CALIFORNIA COASTAL COMMISSION
45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105- 2219
VOICE AND TDD (415) 904- 5200
FAX (415) 904- 5400

DRAFT FOR PUBLIC REVIEW AND COMMENT

The 2006 Updated Assessment of the California Coastal Management Program (CCMP)

Performed Under Section 309
(the Coastal Zone Enhancement Grants Program)
of the
Coastal Zone Management Act

January 31, 2006

This is an update to the 2001 Assessment of the California Coastal Management Program. It provides a description and assessment of coastal resources and program needs in nine enhancement areas, according to guidance provided by the federal Office of Ocean and Coastal Resource Management, National Oceanic and Atmospheric Administration. The Assessment includes achievements made under the current Section 309 grant and will serve as the basis for developing a strategy to address priority program needs in one or more enhancement areas during the next three year federal grant cycle.

PREFACE

California's burgeoning population has created extraordinary development pressures along the state's scenic coastline. With nearly $5.36 million in funding from the Enhancement Grants Program, the California Coastal Commission has greatly enhanced its ability to analyze and manage coastal resources during the last thirteen years. Coastal Commission studies funded by Enhancement Grants have documented:

- *An insufficient number of locations where the public can get to the coast from Highway 1;*
- *Seawalls blocking sandy and cobble beach areas that could be used by the public;*
- *Harm to coastal wildlife and vegetation caused by development along the coast;*
- *Polluted runoff resulting in beach closures and damage to marine life;*
- *A degradation of water quality and the health of the wildlife and vegetation of coastal streams and wetlands;*
- *Continued threats to the remaining 9% of California's wetlands by development encroachments; and,*
- *Inadequate roads and insufficient water supply to serve planned development and serve California's coastal visitors.*

The Enhancement Grants Program has been an important asset to coastal management in California, providing crucial funding for not only identifying these concerns, but also developing solutions. The Commission remains dedicated to our mission of protecting the coast. This Assessment and Strategy has allowed the Commission to reflect upon its accomplishments, identify the state's coastal management needs, and create a plan to address those needs.

Table of Contents

The 2006 Draft Updated Assessment of the California Coastal Management Program

Performed under Section 309 of the Coastal Zone Management Act— the Coastal Zone Enhancement Grants Program

Public Review Draft
January 31, 2006

Introduction

The updated Assessment examines progress made from 2001 through 2005 in achieving the coastal zone "enhancement objectives" specified in Section 309 of the Coastal Zone Management Act (CZMA) of 1990, as amended. It assesses the current ability of the California Coastal Management Program (CCMP) to make improvements in the specified enhancement areas. This document considers the portions of the CCMP administered by California Coastal Commission (Coastal Commission or the Commission) and applies only to the Pacific coast elements. The Bay Conservation and Development Commission (BCDC), which administers CCMP activities within San Francisco Bay, has its own Assessment and Strategy documents. Both the Commission and BCDC consider work conducted by the State Coastal Conservancy (SCC) in their respective updates.

Section 309 of the CZMA established a grant program to encourage states to improve their coastal management programs in nine enhancement areas: 1) public access, 2) coastal hazards, 3) ocean resources, 4) wetlands, 5) cumulative and secondary impacts, 6) marine debris, 7) special area management planning, 8) energy and governmental facility siting, and, 9) aquaculture. Within each area, states are required to update their last assessment of coastal resources and to document the coastal management program's ability to manage those resources. The assessment then identifies major gaps the state program faces in addressing the programmatic goal of each enhancement area. As documented in this 2006 update of the enhancement area analysis, the Commission has identified five areas as high priority for program improvements.

2006 CCMP ASSESSMENT

High Priority Areas for Improvements

1) Public Access
2) Coastal Hazards
3) Wetlands
4) Cumulative & Secondary Impacts
5) Special Area Management Planning

The Coastal Commission carries out enhancement programs funded under an Assessment and Strategy adopted in 1992, then updated in 1997 and 2001. To qualify for CZMA funds under the enhancement grant program for fiscal years 2006 to 2011, the Commission must update its assessment and complete a five-year strategy addressing priority areas for program enhancement.

The Assessment is organized according to guidelines provided by the Office of Ocean and Coastal Resource Management (OCRM), part of the National Oceanic and Atmospheric Administration (NOAA). The assessment section begins by summarizing work performed to enhance the coastal management program since the 2001 report. Next, the enhancement area analysis documents the status of the CCMP in each area, discusses program needs, and establishes a priority for improvement of that area of the program.

This document not only provides an accounting of the program achievements made since the 2001 Assessment and Strategy, it also gives the public an opportunity to comment on future needs of the state coastal program. The final updated assessment will be the basis for targeting priority improvements to the CCMP in the future.

Background: Section 309 Enhancement Program

The original strategy for enhancing the Coastal Commission's program was adopted in 1992. At that time, three areas were identified as high priorities for improving the program: wetlands, coastal hazards, and cumulative and secondary impacts of development. The Coastal Commission's current enhancement program, updated in 1997 and 2001, added public access and special area management planning, respectively, to that list of high priority areas.

Performing an assessment allows the Commission to identify needs, around which it builds a five-year enhancement program strategy. Two significant needs stand out in this 2006 assessment: 1) the need to update local coastal programs (LCPs), and 2) statewide access to an enhance geographic information system (GIS). Therefore, the strategy focuses on LCP reviews, technical assistance for local governments and the Commission staff members, and enhancement of GIS data and internet mapping services (IMS). Such improvements will advance management of all five high priority areas identified by the Commission.

Highlights of Program Enhancements 2001-2005

Major accomplishments under the Section 309 program in the last five years include the following program changes and improvements:

- *new or revised authorities, including enforceable policies, administrative decisions, executive procedural orders and memorandum of agreement/understanding;*
- *new or revised Local Coastal Program policies and implementing ordinances;*
- *new or revised geographic information systems;*
- *new or revised guidelines, procedures and policy documents which provide specific interpretation of enforceable CCMP policies to applicants, local government and other agencies that result in meaningful improvements in coastal resource management.*

Below is a summary of significant program changes and improvements that have occurred in the past five years using Section 309 grant funds. The 2001 Strategy outlined a five-year plan for applying the cumulative analysis framework to achieve program changes that would address the priority needs identified in the 2001Assessment. There is significant overlap among the five priority enhancement areas (cumulative impacts of development, coastal hazards, public access, special area management planning, and wetlands protection).

Cumulative Impacts

- The database and inventory of recorded Offers to Dedicate (OTD) Open Space Easements was developed to monitor the location and acreage of lands protected statewide through conservation easement conditions and lots retired in the Santa Monica Mountains under the Transfer of Development Credit Program. The Open Space Easement Program researched and documented OTDs that had been logged in order to determine status and avoid expiration of mitigation requirements. This work has resulted in acceptance of 123 OTDs statewide since 2001, 72 of which are in the Santa Monica Mountains. The geographic information system developed as part of the Malibu/Santa Monica Mountains ReCap is a valuable tool for Commission staff in the review of coastal development permits and enforcement cases in the unincorporated Los Angles County

portion of the Santa Monica Mountains. (Santa Monica Mountains/Malibu ReCAP, adopted June 1999.)

- Commission action on Local Coastal Program (LCP) Amendment SLO-MAJ-3-00 (May 2002) incorporated the Cambria Commercial Design Plan into the North Coast Area Plan component of the LCP and addressed various Periodic Review recommendations for the Cambria commercial areas related to water quality protections, riparian setbacks, flood hazard provisions and community character. (San Luis Obispo County Review, adopted July 2001.)
- The Commission reviewed an LCP Amendment to implement Phase I of the Periodic Review Recommendations to San Luis Obispo County, addressing cumulative and secondary impacts. (SLO-MAJ-1-03, Sept. 2003.)
- Planning for the Salinas Road/Highway One interchange by California Department of Transportation (Caltrans) continues following the parameters established in the Periodic Review of the Monterey County LCP. (Monterey County Review. Commission review Sept 2004, formal adoption not yet taken.)
- The Marina del Rey LCP Review resulted in a Preliminary Report and Recommendations with suggested LCP revisions, completed in June 2005, with final action and transmittal expected in 2006. (Commission review June 2005; pending formal adoption.)

Public Access

- The Commission used Monterey County Periodic Review information and recommendations concerning the California Coastal Trail in commenting on the Forest Service's Southern California Land Management Plan Revisions. (Monterey County Review. Commission review Sept 2004. Formal adoption not yet taken.)
- The Big Sur Land Trust advanced the planning process for public trail connections in that area using Monterey County Periodic Review information and recommendations concerning public access in the vicinity of Carmel River. (Monterey County Review. Commission review Sept 2004. Formal adoption not yet taken.)
- The Monterey County Periodic Review suggested standards for the California Coastal Trail (CCT) alignment and design that were subsequently adopted for the Transportation Agency of Monterey County (TAMC) portion of the Monterey Bay Sanctuary Scenic Trail (MBSST) project; the MBSST is planned to extend northwards from Marina along the former Union Pacific Railroad Monterey Branch Line right of way, now acquired by TAMC for rail-to-trail purposes. (Monterey County Review. Commission review Sept 2004. Formal adoption not yet taken.)
- The Monterey County Periodic Review recommended incorporation of policies that would establish a hierarchy of measures for landslide disposal along the Big Sur Coast, as needed to maintain public access & mobility along Highway 1 while protecting the marine environment within the Monterey Bay National Marine Sanctuary; these measures were developed through the Coast Highway Management Plan (CHMP), funded by the Federal Highway Administration through Caltrans, under the National Scenic Byway Program. (Monterey County Review. Commission review Sept 2004. Formal adoption not yet taken.)

Special Area Management Planning

- The Regional Cumulative Assessment Project (ReCAP) for the Santa Monica Mountains and Malibu area findings and recommendations provided critical information that was used in the Commission staff development of the City of Malibu LCP that was certified in September 2002. The certified LCP implemented many key recommendations of the

Malibu/Santa Monica Mountains ReCAP. (Santa Monica Mountains/Malibu ReCAP, adopted June 1999.)

- As work continues on the Los Osos Habitat Conservation Plan (HCP), the Commission staff's HCP team has made some improvements to the protocols for environmentally sensitive habitat (ESHA) surveys. (San Luis Obispo County Review, adopted July 2001)
- Planning is ongoing towards of completion of a management plan at the Piedras Blancas Lighthouse, which has the potential to carry out several habitat and access recommendations of the San Luis Obispo Periodic Review. (San Luis Obispo County Review, adopted July 2001)
- Staff reviewed and commented on multiple California Environmental Quality Act (CEQA) documents regarding the extant Monterey pine forest and habitat in Del Monte Forest, participated in a series of meetings and discussions with Monterey pine forest experts. (Monterey County Review. Commission review Sept 2004; formal adoption not yet taken.)

Coastal Hazards

- Recommendations from the Monterey Bay region pilot report continue to be implemented in coastal permit and appeals and LCP Amendments. The Commission staff use ReCAP work to review virtually all proposals for shoreline protective devices in the Santa Cruz area. (Pilot ReCAP: Monterey Bay Region. Commission concurrence September 1995.)

Wetlands

- As part of the LCP Amendment for the Orange County Bolsa Chica segment, the Commission staff completed a biological assessment and resource analysis. The Bolsa Chica site analysis involved restoration of 566 acres of wetlands and ESHA. Measures to address cumulative impacts were implemented as part of the Commission action on the LCP Amendment.
- The Commission used Periodic Review and cumulative and secondary impact information and recommendations in reviewing the proposed expansion of the Community Hospital of Monterey Peninsula (3-03-068), which proposed to permanently convert 3/4 of an acre of Monterey pine forest (ESHA) to hospital use.

Enhancement Area Analysis

PUBLIC ACCESS

Section 309 Programmatic Objectives

I. Improve public access through regulatory, statutory, and legal systems.

II. Acquire, improve, and maintain public access sites to meet current and future demand through the use of innovative funding and acquisition techniques.

III. Develop or enhance a Coastal Public Access Management Plan which takes into account the provision of public access to all users of coastal areas of recreational, historical, aesthetic, ecological, and cultural value.

IV. Minimize potential adverse impacts of public access on coastal resources and private property rights through appropriate protection measures.

Resource Characterization

Extent and Trends in Providing Public Access (publicly owned or accessible):

Provide a qualitative and quantitative description of the current status of public access in your jurisdiction. Also, identify any ongoing or planned efforts to develop quantitative measures to assess your progress in managing this issue area.

The California coast, from the redwoods and rocky shores in the north to the palm trees and sandy beaches in the south, is an area of beauty and diversity. The state's coast and its beaches in many ways symbolize the state. The California Coastal Act requires that public access to and along the shoreline be maximized. Every few years, the Commission updates the *California Coastal Access Guide* which details the public access points to the coast and ocean. The primary tool the Coastal Commission uses to increase public access is offers-to-dedicate public easements (OTDs). These could be accessways to the coast, along the shoreline, or vista points. To quantify the programs success, staff keeps track of the number of OTDs that are accepted and then opened to the public.

Briefly characterize the demand for coastal public access within the coastal zone, and the process for periodically assessing public demand.*

Millions of people visit the California coastline every year. Residents and tourists together made more than 566 million visits to California's coast in 1995[1].The demand has grown even greater over the last ten years as the state's population has continued to increase. The staff members of the Commission are working with OCRM to develop quantitative measures of the demand for public access in the coastal zone. Currently, the data available speaks to usage rather than demand. The Department of Parks and Recreation (DPR) track the number of visitors to coastal state parks and some counties record the number of daily visitors to their beaches.

Identify any significant impediments to providing adequate access, including conflicts with other resource management objectives.

Local Coastal Programs (LCP)

The majority of local governments manage their jurisdiction's public access through policies, plans and implementing measures contained in LCPs that have been certified by the Commission as being consistent with the Coastal Act. Some impediments include:

- Outdated LCP access components need to be updated to reflect current access conditions, changed circumstances, and emerging trends.
- Inadequate implementation of policies to ensure that: 1) access findings are required as part of the coastal development permit process; 2) all potential types of access are addressed; 3) lead departments for implementing access policies are identified; and 4) access exemptions or restrictions are carefully defined.
- Vague policies about supplementing and managing access opportunities in light of OTDs.
- Lack of electronic information (GIS) identifying where access improvements are within the jurisdiction for planning and permitting uses.

Shoreline Armoring (Coastal Hazards)

- Negative impacts of shoreline armoring, including loss of sandy beaches and interference with public access.

---

[1] *The Economic Value of California's Beaches.* The Public Research Institute of San Francisco State University. 1997.

Cumulative Impacts

- Installation of structures that encroach on beaches and easements.
- Placement of erroneous private signs that restrict or inhibit legitimate public use.
- Elimination of on-street public parking through such actions as curb cuts for driveways, red zones, installation of private landscaping in public road right-of-ways, and installation of no-parking signs.
- Commitment of public beaches to temporary exclusionary commercial events.
- Local imposition of beach curfews restricting hours and location of public use.
- The vacation or transfer of public road easements providing public access to private property interests.

Water Quality

- Polluted coastal waters that impact a wide variety of shoreline recreational uses the quality of the beach recreational experience.
- Closure of beach areas due to poor water quality, forcing visitors to relocate to other beach areas and contributing to overcrowding.

Public Information

- Lack of sufficient public information regarding the availability of coastal public access facilities.

Inadequate Parking

- Parking demand that exceeds supply, especially in southern California.
- Exclusionary parking programs in coastal neighborhoods that reduce parking for visitors.
- Limiting the hours of operation of public parking lots and street parking.

Resource Characterization (Please explain any deficiencies or limitations in data.)

Access Type	**Current Number(s)**	**Change Since 2001**
State/County/Local Parks (# and acres)	Nine federal parks, 84 state parks (23% of the coastline, 260 miles of shoreline)	No change
Beach/Shoreline Access Sites (#)	These are detailed in the California Coastal Access Guide (2003)	To be determined
Recreational Boat (power or non-power) Access Sites (#)	65	No change
Designated Scenic Vistas or Overlook Points (#)	Much of Highway 1 (the shoreline road) contains scenic vistas. Many designated highway scenic	Caltrans opened one new vista point (Malibu)

Access Type	Current Number(s)	Change Since 2001
	vista points plus hundreds of local roads provide vistas. Such vistas are difficult to quantify.	
State or Locally Designated Perpendicular Rights-of-Way (i.e. street ends, easements) (#)	There are numerous accessways and many outstanding offers to dedicate easements (OTDs) along the coast.	Four vertical accessways have opened as well as numerous lateral accessways. In 2001, 42% of the OTDs had been accepted. As of June 2005, 74% of OTDs have been accepted
Fishing Points (i.e. piers, jetties) (#)	18	No change
Coastal Trails/Boardwalks (# and miles)	Nature trails, disabled access, boardwalks and walkways provide similar types of access to the coast and many exist in coastal cities and counties. For example, some boardwalks provide nature trail access as well as access for wheelchairs.	The statewide 1100 mile trail-in-progress is coming closer to fruition. In 2003, the SCC, in consultation with the CCC & DPR, completed a report called Completing the California Coastal Trail, a strategic blueprint.
ADA Compliant Access (%)	Data not available, however 78 beaches (and at least one in each of the 15 coastal counties) lend beach wheelchairs free of charge.	Data not available
Dune Walkovers (#)	Data not available	Data not available
Public Beaches with Water Quality Monitoring and Public Notice (% of total beach miles) and Number Closed due to Water Quality Concerns (# of beach mile days (BMD)	The State Water Resources Control Board (SWRCB) began reporting closures by beach mile day in 2001	From 1/1/01 to 12/15/05 there were approximately 13,100 BMD.

Access Type	Current Number(s)	Change Since 2001
Number of Existing Public Access Sites that have been Enhanced (i.e. parking, restrooms, signage - #)*	Dozens, if not hundreds of sites provide such enhancements as parking, restrooms and signage.	Eleven (11) new Coastal Access signs were added along PCH in Malibu. Posting of aerial maps depicting the public access easements on Broad Beach in Malibu. Coastal Access signs along Highway 1 mark the four new vertical accessways. Many state parks have been renovated.

Does the state have a Public Access Guide or website? How current is the publication or how frequently is the website updated?

Yes, there is a statewide access guide. The publication is updated every few years, most recently in 2003.

Management Characterization

For each of the management categories below, identify significant changes since the last assessment. For categories with changes:

- Summarize the change.
- Specify whether it was a §309, §306A, or other CZM driven change and specify funding source.
- Characterize the effect of the changes in terms of both program outputs and outcomes.

Categories:

1. Statutory, regulatory, or legal system changes that affect public access

In 2002, the California Legislature amended the Conservancy Act, requiring the SCC to accept all offers-to-dedicate public access easements within 90 days of expiration. The purpose of this legislation was to prevent OTDs from expiring (19 had expired). The change in law came in part due to an OTD analysis funded by a §309 enhancement grant.[2] In addition, the CZMA Section 312 evaluation in 2001 contained a recommendation that the SCC accept all access OTDs and encouraged further coordination between the Commission and the SCC so the OTDs would be secured. As a result of this change, no offers-to-dedicate public access easements will expire.

Acquisition programs or techniques

The SCC has provided grants to agencies/nonprofits to develop plans to open OTD easements to:

- Westport Village Society, bluff top and beach access in Westport, Mendocino County;
- Mendocino Land Trust, Belinda Point Trail, Mendocino County;
- Redwood Coast Land Conservancy, Gualala Bluff top Trail and the Bonham Trail, Mendocino County;

[2] ReCAP Pilot Project: Findings and Recommendations. Monterey Bay Region. Sept. 1995.

- San Mateo County, five OTD easements;
- Marin County, a dozen OTD easements around Tamales Bay;
- Santa Barbara County, one vertical OTD;
- Access for All, in Malibu;
- Agua Hedionda Lagoon Foundation, lagoon trail;
- Voter-approved bonds funded the SCC grants. These grants will help ensure that OTDs are transformed into public access easements.

Comprehensive access management planning (including development of GIS data layers or databases)

OTD Mapping

The Coastal Commission performed extensive mapping of the Malibu OTDs (about 400 in total), including lateral beach, vertical to beach and inland Santa Monica Mountains Trails. The mapping occurred as a result of a state law directing the Coastal Commission to complete an LCP for the City of Malibu and built on prior work completed as part of the Santa Monica Mountains/Malibu ReCAP Project. The State-funded work resulted in a comprehensive overview of outstanding OTDs, which can be accepted by non-profits, local and state agencies.

CCT Plan

In 2001, this 1100-mile long trail-in-progress was designated by the Governor to be a statewide trail priority. The Governor directed that a plan be prepared and, in 2003*, Completing the California Coastal Trail* was completed by the SCC in consultation with the Commission and DPR. The plan defines the goals and objectives of the trail, highlights areas in need of significant work, and includes maps generally depicting the status of the trail. The outcome of the plan—a blueprint for completing the Coastal Trail—will lead to a coordinated effort among agencies to reach the goal: completion.

Impact Analyses

The Commission recently funded two socio-economic studies to analyze the impacts that proposed seawalls would have on nearby public beaches. The studies' findings provided technical evidence to support the public access mitigations required of the permit applicants. Future studies will provide valuable information for planning and permit decisions.

Operation and maintenance programs

No changes

Funding sources or techniques

No changes

Education and outreach (access guide or website, outreach initiative delivered at access sites, other education materials such as pamphlets)

Orange County Beach Access Map (Oil spill mitigation funds)

In 2002, the Coastal Commission produced the Orange County Beach Access Map. The map was produced with oil spill mitigation funds derived from settlement of the American Trader oil spill which damaged the Orange County coast. The map is inexpensive, easily accessible, and helps members of the general public locate access to the coast and ocean in the Orange County region. Given the population in southern California and the potential for growth in the entire state, regional guides such as this will be an important resource for the public in the future.

Guide to Northern California Beaches and Parks

The Commission published *Experience the California Coast: A Guide to Beaches and Parks in Northern California* in November, 2005. This easy-to-use and comprehensive guidebook describes coastal destinations in northern California, how to get there, what facilities to expect, and what there is to do at each location. The book includes a comprehensive list of more than 300 beaches, parks on or near the coast, and paths to the shoreline. It features photographs, detailed maps, and charts that provide information on facilities, attractions, coastal environments, and access for the disabled. Like the Orange County map, the guidebook is an invaluable resource to visitors to the coastal zone in this region. It was funded by the Coastal Impact Assistance Program and royalties from sales of the California Coastal Access Guide.

Coastal Access Signs and Maps

In 2004, at the Commission's request, the Department of Transportation (Caltrans) installed 11 new coastal access signs along Highway 1 in Malibu, informing visitors of existing public access points. The state funded the project. As a result, the public has more knowledge about the location of access points in Malibu. As each new accessway is opened, Caltrans installs signs along the coastal highway.

Also in 2004, the Commission posted aerial maps depicting the numerous public access easements located along the mile stretch of beach in Malibu known as Broad Beach. Long-time conflicts between homeowners and beach goers were resolved by the posting of these maps which clearly delineate the public use areas.

Beach water quality monitoring and/or pollution source identification and remediation programs.

SWRCB is responsible for monitoring water quality. The implementation of several laws has led to improved beach water quality monitoring since the last assessment. In 1997, Assembly Bill 411 required weekly monitoring from April to October at all beaches with more than 50,000 annual visitors or at beaches located in areas adjacent to storm drains that flow during the summer. Monitoring began in 1999. Beaches that fail to meet the state's criteria for any one of three indicators must be posted with conspicuous warning signs to notify the public of health risks associated with swimming in these areas.

AB 1946, an add-on bill to AB 411, took effect on January 1, 2001. The bill improved the data collection standards and public disclosure requirement. It allows the state to collect better information on the type of action taken when beach testing uncovers pollution as well as the specific source of the problem.

Conclusion

2. Identify priority needs or major gaps in addressing the programmatic objectives this enhancement area that could be addressed through a 309 Strategy.

As the coast becomes more populated and developed, space becomes more limited and protecting and securing public access becomes more challenging. Most new public access in California will be attained and managed through certified LCPs. Updated LCP policies are critical for maintaining and improving public access; however, most LCPs are long overdue for review and update.

To adequately enhance public access, the CCMP needs to improve its technical assistance, acquisition tools, and access planning. The Commission should provide more training and assistance to local governments and nonprofits who shoulder the burden of providing public access. Spatial information (GIS) is an important part of planning public access and the data

needs to be readily available. Finding new methods of securing access, beyond OTDs, would be helpful, as would new studies documenting the impacts of traffic and seawalls on public access.

What priority was this area previously and what priority is it now for developing a 309 strategy and allocating 309 funding and why?

Last Assessment		**This Assessment**	
High	x	High	x
Medium		Medium	
Low		Low	

Public access policies are the cornerstone of the California Coastal Act. Preserving and increasing access to the shoreline is still a prominent issue for Californians today. The state's population is increasing by approximating 500,000 annually and protecting public access from the cumulative impacts of growth and maximizing public access to the shoreline remains one of the Commission's highest public duties.

COASTAL HAZARDS

Section 309 Programmatic Objectives

- Direct future public and private development and redevelopment away from hazardous areas, including the high hazard areas delineated as FEMA V-zones and areas vulnerable to inundation from sea and Great Lakes level rise.

V. Preserve and restore the protective functions of natural shorelines features such as beaches, dunes, and wetlands.

VI. Prevent or minimize threats to existing populations and property from both episodic and chronic coastal hazards.

Coastal Hazards Characterization

1. General level of risk from the following coastal hazards:

Hazard	**High Risk**	**Medium Risk**	**Low Risk**
Hurricane/Typhoons			x
Flooding	x		
Storm Surge			x
Episodic Erosion	x		
Chronic Erosion	x		
Sea/Lake Level Rise		x	

Hazard	High Risk	Medium Risk	Low Risk
Subsidence		x	
Earthquakes	x		
Tsunamis		x	

If the level of risk or state of knowledge about any of these hazards has changed since the last assessment, please explain. Also, identify any ongoing or planned efforts to develop quantitative measures for this issue area.

Knowledge about these hazards has not changed since the last assessment, but public awareness and concern about them has increased. Due to a series of natural disasters and several winters with intense storms, coastal residents now have a heightened awareness of coastal hazards.

Recent research suggests that for southern California, extreme winter waves are becoming more intense and occurring with greater frequency. This suggests that storm and flooding hazards are increasing along with the resulting risks. Similarly, added evidence of global warming and sea level change indicates that these conditions will lead to great risks for coastal areas not able to adjust or adapt to changing water levels. Finally, the recent Indian Ocean tsunami is providing valuable new information on the dynamics of major tsunamis as well as the risks associated with these events.

Summarize the risks from inappropriate development in the state, e.g., property at risk, publicly funded infrastructure at risk, resources at risk.

Numerous public and private developments located adjacent the shore either are now, or will soon be, in danger from erosion. Many erosion or flooding protection techniques encroach on public beach areas and adversely effect coastal resources. Unabated erosion can: 1) affect roads and infrastructure; 2) jeopardize life and private property; and 3) reduce or eliminate many coastal recreational opportunities and amenities. Such losses would have incalculable public and private costs.

Development is also at risk from inland changes as demonstrated by event such as the 2004 La Conchita slide (Ventura County). Inland slides not only put communities at risk, they interrupt coastal transportation routes and coastal recreation and can modify sediment contributions to nearshore areas.

Management Characterization

1. Changes to the State's hazards protection programs since the 2001 assessment.

Since 2001, there have not been any major changes to the following mechanisms for hazards protection: building restrictions; repair/rebuilding restrictions; restrictions on "hard" shoreline protection structures; restrictions on renovation of shoreline protection structures; beach/dune protection; permit compliance programs; inlet management plans; SAMPs; local hazards mitigation planning; innovative procedures for dealing with takings; methodologies for determining setbacks; disclosure requirements; publicly funded infrastructure restrictions; innovative programs to encourage beach nourishment; public awareness of hazards; or increased staff training on shoreline erosion issues.

Nature of Changes.

Restrict "hard" shoreline protection structures; Beach/dune protection.

- A Commission staff taskforce, established in 1998 continues to meet every other month to discuss new projects, options for improved public resource protection when shoreline armoring is necessary, and issues relating to emergency permits for shoreline protection.
- The Commission has approved regional opportunistic beach nourishment permits for the BEACON region (Santa Barbara and Ventura Counties) and for the City of San Clemente.
- Staff works closely with the Coastal Sediment Management Workgroup, a partnership formed to facilitate regional approaches to protecting, enhancing and restoring California's coastal beaches and watersheds through federal, state and local cooperative efforts.
- Staff takes an active role in the direction and review of several research studies looking more closely at beach processes, sand budgets, and studies of the overall interaction between sediment supplies, biological resources and recreational beach resources.
- Staff remains involved in and aware of outside research that helps better explain coastal hazards and shoreline change. (Ex: Staff has provided input and guidance on efforts at UC Santa Cruz examining the relationship between sediment inputs and beach change, and at UC San Diego, where a new ground-based LIDAR to study short-term changes in coastal bluffs is being developed.)
- Staff is working closely with local governments to encourage planned retreat strategies to move public and private facilities out of the existing and future wave uprush zones.

Procedural Guidance Documents and Commission Briefings

- Staff continues to use the 1999 guidance document on Beach Erosion and Response.
- Technical services staff provide briefings for the Commission and staff about landslides, steep slopes, sea level change, tsunamis, and the in-lieu mitigation program.
- Staff contracted for two site-specific studies of the value of recreational losses resulting from the construction of seawalls.
- Staff and the Commission continue to insure that seawall impacts will be mitigated to the maximum extent practicable.
- Staff geologist published a paper in *California and the World Oceans* outlining the process for determining where to safely site new development on a coastal bluff.
- Develop regional in-lieu fee sand mitigation programs to provide a systematic approach to mitigate for the loss of beach sand resulting from the construction of new shoreline protective works or from major repairs to exiting shoreline protective works that increase the design life of the protective works.

Participation on the Integrated Ocean Observing System:

- Staff attend meetings and provide input for the Integrated Ocean Observing System (IOOS), a national effort to better observe, understand and provide information products about our ocean and coastal areas.

Geographic Information System compilation of coastal erosion and armoring data

- A NOAA Coastal Zone Management Fellow (Jennifer Dare) from 2003-2005, compiled available data on coastal erosion rates and locations, shoreline armoring areas, and other

pertinent data into a GIS system, which is available for use by coastal analysts to help determine likely areas of concern for erosion and armoring-related issues.

Conclusion

1. Identify priority needs or major gaps in addressing the programmatic objectives for this enhancement area that could be addressed through a 309 Strategy.

Procedural and technical assistance needs.

- Developing, implementing and continuing a training program for local government and commission staff to improve management of coastal hazards.
- An ongoing and maintained statewide inventory of the location, extent and cost of recent coastal damage resulting from storm events, earthquake activity, flooding, tsunami, erosion and bluff failure, resulting in criteria to designate areas as current and future high hazard areas.
- Involvement with the California Ocean Observing programs, as well as IOOS.
- Developing and improving links between ocean observing and identified high and medium risk coastal hazards.
- Continued involvement in California Coastal Sediment Management Workgroup.
- Developing and tracking programs to support ongoing beach nourishment in areas with a high potential for beach stability and recreational use.
- Supporting efforts for opportunistic beach nourishment and providing training to local government staff on the filing and permitting steps necessary to implement the programs.
- A study to examine the long-term effectiveness of hard structures along the coastline and the possible damages to the shoreline from their installation.
- A survey of the effectiveness of natural beach features in protecting coastal wetlands.

Cumulative impacts/planning and regulation needs.

- Review of LCP hazards management to address the cumulative impacts of growth and development and to improve the management of shoreline resources along other areas of the coast.
- Development of technical, site specific data, including mapping, to determine the physical impacts of projects on shoreline resources.
- Improve programs and policies for siting structures away from high hazard areas and guidance on development strategies.
- Guidance for developing regional erosion and bluff retreat management plans, including alternatives to shoreline protective devices and alternatives to minimize the effects of emergency authorizations and rebuilding.
- Reevaluation, and possible modification, of the existing definition of “bluff edge” in the statewide interpretive guidelines for further clarity.
- Recognition of wildfires as a coastal hazard and develop LCP policies to insure that coastal lands are managed and developed to minimize the adverse impacts from such fires.
- Guidance for major watershed projects for addressing impacts to sand supply.
- A coastal risk atlas to provide hazards mapping for local governments.
- LCP policies that focus on redevelopment standards.
- Creative techniques for retiring development rights in high hazard areas.

- Maps of the shoreline based on predicted sea level rise.
- Education about why sea level is rising and how automobile and other emissions contribute to global warming.
- LCP policies that focus on rare but high hazard events, such as tsunamis.

What priority was this area previously and what priority is it now for developing a 309 strategy and designating 309 funding and why?

Last Assessment		**This Assessment**	
High	x	High	x
Medium		Medium	
Low		Low	

Further attention to coastal hazards is of highest priority. Many positive changes have occurred since the last assessment; however, far more work is necessary in staff training, outreach to local governments, workshops, and augmentation of the professional expertise on staff. The initial assessment enabled staff to focus on coastal hazards, to identify the cumulative impacts from coastal erosion, and to identify many of the approaches to address these impacts. The Commission should expand on general concerns, such as staff coordination and outreach to local governments. Also, there should be a focus on some of the specific concerns, such as: improving setback policy; providing guidance and regional plans for emergency permits; guidance for beach nourishment; and improving the identification of coastal hazards throughout the state.

OCEAN RESOURCES

Section 309 Programmatic Objectives

I. Develop and enhance regulatory, planning, and intra-governmental coordination mechanisms to provide meaningful state participation in ocean resource management and decision-making processes.

II. Where necessary and appropriate, develop a comprehensive ocean resource management plan that provides for the balanced use and development of ocean resources, coordination of existing authorities, and minimization of use conflicts. These plans should consider, where appropriate, the effects of activities and use on threatened and endangered species and their critical habitats. The designation of specific marine protected areas should be considered.

(Note: Because of the complexities of Ocean Resources, a more detailed assessment is attached as Appendix A.)

Resource Characterization

1. In the table below characterize ocean resources and uses of state concern, and specify existing and future threats or use conflicts.

Resource or Use	**Existing Threat or Conflict**	**Anticipated Threat or Conflict**	**Degree of Threat (H/M/L)**
Habitat and living resources	General habitat and fisheries decline, water pollution	Point and nonpoint source pollution and habitat loss in watersheds and coastal areas	High

Resource or Use	Existing Threat or Conflict	Anticipated Threat or Conflict	Degree of Threat (H/M/L)
Oil and gas	Ongoing cumulative impacts to offshore resources and coastal communities	Oil spills, aging facilities, pollutant discharges, potential expansion of exploration/development	High
Water quality	Pollution from inland waterways	Watershed degradation from polluted runoff	High
Shoreline erosion	Development, river channelization, dam construction, shoreline armoring	Development activities, shoreline armoring	High
Marine mammals/other marine species	Impacts from anthropogenic sound	Impacts from anthropogenic sound	Medium
Ports and harbors	Dredge and fill, conflicts with habitat	Dredge and fill, conflicts with habitat	Medium
Vessel traffic	Potential spills	Potential spills	Medium
Tourism and recreation	Unmet demand, user conflicts	Unmet demand, user conflicts	Medium
Coastal power plants	Ongoing impacts to marine species; unrealized opportunity to avoid or reduce impacts	Ongoing impacts to marine species; unrealized opportunity to avoid or reduce impacts	Medium
Desalination	High cost/energy demand, potential marine biological resource impacts due to intakes and discharges, potential growth-inducing effects	High cost and energy demand potential marine biological resource impacts due to intakes and discharges, potential growth-inducing effects.	Medium
Fiber optic cable project	Impacts to coast and ocean resources from installation of fiber optic cables	Hard bottom habitat destruction, whale entanglement, public access, water quality, fishing	Medium
Marine Protected Areas	Resource management, user conflicts	Resource degradation, user conflicts	Medium
Fisheries	Species depletion, user conflicts	Species depletion, user conflicts	Low

Resource or Use	Existing Threat or Conflict	Anticipated Threat or Conflict	Degree of Threat (H/M/L)
Oil spill response technology	Impacts to water quality and marine resources	Impacts to water quality and marine resources	Low

Describe any changes to the resources or relative threats since the last Assessment.

Water Quality

- Creation of California's Critical Coastal Areas (CCA) Program.
- Selection of five CCAs as pilot projects.
- Development of a statewide Nonpoint Education for Municipal Officials program.
- Implementation of a Surface Water Quality Ambient Monitoring Program.
- Creation of NPS Monitoring Councils to track water quality monitoring and Management Measure implementation and performance.
- Staff participation on the Beach Water Quality Workgroup.
- Staff participation on the Clean Beach Advisory Group.

Ocean Noise and Marine Species

- Commission increased its scrutiny of oil and gas, military, and underwater research using active acoustics and has attempted to improve monitoring, reporting, and mitigation measures to increase their effectiveness.
- Commission participated in the Marine Mammal Commission's Advisory Committee on Acoustic Impacts on Marine Mammals
- Commission expanded awareness of the need for state-level input, and acted as a disseminator of the efforts of the committee to the other coastal states.

Coastal Power Plants and Once-Through Cooling

- Commission reviewed proposed upgrades at four coastal power plants (Moss Landing, Huntington Beach, Morro Bay, and El Segundo) as part of the state Energy Commission (CEC) approval process.
- One proposed repower project at a coastal power plant will require a coastal development permit from the Commission (rather than approval from the CEC).
- CEC established a goal to repower several thousand megawatts worth of coastal power plants over the next seven years, which will result in approximately 6-10 proposals.
- Commission and CEC developed a memorandum of understanding (MOU) to address both substantive and procedural issues likely to come up during future reviews.
- Commission staff assisted CEC staff in preparing a report on the scientific adequacy of existing studies on the effects of these systems on the marine environment.
- U.S. EPA revised Section 316(b) of the federal Clean Water Act, which applies to once-through cooling systems.
- Commission is coordinating with the state's Ocean Protection Council, EC, SWRCB, and several Regional Water Quality Control Boards.

Desalination

- More than two dozen proposals for desalination facilities along the coast have been proposed, the largest of which proposes to co-locate with coastal power plants to allow use of their once-through cooling system as a water source.
- Commission staff participated in a work group, a task force, conferences and workshops, and updated a seawater desalination report.
- Commission approved two facilities being operated to test desalination equipment and processes and has approved a facility that will provide drinking water to Sand City.
- Proposition 50 provides up to $50 million for desalination-related research projects. Twenty-five projects have been funded and many will require CDPs.

Fiber Optic Cables (FOCs)

- Commission approved one additional commercial cable project.
- Three cable companies have filed for bankruptcy and are out of compliance with conditions of CDPs and commitments made in their consistency certifications. Staff has attempted to resolve outstanding permit violations.
- The Commission has initiated litigation to resolve three cable violation cases.

Southern Sea Otters

- California (southern) sea otter population declined significantly from 1996-2003 and is not yet experiencing stable growth.
- Sea otter mortality increased throughout their range.
- Nonpoint water pollution has been suggested as a possible source of contamination to the sea otter population.
- The U.S. Fish and Wildlife Service (USFWS) has 1) redrafted its Southern Sea Otter Recovery Plan, 2) initiated a consultation under Section 7 of the ESA, 3) issued a biological Opinion, and 4) provided an evaluation of the translocation program.
- The USFWS released a Draft Supplemental Environmental Impact Statement (DEIS) regarding the translocation.
- Commission staff provided comment to the USFWS on the Recovery Plan, the Biological Opinion, and the translocation evaluation, and will review the DEIS.

Management Characterization

1. Identify significant state ocean and/or Great Lakes management programs and initiatives developed since the last assessment:

- Statewide comprehensive ocean management statutes
- Statewide comprehensive ocean management plan or system of Marine Protected Areas
- Single-purpose statutes related to ocean resources
- Statewide ocean resources planning/working groups
- Regional ocean resources planning efforts
- Ocean resources mapping or information systems
- Dredged material management planning
- Habitat research, assessment, monitoring

- Public education and outreach efforts
- Other

For categories with changes:

- Summarize the change.
- Specify whether it was a 309 or other CZM driven change and specify funding source.
- Characterize the effect of the changes in terms of both program outputs and outcomes.
- Key management initiatives since 2001 are described below.

Statewide comprehensive ocean management statutes:

309 or CZM-driven? No.

California Ocean Protection Act

The California Ocean Protection Act (COPA) was signed into law in 2004. The key element of COPA was its formation of the California Ocean Protection Council (Council), which consists of the Secretary of the Resources Agency, the Secretary for Environmental Protection, and the Chair of the State Lands Commission. In September, the Council adopted an Ocean and Coastal Information, Research and Outreach Strategy to support information, research, monitoring, and outreach programs that address key ocean and coastal resource management, policy, science, and engineering issues. The Council also authorized the formation of a Scientific Advisory Committee to support the efforts of the Council.

Statewide comprehensive ocean management plan or system of Marine Protected Areas:

309 or CZM-driven? No.

Marine Protected Areas (MPAs)

- Staff worked on the 2003 establishment of state water MPAs in and around the Channel Islands National Marine Sanctuary (NMS), and along the central coast of California. Staff continues to work on the federal designation.
- Staff participated on the Marine Life Protection Act (MLPA) Blue Ribbon Task Force.
- Staff participates in the California Central Coast Regional Stakeholder Group (CCRSG) for the MLPA effort.
- District staff has been involved with the Channel Island NMS federal water marine reserve proposal and the Monterey Bay NMS Kelp Management Report.
- Commission staff commented on NOAA's consideration of whether to promulgate rules related to fiber optic cable projects in national marine sanctuaries.

Coastal National Monument

- Staff met with the Bureau of Land Management about the California Coastal National Monument, reviewed the draft and final EIS and the Resource Management Plan, and processed the plan under federal consistency authority.

Anthropogenic Sound in the Marine Environment

- Commission has actively articulated concerns about the effects of anthropogenic sound on marine mammals and other marine species.
- Commission participated in the Marine Mammal Commission's Advisory Committee on Acoustic Impacts on Marine Mammals.

Other

- Commission is a member of the Resources Agency Sea Grant Advisory Panel.
- Sea Grant research and education program continues, as does work on the San Francisco Bay and Santa Monica Bay National Estuary Programs.
- Important attention continues to be given to ocean resource issues through updating the management plans at California's four National Marine Sanctuaries Islands.
- Staff sit as Sanctuary Advisory Council members for two of the NMS.

Single-purpose statutes related to ocean resources:

309 or CZM-driven? No.

Of the many statutes implemented over the past several years, the following are important to ocean resource protection:

- Statute: SB 771 Clean Coast Act (Chapter 588, Statutes of 2005).
- Statute: SB 245 Transgenic Fish (Chapter 871, Statutes of 2003).
- Statute: AB 16 Oil Transport (Chapter 871, Statutes of 2003).
- Statute: AB 715 Oil Spill Prevention and Response (Chapter 715, Statutes of 2002).
- Statute: SB 209 (Chapter 318, Statutes of 2001).
- Statute: SB 1319 Marine Managed Areas Improvement Act (Chapter 385, Statutes of 2000).

Statewide ocean resources planning/working groups:

309 or CZM-driven? No.

See COPA above.

Regional ocean resources planning efforts:

309 or CZM-driven? No.

Once-Through Cooling Work Group

Staff participates on a work group establishing agreed-upon protocols for data collection and study design, acceptable mitigation measures, and other issues related to the implementation of revised US EPA regulations governing cooling water structures for coastal power plants.

Ocean resources mapping or information systems:

309 or CZM-driven? Yes.

Ocean Observation Systems

The Integrated Ocean Observing System (IOOS) is a national effort to better observe, understand and provide information products about our ocean and coastal areas. Regional Associations (RAs) engage the diverse end users of ocean observing data and products to help develop this system. California has two RAs, the Central and Northern California Ocean Observing System (CeNCOOS) and the Southern RA (SCCOOS). The state has invested $21 million in ocean observations, primarily for understanding currents in support of water quality issues. The Commission analyzed the state CZM program needs to provide information to both RAs.

Dredged material management planning:

309 or CZM-driven? No.

Contaminated Sediments Task Force

The Commission co-chairs Contaminated Sediments Task Force for the Los Angeles River Basin with the Los Angeles Regional Water Quality Control Board.

Public education and outreach efforts:

309 or CZM-driven? No

The Coastal Commission's Public Education Program includes a number of management programs and initiatives for protecting coastal resources. See the Marine Debris section.

Conclusions

1. Identify priority needs or major gaps in addressing the programmatic objectives for this enhancement area that could be addressed through a 309 Strategy.
    - Develop guidelines for long-term planning for conservation and protection of ocean resources and uses, and specific policy priorities and guidelines for long-term management of California's interests in federal waters. Development of measures for proposed implementing legislation, if any.
    - Continue improvements to interagency management of ocean resources, including development of possible alternative conflict resolution mechanisms and frameworks.
    - Research the long-term affects of fresh water nuisance flows on intertidal biological communities.
    - Obtain assistance from the NOAA Coastal Services Center to develop remote sensing tools for impervious surfaces analysis; assessment of ecosystem status and health; and changes in land cover and trend analysis at watershed scales.
    - Research the following data gaps in our understanding of the effects of underwater acoustics on marine mammals:
        - Develop and improve standardized data formats for marine mammal abundance and distribution and develop a database for management and public access.
        - Develop improved data gathering and monitoring of the impacts of anthropogenic sound on the marine environment, including promulgating standardized systems to coordinate and disseminate the collection, aggregation, and analysis of scientific information.
        - Develop improved monitoring measures to increase the level of detection of strandings or mortalities at sea associated with sound-producing activities.
        - Develop improved knowledge of marine mammal status, abundance, stock structure, life history, seasonal distribution, and behavior, including acoustic communication, models to characterize and predict areas of high and low importance for marine mammals, and models to better understand anatomy, physiology, ecology, and behavior with particular emphasis on marine mamma hearing systems and diving physiology.
        - Develop improved capabilities to investigate and compare acoustic exposures, including comparisons of anthropogenic, environmental, and biological variables, the relationship of these variables to auditory, behavioral and physiological effects.
        - Develop improved evaluation tools comparing and looking at the effectiveness of existing and proposed mitigation measures (such as passive acoustic monitoring and active acoustic detection methods) in various contexts.

- Ensure adequate studies to identify the impacts of once-through cooling and/or determining where it is feasible to switch to a less environmentally damaging alternative cooling method.
- For analyzing desalination and coastal power plants and fiber optic cables, better science is needed, particularly in understanding of the biological effects of open water intakes.
- Improve coordination and direction among the agencies (Coastal Commission, Regional Boards, State Board, and CEC) to ensure the studies being done for coastal power plants are adequate for the proposed desalination facilities.

What priority was this area previously and what priority is it now for developing a 309 strategy and designating 309 funding and why?

Last Assessment		**This Assessment**	
High		High	
Medium	x	Medium	x
Low		Low	

As in the 2001 Assessment, Ocean Resources are a medium priority of the CCMP. Addressing the myriad impacts to ocean resources, both as an individual agency and in coordination with other agencies, will be an important aspect of the Commission's role during the next five years. NPS, oils spills, and other impacts of on- and offshore development will continually pose challenges to managing ocean resources. This enhancement area requires the persistent attention of the Coastal Commission to help ensure the balanced use and development of ocean resources. It is a medium priority relative to the other enhancement areas.

Wetlands

Section 309 Programmatic Objectives

I. Protect and preserve existing levels of wetlands, as measured by acreage and functions, from direct, indirect and cumulative adverse impacts, by developing or improving regulatory programs.

II. Increase acres and associated functions (e.g., fish and wildlife habitat, water quality protection, flood protection) of restored wetlands, including restoration and monitoring of habitat for threatened and endangered species.

III. Utilize non-regulatory and innovative techniques to provide for the protection, restoration, and acquisition of coastal wetlands.

IV. Develop and improve wetlands creation programs.

Resource Characterization

1. Extent of coastal wetlands (chart)

The Coastal Commission does not have available the data needed to complete the chart provided by OCRM (extent in acres of tidal, freshwater, publicly-acquired, restored, or created wetlands).

Provide a qualitative description of wetlands status and trends based on the best available information. Also, identify any ongoing or planned efforts to develop quantitative measures for this issue area. Provide explanation for trends.

Wetland Status and Trends

Approximately 91% of California's wetland acreage present before European settlement has been lost.[3] However, there has been relatively little loss of wetlands within the California coastal zone over the last 30 years because of the extremely protective nature of Section 30233 of the Coastal Act. Essentially all impacts to wetlands have been small and a result of public use projects, such as seismic retrofits of bridges, double-tracking for railroads, and repair of utility lines.

There have been several large and ecologically extremely significant restoration projects initiated in recent years. These projects have been funded as mitigation for loss of deep water habitat in the Ports of Los Angeles and Long Beach or for direct impacts on fish populations due to the cooling water intakes for a coastal power plant.

- Hydrologic and biological restoration of the 600-ac Batiquitos Lagoon was completed in December 1997 after 90 years of degradation and loss of tidal influence. Following construction, the newly tidally influenced habitats have recovered many of the historical functions.
- The restoration plan for the 1,247-acre Bolsa Chica lowlands was approved by the Coastal Commission in November 2001; construction began in October 2004 and is estimated to be complete by August 2006. By that time, some 566 acres will be restored to tidal influence and an additional 200 acres will be made tidal some time in the future when oil field activities are discontinued.
- In October 2005, the Coastal Commission approved the final restoration plan for the San Dieguito lagoon, which will result is the creation of 150 acres of tidal habitats and the significant enhancement of many acres of existing, but degraded salt marsh and open water habitats. Construction will begin sometime in 2006 and continue for several years.

In addition to these large restoration efforts in southern California, there have been many projects throughout the state involving the restoration of small (< 25 ac) freshwater or tidal marshes. The Southern California Wetlands Recovery Project is a coalition of five federal and 12 state agencies tasked with the preservation, restoration, and creation of wetlands within the Southern California Bight. Since 1997, the group has directed $62 million dollars toward this effort with 52% for acquisition, 31% for restoration, and 19% for planning. The State Coastal Conservancy oversees and staffs this initiative.

Keeping track of gains and losses of wetlands is a difficult task and one that has not been accomplished in California. However, the Coastal Commission is participating in the California Coastal Wetlands Monitoring Venture which is a cooperative effort of state and federal agencies that is being supported by the USEPA. Two of the major initiatives of this venture are to develop an inventory of wetlands using aerial imagery and to develop a method of assessing the quality of wetlands at a regional scale. Both are ongoing efforts. In the last three years, significant resources have been devoted to developing a California Rapid Assessment Method. It is currently in the final stages of verification. In combination these two initiatives will enable managers to track changes in both the extent and condition of wetlands both in and out of the coastal zone in California.

Characterize direct and indirect threats to coastal wetlands, both natural and man-made. For threats identified, provide the following information: scope of threat, recent trends, and impediments to addressing the threat.

[3] Dahl, T.E. 1990. Wetland losses in the United States 1780's to 1980's. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C.

Alterations of hydrology are a constant threat, especially in urban areas. The most common change is the addition of dry season nuisance flows from residential areas. These flows tend to be polluted and can change the character of the vegetation in coastal estuaries.

Erosion due to development activities contributes to downstream sedimentation of coastal wetlands. This is a significant problem in northern California where it is associated with commercial logging practices, in central and southern California where it is associated with housing construction and agricultural practices, and in the Tijuana National Estuarine Reserve, where it currently results mainly from erosion in Mexican tributary watersheds, but where construction activities related to the border fence are likely to be significant factors in the near future.

Pollution, particularly nutrient and bacterial pollution, is a constant threat to coastal wetlands. In wetlands that have been restored to significant tidal action, the problem will be somewhat alleviated, because the pollution will be carried into open coastal waters.

The channelization of our major waterways occurred long ago, although there are recent examples outside the coastal zone that affect coastal habitats. Channelization and habitat removal is still taking place throughout the state within the coastal zone as a result of activities of flood control districts in both urban and rural settings. There is no obvious remedy when the activities are undertaken for perceived public safety reasons.

Invasion by exotic species is taking place throughout the state and is probably underestimated. Control of ship ballast may reduce the future invasion of such species, but those species that are already present will likely continue to spread throughout the state at rates determined by chance and life history characteristics. It is unlikely that there will ever be resources to address the problem except in the case of the subset of species that are demonstrated to be major ecological or economic threats. Even with substantial resources, many species may represent an intractable problem.

Sea level rise should not be overlooked. Since many of our coastal tidal wetlands are closely bounded by development, there is little opportunity for a horizontal shift in habitat types. Over time many tidal wetlands will lose marsh habitat in favor of mudflat and open waters.

Management Characterization

1. Within each of the management categories below, identify significant changes since the last assessment:

- Regulatory program, wetlands protection policies and standards, assessment methodologies (health, function, extent), impact analysis, restoration/enhancement programs, Special Area Management Plans, education/outreach, wetlands creation programs, mitigation banking, acquisition programs, and publicly-funded infrastructure restrictions

There were no changes in the above list of management categories provided by OCRM.

- Mapping/GIS/tracking systems

As a NOAA Coastal Fellow during the period 2000-2002, Rebecca Ellin developed historical and current wetland maps for Del Norte, Humboldt, and San Mateo Counties. She obtained, interpreted, and digitized wetland areas from early maps (T sheets), and worked with personnel of the National Wetlands Inventory to obtain or develop maps of current conditions, which she also digitized and entered into a GIS system. Subsequently, through a cooperative program with USEPA, San Luis Obispo County, and the Coastal Commission, and funded by the USEPA, she coordinated the development of similar maps for San Luis Obispo County.

For categories with changes provide the following information for each change:

- Characterize the scope of the change
- Describe recent trends
- Identify impediments to addressing the change

Assessment methodologies

The major change is the significant progress in developing the California Rapid Assessment Method. C-RAM is close to being ready for routine use. Both members of the development team and academic researchers have been field testing and calibrating this assessment method.

Restoration/Enhancement Programs

The most significant program continues to be the Southern California Wetlands Recovery Project. The various elements of the program (Manager's Group, Scientific Advisory Panel, Citizens Groups, etc) are well-developed and functioning effectively. The major challenge in the future will be funding.

Mapping/GIS/tracking systems

There has been a continuous and significant increase in the development of useful GIS layers. The biggest challenges are to coordinate mapping and GIS efforts throughout the state, to increase the availability of GIS layers, to development funding and infrastructure to house geographic information systems (in ArcIMS or other formats) and to maintain both the network system and the databases, and to obtain public access to data on a parcel level.

Mitigation Banking

Mitigation banking is not a significant activity in the coastal zone and there does not appear to be much interest from those entities that have investment capital.

Acquisition programs

Southern California Wetlands Recovery Project is the most significant. The State Coastal Conservancy funds both acquisition and restoration throughout the state.

Conclusion

1. Identify priority needs or major gaps in addressing the programmatic objectives for this enhancement area that could be addressed through a 309 Strategy.

LCPs need to provide the basis for protection of wetlands and environmentally sensitive habitats (ESHA). Local governments need guidance from the Commission to include LCP wetland definitions that are the same or similar to the definition in the Commission's Regulations. This would provide strong direction to the technical specialists that ultimately do the wetland delineations upon which policy decisions are based. There is also a great need for statewide guidance on how to delineate wetlands.

Beyond wetlands, it is important that LCPs include the definition of ESHA contained in the Coastal Act and include the protective policies of Section 30240. Moreover, LCPs should provide for site-specific assessments of ESHA regardless of other LCP provisions that identify or map particular types of ESHA. ESHA must ultimately always be determined by assessing the existing conditions on a site, based on current knowledge of the functions and rarity of species and habitats.

Strong policies relating to spatial buffers around wetlands and sensitive terrestrial habitats are essential, as well. Such buffers provide numerous functions, including: (1) keeping disturbance at

a distance, (2) reducing impacts from domestic animals, especially cats, (3) providing complementary habitat, which is especially important for wetlands, (4) treating runoff, and (5) accommodating errors in habitat delineation. Habitat buffers should generally be at least 100 feet in width.

Other needs for managing and protecting wetlands and ESHA include: transportation corridor expansion, addressing fuel modification to prevent habitat loss, an increase in conservation easements, and encouraging community groups to take on restoration projects.

What priority was this area previously and what priority is it now for developing a 309 Strategy and designating 309 funding and why?

Last Assessment		**This Assessment**	
High	x	High	x
Medium		Medium	
Low		Low	

Although significant progress has been made in some areas of wetland management, the overall goal of establishing an integrated, comprehensive wetland management and enhancement program remains unfulfilled. The Coastal Act clearly mandates the preservation and enhancement of California's coastal zone wetlands and ESHAs. Yet population growth, continuing development pressure, limited scientific understanding, lack of coordination and communication, insufficient funding and expertise, and political inconsistencies in protecting wetlands all impede substantial progress to achieving the overall goal. Wetland issues remain a high priority for enhancing the coastal program, from both a State and national perspective.

CUMULATIVE IMPACTS

Section 309 Programmatic Objectives

I. Develop, revise or enhance procedures or policies to provide cumulative and secondary impact controls.

Resource Characterization

1. Identify areas in the coastal zone where rapid growth or changes in land use require improved management of cumulative and secondary impacts (CSIs). Provide the following information for each area:

- Type of growth or change in land use
- Rate of growth or change in land use
- Types of cumulative and secondary impacts

2. Identify areas in the coastal zone, by type or location, which possess sensitive coastal resources (e.g., wetlands, water bodies, fish and wildlife habitats, threatened and endangered species and their critical habitats) and require a greater degree of protection from the cumulative or secondary impacts of growth and development.

The 2000 Census reported a statewide population of 33,871,648. [4] As of January 1, 2005, California's population exceeded 36.8 million persons. [5] Almost half of the state's population resides in four counties, the three coastal counties of Los Angeles, Orange, and San Diego, and the inland county of San Bernardino. In 2000 the population of coastal counties was estimated at 19.76 million. It is estimated to increase to 21.9 million in 2010 and 23.2 million in 2020. [6] Urbanization and other development pressures on resources and access to the coast will also increase as a result of this growth.

Since the last assessment, over 8000 regulatory and planning items have been submitted to the Commission for review. The Commission has reviewed over 9700 post-certification notices of local coastal permits approved by local governments pursuant to certified LCPs. [7] These incremental decisions when taken together can represent significant changes to coastal resources.

Much of the California coast has sensitive areas susceptible to cumulative impacts. The CCMP identifies the following as sensitive habitats: dunes, wetlands, riparian vegetation, tide pools, redwood and other forests, coastal scrub and sage, and grasslands. As growth in California continues, these resources are more prone to adverse impacts, especially in areas where resources have been seriously degraded in the past. Examples of cumulative impacts identified through Regional Cumulative Assessment Projects (ReCAP) and other enhancement projects include:

- loss of public access opportunities through incremental armoring of the coast;
- hardening of wetland edges;
- impacts to wetland hydrology and water quality;
- cumulative impacts to public access through increases in population demand and use;
- impacts to sensitive resources through increased use near access areas;
- drainage of polluted runoff into coastal waterways.

Management Characterization

The Coastal Act specifically requires review of cumulative impacts; this concern is also implicit in many specific policies in the Coastal Act and LCPs. Generally, the CCMP controls cumulative impacts through the implementation of statewide resource protection policies at the local decision-making level, specifically through LCPs. However, LCPs are frequently amended and these amendments are often initiated for a particular development project, not for a programmatic change or policy modification. Project-driven amendments, which often seek to allow development projects that may not otherwise be permissible by the certified LCP, may result in cumulative impacts to resources.

Many LCPs are dated, having been developed in the early 1980s, and do not reflect current conditions or newer scientific information on coastal management. Without a programmatic review of their performance and incorporation of new, updated information, these LCPs are unlikely to effectively address cumulative impacts. Some local governments are initiating comprehensive updates to their LCPs through LCP Amendments, often as part of overall General

---

[4] http://quickfacts.census.gov/qfd/states/06000.html
[5] Department of Finance, Press Release, State Population Tops 36.8 Million;
Annual Growth More Than 500,000 for Sixth Year in a Row, May 2, 2005.
[6] State of California, Department of Finance, Population Projections by Race/Ethnicity for California and Its Counties 2000–2050, Sacramento, California, May 2004 and State of California, Department of Finance, *E-4 Population Estimates for Cities, Counties and the State, 2001-2005, with 2000 DRU Benchmark.* Sacramento, California, May 2005.
[7] Data derived from queries to Permit Tracking System, 10/4/05. Not all items submitted resulted in public hearings. Number includes items such as administrative permits, extensions, emergency permits and waivers, but even these administrative items represent minor development proposals and result in some level of Commission review.

Plan updates. These updates provide an effective vehicle to incorporate land use and policy revisions to address CSIs based on more updated information. In order to adequately consider cumulative impacts in updating Land Use Plans and policies, the Commission needs to provide more extensive technical assistance to local government staff.

As the state's projected population growth increases development pressures, CSIs will be increasingly addressed through actions taken by the Commission on coastal permit amendments and appeals of local decisions.

1. Identify significant changes in the state's ability to address CSI since the last assessment (e.g., new regulations, guidance, manuals, etc.). Provide the following information for each change:

2. Identify priority needs or major gaps in addressing the programmatic objectives for this enhancement area that could be addressed through a 309 Strategy (i.e., inadequate authority, data gaps, inadequate analytical methods, lack of public acceptance, etc.).

Addressing Cumulative Impacts in San Luis Obispo County

During the assessment period, the Commission worked to implement recommendations of the San Luis Obispo (SLO) County LCP Periodic Review addressing cumulative impacts. Following an Implementation Strategy developed in December 2001, the Commission reviewed several LCP Amendments, implemented recommendations through regulatory actions, enhanced post certification procedures and interagency coordination. Many program changes addressing CSIs have been achieved through amendments to the SLO LCP. The following are some of the key Commission changes:

LCP Amendment Program Changes

- Commission action on LCP Amendment SLO-MAJ-3-00 (May 2002) incorporated the Cambria Commercial Design Plan into the North Coast Area Plan component of the LCP and addressed various Periodic Review recommendations for the Cambria commercial areas related to water quality protections, riparian setbacks, flood hazard provisions and community character.
- Other LCP Amendments approved by the Commission addressed necessary procedural improvements in the LCP (SLO-MAJ-1-01, Part B) (March 2003).
- The Commission approved a Specific Plan for the Oceano Area that updated policies (SLO-MAJ-1-02; April 2004).
- The Commission approved an operations and maintenance program for the Port San Luis Harbor that addressed various water quality recommendations. (3-02-071; March 2003).
- Commission action on the County Grading Ordinance addressed several water quality, agricultural resource, sensitive habitat and procedural recommendations. An archaeological resource site was protected through Commission action to negotiate acceptance of an OTD by a nonprofit entity in Cambria.
- The Commission reviewed a revised LCP Grading Ordinance and adopted suggested modifications to implement in part cumulative and secondary impact recommendations related to avoiding and minimizing polluted runoff and protecting scenic, environmentally sensitive habitat and agricultural resources. The County did not accept the suggested modifications and Commission staff continues to work with the County to address grading issues.
- The Commission reviewed an LCP Amendment on Cambria Commercial Design Guidelines to address, in part, cumulative impacts on scenic resources, and community character and water quality in Cambria (LCP Amendment No. 3-00).

- The Commission reviewed an LCP Amendment to implement Phase I of the Periodic Review Recommendations to address CSIs (SLO-MAJ-1-03; Sept. 2003).
- The State's acquisition of a conservation easement over a large portion of the north coast of San Luis Obispo County (the Hearst Ranch) may address significant CSIs.

Regulatory Program Changes

- On appeal, the Commission approved a permit to replace water tanks in Cambria (A-3-SLO-05-017) to provide additional water storage to meet the community's system wide fire protection, back-up emergency, and daily operational needs. The project included measures to avoid encroachment into Monterey pine forest ESHA, which addressed cumulative and secondary impact recommendations related to the shortage of available water supplies to support new development in Cambria review and related to ESHA protection.
- Coastal Commission permit 3-01-063 (Oceano Sand Moving) addressed the Periodic Review access and ESHA recommendations related to managing the impacts of the sand accumulation along a beachfront residential area and implemented Periodic Review recommendations to address dune habitat restoration and enhancement.
- Commission approval of a permit for a wastewater treatment system (A-3-SLO-03-113) to serve areas of Los Osos, Baywood Park, and Cuesta-by-the Sea, included measures to manage groundwater levels, to address CSIs of development, to address public service and water quality recommendations.

Procedural Program Changes

- Several changes to local processes have been implemented that do not require LCP amendments. For example, improvements made to the format and processing of the Final Local Action Notices such as corrections to the appeal dates and noticing of non-appealable development will improve post-certification monitoring and public noticing.
- The Commission staff has made some improvements to the protocols for ESHA surveys as part of ongoing work on the Los Osos Habitat Conservation Plan (HCP),
- Planning is ongoing towards of completion of a management plan at the Piedras Blancas Lighthouse, which has the potential to carry out several habitat and access recommendations of the Periodic Review.
- The SLO County staff increased coordination with Commission staff on certificates of compliance thereby addressing some Periodic Review development recommendations.

Program Needs

While many LCP program changes have been implemented through amendments and permit appeals, and county-initiated update of Area Plans is continuing, future progress is impeded by lack of adequate Commission staff resources to provide technical assistance and lack of grant funding assistance to facilitate local planning efforts. Additional impediments exist at the local level as the County Board of Supervisors may disagree with recommendations adopted by the Commission and there currently exists no mechanism to provide extensive education to local decision makers, or to ensure implementation of the Periodic Review recommendations.

Addressing Cumulative Impacts in Monterey County

In September 2004, the Commission completed a draft evaluation report and recommendations for the Monterey County LCP Periodic Review addressing cumulative impacts. This included evaluating coastal permits authorized and other actions implementing the LCP. The review

addressed the Commission directed staff to work with the County to address the recommendations as part of the County's General Plan/LCP Update process.

Regulatory Program Changes

- Periodic review and cumulative and secondary impact information and recommendations were used in Commission review of the proposed expansion of the Community Hospital of Monterey Peninsula (3-03-068) which proposed to permanently convert 3/4 of an acre of Monterey pine forest to hospital use.
- Periodic review and cumulative and secondary impact information and recommendations regarding water supply factored into the Commission's denial of a proposed subdivision in northern Monterey County on appeal (A-3-MCO-04-054).

Procedural Program Changes

- Periodic review and cumulative and secondary impact information and recommendations concerning the California Coastal Trail were utilized in commenting on the Forest Service's Southern California Land Management Plan Revisions.
- Periodic review and cumulative and secondary impact information and recommendations concerning public access in the vicinity of Carmel River were utilized by the Big Sur Land Trust in advancing the planning process for public trail connections in that area.
- Planning for the Salinas Road/Highway One interchange by Caltrans continues following the parameters established in the Periodic Review to address CSIs.
- The Periodic Review information and recommendations regarding transportation were used to generate comments to (and in discussions with) Transportation Authority of Monterey County (TAMC), Caltrans, and the County Redevelopment Agency on their proposed highway and rail improvement projects.
- The Periodic Review suggested standards for the California Coastal Trail (CCT) alignment and design that were subsequently adopted for TAMC's portion of the Monterey Bay Sanctuary Scenic Trail (MBSST) project; the MBSST is planned to extend northwards from Marina along the former UPRR Monterey Branch Line right of way, now acquired by TAMC for rail-and-trail purposes.
- The Periodic Review recommended incorporation of policies that would establish an hierarchy of measures for landslide disposal along the Big Sur Coast, as needed to maintain public access & mobility along Highway 1 while protecting the marine environment within the Monterey Bay National Marine Sanctuary. These measures were developed through the Coast Highway Management Plan (CHMP), funded by the Federal Highway Administration through Caltrans, under the National Scenic Byway Program.
- Staff reviewed and commented on multiple CEQA documents regarding the extant Monterey pine forest and habitat in Del Monte Forest, participated in a series of meetings and discussions with Monterey pine forest experts.

Program Needs

While planning for the General Plan Update is continuing in Monterey County, future progress is impeded by lack of adequate Commission staff resources to provide technical assistance. Additional impediments exist at the local level as the County Board of Supervisors may disagree with recommendations submitted by the Commission as part of the draft report, and there currently exists no mechanism to ensure implementation of the recommendations.

Implementing Cumulative Impacts Mitigation

Since 2001, the Commission has achieved acceptance of 132 Offers to Dedicate Conservation and Open Space Easements (OTDs). These accepted easements implement required mitigation to protect scenic, open space and habitat areas from development impacts. Roughly half of the OTDs are to mitigate cumulative impacts of development in the Santa Monica Mountains.

Program Needs

While efforts continue to get OTDs accepted, several impediments exist. Many nonprofit organizations indicate that such OTDs may not be accepted without funds to pay for monitoring and maintenance or restoration needed. Current Conservancy grant programs are not able to provide operations funding and incentive funding is needed. Conservation and Open Space OTDs are often significantly more difficult to evaluate than Public Access OTDs because it is often harder to locate the exact easement on a property. Negotiation for acceptance is often more difficult because as no public use is allowed as part of Conservation and Open Space OTDs, there are fewer parties interesting in accepting the easement. Additional impediments exist in developing and implementing adequate databases to track and monitor OTDs.

There are roughly 648 OTDS remaining to be accepted. At the Commission's current rate of about 40-50 OTDs accepted per year at current staffing levels it would require over 15 years to achieve acceptance of all outstanding OTDs. Additional staff resources are needed to accelerate acceptance.

Addressing Cumulative Impacts in Other LCP Updates, Amendments and Regulatory

Program Changes

- As part of the LCP Amendment for the Orange County Bolsa Chica segment, the Commission staff completed a biological assessment and resource analysis. Measures to address cumulative impacts were implemented as part of the Commission action on the LCP Amendment.
- The Commission initiated a Periodic Review of the Marina del Rey LCP, which will include an assessment of cumulative impacts of development on the access, recreation, and transportation resources in and adjacent to Marina del Rey. Draft recommendations have been developed.
- The Malibu/Santa Monica Mountains ReCAP findings and recommendations provided critical information that was used in the Commission development of the City of Malibu Local Coastal Program that was certified in September 2002. The geographic information system developed as part of the Malibu/Santa Monica Mountains ReCap is a valuable tool for Commission staff in the review of coastal development permits and enforcement cases in the unincorporated portion of the Santa Monica Mountains in Los Angeles County.
- Recommendations from the pilot ReCAP for the Monterey Bay Region report continue to be implemented in coastal permit and appeals and LCP Amendments.

Improved Information Management

To enhance the implementation of the Transfer of Development Credit (TDC) Program in the Santa Monica Mountains, the Commission staff updated the existing database to improve the tracking of TDCs in the Santa Monica Mountains/Malibu area. Improved tracking will ensure that required cumulative impacts mitigation will be protected.

The Commission staff implemented the Database and Inventory of recorded Offers to Dedicate Open Space Easements to monitor the location and acreage of lands protected statewide through

conservation easement conditions and lots retired in the Santa Monica Mountains under the Transfer of Development Credit Program. Conservation and Open Space OTDs are required to mitigate cumulative impacts of development to scenic, habitat and other resources throughout the state.

Program Needs

LCP Amendments are emerging as a key mechanism for addressing CSIs. Currently the Commission lacks an effective means to monitor and evaluate the implementation of LCP Amendments. The Commission needs to improve its ability to electronically access certified LCPs and to track and evaluate the implementation of amendments to the LCPs. Improved access to easement information is needed to improve analysts' consideration of regional access needs as part of the regulatory program. The existing TDC and OTD ordinances need to be updated and integrated into a GIS and available as part of an Integrated Mapping Service.

Conclusion

1. Identify priority needs or major gaps in addressing the programmatic objectives for this enhancement area that could be addressed through a 309 Strategy (i.e. inadequate authority, data gaps, inadequate analytical methods, lack of public acceptance, etc).

Commission staff must continue to implement policies derived from the specific recommendations of the five ReCAP/Periodic LCP Review analyses (Monterey Bay Region, Santa Monica Mountains/Malibu, San Luis Obispo County, Monterey County, and LA County/Marina del Rey). The implementation measurements improve LCP policies and implementation ordinances in the project areas and also lead to improved policies and ordinances throughout the coastal zone, especially in addressing CSIs.

As growth in the coastal zone continues, pressure increases on the ability of the public to access the coastal. Pressure is also increasing on the ability to protect and provide a wide range of adequate public recreation and visitor support facilities. The Commission staff must develop new plan provisions and policy mechanisms to ensure maximum public access to the coast and provision of adequate support facilities so that cumulative development pressures will not result in conversion or loss of affordable facilities and access.

Although the Commission allocated staff to the ReCAP/Periodic Review programs to address cumulative impacts in plan development, staffing levels remain inadequate to address both ongoing permit review and Periodic Review of cumulative impacts. There continues to be a lack of adequate mechanism to ensure Commission recommendations are implemented. The Commission should continue to seek legislative support for funding for staff to work on periodic LCP reviews and for legislative changes to incorporate requirements to ensure implementation of Commission adopted recommendations.

The Commission should continue its efforts to provide incentives for local governments to update and amend their LCPs, as Commission is still unable to require such changes; under the CCMP, a local government assumes responsibility for implementing the Coastal Act after certification of its LCP. Lack of funding to assist local governments in local coastal planning is a significant impediment. The Commission should continue to seek ways to increase funding to local governments. In addition, methods are needed to update local land use plan (LUP) maps and to assist local governments in comprehensively evaluating the cumulative effects of LUP amendments.

Continued improvements to the permit tracking database to emphasize monitoring of LCP Amendments and condition compliance would improve the ability of Commission staff to use the data in analyzing cumulative impacts.

Internet mapping services and statewide GIS data, available to both Commission and local staff, would provide an enormous benefit for coastal protection. Expanding the Commission's GIS to include parcel data and providing IMS capability would enhance the agency's ability to undertake cumulative impact analysis on both a regional and a statewide basis. A more comprehensive GIS that uses parcel data to link to other datasets (like the PTS) could provide important information to both Commission staff and to local governments in reviewing and analyzing policies, ordinances, and permits. Commission staff should also be trained to use IMS in their analyses. In addition, an enhanced GIS would assist in tracking and reporting national performance indicators.

The Commission needs to continue to link coastal program improvements to local and regional watershed planning and management and growth management efforts within regions of the state outside the coastal zone.

The Commission should strive to improve links between science and policy makers. The link will help the Commission base its permitting decisions on a stronger scientific foundation. At the same time, the link would improve management of the cumulative impacts of coastal development and growth in priority enhancement areas of access, wetlands, and hazards management. Long term research and monitoring in cooperation with scientists and academic researchers is needed to better understand the actual status of critical coastal resources.

What priority was this area previously and what priority is it now for developing a 309 Strategy and designating 309 funding and why?

Last Assessment		**This Assessment**	
High	x	High	x
Medium		Medium	
Low		Low	

Cumulative and secondary impacts of development affect every other enhancement area in some way. Because California continues to have a burgeoning population, the accompanying development keeps cumulative impacts at the forefront of coastal management concerns. The incremental nature of development decisions means that the Commission must remain alert to their impacts. Applying the regional review methodology developed under past regional cumulative assessment projects is a high priority for addressing the management of cumulative and secondary impacts at the state and local level.

MARINE DEBRIS

Section 309 Programmatic Objectives

I. Develop or revise programs that reduce the amount of marine and lake debris in the coastal zone.

The Commission carries out an ongoing, statewide campaign that combines conservation, education, outreach to underserved communities, and hands-on action to address marine debris and ocean pollution and encourage coastal protection and restoration. The campaign promotes environmental stewardship and community pride.

Programs include:

- the statewide annual Coastal Cleanup Day;
- the year-round Adopt-A-Beach program of beach cleanups;

- a statewide clean boating campaign;
- an on-line directory of marine, coastal and watershed educational resources;
- a marine education and restoration grant program;
- a marine debris focused school assembly program and kids beach cleanup;
- a set of K-12 marine debris-oriented school materials called Save Our Seas;
- a science activity guide for teachers in grades 3 through 8, with community service activities for all grades, called Waves, Wetlands and Watersheds;
- the Coastal Stewardship Program, which includes the Coastal Stewardship Pledge, a Partners Program and the distribution of Seafood Watch cards;
- a community-based restoration and education program at Upper Newport Bay in Orange County;
- a K-12 curriculum for Upper Newport Bay, called Our Wetlands, Our World;
- a Coastal Art and Poetry contest for K-12,
- an amateur photography contest;
- a website: coastforyou.org; and
- the Plastic Debris: Rivers to Sea Project (see below).

In 2004 and 2005, the Commission worked in partnership with the Algalita Marine Research Foundation (AMRF) on the Plastic Debris: Rivers to Sea Project. Funded by a grant from the State Water Resources Control Board to AMRF, the Project includes a monitoring component to assess the plastic debris loading and sources of trash and plastic in two urban southern California rivers; a planning component to identify actions to help government, industry and non-profit organizations reduce the discharges of plastics and trash in urban runoff; and an education component to increase awareness of the issue among interested parties. The Project held the Plastic Debris: Rivers to Sea conference in Redondo Beach on September 7 to 9, 2005, and produced a website www.plasticdebris.org. The Commission intends to continue to work on this Project in the next phase, which will focus on implementation of the Action Plan, and is seeking funding to do so.

In the coming years, the Commission education program plans to continue to work with the fishing community to reduce the waste associated with fishing, especially nets and monofilament line, and encourage recycling of these products. The focus of these efforts will be around Coastal Cleanup Day and through the Clean Boating Program.

Marine/ Debris Characterization

1. Extent of marine debris and its impact on the coastal zone.

Source	Impact (Significant/Moderate/Insignificant)	Type of Impact
Litter and other Non-point sources (urban runoff)	significant	Aesthetic, fisheries resources, wildlife, habitat, health & safety, and economic.
Beach Litter	significant	Aesthetic, habitat, wildlife, health & safety, and economic.

Source	Impact (Significant/Moderate/Insignificant)	Type of Impact
Plastics Industry	significant	Mainly pellet related impacts – aesthetic, fisheries resources, wildlife, habitat, and economic
Boating	moderate	Aesthetic, fisheries resources, wildlife, habitat, and economic
Offshore operational waste	low	Aesthetic, fisheries resources, wildlife, habitat, and economic
Sewage and medical waste	low	Primarily health & safety, also aesthetic and resource damage.

If any of the sources above or their impacts has changed since the last assessment, please explain.

Plastic continues to be the biggest and most persistent contributor to marine debris. Studies completed since the last assessment have improved our understanding of the extent and impacts of the plastic marine debris problem. These studies have raised four main areas of concern. First, the extent of the plastic debris problem offshore, in the open ocean, is much greater than previously imagined. The Algalita Marine Research Foundation and the Southern California Coastal Water Research Project have conducted studies comparing the mass of plastic debris to the mass of plankton in various locations. In the north Pacific Central Gyre, a nutrient poor area where debris accumulates, the researchers found six times the mass of plastic to plankton. Offshore the Los Angeles and San Gabriel rivers, the ratio of plastic to plankton mass was 2.5:1. Second, plastic pellets have been found to serve as a transport mechanism for toxic chemicals, including PCBs and DDE. Researchers have found that these chemicals concentrate on plastic at more than one million times background levels. This finding has implications for potential impacts to marine food chains, and additional research is needed. Third, studies have found that plastic pellets and other "microplastics" (the product of plastic products that have photo-degraded) are a greater problem than previously thought. These are the plastics that pose the greatest threat to wildlife from ingestion, since many look similar to food sources, such as fish eggs. In addition, they are ingested indiscriminately by filter feeders such as salps. Plastic pellets were the number one item found in a debris study of Orange County beaches. A fourth area of impact of marine debris that has been identified in recent years involves invasive species using plastic debris to transport to new areas.

In terms of beach cleanups, our main tool for assessing trends is the data card provided by the Ocean Conservancy for the International Coastal Cleanup. A recent focus of the California Coastal Cleanup has been expanding the cleanup inland, to clean the rivers and waterways that drain to the coast in an effort to educate the public about the watershed connection and stop debris from getting to the coast and ocean. We now have cleanups in 45 of the 58 counties in California. An unempirical look at the data from the California Coastal Cleanup indicates that while the coast may be getting somewhat cleaner (less trash per coastal cleanup volunteer in recent years), the inland cleanups more than make up for this. Illegal dumping and waterway pollution are becoming a much larger proportion of the debris picked up during each Coastal Cleanup. In 2004, we had record numbers both in terms of volunteers (50,753) and trash collected (912,147). In 2005, more than 47,770 volunteers removed over 881,000 pounds of debris from over 700 sites during what was geographically our largest cleanup ever (these numbers are not yet

final, as results are still coming in). For comparison, 43,179 volunteers removed 732,404 pounds of trash from the shore in 2000.

Do you have beach cleanup data? If so, how do you use this information?

Yes. The data is used as an educational tool by school groups. The Waves, Wetlands and Watershed Activity Guide has a beach cleanup activity and includes a data card and ideas on how teachers can use the data in lessons. The data has also been used to affect public policy, for example, the City of Berkeley adopted a ban on polystyrene fast food containers partly in response to Coastal Cleanup Day findings.

Management Characterization

1. For the categories below, identify significant state ocean management programs and initiatives developed since the last assessment.

State/local program requiring recycling:

- Several cities have instituted curbside plastic bag recycling programs: City of San Juan Capistrano, City of Dana Point, City of San Clemente, City of San Jose, City of Los Angeles, and City of Sacramento.
- California Integrated Waste Management Board (CIWMB): Rigid Plastic Packaging Container Program, which supports plastic container recycling infrastructure and markets; Recycled Content Plastic Bag Program; and, "Plastics White Paper" – study aimed at improving rate of plastic recycling in California.
- Department of Conservation: In order to encourage recycling, the California Redemption Value on beverage containers increased on January 1, 2004 from 2.5 cents to 4 cents for containers under 24 ounces, and from 5 cents to 8 cents for those over 24 ounces.

State/local programs to reduce litter:

- The Plastic Debris Rivers to Sea Project (described above).
- Los Angeles Regional Water Quality Control Board adopted a Trash Total Maximum Daily Load for several major watersheds.
- Many local government projects.
- CIWMB – conducted several studies aimed at studying compostable plastic performance in commercial composting systems.
- CIWMB – waste reduction plans for large venues and events, promoted through local government CIWMB block grant recipients.
- The City of San Francisco and several other communities are considering imposing a fee on plastic bags.
- 15 California cities have imposed smoking bans on public beaches, in part, to reduce cigarette butt litter.

State/local programs to reduce wasteful packaging:

- The Plastic Debris Rivers to Sea Project.
- City of Malibu banned polystyrene from grocery stores, fast food outlets and coffee shops.
- Cities of Laguna Hills, Huntington Beach, San Clements and San Juan Capistrano banned polystyrene packaging from city offices and city-run events.

- Ventura County banned polystyrene products at all restaurants and concessions doing business on Ventura County properties.
- Progressive Bag Alliance – 5 plastic bag manufacturers, working to reduce wasteful use of plastic: increased recycled content, providing clerk training, public education in stores, increased in-store recycling of bags.

State/local program managing fishing gear:

- Ocean Protection Council (OPC) funded UC Davis's Wildlife Health Center, SeaDoc Society to conduct pilot derelict gear removal program in 2005.
- Marine debris concerns incorporated into harbor, port, marina and coastal solid waste management plans.
- Existing as of last assessment - marine debris concerns were integrated into marina and harbor pollution control initiatives through the Commission's Coastal Non-point Pollution Control Program.
- Education and Outreach Programs:
- Commission Programs (Coastal Cleanup Day, Adopt-A-Beach etc. – see above).
- "Erase the Waste" – the State Water Resources Board.
- "Don't Trash Fresno" and "Don't Trash California" – California Department of Transportation.
- Keep California Beautiful programs.
- Many local programs.
- The Commission approved a coastal development permit for the removal derelict fishing equipment, mooring equipment and vessels from a 350 acre mooring area just offshore of east beach in the City of Santa Barbara. The Commission also approved a coastal development permit for a regulated mooring/anchoring program designed to decrease pollution, sea floor debris and vessel groundings on East Beach.

For the changes identified above provide a brief description of the change:

- Characterize scope of change
- Describe recent trends
- Identify impediments to addressing the change
- Identify successes

There is a great deal of activity both at the state and local level on the topic of marine debris in recent years. In particular, the Los Angeles Regional Water Quality Control Board's decision to adopt a Total Maximum Daily Load for trash for several major watersheds, and to set the acceptable level at zero, has generated interest and activity, particularly on the part of local government who must comply with this mandate, as well as jurisdictions who may be subject to similar regulations in the future.

The research mentioned above conducted by the Algalita Marine Research Foundation and others has also spurred interest in the marine debris problem – there is broad recognition that the problem is more severe than previously thought, particularly as it relates to plastic and to land-based sources of marine debris.

However, there is a lack of resources to address marine debris concerns. The issue does not fall squarely under the auspices of any one agency, but is of at least peripheral interest to a wide range of agencies – straddling the issues of non-point source pollution, waste management and

environmental conservation, with both ocean and land-based sources. There is also a lack of coordination among the agencies and groups working on this issue, for the same reason – there is no agency or organization that serves as a central point of contact or clearinghouse on this topic.

More research is needed to fully understand the scope of the marine debris problem. In particular, there is a need for research on the nature of the potential harm to marine wildlife and human health from the small, degraded plastic pieces and pellets in the ocean. Research is needed to understand, for example, whether toxic chemicals can "flow up" the food chain to consumers.

The Plastic Debris: Rivers to Sea project and conference has filled an important niche in bringing many of the involved parties together and beginning the necessary research and dialogue needed to address this issue in a more comprehensive way. However, the project was funded by a one-time grant and is ending in early 2006.

Conclusion

1. Identify priority needs or major gaps in addressing the programmatic objectives for this enhancement area that could be addressed through a 309 Strategy
    - Sales of the Whale Tail License Plate provide stable core funding for the Commission's public education efforts that address marine debris, such as Coastal Cleanup Day and the Adopt-A-Beach Program. However, this funding does not cover the costs of anything beyond these core functions. Funding needs include the following:
        - Phase 2 of the Plastic Debris: Rivers to Sea Project. The project is currently funded by a grant from the State Water Board to the Algalita Marine Research Foundation. The grant runs through the end of 2005. The project is working with stakeholders to develop a California Marine Debris Action Plan, focusing on land-based sources. Additional funding is needed to oversee implementation of the action plan, and to provide an ongoing statewide coordination function on this topic.
        - A statewide, year round media campaign. The Commission has been successful at securing donated advertising and publicity for its Coastal Cleanup Day event. However, the event is only one day each year. A media campaign is needed to promote year round ocean stewardship and public involvement in programs like Adopt-A-Beach.
        - Local marine debris education programs. The Commission supports local marine debris efforts through its Whale Tail Grants Program. However, the need for these grants far exceeds the availability of funds – 80-90% of the proposals submitted do not receive funding. Many of the proposals that are turned down are worthy of funding.

What priority was this area previously and what priority is it now for developing a 309 Strategy and designating 309 funding and why?

Last Assessment		**This Assessment**	
High		High	
Medium		Medium	x
Low	x	Low	

Our understanding of the potential harm from marine debris has increased since the last assessment. In its final report, issued in September 2004, the U.S. Commission on Ocean Policy identified marine debris as a serious threat to fishery resources, wildlife and habitat, as well as human health and safety. There is strong public support for addressing this issue. In a recent survey, voters in Los Angeles and Orange County ranked the issue of trash and pollution emptying into the ocean from storm drains among the most serious problems facing their counties. The problem is multi-faceted and solving it will require extensive intergovernmental and public cooperation, creativity and initiative.

Marine debris is a focus of widespread direct public involvement with the coastal management program, especially for young people, and it can act as an introduction to participation in more complex coastal issues. It is also a subset of the public access and wetland issues, having impacts on both. Integrating marine debris-related activities into the overall coastal enhancement scheme will make for a stronger strategy. Therefore, the Commission is upgrading this enhancement area to a medium priority.

SPECIAL AREA MANAGEMENT PLANNING

Section 309 Programmatic Objectives

I. Develop and implement special area management planning in coastal areas applying the following criteria:

- Areas with significant coastal resources (e.g., threatened and endangered species and their critical habitats, wetlands, water bodies, fish and wildlife habitat) that are being severely affected by cumulative or secondary impacts;
- Areas where a multiplicity of local, state, and federal authorities hinder effective coordination and cooperation in addressing coastal development on an ecosystem basis;
- Areas with a history of long-standing disputes between various levels of government over coastal resources that has resulted in protracted negotiations over the acceptability of proposed uses;
- There is a strong commitment at all levels of government to enter into a collaborative planning process to produce enforceable plans;
- A strong state or regional entity exists which is willing and able to sponsor the planning program.

Resource Characterization

Area	Major conflicts
Wetlands	Pressures to develop unpermitted uses and secondary impacts from adjacent impacts to buffers and water quality.
Environmentally Sensitive Habitat Areas	Pressures from encroachment and impacts to buffers and water quality.
Agricultural Lands	Pressures to convert agricultural lands to urban development and impacts to agricultural viability form adjacent development. Impacts of secondary uses on agricultural lands and impacts of large lot residential development of "monster homes" on agricultural lands and cumulative impact on agricultural viability.

Local coastal programs (LCPs) are considered the equivalent of the CZMA Section 309(a)(6) definition of *special area management plans (SAMP) for important coastal areas*. The Coastal Act allows for any local government lying in whole or in part in the coastal zone to prepare an LCP for that portion of the coastal zone within its jurisdiction. In addition, the Commission continues to review and maintain special area plans for the four industrial ports, public works planning for special districts, including important State Park units, and plans for the siting of energy facilities.

LCPs consist of detailed land use plans and specific implementing actions to accommodate new development while protecting sensitive resources (ports and universities also have coastal programs that are identified as port plans, public works plans and long range development plans). Moreover, LCPs are considered the primary vehicle for furthering community and regional coastal resource planning as well as public access planning.

There are 75 different coastal jurisdictions to date. Coastal Act Section 30511(c) allows jurisdictions to submit LCPs in separate geographic units. The jurisdictions are currently divided into 128 geographic LCP planning segments. Of those, 92 segments have Commission-certified LCPs. The local governments having jurisdiction within the 92 segments issue coastal permits.

As discussed in the CSI section, the Coastal Act requires that the Commission review the implementation of certified LCPs every five years in order to determine whether the LCP is being effectively implemented in conformity with the policies of the Coastal Act. In enacting this mandate, the legislature recognized the importance of ongoing monitoring, evaluation and update of LCPs to effective coastal management. However, to date the Commission has completed only a few LCP reviews and many LCP reviews are overdue.

As of August 2005, approximately 21 jurisdictions[8] have initiated or completed partial or comprehensive updates to their LCPs. In these instances the LCPs have been amended to include revised and new policies and/or ordinances. Significant changes have occurred in the coastal zone. LCPs that contain outdated policies and standards for managing sensitive coastal resources are insufficient to guide coastal management and threaten the protection of fragile coastal land and water areas. The Commission lacks sufficient staff resources to consistently participate in local planning task force meetings, providing assistance to local governments during these updates. Efforts to provide assistance through other means, such as the internet, have also languished due to lack of staff.

As of August 2005, approximately 36 LCP segments of jurisdictions remain uncertified. In addition there are 45 geographic areas where issues pertaining to a specific geographic area remain unresolved and the Commission retains coastal development permit authority (referred to as ADCs, Areas of Deferred Certification). Assisting local governments in completing their LCPs and ADCs has been extremely difficult due to the Commission having lack of staff and limited technical and financial assistance.

In addition to LCPs, there are other local and regional planning efforts that impact coastal development plans and permits involving various SAMPs. Staff involvement has been limited because, 1) the scope and scale of many of these plans are large and, 2) participation on these work groups is labor intensive. Where SAMPs have been developed in the coastal zone as a result of cooperative efforts by the Commission staff, local governments and other entities, the result

[8] City of Eureka, City of Fort Bragg, City of Point Arena, Sonoma County, Marin County, San Mateo County, City of Half Moon Bay, Santa Cruz County, City of Santa Cruz, City of Sand City, San Luis Obispo County, City of Morro Bay, City of Pismo Beach, City of Santa Barbara, City of Carpinteria, City of San Buenaventura, LA County Marina del Rey LCP, City of Huntington Beach, City of Carlsbad Village Redevelopment Area, City of San Diego, City of National City.

has been that the resource protection plans reflect the LCP policies and ordinances of the jurisdiction and the plans are likely to be amended into the LCP [9]. However, only a small majority of the plans have been incorporated into the LCP. This results in misinformation regarding development standards and allowable uses of land since the LCP is the statutorily binding planning document and vision for coastal resource management, public access and development in the coastal zone.

Reviews of some SAMPs have occurred through federal consistency authority. Since 2001 these included: 1) the General Management Plan for the Santa Monica Mountains National Recreation Area; 2) an Interim Management Plan for the Humboldt Bay South Spit; 3) the Freshwater Lagoon Spit Development Concept Plan for Redwood National Park; 4) an Interim Management Plan for the Stornetta Public Lands in Mendocino County; 5) the King Range Management Plan, 6) a Pajaro Valley Basin water supply Management Plan; 7) a Resource Management Plan for California Coastal National Monument; 8) a revised Land and Resource Management Plan for Los Padres National Forest; and, 9) Management Guidelines for the Brazil Ranch in Los Padres National Forest. However, staff did not participate in many of these plan creations and the majority of the above listed special area management plans have not been incorporated into the existing certified LCPs.

While there are no specific areas to be identified for a formal SAMP process, the Commission will continue to use the techniques of special area management planning where they are helpful in the context of ongoing coastal management planning. For instance, the Commission is working with a number of other state agencies to develop and implement the Critical Coastal Area program. Theses agencies include: State Water Resources Control Board and several Regional Water Quality Control Boards, Department of Fish and Game, Parks and Recreation, State Lands Commission, Coastal Conservancy, Caltrans, and others. The Critical Coastal Area program is a component of California's Nonpoint Source Pollution Control Program.

Other regional planning efforts included in special area management plans are the habitat conservation plans (HCPs) and natural community conservation plans (NCCPs). These plans are developed by multiple federal, state, local government, environmental and developer stake-holders and, in most cases, represent years of meetings and work by all parties. HCPs (AKA NCCPs, Habitat Management Plans, Multi-species Conservation Plans, and Multi-habitat Conservation Plans) must be adopted before a developer can apply for an incidental take permit that would allow for the take of endangered or threatened species. These plans must not contradict the habitat and resource protection policies of the Coastal Act or the area's LCP.

The scale of HCPs geographically exceeds the coastal zone boundary. However, in order for the plans to be enforceable in the coastal zone, development proposals must conform to the area's statutory policies (where there is a certified LCP, the LCP Land Use Plan polices are the legal standard of review). Therefore, it is important that the plans be included and amended into LCPs. Consideration of the habitat planning efforts as part of the LCPs is critical for two reasons: 1) these habitat plans are the only way in which the take of habitat or of threatened and endangered species can occur; and, 2) the habitat plans allow for the take of habitat and species that will adversely affect coastal zone resources.

There have been a number of significant changes in coastal management. Some of these changes have occurred due to changes in statute, such as the Coastal Nonpoint Source Pollution Program and Habitat Conservation Planning. Other changes have occurred because of an updated

[9] Examples: development of specific plans for identified resource areas, lagoon enhancement plans, specification of priority and resource-dependent uses within sensitive resource areas, restoration/mitigation plans for disturbed wetlands, habitat conservation plans, sensitive resource overlays, flood control/stream management programs and development of transfer of development rights programs.

knowledge brought about through regional cumulative assessments, such as securing new and protecting existing public access to the coast. Because all LCPs function as special area management plans for important coastal areas, they need to be updated in order to be legally adequate at addressing the changes in coastal management.

Management Characterization

1. Identify areas of the coast that have or are being addressed by a special area plan since the last assessment.

The principal arena for special area management planning is the Local Coastal Program process. Since the October 2001 LCP Status report was published, the Commission certified five Land Use Plan segments and four Implementation segments. During this period, four LCP segments were effectively certified and permit authority transferred. Three Areas of Deferred Certification were resolved and certified. The Commission reviewed and acted on a total of 260 LCP amendments as well as six Long Range Development Plan Amendments, two Public Works Plan Amendments, and 11 Port Master Plan Amendments. The Commission has formally acted on some special area plans (such as wetland management plans) through its regulatory process and has informally participated in a number of other area planning programs with other agencies.

Identify any significant changes in the state SAMP programs since the last Assessment (i.e., new regulations, guidance, Memorandums of Understanding, completed SAMPs, implementation activities, etc.). Provide the following information for each change:

- Characterize the scope of the change
- Describe recent trends
- Identify impediments to addressing the change
- Identify successes

Since the last Assessment, the major program change has been the loss of the Local Assistance Planning Grant funds. In the FY 2001/2002, the grant funds were eliminated from the Commission's budget, leaving no funds to provide support and incentives for LCP and SAMPs. The Commission has also lost a significant number of vacant staff positions in each budget year, putting even greater strain on staff's ability to provide local assistance.

Conclusion

1. Identify priority needs or major gaps in addressing the programmatic objectives for this enhancement area that could be addressed through a 309 Strategy.

LCPs need to reflect significant changes that have occurred in the coastal zone and incorporate the multitude of ongoing special area management planning efforts. As more local jurisdictions initiate updates of LCPs, the demand for Commission staff increases to provide timely, ongoing assistance and feedback in order to assure conformance with Coastal Act policies. Priority LCPs are those that: 1) have a high level of post-certification permit and appeals activity; 2) contain critical coastal resource management issues; 3) are faced with high growth and development pressures; and, 4) have experienced a higher number of project-driven amendments.

The Commission needs to assist local governments updating and amending their LCPs and become more involved in special area management planning efforts. The program changes that would enhance the CCMP are amendments to LCPs that update their resource protection and public access policies. The program change that would enhance the CCMP while also ensuring the enforceability of the regional SAMPs is to have them approved and incorporated into the CCMP as local coastal program amendments.

As with CSIs, statewide IMS would provide an invaluable tool for creating and analyzing proposed LCPs and LCP amendments.

What priority was this area previously and what priority is it now for developing a 309 Strategy and designating 309 funding and why?

Last Assessment		**This Assessment**	
High	x	High	x
Medium		Medium	
Low		Low	

The CCMP provides the necessary structure for developing and implementing SAMPs. However, necessary amendments to LCPs have not occurred as envisioned. To date, the Commission has relied on the Local Coastal Program process as a means to incorporate special area planning efforts. To ensure that these efforts are effective, LCPs must be up-to-date and attention to SAMPs must remain a high priority.

ENERGY AND GOVERNMENT FACILITY SITING

Section 309 Programmatic Objective

I. Enhance existing procedures and long range planning processes for considering the needs of energy-related and government facilities and activities of greater than local significance.

II. Improve program policies and standards which affect the subject uses and activities so as to facilitate siting while maintaining current levels of coastal resource protection.

Management Characterization

1. Identify significant changes in the state's ability to address the siting of energy and government facilities since the last Assessment (e.g., new regulations, guidance, manuals, etc.). Provide the following information for each change:

- Characterize the scope of the change
- Describe recent trends
- Identify impediments to addressing the change
- Identify successes

Energy

36 Undeveloped Oil and Gas Leases

There are 36 undeveloped federal outer continental shelf (OCS) leases offshore California. In November 1999, the State of California, including the Commission, filed suit in U.S. District Court challenging the Minerals Management Service's (MMS) failure to comply with the requirements of the CZMA with respect to the granting of lease suspensions. In 2001, the district court held in State of California v. Norton that approval of the lease suspensions by MMS is a federal agency activity subject to consistency review by California under the CZMA. On appeal, the U.S. Court of Appeals for the Ninth Circuit affirmed the district court judgment.

In 2005, the MMS submitted to the Commission ten consistency determinations for the 36 lease suspension requests. The Commission objected to the ten consistency determinations based on

lack of information. The "lack of information" objection was the result of a disagreement between the MMS and the Commission over whether MMS was to provide a more detailed analysis of the broad and long-term effects of post-suspension exploration, development and production activities that are reasonably foreseeable results of the MMS' approval of the lease suspensions. The MMS refused to provide certain information requested by the Commission about the future post-suspension exploration, development, and production stages.

The MMS has not yet informed the Commission how it intends to respond to the Commission's objection to the ten consistency determinations. The MMS has four options: 1) allow the leases to expire; 2) re-submit to the Commission consistency determinations for the lease suspensions with the information identified by the Commission as necessary to complete its review; 3) offer dispute resolution to attempt to resolve the agencies' differences; or 4) notwithstanding a Commission objection, the MMS could approve the lease suspensions. If the MMS chooses Option 4, the Commission will sue the federal government.

Liquefied Natural Gas (LNG) Receiving Terminals and Regasification Facilities

Since 2001, the Commission has received three proposals to build and operate LNG receiving terminals and regasification facilities along the California coast or in federal waters. LNG is natural gas cooled to a temperature so that it becomes a liquid. Because LNG is more compact than gas, it can be transported long distances across oceans using specially designed ships.

The three proposals are:

- BHP Billiton proposes to install a Floating Storage and Regasification Unit (called Cabrillo Port) approximately 14 miles offshore Malibu. This project requires consistency certification and a coastal development permit application from the Commission.
- Sound Energy Solutions proposes an LNG terminal and regasification facility on a 27-acre site at Pier T within the Port of Long Beach. This project will require the Port of Long Beach to obtain from the Commission a Port Master Plan Amendment.
- Crystal Energy proposes to convert existing Platform Grace (located in federal waters offshore Ventura County) to an LNG receiving terminal and regasification facility. This project requires a consistency certification and a CDP from the Commission.

The Commission is the only state agency with regulatory authority over all three proposed projects. The LNG proposals are highly complex and controversial. In addition to causing potential conflicts with ocean users and adverse coastal resource effects, siting LNG facilities along the highly populated California coast raises serious public safety concerns.

In February, 2005, the Commission sent a letter to California's legislature asking it to provide assistance in establishing a process to determine the most appropriate sites for one or more new LNG terminals along the California coast. The Commission expressed concern that it must consider projects on a first-come, first-served basis without reference to a statewide LNG infrastructure plan or statewide LNG siting criteria. It urged the legislature to consider legislation to address these concerns.

To date, staff has held two Commission LNG informational briefings and an LNG Safety Workshop and is currently reviewing draft environmental impact documents and safety studies for the Cabrillo Port and the Port of Long Beach projects. Staff also participates in monthly meetings of the California LNG Multi-Agency Permitting Working Group.

Power Plants

Since 2001, the Commission has reviewed proposals concerning six existing coastal power plant facilities, largely to increase electrical generating capacity within an existing power plant facility

or site footprint. Two proposals being reviewed will replace steam generators at nuclear power plants (San Onofre and Diablo Canyon). The intent of the proposals is to allow the plants to operate until the end of their license periods; however, they could also result in extending the life of the plants and thus extend the length of time the plants are affecting coastal resources. Additionally, the Commission has in the past year approved two new facilities for storing spent nuclear fuel at both the Diablo Canyon and Humboldt Bay nuclear power plants, and while these facilities are proposed as temporary, the Commission expects that they will remain on the coast for the foreseeable future and will affect coastal resources in perpetuity. Regardless, these facilities will allow the operators to move the highly radioactive spent fuel from "wet storage" into more secure "dry cask storage" facilities at the power plant sites. During the next several years, the Commission expects to see additional expansion projects at several coastal power plants, though generally within the existing power plant sites.

Wave Energy

Commercial technology to produce energy from ocean waves has advanced since 2001. There are a number of small companies that now seek to test commercial technologies offshore California. To date, one application has been submitted, for a pilot project consisting of a single 120-foot tower and float buoy to be located offshore Eureka. The pilot project will test the technology in an ocean environment; the tower will not produce any power.

It appears that a commercially viable wave energy facility will require hundreds to tens of thousands of devices in large offshore industrial complexes. Because of the particularities of wave dynamics, an offshore wave energy facility will necessarily be located close to shore. As such, wave energy raises a number of potential coastal resource impact concerns, including: visual, space preclusion/conflicts with commercial fishing and other recreational users of the coast, shading of marine environment, changes to littoral transport patterns, and interference with whale migration routes. These issues are common to all wave energy industrial complexes, and do not include issues specific to a particular technology proposed.

Commission staff believes a siting study should be conducted, to examine wave and current regimes, existing uses, and assess areas where marine resources would be most vulnerable and least vulnerable to the potential siting of wave energy facilities offshore California. Over the next few years, the Commission expects to see more proposals for pilot wave projects, and perhaps a proposal for a small offshore facility.

Vessel Traffic

The Offshore Vessel Traffic Risk Management Workgroup of the Pacific States/British Columbia Oil Spill Task Force completed its effort to generate offshore vessel traffic recommendations for the entire west coast. The effort, in which Commission staff actively participated, characterized the nature of vessel traffic off the west coast, identified current vessel assist resources, and recommended voluntary vessel traffic distances from shore for all vessels over 300 gross tons.

Oil Spill Response Technology

Chemical dispersants, or in-situ burning of spilled oil, are two examples of "applied response technology" (ART). If applied successfully, these technologies, coupled with traditional mechanical oil spill cleanup techniques can reduce the amount of surface-carried oil able to foul sensitive resources. However, use of ART involves its own set of environmental trade-offs. While later generations of chemical dispersants have themselves become less toxic, they nevertheless serve to take the oil into the water column, where marine organisms can absorb fine oil droplets. Likewise, a successful in-situ burn can remove spilled oil from the water surface, but instead place oil particulates (ash) into the air or into the water column.

From 2002-2005, the Commission staff helped develop a revised policy for the use of chemical oil spill dispersants in California federal offshore waters. The Region IX Regional Response Team (RRT) assignment to the six California Area Committees was to recommend one of three types of dispersant approval zones for federal waters. Commission staff served on all six statewide subcommittees addressing this policy challenge, and served as chair of one. Staff also attended all RRT meetings on this topic, and took the lead on authoring the statewide California Dispersant Plan (CDP). The CDP was put into play at a major southern California oil spill drill in 2004, and the RRT has subsequently approved the draft final CDP as part of their Regional Contingency Plan. The CDP will also be part of all three Area Contingency Plans maintained by the Coast Guard.

Commission staff also extensively reviewed a draft CEQA in-situ burn document written by staff of the CDFG Office of Oil Spill Prevention and Response. Commission staff has offered to assist in further development of the in-situ burn policy, using the above-described CDP process as a model. The CDP will likely serve as a future model for development of a California "Places of Safe Refuge" policy for vessels foundered at sea. Commission staff expects to play a significant role in development of this policy.

Oil Spill Response Plans

Between 2001 and 2004, Commission staff reviewed all oil spill response plans (OSRPs) for existing federal offshore oil platforms. Commission staff also reviewed 2004 updates and amendments to the OSRPs, and is reviewing those for 2005. Oil spill response capability was required as part of previously concurred-in federal consistency certifications issued by the Commission for platform Development and Production Plans. Over the past year, Commission staff has provided written comments to MMS on each plan. Commission staff comments have focused on issues that might trigger further federal consistency review, such as platform response equipment changes, or changes in response time.

Government Facilities

Under the federal consistency provisions of the CZMA, the Commission has reviewed hundreds of federal activities, including airport expansions, shoreline armoring, wetland and ESHA restoration, U.S./Mexican border security infrastructure and fencing, flood control improvements, harbor maintenance dredging and port channel deepening, Air Force missile site expansions, Navy sea range testing and simulated battle operations, sewage treatment upgrades, secondary treatment waivers, mass transit infrastructure repairs and expansions, Navy fiber optic cable replacement, new FAA airport radars and monitoring of existing Navy radars, federal trust actions for Indian Tribes, Indian gaming casinos, dam removal, harbor maintenance dredging, marine scientific surveys using air guns and other active acoustics, military base and wildlife and forest management plans, and fisheries management plans. As discussed in the Ocean Resources appendix, the Commission plays a leading role in the management of active acoustics. Staff also continues to participate in regional task forces to address disposal of dredged sediments.

Conclusion

1. Identify priority needs or major gaps in addressing the programmatic objectives for this enhancement area that could be addressed through a 309 Strategy.

Energy

Mitigation measures contained in permits and federal consistency reviews need adequate funding for implementation monitoring. Many energy projects are located wholly or partly in the ocean and can cause adverse marine resource coastal effects. It is difficult to monitor compliance with mitigation measures when projects and associated impacts are offshore. The Commission needs

ways to monitor project compliance and ensure that mitigation measures function to alleviate adverse environmental impacts. Better mitigation monitoring, reporting, record keeping and correction of unsuccessful mitigation measures could enhance the CCMP.

In some instances, the Commission has required independent monitoring to ensure objective performance evaluations and application of remedial measures. Substantial evidence suggests that independent monitoring, if applied routinely, would enhance permit compliance and help protect coastal resources. The Commission needs to determine options for placing the financial burden of independent monitoring on the applicant.

For oil spill response, early and improved coordination with other federal, state, and local government agencies remains a priority need.

Government Facilities

The major program need for government facilities is to continue working with OCRM and other federal agencies to improve the federal consistency process to increase efficiency and address emerging issues. These needs include implementing and improving the process for phased review of existing and future proposed facilities, and improving coordination mechanisms.

What priority was this area previously and what priority is it now for developing a 309 Strategy and designating 309 funding and why?

Last Assessment		**This Assessment**	
High		High	
Medium		Medium	x
Low	x	Low	

The Commission has accomplished significant work in this enhancement area, however many new challenges have been presented. To address the complexities of emerging technologies, such as LNG, the Commission has upgraded Energy and Government Facilities to a medium priority.

Aquaculture

Section 309 Programmatic Objective

I. Enhance existing procedures and long range planning processes for considering the siting of public and private marine aquaculture facilities in the coastal zone.

II. Improve program policies and standards which affect aquaculture activities and uses so as to facilitate siting while ensuring the protection of coastal resources and waters.

Resource Characterization

1. Briefly describe the state's aquaculture activities (e.g., existing procedures, plans, program policies and standards).

Briefly describe environmental concerns (e.g., water quality, protected areas, impacts on native stock and shell fish resources). Also, describe any use conflicts (e.g., navigational, aesthetic, incompatible uses, public access, recreation, and future threats (e.g., shoreline defense works, introduced species).

Management Characterization

1. Identify significant changes in the state's ability to address the planning for and siting of aquaculture facilities since the last Assessment (new regulations, guidance, manuals, etc.). Provide the following information for each change:

- Characterize the scope of the change
- Describe recent trends
- Identify impediments to addressing the change
- Identify successes

The majority of California's aquaculture development is comprised of commercial farming of freshwater fish, and is sited outside of the coastal zone. Within the coastal zone, in both freshwater and marine systems, the major aquaculture activities include commercial farming of oysters, abalone, and mussels. To a lesser degree, clams and scallops are farmed. The California Department of Fish and Game (CDFG) supervises an Ocean Resources Enhancement and Hatchery Program for white sea bass, consisting of a hatchery facility and numerous grow-out pens in southern California. These activities all involve onshore and offshore components.

The State's ability to address aquaculture through regulations, State and local statutes, and guidelines, et cetera is as follows:

- CDFG promotes aquaculture in the state and may grant leases on state tide and submerged lands for the purpose of commercial aquaculture development.
- Aquaculture projects are regulated under the California Environmental Quality Act.
- The California Coastal Act regulates the offshore components of aquaculture projects.
- The onshore components of an aquaculture project in the coastal zone are regulated under either the Coastal Act or a local government's certified local coastal program.
- The RWQCB have regulatory authority over discharges into State waters, under federal Clean Water Act standards. Application of standards differs from region to region.
- The California Department of Health Services regulates the harvesting of bivalve shellfish for human consumption under the Health and Safety Code.
- The California Office of Spill Prevention and Response investigates possible seafood contamination if alternative oil spill response technologies are used near aquaculture facilities.

Pending legislation in the State Senate (SB 768) would revise California Fish and Game Code to: 1) require CDFG to prepare an environmental assessment examining siting issues and environmental standards for California aquaculture projects, and 2) establish environmental standards for issuing aquaculture leases. Commission staff is working with State legislators to ensure the language in this bill is consistent with Coastal Act requirements.

Since 2001, large-scale fish ranching in federal waters, often called "open-ocean aquaculture," has attracted growing interest. To date, there is one proposal to place a fish farm at offshore oil platform, Platform Grace, located in federal waters offshore of Ventura County. The state's authority over fish farms located in federal waters is unclear – the Commission has asserted federal consistency review authority over the Platform Grace project, however a decision by the federal government regarding whether the Commission has review authority has been delayed until an environmental analysis under the National Environmental Policy Act is conducted.

Currently, federal laws and regulations governing open-ocean aquaculture are limited to:

- The Army Corps of Engineers has authority to issue Section 404 (Clean Water Act) permits for fill in the navigable waters of the United States. A Corps permit action can trigger formal consultation with NOAA Fisheries and/or the US Fish and Wildlife Service, under the Marine Mammal Protection Act, the Magnuson-Stevens Fisheries Conservation Act, and/or the federal ESA.
- In September 2004, the Federal Environmental Protection Agency established Effluent Limitations Guidelines and New Source Performance Standards for aquaculture. These guidelines and standards are implemented when they are incorporated into a new general or individual NPDES permit.

There is no regulatory scheme in place now to issue or manage offshore leases associated with open ocean aquaculture. Pending federal legislation would consolidate federal regulatory authority over open-ocean aquaculture with NOAA Fisheries. Commission staff is seeking, among other issues, that any federal legislation includes strict and specific environmental standards for fish farms.

Environmental concerns associated with aquaculture development in California include:

- The effects of wastewater discharge from aquaculture facilities to marine water quality;
- Introduction of pathogens into the marine environment;
- Introduction of exotic species into the marine environment;
- Adverse effects on the genetic diversity and fitness of native species;
- Habitat damage (e.g., damage to eel grass beds resulting from construction activities);
- Degradation of the scenic quality of the coast;
- Marine debris originating from improperly maintained or abandoned aquaculture projects that may litter beaches and harm marine life due to ingestion or entanglement;
- Development projects that may degrade marine water quality on which aquaculture is dependent (e.g. livestock and grazing); and
- Oil dispersants, and in-situ burning of spilled oil, are two methods of alternative oil spill response technology that have potential impacts on nearshore aquaculture resources.

The production of bivalve shellfish (filter feeders) is dependent on high water quality in order to protect public health. Thus, the water quality effects of point and non-point source discharges are an important concern for the aquaculture industry.

Aquaculture, while listed as a priority coastal use in the Coastal Act, may raise conflicts with other uses of the coastal zone, such as:

- Public access to and along the shoreline;
- Public recreational activities (e.g., sea kayaking, recreational fishing, diving, ecotourism);
- Commercial fishing (when placed within working harbors and marinas); and
- Navigation.

Conclusion

1. Identify areas of the coast that have or are being addressed by a special area plan since the last assessment.

Existing state and local regulations under the Fish and Game Code, the California Environmental Quality Act, the California Coastal Act, certified local coastal programs, and the California Health and Safety Code, address environmental concerns and use conflicts associated with aquaculture in the coastal zone. However, improved coordination between the regulating agencies

would further the above stated programmatic objectives. For example, Fish and Game Code Section 15700 establishes a statewide Aquaculture Development Committee, however this committee does not exist currently. The committee could help standardize certain State regulatory processes, such as Clean Water Act standards managed by the Regional Water Boards. The Committee could also facilitate coordination among State agencies, and between federal agencies and the State.

Another improvement could be the development of a offshore aquaculture procedural guidance document that (a) identifies existing regulatory authorities; (b) compiles and analyzes existing permits and conditions for aquaculture facilities that the Commission and/or local governments have acted on to date; and (c) identifies environmental issues of concern and state-of-the-art environmental standards and monitoring requirements.

What priority was this area previously and what priority is it now for developing a 309 Strategy and designating 309 funding and why?

Last Assessment		**This Assessment**	
High		High	
Medium		Medium	x
Low	x	Low	

The effects of aquaculture to coastal and marine resources, public access and recreation, and public health are addressed under existing State and local laws, although the industry would be better served through improved regulatory coordination. Existing federal laws and regulations are not currently adequate to address environmental concerns and use conflicts associated with open-ocean aquaculture, and the State's role in reviewing aquaculture projects in federal waters is not clear. For these reasons, and since California expects to see more proposals for fish farms, aquaculture has been upgraded from a low to a medium priority.