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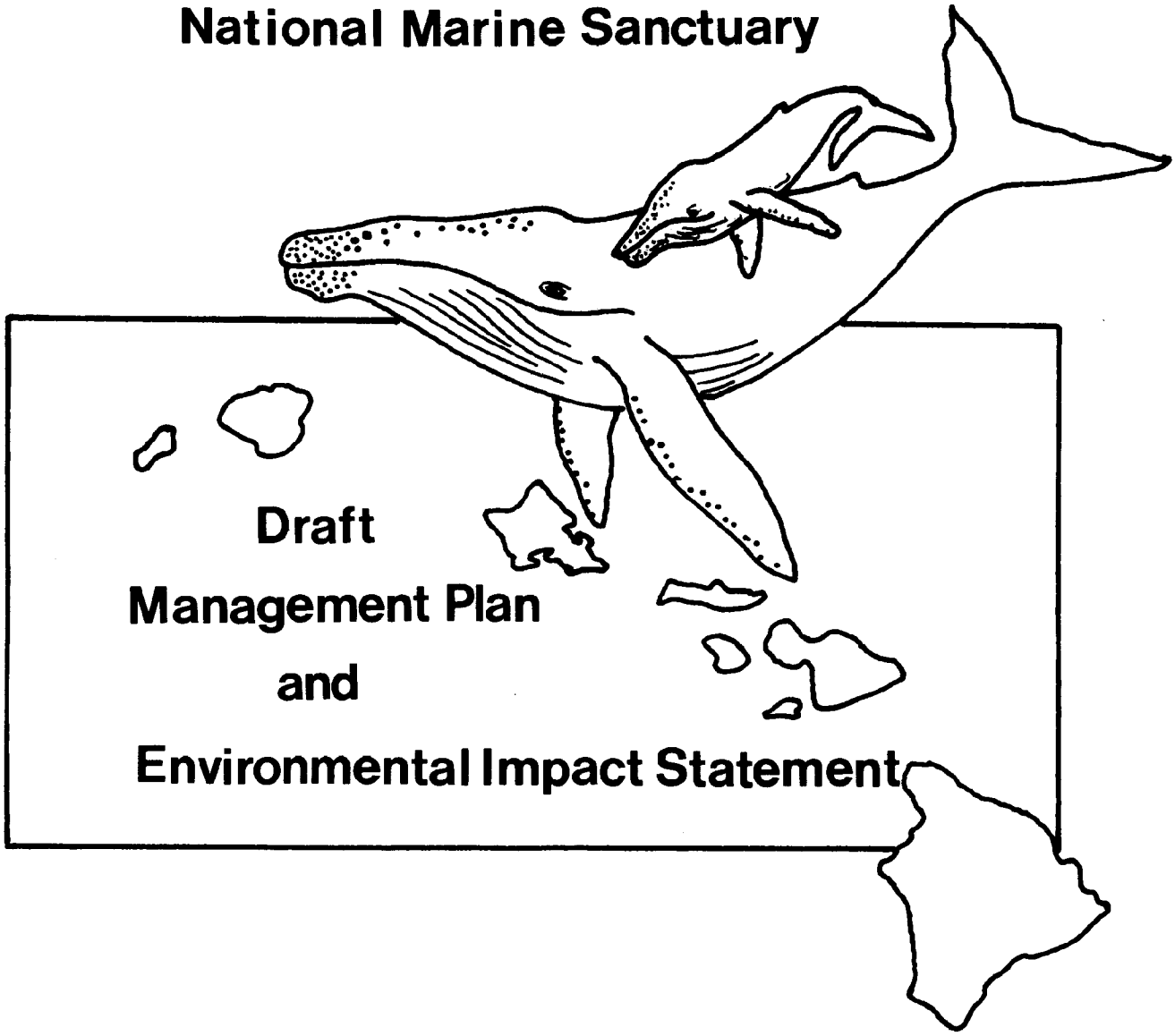
Proposed Hawai'i Humpback Whale National Marine Sanctuary



Draft Management Plan and Environmental Impact Statement

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J. S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of Ocean and Coastal Resource Management
Sanctuary Programs Division
Washington, D.C. 20235

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UNITED STATES DEPARTMENT OF COMMERCE

DRAFT MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED HAWAI'I HUMPBACK WHALE NATIONAL MARINE SANCTUARY

DECEMBER 1983

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DESIGNATION: Draft Environmental Impact Statement/Sanctuary Management Plan

TITLE: Proposed Hawai'i Humpback Whale National Marine Sanctuary

ABSTRACT: The National Oceanic and Atmospheric Administration (NOAA) proposes to designate certain waters within the Hawaiian Islands as a National Marine Sanctuary. The Designation will be effected by a Sanctuary Management Plan which, when implemented, will establish a means for assuring the long-term protection of the endangered humpback whale population in its winter habitat in Hawaiian waters. The plan applies to those waters found within the 100-fathom isobath surrounding the main Hawaiian Islands. It does not impose any additional restrictions on commercial or recreational fishing nor does it preempt any existing State or Federal authority for managing the humpback whale in its habitat in Hawaiian waters. The approach, rather, has been to develop programs for coordinating Federal, State, and local agency roles in enforcement, research, public education, and Sanctuary administration.

This document reflects the cooperative findings of NOAA and the State and includes a description of the proposed Sanctuary's boundaries and the management plan's strategies for carrying-out its goals and objectives and the purposes of this Designation.

The effect of the Designation is to complement existing efforts to protect the endangered humpback whale through increased coordination of and furnishing support for management-related research and interpretive programs, the results of which will: (1) improve the data base for resource allocation decisions; and (2) enhance the public's understanding of the species and its habitat in Hawaiian waters. Alternatives to the proposed action include: a no action alternative, a regulatory alternative, boundary options, and those involving a variety of institutional mixes for Sanctuary administration.

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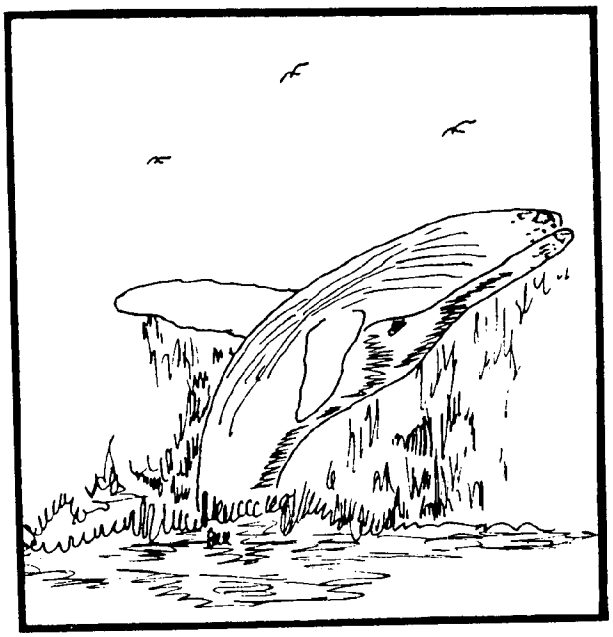
Comment Period: Comments close on this Draft Environmental Impact Statement 60 days following the date of the Federal Register notice announcing availability. See Part IX for List of Persons, Organizations, and Agencies receiving this document.

TABLE OF CONTENTS



DRAFT MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT STATEMENT: HAWAI'I HUMPBACK WHALE NATIONAL MARINE SANCTUARY

TABLE OF CONTENTS

	PAGE
NOTE TO READERS	i
PROLOGUE	v
EXECUTIVE SUMMARY	vii
PART I: INTRODUCTION	
A. Authority for Designation	1
B. Goals of the National Marine Sanctuary Program	1
C. Status of the National Marine Sanctuary Program	2
D. The Hawai'i Humpback Whale National Marine Sanctuary Program:	
1. Purpose and Need for the Designation	3
2. Background	4
E. The Terms of the Designation	7
F. The Plan for Managing the Sanctuary	7
PART II: CONTEXT FOR PLANNING	
A. Regional Geography	13
B. Physical Characteristics of the Site:	
1. Climate	15
2. General Oceanography	15
C. Description of the Resources of the Habitat:	
1. Terrestrial Systems	19
2. Marine Systems:	
a. Anchialine pools	19
b. Benches and tidepools	20
c. Fishponds	20
d. Coral reefs	20
e. Reef slope habitats	21
f. Deep-water terraces and slopes	21
g. Threatened and endangered species	21

PAGE

D. The Humpback Whale:

1. Historical Notes 22
2. Characteristics and Natural History of the Species:

a. Life history 23
b. Mortality 24
c. Feeding 24
d. Migration and distribution 24
e. Behavior 26
f. Interactions with man 27

E. Socioeconomic Profile:

1. Population 28
2. Labor Force 29
3. Military 29
4. Agriculture 29
5. Tourism 29
6. Hawaii's Fishing Industry 30
7. Maui's Tour Boat Industry 30

F. Institutional Setting:

1. State Authorities 31
2. Federal Authorities 34
3. Local Authorities 37

PART III: SANCTUARY MANAGEMENT STRATEGIES

A. Administration Plan 39
B. Resource Protection Plan 45
C. Resource Studies Plan 47
D. Interpretive Plan 53

PART IV: PROGRAM EVALUATION

A. Sanctuary Management Plan Review 59
B. Management Strategies Review 60

PART V: ALTERNATIVE ACTIONS INCLUDING THE PREFERRED ALTERNATIVE

A. Introduction 63

B. Institutional Alternatives:

1. Status Quo 63

PAGE

2. Federal Alternatives:

a. Critical habitat 65
b. National Marine Sanctuary: NOAA's Preferred Alternative 65

3. Other Alternatives 65

B. Boundary Alternatives:

1. Status Quo 67
2. 100-fathom Isobath 67
3. Maui County Waters 67
4. NOAA's Preferred Alternatives 68
5. Moving Boundary 69
6. Northwest Hawaiian Islands 69

C. Management Alternatives:

1. Status Quo 70
2. Coordinated Sanctuary Management Plan: NOAA's Preferred Alternative 70
3. Non-Government Administration 71
4. Other Federal Alternatives 71

PART VI: ENVIRONMENTAL CONSEQUENCES

A. Introduction 73

B. NOAA's Preferred Alternative:

1. National Marine Sanctuary Designation 74
2. Boundary 74
3. Sanctuary Management Plan:

a. Sanctuary administration 75
b. Resource protection 76
c. Resource studies 77
d. Interpretive program 78

C. Other Alternatives Considered:

1. Institutional Alternatives 79
2. Boundary Alternatives 82
3. Alternative Management Strategies 83

PART VII: ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED 85

PART VIII: LIST OF PREPARERS 87

PAGE

PART IX: LIST OF AGENCIES, ORGANIZATIONS, AND PERSONS RECEIVING COPIES 91

PART X: REFERENCES 99

APPENDICES

A. Title III of the Marine Protection, Research and Sanctuaries Act of 1972 105

B. Draft Designation Document: Hawai'i Humpback Whale National Marine Sanctuary 109

C. NMFS Notice of Interpretation 113

D. Guidelines for Establishing Research Agenda 115

E. Guidelines for Establisning an Interpretive Program .. 121

F. Excerpts from the Report of the Hawaiian Humpback Whale Sanctuary Workshop Committee 123

G. Final Report and Action Plan of the Mayor's Maui County Whale Reserve Committee 129

H. Chapter 205A, Hawaii Revised Statutes: Relating to Coastal Zone Management 139

I. Chapter 267, Hawaii Revised Statutes: Relating to the Conservation of Wildlife and Plants 145

J. Chapter 195, Hawaii Revised Statutes: Relating to Natural Areas Reserve System; Regulations concerning Cape Kīna'u-Āhihi Bay NARS 151

K. Chapter 190, Hawaii Revised Statutes: Relating to Marine Life Conservation Program; Regulations concerning Mānele-Hulopoe, Molokini Shoals, and Honolua-Mokuleia Bay MLCDs 157

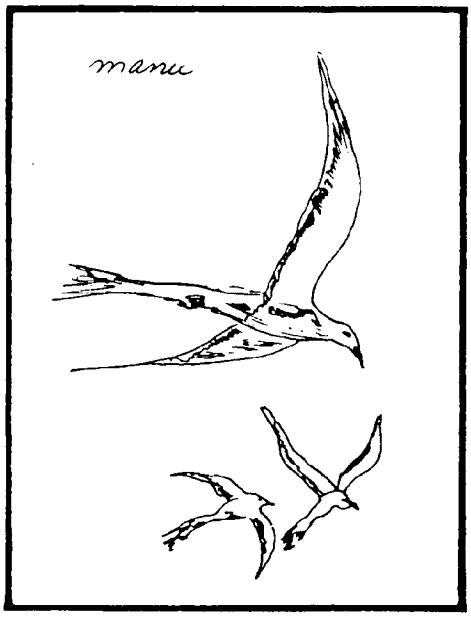
L. Chapter 195D, Hawaii Revised Statutes: Relating to the State's Boating laws 167

LIST OF FIGURES AND TABLES

FIGURE		PAGE
1.	Status of the National Marine Sanctuary Program	3
2.	Proposed Boundary Option-1977	4
3.	Major Breeding and Calving Areas (NMFS, 1979	5
4.	Boundary Recommendation-1979	6
5.	Proposed Boundary: NOAA's Preferred Alternative	6
6.	Regional Map of the Pacific Basin	13
7.	Proposed Boundary Option-1981	15
8.	100-Fathom Isobath (Maui County/Penguin Bank)	16
9.	Hawaiian Islands Wave Regimes	18
10.	Humpback Whale Distribution	26
11.	Marine Life Conservation Districts and Natural Areas Reserve in Maui County Waters	33
12.	Institutional Arrangement for Plan Coordination	41
13.	Implementation Trajectories	58

TABLES		
I	Regional Whale Sightings (Herman, et al.)	27
II	Commercial Fish Landings, Maui County	30
III	Operational Attributes of Alternatives Considered:	
	Part A. Institutional Alternatives	81
	Part B. Boundary Alternatives	83
	Part C. Management Strategies	84

NOTE TO READERS



NOTE TO READERS

In accordance with program regulations issued under the authority of Title III of the Marine Protection, Research and Sanctuaries Act of 1972, as amended (16 U.S.C. 1431 et seq.), NOAA has prepared a Draft Sanctuary Management Plan and Environmental Impact Statement for the proposed Hawai'i Humpback Whale National Marine Sanctuary.

This combined document was prepared by NOAA in consultation with the State of Hawai'i and other Federal agencies and represents a distillation of those discussions and the comments received from the citizens of Hawai'i. The document assists the reader in making the transition from a broad statement of planning needs and purposes to specific management strategies proposed for implementing the plan for managing the marine sanctuary in Hawai'i. Accordingly, its content is organized as follows:

PART I. INTRODUCTION - A broad definitive statement of the purposes to be served by the establishment of the marine sanctuary in Hawaiian waters and the objectives to be met through the implementation of the plan for managing the Sanctuary. This part also describes the National Marine Sanctuary Program, its enabling authority and implementing regulations, and the goals and objectives of the Sanctuary Management Plan and the terms of the Designation.

PART II. CONTEXT FOR PLANNING - A description of the conditions which influenced the planning process and which will serve to constrain or enhance the implementation of the management plan in the future. These factors include: (a) the physical and cultural geography of the region and site; (b) the life cycle and description of the humpback whale and the characteristics of its habitat in Hawai'i; (c) socioeconomic values tied to the resources and their use; and (d) the existing political-institutional setting for the management plan. This section also satisfies the NEPA requirement for describing the "Affected Environment", in the preparation of the Environmental Impact Statement.

PART III. SANCTUARY MANAGEMENT STRATEGIES - A discussion of the specific approaches proposed through which the purposes and objectives of the Designation and the plan for managing the Sanctuary will be achieved. Correspondingly, four coordinated plan increments have been prepared, each addressing specific management issues--research, resource protection and enforcement, public education, and agency roles and responsibilities prescribed for plan implementation.

PART IV. PROGRAM EVALUATION - A discussion of the procedure by which the effectiveness of the Sanctuary Management Plan in achieving its desired outcomes can be measured, i.e., how responsive the plan is to the needs for managing the resources and how well its functional provisions have been carried out. Also discussed is the coordination of plan review, its frequency, and the indicators that will be considered in measuring performance.

PART V. ALTERNATIVES TO THE PROPOSED ACTION - A concise statement done in partial compliance with NEPA regulations which describes the range of alternatives, including the Preferred Alternative, considered in developing the Sanctuary Management Plan. Management issues discussed in this part principally include the boundary issue, the purposes for which the Sanctuary is to be managed, and the various administrative arrangements for satisfying the objectives of the management plan.

PART VI. ENVIRONMENTAL CONSEQUENCES - A companion discussion to the evaluation of alternatives describing the specific impacts of the human and natural environment engendered by the proposed action as well as: (1) its potential adverse environmental or socioeconomic effects, (2) the relationship between the proposed action and its impacts on long-term productivity, (3) possible irreversible commitments of resources, and (4) possible conflicts between the proposed action and the objectives of Federal, State and local plans, policies, and programs for the area.

PART VII. ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED - A further iteration of the nature of the environmental consequences associated with a particular action that provides a brief summation of the net effects that are adverse and unavoidable. This part of the DEIS weighs the anticipated magnitude and duration of the impacts associated with a particular alternative against the reasons for accepting it over the other options considered.

PARTS VIII - X.

The remaining sections of the document identify the persons responsible for its preparation, those receiving copies, and the supporting references and documentation used in developing the draft plan and the strategies for is implementation.

The Federal action being considered in Hawai'i is the development and implementation of a plan for managing a National Marine Sanctuary for humpback whales in the waters of the State, designated under Title III of the Marine Protection, Research and Sanctuaries Act (MPRSA). An immediate effect of approval will be the establishment of a management regime whose principal purpose would be to contribute to the long-term protection of the humpback whale through the:

- Management of the designated area of a crucial habitat for wintering populations of the endangered humpback whale through the coordination of existing Federal, State, and local authorities;

- Improvement of resource management decisions through the coordination of research aimed at increasing our understanding of the species, including its biological needs, environmental factors affecting its fitness and vitality, and behavioral responses; and

- Enhancement of the public's awareness of the vulnerability of the species to man's activities and concern for its long-term survival, through interpretive/education programs directed towards Hawaii's citizens and visitor industry.

In addition, the establishment of a plan for managing a National Marine Sanctuary in Hawaiian waters for the endangered humpback whale is also intended to:

- Promote a meaningful partnership between Federal and State and local governments in managing the resources of the Sanctuary.
- Reinforce the State's continuing efforts to promote a statewide conservation ethic and the role of local government in decisions affecting their economy; and
- Demonstrate the commitment of the U.S. and the people of Hawai'i to protect the humpback whale populations in the North Pacific.

Taking the above into account, NOAA has determined that implementation of the Sanctuary Management Plan will be consistent with the following goals of the National Marine Sanctuary Program.

- Enhance resource protection through the implementation of a comprehensive, long-term management plan tailored to the specific resources of the Sanctuary;
- Promote and coordinate resources to expand scientific knowledge of significant reserves and improve management decisionmaking;
- Enhance public awareness, understanding, and wise use of the marine environment through public education, interpretive and recreational programs; and
- Provide for maximum compatible public and private use of special marine areas.

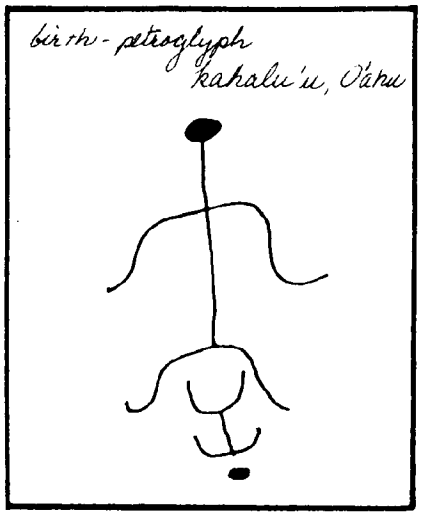
This document contains both a Draft Sanctuary Management Plan and Draft Environmental Impact Statement (DEIS) as well as the Draft Designation Document for the proposed Hawai'i Humpback Whale National Marine Sanctuary. Where possible, the DEIS incorporates by reference the elements of the management plan which also address NEPA requirements. The following table is provided to assist NEPA reviewers.

NEPA Requirement	Management Plan	
Purpose and Need for Action	Part I	Introduction
Alternatives:		
Preferred Institutional Alternative	Part I Part V	Introduction Alternatives
Preferred Boundary Alternative	Part II Part V	Context for Planning Alternatives

NEPA Requirement	Management Plan	
Preferred Management Alternative	Part III Part V	Management Strategies Alternatives
Other Alternatives	Part V	Alternatives
Affected Environment	Part II	Context for Planning
Environmental Consequences:		
General and Specific Impacts	Part VI	Environmental Consequences
Unavoidable Adverse Environmental or Socioeconomic Effects	Part VII	Environmental Effects Which Cannot Be Avoided
Relationship between Short-term Uses of Environment and the Maintenance and Enhancement of Long-term Productivity	Part VI Part VII	Environmental Consequences Environmental Effects Which Cannot Be Avoided
Possible Conflicts between the Proposed Action and the Objectives of Federal, State, Regional, and Local Land Use Plans, Policies and Controls for the Area Concerned	Part II Part VI Part VII	Context for Planning Environmental Consequences Environmental Effects Which Cannot Be Avoided
List of Preparers	Part VIII	
List of Agencies, Organizations, and Persons Receiving Copies of the DEIS	Part IX	

Part X

PROLOGUE



PROLOGUE

"O ke au i kahuli wela ka honua
O ke au i kahuli lole ka lani
O ke au i kuku'iaka ka La ...
O ka walewale ho'okumu honua ia"

Composed centuries ago, long before the first missionaries landed on Hawai'i's shores, the "Kumulipo" tells us of the Earth's creation. The gods, after consulting with La, the sun god, decided to change the heavens--a realm of darkness, lighted only by the "makali'i ka po" or tiny eyes of the gods (stars)--creating light, air, land and water. Then the ko'a, or coral was formed and the formation of coral reefs began. The moe-one, or sand worm, was also created and would live by eating the ko'a, as would the pe'a (starfish), the loli (sea cucumber), the wana (sea urchin), and other reef creatures. The breaking of the coral produced sand on the shoreline. The 'opihi, pipipi, and other sea creatures that live on the rocks were created. The cold water from the mountains mixed with the warm ocean waters and helped the sea creatures to multiply and flourish. "O ke akua ke komo, 'a'oe komo kanaka"...There was a heavenly being, or akua, present throughout the creation but not in human form.

As a variety of limu (seaweed) was created in the ocean, one plant was created on the land to act as its guardian. In all, 13 varieties were created. Twenty-nine pairs of fish were created, each also with a corresponding land plant to act as a guardian. The largest of the fish was the kohola, or whale, whose guardian on land was the 'ili-ahi, or sandlewood tree. The "Kumulipo" tells us "... a procession of kohola are passing by, the opule are swimming in schools for a long distance, and the ocean is thick with them." Reflecting upon this magnificent tale, it is ronic to note that today, that one of the largest, most majestic of sea creatures, the kohola, and its guardian, the 'ili-ahi, are both endangered species.

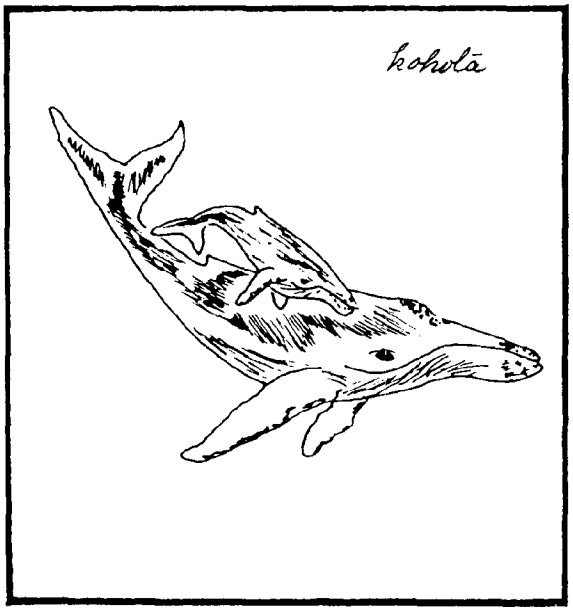
The early Hawaiians recognized the value of their precious resources both of the land and in the sea. The ahupua'a, or land divisions that extended into the sea, for example, were intended to serve as natural storehouses providing the people with the basic ingredients to sustain life and the island culture. Through a system of kapu, the ancient Hawaiians ensured that not only would there be resources to serve their needs but also those of future generations--koa and the fruit of the ulu from the upland forests; opae, o'opu, hihiwai, and kalo from the clear-running streams and lower valleys; and the he'e hiding among the crevices of the coral reef. This ethic of "ecological stewardship" was carried further in Hawaiian culture to provide for the protection of people.

The pu'uhonua, or place of refuge, afforded sanctuary to those who sought and could reach it--the persecuted, the vanquished, breakers of kapu, ali'i and maka'ainana alike. Everyone and everything had its place in ancient Hawai'i. Pono--all is in perfect order.

Today, the people of Hawai'i are experiencing a cultural renaissance, embracing the values that made old Hawai'i the true tropical paradise described by early western voyagers. The wisdom and foresight of the early Hawaiians and the aloha the kupuna bore for their natural surroundings are slowly finding their way back into the social consciousness of modern Hawai'i. While the return of the old ways and the kapu cannot be expected, the values upon which they were built still can serve to guide the resource decisions we make today.

The kohola, that magnificent native-born giant, is an endangered creature. Caught up in the reawakening of Hawaiian culture, the people of Hawai'i are now being asked: Should the kohola be given pu'uhonua? Should we, as konohiki to our island environment, create the means to ensure their long-term protection? The answer lies within each and every American citizen and the people of Hawai'i.

EXECUTIVE SUMMARY



EXECUTIVE SUMMARY

Proposed for designation as a National Marine Sanctuary are certain waters in Hawai'i which annually host a large wintering population of humpback whales. The whales, which migrate every fall from their summer feeding grounds off southeast Alaska, remain in Hawaiian waters until late spring before returning to their summer habitat. While in Hawai'i, the whales move throughout the archipelago concentrating in the warm, shallow waters of the islands where they engage in the reproductive activities so vital to their survival. It is estimated that the Hawaiian population of humpbacks numbers approximately 600 to 800 individuals.

NOAA initially became involved with the project in late 1977 in response to a proposal submitted by an independent researcher on Maui to establish a National Marine Sanctuary under Title III of the Marine Protection, Research and Sanctuaries Act of 1972 (MPRSA), as amended. The boundaries of the proposed area included three options delineated according to the significance of each to the habitat needs of the whales. The area off the southwest coast of Moloka'i referred to as Penguin Bank was not included as part of the original proposal.

The nomination was placed on the National Marine Sanctuary Program's List of Recommended Areas (LRA) in October 1979 and a scientific workshop convened in Hawai'i that following December. The purpose of the workshop was to seek the assistance of scientists and resource managers in the evaluation of the proposal. The panelists concluded that of the range of alternatives considered, the establishment of a National Marine Sanctuary in Hawai'i under Title III of the MPRSA was the most beneficial to the long-term protection of the endangered humpback whale.

The marine sanctuary nomination was declared an Active Candidate by NOAA in March 1982. Public workshops were subsequently held in Hawai'i during April to further discuss the purpose of and evaluate the issues related to management of the Sanctuary in Hawaiian waters.

All of the discussions to date, involving a broad range of interests in Hawai'i--boaters, fishermen, researchers, and State and local officials--have laid the foundation upon which certain key decisions have been made, i.e., the boundaries proposed for the Sanctuary; the institutional arrangements between State and County governments and NOAA in the management of the area; and the assurances concerning future sanctions against commercial and recreational fishing in the Sanctuary.

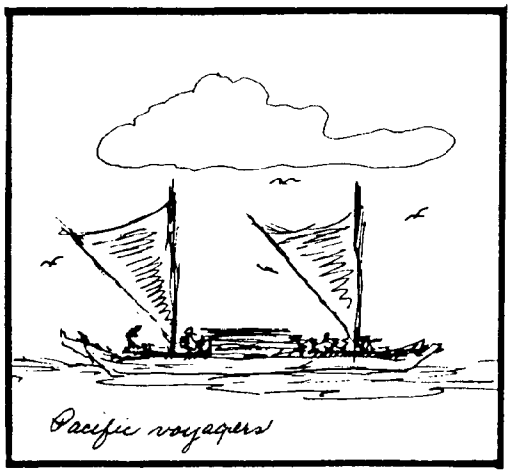
The plan developed by NOAA for managing the Sanctuary in Hawai'i is the product of a cooperative evaluation process between the State and NOAA and is strongly oriented towards: (1) improving the coordination of existing State and Federal resource protection programs; (2) promoting management-related research designed to improve the basis for decisionmaking; (3) establishing public awareness and education programs aimed at the long-term protection of the humpback whale and the values of its habitat in Hawaiian waters; and (4) ensuring the widest possible accommodation of public and private uses of the Sanctuary's resources.

It calls for the creation of a coordinated management regime involving the participation of all levels of government and a broad range of citizen interests and the private sector. No additional restrictions will be imposed as a consequence of the proposed designation beyond those already existing under other authorities which presently protect the humpback whale from taking and regulate access to the use of the resources of the candidate site. The Sanctuary Management Plan does not intend to duplicate them. It does, however, intend to promote the non-regulatory side of resource management, i.e., public awareness and education, promoting and coordinating research within the Sanctuary and making available any resulting product, and coordinating the activities of Federal and State agencies in carrying out their respective roles in resource management.

The provisions of the Sanctuary Management Plan will be applied statewide within the boundary established by the 100-fathom isobath. The boundary represents the position taken by the State upon the recommendation of its Advisory Committee and, subsequently, serves as NOAA's Preferred Alternative. The State's acceptance of its Committee's findings on the boundary issue does not constitute an endorsement for the designation of the proposed Sanctuary. Its action is intended only to serve as a means for assuring that the proposal is fully considered by the public and government decisionmakers. Its focus considers less the geopolitical convenience of boundary delineation, emphasizing rather the study and protection of the whales when and wherever they may occur in islands waters. Furthermore, the plan has adopted an existing legal boundary used by NOAA's National Marine Fisheries Service to delineate the principal breeding and calving grounds of the humpback whale in Maui County waters as the core of the Sanctuary in Hawai'i. This "tiered" approach simply means that although broadly applicable statewide to all waters surrounding the major islands of the chain (including Ka'ula), the management plan also recognizes the need to support the continuing efforts of the National Marine Fisheries Service to protect the humpback whales in areas of known biological significance to the species.

Again, as an added measure of assurance to the State of Hawai'i and its citizens, the terms of the Designation do not impose additional restrictions on fishing and vessel operations in the proposed Sanctuary and further provide safeguards against the unreasonable imposition of additional restrictions after the Sanctuary is designated. Article 6 of the proposed Sanctuary's Draft Designation Document states that the "terms of this Designation may be modified only in accordance with the procedures by which the original Designation was made" including approval by the Governor of the State of Hawai'i, where State waters are involved.

PART I. INTRODUCTION



PART I: INTRODUCTION

A. Authority for the Designation

Title III of the Marine Protection, Research and Sanctuaries Act of 1972 (MPRSA) 16 U.S.C 1431 et seq., as amended (Appendix A), authorizes the Secretary of Commerce, with Presidential approval, to designate ocean waters as marine sanctuaries for the purpose of preserving or restoring their conservation, recreational, ecological, or aesthetic values. Marine sanctuaries may be designated as far seaward as the outer edge of the continental shelf, in coastal waters where the tide ebbs and flows, or in the Great Lakes and their connecting waters, and are built around the existence of distinctive marine resources whose protection and beneficial use requires comprehensive planning and management. The MPRSA provides the National Oceanic and Atmospheric Administration (NOAA), through which the Act is administered, with a means for establishing comprehensive management programs designed to meet its statutory mandate--including the authority for rulemaking. Immediate responsibility for administering the National Marine Sanctuary Program within NOAA has been delegated to the Sanctuary Programs Division (SPD) of the Office of Ocean and Coastal Resource Management (OCRM), National Ocean Service (NOS).

B. Goals of the National Marine Sanctuary Program

Consistent with the mission of developing a system of national marine sanctuaries for the purposes of serving the long-term benefit and enjoyment of the public, the following goals were established for the national program:

- Enhance resource protection through the implementation of a comprehensive, long-term management plan tailored to the specific resources;

- Promote and coordinate research to expand scientific knowledge of significant marine resources and improve management decision-making;

- Enhance public awareness, understanding, and wise use of the marine environment through public interpretive and recreational programs; and

- Provide for optimum compatible public and private use of special marine areas.

Although the term "sanctuary" often has led to negative views of the marine sanctuary program, the establishment of marine sanctuaries was never intended by the Congress, and is not interpreted by NOAA, to set aside areas where all uses would be excluded or automatically regulated. Rather, multiple uses would be encouraged and such areas managed for the purpose of balancing resource protection needs with those of other competing interests.

C. Status of the National Marine Sanctuary Program

To date, six national marine sanctuaries have been established since the Program's inception in 1972 (Figure 1):

- U.S.S. MONITOR National Marine Sanctuary - Designated in January 1975, it encompasses a one square mile area southeast of Cape Hatteras, North Carolina, site of the wreck of the Civil War ironclad, U.S.S. MONITOR.

- Key Largo National Marine Sanctuary - Designated in December 1975, it provides protective management of a 100-square mile coral reef area south of Miami, Florida.

- Channel Islands National Marine Sanctuary - Designated in September 1980, it consists of an area of approximately 1,252-square nautical miles off the coast of California adjacent to the northern Channel Islands and Santa Barbara Island. The Sanctuary ensures that valuable habitats for marine mammals, including extensive pinniped assemblages, and seabirds are protected.

- Looe Key National Marine Sanctuary - The Sanctuary consists of a five-square nautical mile submerged section of the Florida reef tract southwest of Big Pine Key. The site includes a beautiful "spur and groove" coral formation supporting a diverse marine community and a wide variety of human uses. It was designated in January 1981.

- Gray's Reef National Marine Sanctuary - The site, designated in January 1981, is a submerged live bottom sea area located on the South Atlantic continental shelf due east of Sapelo Island, Georgia. The Sanctuary, which encompasses about 17-square nautical miles, protects a considerably productive and unusual habitat for a wide variety of species including corals, tropical fish and sea turtles.

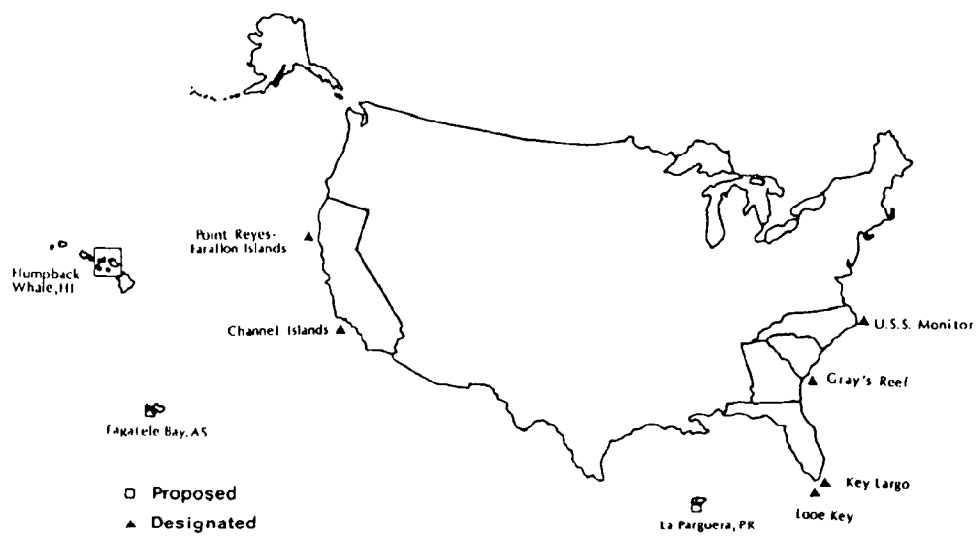
- Point Reyes-Farallon Islands National Marine Sanctuary - This 948-square nautical mile area off the California coast north of San Franscisco contains a diverse array of marine mammals and marine birds as well as fishery, plant, and benthic resources. The Sanctuary was designated in January 1981 and ensures that the area receives long-term, comprehensive protection.

In addition to the Hawai'i nomination, two other sites are currently being considered for designation as national marine sanctuaries:

- La Parguera National Marine Sanctuary - The site is a 68.27-square nautical mile area located off southwestern Puerto Rico. The proposed Sanctuary includes extensive mangroves, coral reefs, and seagrasses which support a diversity of fishes and marine birds. The waters of the sanctuary are known also for their concentration of the light-emitting dinoflagellate *Pyrodinium bahamense*, which give them their bioluminescent quality.

° Fagatele Bay National Marine Sanctuary - The site is a 163-acre embayment located on the south coast of the Island of Tutuila, American Samoa. The bay is typical of marine systems found on high islands of volcanic origin formed by eustatic changes in sea level, geologic subsidence and aging and provides researchers a rare opportunity to study marine ecological succession.

fig. 1 Status of the National Marine Sanctuary Program



D. The Hawai'i Humpback Whale National Marine Sanctuary

Purpose and Need for the Designation

The humpback whale (Megaptera novaeangliae) is one of the most depleted species on earth. The scattered populations inhabiting the world's oceans today represent a small fraction of their former numbers and stand as reminders of man's recent history which has seen the humpbacks and other whale species extensively exploited by coastal and high seas whalers.

Protected by international convention since 1966, the future of the "endangered" (a status accorded since 1970 by the U.S.) humpback whale is still uncertain. Some populations, such as that in the Antarctic where only 3% of the original stock remains, might already be beyond "biological recovery", i.e., not occurring and breeding in numbers sufficient to increase the stock's size or, at a minimum, replace individuals lost through natural mortality. It is also uncertain as to whether the wintering population annually observed in Hawaiian waters is making or can make a comeback. Any recovery, at best, would be very slow and probably benefit from additional public attention and long-term management measures that would result from marine sanctuary designation.

Each winter, the shallow, warm waters surrounding the Hawaiian Islands provide an ideal place for humpback whales to breed and tend their young. These "large-winged" mammals, generically referred to as kohola by the Hawaiians, begin entering Hawaiian waters as early as November, where they remain until late spring when they depart for their summer feeding grounds off the south

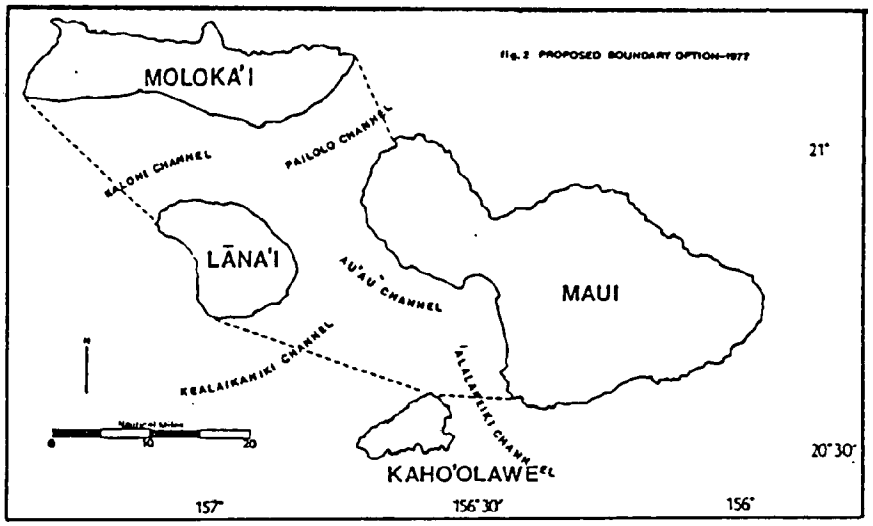
coast of Alaska. These seasonal visitors to Hawai'i, numbering approximately 600-800 animals, represent the largest and most widely known of the three breeding populations remaining in the North Pacific.

Although sighted over deeper waters throughout the major islands, the shallow waters found within the 100-fathom isobath appear to offer the most hospitable habitat and, consequently, play host to the greatest number of wintering humpbacks. These waters traditionally have been shared also by resident and tourist alike who engage in a wide range of commercial and recreational activities such as boating, fishing, and diving.

Some of these activities and particularly those directly resulting from heightened enthusiasm for research and the profitability of whale watching charters might contribute unknowingly to the harassment of the species. Such cause and effect relationships, however, are more the result of speculation than a fact substantiated by scientific research. Indeed, if such correlations were established in the future, State and Federal authorities already possess the means to amend their regulations correspondingly. Until more information becomes available concerning what affects the behavior and/or biological fitness of the seasonal whale population in Hawai'i, it is still an issue of sufficient importance to warrant further evaluation. The plan for managing the proposed Sanctuary provides the opportunity for acquiring this information.

Background

In July 1977, the U.S. Marine Mammal Commission presided over a workshop in Hawai'i which resulted in a biological definition for harassment, including the behavioral responses which might indicate stress, and the identification of human activities which might constitute such an act. The attendees also made recommendations that a range of management alternatives be considered to ensure the protection of the whales and that Federal enforcement presence be strengthened during the whale season. A proposal to establish a marine sanctuary in Hawai'i for the humpback whale was submitted later that year by an independent whale researcher working on Maui. The proposal recommended three boundary alternatives, all within the waters of Maui County but excluding the area referred to as Penguin Bank off the coast of Moloka'i (Figure 2).



During this period, NOAA's National Marine Fisheries Service (NMFS) held public hearings in Hawai'i which resulted eventually in the issuance of a Notice of Interpretation on "Humpback Whale Harassment in the Hawaiian Islands Area" (44 FR 1113, 1979). The notice (Appendix C) identified principal calving areas in Maui County waters, defined "taking" by means of harassment under the Marine Mammal Protection and Endangered Species Acts, and the identification of specific human activities which constituted harassment and, consequently, were subject to regulation (Figure 3).

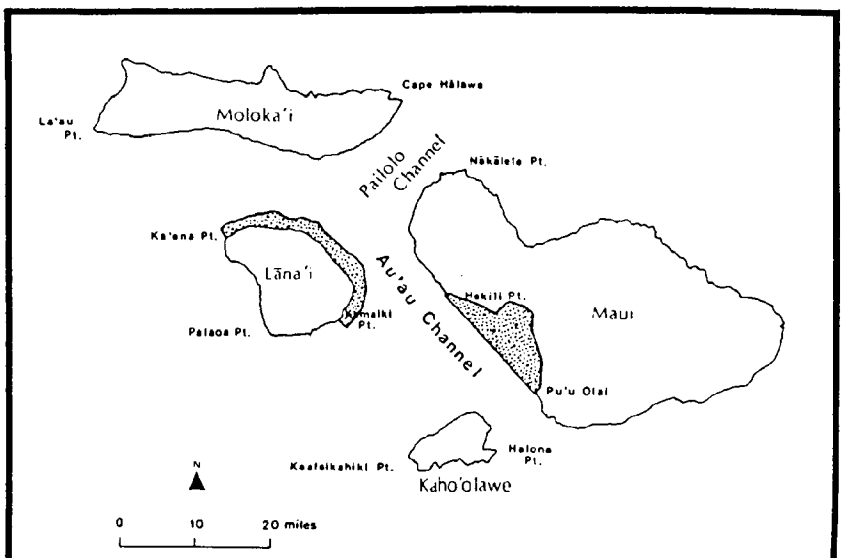


Figure 3 - Major Breeding and Calving Areas (NMFS, 1979)

This mechanism currently serves as the principal means for protecting the humpback whale and managing its habitat in Hawai'i.

On October 31, 1979, the proposal was placed on NOAA's "List of Recommended Areas" (44 FR 62552, 1969). This constituted NOAA's first official act to formally acknowledge the nomination as a possible National Marine Sanctuary.

In December 1979, a panel of scientists, resource managers, and Federal, State, and local officials convened in Hawai'i to discuss the biology of the humpback whale in Hawaiian waters, the need for additional research and public awareness, regulatory measures, and management alternatives for assuring the long-term protection of the endangered species. In 1980, NOAA circulated the findings and recommendations of the panel (Appendix F).

The report described three management alternatives including: (1) status quo; (2) critical habitat designation as provided by the Endangered Species Act of 1973; or (3) marine sanctuary designation under Title III of the MPRSA. Of the three alternatives, the committee concluded that the designation of a National Marine Sanctuary was the "most certain route to continuing protection of the humpback whale in Hawaiian waters."

The members did not feel that an appropriate level of protection for the whales nor the full participation of local, State, and Federal authorities could be achieved through either the maintenance of the status quo or a critical

habitat designation. Additionally, the Committee also proposed the following boundary: the 100-fathom (183-meter) isobath encircling the islands of Ka'ula, Ni'ihau, Kaua'i, O'ahu, and Hawai'i, and adjoining the Islands of Lāna'i, Maui, Kaho'olawe, and Moloka'i, including Penguin Bank. In addition, the deep-water area of Pailolo Channel from Cape Hālawa, Moloka'i to Nākālele Point, Maui and southward was recommended for inclusion (Figure 4).

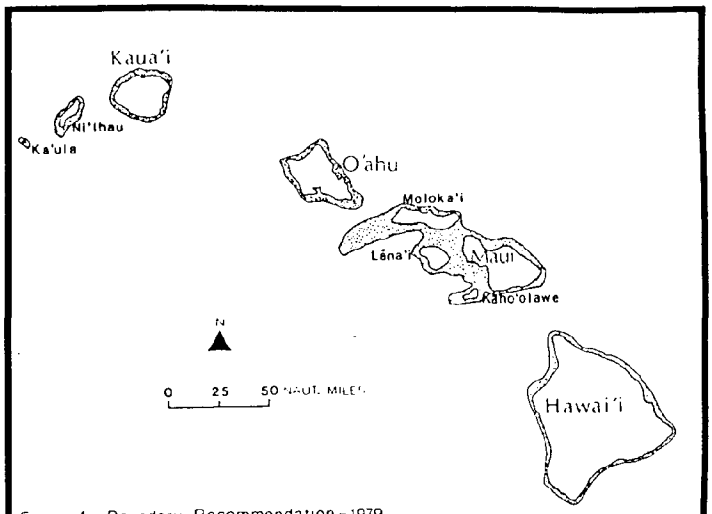


Figure 4 – Boundary Recommendation - 1979

Following preliminary consultations with State and Federal agencies, and a comprehensive evaluation of each alternative, NOAA initially concluded that the area circumscribed by the 100-fathom isobath might be excessive in terms of the corresponding level of effort that would be required to ensure proper Sanctuary administration, a result that would dilute overall management capabilities in selected areas of whale concentration. NOAA at that time felt that a more discrete area might offer a better balance between considerations made for relative habitat value and biological significance, and the level of management effort desired or necessary for achieving the purposes of the National Marine Sanctuary Program. Consequently, a smaller boundary initially was prescribed by NOAA for the proposed marine sanctuary, involving only Maui County waters (Figure 5).

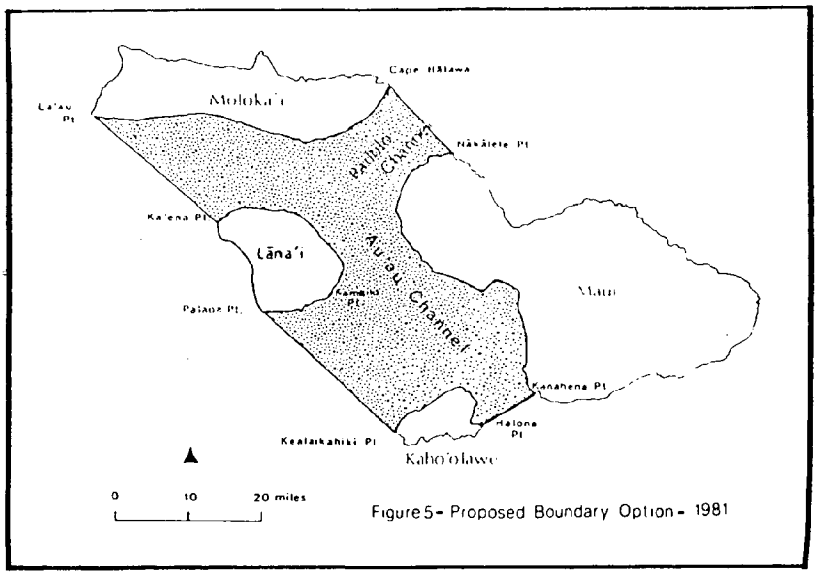


Figure 5 - Proposed Boundary Option - 1981

On March 17, 1982, following another round of public meetings, and discussions with State and local officials, consultation with other Federal agencies, and further evaluation in accordance with Section 922.23(a) of the regulations governing the National Marine Sanctuary Program, the proposal in Hawai'i was declared an Active Candidate (47 FR 11544, 1982).

In May 1983, NOAA announced its intent to prepare a Draft Sanctuary Management Plan and Draft Environmental Impact Statement for the marine sanctuary in Hawai'i. It also solicited at that time the assistance of the State in the cooperative evaluation of several key issues related to the management of the area. The State responded through the creation of a Governor's Advisory Committee representing a broad range of user interests, supported by a resource staff comprised of Federal, State, and local representatives (Part VII: List of Preparers). The Committee's mandate from the Governor was to provide the State with input on the issues and assist NOAA in the preparation of the draft Sanctuary documents. Their work resulted in a series of recommendations submitted to NOAA through the Governor's Office. One of the major positions taken by the Committee vis-a-vis State of Hawai'i, supported the extension of the boundaries of the proposed marine sanctuary to include the 100-fathom isobath.

It was the opinion of the Committee that the larger boundary represented, among other things, all of the known areas used by the humpbacks while in Hawaiian waters and an opportunity for enhancing research, education, and resource protection activities statewide. This, as well as other recommendations made by the Advisory Committee, and the corresponding position taken by the State, assisted NOAA in the preparation of this document.

E. The Terms of the Designation

Section 302(f)(1) of the MPRSA provides that as a condition for establishing a national marine sanctuary, the Secretary of Commerce must first set forth the terms of the Designation. The terms must include: (a) the geographic area included within the Sanctuary; (B) the characteristics of the area that give it conservation, recreational, ecological or aesthetic value; and (c) the types of activities that would be subject to regulation by the Secretary in order to protect those characteristics. In short, the Designation Document serves as the primary authority for managing the Sanctuary, modifications to which may only be made by the "same procedures through which (the) original designation (was) made." Sections 302(a) and (b)(2)(A and B) also vests with the President of the United States, Governor of the State of Hawai'i and the U.S. Congress the authority to approve, certify, or find against the Designation or any of its terms, thereby providing essentially the power to "veto" the proposal. A draft Designation Document for the proposed National Marine Sanctuary in Hawai'i can be found in Appendix B of this document.

F. The Plan for Managing the Sanctuary

Purpose and Scope of the Plan

The plan for managing the proposed Sanctuary is intended to carry out the terms established in the Designation. It is oriented towards the protection of the humpback whale and relies on the coordination of existing State and Federal authorities for its implementation. It carries with it no new

The plan is consistent with the goals of the National Marine Sanctuary Program and the purposes intended to be served by the Designation. Through the its specific strategies for plan implementation, it provides for: (1) the Sanctuary's on-site administration; (2) development and implementation of coordinated management-related research agenda; (3) the enhancement of public awareness and education efforts; and (4) the coordination of Federal, State, and local resource protection programs, including the enforcement of existing regulations.

Goals and Objectives of the Plan

Regulations currently enforced under the authority of the Endangered Species Act of 1973 and the Marine Mammal Protection Act of 1972 by NOAA's National Marine Fisheries Service regarding the "taking" of humpback whales in Hawai'i alone do not constitute a plan for managing the resource. The role of regulatory enforcement in the management of a given resource traditionally has been limited in its ability to provide for the comprehensive treatment and coordination of issues such as: (1) State and other Federal resource management programs; (2) management-related research designed to improve the basis for decisionmaking; (3) public awareness and education efforts which are essential to any long-term resource protection initiatives; and (4) addressing issues related to the allocation of resources. These represent the purposes for which the Sanctuary in Hawai'i would be established and, subsequently managed. The following describes these purposes in a set of goal statements supported by the immediate objectives or actions necessary to fully implement the terms of the Designation.

GOAL 1: Ensure the long-term protection and vitality of the wintering humpback whale population in Hawaiian waters.

The waters surrounding the Hawaiian Islands and particularly those within the 100-fathom isobath annually play host to a large wintering population of the endangered humpback whale (*Megaptera novaeangliae*). These whales journey over 2,500 miles from their summer residence in the waters of Southeast Alaska to their wintering grounds in Hawai'i where they engage in the reproductive activities that are so vital to their survival. Although protected from commercial whaling since 1966 by international convention, the future of the species is still uncertain. Currently, NOAA's National Marine Fisheries Service (NMFS) regulates the "taking" of humpback whales in Hawaiian waters. These regulations have provided some measure of protection to the wintering humpback whale population, however, some of NMFS's success in managing the species in Hawai'i has been attributed to its non-regulatory efforts in educating the boating and fishing public. Unfortunately, NMFS acting alone has neither the resources nor the statutory mandate to sustain these efforts on a broader scale. The establishment of a marine sanctuary for the humpback whale in Hawaiian waters offers a unique opportunity for building upon NMFS's initiatives and for coordinating other existing Federal responsibilities with those of the State and local governments in the areas of research, enforcement, and public education. The proposed Sanctuary represents a major commitment by the American people and the citizens of the 50th State to: (1) ensure the long-term protection of the endangered humpback whale; (2) seek a better understanding of the whale and its interactions with man throughout its range; and (3) create a public awareness and ethic that all great whales inhabiting the world's oceans should be protected.

Specific management objectives:

(a) Establish mechanisms to foster coordination and cooperation among Federal, State, and local agencies responsible for enforcing the various laws and regulations for protecting marine resources in Hawai'i.

(b) Implement a coordinated research and monitoring program directed at improving man's knowledge of the species and the needs and priorities for its protection.

(c) Implement a coordinated public awareness/education program designed to create an environmental ethic and understanding of the values of the humpback whale and its habitat in Hawaiian waters and the need for its protection.

(d) Establish a comprehensive program for the on-site administration of the Sanctuary that coordinates and institutionalizes the roles and responsibilities of participating Federal and State agencies and which also sets forth the procedures for implementing each of the management strategies of the Sanctuary Management Plan.

GOAL 2: Provide a scientifically sound and responsible means for administering research within the Sanctuary.

Compared to what we know about many of the other species which cohabit our planet, there is a dearth of information concerning the world's humpback whale population. Only recently have researchers begun to study the humpback whale--its natural history, range and habitat, and behavior. When carried out in an organized, responsible manner, the benefits derived from research findings accrue to both the humpback whale, in terms of our understanding of the factors that affect its biological fitness, and to resource managers, whose responsibility is to decide on the appropriate management responses for assuring the long-term protection of the species.

The proposed Sanctuary in Hawai'i provides a unique opportunity for the researcher to study the whales under a variety of conditions. Some areas within the Sanctuary are relatively isolated while others are easily accessible and close to areas of dense human habitation and activities.

Much of the work to date has been the result of independent research conducted under contract to a number of agencies and organizations or supported by private donations and whale watching cruises. Very little coordination has occurred within the research community in either project collaboration, design, or in the sharing of information. As a result, some duplication may occur. Viewing several researchers conducting similar, although not necessarily duplicative research, has led to the perception by user interests that research activities are the primary source of whale harassment in local waters. In addition, claims have been made against some holders of NMFS-related research permits questioning their "scientific" value and motivations. Unfortunately, these perceptions have made the humpback whale research highly suspect to many people. The establishment of the Sanctuary and the implementation of its

associated management plan is viewed as a means to restore the credibility of the research effort and the importance of supporting scientific investigations on the humpback whale in Hawaiian waters.

The Sanctuary Management Plan includes a resource studies component which serves as a strategy for developing and carrying out a coordinated research program in the Sanctuary. The strategy serves as a means for ensuring that research will: (1) correspond to the immediate purposes and objectives of the Designation; (2) not duplicate other research where not intended by design; (3) be carried out only by qualified persons specified on valid permits issued by NMFS; and (4) not harass whales unnecessarily, even where contact is permitted.

Specific management objectives:

(a) Implement a comprehensive Resource Studies Plan that clearly establishes research needs and priorities.

(b) Promote and support research that is compatible with past, current, or projected research activities within the Sanctuary or relevant to the Hawaiian stock.

(c) Establish procedures for receiving and evaluating research proposals to ensure that such research proposed within the Sanctuary is consistent with the purposes, objectives, needs, and priorities of the Resource Studies Plan or its related research agenda.

(d) Collaborate with other agencies, institutions, and funding sources to promote needed research in the Sanctuary.

(e) Develop and maintain a data management system/repository that provides a means for enhancing information exchange and ensuring that findings result from work performed within the Sanctuary are made available to other researchers and the Sanctuary administrators.

GOAL 3: Enhance the public's awareness and understanding of the worldwide plight of the endangered great whales, the humpback whale, and the value of its habitat in Hawaiian waters to its survival.

Ultimately, the success of any resource management program initiated by government depends largely on the support it receives from the public affected by its provisions. Regulatory enforcement acting alone cannot achieve in the long-run what is possible when a well-informed public recognizes its responsibilities in and the need for protecting its natural heritage. The establishment of a marine sanctuary in Hawai'i is intended specifically to protect the humpback whale in its winter habitat in Hawaiian waters. Its reach, however, goes far beyond its interisland boundaries. Internationally, the establishment of the marine sanctuary in Hawai'i serves as a declaration of America's commitment to ensure the survival of the humpbacks as well as other species of great whales which inhabit the world's oceans. More significantly, the immediate beneficiaries of the Sanctuary are Hawaii's present and future generations.

Through direct contact with Sanctuary-supported interpretive programs, the citizens of Hawai'i will be given an unparalleled opportunity to acquire a better understanding of the whales, their habitat in island waters, and the value of the Sanctuary in offering a long-term commitment to their protection. The Sanctuary in Hawai'i also may help to reinforce the State's continuing efforts to preserve the island's unique cultural conservation ethic or kapu system in its resource management programs.

Specific management objectives:

(a) Implement a comprehensive Interpretive Plan designed to create an environmental ethic and awareness of the values of the Sanctuary's resources and the need for their protection.

(b) With the cooperation of the State of Hawai'i, county governments, other Federal agencies, and private interests, establish an interpretive facility and menu of programs aimed at broadening public support for the protection of the whales and the National Marine Sanctuary as well as serving as a repository and clearinghouse for information on humpback whales and current research activities.

GOAL 4: Consistent with the purposes of the Designation, ensure the widest possible accommodation of and access to traditional uses of the waters and resources of the Sanctuary, including commercial and recreational fishing, boating, and other water contact activities not otherwise prohibited by Federal or State law.

A wide variety of activities occur within the boundaries of the Sanctuary, among which include commercial, recreational, subsistence, public and private, consumptive, and non-consumptive uses. Many are deeply rooted in the cultural experience of Hawai'i and sanctioned by tradition; others are restricted or regulated by permit; all, however, depend on the continued health and availability of the Sanctuary's resources--including the humpback whale. Existing Federal and State laws acting alone or together currently form the regulatory framework for protecting the quality of the marine habitat and the allocation of its resources among the various users. Designation of the marine sanctuary in Hawai'i will not mean another layer of government nor the preemption of or encroachment upon existing authorities. The proposed Sanctuary is not intended to create economic windfalls for any particular interest at the expense of another. The humpback whales are the primary beneficiaries of the Designation in Hawai'i. The Designation is seen as an opportunity to make resource management decisions more efficient through the coordination of the various regulatory mechanisms already available to the administration of the Sanctuary.

Specific management objectives:

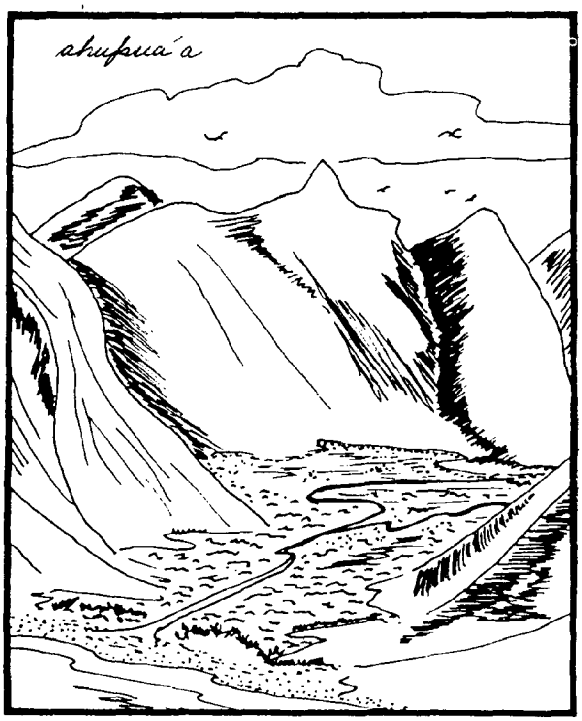
(a) Establish mechanisms to foster coordination and cooperation among Federal, State, and local government agencies responsible for enforcing the various laws and regulations for protecting marine resources in Hawai'i.

(b) In coordination with other Federal, State, and local agencies, establish a means for monitoring the health and quality of the Sanctuary and its resources.

(c) Initiate procedures for ensuring adequate consultation with State coastal managers in order to minimize potential user conflicts and irreparable environmental losses.

(d) Establish channels of communication between resource managers, users of the resource, private industry, and public interest groups in order to prevent or resolve conflicts and ensure the public's continuing involvement in the decisionmaking process.

PART II. CONTEXT FOR PLANNING



PART II: CONTEXT FOR PLANNING

A plan for effectively managing the Sanctuary's resources is a product resulting from a process founded on a firm understanding of current and changing natural and human conditions which influence plan development or may be affected by its implementation. Collectively, these conditions, the effects of which are described by scientific inquiry and experience, serve as the setting or context within which the preparation of the management plan for the proposed marine sanctuary in Hawai'i occurred. Their integration in the planning design is intended to ensure that the resulting product addresses the need for maintaining: (1) optimum biological productivity of renewable resources and a system for their allocation; (2) an equitable balance among social, economic, and environmental costs and benefits including the need to protect traditional and cultural practices; and (3) a politically acceptable legal institutional structure possessing the authority to act. The following discussion describes: (1) the geography of the region and the area encompassed by the proposed Sanctuary's boundaries; (2) the humpback whale, its historic presence in Hawai'i, distribution behavior, and the resource characteristics of its habitat in Hawaiian waters; (3) socioeconomic factors, including traditional and subsistence uses; and (4) the legal-institutional setting.

A. Regional Geography

The Hawaiian Archipelago is a group of eight major islands together with about 100 smaller islets, shoals, and reefs stretching 1,400 nautical (1,600 statute) miles along a southeast-northwest axis in the North Central Pacific. Lying in the Tropic of Cancer between 154°40' to 178°75'W longitude and 18°40' to 28°25'N latitude, the Islands of Hawai'i, along with numerous neighboring banks, guyots, and seamounts, are the products resulting from successional periods of volcanic construction, erosion and sedimentation, isostatic adjustment, eustatic changes in sea level, and reef building. These phenomena created the conditions in the islands which today favor the habitation of wintering humpback whales (Figure 6).

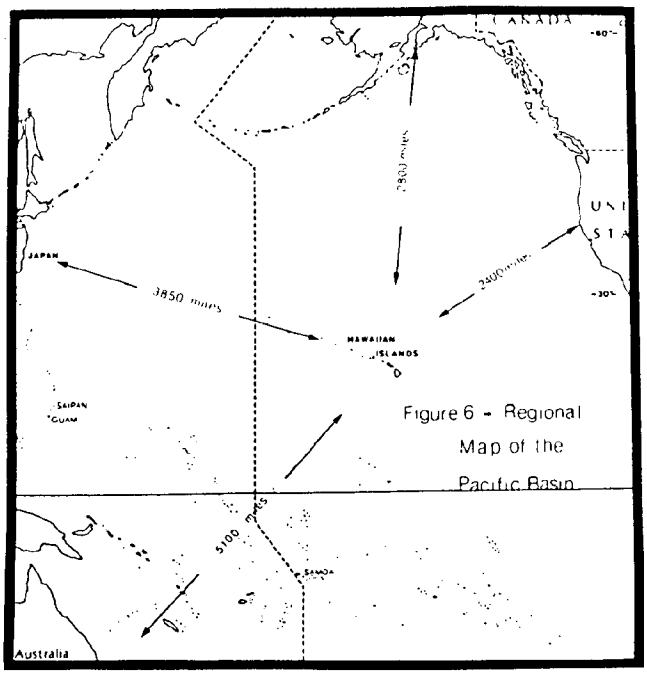


Figure 6 - Regional Map of the Pacific Basin

B. Physical Characteristics of the Site

The Islands of Hawai'i are principally the products formed by successive periods of volcanic construction, weathering, submergence, and eustatic changes occurring during the Tertiary. The islands sit astride an oceanic ridge surrounded by a depression in the earth's crust or Deep averaging 18,000 feet below sea level. This feature in turn is associated with the Hawaiian Arch which rises about 2,000 feet around the Deep.

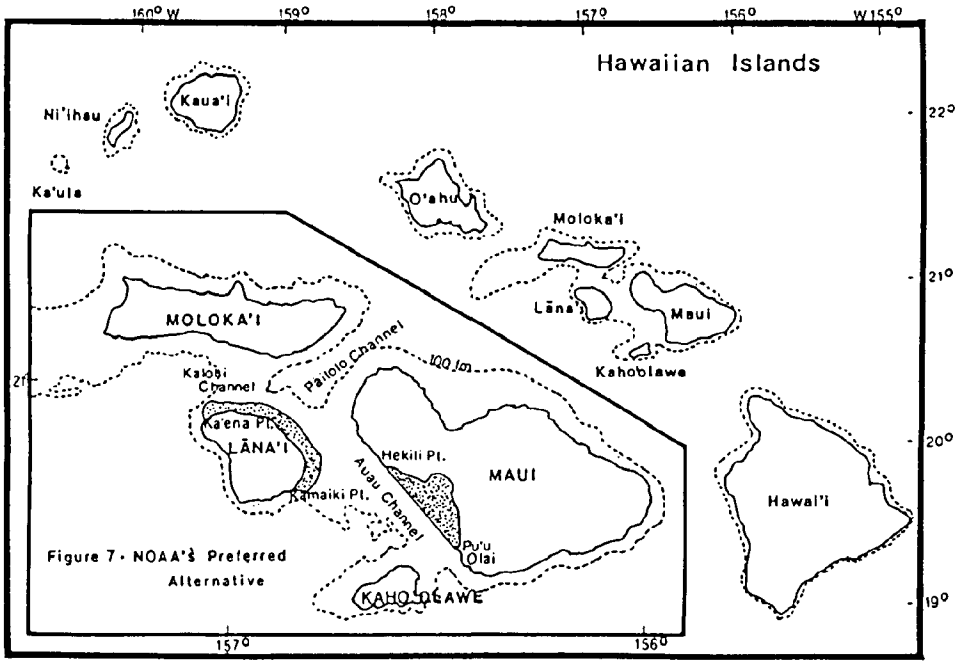
Beginning with Kure Island about 25 million years ago, it has been theorized by scientists that the centers of volcanic activity gradually shifted as the crustal plate upon which the Hawaiian Archipelago sits moved slowly towards the northwest over a "hot spot" in the earth's mantle. Paleogeologic evidence and the location of current volcanic activity on the Big Island of Hawai'i supports this theory of plate tectonics.

With few exceptions, the islands are flanked by a broad platform or shelf lying between 500 and 600 fathoms. Off the western tip of O'ahu, for example, the Waho shelf extends for 40 miles towards Kaua'i. The platform is shallower between the closely spaced islands of Maui County which at one time were joined to form a single large landmass. The feature is further accented in Maui County by Penguin Bank, a submarine shelf extending 27 miles to the southwest of Moloka'i. The average depth of water over the Bank is 30 fathoms, dropping off abruptly to several hundred fathoms along its edge. Ocean currents intercepted by the Bank give rise to an upwelling phenomenon which supports one of the most productive bottom fisheries in the islands.

Although sometimes observed over deeper waters statewide, current evidence strongly suggests that the shallower waters (100 fathoms) surrounding the major islands represent the most important habitat to the wintering humpback whales in Hawai'i. It was this consideration primarily that moved NOAA's committee in 1979 and, more recently, the Advisory Committee appointed by the Governor to assist the State in the evaluation of the marine sanctuary proposal in Hawai'i, to propose the 100-fathom isobath boundary alternative.

With one minor modification, the Advisory Committee's recommendation, vis-a-vis State's position, on the boundary was accepted by NOAA as its Preferred Alternative (Figure 7). Article 2 of the draft Designation Document establishes the geographic references to the proposed Sanctuary's boundaries.

The single exception was made to ensure the recognition of certain areas found within the State's 100-fathom isobath having special significance to the reproductive activities of the humpback--a fact acknowledged by NMFS in its 1979 Notice of Interpretation (Appendix C). The significance of these areas, which may be described as core areas to the seasonal population of humpbacks in Hawai'i, was heavily considered in NOAA's development of the plan proposed for managing the marine sanctuary. Consequently, much of the information presented in this document and used as the context for planning describes conditions in and around the areas identified in the Federal Register notice.



Climate

Although the islands lie well within the tropics, the surrounding ocean currents, terrain, and northeasterly "tradewinds" work together to create a subtropical climate. The temperature of the waters surrounding the islands, for example, is about 10°F less than that of other areas at the same latitude, a condition which accounts in part for the low diversity exhibited in Hawaiian reef corals and their associated marine communities relative to other areas in the Indo-Pacific region.

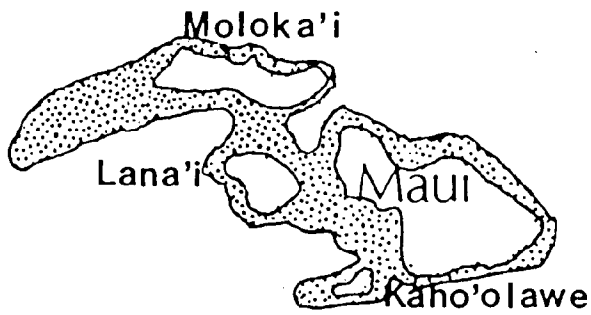
Although periodically interrupted by southerly winds or "Kona weather", resulting from a shift in the position of the Pacific Anticyclone and its associated storm events, the tradewinds persist for much of the year. During the ho'oilo, however, which was used by the early Hawaiians to describe the rainy or "winter" season, the more southerly position of the high pressure cell influences the consistency of the tradewinds. This seasonal shift gives rise to "Kona storms" and their attendant southerly winds and cold frontal passages. Where these winds encounter mountains which obstruct, deflect, and accelerate their flow, distinct biogeographic zonations and physical conditions result. For example, as tradewinds descend the slopes they become warmer and drier, increase in velocity, and create arid and semi-arid conditions on the leeward sides of the islands. This phenomenon is well understood by boaters and fishermen operating out of places like Mā'alaea Bay on Maui who, returning in the late afternoon, encounter rough seas an strong headwinds flowing across the isthmus between the flanks of Haleakalā and the West Maui mountains. Interestingly, these mountains also create areas of calm water by the "wind shadows" they cast.

General Oceanography

The depths of the waters in the immediate area of the major habitat area around Maui County with the exception of Pailolo, 'Alalakeiki, Kealaikahiki, and Kalohi Channels, rarely exceed 100 fathoms--evidence of a time when the

Lāna'i, Penguin Bank, East and West Moloka'i, and East and West Maui volcanoes were joined nearly two million years ago. What remains today as the islands of Maui, Moloka'i, Lāna'i, and Kaho'olawe are merely the eroded peaks of these volcanoes. Penguin Bank is now totally submerged, existing as a relatively shallow shelf off the southwest corner of Moloka'i (Figure 8).

Figure 8: 100 - Fathom Isobath (Incl. Penguin Bank)



In the vicinity of Maui, currents are highly variable, depending to a great extent upon the velocity and direction of the wind. Generally, there is a westward flow in the offshore areas along the north and south coasts which is part of the general westward oceanic drift accompanying the prevailing northeast tradewinds. Much of the flow along the south coast appears to continue westward past the south coast of Kaho'olawe. Weak variable currents are reported in the 'Alalakeiki Channel, while there is a northward flow in the Au'au Channel. Near the Maui shoreline, the currents are complicated by tidal effects, wind, and counter-currents.

Around the Moloka'i shoreline, an eastward flow is present along the shore in the vicinities of Kaunakakai and Kamalō and a westward flow near Lā'au Point. Combined with these movements are tidal currents which usually reach an eastward maximum velocity about the time of low water at Honolulu and a westward maximum about the time of high water. The westward flow near Lā'au Point is reported to turn sharply northward at the point. Currents set westward along the entire northern coast of Moloka'i and northeastward along the east coast.

The presence of Haleakalā on Maui creates a localized influence on the currents and tides of the area in its shadow. For instance, the transport of water in the 'Alalakeiki Channel is heavily influenced by wind and tides. Winds sweeping around the flanks of Haleakalā can serve either to reduce or enhance the rate of transport, resulting in a periodic convergence and divergence of currents flowing along the eastern and northwestern coasts of Kaho'olawe. However, because of the effect Haleakalā has on localized wind conditions in

the area between Maui and Kaho'olawe, highly unstable eddy current systems are often generated and may not fit a simplistic, generalized pattern of nearshore currents.

Currents found in the channels are generally characterized as weak and variable. The six-mile wide 'Alalakeiki Channel separates the southwest extremity of Maui from the western shore of Kaho'olawe. The current here usually flows northwesterly with a maximum velocity of 0.7 knots on the west side of the channel near Kaho'olawe and south-southeasterly with a maximum velocity of 0.4 knots along the east side of the channel near Maui. Velocities up to 1 knot have been observed in the channel. The tradewinds draw through the channel, hauling around the north end of Kaho'olawe. They blow with much force at the easterly entrance to the channel, but it is generally calm in the vicinity of Molokini Islet.

Lāna'i lies westward from West Maui across the eight mile Au'au Channel, where current velocities average 1.1 knots in an easterly direction. Beginning with a maximum ebb of about two knots easterly, the current decreases to slack and then increases to a maximum ebb again without a significant flow in flood direction. It is often calm in the channel when the tradewinds are blowing.

The currents in the 15 mile wide Kealaikahiki Channel, which separates the Islands of Lāna'i and Kaho'olawe, are generally weak, wind-influenced, and variable, with velocities reaching a maximum of 0.5 knots in a northeastward direction.

The 7.5 mile wide Pailolo Channel lies in a northwestern direction from Maui to Moloka'i. The average current velocity is about 0.3 knots in a northeasterly direction with a maximum velocity of about 0.6 knots.

Kalohi Channel, between Lāna'i and Moloka'i, is eight miles across at its widest point and exhibits reversing currents with average maximum velocities of 0.5 knots. The flood tide sets eastward while the ebb sets westward.

Several types of waves, different by the area or mechanism of generation, are found in Hawaiian waters. However, two general patterns prevail. The first is the phenonemon dictated by the dominance of the Tradewinds, which generate waves of 4 to 12 feet in height with periods of 5 to 8 seconds. These waves are most common during the summer season which runs from late spring to late autumn. The second general wave pattern is the phenomenon resulting from storm events. These storms may occur in the North Pacific, creating the North Pacific Swell; near Antarctica, producing a Southern Swell; and periodically, when low pressure areas developing northwest of Hawai'i move slowly eastward, resulting in Kona Storms and accompanying waves which approach the islands from the south. Some of these storm-driven waves may exceed 30 feet, but usually average 8 to 15 feet. Wave period varies from a long of 14 to 22 seconds for Southern Swells to a short of 8 to 10 seconds for Kona Storm waves.

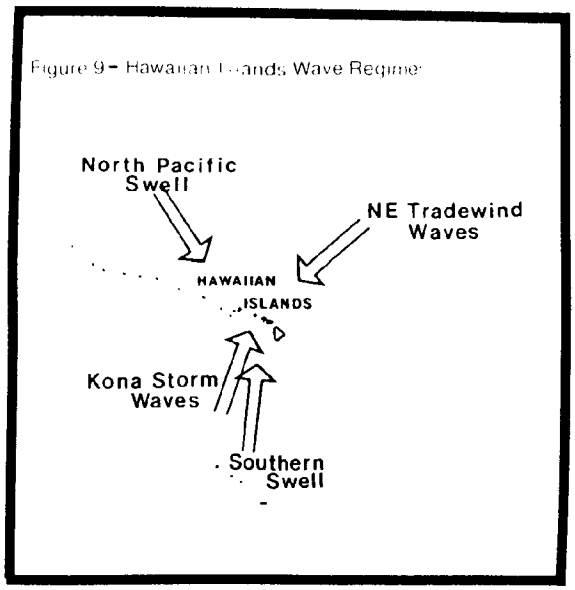


Figure 9 - Hawaiian Islands Wave Regime

Allied to the wave story is the occurrence of tsunamis or seismic sea waves. These events are generally caused by the sudden displacement of rock in the ocean. This displacement may be caused by submarine volcanic activity, landslides occurring on land or below sea level, and, more importantly, sudden fault movements on the ocean floor. Regardless of the mechanism involved in generation, the waves produced are characteristic in that they are a series of elastic swells, of long periods averaging 15 minutes and can approach open ocean speeds of 500 miles per hour. As they enter shallow coastal waters the waves slow up as they gain in height. What results as these waves impact the shoreline is dependent upon, as MacDonald and Abbott (1970) observed, "the character of the shore below sea level and the direction in which the wave approaches." For example, there may be a gentle rise in water level with its attendant flooding of the shore zone or a wave of translation with a steep front and turbulence that impacts the shoreline with great force. Tsunami runups therefore, are highly variable and unpredictable because of local topography and bathymetry, variables which affect flow convergence, friction, reflection, and refraction. As a rule, however, tsunami waves, given the past sites of generation, have had most effect on the exposed north and northeastern shores of the islands.

Beaches in Hawai'i are not static. They are continually changing their composition, structure, and volume seasonally, yearly, or over longer periods of time. The movement of beach materials in the coastal zone of the islands or any other behavior of sediment along the shores is a function of the source of energy used in transport, i.e., ocean waves and currents, winds, and tsunami and storm events. Depending upon the magnitude and direction of the energy source, beach materials may move onshore and offshore or back and forth along the shoreline, creating periodic erosion-accretion phenomena. In places throughout the State and in Maui County, however, there does occur a phenomenon in which there is a net loss of beach volume with a concomitant increase in offshore sand deposits.

In general, the waters which constitute the main breeding grounds for the humpback whale have been classified as A and AA by the State (11-55, Department of Health Administration Rules). This designation is intended to protect and promote such uses as "oceanographic research, the support and propagation of shellfish and other marine life, conservation of coral reef and wilderness areas, compatible recreation, and aesthetic enjoyment." In essence, it is the State's objective, with respect to Class AA waters, that "they remain in as nearly their natural, pristine state as possible with an absolute minimum of pollution from any source."

C. Description of the Resources of the Habitat

Terrestrial Systems

The shorelines bordering the waters of the proposed Sanctuary represent a variety of plant communities which exhibit speciation that is as common to all coastal areas of the State as it is distinct in terms of windward-leeward distribution. Dominating the coastal strand are dense growths of kiawe (*Prosopis* sp.), the iron wood (*Casuarina equisetifolia*), and bristly foxtail (*Setaria verticillata*), all exotic introductions. Additionally, in some areas, particularly along the south coast of Moloka'i, extensive mangrove communities of the genus *Rhizophora* have developed. The Hawaiian mangrove stands are unique, however, in that they lack the diverse fauna and botanical seral aspects of other typical associations found in other tropical areas. Seaside purslane (*Sesuvium portulacastrum*), naupaka kahakai or beach naupaka (*Scaevola taccada*) and the pickleweed, akuli'kulika'i (*Batis maritima*), also can be found along much of the leeward coastline.

Along some stretches of the windward shoreline, perennial streams empty into the ocean creating estuarine-like conditions which support the growth of fresh and brackish water coastal vegetation such as hau (*Hibiscus* sp.), paragrass (*Brachiaria mutica*), and the bulrush, aka'aka'i (*Scirpus* sp.).

Located immediately inland of Mā'alaea Bay is one of the few natural waterbird habitats remaining in Hawai'i, Kealia Pond, which Maciolek (1971) described as a seasonal salt marsh. Kealia Pond provides habitat to several threatened and endangered species of endemic waterbirds such as the Hawaiian stilt (ae'o), coot (alae keo'keo), duck (koloa), and night heron (auku'u).

Marine Systems

The ocean floor surrounding the main Hawaiian Islands is characterized by broad, relatively shallow platforms, terraces, and shoals formed over geologic time by volcanic activity, subaerial erosion and sedimentation, changes in sea level, and submergence. Associated with these features are conditions which greatly influence the establishment and development of unique biological communities. The following describes the major coastal aquatic habitats found on or around the islands of Hawai'i:

Anchialine Pools - Found along the southeast coast of Maui near Cape Kīna'u is a series of unique coastal brackish water systems which, although possessing only subsurface connections to the sea, still show

tidal fluctuations. Because of their lack of surface continuity with streams or the sea, these systems provide a habitat for a distinct biological assemblage dominated by small fish and invertebrates, many of them endemic, such as the molluscs Theodoxus neglectus and T. cariosus and the small red shrimp Metabetaeus lohena and Halocaridina rubra. Vegetation characteristic of these systems, which now only exist on the Islands of Maui and Hawai'i, include benthic algae such as Rhizoclonium and Schizothrix and the vascular plant Ruppia maritima.

Benches and Tidepools - Basalt and limestone solution benches are common to the shoreline bordering the Sanctuary. Depending on the physical conditions which affect salinity and temperature, tidal pools provide habitat to a diverse community of marine life. Common to these systems are the blenny (Istiblennius zebra), goby (Bathygobius fuscus), wana or sea urchin (Echinothrix diadema), and the juveniles of fish such as the manini or convict tang (Acanthurus sandvicensis) and ahole'hole (Kuhlia sandvicensis).

Although not as well developed on the islands of Maui County as those found on O'ahu, calcareous or carbonate shorelines are features also common to the coasts bordering the Sanctuary. Covered by a thick algal mat of blue-greens, these systems play host to a large number of grazing herbivores such as the snake cowry (Cypraea caputserpentis), the burrowing sea urchin (Echinometra mathaei), and carnivorous snails, including mitres (Mitra sp.), the drupe Morula, and the abbreviated cone (Conus abbreviatus).

Fishponds - Common to the south shore of Moloka'i are loko i'a or Hawaiian fishponds. Contrary to the popular notion that these systems were used for culturing fish, loko i'a served merely as places where fish were captured, stored, and fattened for future use. It also served as a source of fish during the spawning season of such kapu species such as the ama'ama or mullet (Mugil cephalus) and awa or milkfish (Chanos chanos). This was particularly important in the subsistence economy of the early Hawaiians who depended on the sea for much of their protein. The loko i'a fell into disrepair with the coming of a more land-extensive, cash economy and differing views on resource allocation. Consequently, many of the loko i'a in Hawai'i today are now heavily silted, have been filled, or are overgrown with mangrove.

Coral Reefs - The Hawaiian Islands lie at the northern margin of the tropics where water temperatures are greatly influenced by currents in the North Pacific. Correspondingly, coral development is poor compared to other islands with the Indo-Pacific region. Only 14 genera and subgenera of reef corals, for example, can be found in Hawaiian waters (Maragos, et. al.,1975). On the other hand, 35 and 60 genera and subgenera, respectively, have been described in the Line and Marshall Islands. Nevertheless, coral reefs are quite evident throughout most of Hawai'i and represent major components of the islands' coastal marine environment.

In the waters of the Sanctuary the most extensive reef development occurs along the south and windward coasts of Moloka'i and Lāna'i, respectively. Only small discontinous patch reefs have been described in the waters of the Island of Maui. Typically, all of these systems are subtidal or below sea level.

The coral reef, as a physical structure, is composed primarily of biogenic carbonaceous remains cemented by the secretions of coralline algae. The reef also can be viewed as a system comprised of floral and faunal communities which, although not as diverse or flourishing as other areas in the Indo-Pacific region, plays a major role in the economy of Hawaii's marine environment.

The shallow reef communities found within the waters of the Sanctuary are associated with a diverse assemblage of marine organisms. Commonly found are hermatypic corals such as Porites lobata, P. compressa, Pocillopora meandrina, P. damicornis, and species of the genera Leptastrea, Pavona, and Montipora. Fleshy algae or limu, including the introduced Acanthopora spicifera, limu kala (Sargassum sp.), limu lipoa (Dictyopteris sp.), and wawae i'ole (Codium edule) also can be found on the reef and reef flats. Infaunal or cryptic organisms include a large number of gastropods, echinoderms, molluscs, crustaceans, and nocturnal fish species such as the alaihi or squirrelfish (Holocentrus sp.), u'u or menpachi (Myripristis sp.), and puhi uha (Conger sp.). Generally, however, fish speciation is relatively low, consisting primarily of large schools of acanthurids (surgeonfish), colorful labrids (wrasse), and scarids (parrotfish), and occasional predators such as the carangid, ulua.

Reef Slope Habitats - Beyond the reef, at depths below 5-10 meters, the bottom frequently is dominated by large sandy areas and massive coral formations. These provide habitat to a wide variety of burrowing invertebrates and plankton feeders such as species of butterfly fish (Chaetodontidae), pomacentrids like the mao'mao, and large pelagic schools of opelu (Decapterus sp.) and akule (Selar crumenopthalmus).

Deep Water Terraces and Slopes - In deeper waters at depths greater than 25m, large boulders and coral rubble dominate the bottom, while hard corals and benthic algae are either absent or their presence greatly reduced. Well-developed terraces and "drop-offs" have been reported at depths of 50, 60, and 75m and are associated with some of the most abundant and economically valuable fisheries in the State. Commonly found, for example, are bottom-dwelling carnivores such as the hapu'upu'u or grouper (Epinephelus quernus) and species of snappers or lutjanids including uku, o'paka'paka, ehu, onaga, and where sandy bottoms occur, the kona crab (Ranina ranina).

Little is known about biological assemblages occurring at depths greater than 100 fathoms. Scientific research and limited commercial harvesting, however, have revealed the presence of precious corals such as the gold (Gerardia sp.), bamboo (Isididae), and pink (Corallium sp.) as well as stocks of deep water caridean and penaeid shrimp. Commercial exploitation of these deep-water resources occurs within the waters of the Sanctuary.

Threatened and Endangered Marine Life - The waters of the proposed Sanctuary not only provide habitat to the wintering humpback whale but also to several other species of marine mammals such as the pilot whale (Gobicephala malaena), false killer (Pseudorca crassideus), Pacific bottlenose dolphin (Tursiops sp.) spotted and spinner dolphins (Stenella sp.). Although seen, but not considered a resident of or frequent visitor to the waters around the major islands is the endangered Hawaiian Monk seal (Monachus schauinslandi).

The threatened green sea turtle (Chelonia mydas) and, less frequently, the endangered hawksbill (Eretmochelys imbricata) occur throughout the waters of the proposed Sanctuary. Although no reports of nesting have been confirmed, the green sea turtle population appears to have benefited from its protection under State and Federal authorities.

D. The Humpback Whale

Historical Notes

Requisite to our full appreciation and knowledge of the humpback whales currently found in Hawaiian waters is an equally important understanding of the role played by the species in the cultural history and ecology of the islands. The followinig excerpt from Herman et al. (1977) provides an excellent review of the literature and early accounts of the humpbacks in Hawai'i and Oceania.

> "Prior to the 1976 season, the Hawaiian population had not been studied in any detail. In fact, it seems to have gone almost unnoticed in the scientific literature until relatively recently, as illustrated by a number of compendia on the zoogeography of cetacea that failed to record the population (e.g., Marcuzzi and Pilleri, 1971; Tomilin, 1967). Bryan (1915), in his review of Hawaiian ethnology, geology, and natural history, seems to be the first to give mention of the population, but as noted by Tomich (1969) Bryan's documentation is sparse. Unfortunately, the situation improved little thereafter, being limited mainly to occasional newspaper reports of sightings (see summary in Tomich, 1969). This historical neglect seems paradoxical given that Hawai'i was the commercial hub of North Pacific whaling in the early and mid-nineteenth century, offering rest, recuperation and reprovisioning to the hundreds of vessels hunting sperm whales in equatorial waters or in the seas adjacent to Japan, or else searching for right whales in the Bering Sea, the Sea of Okhotsk, and in adjacent waters. Apparently, the whalers had little interest in catching or even logging the presence of the seasonally resident humpback whales in Hawai'i, which were of lesser economic importance at the time than were sperm or right whales. Minor exploitation of the Hawaiian humpback whale population (and of a few sperm whales) did occur from the late 1840's through to the late 1860's by shore whaling stations operating mainly from the Island of Maui (Anon. 1848, 1856, 1866; Baldwin, 1958; also see Jones, 1938), but the records seem too fragmentary to allow for any estimates of nineteenth century abundance of the humpback whale in Hawaii. The 19th century exploitation by shore stations appears to have begun just about the time when whales, in general, were diminishing in economic importance worldwide. Combined with the apparent difficulty encountered by the Hawaiian shore stations in capturing the animals, each operation seems to have petered out only a few years after it began. Exploitation of the at-large North Pacific humpback whale stock in its higher latitude summer feeding grounds, which certainly must have included portions of the Hawaiian population was, as noted, a continuing process from the latter part of the nineteenth century, when Japanese and, apparently, Russian pelagic whaling began (H. Omura, personal communication), through the end of 1965.

There is no evidence of any exploitation of the humpback whale by native Hawaiians prior to the nineteenth century. The antiquities of the Hawaiians, including their petroglyphs, contain no record of humpback whales, or indeed of whales of any type, and there are no Hawaiian whale legends other than a very few obviously imported from the South Pacific, where native whaling did occur (Beckwith, 1970; Kirtley, 1971; Malo, 1951). The Hawaiian language seems to contain no special word for humpback whale, though a general word for whale, kohola, exists, as does a special term, palaoa, for sperm whale teeth or products derived from teeth, such as whale-tooth pendants (Malo, 1951; Pukui and Elbert, 1971). Sperm whales and other toothed whales were apparently washed ashore on occasion, and their teeth became the valued property of the royalty. No similar names for derivatives from baleen whales (such as baleen plates) appear in recorded Hawaiian history or in the language. The sum of the evidence thus suggests that the humpback whale was either of little interest to the pre-nineteenth century Hawaiian natives, or else that the whales were inhabiting different breeding grounds than those used today, grounds which were not observable from the island shores or the nearby waters. The resolution of those two hypotheses poses an interesting challenge to marine mammalogists and archaeologists".

Additional background information can be found in Herman (1979), "Humpback Whales in Hawaiian Waters: A Study in Historical Ecology" (Pacific Science 33:1)

Characteristics and Natural History of the Species

The humpback whale (Megaptera novaeangliae) today is one of the most depleted species of marine mammals, numbering an estimated 4,000 to 5,000 animals worldwide. The scattered populations inhabiting the world's oceans represent but a small fraction of their former numbers and stand as grim reminders of man's recent history which has seen the humpbacks and other species of great whales extensively exploited by coastal and high seas whalers.

With the single exception of the subsistence take permitted by natives of Greenland, the International Whaling Commission has prohibited commercial harvests of humpback whales since 1966. The future of the endangered humpback whale (a status accorded by the U.S. since 1970), however, is still uncertain. Some populations, for example, such as those found in the waters of the Antarctic, might already be beyond "biological recovery" (i.e., not occurring and breeding in numbers sufficient to increase the size of the population or, at a minimum, replace individuals lost through natural mortality). Whale populations in the North Pacific, although not as decimated, remain as vulnerable due to the loss of suitable habitat necessary to ensure their survival. Any recovery would at best be slow and require better understanding of the humpback's natural history and some corresponding measure of protection for and management of the species and its habitat.

Life History

The humpback whale belongs to a group of rorqual whales of the family Balaenopteridae which includes the blue, finback, sei, Bryde's, and minke. They are intelligent, warm-blooded creatures who, like other marine mammals, give live birth and suckle their young. Although the humpback may remain

underwater for extended periods, they have lungs and must surface to breathe. Fully mature adults grow to lengths of over 13m (>40 feet), females becoming somewhat larger, and may attain weights of up to 40 tons. Both sexes reach reproductive maturity at about five or six years at which time they are approximately 11-12m (37-39 feet) in length, and according to some estimates, may live as long as 70 years. The humpback's reproductive cycle generally spans two years. Mating, which primarily occurs on its wintering grounds, is followed by about an 11-month gestation period and the birth of a single calf which may measure about 4.5-5m (14 feet) long. Most calves are probably weaned after six to eight months of dependence and prior to their first southward migration. Nishiwaki (1959) determined from catch statistics that the sex ratio in North Pacific humpbacks was nearly 1:1 and that the average pregnancy rate for the population reached as high as 65% during the wintering season.

Mortality

Very little is known of natural mortality factors affecting the North Pacific humpback whale. Although whales have been known occasionally to collide with ships or become entangled in cables or fishing gear, aside from infrequent reports of attacks by killer whales, no hard evidence exists that suggests the rate or significance of incidental take or natural predation upon the humpbacks.

Feeding

The humpbacks feed all summer in their northern habitat, preying principally upon schooling fish such as the capelin (*Mallotus villosus*), Atka mackerel (*Pleurogrammus monopterygius*), and Pacific herring (*Clupea harengus*) as well as the euphausiid, krill. The literature describes much of the whale's feeding behavior in the waters of Southeast Alaska (Nemoto, 1959 and Jurasz, 1979) and suggests that humpbacks seldom feed while on their wintering grounds. Behavior suggesting anything to the contrary has not been documented in Hawaiian waters.

Migration and Distribution

Each winter, the shallow, warm waters surrounding the Hawaiian Islands provide an ideal place for humpback whales to breed, calve, and tend their young. They begin entering the waters of the State as early as November, remaining until late spring when they depart for their summer feeding grounds in the higher latitudes. The precise location of their summer habitat still remains to be identified; some speculation places it west of other known humpback feeding grounds off the Alaska coast, perhaps along the western rim of the North Pacific (Herman, 1976). Migrations are believed to coincide with endogenous hormonal and exogenous weather cues.

These seasonal residents of Hawai'i, numbering approximately 600 to 800 animals, represent one of three wintering populations remaining in the North Pacific. The other two wintering populations recognized in the North Pacific are the *Asian*, found in the waters surrounding Taiwan, the Bonin, the Mariana, and Ryukyu Islands, and the *North American* which occurs along the coast of Baja California and the Mexican mainland. Together, these three groups number approximately 1,000 whales, a mere fraction of the 15,000 believed to have

been present in the North Pacific before 1905. The Hawaiian stock unquestionably is the largest of the three wintering populations and, with respect to its annual migration, certainly the most widely publicized, accessible, and studied.

On their annual visit to the islands, the humpbacks reportedly first approach from the north or northeast, entering the waters of Maui County through Pailolo and/or Alenuihaha-'Alalakeiki Channels and concentrating along the Kihei coast of Maui; the north and northeasten coast of Lāna'i; the mid-Au'au Channel region; and the western and northern reaches of Penguin Bank. Although they can be found throughout the Hawaiian Chain, evidence does not suggest now that they occur in any appreciable numbers north of the Islands of Ni'ihau and Kaua'i. This, however, may be an artifact of the methods used to census the population. Based on the increased frequency of sightings and the numbers observed, research indicates that, following a peak in February, the population shifts gradually to the west towards the Islands of Ni'ihau, Kaua'i, and O'ahu. It has been speculated that this movement during the late season heralds the imminent departure of the whales for their summer feeding grounds at the higher latitudes. Albeit the temporal dimension of the whale population and its distribution throughout the State, the following areas were cited by the NOAA panel in 1979 as being of importance to the humpbacks during their residence in Hawaiian waters:

- The shallow bank surrounding Ka'ula Island;
- The south coast of Ni'ihau, from Pueo Point south around Kawaihoa Point to Pu'uwai Village;
- The south coast of Kaua'i from Nāwiliwili to Port Allen (Hanapēpē);
- The north and east coasts of O'ahu, from Makapu'u Point to Ka'ena Point;
- Penguin Bank, extending south-southwest from Moloka'i;
- The northwest coast of the Big Island, from Keāhole Point to 'Upolu Point; and
- The bank extending off Ka Lae (South Point), Hawai'i.

Although there is reportedly some diurnal relationship between aggregations sighted off the south coast of Moloka'i and Penguin Bank, with the exception of the Islands of Maui County, research findings (Wolman and Jurasz, 1977 and Herman, 1980) currently do not suggest any continuity in the whale population from one island to another. Once again, this may merely be an artifact of the research design to date.

Relatively little is known about how factors such as currents, wind exposure, sea state, temperature, and climatic variations might affect humpback whale distribution in Hawaiian waters. However, evidence suggests that for breeding and calving purposes, humpback whales seek areas of warm, calm waters within the 100-fathom contour of continental shelves and outlying banks of large islands. The coastal waters around the main Hawaiian Islands satisfy these reported preferences: remote, isolated regions devoid of dense human

habitation; prevailing calm, clear weather conditions characteristic of leeward coasts; warm tropical waters averaging 22°C (77°F); wide, shallow banks; and water quality unhampered by excessive turbidity or thermal burdens (Herman, et. al., 1977; Winn, 1977).

Strict adherence to these selection criteria is not always the case. For example, Herman (1980), citing Penguin Bank as an area subject to heavy, gusty trades yet still preferred by humpbacks, discounted the importance of wind conditions alone as a principal determinant of whale distribution in the islands. He suggested that some windward areas were not selected simply because of the "limited extent of shallow water available." (Figure 10)

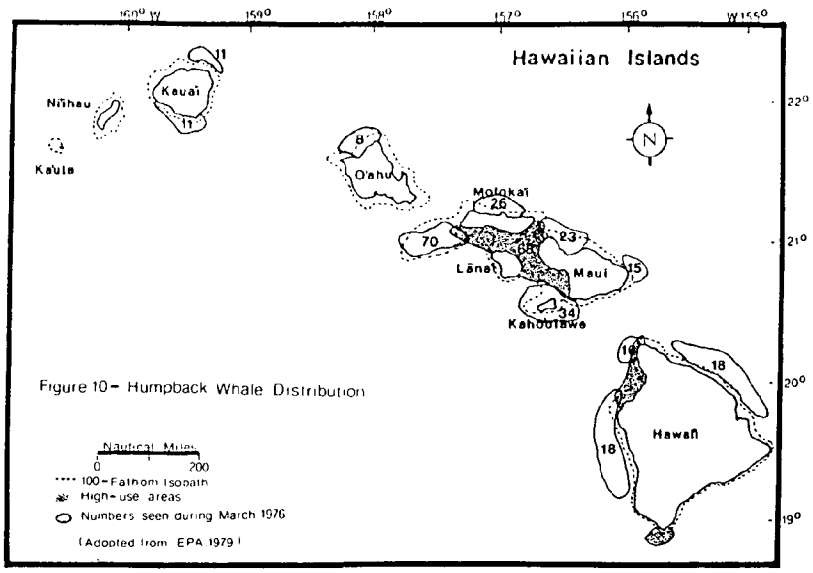


Figure 10- Humpback Whale Distribution

Although it is still uncertain as to what if any impact military operations have on the humpbacks in the waters of Maui County, research data supports popular speculation that the whales in those waters tend to avoid the area around the Island of Kaho'olawe.

Herman's data on sightings during the 1976-77 season (Table 1) strongly indicate that throughout the winter season, most of the regions showing heaviest humpback residency are located in Maui County waters--around the proposed Sanctuary's management core. He also reported finding the highest densities of calves (84.9 %) in these waters, with the most important calf-rearing areas beingthe nearshore waters of Kalohi Channel, including the northeast coast of Lāna'i and the Kihei region of Maui. Penguin Bank was also cited as an important nursery area to the humpbacks.

Behavior

Although the existing literature reflects a paucity in our understanding of humpback whales' behavior, recent studies of the Hawaiian population are beginning to shed some light on the whales' social organization and responses to human contact. Socially, the humpbacks have been described as being gregarious

animals, often found in groups of 7-10 in their summer feeding grounds, where it has been hypothesized that three of the wintering populations in the North Pacific comingle. In Hawai'i, however, such sightings are rare. Researchers in Hawai'i, for example, reported observing only solitary animals or pairs over 70% of the time. Wolman and Jurasz (1977) reported that no pods larger than five whales were observed during their survey which counted 373 humpbacks during a 12-day, 1,100 mile cruise around the State. Similarly, Herman (1980) reported that of the 1,998 whales censured in his study, 97.7% consisted of pods numbering 5 or less, the average, based on 926 sightings, being 2.15 animals. These numbers are not unexpected if one accepts the hypothesis regarding the whales' reproductive and social behavior during their residence in Hawaiian waters.

TABLE I: Total Numbers of Whales Sighted in Each Region By Data for All Data Sources Combined

REGION	JANUARY 7	JANUARY 14–19	JANUARY 30	FEBRUARY 2	FEBRUARY 13	FEBRUARY 18	FEBRUARY 26	MARCH 1	MARCH 10	MARCH 16	MARCH 23	MARCH 30	APRIL 6	APRIL 20	ALL
NIIHAU:															
All Coasts	7			11		7									25
KAULAKAHI CHN:															
Niihau-Kauai	3		2		1								2		8
KAUAI:															
All Coasts		9	3	18	15	24	14			14	1	31	3	6	138
OAHU:															
All Coasts			2	2	8	17	1	3	3	6	1	12	3	8	3	69
KAIWI CHN:															
H'lulu-Penguin Bank			4	2	4	11	1			3		1	4			30
PENGUIN BANK:															
Entire Area		1	15	25	19	8	60	13	2	21	4	13	5	1	7	198
MOLOKAI:															
Ilio-Halawa			1	2								3	2			8
Laau-Kaunakakai	2	2	2		2	1	11			3		4	5		8	40
Kaunakakai-Halawa	4	3		3	2	6	2		1			1	6			29
LANAI:																
Kaena-Palaoa					1	6	2	3	3			1				16
Palaoa-Kikoa	3	2	1		16	8		2	4	1	2	3				42
Kikoa-Kaena	11	9	15	20	20	21	47	22	3	9	11	8	31	3	11	241

REGION	JANUARY 7	JANUARY 14–19	JANUARY 30	FEBRUARY 2	FEBRUARY 13	FEBRUARY 18	FEBRUARY 26	MARCH 1	MARCH 10	MARCH 16	MARCH 23	MARCH 30	APRIL 6	APRIL 20	ALL
PAILULU CHN:															
Deep Water	7	16	9	6	1	10	13	7	1			1		1	72
MAUI:															
Hana-Napili		3	1	2	3		1	6	2		5	5		2	30
Napili-McGregor	21	43	7	27	24	71	52	35	17	34	44	42	2	10	5	434
McGregor-Kinau	7	8	15	38	35	48	14	10	25	14	5	1	7			227
Kinau-Hana				4	2										1	7
MID-AUAU:															
Lanai-Maui-Kahoolawe	3	4	19	32	23	25	28	7	11	9	3	18	6	3		186
KAHOOLAWE:															
NW and E Coast				5		3	1	2	6	1		5				23
KEALAKAHIKI CHN:															
Lanai-Kahoolawe			2		6	1										9
HAWAII:															
Upolu-Keahole			5			11	1	11			3		2			33
Keahole-Ka Lae				2		8	3	7			1					21
Ka Lae-C. Kumikahi			10			1	3									14
C. Kumukahi-Upolu				8		2		22								32
TOTALS	68	100	117	196	215	267	294	110	78	105	84	116	108	30	44	1,932

Source: Herman, L. et al., 1980

After slightly less than a year of gestation, humpbacks return to their wintering grounds to give birth, an event that has never been witnessed in Hawaiian waters. The data reveal that in Hawai'i peak calving occurs near the third week in February.

Studies conducted in Hawai'i indicate that following birth, the cow-calf pair remain separated for a short period from the other whales. It is during this early post-parturition period, many whale experts believe, that a calf acquires social imprinting and the skills necessary for survival. Later in the season, cow-calf pairs increasingly are found in the company of other adult whales. Generally, these pods consist simply of the cow-calf pair and a single adult or "escort." It has been widely hypothesized that the escort serves a protective function, however, the data concerning this part of the humpback's behavior remain inconclusive.

Interactions with Man

In addition to predation and other natural mortality factors, the vitality and fitness of humpback whale populations also can be affected adversely by man's activities. Where these activities result in the loss or degradation of habitat, behavior modifications, or the interruption of reproductive functions, the ultimate effect would be a reduction in the rate of recruitment, or population growth.

Commercial harvesting of humpbacks was prohibited by the International Whaling Commission in 1966. Since then most efforts to protect the whales have been directed toward the elimination or reduction of stress caused by human contact, particularly those activities which visibly trigger avoidance or antagonistic displays in the humpbacks. Relating whale behavior to certain human activities is not an exact science. Some uncertainties exist as to the interpretation of responses such as vocalizations, slapping and raking the water surface with pectoral and caudal flukes, releasing streams of bubbles, charging, breaching, or the avoidance or abandonment of areas. Nonetheless, certain activities which have brought man and whale into contact have been observed to modify the humpback's behavior. Sufficed to say, to the extent such controls can be justified by scientific fact, it would be in the long-term interest of both man and whale to control or eliminate those activities which constitute harassment.

E. Socioeconomic Profile

Hawaii's economy has changed considerably since westerners disrupted and to a large extent replaced the economically self-sufficient native Hawaiian culture in the 1800's. Large scale agricultural development based on sugar and pineapple plantations scattered throughout the major islands provided the initial stimulus for widespread social and economic change. Labor for the plantation was largely imported from foreign countries, notably China, Japan, Portugal, and later the Philippines. These immigrants eventually melded with the existing Hawaiian and Caucasian populations to form the unique culture of the islands. As an agrarian society operating on a plantation system, upward socio-economic mobility for laborers was minimal.

National defense provided the next stimulus for Hawaii's social and economic development. Hawai'i was close enough to the Far East to be strategically important and near enough to the U.S. mainland to be supplied with necessaary material. The development of Hawaii as a military base helped create a physical infrastructure and a local skilled labor base which benefited the growth of other industries. In addition, the influx of Federal dollars supported the growth of secondary service industries which provide goods and services to those employed in export industries.

Tourism is the State's most recent growth industry. The industry has grown rapidly since Hawai'i achieved statehood in 1959, particularly during the 1960s and 70s, and now surpasses defense as the dominant source of revenue for the State. (Since statehood, the growth rate in the number of visitors has increased an average of 17.7 percent/year.)

Population

Preliminary estimates indicate a July 1, 1982 resident population of 993,700 in the State of Hawai'i including 54,900 members of the armed forces and 66,700 military dependents. Approximately 78% of the population resides on O'ahu; 10% on the Island of Hawai'i; 8% in Maui County which consists of the Islands of Maui, Moloka'i, and Lana'i; and 4% on Kaua'i. The estimated de facto population which represents all persons physically present in the State in 1982 was about 1,084,200. This total includes the State's daily average of 105,000 visitors. It excluded 14,600 residents temporarily absent.

Population surveys indicate that the median age in 1980 was 28.3 years and that there is no single ethnic group in the majority. Hawaii's ethnic groups are: Caucasian, 26.3%; Japanese, 23.5%; Hawaiian and part-Hawaiian, 18.9%; Filipino, 11.2%; Chinese, 5.1%; Korean, 1.3%; Black, 1.3%; Samoan, 1.2%; Puerto Rican, 0.7%; mixed (except part-Hawaiian), 9.4%; and other groups, 1.1%.

Labor Force

The civilian labor force averaged 449,000 in 1981, with an unemployment rate of 5%. The unemployment rate averaged 6.7% in 1982, with Island levels ranging from 6.1 to 18.5%. By occupation, one out of four civilian workers is classified as professional or technical. Activities with especially large numbers of employees include government (89,000 in 1981); services (101,000); retail trade (87,000); finance, insurance, and real estate (37,000); and transportation, communication, and utilities (31,000).

Military

Defense expenditures not including Federal non-military spending, represent the second largest source of income in the Hawai'i economy. Military spending in Hawai'i during 1982 amounted to $1.69 billion, more than double the total reported 10 years earlier.

Agriculture

As of 1981, there were 4,300 farms in Hawai'i with a total of two million acres. Both figures have declined during the past decade. The value of crop sales in 1981 was $401 million, or 125% higher than the total for 1971. Unprocessed sugar cane registered $207 million in sales in 1981, while pineapple sales totaled $90 million. Other major crops were flowers and nursery products with sales of $30 million and macadamia nuts with $26 million in sales. Diversified agriculture, defined as all crops other than sugar and pineapple, rose from $23 million in 1971 to $104 million in 1981.

Tourism

Tourism is the largest generator of civilian jobs in Hawai'i. In 1982, over four million persons visited Hawai'i with an average of 105,000 present daily. The most current figures available estimate that yearly visitor expenditures rose from $705 million in 1971 to $3.2 billion in 1981.

In the last decade, tourism has become Maui County's primary industry. From 1971 to 1981, visitor expenditures have increased almost sixfold, from $74.2 million to $426.7 million.

As of February 1983, there were 12,110 hotel rooms on the Island of Maui, 628 units on Moloka'i, and 11 on Lāna'i. The County's annual hotel occupancy rate for 1982 was 73.9%. Hotels employ 5,250 Maui County residents.

Hawai'i Fishing Industry

The 1978 Hawaii State Plan recognizes the importance of economic diversification and the prudent use of the State's natural resources. One applicable area in this regard is Hawaii's fishing industry which currently represents only a small percentage of the State's economy.

In 1981, there were 2,572 commercial fishermen licensed by the State Department of Land and Natural Resources. The Hawaii Fisheries Development Plan estimates that no more than 800 are full-time while the rest are either part-time or recreational fishermen. A State total of 13,396,000 pounds of fish landings were reported for 1981, worth approximately $18,338,000. Irrespective to its dollar contribution to the State's gross product, when compared to other sectors the fisheries are extremely important to the livelihood and diet of local people. Data available on commercial fish landings for the years 1978 to 1980 for the Islands of Maui County are listed in Table II.

Table II. Commercial Fish Landings - Maui County

ISLAND	YEAR	POUNDS CAUGHT	VALUE
Maui	1980	1,116,640	$914,665
	1979	684,850	571,004
	1978	687,698	483,980
Moloka'i	1980	26,298	$ 27,824
	1979	27,181	26,620
	1978	26,705	25,069
Lāna'i	1980	16,110	$ 16,643
	1979	17,236	13,278
	1978	27,534	13,959

Maui's Tour Boat Industry

Approximately 50 tour boats operate out of Maui, working off the main tourist centers of Lahaina, Kihei, and Ka'anapali. Boat operators feature such services as dinner and cocktail cruises, sightseeing, charters, whale watching, and sail/snorkel activities.

In a 1983 draft report on the Maui tour boat industry, 21 companies in the trade were surveyed. A cumulative gross income of approximately $9.4 million was reported by these operators. It also is noted that earnings from the whale watching cruises which operate between December and May equal or exceed receipts of the other year-round tour boat activities.

Testimony received at earlier public meetings on Maui and estimates made by the Governor's Advisory Committee suggest that no more than a dozen operators statewide engage in commercial whale watching. Averaging $15 per head the industry's annual gross was placed at over $3 million. Expansion of this particular industry, however, at least around Lahaina Roads is constrained by a cap placed by the State of Hawaii limiting the total number of slips available to commercial vessels in the Lahaina-Mā'alaea area.

F. Institutional Setting

Currently, several management programs administered by Federal, State, and local authorities form the institutional basis for governing the allocation of marine resources in Hawai'i. Together, they provide for the management of particular species, their habitats, and/or specific geographic areas by setting aside selected areas for special management, restricting activities, establishing permitting programs, and prohibiting or regulating "take" (i.e., prescribing open and closed seasons, regulated species, and bag and gear limitations). The following discussion provides an overview of the authorities applicable to the resources of the Sanctuary and/or the protection of the humpback whale.

State Authorities

Several State agencies share in the protection and management of marine ecosystems and resources in Hawai'i. Only a few, however, ever become involved directly in decisions affecting the humpback whale or its habitat. One such agency is the Department of Health (DOH). The DOH, for example, has the authority established under State and Federal law to regulate point-source discharges into the surface and coastal waters of the State (Part III, Chapter 342, Hawaii Revised Statutes and the Clean Water Act of 1977, 33 U.S.C. 1344). Through its National Pollution Discharge Elimination System (NPDES) permit process and "zone of mixing" variances, the DOH seeks to limit the degradation of receiving waters that might occur as a result of point-source discharges. The agency, however, is not required to consider its permitting decisions in terms of their possible impacts to specific marine resources or the presence of endangered species.

The Office of Environmental Quality Control also shares some of this peripheral involvement in its responsibility for carrying out the policies of the Hawai'i Environmental Protection Act (under the authority of Chaper 343, Hawaii Revised Statutes) which spells out the requirements and procedures for preparing an Environmental Impact Statement.

The State also has in place a Federally approved Coastal Zone Management Program (HCZMP) through which its agencies and those of county governments can exercise considerable authority to ensure that the policies and objectives related to the protection of coastal ecosystems are met. Indeed, the HCZMP established under the authority of Chapter 205A, Hawaii Revised Statutes, (Appendix H) includes within its management purview the designation of "areas of particular concern" (APC) which sets aside areas of "high natural productivity or essential habitat for living resources, including fish, wildlife..." (15 CFR Part 923.21-23). The HCZMP, although not as specific as other State authorities in its responsibilities for marine resources, can provide a useful means for coordinating the management of shorelands, the uses of which might adversely affect coastal resources.

In actions directly involving the protection, conservation and/or restoration of marine habitats, ecosystems, populations and/or species, however, or the regulation of activities which may have an immediate impact on the resources of the Sanctuary, divisions within the Departments of Land and Natural Resources and Transportation play lead roles.

Department of Land and Natural Resources (DLNR) - The DLNR has been vested with the legal authority for establishing and carrying out a broad range of marine resource management programs, the responsibility for which it has principally delegated to its Divisions of Aquatic Resources (formerly the Division of Fish and Game) and Conservation and Resources Enforcement. In addition to its participation in carrying out the actions of the Board of Land and Natural Resources, for example, the DLNR has an existing institutional responsibility for the protection, utilization, and development of both living and non-living marine resources in Hawai'i. To accomplish this, the DLNR promulgates and enforces rules and regulations governing: (1) subsistence, sport/recreational, and commercial fisheries (Chapters 188 and 189, HRS); (2) the protection and propagation of fish and game (Chapter 187, HRS); (3) conservation and enforcement programs (Chapter 199, HRS); (4) endangered species (Chapters 191 and 195D, HRS); (5) Marine Life Conservation Districts (Chapter 190, HRS); and, (6) the Natural Areas Reserve System (Chapter 195, HRS). Because of their emphasis on the protection of endangered species and special area management, three of the DLNR's statutory responsibilities in marine resource management are of key concern to this discussion.

Conservation of Wildlife and Plants:

In order to satisfy the provisions of the Federal Endangered Species Act of 1973 (16 U.S.C. 1531-1543), Hawai'i established programs for the conservation of threatened and endangered species of wildlife and plants (Appendix I). Under the provisions of Chapter 195D, Hawaii Revised Statutes, the DLNR is directed to establish programs for ensuring the "continued perpetuation of indigenous wildlife and plants and their habitats for human enjoyment, for scientific purposes, and as members of ecosystems..." The DLNR is required to maintain a list of indigenous species determined to be endangered because of any of the following:

- Presence of threatened destruction, modification, or curtailment of its habitat or range;
- Overutilization of commercial, sporting, scientific, educational, or other purposes;
- Disease or predation;
- Inadequacy of existing regulatory mechanisms; or
- Natural or man-made factors affecting its continued existence in Hawai'i.

The statute also directs the DLNR to "conduct research on indigenous plants, birds, and mammals and on endangered species and their associated ecosystems" and carry out programs for their conservation, management, and and protection. Other provisions of the law give priority to the protection and conservation of species and their ecosystems within the State whose loss would "imperil or terminate ... their existence in the world" and, further, empower the DLNR with the authority to enter into agreements with Federal agencies and the counties for ensuring the proper administration and management of areas deemed crucial to the survival and maintenance of endangered species. The humpback whale, as are other species of wildlife determined to be endangered pursuant to the Federal statute, is automatically given such status under the State law.

Natural Areas Reserve System:

The Natural Areas Reserve System (NARS) was created under Chapter 195, Hawaii Revised Statutes, to protect unique geological, volcanic, and other natural areas in Hawai'i with distinctive aquatic or terrestrial features of floral and faunal communities. The statute also created an 11-member commission whose primary responsibilities were to: (1) recommend to the Governor and the DLNR areas suitable for inclusion within the reserves system; (2) conduct studies for potential natural area reserves; (3) recommend policies regarding controls and permitted uses of areas within the reserves system; (4) advise the Governor and the DLNR on matters relating to the preservation of Hawai'i's unique natural resources; and, (5) develop ways and means of extending and strengthening existing preserves, sanctuaries and refuges within the State.

The land and water of Cape Kīna'u-Āhihi Bay, formed by a tongue of lava which entered the sea along Maui's south coast during the last eruption of Haleakalā, is one of seven NARS sites that have been designated to date. It is also the only reserve which includes within its boundaries coastal marine waters (Appendix J). In this unique instance, the NARS designation was used to create and protect in perpetuity, a three-component system consisting of: (1) lava flows forming Cape Kīna'u and their developing dry land vegetation; (2) an inshore marine ecosystem containing relatively unmodified floral and faunal communities with diverse speciation; and (3) mixohaline (anchialine) ponds with unique environmental character and rare and endemic animal populations.

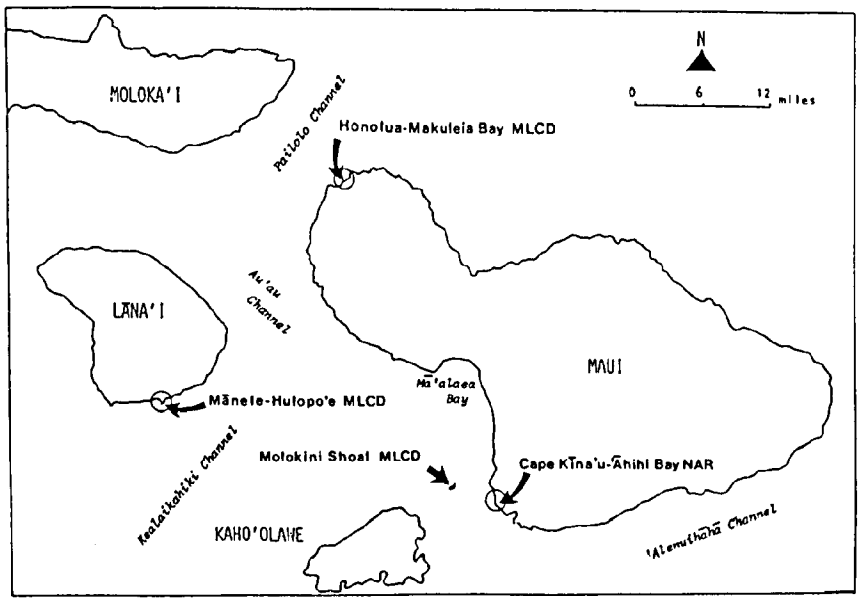


fig.18 Marine Life Conservation Districts and Natural Area Reserve in Maui County waters

Marine Life Conservation Districts:

Another more expansive State effort to manage marine resources is the Marine Life Conservation Program established under Chapter 190, Hawaii Revised Statutes (Appendix K). Under this program, the DLNR may designate, for the purposes of protecting, conserving and preserving their intrinsic values, unique marine resources and habitats as Marine Life Conservation Districts (MLCD). The general criteria used by the DLNR to assess the value of potential MLCDs are: (1) species diversity; (2) traditional uses of the area; (3) easily recognizable boundaries for enforcement; (4) accessibility to the public; (5) oceanographic conditions such as degree of wave exposure, currents, and visibility; (6) water quality; and (7) availability of public facilities.

Thus far, seven MLCDs have been established--three in Maui County (Mānele-Hulupo'e, Lāna'i; Honolua-Mokuleia, Maui; and Molokini Shoal), two on the Big Island (Lapakahi and Kealakekua Bay), and Pupukea and Hanauma Bay on the Island of O'ahu. For each of these MLCDs, regulations have been promulgated by the DLNR that prohibit certain activities which might alter the natural properties of the area; control permissible uses such as fishing and marine construction; govern the issuance of scientific research permits; and, through the adoption of State DOT regulations, control vessel traffic and moorage.

In summary, the powers conveyed by Hawai'i statutory law to the Department of Land and Natural Resources are indeed broad, giving the agency considerable latitude in designating specific areas as Marine Life Conservation Districts and Natural Area Reserves, and the rule-making authority for managing specific areas, controlling marine-related activities, and protecting certain species of marine life.

Department of Transportation (DOT) - Although its statutory authority does not provide the DOT with the power to regulate the taking of living marine resources, rules issued pursuant to Chapter 267, Hawaii Revised Statutes (Appendix L), authorizes the agency to regulate vessel operations and their use in State waters. The implementing rules and regulations also have created the authority and established procedures for enforcement. Additionally, the DOT established special rules governing specific activities within the shorewaters of three areas of the State, i.e., Waikiki, Makapu'u, and Kealakekua Bay.

Federal Authorities

The purposes and objectives of marine resource management efforts in Hawai'i are also reflected in several Federal initiatives. In addition to those programs that serve principally as funding sources for local management efforts (e.g., the Fish and Wildlife Conservation, Pittman-Robertson, and Dingell-Johnson Acts), agencies of the Federal government are authorized to regulate certain activities occurring within and uses of navigable waters of the State. For example, the Fish and Wildlife Service of the Department of the Interior, the National Marine Fisheries Service (NOAA), U.S. Customs Service, (Treasury Department), and the U.S. Coast Guard (Department of Transportation) all share responsibility for enforcing the provisions of the Endangered Species Act of 1973, as amended. Further, the Fish and Wildlife Service, in coordination

with the U.S. Environmental Protection Agency and NOAA's National Marine Fisheries Service, assist the U.S. Army Corps of Engineers in implementing the permitting provisions of Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899 relating to dredging and filling of and construction activities affecting navigable waters. These authorities and responsibilities will not be preempted by the Sanctuary Designation.

In addition to Title III of the Marine Protection, Research and Sanctuaries Act of 1972, as amended (Appendix A), two other Federal programs have immediate implications in the implementation of the Sanctuary Management Plan.

Marine Mammal Protection Act of 1972 - Provisions of the Marine Mammal Protection Act (MMPA), 16 U.S.C 1361 *et seq*. apply to both U.S. citizens and foreign nationals subject to U.S. jurisdiction and serve to protect all species of marine mammals. Responsibility for ensuring that the law is fully implemented is given to the National Marine Fisheries Service (NMFS) of the Department of Commerce and Interior's Fish and Wildlife Service.

The MMPA establishes a management framework that includes: (1) a moratorium on the "taking" of marine mammals; (2) the development of a management approach designed to achieve an "optimum sustainable population" (OSP) of a particular species or stocks of marine mammals; and (3) the protection of species or populations determined to be "depleted" (e.g., either below the OSP level or listed as endangered or threatened under the Endangered Species Act).

Among its other, more explicit definitions such as "...hunt, capture, or kill...," the term "take" is also broadly defined by the MMPA to include acts of "harassment" or those which unintentionally affect the natural behavior of marine mammals. A Notice of Interpretation was issued by the NMFS in 1979 which defined "taking" by harassment under the MMPA and the Endangered Species Act of 1973 (Appendix C). The notice was intended to serve as a guide for human conduct in the vicinity of humpback whales and sought to discourage and eliminate activities constituting "harassment" within 200 nautical miles of the Hawaiian Islands.

Exceptions to the moratorium on "taking" are provided by permits issued by the NMFS and granted for: (1) the taking for scientific or display purposes; (2) the taking incidental to commercial fishing operations; and, (3) the taking subject to a determination that the particular species in question is at or above its optimum sustainable population level--a level determined by the carrying capacity of the habitat and health of the ecosystem of which the species is a part and the numbers of animals which will result in the maximum of the population or species.

The MMPA also extends additional protection to marine mammals considered to be "depleted" such as the humpback whale. In cases involving depleted species or populations, the moratorium against taking cannot be lifted, with the single exception of taking by permit for the purpose of scientific research.

Although the MMPA provides for the transfer of management for marine mammals to the states, the State of Hawai'i has not petitioned the Federal government for this responsibility. Consequently, as it is presently construed,

the NMFS serves as the sole authority under the MMPA for protecting the humpback whale in Hawaiian waters. The MMPA, however, is flexible in its provisions for designating and authorizing officers and employees of the State to act as Federal law enforcement agents (Section 107(b) of Title I).

Endangered Species Act of 1973 - The Federal Endangered Species Act (ESA), 16 U.S.C 1531 et seq., in conjunction with the MMPA, form the basis for existing management efforts to protect the humpback whales in Hawai'i. Through the ESA's broad provisions, the U.S. Fish and Wildlife Service and the NMFS are empowered programs for protecting flora and fauna determined to be threatened or endangered. The law applies to land, State or Federal waters, or in waters covered by international treaties, conventions, and agreements upon which such species rely for their continued existence.

Similar to the MMPA in its prohibitions on "taking," the ESA goes still further in its definitions to include attempts made to harass, pursue, hunt, shoot, wound, and the like. The Fish and Wildlife Service regulations further interpret the term to include significant environmental modification or degradation to the habitat used by, and acts which result in, the significant disruption to natural behavior patterns of threatened and endangered species (50 CFR 17.3).

Another one of the ESA's provisions of note to this discussion allows the Federal government to enter into management and cooperative agreements with any State which establishes and maintains an adequate and active program for the conservation of threatened and endangered species. Hawai'i currently has a Federally-approved endangered species program, however, the State has not been granted similar authority under the MMPA vis-a-vis management of the humpback whale.

The ESA also includes provisions for the designation by the Fish and Wildlife Service and the NMFS of "critical habitat" areas for endangered species and for establishing a "Section 7 consultation process" designed to ensure that Federal actions do not jeopardize the continued existence of threatened and endangered species or result in the destruction or modification of such habitats determined to be "critical." Currently, "critical habitats" are defined as specific areas within the geographic area occupied by the species in which are found physical or biological features which are essential to the conservation of the species and which may require special management considerations or protection of specific areas outside of the geographic range of the species but essential for their conservation. Although the Section 7 provision has been used in the past with respect to the humpback whale in Hawai'i, the waters of the proposed Sanctuary have not been designated as a "critical habitat".

Fishery Conservation and Management Act of 1976 - The Fishery Conservation and Management Act (FCMA), 16 U.S.C. 1801 et seq., establishes regional fishery management councils and the authority to develop initiatives for the conservation and management of all fishery resources within a Fishery Conservation Zone (FCZ) generally extending up to 200 miles from a state's or island's shores. The Fishery Management Plans (FMP) developed by the regional councils in accordance with guidelines established by NMFS outline the management measures required for maintaining optimum yield for specific fisheries. As such, these

plans regulate the take by sport and commercial fishermen as well as the harvest, where permitted, by foreign operations. If the proposed FMPs meet the Federal guidelines and assuming no objection is received from the Department of State, U.S. Coast Guard, or any other relevant agency, they are approved by the authority of the Secretary of Commerce.

The Western Pacific Regional Fishery Management Council is responsible for the area extending beyond the territorial waters of Hawai'i as well as other American-flag territories in the Pacific.

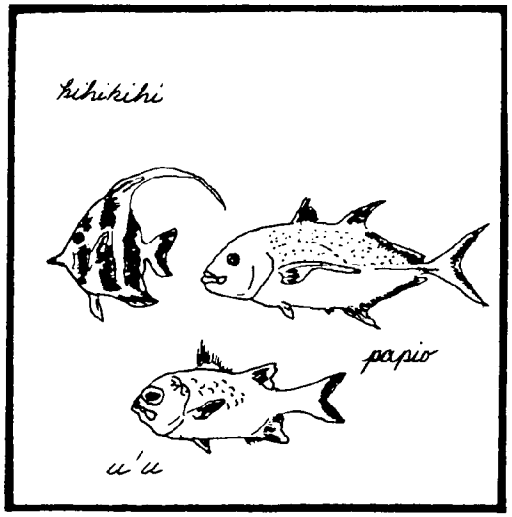
Local Authorities

In 1977, the Mayor of Maui County proclaimed the waters lying west of the Island of Maui as a "County Whale Reserve," and further declared the months of December through May as "County Whale Reserve Months." Although the action did not carry with it any regulatory fucntion, the county's initiative and the designation of the humpback whale as the Official State Marine Mammal in 1976, indicated that there was agreement at least on the significance of the species in Hawai'i if not on the needs and means for its protection.

Although somewhat limited in their ability to exercise authority over the uses of marine resources occurring within State waters, counties can work with the State to ensure that Federal actions which have "direct and significant impacts" on coastal resources are consistent with the policies and provisions of the State's Federally-approved coastal management program. In accordance with CZM regulations, Federally licensed and permitted activities require this determination (15 CFR Part 930).

Despite the presence of Federal programs and the availability of State authorities, there still exists opportunities for enhancing the protection of humpback whales in Hawai'i. These opportunities primarily result from: (1) the lack of adequate funding for program development and implementation (e.g., public education efforts and interpretive displays which increase the public's awareness and understanding of the whales and their activities in Hawaiian waters) and for providing the necessary enforcement staff and support to properly monitor activities; (2) the lack of institutional mechanisms for ensuring on-going interagency and Federal-State coordination and the timely resolution of conflicts; and (3) the lack of a coordinated research program which responds to unmet management-related needs and questions concerning the habitat and behavior of humpback whales in Hawai'i and ensures that unnecessary duplication does not occur. The Designation is intended to remedy these deficiencies.

PART III. MANAGEMENT STRATEGIES



PART III SANCTUARY MANAGEMENT STRATEGIES

Immediate responsibility for assuring that the purposes and objectives of the Designation are met falls principally on the efficiency of the network relied upon for managing the proposed Sanctuary and the quality of the plans or strategies for: (1) protecting the resources of the Sanctuary; (2) promoting and coordinating resource studies; (3) developing and implementing interpretive and public education programs; and (4) guiding the overall administration of the Sanctuary. Further, once the Sanctuary is established, the success in implementing the plans will depend in large part on the participation of State and local governments and the citizens of Hawai'i. Recognizing this important link in the management chain, the following strategies need to and have been prepared in close consultation with the interests immediately served or affected by its provisions.

Three key elements bind each of the functional plans together to form the comprehensive management plan for managing the proposed National Marine Sanctuary in Hawai'i, i.e.,

- their immediate relationship to the management purposes served by the Designation and to each other;
- their emphasis on developing the basis for prescribing specific agency roles and responsibilities for implementing their substantive provisions; and
- their usefulness as a means for measuring agency performance and program accomplishment.

Although at first there may appear to be ample authority for managing the resources of the Sanctuary, upon further inspection one finds that they rely principally on regulatory approaches to management. The management regime proposed for the management of the Sanctuary in Hawai'i does not introduce any new regulations or permitting requirements. The Sanctuary relies upon, as its principal means for managing the resource, the coordination of non-regulatory approaches such as public education, interpretive displays and programs, and the coordination of scientific research activities. Its discussion of existing State and Federal enforcement programs is intended only to serve as a means for identifying opportunities (and constraints) for interagency coordination and cooperation. Thus, although new roles have been created and assigned to the State and Federal agencies involved in managing the marine sanctuary, such does not preempt nor conflict with any of their existing statutory or regulatory responsibilities. The following describes the four functional plans to be implemented within the marine sanctuary which together are designed to achieve the purposes of the Designation. Each section is prefaced by an overview which discusses the rationale for and considerations taken into account in plan development. The remaining three elements--Implementation Strategy, Institutional Framework, and Plan Coordination--address specifically the approach taken in implementing the plans, the management roles created or prescribed for Federal, State and local agencies, and the responsibilities of each in ensuring the coordination of management activities.

Once again, each plan only establishes the basic framework upon which the necessary cooperative agreements and memoranda of understanding will be developed and, further, provides a means for measuring agency and program performance.

A. Administration Plan

During the evaluation of the marine sanctuary proposal in Hawai'i, a number of options were considered regarding the mechanics of plan implementation. These included possible arrangements involving Federal and State agencies as well as non-governmental entities in the day-to-day management of the marine sanctuary. Four considerations were paramount to the determination of the most appropriate means for ensuring that the terms of the Designation would be satisfied:

- Humpback whales and the marine sanctuary proposal are of local, State, and national interest and thus, close cooperation among all levels of government is critical and highly desirable;

- A variety of traditional uses occurs in all Hawaiian waters, therefore, a sanctuary of any size must take into account the needs and concerns of local citizens and interests. Any advisory committee or oversight group must include a thorough representation of all affected interests;

- The State of Hawai'i currently has at its disposal several resource management programs which can be used to complement existing Federal laws protecting the humpback whale. Consequently, any management proposal should consider fully the possibility and desirability for creating an "institutional mix" of State and Federal authorities; and

- The National Marine Fisheries Service is responsible for implementation of existing Federal laws relating to the management of the humpback whales, therefore, NMFS will either be directly involved in the management of or will be a party to any arrangements made for the on-site administration of a marine sanctuary.

Additionally, overlaps in agency roles and their generic responsibilities in research and education, permitting, or the enforcement of regulations also were considered in the evaluation and provided the common thread for developing the plan for coordinating Federal, State, and local management programs and activities.

Implementation Strategies

The strategy for implementing the functional elements of the Sanctuary Management Plan in Hawai'i relies on an institutional arrangement that provides for the coordination of existing Federal, State, and local authorities. The strategy focuses on the development of mechanisms that ensure the effective coordination and cooperation of agencies in carrying out their respective roles in the management of the marine sanctuary vis-a-vis meeting the terms set forth in the Designation.

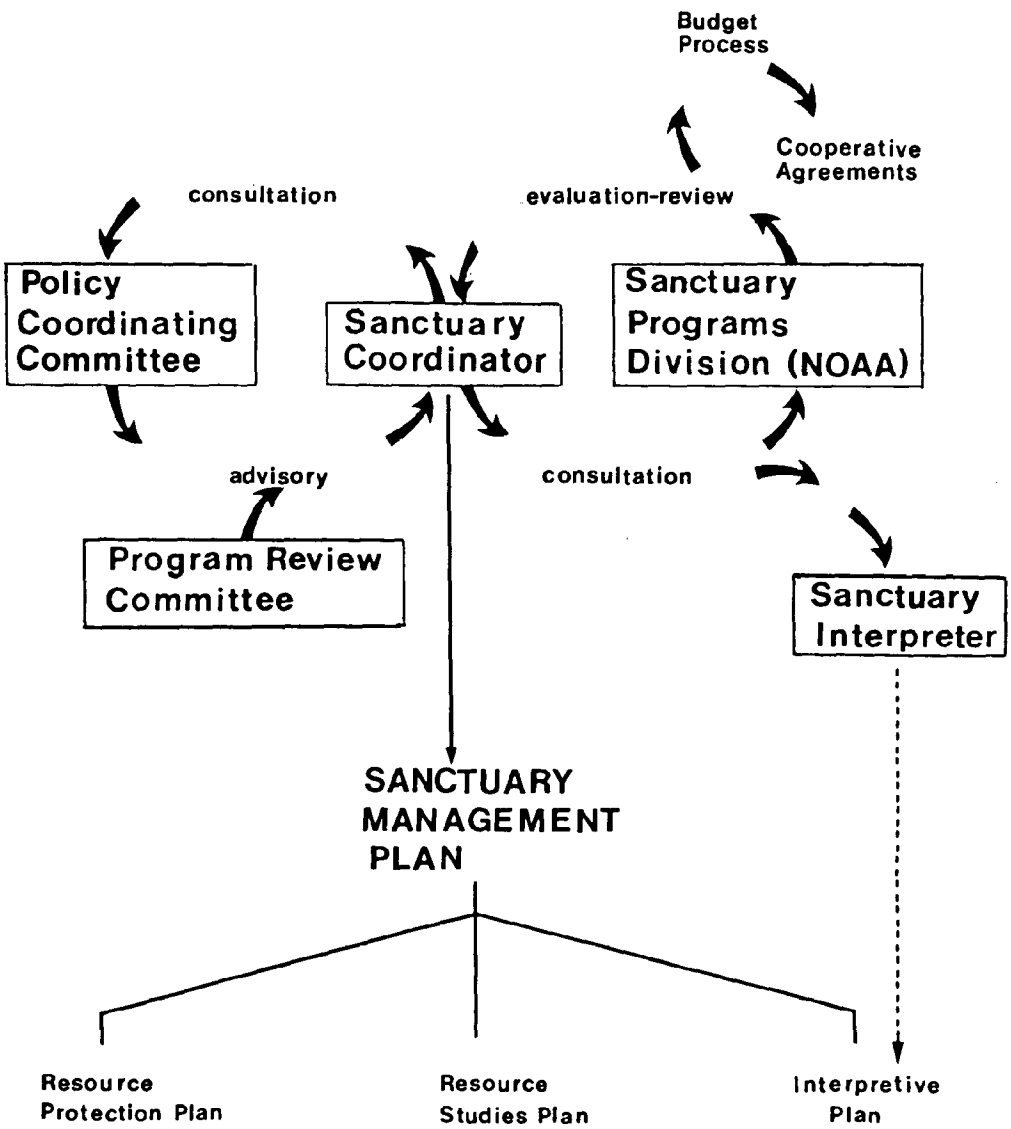


fig.12 Institutional Arrangement for Plan Coordination

The Administration Plan calls for the establishment of a management hierarchy headed by a Sanctuary Coordinator in consultation with NOAA's Sanctuary Programs Division (SPD) and other agencies of Federal, State, and local governments. These elements are bound together by a series of cooperative agreements and memoranda of understanding which establish agency roles and responsibilities and their interaction with other program agencies and the SPD/NOAA (Figure 12).

Institutional Framework

The following describes the entities that have been created which will play major roles in the cooperative management of the marine sanctuary in Hawai'i:

(1) Sanctuary Coordinator - If the Designation of the marine sanctuary in Hawai'i is to be successful in reaching its intended goals, its related plan for managing the area must prescribe a means for effectively coordinating all of the affected State and Federal interests. Further, given the broad range of local interests represented in the management of the marine sanctuary and the inefficiencies of *ad hoc* decisionmaking, NOAA has recommended that an on-site manager, i.e., Sanctuary Coordinator, role be established. NOAA also agreed with the findings of the Governor's Advisory Committee that an agency of the State of Hawai'i is the most appropriate of the three options considered concerning where such responsibility should be placed, that is:

- the State would be in a position to recognize the need for balancing traditional uses of the Sanctuary's resources and initiatives to protect the humpback whale in Hawaiian waters;
- There would be an economy of time and money if the State coordinates its management resources with existing Federal authorities;
- The ESA and MMPA both recognize the State and Federal cooperation in the management of marine mammals and endangered species;
- The State would be the most effective management entity in working with the citizens of Hawai'i and users of the Sanctuary's waters; and
- The State already has the authority to manage certain marine areas within its territorial sea having special significance.

The State agency which traditionally has assumed the role in marine resource planning, management, and research is the Division of Aquatic Resources of the Department of Land and Natural Resources. It has been decided, therefore, to place the responsibility for Sanctuary management coordination within this agency of State government.

(2) Policy Coordination Committee (PCC) - In guiding the implementation of the Sanctuary Management Plan, the Sanctuary Coordinator will need to enlist the cooperation of several key governmental offices, each of which currently is responsible for some aspect in the management of the resources of the marine sanctuary. Their existing responsibilities will not be preempted as a result of Sanctuary Designation, rather in their roles as members of the PCC, they will be better able to communicate and coordinate their respective programs

with other resource managers. More efficient approaches for implementing the Sanctuary Management Plan will result and become available to the Sanctuary Coordinator--the ultimate value of which will accrue to the protection of the humpback whale and its habitat in Hawaiian waters.

Represented on the PCC will be the following Federal, State, and local agencies:

- Division of Conservation and Resources Enforcement, Department of Land and Natural Resources (DLNR)
- Harbors Division, Department of Transportation (DOT)
- Coastal Zone Management Program, Planning Division, Department of Planning and Economic Development (DPED)
- County governments
- National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA)
- Sanctuary Programs Division (SPD), Office of Ocean and Coastal Resource Management, National Ocean Service, NOAA
- U.S. Marine Mammal Commission
- U.S. Navy, Department of Defense
- U.S. Army Corps of Engineers, Department of Defense
- U.S. Fish and Wildlife Service, Department of the Interior

(3) Program Review Committee (PRC) - As a way of ensuring that the Sanctuary Management Plan is implemented in accordance with the terms of the Designation and is achieving its goals and objectives, an oversight role has been recommended which will be served by a committee similar to that appointed by the Governor during the evaluation process. The PRC's value to the protection of the humpback whale will be in its participation and representation of the broad public interest in the review of plan implementation and in discussions on issues concerning the allocation of the Sanctuary's resources.

(4) Sanctuary Interpreter - Since the major thrust of the Sanctuary Management Plan focuses on improved research coordination and public awareness/education, it is appropriate that a role be established to guide the development and implementation of materials and programs designed to enhance such efforts. Working with the Sanctuary Coordinator, the interpreter can ensure that an effective "lock-up" occurs between the implementation of the Sanctuary Management Plan's interpretive component and its research and resource protection programs.

Plan Coordination

Each of the roles described in the preceding section has assigned to it a set of specific tasks and management responsibilities. The following describes

these and serves as a basis for developing cooperative agreements and, ultimately, the means for evaluating program performance:

(1) Sanctuary Coordinator

- coordinates with the SPD and other members of the PCC, in the development of plans and programs for guiding the implementation of the Sanctuary Management Plan's functional elements;
- coordinates with other Federal and State agencies in the determination of program needs and priorities and the preparation of the operations budget for the Sanctuary;
- administers the funds received from the SPD/NOAA and initiates actions necessary to satisfy the terms conditioned to the award;
- consults with and participates in meetings of the Program Review Committee;
- prepares and submits periodic reports to the SPD as required by the terms of the cooperative agreement; and
- maintains an on-going monitoring effort to gauge program performance with respect to the purposes intended by the Designation.

(2) Policy Coordination Committee

- assists in the development and periodically reviews the plans and approaches used in implementing the Sanctuary Management Plan; and
- assists the Sanctuary Coordinator in the determination of program needs and priorities and the preparation of the operations budget for the Sanctuary.

(3) Program Review Committee

- assists the Sanctuary Coordinator in the review of programs developed for implementing the functional elements of the Sanctuary Management Plan; and
- participates in an on-going monitoring effort to gauge program performance relative to the management purposes served by the Designation.

(4) Sanctuary Interpreter

- assists the Sanctuary Coordinator in the development of plans and approaches for guiding the implementation of the Sanctuary Management Plan functional elements; and
- assists the Sanctuary Coordinator in responding to requests made for information on the Sanctuary.

Implicit throughout this discussion is the major role that the Sanctuary Programs Division (SPD) plays in the determination and awarding of funds for operating the marine sanctuary in Hawai'i. Given the SPD's national focus and the demands placed on it by other existing National Marine Sanctuaries, the level of funding available annually to the operation of the site in Hawai'i will depend primarily on the quality of the programs and facilities proposed and their contribution towards meeting the goals and objectives of the Sanctuary Management Plan.

B. Resource Protection Plan

Opportunities for protecting the humpback whale and its winter habitat in Hawaiian waters can be found in a number of existing State and Federal laws. These provisions, however, with the single exception of the Notice of Interpretation issued by NMFS in 1979 (Appendix C) defining "take" in reference to harassment, to date have not addressed the humpback whale or the specific requirements for protecting its habitat in Hawai'i. This is not to say that such authority to act in the future does not exist. The State of Hawai'i, for example, can exercise its authority under various provisions of its statuatory code to set aside areas as Natural Area Reserves or Marine Life Conservation Districts or to regulate marine vessel operations and activities related to shorewaters.

Anticipating that neither Federal nor State authorities will move to make major revisions in the scope of their current regulatory programs or in the role that they play in protecting the humpback whale, the management plan proposes simply to coordinate these functions in its resource protection element.

Implementation Strategies

The management plan proposed for the marine sanctuary in Hawai'i does not call for the State to create new regulatory programs, establish additional marine conservation areas, or impose additional restrictions. The plan does propose to coordinate the existing Federal responsibility for enforcement with that of State agencies acting under their separate authorities within the boundaries of the marine sanctuary. Through this means, the plan will establish an institutional network and formal working arrangement between Federal and State authorities, the objectives of which are to: (1) better protect the humpback through an enhanced enforcement presence; (2) reduce the incremental costs associated with any increased surveillance program, possibly through the seasonal assignment of trained State enforcement officers to assist NMFS agents; (3) provide professional training opportunities for State personnel; (4) enhance communication and the sharing of information and expertise among Federal and State agencies and enforcement staff; and (5) recognize the State's continuing role in and responsibility for managing the resources found within its coastal waters.

Institutional Framework

Since there will be no regulations issued pursuant to this Designation, the plan for protecting the resources of the Sanctuary will rely principally upon cooperative agreements and memoranda of understanding which specify: (a) agency roles and responsibilities in implementing the Sanctuary Management

Plan; (b) the personnel standards and operating procedures for conducting surveillance and enforcement; (c) the level of funding necessary for staff development, training and field support; and (d) the conditions and terms under which State conservation officers may be deputized and authorized to act as Federal law enforcement agents. Additionally, to ensure the effective coordination among the agencies currently responsible for the protection of the humpback whale and its habitat, the Policy Coordinating Committee (PCC) will play a role in assisting the Sanctuary Coordinator in developing the plans for integrating State and Federal roles in the surveillance and enforcement program.

Plan Coordination

Agency roles and the authority to act in implementing the Resource Protection Plan are prescribed in appropriate Federal and State statutes. The following describes the responsibilities of NMFS and other entities in providing for regulatory enforcement in the waters of the marine sanctuary in Hawai'i:

(1) National Marine Fisheries Service

- provides for continued enforcement of regulations governing taking of humpback whales in Hawaiian waters;
- assists the State of Hawai'i and the Sanctuary Coordinator in the development of cooperative programs for staff training and joint surveillance and enforcement activities; and
- reports periodically to the PCC on the status of enforcement programs.

(2) Sanctuary Coordinator

- with the assistance of the appropriate agencies of the State government and NMFS, develops plans for coordinating Federal and State roles in the surveillance and enforcement program;
- assists in the development and implementation of training programs for State enforcement officers;
- coordinates response in the event of an emergency or condition threatening the Sanctuary's resources;
- with NMFS, develops a joint form and procedures for reporting visitor use patterns, potential and observed violations of applicable laws, and other information as required to ensure effective implementation of the Resource Protection Plan; and
- prepares and submits reports periodically to NOAA's Sanctuary Programs Division concerning enforcement activities.

(3) Policy Coordination Committee

- assists the Sanctuary Coordinator in the development of plans for coordinating Federal and State roles in the surveillance and enforcement program.

(4) Program Review Committee

- assists the Sanctuary Coordinator in reviewing programs developed specifically for implementing the Resource Protection Plan.

(5) Sanctuary Interpreter

- assists the Sanctuary Coordinator in the development of programs designed around the theme of enforcement's role in resource protection; and

- prepares and distributes information about the resource protection programs applicable to the marine sanctuary.

C. Resource Studies Plan

Consistent with the management purposes of the marine sanctuary in Hawai'i, resource studies will yield two primary benefits: (1) the broadening of the body of scientific knowledge concerning the humpback whale and the resources of its habitat; and (2) the availability and utility of that level of understanding to management decisionmaking. Both orientations are equally valuable and requisite to the long-term protection of the species. With this in mind, the Resource Studies Plan will be used to guide the development of a preliminary agenda for ensuring that research activities in the Sanctuary are conducted in a manner that is consistent with its management needs and the purposes of the Designation. The agenda will address the need for conducting specific kinds of investigations, accord priorities to research relative to their importance in addressing these needs, and prescribe studies. NOAA has considered the following factors in preparing this plan element:

- the availability and quality of existing data or current research being conducted on the humpback whale in Hawai'i and throughout its range;

- gaps or deficiencies in the data base that need to be addressed in order to adequately respond to management issues and concerns;

- sources of research funding other than that available under Title III of the Marine Protection, Research and Sanctuaries Act;

- the coordination strategies necessary to stimulate information exchange, increase research productivity, prevent unnecessary duplication, and reduce administrative costs;

- possible mechanisms for linking basic data collection, information management, and delivery systems with resource managers; and

- possible planning strategies which assure the widest possible participation and involvement of all interested parties in the development of research priorities.

These considerations, as well as input derived from the Governor's Advisory Committee, have assisted NOAA also in developing the preliminary agenda for addressing both the scientific and resource management needs of the Sanctuary in Hawai'i.

The following describes some of the key areas on which the Resource Studies Plan focuses and for which specific research programs will be developed:

Studies Related to Basic Scientific Inquiry

- description of the major components of the humpback whales' wintering habitat in Hawai'i and the compilation of baseline information on the parameters for measuring its quality;

- investigation of the sensory reception of the humpback in Hawaiian waters and its related behavioral responses; and

- description of the ecology of the whale, e.g., social organization, recruitment and population dynamics, spatial and temporal distribution including abundance, composition, migration, and the mingling of groups within State waters and between Hawai'i and other areas throughout its range.

Studies Related to Resource Management Issues

- evaluation of current surveillance and monitoring techniques employed in scientific investigations; e.g., underlying assumptions, design flaws, statistical validity, precision, and compatibility with other approaches;

- determination of the significance of impacts associated with certain activities on whale behavior and its correlation with the current interpretation of "taking" by harassment as applied to the humpback whale in Hawaiian waters;

- justification and analysis of present and projected user demands made on the resources of the marine sanctuary by resident and tourist populations and the process currently used in making allocation decisions;

- description of the traditional and cultural uses of marine resources practiced by commercial and recreational interests in Hawai'i; and

- examination of the whale's adaptability to changing environmental conditions and man's presence and activities.

Appendix E of this document provides further guidance regarding the factors taken into account in agenda-setting, i.e., the overall research program, schedules, and priority considerations. Additionally, the section establishes the procedures for evaluating and monitoring research conducted in the waters of the Sanctuary.

Implementation Strategies

Past and current research, to the extent made possible by available funding support, has produced some information on the distribution and movement of the humpbacks in Hawaiian waters. For the most part, this data constitutes most of what is known currently about the species in their wintering grounds. The establishment of the marine sanctuary in Hawai'i will mean the implementation of an agenda for research that is responsive to the information needs of resource

managers and government decisionmakers, coordinated in terms of its emphasis on information sharing and agency participation in establishing research priorities, and accountable with respect to Sanctuary and permitting authorities.

Institutional Framework

In Hawai'i the lack of a coordinated program for studying the humpback whale has led to much competition among individual researchers and controversy over the value of their efforts to the protection of the species. Proprietary feelings towards research findings have created a situation in which no one benefits. Man's knowledge of the humpback whale is not served, for example, when the work of one duplicates that of another or misses the opportunity to build upon efforts already completed. The value of research is also maligned sometimes by people who, perhaps unaware of research designs which require replicative studies, view research permits as a license to harass the species. Ironically, perhaps the greatest misfortune that results when research is not adequately coordinated or its value questioned falls upon the humpback whale.

If protection from harassment is vital to the health and maintenance of the humpback whale in Hawai'i, then it is equally as important to reduce or eliminate its occurrence--regardless of the source. Consequently, it would be beneficial to the whales if the evaluation of research proposals were conducted in a way that would ensure the broadest representation of agency and scientific interests. To achieve this, the management plan calls for the development of an agenda that reflects research needs and priorities in the proposed Sanctuary as well as the establishment of the administrative means necessary to coordinate the review of research proposals by State and Federal agencies and qualified scientists.

Agencies currently empowered by Federal and State laws to regulate access to resources found within NOAA's Hawaiian waters include NOAA's National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service, and the State's Departments of Land and Natural Resources and Transportation. Other agencies such as the U.S. Army Corps of Engineers, Environmental Protection Agency, and the Hawai'i Department of Health also participate in decisions governing "access" or use of the waters and resources of the marine sanctuary.

Since the immediate focus of the Sanctuary's management plan is to reduce or eliminate activities which constitute taking by harassment through the coordination of existing authorities, the NMFS will continue to play its lead role in the evaluation of research proposals. The only change that has been proposed in the Sanctuary Management Plan is the creation of a Scientific Advisory Committee and its role in the implementation of the research agenda.

Scientific Advisory Committee (SAC)

NMFS is already required by statute and regulations to publish a notice in the Federal Register for every permit application it receives and to provide opportunities for agency and public comment. For example, Section 216.31(b) of the regulations governing the taking of marine mammals under the authority of the Marine Mammal Protection Act of 1972, as amended (50 CFR Part 216, 39 FR 1851, 1974), requires that the agency consult with the U.S. Marine Mammal Commission and its Committee of Scientific Advisors on Marine Mammals in its permit decisionmaking. These regulations and those issued under the authority

of the ESA (50 CFR §222.24) also provide the means for soliciting other agency views and the opportunity for public review and comment. The implementation of the Resource Studies Plan will not require that NMFS amend these regulations. The plan simply calls for establishing a formal peer review process to assist the permitting agency in its evaluation of research proposals. In addition to the U.S. Marine Mammal Commission, the following may be empaneled by NMFS to participate in the review process:

- Division of Aquatic Resources, Department of Land Natural Resources
- Sea Grant Program, University of Hawaii
- Sanctuary Programs Division, Office of Ocean and Coastal Resource Management, National Ocean Service, NOAA
- U.S. Fish and Wildlife Service, Department of the Interior
- U.S. Army Corps of Engineers, Department of Defense
- Scientists

Plan Coordination

The criteria used for NMFS in the evaluation of research proposals and its permit decisionmaking is found in the regulations governing the implementation of both the Endangered Species Act of 1973, as amended (50 CFR Part 217-222) and the Marine Mammal Protection Act of 1972, as amended (50 CFR Part 216). The Scientific Advisory Committee will not serve an oversight function, rather, its role is to assist NMFS in the coordination of its consultation process and advise the agency on the appropriateness of research proposals in meeting Sanctuary goals and objectives and their merit with respect to the long-term protection of the humpback whale. NMFS's representation on the Policy Coordination Committee and the State's Division of Aquatic Resources dual role in the Sanctuary Coordination and as a member of the Scientific Advisory Committee also provide for effective "cross-talk" or coordination between the Sanctuary's administration and Resource Studies Plan implementation.

The following describes the responsibilities of the Scientific Advisory Committee, NMFS, the SPD, and those of other entities playing key roles in the implementation of the Resource Studies Plan:

(1) Scientific Advisory Committee (SAC)

- assists NMFS in the evaluation of proposals for research in the marine sanctuary requiring permits under the Marine Mammal Protection Act and Endangered Species Act;

(2) Sanctuary Programs Division, NOAA

- coordinates with the Sanctuary Coordinator the development and implementation of a research agenda that is consistent with the terms of the Designation and priorities of the Resource Studies Plan;

- issues "Request for Proposals" (RFP) for selective studies and evaluates unsolicited proposals in connection with NMFS;
- participates in the peer review process as a member of the SAC;
- assists in securing funding for priority research projects;
- reviews research findings and reports, and progress in implementing the Resource Studies Plan;
- coordinates with the Sanctuary Interpreter in the development of and maintains a repository for data generated by research conducted in the marine sanctuary; and
- prepares reports and materials describing significant findings resulting from the research program.

(3) National Marine Fisheries Service, NOAA

- administers permitting provisions of the Marine Mammal Protection Act of 1972, as amended, and the Endangered Species Act of 1973, as amended, in accordance with 50 CFR Parts 216 and 217-222;
- establishes and coordinates the peer review process and guides the SAC in the evaluation of proposals for research in the marine sanctuary;
- consults with other Federal and State agencies, as necessary, on permitting decisions within the State's territorial waters;
- participates in Section 7 consultations and prepares biological opinions;
- assists the SPD and Sanctuary Coordinator in the development and maintenance of a research agenda for the marine sanctuary;
- assists the SPD and Sanctuary Interpreter in the establishment and maintenance of a repository for data generated by research in the marine sanctuary; and
- assists the SPD in the review of research findings and reports, and programs used for implementing the Resource Studies Plan.

(4) Sanctuary Coordinator

- coordinates the development of a detailed agenda and project schedule tailored to respond to a range of research objectives and priorities;
- coordinates with the SPD in the development of requests for proposals (RFP) for selected studies and assists in the evaluation of unsolicited proposals;

- maintains close communication with the scientific/academic community and other sources possessing skills and knowledge beneficial to the management of the marine sanctuary;

- participates in the peer review process used for evaluating research proposals applicable to the resources of the Sanctuary (a process further described in the Resource Studies Plan);

- consults with the PCC and NMFS in the development of the procedures and criteria used in the peer review process;

- assists State and Federal agencies in the monitoring of activities conducted under permit within the waters of the Sanctuary;

- cooperates with and assists persons conducting permitted research within the waters of the Sanctuary;

- reports to the SPD and advises the Sanctuary Interpreter of the research in progress;

- with the Sanctuary Interpreter and in coordination with NMFS, maintains a Sanctuary resource data base and document center to house materials and information generated by research conducted in the marine sanctuary; and

- assists the Sanctuary Interpreter in maintaining liaison with other whale research centers, nationally and internationally.

(5) Policy Coordinating Committee

- consults with Sanctuary Coordinator in the development of a detailed agenda and project schedule tailored to respond to a range of research objectives and priorities;

- assists the Sanctuary Coordinator and NMFS in the development of a peer review process and the procedures and criteria used for evaluating research proposals applicable to the resources of the Sanctuary; and

- periodically reviews the Resource Studies Plan and the approaches taken in its implementation.

(6) Program Review Committee

- advises the Sanctuary Coordinator on the research agenda and work schedule developed for implementing the Sanctuary's Resource Studies Plan; and

- assists the Sanctuary Coordinator in reviewing the progress made in implementing the Resource Studies Plan.

(7) Sanctuary Interpreter

- assists the Sanctuary Coordinator in the development of a detailed agenda and work schedule tailored to respond to a range of research objectives and priorities;
- cooperates with and assists persons conducting permitted research within the waters of the Sanctuary;
- integrates information acquired through research with the design and operation of interpretive programs;
- informs visitors and extension audiences on the research in progress and its value to the protection of the humpback whale;
- in coordination with NMFS, assists the Sanctuary Coordinator and SPD in the publication of materials describing the research program for the marine sanctuary, accomplishments and project status, and in the maintenance of a Sanctuary resource data base and document center; and
- assists the Sanctuary Coordinator in maintaining liaison with other whale research centers, nationally and internationally.

D. Interpretive Plan

The resident and tourist population in Hawai'i has expanded rapidly since statehood. Maui's resident population, for example, currently numbers over 63,000, representing a 62.4% increase since 1970. The number of visitors during that period also increased as dramatically. Many of these visitors since the mid-seventies have engaged in whale-watching, an activity that most likely will grow as world attention is increasingly turned towards the need for protecting the remaining population of great whales.

The expanding visitor industry has also given rise to and most likely will continue to expand other water-based activities in the waters of Maui County. The sum total of their impact upon the humpback whale and its habitat is not clear, however, as uncertain is the threshold or level beyond which it will constitute a threat to the fitness of the species. Current regulations governing the "take" by means of harassment and issuance of permits allowing "take" incidental to approved research, do not take into account the possible adverse cumulative effect of activities which alone may be of little or no environmental consequence. Regulations, alone, albeit their effectiveness to treat a specific problem or issue, do not constitute a comprehensive resource management program.

The plan for managing the proposed Sanctuary in Hawai'i recognizes this "management deficiency" and, consequently, proposes to supplement the existing regulatory programs with initiatives designed to educate the public concerning the needs of the humpback whale and the role and value of its winter residence in Hawaiian waters. The Interpretive Plan, therefore, serves as a cornerstone for efforts intended to generate public concern about the maintenance of the

species in Hawai'i as well as other species of great whales worldwide. Additionally, the implementation of the Interpretive Plan will result in other positive spin-offs such as:

- enhancing visitor experience and appreciation;
- clarifying and coordinating the respective roles of government, the private sector, and the public and their responsibilities for managing the resource;
- instilling and reinforcing an environmental ethic and sensitivity in the youth of Hawai'i; and
- creating a means for disseminating information on existing State and Federal programs directed at resource protection, e.g., State regulations governing activities within designated Marine Life Conservation Districts and Natural Area Reserves.

Implementation Strategies

The implementation of the Sanctuary Management Plan's interpretive component will rely principally on a strategy involving the coordination of new and existing governmental programs, private institutions and facilities, and public participation. Through this means, the establishment of the marine sanctuary would call attention to the endangered status of the humpback whale and the significance of the species.

The Interpretive Plan stresses coordination among the various Federal, State, and local authorities as well as the active participation of private interests in Hawai'i for its implementation. It does not propose to duplicate what can be found in existing programs at the local, national, or international levels. It has, however, drawn much from the work and 1977 recommendations of the Maui County Whale Reserve Committee and the more recent findings of the Governor's Advisory Committee.

Programs - The Interpretive Plan includes an agenda for developing and carrying out a variety of programs for both residents and tourists, in addition to providing opportunities for addressing national and international audiences. The following describes some of the programs and approaches that will be used in implementing the Interpretive Plan:

- publication and distribution of information pamphets describing the concept and boundaries of the marine sanctuary, the life cycle of the humpback, and the rules governing man's contact with the whale;
- preparation of brochures describing each of the Marine Life Conservation Districts and the Natural Areas Reserve found in Maui County waters--providing information on location, biological values, public safety considerations, and the nature of the management program;
- preparation of multi-media productions for presentations in classrooms, at special events, and in the planned visitor interpretive center;

- conduct special workshops and seminars for specific user groups such as boaters, public officials, visiting scientists, and educators;

- scheduling of public events which are designed to call attention to the marine sanctuary and the resident wintering humpback whale population; and

- broadening of the roles played by Federal and State enforcement officials in public education, e.g., the preparation and dissemination of information advisories to registered boaters.

Facilities - The Interpretive Plan provides for the possible establishment of plant facilities which can be used to house the Sanctuary's interpretive programs. Ideally, the facilities should be located in the proximity to areas of resident and visitor concentrations. They may be developed and managed in conjunction with other water-related exhibits and/or housed in existing structures such as those owned or operated by the State, such as the Waikiki Aquarium, the counties, or private organizations such as the Lahaina Restoration Foundation.

The facilities will serve a variety of functions which might include such things as a visitor reception area, exhibit hall, auditorium, film and videotape library, document collection and archives, research center and information clearinghouse, and sanctuary administration office. The establishment of interpretive facilities, without question, not only will enhance the visitor experience but also provide Hawaii's residents with a unique opportunity to learn more about the humpback whale in its island home.

In cooperation with the State and local government, additional satellite facilities may be designed and operated that would provide additional means and opportunities to present the story of the humpback whale. One recommendation made by the Maui County Whale Reserve Committee, for example, supported the construction of roadside facilities such as graphic displays, scenic vistas, and coin-operated binoculars.

Institutional Framework

The first order of business following Designation of the Sanctuary calls for the hiring of a Sanctuary Interpreter and preparation of a scope of work and plan milestones for implementing the Interpretive Plan. Although administered independently, interpretive programs will be dovetailed with the rest of the sanctuary's functional elements of research management and enforcement.

As indicated earlier in this discussion, the implementation strategy seeks to blend the various Federal, State, and local interests to create a program for the Sanctuary in Hawai'i unparalleled elsewhere. To this end, guidelines have been prepared to assist in the development of the Interpretive Plan vis-a-vis the terms and conditions of the contract between the SPD and the Sanctuary Interpreter (Appendix E).

Plan Coordination

The implementation of the interpretive element of the Sanctuary Management Plan will be coordinated with the research agenda and administrative regime developed for the site. As such, a number of agreements will be necessary between all of the parties involved in research, sanctuary interpretation, and

administration. These agreements will describe the tasks and their relationship to the overall goals and objectives of the interpretive program, agency responsibilities, and the schedule and level of support necessary for completing the work. The following describes the SPD's role and that of others in the implementation of the Interpretive Plan:

(1) Sanctuary Programs Division, NOAA

- guides the planning, coordination, development, implementation, and review of the Interpretive Plan; and
- reviews proposed annual operating budgets and provides funds for Sanctuary interpretive programs.

(2) Sanctuary Coordinator

- assists the Sanctuary Interpreter in designing the major parameters of the program used in the implementation of the Interpretive Plan;
- coordinates with Sanctuary Interpreter on studies for monitoring visitor usage of the Sanctuary; and
- responds to requests for information on the Sanctuary and advises Sanctuary Interpreter on the type and frequency of requests received.

(3) Policy Coordinating Committee

- periodically reviews the Interpretive Plan and the approaches taken in its implementation.

(4) Program Review Committee

- assists the Sanctuary Coordinator in reviewing the progress made in implementing the Interpretive Plan.

(5) Sanctuary Interpreter

- in consultation with the Sanctuary Coordinator and the SPD, develops a program for implementing the Interpretive Plan that is coordinated with the other functional elements of the Sanctuary Management Plan;
- reviews current scientific and socioeconomic information related to the Sanctuary to assure that the interpretive program is factual and accurate;
- conducts studies to determine Sanctuary audience profiles, preferences, and aspirations;
- monitors visitor usage of the Sanctuary;

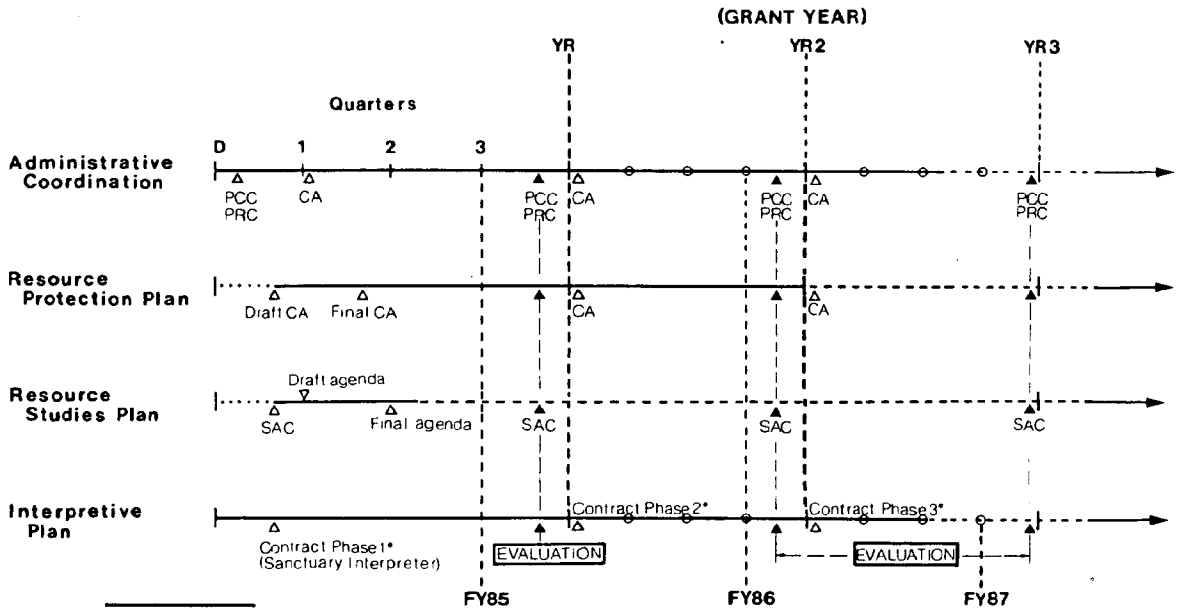
- where required, assists the Sanctuary Coordinator in responding to requests for information on the Sanctuary;
- provides the primary location and facilities for housing Sanctuary interpretive programs, visitor and research center;
- coordinates with the University of Hawai'i, Department of Education, and the counties in the production of programs and materials for use in schools and community extension activities;
- maintains liaison with other marine interpretive centers, nationally and internationally;
- prepares and submits to the SPD, annual work program narratives and operations budgets for implementing the Interpretive Plan;
- seeks other sources of funding for research and interpretive programs; and
- prepares periodic reports for and responds to inquiries made by SPD concerning program accomplishments and success in meeting the Sanctuary Management Plan's interpretive goals and objectives.

In addition to its role on the Policy Coordinating Committee, a representative of county government will also serve as a liaison between county agencies and the SPD, Sanctuary Interpreter, and Sanctuary Coordinator, and assist the Sanctuary Interpreter in the development of interpretive themes, programs, and facilities.

Implementation Trajectories

The Sanctuary Management Plan thus far has defined its goals and objectives and, in this section, the set of strategies relied upon for carrying-out its substantive provisions in administrative coordination, enforcement, research, and public awareness and education. As important to the Sanctuary Management Plan's ability to satisfy the purposes of the Designation is the timing of its implementation, i.e., when certain administrative events will occur, what agency roles are involved, the relationship of the events to other management activities, and the program's milestones/benchmarks. Figure 13 illustrates the implementation trajectories of each of the four management strategies, from start-up to full implementation. The initial targets set for the proposed National Marine Sanctuary in Hawai'i anticipates full operational status by the second month following its Designation and the accomplishment of the Sanctuary Management Plan's principal objectives by the 30th month.

fig.13 **Implementation Trajectories**



key:

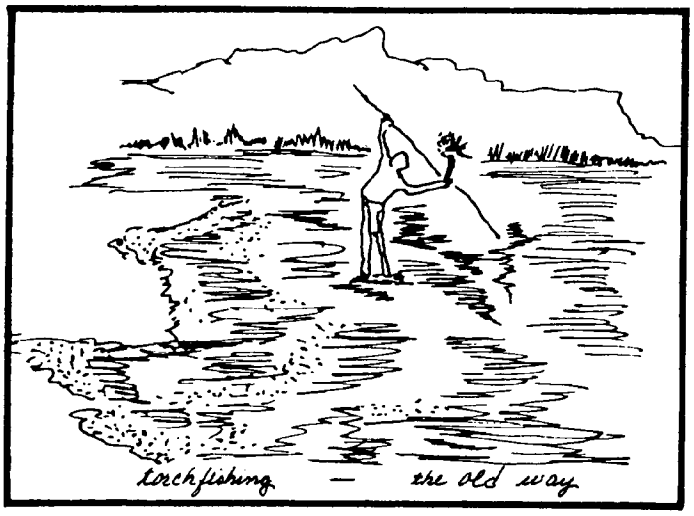
PCC - Policy Coordinating Committee
PRC - Program Review "
SAC - Scientific Advisory "
CA - Cooperative Agreement
D - Designation

*Appendix E

- - - - - start-up (planning)
—— operations
- - - institutionalized

Program Phases

PART IV. PROGRAM EVALUATION



PART IV: PROGRAM EVALUATION

The Sanctuary Management Plan itself represents the product of an ev ıation process begun in 1977 which took into consideration a broad range of iss s related to the humpback whales found in Hawaiian waters. The evaluation primarily looked at the needs of the whales for protection and the means available to satisfy that need. The resulting findings strongly indicated the need for and supported the establishment of a National Marine Sanctuary in Hawai'i.

The plan for managing the marine sanctuary in Hawai'i was not developed for the purpose of justifying the Designation, rather, it is the result. It is a comprehensive planning document that provides a basic framework for implementing a coordinated management program.

The effectiveness of the plan in providing for the long-term protection of the humpback whales needs to be viewed from two equally important perspectives--first, the utility of the plan as a means for addressing the management issues discussed during the evaluation and in meeting the expectations expressed by a wide range of interests in Hawai'i and, second, the effectiveness of the management action taken to carry out its functional provisions. Each has its own special requirements with respect to the: (1) frequency of evaluation; (2) indicators and measurement techniques used in determining the level of program performance; and (3) manner in which their products are used in changing the plan's orientation or refining its strategies for implementation.

A. Sanctuary Management Plan Review

The management plan developed for the marine sanctuary is built around four major goals which provide for the implementation of specific programs directed towards the long-term protection of the humpback whale. The overall thrust of the plan is to complement existing management capabilities, ensuring their full coordination, without imposing new restrictions on human activities. It is based on the assumption that adequate protection for the whales can be achieved through the plan's coordination of programs already in place and currently administered by Federal and State agencies and, further, that such efforts can coexist with man's activities.

Frequency

In view of the plan's rather broad statement of purpose and reliance on the specific programs to be developed for its implementation (the evaluation of which will be discussed next), it would not be appropriate nor useful to the managers of the Sanctuary to conduct annual reviews. Rather, because of budgetary considerations and management priorities which affect program scheduling, a three-year benchmark is recommended. The time line is reasonable in that it allows all of the major program agenda--facilities development, agenda-setting, coordination of authorities, and the institutionalization of roles and agency responsibilities--the time necessary to establish "track records." Only through this means can one develop a sense about the sensitivity of the Sanctuary Management Plan in responding to programmatic and political considerations.

Performance Indices and Measurement

The plan's statement of goals and objectives calls for the development and implementation of program agenda for resource protection, research, interpretive designs, and coordinating Sanctuary administration. Performance, therefore, should be measured against how effective the plan was in meeting its management objectives. Effectiveness, in turn, would be determined as a function of what actually was "established, implemented, instituted" and so forth. Consequently, the level of the plan's effectiveness would be a relative measure, determined in large part by the expectations and subjective findings of program managers and expressed in terms of whether it was found satisfactory or deficient in meeting its specific objectives.

Program Feedback

Reflecting on the plan's underlying assumption, the value of the evaluation lies in its possible use as a checklist for monitoring agency coordination and preparing annual work programs and funding priorities. Evaluation findings also have political utility in that they can be used to demonstrate the value of the management program in terms of economics, government efficiency, resource protection, and public benefit.

B. Management Strategies Review

The four functional components or management strategies are the key elements that drive and guide the implementation of the Sanctuary Management Plan. The strategies respond to all of the major issues raised during the evaluation of the proposal regarding the question of "how" the Designation would serve the long-term protection of the whales and also that regarding the assurances for protecting traditional uses of the Sanctuary's resources from further restriction. The strategies also serve a role in agenda-setting by contributing to the development of the specific tasks, agreements, and work programs necessary to achieve the purposes of the Designation. These would be articulated in the cooperative agreements, and memoranda between agencies which specify roles and management responsibilities, procedures, contractual terms and arrangements, and performance benchmarks.

Frequency

The question of whether the Sanctuary Management Plan is successful in meeting the purposes of the Designation will be answered in large part through the evaluation of the programs tied to its implementation. Since these programmatic efforts will be established in interagency agreements which incorporate funding provisions tied to specific performance periods, the frequency of evaluation will be determined accordingly.

Performance Indices and Measurement

The specific terms and conditions related to an agency's role in Sanctuary management and its responsibilities for plan implementation, set forth the parameters or indices upon which performance will be based. Given the SPD's major role as a funding source for supporting the administration of the Sanctuary,

the agency, consequently, will lead the evaluation and coordinated review of the strategies used in implementing the Sanctuary Management Program.

Program Feedback

The periodic review and evaluation of Sanctuary management activities is based on the assumption that such efforts provide managers with the most efficient means for determining the strengths and weaknesses of the plan's strategies and, subsequently, the most appropriate responses for its implementation. If, for example, upon determining that a particular task or term conditioned to a cooperative agreement was not being met or that its consequences were counterproductive or not cost-effective, the SPD would consult with the agency or agencies party to the agreement to modify the work program or reduce the level of funding support received. Further, to ensure that such initiatives receive full support and are useful in meeting program objectives, the SPD will consult also with the Sanctuary's Policy Coordinating Committee in any action concerning interagency agreements.

In summary, the two levels of evaluation together provide a means for gaining information on the overall effectiveness of program implementation as well as serve as a tool for prescribing refinements to the management program. The evaluation program is not intended to serve simply as a "stick" by which to force agency participation. Rather, its value lies in the insights it provides on what works well and what doesn't in managing the resources of the Sanctuary and its usefulness to decisionmakers.

PART V. ALTERNATIVES

PART V: ALTERNATIVE ACTIONS INCLUDING THE PREFERRED ALTERNATIVE

Introduction

The evaluation of the marine sanctuary proposal in Hawai'i principally has involved looking at a range of alternatives representing three major themes: (1) the need or desirability of using the provisions of Title III of the Marine Protection, Research and Sanctuaries Act as a means to enhance the protection of the humpback whale in Hawaiian waters; (2) the boundaries of the area necessary to fully protect the species during its residence in Hawai'i and, more importantly, in areas significant to its reproductive functions such as mating, calving, and nursing its young; and (3) the most appropriate management arrangement for meeting the intended purposes of the proposed Designation and carrying-out the goals and objectives of the plan for managing the Sanctuary. The following discussion describes all of the alternatives considered during the evaluation process since 1977, including NOAA's "preferred alternative" and that involving "no action" or the status quo. The purpose of this discussion is to provide the reviewer with the information required and used by NOAA as a basis for making its decisions.

A. Institutional Alternatives

The proposed action is the designation of and the approval of a plan for managing a National Marine Sanctuary for humpback whales in Hawaiian waters under the authority of Title III of the Marine Protection, Research and Sanctuaries Act of 1972. This action follows an evaluation process begun in 1977 that took into account: (a) the ecological, recreational, research, and educational significance of the resources of the proposed area; (b) existing and potential threats to these resources; (c) protection afforded by existing State and Federal regulatory mechanisms; (d) the value of the proposed action in complementing other public or private programs with similar objectives; (e) the aesthetic quality of the area's resources; and (f) the economic value of natural resources and human uses within the area which may be foregone as a result of marine sanctuary designation. The proposed action is one of five alternatives considered. Each of the other institutional arrangements also relies upon the exercise of existing State and/or Federal authorities as a means for protecting the humpback whale and its habitat in Hawaiian waters. This environmental impact statement and the comments received during its review are intended to assist the Secretary of Commerce in determining the need for the proposed action.

1. Status Quo

If no marine sanctuary were designated, the management of the humpback whale and the quality of its habitat in Hawaiian waters would continue to rely solely on the respective enforcement efforts of the National Marine Fisheries Service (NMFS) and agencies of the State currently empowered to regulate activities affecting living and non-living marine resources. Maintenance of the status quo would mean simply that existing State and Federal regulatory and non-regulatory programs and levels of effort related to the protection of the humpback whale from "take" by means of harassment and the management of the resources of its habitat would remain unchanged. For the purposes of this discussion, the status quo also includes the 1977 Maui County Whale Reserve initiative which proclaimed certain waters lying west of the island of Maui

as a "County Whale Reserve" and the months of December through May as "County Reserve Months." In view of experiences gained in the management of the species in Hawai'i to date, maintenance of the status quo, however politic or comfortable to those who have grown accustomed to it, does not effectively address the need or capitalize on the opportunities for promoting and coordinating Federal-State programs, research, and user awareness/public education initiatives.

The following briefly describes the inefficiences of the status quo alternative and references in this document where the strategies proposed for correcting them can be found:

a. User Awareness/Public Education - Although the Federal presence has resulted in the reduction of whale harassment, much of that success has been attributed to NMFS's non-regulatory activities--funding support for which has been and still is limited under current programs. Maui County's non-regulatory initiative (Part III(F), Page 37) unfortunately was never provided the support necessary for implementing the 1977 recommendations of the Mayor's Whale Reserve Committee. Its findings, however, are as applicable today as they were then, a fact that has been reflected in the development of the draft management plan.

b. Federal-State Program Coordination - The proposed Sanctuary Management Plan recognizes the need for and desirability of the State of Hawaii's involvement in the administration of the marine sanctuary and protection of the humpback whales found in its territorial waters. In addition to existing Federal authorities which protect the humpbacks from taking, the State possesses a complementary body of authority for managing all of the other components of the habitat (e.g., water quality, fisheries, and submerged lands) and the organizational means to enforce its corresponsing regulations. Ideally, the effective coordination of the Federal and State roles would serve to enhance the efficiency of each in providing for the highest possible level of protection for the species and its habitat for the resources available. The importance of the species involved is sufficient justification that this coordination occurs not as a result of an ad hoc process but is the product of a formal arrangement agreed to by the agencies responsible for resource management in Hawai'i (Part I(E), Page 8 and Part III(B), Page 44).

c. Research - Criteria governing the issuance of permits that authorize the "taking" for scientific research purposes currently do not require applicants to coordinate their work with that of others or to submit their research data and findings to NMFS. Consequently, much controversy has arisen concerning the utility of the research effort and its perceived value and possible impact on the humpback whale population.

2. Federal Alternatives

In addition to the programs currently being carried out by NMFS under the authority of the Marine Mammal Protection and Endangered Species Acts, the Federal government has at its disposal two other alternatives that can respond to the needs for protecting the humpback whales in Hawaiian waters, i.e., "critical habitat" designation and the establishment of a National Marine Sanctuary.

a. Critical Habitat - The Endangered Species Act of 1973 (16 U.S.C. 1531-1543), as amended in 1978 (Part II(F), Page 36) defines critical habitats as either: (1) specific areas within the geographic range of a species in which can be found the physical or biological features upon which it depends for its conservation and which may require special management considerations; or (2) specific areas occurring outside of the geographic range of a species but determined by the Secretary as essential to its conservation. Section 4(b)(2) of the Act authorizes the Secretary, on the basis of the "best scientific data available" and in consideration of the range of relevant impacts, to designate critical habitats and promulgate regulations appropriate for their management. The Secretary also may act to develop and implement "recovery plans," the purpose of which would be to recommend actions for restoring an endangered or threatened species to levels where their continued protection under the Act would no longer be required.

The effects of a critical habitat designation primarily apply to Federal or federally-funded activities and do not directly impact existing uses such as commercial fishing and boating. In Hawaiian waters, these uses, however, would still be subject to regulations governing the "taking" of the endangered species. Although intended primarily to coordinate the activities of Federal agencies, the use of the critical habitat provision, involving additional restrictions, could indirectly impact other user interests and coastal developments such as Corps-funded harbor and channel improvements.

b. Designation as a National Marine Sanctuary - This institutional alternative, NOAA's Preferred Alternative, calls upon the provisions of Title III of the Marine Protection, Research and Sanctuaries Act of 1972, as amended (16 U.S.C. 1431 et seq.) to designate, with Presidential approval, National Marine Sanctuaries; Part I of the Draft Sanctuary Management Plan describes more fully the National Program's authorizing statute, purposes of the National Marine Sanctuary Program, its status, goals and objectives of the plan for managing the Sanctuary, and the terms proposed in its Designation. This alternative would provide a means for addressing all of the deficiencies described for the status quo option and relies heavily on an "institutional mix" involving the equal participation of both Federal, State and local agencies and their respective authorities.

c. Other Federal Options Considered - Early in the evaluation of the proposal, comments were made during public meetings which suggested the applicability of the Fishery Conservation and Management Act of 1976 (FCMA), 16 U.S.C. 1801 et seq. to the management of the humpback whale and its habitat in Hawaiian waters. Part II(F), Page 36 of this document highlights the primary thrust of the programs created under the authority of this statute. Since the humpback whale is protected under U.S. law as an endangered species wherever it occurs within U.S. waters and therefore not subject to harvesting, the provisions of the FCMA cannot be readily applied to the protection of the species or the management of its habitat.

3. State Alternatives

The State of Hawai'i can call upon several statutes that provide the authority to regulate specific kinds of activities or establish mechanisms for protecting unique marine resources and habitats. Taken alone, activity-specific authorities such as those governing water quality or shorewaters construction or the establishment of bag limits and gear restrictions, do not provide the breadth necessary to ensure the comprehensive management of marine resources. Tailored specifically to address this need, the Marine Life Conservation Program and the Natural Areas Reserve System provide the State with the potential means for creating management areas technically comparable to marine sanctuaries. Part II(F), Page 33-34 of this document discusses both of these mechanisms, a brief description of which is provided in the following :

a. Natural Areas Reserve System - Sites designated under this authority (Chapter 195, Hawaii Revised Statutes) are intended to preserve in perpetuity endangered marine and terrestrial species, significant geological or volcanological sites, and unique land and water habitats, especially those supporting endemic flora and fauna in natural, undisturbed communities. Regulations issued pertaining to the Cape Kīna'u-Āhihi Bay (Appendix I) describes the three component system found within the proposed Sanctuary's boundaries as a lava-formed cape with developing dry land vegetation, an inshore marine ecosystem, and mixohaline (anchialine) ponds. The regulations also establisn use restrictions and permitting requirements.

b. Marine Life Conservation Program - The State may act under Chapter 190, Hawaii Revised Statutes to establish Marine Life Conservation Districts (MLCD) to preserve, protect, and conserve significant marine resources and geological features as well as ensure the maintenance of the habitat necessary for the restoration of threatened or endangered species. The Department of Land and Natural Resources, following designation, may issue rules and regulations: (1) establishing critical seasons and/or critical zones; (2) regulating the harvesting or conservation of fish and other marine resources and geological features or specimens; (3) prescribing acceptable methods of fishing; (4) prohibiting the contamination or alteration of physical, chemical, or biological properties of the waters; (5) for marine construction and related activities, vessel traffic, and moorage; and (6) specifying the issuance of permits for approved activities on a case-by-case basis. The State has issued regulations for each of the three MLCDs found within the Sanctuary's boundaries (Appendix K).

Two major considerations limit the utility of an institutional option relying principally upon these State authorities. First, the species for which the management regime would be developed around is an endangered marine mammal and thus subject to the statutory provisions of the Federal Marine Mammal Protection and Endangered Species Acts. Unless the State assumes, through a cooperative agreement, the management of the whales (which it has not) the species would remain as it is now a Federal responsi-ility. Second, the effectiveness of both the NARS and MLCD Programs is found in their ability to identify discrete areas possessing unique features worthy of protection and concentrating the resources available to the State on managing the sites. If either program were to take into account

even the discrete areas within Maui County waters which alone are considered biologically significant to the whales, they would lose their special focus, and in view of the State's limited resources, most likely their effectiveness in producing results beneficial to the species.

B. Boundary Alternatives

A number of boundary options for the Sanctuary in Hawai'i were considered during the evaluation process. They represent a range of opinions concerning the area necessary for providing the benefits of sanctuary designation to the Hawai'i population of humpback whales. Each of the options were considered against a set of evaluation criteria which took into account: (1) the best scientific information available; (2) ease of identification and institutional acceptance; (3) the concentration of activities in near proximity to known calving areas; (4) the number of visitor-whale encounters; (5) the level of whale research efforts; (6) the availability of Federal and State resources; and (7) the need to ensure that the allocation of those resources produced the greatest results in terms of benefits to the whales.

1. Boundary Alternative A: Status Quo

This alternative simply corresponds to the "boundaries" delineated by NMFS in its Notice of Interpretation which defined principal breeding and calving grounds for the humpback whale in Hawai'i and "taking" by means of harassment (44 FR 1113-1114, 1979). It includes all waters within two miles of the mean high water line from Ka'ena Point east by southeast, passing Halepalaoa Landing and Kikoa Point, to Kamaiki Point on Lāna'i as well as all of the waters inshore of a line drawn from Hekili Point southeast to Pu'u Olai on Maui (see Figure 3). This boundary would not and currently does not mean that NMFS could and can only enforce its taking by harassment regulations within the area so prescribed. The notice simply establishes two sets of standards, on the basis of the biological significance of the habitat to the humpback whale, for interpreting the conditions under which activities may constitute harassment.

2. Boundary Alternative B: 100-Fathom Isobath

This alternative initially was recommended in 1979 by a panel of scientists convened by NOAA to review the humpback whale issue in Hawai'i and recently reaffirmed by an Advisory Committee appointed by the Governor. Their boundary recommendation was based on a perceived need to protect the whales wherever they occurred in Hawaiian waters, irrespective of whether such areas were recognized as critical to the reproductive activities of the species. Correspondingly, this alternative included all of the waters surrounding the major Hawaiian Islands out to the 100-fathom isobath, including the waters around Ka'ula, Penguin Bank, and the deepwater areas of Pailolo Channel separating Moloka'i and Maui (see Figure 4).

Recalling the preceding discussion concerning the Institutional Alternative of using either the State's Marine Life Conservation Program or Natural Areas Reserve System as a means for managing the humpback whale and its habitat, it was concluded that a broad boundary, alone, likewise would

weaken the marine sanctuary's overall ability to focus its resources effectively on specific issues in areas of known biological significance to the species.

3. Boundary Alternative C: Maui County Waters

This alternative, originally recommended by NOAA in 1981, encompasses 784 square nautical miles of waters contiguous to the islands of Maui County (see Figure 5). It included all of the waters bounded by lines connecting prominent geographic landmarks on the four islands of Maui, Moloka'i, Lāna'i, and Kaho'olawe.

Found within this area also are principal breeding and calving grounds defined by NMFS in its 1979 Notice of Interpretation, three State MLCDs and a NARS, and the areas originally prescribed by James Hudnall in 1977 in his proposal submitted to NOAA. Scientific data suggest that the waters included within this boundary alternative also provide habitat to the highest concentration of humpbacks during the wintering season and, correspondingly, has served as the focus for most of the attention given to the species in Hawai'i by researchers and whale watchers.

4. Boundary Alternative D: NOAA's Preferred Alternative

This alternative is proposed as a compromise between the need to ensure the full protection of the humpback whales wherever they may occur in State waters and the benefits of enhancing the level of resource protection programs in areas of recognized biological significance to the species. Consequently, it prescribes a geographically broad management area, i.e., the 100-fathom isobath described in Boundary Alternative B, within which exists a more discrete core corresponding to the NMFS initiative in Boundary Alternative A.

Selecting this alternative is intended to satisfy a number of needs: First, it would recognize the fact that humpback whales can be found throughout the waters of the State during the wintering season; second, that NMFS already possesses the authority to protect the whales from taking statewide; third, it would ameliorate the concerns of those who attach some significance to the boundary with respect to enforcement; and fourth, that there are certain areas in the State that already have been identified as significant to the reproduction and fitness of the species and within which greater management efforts ought to be exerted.

All provisions of the proposed management plan will be applied statewide, however, priorities will be accorded to meeting the needs of State and Federal agencies in coordinating and carrying-out their respective programs in the areas described in NMFS's Notice of Interpretation.

5. Other Boundary Alternatives Considered

Additional alternatives were considered during the evaluation of the proposal. One supported a less traditional approach which proposed to establish a buffer around each individual whale, i.e., a "moving" boundary concept, and another, the extension of the boundary beyond Ka'ula to include the Northwest Hawaiian Islands. The following briefly describes each:

a. "Moving" Boundary - This novel approach suggested that a boundary be established around each humpback whale, wherever it happened to be. The rationale simply viewed the protection of the whale--apart from its habitat--as the key to its long-term survival. If controlling harassment was the only purpose to be served by Sanctuary designation, the "moving" boundary alternative, which operationally is not much different from the distance formula used by NMFS, would be appropriate. The Sanctuary in Hawai'i, however, proposes to provide a means for the comprehensive management of the whale and, with the cooperation of the State, the resources of its habitat. In essence, a "moving" boundary concept would always be present in some form as long as enforcement standards exist for regulating activities in Hawaiian waters which constitute "taking" by means of harassment.

b. Northwest Hawaiian Islands - This alternative could be viewed as a variation on the theme that all waters of the State are important to the migrating humpbacks and, therefore, ought to be protected. Stretching well over 1,200 miles north by northwest from Ka'ula, the Northwest Hawaiian Islands or "leewards," with the exception of the U.S. Navy controlled Midway Island and Kure Atoll, constitute the Hawaiian Islands National Wildlife Refuge. Managed by the U.S. Fish and Wildlife Service of the Department of the Interior, the area's waters are known to be the habitat for the threatened green sea turtle and the endangered Hawaiian monk seal. Reports of humpback whales within the Refuge are either non-existent or unsubstantiated--an occurrence, however, which may be an artifact of the limited research opportunities. In any event, should humpback whales be sighted, they immediately would be accorded full protection under the existing Federal statutes governing endangered species and marine mammals.

In view of the above, the question of where the boundary lines are drawn clearly is not as important to the designation of the marine sanctuary as the strategies proposed for its management.

C. Alternative Management Strategies

Up to this point in the evaluation, the draft environmental impact statement has considered and identified as NOAA's Preferred Alternatives a range of options for: (1) ensuring the long-term protection of the humpback whale and its habitat in Hawaiian waters; and (2) the area representing the best balance between the management needs of the species and the allocation of the resources available for carrying-out the strategies necessary to meet those ends. In evaluating the various arrangements possible for managing the humpback whale in its Hawaiian habitat, NOAA's earlier choices, therefore, become the assumptions upon which the preferred management strategy alternative should be founded, i.e.,

- Designation of a National Marine Sanctuary under the MPRSA is the most effective means for ensuring the long-term protection of the humpback whales and its habitat in Hawaiian waters; and

- A statewide boundary delineated by the 100-fathom isobath and the areas currently described by NMFS as major breeding and calving grounds together represent the best possible compromise in size, significance to the biology of the species, the level of human activities, and in the efficient allocation of available resources.

1. Management Strategy A: The Status Quo

As described in Part II(F) a number of State and Federal authorities which may affect the humpback whale or its habitat currently operate in the waters of the proposed marine sanctuary. The breakdown in regulatory responsibilities within the waters of the proposed Sanctuary "delegates" to NMFS/NOAA control over activities which directly affect the whales while other Federal agencies and/or the State of Hawai'i regulate vessel operations and a host of activities affecting the quality of the habitat including those which involve submerged lands, the water column, and living resources.

Under this option, both State and Federal agencies would continue to carry-out their enforcement programs as they do currently. The management strategy would simply attempt to "inventory" the resources available and provide additional support for their continued operation. The benefit served by this approach in terms of providing better protection for the whales would depend, as it does now, on the level of cooperation and coordination achieved among the agencies responsible for the welfare of the species and the management of the resources of its habitat.

2. Management Strategy B: Coordinated Sanctuary Management Plan

This option, NOAA's Preferred Alternative, takes the development of management strategies one step further than the maintenance of the status quo. It does not propose to change existing State and Federal roles and responsibilities or create additional regulatory requirements. It relies upon the coordination of these elements to carry-out the goals and objectives of a comprehensive plan for managing the resources of the Sanctuary. The incremental parts or "management strategies" for plan implementation are discussed in detail in Part III of this document and briefly described in the following:

a. Administration Plan - This strategic element calls for the establishment of a management hierarchy headed by a Sanctuary Coordinator in consultation with the Sanctuary Programs Division, OCRM/NOAA, and a Policy Coordination Committee (PCC) and Program Review Committee (PRC). The PCC's membership includes representatives from Federal, State, and local governments who advise the Sanctuary Coordinator in the development and review of plans and approaches for implementing the overall Sanctuary Management Plan and assist in management programming and budgeting. The PRC would be comprised of a representative group of resource users in Hawai'i such as boaters, fishermen, educators, researchers, and environmental interests. The PRC would serve an advisory function to sanctuary management, ensuring that the Sanctuary Management Plan was achieving its goals and objectives and being implemented in accordance with the terms of the Designation.

b. Resource Protection Plan - Again, the strategy does not call for the creation of new regulatory programs. It does propose to coordinate existing State and Federal authorities responsible for resource protection in Hawai'i through the establishment of formal working agreements which

identify agency roles, coordination linkages, and the support available to carry-out its terms. The PCC is expected to play a major role in the full development and implementation of this strategy.

c. Resource Studies Plan - This element of the Sanctuary Management Plan addresses several important needs which when met would correct a corresponding number of problems and criticisms related to current research efforts. First, the strategy calls for the development of an agenda for research that is responsive to the information needs of resource managers and government decisionmakers. Second, the agenda would establish research priorities based on agency input. Third, the existence of a priority agenda would serve as a means for encouraging research coordination. Fourth, research proposals in the Sanctuary would be subject to a formal peer review process conducted by NMFS with the assistance of a Scientific Advisory Committee (SAC) and, Fifth, the agenda would implicitly introduce a higher level of accountability with respect to the disclosure of research findings.

d. Interpretive Plan - This plan increment lays the groundwork for the establishment of programs that would call attention to the endangered status of the humpback whale, thereby broadening the public's understanding of the vital role played by the habitat in Hawai'i in protecting the species. The strategy calls for the creation of a Sanctuary Interpreter's role as well as the development of a phased workplan for facilities construction and program implementation. Key to its successful implementation would lie in its ability to coordinate its substantive programs with other elements of the Sanctuary Management Plan, other related research centers, and national and international organizations.

3. Management Strategy C: Non-government Administration

As an alternative to management by a State and/or Federal agency, a non-governmental entity may be contracted for all or part of the on-site management requirements other than enforcement. Such an entity might be a local research institution, college, university, or a committee contracted by NOAA to oversee implementation of a public awareness/education and research program. It was concluded in the evaluation that although a non-government entity might be contracted to provide specific services such as in interpretive programs, since no new authority would be created by the Designation, such an approach would not be as successful in ensuring the coordination of existing State and Federal roles and responsibilities.

4. Management Strategy D: Federal Administration

Title III of the Marine Protection, Research and Sanctuaries Act of 1972, as amended, provides the Secretary of Commerce with the authority to "issue necessary and reasonable regulations to implement the terms of the designation and control the activities described in it." This provision of the law could have been applied to the marine sanctuary in Hawai'i to expand upon existing Federal controls or to bring within its purview activities and/or areas currently not subject to such authority. This alternative, for example, could have been used to establish regulations to which all activities

within the proposed marine sanctuary would be subject. Possible variations to the Federal regulatory theme included the following:

a. Total, year-round - Closed sanctuary with no access provided for the general public and use limited to a small number of scientific researchers.

b. Total, seasonal - Closure and access enforced only when humpback whales were present in Hawaiian waters.

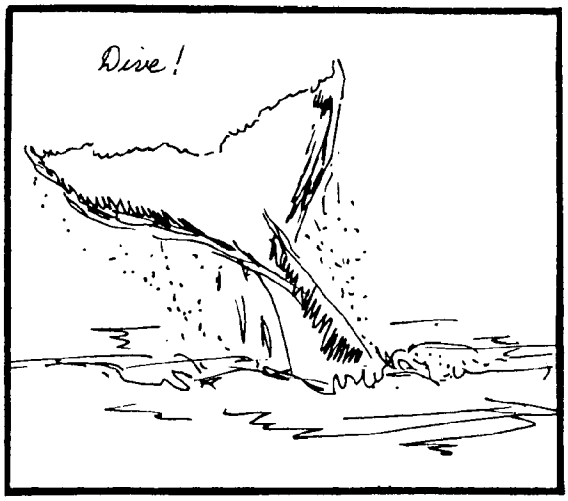
c. Restricted, year-round - Access permitted but restrictions imposed year-round in addition to existing regulations enforced under the Marine Mammal Protection and Endangered Species Acts.

d. Restricted, seasonal - Same provisions as in preceding, but enforced only during the presence of humpback whales in Hawaiian waters.

NOAA rejected this alternative early in the evaluation process simply because Federal programs already in place provided sufficient regulatory protection for the humpback whales in Hawai'i and that any additional restrictions would be inconsistent with the agency's philosophy and intent of the national program which encourages the widest possible accommodation of public and private use of the Sanctuary's resources consistent with the purposes for which the Designation was made. Any initiative that would serve as a means to block or unnecessarily impede human use and reasonable development of the resources of the Sanctuary would be in conflict with this philosophy.

Although the designation of the Sanctuary could not preclude the imposition of future restrictions under either the Marine Mammal Protection and Endangered Species Acts, the MPRSA itself, or the authorities of the State of Hawai'i, the likelihood of such action being proposed would be minimal in the presence of a coordinated management plan for the species and habitat involving all levels of government.

PART VI. ENVIRONMENTAL CONSEQUENCES



PART VI: ENVIRONMENTAL CONSEQUENCES

Introduction

As part of the process for selecting the appropriate institutional, boundary, and management strategy alternative, NOAA first needed to evaluate the environmental consequences or impacts associated with each. This assessment viewed the environment as both the natural-physical features and the socioeconomic-cultural elements of man's habitat and involved three stages of evaluation.

The initial stage called for the identification of all of the existing natural and socioeconomic-cultural characteristics of the planning area that might potentially be affected by the action being considered such as lifestyle and traditional uses of the resources; tax revenue and income opportunities; social and dollar costs; institutional mechanisms; ecosystem dynamics; productivity; and behavior. This exercise ensured that the comparison of the alternatives would be based on a common set of considerations, thereby cancelling out the effect that individual biases might have on evaluation results.

Following the assessment of the environmental characteristics in the planning area, the next major step in the selection process took into account the significant operational attributes of each of the alternatives which potentially might modify those conditions. These attributes included such possible eventualities as increased demand for institutional support and public services; the need for reallocating resources; and the net benefit to the humpback whale and its habitat resulting from implementation of the alternative.

The third and final stage involved the use of a relatively simplistic checklist procedure for identifying the nature, and to the extent possible, probable magnitude of environmental impacts resulting from each alternative. It was not expected to predict, however, the possible degree and dimension of the associated changes.

The net effect of the impacts engendered by each of the alternatives considered relevant to the evaluation was taken into account by NOAA in its selection process and are discussed in the following:

A. NOAA's Preferred Alternative

The designation of the Hawai'i Humpback Whale National Marine Sanctuary would result in the immediate implementation of a coordinated plan for ensuring the long-term protection of the species and the management of its habitat in Hawaiian waters. It would achieve this through a comprehensive program that would:

- promote resource protection through the enhancement of current regulatory/enforcement efforts of the State and Federal government;
- implement a coordinated, scientifically-sound research program aimed at expanding man's basic knowledge of the species and improving resource management decisions;

- establish an interpretive program for the purposes of broadening the public's understanding and awareness of the species and the proposed Sanctuary, the endangered status of the humpback whale, and the resources so vital to its long-term survival;

- create an administrative or institutional network for ensuring the full coordination of all the Federal, State, and local agencies in carrying out their responsibilities for implementing the Sanctuary Management Plan; and

- provide continued opportunity for citizen participation in the management process.

The following describes the primary impacts of the proposed action, including the range of the environmental effects associated with each and:

- the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity; and
- any irreversible or irretrievable commitments of resources which would be involved.

1. National Marine Sanctuary Designation under Title III of the Marine Protection, Research and Sanctuaries Act

The exercise of the Act's authority in establishing the marine sanctuary in Hawai'i will not in and of itself engender any measureable impacts, affect long-term productivity, or irretrievably involve the commitment of resources. It has, however, stimulated negative reactions from certain sectors of the fishing and boating community who view the proposed action as a threat to their activities. Since the designation of the Sanctuary does not carry with it any additional regulatory restrictions, relying instead on existing State and Federal authorities, these impacts are more perceived than real--an unavoidable response deeply-rooted in the historic attitude of the islanders toward government's regulatory activities. Based on an evaluation of what plan modifications might be possible in the future and the probability of that occurring, NOAA firmly believes that most of these perceptions will disappear as the marine sanctuary develops a "track record."

The Act provides a means for establishing cooperative arrangements between the agencies of Federal, State, and local governments responsible for managing the resources of the Sanctuary. Through this coordination, a more efficient allocation of available agency resources will result--the ultimate beneficiary of which would be the humpback whale. The Act also provides for the development of and funding for implementing a wide variety of programs not possible under existing State or Federal authorities (described further in Section 3 of this discussion).

2. Boundary

Since the plan for managing the Sanctuary and the terms of the Designation rely on existing statutory controls to regulate the resources found within its waters, the boundary alternative selected does not involve

any impacts to existing conditions. Once again, the exception in this case are those who view the boundary as an enclosure within which stringent regulatory controls would be exercised. Earlier discussions have already established that existing State and Federal laws would continue to operate outside of the boundary, just as they would if no marine sanctuary was present.

With a single exception, the preferred boundary alternative corresponds to the findings of NOAA's 1979 workshop panelists and the current position assumed by the State of Hawai'i upon the recommendation of the Governor's Advisory Committee. In addition to the 100-fathom isobath, it includes a core representing areas of known biological significance to the humpback whales which corresponds to existing areas defined by NMFS as major breeding and calving grounds--within which stricter enforcement standards apply. The primary emphasis of this alternative, correspondingly, is placed on the protection of the humpback whale throughout its winter range in Hawai'i also recognizing, however, the importance of enhancing Federal and State management efforts within areas of dense whale concentrations and/or biological importance to the species.

The NMFS Notice of Interpretation already establishes two sets of enforcement standards for making findings of harassment. These standards draw a tight correlation between the vulnerability of the humpbacks during certain stages in their life cycle and the corresponding level of protection necessary during those periods. The humpback whales and the overall quality of the research effort will also benefit from a formal peer review process which would assume a similar posture in the evaluation of proposals for research within or outside of the core areas of the proposed Sanctuary.

3. Sanctuary Management Plan

Implementation of the Sanctuary Management Plan involves carrying-out four specific management strategies, each of which has a distinct function in establishing the approach taken in implementing its provision, the management roles prescribed for Federal, State, and local agencies, and the responsibilities of each in ensuring the coordination of management activities. The net effect of plan implementation is positive in terms of the cumulative impact of its collective parts on the humpback whale and the resources of its habitat. The following describes the broader implications of the proposed action:

a. Sanctuary Administration - The strategy for coordinating the various elements of the Sanctuary Management Plan involves the development of mechanisms that ensure the effective cooperation of Federal, State and local agencies in carrying-out specific roles in the management of the marine sanctuary. The strategy establishes three roles and their respective responsibilities in plan implementation. The initiative does not preempt existing roles or delegate responsibilities to agencies lacking the authority to act. It serves as a means for providing agencies with the opportunity for early consultation and coordination as well as giving citizens access to the sanctuary management process.

The impact associated with this element is principally the dollar cost incurred by agencies in the administration of the Sanctuary Management Plan.

b. Resource Protection - The proposed action has already been described as being more cost-effective than other alternatives in the level of surveillance and enforcement it can provide for a given investment. The term "enhancement" used to describe the desired outcome of the Sanctuary Management Plan in providing for the long-term protection of the humpback whale and its habitat, depending on one's perspective, may represent either implicit constraints to man's activities or opportunities for expanding traditional roles beyond that of regulatory enforcement.

The negative implications of the former most likely will be the immediate impact of plan implementation. Again, as in earlier examples of initial resistance bred by inertia, the threat to users of the Sanctuary's resources is more perceived than substantive. This consequence of plan implementation, however, cannot be mitigated until that time when statistics become available supporting or repudiating such claims. In any event, evidence of increased violations reported by State and Federal enforcement agents should not serve as a test for determining the acceptability of the environmental cost associated with the proposed action. If, for example, increased enforcement presence did result in a greater number of citations being issued with respect to harassment in the waters of the Sanctuary or statewide, then, it follows the proposed action would be viewed as an appropriate measure for ensuring the long-term productivity of the whales in Hawai'i. The underlying caveat in this case simply implies that the existence of a regulatory regime should not be viewed as a threat to activities which do not constitute a "taking" through harassment and further would serve to encourage self-policing within certain highly visible groups such as commercial whale watchers.

Recognizing the costs associated with the human element in enforcement programs, one of the principal benefits of the proposed action will be derived from the Sanctuary Management Plan's focus on the "enhancement" of the role to be played by State and Federal conservation officers. The draft plan specifies the need for expanding the role of enforcement personnel in public information user education programs and for providing opportunities for professional staff development and support, both of which are designed to improve the quality of the enforcement presence.

Through a number of programs developed in coordination with the plan's interpretive strategy, enforcement agents would serve a function as public relations staff and educators, providing boaters, fishermen, commercial whale watchers, and other users of the Sanctuary's waters with information about the area, its resources, and any applicable restrictions. They would also serve as liaison to the public and "ombudsmen" for the marine community. Their emphasis would be placed on the prevention of violations rather than on the after-the-fact exercise of police powers.

Equally important to the resource protection effort is the plan's provision for professional training opportunities for State enforcement staff and their possible involvement in enforcing Federal laws. Training opportunities would improve the caliber of the staff available to the State

of Hawai'i for enforcing its statutory laws and departmental rules concerning marine resources activities. Moreover, the down-the-road potential of coordinating State and Federal enforcement responsibilities provide real benefits in terms of cost savings and program effectiveness. For example, not only would there be better communication between staff, but also a more efficient use of resources and equipment made available by NOAA for carrying out the surveillance and enforcement effort.

Associated with this alternative also is the hidden value of the experience gained by both the enforcement staff and Hawaii's citizens. Through the increased contact proposed in NOAA's Preferred Alternative, both enforcement staff and users of the resources would become better apprised of and sensitive to the needs for each and their respective operational problems. The plan's resource protection element, consequently, holds as its unwritten goal the changing of attitudes that currently view the system as an "us and them" situation and the violators as folk heroes. No one benefits from that experience, not the citizens--who as a consequence would bear the added costs of greater restrictions; not the government-- who would need to invest increasing amounts of resources to the protection of the species; and, least of all, not the humpback whales--who would become caught up in a game of "cops and robbers." The desired outcome then, would be to redefine the roles, creating a more positive environment for resource protection programs.

c. Resource Studies - The proposed action would provide a means for coordinating research conducted in the marine sanctuary. It would establish an agenda for research tailored to respond to specific management concerns about the effectiveness of existing programs for protecting the humpback whales and their appropriateness in terms of accommodating present and projected uses of the area. This would benefit both man and whale by improving our understanding of the species' behavior under a variety of conditions and ensuring that future management decisions affecting man's activities are based on scientific fact.

The alternative provides an opportunity for conducting multidisciplinary studies, not currently available, which would be applied towards increasing man's knowledge about the whale's habitat and the health of the marine community found in the waters of the Sanctuary. This, conceivably, could include resource surveys that might address other user interests. NOAA's Preferred Alternative also stresses the development of a strong management-related research program, the benefits of which would assist State and Federal agencies in interpreting events or predicting natural or man-induced changes and phenomena. Since the research program would be predicated on an agenda spelling-out specific areas for scientific inquiry and articulating the priorities accorded to each, the implementation of the proposed action by NOAA most likely would result in some changes to existing conditions. These changes, however, are intended.

Implementation of NOAA's Preferred Alternative involves the introduction of three major changes or improvements in the way research programs are currently administered. The proposed action, for example, would establish a means for ensuring that: (1) researchers did not, unless intended by

design, duplicate the work of others or unnecessarily harass the whales; (2) applications for research in the Sanctuary are subject to a formal scientific peer review process involving early agency consultation and a Scientific Advisory Committee; and (3) the results of research permitted in the Sanctuary are provided to its administrators. The purpose would not be to foreclose the range of research opportunities or favor one applicant over another, but introduce accountability in the research permitting process. Again, the ultimate recipient of the plan's benefits would be the humpback whale. In any case, the impacts of plan implementation will be unavoidable, but with respect to the prudent use and continued availability of the resources found within the waters of the proposed Sanctuary, most likely beneficial.

d. Interpretive Program - The Sanctuary Management Plan provides for the development and implementation of programs designed to educate the public concerning the needs of the humpback whale and create an awareness and appreciation of the resources of its winter habitat in Hawaiian waters. Additionally, the proposed action would result in other benefits such as:

- the enhancement of the visitor experience;
- the clarification and coordination of the roles of government, the private sector, and Hawaii's citizens in managing the resources of the Sanctuary;
- the dissemination of information on existing State and Federal resource protection programs; and
- the promotion of an environmental ethic, the significance of which, in terms of the long-term protection of the humpback whale and its habitat in Hawaiian waters, transcends all of the above.

The proposed action calls for the creation of a Sanctuary Interpreter's role and the phased implementation of on-site and extension programs and the siting/development of certain plant facilities such as an interpretive center, research archive, and possibly, an aquarium. The alternative would not duplicate existing programs but rely on a cooperative approach to ensure the full participation of each in developing and implementing its substantive provisions.

Information on the humpback whale and the other resources found in the Sanctuary's waters would be presented, including materials describing each of the State's Marine Life Conservation Districts and the Cape Kīna'u-Āhihi Bay Natural Areas Reserve in Maui County. Together, these programs would help the public to gain a better understanding of the synergistic nature of the relationship between the living marine community and the abiotic features of their habitat.

The cost associated with this alternative principally involves the dollar value of the investments made for contracting a Sanctuary Interpreter and the phased implementation of the plan's work tasks, including facilities construction costs.

The impact of the plan may have both direct and extra-market effects on the local economy and the operations of State and local government such as:

- economic and employment opportunities;
- property values;
- land use plans, zoning and permitting requirements;
- expenditures and demands for public services including transportation, water, energy, and sewage;
- visitor spending and recreational opportunities;
- tax revenues;
- educational opportunities for local citizens; and
- life style.

The net effect of the consequences associated with the implementation of NOAA's Preferred Alternative is estimated to be positive, with the qualification that such investments achieve the purposes of the Designation without engendering significant unanticipated social costs.

B. Other Alternatives Considered

On balance, NOAA's Preferred Alternative represents the most effective approach to meeting the range of needs in managing the humpback whale and its habitat in Hawaiian waters. NOAA's conclusions resulted from an exhaustive evaluation process which sought and received input from several sources both in and out of government.

Each of the alternatives considered and described in Part V of this document together represent all of the recommendations received by NOAA since 1977. The basis for rejection in each instance was predicated on its ability to meet specific criteria which served as tests for measuring operational deficiencies in: (1) providing opportunities for addressing a broad range of institutional needs; (2) balancing the biological significance of an area and the habitat needs of the humpback whales with the resources available and operational considerations; and (3) providing a reasonable means for effectively treating the management issues concerning resource protection needs, research, public education, and agency coordination.

Many of these operational attributes have been described elsewhere in Part V and Section A of this part. The following, therefore, simply highlights the basis for NOAA's finding, i.e., why these alternatives were considered less satisfactory than the proposed action:

1. Institutional Alternatives

The other alternatives considered in NOAA's evaluation of the institutional arrangement proposed for protecting the humpback whale in Hawai'i

included: (a) maintenance of the Status Quo; (b) other Federal Alternatives such as critical habitat designation and the provisions of the Fishery Conservation Management Act of 1976; and (c) State Alternatives based on the Marine Life Conservation Program and Natural Areas Reserve System.

Each alternative, including what was to become NOAA's Preferred Alternative, was measured against a list of "test" criteria which described the operational attributes considered important to the effective long-term protection of the humpback whale and its winter habitat in Hawai'i. Where not met, these criteria were viewed as indicators of management gaps or, a positive sense, opportunities. The following lists the desired operational attributes considered in this evaluation:

a. Authority/means for providing for the management of the humpback whale, areas in which it is present, and the resources of its habitat - The provisions of statutory law that give an agency or agencies the means to carry-out programs intended specifically to benefit the humpback whale through its protection, the management of geographic areas within its geographic range, and the conservation of the key resources of its habitat.

b. Regulatory/permitting provisions - Ability to promulgate and enforce regulations governing the activities affecting the species or its habitat.

c. Financial assistance provisions - Means for providing the funding support necessary for carrying out the range of programs important to the long-term protection of the species.

d. Opportunities for coordinating research - Means for ensuring that research conducted on the humpback whale conforms to established standards of scientific purpose and need and the sharing of information.

e. Opportunities for public awareness/education - Provisions for carrying-out a multi-dimensional program directed at Hawaii's residents and visitors which describes the endangered status of the humpback whale, the value of its habitat in Hawaiian waters, and the need for its continued protection.

f. Opportunities for professional staff training - Means for providing in-service training for professional staff and the coordination of State and Federal enforcement roles.

g. Opportunities for citizen participation - Access to the management-decisionmaking process by citizens.

h. Opportunities for Federal-State coordination - Form of arrangements ensuring interagency cooperation in all aspects of program implementation.

i. Opportunities for agency consultation - Means for soliciting and acquiring early agency comments and recommendations on program decisions.

j. Opportunities for periodically evaluating program performance - Built-in mechanisms for providing "ends-means" adjustments.

In most cases, the alternatives fell considerably short of meeting the criteria. The Status Quo and State Alternatives scored higher than either the "critical habitat" or FCMA options, however, even their utility in several instances was conditionally qualified. The status quo, for example, provides for a form of public involvement in decisionmaking, but only through the review process for research permitting. The proposed action would preserve this and in addition create a formal means for ensuring continued citizen participation in Sanctuary management.

The following table illustrates that part of the checklist used in the evaluation of institutional alternatives:

Table III. OPERATIONAL ATTRIBUTES OF ALTERNATIVES CONSIDERED

PART A:

Attributes	Institutional Mechanism				
	Status Quo	Critical Habitat	Title III	FCMA	State NARS/MLCD
Means for managing the humpback whale and the resources of the habitat	X	X	provided but not exercised	-	habitat resources
Financial assistance provided	-	-	X	-	-
Regulatory/permitting provisions	X	X	authority not exercised	X	X
Coordinated research opportunities	-	-	X	-	-
Public awareness/ educational opportunities	limited	-	X	-	limited
Professional staff training opportunities	-	-	X	-	-
Citizen participation opportunities	review of permit applications	-	X	-	-
Agency consultation	review of permit applications	-	X	-	-
Fed-State coordination	ad hoc	-	-	-	ad hoc
Periodic evaluation of program performance	-	-	X	-	-

2. Boundary Alternatives

All of the alternatives considered would protect the humpback whale. Most of them would, additionally, through the coordinated activities of the State, also conserve the key resources of its habitat in Hawaiian waters. The purpose then of the evaluation of boundaries needed to respond to the question of: "Given a set of conditions that include: (a) the distribution and migration of humpback whales in Hawaiian waters; (b) their dependence upon certain areas to carry-out their reproductive functions; (c) operational needs for managing the Sanctuary such as personnel and funding requirements; and (d) legal-institutional consideration, how large should the marine sanctuary be and to what extent should each factor influence that decision?"

As in the preceding section, a series of "test" criteria reflecting the desired operational attributes of alternatives was considered along with an additional set of factors which looked at the significance of specific areas in terms of biological value, presence of the species, and potential impacts. The following lists these attributes:

a. Operational efficiency - Measure in terms of matching the needs prescribed by the size of the area subject to management with the availability of resources to carry-out the plan.

b. Ease in physical discrimination - Condition which describes the relative ease or difficulty in delineating, on the basis of ground features and benchmarks identified on maps, the boundary of the area subject to the provisions of the Sanctuary Management Plan and its consistency with existing State and Federal programs, the effects of which are already understood by users of the proposed Sanctuary's resources.

c. Biological significance to humpback whale - The value of an area and its value in terms of meeting the biological needs of the species.

d. Concentrations - The numbers observed within an area and the frequency of the occurrence.

e. Level of human activity - An indication of the potential impact associated with existing and projected intensities of human activity.

The evaluation results represent a best qualitative estimate of how and to what extent each boundary alternative meets the need for balancing resource management needs with the realities imposed by management constraints. A broad boundary, for example, would provide the geographic coverage necessary in managing the species, however, it would also sacrifice the ability to concentrate its available resources on discrete management issues within specific areas of unique biological significance.

Irrespective of where the boundaries are drawn, NOAA's National Marine Fisheries Service will continue to enforce its regulations governing whale harassment. Likewise, the State of Hawai'i would still continue managing the marine resources within its jurisdiction and the Marine Life Conservation Districts and Natural Areas Reserve found in Maui County waters.

The following table illustrates the checklist used in this evaluation:

Table III - PART B:

Attributes	Status Quo	100-Fathom	Maui County	NOAA's Preferred Alternative	Moving	NWHI
			Boundary			
Biological significance to humpback whale	X	selected areas	X	selected areas	X	selected areas
Reported concentrations	X	selected areas	X	selected areas	NA	selected areas
Existing/projected intensities of human activity	X	selected areas	selected areas	selected areas	NA	selected areas
Operational efficiency	X	-	X	X	-	-
Ease in physical discrimination	maps	maps	X	maps	-	-

3. Alternative Management Strategies

As cited earlier in Part V(C) of this document, the consequences of the alternative actions proposed for managing the proposed marine sanctuary in Hawai'i could be better determined if the "management environment" was first described. Consequently, two major assumptions were posited concerning the utility of marine sanctuary designation to the protection of the species and the efficieny represented by NOAA's preferred boundary option. These, in turn, established the major parameters of the management program within which the proposed management scheme would operate.

The "test" criteria used in this part of the evaluation of environmental impacts were determined on the basis of their conributions to the management program's effectiveness in meeting the primary goals and objectives of the National Marine Sanctuary Program. These operational attributes or criteria were:

a. Authority necessary to implement comprehensive management programs - The broad statutory mandate providing the basis for carrying-out a full range of resource protection programs.

b. Surveillance and enforcement programs - The means necessary for ensuring an adequate level of control over the Sanctuary's resources.

c. Coordinated research agenda - A formal statement of research goals and objectives determined by needs and supported by the priorities established and administered through a scientific peer review process.

d. Public awareness/educational programs - An agenda for implementing a range of interpretive programs designed to provide on-site and extension audiences with information on the humpback whale, its habitat in Hawaiian waters, and the role of the marine sanctuary in its long-term protection.

e. Federal-State coordination mechanisms - A formal procedure for ensuring the full participation of all levels of government in the management of the species and the resources of its habitat.

f. Agency consultation provision - A process for soliciting and acquiring the early comments and recommendations of Federal, State, and local agencies in decisionmaking.

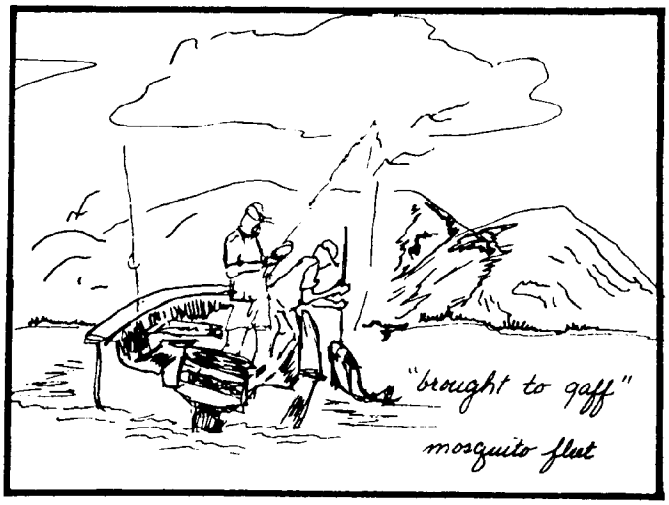
Since the greatest concern of Hawaii's citizens and government agencies has focused on the means proposed for managing the marine sanctuary, satisfactorily meeting all of the evaluation criteria was considered essential to NOAA's decision on its preferred management strategy. NOAA's Preferred Alternative provides a more efficient way of managing the resources of the area without creating additional regulations or restrictions--the ultimate benefits of which would accrue to the endangered humpback whale populations found in the North Pacific.

Table III, PART C, illustrates the checklist procedure used in assessing the consequences of the alternative management strategies considered in Sanctuary evaluation.

Table III - PART C:

	Management Strategies			
Attributes	Status Quo	NOAA's Preferred Alternative	Non-Govt.	Fed. Restrictions
Comprehensive mandate	-	X	-	X
Coordinated research agenda	-	X	X	-
Public education and awareness	limited	X	X	-
Surveillance and enforcement	X	coordination mechanism	-	X

PART VII. UNAVOIDABLE EFFECTS



PART VII: ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

Some environmental impacts, the effects of which might be adverse to particular interests, may be avoided entirely by pursuing alternative courses of action to that proposed. Others may be ameliorated by mitigation techniques, while still others can neither be avoided or ameliorated. In designing the proposed alternatives, considerations were made for balancing its consequences if implemented against those associated with a "no-action" or Status Quo alternative and other major options, technical and allocation efficiency considerations, and the nature of its anticipated adverse effects in terms of their temporal dimension and magnitude.

The net effect of sanctuary designation in Hawai'i will be positive in terms of meeting the broad range of needs associated with the long-term protection of the humpback and its habitat in Hawai'i. The proposed action, however, may have the potential for adversely affecting existing research and commercial whale watching activities through the implementation of a coordinated agenda and the enhancement of surveillance and enforcement operations. The negative impacts, the effects of which cannot be avoided, are based more on attitudes and less on operational fact.

It is also possible that the attention a national sanctuary designation would receive might conceivably result in an increase in the number of visitors wishing to view the whales in Hawai'i. This potentially adverse impact, however, would be mitigated by: (1) the upper limit established by the State on the number of commercial vessels operating out of Lahaina and Ma'alaea; (2) enhanced enforcement efforts made possible through increased funding support and improved agency coordination; and (3) heightened public concern over the long-term protection of the whales resulting from interpretive programs.

The perception that the Designation would result in greater restrictions on boating and fishing beyond that already provided by existing law simply is not substantiated by any provision of the plan developed for managing the proposed Sanctuary. One possible mitigating action would be the maintenance of the Status Quo, which in itself would incur other environmental costs such as those currently associated with the existing management gaps described in Part VI of this document.

Since NOAA's Preferred Alternative incorporates elements of the Status Quo for the purposes of providing for its surveillance/enforcement needs and does not propose any additional means of its own, it is probable that the level of adversity towards the proposed action will be ameliorated once its operational characteristics become better understood.

PART VIII. LIST OF PREPARERS

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Mr. Kelvin Char

Regional Projects Manager, Sanctuary Programs Division, National Ocean Service. Responsible for the preparation and production of this document including project development, planning, and coordination with the State of Hawai'i. Mr. Char received his BA degree in Zoology and Masters in Urban-Regional Planning (MURP) from the University of Hawaii.

Mr. William Thomas

Program Specialist, Sanctuary Programs Division, National Ocean Service. Assisted Regional Projects Manager in the assimilation of materials used in the preparation of this document. Graduate of the University of Hawaii with undergraduate and graduate degrees in Zoology.

State of Hawaii, Office of the Governor

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Former Administrative Assistant to the Governor of Hawaii. Currently serving as a White House Fellow on the staff of the Vice President of the United States. Served as initial Governor's liaison to project evaluation process.

Mr. Brad Mossman

Current Administrative Assistant to the Governor of Hawaii serving as project liaison.

Mr. Richard Poirier

Planning Division, Department of Planning and Economic Development, State of Hawaii. Primarily responsible for the overall coordination of agency input in the project evaluation process.

Mr. Craig Tasaka

Planning Division, Department of Planning and Economic Development, State of Hawaii. Assisted Mr. Poirier in carrying-out the State's responsibilities in the joint State-Federal evaluation process.

Governor's Advisory Committee on the proposed Hawai'i Humpback Whale National Marine Sanctuary

As part of the on-going process conducted jointly by the State of Hawaii and NOAA, the Governor appointed a 15-member citizen advisory committee supported by a staff representing Federal, State, and local county government. The Committee's function was to assist the State in the evaluation of the issues related to program development and implementation as well as participate in the preparation and review of the Draft Sanctuary Management Plan.

Advisory Committee Members	Affiliation
Mr. James Coon (Chairman)	State Boating Task Force
Ms. Wendy Diehl	Greenpeace Hawaii
Mr. Warren Akiona	Maui Cooperative Fishing Ass'n
Mr. Dave Padgett	Maalaea Boat and Fishing Club
Mr. W.C. Higginbotham	Lahaina Restoration Foundation
Dr. Louis Herman	University of Hawaii
Mr. Dave Raney	Sierra Club
Mr. Conrad Ventura	Office of Hawaiian Affairs
Mr. Francis Blackwell	Maui County Visitors Ass'n
Capt. F.T. Cooper	Consultant, Hawaii Sea Transit
Mr. Glenn Nishihara	Hawaii Fishing Coalition
Mr. Keith Burchett	Conservation Council of Hawaii
Mr. Duane Ting	David P. Ting and Sons, Inc.
Mr. Val Diehl	Lahaina Yacht Club
Mr. Bill Choy	Hawaii State Fisheries Coordinating Council

Resource Agency Representative	Agency
Mr. William Gilmartin	National Marine Fisheries Service/NOAA, Kewalo Lab
Mr. Doyle Gates	National Marine Fisheries Service/NOAA, Director, Western Pacific Program Office
Mr. John Min	Office of the Mayor, Maui County
Mr. Shoji Kato	Planning Division, Department of Planning and Economic Development
Mr. Howard Pennington	Department of Planning and Economic Development
Mr. David Parsons	Harbors Division, Department of Transportation
Mr. Henry Sakuda	Division of Aquatic Resources, Department of Land and Natural Resources
Mr. Noah Pekelo	Division of Conservation and Resources Enforcement, Department of Land and Natural Resources

Mr. John Hawkins	Department of Education
Capt. M.M. Dallam	U.S. Navy
LCdr Michael Mierzwa	U.S. Coast Guard
Mr. Rob Shallenberger	U.S. Fish and Wildlife Service, Department of the Interior
Mr. Justin Rutka	Western Pacific Fishery Management Council

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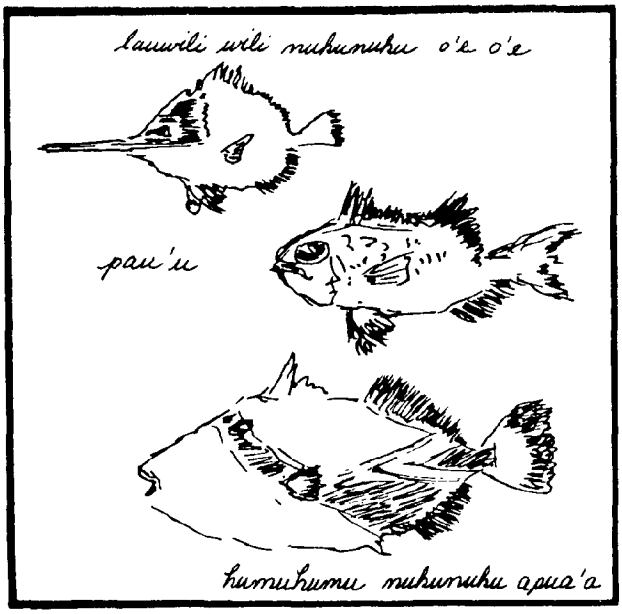
PART IX. LIST OF AGENCIES AND INTERESTS RECEIVING COPIES



PART IX: LIST OF AGENCIES, ORGANIZATIONS, AND PERSONS RECEIVING COPIES

Federal Agencies

Advisory Council on Historic Preservation
Department of Agriculture
Department of Commerce
Department of Defense
  Department of the Air Force
  Department of the Navy
  Department of the Army
  U.S. Army Corps of Engineers
Department of Energy
Department of Health and Human Services
Department of the Interior
Department of Justice
Department of Labor
Department of Transportation/U.S. Coast Guard
Environmental Protection Agency
Federal Energy Regulatory Commission
General Services Administration
Marine Mammal Commission
Nuclear Regulatory Commission

National Distribution

AMERICAN
AFL-CIO
American Association of Port Authorities
American Bureau of Shipping
American Cetacean Society
American Farm Bureau Federation
American Fisheries Society
American Gas Association
American Industrial Development Council
American Institute of Architects
American Petroleum Institute
American Shore and Beach Preservation Association
American Society of Civil Engineers
American Society of Planning Officials
American Waterways Operators
Amoco Production Company
Atlantic Richfield Company
Boating Industry Association
Bureau of Marine Resources
Center for Environmental Education
Center for Law and Social Policy

Center for Natural Areas
Center for Urban Affairs
Center for Urban and Regional Resources
Chamber of Commerce of the United States
Chevron U.S.A., Inc.
Cities Service Company
Coastal States Organization
Coast Alliance
Congressional Research Service
Conservation Foundation
Continental Oil Company
Council of State Planning Agencies
The Cousteau Society
CZM Newsletter
Defenders of Wildlife
Edison Electric Institute
Environmental Policy Center
Environmental Defense Fund, Inc.
Environmental Law Institute
Friends of the Earth
Gulf Energy and Minerals, U.S.A.
Gulf Oil Company
Gulf Refining Company
Industrial Union of Marine and Shipbuilding Workers of America
University of Washington - Marine Studies
Institute for the Human Environment
Interstate Natural Gas Association of America
Marathon Oil Company
Marine Mammal Center
Marine Technology Society
Mobil Oil Corporation
Mobil Exploration and Producing, Inc.
Murphy Oil Company
National Association of Conservation Districts
National Association of Counties
National Association of Home Builders
National Audubon Society
National Coalition for Marine Conservation, Inc.
National Federation of Fishermen
National Fisheries Institute
National Forest Products Association
National Geographic Society
National Marine Manufacturers Association
National Ocean Industries Association
National Parks and Conservation Association
National Recreation and Park Association
National Research Council
National Society of Professional Engineers
National Waterways Conference

National Wildlife Federation
Natural Resources Defense Council
Natural Resources Law Institute
New York Zoological Society
Oceanic Society
Outboard Marine Corporation
Resources for the Future
Rose, Schmidt and Dixon
Shell Oil Company
Sierra Club
Skelly Oil Company
Smithsonian Institute
Soil Conservation Society of America
Sport Fishing Institute
Standard Oil Company of Ohio
Sun Company, Inc.
Tenneco Oil Company
Texaco, Inc.
The Nature Conservancy
The Wildlife Society
Union Oil Company of California
Urban Research and Development Association, Inc.
Western Oil and Gas Association
Wildlife Management Institute
Wilderness Society
Woods Hole Oceanographic Institute, Marine Policy and Oceans Mgt. Program
Alaska Department of Fish and Game

Congressional Delegation

Senator Daniel Inouye, Hawaii
Senator Spark Matsunaga, Hawaii
Representative Daniel Akaka, Hawaii
Representative Cecil Heftel, Hawaii
Representative Antonio Won Pat, Guam
Representative Fofo Sunia, American Samoa
Edward Pangelinan, Delegate to the United States from the Commonwealth of the Northern Mariana Islands

State and County Agencies/Distribution

Office of the Governor
Office of the Lt. Governor
Members, Hawaii State Legislature
Legislative Reference Bureau Hawaii
Coastal Zone Management Program
Land Use Commission
Board of Land and Natural Resources
Public Utilities Commission
State Historic Preservation Officer
Environmental Quality Commission

Office of Environmental Quality Control
Hawaii Housing Authority
Office of Hawaiian Affairs
Hawaii Community Development Authority
State Energy Office
Department of Health
Department of Transportation
Department of Defense
Department of Social Sciences and Housing
Department of Education
Department of Hawaiian Home Lands
Department of Budget and Finance
University of Hawaii:
- Environmental Center
- Water Resources Research Center
- Hawaii Institute of Marine Biology
- Hawaii Institute of Geophysics
- Marine Advisory Program, Sea Grant
- Marine Option Program
- Department of Urban-Regional Planning
- Department of Zoology
- Library/Document Center

City and County of Honolulu:
- Office of the Mayor
- Department of Parks and Recreation
- Department of General Planning
- Department of Land Utilization

Kauai County:
- Office of the Mayor
- Planning Department

Hawaii County:
- Office of the Mayor
- Planning Department

Maui County
- Office of the Mayor
- County Council
- County Planning Commission
- Planning Department
- Economic Development Department
- Department of Public Works
- Department of Water Supply
- Office of Economic Opportunity

Library Information Centers:
- Hawaii State Library, Main Branch
- Hawaii Regional
- Lahaina Public
- Kailua-Kona Public
- Maui Regional
  - Kahalui
  - Makawao
  - Lahaina
  - Wailuku
- Kauai Regional
- Kaimuki Regional

Waimea Public
Kaneohe Regional
Lanai Community
Pearl City Regional
Molokai Community

Other State and Local Distribution

Hawaii Visitors Bureau
Hawaiian Air
Aloha Airlines
Mid-Pacific Air
Hawaii's Thousand Friends
General Contractors Association
Outdoor Circle
Bishop Museum
Castle and Cooke, Inc.
Alexander Baldwin
C. Brewer and Company
Dillingham Corporation/HD&C
ILWU
United Public Workers
Hawaii Hotel Association
Windjammer Cruises
Oahu Development Conference
Hawaii Chamber of Commerce
League of Women Voters
AMFAC
Theo H. Davies
American Institute of Architects
American Planners Association
HGEA
Hawaii Geographic Society
Hawaiian Tuna Packers
Hawaii Fishing News
Maui News
Maui Divers, Inc.
Maui Whale Research Institute
SEACO
Kihei Community Association
Home Builders Association of Hawaii
American Society of Landscape Architects
Bishop Estate
Hawaii Council of Dive Clubs
Hawaiian Electric Company
Maui Electric Company
Maui Land and Pineapple Company
Kapalua Land Company
Sheraton Hotels, Maui County
Hyatt Hotel, Maui
Koele Company
Seibu Corporation
Kamehameha Development Corporation

Common Cause
Campbell Estate
Pioneer Mill
Kaupo Ranch
Hana Ranch
Ulupalakua Ranch
Kaluakoi Corporation
Molokai Ranch
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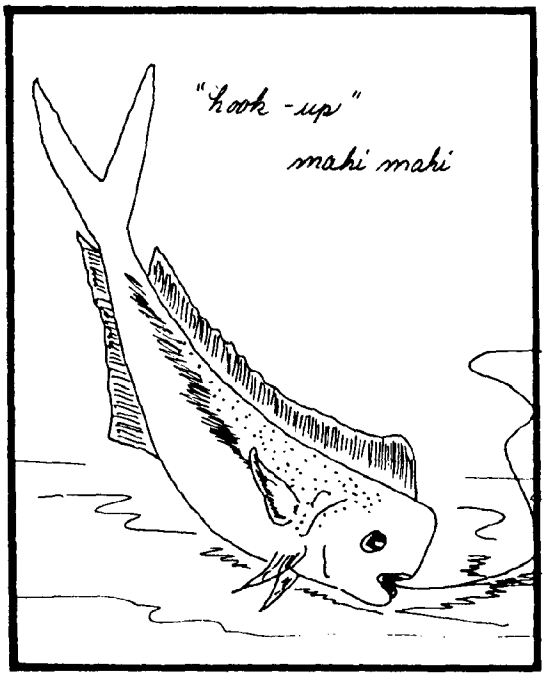
PART X. REFERENCES



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APPENDIX A

MARINE PROTECTION, RESEARCH AND SANCTUARIES ACT AMENDMENTS OF 1980 TO TITLE III (P.L. 96-332) INCORPORATED INTO TITLE III OF THE MARINE PROTECTION, RESEARCH AND SANCTUARIES ACT of 1972 (P.L. 92-532)

AN ACT

To regulate the transportation for dumping, and the dumping, of material into ocean waters, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that this Act may be cited as the "Marine Protection, Research, and Sanctuaries Act of 1972."

For the purposes of this document Title I (Ocean Dumping) and Title II (Comprehensive Research on Ocean Dumping) have been deleted.

TITLE III - MARINE SANCTUARIES

SEC. 301. Notwithstanding the provisions of subsection (h) of section 3 of this Act, the term "Secretary," when used in this title, means Secretary of Commerce. The term 'State', when used in this title, means any of the several States or any territory or possession of the United States which has a popularly elected Governor.

SEC. 302. (a) The Secretary, after consultation with the Secretaries of State, Defense, the Interior, and Transportation, the Administrator, and the heads of other interested Federal agencies, and with the approval of the President, may designate as marine sanctuaries those areas of the ocean waters, as far seaward as the outer edge of the Continental Shelf, as defined in the Convention of the Continental Shelf (15 U.S.T. 74; TIAS 5578), of other coastal waters where the tide ebbs and flows, or of the Great Lakes and their connecting waters, which he determines necessary for the purpose of preserving or restoring such areas for their conservation, recreational, ecological, or esthetic values. The consultation shall include an opportunity to review and comment on a specific proposed designation.

(b)(1) Prior to designating a marine sanctuary which includes waters lying within the territorial limits of any State or superjacent to the subsoil and seabed within the seaward boundary of a coastal State, as that boundary is defined in section 2 of title I of the Act of May 22, 1953 (67 Stat. 29), the Secretary shall consult with, and give due consideration to the views of, the responsible officials of the State involved.

(2) A designation under this section shall become effective unless --

(A) the Governor of any State described in paragraph (1) certifies to the Secretary, before the end of the sixty-day period beginning on the date of the publication of the designation, that the designation or any of its terms described in subsection (f)(1), are unacceptable to his State, in which case those terms certified as unacceptable will not be effective in the waters described in paragraph (1) in such State until the Governor withdraws his certification of unacceptability; or

(B) both Houses of Congress adopt a concurrent resolution in accordance with subsection (h) which disapproves the designation or any of its terms described in subsection (f)(1).

The Secretary may withdraw the designation after any such certification or resolution of disapproval. If the Secretary does not withdraw the designation, only those portions of the designation not certified as unacceptable under subparagraph (A) or not disapproved under subparagraph (B) shall take effect.

(c) When a marine sanctuary is designated, pursuant to this section, which includes an area of ocean waters outside the territorial jurisdiction of the United States, the Secretary of State shall take such actions as may be appropriate to enter into negotiations with other Governments for the purpose of arriving at necessary agreements with those Governments, in order to protect such sanctuary and to promote the purposes for which it was established.

(d) The Secretary shall submit an annual report to the Congress, on or before November 1 of each year, setting forth a comprehensive review of his actions during the previous fiscal year undertaken pursuant to the authority of this section, together with appropriate recommendation for legislation considered necessary for the designation and protection of marine sanctuaries.

(e) Before a marine sanctuary is designated under this section, the Secretary shall hold public hearings in the coastal areas which would be most directly affected by such designation, for the purpose of receiving and giving proper consideration to the views of any interested party. Such hearings shall be held no earlier than thirty days after the publication of a public notice thereof.

(f)(1) The terms of the designation shall include the geographic area included within the sanctuary; the characteristics of the area that give it conservation, recreational, ecological or esthetic value; and the types of activities that will be subject to regulation by the Secretary in order to protect those characteristics. The terms of the designation may be modified only by the same procedures through which an original designation is made.

(2) The Secretary, after consultation with other interested Federal and State agencies, shall issue necessary and reasonable regulations to implement the terms of the designation and control the activities described in it, except that all permits, licenses, and other authorizations issued pursuant to any other authority shall be valid unless such regulations otherwise provide.

(3) The Secretary shall conduct such research as is necessary and reasonable to carry out the purposes of this title.

(4) The Secretary and the Secretary of the department in which the Coast Guard is operating shall conduct such enforcement activities as are necessary and reasonable to carry out the purposes of this title. The Secretary shall, whenever appropriate and in consultation with the Secretary of the department in which the Coast Guard is operating, utilize by agreement the personnel, services, and facilities of other Federal departments, agencies, and instrumentalities, or State agencies or instrumentalities, whether on a reimbursable or a non-reimbursable basis in carrying out his responsibilities under this title.

(g) The regulations issued pursuant to subsection (f) shall be applied in accordance with recognized principles of international law, including treaties, conventions, and other agreements to which the United States is signatory. Unless the application of the regulations is in accordance with such principles or is otherwise authorized by an agreement between the United States and the foreign State of which the affected person is a citizen or, in the case of the crew of a foreign vessel, between the United States and flag state of the vessel, no regulation applicable to ocean waters outside the territorial jurisdiction of the United States shall be applied to a person not a citizen of the United States.

(h)(1) For purposes of subsection (b)(2)(B), the Secretary shall transmit to the Congress a designation of a marine sanctuary at the time of its publication. The concurrent resolution described in subsection (b)(2)(B) is a concurrent resolution which is adopted by both Houses of Congress before the end of the first period of sixty calendar days of continuous session of Congress after the date on which the designation is transmitted, the matter after the resolving clause of which is as follows: 'That the Congress does not favor the taking of effect of the following terms of the marine sanctuary designation numbered : transmitted to Congress by the Secretary of Commerce on : .', the blank space being filled with the number of the designation, the second blank space being filled with the date of transmittal, and the third blank space being filled with the terms of the designation which are disapproved (or the phrase 'the entire designation' if the entire designation is disapproved).

(2) For the purpose of paragraph (1) of this subsection

(A) continuity of session is broken only by an adjournment of Congress sine die; and

(B) the days on which either House is not in session because of an adjournment of more than three days to a day certain are excluded in the computation of the sixty-day period.

(3) A designation which becomes effective, or that portion of a designation which takes effect under subsection (b), shall be printed in the Federal Register.

SEC. 303. (a) Any person subject to the jurisdiction of the United States who violates any regulation issued pursuant to this title shall be liable to a civil penalty of not more than $50,000 for each such violation, to be assessed by the Secretary. Each day of a continuing violation shall constitute a separate violation.

(b) No penalty shall be assessed under this section until the person charged has been given notice and an opportunity to be heard. Upon failure of the offending party to pay an assessed penalty, the Attorney General, at

the request of the Secretary, shall commence action in the appropriate district court of the United States to collect the penalty and to seek such other relief as may be appropriate.

(c) A vessel used in the violation of a regulation issued pursuant to this title shall be liable in rem for any civil penalty assessed for such violation and may be proceeded against in any district court of the United States having jurisdiction thereof.

(d) The district courts of the United States shall have jurisdiction to restrain a violation of the regulations issued pursuant to this title, and to grant such other relief as may be appropriate. Actions shall be brought by the Attorney General in the name of the United States, either on his own initiative or at the request of the Secretary.

SEC. 304. (Appropriations not to exceed $2,235,000 per year have been authorized for fiscal years 1982 and 1983.)

APPENDIX B

DRAFT DESIGNATION DOCUMENT FOR THE HAWAI'I HUMPBACK WHALE NATIONAL MARINE SANCTUARY

Preamble

Under the authority of the Marine Protection, Research and Sanctuaries Act of 1972, as amended, Pub.L. 92-532 (the Act), certain waters contiguous to the Hawaiian Islands, are hereby designated a National Marine Sanctuary for the purposes of: (1) ensuring the long-term protection and vitality of the wintering population of the endangered humpback whale (Megaptera novaeangliae) in Hawaiian waters; (2) providing a scientifically sound and responsible means for administering research within the Sanctuary; (3) enhancing the public's awareness and understanding of the plight of the endangered great whales, the humpback whale in particular, and the values of its habitat in Hawaiian waters to its survival; and (4) ensuring the widest possible accommodation of public and private access to and the traditional uses of the waters and resources of the Sanctuary consistent with the purposes for which it is established, including but not limited to recreational and commercial fishing and boating, marine transportation, or any other activity consistent with the purposes for which the Sanctuary is designated.

Article 1. Effect of Designation

The Designation of the Hawai'i Humpback Whale National Marine Sanctuary (the Sanctuary) establishes the basis for the cooperative management of the area described in Article 2 by the State of Hawai'i and the National Oceanic and Atmospheric Administration (NOAA). Article 4 specifies the conditions under which certain types of activities will be subject to regulation under the authority of the Act. The identification of the types of activities which may be regulated does not subject them to control. This may be accomplished only through specific regulations, whether issued by NOAA, the State of Hawai'i, or other Federal authorities and relied upon by NOAA in managing the Sanctuary. Activities may be regulated under the authority of the Act only by amending Article 4, Section 1 of the Designation Document in accordance with Section 302(f)(1) of the Act. Article 6 reaffirms the statutory requirement and regulatory procedure for modifying any of the terms of the Designation.

Article 2. Description of the Area

The Sanctuary's boundary is delineated by, and encompasses all of the waters enclosed within, the 100-fathom (183-meter) isobath encircling the Islands of Ka'ula, Ni'ihau, Kaua'i, O'ahu, Moloka'i, Lāna'i, Maui, Kaho'olawe, and Hawai'i, including the deep-water area southward from Cape Hālawa, Moloka'i (21°10'N latitude, 156°43'W longitude) to Nākālele Point (21°02'N latitude, 156°35'W longitude). Found within this boundary and adopted by this Designation as the Sanctuary's core are two areas of special significance to the humpback whales in Hawai'i. These areas correspond to the "major breeding and calving grounds of the humpback whale" defined by the National Marine Fisheries Service in its Notice of Interpretation concerning "Humpback Whale Harassment in the Hawaiian Islands Area" (44 FR 1113, 1979) and include the 48.79 square nautical

mile area within two miles of the mean high water line from Ka'ena Point (20°55'N latitude, 157°04'W longitude) east by southeast, passing Halepalaoa Landing (20°50'N latitude, 156°49'W longitude) and Kikoa Point (20°49'N latitude, 156°49'W longitude), Lāna'i and a 37.62 square nautical mile area inshore from Hekili Point (20°49'N latitude, 156°38'W longitude) to Pu'u Olai (20°39'N latitude, 156°27'W longitude), Maui.

Article 3. Characteristics of the Area That Give it Particular Value

The Sanctuary's waters are an important winter habitat for the largest remaining population of humpback whales in the Northern Pacific. Every year around November large numbers of these endangered marine mammals return from their summer feeding grounds in the higher latitudes of the North Pacific to the warm, shallow waters of the Sanctuary where they remain until late Spring. While in Hawaiian waters, the humpback whales engage in the reproductive activities vital to the maintenance of the species. Reportedly, the greatest number of wintering humpbacks in Hawaiian waters can be found within the area enclosed by the 100-fathom isobath. Certain waters found within the area also have been acknowledged by scientists and the National Marine Fisheries Service as being significant to the reproduction and maintenance of the species. Because of their accessibility and close proximity to major centers of resident and tourist population while present in their Hawaiian wintering grounds, the whales attract much public attention and research interest both of which create potential opportunities as well as problems in the long-term protection of the species.

Article 4. Scope of Regulations

Section 1. Activities Subject to Regulations. No regulations have been issued pursuant to this Designation imposing restrictions on uses of the Sanctuary's resources beyond the restrictions already provided by existing State and Federal authorities. However, where necessary to ensure the protection of the humpback whale, certain types of activities not already prohibited by State or Federal law or otherwise excluded under Federal law, which are determined to be detrimental to the species may be subject to regulation under the authority of the Act. The types of activities which may be considered detrimental to the humpback whale in the waters of the proposed Sanctuary include those that directly result in the physical alteration of its habitat or in the modification to its behavior, to the extent that such consequences can be found to constitute significant and adverse impacts to the biological fitness of the species.

Section 2. Consistency with International Law. Regulations issued by NOAA pursuant to the Act or those upon which the Designation relies for managing the Sanctuary apply to foreign flag vessels and persons not citizens of the United States only to the extent consistent with recognized principles of international law including treaties, conventions, and agreements to which the United States is signatory.

Section 3. Emergency Regulations. When necessary to prevent immediate or irreversible damage to the humpback whales, activities other than those already prohibited in the Sanctuary by existing State or Federal authorities, may be regulated under the Act for a period not exceeding 120 days. Under no circumstances may such regulation prohibit or significantly interfere with normal

maritime trade or the commercial transport of people between islands on or above the waters of the proposed Sanctuary. In order to extend the emergency provisions beyond the 120-day period, an appropriate amendment to the terms of this Designation must be proposed in accordance with the procedures specified in Article 6 and the regulations governing the National Marine Sanctuary Program.

Article 5. Relation to Other Regulatory Programs

Section 1. Fishing. Sport and commercial fishing are not subject to regulation under Article 4 of this Designation. All existing regulatory programs pertaining to fishing shall remain in effect, including regulations issued by the State of Hawaii and by NMFS in accordance with Fishery Management Plans developed under the Fishery Conservation and Management Act of 1976 (16 U.S.C. 1801 et seq.).

Section 2. Vessel Operations. Military, recreational and commercial vessels used for private and public purposes are not subject to regulation under Article 4 of this Designation. All existing regulatory programs pertaining to vessel operations shall remain in effect, including regulations concerning: (a) discharges issued or enforced by the State of Hawai'i or by the U.S. Coast Guard in accordance with its regulations implementing the Clean Water Act (33 U.S.C. 1251 et seq.) and (b) the "taking" of humpback whales enforced by NMFS in accordance with the Marine Mammal Protection Act of 1972 (16 U.S.C. 1361 et seq.) and the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.).

Section 3. Defense Activities. Any activity conducted by the Department of Defense that is essential to the national security or because of emergency is permitted in the Sanctuary. However, such activity shall be consistent with all regulations applicable in the management of the Sanctuary to the maximum extent practicable.

Section 4. Other Programs. All applicable regulatory programs shall remain in effect and all permits, licenses, and other authorizations issued pursuant to these programs shall be valid within the Sanctuary unless otherwise prohibited by any regulation governing the activities listed in Article 4, Section 1 or unless specifically prohibited by any emergency regulations issued under Article 4, Section 3 of this Designation.

Article 6. Modification of the Terms of This Designation

The terms of this Designation may be modified only in accordance with the procedures by which the original Designation was made, including public hearings, consultation with Federal and State agencies and the Western Pacific Fishery Management Council, approval by the President of the United States, certification by the Governor of Hawaii where State waters are involved, and review by both Houses of Congress.

APPENDIX C

request and the proposal is amended accordingly.

In consideration of the foregoing, Part 117 of Title 33 of the Code of Federal Regulations is amended by revising § 117.225(f)(1) to read as follows:

§ 117.225 Navigable waters in the State of New Jersey; bridges where constant attendance of draw tenders is not required.

* * * * *

(f) * * *

(1) Overpeck Creek, Consolidated Rail Corporation and New York, Susquehanna and Western Railroad Company drawbridges. The draws of each bridge shall open on signal if at least 24 hours notice is given.

* * * * *

(Sec. 5, 28 Stat. 362, as amended, sec. 6(g)(2), 80 Stat. 937; 33 U.S.C. 499, 49 U.S.C. 1655(g)(2); 49 CFR 1.46(c)(5).)

NOTE.—The Coast Guard has determined that this document does not contain a major proposal requiring preparation of an Economic Impact Statement under Executive Order 11821, as amended, and OMB Circular A-107.

Dated: December 28, 1978.

J. B. HAYES,
Admiral, U.S. Coast Guard
Commandant.

[FR Doc. 79-386 Filed 1-3-79; 8:45 am]

[3510-22-M]

Title 50—Wildlife and Fisheries

CHAPTER II—NATIONAL MARINE FISHERIES SERVICE, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, DEPARTMENT OF COMMERCE

HUMPBACK WHALE HARASSMENT IN THE HAWAIIAN ISLANDS AREA

Interpretation

AGENCY: National Oceanic and Atmospheric Administration, National Marine Fisheries Service.

ACTION: Notice of interpretation.

SUMMARY: The National Oceanic and Atmospheric Administration, National Marine Fisheries Service, interprets "taking by harassment" with regard to humpback whales (*Megaptera novaeangliae*) in waters adjacent to the islands of the State of Hawaii for purposes of imposing civil penalties under the Marine Mammal Protection Act of 1972, as amended, and the Endangered Species Act of 1973, as amended (the "Acts"). Those activities which will be presumed to constitute harassment of humpback whales under the Acts are defined.

DATE: This notice is effective on January 4, 1979, and this interpretation will be re-evaluated in April 1979.

COMMENTS: Comments on this interpretation are welcome. All comments should be mailed to: Gerald V. Howard, Regional Director, Southwest Region, National Marine Fisheries Service, 300 South Ferry Street, Terminal Island, Calif. 90731. Telephone: 213-548-2575.

FOR FURTHER INFORMATION CONTACT:

Doyle E. Gates, Administrator, Western Pacific Program Office, National Marine Fisheries Service, P.O. Box 3830, 2570 Dole Street, Honolulu, Hawaii 96812. Telephone: 808-946-2181.

Martin B. Hochman, Southwest Regional Counsel, Southwest Regional Office, NOAA Office of General Counsel, 300 South Ferry Street, Room 2020, Terminal Island, Calif. 90731. Telephone: 213-548-2756.

SUPPLEMENTARY INFORMATION: As a result of commercial whaling during the first half of this century, the number of humpback whales (*Megaptera novaeangliae*) in the North Pacific is seriously reduced from former levels. Population levels have declined from an estimated 15,000 in 1905 to a present estimate of 850. Humpback whales received protection in 1966 when the International Whaling Commission placed a prohibition on the commercial taking of them. In 1970, the humpback whale was designated an endangered species under the Endangered Species and Conservation Act of 1969. Humpback whales are now protected by the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*), the Marine Mammal Protection Act of 1972, as amended (16 U.S.C. 1361 *et seq.*), and the Convention on International Trade in Endangered Species of Wild Fauna and Flora, March 3, 1973 (T.I.A.S. No. 8249).

Estimates of the size of the stock of humpback whales that winters in Hawaiian waters range from 336 to 590 animals. This stock is believed to represent approximately 60 percent of the estimated total North Pacific population.

Each year humpback whales begin arriving in the Hawaiian Islands area in late October. Their numbers peak in late January through February and remain fairly constant through mid-March. The whales return each year to the waters inside the 100-fathom curve surrounding the main Hawaiian Islands for the purposes of calving, nursing, and breeding. Their major areas of concentration are Penguin Bank; the waters bounded by the islands of Molokai, Lanai, Maui, and Kahoolawe; and the coastal waters of the island of Hawaii from Kamakamaka Point to Keahole Point. The annual northward migration begins in April, and by early June most of the humpbacks have left the Hawaiian Islands area.

The humpbacks presumably live and breed in the Hawaiian Islands area because it offers the environmental conditions for calving and nursing most favored by the whales. Activities that force the humpback whales to abandon these breeding grounds may result in a substantially lower recruitment rate for an already severely reduced population.

While in the Hawaiian Islands area, the humpback whales are the subject of commercial photography, whale-watching tours, and scientific research. They are also affected by other human activities such as marine construction, commercial shipping, and turbidity resulting from agricultural activities. There is information that these activities may be adversely affecting the behavior and distribution of humpbacks. The whales appear to be abandoning some areas, and are becoming more difficult to approach in other areas. During the 1940's and 1950's, humpbacks were present between Wailupe and Koko Head on Oahu in numbers observed and recorded during that period by the Wailupe Whale Watch Organization. During the 1975-1976 calving and breeding season, virtually no whales were observed in this area.

Within the past five years, there have been at least nine special television programs and three record albums produced which focus on the humpback whales. This publicity has generated heightened public awareness, which in turn has resulted in a rapid expansion of whale-watching activities. According to reports received by the National Marine Fisheries Service, the number of encounters between whales and boats is increasing. Seminars and workshops are being advertised with the promise that the participants will be able to view humpback whales in their natural habitat, and the opportunity to see a humpback whale is becoming an increasingly important component of Hawaiian Islands tour promotions.

Both the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973 prohibit the "taking" of humpback whales. By definition in the statutes, harassment is a form of "taking," although harassment is not separately defined. The Marine Mammal Protection Act of 1972 provides that a civil penalty of not more than $10,000 for each violation may be assessed against any

person violating any provision of the statute (16 U.S.C. 1375(a)). The Endangered Species Act of 1973 also provides for civil penalties of up to $10,000 (16 U.S.C. 1540(a)). Both Acts provide for criminal penalties under some circumstances.

Based in part on information developed by the Marine Mammal Commission workshop on humpback whales in July, 1977, and concerns expressed at two public hearings held by the National Marine Fisheries Service in the State of Hawaii in June, 1978, the National Marine Fisheries Service has developed this interpretation of "taking by harassment" to further protect the humpback whale population during its critical breeding and calving period in the Hawaiian Islands area, to define certain activities which will be presumed to constitute harassment of humpback whales under the Marine Mammal Protection Act and the Endangered Species Act, and to afford notice that actions defined in this notice will be subject to civil penalty proceedings under the Acts.

NOTICE OF INTERPRETATION OF "TAKING BY HARASSMENT" IN REGARD TO HUMPBACK WHALES IN THE HAWAIIAN ISLANDS AREA

AUTHORITY: Marine Mammal Protection Act of 1972, as amended, 16 U.S.C. 1361 *et seq.*, and the Endangered Species Act of 1973, as amended, 16 U.S.C. 1531 *et seq.*

I. This notice applies to persons subject to the jurisdiction of the United States under the Marine Mammal Protection Act of 1972, as amended, and the Endangered Species Act of 1973, as amended, in waters adjacent to the islands of the State of Hawaii extending to 200 nautical miles.

II. Activities authorized by scientific research permits (see 50 CFR 220) are governed by the terms of the permits, including the requirement that permit holders are required to display triangular yellow pennants while engaging in permitted activities in these waters.

III. Each of the following activities is presumed to constitute "harassment" with respect to humpback whales under the Marine Mammal Protection Act of 1972, 16 U.S.C. 1362(3) and 1372(a), and the Endangered Species Act of 1973, 16 U.S.C. 1532(14) and 1538(a):

A. *Aircraft:* Approaching a humpback whale by flying lower than 1000 feet while within a horizontal distance of 300 yards from the humpback whale. "Flying" includes hovering, circling, or buzzing.

B. *Vessels, swimmers, and divers:*

1. In calving and breeding grounds—Approaching within 300 yards of a humpback whale, or herding or driving a humpback whale from any distance, in the following calving and breeding grounds (see map):

a. Lanai—all waters within two miles of the mean high water line from Kaena Point east by southeast, passing Halepalaoa Landing and Kikoa Point, to Kamaiki Point;

b. Maui—all waters inshore from a line drawn from Hekili Point at Olowalu southeast to Puu Olai.

2. In all areas subject to this notice other than the calving and breeding grounds described above—

a. Approaching within 100 yards of a humpback whale;

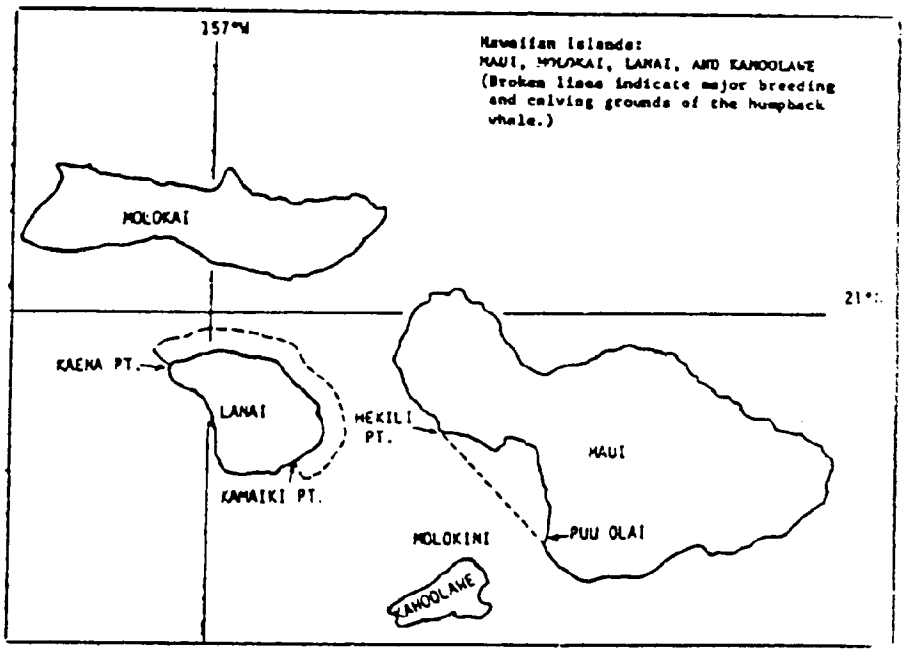
b. Traveling faster than a humpback whale, or the slowest whale in a group of whales, while between 100 and 300 yards of the whale or whales;

c. Multiple changes in vessel speed while between 100 and 300 yards of the whale;

d. Separating a whale from a calf;

e. Herding or driving whales.

C. Any other act or omission that substantially disrupts the normal behavioral pattern of a humpback whale is also presumed to constitute harassment. A substantial disruption of a normal behavioral pattern may be manifested by, among other actions on the part of the whale, a rapid change in direction or speed; escape tactics such as prolonged diving, underwater course changes, underwater exhalation, or evasive swimming patterns such as swimming away rapidly at the surface; stopping of breeding, nursing or feeding; attempts by a female or her escort to shield a calf from a vessel or a human observer by tail swishing or by other movements to protect a calf; or the abandonment of a previously frequented area.



Dated: December 28, 1978.

WINFRED H. MEIBOHM,
Acting, Executive Director,
National Marine Fisheries Service.

[FR Doc. 79-353 Filed 1-3-79; 8:45 am]

APPENDIX D

GUIDELINES FOR ESTABLISHING RESEARCH AGENDA

The management strategy for implementing the Resource Studies Plan establishes a preliminary agenda for the Sanctuary's research program. It reflects a broad statement of research needs for which discrete actions will be developed. To assist in that activity, and to ensure that such initiatives are compatible with the goals and objectives of the Sanctuary Management Plan and consistent with the overall strategy for implementing the resource studies component, the following framework for guiding research is proposed which serves both a descriptive and analytical function:

A. Research related to the whales

1. Temporal and spatial distribution and abundance in Hawaiian waters and the Sanctuary.

2. Movement and habitat use patterns including effects of habitat conditions, depth of water, distance from shore, natural phenomena (ocean currents, sea state, precipitation, wind velocity, turbidity, tides and lunar phase, etc.), time of day, and season.

3. Undisturbed behavior by year class, sex, group size and composition, time of day, season, and location, such as:

(a) resting times and duration of dives

(b) speed of travel and direction

(c) surface activity, i.e., breaching, tail lobbing, raking, finning, etc.

(d) vocalization

(e) singing

(f) approaches made to boats

(g) nursing

(h) courtship

(i) interaction with other humpback whales and social organization

(j) interaction with other marine mammal species

4. Modified behavior (stimulus-response patterns)

B. Research related to habitat

1. Baseline conditions in waters of Sanctuary and other areas of the State visited by humpbacks such as:

(a) Phsyical parameters--water temperature; turbdity/sediment load; insolation; wind velocity, direction, and duration; exposure to open ocean; precipitation; currents and tides; depths and bottom contour; and substrate type.

(b) Chemical parameters--salinity; dissolved oxygen; inorganic nutrients; ph; organic loads; and other pollutants.

(c) Biological parameters--distribution and abundance of other marine mammals including possible predator species; primary productivity; ecological energetics; and biotic potentials.

2. Modified conditions resulting from both naturally occurring phenomena and man's activities such as:

(a) toxic chemical spills

(b) heavy precipitation and land runoff

(c) other sources of non-point source pollutants

(d) agricultural and other land-disturbing activities and residues

(e) dredging and other activities involving the alteration of the seabed or noise propagation in the water column

(f) thermal effluents above ambient

(g) tsunami and heavy seas

(h) activities affecting shoreline configuration and littoral processes

C. Research related to man-whale encounters

1. Temporal and spatial distribution and level of activity by type in Hawaiian waters and in the Sanctuary such as:

(a) surfing

(b) recreational boating including sailing, and power craft

(c) canoeing/paddling

(d) SCUBA diving

(e) swimming and snorkeling

(f) surf casting and shoreline fishing

(g) limu/opihi picking

(h) spearfishing

(i) commercial fishing including bottom fishing, trolling, netting, trapping, long-lining, precious coral harvesting, and aquarium trade

(j) sport charter boat

(k) commercial whale watching

(l) anchorages

(m) marine transportation

2. Movement and resource use patterns including effects of resource type and availability, depth of water, distance from shore, natural phenomena (ocean currents, sea state, precipitation, wind velocity, water clarity, tides and lunar phase, etc.), time of day, and season.

Identification of Research Needs

The research agenda developed for the Sanctuary will establish a prescriptive strategy for satisfying a broad range of needs related to the humpback whale and the management of its habitat in Hawai'i. It will be the product of a collective, on-going assessment of the need for and value of specific research and further serve as both an explicit statement of expectations as well as a point of reference for guiding the evaluation of future proposals. Consequently, in designing the specific research program, the following considerations should be kept in mind:

- the humpback whale is an endangered species throughout its worldwide range;
- that they are protected by international convention and, where applicable, by existing Federal and State authorities;
- that the marine sanctuary will serve as a natural field laboratory providing a unique opportunity for conducting research aimed at expanding scientific knowledge and improving management decisionmaking;
- that the Designation will emphasize non-regulatory management techniques;
- that an existing body of information on the humpback whale already is available and can be used in guiding the identification of research needs, i.e., the opportunities for follow-up monitoring as well as the deficiencies in the management data base; and

- the utility and appropriateness of various survey and monitoring techniques such as observations from shore and surface vessels; aerial surveillance; tagging; radio, sonar, and satellite tracking; photographic cataloging; acoustic studies; and voice printing.

The preceding should serve as a blueprint for assisting Sanctuary managers in constructing a comprehensive research program that not only describes conditions and measures the effects of certain factors on the health and behavior of the whales and on the quality of their habitat but also prescribes the most appropriate management response for their protection and maintenance.

Priority-setting

Inevitably, once research needs have been articulated, decisions have to be made regarding the relative importance of each. Although somewhat subjective, priorities accorded to research on the basis of mutually agreed upon evaluation criteria are at least consistent and predictable vis-a-vis defensible. The question, therefore, is what should the criteria reflect beyond a simple statement of goals and objectives and by what process should they be fashioned. The Scientific Advisory Committee (SAC) and its role in the development and research agenda is the obvious place to begin.

Assuming that the members of the SAC are comparably qualified and experienced, the Delphi Technique developed by the RAND Corporation offers a widely-accepted means and opportunity for obtaining a consensus on issues while minimizing the undesirable effects of face-to-face interaction. In this case, the issue involves the development of criteria for ranking research and the relative weight assigned to each factor.

The following describes the Delphi operating procedure to be used for guiding the intiial work of the SAC:

A. Present the problem to the SAC along with the Sanctuary Management Plan and other information relative to the research program. Problem Statement: Establish a set of weighted criteria for ranking the relative importance of research programs/proposals in the marine sanctuary.

B. Have each member record in writing a list of criteria they consider germane to the evaluation of research related to: (a) the whales; (b) the habitat: and (c) man-whale encounters.

C. After establishing a range of numerical values (e.q., most important = 5; moderately important = 3; least important = 1) have each member record in writing the values assigned to each of the criteria proposed by the group.

D. Conduct group discussion on the assumptions, rationale, and validity of the values assigned.

E. Analyze the mean and standard deviation of scores to show the level of agreement or disagreement within the group.

F. Again, have each member enter privately a second-round score for each criteria followed by another discussion session and statistical analysis.

G. Repeat process until the group's responses approach a consensus.

The priority rankings developed as an outcome of this exercise serves as only one of the many factors considered in the evaluation of solicited and unsolicited proposals submitted for research in the Sanctuary. Individual decisions still need to be made on a case-specific basis taking into account such things as the qualifications and experience of the researcher; the proposed technical approach and research design; and the level of support available for conducting the work or demand for its expected products.

APPENDIX E

GUIDELINES FOR ESTABISHING AN INTERPRETIVE PROGRAM

Section III(D) of the Management Plan establishes the fundamental concepts concerning the development and implementation of interpretive programs for the marine sanctuary. It was, as this discussion is, not intended to "lock-in" on a specific plan possessing specific work tasks. Rather, these discussions provide broad guidance in developing a program agenda and performance contract which: (1) incorporates a basic set of substantive tasks; and (2) establishes major program milestones. The following sets forth the anticipated steps to be taken subsequent to Designation in the development of the interpretive program for the proposed Sanctuary in Hawai'i:

CONTRACT PHASE 1:

- Prepare preliminary scope of work for RFP for contracting Sanctuary Interpreter

Following consultation with the Sanctuary Coordinator and discussions with the Policy Coordinating and Program Review Committees, the SPD shall prepare a scope of work and companion "Request for Proposals."

- Select Sanctuary Interpreter and negotiate final scope of work and performance benchmarks

Within 2 months of the Designation, the SPD and contractor will have negotiated the final terms of the proposal/contract to implement an interpretive program for the Sanctuary, i.e., products/deliverables, and performance levels and benchmarks. Recommended substantive elements:

- Detailed plan for developing and implementing interpretive program themes for use on-site or in community extension efforts such as: (a) natural resources of the Sanctuary; (b) the role of the Sanctuary in the protection of the humpback whale and the resources of its habitat, including the State's Marine Life Conservation Districts and Natural Area Reserve on Maui; (c) traditional uses of the Sanctuary's waters; and (d) the role of enforcement in resource management.

- Detailed plan describing the approaches to be employed in program implementation such as the development of: (1) brochures, posters, maps and newsletters, (2) audio-visual media, (3) fixed and portable exhibits, (4) a speakers bureau, (5) an information clearinghouse, (6) workshops for professional educators and government officials; and (7) science seminars and periodic publications related to research conducted within the Sanctuary.

- Preliminary construction plan for securing appropriate plant facilities that will house the Interpretive Center and provide a local identity for the marine sanctuary in Hawai'i.

- Evaluate program performance in accordance with Part IV of this document and the conditions/benchmarks established in contract negotiations (month 10-11)

- Renegotiate contract with Sanctuary Interpreter, incorporating where necessary, new, additional, or modified work programs, schedules and benchmarks (month 12)

CONTRACT PHASE 2:

- Implement strategies agreed upon in contract negotiations and incorporated in its terms
  - interpretive themes
  - approaches for implementation
  - development of Interpretive Center.
- Evaluate program performance in accordance with Part IV of this document and the conditions/benchmarks established in contract negotiations (month 22-23)

The 2nd-year evaluation will focus on the implementation activities of the Sanctuary Interpreter as a measure of program performance.

- Renegotiate contract with Sanctuary Interpreter, incorporating where necessary, new, additional, or modified work programs, schedules, and benchmarks (month 24)

Major consideration will be given the establishment and full operation of the Sanctuary Interpretive Center and institutionalization of the on-going interpretive program, i.e., agency coordination, public support, and extramural sources of funding.

CONTRACT PHASE 3:

- Implement strategies agreed upon in contract negotiations and incorporated in its terms
- Institutionalize interpretive program (month 30)
- Evaluate program performance in accordance with Part IV of this document and the conditions/benchmarks established in contract negotiations (month 34)

The 3rd-year and each succeeding year's evaluation will focus on how well the Interpretive Plan is meeting its goals and objectives and the purposes of the Designation. Annual contract negotiations tied to performance provide the SPD and Sanctuary Interpreter with the flexibility to create new initiatives as well as modify existing programs, the result of which leads to a more efficient use of the Sanctuary's resources.

APPENDIX F

REPORT OF THE HAWAIIAN HUMPBACK WHALE SANCTUARY WORKSHOP COMMITTEE

December 12-14, 1979

Abstract

A three-day workshop of eleven whale experts, conservationists, marine resource managers, delegates of Hawaiian state and local government, and representatives of the Marine Sanctuaries Program Office, Office of Coastal Zone Management, U.S. Department of Commerce, met in Kā'anapali, Maui, to consider the adequacy of present management of the endangered humpback whales in Hawai'i, and to explore possible additional means of protection. The panel concluded that, while the number of these whales appears to be at least stable, the species as a whole remains close to extinction in most parts of its worldwide range. Thus this stock and its health are especially serious matters of international concern.

Concern about the humpbacks when in Hawai'i arose because (1) increasing contacts of various sorts between humans and whales, and impacts upon their habitat, without continued control, might reduce the biological fitness of the species and could cause its decline in Hawaiian waters or departure from the area, and (2) while various statutes, such as the Marine Mammal Protection Act of 1972, provide protection for the whales, long-term planning and funding commitments for management, surveillance, and research do not exist.

Human contacts with the whales that were of most concern to the panel were those currently prohibited as harassment by the National Marine Fisheries Service; i.e., those in which whales are actively followed or intercepted by people in boats, in aircraft, on jet skis, and underwater. Other activities in which major disruptive effects might be expected include some forms of military activity, and major underwater construction. Commercial and fishing traffic was not thought to be a present source of concern with the exception of hydrofoils where a potentially serious problem of collision exists.

Roughly, the waters surrounding the main Hawaiian Islands (Ni'ihau southeast to Hawai'i) shallower than 100 fathoms were found to contain the crucial reproductive and social activity of Hawaiian humpback whales, and could be used to define a protection or sanctuary zone.

The Workshop Committee recommended two kinds of increased protection: (1) a marine sanctuary or protection zone operated under the Marine Sanctuaries Program of the Office of Coastal Zone Management, U.S. Department of Commerce, with the full participation of the State of Hawai'i and its counties, and (2) the establishment of a Recovery Team under the National Marine Fisheries Service, also of the U.S. Department of Commerce.

The proposed sanctuary or protection zone would enhance the achievement of three conservation goals:

1. Monitoring and study of Hawaiian humpback whales to determine the health of the species, its population trends, its social structure, its movements, its sources and its management features such as fecundity, recruitment and mortality.

2. Public education to assist in management and to inform the public at large about these animals.

3. Any needed protection not currently provided by federal and state statutes, utilizing existing federal, state and local agencies.

The Recovery Team would provide a detailed examination of the status of the humpback whale population from several points of view relative to its protection, assuring interface with all concerned parties. It would afford an organized way to develop a comprehensive conservation plan for the humpback whale, throughout its range.

A recommendation for an institutional framework was evolved for the proposed sanctuary or protective zone, which envisioned equal participation among county, state, and federal governments, with primary funding to come from the federal Marine Sanctuaries Program.

The sanctuary or protective zone was thought by a number of participants to be of great symbolic importance both nationally and internationally, and especially appropriate for Hawai'i, our only island state, as evidence of our concern for the preservation of fragile marine systems. The fate of the world's whales has been the subject of much interest in the United Nations and elsewhere. It was felt by some of the panel that benefit would accrue to Hawai'i through this expression of concern and because a sanctuary or protective zone would be a potential means for attracting and educating visitors to the islands.

The committee expressed its hope that a similar institutional arrangement could be developed for Alaskan humpback whales, which are thought to be, at least in part, travelers from Hawaiian waters at the northern terminus of their annual migration on their summer feeding grounds.

INTRODUCTION

On December 12, 1979, a three-day workshop convened on Maui to (1) assess the biological needs of the Hawaiian population of humpback whales (*Megaptera novaeangliae*), (2) pinpoint actual or potential problems that may slow or stop its recovery from near extinction, and (3) describe possible arrangements for further protection, if such protection is indicated in the light of these findings.

The meeting resulted from widespread public interest in the Hawaiian humpback whales that included a formal application to the Marine Sanctuaries Program for the establishment of a sanctuary and a number of more informal suggestions for protection. Harassment, especially of Hawaiian humpback whales, had been the primary focus of a previous workshop held in Honolulu in 1977, sponsored by the Marine Mammal Commission. That workshop helped to define harassment under the terms of the Marine Mammal Protection Act of 1972 and concluded that the situation required continuing surveillance and enforcement.

The panel whose work is described here, drew in part from participants in the earlier group and from scientists, marine resource managers, and conservationists, active at the national and international levels, and from those familiar in detail with Hawaiian humpback whales and with the social, political and management issues relating to them in Hawai'i. The panel was composed of the following members:

Dr. Kenneth S. Norris, Chairman. Professor of Natural History, Environmental Studies, University of California, Santa Cruz; Chairman, 1977 Workshop on Problems Related to Humpback Whales in Hawai'i; Cetologist; Member Committee of Scientific Advisors on Marine Mammals, U.S. Marine Mammal Commission, 1972-76.

Dr. Sylvia A. Earle, Research Scientist, California Academy of Sciences, San Francisco; Board of Governors, International Union for Conservation of Nature and Natural Resources; Trustee of the World Wildlife Fund; Program Director, Ocean Trust Foundation.

Mr. Kenji Ego, Director, Hawai'i Division of Fish and Game, Department of Land and Natural Resources, Honolulu. Representative of the State of Hawai'i.

Mr. Doyle E. Gates, Administrator, Western Pacific Program Office, National Marine Fisheries Service, Southwest Region, Honolulu. Representative of the National Marine Fisheries Service.

Dr. Louis M. Herman, Professor of Comparative and Physiological Psychology, Department of Psychology, University of Hawai'i at Mānoa; Director, Kewalo Basin Marine Mammal Laboratory, University of Hawai'i; Specialist in studies of Hawaiian humpback whales and dolphins; Member 1977 Workshop.

Mr. Roy Nickerson, Newspaperman, Lahaina Bureau Chief, The Maui News; Author: ***Brother Whale***, ***Hawai'i, The Volcanic State***, and ***Lahaina, Royal Capital of Hawai'i***. Representative of the Office of the Mayor, County of Maui.

Dr. Roger S. Payne, Cetologist, New York Zoological Society; Specialist in studies of humpback whales and right whales, Atlantic and Pacific Oceans; Member 1977 Workshop.

Dr. William E. Schevill, Woods Hole Oceanographic Institution; Museum of Comparative Zoology, Harvard University; Cetologist; Member Committee of Scientific Advisors on Marine Mammals, U.S. Marine Mammal Commission, 1972-76; Delegate International Whaling Commission; Editor: ***The Whale Problem***. Member 1977 Workshop.

Dr. Edward W. Shallenberger, Vice-President, Sea Life Park, Waimānalo; Cetologist; Specialist in studies of Hawaiian whales and dolphins; Member 1977 Workshop.

Dr. Leighton R. Taylor, Jr., Director, Waikīkī Aquarium; Professor of Ichthyology, Graduate Faculty, Department of Zoology, University of Hawai'i at Mānoa.

Dr. Robert B. Weeden, Professor of Resource Management, School of Agriculture and Land Resources Management, University of Alaska; Research Biologist, Alaska Department of Fish and Game; Member Committee of Scientific Advisors on Marine Mammals, U.S. Marine Mammal Commission; Representative of the U.S. Marine Mammal Commission.

The panel was assisted by experienced resource persons qualified to provide information related to humpback whale protection. These were:

Ms. JoAnn Chandler, Director, Marine Sanctuaries Program.

Mr. James Hudnall, Director, Maui Whale Research Institute.

Mr. Daniel Y. Tanaka, Planner, Hawai'i Department of Transportation, Harbor Division.

Mr. Douglas G. Warnock, Deputy Area Director, Alaska Area Office, U.S. National Park Service.

point at which protection under the Endangered Species Act would no longer be required. A Recovery Team has not been appointed for humpback whales and other endangered whales in Hawaii or elsewhere in the world.

Recovery Plans may recommend management means, including but not limited to management areas and sanctuaries, the designation of critical habitat areas or species-specific regulations. Such management recommendations may include cooperative agreements with state and other federal agencies.

The Plan may also identify data gaps, recommend research, including the priority of research, and identify agencies or individuals qualified to conduct the necessary research.

Recovery Teams consist of qualified individuals representing a diversity of viewpoints appointed by the National Marine Fisheries Service for endangered species under its purview. The selection of species for recovery planning efforts is usually dictated by species priorities, foreseen benefits and interagency coordination needs.

Appointment of a Recovery Team does not carry funding nor regulatory authority and was perceived as a potential additional action that does not exclude a sanctuary option *a priori.*

Although the Recovery Team can consider critical habitat as a management recommendation, critical habitat could be designated without a Recovery Team or Plan. The direct impact of such designation would be on federal and/or federally funded or controlled activities and, depending upon the limits or parameters selected, may encompass land as well as water areas. Thus, critical habitat would require federal agencies to consider habitat in addition to species impacts in evaluating their activities.

Designation as critical habitat does not directly affect state (public) activities such as commercial fishing, recreational boating, sailing, diving, and others. However, any such human use involving the "take" of endangered species, which is defined to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or to attempt to engage in any such conduct" is prohibited unless permitted for certain research or other purposes. This is a statutory restriction and exists whether or not critical habitat is designated. The majority of the panel felt that the development of further species-specific or restrictive-use regulations to implement the "take" prohibition of the Act could cause considerable impact on state affairs and was regarded as unnecessary if adequate sanctuary protection could be devised.

Option 3: Designation as a Marine Sanctuary

Institutional Arrangements

In general, committee members favored a geographically more expansive sanctuary than that described in the existing proposal submitted to the Office of Coastal Zone Management. The whales' use of most waters inside the 100-fathom isobath of the main Hawaiian Islands indicates that confining a sanctuary to the interisland waters between Maui, Lāna'i, Moloka'i and Kaho'olawe is inappropriate.

Such a broad marine sanctuary could impact the diverse interests of all levels of government. The federal government is responsible for the fate of the humpback whale under the Marine Mammal Protection Act, the Endangered Species Act, the Marine Protection, Research and Sanctuaries Act and others. The State of Hawai'i and its component counties have expressed concern not only for marine mammal conservation through the state's own Endangered Species Act, Marine Life Conservation Districts, and Natural Area Reserves but also for the continued use of its waters for commerce, recreation, and fishing. Decisions that afford protection for whales must consider these local needs when rules are being shaped.

Consequently, members of the panel conceived of a cooperative arrangement for a sanctuary in which regulations would be formulated through a process where representatives of all three government entities, county, state, and federal, participated equally. These regulations would be developed in accordance with applicable statutes at all levels. Any affected county could choose to participate actively in the sanctuary management.

The panel recommended that the state be directly responsible for on-site administration of the sanctuary and that enforcement should remain with the federal National Marine Fisheries Service unless, by mutual agreement, it was contracted to the state.

Funding, in such an arrangement, would stem from the federal Marine Sanctuaries Program and would be available for enforcement, research, education, and operational budgets.

Proposed Sanctuary Boundaries

In order for a sanctuary to protect the humpback whale adequately, it must encompass all Hawaiian waters in which important life functions (courtship and early nurture) of the whales occur. Although public attention has been centered in the four-island region of Maui County, there are other significant critical areas, such as Penguin Bank, the windward coasts of O'ahu and areas adjacent to Kaua'i, Ni'ihau and Hawai'i. There is suggestive evidence that whales do not stay in a given area but may move through the island channels, giving a fractional sanctuary little meaning.

Accordingly, the following boundary is proposed:

The 100-fathom (183-meter) isobath encircling or adjoining these Hawaiian Islands: Ka'ula, Ni'ihau, Kaua'i, O'ahu, Moloka'i, Lāna'i, Maui, Kaho'olawe and Hawai'i and including Penguin Bank. In addition, the deep-water area of the Pailolo Channel from Cape Hālawa, Moloka'i to Nākālele Point, Maui and southward is included. A map outlining these areas appears as Appendix III.

Certain areas seem to be of special importance within these broad sanctuary boundaries. They are frequently occupied by whales. These areas were selected on the basis of the recent (1977-79) distribution of whales, but it is recognized that relative usage by whales may change in the future. These areas are:

1. The bank surrounding Ka'ula Island.
2. The south coast of Ni'ihau Island from Pueo Point south around Kawaihoa Point to Pu'uwai Village.
3. The south coast of Kaua'i Island from Nāwiliwili to Port Allen.
4. The north and east coasts of O'ahu Island from Makapu'u Point to Ka'ena Point.

5. Penguin Bank.
6. Contiguous waters within the islands of Moloka'i, Maui, Kaho'olawe and Lāna'i.
7. The waters between Kaunakakai and Lā'au Point, Moloka'i.
8. The northwest coast of Hawai'i Island from Keāhole Point to 'Upolu Point.
9. The bank extending off Ka Lae (South Cape), Hawai'i.

The majority opinion of the committee was that Option 3 (the Designation of a Marine Sanctuary) was the most certain route to continuing protection of the humpback whale in Hawaiian waters. The committee majority also regards the appointment of a Recovery Team by the National Marine Fisheries Service to be a positive step toward achieving specific needs for humpback whale research. Designation of a critical habitat by NMFS was not thought to be as flexible an instrument for protection as a sanctuary especially when protection requirements include such a major portion of Hawai'i state waters and because critical habitat applies only to federally funded or controlled activities. The sanctuary designation can encourage a significant state and county presence in the operation of a protective zone.

Two points should be noted here. First, although some uncertainty was expressed about the use of the word "sanctuary" (it is a word which is often misinterpreted to mean closure), its symbolic importance both internationally and locally was recognized.

Second, the State of Hawai'i has a number of statutory conservation options (i.e., Marine Life Conservation Districts, Natural Area Reserves System, State of Hawai'i Endangered Species Act of 1972 as amended in 1975) which could provide protection for the humpback whales. These were cited as possibilities for designating areas of protection within the state but the committee thought the financial burden for this single government entity would be too great to provide an area large enough to be biologically significant for the whales.

It was emphasized that only in full partnership among local, state and federal governments can viable, protective measures be drawn and, indeed, adequate protection for the species be provided.

Research and Education

The effect of human activity on whales should be monitored consistently in order to develop appropriate rules for management of a sanctuary.

The need to acquire knowledge crucial to the assessment of the whale population's present state and future prospects is of equal importance.

It is evident that, although much has been learned by research workers since 1977, there is much more that is still unknown. The panel concluded that a continuing commitment to research progams is critical to the whales' survival.

The committee recognized that public education about humpback whales was an important opportunity for Hawai'i and would augment management efforts.

On the one hand, Hawai'i is becoming renowned around the world as a unique place in which the rare humpback whale can be seen or heard singing its mysterious songs all in calm, clear, warm waters. A destination for a burgeoning tourist and media populace is

APPENDIX G

ELMER F. CRAVALHO
Mayor

COUNTY OF MAUI
MAYOR'S MAUI COUNTY WHALE RESERVE COMMITTEE
P. O. BOX 338
LAHAINA, MAUI, HAWAII 96761

JAMES C. LUCKEY
Chairman
PAUL CAMERON
PHIL COLE
CYMBRE FERGUSON
RICK GAFFNEY
PAT LEFFINGWELL
NED LINDSEY
CHARLES B. SUTHERLAND
BILL WOOKEY

July 1, 1977

To: The Honorable Elmer F. Cravalho, Mayor
County of Maui

From: Mayor's Maui County Whale Reserve Committee

FINAL REPORT AND ACTION PLAN

- -

Introduction

In June, 1976, a group of Maui residents, representing a broad section of the community, communicated with the Mayor's office, proposing the establishment of a whale reserve in the waters of Maui County. With the support of the Mayor and various other conservation groups, this committee was appointed in January of 1977.

The mandate given us was to study and report on the feasibility of such a reserve and to suggest ways of accomplishing the following objectives:

1.- To seek systematic methods of establishing controls and supervision that would prevent the harassment of the whales while encouraging mutual enjoyment of Maui waters by both whale and man.

2.- To work with the National Marine Fisheries Service and other agencies in establishing a clearinghouse for information on the Humpback and other whales.

3.- To establish an educational program informing the general public and boaters about the needs of the whale.

4.- To enlist the support of other organizations to provide funds for a Whale Research Center on Maui.

With these goals in mind, our committee has met on numerous occasions, corresponded with a large number of individuals and organizations and has reached the conclusions contained in the following report.

As a result of these deliberations, we are firmly convinced that a positive move is essential at this time to assure the continued life cycle of Maui's Humpback whale. Our reasons are outlined in the sections to follow.

July 1, 1977

Mayor Elmer F. Cravalho
(con't., Page 2)

Our task has been a challenging one. While similar discussions have been held regarding other marine areas in the United States, to date there has been no definitive action. Consequently, Maui County could have the distinction of becoming the first government body to take action, should this plan be adopted. And, there is no doubt, as you will see from the reactions and responses contained in this report, that the interest in whales in general and the Maui Humpback in particular is widespread and enthusiastic.

The great whales of the world have captured the imagination of the American people and it is in this spirit of increased awareness and concern that we respectfully submit this report.

James C. Luckey, Chairman
MAUI COUNTY WHALE RESERVE COMMITTEE

With special thanks to Michael Wyatt, Paul Mancini, Marion Fox, Roy Nickerson, Dr. Roger S. Payne, and Dr. Sylvia Earle for their helpful advice and guidance.

EDUCATIONAL PROGRAMS (con't.)

We have viewed with alarm other areas of the world where the imposition of man has created serious problems to the natural life cycle of the whale. For example, the Gray Whale which passes along the shores of California each year on its way to calving grounds in Baja California could be in jeopardy because of uncontrolled and over-zealous whale watching.

Maui already has whale watching cruises operating out of Lahaina. Each year they increase in frequency and numbers. Thus far, this committee believes that the operators of cruise boats have acted in a totally responsible manner, well within the established guidelines for harassment. However, who knows what tomorrow will bring? It is critical that guidelines and educational programs are undertaken now to prevent serious conflicts in the future.

It is alarming to realize how little our average visitor knows about whales. But, it is very gratifying to know how eager they are to learn more. So, we have a large potential audience which should be reached. We can therefore educate our visitors to the plight of the whales of the world, and also add a unique and fascinating experience to their visit to Maui.

And, finally, if we are to achieve the ultimate goal of saving the whales of the world for future generations we must begin with the future generation in providing dynamic information to be used in our schools. Where better than on Maui, where students can observe great whales at play, to plant the seeds of conservation and protection? We are hopeful that programs developed here could be offered to state and mainland systems for their use and enjoyment.

Proposals:

1.- For the resident and visiting boater: a concise and informative brochure outlining the concept and boundaries of the Maui County Whale Reserve, including a definition and descriptive example of harassment, suggested rules of conduct, sensible precautions, and general information about the life cycle of the Humpback whale. These would be distributed through our local harbor authorities, yacht clubs, fishing clubs, sailing clubs, and Coast Guard.

2.- For the visitor and interested resident: an illustrated pamphlet concentrating on the fascinating story of Maui's Humpback whale, including the latest in scientific facts relating to its yearly trip to Maui. This publication should include information on relative size, mating and calving areas, distances travelled, feeding habits, breathing, the song of the Humpback, and social activity such as breaching, tail-lobbing, spy-hopping, flippering, etc. Such a pamphlet would find broad distribution through such outlets as the Hawaii Visitors Bureau, Maui County Visitor Association, Kaanapali Beach Operators Association, and local visitor and transportation facilities.

3.- For the student and special interest groups: a selection of audio visual and video tape presentations. During the 1977 Humpback season, Maui hosted a large group of scientists, researchers and photographers who came to study the whale. Included in this group were such important organizations as the

EDUCATIONAL PROGRAMS (Con't.)

National Geographic Society, Survival Anglia, and the New York Zoological Society. They compiled a mass of new information and some outstanding film and photo records of the Humpback both above and below the sea. Without exception, these organizations have expressed their willingness to contribute this material for the purposes of an educational program.

It is interesting to note that Maui has the local facilities and expertise to produce excellent slide and video-tape shows which are easily portable and very effective in group presentations.

To start from the beginning to produce such films, slides, or tapes would be prohibitively expensive. But, with this wealth of material available, we believe an outstanding job could be done at minimal cost.

4.- We strongly recommend a program of roadside facilities to include graphic displays, observation stations on hillsides, and permanently mounted coin operated binoculars at strategic locations along the West shores of Maui from Napili to Makena. Such a program would not only accommodate those who would not have the opportunity to go out on the water, but could have the effect of easing the pressure of boat traffic.

CONTROL AND MONITORING

There are two Federal acts which relate directly to the protection of marine mammals in Hawaiian waters. These are the Endangered Species Act and the Marine Mammal Protection Act. Both assign the responsibility for enforcement to the National Marine Fisheries Service, a division of the National Oceanographic and Atmospheric Administration with the ultimate support of the Coast Guard.

Presently, there are only two enforcement officers stationed in Honolulu and their territory includes not only the entire Hawaiian chain but the South Pacific as well. And, their responsibilities include many other enforcement duties such as the 200 mile limit. Thus it is doubtful if Maui County can ever expect a full-time Federal enforcement officer during the Humpback season.

We, of course, are concerned about the possible harassment of the Humpback while in Maui waters. The definition of "harassment" as contained in the Federal Act allows great latitude in interpretation and it is clearly the task of a professional to make that determination. However, that does not relieve us from our responsibility to assist in any way possible to increase the effectiveness of the enforcement process.

We feel, with a proper educational program and in full cooperation with the National Marine Fisheries Service, that a system can be developed to effectively supplement enforcement by serving as the "eyes and ears" of the agency responsible.

The private and commercial boating fraternity of Maui, which ranges from the sleekest yacht to the most modest sampan, is a great source of experience, energy, and responsibility. We feel it richly deserves to be included in the Whale Reserve program.

CONTROL AND MONITORING (Con't.)

Proposals:

1.- To sponsor periodic workshops with guidance from the National Marine Fisheries Service to train local boaters at all levels in the provisions of the law relating to harassment and to specially recognize those who have participated in these workshops as monitors of marine conduct relative to whales and other marine mammals.

And to establish a volunteer corps of similarly trained persons to act as Whale Reserve monitors.

2.- To provide a central clearing house by phone and radio for reports of harassment, not only from boaters but from the public at large, and to relay that information to the proper authority for action.

3.- This committee does NOT advocate or suggest prohibiting recreational boating or marine related activities within the Reserve area.

However, unbridled surface activity could disturb the life cycle of the whale and the authority responsible for the Reserve should address itself to the immediate problem of reducing this adverse impact by:

a.- Determining and publishing recommended seasonal routes for high speed traffic through the Reserve area.

b.- Outlining known areas of mating and calving which should be avoided.

c.- Working with whale watch cruise operators in preventing high concentrations of activity, particularly in sensitive areas.

d.- Screening and monitoring research, photography, and promotional activity to maintain the lowest possible level of disturbance and to discourage exploitation of the animal resource for private or personal gain.

RESEARCH CENTER

You will see from attached correspondence a wide and enthusiastic response to the concept of developing a Whale Research Center on Maui. This is a large undertaking, but one worth pursuing because of the continuing research efforts which would result, thus providing a valuable source of information for the scientist, scholar, and writer.

The Lahaina Restoration Foundation, which owns the old U.S. Seamen's Hospital property and building on Front Street in Lahaina has offered to commit that site, which is part of Historic District #1, to use as a Whale Research center in perpetuity. Their concept is to restore the exterior of the building to its 1850 configuration and modify the interior for use as a research facility.

RESEARCH CENTER (con't.)

This idea has many positive ramifications. We have been assured of financial support for staffing, equipment, and programs from various sources. It would give this major historical site ongoing purpose and vitality. It would be a first in the State of Hawaii. And, perhaps most intriguing of all, there is a certain poetic justice in creating a center dedicated to preserving the life of the whale in a building so closely allied with those American seamen who were intent on the destruction of the same animal over a century ago. The State of Hawaii Historic Preservation Officer, Miss Jane Silverman, has expressed her support of such a plan.

But regardless of the site or location chosen, we enthusiastically support the Research Center concept.

Proposals:

1.- To actively pursue the development of a Whale Research Center on Maui, enlisting support from private, public, and government agencies throughout the world.

IMPLEMENTATION

In our research, we have attempted to find a direct corollary to the legal structure of a Whale Reserve. Sanctuaries have been declared in both Argentina and Mexico, but we find that their foundation either has no bearing on our particular situation or that their effectiveness leaves something to be desired.

Maui County is embarking on a unique course of action and it will require imaginative planning to make it work.

We realize that we cannot do it alone. There must be guidance and participation from various sectors of State, Federal, and private agencies.

Unless we take positive action now to form a strong local framework within which these agencies can function, it must only be a matter of time before another authority moves to fill the void and Maui County's control will slip away.

Therefore, we recommend an effective date no later than September 15, 1977, so that the proposals contained in this report can be in full force and effect prior to the 1978 Humpback season.

FUNDING

We do not envision the immediate necessity for any major capital expenditures to establish the Whale Reserve. However, the educational programs, correspondence, and coordination will require some County support to begin with. Ultimately, we think that funds can be secured from many sources for such projects as the Research Center. Much of the staff work can be on a volunteer basis.

FUNDING (con't.)

Proposals:

1.- That the Mayor of the County of Maui declare the immediate need for the establishment of the Maui County Whale Reserve no later than September 15, 1977;

2.- That consideration be given to the passage of a County ordinance providing the authority for the Whale Reserve and outlining, under law, not only the duties and obligations of such authority, but also providing the right to determine rules and regulations as necessary to achieve the goals and objectives of this report;

3.- That such authority be vested in a nine member voluntary commission, appointed by the Mayor with the approval of the Council, whose duties would be to initiate, promote, and maintain these goals and objectives on a permanent basis.

(The following copies of correspondence are typical of the replies received in answer to our request for information and comments. A total of over 100 letters of inquiry were mailed with a resulting high percentage of responses. All were supportive of the Whale Reserve concept.)

MAUI COUNTY WHALE RESERVE COMMITTEE February 8, 1977

Members:		Home	Business
Paul Cameron	166 Halelo St., Lahaina	661-0753	
Phil Cole	P. O. Box 1736, Lahaina	661-~~4529~~ 4700	same
Cymbre Ferguson	~~#4 International Colony Club~~ POB 696 Lahaina	661-3228	661-3671
Rick Gaffney	P. O. Box 1855, Kahului	575-2340	877-2088
Pat Leffingwell	1724 Halama, Kihei 96753	879-1017	879-2712
Ned Lindsey	393 Front St., Lahaina	661-0564	
Jim Luckey, Chrm.	P. O. Box 338, Lahaina	661-3473	661-3262
Charles B. Sutherland	P. O. Box 446, Lahaina	661-0768	661-4592
~~Bill Wookey~~	~~1590 Kuuipo, Lahaina~~	661-3355	661-3812
[illegible]	POB 926 Lahaina		

SUB COMMITTEES

1. Educational Programs - Ferguson, Chrm.; Cole, Sutherland

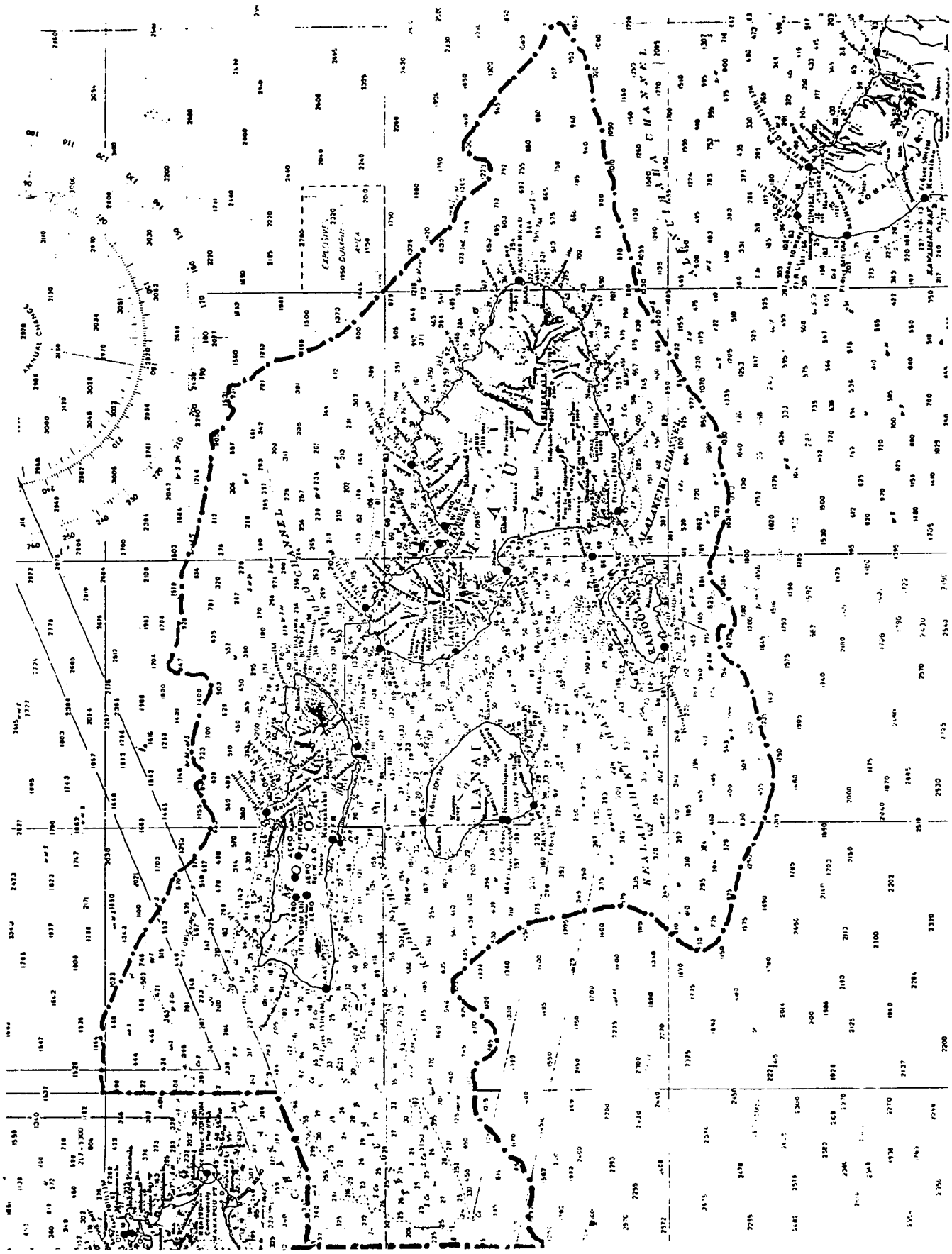
2. Research Center - Wookey, Chrm.; Ferguson, Leffingwell

3. Legal Structure - Lindsey, Chrm.; Cameron, Gaffney

4. Liaison - Gaffney, Chrm.; Cole, Sutherland

5. Control & Monitoring - Cole, Chrm.; Cameron, Leffingwell, Lindsey, Wookey

Next meeting: February 23, 1977, Masters' Reading Room, Lahaina
3:30 pm


LANAI
KEALAIKAHIKI CHANNEL
KAHOOLAWE
KAUIKEHEAD
KAWAIHAE BAY
EXPLOSIVE
DUMPING
AREA

APPENDIX H

A BILL FOR AN ACT

RELATING TO COASTAL ZONE MANAGEMENT.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

SECTION 1. Findings and Purpose. The legislature finds that Congress has enacted the Coastal Zone Management Act of 1972, Public Law 92-583, as amended, which recognizes the national interest in the effective planning, management, beneficial use, protection, and development of the coastal zones of the several states.

It is a purpose of this Act, to authorize a Hawaii state coastal zone management program that complies with the requirements of the National Coastal Zone Management Act. However, the controlling purpose of this Act is to provide for the effective management, beneficial use, protection, and development of the coastal zone. Where Hawaii's unique geographical and political circumstances result in the necessity of choosing between the intent of the federal legislation and specific requirements the purpose of this Act shall control.

The legislature further finds that Hawaii's environment is both undermanaged and overregulated; that new regulatory mechanisms must not be added onto, but rather combined with, the existing systems; and that the counties have shown their ability and willingness to play a constructive role in coastal zone management by their actions under chapter 205A, part II, Hawaii Revised Statutes,

SECTION 2. Repeal. Part I of chapter 205A, Hawaii Revised Statutes, is repealed.

SECTION 3. Chapter 205A, Hawaii Revised Statutes, is amended by adding a new part to read as follows:

"PART I. COASTAL ZONE MANAGEMENT"

Section 205A-1. Definitions. As used in this part, unless the context otherwise requires:

(1) "Agency" means any agency, board, commission, department, or officer of a county government or the State government;
(2) "Authority" means the authority administering chapter 205A, Hawaii Revised Statutes, at the time of the effective date of this Act.
(3) "Coastal zone management area" means the special management area after compliance pursuant to section 205A-23 of this chapter and as defined in part II of this chapter.
(4) "Coastal zone management program" means the coastal zone management program as provided by this part;
(5) "Department" means the department of planning and economic development.
(6) "Development" means the development as defined in part II of this chapter.
(7) "Land" means the earth, water, and air above, below, or on the surface;
(8) "Lead agency" means the department of planning and economic development;
(9) "Person" means an individual, corporation, or partnership, and an organization or association, whether or not incorporated.
(10) "Shoreline" means the shoreline as defined in part II of this chapter.

Section 205A-2. Coastal Zone Management Program; Objectives and Policies.

(a) The objectives and policies in this section shall apply to both parts I and II of this chapter.
(b) Objectives.
  (1) Recreational resources;
    (A) Provide coastal recreational opportunities accessible to the public.
  (2) Historic resources;
    (A) Protect, preserve, and, where desirable, restore those natural and man-made historic and pre-historic resources in teh coastal zone management area that are significant in Hawaiian and American history and culture.
  (3) Scenic and open space resources;
    (A) Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.
  (4) Coastal ecosystems;
    (A) Protect valuable coastal ecosystems from disruption and minimize adverse impacts on all coastal ecosystems.
  (5) Economic uses;
    (A) Provide public or private facilities and improvements important to the State's economy in suitable locations.
  (6) Coastal hazards;
    (A) Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, and subsidence.
  (7) Managing development;
    (A) Improve the development review process, communication, and public participation in the management of coastal resources and hazards.

(c) **Policies.**

(1) Recreational resources;

(A) Improve coordination and funding of coastal recreation planning and management; and

(B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:

(i) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;

(ii) Requiring replacement of coastal resources having significant recreational value, including but not limited to surfing sites and sandy beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;

(iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;

(iv) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;

(v) Encouraging expanded public recreational use of county, State, and Federally owned or controlled shoreline lands and waters having recreational value;

(vi) Adopting water quality standards and regulating point and non-point sources of pollution to protect and where feasible, restore the recreational value of coastal waters;

(vii) Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, artificial reefs for surfing and fishing; and

(viii) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, county planning commissions; and crediting such dedication against the requirements of section 46.6

(2) Historic resources;

(A) Identify and analyze significant archaeological resources;

(B) Maximize information retention through preservation of remains and artifacts or salvage operations; and

(C) Support State goals for protection, restoration, interpretation, and display of historic resources.

(3) Scenic and open space resources;

(A) Identify valued scenic resources in the coastal zone management area;

(B) Insure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;

(C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and

(D) Encourage those developments which are not coastal dependent to locate in inland areas.

(4) Coastal Ecosystems;

(A) Improve the technical basis for natural resource management;

(B) Preserve valuable coastal ecosystems of significant biological or economic importance;

(C) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and

(D) Promote water quantity and quality planning and management practices which reflect the tolerance of fresh water and marine ecosystems and prohibit land and water uses which violate State water quality standards.

(5) Economic uses;

(A) Concentrate in appropriate areas the location of coastal dependent development necessary to the State's economy;

(B) Insure that coastal dependent development such as harbors and ports, visitor industry facilities, and energy generating facilities are located, designed, and constructed to management area; and

(C) Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:

(i) Utilization of presently designated locations is not feasible;

(ii) Adverse environmental effects are minimized; and

(iii) Important to the State's economy.

(6) Coastal hazards;

(A) Develop and communicate adequate information on storm wave, tsunami, flood, erosion, and subsidence hazard;

(B) Control development in areas subject to storm wave, tsunami, flood, erosion, and subsidence hazard;

(C) Ensure that developments comply with requirements of the Federal Flood Insurance Program; and

(D) Prevent coastal flooding from inland projects.

(7) Managing development;
   (A) Effectively utilize and implement existing law to the maximum extent possible in managing present and future coastal zone development;
   (B) Facilitate timely processing of application for development permits and resolve overlapping or conflicting permit requirements; and
   (C) Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life-cycle and in terms understandable to the general public to facilitate public participation in the planning and review process.

Section 205A-3. Lead Agency. The lead agency shall:
(1) Receive, disburse, use, expend, and account for all funds that are made available by the United States and the State for the coastal zone management program;
(2) Provide support and assistance in the administration of the State coastal zone management program;
(3) Review Federal programs, permits, licenses and development proposals for consistency with the coastal zone management program;
(4) In consultation with the counties and the general public prepare guidelines in furtherance of the objectives and policies of the Act to be submitted 20 days prior to the convening of the 1978 Regular Session of the Legislature for review, modification and enactment by the Legislature.
(5) Conduct a continuing review of the administration of the coastal zone management program and of the compliance of State and county agencies;
(6) Facilitate public participation in the coastal zone management program;
(7) Review State programs within the coastal zone management area from the shoreline to the seaward limit of the State's jurisdiction for consistency with the coastal zone management program; and
(8) Prepare an annual report to the governor and the legislature which shall include recommendations for enactment of any legislation necessary to require any agency to comply with the objectives and policies of this chapter and the guidelines enacted by the legislature.

Section 205A-4. Implementation of objectives, policies, and guidelines.
(A) In implementing the objectives of the coastal zone management program full consideration shall be given to ecological, cultural, historic, and esthetic values as well as to needs for economic development.
(B) The objectives and policies of this chapter and the guidelines enacted by the legislature shall be binding upon actions within the coastal zone management area by all agencies.

Section 205A-5. Compliance. Within two years of the effective date of this chapter, all agencies shall amend their regulations, as may be necessary, to comply with the objectives, and policies of this chapter and the guidelines enacted by the Legislature.

Section 205A-6. Cause of Action.
(a) Subject to chapters 661 and 662, Hawaii Revised Statutes, any person or agency may commence a civil action alleging that any agency:
   (1) Is not in compliance with one or more of the objectives, policies, and guidelines provided or authorized by this Act; or
   (2) Has failed to perform any act or duty required to be performed under this Act; or
   (3) In exervising any duty required to be performed under this Act, has not complied with the provisions of this Act.
(b) In any action brought under this section, the department, if not a party, shall intervene as a matter of right.
(c) A court, in any action brought under this section, shall have jurisdiction to provide any relief as may be appropriate, including a temporary restraining order or preliminary injunction.
(d) Any action brought under this section shall be commenced within sixty days of the act which is the basis of the action.
(e) Nothing in this section shall restrict any right that any person may have to assert any other claim or bring any other action.

SECTION 4. Section 5, Act 176, Session Laws of Hawaii 1975, is amended to read as follows:
"SECTION 5. This part shall take effect upon its approval , and shall remain in effect until implementation of a coastal zone management program pursuant to the Coastal Zone Management Act of 1972, Public Law 92-583, and to Section 205A-1 and Section 205A-2, Hawaii Revised Statutes."

SECTION 5. Section 205A-21, Hawaii Revised Statutes, is amended to read as follows:
"Section 205A-21. Findings and Purposes. The legislature finds that, until a general coastal management program can be developed and implemented, special interim controls on developments within an area along the shoreline are necessary to avoid permanent losses of valuable resources and the foreclosure of management options, and to ensure that adequate access, by dedication or other means, to public owned or used beaches, recreation areas, and natural reserves is provided. The legislature finds and declares that it is the State policy to preserve, protect, and where possible, to restore the natural resources of the coastal zone of Hawaii."

SECTION 6. Section 205A-22, Hawaii Revised Statutes, is amended by amending one definition and adding three new definitions to be appropriately designated and to read:

"(1) "Authority" means the county planning commission except in counties where the county planning commission is advisory only wi which case "authority" means the county council or such body as the council shall by ordinance designate. authority administering chapter 205A, Hawaii Revised Statutes, at the time of the effective date of this Act.

(7) "Lead agency" means the department of planning and economic development.

(8) "Coastal zone management area" means the special management area after compliance pursuant to section 205A-23 of this part.

(9) "Coastal zone maangement program" means the coastal zone management program as provided in this chapter."

SECTION 7. Section 205A-23, Hawaii Revised Statutes, is amended to read as follows:

"Section 205A-23. County Area Boundaries. (a) Each county shall, after holding public hearings, provide for the delineation of the boundary of the special management area of that county on maps of appropriate scale. Copies of such maps shall be filed with the authority prior to December 1, 1975. The special management area in each county shall be as shown on such maps filed with the authority as of the effective date of this Act.

(b) Within two years of the effective date of this Act, the authority shall review and amend as necessary its special management area boundaries, subject to lead agency review as to compliance with the objectives and policies of this chapter and the guidelines enacted by the legislature. Copies of the amended maps shall be filed with the authority and the lead agency.

(c) After determination by the lead agency that there is compliance pursuant to Section 205A-5, the special management areas shall be the coastal zone management areas."

SECTION 8. Section 205A-24, Hawaii Revised Statutes, is repealed.

" Section 205A-24. Special management area objectives. The objectives of the special management area shall be the maintenance, restoration, and enhancement of the overall quality of the coastal zone environment, including, but nor limited to, its amenities and aesthetic values, and to provide adequate public access to publicly owned or used beaches, recreation areas and natural reserves. "

SECTION 9. Section 205A-25. Special management policy. It shall be the policy of the authority through its programs, activities and resources to:

(1) Maintain the undeveloped portion of the special management area of the state where needed for recreation, scenic, educational and scientific uses in a manner that protects resources and is of maximum benefit to the general public.

(2) Encourage public and private agencies to manage the natural resources within the State in a manner that avoids or minimizes adverse effects on the environment and depletion of energy and natural resources to the fullest extent.

(3) Protect the shorelines of the State where needed from encroachment of man-made improvements and structures.

(4) Encourage the definition and development of operational criteria and standards for the special management area which lead toward progressive enhancement of the relationship between mankind and the natural environment.

(5) Carry out a program of intergovernmental and private-public interaction and coordination on the special management area planning and management.

(6) Encourage citizen participation in the planning process for the special management area so that it continually embraces more citizens and more issues. "

SECTION 10. Section 205A-26, Hawaii Revised Statutes, is amended to read as follows:

"Section 205A-26. Guidelines. (a) In implementing this part, the authority shall adopt the following guidelines for the review of developments proposed in the special management area:

(1) All development in the special management area shall be subject to reasonable terms and conditions set by the authority in order to ensure:

(A) Adequate access, by dedication or other means, to publicly owned or used beaches, recreation areas, and natural reserves is provided to the extent consistent with sound conservation principles.

(B) Adequate and properly located public recreation areas and wildlife preserves are reserved.

(C) Provisions are made for solid and liquid waste treatment, disposition, and management which will minimize adverse effects upon special management area resources.

(D) Alterations to existing land forms and vegetation, except crops, and construction of structures shall cause minimum adverse effect to water resources and scenic and recreational amenities and minimum danger of floods, landslides, erosion, siltation, or failure in the event of earthquake.

(2) No development shall be approved unless the authority has first found:

(A) That the development will not have any substantial adverse environmental or ecological effect, except as such adverse effect is clearly outweighed by public health and safety. Such adverse effects shall include, but not be limited to, the potential cumulative impact of individual developments, each one of which taken in itself might not have a substantial adverse effect and the elimination of planning options; and

(B) That the development is consistent with the findings and policies set forth in this part.

(3) The authority shall seek to minimize, where reasonable:

(A) Dredging, filling or otherwise altering any bay, estuary, salt marsh, river mouth, slough, or lagoon.

(B) Any development which would reduce the size of any beach or other area usable for public recreation.

(C) Any development which would reduce or impose restrictions upon public access to tidal and submerged lands, beaches, portions of rivers and streams within the special management areas and the mean high tide line where there is no beach.

(D) Any development which would substantially interfere with or detract from the line of sight toward the sea from the state highway nearest the coast.

(E) Any development which would adversely affect water quality, existing areas of open water freee of visible structures, existing and potential fisheries and fishing grounds, wildlife habitats, or potential or existing agricultural uses of land.

(b) Guidelines adopted by the authority shall be consistent with the coastal zone management program objectives, and policies, of this chapter and the guidelines enacted by the Legislature.

SECTION 11. Section 205A-29, Hawaii Revised Statutes, is amended by amending subsection (a) to read:

"(a) The authority in each county shall adopt, prior to December 1, 1975 and may amend pursuant to chapter 91, the rules, regulations and procedures necessary for application of permits and hearings. The authroity may require a reasonable filing fee. The fee collected shall be used for the purposes set forth herein."

SECTION 12. Statutory material to be repealed is bracketed. New material is underscored. In printing this Act, the revisor of statutes need not include the brackets, the bracketed material, or the underscoring.

SECTION 13. This Act shall take effect upon its approval.

APPENDIX I

[CHAPTER 195D]
CONSERVATION OF WILDLIFE AND PLANTS

SECTION

[195D-1] FINDINGS AND DECLARATION OF NECESSITY
[195D-2] DEFINITIONS
[195D-3] DETERMINATION BY THE DEPARTMENT RELATING TO CONSERVATION OF PARTICULAR SPECIES
[195D-4] ENDANGERED SPECIES AND THREATENED SPECIES
[195D-5] CONSERVATION PROGRAMS
[195D-6] REGULATIONS
[195D-7] ENFORCEMENT
[195D-8] SEARCH AND SEIZURE
[195D-9] PENALTY
[195D-10] SEVERABILITY

[§195D-1] Findings and declaration of necessity. Since the discovery and settlement of the Hawaiian islands by man many species of wildlife and plants that occurred naturally only in Hawaii have become extinct and many of the remaining species are threatened with extinction, primarily because of increased human use of the land and disturbance to native ecosystems.

All indigenous species of wildlife and plants are integral parts of Hawaii's native ecosystems and comprise the living heritage of Hawaii for they represent a natural resource of scientific, cultural, educational, environmental and economic value to future generations of Hawaii's people.

To insure the continued perpetuation of indigenous wildlife and plants and their habitats for human enjoyment, for scientific purposes, and as members of ecosystems, it is necessary that the State take positive actions to enhance their prospects for survival. [L 1975, c 65, pt of §1]

[§195D-2] Definitions. As used in this chapter:

(a) "Conserve," "conserving," and "conservation" mean to use and the use of all methods and procedures for the purpose of increasing and maintaining populations of wildlife and plants. Such methods and procedures include, but are not limited to, activities such as research, census, habitat acquisition, protection, maintenance, propagation, live trapping, regulated taking, law enforcement and transplantation;

(b) "Department" means department of land and natural resources;

(c) "Ecosystem" means all natural elements, physical and biological, of the habitat or site in which any wildlife or plant species is found, and upon which it is dependent;

(d) "Endangered species" means any species whose continued existence as a viable component of Hawaii's indigenous fauna or flora is determined to be in jeopardy and has been so designated pursuant to section 195D-4;

(e) "Endangered Species Act" means the Endangered Species Act of 1973, 87 Stat. 884, or as such Act may be subsequently amended;

(f) "Indigenous species" means any wildlife or plant species growing or living naturally in Hawaii without having been brought to Hawaii by man;

(g) "Person" means an individual, corporation, partnership, trust, association, or any other private entity, or any officer, employee, agent, department, or instrumentality of the federal government, of any state or political subdivision thereof, or of any foreign government;

(h) "Plant" means any member of the plant kingdom, including seeds, roots and other parts thereof;

(i) "Species" means and shall include any subspecies or lower taxa of wildlife or plants;

(j) "Take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect endangered or threatened species of wildlife or to cut, collect, uproot, destroy, injure, or possess endangered or threatened species of plants, or to attempt to engage in any such conduct;

(k) "Threatened species" means any species of wildlife or plant which appears likely, within the foreseeable future, to become endangered and has been so designated pursuant to section 195D-4;

(l) "Wildlife" means any member of any non-domesticated species of the animal kingdom, whether reared in captivity or not, including, without exception, any mammal, fish, bird, amphibian, reptile, mollusk, crustacean, arthropod or other invertebrate, and includes any part, product, egg, or offspring thereof, or the dead body or parts thereof. [L 1975, c 65, pt of §1]

[§195D-3] Determination by the department relating to conservation of particular species. (a) The department is authorized to conduct investigations on any species of wildlife and plants in order to develop information relating to their biology, ecology population, status, distribution, habitat needs, and other limiting factors to determine conservation measures necessary for their continued ability to sustain themselves successfully.

(b) The department is authorized to promulgate pursuant to chapter 91, regulations relating to the taking, possession, transportation, importation, exportation, processing, selling, or offering for sale, or shipment of any species of wildlife and plant for the purpose of conserving the same.

(c) Except as permitted by regulations promulgated by the department, it shall be unlawful for any person to take, possess, transport, export, process, sell or offer for sale or ship any species of wildlife or plants deemed by the department to be in need of conservation pursuant to this section. [L 1975, c 65, pt of §1]

[§195D-4] Endangered species and threatened species. (a) Any species of wildlife or wild plant that has been determined to be an endangered species pursuant to the Endangered Species Act shall be deemed to be an endangered species under the provisions of this chapter and any indigenous species of wildlife or plant that has been determined to be a threatened species pursuant to the Endangered Species Act shall be deemed to be a threatened species under the provision of this chapter. However, the department may determine, in accordance with this section, that any such threatened species is an endangered species throughout all or any portion of the range of such species within this State.

(b) In addition to the species that have been determined to be endangered or threatened pursuant to the Endangered Species Act, the department may, by regulation, promulgated pursuant to chapter 91, determine any indigenous species of wildlife or wild plant to be an endangered species or a threatened species because of any of the following factors:

(1) The present or threatened destruction, modification, or curtailment of its habitat or range;
(2) Overutilization for commercial, sporting, scientific, educational or other purposes;
(3) Disease or predation;
(4) The inadequacy of existing regulatory mechanisms; or
(5) Other natural or man made factors affecting its continued existence within Hawaii.

(c) Basis for determinations. The department shall make determinations required by subsection (b) of this section on the basis of all available scientific, commercial and other data after consultation, as appropriate, with Federal agencies, other interested state and county agencies, and interested persons and organizations.

(d) Lists.

(1) The department shall issue regulations containing a list of all species of wildlife and plants that have been determined, in accordance with subsections (a) through (c) of this section, as endangered species and a list of all such species so designated as threatened species. Each list shall include the scientific, common and Hawaiian name or names, if any, and shall specify with respect to each such species over what portion of its range it is endangered or threatened.

(2) Except with respect to species of wildlife or plants determined to be endangered or threatened pursuant to the Endangered Species Act, the department shall upon its own recommendation or upon the petition of three interested persons, who have presented to the department substantial evidence which warrants review, conduct a review of any listed or unlisted indigenous species proposed to be removed from or added to the lists published pursuant to paragraph (1) of this subsection.

(e) Prohibited acts. With respect to any endangered species of wildlife or plant, it is unlawful, except as provided in subsection (f) of this section, for any person subject to the jurisdiction of this State to:

(1) Export any such species from this State;

(2) Take any such species within this State;

(3) Possess, process, sell or offer for sale, deliver, carry, transport or ship, by any means whatsoever, any such species;

(4) Violate any regulation pertaining to the conservation of such species or to any threatened species of wildlife listed pursuant to this section and promulgated by the department pursuant to authority provided by this chapter.

(f) Permits. The department may permit, under such terms and conditions as it may prescribe, any act otherwise prohibited by subsection (e) of this section, for scientific purposes or to enhance the propagation or survival of the affected species. [L 1975, c 65, pt of §1]

[§195D-5] **Conservation programs.** (a) The department shall conduct research on indigenous plants, birds and mammals and on endangered species and their associated ecosystems, and shall utilize the land acquisition and other authority vested in the department to carry out programs for the conservation, management, and protection of such species and their associated ecosystems. In addition, the department is hereby authorized to acquire by purchase, donation or otherwise, lands or interests therein needed to carry out the programs relating to the intent and purpose of this part.

(b) The office of the governor shall review other programs administered by the department and, to the extent practicable, utilize such programs in furtherance of the purposes of this section. The governor or his authorized representative shall also encourage other state and federal agencies to utilize their authorities in furtherance of the purposes of this section by carrying out programs for the protection of endangered species and by taking such action as may be necessary to insure that actions authorized, funded, or carried out by them do not jeopardize the continued existence of endangered species.

(c) In carrying out programs authorized by this section, the department may enter into agreements with federal agencies and with the counties for ad-

ministration and management of any area established under this section or utilized for conserving, managing, enhancing, or protecting indigenous plants, birds and mammals and endangered species.

(d) In carrying out programs authorized by this section, priority shall be given to the conservation and protection of those endangered plant, bird and mammal species and their associated ecosystems whose extinction within the State would imperil or terminate, respectively, their existence in the world.

(e) The department shall coordinate with the natural area reserves commission and the animal species advisory commission all research, investigations, lists of indigenous and endangered plants, birds and mammals, and programs for the conservation, management, enhancement and protection of such species that are authorized by this part.

(f) The department may permit, under such terms and conditions as are adopted by regulation, the taking, possession, transportation or exportation of any indigenous plant, bird or mammal on the endangered list for educational, or scientific purposes and for propagation of such species in captivity for preservation purposes. [L 1975, c 65, pt of §1]

[§195D-6] **Regulations.** The department shall have the authority to promulgate pursuant to chapter 91 such regulations as are necessary to carry out the purposes of this chapter. [L 1975, c 65, pt of §1]

[§159D-7] **Enforcement.** Any employee or agent of the department upon whom the board of land and natural resources has conferred powers of police officers, including the power to serve and execute warrants and arrest offenders or issue citations throughout the State, and any police officer of the counties of this State shall have the authority to enforce any of the provisions of this chapter or any regulation or rule promulgated pursuant hereto. [L 1975, c 65, pt of §1]

[§195D-8] **Search and seizure.** Any officer or agent authorized pursuant to section 195D-7 shall have the authority to conduct searches as provided by law and to seize any equipment, business records, merchandise, wildlife or wild plant taken, possessed, transported, sold, offered for sale, or used in violation of any section of this part or any rule or regulation promulgated hereunder, and any of the foregoing so seized shall be held by the department pending disposition of court proceedings, or the department prior to forfeiture may direct the transfer of wildlife or wild plants so seized to a qualified zoological, botanical, educational, or scientific institution for safekeeping, costs thereof to be paid by the defendant. Upon conviction of the person or persons from whom the seizure was made, the court shall declare the items seized forfeited to the State. Such items shall be destroyed or disposed of in any manner as the department may deem appropriate. [L 1975, c 65, pt of §1]

[§195D-9] **Penalty.** Any person who violates any of the provisions of this chapter or the provisions of any regulation or rule promulgated hereunder shall be fined not more than $1,000 or be imprisoned not more than one year, or both. [L 1975, c 65, pt of §1]

[§195D-10] **Severability.** Should any section, subsection, sentence, clause, or phrase of this chapter or any regulation or rule promulgated pursuant thereto be for any reason held by a court of competent jurisdiction to be invalid, such decision shall not affect the validity of the remaining portions of this chapter or regulation or rule promulgated pursuant thereto. [L 1975, c 65, pt of §1]

ACT 111
(SB 133, SD 1, HD 1, CD 1)

LAW ON CONSERVATION OF WILDLIFE AND PLANTS; INCLUSION OF AQUATIC LIFE, SPECIFICATION OF LAND PLANTS, AND OTHER TECHNICAL AMENDMENTS. Amends the law on conservation of wildlife and plants.

Adds a new definition of "aquatic life" as any type of species of mammal, fish, amphibian, reptile, mollusk, crustacean, arthropod, invertebrate, coral, or other animals that inhabit the freshwater or marine environment, and includes any part, product, egg, or offspring thereof, or freshwater or marine plants, including seeds, roots, and other parts thereof. Adds a new definition of "license" as written permission by the department of land and natural resources to do a particular act or series of acts which without such permission would be unauthorized or prohibited. Amends the definition of "plant" meaning any member of the plant kingdom, including seeds, roots, and other parts thereof by excepting freshwater or marine plants and changing the term to "land plants". Amends the definition of "wildlife" meaning any member of any non-domesticated species of the animal kingdom, whether reared in captivity or not, including, without exception, any mammal, fish, bird, amphibian, reptile, mollusk, crustacean, arthropod or other invertebrate, and including any part, product, egg, or offspring thereof, or the dead body or parts thereof by: (1) deleting reference to "species" and substituting "non-domesticated member of the animal kingdom"; (2) deleting listing of specific classes and phyla, invertebrates, and dead body or parts thereof; and (3) excepting aquatic life. Amends the definition of "take" meaning to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect endangered or threatened species of wildlife, or to cut, collect, uproot, destroy, injure, or possess endangered or threatened species of plants, or to attempt to engage in any such conduct by: (1) including imposition of the actions on aquatic life in the definition; and (2) specifying that the plants are "land plants".

Amends the law by making the provisions applicable to wildlife also applicable to aquatic life and specifying that the plants to which the provisions apply are land plants. Replaces references to "wild plant" with "land plant".

Amends the finding that, since the discovery and settlement of the Hawaiian islands by man, many species of aquatic life, wildlife, and land plants that occurred naturally only in Hawaii have become extinct and many of the remaining species are threatened with extinction, primarily because of increased human use of the land and disturbance to native ecosystems by deleting the reference to remaining species.

Amends the provision allowing the department to permit, under such terms and conditions as it may prescribe, any act otherwise prohibited, for scientific purposes or to enhance the propagation or survival of the affected species by replacing the department's authority to permit the actions with authority to issue temporary licenses to allow the actions. Adds a new provision making the licenses revocable for due cause and nonassignable, and that any person whose license has been revoked shall not be eligible to apply for another license until the expiration of 2 years from the date of revocation.

Amends the provision conferring the department with the authority to promulgate regulations pursuant to the Administrative Procedure Act necessary to carry out this law by requiring the adoption of rules, instead of allowing the promulgation of regulations. Replaces references to "rule or regulation" and "regulation" with "rule" and "promulgate" with "adopt" throughout other provisions.

Amends the provision allowing the department to direct the transfer of aquatic life, wildlife, or land plants seized by the department for violation of this law to a qualified zoological, botanical, educational, or scientific institution for safekeeping prior to forfeiture by also allowing transfer to an ichthyological institution.

Amends the penalty for violation of the law by deleting the fine of not more than $1,000, imprisonment of not more than 1 year, or both. Provides, instead, that a person violating the law is guilty of a misdemeanor and shall be punished (1) for a 1st conviction, by a fine of not less than $250 nor more than $1,000 or by imprisonment of not more than 1 year, or both; and (2) for a 2nd or subsequent conviction within 5 years of a previous conviction, by a fine of not less than $500 nor more than $1,000 or by imprisonment of not more than 1 year, or both. Requires, in addition to the above penalties, a fine of $500 for each specimen of a threatened species and $1,000 for each specimen of an endangered species intentionally, knowingly, or recklessly killed or removed from its original growing location, to be levied against the convicted person. (SSCR 288; HSCR 738; SC 19; HC 37) Effective May 25, 1983.

APPENDIX J

SUBTITLE 6.

GENERAL AND MISCELLANEOUS PROGRAMS

[CHAPTER 195]

NATURAL AREA RESERVES SYSTEM

SECTION

[195-1] FINDINGS AND DECLARATION OF NECESSITY
[195-2] DEFINITIONS
[195-3] HAWAII NATURAL AREA RESERVES SYSTEM
[195-4] POWERS OF THE DEPARTMENT
[195-5] RULES AND REGULATIONS
[195-6] NATURAL AREA RESERVES SYSTEM COMMISSION
[195-7] POWERS AND DUTIES
[195-8] PENALTY

[§195-1] Findings and declaration of necessity. The legislature finds and declares that (1) the State of Hawaii 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, that are highly vulnerable to loss by the growth of population and technology; (2) these unique natural assets should be protected and preserved, both for the enjoyment of future generations, and to provide base lines against which changes which are being made in the environments of Hawaii can be measured; (3) in order to accomplish these purposes the present system of preserves, sanctuaries and refuges must be strengthened, and additional areas of land and shoreline suitable for preservation should be set aside and administered solely and specifically for the aforesaid purposes; and (4) that a statewide natural area reserves system should be established to preserve in perpetuity specific land and water areas which support communities, as relatively unmodified as possible, of the natural flora and fauna, as well as geological sites, of Hawaii. [L 1970, c 139, pt of §1]

[§195-2] Definitions. As used in this chapter, unless otherwise indicated by the context:

"Department" means the department of land and natural resources.

"Commission" means the natural area reserves system commission.

"Natural reserve area" means an area designated as a part of the Hawaii natural area reserves system, pursuant to criteria established by the commission. [L 1970, c 139, pt of §1]

[§195-3] Hawaii natural area reserves system. There shall be a Hawaii natural area reserves system, hereinafter called the "reserves system", which shall consist of areas in the State of Hawaii which are designated in the manner hereinafter provided as natural area reserves. The reserve system shall be managed by the department of land and natural resources. [L 1970, c 139, pt of §1]

[§195-4] Powers of the department. The department of land and natural resources may designate and bring under its control and management, as part of the reserves system any and various areas as follows:

(1) State of Hawaii owned land under the jurisdiction of the department may be set aside as a natural area reserve by resolution of the department, subject to the approval of the governor by executive order setting the land aside for such purposes.

(2) New natural area reserves may be established:

(A) By gift, devise or purchase;

(B) By eminent domain pursuant to chapter 101; or

(C) By the setting aside of State of Hawaii owned land for such purposes by the governor, as provided by section 171-11. [L 1970, c 139, pt of §1]

[§195-5] Rules and regulations. (a) The department of land and natural resources may, subject to chapter 91, make, amend and repeal rules and regulations having the force and effect of law, governing the use, control and protection of the areas included within the reserves system, provided, that no rule or regulation which relates to the permitted use of any area assigned to the reserves system shall be valid and no use of any such area shall be permitted unless such rule or regulation or permitted use shall have been specifically approved by the natural area reserves system commission.

(b) The department may confer upon such of its employees as it deems reasonable and necessary the powers to serve and execute warrants and arrest offenders or issue citations in all matters relating to the enforcement within the reserves system of the law and rules and regulations applicable thereto. [L 1970, c 139, pt of §1]

[§195-6] Natural area reserves system commission. There shall be a natural area reserves system commission, hereinafter called the "commission". The commission shall consist of eleven members who shall be appointed in the manner and serve for the term set in section 26-34. Six of the members of the commission shall be persons possessing scientific qualifications as evidenced by an academic degree in wildlife or marine biology, botany, forestry, zoology or geology. The chairman of the board of land and natural resources, the superintendent of education, the director of planning and economic development, the chairman of the board of agriculture and the president of the university of Hawaii, or their designated representatives, shall serve as ex-officio voting members. The governor shall appoint the chairman from one of the appointed members of the commission. The members shall receive no compensation for their services on the commission but shall be entitled to reimbursement for necessary expenses while attending meetings and while in the discharge of their duties.

The commission shall be a part of the department of land and natural resources for administration purposes as provided in section 26-35.

Any action taken by the commission shall be by a simple majority of its members. Six members of the commission shall constitute a quorum to do business.

The commission may engage employees necessary to perform its duties, including administrative personnel, as provided by section 26-35.

The commission shall adopt rules guiding its conduct and shall maintain a record of its activities and actions. [L 1970, c 139, pt of §1]

[§195-7] Powers and duties. The commission shall:

(1) Recommend criteria to be used in determining whether an area is suit-

able for inclusion with the reserves system;

(2) Conduct studies of areas for possible inclusion within the reserves system;

(3) Recommend to the governor and the department of land and natural resources areas suitable for inclusion within the reserves system;

(4) Recommend policies regarding required controls and permitted uses of areas which are part of the reserves system;

(5) Advise the governor and the department of land and natural resources on any matter relating to the preservation of Hawaii's unique natural resources; and

(6) Develop ways and means of extending and strengthening presently established preserves, sanctuaries and refuges within the State. [L 1970, c 139, pt of §1]

[§195-8] **Penalty.** Any person who violates any of the laws and rules and regulations applicable to the reserves system shall be fined not more than $100 or imprisoned not more than 30 days, or both, for each offense. [L 1970, c 139, pt of §1]

REGULATION NO. 7

(Natural Area Reserves System)

REGULATION RELATING TO THE PROTECTION, CONTROL AND USE OF AHIHI-KINAU NATURAL AREA RESERVE, ISLAND OF MAUI.

Section 1. PURPOSE AND INTENT. The Legislature has found that the State of Hawaii possesses unique natural resources such as geological features and distinctive marine and terrestrial plants and animals, many of which occur nowhere else in the world, that are highly vulnerable to loss by the growth of population and technology; that these unique natural assets should be protected and preserved for present and future generations of man to provide viable illustrations of an original natural heritage, to act as base lines against which changes made in environments of Hawaii can be measured, to serve as reservoirs of natural genetic materials, and to be used, as feasible, for research in natural sciences and outdoor teaching laboratories. In keeping with these findings, the Legislature has authorized the establishment of a statewide Natural Area Reserves System to preserve in perpetuity endangered species, important geological sites, and specific land and water areas which support native flora and fauna in their natural communities.

Section 2. DESIGNATION. This regulation shall govern the protection, control and use within the AHIHI-KINAU NATURAL AREA RESERVE, hereinafter called the "Reserve," which is established by Governor's Executive Order No. 02668. It constitutes a three-component system:

A. The lava flows forming Cape Kinau resulting from the last volcanic activity on Maui Island and their developing dry land vegetation.

B. An inshore marine ecosystem containing relatively unmodified floral and faunal communities with diverse speciation.

C. Mixohaline ponds with unique environmental character and rare animals.

Section 3. LOCATION. The Reserve shall include all submerged and emerged lands, and inshore, ponded and subterranean waters of Cape Kinau and the southern part of Ahihi Bay, Island of Maui, as described and depicted in Exhibits A and B, attached hereto and made parts hereof.

Section 4. USE RESTRICTIONS AND CONTROL IN THE RESERVE.

A. The cutting, killing, damaging, burning or removal of any terrestrial or aquatic plant or animal life or related acts are prohibited in the Reserve, including but not limited to angling, netting, spearing, trapping, or the gathering of coral, shellfish, or limu.

B. The possession in the Reserve of implements for removing terrestrial or aquatic plants or animals, objects of antiquity, hunting or fishing gear including but not limited to firearms and archery equipment, angling devices, seines, nets, spears, traps, pry bars or noxious chemicals, is prohibited.

C. The introduction, possession or release of any viable form of foreign plant or animal life in the Reserve is prohibited. "Foreign" shall mean originating outside the Reserve.

D. The presence, introduction, possession or operation of any vehicle in the Reserve is prohibited.

E. The introduction or possession of any vessel on the fast or dry lands in the Reserve is prohibited and no person shall operate a vessel on or in the waters except as provided in the State Boating Regulations, Department of Transportation, State of Hawaii.

F. Swimming, wading or otherwise entering mixohaline lava ponds or brackish water ponds not definitely part of the open ocean in the Reserve or the placement of any materials in such waters, are prohibited.

G. The appropriation, excavation, injuring or destroying of any historic or prehistoric ruin or monument or any object of antiquity in the Reserve are prohibited.

H. The installation of any new structures, construction of new access routes, or the modification of existing road or trails are prohibited.

I. Activities not consistent with preservation of natural values or scientific or education uses, such as the disturbance, excavation or removal of lava or other mineral material and grazing or other agricultural uses, are prohibited.

J. Discarding of any foreign material, refuse, or litter of any description or depositing into waters within or bordering upon lands of the Reserve, any substance which pollutes or is liable to cause pollution of said waters is prohibited.

K. The willful tearing down, defacing, or disturbing of any public notice, sign, monument, or buoy posted or installed within or on the boundary of the Reserve is prohibited.

L. Camping, building fires, or nighttime use between one-half (½) hour after sunset and one-half (½) hour before sunrise in the Reserve are prohibited.

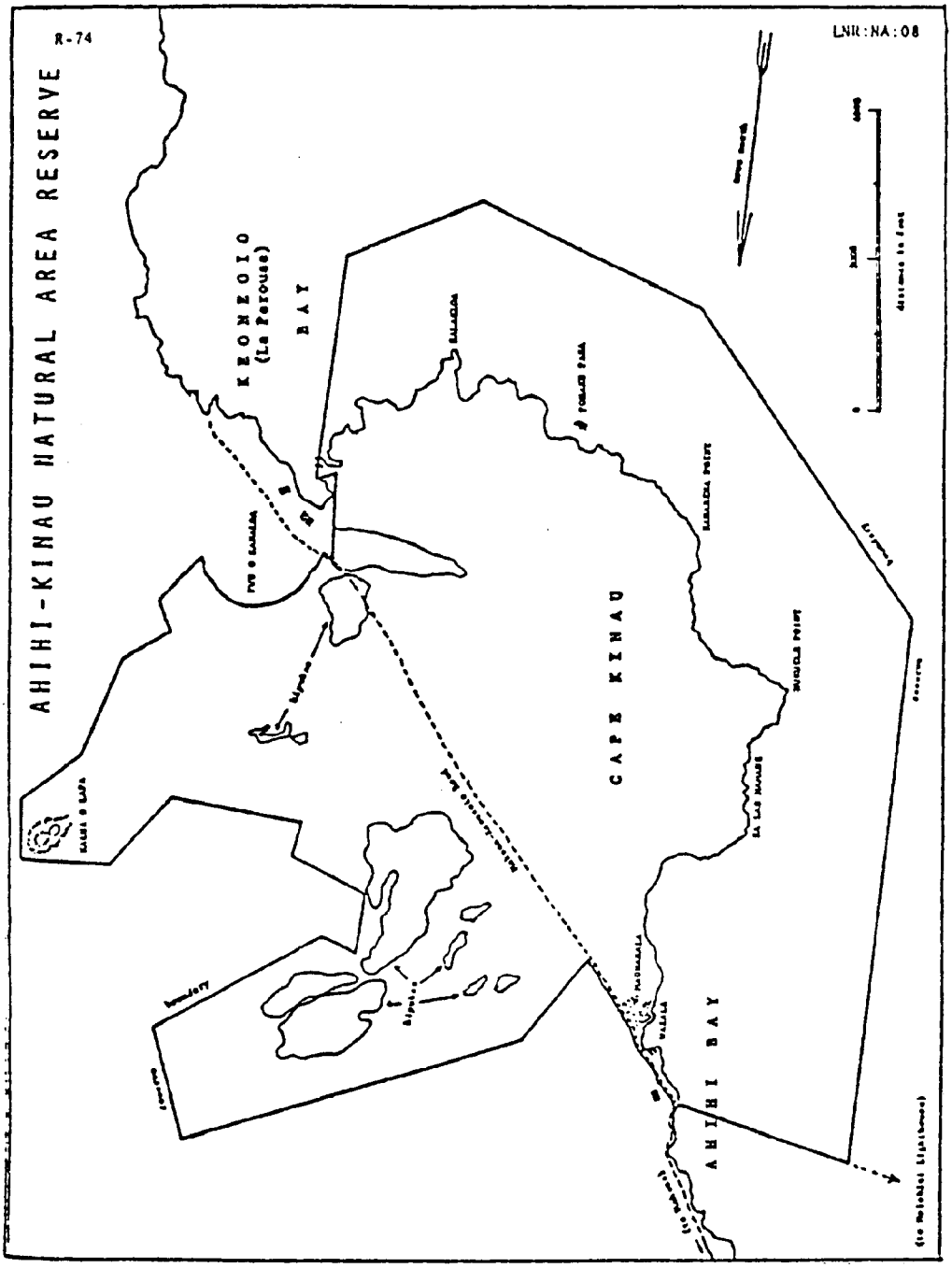
Section 5. EXCEPTED USES AND PERMITS.

A. The Board or the Chairman of the Board after approval of the Commission may issue permits granting exceptions to the restrictions of this regulation for research or educational purposes. Each request for such special-use permit shall be submitted in writing and shall be considered on its own merits, particularly its effect on the Reserve. Said permits shall be non-transferable and subject to cancellation or termination by the Board or its duly authorized representative.

B. Designated parking areas within the Reserve are excepted from specified restricted uses and from the prohibition of the introduction or possession of prohibited materials or articles as set forth in the above Sections 4B, 4C, 4D, 4E, and 4L, of this Regulation. Exceptions apply to vehicle operation, possession of boats, and catch devices intended for use outside the Reserve, possession of plant and animal materials originating outside the Reserve and being transported through it.

C. The Reserve boundary landward from the Makena-Keoneoio Road is intended to include only recent lava flows and their vegetated kipukas. Because practical boundary lines cannot precisely follow the lava's edge, those portions of vegetated, non-kipuka lands extending into the Reserve along boundary courses 3 through 23 are excluded from the restrictions of this Regulation.

Section 6. PENALTY. Any person who violates any of the provisions of this regulation shall be fined upon conviction thereof not more than One Hundred Dollars ($100.00) or imprisoned not more than thirty (30) days, or both for each offense.


AHIHI-KINAU NATURAL AREA RESERVE
R-74
LNR:NA:08
KEONEOIO
(La Perouse)
BAY
CAPE KINAU
AHIHI BAY

APPENDIX K

REGULATION 40.

CONCERNING THE ESTABLISHMENT, PROTECTION AND CONSERVATION OF THE MANELE-HULOPOE MARINE LIFE CONSERVATION DISTRICT, ISLAND OF LANAI.

PART I

SECTION 1. Establishment of District. The Board of Land and Natural Resources does hereby declare and establish the Manele-Hulopoe Marine Life Conservation District for the purpose described in Section 2 of this part.

SECTION 2. Purpose. It is the purpose of this regulation to preserve, protect and conserve the marine resources and geological features within the Manele-Hulopoe Marine Life Conservation District.

SECTION 3. Subzones. The Manele-Hulopoe Marine Life Conservation District shall consist of Subzones A and B, as described in Exhibit "A" and delineated on Exhibit "B", attached hereto and made parts hereof.

PART II

SECTION 1. Activities Prohibited. It shall be unlawful, within Subzones A and B of the District, for any person to engage in the following activities, except as provided for in Section 2 of this part:

(a) Fishing. To fish for, take, possess or remove any fin-fishes, mollusk (including live sea shells and opihi), crustacea, algae (limu) or other marine life.

(b) Geological features. To take, alter, deface, destroy, possess or remove any rocks, coral, sand, or other geological features or specimens.

(c) Pollution. To pollute or to dispose or discharge trash or other unauthorized waste in a manner contrary to provisions contained in Chapters 37, 37-A and 37-B and other applicable Chapters of the Public Health Regulations, Department of Health, State of Hawaii, and any amendments thereto, which by reference are hereby incorporated in this Regulation and made a part hereof as though fully recited herein.

(d) Construction. Without permission of proper governmental authority, to construct; install; erect; or repair piers, jetties, moorings, utilities, or structures of any kind; or abandon any type of water craft or other sizable object; sunk or unsunk, except as may be required for the normal utilization, operation and maintenance of the facilities of the Manele Small Boat Harbor in accordance with prior agreements and assurances made between the State and Federal Governments.

(e) Boats. To operate, anchor or moor any vessel in a manner contrary to the Rules and regulations Governing Boating of the Department of Transportation, State of Hawaii, and any amendments thereto, which by reference are hereby incorporated in this Regulation and made a part hereof as though fully recited herein.

SECTION 2. Exceptions. Notwithstanding any provisions of this regulation to the contrary, and except as prohibitied by any other rule, regulation or law, it shall be lawful for any person to engage in the following activities within the Manele-Hulopoe Marine Life Conservation District:

(a) Fishing. To fish for, take, possess or remove fin-fishes and crustaceans as follows:

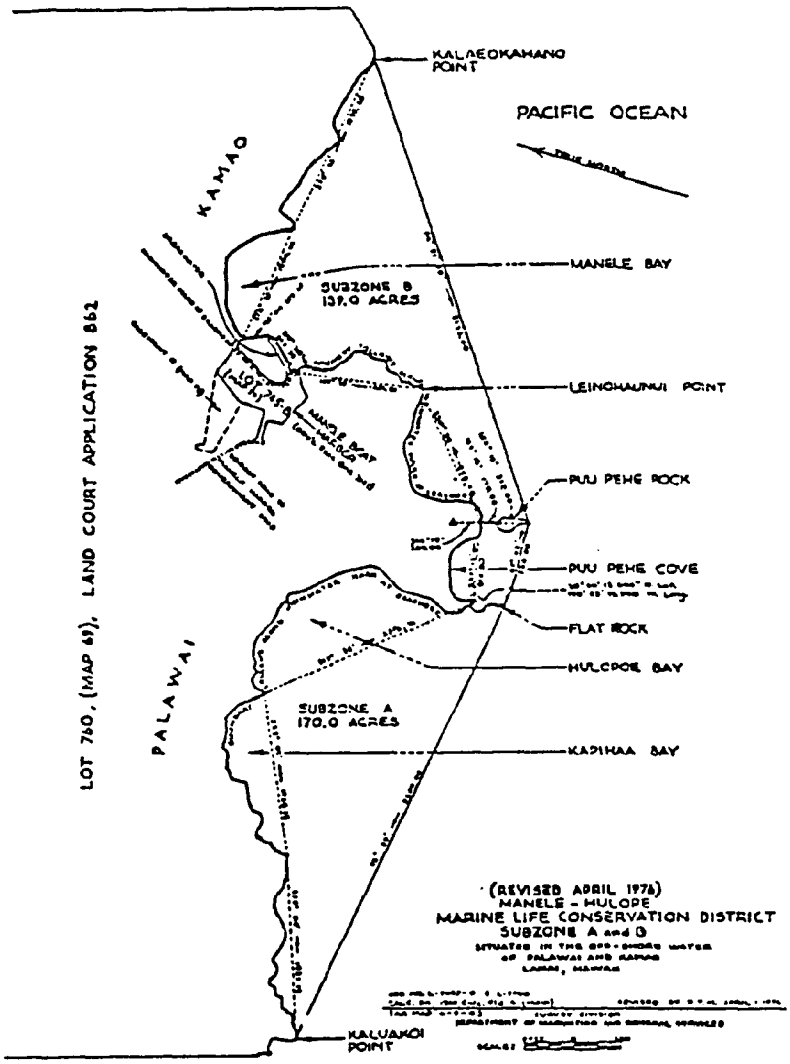
1) Within Subzone A by hook and line from the shoreline only, and;

2) Within Subzone B by any legal fishing method, except spears, traps, and nets other than throwncts.

(b) Permits. To take for scientific, propagation or other purposes, any fish, mollusks, crustacea, and the eggs thereof, and any other form of marine life or to engage in any activity prohibited in this regulation as authorized by a permit issued by the Board of Land and Natural Resources.

SECTION 3. Penalty. Any person violating the provisions of this regulation shall be fined not more than $100 or imprisioned not more than 30 days or both, as provided in Section 190-5, Hawaii Revised Statutes.

Adopted this 22nd day of October, 1976 by the Board of Land and Natural Resources.


KALAEOKAHANO POINT
PACIFIC OCEAN
KAMAO
MANELE BAY
SUBZONE B
137.0 ACRES
LEINOHAUNUI POINT
PUU PEHE ROCK
PUU PEHE COVE
FLAT ROCK
HULOPOE BAY
PALAWAI
SUBZONE A
170.0 ACRES
KAPIHAA BAY
LOT 760, (MAP 65), LAND COURT APPLICATION 862
(REVISED APRIL 1976)
MANELE - HULOPE
MARINE LIFE CONSERVATION DISTRICT
SUBZONE A and B
KALUAKOI POINT

DLNR REGULATION 42

The Board of Land and Natural Resources, pursuant to Chapter 190, Hawaii Revised Statutes, and every other law hereunto enabling, does hereby adopt the following regulation for the establishment, protection and conservation of the Molokini Shoal Marine Life Conservation District, County of Maui.

REGULATION 42. CONCERNING THE ESTABLISHMENT, PROTECTION AND CONSERVATION OF THE MOLOKINI SHOAL MARINE LIFE CONSERVATION DISTRICT, COUNTY OF MAUI.

PART I

SECTION 1. Establishment of District. The Board of Land and Natural Resources does hereby declare and establish the Molokini Shoal Marine Life Conservation District for the purpose described in Section 2 of this part.

SECTION 2. Purpose. It is the purpose of this regulation to preserve, protect and conserve the marine resources and geological features within the Molokini Shoal Marine Life Conservation District.

SECTION 3. District. The Molokini Shoal Marine Life Conservation District shall consist of and include that portion of the submerged lands and overlying waters surrounding Molokini Islet from the highwater mark at the seashore to a depth of 30 fathoms.

PART II

SECTION 1. Activities Prohibited. It shall be unlawful for any person to engage in the following activities within the District, except as provided for in Section 2 of this Part:

(a) Marine Life. To fish for, take, injure, kill, possess or remove any fin-fish, crustacean, mollusk (including shell and opihi), and eggs thereof, coral, alga (limu) or other marine life.

(b) Gear Possession. To have or possess in the water any spear, trap, net, crowbar, or any other device that may be used for the taking of marine life or geological features.

(c) Geological Features. To take, alter, deface, destroy, possess or remove any rock, sand or other sediment, coral, or other geological feature or specimen.

(d) Pollution. To pollute, or to dispose or to discharge trash or other unauthorized waste in a manner contrary to provisions contained in Chapters 37, 37-A and 37-B and other applicable Chapters of the Public Health Regulations, Department of Health, State of Hawaii, and any amendments thereto, which by reference are hereby incorporated in this regulation and made a part hereof as though fully recited herein.

(e) Construction. Without permission of proper governmental authority, to construct; install; erect; replace piers, jetties, moorings, utilities, or structures of any kind; or abandon any type of water craft or other sizable object, sunk or unsunk.

SECTION 2. Exceptions. Notwithstanding any provisions of this regulation to the contrary, and except as prohibited by any other rule, regulation or law, it shall be lawful for any person to engage in the following activities within the Molokini Shoal Marine Life Conservation District:

(a) Fishing. To fish for, take, possess or remove fin-fishes by trolling with use of artificial lures, only.

(b) Personal Safety. To possess while in the water any knife and any shark billy, bang stick, powerhead, and carbon dioxide (CO_2) injector for the sole purpose of personal safety.

(c) Permits. To take, for scientific, or other purposes, any fish, mollusk, crustacean, and the eggs thereof, and any other marine life, or to engage in any activity prohibited in this regulation as authorized by a permit issued by the Board of Land and Natural Resources.

SECTION 3. Penalty. Any person violating the provisions of this regulation shall be found guilty of a petty misdemeanor.

SECTION 4. Severability. Should any section, subsection, sentence or clause, or phrase of this regulation be for any reason held by a court of competent jurisdiction to be invalid, such decision shall not affect the validity of the remaining portions of this regulation.

State of Hawaii
Department of Land and Natural Resources
Honolulu

DIVISION OF FISH AND GAME

* * * * * * * * * *

The Board of Land and Natural Resources, pursuant to Chapter 190, Hawaii Revised Statutes, and every other law hereunto enabling, does hereby adopt the following regulation for the establishment, protection and conservation of the Honolua-Mokuleia Bay Marine Life Conservation District, island of Maui.

REGULATION 44. CONCERNING THE ESTABLISHMENT, PROTECTION AND CONSERVATION OF THE HONOLUA-MOKULEIA BAY MARINE LIFE CONSERVATION DISTRICT, ISLAND OF MAUI.

PART I

SECTION 1. Establishment of District. The Board of Land and Natural Resources does hereby declare and establish the Honolua-Mokuleia Bay Marine Life Conservation District for the purpose described in Section 2 of this Part.

SECTION 2. Purpose. It is the purpose of this regulation to preserve, protect and conserve the marine resources and geological features and to foster recreational non-consumptive public use within the Honolua-Mokuleia Bay Marine Life Conservation District.

SECTION 3. District. The Honolua-Mokuleia Bay Marine Life Conservation District shall consist of Parts 1 and 2, as described in Exhibit "A" and delineated in Exhibit "B", attached hereto and made parts hereof.

PART II

SECTION 1. Activities Prohibited. It shall be unlawful for any person to engage in the following activities within the District, except as provided in Section 2 of this part:

(a) Fishing and Taking of Marine Life. To fish for, take, injure, kill, possess, or remove any finfish, crustacean, mollusk (including sea shells and opihi), and eggs thereof, coral, algae (limu), or other marine life.

(b) Altering Geological Features. To alter, deface, take, possess, or remove any sand, coral, rock or other geological features or specimens.

(c) Possessing of Fishing or Other Gear. To have or possess, while in the Marine Life Conservation District, fishing gear or any device including but not limited to any hook-and-line, spear, trap, net, and crowbar, that may be used for the taking or altering of marine life or geological features or specimens.

(d) Polluting. To pollute, or to dispose of, or to discharge trash, or other unauthorized waste in a manner contrary to provisions contained in Chapters 37, 37-A and 37-B, and other applicable Chapters of the Public Health Regulations, Department of Health, State of Hawaii, and any amendments thereto, which by reference are hereby incorporated in this regulation and made a part hereof, as though fully recited herein.

(e) Constructing. To construct, install, erect, replace piers, jetties, moorings, utilities, or structures of any kind or to abandon any type of water craft, or other sizable object, sunk or unsunk without written permission of proper governmental authority.

(f) Boating. To operate, anchor or moor any vessel in a manner contrary to the Rules and Regulations Governing Boating of the Department of Transportation, State of Hawaii, and any amendments thereto, which by reference are hereby incorporated in this Regulation and made a part hereof as though fully recited herein.

SECTION 2. Activities Permitted. Notwithstanding any provision of this regulation to the contrary, and except as otherwise prohibited by any other rule, regulation or law, it shall be lawful for any person within the District to engage in the following activities:

(a) Possession of Fishing Gear and/or Fish and Other Aquatic Organisms. To possess aboard any boat or water craft any legal fishing gear or fish or other aquatic organisms taken outside of the Marine Life Conservation District and brought within the restricted area.

(b) Other Activities with a Permit. It shall be lawful with a permit issued by the Board of Land and Natural Resources under such terms and conditions as it deems necessary to:

(1) take or possess any fish, mollusk, crustacean, and eggs thereof, and any other marine life or plant, or to engage in any activity prohibited in this regulation for scientific or educational purposes.

(2) bag and remove akule within the Honolua-Mokuleia Marine Life Conservation District provided that the akule are first netted in waters outside of the Marine Life Conservation District, and provided further that the net is moved only over the sandy bottom.

SECTION 3. Revocation of Permits. The Board of Land and Natural Resources may revoke any permit issued pursuant to this regulation for any violation of the terms and conditions of the permit for a period of up to one-year from the date of revocation. Any person whose permit has been revoked shall not be eligible to apply for another permit until the expiration of one year from the date of revocation.

SECTION 4. Penalty. Any person violating the provisions of this regulation shall be guilty of a petty misdemeanor and upon conviction thereof, be punished in accordance with Section 190-5 Hawaii Revised Statutes.

SECTION 5. Severability. Should any section, subsection, sentence, clause, or phrase of this regulation be for any reason held by a court of competent jurisdiction to be invalid, such decision shall not affect the validity of the remaining portions of this regulation.

Adopted this 27th day of January, 19 78 by the Board of Land and Natural Resources.

Regulation 44 Exhibit "A"

STATE OF HAWAII
Survey Division
C.S.F. No. 18,140 Dept. of Accounting and General Services October 19, 1977
Honolulu

HONOLUA-MOKULEIA BAY
MARINE LIFE CONSERVATION DISTRICT

PARTS 1 AND 2
Situated in the Off-Shore Waters of Honolua
Lahaina (Kaanapali), Maui, Hawaii

PART 1 - Honolua Bay

Beginning at Kalaepiha Point on highwater mark at seashore at the west corner of Honolua Bay, the coordinates of said point of beginning referred to Government Survey Triangulation Station "MALO 2" being 3043.33 feet South and 1037.63 feet West, thence running by azimuths measured clockwise from True South:-

1. 205° 38' 1186.21 feet across Honolua Bay to a point on highwater mark at seashore;

Thence along Land Patent 8129, Land Commission Award 8559-B, Apana 23 to Wm. C. Lunalilo, along highwater mark at seashore for the next three (3) courses, the direct azimuths and distances between points on said high-water mark at seashore being:

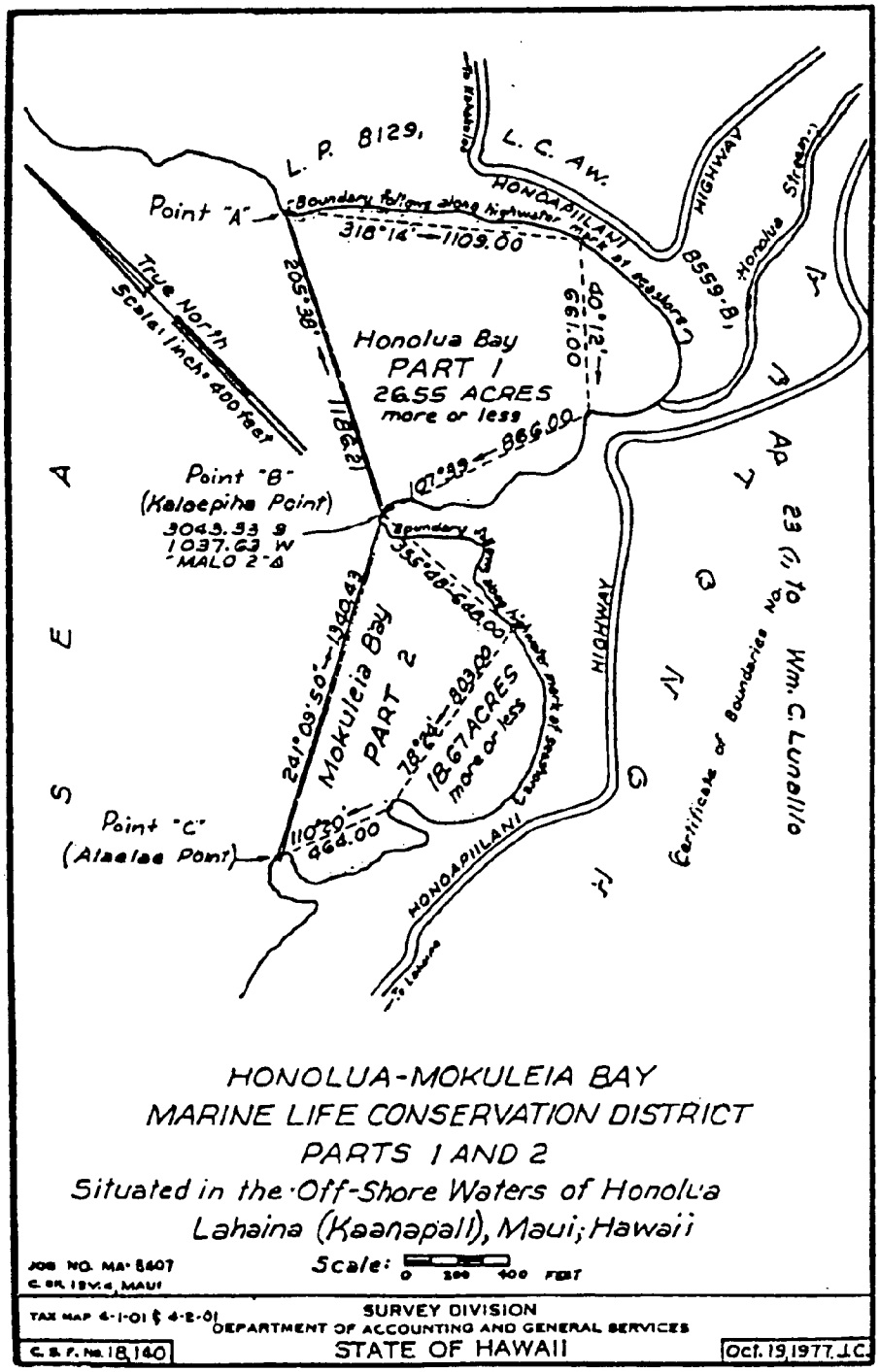
2. 318° 14' 1109.00 feet;
3. 40° 12' 661.00 feet;
4. 107° 39' 866.00 feet to the point of beginning and containing an AREA OF 26.55 ACRES, more or less.

PART 2 - Mokuleia Bay

Beginning at Kalaepiha Point on highwater mark at seashore at the north corner of Mokuleia Bay, the coordinates of said point of beginning referred to Government Survey Triangulation Station "MALO 2" being 3043.33 feet South and 1037.62 feet West, thence running by azimuths measures clockwise from True South:-

Along Land Patent 8129, Land Commission Award 8559-B, Apana 23 to Wm. C. Lunalilo, along highwater mark at seashore for the first three (3) courses, the direct azimuths and distances between points on said highwater mark at seashore being:

1. 355° 48' 648.00 feet;
2. 78° 24' 803.00 feet;
3. 110° 20' 464.00 feet to Alaelae Point;
4. 241° 09' 50" 1340.43 feet across Mokuleia Bay to the point of beginning and containing an AREA OF 18.67 ACRES, more or less.


L. P. 8129,
L. C. Aw.
HONOAPIILANI
HIGHWAY
Honolua Stream
Point "A"
Boundary follows along highwater mark at seashore
318°14' — 1109.00
True North
Scale: 1 inch = 400 feet
205°38' — 1186.21
40°12' — 661.00
8559-B1
Honolua Bay
PART 1
26.55 ACRES
more or less
107°39' — 866.00
Point "B"
(Kaloepiha Point)
3043.33 S
1037.63 W
"MALO 2" Δ
Boundary
355°48' — 648.00
241°09'50" — 1340.43
Mokuleia Bay
PART 2
78°24' — 803.00
18.67 ACRES
more or less
Point "C"
(Alaelae Point)
110°30' — 464.00
HONOAPIILANI
HIGHWAY
Certificate of Boundaries No. 23 (1) to Wm. C. Lunalilo
S E A
A P A N O H A
HONOLUA-MOKULEIA BAY
MARINE LIFE CONSERVATION DISTRICT
PARTS 1 AND 2
Situated in the Off-Shore Waters of Honolua
Lahaina (Kaanapali), Maui; Hawaii
Scale: 0 200 400 FEET
JOB NO. MA-5407
C. SR. 19V.4, MAUI
TAX MAP 4-1-01 & 4-2-01
SURVEY DIVISION
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
C. S. F. No. 18,140
STATE OF HAWAII
Oct. 19, 1977. J.C.

APPENDIX L

CHAPTER 267
BOATING LAW

Historical note. Source notes for this chapter begin with L 1965, c 200, which completely amended and reenacted the chapter. Prior law: L 1917, c 152, L 1937, c 65 and L 1957, c 158.

SECTION
267-1 DECLARATION OF POLICY
267-2 PURPOSE
267-3 DEFINITIONS
267-4 RULES AND REGULATIONS
267-5 FINES AND PENALTIES
267-6 ENFORCEMENT
267-6.1 ARREST OR CITATION
267-7 POLICE REPORTS
267-8 DUTY OF OPERATOR INVOLVED IN, AND AT THE SCENE OF, A BOATING ACCIDENT; LIMITATIONS ON LIABILITY
267-9 ACCIDENT REPORTS BY OPERATORS; CONFIDENTIAL NATURE
267-10 RECIPROCAL AGREEMENTS AND COURTESY
267-11 VESSELS REQUIRED TO BE REGISTERED AND NUMBERED
267-12 FEES AND CHARGES
267-13 DISPOSITION OF REVENUES
267-14 UNIFORMITY
267-15 PREEMPTION OF LOCAL LAW AND SPECIAL RULES

§267-1 Declaration of policy. The legislature hereby finds, determines, and declares that this chapter is necessary to promote and attain (1) the full use and enjoyment of the waters of the State; (2) the safety of persons and the protection of property as related to the use of the waters; (3) a reasonable uniformity of laws and regulations regarding the use of the waters; and (4) conformity with, and implementation of, federal laws and requirements. [L 1965, c 200, pt of §1; Supp, §112-40]

§267-2 Purpose. The purpose of this chapter is to authorize the department of transportation to adopt and promulgate reasonable rules and regulations for the regulation of vessels and their use in the waters of the State, which, together with the provisions of this chapter, shall conform with and supplement federal laws and requirements to fully implement the declared policy of section 267-1. [L 1965, c 200, pt of §1; Supp, §112-41]

§267-3 Definitions. In this chapter, if not inconsistent with the context:

(1) "Boat dealer" means a person engaged wholly or partly in the business of selling or offering for sale, buying or taking in vessels for the purpose of resale, or exchanging vessels, for gain or compensation.

(2) "Boat livery" means the business of holding out vessels for rent, lease, or charter.

(3) "Boat manufacturer" means a person engaged in
- (A) The manufacture, construction, or assembly of boats or associated equipment; or
- (B) The manufacture or construction of components for boats and associated equipment to be sold for subsequent assembly; or
- (C) The importation into the United States for sale of boats, associated equipment, or components thereof.

(4) "Boating accident" means any occurrence involving a vessel or its equipment that results in:
- (A) The death of a person;
- (B) The loss of consciousness by any person, the receipt of medical treatment by any person, or the incapacity of any person for more than twenty-four hours;
- (C) Damage to the vessel and other property totalling more than $100; or
- (D) The disappearance of a person from the vessel under circumstances that indicate death or injury.

(5) "Certificate" means certificate of number.

(6) "Coast guard" means the Coast Guard of the United States, or its successor agency.

(7) "Department" means the department of transportation.
(8) "Director" means the director of transportation.
(9) "Federal laws and requirements" means all statutes, rules, and regulations, and other laws of the United States, which may be applicable to any and all subject matters of this chapter, and of the rules and regulations adopted and promulgated pursuant to this chapter.
(10) "Length" means the measurement of a vessel from end to end over the deck.
(11) "Operate" means to navigate or otherwise use a vessel on or in the waters of the State.
(12) "Operator" means a person who operates or who has charge of the navigation or use of vessel.
(13) "Person" means an individual, partnership, firm, corporation, association, or other legal entity.
(14) "State" means the State of Hawaii.
(15) "Undocumented vessel" means any vessel which does not have and is not required to have a valid marine document as a vessel of the United States.
(16) "Vessel" means all description of watercraft, used or capable of being used as a means of transportation on or in the water, except a seaplane.
(17) "Waters of the State" means any waters within the jurisdiction of the State, the marginal seas adjacent to the State, and the high seas when navigated as a part of a journey or ride to or from the shores of the State. [L 1965, c 200, pt of §1; Supp, §112-42; HRS §267-3; am L 1974, c 103, §1]

§267-4 Rules and regulations. The department of transportation shall from time to time make, alter, amend, and appeal rules and regulations not inconsistent with the law as may be reasonably necessary to implement the policy and purpose of this chapter, and in such adoption and promulgation the department may classify vessels into appropriate categories and classes.

Without limiting the generality of the department's power to adopt and promulgate other rules and regulations pursuant to this section, it shall adopt and promulgate rules and regulations with respect to the following:

(1) The registration and numbering of vessels;
(2) The operation, use, and equipment of vessels on or in the waters of the State; and
(3) The conduct of persons involved in boating accidents and in the reporting of the accidents and other casualties and losses to the department.

Rules and regulations made pursuant to the powers granted under this section shall be adopted and promulgated pursuant to chapter 91 and shall, upon being duly adopted and promulgated, have the force and effect of law. [L 1965, c 200, pt of §1; Supp, §112-43]

§267-5 Fines and penalties. Any person violating any of the provisions of this chapter, or of the rules and regulations adopted and promulgated pursuant to this chapter, shall be fined not more than $1,000 or imprisoned not more than one year, or both; provided that, in addition to, or as a condition to the suspension of, the fines and penalties, the court may deprive the offender of the privilege of operating any vessel, in the waters of the State for a period of not more than two years. [L 1965, c 200, pt of §1; Supp, §112-44]

§267-6 Enforcement. The director of transportation may enter into a contract with corporations authorized to engage in business in the State to aid in enforcing this chapter and all rules and regulations adopted pursuant to this chapter in specified areas provided that the corporations agree to undertake this activity at no expense to the State and to hold the State harmless in respect to all injuries, losses or damages arising from, growing out of or caused by any acts or omissions of the corporations, their officers, agents or employees in connection with the contract. The director of transportation may appoint no more than ten officers and employees of the corporations to serve as boating enforcement officers to enforce this chapter. The director of transportation, officers, and employees of the department of transportation, boating enforcement officers appointed by the director under this section, and every state and county officer charged with the enforcement of state laws shall enforce and assist in the enforcement of this chapter and of all rules adopted pursuant to this chapter.

For the purpose of enforcement, the powers of police officers are conferred upon the director, other officers and employees of the department designated by the director, and boating enforcement officers appointed by the director; and the powers herein conferred shall, without limiting their generality, include the power to be exercised reasonably with respect to the service and execution of warrants, arresting of offenders, service of notices and order, and the stopping, boarding, investigation, and inspection of vessels.

Nothing herein shall preclude enforcement of state or federal laws and requirements pursuant to agreements or other arrangements entered into between the director and appropriate officers and agencies of the United States and other states to ensure the fullest possible cooperation in promoting and attaining the declared policy of section 267-1. [L 1965, c 200, pt of §1; Supp, §112-45; HRS §267-6; am L 1979, c 195, §1]

§267-6.1 Arrest or citation. Except when required by State law to take immediately before a district judge a person arrested for a violation of any provision of this part, including any rule or regulation adopted and promulgated pursuant to this part, any person authorized to enforce the provisions of this part, hereinafter referred to as enforcement officer, upon arresting a person for violation of any provision of this part, including any rule or regulation adopted and promulgated pursuant to this part shall, in the discretion of the enforcement officer, either (1) issue to the purported violator a summons or citation, printed in the form hereinafter described, warning him to appear and answer to the charge against him at a certain place and at a time within seven days after such arrest, or (2) take him without unnecessary delay before a district judge.

Said summons or citation shall be printed in a form comparable to the form of other summonses and citations used for arresting offenders and shall be designed to provide for inclusion of all necessary information. The form and content of such summons or citation shall be adopted or prescribed by the district courts.

The original of a summons or citation shall be given to the purported violator and the other copy or copies distributed in the manner prescribed by the district courts; provided that, the district courts may prescribe alternative methods of distribution for the original and any other copies.

Summonses and citations shall be consecutively numbered and the carbon copy or copies of each shall bear the same number.

Any person who fails to appear at the place and within the time specified in the summons or citation issued to him by the enforcement officer, upon his arrest for violation of any provision of this part, including any rule or regulation promulgated pursuant to this part, shall be guilty of a misdemeanor and, on conviction, shall be fined not more than $1,000, or be imprisoned not more than six months, or both.

In the event any person fails to comply with a summons or citation issued to such person, or if any person fails or refuses to deposit bail as required, the enforcement officer shall cause a complaint to be entered against such person and secure the issuance of a warrant for his arrest.

When a complaint is made to any prosecuting officer of the violation of any provision of this part, including any rule or regulation promulgated thereunder, the enforcement officer who issued the summons or citation shall subscribe to it under oath administered by another official of the department of transportation

whose names have been submitted to the prosecuting officer and who have been designated by the director of transportation to administer the same. [L 1969, c 266, §1; am L 1970, c 188, §39; am L 1974, c 58, §3]

Effect of Penal Code. Classification of offense and authorized punishment, see §§701-107, 706-640, 663.

§267-7 **Police reports.** For the purpose of enforcement, it shall be incumbent upon the police chief of each political subdivision of the State to transmit to the department of transportation a copy of every investigation report submitted by his subordinate officers which relate to boating accidents or the theft, loss, or recovery of vessels required to be registered and numbered pursuant to section 267-11. [L 1965, c 200, pt of §1; Supp, §112-46]

§267-8 **Duty of operator involved in, and at the scene of, a boating accident; limitations on liability.** (a) An operator involved in a boating accident, if and so far as he can do so without serious danger to his own vessel, or person aboard, shall render such assistance as may be practicable and necessary to other persons and any property in order to save them from danger caused by the accident. He shall also make every reasonable effort to identify himself by giving his name and address and the identification of the vessel he was operating to (1) all persons injured; (2) all owners of properties damaged; and (3) all operators of other vessels involved in the accident. It shall further be his duty to reasonably cooperate with all duly authorized personnel of governmental agencies investigating the accident.

(b) Any person who renders assistance in compliance with subsection (a) and any person who in good faith without remuneration or expectation of remuneration renders assistance at the scene of a vessel collision, accident, or other casualty without objection of any person assisted, shall not be liable for any civil damages resulting from his acts or omissions in providing or arranging towage, medical treatment, or other assistance, except for damages as may result from his gross negligence or wanton acts or omissions. [L 1965, c 200, pt of §1; Supp, §112-47; HRS §267-8; am L 1973, c 125, §1]

Amendment Note

1973 amendment does not affect rights and duties that matured, penalties that were incurred, and proceedings that were begun, before May 18, 1973. L 1973, c 125, §2.

§267-9 **Accident reports by operators; confidential nature.** The operator of (1) any vessel involved in a boating accident in the waters of the State, and (2) any vessel required to be registered, or registered, with the department of transportation and involved in a boating accident in any waters, shall file a written report with the department truthfully setting forth all relevant information required by the department; provided that the report need not be filed with the department where the operator is required by federal laws and requirements to report the accident to the Coast Guard.

The department shall transmit information of all boating accidents to the Coast Guard as may be requested by the agency for compilation, analysis, and publication of statistics.

The accident reports required by this section shall be used only to enable the department and the Coast Guard to make findings of causes of accidents and

recommendations for their prevention, and to compile information for use in making statistical reports; except that they may also be used in the prosecution of the filing of false accident reports. [L 1965, c 200, pt of §1; Supp, §112-48]

§267-10 Reciprocal agreements and courtesy. The department of transportation may enter into, amend, revise, suspend, or revoke reciprocal agreements or arrangements with appropriate and duly authorized agencies of other jurisdictions whereby vessels properly numbered and equipped under their laws and regulations may be granted the privileges, exemptions, and benefits granted to owners of vessels properly numbered and equipped under the laws and regulations of this State, in exchange for similar privileges, exemptions, and benefits being extended to owners of vessels registered and numbered in this State.

The department may by appropriate rules and regulations define the extent and nature of privileges, exemptions, and benefits which may be extended, as a matter of courtesy, to vessels properly numbered and equipped in other jurisdictions not covered by reciprocal agreements or arrangements.

Notwithstanding the preceding language of this section, the department shall recognize the validity of a number awarded to any vessel by (1) another state under a numbering system approved by the Coast Guard under appropriate federal laws and requirements, or (2) by the Coast Guard, for a period of at least ninety days. [L 1965, c 200, pt of §1; Supp, §112-49]

§267-11 Vessels required to be registered and numbered. Every undocumented vessel shall be registered and numbered before its use or operation on or in the waters of the State on an annual basis in accordance with the rules and regulations of the department of transportation except:

(1) Foreign vessels temporarily using the waters of this State;
(2) Public vessels of the United States;
(3) Ships' life boats; and
(4) Other vessels exempted by the department, if federal laws and requirements permit the department to exempt the vessels. [L 1965, c 200, pt of §1; Supp, §112-50]

§267-12 Fees and charges. (a) Except for vessels for which fees and charges are provided in subsection (b), for each vessel required to be registered and numbered by section 267-11, the department of transportation shall assess and collect from the owner the following fees and charges:

(1) Initial registration fee. For the issuance of an original certificate:
  (A) For each vessel twenty feet or less in length, $4.
  (B) For each vessel more than twenty feet in length, $10.
  (C) For each amphibious vehicle licensed as a motor vehicle, $4.
(2) Annual certificate renewal fee. For the annual renewal of a certificate:
  (A) For each vessel twenty feet or less in length, $3.
  (B) For each vessel more than twenty feet in length, $8.
  (C) For each amphibious vehicle that is licensed as a motor vehicle, $3.
(3) Reregistration fee. For the reregistration of a vessel, after a certificate has been canceled or voided, the appropriate amount provided in subsection (a)(1).
(4) Transfer fee. For the transfer of a certificate, $3.
(5) Certificate and registration sticker replacement fee. For the issuance of a replacement certificate or a replacement set of vessel registration stickers, $1.
(6) Certificate modification fee. For modifying a certificate, $3.
(7) Penalty charges for late registration, etc. For each month or fraction thereof that a registration, renewal, reregistration or transfer is delinquent, one-tenth of the appropriate fee shall be added to the normal fee.

(8) Exemptions. The department may reasonably establish, by rules and regulations, exemptions from the fees required by this section.

(b) For a vessel owned by or operated under the custody or control of a boat manufacturer or boat dealer, the manufacturer or dealer shall pay, in lieu of the fees and charges provided for in subsection (a):

(1) Boat manufacturer and boat dealer certificate fee. For each certificate, a fee of $10.

(2) Annual certificate renewal fee. For the annual renewal of a certificate, a fee of $8.

(3) Certificate reissuance. For the reissuance of a certificate after a certificate has been canceled or voided, a fee of $10.

(4) Certificate and registration sticker replacement fee. For the replacement of a certificate or registration sticker, a fee of $1. [L 1965, c 200, pt of §1; Supp, §112-51; am L 1967, c 288, §1; HRS §267-12; am L 1971, c 58, §3; am L 1977, c 57, §1]

Cross References

Modification of fees, see §92-28.

§267-13 Disposition of revenues. All fees and penalties collected pursuant to section 267-12 shall be deposited in the boating special fund. [L 1965, c 200, pt of §1; Supp, §112-52; HRS §267-13; am L 1971, c 93, §4; am L 1972, c 180, §2]

Cross References

Boating special fund, see §248-8.

§267-14 Uniformity. This chapter shall be interpreted and construed in the manner best able to effectuate the general purposes of attaining uniformity in the laws of the State, and with the laws of other states and the United States. [L 1965, c 200, pt of §1; Supp, §112-53]

§267-15 Preemption of local law and special rules. If any ordinance or regulation of any political subdivision of the State conflicts or is inconsistent with this chapter or with the rules and regulations adopted and promulgated pursuant thereto, the ordinance or regulation shall be void.

Any political subdivision of the State may, at any time, make formal request to the director of transportation for the department of transportation's adoption and promulgation of special rules and regulations with reference to the operation and use of vessels on any waters within its jurisdiction. The request shall set forth the reasons which make these special rules or regulations necessary or appropriate.

The department may make special rules and regulations with reference to the operation and use of vessels on any waters within the jurisdiction of any political subdivision of the State as may be reasonably necessary to implement the declared policy of section 267-1. [L 1965, c 200, pt of §1; Supp, §112-54]

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