner was asked to provide direction in guiding the establishment of the Historical Ecology Program and for assistance with the formation of the Wetland Science Symposium.

### **Establishing the CCWG Coordinating Committee and Science Group**

CCWG formed a committee of local and regional partners that evolved throughout the duration of the contract. The Association of Monterey Bay Area Governments (AMBAG) assisted CCWG in contacting a diverse group of wetland professionals representative of the Central Coast region. Two different groups were created: 1) the Wetland Science Symposium Steering Committee (Table 1) and 2) the Science Group (Table 2). The Symposium Steering Committee was a focused group that convened from April through August 2008 to plan the symposium. The Science Group was put together with the goal of creating a long-term working group of entities interested in developing a cohesive mission statement, setting objectives, and continuing to be an active member of CCWG.



**Table 1. Symposium Steering Committee**

<b>Name</b>	<b>Organization</b>
Ross Clark	California Coastal Commission
Gage Dayton	Moss Landing Marine Laboratories
Nicole Beck	2nd Nature
Ana Flores	Association of Monterey Bay Area Governments
Nick Papadakis	Association of Monterey Bay Area Governments
Fred Watson	Cal State University Monterey Bay
Kerstin Wasson	Elkhorn Slough National Estuarine Research Reserve
Andrea Woolfolk	Elkhorn Slough National Estuarine Research Reserve
Bridget Hoover	Monterey Bay National Marine Sanctuary
Gary Conley	Monterey Bay National Marine Sanctuary
Kevin O'Connor	Moss Landing Marine Laboratories
Regina Williams	Central Coast Wetlands Group
Dan Berman	Morro Bay National Estuaries Program
Ann Kitajima	Morro Bay National Estuaries Program
Monica Hunter	Planning and Conservation League Foundation
Howard Kolb	Central Coast Regional Water Quality Board
Alison Whipple	San Francisco Estuary Institute
Chuck Striplen	San Francisco Estuary Institute

**Table 2. CCWG Science Group**

<b>Name</b>	<b>Organization</b>
Andrea Woolfolk	Elkhorn Slough National Estuarine Research Reserve
Bryan Largay	Elkhorn Slough National Estuarine Research Reserve
Fred Watson	Cal State University Monterey Bay
Gage Dayton	Moss Landing Marine Laboratories
Gary Conley	Monterey Bay National Marine Sanctuary
Gillian O' Doherty	National Oceanic and Atmospheric Administration
John Oliver	Moss Landing Marine Laboratories
Karen Worchester	Central Coast Regional Water Quality Control Board
Kenneth Coale	Moss Landing Marine Laboratories
Kevin O'Connor	Moss Landing Marine Laboratories
Kerstin Wasson	Elkhorn Slough National Estuarine Research Reserve
Laura Engeman	State Coastal Conservancy
Monica Hunter	Planning and Conservation League Foundation
Mark Silberstein	Elkhorn Slough Foundation
Mary Gleason	The Nature Conservancy
Nick Papadakis	Association of Monterey Bay Area Governments
Sandra Scoggin	San Francisco Bay Joint Ventures
Trish Chapman	State Coastal Conservancy
Mike Eng	Monterey Bay National Marine Sanctuary
Regina Williams	Central Coast Wetlands Group
Ross Clark	California Coastal Commission

**Host four CCWG coordinating committee meetings including one specific to the Historical Ecology Project (HEP) of the Gabilan Watershed and one specific to the Wetland Symposium.**

CCWG held nine meetings over the duration of the contract. Four of these meetings were specific to the coordination of the Wetland Symposium, three were specific to the Gabilan Historical Ecology Project, and two were focused on further developing and increasing the stature of CCWG as an organization.

CCWG hosted four symposium planning meetings with 10 partners representing a diverse set of perspectives from organizations located throughout the Central Coast. The coordination of the symposium was efficient and the group worked well together to structure the symposium and bring together dynamic speakers.

CCWG hosted two conference calls and one large interactive meeting for regional stakeholders regarding the Central Coast Historical Ecology Project. The calls included one with a larger regional group involved in historical work, and one with San Francisco Estuary Institute (SFEI) and Central Coast Watershed Studies (CCoWS) at CSU Monterey Bay, who were subcontracted by CCWG to initiate a Historical Ecology Project for the Gabilan Watershed region that would build on previous work of SFEI, Elkhorn Slough, and CCoWS. CCWG and SFEI co-hosted a regional Historical Ecology orientation at Moss Landing Marine Laboratories on Oct 30<sup>th</sup> 2008. SFEI delivered a two hour presentation sharing their methodology, which was followed by open discussion lead by CCWG's Ross Clark. The meeting was a great success, people came from throughout the Central Coast region attended and showed significant interest in initiating a regional effort. The following people were present at the orientation (Table 3).

**Table 3.** Historical Ecology Orientation and Stakeholder Meeting Attendees

<b>Name</b>	<b>Organization</b>
Andrea Woolfolk	Elkhorn Slough National Estuarine Research Reserve
Cameron Chabre	Big Sur Land Trust
Chuck Striplen	San Francisco Estuary Institute
Dina Cadenazzi	USDA – Natural Resources Conservation Services
Eric Van Dyke	Elkhorn Slough National Estuarine Research Reserve
Erin Beller	San Francisco Estuary Institute
Gary Conley	Monterey Bay National Marine Sanctuary
Hugo Selbie	University of California Santa Cruz
Joel Casagrande	Watershed Inst Cal State University Monterey Bay
John Oliver	Moss Landing Marine Laboratories
Johnathan Pilch	Watsonville Wetlands Watch
Kamille Hammerstrom	Moss Landing Marine Laboratories
Kellie Rey	Moss Landing Marine Laboratories
Kevin Contreras	Elkhorn Slough National Estuarine Research Reserve
Kevin O'Connor	Moss Landing Marine Laboratories MLML
Mike Sapunor	Santa Cruz County
Regina Williams	Central Coast Wetlands Group
Robin Grossinger	San Francisco Estuary Institute
Ross Clark	California Coastal Commission
Ruth Askevold	San Francisco Estuary Institute
Sierra Perry	Moss Landing Marine Laboratories
Suzanne Marr	USEPA
<b>Not present but interested:</b>	
Bridget Hoover	Monterey Bay National Marine Sanctuary
Dan Berman	Morro Bay National Estuary Program
Howard Kolb	Regional Board

One of the most significant meetings hosted by the CCWG in 2008 was the West Coast Regional Roundtable Discussion held in conjunction with the Wetland Science Symposium. Ross Clark, Gage Dayton and Regina Williams hosted this roundtable as a crucial step in building the capacity of CCWG, formalizing the organization, and developing collective regional goals and objectives with a diverse group representing the Central Coast partners concerned with wetland health. The meeting consisted of managers, scientists, agencies and governmental and non-governmental organizations (Table 4).

**Table 4.** Central Coast Regional Roundtable Discussion Attendees

<b>Name</b>	<b>Organization</b>
Becky Suarez	Department of Fish and Game
Bridget Hoover	Monterey Bay National Marine Sanctuary
Bryan Largay	Elkhorn Slough National Estuarine Research Reserve, Tidal Wetland Project Director
Dan Berman	Morro Bay National Estuary Program
Eric Stein	Southern California Coastal Water Research Project
Fred watson	CSU Monterey Bay
Gage Dayton	Moss Landing Marine Labs and UC Santa Cruz, Natural Reserves
Gary Conley	Monterey Bay National Marine Sanctuary
Gillian O' Doherty	National Oceanic Atmospheric Administration
Howard Kolb	Regional Board
Karen Worchester	Central Coast Regional Water Quality Control Board
Kat Ridolfi	San Francisco Estuary Institute
Kenneth Coale	Moss Landing Marine Laboratories, Director
Laura Engeman	State Coastal Conservancy
Mark Silberstein	Elkhorn Slough Foundation
Marti Johnson	Planning and Conservation League Foundation
Lexi Brown	The Nature Conservancy
Meg Caldwell	Center for Ocean Solutions
Meredith Williams	San Francisco Estuary Institute, Project Manager
Nick Papadakis	The Association of Monterey Bay Area Governments
Nik Strong-Cvetich	Coastal Watershed Council
Regina Williams	Central Coast Wetlands Group
Ross Clark	California Coastal Commission
Sandra Scoggin	San Francisco Bay Joint Ventures
Suzanne Marr	US Environmental Protection Agency
Trish Chapman	State Coastal Conservancy

The meeting started with a brief presentation by members of CCWG in which they described the current structure of the organization and presented the goals and objectives that were developed in years past. Eric Stein from Southern California Coastal Water Research Project (SCCWRP), another regional collaborative organization dedicated to wetland health, provided insight into how their organization was formed and has fared throughout its tenure. The presentation provided great information, advice and inspiration for the development of a cohesive Central Coast group intent upon enhancing wetland science and management. A follow-up conference call was held a month later to discuss the ideas put forth at the roundtable discussion and to solidify the current structure,

partners and next possible steps. A letter of intent was written and people signed on as official members of the CCWG (Appendix I).

**Developing the organizational structure of the working group (e.g. mission statement, define membership, explicitly define goals, update publications, meeting agendas, and locations).**

The mission statement of CCWG along with a detailed list of goals and objectives was developed in 2005 and was presented at the Central Coast Roundtable Discussion in September 2008.

Attendees at the Roundtable Discussion came to the consensus that our mission statement, programmatic goals, and objectives were adequate and that the next step was to formalize the group by producing a letter of intent to be vetted and signed by. This was accomplished and there is now an official list of partners and a set of objectives (Appendix I: letter of intent and list of partners; Appendix II: Program charter updates in 2007).

**Host two or more Science Group meetings regarding the Historical Ecology Project (HEP)**

Several meetings were held throughout the contract period regarding the initiation and implementation of a regional Historical Ecology Project. A primary step in project initiation was holding a meeting with experts from the San Francisco Estuary Institute and the broader scientific community in our region (Table 5). Chuck Striplen from SFEI facilitated the meeting and provided insight and overview of the process SFEI has developed for data collection on historical ecology projects.

**Table 5.** Central Coast Historical Ecology Group

<b>Name</b>	<b>Organization</b>
Ross Clark	California Coastal Commission
Nina D'Amore	Elkhorn Slough National Estuarine Research Reserve
Chuck Striplen	San Francisco Estuary Institute
Alison Whipple	San Francisco Estuary Institute
Joel Casagrande	Watershed Inst. Cal State Monterey Bay
Adam Wiskind	Moss Landing Marine Laboratories
Andrea Woolfolk	Elkhorn Slough National Estuarine Research Reserve
Eric Van Dyke	Elkhorn Slough National Estuarine Research Reserve
Kerstin Wasson	Elkhorn Slough National Estuarine Research Reserve
Gage Dayton	Moss Landing Marine Laboratories
Bridget Hoover	Monterey Bay National Marine Sanctuary

The meetings covered topics such as data collection protocols, choosing suitable research sites, decoding which questions should drive the regional historical ecology study, and identifying regional experts to lead future work efforts. CCWG held two meetings with SFEI and CCoWS. Tasks were assigned to members of the HEP group at this point. SFEI was hired to provide a strategic plan for the Gabilan HEP and to train others in the HEP group in the methodologies they've developed. CCWG also subcontracted Joel Casagrande from CCoWS to compile current spatial data layers and historic maps, photos, literature, and anecdotes involving the Gabilan watershed.

### **TASK 3 Establish a Historical Ecology Program for the Monterey Bay region**

**Task description:** The objective of task 3 was to lead a collaborative effort focused on compiling current and historical information for Monterey Bay wetlands. The program was designed to build off successful efforts conducted in San Francisco and Elkhorn Slough, using San Francisco Estuary Institute guidelines. Information was to be compiled and made available to the science group and posted on the CCWG website.

#### **Establish regional historical ecology team and develop information collection protocol.**

The Historical Ecology Science Group currently consists of 18 people from different agencies along the Central Coast (see Task 2, Table 3). Throughout the series of initial meetings it became

apparent that several groups in the area were unknowingly conducting parallel research and that a collaborative effort among researchers was needed. CCoWS and CCWG were contracted to collect and compile specific data and SFEI was contracted to train the established team.

After consultation with SFEI staff it was clear that a complete historical map and historical interpretation of the Gabilan Watershed was well beyond the scope of the current project. Thus, the primary goal of this task changed with the new objective to be the establishment of a strategic plan that will allow our region to move forward with a scientifically valid approach outlining the essential steps needed to create a HEP for the Central Coast. SFEI was contracted to create a strategic plan to guide CCoWS and CCWG in moving forward with the Central Coast HEP. SFEI aided in adjusting our over zealous work plan into one with a more achievable outline according to the funding and time allotted in this contract, leaving out the rigorous scientific analysis of all of the compiled data for a future project. However, CCWG was able to complete all of the original task deliverables as well as complete a strategic plan.

A second deliverable from SFEI intended to aid in the development of a data collection protocol and regional capacity building, was the Historical Ecology Orientation and Stakeholder Meeting, which familiarized interested people with the methodology employed by SFEI. In this meeting they provided a detailed presentation about the data collection, compilation, and synthesis protocols they use along with a written document outlining the various data sources they depend on for thorough historical interpretation. A comprehensive list of Historical Ecology questions was also provided to central coast partners at the stakeholder meeting to encourage the group to determine which questions might drive the regional project.

As a result of several HEP planning meetings it was agreed that historical ecology projects should be driven by questions with the understanding that formulating and testing hypotheses objectively furthers the understanding of historical systems. The group discussed important regional questions such as: *what was the extent of riparian habitat and brackish water habitat influences by the dynamic exchange of marine and freshwater?* It was agreed that the Gabilan Watershed should be the focus for the pilot HEP project for the region, and that obtaining T-sheet maps, 1930 aerials, and information from land grants is the first step in terms of data collection.

SFEI recommended modifications to task 2b in order to better prepare the Central Coast to participate in a robust HEP effort. The following is the updated task.

Task 2(b): developing a strategic plan that will define the project scope, define key questions, and technological questions, identify stakeholders, and delineate the project area.

Is this the modified task or the original should we show how it changed more clearly

## Results

Joel Casagrande at CCoWS was able to use the protocols developed by SFEI to accomplish the first stages of the Historical Ecology Project for the Gabilan Watershed. He was able to go far beyond the expectations of his contract to collect maps, literature, photos, and anecdotes from 1850-present, complete a current conditions map, and create a thorough timeline of human landuse for the watershed.

Joel created a current conditions geodatabase which contains approximately 30 relatively current data layers for the Gabilan watershed. He also compiled historical information pertinent to understanding the history of the Gabilan watershed. CCWG now has an on-line historical reference library ([www.centralcoastwetlands.org](http://www.centralcoastwetlands.org)) which contains: newspaper articles from the early 1900s that give an account of environmental conditions as far back as the mid 1800s, historical documents dating as far back as 1879, anecdotes from 1850–present, historical maps dating back to the 1700s, geo-referenced black and white aerial photos from 1937 for much of the lower half of the watershed (Figure 5), and a map containing geo-referenced topographic maps from the 1900s covering the entire watershed (Figure 6). A draft historical ecology map for the Gabilan watershed was also created along with a historical timeline illustrating land use eras, population trends, generalized agricultural phases, acres planted, and an events timeline from 1700-2010 (Figure 4). The next steps and a timeline for completing the project are also included (Appendix III).

While interpretation of the combined information using the comprehensive methodology of SFEI was beyond the scope of this project, an initial interpretation has been made and will be provided to the technical review team for discussion and direction. The data that has been collected for the watershed is a significant start to a completed HEP for the Gabilan Watershed and will be presented



to the Monterey Integrated Regional Water Management Planning group tasked with developing a regional water management plan for the area.

### Central Coast HEP deliverables

#### *Current condition GIS map for the central Monterey Bay (Figures 1-3).*

Other regions that have initiated historical ecology projects began by creating several key reference materials. These have helped to increase people's awareness of local wetland landscape, and have led to a greater understanding of the aquatic resources that have been lost through human modifications. CCWG initiated a HEP for the Gabilan watershed to help define future restoration potential within this rural watershed and define how historical natural processes have resulted in a diverse assortment of aquatic resources. Three important outcomes of a historical ecology effort include: 1) a current conditions map, 2) a historical landscape map, and 3) a land use timeline defining the various stages of land use change since European settlement. Through the efforts of CCoWS and Joel Cassagrande, we have initial draft versions of these products that can be built upon in the future.

The following three maps are examples from 17 map layers that CCoWS compiled to create the current condition map for the Gabilan Watershed. See Appendix IV to view all of the current conditions maps. The current condition data is a critical piece of the HEP, as it provides a baseline from which to look back. The current conditions data set is diverse, ranging from population density, air temperature, to pounds of pesticides applied within the watershed.

Figure 1. 2000 Census Tract Population Density (# of people per km sq)

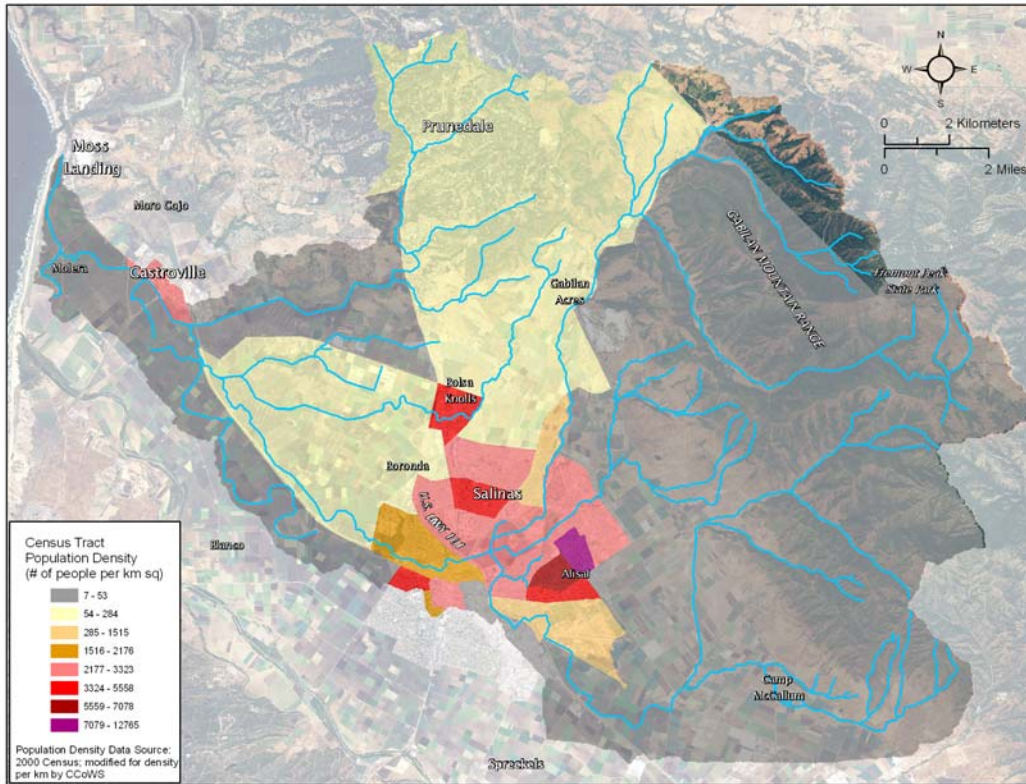


Figure 2. 1995 El Nino Flood (March 12, 1995)

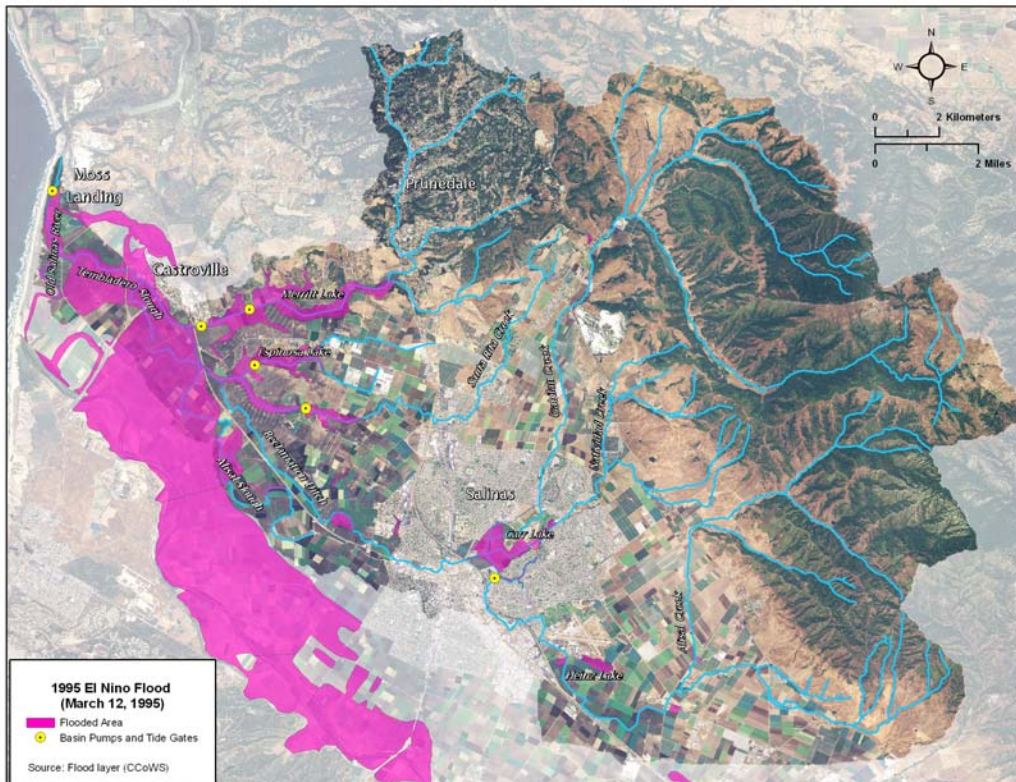
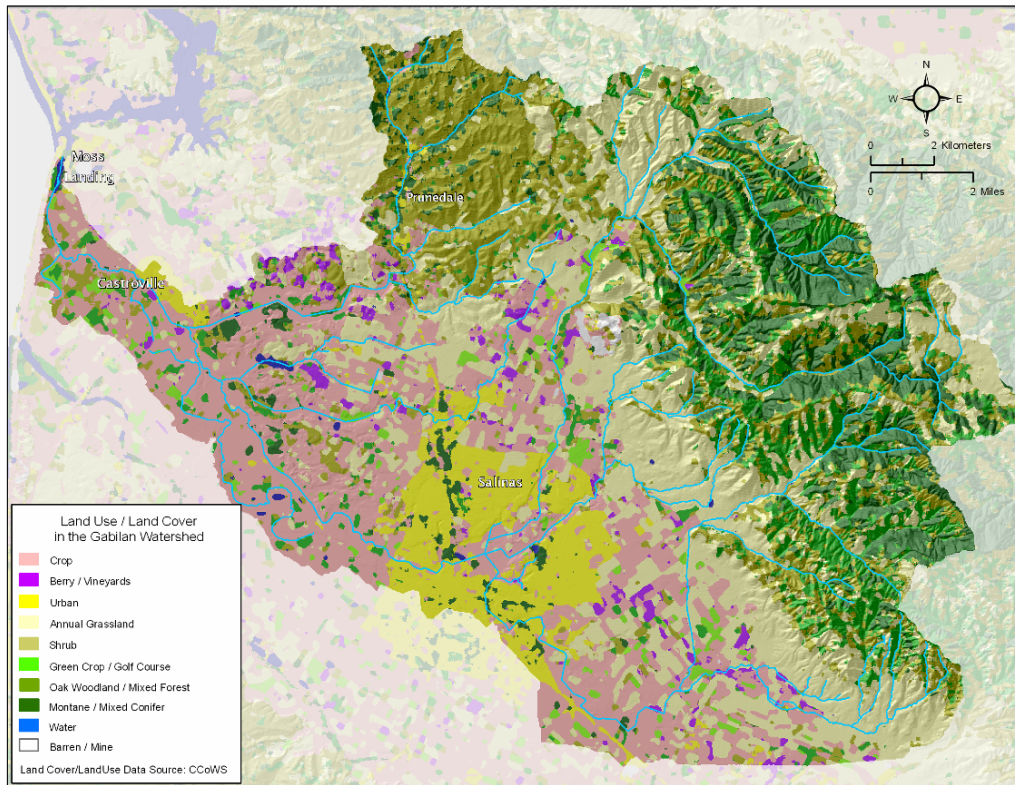


Figure 3. Landuse/Land Cover in the Gabilan Watershed (Circa. 2002)



### *Historical Timeline*

CCoWS created a Landuse Timeline (Figure 4) that depicts many significant landuse changes including: the switching of pasture and dry farming to intensive row crop use, population growth and hydrologic modifications to the system since the 1600s. This timeline can be of use to resource managers as it better defines how past modifications to the system may be driving various hydro-geomorphic and ecological processes.



Figure 4. Historical timeline for the Gabilan Watershed

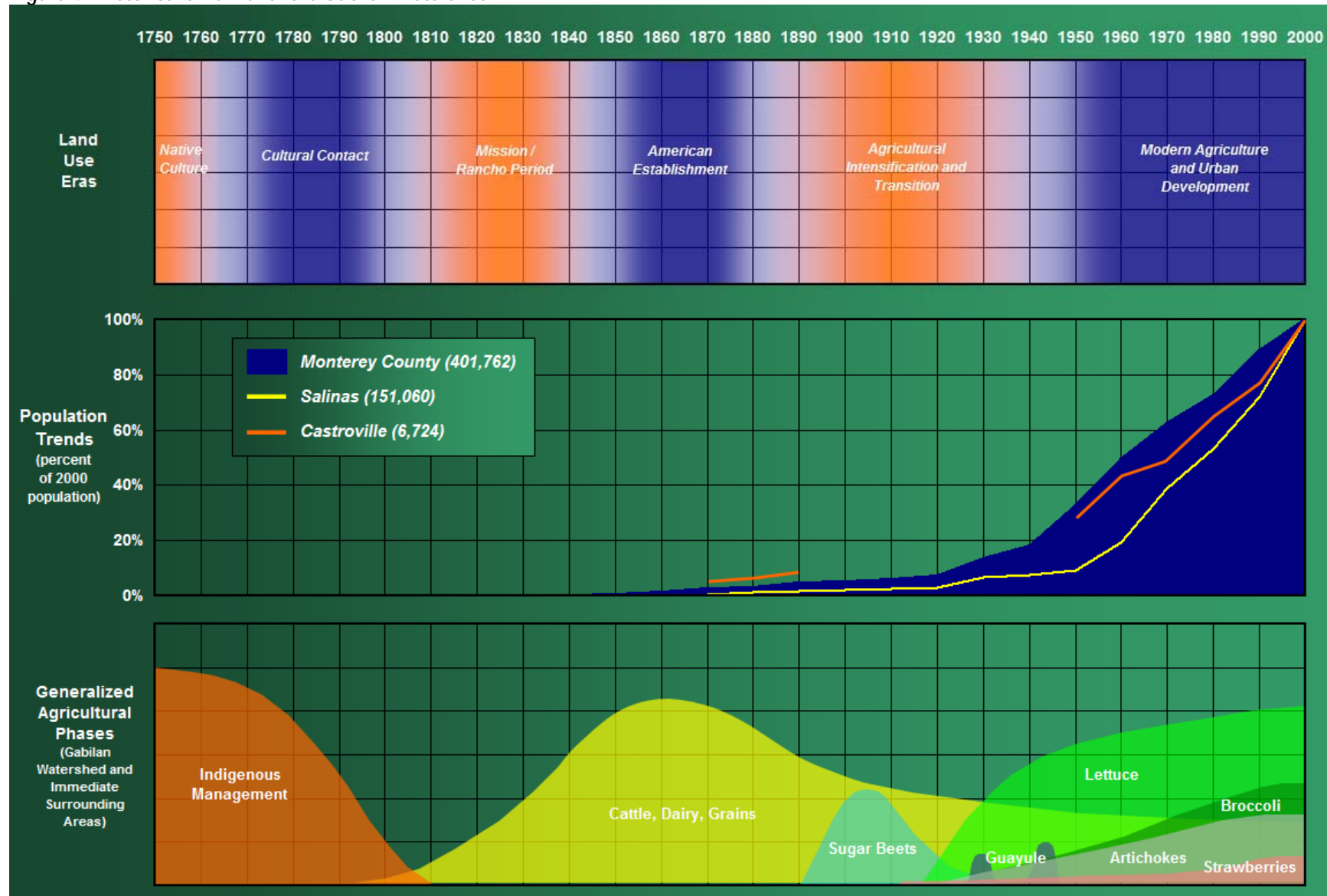
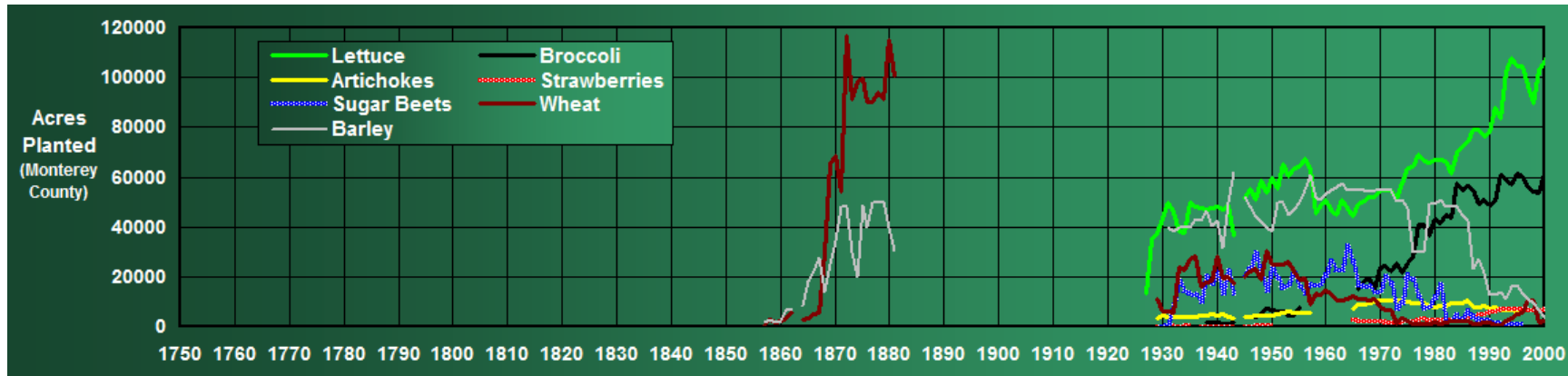
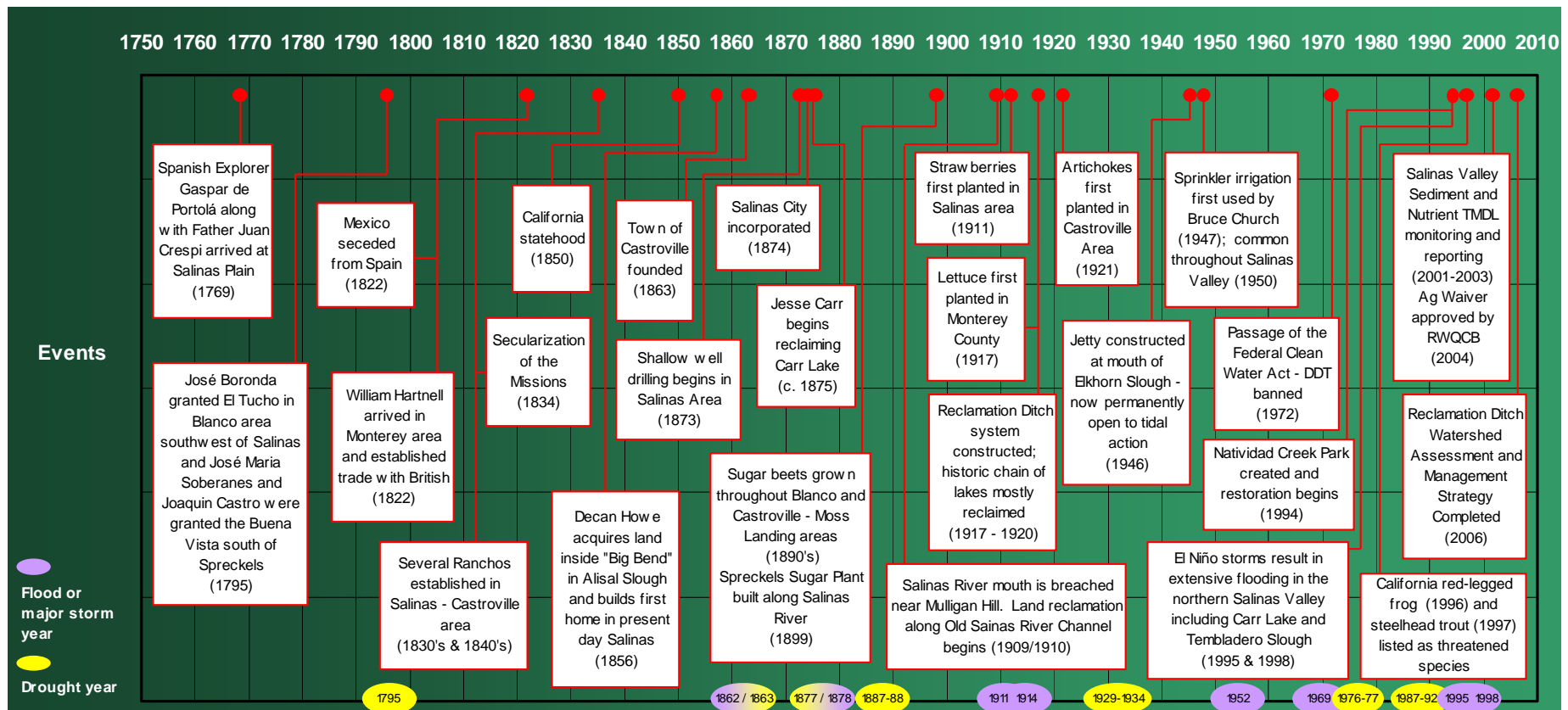


Figure 4. continued



## GABILAN WATERSHED AREA | TIMELINE 1750 – 2006



***Creating a Historical Condition and Habitat map for the Gabilan Watershed***

Some of the underlying questions posed by resource managers that can be addressed through a historical ecology project include: What resources have we lost? How were various habitat types and plant and animal species distributed throughout the watershed? How did the resources respond to seasonal and periodic perturbations and changes in climate? Other questions that have been brought up during discussions with local partners include: How did fresh and sea water interactions regulate coastal wetland habitats before and after modifications to the mouth of the Gabilan? What plant species pallets were common? Where should species be reestablished based on a historical perspective?

While historical conditions cannot dictate future restoration activities, this information can be useful in developing restoration objectives and prioritizing actions. Even with access to old reports and scientific studies, a full understating of how these resources functioned 200 years ago is difficult. Because there is limited money to do intensive and thorough HEP evaluations within all 11 watersheds of the Central Coast, CCWG is working to expand the capacity for local partners to use historical records by providing easy access to those records. Through continued efforts to expand the Gabilan and Moro Bay HEPs and distribute results online, we hope to opportunistically build a wealth of information over time, taking advantage of the web as a resource to share and compile data.

Investigations of historical photographs and newspaper articles can expand the lines of evidence and the records of species distribution. Numerous newspaper articles referencing sources from the 1800s mention the vast number of aquatic birds prevalent throughout the watershed, spanning vast areas between Salinas and Moss Landing. Multiple sources reference the magnificence of a sky filled with these birds in flight. Such records provide a window into the magnitude of wetland degradation. Further, these types of anecdotes are often more effective at provoking greater understanding and awareness of the state of our watersheds than maps, graphs and timelines, since they catch the eye and heart of the public.

The following five figures are examples of early maps, literature, newspaper articles and anecdotes that are available and can be used to evaluate the distribution and abundance of various habitat

types. Many of these contain important indicators of land use, as well as habitat and aquatic resource locations. None of these sources can be considered complete records, however when combined they provide multiple lines of evidence generating a vivid picture of the historical condition of the Gabilan watershed.

CCWG hopes to build a wealth of knowledge that will help current and future generations expand the capacity of our natural habitats and regain some of what we have lost. Figure 10 is a historical conditions map created from various records compiled for the Gabilan Watershed that references the existence of resources in specific locations. While this map is not yet a comprehensive depiction of the Gabilan Watershed in the 1800s, it provides a foundation for CCWG partners to build upon, adding resources and information, so that over time it will flourish into a complete record of historical data.

In the near future, we hope to work with Joel Casagrande to continue the review of compiled records in order to expand the weight of evidence to various mapped resources and integrate more references into the document. The map will also function as a tool for those within the Monterey Regional Integrated Water Management Program to use and modify.

While many of these ideas are not integrated into the draft Strategic Plan that was presented by SFEI, we hope to build from the current version of the Strategic Plan integrating these ideas with aid from local partners. The current version of the Strategic Plan is provided in Appendix VII.

Figure 5. The Gabilan Watershed lowland and foothill areas, 1937

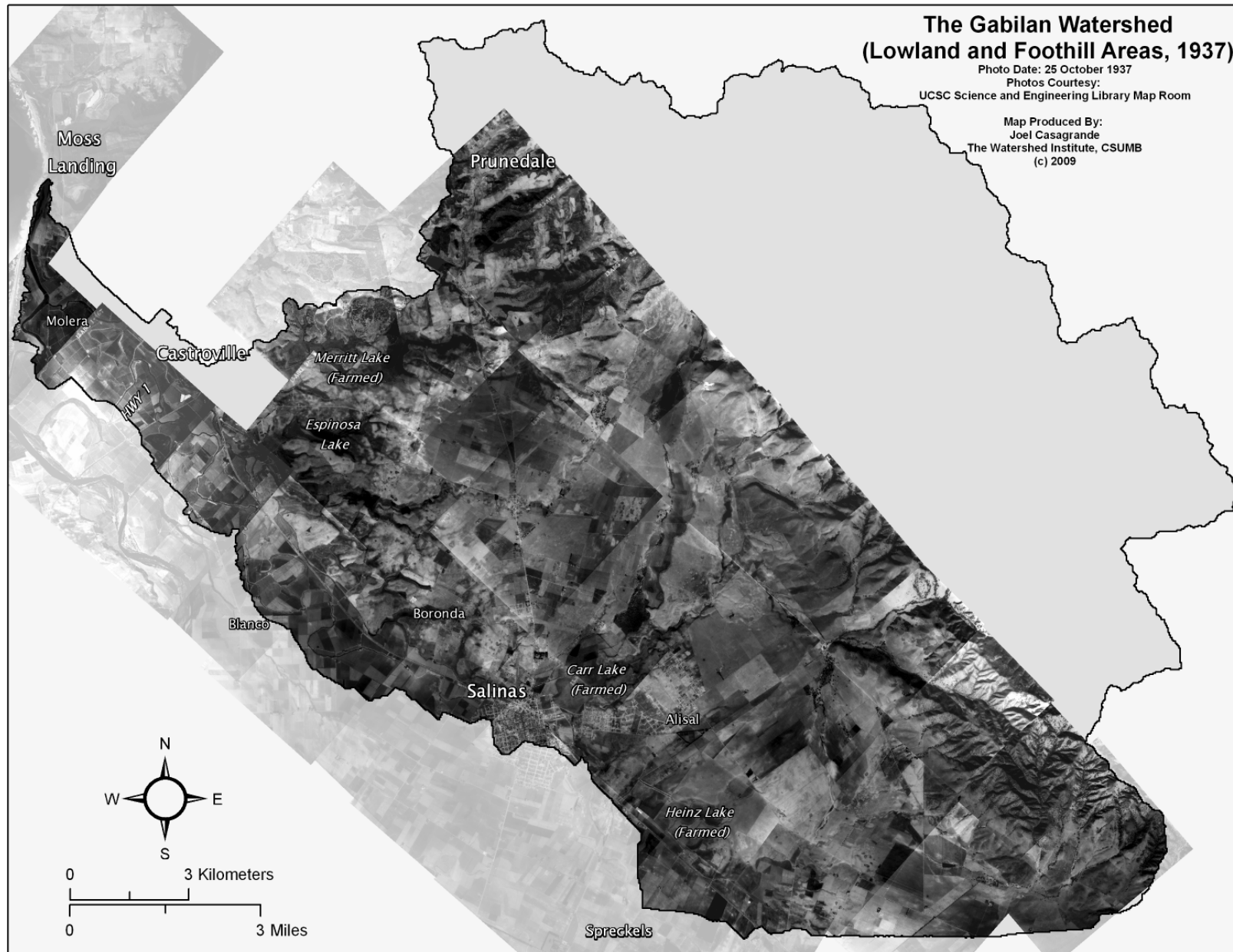
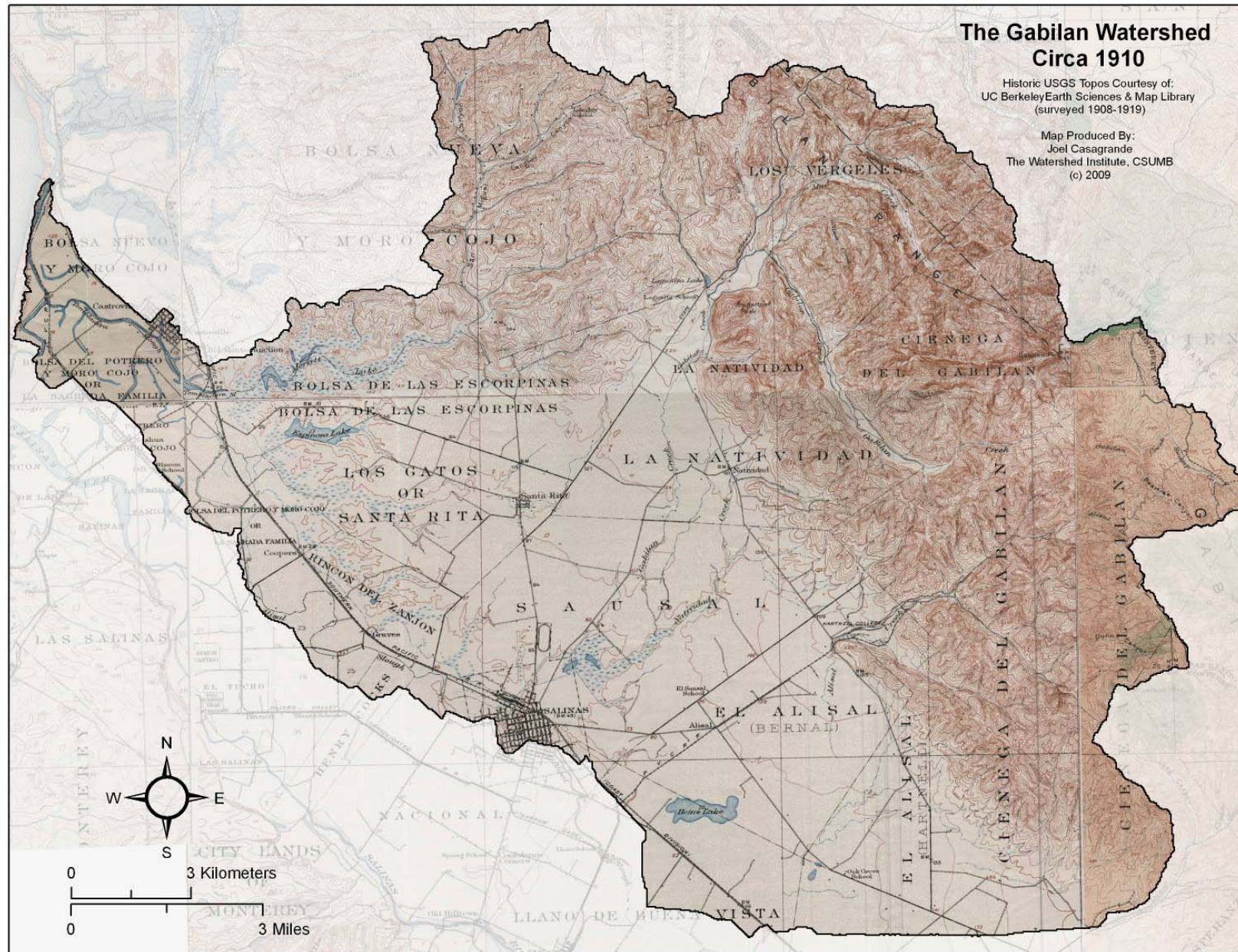




Figure 6. The Gabilan Watershed Circa 1910





*Historic information regarding extent, condition and resources of central Monterey Bay wetlands with an emphasis on the Gabilan Watershed (Figure 7-9).*

These figures are examples of numerous, newspaper articles, photographs and maps that have been compiled to date. To see all the collected information on the diversity, extent and condition of central Monterey Bay resources, see Appendix V (also online at [www.centralcoastwetlands.org](http://www.centralcoastwetlands.org)).

Figure 7. Salinas Circa 1880s



Figure 8. Quote from Paul Parker, 1934

It is difficult for the "newcomer" to realize that the vegetable field he now sees at Lake Merritt, Carr's lake and Heinz lake were at one time full of water and covered with thousands of duck. The reclamation ditch drained them dry and with the series of dry years that followed they never came back.

—Paul Parker, 1934

Figure 9. Picture of Carr Lake from the Salinas Californian April 2, 1958

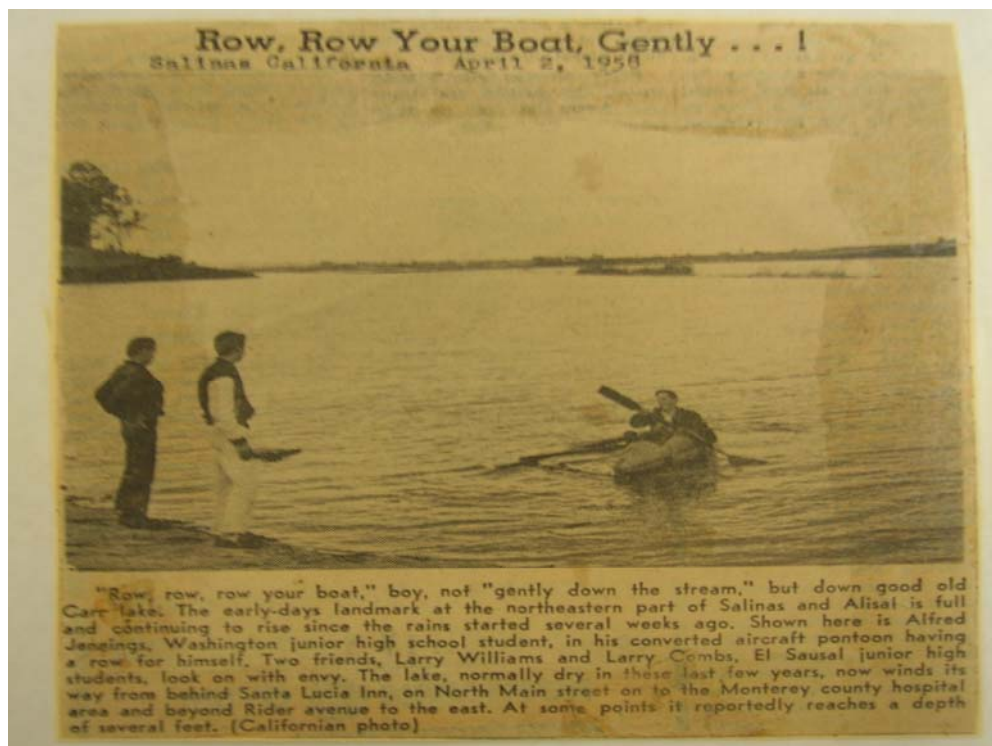
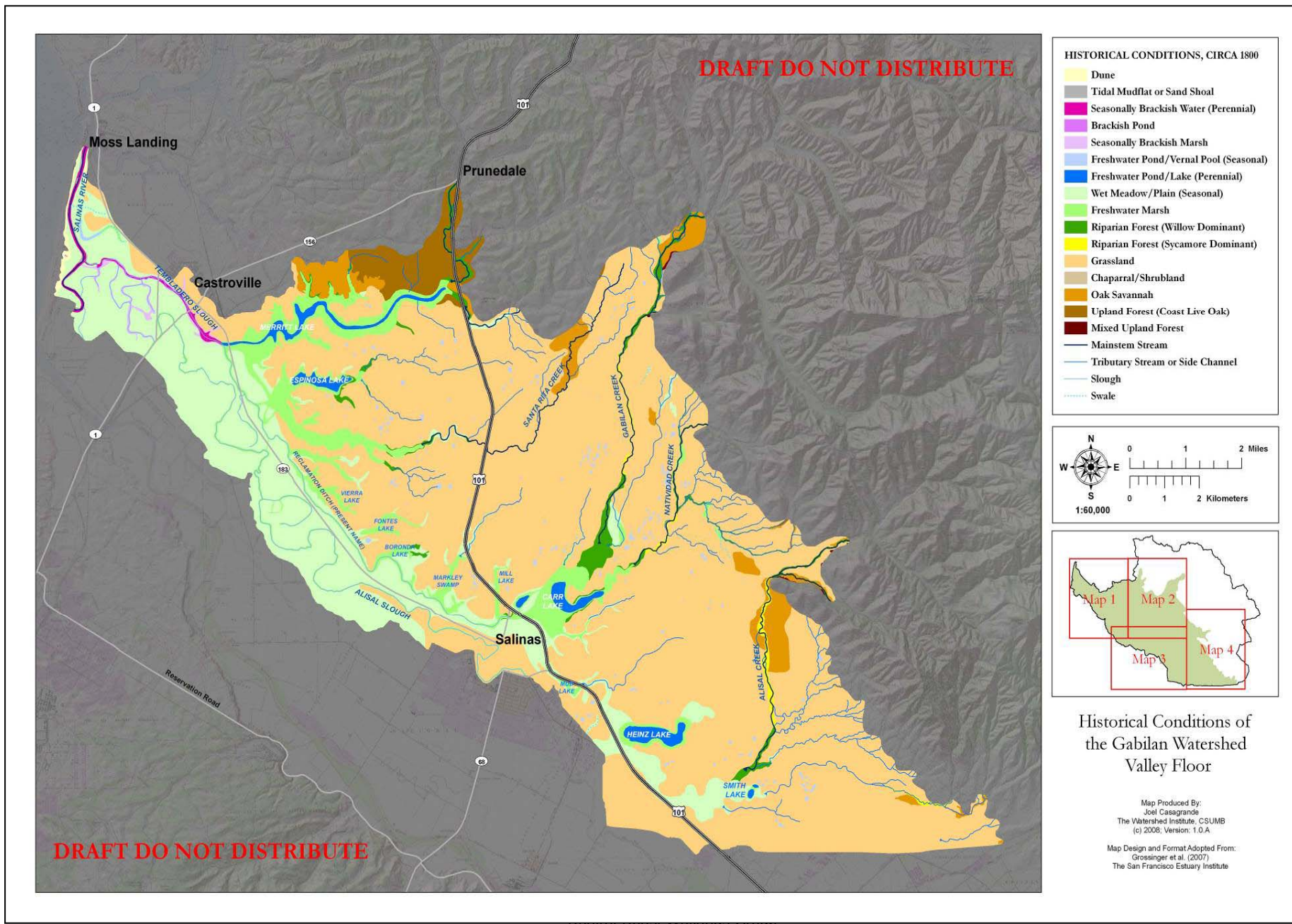


Figure 10. Historical Conditions of the Gabilan Watershed Valley Floor Circa 1800. Please see appendix VI for the 4 detailed maps which accompany this figure.



#### **TASK 4. Enhance the content of the Central Coast Wetlands Group website and create an annual reporting process for Group activities ([www.centralcoastwetlands.org](http://www.centralcoastwetlands.org))**

**Task Description:** We have continued to develop a library of historical reports which form the scientific groundwork for many current programs. Most of these reports have not been made available since their initial printing and few copies remain. These reports have been put online to build a library of information for the Central Coast wetland researchers and managers. The Coastal Commission has recently partnered with CSUMB to help archive many historic resource documents for the entire Central Coast and hope to continue this work in the future. The project page will provide a location for members of the Wetlands Group make their project reports available.

##### **Develop comprehensive web accessible library of current and historic public wetland documents.**

The new CCWG website is user friendly, well organized, and contains a wealth of information regarding wetlands in the Central Coast Region. Some of the key features of the website include 1) a reference library page that can serve as a repository for all of the projects that have been completed in the Central Coast region currently ranging from 1970– present, 2) a historical ecology page which includes the historical literature, photos, maps, anecdotes and articles compiled by CSUMB, as well as the methodology used in the Gabilan Watershed pilot project, 3) links to the wetland monitoring and assessment tools developed by CCWG and its partners, 4) the information presented at the 2008 Wetland Science Symposium, 5) access to collaborative projects.

*Please visit the website at [www.centralcoastwetland.org](http://www.centralcoastwetland.org)*

##### **Integrate priority information generated by partner organizations and provide this information on website.**

The CCWG website is currently set up to house and integrate priority information from our Central Coast partners. Because of a lack of local resources to host a web site, the CCWG site had been hosted by SFEI until this grant provided the funds to move the site. Since active management of the website was the objective, portions of the site have been moved to Moss Landing Marine Labs where they are managed and updated frequently. The site now acts as a place where data and



current reports can be accessed by the general public. There is a page within the site that is dedicated to the Integrated Regional Water Management Plan for the Greater Monterey County region.

## **TASK 5. Host a Central Coast Wetland Science Symposium/Meeting**

**Task Description:** A cornerstone of regional wetland team building is the meeting of members to exchange ideas and results of current work. The Wetland Science Symposium has provided that forum for scientists within the region. The CCWG Steering Committee and Science Group established the symposium, developed objectives and created an agenda for the meeting. Regional programs and scientist were invited to host individual breakout groups and/or present research on topics such as 1) water quality benefits of wetland restoration, 2) conflicts between wetland restoration and food safety, 3) meeting the state “no-net-loss” policy for wetlands, and 4) the role of conservation easements in managing regional wetland habitat.

### **Establish Symposium work group**

The Steering Committee for the symposium was established in April 2008 and consisted of 14 people representing different agencies and organizations throughout the targeted region (table 1). The committee naturally shifted during the planning phase as interested people contacted us wanting to be involved while others found themselves over committed. A core group emerged by the third meeting; these individuals played active roles in the development of the event. Each committee member actively participated in structuring the symposium.

### **Symposium objectives, topics and speaker list**

The Steering Committee decided to split the symposium into two days with the first day being composed of talks focused on wetland conditions along the Central Coast, and day two focused on discussing the structure and growth of CCWG as a formal organization.

Day one of the symposium took on a unique theme encouraging participants to consider their work through the lens of successes and failures across three different project phases 1) goal setting, 2) implementation, and 3) evaluation/monitoring. Three people from the steering committee took the

lead in covering these sections by interviewing speakers and confirming that the symposium would have a structured logical theme that would really benefit our community. Please see the symposium program (Appendix VIII).

### **Host Central Coast Wetland Science Symposium**

The Wetland Science Symposium was held on September 24<sup>th</sup> and 25<sup>th</sup> 2008. The event was a success with a turn out of 90 people the first day and 20 special invite guests for the second. The 24<sup>th</sup> provided the opportunity for regional wetland experts to share successes and failures of recent projects with the larger community of scientists, managers, public, and private agencies. There was also a longer presentation from the San Francisco Estuary Institute (SFEI) that focused on discussing their perspective as a regional organization that has spanned the gap between environmental science and environmental management and policy. This talk was specifically included to highlight the success of SFEI, get their advice on how to “build” a program, and provide discussion as to the pros and cons of creating such an organization.

The second day was a smaller more intimate meeting that included key Central Coast partners to discuss the need for a regional science entity. On both days we heard from other regional groups (SCCWRP and SFEI) about how they were started and have fared throughout their tenure. On the second day we proposed the idea of further developing the Central Coast Wetlands Group, brainstormed about ways to provide permanent core funding for CCWG, and discussed our common goals. We received constructive feedback regarding the feasibility of becoming an entity. A follow up meeting was scheduled for late October to continue formalizing the Central Coast Wetlands Group, which ultimately led to the creation of the letter of intent document described above (task 2).

In collaboration with the Monterey Bay National Marine Sanctuary and West Coast Regional Sanctuary office, a Brochure was produced that effectively outlines the success today of the CCWG and the various tools and resources the group has developed that could benefit other regional partners. This brochure will be made available online as well as in print form and will be a valuable communication tool for the next year or two.

## Next steps

Response from regional partners on the value of the CCWG collaborative intent was very positive. Many partners provided sound direction on next steps and priority activities. Some priority actions include the continuation and expansion of the central coast HEP program to complete the Gabilan project and investigate initiating a HEP for the Morro Bay watershed in partnership with the Morro Bay NEP. Other suggested priority activities included continuing the Symposium series (annually or biannually), initiating work to address conflicts between wetland restoration activities and food safety issues, continuing active participation in state wetland monitoring tool development and program implementation, and initiating direct one on one conversations with key partner agencies to integrate CCWG actions into agency programs and objectives.

Moss Landing Marine Laboratories and the CCWG are currently drafting numerous grant proposals to secure funding to implement priority activities defined above. The value of this EPA wetland grant to initiate the CCWG program, fund staff to provide the management necessary to move from ideas to products, and host a region specific symposium have greatly improved CCWG's ability to move forward with implementing the now formalized Strategic Plan.

## Appendices

- Appendix I. CCWG letter of intent.
- Appendix II. Program charter updates in 2007.
- Appendix III. Recommended next steps for the HEP by CCoWS.
- Appendix IV. Current Condition Maps for the Gabilan Watershed
- Appendix V. Anecdotes, Newspaper Articles and historical photos
- Appendix VI. Draft Historical Conditions Map of the Gabilan Watershed
- Appendix VII. SFEI Strategic Plan for the HEP
- Appendix VIII. Central Coast Wetland Science Symposium program
- Appendix IX. CCWG Informational Brochure
- Appendix X. Inventory of historic maps for the greater Gabilan Watershed Area.