A Facility Strategy for the Kaua'i NOAA Sanctuary Discovery Center

NOAA's Office of National Marine Sanctuaries

Facility Programming and Consulting
Final - July 2011

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National Marine Sanctuaries

National Oceanic and Atmospheric Administration
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Cover Photos

Clockwise, from left to right:

1. The “Lost On A Reef” exhibit opening at the Mokupāpapa Discovery Center in Hilo, HI; Source: Yumi Yasutake, 2010
2. The Mokupāpapa Discovery Center’s wet lab classroom opening event in Hilo, HI; Source: Yumi Yasutake, 2009
3. The Hawaiian Islands Humpback Whale National Marine Sanctuary west of Kīlauea Point on Kaua‘i; Source: Bruce Parsil, 2010
4. Family ocean day event at the Mokupāpapa Discovery Center in Hilo, HI; Source: Yumi Yasutake, 2010
5. Students engaged in a lesson at the Mokupāpapa Discovery Center’s wet lab classroom in Hilo, HI; Source: Yumi Yasutake
6. Kamehameha School students tour exhibits at the Mokupāpapa Discovery Center in Hilo, HI; Source: Yumi Yasutake

NOAA's Office of National Marine Sanctuaries (ONMS) has engaged Facility Programming and Consulting (FPC) to prepare a Facility Strategy for the Island of Kaua'i. The strategy serves as a guide for establishing a NOAA Sanctuary discovery center on the island.

Regional Director's Message to Readers

Aloha,

This document represents the latest planning efforts by the National Oceanic and Atmospheric Administration's Office of National Marine Sanctuaries for a proposed "discovery center" on the island of Kaua'i. The Pacific Islands Region of the ONMS is comprised of a partnership between the Hawaiian Islands Humpback Whale National Marine Sanctuary, the Papahānaumokuākea Marine National Monument and the Fagatele Bay National Marine Sanctuary in American Samoa.

In November of 2010 and February of 2011, public workshops were conducted and overseen by Facility Programming and Consulting in an effort to gain a better understanding of the issues and general ideas important to the local community of Kaua'i. Additional comments and input were solicited through an article in The Garden Island *newspaper, online, and in smaller community-based meetings. Over 100 people, including Kaua'i County Mayor Bernard Carvalho, Jr., provided feedback that was then incorporated into this report.*

The purpose of this document is to provide the reader with insight on the thoughts and desires expressed by those who participated in these workshops and provided input. It is a summation of the ideas, hopes and dreams of the people of Kaua'i for a discovery center that exemplifies the unique nature of Kaua'i's ecosystems, culture and history and will serve as an important tool for defining each step as the project moves forward.

In addition, a collection of responses from the discussions pertaining to possible site locations for the proposed discovery center follows. Please bear in mind that the locations listed in this document are only for discussion and consideration and do not represent a commitment to any one of them at this time. In many cases, property owners for these potential sites have not even been approached about such a center. Additionally, if a location is not named, it does not preclude it from being considered. Finally, the possibility exists for a number of smaller outreach locations or visitor center sites to be constructed, either independently or in partnership with another entity. This possibility should not be overlooked. This report does not exclude the possibility of other visitor center options if they become available, such as satellite/storefront visitor centers or outreach

venues in different communities on Kauaʻi, which would not preclude a larger discovery center located in a central location such as Līhuʻe.

It is my hope that this document provides the reader with a general overview of the current status and planning efforts for a discovery center for the island of Kauaʻi. We continue to seek advice, input and options for a discovery center that will meet the needs as well as expectations for all. Following the completion of this document, we will continue to engage the public to help us refine our scope for location(s), venue(s), and priorities for the discovery center.

Mahalo - Allen Tom
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Acknowledgements

A significant commitment was made by many individuals in order to create this document. Their participation is greatly appreciated. Their names are listed below in alphabetical order within each group.

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Bernard P. Carvalho, Jr.	Mayor, County of Kaua‘i

Mahalo

Mahalo to Kaua‘i sanctuary volunteers who helped at the public workshops with small group facilitation, documentation of public comments, registration, set-up, photography, feedback, and other supportive activities. Thanks also to the Mokupāpapa Discovery Center staff for demonstrating educational activities.

Terms and Abbreviations

Many terms used in this document have been abbreviated. Following is a list of the common abbreviated terms used throughout.

ASF	Assignable Square Feet
DLNR	Department of Land and Natural Resources
DOE	Department of Education
FBNMS	Fagatele Bay National Marine Sanctuary
FPC	Facility Programming and Consulting
GBCI®	Green Building Certification Institute
GSF	Gross Square Feet/Foot
HIHWNMS	Hawaiian Islands Humpback Whale National Marine Sanctuary
HVAC	Heating, Ventilation, and Air Conditioning
KCC	Kaua‘i Community College
MOA	Memorandum of Agreement
NWHI	Northwestern Hawaiian Islands
PIR	Pacific Islands Region
PMNM	Papahānaumokuākea Marine National Monument
SF	Square Feet/Foot
LEED®	Leadership in Energy and Environmental Design
NOAA	National Oceanic and Atmospheric Administration
ONMS	Office of National Marine Sanctuaries
O&M	Operations and Maintenance
ROV	Remotely Operated Vehicle
USCG	United States Coast Guard

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Introduction 1

The National Oceanic and Atmospheric Administration's (NOAA) Office of National Marine Sanctuaries (ONMS) has commissioned this report to determine a strategy for establishing a NOAA/ONMS "discovery center"[1] on the Island of Kaua'i. The ONMS understands the importance of a community-centered development process to plan such a facility and has partnered with the Kaua'i community in creating a conceptual plan that encompasses the wants and needs of all who are involved. Although the particulars of the project are unknown at this time, this document serves as an open dialogue between NOAA, the Kaua'i community, and partners to document the process of planning a physical presence on Kaua'i. The current Hawaiian Islands Humpback Whale National Marine Sanctuary (HIHWNMS) satellite office, which is shared with staff from the Papahānaumokuākea Marine National Monument (monument), is located in the Kukui Grove Executive Center in Līhu'e, Kaua'i. It occupies a small space in a commercial office complex and serves as the base of operations for ONMS programs on Kaua'i. The office could broaden its programs, better meet the island's needs, and more effectively accomplish its missions if space constraints were overcome.

ONMS Background and Mission

The National Marine Sanctuary System collectively consists of 13 sanctuaries and one marine national monument. These sanctuaries are grouped into four regions, including the Pacific Islands Region (PIR). The PIR is comprised of three special areas that protect ocean wildlife and ecosystems, as well as a unique island cultural and maritime heritage. The PIR is comprised of the following sanctuaries:

- Hawaiian Islands Humpback Whale National Marine Sanctuary (HIHWNMS)

Created by Congress in 1992 to protect humpback whales and their habitat in Hawai'i. The sanctuary, which lies within the shallow (less than 600 feet), warm waters surrounding the main Hawaiian Islands, constitutes one of the world's most important humpback whale habitats.

[1] *For the purpose of this report, the proposed facility will be referred to as the "discovery center." When appropriate, the Kaua'i's community will officially name the facility.*

- Papahānaumokuākea Marine National Monument (PMNM)

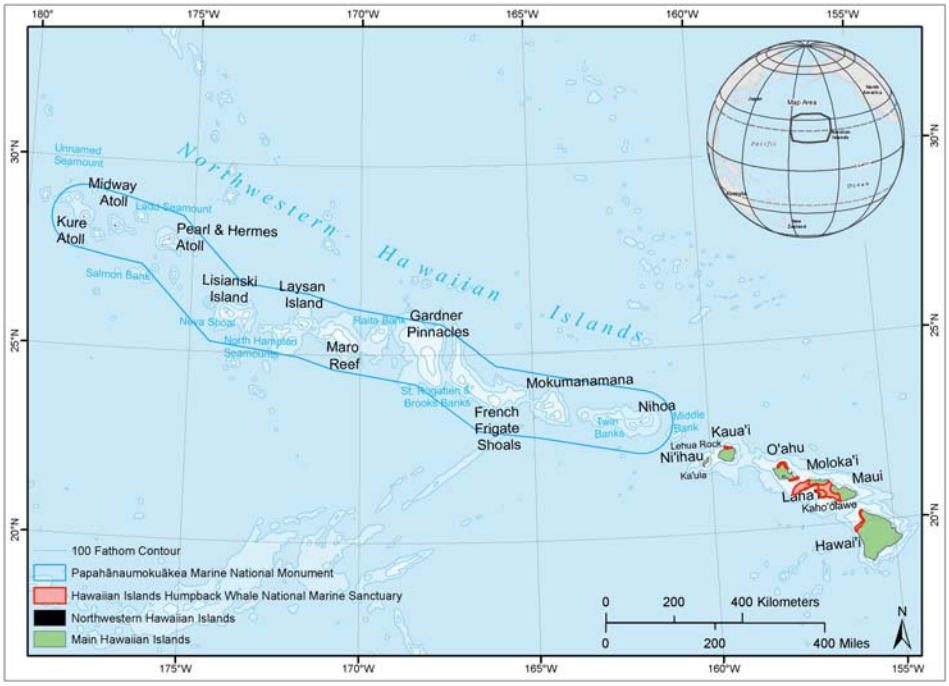
  PMNM is the largest protected area in the United States, stretching the length of the Northwestern Hawaiian Islands. Co-managed with the State of Hawai'i and the Department of the Interior, the monument preserves one of the most untouched areas of coral reef in the world.
- Fagatele Bay National Marine Sanctuary (FBNMS)

  FBNMS is the only site located below the equator and in a U.S. Territory. With the support of the American Samoa Government, the site protects a small, but pristine coral reef.

The mission of NOAA's Office of National Marine Sanctuaries is to serve as the trustee for the nation's system of marine protected areas, to conserve, protect, and enhance biodiversity, ecological integrity and cultural legacy.

The National Marine Sanctuaries Act Mandate:

"...To identify and designate as national marine sanctuaries areas of the marine environment which are of special national significance and to manage these areas as the National Marine Sanctuary System..."[2]

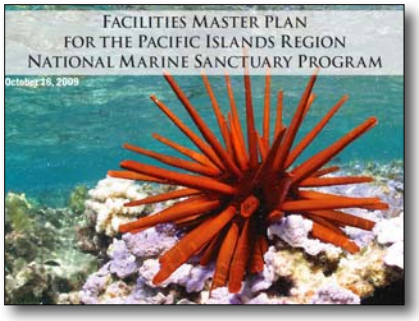


The ocean around the Hawaiian archipelago is part of the Papahānaumokuākea Marine National Monument and the Hawaiian Islands Humpback Whale National Marine Sanctuary. (Source: Joey Lecky)

[2] *National Marine Sanctuaries Act (Sec. 301)*

The people of Kaua‘i have long had a relationship with the northwestern Hawaiian Islands that endures in modern day Hawai‘i. Kaua‘i is an ideal setting in which the resources and heritage of the Papahānaumokuākea Marine National Monument and the Hawaiian Island Humpback Whale National Marine Sanctuary can be shared and the responsibilities for caring for them can be inspired.

Purpose of this Document



The 2009 Facilities Master Plan for the PIR preceded this document and first identified the need for an increased presence on Kaua‘i. (Source: Ferraro Choi and Associates)

The purpose of this document is to outline the vision and strategy for the implementation of a marine-focused educational facility on Kaua‘i. The project was initially identified as a regional priority in the 2009 Pacific Islands Regional Facilities Master Plan, which determined the overall strategy for effective facilities to support the regional mission. Many of the region’s existing locations, including the small office currently on Kaua‘i, are inadequate in size and function and thus unable to fully support the ONMS vision, mission, and goals. The master plan makes recommendations to improve seven existing facility locations and proposes eight new locations that currently do not exist. Kaua‘i was identified as a possible new facility location in the plan because the current administrative facility is too small and does not optimally support the many programs on the island. The proposed facility, the discovery center, would help to support and improve the primary sanctuary and monument activities on Kaua‘i, which include the following initiatives:

- Education for Adults and Children (residents and visitors)
- Research and Science
- Management of the Sanctuary and its Resources
- Public Outreach
- Community Engagement
- Endangered Species and Resource Protection
- Ocean Stewardship

Hawaiian meeting facilitator Puanani Burgess guided the community through both visioning workshops that preceded this document. (Source: James Yamamoto)

It is important to note that financial resources are not currently available for a project, but this document sets the stage and presents options for the ultimate goal of expanding, enhancing, or improving the physical and programmatic presence on Kaua‘i.

Project Process

The community-centric process for the facility strategy is outlined below:

Community Visioning Workshop One and Preliminary Information Collection. The first public community meeting was held on November 20, 2010, and was open to the

community and sanctuary volunteers. Approximately 70 people attended the first workshop. This workshop introduced the project to the community and presented a general overview of NOAA. The intent was to engage the public in a facilitated visioning session for the proposed facility. NOAA engaged a Hawaiian facilitator and community development expert, Puanani Burgess, to facilitate the workshop. Meeting participants were then organized into smaller focus groups and asked to present answers to the following questions so that NOAA/ONMS would attain a deeper understanding of the island and its people.

- What is the gift of Kaua'i?
- What is your vision of Kaua'i?
- With the vision in mind, how would a discovery center support your vision of Kaua'i?
- Who would the center serve? What values would be foundational to the center? What kinds of activities, services and programs do you see happening at the center?
- Where could the center be located?
- How do you see yourself continuing to be involved with the development of the center?

The smaller groups then presented a summary of their findings back to the larger community group. Each group's answers to the questions were written on individual sticky notes and compiled on large poster boards. In order to accommodate individuals unable to attend the large workshop, several smaller workshops were held along with solicitation through media and websites for email feedback from the general public.

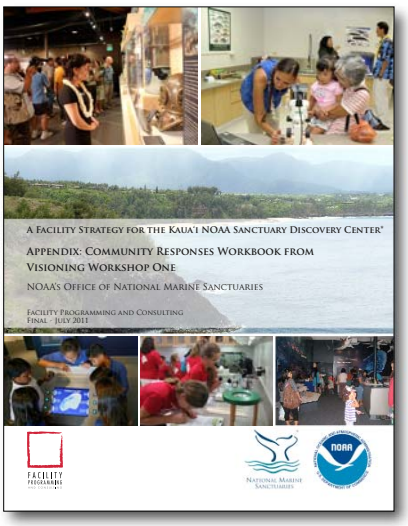
The more than 500 responses to the six questions were then compiled into a "workbook" that documented the community's reaction to the questions and thoughts toward the discovery center. The workbook (Appendix) captures the community's overwhelming support for a discovery center and the initial outlook for activities and locations.

This task was combined with a first set of on-site interviews and site tours with potential partners, some community leaders, and local advocates, providing the opportunity to discuss "big picture" issues and potential synergies. The outcome from the first workshop and on-site interviews informed the second community visioning session and public presentation discussed next.

Community Visioning Workshop Two. The second community visioning workshop was held February 5, 2011. Facility Programming and Consulting presented a summary of findings from the previous effort, and ONMS presented several examples of existing NOAA visitor and discovery centers across

Kaua'i County Mayor Bernard Carvalho, Jr., gave the opening address at both NOAA discovery center community visioning workshops. (Source: FPC)

Participants formed small breakout groups during the first community workshop to address the six questions. (Source: FPC)



Community responses from Workshop One were compiled into a workbook that was used to inform both the second workshop and this document. (Source: FPC)

the United States and demonstrated some of the educational activities that could be expected in a discovery center. Puanani Burgess once again facilitated the workshop.

"Planning teams" were formed to identify the mission, goals, priorities, locations, and activities of their ideal discovery center. (Source: James Yamamoto)

This meeting was aimed to further refine the sentiments of the public into a more specific strategic mission, set goals and priorities for the proposed discovery center, as well as identify "must have" spaces and activities in the center. Participants were grouped into "planning teams" that were asked to develop a design presentation focusing on the following:

- A mission statement for their idea of a discovery center
- The top three goals for the discovery center
- A list of "must have" spaces or activities for their center and a list of "nice to have" spaces or activities
- Where should the center/facility be located and why?
- What kind of activities does the group see taking place at the center/facility?

Participants at Workshop Two were invited to participate in educational activities, such as this Albatross Bolus dissection, to illustrate the range of activities that could take place at the discovery center. (Source: James Yamamoto)

Approximately 50 people attended the second workshop and formed five planning team groups. The groups were allotted time to work through each item listed above. Each group then made a design presentation back to the larger group. The group responses from Workshop Two gave further insight into the community's requirements and vision for a discovery center. The results from this meeting, arranged by group, can be found in Chapter Three of this document.

Facility Strategy. The intent of this document, specifically the facility strategy, is to develop a "road map" and a menu of alternatives that will support the development of the discovery center. The plan defines supporting strategic goals, mission and vision, core values and established guiding principles. The facility strategy addresses the following:

- A summary of community vision
- A summary of need and opportunities
- A summary of available market data
- A description of potential partnerships (if any)
- A description of preferred locations
- An analysis of the initial and long term costs, including staffing

One of the primary functions of the facility strategy is to identify the community's needs for the discovery center and marry them with the needs of NOAA/ONMS in a way that will support the planning, funding requirements, and program development to ensure a successful outcome.

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The discovery center would provide local children the opportunity to participate in hands-on ocean science activities like this Albatross Bolus dissection. (Source: James Yamamoto)

The discovery center on Kaua'i is envisioned to be a central community gathering place that promotes a life-long educational experience to people of all ages through exhibits, events, and activities. It will be a center of place-based learning that is sensitive to the Hawaiian culture and history.

The purpose of this facility strategy is to document the vision for a sanctuary discovery center on the island of Kaua'i. Strategic planning was initiated to determine community needs, set a meaningful mission and goals for the facility, and to define the future course of action desired by the community, volunteers, and staff. Additionally, this strategy is guided by the broader objective of increasing visibility and raising awareness amongst the surrounding population regarding the discovery center's connection with the community, as well as the function of the National Oceanic and Atmospheric Administration (NOAA), and the Office of National Marine Sanctuaries (ONMS) in this region.

Kaua'i's current sanctuary facility, located in the Kukui Grove Executive Center, serves both the Papahānaumokuākea Marine National Monument (PMNM) and Hawaiian Islands Humpback Whale National Marine Sanctuary (HIHWNMS). This sanctuary office is a small space in a commercial business complex and serves as the base of operations for sanctuary programs on Kaua'i. The office also serves as a venue for a limited range of volunteer training sessions, various workshops, and meetings; educational and outreach materials are also available at this location. The existing facility is not satisfactory in that it does not provide adequate office space, operational spaces, storage, displays, or public meeting space that would allow for more robust programs consistent with the ONMS mission. It is a priority of the Pacific Islands Region (PIR) to improve facilities on Kaua'i by establishing a new public discovery center to promote education, outreach, science and research, and other missions on the island to both residents and visitors. This new discovery center is identified in the 2009 Pacific Islands Regional Master Plan.

The Discovery Center Vision

Based on other ONMS facilities located throughout Hawai'i, the discovery center on Kaua'i is envisioned to be a central community gathering place promoting life-long educational experiences to people of all ages through exhibits, events, and activities.

Goals for a Discovery Center

The project team, utilizing input from the community, developed the following goals:

- To provide a gathering place for residents and visitors of all ages that facilitates awareness, understanding, and appreciation of:

  - The marine and terrestrial environments of Hawai‘i
  - Hawaiian cultural values
- To present the overarching conservation message of the Office of National Marine Sanctuaries
  - To present a story of why the sanctuary and monument exist and why they should be protected
  - To increase support of NOAA and ocean stewardship
  - To create an opportunity for the community to become more familiar with NOAA through the “One NOAA” concept
  - Science and research will be intrinsic throughout the facility to increase marine awareness and science education among local children
- To respond to both primary markets (residents and visitors) making the learning experience available to everyone
- To be a model of sustainability in all areas of planning, design, and operation
- To involve a broad spectrum of the community, including residents, children, educational, volunteer and local business groups in the community-centric development and operation of the center:
  - To be an information and activity hub for the community’s environmental efforts
  - To support regional partners with knowledge, resources and services

The Facility Strategy

This document addresses a wide range of topics affecting the implementation of a discovery center on Kaua‘i. The document is organized into the following sections:

- **Community Feedback Summary:** Addresses the range of activities and other requirements identified by the community that would take place at the center.
- **Factors that Influence the Planning:** Covers many considerations affecting the planning and implementation of the discovery center. As with any project, there are outside influences that guide or affect the project including:
  - Who Will Use the Facility
  - Sustainability Suggestions
  - Other Considerations
- **Facility Requirements:** Summarizes the physical needs and assets of the discovery center and include physical locations on Kaua‘i, space needs that determine the size of the center, exhibits, and the scope of the project.

Mayor Bernard P. Carvalho, Jr. created a vision for Kaua'i during his inauguration speech on December 1, 2010. The vision, called *Holo Holo 2020*, calls for all organizations, businesses, residents and visitors on Kaua'i to be part of creating an island that is sustainable, values native culture, has a thriving economy, and cares for all – keiki to kupuna.

- **Cost and Budget:** This project is not currently funded. However, consideration has been given to potential costs for a discovery center including capital costs, annual operations and maintenance, and staffing.
- **The Next Steps:** In order to ensure that the momentum of the project is not hindered, specific steps will be determined to guide the next phases. NOAA will continue to engage the public to refine the scope and priorities for the project.

The discovery center is widely supported by the people of Kaua'i as an opportunity to create a place for people of all ages to learn about the ocean and conservation. Over 500 responses were received during the initial planning stages that were overwhelmingly supportive of an ocean-themed discovery center. In addition, the project is in line with Kaua'i Mayor Bernard Carvalho, Jr.'s *Holo Holo 2020* vision of "creating an island that is sustainable, values our native culture, has a thriving and healthy economy, cares for all – keiki (children) to kupuna (elders)." The mayor supports the discovery center as a place where "NOAA will not only be able to continue to operate their programs…but they will also be able to provide a unique learning experience for all people on Kaua'i…residents and visitors alike. This proposed discovery center will more than anything else be a wonderful benefit for our children, so they can grow up to be even better educated than we are about the need to preserve and protect our natural resources."[1] The *Holo Holo 2020* vision lists several goals and objectives that are similar to those of the discovery center:

- Supporting the economy
- Becoming more sustainable now
- Planning for our island's future
- Caring for our communities, our families, our residents, and our visitors

The *Holo Holo 2020* program currently consists of 38 county, state, and federal projects that embody the mission of sustainability and community engagement. Mayor Carvalho understands the importance of "looking at ways to preserve our natural resources and protecting our oceans and our streams, especially on the beautiful island of Kaua'i. A facility, like the discovery center, that can educate our keiki, our residents, and our visitors about protecting natural resources is overdue."[1]

[1] *This statement was included in Mayor Bernard Carvalho's opening remarks at the November 20, 2010 public workshop.*

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Community Feedback Summary 3

The mission and activities to take place at the proposed discovery center will be the foundation of the strategic plan for the facility. The overarching message of this document is that community ownership and engagement in this process will lead to a clear and universally-supported strategic view on priorities and distinct understanding of the core values of NOAA as well as the island community of Kaua'i. Two public workshops and several smaller facilitated meetings were held to encourage community participation in the development of a strategy for the discovery center. The workshops served as a means to introduce members of the local community to ONMS and gauge the level of interest in implementing a discovery center or visitor center on the Island of Kaua'i. Participants were encouraged to brainstorm their vision, discuss opportunities, and hone in on defining the discovery center experience.

The findings of the first workshop are contained in the Appendix of this report (Comment Workbook) and are available under separate cover. The focus of the second community workshop centered its aim on working groups that determined the mission, long and short-term goals, and requirements for the facility. Those results are included in the subsequent pages of this document.

Scope of Activities

The community was asked which activities they would like to see in the proposed discovery center on Kaua'i and how the discovery center can best support Kaua'i. The scope of activities, programs, and events that could be accommodated in the discovery center sum up the driving force that will determine what the final facility model will be.

Once all responses were collected from the participants they were analyzed for word repetition. The following graphic is a visual representation of topics or ideas that were considered a priority by the community.

This graphic visualizes words and sentiments most commonly expressed by the community in their feedback.

Community Priorities

According to the data gathered within the workshops along with other community input, a list of priorities was developed. The following activities represent those priorities as defined by the local Kaua'i community.

- Education (both traditional and historical) for all ages in partnership with local schools and Kaua'i Community College (KCC) for programming and field trips
- Community meeting space
- Marine science and research
- Wet labs and classrooms
- Land to ocean system/connectivity of the Hawaiian ahupua'a (land division from the mountains to the ocean)
- Hands-on (interactive) displays and activities
- Animal rescue and rehabilitation
- History and importance of Kaua'i and the Hawaiian culture
- Community identity
- Conservation/mālama/sustainability
- Ocean/boating/swimming safety

ONMS Activities

The discovery center would likely include NOAA, sanctuary, monument, and possible partner messaging. Many of ONMS' priorities overlap or are in alignment with those of the community. ONMS activities are listed below.

Outreach and Education

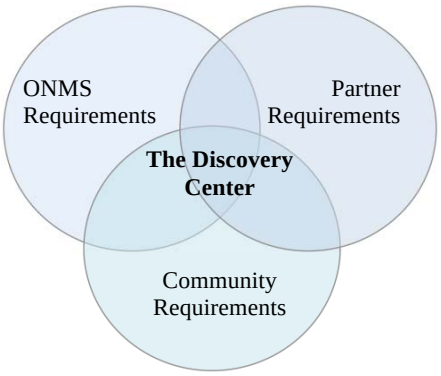
Assets such as exhibits, classroom and training spaces, learning labs, lecture spaces, and signs are the tools used for outreach and education activities that help spread the message of ocean literacy and conservation.

Research and Science

Science and research missions play a vital role in the goals of marine conservation and protection. In order to effectively manage the resources within the marine sanctuary system, scientists must understand the natural and cultural resources and the threats they face. To do this, the right facilities and spaces are needed (e.g., wet lab classrooms).

Management/Protection

The ONMS strives to identify, understand, assess and respond to natural and human-caused environmental changes within the sanctuaries through science and research missions. To effectively manage the resources within the marine sanctuary system,



The discovery center on Kaua'i will likely be a cooperative alliance between the ONMS, partners, and the local community that will integrate many overlapping activities.

scientists must understand the natural and cultural resources and the threats they face. Many research missions are conducted in partnership with universities and federal, state, and private research organizations.

Endangered Species and Resource Protection

Resource protection and management go hand-in-hand, joining forces to reduce the threats and impacts of human-induced effects on the natural and maritime heritage resources in the sanctuaries. Resource protection in the sanctuaries includes regulations, permitting, incident response and contingency planning, damage assessment and restoration, and enforcement.

Ocean Stewardship

In order to successfully address complex ocean and/or coastal-related issues, balance the use and conservation of marine resources, and realize future benefits from the ocean, the public must be educated and engaged with a sense of excitement in the importance of the ocean and how individual actions can affect the ocean and its inhabitants.

The "One NOAA" Concept

The ONMS serves as the "face" for the larger NOAA organization and promotes the "One NOAA" agenda of NOAA as an integrated system of offices. The ONMS often uses exhibits and signs to explain other NOAA activities and programs, such as wildlife protection under National Marine Fisheries Service (NMFS) or how climate change is affecting ecosystems under the National Weather Service.

Both Sanctuary and Monument Concepts

Any facility on Kauaʻi would include information and activities related to both the Hawaiian Islands Humpback Whale National Marine Sanctuary and the Papahānaumokuākea Marine National Monument.

Administration and Operations

Although it is often overlooked, the importance of providing adequate operational support space such as staff offices, meeting spaces, and storage should not be discounted as it is critical in order to provide the support required by this program mission.

Second Workshop Findings

The second workshop for the proposed Kaua'i sanctuary discovery center was held on February 5, 2011. This workshop included over 40 participants who were asked to form "planning teams" to further consider the community-centered vision for the proposed center. Each planning team was given the following scenario:

NOAA has put out an RFP (Request for Proposals) to the Kaua'i island community to design and propose the development of a discovery center for Kaua'i. The elements each proposal will have to cover are as follows:

A. A Mission Statement for your center/facility. A mission statement for the center is one of the most important definitions you create. It will explain why it exists, whom it will serve, and guide the development and critical strategic decisions regarding the direction of the center/facility. A mission statement should provide a clear overview of the center's values and ideals.

Ideally, your mission statement should be no more than three or four sentences, or a short list of bullet points, and should define the work of the center and who and how it will serve the community. There is a lot of research and input to consider from ideas gathered during the previous community visioning workshop.

B. Write the top three goals of the center/facility. The goal statements will identify what you want to accomplish regarding the development of the center/facility, give a timeline, and identify what needs to be done to accomplish each goal.

C. Write a list of "must haves" for the center and a list of "nice to have." Also consider that the center may be built in phases/stages while developing the list of spaces.

D. Where should the center/facility you envision be located and why? You can consider and recommend more than one site, but please list your pros and cons for each site.

E. What kinds of activities do you want to see take place at the center/facility? Consider NOAA's needs for inclusion in the center/facility:

- NOAA logos placed prominently throughout the Center as well as a sign that reads, "Sponsored by NOAA's Office of National Marine Sanctuaries."

MISSION STATEMENT:

A mission statement will determine the purpose and guide the actions of the discovery center; it spells out the sense of direction, guides decision-making, and spells out overall goals

ORGANIZATIONAL GOALS:

Organizational goals define what will be accomplished at the discovery center and give direction and motivation. These are the benchmarks that define success.

SPACE PRIORITIES:

Prioritizing spaces and activities will help to guide decisions, funding, and phasing of the discovery center project.

LOCATION:

The location of the discovery center will determine cost and program possibilities as well as providing opportunities for partnerships and synergies.

ACTIVITIES:

Activities at the discovery center are the day-to-day missions that make the discovery center come to life and contribute back to the community.

Five planning groups were formed (including one add-on meeting which allowed volunteers who helped at the workshop to provide their personal input). The responses are included on the following pages.

- A map of the entire national marine sanctuary system and maps of the Papahānaumokuākea Marine National Monument and the Hawaiian Islands Humpback Whale National Marine Sanctuary.
- A large map of Kaua'i somewhere in the facility.
- Various signs related to both sanctuary sites as well as an interactive kiosk from NOAA.
- NOAA has listed for the center/facility the inclusion of office spaces and a community meeting space that will seat approximately (fill in the blank) people as "very desirable."

The visioning workshops assisted in scoping the views and opinions on what the community envisions for the discovery center.

Group 1

Mission Statement

To provide a place for people of all ages to increase awareness and understanding of traditional and contemporary science which promotes sustainability.

Goals

1. Identify and acquire a location while simultaneously developing priority programs and exhibits – Six months
2. Identify Funding – One year
3. Open doors to the initial phase of discovery center – Two years

Spaces

Must Haves:

- Attractive mount of entire Hawaiian archipelago
- Wet lab
- Gift shop (to raise funds for support of programs and operations)
- Sensory and interactive exhibits
- Flexible meeting space (that could possibly also serve as a theater for ocean-themed films)

Nice to Haves:

- Restaurant (also for fundraising); restaurant would need to be community-friendly and not a threat to other businesses in the area. It could perhaps be in partnership with an existing restaurant and would be self-sustaining with a garden or at the very least using local farmers.
- Bus transportation for outreach at local schools or other possible audiences.
- Presentations and classes by traditional and contemporary scientists
- Venue for other ocean-centric art and traditional arts (e.g., hula, music)

Location

- Nawiliwili Harbor
- Coco Palms (initial location or satellite location)
- North Shore (initial location or satellite location)

Activities

- Educational activities and classes for all ages
- Special presentations by different expert speakers
- Field trips and field work that gets volunteers and the community out into "place-based" science at the beach or out in the environment
- Plays/puppet shows/artistic displays for kids
- Volunteer opportunities for both residents and visitors
- Scientific monitoring
- Exploration activities
- Community meetings
- Tours
- Teacher workshops

Group 2

Mission Statement

The discovery center offers education and active solutions to the challenges of Hawai'i's delicate ocean and land ecosystem.

Goals

- To have inside and outside encounters and classes for science and culture
- To have research facilities including a lab for others to come to do research
- To provide public displays
- Rehab center for marine life
- To be a building "off the grid" that is sensitive to Hawaiian culture

Spaces

Must Haves:*

- Well planned and sufficient parking
- Various displays
- To have access to outside hands-on displays/activities
- Hands-on classrooms
- Rehab center for marine life
- Must have a LEED certification

** Presenter did not differentiate between "must haves" and "nice to haves" in presentation*

Location

- Ahukini Landing – Great building site with good whale watching, sea turtles, good dive site, near airport
- Hale Kaua'i – Existing building, right in Nawiliwili Harbor, easy access to tourists, has nine acres of endless possibilities, near the fishpond and river, owner is in favor of the center

Activities

- Snorkel outings
- SCUBA certification
- Classes to come learn about marine life
- Lab testing for water quality

Group 3

Mission Statement

Develop a gathering place for everyone culturally and environmentally unique with a sense of place that promotes mālama (preservation), aloha, pono (balance), and kuleana (responsibility) of the land and sea of Kauaʻi and Niʻihau for kamaʻāina (locals) and malihiniʻohana (visitors).

Values: Sustainability, education, protection, conservation, preservation, and respect

Goals

1. Education
2. Community gathering place
3. Restoration projects through wet labs, integration of the Department of Education, guest speakers, and hands-on projects.

Spaces

Must Haves:

- Community meeting space
- Wet labs
- Multipurpose rooms
- Educational/cultural/scientific programs
- Experimental space
- Ocean access
- Parking accessibility for cars and buses
- Hands-on exhibits
- Restrooms
- PA System
- Gift Shop
- Maps

Nice to Haves:

- Docking for boats
- Aquarium
- Overnight facilities
- Snack bar
- Computer lab
- Web-cam on a live coral reef
- Ocean-themed art gallery

Location

- Nawiliwili Harbor – Hale Kauaʻi
- A place pono to native Hawaiians
- Central location (such as Līhuʻe) next to coast/groves
- Coco Palms

Activities

- Education/educational programs
- Class visits
- Community meetings
- Animal rehab
- Research
- Vessel facilities
- Ahupuaʻa
- Restoration
- Videos
- Lectures
- Touch-feel/hands-on demonstrations
- Family programs
- Seasonal programs dealing with shearwaters, whales, etc.

Group 4

Mission Statement

The discovery center actively participates in culturally sensitive marine education for Hawai'i.[1]

Goals

1. Education – Combining the best of ancient Hawaiian practices and modern ongoing research. This may include lab experiences and outings.
2. Research
3. Marine animal rehab

Spaces

Must Haves:*

- Recognition of host culture and their relationship to sanctuary goals
- Injured animal rehab center
- Research lab
- Community outreach
- Financial partnerships
- Volunteers
- Meeting places for at least 300
- Multimedia facility
- Flexible displays

** Presenter did not differentiate between "must haves" and "nice to haves" in presentation*

Location**

- Nawiliwili Harbor to be near fishpond and sea
- Hale Kaua'i
- Port Allen
- Ahuhukini because there is lots of marine activity in the area
- Kaua'i-Aston Aloha Beach Hotel because it is a state lease, is culturally located
- Within metes and bounds of sanctuary

*** Location to be determined by other requirements (mission, goals, and activities)*

Activities***

- Field trips
- Exchange student program
- Data collection by volunteers (e.g., water sampling)
- Place to teach and learn the culture
- Interactive
- Scientific research
- Rehab
- Community outreach and education
- Lab experiences
- Displays

**** Center activities to be determined by community consensus*

[1]*Discovery center staff should take a good look at wording of similar mission statements, especially Native American facility mission statements that include or look at culturally sensitive issues/concerns in those statements (e.g., American Samoa and Papahānaumokuākea).*

Group 5

Mission Statement

A place for residents and visitors of all ages that facilitates awareness, understanding, and appreciation of:

- *The marine and terrestrial environments of Hawai'i*
- *Hawaiian cultural values*

Goals

- Provide access to technology and scientific tools; integrate inquiry-based lessons
- Large community gathering place
- Place for all groups to share
- Destination for residents and visitors
- Resource for education
- Working in partnership with the community
- Educate
- Inspire sustainability (financial and operational)
- Teach sustainability (living)
- Conservation
- Marine education resource conservation center
- User friendly
- Sustainability (building)

Spaces

Must Haves:

- Staff offices
- Meeting place for 200 people
- Restrooms
- Sound system
- Parking
- Be self sufficient financially
- Maps of archipelago, northwestern Hawaiian Islands, and Kaua'i
- Classroom space
- Multi-purpose room for wet labs, demos, arts, family science
- Funding
- Marine education
- Research and conservation center with paid biologist
- Hands-on activities
- Long-term commitment by NOAA/ONMS for the facility
- High tech room, GPS, webcams, maps, tracking
- Vision
- Exhibits of all marine threats
- Rotating exhibits
- Speakers/lectures
- Website
- Store/bookstore/library

Nice to Haves:

- Partitions for meeting areas
- Aquaria
- Small kiosks/displays of ocean-related non-profits
- Tech equipment, film edit, GPS tracking, computers, video cams, live feed from research vessels
- Rehab center or link
- Response boat
- Life-size whale model and others (e.g., pelagic birds)
- Shoreline access within walking distance
- Snack bar with kitchen
- Showers for overnight stays and kitchen
- Store/bookstore
- Wet lab
- Outreach sites (satellite locations)
- Mobile classroom
- Library

Location

1. Hale Kaua'i
2. Coco Palms
3. Near U.S. Coast Guard Station

Activities

- Inquiry-based lessons
- Indoor and outdoor activities
- Interactive exhibits
- Classes, speakers, lectures, demos
- Overnight educational stays
- Satellite locations with observation stations
- Cultural, ocean events
- Annual ocean fair
- Films, video
- Star lab programs

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4 Factors That Influence the Planning

There are many factors that will influence the development, planning, and design of a discovery center for Kaua‘i. These factors should be considered from the onset of the visioning for the project. This chapter looks to summarize all outside factors that should be considered when planning the discovery center.

Who Will Use the Facility?

The people utilizing the facility represent critical influence in determining location and mission objectives. The discovery center will be used primarily by local Kaua‘i residents and secondly by tourists to the island. For the purpose of this facility strategy, a summary market study was performed to determine both resident and tourist demographics to aid in:

- Definition and character of the market area population including demographic, lifestyle clusters and socio-economics;
- Breakdown of the population into appropriate segments to determine potential users;
- Estimates of the number of customers appropriate for the proposed project; and
- Identification and impact of the other competitive recreation/entertainment activities.

Demographic data included on the following pages was gathered from census data compiled by the U.S. Census Bureau and the Kaua‘i Visitors Bureau.

Resident Demographics

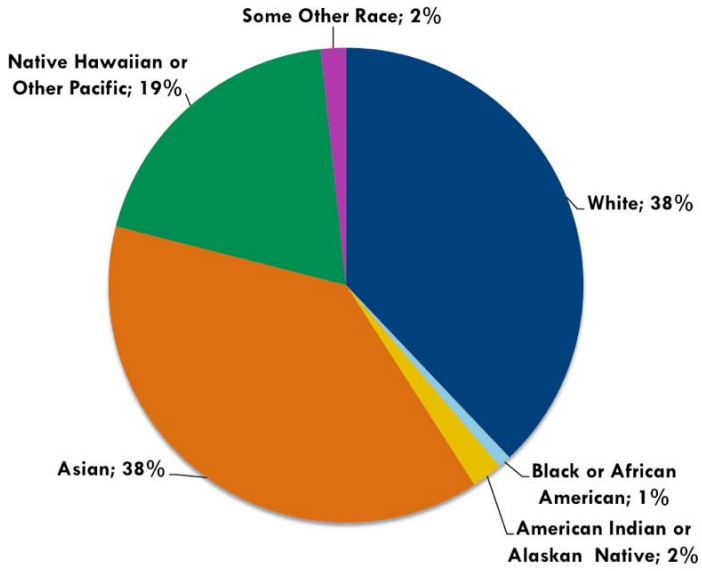
Kaua‘i’s residents are viewed as the primary target market for the discovery center, including adults and children. The following section provides a brief overview of Kaua‘i demographics.

Summary:

- 2010 Kaua‘i population estimate – 67,091 (growth from 2000-2010 was 14.8 percent)
- Number of households – 23,240
- Total housing units – 29,793
- Average household size – 2.84
- Average family size – 3.31
- Median age – 41.3

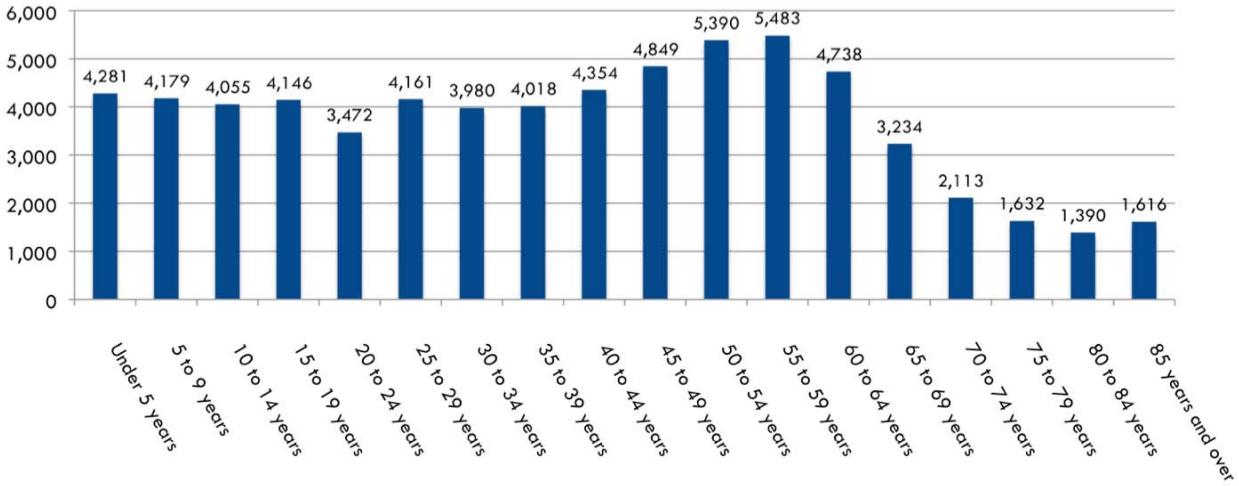
Kaua'i Population and Race[1]

Kaua'i's population was approximately 67,091 in the 2010 census.



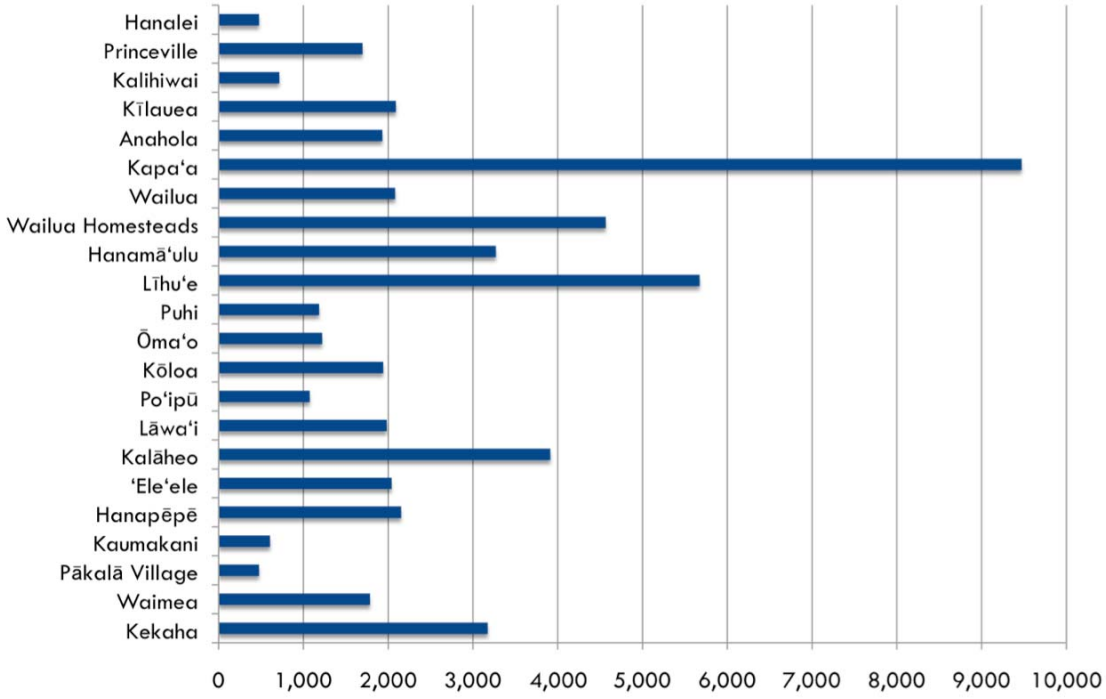
Age and Gender

Kaua'i's population is relatively young with a median age of 41.3 years. Gender on Kaua'i is generally evenly divided between male and female.



[1] *In combination with one or more of the other races listed. The six numbers may add to more than the total population, and the six percentages may add to more than 100 percent because individuals may report more than one race. White in this case includes Hispanic or Latino descent. Native Hawaiian/Pacific Islander includes Native Hawaiian, Guamanian/Chamorro, Samoan, and other Pacific Island descents. Asian includes Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, and other Asian descents.*

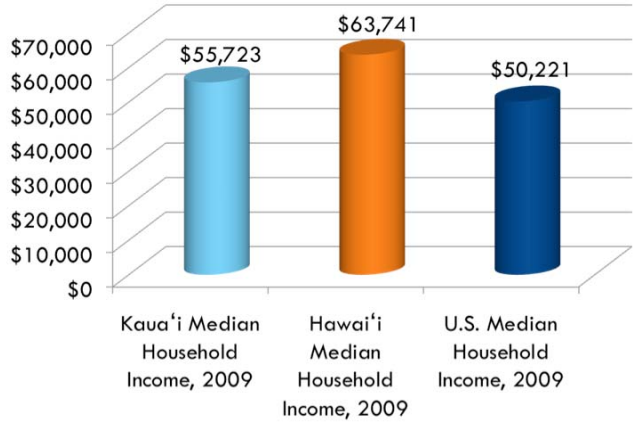
Kaua'i Population by Town or Area[2]



[2] *Information was taken from the 2000 U.S. Census (2010 data not yet released at the time of this report).*

Kaua‘i Economy

- The unemployment rate was 8.5 percent as of October 2010.
- Median household income[3]:



- The economy of Kaua‘i entered into a recession in 2008. Thus, Kaua‘i County faces a particularly challenging economic environment over the next two years.
- Tourism is expected to slowly recover, but overall tourist arrivals are expected to be lower than the 2008 peak and are not expected to reach this peak again.
- Construction jobs have dropped approximately 20 percent since 2008.[4]
- There has been a drop in cruise traffic to the island due to a reduction in cruise ships that stop there.

Visitor Demographics

Visitors to Kaua‘i are the secondary market of the discovery center.

- Named Number Two “Top Island” in the world in 2010 (*Travel + Leisure Magazine*)
- Approximately one million visitors per year
- Direct spending totaled $91.5 Million in September 2010, up 35 percent from 2009; average daily spending is $185 (2010)
- Repeat visitors comprise a majority of tourists to the island
- A majority of the visitors to Kaua‘i are age 50 and over
- Top reasons people visit Kaua‘i include natural beauty, beaches, activities, and rural environment.

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[3] *2009 U.S. Census Bureau Data*

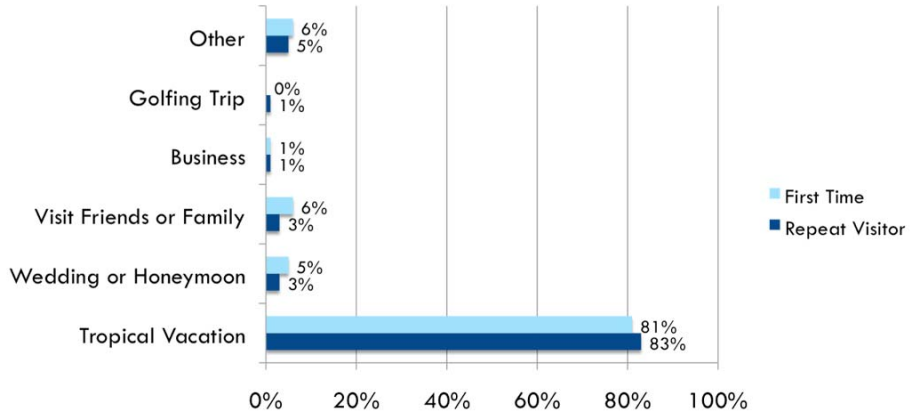
[4] *Kaua‘i Economic Outlook Summary: Kaua‘i Hit Hard by Global Recession; University of Hawai‘i Economic Research Organization; July 15, 2009*

Visitor Arrivals to Kaua‘i

Kaua‘i	2010	2009	2008
Arrivals by cruise ship	196,503	189,641	225,640
Average length of stay (days)	1.39	1.43	1.51
Arrivals by air	963,523	931,425	1,033,449
Average length of stay (Domestic)	8.19	7.61	7.35
(International)	5.22	4.42	3.98
Per person per day spending ($)	$185.00	$150.80	$157.40
Total Expenditures ($ mil)	$264.30	$1,032.40	$1,146.90

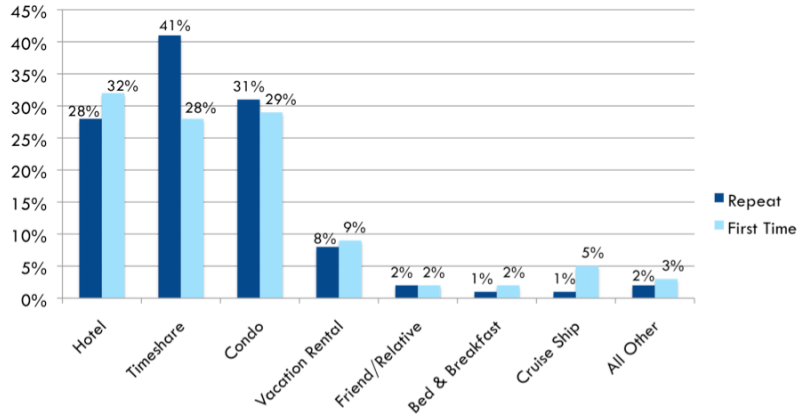
Reason for Visit

Many of Kaua‘i’s one million visitors per year come for the beaches and natural beauty.



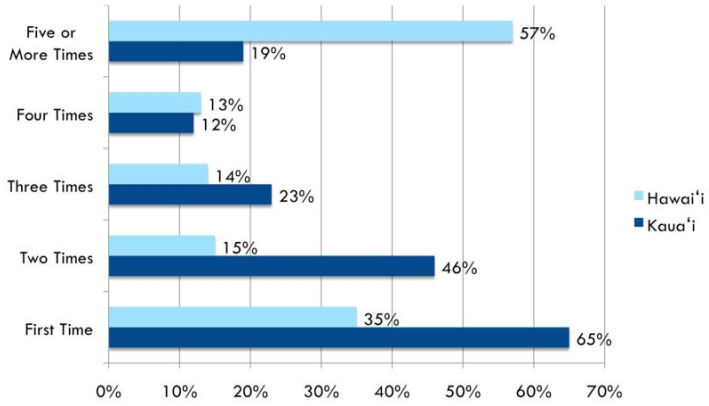
Accommodations While on Kaua'i

There has been a trend toward increased use of timeshares, condominiums, and vacation rental properties rather than hotels. These visitors are more dispersed in the community, making them harder to reach.



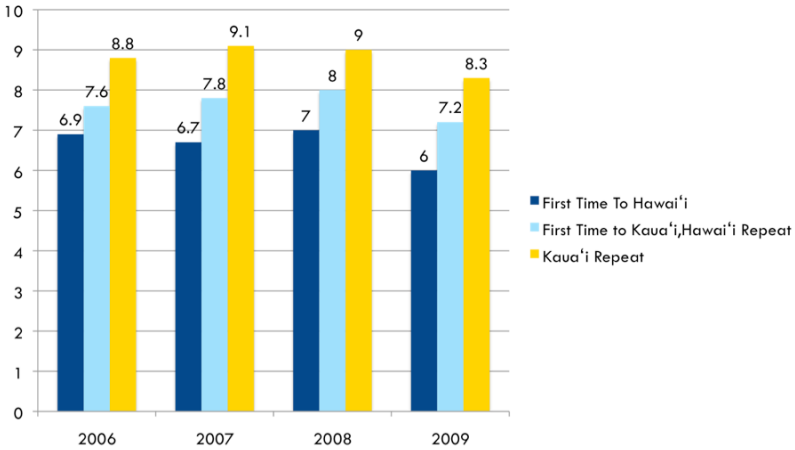
Number of Visits to the Island of Kaua'i vs. the State of Hawai'i

Kaua'i has a high occurrence of repeat visitors.

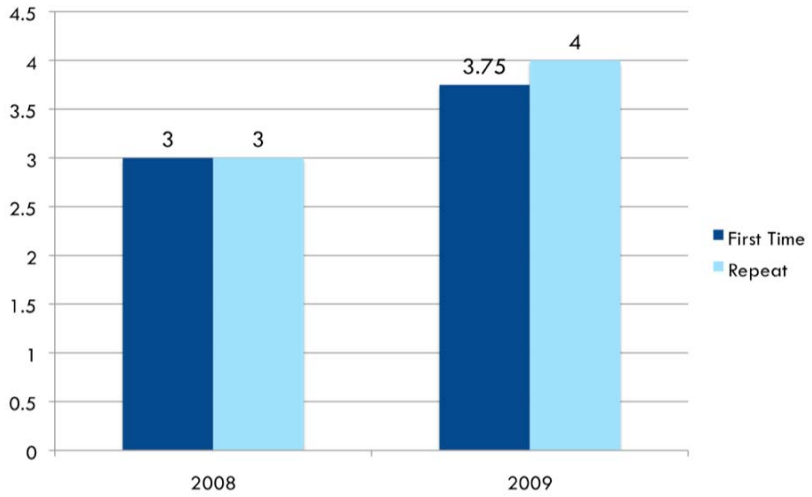


Days Spent on Kaua'i

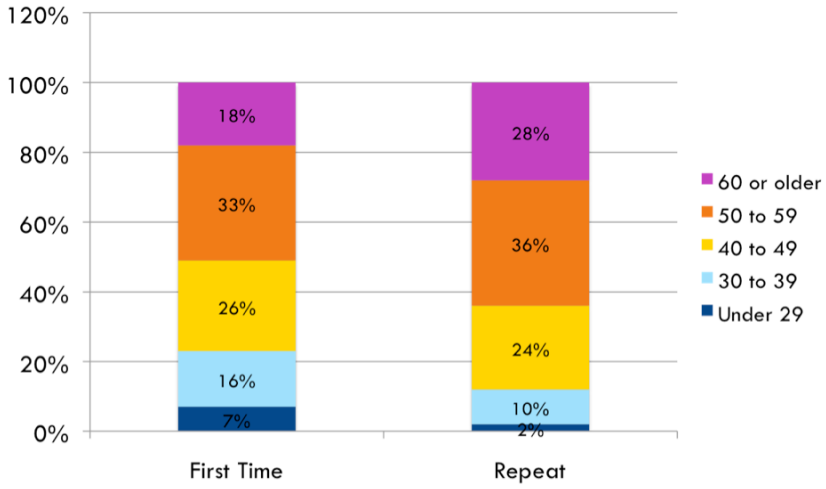
The average stay is approximately one week.



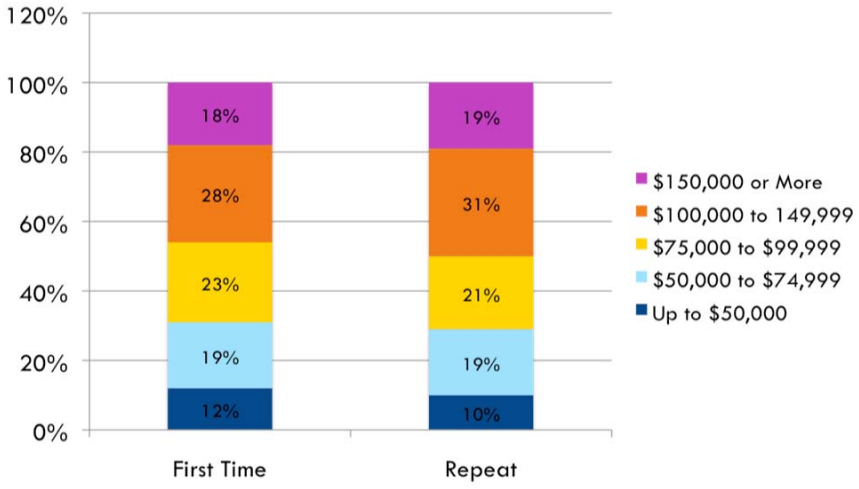
Average Size of Travel Party to Kaua'i



Age of Kaua'i Visitors

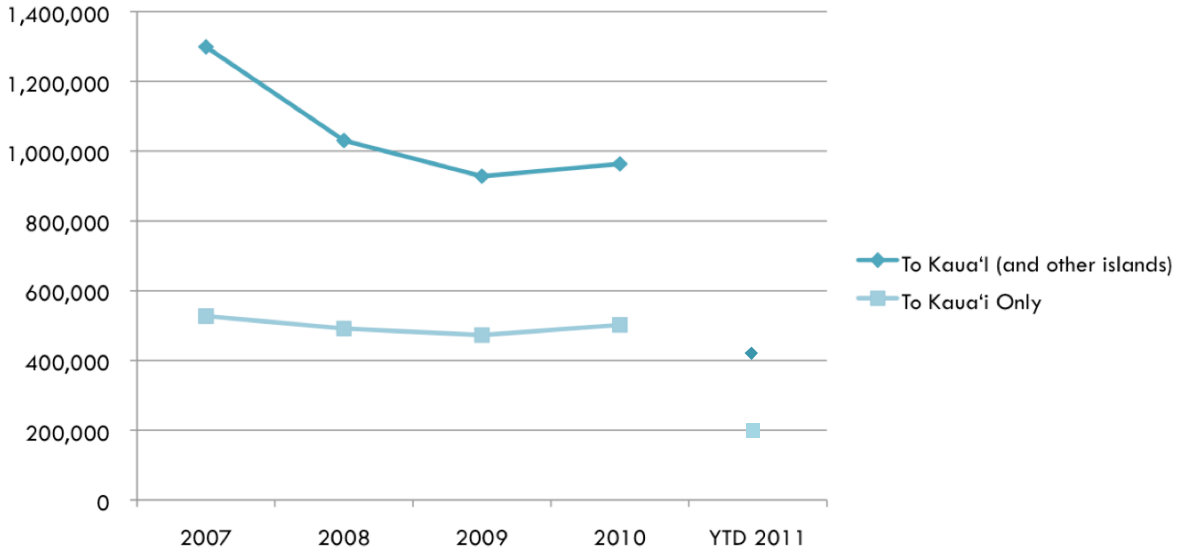


Average Income of Kaua'i Visitor

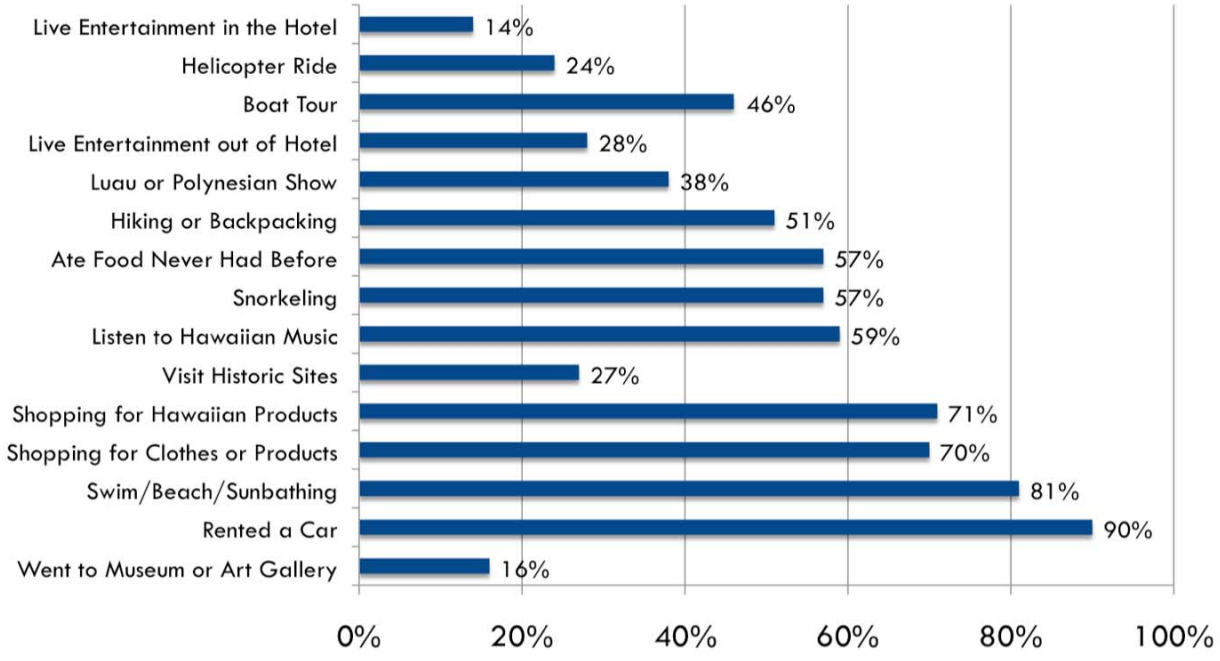


Visitor Arrivals by Air on Kaua'i

Many visitors come from the U.S., with a majority originating from the West coast. Visitor arrivals took a sharp downturn from 2008-2009, with a slight improvement in 2010.[5]



Activities While on Kaua'i



[5] *Source: Hawaii Tourism Authority, Department of Business, Economic Development & Tourism – Research and Economic Analysis Division. 2011 is year-to-date data to May 2011.*

Sustainability Suggestions

The idea of sustainability was of utmost importance to community members. The proposed Kaua'i discovery center must incorporate principles of sustainable design and operations, along with being a model of green practices and providing exhibits on sustainable practices. Sustainable environmental practices can reduce operating and "bottom line" costs by reducing utility bills such as electricity and water.

Sustainable Planning and Design

Sustainable building design seeks to reduce negative impacts on the environment and improve the health and comfort of building occupants, thereby improving building performance. The basic objectives of sustainability are to reduce consumption of non-renewable resources, minimize waste, and create healthy, productive environments. The ONMS is committed to incorporating green design principles in all existing facilities and new construction.

Utilizing a sustainable design philosophy encourages decisions at each phase of the design process that will reduce negative impacts on the environment and the health of the occupants, without compromising the bottom line. Sustainable design principles include the ability to:

- Optimize site potential or the renovation or reuse of an existing building;
- Minimize non-renewable energy consumption;
- Use environmentally preferable products;
- Protect and conserve water;
- Optimize operational and maintenance practices; and
- Enhance indoor environmental quality.

Using sustainable building practices throughout the organization can also lead to long-term cost savings. Conversely, like many ONMS facilities, greening has an associated start up cost premium that should be considered when planning future facilities and renovations.

Sustainable Operations

Sustainable operations refer to the day-to-day management of the discovery center. The building can be operated with full consideration of the environmental factors. Following are several suggestions that can support the idea of sustainable operations:

- Composting and Recycling: Encouraging staff and visitors to recycle. Ensuring recycling receptacles are accessible throughout the facility will divert trash from landfills.
- Use low-flow plumbing fixtures to reduce water consumption.
- Install photovoltaic systems, if possible, to reduce energy usage and cost.
- Use ENERGY STAR® products for heating, lighting and appliances.
- Install occupancy sensors in the facility to ensure lights are off when spaces are not occupied.
- Replace HVAC filters on schedule, and with the use of high performance filters HVAC operating costs will remain low.
- Eliminate toxic cleaning agents and use water-based and biodegradable products when maintaining and cleaning the discovery center.
- Use recaptured water for landscaping irrigation.

While this list does not include all sustainable operations and maintenance best practices, it gives an idea of methods that will be applied to the discovery center. Most studies show a cost premium of between 0.5 percent and 6 percent for a moderate level of sustainable design; obviously higher levels of sustainability (or higher LEED certifications) will require greater initial investment for the discovery center. In addition, consideration will be given to how the discovery center can sustain the program mission for the next 10, 20, or 30 years without major relocation, renovation, or construction. Occupying the right facilities that meet mission needs is critical in Kaua‘i and the space should provide room for growth.

LEED® Certification

This section outlines the requirements for the LEED green building certification program if the ONMS/partners choose to seek LEED requirements for sustainability. An interest in making the discovery center a LEED certified project was expressed early in the planning process.

LEED

The LEED Green Building Rating System™ is a building rating system that is based on accepted energy and environmental principles. Participation in obtaining certification is voluntary. The rating system takes a holistic approach to evaluating environmental performance and provides a definitive standard for what constitutes a “green building.” LEED for New Construction and Major Renovations (LEED NC) is a measurement system designed for rating commercial buildings and includes new building or renovation projects. The first LEED Pilot Project

Program, also referred to as LEED Version 1.0, was launched in August 1998. After extensive modifications, LEED Green Building Rating System Version 2.0 was released in March 2000, with LEED Version 2.1 following in 2002 and LEED Version 2.2 following in 2005. On April 27, 2009, U.S. Green Building Council (USGBC®) launched LEED v3. The ability to be flexible allows LEED to evolve, taking advantage of new technologies and advancements in building science while prioritizing energy efficiency and CO2 emission reductions.

LEED was created to accomplish the following objectives:

- Define "green building" by establishing a common standard of measurement;
- Promote integrated, whole-building design practices;
- Recognize environmental leadership in the building industry;
- Stimulate green competition;
- Raise consumer awareness of green building benefits; and
- Transform the building market.

The LEED rating system is divided into six environmental categories and one general category for innovation:

- **Sustainable Sites (1 prerequisite, 26 possible points)** This category targets many site related activities and strategies such as construction pollution prevention, site selection and development, density and community connectivity, brownfield redevelopment, alternative transportation, storm water design, heat island effect and light pollution reduction.
- **Water Efficiency (1 prerequisite, 10 possible points)** This category focuses on efficient landscaping techniques, innovative wastewater technologies, and water use reduction.
- **Energy and Atmosphere (3 prerequisites, 35 possible points)** This category defines fundamental commissioning of energy systems, minimum energy performance and fundamental refrigerant management. Additional points can be obtained for level of optimized energy performance, percent of on-site renewable energy, enhanced commissioning, enhanced refrigerant management, measurement and verification, and green power.
- **Material and Resources (1 prerequisite, 14 possible points)** This category addresses the storage and collection of recyclables, building reuse percents, construction waste management, materials reuse, use of recycled content, regional materials, and rapidly renewable materials and certified woods.

- **Indoor Environmental Quality (2 prerequisites, 15 possible points)** This category awards points for design strategies that improve the indoor environment for the building's users. It defines a minimum Indoor Air Quality (IAQ) Performance and Environmental Tobacco Smoke (ETS) Control. Optional points are awarded for outdoor air delivery monitoring, increased ventilation, construction IAQ management plan during construction and before occupancy, low-emitting materials for adhesives and sealants, paints and coatings, carpet systems and composite wood and agrifiber products, indoor chemical and pollutant source control, controllability of systems, thermal comfort design and verification and percent of spaces with daylight and views.
- **Innovation and Design Process (6 possible points)** This category provides the opportunity for the architect to receive points for innovative design strategies not covered in the previous five categories. One point is given for having a LEED Accredited Professional on the team.
- **Regional Priority (4 possible points)** The intent of this category is to provide an incentive for the achievement of credits that address geographically specific environmental priorities. A database of Regional Priority credits and their geographic applicability is available on the USGBC website, *http://www.usgbc.org*.

Benefits of LEED

The move toward LEED and green building practices has been driven greatly by the tremendous benefits that are a direct result of implementing a green approach. Green buildings use key resources more efficiently when compared to conventional buildings that are simply built to code. LEED creates healthier work and living environments, contributes to higher productivity and improved employee health and comfort. The USGBC has also compiled a long list of benefits associated with implementing a LEED strategy, which ranges from improving air and water quality to reducing solid waste. The fundamental reduction in relative environmental impacts in addition to all of the economic and occupant benefits goes a long way toward making a case for green building. It is also important to note that these benefits are reaped by anyone who comes in contact with the project, which includes owners, designers, occupants and society as a whole.

Certification

Different LEED versions have varied scoring systems based on a set of prerequisites and a variety of credits in the seven major categories listed above. In LEED Green Building Design and Construction and Major Renovations 2009 Edition (LEED v3),

there are 100 base points and buildings can qualify for four levels of certification:

- Certified – 40-49 points
- Silver – 50-59 points
- Gold – 60-79 points
- Platinum – 80 points and above

LEED certification is obtained after submitting an application documenting compliance with all the prerequisites and qualifying for a minimum number of points to attain the established project ratings as listed above. Having satisfied the basic prerequisites of the program, applicant projects are then rated according to their degree of compliance within the rating system as well as paying registration and certification fees. Certification is granted solely by the USGBC.

Other Considerations

The Needs of Kaua‘i

During visioning workshops, the community suggested that culture is the foundation for everything that occurs at the proposed discovery center. The development of a discovery center with this cultural connection in mind from inception would not only perpetuate culture, but would also promote the concepts of sustainability and interconnectedness that are in alignment with the mission of NOAA. It is a site principled on place-based learning and a space to show, tell and teach. Any action taken on the island of Kaua‘i to implement a discovery center should be planned with utmost consideration to the needs of Kaua‘i and its community, along with the knowledge of traditional Hawaiian culture and practices. The idea of Kaua‘i mālama, as suggested during the visioning workshops, is to encourage conservation and responsible use of Kaua‘i and its oceans, which is a vision that is easily transferred to the discovery center.

Historically, native Hawaiians lived a sustainable and harmonious existence that respected both the land and ocean. Native Hawaiians used the resources within their ahupua‘a (a land division usually extending from the uplands to the sea), valued qualities such as ka ho‘ihi (respect), laulima (cooperation), and mālama (to take care of), which resulted in a pono (righteous) relationship with the natural environment. Native Hawaiians understood that by caring for their resources they would in turn be cared for. With this in mind, the discovery center will incorporate sustainable and green design principles to be a model of the Hawaiian notion of mālama to the environment. Examples include adaptive reuse of an existing building,

sustainable or recycled materials, solar panels, and low-flow plumbing.

These native Hawaiian and sustainable influences on the discovery center project are aligned with Kaua‘i Mayor Bernard Carvalho, Jr.’s *Holo Holo 2020* vision to “create an island that is sustainable, values our native culture, has a thriving and healthy economy, cares for all – keiki (children) to kupuna (elders), and has a responsible and user-friendly local government.” The discovery center project looks to embody similar principles based on sustainability and respect for the Hawaiian culture. It is the mayor’s vision that the center also be a benefit for local children by providing unique learning experiences.

It is the vision that educational programs at the discovery center should be implemented with consideration to both modern and traditional Hawaiian ideals that incorporate the concepts of family, connectivity with the land and ocean, and hands-on experience. Hawaiian education embraces these cultural values and principles to perpetuate ancient Hawaiian art, history, lifestyle, geography, hula, and Hawaiian language vocabulary. The idea of hands-on and demonstration-based learning is a crucial factor in traditional Hawaiian education, and the notion of hands-on activities was repeated throughout visioning sessions for the discovery center. These principles will guide the planning, programs, and exhibits within the discovery center and will be the cornerstone of the discovery center concept.

The current status of Hawai‘i’s school system and trends affecting the State's public school system has meant budgetary cutbacks and pedagogical changes. These changes have decreased the public school’s ability to provide science labs and field trips for students as the public schools concentrate on basics. A discovery center has the unique opportunity to fill this void for the children of Kaua‘i by providing hands-on ocean science opportunities, a wet lab classroom, and outdoor space for activities.

Other social influences can lend credence to a discovery center on Kaua‘i. For example, the leading cause of fatal injuries from 2005-2009 among non-residents on Kaua‘i is drowning[6]. The discovery center could be a venue for ocean literacy and ocean safety messages and/or materials to encourage the education that is needed to prevent drowning deaths among both residents and non-residents. In addition, the leading cause of fatal injury to residents in the State of Hawai‘i from 2005-2009 is suicide[6], especially among younger generations. While it is not the direct mission of the discovery center to support such issues, places like

[6] *According to the Hawai‘i State Department of Health Statistics*

the center can give students the educational support, stability, and encouraging background that can influence and inspire young people.

Finding Potential Partners

Collaboration between ONMS with other agencies represents a way to translate the vision and mission into a discovery center more rapidly than the ONMS could achieve by acting alone. There is great potential to further develop existing partnerships as well as look at creating additional partnerships with organizations that complement the activities of NOAA. The following list is not all-inclusive, but suggests the range of potential organizations that may express an interest in the ongoing support of the discovery center project:

- Garden Island Arts Council
- U.S. Coast Guard and Auxiliary
- U.S. Fish and Wildlife Service/Biological Services
- Kaua‘i schools
- Kaua‘i Museum
- Akimeka/Digital Bus
- Preserve Hawai‘i
- Cruise ships
- Traditional groups
- Kaua‘i Community College
- The University of Hawai‘i
- Other local visitor centers and parks
- Division of Boating and Ocean Recreation
- Department of Land and Natural Resources
- Kaua‘i Community Radio (KKCR-FM)
- Division of Forestry and Wildlife
- Department of Education (DOE)
- Other State agencies
- Kaua‘i watershed organizations

None of the opportunities presented herein are specifically recommended or endorsed, and are not in any specific order. They are listed here to merely illustrate the range of possibilities available to consider as a partner in the Kaua’i discovery center. The sanctuary, with guidance from ONMS headquarters, and the community should decide which of the alternatives make the most sense for the site.

Funding

There must be a budget to carry out the proposed discovery center. This budget can be refined as design progresses on each component of the project, but it is unwise to move forward without a realistic estimate of costs and a strategy for funding the entire project. The center is merely a “concept” and nothing will happen until funds have been committed.

Action items:

- Prioritize each component of the project.

- Identify elements that could be taken out of sequence if funds become available.
- Prepare a broad-based cost estimate for the project.
- Identify possible funding sources for the project.
- How would funds be disbursed?

Management Plans

The management plans for both the HIHWNMS and PMNM will influence the mission and vision for the project. The management plans outline priorities and strategies that guide the direction of the sanctuary and the monument respectively. The strategies contained in the management plans, including gauging and increasing public awareness, developing new and expanded educational programs, and maintaining existing and developing new exhibits, provide a foundation for the recommendations made in this document.

Papahānaumokuākea Marine National Monument 2008 Management Plan

The Monument is jointly managed by three co-trustees – the Department of Commerce (through NOAA), Department of the Interior (through the U.S. Fish and Wildlife Service), and the State of Hawai'i (through the Department of Land and Natural Resources) – and represents a cooperative conservation approach to protecting the entire ecosystem.

Monument Vision

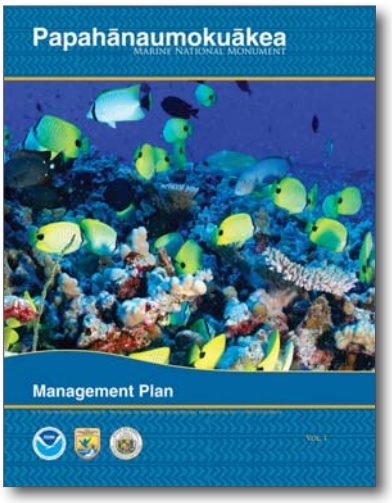
To forever protect and perpetuate ecosystem health and diversity and Native Hawaiian cultural significance of Papahānaumokuākea.

Monument Mission

Carry out seamless integrated management to ensure ecological integrity and achieve strong, long-term protection and perpetuation of NWHI ecosystems, Native Hawaiian culture, and heritage resources for current and future generations.

The PMNM management plan presents action plans to address six priority management needs over a 15-year planning horizon. These priority management needs are as follows:

- Understanding and interpreting the Northwestern Hawaiian Islands (NWHI)
- Conserving wildlife and habitats
- Reducing threats to Monument resources
- Managing human uses
- Coordinating conservation and management activities



The PMNM Management Plan was published in 2008. (Source: PMNM)

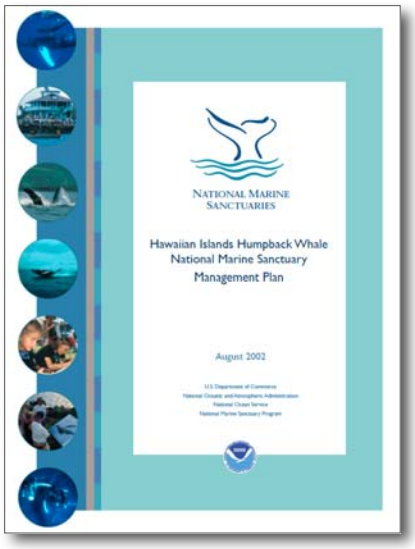
- Achieving effective Monument operations

These goals should be considered within the visioning phase of the discovery center project.

Hawaiian Islands Humpback Whale National Marine Sanctuary

HIHWNMS Vision Statement

"The Sanctuary works collaboratively to sustain a safe and healthy habitat for the North Pacific stock of humpback whales (koholā). As a community of ocean stewards, the Sanctuary strives to achieve a balance of appropriate uses, inspired care taking, enlightened understanding, and effective education to ensure the continued presence of the koholā for future generations. The Sanctuary endeavors to do this with harmony, hope, respect, and aloha o ke kai (love of the sea)."[7]



The 2002 HIHWNMS Management Plan is currently under review. The new management plan will be published in 2014 after a public review process. (Source: HIHWNMS)

HIHWNMS' management plan is currently under review to address current and emerging issues and to increase management effectiveness. NOAA is conducting this process to determine the future direction and scope of the Hawaiian Islands humpback whale sanctuary. NOAA uses the term "management plan review" to describe this process which includes intensive public review and comment periods to determine the goals, objectives, and management activities for the sanctuary. The management plan review will take several years to complete and will result in a new management plan for the sanctuary.

In 2010, the HIHWNMS initiated a public scoping period to encourage open public dialogue during the management plan review process. During this period, the sanctuary received extensive input from many different constituent groups. Public comments submitted included support of the sanctuary's educational programs and for the establishment of a learning center on Kaua'i.

During the public scoping process, over 12,300 submissions were received from agencies, organizations, elected officials, and community members throughout Hawai'i, the U.S. mainland, and around the world. All comments from this process were organized into the following three categories and subcategories (in no particular order):

- List of Issues:
  - Climate change

[7] *HIHWNMS' management plan, including its vision statement, is currently under review and may be revised as the management plan review process continues.*

  - Ecosystem protection: species and habitats
  - Enforcement
  - Humpback whale protection
  - Management effectiveness
  - Marine animal assessment and response
  - Native Hawaiian culture
  - Ocean literacy
  - Offshore development
  - Water quality
- Potential Solutions:
  - Boundaries and zones
  - Outreach and education
  - Regulations
  - Research
- Overarching Considerations:
  - Community engagement
  - Environmental impacts
  - Native Hawaiian traditional perspectives
  - Socioeconomic; fishing; ocean uses; livelihoods; access

The next steps to finalizing the management plan include the preliminary management plan recommendations (Fall 2011 through 2012); the draft management plan document for public comment in 2013, and an environmental assessment. The final management plan will be published in 2014. For more information on the HIHWNMS management plan review, visit:

http://hawaiihumpbackwhale.noaa.gov/management/management_plan_review.html

ONMS Visitor Center Benchmarking

As part of the planning for a discovery center in Kauaʻi, it is useful to examine the best practices across ONMS. Common themes in the development of all ONMS visitor centers include the following:

- Community visioning and participation
- Multiple partnerships with like-minded organizations and civic partners
- All ONMS visitor centers are free to visitors
- Extensive marketing efforts including programming, media and print materials about the region and sanctuary
- Maintaining and improving existing exhibits before attempting to install new ones

The old Lāhainā Courthouse is being renovated into a visitor orientation facility while restoring its architectural features and interpreting its history. (Source: ONMS)

NOAA's Mokupāpapa Discovery Center in downtown Hilo is in a storefront location frequented by visitors and residents. (Source: Yumi Yasutake)

The Mokupāpapa Discover Center is an interactive educational facility that focuses on the marine life, and the natural, cultural, and maritime heritage resources of the Papahānaumokuākea Marine National Monument. (Source: Yumi Yasutake)

- Participation in outreach events
- Ongoing development of educational programs and materials
- Multiple satellite displays and exhibits prior to implementation
- Volunteer programs

ONMS currently operates visitor centers in a variety of formats. The traditional "stand alone" facility is but one of a range of possibilities to be considered. These visitor centers give both the community and potential partners a vision of what is possible within the realm of visitor centers. ONMS has been successful in leveraging opportunities from other sanctuary locations. Benchmarking against other ONMS sites can reduce questions and ultimately shape the planning process for the Kaua'i discovery center. Examples of other ONMS visitor centers include:

- **Dedicated Visitor Center in a Tourist Destination:**

  The Lāhainā Visitor Orientation Facility for the Pacific Islands Region of ONMS

  This center will be located in the heart of a tourist area in order to reach the target audience identified for that region. When completed, this center on Maui, Hawai'i, will provide indoor exhibits and outdoor community use areas in a tourist location. The concept was developed in partnership with community stakeholders. Their website for more information is:

  http://sanctuaries.noaa.gov/about/lahaina.html

  The Mokupāpapa Discovery Center

  This 4,000 square foot facility is free to the public and is open five days a week. Located in the downtown tourist area of Hilo, Hawai'i, this center is an interactive educational facility that utilizes a variety of learning tools to teach visitors and school children of all ages about Papahānaumokuākea Marine National Monument. The Center emphasizes marine life, and the natural and cultural resources contained within the nation's largest conservation area. Their website for more information is:

  http://www.papahanaumokuakea.gov/education/center.html

  The Kīhei Education Center for HIHWNMS

  Located in Kīhei, Maui, this campus features an educational center. This beachfront campus is the primary education and operations facility for HIHWNMS. The Kīhei Education Center, the new multi-purpose facility, and the native Hawaiian fishpond fronting the campus afford many opportunities for education about humpback whale protection, Hawai'i's marine

environment, and Hawaiian culture. The new facility is also the venue for community outreach programs and meetings. For more information please visit their website:

http://hawaiihumpbackwhale.noaa.gov/about/offices.html

- **Cooperative Visitor Center: *Florida Keys Eco-discovery Center***

  This 13,100 SF facility attracts approximately three million visitors annually. It features various interactive displays, a theater, and a gift shop. The center is sponsored and operated by NOAA, the Mote Marine Laboratory, the Florida Keys National Marine Sanctuary, South Florida Water Management District, the Everglades and Dry Tortugas National Parks, National Wildlife Refuges of the Florida Keys, and Eastern National. For more information, please visit their website at:

  http://floridakeys.noaa.gov/eco_discovery.html

- **Cooperative Storefront: *Outdoor Santa Barbara Visitor Center, Channel Islands National Marine Sanctuary (CINMS)***

  This small visitor center was created in partnership with Channel Islands National Park, Los Padres National Forest, the City of Santa Barbara, and the Santa Barbara Maritime Museum. CINMS is currently constructing an administrative headquarters and educational visitor center in partnership with the University of California at Santa Barbara. The website for more information is:

  http://outdoorsb.noaa.gov

The sanctuary's 3-acre campus in Kīhei, Maui, provides many opportunities for education about humpback whale protection, Hawai'i's marine environment and Hawaiian culture. (Source: ONMS)

The Florida Keys Eco-discovery Center contains many different types of exhibits from both NOAA and partner groups. (Source: ONMS)

The outdoor Santa Barbara Visitor Center offers a balcony with 360˚ views of the surrounding marina and ocean, allowing for interpretive signs featuring messages of the collaborative agencies. (Source: FPC)

Facility Requirements 5

This chapter delves deeper into the physical requirements of the discovery center, including space and location needs, project scope, and the use of kiosks, signs, and exhibits.

The Current Facility

The approximately 1,000 square foot sanctuary office in Līhu'e's Kukui Grove Executive Center is too small and does not have adequate room to support a broader range of outreach or educational activities. (Source: Jean Souza)

The current sanctuary facility in Līhu'e, Kaua'i, is located in the Kukui Grove Executive Center, across from the Kukui Grove Shopping Center and provides office space for both the PMNM and HIHWNMS. This ONMS field office is a small space in a commercial office complex that serves as the base of operations for sanctuary programs on Kaua'i. The office also serves as a venue for scheduled small-group volunteer training, workshops, and meetings; education and outreach materials are also available here.

The existing facility is not satisfactory in that it does not provide adequate office space, operational spaces, storage, classroom or training areas, or public meeting space. The space is crowded and it does not have adequate room to support a broader range of outreach or educational activities. Secondly, the facility is not visible to the public and is not perceived as welcoming to visitors. Other venues in Līhu'e for sanctuary activities are becoming more difficult to find due to decreasing inventory of rooms with adequate features.

The Kukui Grove Executive Center, while located in a good central location in Līhu'e, is too small to accommodate many needed sanctuary activities.

The idea of an expanded presence on Kaua'i was first identified in the 2009 PIR Master Plan. This document determined future requirements for the site, which consist of increased staff and operations on the island, including vessel support. The plan

recommends an acquisition strategy for procurement of the facilities required to support PIR, HIHWNMS, and PMNM activities on Kaua‘i.

Facility Options

The next step to determining a facility strategy on Kaua‘i is to examine facility options. These options range from doing nothing to the actual implementation of a center with or without partners.

One Location or Multiple Locations?

Before considering specific locations, the discovery center should be considered under the broader spectrum of general location options on Kaua‘i. Options to consider when planning for a greater presence on Kaua‘i include:

- No Action/Continue As is; the sanctuary will continue to operate out of the current facilities, but will be limited in operations on Kaua‘i.
- Remain at the current location and improve or expand facilities by adding more programs or exhibits at this location. This option means considering an expansion of the facilities in the Kukui Grove Executive Center or Shopping Center.
- Construct or lease a new facility or storefront with or without partners. This option would involve the creation of a NOAA centered storefront in a partner facility.
- Implement and construct multiple mini-facilities and/or exhibits with partners. This may mean the use of partner facilities for exhibits or programs.
- Construct or renovate a dedicated building with or without partners. This is perhaps the most popular option among the community.

The idea of a stand-alone discovery center is just one of many options that could be used to increase awareness and a central location is the preferred option of the community. The idea of one easily accessible location that could be enjoyed by everyone, with additional satellite locations in more remote locations, was the preferred option in community workshops.

Kaua‘i’s old courthouse presents an opportunity to revitalize the Līhu‘e town core and adaptively reuse a historic building, which is often the approach used by NOAA when considering capital projects. (Source: FPC)

The Hale Kaua‘i Building near Nawiliwili Harbor is a privately-owned building that is temporarily being used for county offices and County Council chambers while major renovation work to the County Council's building is underway. The Hale Kaua‘i building is expected to be available for lease at the end of 2011. (Source: Jean Souza)

Potential Locations

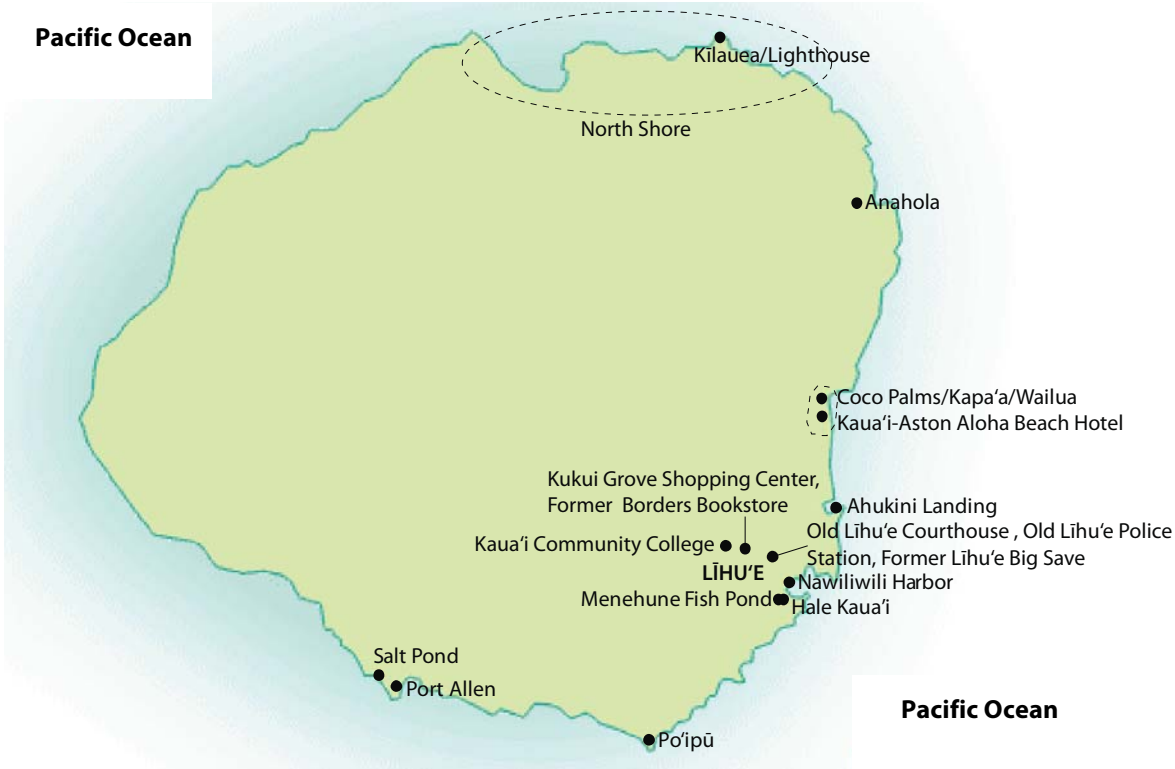
When envisioning a facility on Kaua‘i, it is important to examine potential locations, or places that could satisfy the requirements of the center. The following potential locations for the discovery center were provided by the community in visioning workshops and interviews. While this list is not all-inclusive, it gives an idea of the local sentiment regarding the range of possible solutions for the discovery center or satellite locations. The locations listed

may or may not be feasible, financially or otherwise, but all suggestions have been included here.

- North Shore
- Kīlauea Point/Lighthouse
- Anahola
- Kapa‘a
- Coco Palms
- Kaua‘i-Aston Aloha Beach Hotel
- Ahukini Landing
- Former Līhu‘e Big Save market
- Old Līhu‘e Courthouse
- Old Līhu‘e Police Station
- Nawiliwili Harbor
- Hale Kaua‘i Building
- Former Borders Bookstore
- Menehune Fish Pond
- Kaua‘i Community College
- Po‘ipū
- Old Humane Society Building
- Port Allen
- Salt Pond

Potential Location Map

The diagram below shows the approximate location of several potential sites suggested throughout the facility strategy process. It is unknown if there are available sites or buildings in all locations, but they have been included for reference.



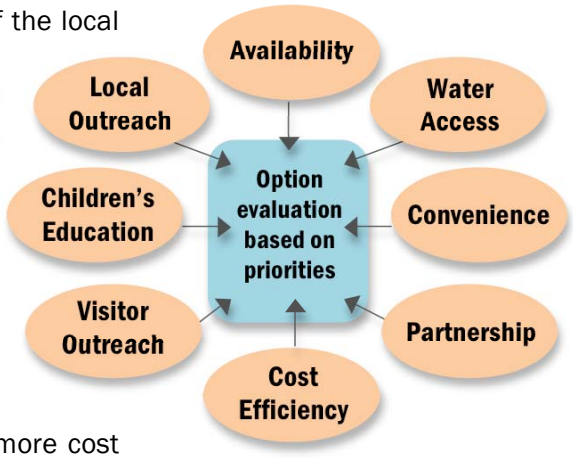
How to Select a Location

Once the potential locations have been determined, the next step is to select a preferred location or list of locations. Location is perhaps the most critical component of the planning and will determine many of the other parameters of the discovery center including budget and scope.

A location that is near water, such as the Ahukini Pier area, is often a favorable location for marine-focused mission objectives. (Source: FCA)

When comparing options, the ONMS, the community, and partners should weigh the following parameters:

- Availability – Is the option easily available and attainable for the ONMS to acquire? Is there room for expansion or a phased approach to construction?
- Accessibility/Convenience – Is the option accessible and attainable; is parking considered (cars and buses)? Is it in a central or easily accessible location?
- Cost Efficiency – Is the option cost effective and efficient to fulfill the goal of reaching the public?
- Local Outreach – Does the option meet the needs of the local resident population?
- Visitor Outreach – Does this option maximize the ability to reach visitors in areas those visitors frequent (nearby hotels or other visitor destinations in the area)?
- Children's and Student Education – Does this option have the ability to reach the specific needs of children? Is it near KCC and other Kaua'i schools?
- Partnership Opportunity – Does the option present an opportunity to build or expand an existing or new partnership? Sharing costs with partners is often a more cost effective solution and allows the ONMS to tap into existing visitors or peer's resources. (See partnerships discussed in the next section)
- Access to Water/Outdoors – In the case of an ocean-centric building, it makes sense to provide a view or physical connection to the ocean. Access to the ocean may also make activities such as hands-on activities, boat docking, and animal rehabilitation possible.



Once the parameters are agreed upon, the locations can be compared against the parameters using a decision-matrix. This matrix will serve to further vet the options and result in a "short list" of possible alternatives that can be further explored for cost, partnership opportunities, or design possibilities. An example decision matrix has been provided on the following page.

This example decision matrix was developed using the best available information for that point in time. It does not present all possible locations, but provides an idea of how a list of preferred locations could be developed by the community utilizing the parameters developed during planning.

	Availability	Accessible/ Convenient	Cost Efficient	Local Outreach	Tourist Outreach	Children's or Student Education	Partnership Opportunity	Access to Ocean/Water/ Outdoors
Areas/Towns								
Kīlauea Point/Lighthouse								
North Shore								
Anahola								
Kapa'a								
Ahukini Landing								
Līhu'e								
Nawiliwili Harbor								
Menehune Fish Pond								
Po'ipū								
Port Allen								
Salt Pond								
Buildings								
Coco Palms								
Kaua'i-Aston Aloha Beach Hotel								
Kukui Grove Shopping Center								
Old Līhu'e Big Save								
Old Borders Bookstore								
Old Courthouse/Police Station								
Hale Kaua'i Building								
Old Humane Society Building								

Key

- Solution will likely satisfy requirement
- May or may not satisfy requirement; limitations apply to effectiveness
- Does not satisfy requirement

This matrix can be used as a starting point to accomplish the following:

- Prepare a list of potential locations that meets the needs of the community, potential partners, and ONMS staff.
- Vet each option to develop a "short list" of locations that are attainable and meet all criteria.
- Determine potential costs of preferred options based on current information from building owners, realtors, and other experts.

The Akimeka Maui Digital Bus is a mobile laboratory classroom designed to cultivate student interest in science through technology. (Source: Akimeka)

Facility Partners

Another important step in planning for a discovery center is to determine potential partners that could share in the facility. Partnerships are one way that the ONMS can do more with less by sharing risk, responsibility, resources and knowledge. Partnerships are a valuable tool utilized by ONMS in outreach and educational activities. By partnering with organizations that have a complementary mission, ONMS gains more contacts, visitors, and/or financial support than would have been achieved alone. Support from partners and the community can also be very

beneficial to the success of any new undertaking. The discovery center can use the synergies derived from partnering, whether through the sharing of facilities or sharing of knowledge and resources to get its message to a wider audience, and the PIR can work closely with current and potential partners to explore new ways to promote the important role played by the sanctuary and the greater message of ocean stewardship. While the sanctuary office on Kaua'i currently has many partners on the island and throughout Hawai'i, some possible new partnering ideas were discussed during the workshops and interviews that could assist in the promotion of the outreach initiative. For example, the following list of potential partners has been repeated here because they have a focus on nature and coastal ecology and might be considered as new partners or as ongoing partners with enhanced roles, as planning for a center moves forward.

- Garden Island Arts Council
- U.S. Coast Guard and Auxiliary
- U.S. Fish and Wildlife Service/Biological Services
- Kaua'i schools
- Kaua'i Museum
- Akimeka/Digital Bus
- Preserve Hawai'i
- Cruise ships
- Traditional groups
- Kaua'i Community College
- The University of Hawai'i
- Other local visitor centers and parks
- Division of Boating and Ocean Recreation
- Department of Land and Natural Resources
- Kaua'i Community Radio (KKCR-FM)
- Division of Forestry and Wildlife
- Department of Education (DOE)
- Other State agencies
- Kaua'i watershed organizations

Partners in established locations may be able to offer prime venues for exhibits and signs. ONMS may be able to bring new exhibit offerings to its partners while the sanctuary could profit from existing visitors and the financial advantages of shared operational costs and exhibit maintenance.

It is highly likely that one or more partner agencies or organizations will participate in the discovery center. This commitment will likely involve financial support, partial ownership, exhibits, or being parties to a lease or Memorandum of Agreement. Depending on what decisions are made, partners may join the community working group in order to carry the project forward and ensure the following tasks are completed:

- Prepare a long list of potential partners who might be willing to participate in a long-term solution for the discovery center.
- Vet the possible partners and develop a short list of partners who are willing to contribute to the future of the discovery center.

- Enter into meaningful discussions with each partner on the short list.
- Ensure that the discovery center solution(s) meet the needs of both the community and the organizations involved.

Use of Kiosks, Signs, and Exhibits

Touch screen interactive kiosks can be placed virtually anywhere and display a wide variety of information. (Source: ONMS)

Exhibits, signs and kiosks are physical assets that serve as interpretive media to convey the sanctuary message to a wide variety of constituents in many venues, including beaches, museums, aquaria, and storefronts and visitor centers. Interpretive assets serve as tools for outreach, education, and branding for the ONMS and partners. Unlike national parks, which can be easily accessed and experienced by the public, the underwater marine environments protected by the ONMS are remote and not readily accessible. Therefore, signs and exhibits are vital to connecting the public with the sanctuary's and monuments marine and cultural resources.

Exhibits are among the most important physical assets for ONMS buildings. ONMS exhibit teams must consistently derive new ways to attract and inspire curiosity among the public to garner the support of the community. The exhibit team is often planning and designing new exhibits or updating existing exhibits on a regular basis. Consequently, exhibits can require the same amount of upkeep and maintenance that is associated with facilities or signs.

Kiosks

The ONMS currently utilizes a number of interactive touch-screen kiosks at numerous locations that present up-to-date weather, ocean conditions, surface temperature, and a variety of other links about national marine sanctuaries. Concurrently, the portable kiosk, which can be placed virtually anywhere, serves as an interactive collection of knowledge and information for marine sanctuaries.

These kiosks help the ONMS convey a variety of different messages at many locations, with touch-screen buttons, videos, live weather and news feeds, and information on the sanctuary system in a fun, interactive, and user-friendly format.

Signs

Signs are yet another way to reach the public in both the discovery center and throughout Kaua'i. ONMS signs can contain countless educational and interpretive information regarding the sanctuaries and Hawai'i. ONMS employs various types of signs, including educational, coastal, directional, and enforcement signs, and roadside turnarounds.

Signs can be used to accomplish the following goals:

- Awareness and appreciation of marine and coastal resources by residents and visitors
- Improved levels of information and education service to residents and visitors
- Providing information to educate the public on marine life and the resources in the sanctuaries

The site may consider placing signs at partner facilities, coastal sites, and turn-offs around the island.

Signs can be used at points of interest in Kaua'i to convey discovery center messages to the public. (Source: ONMS)

Exhibits

Exhibits need to be viewed as a direct extension of the discovery center efforts and should directly align with the overall vision, mission, and strategies of the facility. More and more, exhibits are attempting not only to provide an interesting and educational environment, but also to give visitors an experience with entertainment value that will be remembered. The experience at the discovery center may involve re-creating what it is like to experience underwater environments, to appreciate the culture and special places of Kaua'i or immersing the visitor in the mission of research and conservation. If visitors can experience the mission, vision, and goals through an exhibit, they will retain a more memorable message that they will then share with others.

Exhibits, such as these at the Mokupāpapa Discovery Center, are what will inspire action by the public. (Source: ONMS)

Best practices for marine and conservation exhibits can be found at various museums and aquaria around the world. The goals of each exhibit should be to tell a story, educate on a particular subject, and connect with the local community. The experience at each exhibit is what the audience will take away with them, and the message will only be absorbed if the goals are presented in a clear, interactive, and entertaining manner. Examples of possible exhibits that could be considered for the discovery center include the following:

- Technology and visual media, including projection, touch-screens, wrap-around video screens, and high-definition video
- Aquariums and other living installations where the user can view and experience natural habitats
- Interactive sensory exhibits that require the user to touch, smell, hear, move, or operate
- Create an experience of being submersed
- Re-create the underwater environment with lighting and theatrical projections
- Bring the conservation and research functions to the public through microscopes, ROVs, learning labs, conservation labs, and others

Large exhibits of maps and aerial photos are popular features in discovery centers. This exhibit of the entire Hawaiian archipelago also illustrates the geologic history of the islands. (Source: Yumi Yasutake)

Aquariums allow close-up study of living resources, especially useful for the vast majority of the public who are not physically capable of doing so in the field. The aquarium at Mokupāpapa Discovery Center is one of the major attractions that residents cited as the reason for repeat visits to the center. (Source: Yumi Yasutake)

The Mokupāpapa Discovery Center in Hilo has many features, including a multipurpose theater, displays, and a wet lab classroom. (Source: Yumi Yasutake)

A wet lab classroom, equipped with microscopes, view screens, specimens, and models, allows for directed, hands-on science activities in a mess-resistant setting. (Source: Yumi Yasutake)

- Create a visual experience that allows visitors to travel to all the sanctuaries and/or the ocean depths
- Oral histories of Kaua'i and/or Hawaiian culture
- Conservation and research labs where the user can view sanctuary activities in action

Planning for and around exhibits is highly recommended throughout the design process for the discovery center project. Since exhibits and signs are often more complicated than they appear, the concept planning and design process is the first step to a successful exhibit. Whatever the solution for the discovery center, it is almost certain to involve using signage, exhibits and/or kiosks to relay the message to the public.

Suggested Action items:

- Identify the message(s) needed at the discovery center using the vision and mission statements for the facility.
- Retain an exhibit designer to develop preliminary designs for the center that can be used to promote the center to potential partners or funding sources.

What Kinds of Spaces are Required?

Determining the space requirements of the discovery center is one of the first steps in planning for a hypothetical physical address. It is too soon to know the funding that will be available or when funding will become available, but general planning in advance will ensure that solid decisions are made when the time arrives.

To develop a preliminary program of requirements (a list of space requirements) for a potential discovery center, several benchmarks were considered including the 2009 PIR Master Plan, community feedback, and benchmarking other sanctuary sites. This preliminary program will translate the overall vision and goals into a physical space or footprint that measures the potential size and scope of the facility. This programming effort will help determine which specific site or building most closely matches the discovery center's needs. This will provide ONMS and the sanctuary, as well as potential partners, with a consistent description of what should be included so that all needs are met as closely as possible. A preliminary space list of the minimum requirements for the center as determined by the community and the ONMS is included.

A definitive size and scope of the discovery center is unknown at this time. The space list presented below is a good starting point, but it is still in draft form. It is simply a "wish list" of all spaces perceived as necessary for the facility. The proposed

solution/location will result in a more precise project scope and space list that will be customized to the project budget and site or building constraints. The spaces included have been sized according to government space standards and industry best practices.

Kaua'i Discovery Center

Preliminary Space List

Name of Space	Capacity	No. and Size of Space	Total Area (ASF)
Shared Space			
Large Multipurpose Room	200	1 @ 2,200sf	2,200
Storage (Furniture)		1 @ 500sf	500
Large Conference Room	18-25	1 @ 500sf	500
Wet Lab/Classroom	24-30	1 @ 900sf	900
Storage/Prep/Research		1 @ 300sf	300
Kitchenette/Break Room		1 @ 200sf	200
Library		1 @ 150sf	150
Subtotal Shared Space			***4,750***
Administrative Space			
Administrative			
Volunteer Coordinator		1 @ 120sf	120
Center Manager		1 @ 120sf	120
Administrative Assistants		2 @ 80sf	160
HIHWNMS Staff		1 @ 120sf	120
PMNM Staff		1 @ 120sf	120
Aquarist/Biologist		1 @ 120sf	120
Education Coordinator		1 @ 120sf	120
Outreach Coordinator		1 @ 120sf	120
Support			
Workroom/Copy Room		1 @ 225sf	225
Storage/File Rooms		2 @ 75sf	150
Subtotal Administrative Space			***1,375***
Volunteer/Staff Space			
Staff/Volunteer Room w/ Lockers		1 @ 400sf	400
Showers/Restrooms		2 @ 150sf	300
Bunking		2 @ 200sf	400
Storage		1 @ 120sf	120
Subtotal Volunteer/Staff Space			***1,220***

Name of Space	Capacity	No. and Size of Space	Total Area (ASF)
Gift Shop			
Office		1 @ 100sf	100
Gift Shop		1 @ 500sf	500
Merchandise Storage		1 @ 150sf	150
Subtotal Gift Shop			***750***
Visitor Area			
Exhibit Space		1 @ 4,000sf	4,000
Subtotal Visitor Area			***4,000***
Partner Space			
Administrative			
Offices		3 @ 120sf	360
Touchdown Space[1]		1 @ 175sf	175
Administrative Support		2 @ 80sf	160
Support			
Workroom/Copy Room		1 @ 225sf	225
Storage		1 @ 75sf	75
Subtotal Partner Space			***995***
Small Boats Program Space			
Maintenance Shop Space		1 @ 600sf	600
Storage		1 @ 120sf	120
Dive Locker		1 @ 300sf	300
Subtotal Small Boats Program Space			***1,020***
Building Subtotal ASF			**14,110**
Net to Gross (65%)			***7,598***
Building TOTAL			**21,708**

[1] *Touchdown spaces are simple workspaces that may be employed as a substitute for a larger office. A touchdown space can be a temporary workspace within a working office, or cubicles that are located in a business set up to provide a place to work for visitors (visiting scientists, researchers, or students).*

This space list is not all-inclusive and does not include all spaces proposed for the discovery center; the list gives an idea of the spaces proposed by the community and the ONMS. As planning for the center progresses, the site, partners, and community, along with the budget, will determine the preferred overall list of space for the building.

Phasing

It is unlikely that all steps will occur simultaneously - the project may be phased in more easily attainable steps with pieces being implemented or built-out as funding becomes available. After the community group agrees on the priorities for the discovery center, a more concrete phasing strategy may be developed that incorporates these priorities. The following chart uses the previously listed space program and gives an example of a phased approach for programmatic implementation of the discovery center. Phasing for funding and construction purposes may have a different configuration.

Discovery Center Phasing	Phase One			Phase Two		
Name of Space	No. and Size of Space		Total Area (ASF)	Name of Space	No. and Size of Space	Total Area (ASF)
Shared Space						
Large Multipurpose Room	1	@ 2,200sf	2,200	Large Conference Room	1 @ 500sf	500
Storage (Furniture)	1	@ 500sf	500	Library	1 @ 150sf	150
Wet Lab/Classroom	1	@ 900sf	900			
Storage/Prep/Research	1	@ 300sf	300			
Kitchenette/Break Room	1	@ 200sf	200			
Subtotal Shared Space			***4,100***	***Subtotal***		***650***
Administrative Space						
Administrative						
Center Manager	1	@ 120sf	120	Volunteer Coordinator	1 @ 120sf	120
Administrative Assistant	1	@ 80sf	80	Aquarist/Biologist	1 @ 120sf	120
HIHWNMS Staff	1	@ 120sf	120	Education Coordinator	1 @ 120sf	120
PMNM Staff	1	@ 120sf	120	Outreach Coordinator	1 @ 120sf	120
Support				Administrative Assistant	1 @ 80sf	80
Workroom/Copy Room	1	@ 225sf	225			
Storage/File Room	2	@ 75sf	150			
Subtotal Administrative Space			***815***	***Subtotal***		***560***

Discovery Center Phasing	Phase One				Phase Two		
Name of Space	No. and Size of Space		Total Area (ASF)	Name of Space	No. and Size of Space		Total Area (ASF)
Volunteer/Staff Space							
Staff/Volunteer Room w/ Lockers	1	@ 400sf	400	Showers/Restrooms	2	@ 150sf	300
Storage	1	@ 120sf	120	Bunking	2	@ 200sf	400
Subtotal Volunteer/Staff Space			***520***	***Subtotal***			***700***
Visitor Area							
Exhibit Space	1	@ 2,000sf	2,000	Exhibit Space	1	@ 2,000sf	2,000
Subtotal Visitor Area			***2,000***	***Subtotal***			***2,000***
Gift Shop				**Gift Shop**			
None				Office	1	@ 100sf	100
				Gift Shop	1	@ 500sf	500
				Merchandise Storage	1	@ 150sf	150
Subtotal Gift Shop			***0***	***Subtotal Gift Shop***			***750***
Partner Space							
Administrative							
Offices	2	@ 120sf	240	Offices	1	@ 120sf	120
Touchdown Space	1	@ 175sf	175	Administrative Support	1	@ 80sf	80
Administrative Support	1	@ 80sf	80				
Support							
Workroom/Copy Room	1	@ 225sf	225				
Storage	1	@ 75sf	75				
Subtotal Partner Space			***795***	***Subtotal***			***200***
Small Boats Program				**Small Boats Program**			
None				Maintenance Shop	1	@ 600sf	600
				Storage	1	@ 120sf	120
				Dive Locker	1	@ 300sf	300
Subtotal			***0***	***Subtotal***			***1,020***
Subtotal ASF			**8,230**				**5,880**
Net to Gross (65%)			***4,432***				***3,166***
TOTAL	**Phase 1**		**12,662**		**Phase 2**		**9,046**

Developing a Phasing Strategy and Schedule

The community working group should develop a phasing strategy that addresses the following points:

- Prioritize each component of the project.
- Establish a milestone schedule that illustrates the approximate durations for each segment and the sequence of events.
- Identify elements that could be accelerated if funds become available.

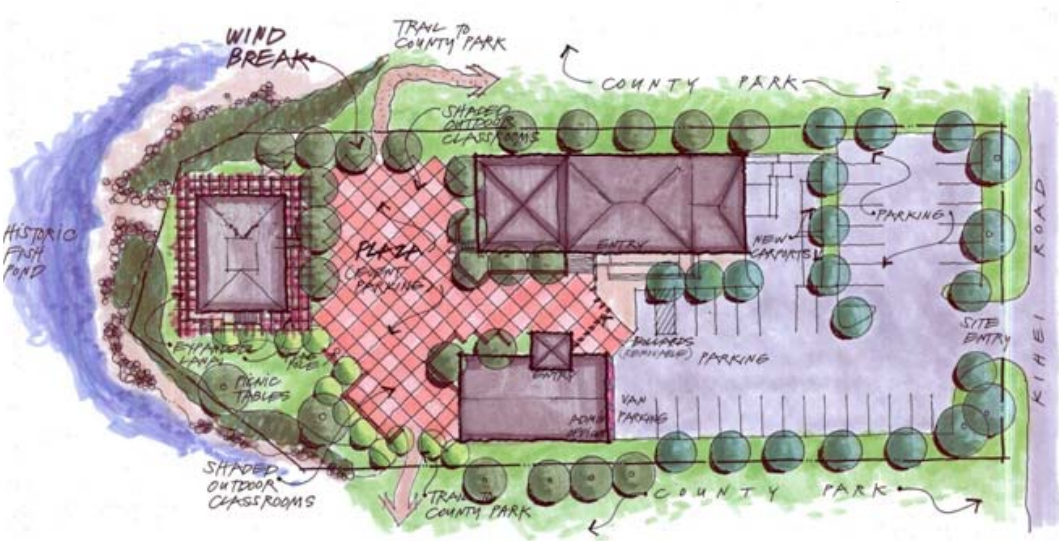
Outdoor Spaces

Planning for the discovery center should not be limited to the interior spaces and exhibits. Outdoor spaces also play a vital part in fulfilling the goals of this community driven project.

Outdoor areas to consider:

- Covered performance/activity area
- Outdoor restrooms
- Exterior exhibit area (sculpture, signs, exhibits)
- Outdoor storage for small boats
- Garden

Outdoor spaces around the discovery center can also be used for field trips and hands-on activities.



HIHWNMS' Kīhei campus utilizes outdoor plaza space for educational settings such as an outdoor classroom and a picnic area overlooking the water. (Source: FPC)

Potential Cost and Budget Factors 6

The budget for the discovery center is a critical component of the project planning. Currently, there is no budget or funding available for a project on Kaua'i and before the discovery center project team and the PIR can move forward, there must be a budget. This budget can be refined as more decisions are made, but it is unrealistic to move forward without a preliminary estimate of costs and a strategy for funding the project.

While it is too early to establish a firm budget without knowing the exact location chosen by the community, NOAA, or the partners, this chapter establishes facility costs common to ONMS visitor centers, including fabrication cost, rentable rates, and operations and maintenance. Typically, facility costs include both the first-time investment made by ONMS and the ongoing maintenance and upkeep costs, including staffing.

1. One-time costs include new facility construction or renovation and exhibit fabrication. Other costs that could be considered under this category are major mid-life repairs or replacement.

2. Recurring costs include lease costs incurred by the ONMS/partners and long-term operations and maintenance of the facility. Additional recurring costs might include maintenance and upkeep of kiosks and other technology, replacing, repairing or updating exhibits and/or signage, and staffing for the facility.

The ranges included in this chapter will help the site to prepare a broad-based cost estimate for the preferred alternative, including long-term maintenance and operational costs.

Facility Costs

When considering actual physical space for the discovery center, three options are to be considered: leasing a building or space, purchasing a building or space, or constructing a building. Studies have shown that building ownership often costs less than operating leases[1]. However, ONMS has often turned to leasing for many reasons, but predominant among them is the recurring difficulty in obtaining funding for the required operations, maintenance, and upkeep of owned facilities. In addition, the human capital required to operate those owned facilities should be considered. Leasing often opens the door for successful partnerships with local stakeholders leading to a sharing of resources and a reduction of operational costs. The discovery

[1] *US Government Accountability Office (GAO) "Federal Real Property, an Update on High Risk Issues" July 15, 2009*

center project team must evaluate each requirement for the discovery center and research the constraints as well as the potential benefits associated with each decision regarding whether to lease, build, or purchase.

The following gives some idea of average lease rates and recent building purchase prices of properties on Kauaʻi. Although specific lease agreements may vary, this gives the ONMS an idea of the current commercial real estate market in Kauaʻi. In addition to the rental rates listed below, consideration must be given to operating expenses such as utilities.

Table 6.1: Rentable Rates

***2011 Class AA Average Rentable Rate / Square Foot / Year in Kauaʻi County**

LOCATION	AREA (SF)	COST PER SF/YEAR	TOTAL PER YEAR (1,000SF)
Kapaʻa	1,427-2,728	$21	$21,000
Līhuʻe	128-2,020 SF	$18-60	$60,0000
Līhuʻe	92-2,300	$19.80	$19,800
Līhuʻe	397-15,000	$48	$48,000
Kōloa	306-1,554	$24	$24,000
ʻEleʻele	1,200-1,390	$18	$18,000
Hanapēpē	875-3,166 SF	$8.40-12	$12,000
	Average	**$29.80**	

Source: NAI Global and LoopNet

Table 6.2: Commercial Properties for Sale

Examples of Buildings for Purchase in Kaua'i County

AREA (SF)	LOCATION	SALE PRICE
12,483	Kapaʻa	$2.2M
7,543	Kapaʻa	$1.45M
17,100	Hanapēpē	$499,000
5.79 Acre Oceanfront Lot	Waimea	$3.8M
	Average	**$1.3M**

Source: NAI Global and LoopNet

Construction / Renovation Costs

After a site or building/space is acquired for the discovery center, it is time to determine how much it will cost to turn the space into

the discovery center envisioned by the community and determine the project budget. The following chart takes ballpark costs experienced by the ONMS on both renovation and new construction in Kīhei, Maui. These estimates, although not on Kaua'i, can give an order of magnitude cost associated with similar facilities in the Hawaiian region.

Table 6.3: Renovation and New Construction Costs

Renovation Costs*

Cost per SF	*$280*
RENOVATION AREA	**COST**
1,000	$280,000
5,000	$1,400,000
10,000	$2,800,000
15,000	$4,200,000
20,000	$5,600,000

** These costs are based on those estimated for the renovation of a historic structure in Kīhei. This includes demolition of partitions, wiring, ceilings, HVAC, plumbing upgrades. Source: NOAA*

New Construction Costs**

Cost per SF	*$550*
BUILDING SIZE	**COST**
2,500	$1,375,000
5,000	$2,750,000
10,000	$5,500,000
15,000	$8,250,000
20,000	$11,000,000

*** Does not include design, pre-design, or construction administration. Source: NOAA*

When the preferred solution(s) are identified, these costs can be applied to the site to give an idea of the potential renovation or construction costs that may be required. This may help determine the feasibility of one location versus another. Other considerations for cost would include Furniture, Fixtures, and Equipment (FFE), technology requirements, environmental costs, and specialty spaces such as lab or animal facilities.

Kiosks, Signs, and Exhibits

The costs previously covered include acquisition, construction, or renovation of the actual discovery center facility (the shell). After the location is acquired, cost of the signs and exhibits that will populate the space within the facility must be considered. These costs can further be determined once an experienced exhibit planner is brought on board to determine a conceptual plan for exhibits.

Signs Costs

Signs are often used by the ONMS at roadside turnouts and other places of interest. Signs are often used in conjunction with other facilities to encourage people to learn more. The approximate cost per sign totals approximately $3,000. The cost breakdown for design, fabrication, and installation is as follows:

- $800 per sign for design
- $300 per sign for reimbursable expenses (associated with design)
- $300 per sign for installation
- $1,500 per sign for fabrication (including the base)
- $100 per sign for miscellaneous costs and/or escalation

These figures do not include personnel costs for ONMS staff to develop signage.

ONMS Interactive Kiosk Costs

The following table illustrates a hypothetical cost model developed for the ONMS Facilities and Exhibits Master Plan (2010). The table assumes that two kiosks would be placed initially, and an additional kiosk would be installed every three years. The life span is assumed to be eight years, with major maintenance such as the replacement of a hard drive or screen every four years. While this is not a real case, it is being included to provide an idea of the costs associated with kiosks and to help plan for more interactive kiosks in the future.

Table 6.4: Lifecycle Cost Analysis for Kiosks (Hypothetical Example)[2]

Kiosk Lifetime Operations Cost	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Program, Design, and Install Kiosks (2)	$60,000							
Yearly Programming and Maintenance Fee (3% escalation per year)	$850	$876	$902	$929	$957	$985	$1,015	$1,045
High Speed Internet Service ($100/Mo.)	$1,200	$1,236	$1,273	$1,311	$1,351	$1,391	$1,433	$1,476
Annual Update (1 update per year x $150 per hour x 8 hours x 2)		$2,400	$2,400	$3,600	$3,600	$3,600	$4,800	$4,800
Unplanned Maintenance (example: replace monitor x 2)				$3,000			$3,000	
Subtotal	**$62,050**	**$4,512**	**$4,575**	**$8,840**	**$5,907**	**$5,977**	**$10,248**	**$7,321**
							Total	**$109,429**

[2] *Costs based on the 2010 ONMS Facilities and Exhibits Master Plan*

Benchmark Exhibit Costs

Exhibits would be an obvious cost consideration for the discovery center, along with the associated design and development costs. Funding for exhibits is usually an additional facility cost taken on by ONMS and/or partner organizations, and includes exhibit planning and design, fabrication and installation. Historical cost ranges from $350 to $650 per square foot of the space to be occupied are influenced by the level of complexity of the design, rising from static exhibits to displays with increasing levels of media and technology, to live exhibits. As a general rule of thumb, about 40 percent of the total construction budget available for a project should be dedicated for exhibit planning, design, and installation.

Table 6.5: Exhibit Cost Ranges

Exhibits Cost Range*	
Static Exhibits	Approx. $350 per SF
Interactive Exhibits	Approx. $500-550 per SF
Living or High-Tech Exhibits	Approx. $600-650 per SF

** Seruto & Company*

For example, a 1,000 SF exhibit space being planned by the ONMS is estimated to cost approximately $350,000 for a static exhibit with a few interactive components. Historically, about 25-30 percent of the cost for an exhibit goes into the planning and design of the exhibit.

Another cost consideration is the life cycle cost for operating, maintaining and repairing exhibits. Much like buildings, exhibits must be maintained and repaired throughout their lifespan. While there is no industry standard for the costs associated with maintaining exhibits, several factors can help determine the operational costs, such as the complexity of the exhibit (e.g., moving parts, technology, materials used).

Aligning the Vision with the Budget

Once a budget is determined for the project, both for procurement of a facility and construction/renovation costs, it is then time to update the preliminary programming (space list) and align the vision/needs for the discovery center with the budget. The budget will also provide guidance on which locations will or will not work financially.

Action items:

- Using the preliminary programming previously developed, write a detailed building program enumerating space requirements for the proposed facility. Keep the program and budget in equilibrium.
- Use the programming requirements to evaluate each of the available solutions and determine which solution is the best fit for the discovery center.
- Evaluate how partner facilities can contribute to the mission objectives. For example, meeting, training and classroom spaces could be shared by two similar organizations.
- An exhibit designer should develop a detailed preliminary exhibit design that meets the vision and theme of the center.
- Engage an architect, with appropriate engineering sub-consultants, to plan and design improvements to the new building/existing space/proposed site.
- Update and refine the preliminary cost estimate for the project.
- Research applicable federal, state, county, and municipal laws, ordinances, standards and regulations. (This is especially important when dealing with a historic property and environmentally sensitive sites).

Long-Term Operations and Maintenance

Operations and maintenance (O&M) funding is imperative to support any facility. These O&M costs include:

- Custodial service
- Energy
- Grounds
- Maintenance and repair
- Management
- Pest control
- Refuse
- Road clearance
- Security
- Communications
- Water
- Sewer

Average O&M Costs for a NOAA-owned visitor center is approximately $17.10 per SF annually. Leased facilities must be evaluated under a different cost model. With a lease the user generally does not absorb costs associated with maintenance of the facility, which are often retained by the owner of the building. The costs associated with the renter include the lease rate and a corresponding portion of the utilities. For rented spaces, operational costs typically include:

- The rate for the lease
- Custodial service
- Energy

- Security
- Telecommunications

The average operational cost for a leased facility is $1.40 per SF annually. Many factors can drive up operational costs, such as inflation, complexity of engineering, type of facility, occupancy or function, and region.

Staffing

Another consideration of cost and budgeting is staffing for the discovery center. Typically, staffing costs will include wages or salary for both full-time and part-time employees and a percentage that is budgeted for benefits. In the case of the discovery center, it is assumed that initial staffing would include two full-time employees currently working on Kaua‘i representing the sanctuary and monument on Kaua‘i, plus a facility/program manager who would be in charge of running the discovery center and its programs. Depending on the scope of the discovery center, additional part or full-time employees could be added to manage the discovery center and its programs. As demonstrated in other facilities managed by the ONMS, volunteers are an essential component of discovery center operations. Appropriate support facilities should be incorporated, such as work and break rooms dedicated to staff and volunteer use.

Also under consideration are staffing needs of partners of the discovery center and their potential requirements. These may include offices and other administrative support spaces that would be included in both the scope and size of the project and operating budget of the facility. Staffing needs of partner agencies (current and future) should be established early in project planning so that expectations are met for both sides.

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This document summarizes the planning and information to date regarding the proposed outreach effort of NOAA's Office of National Marine Sanctuaries for a proposed discovery center on Kaua'i. The primary goals of this effort are to outline the vision and goals as suggested by the Kaua'i community. The local community was engaged to help shape the vision of the discovery center in its earliest planning stage. There is currently no funding or financial commitment associated with a project on Kaua'i, so it is important to keep the momentum of the project moving forward.

This document summarizes the vision, goals, and many of the considerations and challenges (including cost, location, and scope) that will influence the development of the discovery center. It provides a realistic framework that will determine the next steps in the planning of the center. The following section outlines potential steps and goals that will promote progress of the project from its preliminary planning stages (this document) to completion.

The Way Forward

1. The community workshops brought many individuals, organizations, and agencies together who share a common vision: the idea of building an ocean-focused discovery center on the island of Kaua'i. This group of involved citizens can be the catalyst that keeps this project moving forward. Community working groups could be gathered as needed to discuss individual opinions and views regarding the discovery center project.

   These community scoping groups[1] will also serve to further develop and refine the priorities for the center, including project scope, potential locations or venues, and possible funding sources in collaboration with NOAA and potential partners.

2. Establish specific goals that will help measure success and keep the group moving forward on the project. These metrics will enable the group to stay on task through the completion of the discovery center. These goals will serve as milestones or a checklist of tasks that should occur to keep the project moving. Consider organizational scoping meetings to review this checklist regularly, prioritize which steps should be taken

[1] *Depending on the scope and composition of working group participation, Federal Advisory Committee Act (FACA) and administrative guidelines developed by the General Services Administration (GSA) may apply.*

when, and begin taking action. For example, possible tasks may include:

- Establish the most important space priorities, preferred scope of the project, and potential location(s) or venue(s).
- Establish a timeline with target dates and specific milestones.
- Establish a budget for moving forward in developing a strategy that satisfies all aspects of the project.

3. There must be a budget to carry out the proposed project(s). This budget can be refined as development and/or design progresses on each component or phase of the project, but it is unrealistic to move forward without a firm estimate of costs and a strategy for funding the project. Without funding, it is unlikely that the discovery center will be implemented. Currently, there are no capital funds or commitment of funds for this project.

NOAA and the community should identify potential capital funding streams and a broad-based cost estimate developed that coincides to the priorities identified in this document. Funding sources such as community-based fundraising efforts, grants, federal funding, and private benefactors are options that could contribute to the implementation of a discovery center.

4. ONMS should approach potential partners identified in relation to the discovery center. Meetings should be held with potential partners to determine their level of interest, possible financial support, building ownership or leasing, etc. Depending on what decisions are made, partners may join the community working groups to further promote the project. It is important to develop good relationships with potential partners as soon as possible.

In addition, similar centers throughout the State of Hawai‘i could be consulted for advice, success stories, and roadblocks in relation to funding and implementation of facilities.

5. Marketing the potential discovery center may be a good way to keep the momentum going and to get the community behind the project. Even though there was significant participation in the workshops, there are many residents who have not heard of the project. This is an opportunity to spread the word and increase support for the project. It is important to keep people excited about the implementation of a discovery center and its potential to positively influence the community. Interested members of the community should

continue to "advertise" the discovery center to the Kaua'i community and potential partners.

The next steps for the planning process will rely heavily on the participation and leadership of the community, NOAA, and potential partners.

You can learn more about the Office of National Marine Sanctuaries by visiting http://sanctuaries.noaa.gov

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