SECTION 309
ASSESSMENT AND STRATEGY
FY 2011-2015

Coastal Zone Management Program
Office of Planning
Department of Business, Economic Development & Tourism
State of Hawaii
October 2010

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A publication of the Hawaii Office of Planning, Coastal Zone Management Program, pursuant to National Oceanic and Atmospheric Administration Award No. NA09NOS4190120, funded in part by the Coastal Zone Management Act of 1972, as amended, administered by the Office of Ocean and Coastal Resource Management, National Ocean Service, National Oceanic and Atmospheric Administration, United States Department of Commerce. The views expressed herein are those of the author and do not necessarily reflect the views of NOAA.

TABLE OF CONTENTS

CHAPTER I. INTRODUCTION 1
CHAPTER II. SUMMARY OF COMPLETED SECTION 309 EFFORTS 3
COASTAL HAZARDS 3
CUMULATIVE AND SECONDARY IMPACTS 6
CSI 1. COMMUNITY-BASED MANAGEMENT 7
CSI 2. SURFACE WATER RUNOFF AND EROSION 8
OCEAN RESOURCES MANAGEMENT 10
CHAPTER III. ASSESSMENT 13
Ocean Resources 13
Public Access 29
Coastal Hazards 41
Wetlands 53
Cumulative and Secondary Impacts 67
Aquaculture 77
Special Area Management Planning 83
Marine Debris 91
Energy & Government Facility Siting 97
CHAPTER IV. STRATEGIES 105
Ocean Resources Management Policies (Adoption as State Policy) and ORMP Executive Order 105
Strategy for Enhancing Shoreline Public Access: Alternative Financing Plan for Acquisition and Maintenance of Shoreline Public Access and Statutory Amendments (Program Changes) for Coastal Land Acquisition 115
CHAPTER V. PROJECTS OF SPECIAL MERIT: CLIMATE CHANGE ADAPTATION 127
APPENDIX A PUBLIC PARTICIPATION
APPENDIX B SURVEY RESPONSES

CHAPTER I. INTRODUCTION

Section 309 of the Coastal Zone Management Act (CZMA), as amended in 1990 and 1996, establishes a voluntary coastal zone enhancement grants program to encourage State and Territory Coastal Management Programs (CMPs) to develop program changes in one or more of nine enhancement areas. Under this program, the Secretary of Commerce is authorized to make awards to states and territories to develop and submit for federal approval, program changes that support attainment of one or more of the enhancement area objectives.

All CMPs must complete an approved Assessment and Strategy to be eligible for Section 309 funding in FY2011-2015. This Assessment and Strategy has been prepared in order that the Hawaii Coastal Zone Management (CZM) Program may be eligible for Section 309 funding in FY2011-2015. The Assessment and Strategy report was developed on the basis of research and interviews with resource people.

In addition, past and present CZM Program directions and initiatives, CZM staff capabilities, and CZM Program expertise and core functions were significant factors in the development of the Strategies.

Public meetings were held throughout the State to obtain input. Public input was also solicited through an online survey. The draft Assessment and Strategy was also posted on the CZM website.

CHAPTER II. SUMMARY OF COMPLETED SECTION 309 EFFORTS

COASTAL HAZARDS

Coastal hazards was selected as a priority area for the 2006-2010 Assessment and Strategy. The program changes and major tasks focused on the building of resilient communities statewide through new building codes with hurricane design standards customized for the unique terrain of the Islands of Hawaii. The Strategy consisted of the following:

1. Adoption of state-of-the-art building codes with customized coastal hazard mitigation standards throughout the State of Hawaii.

2. Code adoption will be followed up with high quality training on interpretation and application of the codes.

3. Public outreach and education on natural hazard mitigation will complement this program change throughout the five-year period.

See, Section 309 Enhancement Area Grant Program, FY 2006-2010 Assessment and Strategy, p.13. Office of Planning, DBEDT, State of Hawaii (June 2006).

***Note*:** Only Item No. 1 above is considered a program change under Section 309 Guidance. Item Nos. 2 and 3 implement the program changes described in Item No. 1.

***Summary*:** Throughout the course of this project, the CZM Program has worked collaboratively with its diverse group of partners. This working relationship led to concrete and enduring results that permanently reduce the risks to life and property statewide. Section 309 funding and CZM Program technical expertise were essential in the development of new science, drafting of new laws, and comprehensive and consistent training. The importance of collaboration with relevant stakeholders in reaching a common goal cannot be overemphasized. Time and again, this kind of teamwork has led to fruitful results.

Program Change: Adoption of building codes with customized wind design standards.

Program Changes Completed:

- ***Adoption of the 2003 International Building Code and International Residential Code by the City and County of Honolulu.***
  In 2007, the City and County of Honolulu adopted the 2003 International Building Code and 2003 International Residential Code, with the wind design

standards and maps developed for the Island of Oahu (City Ordinance 07-22). City Ordinance 07-22 was submitted as a routine program change and approved as an enforceable policy of the CZM Program by letter dated March 12, 2009, signed by John King, Chief of the Coastal Programs Division, Office of Ocean and Coastal Resource Management.

- ***Adoption of the 2003 International Building Code and International Residential Code by the County of Kauai.***
  In 2008, the County of Kauai adopted the 2003 International Building Code and 2003 International Residential Code (Ordinance No. 857). Ordinance No. 857 will be included with our next request for routine program changes.

- ***Adoption of the State Building Code (based on the 2006 International Building Code) with customized wind design standards by the State of Hawaii.***
  The State Building Code was adopted by the State of Hawaii as administrative rules, and became effective as of April 16, 2010 (Hawaii Administrative Rules (HAR)), Title 3, Subtitle 14, Chapter 180 State Building Code). This Code is the result of a concerted effort of the public and private sectors working to meet the objectives of Act 82 which is described immediately below. One year after adoption, all State buildings will be constructed in accordance with the Code. The four Counties will follow the Code, no later than two years after adoption of the State Building Code, unless a County acts to specifically amend the code. All four County building code chiefs approved the State Building Code, which includes the Hawaii wind standards and maps developed with Section 306 and 309 funds, and Federal Emergency Management Agency (FEMA) hazard mitigation grant funds. The State Building Code will be included with our next request for routine program changes.

Major Accomplishments in Development of the Program Changes:

- ***Enactment of State Building Code Design and Standards Act.***
  In 2007, the Hawaii State Legislature enacted the State Building Code and Design Standards Act (Act 82, *Session Laws of Hawaii*). Act 82 found that the fragmented building requirements in Hawaii were of great concern because of health and safety considerations, especially relating to emergency disaster preparedness. Act 82 established a State Building Code Council ("Council") whose duty is to review and adopt new model building codes (to be known as the State Building Code) within 18 months of its official publication date. Act 82 also requires adoption of Hawaii-specific design standards for hurricanes, floods, and tsunami. The Council includes one County building official from each of the four Counties, appointed by the Mayor. By law, the four County building officials also comprise a subcommittee, whose duty is to recommend any necessary or desirable State amendments to the model codes. Any recommended State amendments require the unanimous agreement of the subcommittee. This is significant because the Counties are required to follow the State Building Code,

no later than two years after its adoption, unless a County acts to specifically amend the Code.

Act 82 was drafted by a State Building Code Task Force member and a CZM Program staff member. Act 82 will not be submitted as a routine program change because it is an enabling act. However, it is included here because of its integral role in ensuring the adoption of state-of-the-art building codes with customized coastal hazard mitigation standards throughout the State of Hawaii, and because of the CZM Program's role in the drafting of the Act.

- ***Completion of statewide customized wind design standards.***
  Development of the wind design standards involved working with Hawaii State Civil Defense, FEMA, and each of the four County public works and planning agencies to insure that funding and technical support was made available for a unified system of wind design standards that would be consistent statewide, while taking into account the unique terrain found on each major island in the State. Separate studies for each County were funded through Section 306 and 309 grant funds and FEMA hazard mitigation grant funds. The statewide wind design standards and maps were completed during the period spanning 2005-2008.

- ***Designation of Hawaii as a Special Wind Region by the American Society of Civil Engineers.***
  In 2008, the American Society of Civil Engineers (ASCE) 7 Standards Committee revised the 2005 Edition of ASCE 7 by designating the State of Hawaii as a Special Wind Region. This designation is significant as it represents a national acceptance of the technical accuracy of the Hawaii wind design standards, and it recognizes that for Hawaii, those standards supersede the more generalized national wind standards.

- ***Recognition of the wind design standards by the American Society of Civil Engineers Hawaii Section by top achievement award.***
  In 2010, the ASCE Hawaii Section awarded the customized wind design standards with the 2010 ASCE Hawaii Section Outstanding Civil Engineering Achievement (OCEA) Award. It represented the category of Best Study and Research Project for 2010, and was selected as the overall best project from amongst five categories of projects. This is significant as it represents the first instance of a study and research project (non-construction project) being selected as the OCEA awardee.

Major Accomplishments in Implementation of the Program Changes:

- ***Provision of high quality training on interpretation and application of the new building codes.***
  Statewide International Code training spearheaded by the CZM Program has been ongoing since May 2007. Realization of the full value of new building codes requires well-trained and highly qualified design, building, and regulatory

communities. Training in the interpretation and application of new building codes is an effective way of ensuring that the knowledge and capabilities of those working with the codes are high. As part of the Section 309 Strategy, the CZM Program initiated training of design professionals and building officials in the private and public sectors in the International Codes, in May 2007. In doing so, the CZM Program has worked in partnership with the building divisions of each of the four Counties, the State agencies with design, building, and management responsibilities, the local chapters of the American Institute of Architects, the Construction Specifications Institute, the Structural Engineers Association of Hawaii, and the Hawaii Association of County Building Officials.

Training has been held consistently since its inception in May 2007. Professional trainers in the International Codes, as well as local experts, have provided training in all four Counties of the State. As part of this comprehensive training program, code books have been provided to State and County agencies with building review, permitting, design/build, and management responsibilities.

In 2009, in recognition of the CZM Program's building code training work, a CZM Program staff member was appointed as co-chair of the newly established State Building Code Council Investigative Sub-Committee on Building Code Training. Also in 2009, the CZM Program was presented with the Honolulu Chapter of the Construction Specifications Institute 2009 Cooperation Award for Support of Building Code Seminars. This award was presented at the Construction Specifications Institute Annual Installation and Awards Ceremony in Honolulu. From 2008-2010, the Hawaii Association of County Building Officials has recognized the CZM Program for its efforts in bringing building code training to the Counties.

The demand for training remains high, and additional training in specific topics is planned for the coming year. The CZM Program also has contracted with an expert to develop a Design Guide to the Hawaii wind engineering provisions which were incorporated into the State Building Code. The Guide will be a comprehensive technical reference for architects, engineers, construction industry suppliers and contractors, and building officials. The substantive work for the Guide will be completed by 2011.

CUMULATIVE AND SECONDARY IMPACTS

Cumulative and secondary impacts (CSI) was selected as a priority area in the 2006-2010 Assessment and Strategy. Strategies and projects were developed for two areas: community-based management and surface water runoff and erosion impacts.

CSI 1. COMMUNITY-BASED MANAGEMENT

The goal of the **Community-Based Resource Management (CBRM) project** was to refine and institutionalize an integrated planning approach for the Hawaii CZM Program to assess and manage cumulative and secondary impacts, employing Native Hawaiian concepts and strategies for natural resource management, for purposes of implementing the Ocean Resources Management Plan (ORMP).

During FY07-08, a stewardship report entitled, ***Toward the Development of an Integrated Planning Framework for Natural and Cultural Resource Management in Hawaii: Place-, Culture-, and Community-Based Approaches***, was completed and presents the results of the statewide survey of, and workshop with, community-stewardship organizations. The information gathered was also used to create the ***Hawaii Community Stewardship Directory*** (2008), which helps community-based organizations connect and network with each other. The Directory was updated at the end of April 2009, with 48 new community groups. In the 2010 Directory, 114 groups are represented.

During FY08-09, CZM co-sponsored a three-day workshop with the Community Conservation Network, Harold K. L. Foundation, Hawaii Community Foundation, and National Fish and Wildlife Foundation. About 20 community-based leaders participated in the "Community Capacity-Building for Community-Based Resources Management" Workshop in Honolulu. The workshop provided tools to develop organizational capacity to manage projects and raise funds to support those projects.

CZM also developed an action plan for the CBRM project that focuses on the goals for this project and how to accomplish these goals. The action plan outlined a process that will enable CZM to build upon our recent efforts, to meet the rather ambitious goals outlined in the 309 Strategy in a realistic manner, and to address the needs and concerns of the community groups that we aim to support. CZM staff worked diligently to begin implementation of the action plan. Extensive outreach efforts and community-based meetings were conducted through a variety of methods to obtain broader community input and solidify options for implementation.

During FY09-10, CZM co-sponsored a hands-on, capacity-building and networking workshop on Maui during this reporting period. CZM collaborated with the Hawaii Community Stewardship Network, the Office of Hawaiian Affairs (OHA), the Harold K. L. Foundation, and the Hawaii Department of Land and Natural Resources (DLNR) to provide a capacity-building workshop focusing on ahupuaʻa management and youth engagement. CZM staff also produced an Ecosystem-Based Management Resources Guide for workshop participants. This guide is also available on the Hawaii CZM website. More than 80 participants, almost 30 of them youth, represented 22 communities from across the Main Hawaiian Islands. The workshop was a success, providing 22 community-based organizations from across the State with valuable resources and contacts associated with ecosystem-based management. The workshop

also fostered important partnerships with various non-governmental agencies and community-based organizations to implement strategies aligned with the ORMP.

During FY09-10, CZM continued to gain traction for this project, especially for the foundation of the action plan, which was the Guidance Document on the Legal Framework for Natural and Cultural Resource Management in Hawaii. In collaboration with OHA and the Office of Planning (OP), CZM developed a Request for Proposals (RFP) for the development of this Guidance Document. The RFP was posted for public release, and proposals were evaluated by representatives from CZM and OHA. It became clear to CZM that the project results would serve as a much-needed guide on how to continue to foster community-government relations in an effort to become more effective in natural and cultural resource management in the Islands. This project would have provided the foundation necessary to move the CBRM project forward. The results would also guide CZM actions toward a significant and successful program change.

However, due to the fiscal situation at the time, the decision was made not to award the contract. The project, which was going to result in the development of a more robust and comprehensive guidance document on the legal framework for natural and cultural resource management in Hawaii to assist the CZM Program with decisions on how to best achieve the goals of the CBRM project is now being reassessed.

Efforts will focus on utilizing the *Mahuahua Ai o Hoi* project as a case study and identifying lessons learned in community-based management. The *Mahuahua Ai o Hoi* is a 2009 ORMP Implementation project. Community partners include Kakoʻo ʻOiwi and the Koʻolaupoko Hawaiian Civic Club. The landowner, Hawaii Community Development Authority (HCDA), is an important State partner. The long-term goal of the community and the partners involved is to restore the Heʻeia wetlands and reduce nonpoint source pollution within a traditional Hawaiian ahupuaʻa approach to land management, through the interconnection of Heʻeia wetland and shoreline.

The CZM Program will continue to host workshops to build capacity of community-based organization. Regularly convening workshops of affected stakeholders, including community stewardship groups and State and County agencies, will continuously enhance and ensure the viability and relevancy of the project. Building capacity enables stakeholders to implement the changes envisioned.

Although a Strategy has not been developed for this category, community-based management is an important component of the ORMP. A Strategy has been prepared for Ocean Resources Management.

CSI 2. SURFACE WATER RUNOFF AND EROSION

The 2006-2010 Assessment and Strategy described the significant development pressure that Hawaii was experiencing. Much of the development occurs along the coast and may

threaten water quality. Each development proposal has the potential to contribute to the CSI of erosion and water quality degradation within a region.

Program Change: Adoption of Stormwater Management Ordinances.

Program Change Completed:

- ***Adoption of County of Hawaii Stormwater Management Ordinance.*** The CZM Program has been working with the Counties to develop and adopt ordinances to address stormwater runoff and erosion control. The County of Hawaii adopted Ordinance 07-56: An Ordinance Amending Chapters 23 (Subdivision Control Code) and 25 (Zoning Code), Hawaii County Code 1983 (2005 Edition, as Amended), Relating to Stormwater Management. This ordinance became effective April 12, 2007. The purpose of the ordinance is to require new development to manage stormwater to reduce the potential that it will cause water pollution. The ordinance requires that new subdivisions, and new buildings which need plan approval, discharge their stormwater, up to a specified limit, into drywells or infiltration basins, or use other methods that will filter out suspended solids from stormwater. These requirements will be enforced at the time of subdivision approval for new subdivisions, and at plan approval for new buildings.

- This program change has not been formally submitted to OCRM, pursuant to the program change regulations at 15 CRR part 923, subpart H. The program change will be submitted as part of our next request for routine program changes.

Program Changes In Progress:

- ***County of Maui Stormwater Ordinances.*** This work has been completed by the CZM Program and is awaiting completion from Maui County. A program change will be submitted upon Maui County approval of the proposed stormwater ordinances. The CZM Program has been working with the County of Maui, Department of Public Works to develop measures to mitigate peak runoff during storms and average runoff volume. The County of Maui, Department of Public Works has developed draft subdivision ordinance amendments, building code amendments, and administrative rules pertaining to best management practices to reduce runoff. (Draft Amendment to the Subdivision Ordinance: Sec. 3306 Post-construction stormwater quality best management practices. Draft Amendment to Chapter 33 of the Uniform Building Code: New Section 3306: 18.20.135 Post Construction Stormwater Quality Best Management Practices. Draft Administrative Rules, Title MC-15, Chapter- : Rules for the Design of Stormwater Treatment Best Management Practices). The subdivision ordinance amendments and building code amendments are under review by the Subdivision Engineering Standards Committee. The Subdivision Engineering Standards Committee reviews the ordinances prior to submittal to the County Council. The CZM Program supports adoption of these ordinances. If these ordinances are

adopted, the CZM Program intends to submit them as part of our next request for routine program changes.

- ***Statutory Amendments to Ch. 343, Hawaii Revised Statutes (HRS), Environmental Impact Statement Law Regarding Assessment of Impacts of Stormwater and Runoff***. This work is in progress. If these amendments are enacted, they will be reviewed and a determination made as to whether to submit them as part of our next request for routine program changes.

OCEAN RESOURCES MANAGEMENT

Although Section 309 funds were not expended for ocean resources management specifically, the ORMP is a high priority of the CZM Program. Highlights of activities under this category are summarized as follows:

Section 205A-62, HRS, charges OP with the review and periodic update of the ORMP, as well as coordination of overall implementation of the plan. On December 28, 2006, an updated ORMP was submitted to the 24th Regular Session of the Hawai‘i State Legislature in fulfillment of Senate Concurrent Resolution No. 137, H.D. 1, Regular Session of 2005, and Section 205A-62, HRS.

Charged with coordinating the implementation of the ORMP, the CZM Program established an ORMP Policy Group and an ORMP Working Group in the summer of 2007. The Policy Group consists of the Directors of the affected State agencies and Counties. The Working Group consists of managers and staff of the same groups. Federal partners, as well as the University of Hawai‘i and the Marine and Coastal Zone Advocacy Council (MACZAC), OP’s citizens’ advisory group, are also represented in these groups.

In order to address the numerous tasks of the Working Group, members decided that they could make wise use of time in small break-out groups or caucuses, divided by subject matter. Members reviewed the ORMP Work Plan and based upon their own agency’s projects or interests, they formed the following caucuses with which regular Working Group meetings devote a portion of considerable time to:

- ORMP Outreach
- Climate Change/Coastal Hazards
- Watersheds
- Policy/Legislation

A primary objective of the CZM Program is to coordinate the implementation of the ORMP by promoting collaborative governance and stewardship. To increase direct support for the coordinated implementation of the ORMP, CZM widely distributed a solicitation for ORMP implementation projects that involve at least one State or County government partner and one community-based organization partner.

The HCDA's *Mahuahua Ai o Hoi* project was selected. The community partners involved in this project include Kakoʻo ʻOiwi and the Koʻolaupoko Hawaiian Civic Club. The project site is on Oahu's windward coast at the Heʻeia wetlands (*hoi)*, which currently lay fallow and are covered with dense vegetation. In addition, mangrove overgrowth is hampering the flow of the Heʻeia Stream. In order to restore the Heʻeia wetlands and reduce nonpoint source pollution at the shoreline, the partners are incorporating water quality monitoring within a traditional Hawaiian ahupuaʻa approach to land management, through the interconnections of the Heʻeia wetlands to the Heʻeia shoreline.

CZM was also able to identify additional funds through the Hawaii Coastal Nonpoint Pollution Control Program (CNPCP) to support two additional proposals submitted through the solicitation for ORMP implementation projects. The two projects are:

1. County of Hawaiʻi with Ka ʻOhana O Honuʻapo: *Wetlands Habitat Restoration Plan for Honuʻapo Estuary* ($25,000); and
2. UH Sea Grant College Program with Malama Maunalua: *Building Community Capacity through Education and Outreach to Address Land-Based Pollution in Maunalua Bay* ($33,750).

A Strategy has been prepared for the Ocean Resources Management category.

CHAPTER III. ASSESSMENT

Ocean Resources

Section 309 Enhancement Objective

Planning for the use of ocean resources

Resource Characterization

Purpose: To determine the extent to which problems and opportunities exist with regard to the enhancement objective.

1. In the table below, characterize ocean resources and uses of state concern, and specify existing and future threats or use conflicts (bold type indicates new category or change in threat level).

Resource or use	**Threat or use conflict**	**Degree of threat (H,M,L)**	**Anticipated threat or use conflict**
Ocean recreation	a. Over-saturation/use; exceed carrying capacity of resource and/or geographic portions of it	High	Severe degradation of resource requiring extreme remedial measures
	b. User conflict, includes commercial, individual, and cultural	High	Loss of resource value
	c. Inadequate enforcement of regulated activities	High	Usurpation of resource by a few
	d. Lack of awareness of regulations by residents and visitors	Medium	Needs exceeding enforcement capabilities
Harbors/Marinas	a. Maintenance of small boat harbors/marinas and launching ramps	**Low**	Public health and safety threatened
	b. Live-aboards	**Low**	Pollution from sewage and waste disposal
	c. Enforcement	**Medium**	Medium priority function

Resource or use	Threat or use conflict	Degree of threat (H,M,L)	Anticipated threat or use conflict
Aquatic life	a. Depletion of inshore fish stocks	High	Loss of food source and degradation of marine habitat, loss of biodiversity; lack of adequate baseline data
	b. Depletion of bottom fish stocks	High	Loss of food source and degradation of marine habitat, loss of biodiversity; lack of adequate baseline data
	c. Depletion of exotic species for aquariums	High	Degradation of marine environment and habitat, loss of biodiversity
	d. Introduction of alien species	High	Native species habitat and ecosystem destroyed
	e. Degradation of coral reefs	High	Destruction of coral reef habitat and ecosystem for marine life
	f. Marine mammal protection 1. Public interference 2. Submarine sonar testing	Medium High	f1. Mammal life threatened f2. Mammal life threatened
	g. **Ocean Acidification**	**High**	**Potentially very high risk in the future; including loss of reef and other calcifying organisms, degradation of marine habitat, and potential impacts on entire ocean food chain**
Coral reef ecosystems	a. Degradation from pollution and sediments from land-based runoff	High	Loss of reef habitat and coastal protection
	b. Invasive species importation	High	Loss of reef habitat and coastal protection
	c. Human disturbance such as harmful fishing gear, marine debris, human trampling	**High**	Permanent degradation of reef

Resource or use	Threat or use conflict	Degree of threat (H,M,L)	Anticipated threat or use conflict
	d. Ocean acidification	**High**	**Potentially very high risk of the permanent loss of coral reefs, impacts to entire marine ecosystem**
Salt ponds	**a. Pollution from land-based sources**	**High**	**Degradation of salt pond resource, loss of salt resource, loss salt for human consumption, loss of cultural Hawaiian traditional practices**
	b. Shoreline/urban development	**High**	**Degradation/loss of salt pond resource, loss of salt resource for human consumption, loss of cultural Hawaiian traditional practices**
Fish ponds	**a. Pollution from land-based sources**	**Medium**	**Degradation of fish pond resource, loss of food resource for human consumption, loss of cultural Hawaiian traditional practices**
	b. Shoreline/urban development	**High**	**Degradation/loss of fish pond resource, loss of food resource for human consumption, loss of cultural Hawaiian traditional practices**
Water quality	a. Pollution from ocean uses – cruise ship waste: oil spills, recreational uses	**Medium**	Degradation of ocean environment
	b. Polluted runoff from land-based sources – stormwater, sewage outfalls, and emergency discharges	**High**	Degradation of ocean environment. Untreated sewage spills in emergency situations continues to impact ocean resources

2. Describe any changes in the resources or relative threat to the resources since the last assessment.

Several new resources/uses were added to the table according to the management goals and strategic actions of Hawaii's ORMP. Some threat levels to existing resources/uses changed. Changes are as follows:

Harbors/Marinas:

- Maintenance of small boat harbors – threat level changed from medium to low, as the State is continuously trying to maintain harbors. Anticipated threat was changed from degradation of nearshore waters to public health and safety to reflect the priority threat from lack of maintenance.
- Pollution threats from live-aboards was changed from high to low because there are only two small boat harbors in the State that allow live-aboards.
- Enforcement – threat level for enforcement was changed from high to medium. DLNR, Division of Conservation and Resources Enforcement (DOCARE), has enforcement responsibility over the entire State, so it is difficult to enforce harbor regulations at all times.

Aquatic Life:

- Ocean acidification was added as a new threat to aquatic life.

Coral Reef Ecosystems:

- Human disturbance – threat level was changed from medium to high due to the increasing amount of human threats to coral reefs, such as from marine debris, destructive fishing practices, and reef trampling.
- Ocean acidification – acidification was a new threat added to this section.

Salt Ponds:

New resource added.

Fish Ponds:

New resource added.

Water Quality:

- Pollution from ocean uses, oil spills, and recreational uses – threat level was changed from high to medium.
- Polluted runoff from land-based sources – threat level was changed from medium/high to high as polluted runoff has been identified as one of six major threats to coral reefs, as well as having negative impacts on other marine habitats and ecosystem functions.

The following resources/uses were deleted from the table because either they were no longer a problem or they were consolidated into other resource/use categories:

- Marine minerals
- Research and development uses
- "Life-line" shipping supply for Hawaii

Management Characterization

Purpose: To determine the effectiveness of management efforts to address those problems described in the above section for the enhancement objective.

1. For each of the management categories below, indicate if the approach is employed by the state or territory and if significant changes have occurred since the last assessment:

Management categories	**Employed by state/territory** (Y or N)	**Significant changes since last assessment** (Y or N)
Comprehensive ocean management plan or system of Marine Protected Areas	Y	Y
Regional* comprehensive ocean resources management program	Y	N
Regional* sediment or dredge material management plan	N	
Intra-governmental coordination mechanisms for ocean management	Y	Y
Single purpose statutes related to ocean resources	Y	Y (see list at end of this section)
Comprehensive ocean management statute	Y	N
Ocean resource mapping or information systems	Y	Y
Ocean habitat research, assessment, or monitoring programs	Y	Y
Public education and outreach efforts	Y	Y

* In this table, "regional" is interpreted to mean the Hawaiian Islands region.

2. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.
   (a) Characterize significant changes since the last assessment;

(b) Specify if it was a 309 or other CZM-driven change (specify funding source) or if it was driven by non-CZM efforts; and
(c) Characterize the outcomes and effectiveness of the changes.

Comprehensive ocean management plan:
Ocean Resources Management Plan (ORMP)

a) Section 205A-62, HRS, charges OP with the review and periodic update of the ORMP, as well as coordination of overall implementation of the plan. On December 28, 2006, an updated ORMP was submitted to the Governor and Legislature.

Updating the ORMP involved extensive outreach and input-gathering with participation of various stakeholder groups, government agencies, and the public over a period of eighteen months. The culmination was the 2006 ORMP. The updated plan is an integrated, place-based approach to management of ocean resources; based on land and sea links, the role of human activities, and improved collaboration in governance. Each of the framing perspectives is accompanied by concrete management goals and strategic actions to address them in five-year implementation phases over the next 30 years.

Perspective 1: Connecting Land and Sea
Careful and appropriate use of the land is required to maintain the diverse array of ecological, social, cultural, and economic benefits we derive from the sea.

Strategic actions recommended under Perspective 1 include reducing soil erosion and pollutant loads, developing beach management plans, and protecting priority coastal areas and communities from coastal hazards.

Perspective 2: Preserving Our Ocean Heritage
A vibrant and healthy ocean environment is the foundation for the quality of life valued in Hawai'i and the well-being of its people, now and for generations to come.

Management goals emphasize the improvement of coastal water quality, strengthening marine protected area management, enhancing community capacity to restore and operate Hawaiian fishponds, and promoting sustainable ocean-based tourism.

Perspective 3: Promoting Collaboration and Stewardship
Working together and sharing knowledge, experience, and resources will improve and sustain our efforts to care for the land and sea.

This perspective highlights the need for community participation in cultural and natural resources management and the exploration of place-based approaches, including Native Hawaiian principles of land division such as the ahupua'a.

b) The CZM Program is mandated to update the ORMP by Chapter 205A, HRS. CZM used NA03 Section 309 and NA04 Section 309 funding to update the ORMP.

   ORMP-related projects are funded through the CZM 306 grant. The CBRM project is a major element of the Hawaii CZM Program's efforts to implement Perspective #3 in the ORMP. Meetings, studies, and projects that fall under the CBRM project are part of the FY2005-2010 Strategy and Assessment's Cumulative and Secondary Impacts enhancement area, and are funded with the 309 Enhancement Area Grant Program.

c) Building on traditional Hawaiian management principles and lessons from past efforts, the 2006 ORMP is a shift toward integrated and area-based approaches to natural and cultural resources management that require greater collaboration among jurisdictional authorities, and that will catalyze community involvement and stewardship. In effect, it is a collaborative approach that builds on community partnerships. The ORMP maps incremental 5-year management priorities to embark on a new course of action and achieve the primary goal: to improve and sustain the ecological, cultural, economic, and social benefits we derive from ocean resources today and for future generations.

Intra-governmental coordination mechanisms for ocean management:
ORMP Policy and Working Groups

a) The CZM Program has obtained the support of the Governor, Executive Branch, and the Legislature for implementing the 2006 ORMP. In order to coordinate the implementation and further develop the ORMP statewide, in the summer of 2007, the CZM Program established an executive-level Policy Group and a manager/staff-level Working Group made up of State and County agencies, our federal partners, academia, and community groups. The Working Group is the focus of ORMP implementation – its members are tasked with coordinating their agency's implementation efforts.

   The 2005 Hawaii Ocean and Coastal Council no longer exists.

   MACZAC, CZM's citizen's advisory group, has been continuous since the last assessment.

b) The ORMP Policy and Working Groups are CZM-driven. Facilitation services for the ORMP groups are funded through the 306 grant.

c) The ORMP Policy and Working Groups, made up of 17 ORMP partner groups and agencies, have been able to accomplish a lot since their establishment in 2007. After prioritizing the ORMP management goals and strategic actions for their respective agencies, the Working Group developed two-year agency work

plans to ensure the implementation of selected goals and actions. They also identified budget requirements when able, and have worked on developing legislative proposals to further support implementation efforts.

In order to address the numerous tasks of the Working Group, members decided that they could make wise use of time in small break-out groups, or caucuses, divided by subject matter. Members reviewed the ORMP Work Plan, and based upon their own agency's projects or interests, formed the following caucuses:

- ORMP Outreach
- Climate Change/Coastal Hazards
- Watersheds
- Policy/Legislation

The Working Group continues to meet monthly to streamline implementation and to further develop the ORMP. The Policy Group meets twice annually to recommit staff time and support for ORMP implementation, to guide the work of the Working Group, and to approve its work tasks and recommendations for the next steps.

Ocean resource mapping or information systems:
Atlas of the Shallow-Water Benthic Habitats of the Main Hawaiian Islands

a) In 2007, the U.S. Department of Commerce produced, *Atlas of the Shallow-Water Benthic Habitats of the Main Hawaiian Islands*. The atlas was developed by NOAA, with contributions from various organizations and individuals such as Hawaii's DLNR and the Hawaii Institute of Marine Biology.

> NOAA National Centers for Coastal Ocean Science (NCCOS). 2007. Atlas of the Shallow-Water Benthic Habitats of the Main Hawaiian Islands. NOAA Technical Memorandum NOS NCCOS 61, Biogeography Team, Silver Springs, MD. 331 pp.

In addition to the maps, a DVD is available which contains all the data, Geographic Information System (GIS) files, metadata, reports, etc., used to make the maps. The data on the DVD is also available on the internet at: http://www.ccma.nos.noaa.gov/products/biogeography/hawaii_cd_07/welcome.html

b) This atlas was not CZM-driven.

c) This atlas was produced as part of the Mapping and Information Synthesis Group of the U.S. Coral Reef Task Force in 1999, to develop and implement a plan to produce comprehensive digital coral-reef ecosystem maps for all U.S. States, Territories, and Commonwealths. The outcome is that Hawaii now has GIS maps depicting thirty-two distinct benthic habitat types in the Main Hawaiian Islands.

NOAA's next step is to digitally map biotic resources and coordinate a long-term monitoring program that can detect and predict change in U.S. coral reefs and their associated habitats and biological communities.

Ocean habitat research, assessment, or monitoring programs:

a) The Pacific Islands Ocean Observing System (PacIOOS) is one of eleven regional observing programs around the country that are supporting the emergence of the U.S. Integrated Ocean Observing System. The emergence of PacIOOS in 2007 is coordinated by the University of Hawai'i (UH), School of Ocean and Earth Science and Technology (SOEST), in partnership with the UH Sea Grant College Program, with funding from NOAA, SOEST, the State of Hawaii, and its partners.

   The initial focus of PacIOOS has been on the development of the Hawaii Ocean Observing System (HiOOS) as a prototype for future system expansion in the western and southern Pacific. HiOOS is a coordinated effort among numerous researchers at SOEST, as well as various other Federal, State, and County agencies, non-profit organizations, and private companies. HiOOS seeks to provide accurate, timely, and reliable information about the coastal and open ocean. Several HiOOS component groups are collecting data and producing data products that focus on four main catalyst projects in the Hawaiian Islands. A HiOOS database and web interface to access real-time and historical datasets is currently being developed. As data becomes available in the broader Pacific Islands, it will be integrated into the HiOOS dataset and will be available online.

b) PacIOOS is not CZM-driven; however, CZM does believe the ocean observing system is a priority for the State of Hawaii, as well as the larger Pacific region. OP submitted a letter of support to SOEST in 2009, to encourage the development of a sub-regional pilot project of PacIOOS in Hawaii, and the Director of OP serves on the Governing Council of PacIOOS. CZM supports efforts in building coastal resiliency, increasing ocean safety, and promoting the conservation of all of our coastal and marine resources. PacIOOS will strengthen CZM's efforts to promote a safe, healthy, productive, and resilient ocean and coastal zone.

c) Outcomes/Accomplishments include:
   To date, the PacIOOS has established a Governing Council to ensure collaborative management of the system by users and stakeholders. A network of new instrumentation has been deployed through the Pacific region in concert with the specified needs of communities. An end-to-end data management system has been developed and integrated the data into a map-based spatial data viewing system. Data from other sources and programs are collected from throughout the region and served through the web portal as well.

Public education and outreach efforts:

International Year of the Reef (2008)

a) Thanks to the collaborative effort of the Coral Reef Outreach Network (CRON) members and other partners, the International Year of the Reef (IYOR) Hawaii campaign was launched in January of 2008. Numerous groups and events have used IYOR materials and messages to build attendance, and to encourage a more in-depth understanding of the relationship between human actions and coral reefs among volunteer participants. The campaign reached out to groups that may not already be involved in coastal stewardship.

b) Although CZM is a member of CRON, this outreach campaign was not CZM-driven or funded; it was run by DLNR, Division of Aquatic Resources (DAR). As collaborative stewardship and the protection of Hawaii's ocean and coastal resources is a high priority for the CZM Program, we support DAR's outreach and educational efforts to promote coral reef stewardship.

c) Outcomes/Accomplishments include:
   - Targeted messages were used to create outreach materials distributed to partners and at more than 25 events statewide. For more details about materials and events at which IYOR messages were promoted, see the October 2008 progress report.
   - In October of 2008, ten primary and secondary school classes were awarded grants to fund reef-conservation service learning projects – funds were distributed in December and final products were expected in June of 2009, at the end of the school year.
   - October was also Marine Debris Awareness month, supported by CRON partners and this project – the month included a student art contest and several beach cleanups, and culminated with a presentation at the State Capitol building.
   - CRON was consulted in order to decide upon a closing event for IYOR. Attending partners decided that supporting the Green Drinks partnership event would be the best way to gather all those who had supported the campaign, as well as share the successes of the campaign with conservation professionals who will be carrying the torch through the next ten years.
   - All line items in this project were completed except for the Local Action Strategies (LAS) informational 2-pagers. In discussions with LAS coordinators, there appeared to be no viable mechanism to use this type of outreach material to change public behavior. This portion of the budget will be used to support LAS activities in a way deemed most effective by the respective advisory groups.
   - IYOR poster developed using tested messages; poster widely distributed to schools, libraries, managers, non-governmental organizations, and commercial recreation providers.
   - Partnership with Malama Hawaii established to conduct statewide campaign with a focus on behavior modification among members of the general public.

- Website developed in collaboration with Malama Hawaii; site will be hosted after 2008 as a collaborative source for reef stewardship information.
- Partnership with Hawaii State Libraries to distribute IYOR posters and bookmarks.
- 10,000 IYOR bookmarks printed and over 8,000 distributed.
- 7,000 IYOR T-Shirts distributed to CRON members.
- Two 7-foot banners developed: one is IYOR specific and one describes general ocean stewardship values.
- 400 re-useable canvas shopping bags printed and distributed.
- An award-winning IYOR Hawaii public service announcement was released in April.

Single purpose statutes related to ocean resources:

a) The following single purpose statutes related to ocean resources are new since the last assessment:

- **ACT 77 RELATING TO MARINE INVERTEBRATES (2006)**
  Prohibits the taking or killing of female ula (spiny lobster), Kona crabs, and Samoan crabs, subject to some exceptions.

- **ACT 241 RELATING TO FISHING (2006)**
  The purpose of this Act is to create and amend fishing provisions that affect the communities of Haʻena, Kauai and Kahului, Maui. Specifically, Part I of this Act establishes a community-based subsistence fishing area for the ahupuaʻa of Haʻena to protect the fish stocks and coral reef habitats. Part II of this Act extends the effective date of Act 218, Session Laws of Hawaii 2005, to allow the department of land and natural resources time to adopt necessary rules regulating user conflicts in Kahului Harbor.

- **ACT 293 RELATING TO LIMU MANAGEMENT AREA (2006)**
  The purpose of this Act is to preserve and sustain the limu supply by establishing a limu management area along the shoreline of Ewa beach on Oahu.

- **ACT 112 RELATING TO FEDERAL FISHERIES REGULATIONS (2008)**
  Clarifies that the department of land and natural resources shall adopt, amend, or repeal administrative rules to be consistent with federal fishery regulations to improve management and enforcement in a state and federal marine water fishery, under certain conditions.

- **ACT 113 RELATING TO COMMERCIAL MARINE FISHING REPORTS (2008)**
  Requires DLNR to adopt rules to effect federal requirements for fisheries where jurisdiction is shared by the state and federal governments.

- **ACT 92 RELATING TO MANTA RAYS (2009)**
  Establishes criminal penalties and administrative fines for knowingly killing or capturing manta rays within State waters.

- **ACT 126 RELATING TO WATER QUALITY STANDARDS (2009)**
  Revises water quality standards for inland and marine waters based on guidelines from the federal Environmental Protection Agency.

b) Because CZM does not regulate living marine resources, none of the new statutes above were driven by CZM. However, the statutes mentioned above address some of the highest threats to ocean resources identified in this assessment: the health and abundance of living resources such as fisheries, and degradation of coral reef ecosystems and the ocean environment due to polluted runoff.

c) Better coordination, regulation, enforcement, and management of our ocean resources will result in healthier ecosystems, a greater abundance of living marine resources, and a more resilient ocean environment.

Priority Needs and Information Gaps

Using the table below, identify major gaps or needs (regulatory, policy, data, training, capacity, communication and outreach) in addressing each of the enhancement area objectives that could be addressed through the CMP and partners (not limited to those items to be addressed through the Section 309 Strategy). If necessary, additional narrative can be provided below to describe major gaps or needs.

Gap or need description	**Type of gap or need** (regulatory, policy, data, training, capacity, communication & outreach)	**Level of priority** (H,M,L)
Climate change adaptation planning needs to be incorporated into ocean and coastal resource management objectives	Policy, regulatory	H
There is an ever-increasing need to balance the different conflicting uses of the ocean	Policy, regulatory, communication, capacity	H
Lack of a clear framework for cross-sector collaboration and management of marine and coastal resources	Policy, regulatory	H
Lack of regulatory language/public policy in order to institutionalize ORMP principles	Policy, regulatory	H
Insufficient human resources	Capacity	M
Lack of dedicated funding for partners to implement the ORMP	Capacity, policy	M

Gap or need description	**Type of gap or need** (regulatory, policy, data, training, capacity, communication & outreach)	**Level of priority** (H,M,L)
Missing key player representation on ORMP groups	Collaboration, participation	M

Climate Change Adaptation Planning
Impacts of climate change have the potential to pose serious threats to the environment and our natural resources, as well as to the State's economy, our infrastructure, and to public health and safety. Adaptive planning measures must be incorporated into State plans and polices in order to minimize negative consequences and to increase resiliency of our natural resources. The current ORMP, for example, should include measures for climate adaptation during the next update of the plan.

Ocean Use Conflicts
There are numerous conflicting uses of the ocean, and with the push for alternative energy, there will be even more in the future. Balancing different uses remains a challenge in the State.

Collaborative Governance: Balancing Policy and Place-based Management
As the ORMP Working Group moves toward the long-term goal of ecosystem and place-based resource management, the need for a guidance framework for meaningful collaborative governance is evident. Without such a framework, cross-sector collaboration is limited in effectiveness and efficiency. It is also a challenge to incorporate such concepts into State policy, which currently functions within a more sector-based framework.

Lack of Regulatory Language
The fact that the ORMP is not legally binding remains a challenge. A comprehensive perspective in ocean management that is described in the ORMP is a new concept for many state entities, and we do not always get the support and advocacy we need from our leaders to move forward with this management approach. Furthermore, some agencies cannot dedicate the resources needed to do holistic resource management if it is not a directive or mandate.

Insufficient Human Resources
Insufficient human resources are a challenge when trying to do collaborative governance because it requires a considerable amount of time and effort. Working Group members are expected to work within their respective agencies as well as with each other to implement the ORMP. Most members are working on ORMP implementation in addition to their regular job tasks.

Lack of Dedicated Funding to Implement the ORMP
Fiscal support for the ORMP implementation has always been a challenge. There are many necessary and important implementation projects that are worthy of funding, but are not being approved due to the lack of dedicated funding.

Missing Key Players
The ORMP Working Group has been collaborating in pursuit of the broader ORMP goals; however, one out of the four County Planning Departments is missing from the group. Participation of the City and County of Honolulu, Department of Planning and Permitting is particularly critical, as Oahu is the most developed, most populated island in the State; the implications of their absence are broad.

Enhancement Area Prioritization

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

   High X
   Medium ____
   Low ____

   Briefly explain the level of priority given for this enhancement area.

Since Hawaii is the only ocean state in the nation, and the largest and most isolated archipelago on earth, the Hawaii CZM Program places great value on the preservation and sustainable use of ocean resources. For generations, people of Hawaii have depended on ocean and coastal resources for subsistence, recreation, economic sustainability, cultural traditions, and spiritual inspiration.

The management goals and strategic actions in the ORMP support the CZM Program and add context to the Program's objectives and policies. Many people statewide see the plan as the first step toward a comprehensive, futuristic plan for the best and wisest uses of Hawaii's ocean and land in a manner consistent with the public trust doctrine. In FY 07, the CZM Program elevated the ORMP to the Task level under the Section 306 CZM grant. The ORMP is a top priority for the Program and continues to be implemented and further developed.

2. Will the CMP develop one or more strategies for this enhancement area?

   Yes X
   No ____

Briefly explain why a strategy will or will not be developed for this enhancement area.

The ocean resources enhancement area is one of CZM's highest priority areas; therefore, a strategy will be developed for this enhancement area. We believe that the current efforts and momentum of the ORMP Working Group and MACZAC, our citizen's advisory group, provide the Program with the support needed in order to further enhance the ORMP and the way the State manages our natural and cultural resources. The purpose of the strategy will be to conduct an analysis and update of Hawaii's current ORMP, to amend public policy such as the Hawaii State Plan to incorporate ocean resource management objectives, and to develop a framework for purposeful collaborative governance, which will be endorsed through an Executive Order (E.O.).

The basic premises of the ORMP are still sound. The three perspectives are widely supported and have been embraced by the public. However, there are elements of the plan which should be updated and refined. A facilitated and strategic analysis of the ORMP will identify what is working, the challenges frequently encountered, and gaps in the plan. For instance, the ORMP Working Group has identified several gap areas which should be addressed in the update. These gaps areas include, but are not limited to climate change and competing ocean uses.

Although collaborative implementation of the ORMP has occurred, it remains to be a challenge, particularly with the budget crisis. With limited human and fiscal resources available, it has become even more evident that collaborative governance is essential in carrying out the goals and objectives laid out in the ORMP. A guiding framework for how to conduct meaningful collaborative governance will be developed and articulated through an E.O., to direct State agencies to implement the ORMP and to move the plan forward collaboratively.

Public Access

Section 309 Enhancement Objective
Attain increased opportunities for public access, taking into account current and future public access needs, to coastal areas of recreational, historical, aesthetic, ecological, or cultural value

Resource Characterization
Purpose: To determine the extent to which problems and opportunities exist with regard to the enhancement objective.

1. Characterize threats and conflicts to creating and maintaining public access in the coastal zone:

Type of threat or conflict causing loss of access	**Degree of threat** (H,M,L)	**Describe trends or provide other statistics to characterize the threat and impact on access**	**Type(s) of access affected**
Private residential development (including conversion of public facilities to private)	H	1) In various places around the State, private roadway access to shoreline areas is being blocked by gates, fences, signs, or other barriers; 2) Human-induced vegetation that impacts lateral beach access is a statewide problem. There have been community complaints about the vegetative encroachment induced by private property owners at Kahala, Diamond Head, and Kailua beaches, Oahu; Ha‘ena, Wainiha and Hanalei, Kauai, and other areas around the State.	Perpendicular and lateral shoreline access
Non-water dependent commercial/industrial uses of the waterfront (existing or conversion)	L	The SMA permit, by the statutory law, encourages non-water dependent uses of waterfront to locate in inland areas. Public involvement to a large extent prevents non-water dependent commercial/industrial uses of the waterfront.	Perpendicular and lateral shoreline access
Erosion	H	Approximately 2% of Hawaii's shoreline is critically eroding (*Coastal Management* 27:187-217). Some shoreline areas are experiencing significant beach erosion and shoreline retreat. For example, 70% of Kauai's beaches are eroding while Oahu has lost a quarter of its sandy shoreline. (http://www.msnbc.msn.com/id/33934617/ns/us_news-environment/)	Lateral shoreline access

Type of threat or conflict causing loss of access	**Degree of threat** (H,M,L)	**Describe trends or provide other statistics to characterize the threat and impact on access**	**Type(s) of access affected**
Sea level rise/Great Lake level change	M	The beaches become narrow during the high tides. This phenomenon particularly occurs in hotel areas, including Waikiki, Oahu. Scientists haven't yet observed an accelerated rate of sea level rise in Hawaii.	Lateral shoreline access
Natural disasters	M	The potential of coastal disasters such as tsunami and storm surges is high and therefore beaches could shrink or be lost.	Lateral shoreline access
National security	L	There have been no major increased impacts from national security on public access since last assessment.	Perpendicular and lateral shoreline access
Encroachment on public land	H	The biggest encroachment onto public land in Hawaii is human-induced vegetative encroachment on the lands seaward of shoreline.	Lateral shoreline access
Other	L	Beach access closures or warning due to 1) water quality concerns; 2) high surfs; and 3) appearance of jellyfish or sharks.	Perpendicular and lateral shoreline access

2. Are there new issues emerging in your state that are starting to affect public access or seem to have the potential to do so in the future?

   a. The decline in State and County revenues due to the national economic downturn has and will continue to reduce the resources available to acquire and maintain public access, and to carry out public access programs.

   b. An emerging issue is the conflict between a property owner's desire for privacy and exclusivity around his/her property and the public's right to have access to the shoreline. Residents may have been using private roadways to access beach areas without permission, and become distressed when the landowner blocks this access with gates or other means. In various places around the state, private roadway access to shoreline areas is being denied to the public. Gates, fences, signs or other structures are being erected. Some of the closures are permanent while others are in effect during specified hours. Many of these are in subdivisions which predate the passage of Chapter 205A, HRS.

   c. Although it has been many years since several of the plantations have closed, larger lots are now being subdivided into smaller lots, and plantation roads are being closed/gated. The plantation roads provided public shoreline access. There is a general concern that the accesses provided by plantation roads may be lost.

   d. Human induced vegetation which encroaches onto the beach and blocks lateral access along the beach is an increasing problem. This problem has been reported at Kahala, Kailua, and Diamond Head beaches on Oahu and Ha‘ena,

Wainiha, and Hanalei on Kauai. ("Frustrated Kauai Activist Blasts State, County Enforcement of Shoreline Rules", *Environment Hawaii*, March 2006; "Board Talk", *Environment Hawaii*, March 2007; "Two Lawmakers Propose Bills to Stop Owners from Trying to Claim Expanded Beach Land", Star Bulletin, January 13, 2002; letters from DLNR to landowners regarding encroaching vegetation-various; "Report to the Hawaii State Legislature in response to HCR No. 258, Requesting the Office of Planning to Coordinate the City and State Agencies in Addressing the Overgrowth of Vegetation on Kahala Beach", Office of Planning, 2008).

3. **(CM)** Use the table below to report the percent of the public that feels they have adequate access to the coast for recreation purposes, including the following. If data is not available to report for this contextual measure, please describe below actions the CMP is taking to develop a mechanism to collect the requested data.

Contextual measure	**Survey data**
Number of people that responded to a survey on recreational access	205
Number of people surveyed that responded that public access to the coast for recreation is adequate or better.	91
What type of survey was conducted (i.e., phone, mail, personal interview, etc.)?	Tourists were surveyed in person, by mail, and via internet
What was the geographic coverage of the survey?	The survey covered Kauai County.
In what year was the survey conducted?	The County of Kauai conducted the survey in 2007.

Data source: *Hawaii CZM Performance Measure Phase 3 Final Report*, page 38

No additional data on coastal access for recreational purposes have been gathered since the last assessment. The Hawaii CZM Program is examining the feasibility of developing an Internet survey for each Island, to collect the data for this contextual measure for the next assessment. In addition, all projects currently funded by the Hawaii CZM Program are required to provide performance measure data that includes information on coastal access for recreation purposes, if project activities are related to access issues.

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

There is an increasing demand in Hawaii for shoreline public access because of a growing population, increased leisure time, and because customarily used accesses are being lost. Gates, fences, signs, and other barriers to access have been erected. Also, shoreline erosion and vegetation induced by beachfront property owners impose threats to lateral beach access. During each legislative session, the public has raised various issues and concerns regarding the need for shoreline public access.

The Hawaii CZM program routinely examines public access through network agencies, including DLNR, and through quarterly meetings with County Planning Directors. Provision and maintenance of coastal public access are required by the Special Management Areas (SMA) permit system. The public hearings required for the SMA permits provide a chance to assess coastal public access through specific projects. For human-induced vegetation encroachment along beaches, the Hawaii CZM Program in 2008 submitted a report with findings to the Hawaii State Legislature in response to HCR No. 258, requesting the Office of Planning to coordinate with the City and County of Honolulu and State agencies in addressing the overgrowth of vegetation on Kahala Beach, Oahu. The issue of vegetation encroachment on beaches is currently monitored by DLNR on a case-by-case basis, but legal provisions for removal of encroaching vegetation need to be improved.

5. Please use the table below to provide data on public access availability. If information is not available, provide a qualitative description based on the best available information. If data is not available to report on the contextual measures, please also describe actions the CMP is taking to develop a mechanism to collect the requested data.

Types of public access	**Current number(s)**	**Changes since last assessment (+/-)**	**Cite data source**
(CM) Number of acres in the coastal zone that are available for public (report both the total number of acres in the coastal zone and acres available for public access)	2,079,175 acres in total; 1,859,181 acres available for public access	For the purposes of the CZMA Performance Measurement System, coastal zone for the Hawaii CZM Program is defined as lands within the county-designated special management areas including a seaward limit of 3 miles.	1) Planning Departments of City and County of Honolulu, Hawaii County, Maui County and Kauai County. 2) Hawaii State GIS Program; 3) 1:24,000 scale
(CM) Miles of shoreline available for public access (report the total miles of shoreline and miles available for public access)	1,146 miles in total; 1,052 miles available from four Counties for public access	-26 miles for access ,from excluding Northwestern Hawaiian Islands	1) Hawaii CZM Program, Final Report on Phase 1b; 2) Hawaii State Book 2009; 3) Hawaii State GIS Program, including Oahu's offshore islets but excluding other islands' offshore islets. Coastline was smoothed using ArcGIS with "maximum allowable offset" of 20.

Types of public access	Current number(s)	Changes since last assessment (+/-)	Cite data source
Number of State/County/Local parks and number of acres	7 national parks in 378,744 acres; 55 State parks and 16 areas of State park interest in 33,156 acres; 649 County parks in 11,440 acres	+2,914 acres; + 2 State parks with + 6,040 acres.	State Comprehensive Outdoor Recreation Plan 2008 Update, DLNR
Number of public beach/shoreline access sites	Based on one access site per 1.3 mile, it was estimated to have 809 access sites. In total, Hawaii has 138 beach/shoreline parks, which represents 43% of all the beach/shoreline access on the Islands.	No statewide geospatial database available for beach access sites.	1) Surfrider Foundation http://www.surfrider.org/ 1/19/2010 2) State Comprehensive Outdoor Recreation Plan 2008 Update, DLNR
Number of recreational boat (power or non-power) access sites	21 small boat harbors, 54 launching ramps, 13 offshore mooring areas, 10 designated ocean water areas, 108 designated ocean recreation management areas	No change	1) Division of Boating and Ocean Recreation (DOBOR), DLNR, http://hawaii.gov/dlnr/divisions/dbor 1/19/2010
Number of designated scenic vistas or overlook points	20 formal overlook points, most of coastline served by major highways offering routine scenic ocean view planes	No change	The guidebook, *"Scenic Driving Hawaii"*
Number of State or locally designated perpendicular rights-of-way (i.e., street ends, easements)	There are many existing perpendicular public pathways in the State. There are also many incidental access points, public but not "formalized".	No statewide geospatial database available on beach access paths and sites.	
Number of fishing access points (i.e., piers, jetties)	21 public piers, and 9 independent boat launching facilities throughout the State	-2 public fishing piers	DOBOR, DLNR, http://hawaii.gov/dlnr/dbor/, 1/19/2010

Types of public access	Current number(s)	Changes since last assessment (+/-)	Cite data source
Number and miles of coastal trails/boardwalks	Na Ala Hele (NAH), State of Hawaii Trail and Access Program maintains 113 trails (does not include 3 closed trails on Lanai Island) with total 464 miles in Kauai, Oahu, Molokai, Lanai, Maui, and Hawaii.	+ 1 trail	Na Ala Hele Trail & Access System https://hawaiitrails.ehawaii.gov/ 1/19/2010
Number of dune walkovers	No existing data available for the number of dune walkovers. Hawaii uses beach access stairways more commonly than dune walkovers.	No statewide geospatial database available for coastal public access	Communications with DLNR and UH Sea Grant.
Percent of access sites that are ADA compliant access	Most park accesses are Americans with Disabilities Act (ADA) compliant. Improvements to State parks are implemented as funds are made available.	Enhanced	*Hawaii State Parks – A visitor's guide to park resources and recreational opportunities*, Division of Parks, DLNR
Percent and total miles of public beaches with water quality monitoring and public closure notice programs	In 2008, Hawaii reported 444 coastal beaches, 48 (11%) of which were monitored more than once a week, 57 (13%) once a week, 19 (4%) every other week, 13 (3%) once a month, 105 (24%) less than once a month, 192 (43%) were not monitored, and there was no monitoring information for 8 (2%) beaches.	Increasing water quality monitoring on beaches	*Testing the Waters 2009*. http://www.nrdc.org/water/oceans/ttw/sumhaw.pdf

Types of public access	Current number(s)	Changes since last assessment (+/-)	Cite data source
Average number of beach mile days closed due to water quality concerns	There is no data available on the number of beach mile days closed due to water quality concerns. For water quality concerns, total warning/advisory days for events lasting six consecutive weeks or less decreased to 2,766 days in 2008 from 4,134 days in 2007, and 6,507 days in 2006.	No data available from last assessment	1) http://www.surfrider.org/stateofthebeach/home.asp 2) *Testing the Waters 2009.* http://www.nrdc.org/water/oceans/ttw/sumhaw.pdf

Management Characterization

Purpose: To determine the effectiveness of management efforts to address those problems described in the above section for the enhancement objective.

1. For each of the management categories below, indicate if the approach is employed by the state or territory and if significant changes have occurred since the last assessment:

Management categories	Employed by state/territory (Y or N)	Significant changes since last assessment (Y or N)
Statutory, regulatory, or legal system changes that affect public access	Y. Counties of Maui and Kauai adopted amendments to their shoreline setback rules; The SMA permits require protection and provision of public access.	N. HCR 258 reports and proposed amendments to HRS, 205A, did not pass the Legislature.
Acquisition programs or policies	Y. County of Hawaii established a public access, open space, and resources preservation fund.	N

Management categories	**Employed by state/territory** (Y or N)	**Significant changes since last assessment** (Y or N)
Comprehensive access management planning (including GIS data or database)	Y. NAH, the Hawaii Statewide Trail and Access Program, DLNR, plans, develops, and acquires land or rights for public use of land. The program also constructs, restores, and engages in coordination activities to implement a trail and access system. The NAH website contains information on trails throughout the State. In February of 2010, National Oceanic and Atmospheric Administration (NOAA) Fisheries, Pacific Island Regional Office, established a pilot shoreline access database for the Island of Oahu by using GPS, the City and County of Honolulu GIS website, and TMK information. However, there is no statewide comprehensive access management planning including GIS database. There is no statewide guide on shoreline public access. The access guides developed by the County Planning Departments were published approximately two decades ago.	N
Operation and maintenance programs	Y. State and Counties continue to have systematic maintenance for beach parks and public pathways. However, services have and will continue to be impacted by reduced budgets.	N

Management categories	**Employed by state/territory** (Y or N)	**Significant changes since last assessment** (Y or N)
Alternative funding sources or techniques	Y. Public funding at the State and County level has been reduced due to poor economic conditions. Public-private partnerships and private land conservation efforts in recent years have been increasing in Hawaii. However, given the declines in State and County revenues and corresponding budget deficits, there is a need to aggressively explore new, innovative, and creative mechanisms and techniques to fund public access acquisition and maintenance.	Y
Beach water quality monitoring and pollution source identification and remediation	Y. Number of beaches monitored increased; remedial action is ongoing.	Y
Public access within waterfront redevelopment programs	Y. The SMA permit administration requires provision of public access for "development" defined in HRS, 205A.	N
Public access education and outreach	Y. The requirements for the SMA permit encourage involvement from the public and developers in coastal public access through public hearings. However, there is no State website with information on shoreline public access education.	N
Other (please specify)		

2. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.

   (a) Characterize significant changes since the last assessment;
   (b) Specify if it was a 309 or other CZM-driven change (specify funding source) or if it was driven by non-CZM efforts; and
   (c) Characterize the outcomes and effectiveness of the changes.

According to a 2009 Natural Resources Defense Council report, the number of beaches in Hawaii where water quality is monitored has increased and remedial action is ongoing. However, no significant changes have occurred in the management categories

for public access, either from 309 or other CZM-driven change since the last assessment. A proposed bill, HB 839/2008, to fund a statewide geospatial database, and to survey and map public access ways to shoreline areas failed in the 2008 legislation session. However, public-private partnerships and private land conservation efforts in recent years have been increasing in Hawaii to acquire greenways, open space, trails, community gardens, and natural habitats. In addition to the well-established The Nature Conservancy, other national organizations such as The Trust for Public Land and Ducks Unlimited are active in Hawaii. Local organizations such as Maui Open Space Trust, Kauai Public Land Trust, and Protect Kohanaiki Ohana also became more active. For example, the North Shore Community Land Trust, working with many partners including the Trust for Public Land, Surfrider Foundation Oahu Chapter, Surfrider Japan, the State and Federal governments, and the military, successfully concluded the Campaign for Pupukea-Paumalu, purchasing and protecting the 1,129-acre Pupukea Paumalu coastal bluff that overlooks the world's most famous surfing breaks on the North Shore of Oahu.

3. Indicate if your state or territory has a printed public access guide or website. How current is the publication and/or how frequently is the website updated? Please list any regional or statewide public access guides or websites.

Beach park locations are listed in street-map guides and shown annually on phone directory maps. The print publication of shoreline access guides for each County has not been recently updated. Some of them were published two decades ago.

- Maui County Office of Mayor, 1994. *Maui County's Shoreline Access Guide*. (including Molokai and Lanai)
- County of Kauai Planning Department, 1984. *Kauai Beach Access Guide*.
- County of Hawaii Planning Department, 1981. *Shoreline Public Access Guide*.

Hawaii has a website for State parks, http://www.hawaiistateparks.org/ and for the coastal trail program, www.dofaw.net. Both of them are hosted and routinely updated by DLNR. The following websites for shoreline access are also routinely updated:

- http://www.beachaccesshawaii.org/, hosted and maintained by Beach Access Hawaii, a volunteer group
- http://www.hawaii-county.com/planning/spa/index.html, hosted and maintained by the Department of Planning, County of Hawaii
- http://www.alternative-hawaii.com/beaches.htm

The public looks to the CZM Program to ensure shoreline public access, and to provide information on shoreline access. An interactive shoreline access website will not only provide a tool for the State to disclose legal and education information on shoreline access, but also to build a stewardship ethic toward the coastline and ocean.

Priority Needs and Information Gaps

Using the table below, identify major gaps or needs (regulatory, policy, data, training, capacity, communication and outreach) in addressing each of the enhancement area objectives that could be addressed through the CMP and partners (not limited to those items to be addressed through the Section 309 Strategy). If necessary, additional narrative can be provided below to describe major gaps or needs.

Gap or need description	**Type of gap or need** (regulatory, policy, data, training, capacity, communication & outreach)	**Level of priority** (H,M,L)
Funding for public access acquisition and maintenance	Financing plan for public access acquisition and maintenance	H
Interactive website and information accessible to the public for shoreline public access	Communication and outreach for the public to better understand the issues of shoreline public access	H
Information/education provided to shoreline access users to minimize resource depletion and abuse; littering; illegal activities; disruption to neighboring residents, etc.	Communication and outreach	H
Establishment of a statewide geospatial database on shoreline access	Geospatial data on quality and quantity of shoreline public access	M

Enhancement Area Prioritization

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

   High X
   Medium ____
   Low ____

   Briefly explain the level of priority given for this enhancement area.

   As a result of emerging issues in shoreline public access, this enhancement area will be raised to a high priority for coastal management.

2. Will the CMP develop one or more strategies for this enhancement area?

   Yes X
   No _____

Briefly explain why a strategy will or will not be developed for this enhancement area.

A Strategy will be developed for this enhancement area. Sec. 205A-2(b), HRS, (CZM law) calls for providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines of recreational value. Community groups have raised a number of public access issues with the CZM Program, including the blocking of access in subdivisions which predate the passage of Chapter 205A, HRS; loss of parking stalls at popular public access areas; human-induced vegetative growth blocking lateral access along the beach; etc. The Hawaii Legislature has asked the CZM Program to specifically examine human-induced vegetation along the beach. Concerns about public access are frequently raised at the public comment portion of the MACZAC meetings, particularly on the Neighbor Islands. The majority of written public comments received by OCRM during the 2009 Sec. 312 Evaluation of the Hawaii CZM Program pertained to the loss of public access. Community groups view public access as one of the primary responsibilities of the Hawaii CZM Program and look to the Program and its network partners to address public access problems.

However, with the economic downturn and declining revenues, State and County governments have had to cut budgets. Funding for the acquisition and maintenance of public access and related programs has diminished. For example, there have been proposals to raid various special funds, including those that fund the acquisition of coastal lands or to divert their revenue sources in order to reduce the budget deficit. In addition, the State of Hawaii is considering closing several State Parks (including coastal parks) because of the budget deficit. When the Legislature established the 2009-2010 budget, they reduced DLNR's State Parks Division budget by $1 Million. Moreover, when the public brings public access problems and issues to government agencies, the agencies respond that they do not have the staff or resources to deal with these problems. With the likelihood that funds will continue to be scarce, the investigation of new, creative, and alternative funding techniques may be the only way to find solutions to address public access issues.

Moreover, while there are concerns about loss of public access, there are also concerns about the depletion of recreational fisheries, coral reef damage, overuse and abuse of natural resources, littering, vandalism, and lack of security. Education and outreach are needed to foster a stewardship ethic to protect sensitive environmental and natural resources.

Coastal Hazards

Section 309 Enhancement Objective
Prevent or significantly reduce threats to life and property by eliminating development and redevelopment in high-hazard areas, managing development in other hazard areas, and anticipating and managing the effects of potential sea level rise and Great Lakes level change.

Resource Characterization
Purpose: To determine the extent to which problems and opportunities exist with regard to the enhancement objective.

1. Characterize the level of risk in the coastal zone from the following coastal hazards:

   (Risk is defined as: "the estimated impact that a hazard would have on people, services, facilities and structures in a community; the likelihood of a hazard event resulting in an adverse condition that causes injury or damage." Understanding Your Risks: Identifying Hazards and Estimating Losses, FEMA 386-2, August 2001)

Type of hazard	**General level of risk** (H,M,L)	**Geographic Scope of Risk (Coast-wide; Sub-region)**
Flooding	H	Statewide
Coastal storms, including associated storm surge	H	Statewide
Geological hazards (e.g., tsunamis, earthquakes)	H	Statewide
Shoreline erosion (including bluff and dune erosion)	H See, Public Access Assessment	Coast-wide
Great Lake level change and other climate change impacts	M/H See, Ocean Resources Assessment	Statewide
Land subsidence	L	Statewide
Other (please specify)		

2. For hazards identified as a high level of risk, please explain why it is considered a high level risk. For example, has a risk assessment been conducted, either through the State or Territory Hazard Mitigation Plan or elsewhere?

Flooding. Flooding is a temporary inundation of land from excessive rainfall or wave action. Flood risk in Hawaii includes flash floods, dam failure, storm surge, tsunami, riverine floods, coastal floods, and urban floods. All four Counties have a long history of flooding. A summary of the estimated damage of the largest impact disasters in Hawaii show the high level of flood risk in Hawaii:

Date	Declared Disaster	Estimated Damage Assessments
March 2006	Heavy Rains, Flooding, Kaloko Dam Failure	$80 million
October 30, 2004	Manoa Floods	$120 million
November 2000	Hilo Floods	$50 million
September 11, 1992	Hurricane Iniki	$1.6 billion
November 23, 1982	Hurricane Iwa	$239 million
January 1980	Kona Storm	$12.9 million

Source: State of Hawaii Hazard Mitigation Plan (2007), Risk and Vulnerability Assessment, p. 5-2.

Coastal storms. Tropical cyclones, which include hurricanes, tropical storms, and tropical depressions, are one of the most destructive natural disasters that cause loss of lives and property damage worldwide. In the last 50 years, four hurricanes – Iniki, Iwa, Dot, and Nina – struck the Hawaiian Islands. In the Central North Pacific, which includes Hawaii, the official hurricane season runs from June through November. *Climatic Atlas of Tropical Cyclone Tracks over the Central North Pacific*, pp. 7-8. Storm surge, rain, and wind cause most of the damage associated with hurricanes.

Estimated losses and vulnerability have been developed from extrapolations of hurricanes that affected the County of Kauai. Tables detailing the potential losses are found in Appendix A, Potential Losses from Future Hurricanes. Source: *State of Hawaii Hazard Mitigation Plan (2007), Risk and Vulnerability Assessment*, pp. 5-9 – 5-15.

Geological Hazards - Earthquake. Volcanic activity is the cause of approximately 95% of the earthquakes in Hawaii. Earthquake occurrence rates in the County of Hawaii are as high as that near the most hazardous fault areas on the mainland United States. The ground shaking hazard in the County of Hawaii ranks among the highest in the United States. This shaking endangers people and property by damaging or destroying buildings, critical facilities, utilities, roads, and bridges. *Earthquake Hazards and Estimated Losses in the County of Hawaii*, pp. 2-3.

A major earthquake risk and vulnerability assessment, *Earthquake Hazards and Estimated Losses in the County of Hawaii*, was completed in 2005. The assessment customized FEMA's Hazards U.S. (HAZUS-99) computer program that estimates losses from earthquakes to parameters specific to the County of Hawaii. These parameters included ground motion, building inventory, and soil characteristics. Work is ongoing to migrate the customized data from HAZUS-99 to HAZUS-Multi-Hazard, and to add new data as well.

Geological Hazards - Tsunami. A tsunami is a series of waves commonly caused by violent movement of the sea floor. This movement is often the result of violent geologic activity – earthquakes, landslides, and volcanic eruptions. *Tsunami!, W. Dudley and M. Lee,* p. 61. The largest natural disaster in Hawaii on record, in loss of lives, was the April 1946 tsunami that caused 96 deaths in Hilo, 15 on Kauai, 14 on Maui, and 9 on Oahu. The increased local and visitor population, especially along the coastline, increases the potential for loss of life and property damage.

3. If the level of risk or state of knowledge of risk for any of these hazards has changed since the last assessment, please explain.

Flooding. Level of risk and knowledge of risk has increased based on research, risk and vulnerability assessments, and outreach and training, including the following:

- Modeling of dam inundation for all 135 registered dams (statewide) has been completed. The scope of this project includes inundation maps, damage assessment (based on downstream features), socio-economic vulnerability (based on population affected). (2009)
- Statewide flood hazard assessment tool utilizing the latest available flood insurance rate map information in a GIS application for residents to use in determining their flood risk. (2007)

Coastal storms. Level of risk and knowledge of risk has increased based on research, risk and vulnerability assessments, and outreach and training, including the following:

- Evaluation of HAZUS-Multi-Hazards for Hurricane Loss Estimation (2006)
- State of Hawaii Hazard Mitigation Plan (2007)
- Climatic Atlas of Tropical Cyclone Tracks over the Central North Pacific (2008)
- Wind Speed-Up Mapping for the City and County of Honolulu (2006)
- Wind Speed-Up Mapping for the County of Hawaii (2007)
- Wind Speed-Up Mapping for the County of Maui (2008)
- Wind Speed-Up Mapping for the County of Kauai (2008)
- Adoption of the 2003 International Building Code and the 2003 International Residential Code by the City and County of Honolulu (2007)
- Adoption of the 2003 International Building Code and the 2003 International Residential Code by the County of Kauai (2008)
- Hawaii County All Hazards Assessment of Critical Facilities (2009)

Geological Hazards - Earthquake. Level of risk and knowledge of risk has increased based on research, risk and vulnerability assessments, and outreach and training, including the following:

- Applied Technology Council–20 Post-Earthquake Building Safety Evaluations Training for the City and County of Honolulu and the County of Hawaii (2006)
- UH Center for the Study of Active Volcanoes – Public Outreach Program to Schools and Community (ongoing)
- Adoption of the 2003 International Building Code and the 2003 International Residential Code by the City and County of Honolulu (2007)

- Adoption of the 2003 International Building Code and the 2003 International Residential Code by the County of Kauai (2008)
- Hawaii County All Hazards Assessment of Critical Facilities (2009)

Geological Hazards - Tsunami. Level of risk and knowledge of risk has increased based on research, risk and vulnerability assessments, and outreach and training, including the following:

- Tsunami Risk Assessment Project – Land Use, Demographics, Economic Assets (2007)
- Adoption of the 2003 International Building Code and the 2003 International Residential Code by the City and County of Honolulu (2007)
- Adoption of the 2003 International Building Code and the 2003 International Residential Code by the County of Kauai (2008)
- Hawaii County All Hazards Assessment of Critical Facilities (2009)
- UH tsunami structural design requirements (ongoing)
- UH Center for the Study of Active Volcanoes – Public Outreach Program to Schools and Community (ongoing)

4. Identify any ongoing or planned efforts to develop quantitative measures of risk for these hazards.

Flooding. Ongoing efforts include the following:

- Development of evacuation maps for dam inundation is being worked on for all 135 registered dams, based on the 2009 modeling and inundation maps, as well as civil defense guidelines relating to buffer criteria.

Coastal storms. Ongoing efforts include the following:

- Adoption of the State Building Code with County-specific wind design standards.
- Adoption of the 2006 International Building Code and the 2006 International Residential Code by the County of Hawaii
- Adoption of the 2006 International Building Code and the 2006 International Residential Code by the County of Maui

Geological Hazards – Earthquake. Ongoing efforts include the following:

- Migrating and updating the 2005 risk and vulnerability assessment contained in *Earthquake Hazards and Estimated Losses in the County of Hawaii*, using FEMA's HAZUS-Multi-Hazard
- Hawaii County All Hazards Assessment of Critical Facilities identified 80 critical building facilities and ranked the facilities by vulnerabilities. With this assessment, the County of Hawaii can pick from the priority list to prepare benefit-cost analyses and project grant applications. The first

example to come out of this project is one for multi-hazards retrofits for Kau Hospital, has been submitted for a FEMA Pre-Disaster Mitigation Grant.

- Lava flowing modeling is ongoing to identify location (trajectory) of the flow and the rate of advance, to be used to identify areas at risk and the time for evacuation.

Geological Hazards – Tsunami. Ongoing efforts include the following:

- Statewide tsunami modeling and evacuation planning is ongoing. Current evacuation maps are based on historical run-up data using a one dimensional model. The ongoing modeling uses two dimensional numerical modeling and credible worse-case scenarios, which satisfies the national standard under the National Tsunami Hazard Mitigation Program.

5. **(CM)** Use the table below to identify the number of communities in the coastal zone that have a mapped inventory of areas affected by the following coastal hazards. If data is not available to report for this contextual measure, please describe below actions the CMP is taking to develop a mechanism to collect the requested data.

Type of hazard	**Number of communities that have a mapped inventory**	**Date completed or substantially updated**
Flooding	8 (Maui)	Not collected
Coastal storms, including associated storm surge	None reported	
Geological hazards (e.g., tsunamis, earthquakes)	8 (Maui)	Not collected
Shoreline erosion (including bluff and dune erosion)	County-wide (Kauai); 3 (Maui)	Not collected
Great Lake level change and other climate change impacts	Not collected	
Land subsidence	None reported	Not collected
Other (Sea level rise)	8 (Maui)	Not collected

Data source: CZMA PMS Data Collection Sheets completed by the Counties of Kauai, Maui, and Hawaii, Reporting Period FY 2009-2010. Hawaii CZM Program. Data forms were sent to the Counties of Kauai, Maui, and Hawaii. Hawaii did not report any completed mapped inventory. The CZM Program will collect data on the dates of completion of mapped inventories so that this information will be available for the next Five-Year Assessment and Strategy.

<u>Management Characterization</u>

Purpose: To determine the effectiveness of management efforts to address those problems described in the above section for the enhancement objective.

1. For each of the management categories below, indicate if the approach is employed by the state or territory and if significant changes have occurred since the last assessment:

Management categories	**Employed by state/territory** (Y or N)	**Significant changes since last assessment** (Y or N)
Building setbacks/restrictions	Y (County zoning for land use control; building permits including setbacks)	N
Methodologies for determining setbacks	Y (erosion rates for oceanfront building setbacks)	Y
Repair/rebuilding restrictions	Y (repair and rebuilding restrictions in shoreline areas; shoreline setback variances and zoning ordinance for non-conforming building)	N
Restriction of hard shoreline protection structures	Y (HRS, Chapter205A)	N
Promotion of alternative shoreline stabilization methodologies	Y (shoreline setbacks; and soft shoreline stabilization by dune restoration, including native plants)	Y
Renovation of shoreline protection structures	Y	N
Beach/dune protection (other than setbacks)	Y Law provides that accreted land is public in perpetuity.	N
Permit compliance	Y (Building and SMA permits)	N
Sediment management plans	N	
Repetitive flood loss policies, (e.g., relocation, buyouts)	N	
Local hazards mitigation planning	Y Multi-hazard mitigation plans adopted in all 4 Counties and all are in the process of updating the plans.	Y

Management categories	**Employed by state/territory** (Y or N)	**Significant changes since last assessment** (Y or N)
Local post-disaster redevelopment plans	N	
Real estate sales disclosure requirements	Y Special flood hazard areas and anticipated tsunami inundation areas must be disclosed in residential real property transactions under State law; seller has a duty to examine public records when preparing the disclosure statement. HRS, §508D-15.	N This law, first enacted in 1994 and amended last in 2001, was not included in prior 309 Assessments. It is a significant recognition of the responsibility of sellers to provide specific natural hazard information to buyers. Additional categories of hazard disclosures should be enacted into law.
Restrictions on publicly funded infrastructure	N	
Climate change planning and adaptation strategies	Y	Please see discussion in No. 2, below.
Special Area Management Plans	N	
Hazards research and monitoring	Y	Y Significant work has been completed and is ongoing.
Hazards education and outreach	Y	Y Update of State hazard mitigation public education website is near completion; teacher training workshops ongoing.
Other (please specify)		

2. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.
   (a) Characterize significant changes since the last assessment;
   (b) Specify if it was a 309 or other CZM-driven change (specify funding source) or if it was driven by non-CZM efforts; and
   (c) Characterize the outcomes and effectiveness of the changes.

Methodologies for determining setbacks

(a) The County of Kauai amended its shoreline setback code based on scientifically documented rates of shoreline change and the history of coastal hazards in a specific place.
(b) The effort was funded in part by the CZM Program.
(c) The amendment of the shoreline setback laws effectively codifies the new science, resulting in greater protection of life and property and the protection of coastal resources.

Promotion of alternative shoreline stabilization methodologies

(a) The County of Kauai amended its shoreline setback code based on scientifically documented rates of shoreline change and the history of coastal hazards in a specific place. The code recognized the distortion of the natural shoreline caused by seawalls and revetments. Both Kauai and Maui Counties increased shoreline setback more than 40 feet, based on annual shoreline erosion rates.
(b) The effort was funded in part by the CZM Program.
(c) The amendment of the shoreline setback laws effectively codifies the new science, resulting in greater protection of life and property and the protection of coastal resources.

Repetitive flood loss policies

(a) The County of Kauai adopted Floodplain Management Ordinance No. 831 (9/9/2005) which added the "repetitive loss" definition and related regulatory requirements.
(b) The effort was driven by non-CZM sources. DLNR and the County governments are the agencies that participate in the National Flood Insurance Program (NFIP).
(c) Communities with repetitive flood losses can benefit from the mitigation activities included in a repetitive loss plan as provided in the NFIP.

Local hazard mitigation planning

a. The State and Counties are all in the process of updating their multi-hazard mitigation plans. These plans include risk and vulnerability assessments of natural hazards and strategies for mitigation of the hazard risks.
b. The effort is collaborative. CZM has been integrally involved in the planning process during the 2007 and 2010 updates, through its role on the State Hazard Mitigation Forum and the Forum's Planning Subcommittee.
c. The plans must be approved by FEMA in order for the jurisdiction to be eligible for certain types of disaster funding. Through the collaboration and strategy, many high priority mitigation projects have been accomplished, reducing the risk to life and property throughout the State.

Hazards research and monitoring

(a) The State and Counties have conducted hazard research and monitoring through disaster funding received from FEMA, NOAA, and other agencies. Significant projects on tsunami, hurricane, earthquake, flood, and dam safety have been completed, as well as ongoing.

(b) These efforts are collaborative. In some cases, CZM has played a key role in funding and technical assistance, such as the wind design standards and building code adoption and training.

(c) These projects develop and implement new science, resulting in greater protection of life and property.

Hazards education and outreach

(a) The State and Counties have engaged in various hazards education and outreach projects through disaster funding received from FEMA, NOAA, and other agencies.

(b) These efforts are collaborative. CZM has been involved through its work on the Statewide Hazard Mitigation Forum, the Hawaii State Earthquake Advisory Committee, and other collaborative groups. Projects include an updated State public education website on hazards and a *Natural Hazards Outreach and Teacher Training Workshop* project that provides hazards awareness training to Hawaii's school teachers in the context of enhancement of their natural sciences curriculum.

(c) These educational and outreach projects use technology as well as traditional methods of raising awareness of the hazards and disaster preparedness.

Climate change planning and adaptation strategies

(a) (i.) Collaborative planning includes work of the State's Greenhouse Gas (GHG) Emissions Reduction Task Force and the ORMP Policy and Working Groups. The GHG Task Force was established in 2007 under Act 234 to reduce Hawaii's emissions at or below our 1990 levels, by 2020. That task force sunset in December 2009, and in their final report, they concluded that Hawaii must reduce our current GHG emissions by about 12%, or 1.8 million metric tons, in order to reach the target of our 1990 levels by 2020.

(ii.) In September of 2008, the ORMP Working Group requested the ORMP Policy Groups endorsement and support in seeking funds for a comprehensive study of the impacts of global climate change on Hawaii. The Working Group believed that such a study would be essential for an effective and collaborative planning approach to address future impacts. In response to the Policy Group's endorsement, on the condition that no State funds would be used, the ORMP Working Group formed a Climate Change Caucus and examined the actions of several states to determine the best course of action. It was decided that what was most essential was the development of a framework for addressing climate change adaptation planning in Hawaii. This framework was intended to organize future climate change studies and planning efforts statewide.

The Climate Change Caucus then spearheaded the development of such a framework with the rest of the ORMP Working Group and with assistance from UH, Center for Island Climate Adaptation and Policy. The document, *A Framework for Climate Change Adaptation in Hawaii*, was completed in the fall of 2009, and is posted online at: http://www.state.hi.us/dbedt/czm/ormp/ormp.php. The Framework provides meaningful context for a number of key areas that climate change will continue to affect, such as shoreline erosion, coastal development, coastal hazards, and the preservation of our natural and cultural resources. This effort lays out a proposed step-by-step process by which the State can begin to develop plans and make informed decisions on climate change adaptation.

(iii.) In the summer of 2009, a 17-member Climate Change Task Force was created under Act 20, within OP, to assess the impacts of global climate change trends in the State. Unfortunately, the task force has not been able to convene as a group. The specific objectives laid out for the task force were to:

- Scope the impacts of climate change and sea level rise in Hawaii;
- Estimate the costs of the adverse effects; and to
- Make recommendations to address or mitigate the near- and long-term effects of climate change.

(b) The GHG Task Force was not CZM-driven; it was driven by the State's Department of Business, Economic Development and Tourism (DBEDT). The climate change adaptation framework was driven by CZM, working with the ORMP groups and UH's Center for Island Climate Adaptation and Policy.

(c) (i) The GHG Task Force examined three different scenarios for reducing Hawaii's emissions to the target level, including one using a State carbon tax and one using the federal cap and trade scenario currently in the Waxman Markey bill, and unanimously recommended Hawaii's Clean Energy Initiative (+ some additional policies) – which they predict will not only meet but exceed the GHG emissions reduction target by about 39% (if done properly and on time). The Hawaii Clean Energy Initiative is a partnership between the U.S. Department of Energy and the State of Hawaii, committed to lead Hawaii to energy independence with a target goal of 70% clean energy by 2030.

(ii) The outcome of the ORMP Working Group forming a climate change caucus is a collaborative report by the Working Group and the Center for Island Climate Adaptation and Policy entitled, *A Framework for Climate Change Adaptation in Hawaii*. The climate change caucus continues to move forward by working with our partners to implement the different steps in the framework.

(iii) The Climate Change Task Force has never convened, unfortunately due to current political and financial reasons.

3. **(CM)** Use the appropriate table below to report the number of communities in the coastal zone that use setbacks, buffers, or land use policies to direct development away from areas vulnerable to coastal hazards. If data is not available to report for this contextual measure, please describe below actions the CMP is taking to develop a mechanism to collect the requested data.

   For CMPs that use numerically based setback or buffers to direct development away from hazardous areas report the following:

Contextual measure	**Number of communities**
Number of communities in the coastal zone required by state law or policy to implement setbacks, buffers, or other land use policies to direct development away from hazardous areas.	23
Number of communities in the coastal zone that have setback, buffer, or other land use policies to direct development away from hazardous areas that are more stringent than state mandated standards or that have policies where no state standards exist.	23

Data source: Coastal Zone Management Act Performance Measurement System Data Collection Sheets completed by the counties of Kauai, Maui, and Hawaii, Reporting Period FY 2009-2010. Hawaii CZM Program. The County of Hawaii reported 8 communities, the County of Maui reported 9 communities, and the County of Kauai reported "county-wide." The County of Kauai indicated 6 communities under FY2007-2008 and that number has been inserted into the total in lieu of the "county-wide" designation. See also, Phase 3 Final Report, Hawaii Coastal Zone Management Program (July 2008), p. 42 and Hawaii Revised Statutes, Section 205A-43 (establishment of shoreline setbacks).

Priority Needs and Information Gaps

Using the table below, identify major gaps or needs (regulatory, policy, data, training, capacity, communication and outreach) in addressing each of the enhancement area objectives that could be addressed through the CMP and partners (not limited to those items to be addressed through the Section 309 Strategy). If necessary, additional narrative can be provided below to describe major gaps or needs.

Gap or need description	**Type of gap or need** (regulatory, policy, data, training, capacity, communication & outreach)	**Level of priority** (H,M,L)
Continued building code training	Training	H
Development of enhanced state hazard mitigation plan	Data, capacity, planning	M

Enhancement Area Prioritization

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

High ____
Medium X
Low ____

Briefly explain the level of priority given for this enhancement area.

Coastal hazards continue to be a priority area of the Hawaii CZM Program. Over the years, we have developed a strong network of hazard mitigation partners in the public and private sectors. Our collaborative efforts have resulted in program changes of enduring value, as well as heightened citizen awareness of the many coastal hazards present in Hawaii. During the preceding and present Section 309 grant cycles, coastal hazards strategies were carried out as proposed. With the boost of the past two 309 cycles, we are now poised to continue to advance our coastal hazards work using Section 306 funding.

2. Will the CMP develop one or more strategies for this enhancement area?

Yes ____
No X

Briefly explain why a strategy will or will not be developed for this enhancement area.

As discussed immediately above, we find that the Hawaii CZM Program's coastal hazards work can continue successfully using Section 306 funding. We appreciate the opportunity afforded to us over the past two Section 309 grant cycles to advance the objectives of our coastal hazards work. Without the Section 309 funding, projects of statewide magnitude simply would not have been accomplished within their projected timeframes. We have met and in some cases, exceeded our coastal hazards goals and program changes. We find that there are different areas of priority that will benefit from the enhancement grants program and will be submitting strategies for those areas.

Wetlands

Section 309 Enhancement Objective
Protection, restoration, or enhancement of the existing coastal wetlands base, or creation of new coastal wetlands

Resource Characterization
Purpose: To determine the extent to which problems and opportunities exist with regard to the enhancement objective.

1. Please indicate the extent, status, and trends of wetlands in the coastal zone using the following table: Qualitative information is provided below under No. 2 since complete quantitative data is not available.

Wetlands type Estimated historic extent (acres)	**Current extent** (acres)	**Trends in acres lost since 2006** (Net acres gained & lost)	**Acres gained through voluntary mechanisms since 2006**	**Acres gained through mitigation since 2006 Year**	**Source(s) of Data**
Tidal vegetated	Information not available to differentiate between different categories	NA	NA	NA	
Tidal non-vegetated	See Above	NA	NA	NA	
Non-tidal/ freshwater	See Above	NA	NA	NA	
Other (please specify) Wetlands	51,800 (mid 1980's)				*State Comprehensive Outdoor Recreation Plan, 2008 Update, Dept. of Land and Natural Resources, 2009*

NA=Not Available

2. If information is not available to fill in the above table, provide a qualitative description of information requested, including wetlands status and trends, based on the best available information.

Hawaii's hydrological conditions -- heavy rainfall, porous volcanic soil, and steep terrain -- have created unique wetlands that are very different from those found on continental land masses. These wetlands include coastal lagoons, mountainous bogs, and anchialine ponds. Anchialine ponds are land-locked, brackish pools in porous lava, connected underground to both fresh and salt water. Hawaii is one of the few places worldwide where they are found. (*Strategic Plan for Wetland Conservation in Hawaii*, Jan 2006, Pacific Coast Joint Venture) In addition, eighty percent of the known worldwide anchialine pools are on Hawaiʻi Island. (*Hawaii's Comprehensive Wildlife Strategy*, Oct. 1, 2005, Department of Land and Natural Resources, p. 6-72)

In Hawaii, it is estimated that there were 58,800 acres of wetlands, circa 1780. Best available data suggests that by the 1980s, 51,800 acres of wetlands were estimated to still exist, a net loss of 12%. (Dahl, 1990 as cited in the *State Comprehensive Outdoor Recreation Plan, SCORP, 2008 Update*, Department of Land and Natural Resources, April 2009,p. 174.)

While the average overall State wetland loss appears low, Hawaii has lost valuable coastal wetlands at a much higher rate. The U.S. Fish and Wildlife Service estimates that 22,475 acres of coastal wetlands existed circa 1780 and that coastal wetlands decreased by 31% to 15,474 acres in the 1980s. (SCORP, pp. 174-175)

Detailed analysis of pre-historical and historical land use patterns are needed to accurately quantify wetland loss. Published estimates likely underestimate the original extent of wetland habitats as large-scale land use changes occurred shortly after European contact, before many historical records were maintained. Approximately 75% of the remaining 6,190 ha (15,474 ac) wetlands are degraded by non-native invasive plant species and altered hydrology due to urbanization and agriculture. (*Strategic Plan for Wetland Conservation in Hawaii*, Jan 2006, Pacific Coast Joint Venture)

The Nature Conservancy's, *Ecoregional Assessment*, provides the following information on wetland resources.

System	Components	Hawaii	Maui County	Oahu	Kauai-Niihau	Data Source
Wetlands	Anchialine pool complexes (Number)	157	14	14	0	Hawaii Biodiversity Mapping Program, Expert

System	Components	Hawaii	Maui County	Oahu	Kauai-Niihau	Data Source
	Estuarine (Hectares)	1,059	1,628	4,139	583	Expert, DAR Watershed Assessment, NOAA Environmental Sensitivity Index, National Wetland Inventory

Source: The Nature Conservancy of Hawaii

3. Provide a brief explanation for trends.

The *Strategic Plan for Wetland Conservation in Hawaii* describes the following historical reasons for the loss of wetland habitats.

Modification of wetland habitats increased exponentially after European contact. Expansion of plantation style agriculture including sugar cane and pineapple drastically altered the landscape. Coastal wetlands were drained. Irrigation ditches were installed to divert water from perennial streams to more arid agricultural areas, and large land areas were flattened and graded. Increased soil erosion caused by deforestation and livestock grazing also filled coastal wetlands. During the early 20th century, many abandoned taro fields and remaining marshes were farmed for rice cultivation.

Navigation projects, port development, and military developments during and after World War II destroyed numerous fishponds, estuarine marshes, and coral reefs, and altered the water quality of surrounding areas. Housing developments, resort, and civil works projects, including the well-known Waikiki area of Oahu, further destroyed and altered coastal ecosystems.

Indirect modification of wetland habitats occurred as a result of introduced plant and animal species. Mangrove (*Rhizophora mangle*), California grass (*Brachiaria mutica)*, and pickleweed (*Batis maritima*) have encroached on fishponds, marshes, and riparian corridors altering vegetation structure and sedimentation patterns. Introduced mammals have caused declines and sometimes extinctions in populations of endemic birds, including passerines and waterbirds.

4. Identify ongoing or planned efforts to develop monitoring programs or quantitative measures for this enhancement area.

Hawaii's Comprehensive Wildlife Strategy, DLNR, describes proposed plans for monitoring species and for monitoring the effectiveness of conservation actions. The following excerpts from the *Strategy* provide information on ongoing efforts to develop monitoring programs for specific species. In addition, the *Strategy* recognizes the need to

monitor habitats as well as individual species and provides recommendations for monitoring plans for habitats.

Waterbird Monitoring

All endemic Hawaiian waterbirds have existing U.S. Fish and Wildlife Service (USFWS) recovery plans outlining monitoring needs and actions. An updated, revised recovery plan for the nēnē (*Branta sandvicensis* [Hawaiian goose]) is currently being developed by the USFWS. The USFWS has also recently finalized an updated Draft Revised Recovery plan for Hawaiian waterbirds addressing the monitoring needs of koloa maoli (*Anas wyvilliana)* [Hawaiian duck]), ʻalae ʻula (*Gallinula chloropus sandvicensis* [Hawaiian moorhen]), ʻalae keʻokeʻo (*Fulica alai* [Hawaiian coot]), and aeʻo (*Himantopus mexicanus knudseni* [Hawaiian stilt]).

Elements of monitoring from these plans are conducted by the USFWS and its partners; however, the full range of monitoring recommendations has yet to be implemented. The Division of Forestry and Wildlife, DLNR, also conducts twice annual statewide waterbird surveys, covering both private and public land, that include these species as well as the ʻaukuʻu (*Nycticorax nycticorax* [black-crowned night heron]).

Additionally, these species are monitored on various managed lands such as National Wildlife Refuges, military special management areas, and State Wildlife Sanctuaries as part of ongoing management or as part of research.

Anchialine-Pond Fauna Monitoring

Although assessments of many anchialine pond fauna and habitat have occurred over the years, no systematic monitoring takes place.

Ecological Assessment of Coastal Lowland Wetlands and Assessment of Water Quality

Region IX of the Environmental Protection Agency funded a three year project (2006-2009) to conduct an ecological assessment of coastal wetlands in Hawaii and to specifically assess the water quality and habitat functions of semi-natural, restored, and created wetlands. Vegetation, soils, water quality, and fish communities of 40 wetland sites across the five main Hawaiian Islands were sampled. A subset of 20 sites is currently being sampled on a quarterly basis for water quality and fish community composition. (SCORP, p. 179)

5. Use the following table to characterize direct and indirect threats to coastal wetlands, both natural and manmade. If necessary, additional narrative can be provided below to describe threats.

Type of Threat	**Severity of Threat (H,M,L)**	**Geographic Scope of Impact (Extensive or Limited)**	**Irreversibility (H,M,L)**
Development/Fill	L (at present)	Extensive in the past	H
Alteration of hydrology	H	E	M
Erosion	H	E	M
Pollution	H	E	M
Channelization	L	L	H
Nuisance or exotic species	H	E	H
Freshwater input	M	L	M
Sea level rise	L	L	L

The following are the major threats to wetlands identified in the *Strategic Plan for Wetland Conservation in Hawaii*. The largest threat to wetland habitats today is development. Agriculture has declined since World War II. More than half of Hawaii's economy is based on tourism and military expenditures. With the decline of the sugar cane industry the future of many coastal areas is uncertain because these coastal plains are prime areas for high dollar resort and/or housing development. Indirect threats from increased development include non-point source pollution and increased human disturbance.

Invasive vegetation still plagues many coastal and high elevation habitats. Until seed sources are removed on a regional scale and more effective long-term control methods are identified, wetlands require continual maintenance and management.

Natural hydrological regimes have been altered due to lowering of freshwater aquifers, channelization and diversion of perennial streams, and flood protection projects. Direct threats to endemic waterbirds include disease and predation. For koloa, the most immediate threat is hydridization with domestic and feral mallards.

According to *Hawaii's Comprehensive Wildlife Strategy*, the major threats to Hawaii's native wildlife are widespread and common to most species groups and habitats (including wetland species and habitats). Major threats include:

• Loss and degradation of habitat resulting from human development, alteration of hydrology, wildfire, invasive species, recreational overuse, natural disaster, climate change, and other factors;
• Introduced invasive species (e.g., habitat-modifiers, including weeds, ungulates, algae and corals, predators, competitors, disease carriers, and disease);

• Limited information and insufficient information management;
• Uneven compliance with existing conservation laws, rules, and regulations;
• Overharvesting and excessive extractive use;
• Management constraints; and
• Inadequate funding.

The Nature Conservancy identifies the following generalized list of principal threats to wetland resources.

Principal Threats to Estuarine Wetlands

- Direct loss due to development and navigation projects
- Secondary effects from land use practices within watersheds, e.g., excessive sedimentation, altered natural hydrological regimes, altered water quality, and habitat modification
- Degradation by non-native invasive species which has resulted in altered vegetation structure and sedimentation patterns
- Introduction of mammals causing declines in populations of endemic birds
- Sensitivity to oil spills

Principal Threats to Anchialine Pools

- Contamination of water sources
- Introduction of nonnative species, especially fish and vegetation
- Direct loss due to development and landscaping
- Freshwater input decrease
- Few protected examples of anchialine pools
- Rising sea level, drought

Source: *Draft Prospectus to Establish an In-Lieu Fee Program for the Main Hawaiian Islands*, The Nature Conservancy of Hawaii, February 25, 2010

6. **(CM)** Indicate whether the Coastal Management Program (CMP) has a mapped inventory of the following habitat types in the coastal zone and the approximate time since it was developed or significantly updated.

The USFWS has the primary responsibility for mapping and inventory of all the wetlands of the United States. The wetland maps produced by other Federal agencies serve different purposes and generally involve cooperation with the USFWS. (*National Water Summary on Wetland Resources***,** United States Geological Survey, *Water Supply Paper 2425*, 1996)

The USFWS prepared final National Wetland Inventory (NWI) maps for the main Hawaiian Islands. For the five main islands, NWI data were derived from 1970s imagery. Oahu has been updated using 2005 imagery. In FY2009, the NWI data for Kauai (12 quads) was updated. (*Status Report for the National Wetlands Inventory Program: 2009*, U.S. Fish and Wildlife Service, Oct. 2009)

The *Draft Revised Recovery Plan for Hawaiian Waterbirds*, 2005, USFWS, identifies important waterbird recovery habitat. This plan identifies core and supporting wetlands. Core wetlands are those areas that provide habitat for supporting larger populations of Hawaiian waterbirds. The plan emphasizes that core wetlands must be protected and managed to recover Hawaii's endangered waterbirds. Supporting wetlands are those areas that provide habitat important for smaller waterbird populations or that provide habitat needed seasonally by certain waterbird populations during their life cycle.

Hawaii's Comprehensive Wildlife Strategy, Oct. 1, 2005, provides lists of Hawaii flora and fauna species of greatest conservation need.

The *Strategic Plan for Wetland Conservation in Hawaii*, Jan 2006, prepared by the Pacific Coast Joint Venture (PCJV) contains a comprehensive inventory of wetlands in Hawaii.

PCJV is an organization which develops partnerships to protect and restore habitat for birds and other wildlife.

The Hawaii Natural Heritage Program, part of the Center for Conservation Research and Training at UH Manoa, maintains a statewide database of rare and endangered plants and animals, including species supported by wetlands. Access to the database is available at http://hbmp.hawaii.edu/data.html.

The Nature Conservancy has prepared *Ecoregional Assessments and Plan* 2009 for the marine, coastal, and terrestrial systems of the main Hawaiian Islands. The ecoregional planning process identifies priority conservation areas.

7. **(CM)** Use the table below to report information related coastal habitat restoration and protection. The purpose of this contextual measure is to describe trends in the restoration and protection of coastal habitat conducted by the State using non-CZM funds or non Coastal and Estuarine Land Conservation Program (CELCP) funds. If data is not available to report for this contextual measure, please describe below actions the CMP is taking to develop a mechanism to collect the requested data.

In 2006-2007, HCZM developed a new Performance Measurement System that tracks and collect data from the Counties and DLNR for wetland habitat restoration and protection.

Contextual Measure	Cumulative acres for 2004-2010
Number of acres of coastal habitat restored using non-CZM or non-CELCP funds.	• 15 acres = Restored portion of Kawaiele Wetland, Kauai: invasive plants removed ,2 native wetland species out planted • 37 acres = Protected by DOFAW at Kawaiele Wetland, Kauai • 141 acres = Protected by DOFAW at Mana, Kauai • 800 acres = Protected by DOFAW at Kawainui Marsh, Oahu* • 22 acres = Protected by DOFAW at Hamakua Marsh, Oahu* • 70 acres = Protected by DOFAW at Pouhala Marsh, Oahu* • 11 acres = Protected by DOFAW at Paiko Lagoon, Oahu

Contextual Measure	Cumulative acres for 2004-2010
	• 314 acres = Protected by DOFAW at Palaau, Molokai • 235 acres = Protected by DOFAW at Kanaha Pond, Maui • 40 acres = Restored portion of Lehua Island, Kauai: removed verbesina and other non-native weeds at out planting sites per the Lehua Island Restoration Plan; controlled cattle egrets and barn owls on the island and removed marine debris along tidal zones • 277 acres = Protected by DOFAW at Lehua Island, Kauai • 155 acres = Protected by DOFAW at Oahu's Offshore Islets; Restoration of islets includes removal of invasive species and re-planting of native plants; enforcement-work with DOCARE to cite violations of Wildlife Sanctuary Rules; installed informative signs and physical barriers • 250 acres = Protected by DOFAW at Kure Atoll, NWHI** • Portions of the 1,238 land acres of Ahihi Kinau NAR = http://hawaii.gov/dlnr/dofaw/nars/managing-the-natural-area-reserves • Portions of the 25,220 acre Manuka NAR = Manuka: http://hawaii.gov/dlnr/dofaw/nars/reserves/big-island/manukamp.PDF • Portions of the 921-acre Moomomi NAPP = See Moomomi NAPP: http://hawaii.gov/dlnr/dofaw/napp/MOO%20FY07-12%20LRMP.doc, Non-native predator and plant control, litter removal, outreach, monitoring, outplanting at Kaena Pt. • Portions of the 78-acre Kaena Point NAR = See Moomomi NAPP: http://hawaii.gov/dlnr/dofaw/napp/MOO%20FY07-12%20LRMP.doc, Non-native predator and plant control, litter removal, outreach, monitoring, outplanting at Kaena Pt. • 807 marine acres of Ahihi Kinau NAR = Survey, collection, and visitation restrictions. http://hawaii.gov/dlnr/dofaw/nars/managing-the-natural-area-reserves • Portions of 25,550-acre Manuka NAR = Manuka: http://hawaii.gov/dlnr/dofaw/nars/reserves/big-island/manukamp.PDF • Portions of 5,583 Kipahoehoe NAR = Kipahoehoe NAR: http://hawaii.gov/dlnr/dofaw/nars/reserves/big-island/kipahoehoemp1.pdf, Manuka NAR http://hawaii.gov/dlnr/dofaw/nars/reserves/big-island/manukamp.PDF • Portions of 10,142-acre Puu O Umi NAR = Puu O Umi NAR: http://hawaii.gov/dlnr/dofaw/nars/reserves/big-island/puuoumimp.PDF • Portions of 1,620 acre Olokui NAR = http://hawaii.gov/dlnr/dofaw/nars/managing-the-natural-area-reserves • Portions of 3,578.8-acre Hono O Na Pali NAR = http://hawaii.gov/dlnr/dofaw/nars/managing-the-natural-area-reserves • Portions of 5,759-acre Pelekunu NAPP = Pelekunu NAPP: http://hawaii.gov/dlnr/dofaw/napp/Pelekunu_LRP_FINAL%20FINAL.doc Hono O Na Pali NAR: http://hawaii.gov/dlnr/dofaw/nars/reserves/kauai/KIHonoonapalimp.PDF • 5 acres future Maui Medical Plaza project-wetlands mitigation for SMA permit

Contextual Measure	Cumulative acres for 2004-2010
Number of acres of coastal habitat protected through acquisition or easement using non-CZM or non-CELCP funds	404.163 acres = The Legacy Land Conservation Program has provided partial funding for two closed projects for the fee acquisition and protection of coastal lands: the National Tropical Botanical Garden received a grant for the acquisition of 169.87 acres of coastal lands in Honomaele, Maui, for the extension of NTBG's Kahanu Gardens and the protection of coastal vegetation (hala); the County of Hawaii received a grant for the purchase of 234.293 acres on Kawa Bay, in Kau, Island of Hawaii, for establishment of a County park and protection of wildlife habitat (turtles, seabirds, anchialine ponds). Additional coastal projects have been funded and are pending. For more information, please contact Molly Schmidt, 586-0921.

Source: Emma Yuen, Natural Area Reserve System, DOFAW - DLNR
Norma Bustos, DOFAW - DLNR
*Enforced Wildlife Sanctuary Rules related to illegal fishing, dumping, homeless camps at these sites
** Worked with federal government to enforce rules/regulations and conduct outreach

Management Characterization

Purpose: To determine the effectiveness of management efforts to address those problems described in the above section for the enhancement objective.

1. For each of the wetland management categories below, indicate if the approach is employed by the state or territory and if significant changes have occurred since the last assessment:

Management Categories	Employed by State (Y or N)	Significant changes since last assessment (Y or N)
Wetland regulatory program implementation, policies, and standards	Y*	Y
Wetland protection policies and standards	Y*	Y
Wetland assessment methodologies (health, function, extent)	Y*	N
Wetland restoration or enhancement programs	Y*	N
Wetland policies related public infrastructure funding	N	N
Wetland mitigation programs and policies	Y**	N
Wetland creation programs and policies	Y*	N
Wetland acquisition programs	Y*	Y
Wetland mapping, GIS, and tracking systems	N	N
Special Area Management Plans	Y	N
Wetland research and monitoring	Y*	N
Wetland education and outreach	Y*	N

*Source: *Statewide Comprehensive Outdoor Recreation Plan, 2008 Update*, Department of Land and Natural Resources, 2009

**The U.S. Army Corps of Engineers and The Nature Conservancy are currently working together to establish an In-Lieu Fee Program in the main Hawaiian Islands. The program is currently in development and has not been completed.

2. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.
    a) Characterize significant changes since the last assessment;
    b) Specify if it was 309 or other CZM-driven change (specify funding source) or if it was driven by non-CZM efforts; and
    c) Characterize the outcomes and effectiveness of the changes.

Wetland Regulatory Program Implementation, Policies and Standards

Hawaii is a small state and does not have a separate regulatory program for wetlands. However, wetlands are part of and included within a number of regulatory programs: State Endangered Species laws, State Land Use Law (Ch. 205, HRS), SMA permits (under the CZM law, Ch. 205A, HRS, and the Environmental Impact Statement Law (Ch. 343, HRS). County general and development/community plans and zoning ordinances also provide for consideration of wetland resources.

In 2008, the State Land Use Commission (LUC) took measures to protect important wetlands located in the Kaloko-Honokohau National Historic Park (NP), Kona, Hawaii. The NP contains two large (11 and 15-acre) ancient Hawaiian fishponds with large associated wetlands, more than 150 known anchialine pools, and 596 acres of marine waters. The pools and fishponds provide habitat for nine federally protected and candidate endangered species. The LUC reviewed a petition to reclassify 129.99 acres in North Kona, Hawaii upslope from the NP, from the Agricultural to Urban District. As a condition of approval, the LUC required the developer to engineer, construct, and maintain storm and surface water runoff best management practices to prevent pollutants from entering the wetlands and to institute other best management practices. The developers were also required to prepare a Homeowners Pollution Prevention Plan. The issue of mitigating impacts to the wetlands from adjacent and upslope drainage and runoff had been under discussion for several years. In 2002, the LUC held a pollution prevention forum in West Hawaii which discussed issues pertaining to industrial and commercial development adjacent to and upslope of the Kaloko-Honokohau National Historic Park. This change, i.e., the LUC condition, was not CZM driven. However, CZM staff participated in the pollution prevention forum and OP staff has supported conditions to prevent nonpoint source pollution. The outcomes of this change are difficult to assess because they likely prevented damage to wetland resources but the outcomes of prevention are difficult to measure.

Wetland Protection Policies and Standards

Hawaii's Comprehensive Wildlife Strategy was completed Oct. 1, 2005, by DLNR. It sets forth policies and standards for wetlands protection. This change was not CZM-driven. This document resulted in the articulation of a wildlife protection strategy for the State. It is effective in that it identifies priorities and thus focuses resources to these priority areas.

Wetland Acquisition Programs

The Legacy Land Conservation Program of DLNR was established in 2006 and provides grants to local organizations and agencies seeking to purchase and protect lands having these unique and rare valuable resources.

The County of Hawaii Public Access, Open Space, and Natural Resources Preservation Commission was established in 2006. This Commission develops two prioritized lists of lands for potential acquisition funding from the Public Access, Open Space, and Natural Resources Preservation Fund. It ranks potential County acquisitions and possible partnerships with the State or nonprofit organizations.
http://www.co.hawaii.hi.us/finance/ponc.htm

In 2006, Honolulu voters approved Charter Question 3 which set aside a half-percent of real property tax revenues for land conservation purposes. (Revised Charter of Honolulu, Section 9-204(a)). Pursuant to the charter amendment in 2007, the Honolulu City Council established the Clean Water and Natural Lands Fund (Ordinance 07-18) and the Clean Water and Natural Lands Commission (Reso. 07-355 CD1). The Commission was established to advise the City Council on the use and expenditure of these funds. Actual funding will be part of the City's annual budget process. The Clean Water and Natural Lands Commission has developed criteria for prioritizing annual project applications for land acquisition grants from the Clean Water and Natural Lands Fund.

The above wetland acquisition programs were not CZM-driven. They have been effective in protecting valuable resource areas such as wetlands by providing funds which were not previously available for acquisition. Several of the acquisitions have been to protect wetlands.

3. **(CM)** Indicate whether the CMP has a habitat restoration plan for the following coastal habitats and the approximate time since the plan was developed or significantly updated.

Habitat type	**CMP has a restoration plan** (Y or N)	**Date completed or substantially updated**
Tidal Wetlands	Y	*January 2010
Beach and Dune	Y	2005
Nearshore	Y	2005

*Source:Norma Bustos, DOFAW - DLNR

Hawaii has the following plans which contain wetland restoration plans.

- Draft Master Plan for Pouhala Marsh Restoration, completed and revisions made to Wildlife Sanctuary Rules (HAR 126)
- Kure Atoll Management Plan, updated and Revised Wildlife Sanctuary Rules
- *Hawaii's Comprehensive Wildlife Strategy*, Oct. 1, 2005, DLNR.
- The *Draft Revised Recovery Plan for Hawaiian Waterbirds*, 2005, USFWS.

The following are examples of recent restoration and management plans prepared by non-profit organizations that incorporate objectives relating to the protection/conservation/restoration of wetlands.

- *Hilo Bay Watershed-Based Restoration Plan* (2005) UH and the Hilo Bay Watershed Advisory Group.
- *Koolaupoko Watershed Restoration Action Strategy* (2007) prepared by Kailua Bay Advisory Council.
- *Koolau Mountains Watershed Partnership Action Plan* (2005) prepared by Koolau Mountains Watershed Partnership.
- *Kohala Mountains Watershed Management Plan* (2005) prepared by Kohala Mountains Watershed Partnership.
- *Kauai Watershed Alliance Watershed Management Plan* (2005) prepared by Kauai Watershed Alliance.

Source: SCORP, p. 179

Priority Needs and Information Gaps

Gap or need description	**Select type of gap or need** (regulatory, policy, data, training, capacity, communication & outreach)	**Level of priority (H, M, L)**
Funding for wetland acquisition, restoration and enhancement, and assessment and monitoring	Capacity	H

Enhancement Area Prioritization

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

   High X
   Medium ____
   Low ____

   Briefly explain the level of priority given for this enhancement area.

2. Will the CMP develop one or more strategies for this enhancement area?

   Yes ____
   No X

   Briefly explain why a strategy will or will not be developed for this enhancement area.

Most of the loss of wetlands through development and infill occurred in the past, prior to the stringent regulations of today. Regulatory mechanisms at the State and County level including but not limited to endangered species laws, the State Land Use Law (Chapter 205, HRS), County zoning ordinances, the SMA permit system (Chapter 205A, HRS) and environmental impact assessments (Chapter 343, HRS) provide strong protection from urban development for wetlands. In addition, the Federal permits under the U.S. Army Corps of Engineers provide for further review of proposals for development impacting wetlands. It is difficult to develop or fill in a wetland for urban use in today's regulatory environment.

However, wetlands still are subject to threats from hydrological changes, pollution, erosion, and invasive species. Active management and habitat restoration would benefit a number of wetlands. However, resources for wetland management and restoration are scarce. The USFWS provides technical assistance and prepares recovery plans for wetlands.

Additional funding is needed for management and restoration programs. However, funding is a challenge which is universal to all of the enhancement areas.

The CZM Program has had to prioritize the areas for which it will prepare strategies in order to be able to achieve program changes. While wetlands are an important resource, other enhancement areas have been selected as high priority for Sec. 309 funding. The CZM Program will continue to address wetlands under its Coastal Nonpoint Source Pollution Control Program and other program activities.

Cumulative and Secondary Impacts

Section 309 Enhancement Objective
Development and adoption of procedures to assess, consider, and control cumulative and secondary impacts of coastal growth and development, including the collective effect on various individual uses or activities on coastal resources, such as coastal wetlands and fishery resources.

Resource Characterization
Purpose: To determine the extent to which problems and opportunities exist with regard to the enhancement objective.

1. Identify areas in the coastal zone where rapid growth or changes in land use require improved management of cumulative and secondary impacts (CSI) since the last assessment.

Geographic Area	Type of Growth or change in land use	Rate of Growth or change in Land Use	Types of CSI
Hawaii County	Population Growth	+29,159 persons 19.6 % increase	Increase in population means increase in resource use and impacts. Increased sedimentation adversely affects coral reefs and marine life; increases turbidity; creates mud flats and discolors nearshore water. Increased nutrients stimulate plant growth particularly algal growth. Increased runoff from urban areas transports toxic pollutants into streams and near shore waters.
Honolulu County	Population Growth	+31,416 persons 3.6 % increase	See above.
Maui County	Population Growth	+17,063 persons 13 % increase	See above.
Kauai County	Population Growth	+6,066 persons 10.4 % growth	See above.
Statewide	Population Growth	0.7 (2006) to 0.5 (2009) growth	See above.
Hawaii County	# of Residential Construction Permits	2006—2,484 2007—1,852 2008—1,105	Reduced number of permits because of economic recession.

Geographic Area	Type of Growth or change in land use	Rate of Growth or change in Land Use	Types of CSI
Honolulu County	# of Residential Construction Permits	2006—1,724 2007—1,244 2008—719	Reduced number of permits because of economic recession.
Maui County	# of Residential Construction Permits	2006—1,083 2007—1,062 2008—535	Reduced number of permits because of economic recession.
Kauai County	# of Residential Construction Permits	2006—474 2007—374 2008—201	Reduced number of permits because of economic recession.
Urban Land Use District	Reclassifications to or from the Urban Dist.	2006—200,397 Ac. 2009—201,680 Ac. +1,283 Ac.	Increase in acres reclassified could result in impacts to resources
Rural District	Reclassifications to or from the Rural District	2006—10,779 Ac. 2009—11,511 Ac. +732 Ac.	Increase in Rural areas could result in fewer impacts to resources
Agricultural District	Reclassifications to or from the Ag. District	2006—1,928,034 Ac. 2009—1,925,995Ac. -2,039 Ac.	Acreage lost from the Agricultural District is about the same rate from year 2000 to 2005, at about -2,269 acres
Conservation District	Reclassification to or from the Con. District	2006—1,973.034 Ac. 2009—1,973,633 Ac. +24 Ac.	Many fewer acres are being lost to other land uses. Year 2000 to 2005 is -2,368

Source: U.S. Census Bureau, Population Division, U.S. Census Bureau and Hawaii Department of Business, Economic Development and Tourism, Estimated Acreage of Land Use Districts 1969-2005, State of Hawaii Data Book, Informal Communication from the State LUC, based on State of Hawaii Data Book, 2004, Table 6.04 Estimated Acreage of Land Use Districts, by Islands: December 31, 2004; and, current data from the LUC completed boundary amendment dockets from January 2005 to January 2006.

Informal Communication from the LUC. Updated 2009 total based on the LUC completed boundary amendment dockets from January 2006 to January 2010. The acreage figures are under-counted due to no data from the individual Counties providing figures for less than 15 acres land use boundary amendments, done by the Counties authority under Chapter 205, HRS.

Information on population growth and development trends assist in identifying areas where rapid growth and changes have occurred and where there are cumulative and secondary impacts.

Hawaii's coastal zone includes the entire State. The following table shows that the greatest percentage increases in population growth since 2000 have occurred in Hawaii

County, followed by Maui County, Kauai County, and the City and County of Honolulu. However, in terms of number of persons, the City and County of Honolulu experienced the greatest increase, 31,416 persons, followed by Hawaii County with an increase of 29,159 persons. The last assessment examined population growth during the period 2000-2005. During that time period, the ranking among the Counties in terms of percentage change in growth was the same as the period from 2000-2009 but the percent changes were lower (Hawaii County 10.7%; Maui County 8.7%; Kauai County- 6.9% and City and County of Honolulu 3.7%). The increases in population growth on Hawaii County and Maui County indicate that these are areas which have experienced growth and change.

Geographic Area	Population Estimates		Change, 2000 to 2009	
	July 1, 2009	April 1, 2000 Estimates Base	Number	Percent
Hawaii	**1,295,178**	**1,211,538**	**83,640**	**6.9**
Hawaii County	177,835	148,676	29,159	19.6
Honolulu County	907,574	876,158	31,416	3.6
Kalawao County	83	147	-64	-43.5
Kauai County	64,529	58,463	6,066	10.4
Maui County	145,157	128,094	17,063	13.3

Dash (-) represents zero or rounds to zero. (X) Not applicable.

Note: The April 1, 2000 estimates base reflects changes to the Census 2000 population resulting from legal boundary updates, other geographic program changes, and Count Question Resolution actions. All geographic boundaries for the 2009 population estimates series are defined as of January 1, 2009.

Source: U.S. Census Bureau, Population Division

Hawaii's statewide growth rate has been slowing as shown in the following tables: Between 2000 and 2005, the average rate of growth was 0.7 %. From 2006 to 2009, the average rate of growth declined to 0.5 %. Population growth in 2007 was the lowest since 2000 at 0.1%. This low population growth was mainly due to the military deployment from Hawaii to the U.S. Mainland that year.

Date		Total Resident Population	Growth Rate (%)
2000:	1-Jul	1,211,566	0.1
2001:	1-Jul	1,218,305	0.6
2002:	1-Jul	1,228,069	0.8
2003:	1-Jul	1,239,298	0.9
2004:	1-Jul	1,252,782	1.1
2005:	1-Jul	1,266,117	1.1
Average Rate of Growth			0.7

Date		Total Resident Population	Growth Rate (%)
2006:	1-Jul	1,275,599	0.7
2007:	1-Jul	1,276,832	0.1
2008:	1-Jul	1,287,481	0.8
2009:	1-Jul	1,295,178	0.6
Average Rate of Growth			0.5

Source: U.S. Census Bureau and Hawaii Department of Business Economic Development & Tourism

The number of permits for new residential construction on the Neighbor Islands combined is greater than that of the City and County of Honolulu. Since 2004, Hawaii County has outpaced the City and County of Honolulu in permits for new residential construction. The effects of the economic downturn are shown in the sharp decline in residential permits in 2008 (an over 50% drop statewide). The following table illustrates the growth that has been occurring in Hawaii County and Maui County.

PRIVATE RESIDENTIAL CONSTRUCTION AND DEMOLITION AUTHORIZED BY PERMITS, BY COUNTY: 2000 TO 2008

			Other counties			
Category and year authorized	**State total**	**City and County of Honolulu**	**Total**	**Hawaii**	**Kauai**	**Maui**
2000	**4,049**	**1,674**	**2,375**	**1,260**	**273**	**842**
2001	**3,789**	**1,573**	**2,216**	**1,129**	**320**	**767**
2002	**4,323**	**1,822**	**2,501**	**1,243**	**450**	**808**
2003	**5,558**	**2,315**	**3,243**	**1,932**	**422**	**889**
2004	**5,568**	**1,828**	**3,740**	**2,179**	**401**	**1,160**
2005	**6,026**	**1,917**	**4,109**	**2,698**	**440**	**971**

Category and year authorized	State total	City and County of Honolulu	Other counties Total	Hawaii	Kauai 1/	Maui
2006	**5,765**	**1,724**	**4,041**	**2,484**	**474**	**1,083**
2007	**4,532**	**1,244**	**3,288**	**1,852**	**374**	**1,062**
2008	**2,560**	**719**	**1,841**	**1,105**	**201**	**535**

Source: State of Hawaii Data Book

Changes In Land Use Districts During Last Assessment Period 2000-2005

Acreage in State Land Use Districts

	2000	2005	Change
Urban	193,308	197,085	+3,777
Rural	10,010	10,870	+860
Agricultural	1,933,066	1,930,797	-2,269
Conservation	1,976,004	1,973,636	-2,368

Source: Estimated Acreage of Land Use Districts 1969-2005, State of Hawaii Data Book

Changes In Land Use Districts During Current Assessment Period

Acreage in State Land Use Districts

	2006*	2009**	Change
Urban	200,397	201,680	+1,283
Rural	10,779	11,511	+732
Agricultural	1,928,034	1,925,995	-2,039
Conservation	1,973,609	1,973,633	+24

* Informal Communication from the LUC. Based on State of Hawaii, Data Book 2004, Table 6.04 Estimated Acreage of Land Use Districts, by Islands: December 31, 2004; and, current data from the LUC completed boundary amendment dockets from January 2005 to January 2006.
**Informal Communication from the LUC. Updated 2009 total based on the LUC completed boundary amendment dockets from January 2006 to January 2010. The acreage figures are under-counted due to no data from the individual Counties providing figures for less than 15 acres land use boundary amendments, done by the Counties authority under Chapter 205, HRS.

Land Use Commission Decision and Orders for Land Use District Boundary Amendments (15 acres and over only) Source: Land Use Commission

2010
BR09-784 Office of Planning – Ka Iwi Coastline; U to C; 215 acres; approved/pending 4/2010

2009
A07-777 Hawaiian Memorial Life Plan; C to U; 56.6 acres; denied 11/6/2009
A06-771 DR Horton Schuler Homes, 1,553.844 acres; denied 9/30/09
A07-772 A&B Properties A to U 94.352 acres at Waiakoa, Maui; approved 2/20/09
*A99-728(b) Kroc Center; Kapolei, Oʻahu; 15 acres A to U; approved 11/13/09
A05-760 Pukalani Associates, LLC; Kula, Maui; 87.702 acres A to U; approved 4/29/09

2008
A06-770 Shopoff Group, Kona, Hawaii 129.99 acres A to U; approved 10/21/08
A06-767 Waikoloa Mauka, South Kohala, Hawaii, 731.58 acres A to R; approved 6/10/08
A07-773 Emmanuel Lutheran Church Maui A to U 25.263 acres; approved 3/7/08

2007
A06-763 Kapolei Property Dev. Kapolei, Oahu, A to U 344.519 acres; approved 11/20/07
A05-755 Hale Mua, Waiehu, Maui, 117.293 A to U; approved 2/12/07
*A99-728(a) UHWO, Kapolei, Oʻahu; 500.327 acres A to U; approved 8/13/07

2006
A05-758 Pupukea Charitable Org., Oahu, 28.759 acres A to C. 5.219 acres C to A; approved 4/24/06
A04-753 Aina Nui Corporation; Kapolei, Oʻahu; 174.209 acres A to U; approved 4/10/06
A04-751 Maui Land & Pineapple Co. Inc.; Lahaina, Maui; 310 acres A to U; approved 6/30/06
A05-757 McCully; South Hilo, Hawaiʻi; 4.6 acres C to A; denied 5/9/06

*These dockets are sub-sets of the original A99-728 HCDCH that reclassified 1,300 acres from A to U in Kapolei. These LUC actions only created separate dockets for these new projects with a set of conditions that included some from the original docket, some amended, and some deleted.

In 2009, Hawaii experienced the worst economic conditions in forty years. If economic conditions do not improve for a few more years, as some economists predict, population growth may also slow. Slower growth may reduce the future cumulative and secondary impacts on coastal resources. However, one of the difficulties is that resource management programs have faced budget reductions and there is a need to restore many of these programs in order to address and mitigate cumulative and secondary impacts. For example, the Executive Supplemental Budget Request for FY11 category for Hawaii

DLNR showed a 18.4% cut in positions and a 30.1% cut in funding. In the Supplemental Budget Request, the number of positions was reduced from 491.25 to 401.00 and funding was reduced from $33,267,630 to $23,251,540. The Legislature restored a few positions without funding (to allow for future filling of the positions if the economy improves). However, overall the budget for natural resources management was greatly reduced.

Growth and development can have cumulative and secondary impacts on coastal rare and endangered species and their habitats, wetlands, anchialine ponds, salt ponds, fishery resources, open space, public access, and nonpoint source pollution. The narrative on management characterization below will explain which of these coastal resources may be more vulnerable than others because of the degree of management protection provided.

2. Identify sensitive resources in the coastal zone (e.g. wetlands, waterbodies, fish and wildlife habitats, critical habitat for threatened and endangered species) that require a greater degree of protection from cumulative or secondary impacts of growth and development. If necessary additional narrative can be provided below to describe threats.

Land-Based Critical Habitat for Rare and Endangered Species: Environmental impact statements are required for most master planned developments. Flora and fauna surveys are conducted. The State LUC is required to consider impacts on conservation resources in its decision-making. As a result, critical habitat for rare and endangered species are protected through conditions of reclassification or zoning, including provisions for protected areas, buffer areas and/or mitigation measures. Level of threat: Low.

Wetlands and Anchialine Ponds: Wetlands and anchialine ponds are identified through the environmental impact statement review process. Wetlands and anchialine ponds provide habitat for rare and endangered birds and aquatic species. The LUC is required to consider impacts on conservation resources in its decision-making. As a result, wetlands and ponds are usually protected through conditions of reclassification or zoning including provisions for protected areas, buffer areas, and/or mitigation measures. However, threats to water quality due to nonpoint source pollution are high. Direct threats through human usage or degradation (reported instances of bleach dumped into anchialine ponds) are high. Level of Overall Threat: Medium.

Fisheries Resources and Coral Reefs: There are regulations to manage fisheries resources and taking of coral resources although resources for enforcement are low. Nonpoint source pollution indirectly affects fishery resources and coral reefs since both of these resources are sensitive to water quality and siltation. The level of threat from nonpoint source pollution: When nutrients are discharged to water bodies, they can quickly stimulate plant growth, particularly algal growth in marine waters. A significant and unsightly algal boom off the West Maui coast has generated public concern. High.

Public Access: See public access assessment.

Coastal Open Space: Coastal open space resources are identified during the environmental impact review process. Regulatory protection for coastal open space is not as strong as for rare or endangered species. If there is strong public and community interest in protecting the coastal open space, a developer may agree to set aside a coastal buffer area as a condition of development. Threat: High.

Management Characterization

Purpose: To determine the effectiveness of management efforts to address those problems described in the above section for the enhancement objective.

1. For each of the management categories below, indicate if the approach is employed by the state or territory and if significant changes have occurred since the last assessment:

Management Categories	Employed by State	Significant changes since last assessment
Regulations	Y	Y
Policies	Y	N
Guidance	Y	Y
Management Plans	Y	N
Research, assessment, monitoring	Y	N
Mapping	Y	N
Education and Outreach	Y	N

2. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.

This information is provided under Chapter II summary of Completed Section 309 Efforts. CSI was a priority during the last Assessment and Strategy and there have been several activities undertaken in this category.

Priority Needs and Information Gaps

Using the table below, identify major gaps or needs (regulatory, policy, data, training, capacity, communication and outreach) in addressing each of the enhancement area objectives that could be addressed through the CMP and partners (not limited to those items to be addressed through the Section 309 Strategy). If necessary, additional narrative can be provided below to describe major gaps or needs.

Gap or need description	**Type of gap or need** (regulatory, policy, data, training, capacity, communication & outreach)	**Level of priority** (H,M,L)
Not all Counties have storm water management ordinances.	Regulatory	H
Lack of awareness of best management practices to reduce runoff and of low impact design measures.	Outreach	M

There are a number of best management practices which can be utilized to reduce runoff including but not limited to the use of infiltration basins and trenches, constructed wetlands, wet ponds, pervious or porous pavements, vegetated open channels, bioretention systems, detention and retention ponds and vaults, vegetated buffer areas, and street surface and subsurface storage. The CZM Program finds that there is a lack of familiarity with the use of these techniques and that training would increase acceptance and use of these techniques.

Enhancement Area Prioritization

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

   High ____
   Medium X
   Low ____

   Briefly explain the level of priority given for this enhancement area.

2. Will the CMP develop one or more strategies for this enhancement area?

   Yes ____
   No X

   Briefly explain why a strategy will or will not be developed for this enhancement area.

A Strategy will not be developed for this enhancement area. The nonpoint source pollution components of this enhancement area will be addressed by the ongoing activities of the Coastal Nonpoint Source Pollution project within the CZM Program. In addition, CSI are addressed through the ongoing functions of the Land Use Division of OP. The Land Use Division, OP, reviews proposed changes to State Land Use District boundaries and through this function, assesses the impact of growth and development on coastal resources. Impacts on endangered and threatened species and their habitats, native plants and wildlife, wetlands, beach and open space resources, water quality, public access, and historic sites, are carefully reviewed and assessed. Mitigating

measures in the form of conditions are proposed to address these impacts. Recommendations may also be made to modify or deny development proposals.

Aquaculture

Resource Characterization

Purpose: To determine the extent to which problems and opportunities exist with regard to the enhancement objective.

1. Generally characterize the private and public aquaculture facilities currently operating in your state or territory.

Type of Existing aquaculture facility	**Describe recent trends**	**Describe associated impacts or use conflicts**
Algae	Increases in nutrient products and byproducts of algae. New research and development activities for military fuel.	Competition for resources, impacts on traditional practices and recreational activities, and threats to indigenous species.
Shellfish	Increases in new markets (i.e., India and China); new product industries (i.e., bivalve shellfish); and resurgence of fresh water prawn industry.	Competition for resources, impacts on traditional practices and recreational activities, and threats to indigenous species.
Finfish	Expansion of tilapia farming nationwide and increasing acceptance of tilapia products to mainstream consumers.	Competition for resources, impacts on traditional practices and recreational activities, and threats to indigenous species.
Nonfood items	New research and development of brood stock and seed stock for Specific Pathogen Free (SPF) shellfish.	Competition for resources, impacts on traditional practices and recreational activities, and threats to indigenous species.

The common definition of Aquaculture is the farming of aquatic organisms such as fish, shellfish, and even plants. The term aquaculture refers to the cultivation of both marine and freshwater species and can range from land-based to open-ocean production.

Because of the abundance of water and variety of environments, Hawaii is the ideal location for aquaculture. Hawaii has warm year-round temperatures for growing tropical, subtropical and temperate aquatic species. Solar intensity in certain parts of the Islands is among the highest of any state. Trade winds blow 70 percent of the time and weather is generally considered mild and pleasant. Aquaculture has been in use in Hawaii for many years. In fact, fish farming was practiced by the first Polynesians in the Hawaiian Islands more than 1,000 years ago. Hawaiians built complex fish ponds long before the arrival of Captain Cook.

The more modern varieties of aquaculture found in Hawaii today began in the early 1960's with research on the potential of oyster culture and mullet farming, and studies of mass-hatching techniques for freshwater prawns imported from Malaysia. Today, Hawaii's aquaculture industry is divided into four basic categories: algae, such as ogo seaweed; shellfish, such as marine shrimp, freshwater prawns, oysters and clams; finfish, such as tilapia, moi, and catfish; and nonfood items, which include aquarium fish and plants, brood stock and seed stock.

Expertise in aquaculture in Hawaii encompasses a wide variety of species and technologies. Public and private research organizations have pioneered the development of extensive, semi-intensive and intensive cultural systems and regularly consult around the world. Local entities have extensive expertise in the spawning and rearing of mullet, milkfish, freshwater prawns, marine finfish, and marine shrimp. Several companies specialize in the production and sale of certified disease-free shrimp broodstock and seedstock, and oyster and clam seedstock. In addition, Hawaii is home to leading technology companies in microalgae and seaweed production.

Since 2005, Hawaii's aquaculture industry has moved steadily forward, breaking new ground and establishing solid track records. The most recent plans in the algae industry are those between the State Department of Agriculture and the Department of Defense to spur the growth of algae in Hawaii for the development of military fuel as part of an aggressive drive by the Pentagon to reduce its dependence on foreign oil and increase renewable energy sources. In addition to the military fuel project, Cyanotech Corp. has one of the largest algae farms in the nation at Keahole Point that produces nutrient products BioAstin, natural Astaxanthin, and Hawaiian Spirulina Pacifica.

The shellfish industry has been actively increasing its markets in India and China with SPF broodstock. Efforts are also currently underway to establish the bivalve shellfish industry in Hawaii. Bivalve shellfish such as Pacific Oysters and Manila clams were chosen since their culture methods are well known and because they have been cultured in Hawaii previously. Another shellfish industry trying to establish a productive base market is the fresh water prawns industry. Hawaii's fresh water prawn industry is only now beginning to recover after devastating floods and disease closed farms on Oahu.

In the finfish industry, Hawaii has been in the forefront of tilapia farming with the largest number of tilapia farms in the United States. Hawaii leads California and Florida in the number of tilapia farms and total sales of reared food-sized tilapia. Although tilapia farming has been extremely successful, it has been a difficult challenge to get local acceptance of tilapia as a valued farmed product. In recent months tilapia has gained more mainstream acceptance through efforts of the Department of Agriculture's Aquaculture Development Program (ADP) and well known chefs such as Alan Wong. The increased acceptance of tilapia in the local community helps to broaden Hawaii aquaculture industry and increase Hawaii's ability to produce its own food and will help to create a sustainable future for its island communities.

Other finfish industry changes involve the controversy over the open ocean cages for Hawaii's offshore farming operation. Currently there are two offshore aquaculture tenants in Hawaii, Kona Blue Water Farms (now owned by Keahole Point Fish LLC) and Hukilau Farms. Some scientists, environmentalists, and native Hawaiians believe that waste from large fish pens damage the environment below the cages and farmed fish spread disease to wild populations. Others believe that some of the released fish feed do not normally appear in the ocean and can thus disrupt the diets of the wild fish that consume it.

Although it is understood that the environmental concerns about aquaculture activities include threats to indigenous species; competition for resource use; impacts on traditional practices and recreational activities, these are difficult to monitor, regulate and address. The State's goal is to ensure a sustainable aquaculture industry that promises economic and environmental benefits. Economies of scale imply that ranching can produce fish at lower costs than industrial fishing, leading to better human diets and the gradual elimination of unsustainable fisheries. With proper management, support, and regulation Hawaii's aquaculture industry can achieve this.

Management Characterization:

Purpose: To determine the effectiveness of management efforts to address those problems describe in the above section for the enhancement objective.

1. For each of the management categories below, indicate if the approach is employed by the state or territory and if significant changes have occurred since the last assessment:

Management Categories	Employed by state/territory	Significant changes since last assessment (Y or N)
Aquaculture regulations	Y	N
Aquaculture policies	Y	N
Aquaculture program guidance	Y	N
Research, assessment, monitoring	Y	N
Mapping	Y	N
Aquaculture education & outreach	Y	N
Other (please specify)	Y	N

2. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.

   a) Characterize significant changes since the last assessment;
   b) Specify if it was a 309 or other CZM driven change (specify funding source) or if it was driven by non-CZM efforts; and

c) Characterize the outcomes and effectiveness of the changes.

Although there has been steady forward movement in the Hawaii aquaculture industry, there has not been any significant changes since the last assessment.

Priority Needs and Information Gaps

Using the table below, identify major gaps or needs (regulatory, policy, data, training, capacity, communication and outreach) in addressing each of the enhancement area objectives that could be addressed through the CMP and partners (not limited to those items to be addressed through the Section 309 Strategy). If necessary, additional narrative can be provided below to describe major gaps or needs.

Gap or need description	Type of gap or need (regulatory, policy, data, training, capacity, communication and outreach)	Level of priority (H, M, L)
No historical scientific data on impact to local waters & marine life (i.e., use of antibiotics, accumulation of wastes or excess feed, etc.)	Data	M
Lack of monitoring and enforcement of permitting conditions	Regulatory	M
Lack methods for addressing cultural concerns	Policy, communication and outreach	H

Enhancement Area Prioritization

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

High ____
Medium X
Low ____

Briefly explain the level of priority given for this enhancement area.

Priority need in this area is Medium. According to the State Department of Agriculture, Hawaii's commercial aquaculture sector has expanded from 13 farms in 1976 to 100 in 2003. Continued expansion with more species cultured and substantial monies invested is projected. Targeted sectors for greater development based on the industry's track record to date are: 1) high value seafood products for local consumption and export; 2) macroalgae or seaweeds for food or specialty chemicals; 3) microalgae for health foods or specialty chemicals; 4) year-round production of specific pathogen-free broodstock and seedstock; 5) marine and freshwater aquarium species for export; and 6) offshore and open ocean production of fish and pearl oysters. Research and educational activities are also expected to accelerate as new technological improvements are developed to sustain the rapid expansion of the industry, and as increasing numbers of trained people are needed in Hawaii and around the world.

2. Will the CMP develop one or more strategies for this enhancement area?

Yes ____
No X

Briefly explain why a strategy will or will not be developed for this enhancement area.

There are no plans at this time, to develop additional strategies for this enhancement area. The existing State ADP provides essential support services to encourage further growth and diversification of the aquaculture industry. ADP is a planning, development, and problem-solving organization whose goals are to assist in the start-up of production and service businesses, and to contribute to their success. Specific activities include planning and policy formulation, new business development, permit facilitation, marketing assistance, disease diagnosis and prevention assistance, and co-funding of statewide technical extension projects.

Source: Personal Communications with Todd Low, Aquaculture Development Program, State of Hawaii, April 2010.
Food & Water Watch, *The Empty Promise of Ocean Aquaculture in Hawaii: Lessons on factory fish farming from an industrial testing ground*, April 2010.

Special Area Management Planning

Section 309 Enhancement Objective
Preparing and implementing special area management plans for important coastal areas

> The CZMA defines a Special Area Management Plan (SAMP) as "a comprehensive plan providing for natural resource protection and reasonable coastal-dependent economic growth containing a detailed and comprehensive statement of policies; standards and criteria to guide public and private uses of lands and waters; and mechanisms for timely implementation in specific geographic areas within the coastal zone. In addition, SAMPs provide for increased specificity in protecting natural resources, reasonable coastal-dependent economic growth, improved protection of life and property in hazardous areas, including those areas likely to be affected by land subsidence, sea level rise, or fluctuating water levels of the Great lakes, and improved predictability in governmental decision making."

Resource Characterization
Purpose: To determine the extent to which problems and opportunities exist with regard to the enhancement objective.

1. Identify geographic areas in the coastal zone subject to use conflicts that can be addressed through special area management plans (SAMP). Also include areas where SAMP have already been developed, but new issues or conflicts have developed that are not addressed through the current plan. If necessary, additional narrative can be provided below.

In Hawaii, Community Development Districts (CDD), Natural Area Reserves, Marine Life Conservation Districts (MLCD), Estuarine Reserves, and Wildlife Sanctuaries have been identified as Special Area Management.

Community Development Districts (CDD)

CDDs are lands designated by the State government in support of alternative methods for managing and financing infrastructure required to support community development. HCDA manages the State's CDDs. Because of the following priority of uses, Chapter 206E, HRS, established **Kaka'ako** and **Kalaeloa** as Hawaii's CDDs: No new districts have been established since the last assessment.

Natural Area Reserves

Hawai'i possesses unique natural resources such as geological and volcanological features and distinctive marine and terrestrial plants and animals, many of which occur nowhere else in the world, and are highly vulnerable to loss by the growth of population

(Section 195-1, HRS). To protect and preserve these unique natural assets, and to provide base lines against which changes are being made in the environments, the Natural Area Reserves System (NARS) was established.

DLNR, DOFAW manages the State's 19 NARS consisting of more than 109,000 acres. ***http://www.state.hi.us/dlnr/dofaw/nars/narsfr.html***.

Hawaii's coastal waters feature different habitats, each displaying a wide array of marine life. These habitats and resources have always been important in the lifestyles of Hawaii's people. Recreational fishing is enjoyed by many local residents. Snorkeling and scuba diving are popular activities with residents and tourists, and they offer excellent opportunities to see reef fish in their natural environment. Managing activities affecting these resources for the enjoyment of the current and future generations is essential. To ensure that these resources are sustainable, Chapter 190, HRS, established the MLCDs. Currently, there are 11 MLCDs on three islands – Hawai‘i, Maui, and O‘ahu. This number has not changed since the last assessment. http://hawaii.gov/dlnr/dar/coral/mlcd.html

Estuarine Reserves and Wildlife Sanctuaries

The National Estuarine Research Reserves System defines estuary as part of a river or stream or other body of water having unimpaired connection with the open sea, where the sea water is measurably diluted with fresh water derived from land drainage (15 CFR Part 921.2). Estuarine sanctuary, on the other hand, refers to a research area which may include any part or all of an estuary, adjoining transitional areas, and adjacent uplands, constituting to the extent feasible a natural unit set aside to provide scientists and students the opportunity to examine over a period of time the ecological relationships with the area. Unlike other coastal states, Hawai‘i does not have many estuaries.

Similar to estuarine reserves, wildlife sanctuaries are home to many native plants and animals endemic to Hawai‘i. Estuarine reserves and wildlife sanctuaries help protect rare ecosystems that are vital to maintaining a healthy and sustainable Hawai‘i.

The following web pages –http://hawaii.gov/dlnr/dar/regulations.html and http://hawaii.gov/dlnr/dar/streams_native_animals.html – provide additional discussion and maps of the estuarine reserves and wildlife sanctuaries in Hawai‘i.

Geographic Area	**Major conflicts**	**Is this an emerging or a long-standing conflict?**
Hanalei, Kauai	Boating and use of resources issues.	Long-standing

Geographic Area	Major conflicts	Is this an emerging or a long-standing conflict?
Hanapepe Salt Ponds, Kauai	Traditional use and encroachment of development, roadway, and runoff and pollution from adjacent and upslope uses.	Long-standing
Kailua Beach and Dune, Oahu	Sea level rise, coral reef protection, sand dune protection and restoration, recreation, hazard mitigation, public access	Emerging
Waianae Coast, Oahu	Commercial ocean recreation e.g., dolphin watches and resource protection. Commercial uses e.g., fishing vs. community recreational and subsistence uses.	Emerging
Kaneohe Bay, Oahu	Commercial and community use conflicts. Impacts on fisheries, coral reefs, and water quality.	Long-standing
Heeia Wetland and Watershed	Impacts from runoff and erosion on traditional uses; potential future incompatible adjacent uses.	Long-standing
East Maui Watershed	Land use and development, septic systems, wastewater systems, runoff and erosion impacting water quality and marine life.	Long-standing
Waiopae Tidepools, Hawaii	Large numbers of visitors, impacts to marine life, coral reefs, historic and cultural sites. Water quality issues/lack of facilities.	Long-standing
Kahaluu Beach Marine Life Conservation District, Kona, Hawaii	Large numbers of visitors, impacts to marine life and coral reef.	Long-standing
Kealakekua Bay, Hawaii	Commercial recreational use, community use and natural resource protection conflicts. Impacts on coral reefs, historic and cultural sites and water quality.	Long-standing

Geographic Area	Major conflicts	Is this an emerging or a long-standing conflict?
Kaloko Ahupuaʻa, Hawaii	Development upslope from Kaloko-Honokohau Historic Park. Runoff and pollution impacts on wetland and aquatic resources.	Emerging
Community Development Districts	Land use conflicts (commercial, recreational).	Emerging
Natural Area Reserves	Invasive species, user conflicts (habitat protection, recreation), need for active management, access conflicts.	Long-standing
Marine Life Conservation Districts	Invasive species, user conflicts (recreation, tourism), enforcement/ compliance with laws, rules and regs, need for management, funding.	Long-standing
Estuarine Reserves, Wildlife Sanctuaries	Invasive Species, altered hydrological regimes, excessive sedimentation, water quality, need for management, funding.	Long-standing

Management Characterization

Purpose: To determine the effectiveness of management efforts to address those problems described in the above section for the enhancement objective.

1. Identify below any special management areas in the coastal zone for which a SAMP is under development or a SAMP has been completed or revised since the last Assessment:

SAMP title	**Status** (new, revised, or in progress)	**Date approved or revised**
Kakaako Makai Master Plan	In Progress	Projected Dec. 2010
Kalaeloa Master Plan	New	March 1, 2006

SAMP title	**Status** (new, revised, or in progress)	**Date approved or revised**
Three Mountain Alliance Mgmt. Plan (Covers 5 NARS: Puu Makaala, Waiakea 1942 Lava Flow, Kahaualea, Manuka and Kipahoehoe) and 2 Wildlife Sanctuaries (Puu Waawaa Forest Bird Sanctuary and Kipuka Ainahou Nene Sanctuary), Hawaii	New	Dec. 31, 2007
Kaena Point, Oahu, Draft Action Plan. April 30, 2008	In Progress	
Strategic Plan for Hawaii's Natural Area Reserves	New	September 2008

2. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.
   a) Characterize significant changes since the last assessment (area covered, issues addressed and major partners);
   b) Specify if it was a 309 or other CZM-driven change (specify funding source) or if it was driven by non-CZM efforts; and
   c) Characterize the outcomes and effectiveness of the changes.

Since 2006, HCDA has embarked on a community master planning project for Kakaako Makai. A vision and guiding principles have been adopted. A community advisory group has been formed. There have been extensive meetings with community and stakeholder groups. The Kakaako Makai Master Plan is expected to be completed by December 2010. This is driven by non-CZM efforts.

486 acres were added to the Hono O Na Pali Natural Area Reserve on March 23, 2009. The Hono O Na Pali Extension consists of intact wet native forest with several species of rare and endangered plants and animals. This change was driven by non-CZM efforts.

5,795 acres were added to the Kahaualea Natural Area Reserve in Puna, Hawaii in 2009. This area includes a kipuka of ohia forest that survives near one of the most active volcanoes in the world. This change was driven by non-CZM efforts.

The Ahihi Kinau NARS is closed from August 1, 2008 to July 31, 2010, because of overuse by commercial and recreational users. This change was driven by non-CZM efforts.

Priority Needs and Information Gaps

Using the table below, identify major gaps or needs (regulatory, policy, data, training, capacity, communication and outreach) in addressing each of the enhancement area

objectives that could be addressed through the CMP and partners (not limited to those items to be addressed through the Section 309 Strategy).

Gap or need description	Type of Gap or Need	Level of Priority
Geographic hot spots-user conflicts	Regulatory and enforcement	H
Geographic hot spots-heavy visitor use	Communication and outreach	M
Geographic hot spots-runoff, pollution, incompatible land uses	Policy and planning	H
NARS, MLCD's, Wildlife Sanctuaries	More data is needed, i.e., biology surveys	M
NARS, MLCD's, and Wildlife Sanctuaries	More funding is needed for management and enforcement activities	H
Kakaako Makai and Kalaeloa	Planning, communication and community outreach	M

Enhancement Area Prioritization

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

   High ____
   Medium X
   Low ____

   Briefly explain the level of priority given for this enhancement area.

   There are government planning and management activities already underway to address NARS, MLCD's, Wildlife Sanctuaries, and CDDs. In some of the geographic "hot spot" areas, community and nonprofit groups have undertaken stewardship activities such as "Reef Check" and "Makai Watch" to protect marine resources. The Hawaii Tourism Authority provides grants totaling over $1 million for community-based natural resource management.

2. Will the CMP develop one or more strategies for this enhancement area?

   Yes ____
   No X

   Briefly explain why a strategy will or will not be developed for this enhancement area.

   Planning and management activities are underway to address many of these special management areas. In addition, a significant amount of funding is available from the

Hawaii Tourism Authority for community-based natural resource management projects. Chapter 201B, HRS, directs the Hawaii Tourism Authority to provide at least $1 million annually to assist projects and programs that support efforts to manage, improve, and protect Hawaii's natural environment and areas frequented by visitors. These funds are being used by community groups to address some of the above-listed "hot spots." The CZM Program had to limit the number of enhancement areas that it selected in order to effectively utilize the funding available under the Section 309 program. Ocean Resources and Shoreline Public Access were selected as priority enhancement areas for the CZM Program as explained in this report.

Marine Debris

Section 309 Enhancement Objective
Reducing marine debris entering the Nation's coastal and ocean environment by managing uses and activities that contribute to the entry of such debris

Resource Characterization
Purpose: To determine the extent to which problems and opportunities exist with regard to the enhancement objective.

1. In the table below, characterize the significance of marine/Great Lakes debris and its impact on the coastal zone.

Source of marine debris	**Extent of source** (H,M,L)	**Type of impact** (aesthetic, resource damage, user conflicts, other)	**Significant changes since last assessment** (Y or N)
Land Based – Beach/Shore Litter	M	Aesthetic, ecological, human health and safety, economic impacts	N
Land Based – Dumping	M	Aesthetic, ecological, human health and safety, economic impacts	N
Land Based – Storm Drains and Runoff	M	Aesthetic, ecological, human health and safety, economic impacts	N
Land Based – Fishing Related (e.g., fishing line, gear)	H	Resource damage, ecological impacts, navigation hazard, human health and safety	N
Ocean Based – Fishing (Derelict Fishing Gear)	H	Resource damage, ecological impacts, introduction of alien species, navigation hazard, human health and safety	N
Ocean Based – Derelict Vessels	M	Resource damage, ecological impacts.	N
Ocean Based – Vessel Based (cruise ship, cargo ship, general vessel)	M	Illegal dumping of solid waste at sea.	N
Hurricane/Storm	M	Human health and safety, aesthetic, resource and ecological impacts, economic impacts	N
Other (please specify)	NA	NA	NA

Source: Hawaii Marine Debris Action Plan. January 2010. NOAA

2. If information is not available to fill in the above table, provide a qualitative description of information requested, based on the best available information. See above.

3. Provide a brief description of any significant changes in the above sources or emerging issues

   The Hawaii Marine Debris Action Plan introduced by NOAA in January 2010, "establishes a comprehensive framework for strategic action to reduce the ecological, health and safety, and economic impacts of marine debris in Hawaii by 2020." This Action Plan was completed by NOAA Marine Debris Program, and EPA. These agencies facilitated the development of the Plan with active participation and coordination by other Federal agencies like the U.S. Coast Guard, State agencies, such as DLNR, Hawaii CZM Program, State Department of Health (DOH), UH, and Hawaii Pacific University, the Interagency Marine Debris Coordinating Committee, and many other non-governmental organizations and private entities. The Plan also establishes strategies and goals to promote coordinated action to address the significant threats posed by marine debris in the Hawaiian archipelago.

   According to the Plan, most of Hawaii's marine debris, most particularly derelict fishing gear (DFG) is generated by distant sources and brought over to the Hawaiian Island chain by ocean currents. Significant impacts have resulted from the many different types of marine debris that have accumulated along the coastlines of the Hawaiian Islands. These impacts include ecological, human health and safety, and economic impacts.

   > "Ecological impacts on seabirds, Hawaiian monk seals, green sea turtles, and other coastal and marine species occur from ingestion or an entanglement in marine debris. Large floating marine debris such as DFG continues to ensnare marine life (also called ghost fishing) and in at least one case to date has served as a vector for the introduction of alien species (Zabin et al., 2004). Marine debris causes physical abrasion, breakage, and shading of coral reef habitat. The few studies conducted on reefs outside of Hawaii indicate that impacts to sessile marine invertebrates include damage and death (Chiappone et al., 2005). Additionally, entanglement with derelict monofilament fishing line has been shown to cause significant coral mortality (Asoh et al., 2004). These effects have been shown to create long-lasting changes to the reefs they impact (Precht et al., 2001).
>
> Marine debris is a navigation hazard, posing risks to human health and safety by disabling vessels at sea. While the impact of marine debris on navigation has yet to be quantified, anecdotal evidence comes from accounts of fishing vessels encountering marine debris, requiring crew to dive under water to remove debris wrapped around a propeller. This not only endangers human health and safety but also results in economic impacts. Economic impacts of marine debris have also yet to be well quantified. For example, Hawaii's beaches draw hundreds of

thousands of visitors and residents alike. Litter on Hawaii's beaches degrades the aesthetic quality of Hawaii's environment, a major source of Hawaii's economic revenue."

In Hawaii, the endangered Hawaiian monk seals and threatened green turtles are significantly affected by marine debris. They are directly impacted by ingestion and entanglement, but there is also evidence that degraded plastics may be affecting biological systems and entering the food chain.

3. Do you use beach clean-up data? If so, how do you use this information? Yes, the Hawaii CZM Program reports this data to OCRM on the annual CZMA PMS reports.

This information is used to help provide justification for CZM support of annual beach cleanup activities. It is also used to help inform decision-making and the development of the CZM Program's position on legislation and other proposed activities which pertain to marine debris.

Management Characterization

Purpose: To determine the effectiveness of management efforts to address those problems described in the above section for the enhancement objective.

1. For each of the management categories below, indicate if the approach is employed by the state or territory and if significant changes have occurred since the last assessment:

Management categories	**Employed by state/territory** (Y or N)	**Employed by local governments** (Y, N, Uncertain)	**Significant changes since last assessment** (Y or N)
Recycling incentives	Y	Y	Y
Littering reduction programs	Y	Y	N
Wasteful packaging reduction programs	N	Y	Y
Fishing gear management programs	Y	Uncertain	N
Marine debris concerns in harbor, port, marine, and waste management plans	Y	Uncertain	Y
Post-storm related debris programs or policies	N	N	N
Derelict vessel removal programs or policies	N	N	N
Research and monitoring	Y	N	Y

Management categories	**Employed by state/territory** (Y or N)	**Employed by local governments** (Y, N, Uncertain)	**Significant changes since last assessment** (Y or N)
Marine debris education and outreach	Y	Y	N
Other (please specify)	NA	NA	NA

2. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.
   a) Characterize significant changes since the last assessment;
   b) Specify if it was a 309 or other CZM-driven change (specify funding source) or if it was driven by non-CZM efforts; and
   c) Characterize the outcomes and effectiveness of the changes.

Recycling Incentives: 2004 beverage deposit law that sets a 6 cents premium on plastic/glass/aluminum bottles and beverage cans, 5 cents redeemable on return. The law has been very effective in significantly reducing litter. According to the State DOH, 930 million beverage containers are bought each year. For the year from July 1, 2008 to June 30, 2009, the annual redemption rate was 79%. The year before that, July 1, 2007 to June 30, 2008, was 72 %.

A law effective in 2010, called the Hawaii Electronic Waste and Television Recycling and Recovery Law requires manufacturers of covered electronic devices and televisions to operate recycling programs. Covered electronics include computers, printers, monitors, and televisions. This law should encourage consumers to recycle these items, and should reduce littering and dumping. This law is non-CZM driven.

Wasteful packaging reduction programs: Effective in 201, Maui County enacted a law to ban the use of plastic shopping bags. This is non-CZM driven. Hawaii County and the City and County of Honolulu have considered similar bans. In January 2009, retail outlets on the Marine Corps Base Hawaii and the U.S. Coast Guard voluntarily eliminated the use of plastic bags. This is non-CZM driven.

"Get The Drift and Bag It!" Beach Cleanup program: Hawaii CZM has provided funding to ship supplies over to the neighbor islands for the beach cleanup program every year.

Fishing gear management programs: Large scale removal activities have been conducted through Federal-State-Industry partnerships. From 1996 through 2009, about 700 metric tons of marine debris have been removed from the Northwestern Hawaiian Islands. Most of the debris has been used to generate energy. In 2007 to 2009, about 130 metric tons of marine debris was removed for the Hawaii Nets to Energy Program. The nets are chopped up into small pieces suitable for combustion at Honolulu's H-Power facility. Other significant efforts have been small-scale volunteer supported efforts by small businesses such as dive shops, non-profits, and spearfishing clubs. In 2003, Hawaii CZM

helped provide funding to produce a brochure titled, "Effects of Fishing Gear on Coral Reefs and How You Can Help."

Marine debris concerns in harbor, port, marine, & waste management plans: Established in 2006, the pilot project Pier 38 port reception bin on Oahu has been very successful. The bin receives nets from Hawaii's longline fishermen, community groups, and the City and County of Honolulu. This is not a CZM driven program.

Research and monitoring: Studies have been and are currently being undertaken by the UH Center for Microbial Oceanography, Research and Education, on the effects of degrading plastic polymers on the ocean food chain. Since plastic does not biodegrade, but breaks down into tiny and microscopic pieces, the study focuses on how plastics affect the base of the marine food chain.

UH Sea Grant completed a ghost net identification study in 2005. This study was funded by NOAA Fisheries, Pacific Islands Fisheries Science Center, and Hawaii CZM provided some monies through DLNR. The Study was titled, "Marine Debris of the Northwestern Hawaiian Islands: Ghost Net Identification."

In 2008, Hawaii CZM has funded a study called, "Pacific Regional Marine Debris or Ghostnet Mitigation Project." Hawaii CZM supported the UH Sea Grant College Program in attempting to identify and capture the economic costs of ghostnets on maritime and recreational vessels, coastal tourism, and fisheries. The project attempted to collate and begin the analysis of economic impacts of ghostnets in the Pacific region. The project also attempted to collect and document existing port facilities available for recovering derelict and discarded fishing gear.

Other studies and data have been gathered. Hawaii Pacific University has also done studies to monitor ingested plastics by seabirds.

Priority Needs and Information Gaps

Using the table below, identify major gaps or needs (regulatory, policy, data, training, capacity, communication and outreach) in addressing each of the enhancement area objectives that could be addressed through the CMP and partners (not limited to those items to be addressed through the Section 309 Strategy). If necessary, additional narrative can be provided below to describe major gaps or needs.

Gap or need description	**Type of gap or need** (regulatory, policy, data, training, capacity, communication & outreach)	**Level of priority** (H,M,L)
Reduce the backlog of marine debris at sea and on reefs and beaches	Data, regulatory, capacity, communication, coordination, outreach	H

Gap or need description	**Type of gap or need** (regulatory, policy, data, training, capacity, communication & outreach)	**Level of priority** (H,M,L)
Reduce introduction of solid waste and fishing gear at sea and coastal areas	Communication and outreach, capacity, regulatory, policy	H
Decrease abandoned and derelict vessels	Communication and outreach, capacity, policy	H
Reduce land-based debris in waterways	Communication and outreach, regulatory, capacity	M

Enhancement Area Prioritization

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

High ____
Medium X
Low ____

Briefly explain the level of priority given for this enhancement area.

NOAA MDP and EPA took the lead and facilitated the development of the Hawaii Marine Debris Action Plan which was launched in January 2010. The purpose of the plan is to develop a comprehensive framework for strategies to reduce the impacts of marine debris by 2010. Marine debris has numerous impacts to Hawaii's ocean environment, including ecological, health and safety, and economic. The complexity of the marine debris problem indicates that a concerted coordinated effort should be made to reduce marine debris, and include a wide range of entities, strategies, and activities that would focus efforts to reduce and eradicate the impacts of marine debris on the entire Hawaiian Island archipelago.

2. Will the CMP develop one or more strategies for this enhancement area?

Yes ____
No X

Briefly explain why a strategy will or will not be developed for this enhancement area.

A strategy will not be developed for this enhancement area, because other agencies have taken a lead role in this issue already.

Energy & Government Facility Siting

Section 309 Enhancement Objectives
Adoption of procedures and enforceable policies to help facilitate the siting of energy facilities and Government facilities and energy-related activities and Government activities which may be of greater than local significance

Resource Characterization
Purpose: To determine the extent to which problems and opportunities exist with regard to the enhancement objective.

1. In the table below, characterize the types of energy facilities in your coastal zone (e.g., oil and gas, Liquefied Natural Gas (LNG), wind, wave, Ocean Thermal Energy Conversion (OTEC), etc.) based on best available data. If available, identify the approximate number of facilities by type.

Type of Energy Facility	**Exists in CZ** (# or Y/N)	**Proposed In CZ** (# or Y/N)	**Interest in CZ** (# or Y/N)	**Significant changes since last assessment** (Y or N)
Oil and gas facilities	Y: 12 (Tesoro, Chevron, Kalaeloa Ptrs, HECO/KIUC facilities (9))	N	-	Y
Pipelines	Y: 5 (all Oahu) - Chevron: 2 (1 black oil, 1 clean products) - Tesoro: 2 (1 clean products; 1 synthetic natural gas or SNG) - Military: 1 (linked to Tesoro clean products line)	Y: # unknown - seawater A/C, biofuels, hydrogen	-	Y
Electric transmission cables	Y: # unknown, but many	Y: # unknown, but many	-	Y
LNG	Y: 1 (The Gas Co.)	N	-	Y
Wind	Y: 4	Y: 8-10	-	Y
Wave	Y: 1 (pilot)	Y: 1	-	Y
Tidal	N	N	-	N

Type of Energy Facility	**Exists in CZ** (# or Y/N)	**Proposed In CZ** (# or Y/N)	**Interest in CZ** (# or Y/N)	**Significant changes since last assessment** (Y or N)
Current (ocean, lake, river); Hydropower	Y: 5+ large installations & many small scale installations	Y: 3+ large utility scale installations	-	Y
OTEC	Y: 1	Y: 1-2	-	Y
Solar	Y: 2 utility-scale & many distributed / residential installations	Y: 6, utility-scale & many distributed / residential installations	-	Y
Other (please specify); Bioenergy Waste-to-Energy Geothermal Seawater Air Conditioning	 Y: 3 Y: 1 Y: 1 N	 Y: 12+ Y: 2+ Y: 1 Y: 2	-	Y

2. Please describe any significant changes in the types or number of energy facilities sited, or proposed to be sited, in the coastal zone since the previous assessment.

   - In the 2010 Legislative Session, two bills were introduced proposing to ban the construction or expansion of fossil-fueled petroleum facilities in Hawaii, unless under emergency circumstances. This legislation did not pass, but is expected to be reintroduced in 2011. No new fossil fuel energy facilities are expected to be sited in Hawaii. Expansion of existing transmission facilities is ongoing.

   - Since the development of the Hawaii Clean Energy Initiative (HCEI) in 2008, there has been a significant increase in the types and number of renewable energy facilities sited, or proposed to be sited, in Hawaii's coastal zones. An estimated 45 renewable energy facilities have been proposed, and 10 sited since the last assessment. This includes facilities of all renewable energy technologies. The State Energy Office within DBEDT is assisting all renewable energy developers to find suitable locations for their project(s) and to navigate through the regulatory process.

3. Does the state have estimates of existing in-state capacity and demand for natural gas and electric generation? Does the state have projections of future capacity? Please discuss.

- Please see the estimates below. Estimates for future capacity depend upon population growth and infrastructure improvements. Future projections are currently unavailable.

- Kauai: Capacity – 128 MW (megawatts); Peak Demand – 77 MW
- Oahu: Capacity – 1.67 GW (gigawatts); Peak Demand – 1.2 GW
- Maui: Capacity – 260 MW; Peak Demand – 199 MW
- Lanai: Capacity – 9.3 MW; Peak Demand – 5 MW
- Molokai: Capacity – 11.8 MW; Peak Demand – 6 MW
- Hawaii: Capacity – 269 MW; Peak Demand – 203 MW
- State: Capacity – 2,348.1 MW; Peak Demand – 1690 MW

4. Does the state have any specific programs for alternative energy development? If yes, please describe including any numerical objectives for the development of alternative energy sources. Please also specify any offshore or coastal components of these programs.

- In January 2008, the State of Hawaii entered into a partnership with the U.S. Department of Energy called HCEI. With an ambitious target of using renewable resources, the HCEI aims to supply 70% or more of Hawaii's energy needs by 2030. This innovative and unprecedented partnership builds on the progress the State has made to increase energy independence by decreasing Hawaii's reliance on imported oil. Some objectives of the HCEI are as follows:

Conserve: Use What We Need Efficiently

- Commit to a more energy-efficient lifestyle in our homes and on the road.
- Establish energy-efficient building codes and lower our energy use at work and in our schools.

Convert: Harness What We Have Wisely

- Stop building fossil fuel plants.
- Generate 40% of our energy locally by 2030.
- Harness energy from solar, wind, ocean, geothermal, and biomass resources.
- Establish a sustainable alternative-fuel strategy.
- Embrace hybrid and electric vehicles.
- Modernize our power-grid system.

- In October 20, 2008, an Energy Agreement was signed by the State of Hawaii, the Hawaiian Electric Companies, and the State Consumer Advocate to accelerate the accomplishment of Hawaii's energy objectives in the regulated electric utility sector setting forth Hawaii's clean energy goals and methods of attainment.

- The State of Hawai‘i and the Department of Energy are collaborating closely with partners in Hawai‘i that, for various reasons, are highly motivated to support transformational change in the way energy is generated and used in Hawai‘i. Helping to drive the initiative forward through financing and other support, they include:

- State Public Utilities Commission and legislators
- U.S. Department of Defense (DOD): As the single largest energy user in Hawai‘i, DOD has the largest energy footprint. DOD is building on its excellent track record for taking action to conserve energy and implementing effective, often leading-edge energy-efficiency projects. DOD is currently focused on reducing energy use, increasing its use of renewable resources, and improving our energy security.
- Hawaiian Electric Industries, Inc. (HEI): HEI has committed to a long-term goal of transitioning to 100% renewable energy. HCEI is providing technical resources to assist HEI with analysis, planning, and implementation of projects that will advance that goal.
- Kaua‘i Island Utility Cooperative
- Business community
- Castle & Cooke
- Major hotel chains
- Waikiki Business Improvement District.

The lifeblood of HCEI consists of the more than 100 community members and national experts who have formed five working groups dedicated to helping Hawai‘i harness its clean energy potential. The groups are the Integration Working Group, which oversees the other groups, provides the strategy, and is also tasked with building broad-based support for HCEI. The other four groups are called a) End-Use Efficiency group; b) Electricity; c) Fuels; and d) Transportation. The working groups were conceived as a means to integrate the technical and policy expertise of the U.S. Department of Energy (DOE) with Hawai‘i-based knowledge and project resources. Their role is to set out specific milestones to be achieved, create roadmaps for reaching them, and clear the path to a clean energy future for Hawai‘i. The working groups are made up of local stakeholders, including people from the Hawai‘i State Energy Office, County economic development boards, and Hawaiian Electric Company, as well as national energy experts from DOE and the National Renewable Energy Laboratory (NREL).

- Interisland Cable Project – State will drive the investigation and construction of an undersea cable from wind farms on Maui, Molokai, and/or Lanai to Oahu to provide Oahu with 200 MW – 400 MW+ of power.

- Electric Vehicles (EV) – DBEDT is working to bring EV manufacturers to Hawaii. Includes working with land and business owners to ensure adequate supply/number of charging stations throughout the State.

- Bioenergy Master Plan – Discusses at length the feasibility of developing and sustaining a bioenergy industry in Hawaii, with focus on amount of available natural resources (land, water).

- (Under Development) Renewable Energy Zones – A database created by NREL and DBEDT to identify the areas within the State best suited for renewable energy development. The zones are technology/resources-specific (wind, solar, wave, geothermal, etc.), and overlay the optimal zones with the state and County zoning.

- (Proposed) Feed-In Tariff (FIT) system – Pursuant to a decision and order by the Public Utilities Commission, the HECO Companies (which include HECO, HELCO, and MECO) will adopt specific rates for FIT-eligible projects for a 20-year term.

- (Proposed) Property Assessment Clean Energy Bond Program – State issues bonds for capital, which can be loaned to homeowners and businesses to install photovoltaic or solar systems. Loan is repaid via an assessment on the subject property tax.

5. If there have been any significant changes in the types or number of government facilities sited in the coastal zone since the previous assessment, please describe.

   - State Facilities: Other than the feasibility and environmental studies now being conducted on the viability of an undersea cable between Oahu, Molokai, Lanai, and Maui, there are no significant changes concerning State government facilities.

   - Federal Facilities (Military): Now investigating the feasibility of installing renewable energy facilities on or adjacent to military installations and bases, including solar and bioenergy. Also investigating the feasibility of using biofuels for transportation and energy needs, including the development of biofuel processing facilities and biocrop growth/harvest production in Hawaii.

<u>Management Characterization</u>

Purpose: To determine the effectiveness of management efforts to address those problems described in the above section for the enhancement objective.

1. Does the state have enforceable policies specifically related to energy facilities? If yes, please provide a brief summary, including a summary of any energy policies that are applicable to only a certain type of energy facility.

   The State's enabling Legislation for the Hawaii CZM Program, HRS, 205A-2 (b)(5)(A) Economic Uses, contains a policy relating to the siting of public or private facilities and improvements that are important to the State's economy in suitable locations. This would apply to the siting of energy and governmental facilities. The State does not have CZM enforceable policies directly related to energy facilities.

2. Please indicate if the following management categories are employed by the State or Territory and if there have been significant changes since the last assessment:

Management categories	**Employed by state/territory** (Y or N)	**Significant changes since last assessment** (Y or N)
Statutes or regulations	Y	Y
Policies	Y	Y
Program guidance	Y	Y
Comprehensive siting plan (including SAMPs)	Y	Y
Mapping or GIS	Y	Y
Research, assessment or monitoring	Y	Y
Education and outreach	Y	Y
Other (please specify)	-	-

3. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.

   a) Characterize significant changes since the last assessment;
   - Statutes or regulations – See the HRS list as follows.
   - HRS, 269 – Renewable Portfolio Standards: 40 % of the power sold for consumption in Hawaii must come from renewable energy sources by 2030.
   - HRS, 226-18 – Calls for the efficient and responsible use of Hawaii's energy.
   - HRS, 205 – Allows for the development of renewable energy facilities in certain agricultural districts with D or E rated soil, as determined by the land study bureau.
   - HRS, 201N – Renewable Energy Facility Siting Process: Streamlines and sets deadlines for the siting of renewable energy facilities in Hawaii.
   - HRS, 196 – Calls for the efficient and responsible use of Hawaii's energy.
   - HRS, 196-4 – Calls for the State to create and identify "Renewable Energy Zones," identifying the optimal areas of renewable energy resources by amount and type.
   - HRS, 196-6.5 – Solar Water Heating System Required for New Single-Family Residential Construction: Requires solar water heating systems for new single-family residences, unless a variance is granted by DBEDT.
   - HRS, 196-9 – Requires all new State facilities to by at least LEED Silver certified, thus ensuring the facilities are built with energy savings and efficiency measures in place.
   - HRS, 171-95 – Allows the Board of Land and Natural Resources to lease public lands to renewable energy producers without public auction.

- Tax Credits:
    - Photovoltaics: 35% income tax credit per system
    - Solar Water Heating: 35% income tax credit
    - Wind: 20% income tax credit per system

- **Policies** – See HCEI above.
- **Program guidance** – DBEDT provides technical assistance to all renewable energy developers who seek guidance. This includes identifying suitable sites, navigating the permit process, connecting with the appropriate vendors, understanding policies, and any other guidance sought.
- **Comprehensive siting plan** – See the Renewable Energy Zones project and Bioenergy Master Plan above. Comprehensive siting is critical for the State to reach our energy goals. Renewable energy projects must take into consideration land use availability/allowances and needs of the local community, as well as the State energy demand.
- **Mapping or GIS** – See Renewable Energy Zones project.
- **Research, assessment or monitoring** – DBEDT works with NREL to research renewable energy technologies. DBEDT also monitors and assesses the cost of power and fossil fuels.
- **Education and outreach** – DBEDT regularly conducts/hosts/presents at forums and conferences on clean energy.

b) Specify if it was a 309 or other CZM-driven change (specify funding source) or if it was driven by non-CZM efforts; and
The above changes were not 309 or CZM-driven, but do take into consideration CZM compliance (Guidebooks and permitting materials).

c) Characterize the outcomes and effectiveness of the changes.
Thus far – two years after the creation of HCEI – DBEDT has seen an exponential growth in renewable energy development and interest. The changes listed above have facilitated this growth by peaking interest and providing for assistance through the facility regulatory/siting process.

Priority Needs and Information Gaps

Using the table below, identify major gaps or needs (regulatory, policy, data, training, capacity, communication and outreach) in addressing each of the enhancement area objectives that could be addressed through the CMP and partners (not limited to those items to be addressed through the Section 309 Strategy). If necessary, additional narrative can be provided below to describe major gaps or needs.

Gap or need description	**Type of gap or need** (regulatory, policy, data, training, capacity, communication & outreach)	**Level of priority** (H,M,L)
Complete Renewable Energy Zones database	Capacity, research	H

Gap or need description	**Type of gap or need** (regulatory, policy, data, training, capacity, communication & outreach)	**Level of priority** (H,M,L)
Streamline the permit issuance process while assuring conformance with CZM objectives and policies and balancing economic and environmental goals.	Regulatory, data, training, outreach, communication	H
Identify the available land, landowners, and optimal areas of development	Policy, data, communication	H

Enhancement Area Prioritization

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

   High X
   Medium ____
   Low ____

   Briefly explain the level of priority given for this enhancement area.

   The 2008 HCEI sets a goal for 70 % energy independence and sustainability by the year 2030. Concerted efforts are being made to meet this goal by the DBEDT State Energy Office. Thus this enhancement area already has a high priority for State actions and funding. However, Hawaii CZM will not be taking the lead in this area, and we do not consider energy to be a priority area for the Section 309 enhancement area.

2. Will the CMP develop one or more strategies for this enhancement area?

   Yes ____
   No X

Briefly explain why a strategy will or will not be developed for this enhancement area.

A strategy will not be developed for this enhancement area, because DBEDT Energy Office has taken a lead role in this issue already and the CZM Program has determined that there are other priority enhancement areas which are better aligned with the Hawaii CZM Program's core mission, objectives, and staff expertise and capabilities.

CHAPTER IV. STRATEGIES

Ocean Resources Management Policies (Adoption as State Policy) and ORMP Executive Order

I. Issue Area(s)
The proposed strategy or implementation activities will support the following priority (high or medium) enhancement area(s) *(check all that apply)*:

- ☐ Aquaculture
- ☐ Energy & Government Facility Siting
- ☐ Coastal Hazards
- ■ Ocean/Great Lakes Resources
- ☐ Special Area Management Planning
- ☐ Cumulative and Secondary Impacts
- ☐ Wetlands
- ☐ Marine Debris
- ☐ Public Access

II. Program Change Description

A. The proposed strategy will result in, or implement, the following type(s) of program changes *(check all that apply):*

- ☐ A change to coastal zone boundaries;
- ■ New or revised authorities, including statutes, regulations, enforceable policies, administrative decisions, executive orders, and memoranda of agreement/understanding;
- ☐ New or revised local coastal programs and implementing ordinances;
- ☐ New or revised coastal land acquisition, management, and restoration programs;
- ☐ New or revised Special Area Management Plans (SAMP) or plans for Areas of Particular Concern (APC) including enforceable policies and other necessary implementation mechanisms or criteria and procedures for designating and managing APCs; and,
- ☐ New or revised guidelines, procedures and policy documents which are formally adopted by a state or territory and provide specific interpretations of enforceable CZM program policies to applicants, local government and other agencies that will result in meaningful improvements in coastal resource management.

B. Describe the proposed program change(s) or activities to implement a previously achieved program change. If the strategy will only involve implementation activities, briefly describe the program change that has already been adopted, and how the proposed activities will further that program change. (Note that implementation strategies are not to exceed two years.)

The purpose of this strategy is to set forth as explicit State public policy the importance of managing Hawaii's ocean resources because of their economic, environmental, and cultural significance to the State. Specifically, ocean resources objectives and policies will be codified in Hawaii's statewide policy document, the

Hawaii State Plan. Moreover, the execution of an E.O. endorsing an updated ORMP and an associated framework for purposeful collaborative governance will provide an important mechanism to implement these ocean resources objectives and policies. An analysis and update the Hawaii ORMP will provide the basis for proposed legislation to amend the Hawaii State Plan.

III. Need(s) and Gap(s) Addressed

Identify what priority need the strategy addresses, and explain why the proposed program change or implementation activities are the most appropriate means to address the priority need. This discussion should reference the key findings of the Assessment and explain how the strategy addresses those findings.

There are many critical and pressing ocean resources issues, including but not limited to ocean recreation use conflicts, depletion of fish stocks, degradation of coral reefs, invasive species, ocean acidification, etc. Ocean resources management needs to be elevated as a priority in the State of Hawaii in order to obtain the financial and other support that it needs to address these critical issues. This sentiment was clearly articulated by participants of the Joint ORMP Strategic Planning Meeting in July 2010. This strategy addresses the important gaps identified by members of the ORMP Policy and Working Groups at this meeting.

Indeed, there is a need to set forth as explicit State public policy, the importance of managing Hawaii's ocean resources because of their economic, environmental, and cultural significance to the State. Specifically, ocean resources objectives and policies should be codified in Hawaii's statewide policy document, the Hawaii State Plan. Moreover, there is a need for a mechanism to express and formalize Executive Branch support and implementation of these objectives and policies. An E.O. will provide an important mechanism to implement these ocean resources objectives and policies.

In order to capitalize on the collaborative work that has been strengthening for several years now, an analysis and update of the existing ORMP will be conducted to provide the basis for proposed legislation to amend the Hawaii State Plan. The existing ORMP will be analyzed to identify what is working, the constraints and obstacles frequently encountered, and gaps in the plan. The analysis will include facilitated discussions with major partners on various aspects of ORMP implementation (e.g., definitions of the terms we use, often with different intentions and understandings). This facilitated and strategic analysis will help CZM to ensure that the ORMP continues to evolve and be relevant and meaningful to the Program and our partners. The data gathered will also provide the foundation for the development of new policies to address the challenges encountered and any gap areas identified, e.g., climate change and regional ocean partnerships.

Subsequently, with the aid of legal consultation, legislation will be drafted and an Administration bill submitted to amend the Hawaii State Plan to include ocean resources objectives and policies. The CZM Program will advocate for the adoption of this legislation by the Hawaii State Legislature by presenting legislative testimony and increasing the effectiveness of our outreach and communications on the ORMP. An

important piece of getting executive and legislative support for the program changes is to increase official and constituent support through outreach and communication efforts regarding the ORMP. Although collaborative implementation of the ORMP is indeed challenging and faces numerous barriers, it is occurring. However, much like the dilemma inherent in articulating our successes within CZM as a whole, it is difficult to portray the successful implementation of the ORMP. Expertise in social marketing and human dimensions will help fill this gap.

Finally, an E.O. will be prepared which will direct State agencies to collaboratively implement the ORMP objectives and policies. The E.O. will include a framework for purposeful collaborative governance, including but not limited to, establishing the Policy Group by E.O.. This will address the need to articulate how to achieve purposeful collaborative governance, as it was also at the top of the priorities identified at the Joint ORMP meeting. Support will be necessary to conduct the analysis necessary for a meaningful update that will build the foundation for continued support with our partners and increased Executive-level support through an E.O.

IV. Benefit(s) to Coastal Management

Discuss the anticipated effect of the program change or implementation activities including a clear articulation of the scope and value in improved coastal management and resource protection.

The official backing of the Executive will increase the political will to implement the ORMP and move Hawaii toward more sustainable, holistic, collaborative management of our natural and cultural resources. The analysis and update of the ORMP, as well as the framework for purposeful collaborative governance, will help the CZM Program to ensure that the ORMP continues to evolve and be relevant and meaningful to the Program and our partners. In turn, this will result in renewed and energized efforts to implement the ORMP.

Under an overarching vision comprised of three perspectives (Connecting Land and Sea; Preserving our Ocean Heritage; and Promoting Collaboration and Stewardship), the ORMP is a vitally important plan that guides the State to a sustainable future in which our lands and waters are clean, healthy, and productive, and management and stewardship are achieved through collaborative efforts of all levels of government, the private sector, and communities.

A sample of the ORMP's management goals for coastal and ocean management and resource protection include the following:

- Improve coastal water quality by reducing land-based sources of pollution and restoring natural habitats;
- Protect beaches, wetlands, and coastal communities from shoreline erosion and other coastal hazards;
- Improve and ensure maintenance and appropriate use of environmental infrastructure;
- Improve coastal water quality by reducing marine sources of pollution;

- Improve the health of coastal and ocean resources for sustainable traditional, subsistence, recreational, and commercial uses;
- Enhance public access and appropriate coastal dependent uses of the shoreline;
- Promote appropriate and responsible ocean recreation and tourism that provide culturally informed and environmentally sustainable uses for visitors and residents;
- Encourage cutting edge and appropriate ocean science and technology with safeguards for ocean resource protection;
- Apply integrated and place-based approaches to the management of natural and cultural resources; and
- Institutionalize integrated natural and cultural resource management.

The execution of an E.O. directing and guiding the implementation of the ORMP with the associated framework for purposeful collaborative governance, will enable the achievement of these goals and on-the-ground results in the improvement of coastal and ocean resources management and protection. Specifically, the endorsement of the updated ORMP through an E.O. will instruct all State agencies to implement the plan and thus direct resources toward the tasks identified in the plan.

V. Likelihood of Success

Discuss the likelihood of attaining the proposed program change and implementation activities. The state or territory should address: 1) the nature and degree of support for pursuing the strategy and the proposed change; and, 2) the specific actions the state or territory will undertake to maintain or build future support for achieving and implementing the program change, including education and outreach activities.

The likelihood of success for this project is high because the project will build upon the existing work and collaborative partnerships of the ORMP and CZM's citizen advisory group, MACZAC. The project will have a running start, as these groups have been organized and working over a substantial period of time. Each of these groups is committed to the implementation and further development of the ORMP. The ORMP Working Group has been meeting and working on the ORMP for several years, and collaboration, coordination, and buy-in among agencies has strengthened.

The ORMP Working Group consists of State, County and Federal agencies involved in the implementation of the ORMP. Partners include the State Departments of Agriculture, Land and Natural Resources, Health, Transportation, and State Civil Defense, OHA, County Planning Departments, the Honolulu Board of Water Supply, NOAA OCRM and PSC, the U. S. Army Corps of Engineers, UH SOEST, UH Sea Grant College Program, and MACZAC. The members of the ORMP Working Group will be key players in the ORMP update and the development of the E.O. and the associated framework for purposeful collaborative governance.

The ORMP Policy Group is the executive-level body for the ORMP. It is comprised of the Directors, or their designees, of the same agencies and organizations as the ORMP Working Group. This representation illustrates support for the ORMP at higher levels of State, County and Federal government, and is essential for buy-in of the Executive Branch. This group, as well as the ORMP Working Group, was also re-energized at the recent Joint ORMP Strategic Planning Meeting held in July 2010. A key priority articulated at that meeting was raising the political importance of ocean resource management. This strategy addresses that sentiment; therefore, the Program is confident that it will be strongly supported by our ORMP partners.

In addition, the Climate Change/Coastal Hazards caucus and other caucuses of the ORMP Working Group are open to additional stakeholders. These caucuses provide another venue for outreach, participation, and support.

MACZAC is comprised of citizen members with statewide geographic distribution and balanced representation from business, environment, practitioners of native Hawaiian culture, terrestrial and marine commerce, recreation, research, and tourism. MACZAC has become increasingly involved in the ORMP and outreach activities associated with the ORMP, and the members are committed to the update and implementation of the ORMP. MACZAC members have given presentations on the ORMP in their communities, distributed the ORMP at meetings and at community events, and advocated for the plan on numerous occasions. The CZM Program monitors their volunteer hours spent on outreach as part of the CZMA PMS, and their contributions are significant. They will be active participants in the ORMP update. In addition, the promotion of the ORMP by MACZAC is a specified codified duty of this body. Sec. 205A-64, HRS, states that the lead agency (OP) and the public advisory body (MACZAC) shall involve citizens and interested groups and organizations in the updating and implementation of the plan.

The CZM Program will take the following actions to maintain or build future support for achieving and implementing the Program change:

- Convene and engage the ORMP Policy Group and Working Group and MACZAC throughout the update of the ORMP and the development of the framework for purposeful collaborative governance. Support and encourage their active participation in this effort.
- Develop outreach and communication materials to explain the reasoning for updating the ORMP and garner support for the plan. Public informational meetings will also be held throughout the State to obtain input for the update of the ORMP and to foster support for the evolving ORMP in its implementation.
- Take advantage of opportunities provided by conferences or workshops to present the plan and the framework for purposeful collaborative governance. When the plan has been updated and the framework has been prepared, widely disseminate the plan and framework.
- Prepare training and educational materials to explain and support the need to improve upon the current plan and how those interested can help.

- Contract human dimensions and community-based social marketing expertise to enable the Program to achieve desired behavior and program changes.

Government agencies, MACZAC, and many stakeholder groups support the ORMP and want to see it evolve and strengthened by policy-level action. A common concern among our partners is that participation and implementation of the ORMP is currently voluntary and lacks significant political push. With the technical assistance provided through funding from the Section 309 grant, the CZM Program will be able to obtain the expertise necessary to analyze the ORMP, address constraints and obstacles, develop a framework for purposeful collaborative governance, and garner the necessary support for the execution of the desired E.O.

VI. Strategy of Success

Using the template below, provide a general work plan that includes the major steps necessary for achieving the program change and/or implementing a previously achieved program change. The plan should identify significant projected milestones/outcomes, a schedule for completing the strategy, and budget estimates. If an activity will span two or more years, it can be combined into one entry (i.e., Years 2-3 rather than Year 2 and then Year 3). While the annual outcomes are a useful guide to ensure the strategy remains on track, OCRM recognizes that these benchmarks may change some over the course of the five-year strategy due to unforeseen circumstances. The same holds true for the annual budget estimates. If the state intends to fund implementation activities for the proposed program change, describe those in the plan as well. Further detailing of annual tasks, budgets, benchmarks, and work products will be determined through the annual award negotiation process.

Total Years: Five years

Final Outcome(s) and Products: An E.O. based upon an updated ORMP. The E.O. shall include a framework for purposeful collaborative governance. Legislative adoption of amendments to the Hawaii State Plan which incorporate ocean resources-related objectives and policies into the plan. Additional revised authorities including statutes, rules, and enforceable polices to implement the ORMP.

Year(s): Years 1 and 2
Description of activities: Analyze and update the ORMP, which will form the basis for the E.O. and ocean resources-related amendments to the Hawaii State Plan; work on draft E.O. and framework for purposeful collaborative governance, solicit public and stakeholder input

1. Obtain contractual services to assist with Tasks 2 through 14 below:
2. Conduct analysis of the ORMP, its implementation, including constraints, obstacles, and gaps; prepare draft revisions to the ORMP by gathering input from, and holding facilitated discussions with, the following:
    a. ORMP Working Group;
    b. ORMP Policy Group;
    c. MACZAC;
    d. Individual implementing government agencies and programs; and
    e. Other ORMP stakeholder groups.
3. Research related plans and documents particularly government agency management plans, program plans, annual reports, performance reports, etc., in order to identify agency priorities in order to ensure a robust update of the ORMP.
4. Schedule, organize, and conduct First Round of statewide public hearings to obtain input to identify gaps and needed revisions to the ORMP, including potential mechanisms for how to "give it more teeth."
5. Prepare draft revisions to the ORMP, and obtain input from the above-mentioned groups.
6. Utilizing the draft ORMP and legal consultation, prepare draft objectives and policies to amend Ch. 226, HRS, Hawaii State Plan. Format the objectives and policies to be consistent with the Ch. 226, HRS, format.
7. Facilitate and support ORMP Working Group and Policy Group meetings, including caucus group meetings.
8. Continue to coordinate frequently with the ORMP Working Group and Policy Group, and MACZAC.
9. Schedule, organize, and conduct Second Round of statewide public hearings on the draft updated ORMP.
10. Revise Draft 1 after public informational meeting comments.
11. Present revised Draft 2 ORMP and draft objectives and policies amendments to Hawaii State Plan to ORMP Working Group and stakeholder agencies and groups.
12. Present Draft 2 ORMP and draft policies to ORMP Policy Group for endorsement.
13. Prepare Final Updated ORMP and draft legislation for amendments to Ch. 226, HRS.
14. Initiate work on the E.O. and related framework for purposeful collaborative governance.

Outcome (s): Revised Final Updated ORMP and ocean resources-related objectives and policies which will provide the basis for the E.0.; Draft E.O.

Budget: $ 175,000

Contractual-ORMP Analysis and Update:	**$90,000**
Contractual-Legal Consultation:	**60,000**
Travel:	**9,000**
Outreach Materials	**6,000**
Printing:	**10,000**

Year(s): Years 3 and 4

Description of activities: Develop and execute an E.O. and framework for purposeful collaborative governance and pursue legislative adoption of ocean resources-related objectives and policies in the Hawaii State Plan.

Research other E.O.s**;** coordinate with the Governor's Office; prepare an E.O. endorsing the ORMP and framework for purposeful collaborative governance and guidance documents which will provide more detailed directions and instructions to agencies to more effectively and efficiently implement the ORMP. Identify and prepare proposed legislation and/or rule changes to implement the ORMP. Prepare Memoranda of Agreement as necessary. Governor's Office shall execute the E.O.

Obtain contractual services to provide technical assistance to develop a framework for purposeful collaborative governance. Tasks include but are not limited to: researching other jurisdictions/programs for effective, purposeful collaborative implementation of regional plans and programs; obtaining input and recommendations from ORMP Policy and Working Group members, MACZAC, and other ORMP stakeholder agencies and organizations. Prepare a framework for purposeful collaborative governance.

Prepare an administration bill amending Ch. 226, HRS, by adding ocean resources-related objectives and policies. Prepare testimony and present testimony in support of the bill at legislative hearings. Meet with key legislators to explain the bill and advocate for its passage.

Obtain contractual services to provide technical assistance in human dimensions and social marketing to develop a more effective communications campaign to garner support from executive and legislative officials for proposed program changes.

Outcome(s): Broad support for E.O.; execution of an E.O., including a framework for purposeful collaborative governance; legislative adoption of amendments to Ch. 226, HRS, Hawaii State Plan to codify ocean resources objectives and policies; guidance documents and Memorandum of Agreements, if necessary.

Budget: $175,000

Contractual – E.O. and Framework:	**$92,500**
Contractual – Human Dimensions:	**70,000**
Informational Materials:	**6,500**
Travel:	**5,500**

Year(s): Year 5
Description of activities: Training and Outreach

Obtain contractual services in community-based social marketing to identify barriers to specific desired behaviors as well as incentives to action; develop a strategy to decrease barriers identified and increase incentives toward targeted behaviors, conduct a pilot study to implement the strategy and adjust as necessary, and eventually expand implementation of strategy. In the process, actions will increase awareness of the E.O. and ongoing efforts. Provide training to State and County CZM and ORMP staff as needed to provide them with the tools to directly foster purposeful collaborative implementation of the ORMP and conduct community-based social marketing communication campaigns.

Outcome(s): Increased understanding of stakeholders' barriers to targeted behaviors; strategic plan on how to decrease these barriers and increase incentives for targeted behavior changes to support the objectives of the ORMP; change in targeted populations behavior to further support the collaborative implementation of the ORMP; increased capability and ability to collaboratively implement the ORMP.

Budget: $87,500

Contractual:	**$60,000**
Outreach Materials:	**20,500**
Travel: Inter Island	**7,000**

VII. Fiscal and Technical Needs

A. Fiscal Needs: If 309 funding is not sufficient to carry out the proposed strategy, identify additional funding needs. Provide a brief description of what efforts the applying agency has made, if any, to secure additional State funds from the legislature and/or other sources to support this strategy.

Sec. 309 funding will be sufficient to carry out the proposed strategy.

Strategy for Enhancing Shoreline Public Access: Alternative Financing Plan for Acquisition and Maintenance of Shoreline Public Access and Statutory Amendments (Program Changes) for Coastal Land Acquisition

I. Issue Area(s)

The proposed strategy or implementation activities will support the following priority (high or medium) enhancement area(s) *(check all that apply)*:

- ☐ Aquaculture
- ☐ Energy & Government Facility Siting
- ☐ Coastal Hazards
- ☐ Ocean/Great Lakes Resources
- ☐ Special Area Management Planning
- ☐ Cumulative and Secondary Impacts
- ☐ Wetlands
- ☐ Marine Debris
- ■ Public Access

II. Program Change Description

A. The proposed strategy will result in, or implement, the following type(s) of program changes *(check all that apply):*

- ☐ A change to coastal zone boundaries;
- ■ New or revised authorities, including statutes, regulations, enforceable policies, administrative decisions, executive orders, and memoranda of agreement/understanding;
- ☐ New or revised local coastal programs and implementing ordinances;
- ■ New or revised coastal land acquisition, management, and restoration programs;
- ☐ New or revised Special Area Management Plans (SAMP) or plans for Areas of Particular Concern (APC) including enforceable policies and other necessary implementation mechanisms or criteria and procedures for designating and managing APCs; and,
- ☐ New or revised guidelines, procedures and policy documents which are formally adopted by a state or territory and provide specific interpretations of enforceable CZM program policies to applicants, local government and other agencies that will result in meaningful improvements in coastal resource management.

B. Describe the proposed program change(s) or activities to implement a previously achieved program change. If the strategy will only involve implementation activities, briefly describe the program change that has already been adopted, and how the proposed activities will further that program change. (Note that implementation strategies are not to exceed two years.)

Alternative Financing Plan and Statutory Amendments (Program Changes) for Coastal Land Acquisition Financing

The downturn in the economy has reduced State and County budgets. It is becoming increasingly difficult to find funds for public access acquisition and maintenance. There

is a need to research, identify, and adopt innovative funding techniques to obtain, protect, and maintain shoreline access. This Program change will amend sections of the HRS to enable the use of alternative and innovative financing mechanisms to fund coastal land acquisition at the State and County level. These mechanisms will be authorized in State statute so that they can be utilized by State and County governments. Amendments to the finance and taxation sections of the HRS and to Chapter 115, HRS, Public Access to Coastal and Inland Recreational Areas, will be developed. The revised statutes will expand the financing mechanisms available to State and County governments and result in revised coastal land acquisition and management programs at the State and County level.

Implementation Activities

Shoreline Public Access Website to Implement and Support Coastal Land Acquisition Program Changes

To implement and support the statutory amendments/program changes, a statewide website will be established and updated periodically. The website will present and explain the statutory amendments and provide information on alternative and innovative financing mechanisms to fund coastal land acquisition for public access. The shoreline access website will serve as a tool for the State to disclose legal and educational information on shoreline access and coastal land acquisition, and to build a stewardship ethic toward the coastline and ocean. The shoreline access website will encourage public participation. The website will include a list of statutes and regulations relating to public access, information on case law and shoreline public access, existing and proposed statutes and/or procedures for coastal land acquisition, possible funding sources for acquiring new public access, coastal land acquisition programs, links to shoreline access guides, a list of County and State contacts to report access violations, and a panel for the stakeholders to discuss innovative approaches for coastal land acquisition. This website will make it possible to post and update relevant information periodically to enhance coastal land acquisition program changes.

Presently the Hawaii CZM Program addresses public access problems on an ad hoc basis. The innovative financing mechanisms, shoreline access website, and statutory amendments will allow for a systematic and concerted program effort to address critical components of public access.

III. Need(s) and Gap(s) Addressed

Identify what priority need the strategy addresses, and explain why the proposed program change or implementation activities are the most appropriate means to address the priority need. This discussion should reference the key findings of the Assessment and explain how the strategy addresses those findings.

Beach access in many communities in Hawaii is being lost. Beach lots have been

re-developed/renovated and traditional beach access closed off. Landowners are blocking beach access with gates and other barriers. Human induced vegetative growth is blocking lateral access to the beaches. There have been issues relating to the availability of accessible parking near beach access. Beach access is identified as a critical issue in the latest section 312 evaluation.

In some cases, beach access is provided by right to individuals through Native Hawaiian custom and usage, common law, the Hawaii constitution, and other legal provisions or is obtained as a condition of permitting. However, in most cases, the only recourse is to purchase public access. (See Chapter 115, HRS, as to State and County authority to purchase lands for public access.) In the current economic downturn, State and County agencies in Hawaii do not have the funds to purchase land or easements for public access. They do not have funds to provide facilities which improve access such as parking or boardwalks.

During the economic downturn, State and County agencies in Hawaii have had to focus on providing core services. When the public brings public access problems and issues to government agencies, ***the agencies respond that they do not have the staff or resources to deal with these problems.*** State and County agencies have not had the resources or opportunity to look for new and creative approaches to address public access issues. However, with projections that economic conditions will not improve soon and the likelihood that funds will continue to be scarce, the investigation and exploration of new and creative techniques will be the positive way to find solutions to address public access issues. There is a need to develop, identify, and adopt innovative techniques to acquire and maintain public access. These tasks can be accomplished through development of a financing plan for public access.

Development of the financing plan would include researching tools, techniques and mechanisms, particularly innovative mechanisms, that other states or local governments have used to finance public access acquisition and maintenance; presenting and obtaining feedback, and input from Hawaii State and County agencies, community groups, and private homeowners as to the feasibility of utilizing these techniques in Hawaii; working with an intergovernmental committee to obtain consensus on proposed mechanisms and developing a financing plan.

New methods of financing which would be alternatives to revenues from traditional sources of Hawaii government income, i.e., the State income tax, State excise tax, hotel room tax, and County real property taxes, would be explored.

The term “financing” is broadly used to include community volunteer activities as well.

Hawaii has only recently utilized a few new techniques for funding land acquisition such as conveyance fees. There are likely other mechanisms and tools that Hawaii is not aware of and could benefit from.

The following are high priority problem areas which would benefit from new financing mechanisms. Community groups throughout the State have asked that the CZM Program address these problems.

- Private landowners in developed communities are putting up gates or otherwise blocking access. These lots were developed prior to public access requirements. Therefore, the only option is for government to condemn and purchase lands for access. However, government lacks the funding to purchase lands.
- Human induced vegetative growth is blocking lateral access to the shoreline. Two potential solutions have been raised. A legislative approach is explained below. In addition, although these are State lands, the State does not have the funds to clear the vegetative growth. Community groups have volunteered to remove the vegetative growth from State lands. However, there are liability and logistical issues which need to be resolved.
- The lack of parking at public access sites is another issue but government does not have the funds to provide parking facilities.

The following provides an example of an innovative approach that was developed to address a shoreline issue where there is lack of funding for maintenance. A task force was convened by OP CZM in 2008, to discuss the problem of human induced vegetation blocking lateral access to the beach. Private landowners were watering vegetation in front of their beachfront homes. The vegetation encroached onto the public access and blocked access. Although the beach lands are owned by the State, the State does not have the money to remove the vegetative growth. As a result, legislation was proposed to require the adjacent landowner to remove the encroaching vegetation. If the landowner does not remove the vegetation, the State will remove the vegetation and bill the landowner. This law was patterned after the sidewalk ordinance which requires landowners to maintain the sidewalks fronting their homes. If the sidewalk is not maintained, the City will go in and remove vegetative overgrowth or obstructing rubbish and bill the landowner. This bill has passed the legislature (Act 160, 2010) and is provided as an example as to how a new and innovative approach could be used to address a public access problem. The legislation resulted in changes to Chapter 115, HRS, Public Access to Coastal and Inland Recreational Areas.

Other examples could include working with community groups to form special assessment districts to fund public access land acquisition or facility development; or funding public access through fees or charges. Community volunteers could be utilized to remove human induced vegetative overgrowth from beaches if liability and other related issues are resolved.

The information derived from the alternative financing plan will be used to prepare legislation to amend the HRS in order to enable the State and Counties to utilize alternative and innovative financing mechanisms.

A statewide shoreline access website will be a cost-effective way to fill the gap for public information and communication among interested groups and stakeholders. The public looks to the CZM Program for statewide information on coastal public access. Adding a shoreline access section to the CZM website was recommended in the 2009 Section 312 evaluation report. Relevant website links including the alternative financing plan for coastal land acquisition, existing and new or revised statutes and regulations on coastal land acquisition, funding sources for acquiring public access, and panel discussion on innovative approaches for coastal land acquisition will enrich information to deal with emerging issues in coastal public access. Information can also be presented on practices and behaviors of the public and coastal private homeowners, which would help maintain the quality of public access, reduce conflicts in public access, and minimize damage and overuse of coastal resources. A website for coastal public access will be a tool for the CZM Program to draw public attention and involvement of stakeholders including coastal private homeowners in comprehensive shoreline access management.

The demand for shoreline public access in Hawaii has risen because of growing populations, increasing leisure time, and greater coastal development. With the means to address the high priority needs mentioned above, the government, local communities, private homeowners, and the public will have innovative mechanisms to resolve emerging issues and minimize conflicts in shoreline access.

IV. Benefit(s) to Coastal Management

Discuss the anticipated effect of the program change or implementation activities including a clear articulation of the scope and value in improved coastal management and resource protection.

Benefits to coastal management from development of a financing plan for public access acquisition and maintenance and from a website for shoreline access include:

- Enhancing CZM objective and policies by providing coastal recreational opportunities to the public. Beaches and ocean-oriented activities are popular recreational activities in Hawaii. The provision of coastal recreational opportunities accessible to the public is a fundamental objective set forth in the State CZM Law, HRS, Chapter 205A. The website will also assist the public in understanding that shoreline public access is more than access paths and sites. It is part and parcel of coastal resource management for the benefit of present and future generations.

- Implementing the Hawaii ORMP. The ORMP is a promising vehicle for Hawaii coastal management. The ORMP's perspective of promoting collaboration and stewardship encourages public and private partnerships in acquiring and maintaining public access.

- Providing a means for the public and stakeholders (e.g., private landowners) to better understand challenges and issues in coastal public access including

legal, cultural, and economic issues and environmental capacity. The shoreline access website will also address current and long-term needs for public information and help improve program performance.

- Identifying and developing alternative and innovative means to fund public access acquisition and maintenance during these difficult economic times. Opportunities to provide access will not be lost because of lack of funds. Agencies will be able to maintain existing public access sites and facilities if alternative sources of funding are identified, and new or revised statutes enabling the use of these alternative mechanisms are developed and adopted.

V. Likelihood of Success

Discuss the likelihood of attaining the proposed program change and implementation activities. The state or territory should address: 1) the nature and degree of support for pursuing the strategy and the proposed change; and, 2) the specific actions the state or territory will undertake to maintain or build future support for achieving and implementing the program change, including education and outreach activities.

The emerging issues and conflicts in shoreline public access are generating wide attention from the Legislature, the public, and CZM network agencies. The State and County agencies responsible for public access lack the staff and resources to address this issue. Budgets have been severely cut during the economic downturn. These agencies are looking for innovative approaches which do not cost money. This effort will research and provide information on such techniques and mechanisms for consideration by State and County agencies.

Agencies which have specific responsibilities for public access include the following.

- The Hawaii CZM Program through Chapter 205A, HRS, provides the policy umbrella for coastal zone management including public access.
- SMA and shoreline setback requirements under Chapter 205A, HRS, are administered by County authorities.
- The Counties of Hawaii and Kauai have established Public Access, Open Space and Natural Resources Preservation Commissions, and the City and County of Honolulu established the Clear Water and Natural Lands Commission. These commissions are advisory to their Mayors and are responsible for assessing and prioritizing acquisition needs for public access in each County.
- The State public access trail program (NAH) is administered by DLNR. The NAH program was developed to address the loss of traditional access routes to the ocean and other areas.

The budgets of these agencies have been cut and they need to seek alternative, new and innovative sources and techniques to carry out their missions.

The Hawaii CZM Program through the ORMP, has developed a working framework for network agencies to propose plans and procedures, including amendments to statutes, regulations, and ordinances. The ORMP has established a working group since 2007 for its implementation. This Working Group holds monthly meeting to report projects and discuss issues related to coastal management. In particular, the function of the caucus for "Policy and Legislation" is to propose statutory amendments to the Legislature, based on emerging issues of coastal management. The CZM Program will utilize this working framework to obtain input and coordinate with agencies on a financing plan for shoreline public access acquisition and maintenance and develop implementing mechanisms.

The Hawaii CZM Program has gained experience in working in this area through meetings with the Counties and through work on vegetative encroachment onto beaches. CZM coordinated and continues to work with State and County agencies and the community to address the vegetation overgrowth on Kahala Beach. Since 2007, several site visits and meetings regarding human-induced vegetation encroachment on Kahala Beach have been conducted with the State agencies, City & County of Honolulu, and local communities. Specific legislative measures were discussed among agencies and the local communities. OP submitted a report to the Legislature in response to HCR No. 258 to address the vegetation overgrowth along the beach corridor.

Community groups and the Legislature are supportive of efforts to improve public access. Community groups have advocated at the Legislature for public access bills and have rallied support from other community groups. For example, community members attended a number of Neighborhood Board meetings and obtained the endorsement of the bill from several Neighborhood Boards.

The specific actions which the State will undertake to maintain or build support for achieving and implementing the program change are:

- Involving responsible State and County agencies in the development of the financing plan;
- Obtaining public input on various alternatives and the feasibility of financing techniques;
- Obtaining input from and involving the ORMP Policy Group and Working Group and MACZAC.
- Developing shoreline access website for public information to enhance coastal land acquisition program changes.
- Proposing and submitting statutory amendments to the Legislature for adoption.
- Developing amendments to administrative rules.

VI. Strategy Work Plan

Using the template below, provide a general work plan that includes the major steps necessary for achieving the program change and/or implementing a previously achieved program change. The plan should identify significant projected milestones/outcomes, a schedule for completing the strategy, and budget estimates. If an activity will span two or more years, it can be combined into one entry (i.e., Years 2-3 rather than Year 2 and then Year 3). While the annual outcomes are a useful guide to ensure the strategy remains on track, OCRM recognizes that these benchmarks may change some over the course of the five-year strategy due to unforeseen circumstances. The same holds true for the annual budget estimates. If the state intends to fund implementation activities for the proposed program change, describe those in the plan as well. Further detailing of annual tasks, budgets, benchmarks, and work products will be determined through the annual award negotiation process.

Total Years: Five years

Final Outcome(s) and Products: There are four deliverable outcomes and products: 1) Alternative financing plan with innovative mechanisms for public access acquisition and maintenance; 2) Amendments to financing and taxation statutes, e.g., Title 5, HRS, and to Chapter 115, HRS, Public Access to Coastal and Inland Recreational Areas; 3) Amendments to administrative rules; and 4) Public access website to implement and support coastal land acquisition program changes.

Year(s): Year 1
Description of activities:

Formation of interagency committee and obtain consultant services to develop an alternative financing plan for shoreline public access acquisition and maintenance. The CZM program will coordinate the formation of an interagency committee comprised of representatives of State and County agencies with authorities to manage shoreline and shoreline public access. OP, as administering agency, will chair the committee. CZM will provide the necessary staffing support. These meetings will be timed to coincide with the quarterly CZM Planning Directors meetings.

Consultant services will be obtained and work on identifying new, alternative, and innovative funding techniques and mechanisms initiated.

Outcome(s):

(1) Formation of an interagency committee for the financing plan for shoreline public access;
(2) Minutes of committee meetings;
(3) Preparation of contract and obtain staff services, as necessary; and
(4) Initiate work on research of financing mechanisms and financing plan.

Budget: $105,000
Contractual and Staff Services-Financing Plan: $100,000
Travel: $3,500
Contractual Services-Facilitation: $1,500

Year(s): Year 2
Description of activities:

Draft and final alternative financing plan for coastal land acquisition for shoreline public access. Under the direction of the steering committee, the CZM staff will work with the consultant to develop the financing plan for acquisition and maintenance of shoreline public access. Tasks will include:

1) Research and identification of innovative mechanisms, tools and techniques used in other states and local governments to acquire and maintain shoreline public access;
2) Meet with agency, stakeholder and public input as to the feasibility of these mechanisms for Hawaii and for their jurisdictions/programs;
3) Develop and recommend alternative financing strategies and mechanisms for Hawaii;
4) Work with the committee to reach consensus on financing mechanism(s) and/or an alternative financing strategy; and
5) Prepare draft and final financing strategy reports.

Initiate work on legal research to provide content for the public access website. The data gathering phase of work on the website will begin. Contractual services will be obtained to gather information on statutes, ordinances, regulations, and case law; and to prepare explanatory narratives to provide the content for the website.

Outcome(s):

(1) Report on innovative mechanisms, tools, and techniques;
(2) Draft and final financing plan and mechanisms;
(3) Committee meetings and meeting minutes;
(4) Legal research and explanatory narratives which provide content for the website.

Budget: $70,000
Contractual and Staff Services-Financing Plan Outreach/Discussion: $30,000
Travel: $5,000
Contractual and Staff Services-Public Access legal research: $35,000

Year(s): Year 3
Description of activities:

Prepare and propose statutory amendments. Prepare legislation to amend State financing and taxation statutes and Chapter 115, HRS, Public Access to Coastal and Inland Recreational Areas. Testify at legislative hearings on the proposed bill. Meet with legislators and advocate for the adoption of the bill. Coordinate with stakeholders and solicit support and supportive testimony for the bill.

The CZM Program will also begin implementation activities by obtaining contractual services to design and test a website for shoreline public access.

Outcome(s):

(1) Administration bill to amend State financing and taxation statutes and Chapter 115, HRS, Public Access to Coastal Inland Recreational Areas.
(2) Design and test of website for shoreline public access.

Budget: $87,500
Staff services for legislative support: $57,500
Contractual Services for Website: $30,000

Year(s): Year 4
Description of activities:

If legislation is not adopted, continue to advocate for adoption of statutory amendments to the Legislature.

If legislation is adopted, disseminate information to State and County agencies with coastal land acquisition programs and shoreline public access responsibilities. Identify necessary rule amendments and work with State and County coastal land acquisition agencies to prepare amendments to administrative rules.

Contractual Services for Finalizing and Launching Shoreline Public Access Website. The shoreline access website will be finalized by including updated information on proposed and adopted bills for statutory amendments.

Outcome(s):

(1) Legislative adoption of the proposed legislation.
(2) Extensive outreach with government agencies and key stakeholder groups to obtain support for adoption and implementation of financing mechanisms;
(3) Launch website for shoreline public access.

Budget: $87,500
Contractual and Staff Services: Preparation of draft rules and outreach with key stakeholders: $72,500
Travel: $10,000
Website Support: $5,000

Year(s): Year 5
Description of activities:

Coordinate with State and/or County coastal land acquisition programs to prepare amendments to rules to implement statutory changes.

Outcome(s):

1) Adoption of amendments to administrative rules to implement coastal land acquisition;
2) Update and maintain the webpage on revised coastal land acquisition program for shoreline access;
3) Dissemination of informational material.

Budget: $87,500
Contractual and Staff Services: $72,500
Travel: $5,000
Webpage: $5,000
Printing and Dissemination of Informational Material: $5,000

VII. Fiscal and Technical Needs

A. Fiscal Needs: If 309 funding is not sufficient to carry out the proposed strategy, identify additional funding needs. Provide a brief description of what efforts the applying agency has made, if any, to secure additional State funds from the legislature and/or other sources to support this strategy.

County Planning Departments and State agency network partners will provide expertise and assistance though staff participation in this effort. CZM will also draw on the expertise of community groups and nonprofit organizations as they have valuable experience particularly with volunteers and fundraising.

B. Technical Needs: If the State does not possess the technical knowledge, skills, or equipment to carry out the proposed strategy, identify these needs. Provide a brief description of what efforts the applying agency has made, if any, to obtain the trained personnel or equipment needed (for example, through agreements with other State agencies).

The Hawaii CZM Program is staffed by employees with a wide range of coastal zone management experience, from over 20 years to newer staff who were hired in the last three to five years. Most importantly, the Hawaii CZM Program has established a working group with representatives from each network agency for the strategies and implementation of ORMP. The State agencies (e.g., DLNR) and Counties (e.g, Maui and Hawaii) have public access programs. The CZM Program possesses the technical knowledge, skills, and equipments to carry out the proposed strategy.

The CZM Program requests funds under the Sec. 309 project as described in order to obtain expertise in innovative and creative techniques for financing the acquisition and maintenance of public access.

CHAPTER V. PROJECTS OF SPECIAL MERIT: CLIMATE CHANGE ADAPTATION

Projects of Special Merit: Climate Change Adaptation

If desired, briefly indicate what PSMs the CMP may wish to pursue to augment this strategy. Any activities that are necessary to achieve the program change or that the state intends to support with baseline funding should be included in the strategy above. The information in this section will not be used to evaluate or rank PSMs and is simply meant to provide the CMPs the option to provide additional information if they choose. PSM descriptions should be kept very brief (e.g., undertake benthic mapping to provide additional data for ocean management planning). Do not do provide detailed project descriptions that would be needed for the PSM competition.

The Hawaii CZM Program will pursue a Climate Change Adaptation project as a Project of Special Merit. The OMRP Working Group prepared a *Climate Change Adaptation Framework for Hawaii*, which was endorsed by the ORMP Policy Group. A Climate Change Adaptation project will serve to implement the ORMP. The first three steps identified in the Framework are to form a climate change adaptation team; to develop and adopt a long-term vision and to conduct risk and vulnerability assessments.

Projects of Special Merit funding begins in FY12. The CZM Program will pursue funding of up to $200,000 annually for Climate Change Adaptation projects as Projects of Special Merit.

SUMMARY FUNDING TABLE

Section 309 Funding Table

Strategy Title	**Year 1 FY11 Funding**	**Year 2 FY12 Funding**	**Year 3 FY13 Funding**	**Year 4 FY14 Funding**	**Year 5 FY15 Funding**	**Total Five Year Funding**
ORMP Update and Implementation Strategy	$70,000	$105,000	$87,500	$87,500	$87,500	$437,500
Enhancing Shoreline Public Access: Financing Plan for Shoreline Public Access	$105,000	$70,000	$87,500	$87,500	$87,500	$437,500
Total Funding:	$175,000	$175,000	$175,000	$175,000	$175,000	$875,000

APPENDIX A
PUBLIC PARTICIPATION

PUBLIC PARTICIPATION

The Hawaii CZM Program conducted four public meetings to present the draft Section 309 Assessment and Strategy, Fiscal Year 2011-2015. On July 4 and 25, 2010, notices were placed in the public meeting and/or equivalent section of all the major newspapers to announce the public meeting schedule. Notices were placed in the Star Advertiser, The Maui News, The Hawaii Tribune-Herald, West Hawaii Today, and the Garden Island Newspaper. The meetings were all held from 7 to 9 p.m., as follows:

Maui
Tuesday, July 20, 2010
Maui Community College, Kahului
Pilina Multi-Purpose Room
310 W. Kaahumanu Avenue

Kauai
Thursday, July 22, 2010
Wilcox Elementary School, Lihue
4319 Hardy Street

Hawaii
Tuesday, July 27, 2010
Kealakehe Intermediate School, Kailua-Kona
74-Onipa'a Street

Oahu
July 28, 2010
Washington Middle School, Honolulu
1633 South King Street

A record of the meetings is included in this appendix. Note that the first meeting held on Maui had no participants. Meeting notes have been included here for the Kauai, Hawaii, and Oahu meetings. We also allowed the public to submit written comments. There were only 2 written comments. One of the respondents, Mr. Mark G. Hyde, was pleased that the draft document included a discussion on climate change issues. He felt it was important to include this subject in local planning decisions, particularly for water resource availability. He also indicated that local planners should be included in order for the projects to be a success, and that scenario planning techniques should be used. Injection wells were a concern, especially on Maui, and also the dwindling supply of fresh water. He indicated that planning should be concentrating on the 'big picture' with regard to rising temperatures and water strategy.

The second comment letter from Hawaii's Thousand Friends (HTF) indicated that they supported having the addition of climate change in the ORMP. HTF also indicated that the document should also be supported by the Legislature and the public. Other comments from the group indicated support and concern regarding various details of the ORMP organizational and meetings structure, and other comments and corrections.

Lastly, a survey and questionnaire were developed to gather more detailed information and input from the participants at the public meetings, and also to include a wider group of people that could not attend the public meetings. The survey was successful in gathering more information and input from a larger group of respondents. The survey results are summarized in this appendix, and a complete record of the responses are included in Appendix B.

CZM COMMUNITY MEETINGS

Section 309 Strategy And Assessment CZM

Lihue Kauai July 22, 2010
Wilcox Elementary School, Cafeteria
Number of Attendees: four

Mary Lou Kobayashi, Planning Program Administrator, Office of Planning
Lorene Maki, Planner, Coastal Zone Management Program, Office of Planning
Facilitation team from Where Talk Works (Linda Colburn, Pat Rivera)

Attendees included members of the Sierra Club, County of Kauai Open Space Commission (Public Access, Open Space and Natural Resource Preservation Fund Commission), Hanalei Watershed Hui, MACZAC, and a former Planning Commissioner.

A PowerPoint presentation included a report on the progress of initiatives identified in the Coastal Zone Management Strategic Plan 2005-2009 and the initiatives that will be addressed in the updated Coastal Zone Management Plan 2010-2015.

Q&A with group after PowerPoint Presentation

How do you interact with DLNR?

- Answer: Mary Lou provided examples of DBEDT working with DLNR indicating that they are sister agencies but different from DLNR. She provided the ORMP Policy and Working Groups as examples of an interface with DLNR. On a day to day basis we are coordinating on things like permits, environmental/regulations.

Do you know status of Kauai on adoption of the updated building code?

- Answer: Kauai adopted the updated building code (with customized wind standards) early on.
- Comments: Although Kauai is still ahead of other counties the building code adopted in 2003 is not ahead of what's needed.

Do you know the status of storm water runoff and erosion ordinances on Kauai?

- *The County of Kauai does have a stormwater ordinance. It is on the county government website.*

If there are state regulations, why aren't we doing it statewide?

- Answer: Good question—why isn't there a state storm water code. It took a lot to get to the building code statewide, it helps to get the counties in support to work toward the state level
- Comments:
    - My experience at having been with planning conferences—tend to be on other side, stronger rules and examples from the county side

- I'm talking about process—in my opinion it was weaker than other counties—that's the beauty of the county, we can always do it statewide
- Storm water-my concern is considering it as a hazard, when someone is granted an SMA permit in the SMA area, I'm unaware of any guidance or rules, in the circumstance of heavy rains, this become a hazard to public trust resources—my angle is to do it in the county—is there anything in the rules? Trailers, chairs, jet skis ended up on the near shore break—we've got money that we obtained before-shouldn't they be told to tie their stuff down
- I don't think there is anything on the SMA rules covering that
- Your survey-so many of those items are permits-

In your view do you associate that with the county? Your question was trying to (determine) jurisdiction? How do you do your dance with county regulations?

- Answer: SMA permits, watershed planning, a lot of these things are within the realm of the county. There are county planners that are implementing the CZM laws
- Linda indicated that the counties have representation on the ORMP working group.

Do the Neighbor Islands get any grant money?

- The Counties receive funding from the CZM Program to administer Special Management Area permits. This includes Federal grant funds and state funding. If Kauai is not posting their SMA permit on the OEQC Bulletin—you could call DBEDT or raise it as a concern. There's a reason they're not doing it—they're getting advice from someone
- Comments:
  - (We are) Looking at DBEDT to work with us to get county to follow their own laws.
  - Home rule vs. state comes up a lot—there are some advantages to having rigorous standards statewide
  - WINN is a good example—so when you're talking about statewide codes, that would be the argument to make it local—

Priority areas this year are Ocean Resources/Public Access

Each island has public access issues

Discussion A

Tell us about public shoreline access issues or conflicts on Kauai. What needs to happen to remedy these concerns? Who should act?

- On public access, the Pila'a lawsuit provided the opportunity to have a group of scientists and cultural advice. We needed to address or have a conversation about place based access. As we're discussing access we need to look at *mauka* / *makai* connection. If you allow people in the middle section (between *mauka* and *makai*) we should be looking at how that affects public access.

We want to get the bigger picture.

- With shared jurisdiction (between the County and the State) pointing fingers at each other. The public loses out and private property owners get dibs. Traditional access is lost. There are holdover provisions in laws that make it possible for people to acquire access area.
- There is a publication by the Legislative Reference Bureau called Roads in Limbo. This report describes the problem that has resulted from the closure of the sugar plantations and the access that the plantation roads provided in the past. There is a question of state or county jurisdiction of these roads. Neither the state nor the counties want to take over these roads because they are not up to standards. The key is to get state and county to partner.
- *Na Ala Hele*. We have not had an advisory council on Kauai since 2001. We're one of the Neighbor Islands that doesn't have one. This issue is related to access. It's underfunded.

Linda asked for examples of shoreline access

- Covered by 1808 law—shorelines artificially planted and irrigated, *naupaka* loves this, beaches diminished by these actions by private landowners—lawsuits, sometimes we win, sometimes we don't win. Areas where the shorelines are artificially planted and irrigated are: North Shore *Wainiha* and Hanalei.
- Contesting or appealing shoreline certification. Part of the problem is with the planning department. DLNR enforcement of artificial irrigation lines is not consistent.
- We don't want to get sued so we don't want to enforce it—risk aversion stance of county council—the longer it goes on, over time the more we lose—if they would follow the law
- Political will , documentation
- Enforce what is on the books
- There are obvious signs of encroachment, enforcement is not consistent
- I have pictures of these problems—perception is that it's a lower priority—it appears to be a lower priority. (The pictures are in the Kauai Open Space Commission report on the County of Kauai Planning Department website.)
- Vegetation on the beach—looking at OCCL amending their rules, diminish the values of trees, not valuing the vegetation of beach. Proposed revised OCCL rules no longer require a permit to cut or replace trees that are cut which are 6" or more in diameter. Water quality concerns when trees are cut.
- Valuing *naupaka* because it's a native species but doesn't value shade trees
- Some of the landowners, in addition to artificial encouragement of *naupaka* are cutting down shade trees—some others are exotic or alien, they're cutting down shade opportunities—local people like shade trees—it's not like Waikiki
- They're doing two things that in the end make the shoreline unwelcoming to folks because they want the beach to themselves. The owners are cutting down more vertical trees to eliminate shade on the beaches. They are violating the current replacement rule. The private landowners don't care.

- When you plant *naupaka* it changes the berm. The slope is different, lose the migration of the sand. There are lots of consequences to it beyond access. I'm speaking as a private citizen County of Kauai.
- Kauai.gov/open space has reports for Mayor and Council by the Commission. These are on the website and include the latest reports.
- When you limit access or change access, each named place affects cultural access. It affects place based thing with a specific use. The knowledge base is being lost. Some of these accesses should be retained over time. Without having a knowledge base in court we don't have enough folks out there with the historical/ancestral knowledge to retain access.
- Are you talking about *Wainiha*? Commission would be a receptive partner. We want it to be our kuleana but we're not sure the county would allow us to do that
- Our General plan says good things, give public opportunities for public comment before the policy is made. We have a lot of experience but public comment input varies.
- Another access issue—liability—difference between what county believes the state has—the county has to be more aligned with the state-county seems paralyzed—one of the top things I see that problem manifesting in a lot of things that aren't being done—how do we limit the county's liability in the shoreline area? This is one of the most important things—bigger contextual issues.
- Liability is top priority. Waive county liability in the shoreline area.
- Examples-we don't have an iconic sign that is at each shoreline access some of it is you have to stumble across it or its local knowledge—not just *mauka* but *makai* areas—why can't you clear that and why can't you put a sign
- County doesn't want it publicized that there is an access. It's just like hazards; ok in certain conditions but not in others. The decision not to place a sign is because of liability. If someone gets hurt you opened it up and you allowed people to go (there). Kauai should be "come at your own risk".
- The conditions of public access have not been enforced by the county. These are conditions that are placed on approval of subdivisions that public access has to be provided. Need a database of these.
- If have funds—don't have to get the county guy out to weed whack the access
- We have a list of some of those sites—last year the planning department agreed that commission's person can look at sites in question—*Opala* list from a few years ago (*Opala* list is unfinished business/acquisitions)
- Before we move off the *naupaka*—have pictures, private landowners plant *naupaka* to affect trails that affect public access-in places where there are access ways, it's not well maintained—the access way is overgrown, not just on the shoreline--
- Traditional and customary lateral trails—an issue—historic preservation office won't help—we have no advocacy here for historic sites—traditional and customary paths should be protected on islands

- *Mauka/makai*—reduction of invasive species—they're helping the reef life—there is that piece, even as you have a trail—reducing erosion, reducing impact on reef
- Cultural issue—trigger on fishponds—fish traps/ponds haven't been identified—
- Shoreline certification—landowners that will clear vegetation debris line—before surveyor can survey high water line--

Share your thinking with us tonight on these points (enhancement areas) by completing the survey or we can just talk about these. What are the issues and conflicts on Kauai regarding the following and what should be done and by whom?

Ocean recreation

- (These comments related to a meeting convened in *Hanalei* regarding boat permits. The meeting resulted in amended rules from the Division of Boating and Ocean Recreation (DOBOR). The community convened these meetings. The resulting language was sent to the Attorney General and came back with specifically oppositional language. You can trust that the community did their job. Somehow, overtime it reverses. DLNR is not sticking to their mission. When the current director of DLNR got the job, we had high hopes. Cooperation/collaboration was done. The effort languishes; it sits to the detriment of the resource.)

Are there other issues that are less well known?

- **Salt pond (and pans) and fish ponds**
    - The fish ponds don't have a good inventory
    - Salt ponds at Hanapepe are being impacted. Can't find a trigger for an environmental assessment.
    - Obstreperous issue with fishpond identification. When we went to NPEDS there's no puka (for the fish ponds). There's no water. Grubbing and grating permits are allowed. Salt ponds/fish ponds contribute to hazard mitigation and community resiliency. What if the barge doesn't come? Sustainability is a critical thing for this community. We don't see these places in the same light that other indigenous peoples do. Fishponds at *Lepeuli* and *Waipake* are not formally identified, should be inventoried. (Include *Kuuhoa). Also Puu Poa fishpond should be identified formally.*
    - Involved with fishpond at *Heeia*. That's huge fish pond but it's only meant to feed 2,000 people. It's important to identify even the smaller ones because of food security, cultural acknowledgement.
    - Salt ponds: there's not enough done at all levels of government to protect the Hanapepe salt ponds. There's a camping area on the border of the salt pond. There's contamination. A lot of folks say that road that bisects pond should not have been built.
    - I think it's an SMA issue-

    - Partnership with the state is an issue. The county could step in and agree to it but there is no division in county government that has an environmental tag to it.
    - For 2009, the number two priority acquisition recommended by the Open Space Commission was protection of the salt ponds. Acquire state land *mauka*/*makai* of salt pond—to move and expand the park. This will provide, enough of a buffer so that camping can be moved so that it doesn't affect pans
    - There is a problem with agriculture lands runoff going into ponds and therefore pans. The loss that will happen if salt is contaminated is people can't use it.
    - CZM talked about a project but county put the brakes on?
    - Mary Lou answered—timing wasn't right for county
    - The adjacent Burns airfield is incompatible with salt pan/ponds. There are fuel tanks and proposals to expand fuel tanks.
    - Talk about burn field owned by state
- **Who is the point person for runoff from agriculture land, ranch land? Who's the point person in DBEDT?**

Harbors/Marinas

- Many folks in *Hanalei* (have something to say about this)
- Can I ask what position DBEDT had on Superferry about exempting them from EIS?
- The Office of Planning did not have a decision-making role in the exemption of the Superferry and as far as I know OP did not provide comments on the issue of exemption from an EIS. (Answer from Mary Lou.)

Aquatic life

- This discussion centered on shrimp farms in Kekaha that wanted to discharge millions of gallons of water into oceans but the farms ended up dumping shrimp into streams (where) they compete with native *opae*. The current owner indicated that the shrimp are not propagating. Discharge from the farms introduces illness to ocean. Discharge is estimated at 3-5million gallons per day. On the wet side of Kauai the discharge introduces pathogens. On the dry side of Kauai the discharge affects salinity, introduces pathogens into the water and the surfers hate it
- Question: Shouldn't they have an EIS for that? (discharge from shrimp farms).

Coral reef ecosystems

- Lack of *mauka / makai* understanding—erosion that happens *mauka* causes sedimentation
- Bacterial pollution, groundwater, wastewater—has not changed way we look at the broader picture of the ecosystem—we don't do anything to actively protect that—we study the hell out of it
- Reports of coral bleaching. Need to be anticipatory.

- Things like invasive algae we're not addressing it, we don't understand it, we're not prepared for when it happens
- Years ago—there are several places that gets the science, so they can just report statewide, so there's no local enforcement, communities need to be encouraged to stand up—could be a good partnership
- Even with a hotline—to actually to get someone from Oahu to come to Kauai—*mauka*/*makai* watch—we're they tend to bleach out for bottom fish-- next week so we will agree on a consistent reporting form
- County—we're getting reports about significant coral reef degradation at Anini—Anini is the largest coral reef on Kauai (impacted by old mill, golf course runoff—algal reef—not a finger, yellow purple coral, diminishing because of there's a lot of golf balls in that area—DOH did stand up and issued a letter to Princeville golf balls a pollutant—
- Princeville—golf balls are not our fault, they belong to the golfers—

Marine mammals—

These comments were made during the discussion of protected marine mammals.

- Some populations are increasing, some are decreasing.
    - Monk seals declining population statewide, think species might go extinct in our lifetime (there are small numbers in the main Hawaiian Islands although there are more monk seals in the Northwest Hawaiian Islands). There is too much interaction.
    - Spinner Dolphins (there is too much interaction in their sleeping areas)
    - False killer whales (finding that there are less than 100 in the near shore population near Kauai)
- Green sea turtles are increasing

Beaches and Tidal Interfaces

- There are issues regarding shoreline certification.
- Dunes are not being recognized—the back side of the dunes—inaccuracy regarding /not wanting to look at back side of dune—
- Different interpretation of high wash of waves. Does it go up to high-water mark? There is some dune migration from *mauka*. One of the concerns is the validity of the structure (of the dune) as hazard mitigation for the coral reefs.
- Legislation that rebuild on same footprint? Should not be allowed to rebuild on same footprint if destroyed by storm
- Removal of structure—and it becomes a hazard
- County/state difficulty in addressing something to be demolished. The example is Poipu. There are area photos where the debris line is *mauka* of road. Not only were

they allowed to rebuild, they expanded. The structure is bigger, more fortified. So what is impact of these seawalls?

Tidal wetlands

There are areas that get to fortify their shorelines—use sandbags as temporary structure—sandbags deteriorate, not one there to take them away—the sandbags wash onto the reef—foreign sand—introduction of hazardous material-sand doesn't match—sandbags have been there for 9 years—interpretation of minor permit

- North Shore/Haena and *Aliamanu*—we have a lot to show you

Wetlands/estuaries

- We need in stream flow standards statewide—need a baseline. Start with Kauai.
- Estuaries—related to where quality work is being done—sandbars must be left alone—people think they need to break sandbars open—sandbars play a critical role in the natural rhythm of estuary especially oopu—the rain carries –they leak sediment regularly
- A water quality concern is runoff from agriculture land and ranch land that smothers reef. Buffalo and cattle are illegal; oversight is really hard regarding buffalo pooping.
- NRCS issues—conservation plan—NRCS they're the farmers' friend—no one else is looking at conservation plan for culture, state constitution, etc—not NRCS kuleana
- Water quality—efforts to promote slow release fertilizers re lo'i farmers—we have more listed impeded water quality
- Sediment, nutrient, bacteria—*Hanalei* listed for bacteria and sediment—not unsolvable, allowing cesspools to exist is crazy—whose kuleana is this? DOH—no county help
- The legal qualification is 35 parts per milliliter. There is actually 17,000 parts per milliliter at Hanamaulu Bay. This affects near shore water quality. Cesspools (still being allowed) makes Kalapaki a nightmare.
- *Niumalu*, *Hanalei*, Blackpot—*Haena* to *Kalihi Waena*. These are hot spots on Kauai.

Input on survey—, this took a long time

A participant had a comment on the survey—it didn't have any background or context—the response was that this was changed it this am

The facilitator concluded the meeting at 9pm.

Section 309 Strategy And Assessment CZM

Kona, Hawaii July 27, 2010
Kealakehe Intermediate School, Cafeteria
Number of Attendees: Five

Mary Lou Kobayashi, Planning Program Administrator, Office of Planning
Lorene Maki, Planner, Coastal Zone Management Program, Office of Planning
Facilitation team from Where Talk Works (Linda Colburn, Pat Rivera)

Attendees included representatives from HELCO, "HALAU HULA IS HAWAIIAN TRUST," and private individuals.

A PowerPoint presentation included a report on the progress of initiatives addressed in the Coastal Zone Management Strategic Plan 2005-2009 and the initiatives that will be addressed in the updated Coastal Zone Management Plan 2010-2015.

Post Power Point Questions:

- What are the rules for public shoreline access? There is some confusion about this. Is it determined by the vegetation line (salt same as fresh water vegetation – naupaka/mangroves etc.) High water wash, debris line, etc?
- What are the roles and responsibilities of the Coastal Zone Management Program?

General Comments:

- It is important to raise the level of off shore marine resources – as a food security issue – among others.

Shoreline Access:

- Surfers and setbacks. There is inconsistent understanding about access in this area. Surfers sometimes encroach on private property as a means of gaining access. There should be a buffer between the private property and the ocean entry points. (This is an issue near Banyans and Queen's Bath areas where seawall obstruction existed).
- There is inconsistent enforcement re: private property incursions as well as enforcement re: addressing man made obstructions to beach access.
- Shore line development is so rapid… it's important to get ahead of resulting increased usage and conflicts over competing uses.
- Loose dogs have been used by some property owners to discourage public access in designated areas.
- Almost any place where there is surfing near private property there are conflicts. These are less likely to occur on the east side of Hawaii Island.
- Shoreline issues should be clearly addressed as a condition of issuing a building permit in coastal areas.
- There is barbed wire blocking access at Pepeekeo.
- Public access by a Hawaiian man was challenged by the Maunakea Beach hotel. Not sure how this was resolved.

- Public access trails may exist in some resort areas, but the parking and pathways are sometimes a long way from the beaches.

Ocean Recreation:

- Ciguatera (sp?) may be aggravated by illegal fishing practices such as bleaching, or runoff from shores which deposit sediment on the reefs.
- Golf courses use chemicals, insecticides, herbicides, most heavily during the development phase of the course – and less so once the course is established. These chemicals contribute to the creation of acids which break down lava rock. Resort areas have lots of green areas treated in this manner. Difficult to prove the point of origin in these instances.

Harbors/Marinas:

- Harbor water quality has changed at Honokohau and Keauhou (by the volleyball court by the wall) with water getting more cloudy. More boats, more clouding, appears to be linked to drop in aquatic life in the area.

Coral Reef:

- Endangered species act has been used to constrain harbor expansion. We need to expand Kawaihae harbor. Puako boat ramp area shows accumulation of sediment. Ciguatera is thought, by some, to be linked with golf courses particularly in the area off shore from the Mauna Kea Beach hotel. The golf course was investigated in this regard, but the hotel was not investigated. Is the hotel contributing to the ciguatera problem in some way?
- Golf courses have been viewed as a way to disperse sewage treatment effluent. Siting these golf courses near the ocean is a concern. Golf courses facilities may belong in more mauka settings. Waikoloa course doesn't appear to contribute to off shore impacts. Mauna Kea golf course appears to be direct contributor to run off.

Salt Ponds/Fishponds:

- No issues identified for Hawaii Island.
- Fishponds used to be defined as having a makaha that facilitated water flow exchange with the ocean. Now the definition of fishpond is applied to walled fishponds without makaha (slatted gates that allow water exchange from pond with ocean external to pond walls).

Beaches/Tidal Interface:

- Historically, there were issues involving illegal walls erected near beach houses. These changed the sand migration patterns. Sand accumulated behind the wall subsequent to wall installation. Sand migration reduced beach size and adversely affected shoreline access.
- People have built walls with PVC pipes spaced at intervals to support drainage run off. This noted in the "Banyans" area of Big Island. This has contributed to beach erosion and increased introduction of sediment into near shore waters.

Wetlands and Estuaries:

- Honoapu area – areas previously accessible to the public now restricted because of government use/postings.
- Red Opae and opae ula no longer as abundant (Kona past the police station (by old airport) 1 mile makai.

Water Quality:

- Sewage plant below Kona police station – where does the water discharge go? County/state treated discharge could be used instead of county water for purposes like roadside irrigation.
- Mauna Lani Hotel area was once considered a "hot spot" for presence of ciguatera in fish caught.
- Crooked Leg Ranch (Kawaihae/Waimea corridor) water from stream goes underground. Not sure where it enters the ocean. Not sure if contributes to water quality concerns.
- Cesspools in proximity to the shoreline are a concern re: water quality.
- Laupahoehoe area: The decrease in agricultural activities in recent years has reduced runoff into the ocean. The reduction in fish population is attributed to overfishing rather than the reduction of nutrients in the water. Fewer fish exist there because there is less food for them (due to less runoff).

General Comments:
Enforcement and government response (to requests or for information to resolve resource related problems) is fragmented and inconsistent. Difficult to know who to call for what without getting multiple referrals and different answers from different entities. Consolidation of these functions should be considered.

Public cynicism is growing re: the value of public testimony and participation in public meeting participation. If people testify, their comments are often excised from the record or not reflected as offered. Disincentive for those concerned about resource issues.

There is no minimum or maximum size or bag limit set for aquarium fish collectors, yet these constraints apply to subsistence fishermen or individuals fishing. Seems inconsistent with preservation of fishing rights?

Section 309 Strategy And Assessment CZM

Honolulu, Hawaii July 28, 2010
Washington Intermediate School, Cafeteria
Number of Attendees: Seven

Mary Lou Kobayashi, Planning Program Administrator, Office of Planning
Lorene Maki, Planner, Coastal Zone Management Program, Office of Planning
Facilitation team from Where Talk Works (Linda Colburn)

A PowerPoint presentation included a report on the progress of initiatives addressed in the Coastal Zone Management Strategic Plan 2005-2009 and the initiatives that will be addressed in the updated Coastal Zone Management Plan 2010-2015.

Attendees included members or representatives of the Windward Ahupuaʻa Action Alliance, Hawaii's Thousand Friends, MACZAC, OHA, Surfrider Foundation, and Department of Transportation Stormwater Program.

General Comments Post Power Point Presentation:

- CZM program is currently housed in DBEDT – the same state agency that is charged with addressing economic development and tourism. How does this structural relationship affect the functionality of CZM? What happens when there are changes in the DBEDT leadership or Executive Branch?
- Governors can limit an entity like CZM's impact by restricting funding or affecting position counts. Are there ways to mitigate that to insure continuity?
- There will be an election soon. How do you know that what this report recommends will be carried out by the new administration.
- Is the structural relationship like this in other states? What do other states do in this regard?
- If it weren't for NOAA – CZM efforts would have diminished even further (given existing budget and staffing constraints and furlough days). The feds have had to help the state address these resource management issues. There appears to be a lack of political will at the state level to provide the support necessary to do the Ocean Resource related work.
- Public access guides show people where public accesses are located. Don't tell people. The information ends up going into tourist guides. Instead of supporting opportunities to preserve resources, traditional practices and uses, and community/resident use of resources, these resources are overtaxed by visitors at resident's expense. Don't publish public access guides.
- What will the information gained by these discussions do? Will this result in a study, actions, or specific responses to concerns raised? (The goal of this effort is, in part, to identify themes of shared concern statewide. Prospective remedies and strategies are of interest as well.

PUBLIC ACCESS COMMENTS:

- Public access problems tend to occur in areas where public land is adjacent to private property. Barriers are used by private property owners to block public access or discourage public use of shoreline resources. There are recurring examples of this problem on Oahu in Kailua and the Portlock areas.
    - The Portlock area has been particularly troublesome. A private land owner put up a gate to block public access. The same individual is not proposing that steps used by surfers and other users be removed because they are too dangerous to leave as is.
    - Emergency personnel have been hindered while attempting to render aid at Kailua Beach.
    - Some of hotels have acted in ways to complicate access by raising concerns about safety. Presence of homeless on beaches (Waianae mostly) triggers actions by private owner to discourage access as well.
- Legislation exists that is not consistently enforced. There are few consequences for those who obstruct legitimate shoreline access.
- A meeting 8 or 9 years ago addressed the issue of "disappearing" beaches. Plantings established by private landowners were/are sometimes used to extend property lines, reduce accessible beach area, and deliberately changing the vegetation lines. Naupaka plantings, rocks, walls and other mechanisms are used to encroach on public lands by private land owners. These actions cause sand to migrate away from the areas.
- Private landowners should be required to get a permit in order to build a seawall. The permit would require submission of information about potential impact of the seawall prior to receiving approval to build.
- Constructing seawalls can obstruct public access.
- Construction of walls sometimes causes sand to disappear.
- This is an example of the disconnect between state and county authorities. Matters that require county action do not necessarily trigger state involvement on private property.
- A large percentage of the Lani Kai shoreline is hardened to prevent erosion of private property. This leaves little or no area for public use – to walk along the beach. At high tides, the situation worsens.
- There are many examples of private land encroachment through planting of naupaka - in the Diamond Head area.

Ocean Recreation:

- Every community has carrying capacity limits. Kailua Bay and the Mokuluas are heavily used on a daily basis. Recreational usage is an issue in the community of Hanalei on Kauai. Every beach needs a carrying capacity study.
- Competition between users (Stand up paddlers, fishing, swimming, surfers, paddlers, etc.) relies on the good will of people. DLNR lacks the enforcement capacity to address this. Who gets to use the water when there are so many competing for access? Raises safety issues.

- Over use or competition among many types of users reduces the quality of the recreation experience – especially when commercial activities crowd out residents' use and access.
- DLNR prepared an ocean recreation plan to try to establish access areas for single activities (swimming area protected by buoys). Not sure how some of these designations are working out - given the budget and staffing shortages there.
- Whether mandatory or voluntary – people need to be reminded of the Hawaiian Konohiki approach to resource management.
- During better financial times, the state still had only 4 DLNR enforcement officers (conservation resource officers) staff designated to monitor inshore waters.
- Unchecked commercialization of the ocean is a problem. The number of kayaks in Kailua and Lani Kai – very high. People pull up with kayaks and rent them to people on the beach without permits, licenses, or commitments to conduct proper safety briefings for renters.

CZM Structural Relationship:

- CZM in office of planning in DBEDT seems incompatible with resource protection interests. We question the autonomy to protect the resources when another part of the department focuses on increasing access and usage by visitors. There are also federal regulatory considerations (NOAA, Commerce, EPA, Interior) that can complicate the implementation of ocean resource management plans.
- Consider reconfiguring or segregating these seemingly oppositional entities from one another. DBEDT/Tourism goals and objectives are often at odds with resource protection.

Small Boat:

- Commercialization of small boat harbors is an issue too. There is a proposal to build wedding chapels at the Ala Wai Boat Harbor. These kinds of permitted uses are at odds with the proper resource focus. Small boat harbors are for small boats!
- The predecessor to the first ORMP (and to some extent the current ORMP) was put together without mitigation or other deterrents. Commercial use and ocean recreation need some restraints. These connections aren't always made in the ORMP documents - nor are conditional solutions to allow both. Who makes the final determination about usage in these situations?
- We have to recognize that one of our problems is that there are too many of us. Originally, use by a few was ok. Use by many alters the resource conditions (fish).
- Marinas/Harbors go hand in hand. With accommodating small boats. The state seems to rely on private developers and others to meet the growing demand for slips. This puts the public at the mercy of these developers. Additionally, if you don't care for infrastructure already there, don't build more capacity!
- When we talk about water – we have to deal with federal and international laws. There are disconnects between users and others knowledgeable re: the resources and the policy makers who make the rules.
- People who show up to protest policies are often users of the resources. They are often excluded from consultation in the policy development stage.

- Pro forma public meetings leave people feeling frustrated. If consulted at all, it is often too late in the process to make a meaningful difference.
- Revise the planning process. Provide for early public involvement. Change in ways to make it work better.

Ocean Energy Development:

- Change this from low priority to at least medium priority due to multiple projects including, but not limited to the Big Island ocean thermal project, salt water conversion on Oahu and the proposed undersea energy transmission line from Lanai to Molokai and Honolulu.
- There is speculation that a marine base may be the locale for landfall of the undersea cable. There are concerns that there may be marine ecology impacts from the cable – particularly where it connects to land. Pearl Harbor also mentioned.
- Need money to implement policy already in place. The operating budget for ocean resource matters has been limited because of its funding mechanisms. (Less than 5% of the budget goes to DLNR and/or natural resource management.) This should be revisited if progress is to occur.

Enhancement Areas Comments:

- Cumulative secondary impact: Only seen this discussed in environmental assessments or impact statements. Should be required in other situations as well. People need to better define these issues. These are not county SMAP's issue. It's a protection of particular areas issue and how to pay for that.
- Wetlands: Dealing with wetlands requires bringing together a variety of entities. You can't just look at the wetland area without looking at the entire watershed that affects wetlands. Multi entity participation is challenging to bring about. It's the only way to make sure every stream mauka isn't channelized.
- Marine Debris: International boat traffic contributes to marine debris. The state has no jurisdiction in these areas. Local organizations can gather information and provide that information to NOAA or their counterparts – to address at the national level.
    - Pieces of net and other things brought in from collection and retrieval efforts make you wonder they got there in the first place. Currents move this debris to multiple sites. Encourage reuse of plastics – one way to reduce the severity of this problem.

Energy and Government facility Siting:

- Can siting of energy generation plants be included in this section?
- OTEC– impact at deep levels of ocean – concerns about impact of untried technology.
- Kahe Power Plant: HECO's Kahe plant raises questions about the wisdom of locating power generation capacity near the shoreline – given concerns about sea level rise. Kahe raises concerns because the HECO plant returns ocean water (used for cooling purposes) at a higher temperature than when it is removed. What are the impacts associated with this practice?
- Wave energy power generation sites – of concern as this technology moves forward.

- All of these issues should be approached conservatively until more is understood about them.
- 205A – government document has a set of objectives expanded into policies. There are policies in there that relate to energy generation siting. Set up a state program that be federally-approved, reviewed in light of sea level rise.
- Conflict between 2 legitimate groups. Reducing dependency on fossil fuels vs. wind farms and other alternatives. Address these oppositional interests.
- Disagreements are growing more heated. Food/fuel security issues considerations are intensifying too. There are lots of considerations to weigh.

Aquaculture:

- Ocean fish farming mariculture – big concerns for Big Island and Waianae coast. There are cumulative and secondary impacts on marine resources.
- Nutrients generated by confined fish – concentration poses challenges re: waste generated, potential for spread of disease, and use of antibiotics – which could migrate to wild population.
- Aquaculture vs. mariculture.
- Impact on source fish (ocean when fish captured to create fish food for farms)

Please add the following language to your cover letter to feds:
"We who live in this island state appreciate NOAA's Support in helping to protect our coastal and ocean resources." Put this in your letter to NOAA.

Water quality: State/County requirements.

- Agriculture community generates sedimentation, but this is not covered there. Sedimentation is linked to coral reef conditions.
- A requirement of pollution runoff (non point) state ID enforcement mechanism for all points of generation.
- Point source runoff statute to enforce non point source incidents - can use existing state statutes.

SUMMARY OF THE SURVEY RESPONSES
(SEE ALSO APPENDIX B)

There was a total of 89 responses to the survey questionnaire. The survey in its entirety can be found in Appendix B. Also, there were several questions that allowed the public to write in their thoughts and concerns. The responses are very informative, and this can also be found verbatim in Appendix B.

1. When you think of the CZM Program, which of the following activities do you think of?

83.0%	Managing coastal development
85.2%	Ocean resources management planning
72.7%	Public access to beaches and the shoreline
67%	SMA Permits
46.6%	Hurricane hazard mitigation and improved building codes
53.4%	Tsunami hazard mitigation
25.0%	Earthquake hazard mitigation
18.2%	Hazard mitigation training
59.1%	Community-based resource management
44.3%	Federal consistency reviews
60.2%	Preventing nonpoint source pollution
76.1%	Permits and regulations regarding coastal development
44.3%	Climate change adaptation
56.8%	Improving water quality
54.5%	Watershed planning
42%	Providing grants for demonstration projects
61.4%	Providing grants for coastal management projects
28.4%	Permitting for projects in Kakaako and Kalaeloa
56.8%	Outreach and education on coastal hazards

2. The CZM Program works in partnership with various Federal, State and County agencies as well as private entities to mitigate coastal hazards. Please indicate whether you are aware of the following studies, building code amendments, and activities by checking the appropriate items next to each question. The percentages indicate how many respondents were aware of the following.

   25.0% The CZM Program in cooperation with civil defense agencies has supported the preparation of wind speed studies to reduce damage from hurricanes.
   25.0% The CZM Program in cooperation with civil defense agencies has worked to incorporate wind design standards in building codes to reduce damage from hurricanes.
   34.9% County and State Building Codes have been amended and adopted to incorporate wind design standards to reduce damage from hurricanes.
   24.7% Updated and printed 100,000 copies of “Tsunami: The Great Waves”, and supports implementation of plans.

69.4% The CZM Program prepared the ORMP and has been working with other organizations to implement the plan.
49.4% The CZM Program has supported CBRM demonstration projects.
37.2% The CZM Program in cooperation with County of Hawaii agencies worked toward the adoption of a stormwater ordinance for the County of Hawaii to mitigate stormwater runoff.
69.0% The CZM works to improve water quality through a nonpoint source pollution control program.
48.2% Hawaii was one of the first states to institutionalize the concept of public access in county land use permits.

3. Which of the following issue areas should the CZM Program address? Please rank them in order of importance. The following shows the respondent's rankings from most important to least important.
    1) Ocean Resources
    2) Coastal Hazards
    3) Public Access
    4) Special Area Management Planning
    5) Cumulative and Secondary Impacts
    6) Wetlands
    7) Marine Debris
    8) Aquaculture
    9) Energy and Governmental Siting

4. Ocean Resources Management: Please rate the degree of threat or conflicts each issue listed below poses to Harbors/Marinas in the State.

<u>Ocean Recreation</u> **Threat or Use Conflict**	**Degree of Threat –H (High), M (Medium), L (Low)**
a. Over-saturation/use; exceed carrying capacity of resource and/or geographic portions of it	**H (63.2%)**
b. User conflict, includes commercial, individual and cultural	**H (51.7%)**
c. Inadequate enforcement of regulated activities	**H (64%)**
d. Lack of awareness of regulations by residents and visitors	**M (47%)**
<u>Harbors/marinas</u> **Threat or Use Conflict**	**Degree of Threat –H (High), M (Medium), L (Low)**
a. Maintenance of small boat harbors/marinas and launching ramps	**H (45.9%)**
b. Live-aboards	**M (39.3%)**
c. Enforcement	**H (50.0%)**

<u>Aquatic Life</u> **Threat or Use Conflict**	**Degree of Threat –H (High), M (Medium), L (Low)**
a. Depletion of inshore fish stocks	**H (72.1%)**
b. Depletion of bottom fish stocks	**H (62.7%)**
c. Depletion of exotic species for aquariums	**H (45.9%)**
d. Introduction of alien species	**H (80.5%)**
e. Degradation of coral reefs	**H (86.2%)**
f. Marine mammal protection 1. Public interference 2. Submarine sonar testing	**L (37.6%)**
g. Marine Debris	**H (54.8%)**
h. Ocean Acidification	**H & M (42.2%)**
i. Ocean energy development	**M (41.7%)**
j. Aquaculture	**L (40.5%)**
<u>Coral Reef Ecosystems</u> **Threat or Use Conflict**	**Degree of Threat –H (High), M (Medium), L (Low)**
a. Degradation from pollution and sediments from land-based runoff	**H (89.4%)**
b. Invasive species importation	**H (71.8%)**
c. Human disturbance, such as harmful fishing gear, marine debris, human trampling	**H (57.6%)**
d. Ocean acidification	**H (46.3%)**
<u>Salt Ponds</u> **Threat or Use Conflict**	**Degree of Threat –H (High), M (Medium), L (Low)**
a. Pollution from land-based sources	**H (62.2%)**
b. Shoreline/urban development	**H (69.1%)**
<u>Fish Ponds</u> **Threat or Use Conflict**	**Degree of Threat –H (High), M (Medium), L (Low)**
a. Pollution from land-based sources	**H (70.2%)**
b. Shoreline/urban development	**H (67.9%)**
<u>Beaches and Tidal Interface</u> **Threat or Use Conflict**	**Degree of Threat –H (High), M (Medium), L (Low)**
a. Loss of public access	**H (61.6%)**
b. Loss of public ownership	**H (64.0%)**
c. Coastal erosion	**H (64.7%)**
d. Storm surge and flooding	**M (43.5%)**
e. Encroachment by development on shoreline	**H (79.1%)**
f. “Hardening” of shoreline	**H (60.2%)**

<u>Wetlands & Estuaries</u> **Threat or Use Conflict**	**Degree of Threat –H (High), M (Medium), L (Low)**
a. Urban development	**H (78.8%)**
b. Agricultural practices	**M (44.2%)**
c. Polluted runoff from upland areas	**H (72.9%)**
<u>Water Quality</u> **Threat or Use Conflict**	**Degree of Threat –H (High), M (Medium), L (Low)**
a. Pollution from ocean uses – cruise ship waste: oil spills, recreational uses	**M (41.0%)**
b. Polluted runoff from land-based sources – stormwater, sewage outfalls, and emergency discharges	**H (84.5%)**

5. **<u>Public Access:</u>** Please indicate the degree of threat or conflicts each issue listed below poses to Public Access in the State.

Public Access-Type of Threat or Conflict Causing Loss of Access	**Degree of Threat-H (High), M (Medium), L (Low)**
Private residential development (including conversion of public facilities to private) Perpendicular and lateral shoreline access. (a) In various places around the state private roadway access to shoreline area is being blocked by gates, fences, signs, or other barriers;	H (75.3%)
Private residential development (including conversion of public facilities to private) Perpendicular and lateral shoreline access. (b) Human-induced vegetations that impacts lateral beach access is a statewide problem. There have been community complaints about the vegetative encroachment induced by private property owners at Kahala, Diamond Head and Kailua beaches, Oahu; Ha'ena, Wainiha and Hanalei, Kauai and other areas around the State.	H (68.2%)
Non-water dependent commercial/industrial uses of the waterfront (existing or conversion) Perpendicular and lateral shoreline access. The special management area (SMA) permit of the statutory law encourages non-water dependent uses of waterfront to locate in inland area. Public involvement to a large extent prevents non-water dependent commercial/industrial uses of the waterfront.	M (46.4%)
Erosion. Lateral shoreline access. Approximately 2% of Hawaii's shoreline is critically eroding (Coastal Management 27:187-217). Some shoreline areas are experiencing significant beach erosion and shoreline retreat. For example, 70% of Kauai's beaches are eroding while Oahu has lost a quarter of its sandy shoreline.	H (58.3%)

Public Access-Type of Threat or Conflict Causing Loss of Access	**Degree of Threat-H (High), M (Medium), L (Low)**
Sea level rise/Great Lake level change. Lateral shoreline access. The beaches become narrow during the high tides. This phenomenon particularly occurs in hotel areas including Waikiki, Oahu. Scientists haven't yet observed an accelerated rate of sea level rise in Hawaii.	M (41.0%)
Natural disasters. Lateral shoreline access. The potential of coastal disasters such as tsunami and storm surges is high and therefore beaches could shrink or be lost.	M (47.6%)
National security. Perpendicular and lateral shoreline access. There have been no major increased impacts from national security on public access since last assessment.	L (53.7%)
Encroachment on public land. Lateral shoreline access. The biggest encroachment onto public land in Hawaii is human-induced vegetative encroachment on the lands seaward of shoreline.	H (50.6%)
Other. Perpendicular and lateral shoreline access. Beach access closures or warning due to (1) water quality concerns; (2) high surfs; and (3) appearance of jelly fish or sharks.	L (43.4%)

Please circle the category with best describes your access to the coast for recreation: 19.8% Not Adequate, 55.8% Adequate; 24.4 % Better than Adequate.

Questions 6 thru 13 have many written responses. Please refer to Appendix B for the replies to these and other questions in the survey.

APPENDIX B
SECTION 309 SURVEY RESPONSES