

**HOUSE COMMITTEE ON FINANCE
BUDGET REQUEST FOR SUPPLEMENTAL BUDGET 2008-2009**

January 2008

Program Structure: 04 02 01

Program ID and Title: LNR 401 – Aquatic Resources

I. Introduction

A. Summary of Program Objectives

The Program objectives are to preserve and enhance native and indigenous fish and other aquatic species and their habitats for Hawaii's people and its visitors through protection, active management, habitat restoration, public information, education, and other effective management measures.

B. Description of Program Objectives

Objectives of the Program are to protect Hawaii's aquatic resources, and the qualities of aquatic habitats those resources require. This program also includes the central administration for all three of the department's statewide fisheries programs (LNR 153, 805 and 401), administered by the Department's Division of Aquatic Resources, and the staff of the division's neighbor-island offices.

1. Performing administrative functions for the department's three statewide aquatic resources programs (Division of Aquatic Resources), including planning, budgeting, coordination and implementation.
2. Conducting public meetings and hearings, to promulgate rules on regulated areas, and to propose amendments to statutes.
3. Carrying out surveys, inventories, and research of reef, stream, and estuarine fish stocks and their associated species and habitats.
4. Establishing, monitoring and maintaining Marine Life Conservation Districts (MLCDs), Fishery Management Areas (FMAs), Fish Replenishment Areas (FRAs), and other management methods.
5. Evaluating environmental assessments and impact statements, Conservation District Use Applications, Stream Channel Alteration and related applications, requests for approval to import live aquatic organisms, and development, regulatory or research proposals in other forms; issuing Special Activity Permits for aquatic organisms and permits for protected waters.

6. With other agencies investigate fish kills, oil-spill, water-pollution incidents; responding to sea turtle and marine mammal strandings and haul-outs.
7. Supporting and collaborating with the State's Commission on Water Resources Management by conducting field research and maintain a stream/watershed database to provide the Commission with information on abundance, distribution and habitat requirements of native freshwater species and conditions of stream and estuarine habitats, in support of development of Instream Flow Standards as mandated by the Hawaii Supreme Court.
8. Conducting investigations to gather information on and assessing effects of fishing and anthropogenic environmental change and coastal fish stocks and estuarine nursery habitats to develop management strategies to sustain these for the future.
9. Coordinating these activities with other agencies, institutions and councils including the Department of Health, Department of Agriculture, University of Hawaii's Hawaii Institute of Marine Biology and Sea Grant programs, The Hawaii Cooperative Fisheries Unit, the Hawaii Coral Reef Initiative, the Oceanic Institute, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, the Western Pacific Fishery Management Council, the Hawaiian Islands Humpback Whale National Marine Sanctuary, the Paphanaumokuaukea Marine National Monument Management Board, and the U.S. Coral Reef Task Force.
10. Maintaining and improving the statewide program of aquatic resources education, approved for and attracting federal revenues, which develops and distributes informational and educational materials (posters, brochures, workbooks, handouts, video presentations, etc.) to users of aquatic resources and the general public and assists the Department of Education, charter and private schools by training teachers and volunteer instructors to use these curriculum materials.

C. Explain how the Program intends to meet its objectives in the upcoming supplemental year

Meeting program objectives to achieve our goal of managing and preserving Hawaii's aquatic resources for the current generation and to assure their availability for future generations is a serious challenge. The program will accomplish most of its major objectives by the following efforts: A conceptual framework on marine managed areas progresses with the conducting of statewide focus group meetings to obtain public input into a protective category development for marine areas. The battle continues in the fight against marine alien invasive species with the implementation of the Alien Invasive Species

Management Plan. One notable development has been the establishment of the Alien Invasive Species Response Team to stem the proliferation of marine invasives. The incorporation of State waters into the Papahānaumokuākea Marine National Monument in the Northwestern Hawaiian Islands is a major step towards the protection of an intact Hawaiian marine ecosystem. With current activities including a highly ranked application for designation of the Monument as a World Heritage site, and establishment of a formal co-management regime with the Department of Commerce and the Department of the Interior, the program has made significant steps in the interests of preserving our natural and cultural marine resources for present and future generations. Participation in U.S. Coral Reef Task Force activities and support of community-based actions (such as the Instream Flow Council, Watershed Partnerships, Reef Watch, and the Local Resource Councils in West Hawaii), both from the top and at the community level, will comprehensively support the mandate to protect our natural resources. The program also supports the efforts of the Commission on Water Resources Management (CWRM) to set Instream Flow Standards by providing biological data on the distribution, abundance and habitat requirements of native stream species, and by collaborating with CWRM staff to coordinate expenditures and geographical scope of activities in support of common objectives.

II. Program Performance Results

A. Discuss the performance results achieved by the Program in FY '07 and '08

Substantial federal funding, most of which requires no State matching funds, has been obtained to focus on coral reef related fisheries and habitat problems, marine protected areas, and alien species management. Rule amendments for the West Hawaii Fishery Replenishment Area rules have been adopted, creating enforceable provisions for commercial aquarium fish harvesting, greater restrictions on the use of lay nets, and a ban on the use of lay nets statewide. Public information programs have emphasized protection of coral reef habitats, prevention of the introduction of alien species, and safe behavior on rocky ocean shorelines.

Staff were active participants on the Hawaii Coral Reef initiative management committee, the Sea Grant management committee, the Papahānaumokuākea Monument Management Board, the U.S. Coral Reef task force, and serves as the federal point of contact for related activities. As part of a legislative mandate, the Division convened a State Task Force to examine threats of alien marine species introductions through ballast water exchanges and transport of hull fouling organisms by ocean-going vessels, and subsequently developed and passed administrative rules for ballast water management.

Hawaii's coral reefs are now receiving greater attention as a result of the formation of the Hawaii Coral Reef Initiative Research Program, which is managed by a partnership between the University of Hawaii and the Division of

Aquatic Resources. Through sponsored projects the program complements the efforts of the U.S. Coral Reef Task Force and the Marine Conservation Act to develop strategies to protect healthy reefs and, where possible, to implement strategies to reverse degradation. Considerable additional federal funds have been obtained by the Division to support research directed towards those ends, with particular emphasis on ecosystem level projects at Maunalua Bay, Oahu and Kahekili, Maui.

The Department has taken an active role in working with the newly created Papahānaumokuākea Marine National Monument to develop management and science plans for these 1,200 miles of ocean, reefs and islands. Through a Memorandum of Agreement, DAR is working actively with the Department of Commerce and Department of Interior to develop a mutually beneficial management regime for these Leeward Islands, and has taken the lead on a proposal to make the area a World Heritage site via United Nations designation.

The Hawaiian Island Humpback Whale National Marine Sanctuary is co-managed by the State along with its Federal counterpart. Recent efforts to manage resources within the sanctuary include the rescue of a humpback whale, relocating a drifting dying whale offshore that had attracted numerous very large Tiger Sharks, dolphins, and the endangered Hawaiian monk seal. Efforts also included the protection of newborn monk seals during the six-week weaning process. General outreach efforts were made to help the public understand and participate in protection of these marine resources.

A series of regular meetings has been initiated between staff in the Division of Aquatic Resources and the Commission for Water Resource Management, in which priority areas within the State of Hawaii have been identified for acquisition of biological and hydrological data essential for the development of minimum instream flow standards. Additional biological and geographical data layers were also integrated into the Division of Aquatic Resources' watershed geo-database, most notably watershed shape files for the entire main Hawaiian Islands, and data on the introduction of alien sport fishes into ditch and reservoir systems. The draft Atlas of Hawaiian Watersheds and their Biological Resources is presently being edited for final publication and will be made available to the general public on our Web Site, and will be the basis for setting Instream Flow Standards.

The program has maintained an active and aggressive approach to control and interdiction of invasive marine algae. Notable projects included deployment of a "Supersucker Junior" mechanical control platform at Waikiki, and the pilot testing of similar technology on Maui in cooperation with Maui County. The program is also in the process of establishing an innovative herbivore management area at Kahekili, on west Maui, to enhance populations of fishes and invertebrates that graze on invasive marine algae, thereby utilizing local ecosystem services to combat alien species.

Finally, the program has refined and expanded its approach to incident responses, particularly vessel groundings and sedimentation events, by developing updated Standard Operating Procedures integrated with those of DOCARE and the Department of Health. This includes new reporting forms, and standardized protocols for damage assessment and evidence collection. As a result of these efforts, the Department successfully pursued an administrative penalty before the Board of Land and Natural Resources for coral damage due to illegal anchoring at Ahihi-Kinau Natural Area Reserve, and currently has a second case pending before the Board related to a vessel grounding in the Molokini Marine Life Conservation District.

- B. Explain how these results relate to the Program's Objectives and Department's mission

The protection of Hawaii's aquatic resources manifests itself in the above-described efforts. The establishment of the NWHI Monument, planning efforts for additional Marine Life Conservation Districts, identifying nursery habitats for coastal species, setting minimum instream flow standards, addressing invasive species issues, monitoring the effects of regulations such as those on lay gillnets, and enhanced incident response all serve to protect fishes, corals, and other animals, and to reduced degradation of their habitats. Biological value is therefore enhanced and an additional side benefit is the positive effect it has on the State's tourism industry.

The establishment of additional regulations in areas such as the West Hawaii Regional Fisheries Management Area serves to sustain resources which have economic value (fisheries and tourism) as well as protecting ecosystems from decline. Regular monitoring surveys have noted a significant increase in fish biomass and biodiversity in West Hawaii, an indicator of healthy fish stocks.

Ballast water and hull fouling are two major vectors for introducing aquatic alien species. Establishment of such alien species has the potential to alter the State's native ecosystems and can degrade habitats associated biological productivity. Efforts to focused on protected species (whales and dolphins) and endangered species (turtles and monk seals) are necessary to preserve these native animals that are important to both ecological diversity, and to the State's economy as icons of its rich marine systems that attract tourists from around the world.

- C. Explain how the effectiveness of the Program is measured and discuss the performance results achieved during the past two years

Effectiveness can be measured by: the adoption, amendment, or repeal of Hawaii Administrative Rules that establish managed areas; consummation of contracts designed to provide research results to management-related informational needs or to provide support services to management-related projects; the publication, distribution, and use of information brochures, posters, and via media, the public service announcements, news and press releases, radio and TV news coverage and subject interviews; progress and development of a GIS-based database for streams and for estuarine habitats; the removal of alien species; the culture and controlled release of important gamefish; development of a new marine managed area classification system; the number and types of environmental reviews, permit applications, and technical guidance provided the Department and outside agencies. Results are detailed in the previous section, IIA.

- D. Discuss actions taken by the Program to improve its performance results

Partnerships, both public and private, were expanded, and full advantage was taken of the opportunities to access federal funds through volunteer time, in-kind matches, and direct private contributions. Substantial non-matching federal funds have been successfully obtained to help develop a ballast water/hull encrusting organism program to help limit the potential for new alien species introductions through this vector and to deal with problems and issues related to coral reef habitats. An alien species management plan that will make the State eligible for additional federal funding is completed, as is a state wildlife conservation plan. More ways are being sought to partner with the university and the community.

- E. Identification of Rationale for Modifications to Performance

None

III. Problems and Issues

- A. Discussion of Problems and Issues Encountered

As Hawaii's population and visitor industry grow, the demand for and stresses upon our aquatic resources are magnified, and competition for access to these resources by the various user groups increases. Ever-increasing use by non-consumptive users, including commercial dive and snorkeling tours and simply more and more people recreating in the ocean are impacting our stream, estuarine and marine habitats. Healthy watersheds and reef communities are vital to the State's visitor industry and are important elements of the local lifestyle for Hawaii residents, but shoreline activities as well as perturbations in individual watersheds, such as polluted runoff and sedimentation, directly impact the health of the estuarine nursery habitat for most of our coastal marine and coral reef species.

While the impacts of consumptive activities are obvious (e.g., fishing removes fish), impacts of non-consumptive use can be serious also. Anchoring can damage coral, reef organisms in areas heavily used by snorkelers and bathers can be trampled, and recreational watercraft can alter the behavior, habits, and migration patterns and juvenile recruitment of fish to their nursery habitats. Locally, coral reefs are being further degraded by invasive alien species, sedimentation and chronic exposure to nutrients; and they may also be threatened by global warming and new diseases. The State's challenge lies in managing aquatic resources in a manner that assures their perpetuation for use by future generations while allocating sustainable fair shares to the various user groups. This is being pursued without the increases in State funding that would easily be warranted given the circumstances of nearshore fish stock decline, continuing spread of invasive species, and damage to coral reef communities by sediment runoff, and pollution.

The unintentional introduction of alien species represents a serious continuing threat to Hawaii's native environments and its associated resources. *Salvinia molesta*, a floating fern originally imported as a decorative pond plant, has escaped into several freshwater bodies on Oahu. A massive interagency effort was required to remove the weed before it wrecked the Lake Wilson's environment and killed hundreds of tons of fish, but the species lingers in other areas, notably Kawainui Marsh. Problems also exist with introduced marine invasive algae in Kaneohe Bay, Waikiki, Maui, and parts of Molokai and the Big Island.

Many marine organisms have also been introduced to Hawaii through ballast water exchanges by ocean-going vessels and as hull-fouling hitchhikers. Surveys by the Bishop Museum have shown that dozens of alien marine organisms now established in our waters apparently arrived through those sources. Marine ecologists have warned that a dangerous homogenization of the biota in nearshore waters is occurring with unpredictable ecosystem destabilization in Hawaii if the introductions continue unabated. A State task force has been convened, with support from a federal grant, to examine the problem and have developed an alleviation plan, but operation funds have not been allocated

Two issues, indigenous peoples and community-based management, are increasingly receiving attention. Demands for select and special access to resources by native people or management of adjacent nearshore resources by a community puts a strain on the Constitutional directive that the Department manage natural resources for the benefit of all Hawaii's people, but the Constitution also recognizes that native Hawaiians do have traditional rights. Furthermore, virtually all marine waters are over ceded lands. Properly handled, these complexities could be turned towards improved management of our marine resources as personal stakes in the outcome are increased. If ignored or poorly handled, chaos will result and our surviving living marine resources will collapse as regulatory gridlock prevails.

These problems identified, it should be emphasized that we have a dedicated staff that will do more than what should be possible within those funding constraints that are imposed. An intensive education campaign is also ongoing to convince people and decision-makers that an investment in appropriate restrictions now will have real benefits in the near-term future.

B. Program change recommendations to remedy problems

As approved by the Governor in December 2005 the program is requesting the transfer in of a program manager position to LNR 401 from LNR 153 thereby conforming to present administrative structure.

The program is requesting an increase the expenditure ceiling (\$972,500) for federal funds received from the National and Atmospheric Administration's National Ocean Service, National Marine Fisheries Service and the U.S. Fish and Wildlife Service to continue the Hawaii Marine Recreational Survey project (\$172,500), the co-management of Hawaiian Humpback Whale Sanctuary (\$50,000), instream flow project (\$150,000), monitoring of bottomfish populations (\$100,000), stream/estuarine fisheries studies (\$150,000), and projects involving coral reef management, monitoring and the Northwestern Hawaiian Island Marine National Monument (\$350,000).

C. Identify any program issues or problems that affected or will affect the implementation of the program, and the corrective measures or remedies established.

The State continues to enjoy an upward, long-term increase in its economy, along with the resultant increases in population growth and urbanization, including coastal and inland development. Concomitant with this increase is the ever-growing demand for services from our aquatic resources. Whether the services provided mean fish and seafood products for consumption or non-consumptive enjoyment (tourism, snorkeling), these services are continually shrinking, all the while the competition and demand for them are increasing. Most alarming is the decline of herbivorous fishes, which are essential to sustain a healthy, coral-dominated reef habitat. Land-based nutrient input and increased extraction of these large algae-eating fishes, have turned many once healthy reef into a highly degraded, alien algae dominated reef. These "dead" reefs are virtual underwater deserts.

Aquatic ecosystems are complex and scientists still do not know exactly how all living things interrelate. This fact, coupled with limited resources for research and outreach, means that management of these species will inevitably be less refined than is desirable for the foreseeable future. Despite this, the program strives to maintain a base level of services, attempting to be creative and to develop within current constraints expanded and enhanced services, and more effective management regimes. Nonetheless, even with significant federal assistance and

external funding arrangements, there is no substitute for a commitment to core funding for support of priority and long-term needs. As long as it continues to receive only one percent or so of the State's total budget, the Department will remain perennially in a catch-up mode in terms of protecting the State's greatest natural, community and economic asset – its natural resources.

IV. Projected Expenditures for Fiscal Year 2007-2008

	Appropriation Act 213/2007 FY 2007-08	Collective Bargaining	Transfer In Transfer (Out)	Governor's Restriction s	Estimated Total Expenditures	
(Pos. Count)	(28.00)				(28.00)	
Personal Services	2,187,087	61,390	0	0	2,248,477	
Current Expenses	2,805,016	0	1,539,121	0	4,344,137	
Equipment	0	0	0	0	0	
Motor Vehicles	0	0	0	0	0	
(Pos. Count) Total Requirements	(28.00) 4,992,103		61,390	1,539,121	0	(28.00) 6,592,614
Less: (Pos. Count) Special Funds	(0.00) 0	0	0	0	0	(0.00) 0
(Pos. Count) Federal Funds	(1.00) 2,436,559	11,280	1,389,121	0	3,836,960	
(Pos. Count) General Funds	(27.00) 2,555,544	50,110	150,000	0	2,755,654	

A. Explanation Of All Transfers Within the Program I.D. And Its Impact On The Program

Additional federal funds (\$1,389,121) are being used for projects and studies in coral reef management/monitoring and the co-management of the Northwestern Hawaiian Islands Natural Marine Monument (\$364,521), alien coral/deep coral ecosystem/black and stony coral studies (\$186,000), additional funding for the co-

management of the Hawaiian Islands Humpback Whale National Marine Sanctuary (\$78,000), operating cost for the Incidental Take Permit staff (\$11,000), research/management for alien invasive species projects (\$56,600), instream flow project (\$150,000), monitoring bottomfish populations (\$198,000), Hawaii marine recreational fishing survey (\$172,500), life histories/life cycle of key species (\$135,000), and stream/estuarine fisheries studies (\$37,500).

B. Explanation Of All Transfers Between Program I.D. And The Impact To The Program

Additional general funds (\$150,000) were transferred in from the Department's Commission On Water Resource Management (G-08-044-C) to be used as a match for an additional \$150,000 in federal funds to acquire instream flow information (see instream flow project above).

C. Restrictions And Their Impacts On The Program

None

V. Supplemental Budget Request FY 2008-2009

	Appropriation Act 213/2007	Budget Adjustment	Supplemental Requests
	<u>FY 2008-09</u>	<u>FY 2008-2009</u>	<u>FY 2008- 2009</u>
(Pos. Count)	(28.00)	(1.00)	(29.00)
Personal Services	2,409,323	61,380	2,470,703
Current Expenses	2,649,616	972,500	3,622,116
Equipment	0	0	0
Motor Vehicles	0	0	0
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(Pos. Count)	(28.00)	(1.00)	(29.00)
Total Requirements	5,058,939	1,033,880	6,092,819
Less:			
(Pos. Count)	(0.00)	(0.00)	(0.00)
Special Funds			
(Pos. Count)	(1.00)	(0.00)	(1.00)
Federal Funds	2,475,409	972,500	3,447,909
(Pos. Count)	(27.00)	(1.00)	(28.00)
General Funds	2,583,530	61,380	2,644,910

- A. Workload or Program Request (Description of request, reasons for the request, and desired outcomes or objectives to be accomplished by proposed program. Listing/description of positions requested, and funding requirements by cost category and source of funding)

Transfer in of \$61,380 to personnel services for a Program Manager position (#9620) from LNR 153 as approved by the Governor in December 2005.

Increase the expenditure ceiling (\$972,500) for federal funds received from the National and Atmospheric Administration's National Ocean Service, National Marine Fisheries Service and the U.S. Fish and Wildlife Service to continue the Hawaii Marine Recreational Survey project (\$172,500), the co-management of Hawaiian Humpback Whale Sanctuary (\$50,000), instream flow project (\$150,000),

monitoring of bottomfish populations (\$100,000), stream/estuarine fisheries studies (\$150,000), and projects involving coral reef management, monitoring and the Northwestern Hawaiian Island Marine National Monument (\$350,000).

	<u>MOF</u>	<u>FTE (T)</u>	<u>Personal Services</u>	<u>Other Exp.</u>
Ceiling Increase	N			972,500
Program Manager	A	1.00	61,380	
		Totals	61,380	972,500

B. For All Position Count Reductions, Please Specify Whether The Positions Were New, Filled Or Vacant

None

VI. Identify Restrictions Carried Over From FY 2007-2008 As Well As Additional Reductions Due To The Department Of Budget and Finance's Budget Ceiling For FY 2008-2009

None

VII. Capital Improvement Projects Requests For Fiscal Year 2008-2009

None

VIII. Proposed Lapses of Capital Improvement Program Projects

None