

House Committee on Higher Education/Senate Committee on Ways and Means  
Budget Requests for Biennium Budget 2005 – 2007  
January, 2005

Program I.D. and Title: UOH-881, Aquaria

**I. Introduction**

**A. Summary of Program Objectives**

Act 184 (SLH 1995) designates the Waikiki Aquarium as the State Aquarium, and further provides that the objective of the UOH-881 program is to enrich the lives of people of all ages by providing public programs, education, research, and exhibits of the aquatic life of Hawaii and other regions. The State Aquarium at Waikiki is administered through the University of Hawaii-Manoa Chancellor's Office.

**B. Description of Program Objectives**

**1. Education Programs**

Marine science education programs offered by Waikiki Aquarium reach a large target audience. Last year 36,106 school students, teachers, families, and individuals received marine science instruction from our four full-time instructors, two University of Hawaii student workers, 20 affiliate staff from Hawaii's research, education and environmental communities, and more than 30 trained volunteers. Many more were reached through on-site interpretation at our outdoor reef exhibit staffed by approximately 40 volunteers, statewide through collaborations with the DOE Distance Learning and KidScience Programs, environmental news coverage and contributions to natural history programs (e.g. Animal Planet), as well as internationally through our web site. Science literacy and conservation education are the primary emphases of these programs.

Over 100 program offerings each year include:

- Docent-assisted school visits and outreach programs
- Exhibit interpretive programs
- Laboratory experiences and workshops for students and teachers
- Natural history field trips
- Snorkel ecotours
- Shoreline fieldtrip planning services
- Special lectures & services
- Natural History lecture series
- Educational video programs
- In-service teacher workshops
- Public information services—on-site and website inquiries

Modest tuition fees are charged for most programs, but Aquarium admission for Hawaii school students remains free. The most-recent accreditation team from the American Zoo and Aquarium Association reported that our *“education program is particularly good: Waikiki*

*dedicates more staff with many more programs than many larger facilities...(and) the University acts as a resource in providing students, forums, and consulting staff that many zoos and aquariums can only hope to acquire.”* The Aquarium’s designated status as a national Coastal Ecosystem Learning Center promises greater access to national education resources for Hawaii residents.

The Waikiki Aquarium conducts eco-tours to various Pacific locations such as Okinawa, and Christmas Island. These programs allowed participants the opportunity to travel to diverse locations and compare and contrast environments and conservation efforts in other regions. The Education program continues to research ray activity through several programs at the Hawaii Institute of Marine Biology. Education staff have also consulted on the design of exhibits and programs for the new Hanauma Bay Educational Center and the Northwestern Hawaiian Islands Ecosystem Reserve Interpretive Center in Hilo.

## **2. Exhibits**

A \$500,000 renovation of the Aquarium’s signature South Pacific Marine Communities exhibits opened in June 2002. All of the costs associated with this renovation project were covered by sponsorships from local and mainland contributors. This new gallery incorporates computer-based graphics with state-of-the-art life support for marine life, including giant clams and corals that have been in our collections for >20 y, as well as 140+ other species displayed no where else in Hawaii.

The Aquarium’s exhibits include one of the largest and most diverse collections of living corals in the world; endangered Hawaiian monk seals; endemic Hawaiian coastal plants; and many species exhibited nowhere else in the United States, including Hawaiian freshwater fishes and endemic fishes from Midway Atoll. The Aquarium continues to display weedy and leafy seadragons and potbellied seahorses. This year we are displaying the bearded armorheads, pink precious coral, rare deep-water animals including a new undescribed Hawaiian butterflyfish. We continue to expand the diversity of our collection by also showing blue-streaked cardinalfish, haddon’s carpet anomone, fresh water stingrays, medusa worms, deep-water wrasses and the popular, flamboyant cuttlefish.

Ecology, natural history, biological diversity, and conservation are emphasized throughout the Aquarium, in exhibits and programs. Exhibit concepts, design and execution are carried out entirely by staff who have received national awards for excellence, e.g., the AZA MACE award for conservation presented to the Waikiki Aquarium for the “Corals Are Alive” exhibition.

## **3. Research Programs**

The Hawaii Revised Statutes stipulate that the University maintains a research laboratory at the State Aquarium. The proximity of the Aquarium to the Manoa campus provides easy accessibility for UH researchers in need of running seawater, holding tanks, and life support for unique species. Our reference collections include a library with over 1,000 volumes and reprints, still images of marine life, underwater digital video footage, reprints, archives of the Waikiki Aquarium’s history since 1904, original artwork used in exhibits and publications, replicas of

Hawaiian fishing artifacts, and numerous marine life artifacts (e.g. precious corals, stony coral skeletons, shells, and preserved specimens).

Undergraduate and graduate students from UH-Manoa, community colleges, HPU, and Chaminade utilize aquarium facilities for individual research projects. The Aquarium's public seawater tap is used by a number of university programs on a weekly basis for their research projects on campus. The seawater is also dispensed to hundreds of home aquarists on Oahu who reserve pick up times each week.

Aquarium staff conduct on-going research in the following areas:

- **Shark and Ray Ecology**
- **Plankton Culture for Research Feeds and Community Supply**
- **Propagation of Chambered Nautilus and other Cephalopods**
- **Jellyfish Husbandry**

Externally funded research projects include:

- **Coral propagation:** The Waikiki Aquarium has received several grants to develop culture methods for stony corals in order to promote conservation. For the past few years the Aquarium has shipped out over 3,000 south pacific coral propagules to the Georgia Aquarium, Virginia Beach Science Museum, Alaska Pacific University, Underwater World Guam, Long Beach Aquarium, Seattle Aquarium and Monterey Bay Aquarium, thereby reducing collecting pressures on natural populations. We are in the middle of a 3-year study with Israeli colleagues to study micro-propagation and growth of model coral systems.
- **Hawaiian monk seal research program:** This joint effort with UH researchers aims at determining how physiology and reproduction of monk seals vary with diet, age, and season.

### **C. Meeting our objectives in the upcoming fiscal year**

Education programs, exhibit development, and maintenance are funded for the most part by earned revenue sources, supplemented by a State appropriation. Earned income sources include admission fees, membership dues, class tuition fees, gift shop proceeds, special events and fundraisers, gifts and donations, and rental of the Aquarium facilities for evening functions. All general operating expenses are now paid from earned revenue sources. State general funds cover the salaries of 13 state employees including the education staff and the building maintenance department. An additional 20 employees are hired through the Aquarium's S-fund and the Research Corporation and are paid from earned revenues.

## **II. Program Performance Results**

### **A. Program performance results achieved**

Program effectiveness is measured by visitor satisfaction, total admission numbers, earned revenues, and effectiveness in achieving educational goals.

**Visitor ratings:**

	<u>FY2000</u>	<u>FY2001</u>	<u>FY2002</u>	<u>FY 2003</u>	<u>FY 2004</u>
Excellent:	65%	65%	59%	67%	69%
Good:	25%	25%	27%	23%	19%
Average:	7%	6%	9%	6%	9%
Poor:	4%	4%	5%	4%	3%
TOTAL	n = 1,525	n = 1,498	n=1,314	n=1,314	n=1,521

**Attendance:**

	<u>FY1999</u>	<u>FY2000</u>	<u>FY2001</u>	<u>FY2002</u>	<u>FY 2003</u>	<u>FY 2004</u>
General	280,468	273,053	291,359	276,871	267,736	299,804
Rentals	12,294	15,058	13,519	13,490	13,890	20,116
Education	45,769	38,209	31,393	36,805	34,532	36,106
Events	<u>3,050</u>	<u>3,629</u>	<u>4,227</u>	<u>3,706</u>	<u>1,008</u>	<u>1,749</u>
TOTAL	<b>341,581</b>	<b>329,949</b>	<b>340,498</b>	<b>328,622</b>	<b>317,166</b>	<b>357,775</b>

**Revenues:**

	<u>FY2000</u>	<u>FY2001</u>	<u>FY2002</u>	<u>FY 2003</u>	<u>FY 2004</u>
Revenues	\$1,816,850	\$1,899,667	\$1,672,826	\$1,839,835	\$2,142,960
G-funds	<u>512,837</u>	<u>506,001</u>	<u>510,388</u>	<u>513,716</u>	<u>506,604</u>
TOTAL	<b>\$2,329,687</b>	<b>\$2,405,668</b>	<b>\$2,183,214</b>	<b>\$2,353,551</b>	<b>\$2,649,564</b>

**B&C. How these results relate to objectives and how effectiveness is measured****Attendance and revenue:**

The Waikiki Aquarium experienced a substantial decrease in attendance and associated admissions revenues in the aftermath of September 11, 2001 (Aquarium attendance is about 67% tourists and 33% residents). Overall attendance in 2003 continued to drop due to the outbreak of the war on terrorism and SARS. However, FY 2004 shows an increase in revenue reflecting the recovery in the economy as well as success in additional marketing efforts for our 100<sup>th</sup> anniversary in March 2004.

According to the DBEDT 2003 Databook, the Aquarium retained its rank in 2003 as the #5 paid attraction on Oahu, behind the Polynesian Cultural Center, the Bishop Museum, the Honolulu Zoo, and the U.S.S. Missouri, but ahead of Sea Life Park, Waimea Falls Park, the Honolulu Academy of Arts and other local attractions and museums.

**Exhibits:**

Visitor satisfaction has been consistently favorable, >88% of visitors reporting “good” to “excellent” on voluntary exit surveys in FY04.

**Education:**

Attendance in the Education Program remains strong with 36,106 students, adults, families, and other participants in FY2004. This figure is still less than previous years due to a change in the offerings provided by the Education Program.

**Research:**

Aquarium staff published or presented 13 papers during FY2004 based on research conducted at the Waikiki Aquarium. The Aquarium continues to perform research in the following areas: plankton culture; coral propagation and conservation; shark research and husbandry; Chambered Nautilus and other Pacific cephalopods; Monk Seal research and husbandry; and reef fish aquaculture.

**D. Actions taken to improve performance:**

1. A contract for the Waikiki Aquarium to operate a gift shop as part of the recently completed Hanauma Bay Educational Center was negotiated with the City and County of Honolulu to generate a new revenue stream for joint educational endeavors.
2. New exhibits, renovations, and other improvements have enhanced the Aquarium as a destination, as evidenced by favorable comments from visitors. Plans for new exhibits are in the planning stage and should be unveiled in the beginning of FY 2006.
3. An audio tour wand (English, Japanese and German languages) included with each paid admission has significantly increased the educational value of the Aquarium. Visitors have overwhelmingly approved this addition.

**III. Problems and Issues****A&B Discussion of problems and issues encountered, and recommendations to remedy problems****Issue #1: Aftermath of September 11, 2001**

The Waikiki Aquarium is very sensitive to changes in tourism. This fact has been reinforced recently due to the affect of terrorism, SARS and in the past, smaller issues such as airline strikes. Since 2001, the Aquarium has recovered in terms of attendance but we are ever vigilant about growing complacent. Our 100<sup>th</sup> anniversary celebration in March 2004 welcomed a new era in the Aquarium's history with a new Director and we hope the next few years will see a number of physical improvements both externally in new exhibits and internally with additional infrastructure support.

**Issue #2: Compliance issues and aging facilities**

The Waikiki Aquarium building opened in 1955. Extensive renovations to the public side of the building in 1994 brought the Aquarium into compliance with new regulations regarding access for persons with disabilities, and corrected other deficiencies. However, significant deficiencies remain unresolved in this 50-year old building. Recent issues have been submitted for funding support but have not been approved. These include:

- Electrical system upgrade. Our current demand exceeds capacity and we are not is full compliance with OSHA and Fire Department guidelines. (\$300,000)
- Central Air Conditioning system was last updated in 1992 and needs to be replaced due to corrosion of current system. (\$250,000)

- Public restrooms upgrade. The public restrooms were added to the original building in 1971 and are in need of an upgrade due to damage sustained during the 1992 CIP renovation and deterioration. The cast drain lines clog frequently, there is no hot water supply, electrical system is insufficient and the lighting and ventilation are inadequate. (\$90,000)
- Temporary roof repairs done in 1992 have been inadequate. Minor repairs have been performed using Aquarium revenue but water continues to leak into exhibit spaces, the classroom, and staff work areas. (\$300,000)

These essential renovations and emergency repairs should be funded by state funds since they impact public areas. Any failure of these systems will have a significant impact to the viability of the Aquarium's public access.

We foresee additional significant repair work being required in coming years as the Aquarium ages. It is an old building and in many areas no longer meets current building code requirements; this has become a chronic problem and should be unacceptable in a State that depends on tourism and quality visitor attractions.

### **Issue #3: Kakaako Aquarium proposal:**

In 1996, Governor Cayetano proposed the creation of a new world-class aquarium to be built in Kakaako. Therefore, since 1996, the Waikiki Aquarium has been in limbo until a decision was made whether its future would be in Kakaako or Kapiolani Park. In October 2004 the negotiations between the state and the developer had been abandoned. With this issue now behind us, it is hoped that revenue flow via donations will show a significant increase, and ultimately allow the Aquarium to attain its plans for renewal, improvement and diversification of its exhibits.

### **Issue #4: Support of Aquarium research:**

Building research capacity is vital to the Aquarium. The recent wastewater renovations resulted in the construction of two large (20'x20') concrete pads in the Aquarium's back area (as covers for two deep freshwater holding tanks) that would be ideal for developing into a marine microcosm research facility. A proposal to build a two-story research deck is currently in the plans. This area will concentrate work on propagation of corals and reef fish that is currently in very cramped spaces.

### **Issue #5: Remaining viable:**

Next year, 2005, the Aquarium will undergo an extensive five-year re-accreditation review by the American Zoo and Aquarium Association (AZA). We anticipate no problems with this review and after the successful celebration of our 100<sup>th</sup> anniversary, we are working toward establishing a new master plan for our next 100 years. It is our vision that the Waikiki Aquarium will remain open to serve visitors, residents, students, and school groups through the next century, if not beyond. Therefore, we need to continue marketing to target audiences and raising funds for new exhibits, exhibit renovations, and programs.

Despite its small size, productivity of the Waikiki Aquarium is very high, even when compared to larger institutions on the mainland U.S. The Aquarium now offers more kinds of programs to more people on a per capita basis than any of the mainland U.S. Aquariums. There is no other aquarium in the U.S. with the same diversity of educational programs and offerings, none with the same impact in the development of unique new displays of marine life, and few which can boast the same degree of success in research programs or publications. This is particularly significant when it is realized that the Waikiki Aquarium is among the oldest and smallest aquariums in the United States. We strongly urge the Legislature to continue to support the State Aquarium--this jewel of a facility in Waikiki—and not let its 100-year old reputation for excellence become tarnished.

**Expenditures for Fiscal Year 2004-2005**

	Appropriation FY 2005	Collective Bargaining	Transfers In/Out	Restriction	Estimated Total Expenditures
	20.00				20.00
Personnel Service	668,198	14,587	100,000		782,785
Current Expense	1,592,716		(100,000)		1,492,716
Equipment					0
Motor Vehicles					0
<b>Total</b>	<b>2,260,914</b>	<b>14,587</b>	<b>0</b>		<b>2,275,501</b>
By MOF:					
	13.00				13.00
General Funds	542,225	14,587			556,812
	7.00				7.00
Special Funds	1,718,689				1,718,689

- A. Transfers within the Program ID:  
Transfer of special funds from other expenses to payroll to cover shortfalls due to general fund reductions and restrictions.
- B. Transfers between Program ID:  
No transfers
- C. Restrictions:  
None

**Biennium Budget Changes for FY 2005 – 2006 and 2006-2007:**

	Budget Request FY 2005-2006	Budget Request FY 2006-2007
Personnel Services	20.00	20.00
Current Expenses	693,386	693,386
Equipment	2,592,716	2,592,716
Motor Vehicles		
Total	3,286,102	3,286,102
By MOF:		
General Funds	13.00	13.00
	567,413	567,413
Special Funds	7.00	7.00
	1,718,689	1,718,689
Revolving Funds	1,000,000	1,000,000

The biennium budget includes \$1M revolving fund ceiling for the operation of the Hanauma Bay gift shop.

**IV. Restrictions/Reductions:**

None

**V. and VIII. Capital Improvements Requests/Lapsing of CIP:**

The CIP budget is discussed in a separate part of the University testimony.