



# Community Perceptions of Activities, Impacts, and Management at Kealakekua Bay, Hawai‘i

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## EXECUTIVE SUMMARY

### Objectives

Kealakekua Bay is a priority site of the Hawai'i Department of Land and Natural Resources (DLNR). This bay is located on the Island of Hawai'i 12 miles south of Kailua-Kona near the town of Captain Cook, and is popular for activities such as kayaking, snorkeling, and scuba diving. It has been estimated that more than 190,000 people visit this bay annually. Many participants visit without a guide, but commercial boat tours to the area have become popular. Local concerns have been voiced over problems at the bay, including illegal activities such as drinking, drug use, and non-permitted commercial operations (e.g., kayak rentals). These activities may discourage people from visiting the area. High use levels have also generated concerns such as inappropriate anchoring, illegal fishing, and harassment of dolphins.

In response to these issues, the DLNR released the Kealakekua Stewardship Area Management Plan in January 2009 to preserve the historical and cultural integrity of this area by limiting uses that currently are or have the potential for adversely affecting the area. The plan identifies 29 problems occurring in the area and proposes 146 recommendations to address these problems. Following release of this plan, the DLNR advertised a public comment period where comments were submitted on this agency's website, as letters and facsimiles, and as responses to articles in newspapers. Suggestions made during this comment period and at meetings, however, are not likely to be representative of the populations of people using the bay or residing in the area. These forums typically generate comments only from individuals and groups with strong opinions or vested interests and are rarely representative of broader populations of interest.

The goal of this project, therefore, was to conduct a rigorous scientific survey of community members residing near Kealakekua Bay asking them about their perceptions of conditions at this bay and attitudes toward the proposed stewardship management plan. Community members residing near or adjacent to the area are an important stakeholder group because they regularly see and hear about conditions and perceived problems at the bay, raise concerns at meetings and through other outlets, have to live with decisions and management at the bay on a regular basis, and have the ability to vote for or against government agencies and officials responsible for managing this natural resource. Specific objectives of this project were to describe residents':

- amount of past visitation and activity participation at this bay,
- perceptions of current conditions and problems at this bay,
- trust in agencies to manage this bay,
- knowledge of current management at this bay and the new stewardship management plan,
- support and opposition to recommendations in this stewardship management plan, and
- overall support or opposition to this entire stewardship management plan.

### Methods

Data were obtained from an onsite survey administered door-to-door to adult residents of households in the three major communities and towns nearest to Kealakekua Bay – Napo'opo'o-Honaunau, Captain Cook, and Kealakekua. Questionnaires were distributed randomly along every road in these communities daily from January 11 to February 2, 2010. Two approaches

were used to administer questionnaires. First, residents who were home and answered the door completed the questionnaire and returned it to the researcher immediately. Second, the drop off – pick up (DOPU) method was used when nobody answered. A questionnaire was packaged with a cover letter in a plastic bag and placed on the doorknob of each household in which nobody was home for retrieval at a later time. Questionnaires were administered to 472 separate households and  $n = 316$  questionnaires were completed, yielding a 67% response rate. This sample size allows generalizations about the population of households across these communities at a margin of error of  $\pm 5.2\%$  19 times out of 20 (i.e., 95% confidence level), which is the conventional standard accepted in social science and human dimensions of natural resources. These sample sizes and response rates are high for door-to-door onsite and DOPU approaches. Demographic results obtained from this survey were compared to findings of the U.S. Census. There was a difference in the age distribution of respondents, as survey respondents were slightly older than the population reported in the U.S. Census. As a result, data were weighted by age based on the U.S. Census to ensure that questionnaire responses were statistically representative of households and their residents across the three communities.

## Results

### *Previous Visitation and Activity Participation*

- Almost all residents (97%) had visited Kealakekua Bay before.
- Most of these residents had been swimming (80%) or snorkeling (61%) in the bay *without* a commercial tour guide, and approximately one-third had gone kayaking or canoeing, viewed or interacted with the dolphins, been hiking, and / or participated in fishing in this bay without a guide. Fewer residents had gone boating or scuba diving in the bay without a commercially guided tour.
- In total, 69% of residents had not participated in any activities in Kealakekua Bay *with* a commercial tour guide, although 22% had visited this bay on a commercial snorkel tour.

### *Perceptions of Current Conditions and Problems*

- Most residents knew that Kealakekua Bay is a marine life conservation district (MLCD) (67%) and what a MLCD is (70%), but fewer knew what is allowed and disallowed in a MLCD (49%).
- Residents considered the most important attribute at Kealakekua Bay to be the natural environment followed by cultural heritage, public use, and historical aspects. The least important attribute was commercial tour use. These rankings are similar to DLNR priorities, which are to protect natural, cultural, and historical resources first; then public use; and then commercial activities.
- Most residents agreed that there are problems at Kealakekua Bay that need fixing now (83%). Over 65% of residents also agreed that there have been many plans but little improvement at this bay (68%) and that government will do what it wants despite public input (66%). Similarly, 59% of residents disagreed that public comments about the bay have been addressed. There was mixed agreement and disagreement that the bay is only managed for tourists and not residents, commercial tour boats are inappropriate for the bay, and rules and regulations are easy to understand. More people disagreed than agreed that modern kayaks are inappropriate for the bay and tour operators take good care of the bay. These results show that residents are concerned with current conditions at this bay.

- The majority of residents agreed that non-governmental organizations or non-profits should partner with government agencies to manage the bay (59%). There was mixed agreement and disagreement regarding private companies partnering with agencies to manage the bay.
- The majority of residents rated 13 of 22 characteristics at Kealakekua Bay as moderate or extreme problems, suggesting that there are major problems at this site. The largest problem was the presence of alcohol / drug use (69%) followed by lack of parking (66%).
- Over 60% of residents also reported major problems with non-permitted commercial kayak rental activity at Kealakekua Bay (66%), other non-permitted commercial activities at the bay (e.g., paying individuals to watch vehicles or help load kayaks on and off vehicles; 61%), and lack of onsite enforcement or monitoring of rules and regulations (60%).
- Over 62% of residents reported moderate or extreme problems with the condition or access to facilities such as toilets at Kealakekua Bay.
- In terms of environmental issues, 61% of residents reported moderate or extreme problems with people handling or standing on coral in the bay, 58% said that overall impacts on the natural environment in the bay were problematic, and 56% reported major problems associated with people disturbing dolphins or other large marine life in the bay.
- The majority of residents also reported problems with vehicle traffic or congestion (58%), people being rude or discourteous (55%), impacts to cultural or heritage sites (53%), and the amount of commercial kayak use (51%).
- Residents believed that the amount of non-commercial (privately owned) boat use and kayak use were the least problematic issues at Kealakekua Bay (19% and 24% moderate or extreme problem, respectively) and only 27% of residents reported major problems with the size of boats visiting the bay and 38% had problems with the amount of commercial tour boat use occurring in the bay (e.g., snorkel or scuba dive tours).

### ***Trust in State Agency Management***

- The majority of residents agreed that they shared similar values (57%), opinions (52%), and goals (51%) as the DLNR, whereas approximately one-quarter of residents disagreed that they shared similar values, opinions, and goals as the DLNR. Residents were divided on if they agreed (40%) or disagreed (34%) that the DLNR takes similar actions as they would.
- Residents were divided in their trust in the DLNR to address specific problems and manage Kealakekua Bay. The distributions were bimodal, as approximately half of residents agreed that they trusted the DLNR, whereas half did not trust this agency.
- Residents were not highly satisfied with the DLNR management of Kealakekua Bay, as only 19% gave the agency an A or B letter grade and 38% gave a D or F grade. The largest proportion of residents gave the agency a C letter grade for their management efforts (43%).

### ***Knowledge and Attitudes Regarding the Stewardship Plan***

- In total, 65% of residents were *not* aware of the new Kealakekua Stewardship Area Management Plan and 23% were unsure. Only 13% of residents were aware of this plan. This suggests that public comments about this plan that were submitted earlier on the DLNR website and as letters and facsimiles were not generalizable to or representative of the community. Data from this project are representative of the local community and show that residents were largely unaware of the plan.

- Over 86% of residents supported strategies in the plan to increase awareness and information, such as requiring commercial tour companies to provide customers with an orientation briefing, providing more interpretive or educational information at the bay, and installing more signs at the bay describing rules or regulations.
- Many residents supported strategies associated with restoration of the area, such as restoring cultural or historical sites (86%), replacing invasive / exotic plants with native species (85%), and restoring the pond at Napo‘opo‘o (75%).
- Most residents supported actions addressing non-permitted activities and enforcement at Kealakekua Bay, such as establishing a ranger monitoring program (83%), increasing agency patrols (78%), stopping all non-permitted kayak rentals at the bay (75%), stopping all other non-permitted commercial activities (74%), and using volunteers or neighborhood groups for onsite monitoring (61%).
- Over 77% of residents supported a \$5 environmental management fee for all commercial tour customers, but there was less support for charging more than \$5 for this fee (49%).
- Most residents (77%) supported use of physical block sunscreens instead of sunscreens with chemicals, and 67% also supported establishing a no-entry dolphin resting area in the bay.
- Half (50%) of residents supported limiting snorkel boat tours to 18 passengers and limiting kayak tours to 9 kayaks with 13 kayakers, although up to 28% were opposed to these ideas. In addition, 48% of residents supported a limit of 4 commercial scuba divers in the bay at a time, but 25% were opposed to this strategy. Residents were also divided in their support of limits of 4 snorkel boats with 72 passengers in the bay at a time (45% support, 31% oppose) and 36 kayaks with 52 kayakers in the bay at a time (41% support, 31% oppose).
- Over 77% of residents supported requiring tour boat operators to have a government issued permit, and 65% supported requiring commercial kayaks to display a government decal. The majority of residents also supported a no entry zone for motor boats near the Captain Cook Monument (62%), requiring kayak tour companies to shuttle customers to the bay (59%), only allowing activities that complement the area's history and culture (55%), and stopping all vessel landings on the Ka'awaloa shoreline near the monument (50%).
- Resident attitudes were mixed regarding limiting commercial activities at the wharf to only guided tours (47% support, 35% oppose), prohibiting introductory dive training (46% support, 31% oppose), stopping commercial tours on weekends and holidays (44% support, 34% oppose), requiring non-commercial vessels to be registered and display a government decal (44% support, 35% oppose), and allowing kayaker entry into some areas only with guided tours (43% support, 36% oppose).
- There was more opposition than support about stopping snorkel, dive, and kayak tours in the bay after 2018 (40% oppose, 37% support); and allowing only Hawaiian style outrigger canoes in parts of the bay after 2018 (46% oppose, 28% support).
- Over 70% of residents supported a trail system of routes followed by early Hawaiians and over 60% supported increasing the amount of parking at the bay.
- Only 17% of residents supported not changing anything at Kealakekua Bay, whereas 62% were opposed to doing nothing and keeping things as they are now. In other words, residents supported change for this bay.

- There was no clear support or opposition to strategies proposed for Honaunau Bay, such as allowing only resident and boat trailer parking (44% support, 36% oppose), stopping boat anchoring (43% support, 33% oppose), and stopping commercial ocean recreation activities at this bay (42% support, 35% oppose).
- Residents were asked if they would vote in support or opposition to the newly proposed Kealakekua Stewardship Area Management Plan. Although not a majority, the largest proportion of residents would support the plan (45%) and only 15% would oppose it, but many residents (41%) were unsure and most who would support the plan were only somewhat certain of their decision. These findings are not surprising given that 65% of residents were not aware of this entire plan before completing the questionnaire.

### ***Sociodemographic Characteristics***

- Residents were relatively evenly split between weak protectionist (i.e., nature oriented; 43%) and strong protectionist (57%) value orientations toward coral reefs and there was no discernable group with only use oriented (i.e., human needs) values toward coral reefs.
- In total, 53% of residents were female and 47% were male. The average age of residents was 49 years old with the largest proportion between 40 and 60 years old (47%). Another 27% of residents were under 40 years old and 26% were 60 or older. Residents had lived in the community for an average of 25 years although the largest proportion (26%) had lived there for fewer than 10 years. Another 24% of residents, however, had lived in the community for more than 40 years.