

## Appendix B. Compatibility Determinations and Appropriate Use Findings

### B.1 Introduction

The compatibility determinations (CD) developed during the CCP planning process evaluate uses projected to occur at the Kakahai‘a NWR over the next 15 years. The evaluation of funds needed for management and implementation of each use also assumes implementation as described in Chapter 2.

#### B.1.1 Uses Evaluated At This Time

The following CD are included in this CCP:

**Table B.1. Summary of Compatibility Determinations.**

Refuge Use	Page	Compatible?	Year Due for Reevaluation
Wildlife Observation, Photography, and Interpretation	B-5	Yes	2026
Environmental Education	B-11	Yes	2026
Research, Scientific Collecting, and Surveys	B-13	Yes	2021

#### B.1.2 Compatibility – Legal and Historical Context

Compatibility is a tool refuge managers use to ensure that recreational and other uses do not interfere with wildlife conservation, the primary focus of refuges. Compatibility is not new to the Refuge System and dates back to 1918 as a concept. As policy, it has been used since 1962. The Refuge Recreation Act of 1962 directed the Secretary of the Interior to allow only those public uses of Refuge lands that were “compatible with the primary purposes for which the area was established.”

Legally, Refuges outside of Alaska are closed to all public uses until officially opened. Regulations require that adequate funds be available for administration and protection of refuges before opening them to any public uses. However, wildlife-dependent recreational uses (hunting, fishing, wildlife observation and photography, EE, and interpretation) are to receive enhanced consideration and cannot be rejected simply for lack of funding resources unless the refuge has made a concerted effort to seek out funds from all potential partners. Once found compatible, wildlife-dependent recreational uses are deemed the priority public uses at the refuge. If a proposed use is found not compatible, the refuge manager is legally precluded from approving it. Economic uses that are conducted by or authorized by the refuge also require CD.

Under compatibility policy, uses are defined as recreational, economic/commercial, or management use of a refuge by the public or a non-Refuge System entity. Uses generally providing an economic return (even if conducted for the purposes of habitat management) are also subject to CD. The Service does not prepare CD for uses when the Service does not have jurisdiction. In addition, aircraft overflights, emergency actions, some activities on navigable waters, and activities by other Federal agencies on “overlay Refuges” are exempt from the compatibility review process.

New compatibility regulations were adopted by the Service in October 2000. The regulations require that a use must be compatible with both the Refuge System mission and the purpose(s) of the individual refuge. This standard helps to ensure consistency in application across the Refuge System. The Administration Act also requires that CD be in writing and that the public have an opportunity to comment on all use evaluations.

The Refuge System mission emphasizes that the needs of fish, wildlife, and plants must be of primary consideration. The Administration Act defined a compatible use as one that “. . . in the sound professional judgment of the Director, will not materially interfere with or detract from the fulfillment of the mission of the System or the purposes of the Refuge.” Sound professional judgment is defined under the Administration Act as “. . . a finding, determination, or decision, that is consistent with principles of sound fish and wildlife management and administration, available science and resources . . .” Compatibility for wildlife-dependent uses may depend on the level or extent of a use.

Court interpretations of the compatibility standard have found that compatibility is a biological standard and cannot be used to balance or weigh economic, political, or recreational interests against the primary purpose of the refuge (*Defenders of Wildlife v. Andrus*).

The Service recognizes that CD are complex. For this reason, refuge managers are required to consider “principles of sound fish and wildlife management” and “best available science” in making these determinations (House of Representatives Report 105-106). Evaluations of the existing uses on the Kakahai‘a NWR are based on the professional judgment of Refuge and planning personnel including observations of Refuge uses and reviews of relevant scientific literature.

### **B.1.3 Appropriate Use Findings**

The Appropriate Refuge Uses Policy outlines the process that the Service uses to determine when general public uses on refuges may be considered. Priority public uses previously defined as wildlife-dependent uses (hunting, fishing, wildlife observation and photography and EE and interpretation) under the Administration Act are generally exempt from appropriate use review. Other exempt uses include situations where the Service does not have adequate jurisdiction to control the activity and refuge management activities. In essence, the Appropriate Refuge Use policy, 603 FW 1 (2006), provides refuge managers with a consistent procedure to first screen and then document decisions concerning a public use. When a use is determined to be appropriate, a refuge manager must then decide if the use is compatible before allowing it on a refuge. The policy also requires review of existing public uses. During the CCP process, the refuge manager evaluated all existing and proposed refuge uses at Kakahai‘a NWR using the guidelines and criteria as outlined in the appropriate use policy.

Using this process, and as documented on the following pages, the refuge manager determined the following use is appropriate for the purposes of the Refuge System and Kakahai‘a NWR, and directed that a CD be completed for these uses: research, scientific collecting, and surveys.

### **B.1.4 References**

Compatibility regulations, adopted by the Service in October 2000:

<http://Refuges.fws.gov/policymakers/nwrpolicies.html>

*Defenders of Wildlife v. Andrus* (Ruby Lake Refuge I). 11 Env'tl. Rptr. Case 2098 (D.D.C. 1978), p. 873.

Fish and Wildlife Service. 2011. Kakahai‘a National Wildlife Refuge: *Draft Comprehensive Conservation Plan and Environmental Assessment*.

House of Representatives Report 105-106

<http://refuges.fws.gov/policyMakers/mandates/HR1420/part1.html>



## **B.2 Compatibility Determination for Wildlife Observation, Photography, and Interpretation**

**Refuge Name(s):** Kakahai‘a National Wildlife Refuge

**County and State:** Maui County, Hawai‘i

**Establishing and Acquisition Authority(ies):**

Kakahai‘a NWR was established in 1976 under the authority of the:

- Fish and Wildlife Coordination Act of 1956, as amended (16 U.S.C. 742a – 742j)
- Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1544)

**Refuge Purpose(s):**

“...to conserve (A) fish and wildlife which, are listed as endangered or threatened species... or (B) Plants ...” 16 U.S.C. 1534, Endangered Species Act of 1973.

**National Wildlife Refuge System Mission:**

“The mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.”

**Description of Use(s):**

The National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the National Wildlife Refuge System Improvement Act of 1997 identifies wildlife observation, photography, and interpretation among wildlife-dependent public uses which, when compatible with the purpose(s) of the refuge, are priority public uses and receive special consideration in planning for and management of the Refuge System.

Wildlife observation, photography, and interpretation are non-consumptive, wildlife-dependent public uses with similar elements and so are considered together in this CD. Kakahai‘a NWR is unstaffed and not currently open to the public except for special events, under Special Use Permits (SUP), and individual group requests. Viewing of waterbirds and wetland habitats is accessible from the Refuge entrance road and from Old and New Pond levees. Wildlife observation opportunities are limited with the loss of water and open habitat leading to absence of waterbirds, except for the 2-4 days after a rainstorm.

If wetlands are restored and the endangered and migratory birds are once again using the Refuge for foraging, nesting, and resting, there will be an increased opportunities for wildlife observation, photography, and interpretation. With the addition of on-site staff under our preferred management strategy, construction of an elevated viewing platform and kiosk along the entrance road outside the fence has been proposed. Wildlife observation from the Refuge entrance road would provide year-round opportunities because it is not reliant on whether or not staff members are on-site or the

Refuge gates are open. With construction of a viewing platform, Kakahai‘a NWR would have one primary area where the public could engage in wildlife observation and photography. From this vantage point, the public could see into all of New Pond and portions of Old Pond. The viewing platform would be located 50-75 feet from New Pond and the fence would provide a physical barrier for protecting waterbirds and minimize disturbance. In the event birds are nesting on the western edge of New Pond and negative impacts are observed, the area would be closed.

Both New Pond and Old Pond levees serve as trails to view wetland habitats. Because of the relatively small size of the ponds (5.5 and 15 acres, respectively), it may be necessary to block portions of the southeastern levees to minimize disturbance to birds. Although this means the ponds cannot be circumvented, it will retain quality wildlife observation opportunities for the majority of viewers. Maintenance of the earthen levees is an on-going activity that will require pest plant control and periodic repairs to retain their integrity and provide the public unobstructed and safe access. Compaction of the levees will allow wheelchair accessibility, as well.

Disturbance to endangered and migratory waterbirds will be monitored and areas will be closed from public access, particularly during ae‘o and ‘alae ke‘oke‘o nesting. If necessary, the Refuge would be closed to all access during these critical periods.

Future opportunities to develop interpretive panels, particularly on the outside of the fence along the entrance road are planned. These panels will introduce the wetlands and endangered waterbirds present on the Refuge and will enhance public viewing opportunities.

**Availability of Resources:**

<b>Category and Itemization</b>	<b>One-time \$</b>	<b>Annual \$/yr</b>
Administration and management:	\$0	\$2,600
Maintenance:	\$0	\$5,400
Monitoring costs:	\$0	\$3,600
Special equipment, facilities, or improvements:	\$50,000	\$2,600
Offsetting revenues:	\$0	\$0

The Refuge Complex has a minimal budget and staff to manage this use, at this time. Although wildlife observation, photography, and interpretation on the Refuge require minimal resources when the public is on their own, the absence of staff on Moloka‘i limits accessibility. Future wetland restoration, additional staff, and volunteer recruitment will enable an expansion of these programs.

**Anticipated Impacts of the Use(s):**

There are different types of human-wildlife conflicts (direct or indirect; human-caused or wildlife-caused) that occur when people are in nature. Public use activities at Kakahai‘a NWR would be planned and designed to eliminate direct conflicts (e.g., harassment, direct mortality) and minimize indirect conflicts (disturbance as defined by a change in the wildlife’s behavior). Wildlife observation, photography, and interpretation is identified as a priority use because of the importance of sharing what is being protected and the opportunities to increase visitors’ awareness, appreciation

for, and stewardship towards the natural resources. A balance needs to be attained in order for human activities to coexist with waterbird needs. This can be accomplished by minimizing activities and designing public use facilities that allow birds to engage in their natural behaviors.

Human activities on unconfined trails may result in direct effects on wildlife through harassment, a form of disturbance that can cause physiological effects or varying levels of behavioral modifications (Smith and Hunt 1995). Various studies have shown that the severity of the effects depends upon the distance to the disturbance and its duration, frequency, predictability, and visibility to wildlife (Knight and Cole 1991). The variables found to have the greatest influence on wildlife behavior are: a) the distance from the animal to the disturbance and b) duration of the disturbance. In addition, the type of movement by people elicits different responses; for examples, birds show a greater flight response from a human moving quickly and unpredictably (erratic) than to humans moving slowly following a distinct path. Excessive human noises, especially with erratic behavior, are also a factor in bird disturbance by humans.

**Short-term impacts:** Kakahai‘a NWR has been closed to the public except for special events and/or under SUP since its inception as a national wildlife refuge. If the wetland is restored and the endangered species return to the Refuge, the presence of people observing or photographing wildlife has potential to cause short-term disturbance to wildlife. Large non-wildlife-dependent groups are not the norm; however, if excessive disturbance is observed, the Refuge would close the area and mitigate through group education and interpretation. In order to minimize negative impacts to endangered waterbirds, it's important that the groups understand the causes of their endangerment, such as habitat loss and human disturbance. By explaining the negative consequences of disturbance, we strive to change the behavior and instill positive stewardship ethics.

The potential impact of human activities to endangered waterbirds is well documented at Keālia Pond NWR on Maui where strategies to minimize those impacts are implemented. These same restrictions apply to Kakahai‘a NWR whereby areas are closed during critical periods in the waterbirds life history (e.g., nesting and brood rearing). New Pond and the adjacent grassland are open and unimpeded by vegetation allowing public to view birds from a distance without disturbance. Activities are limited to pedestrian access only. Vehicles and bikes are not allowed on the levees and pets (even on leashes) are not permitted. With additional on-island staff, the Refuge would be able to monitor public use, identify when birds are most susceptible to human disturbance, and implement measures to eliminate and/or minimize the human activities for the benefit of endangered waterbirds.

**Long-term impacts:** Wildlife disturbance can be minimized when planning the restoration of wetlands or facilities. Refuge staff will evaluate potential disturbance in future planning and design of public use facilities such as the proposed viewing platform. During nesting season, trails are closed to public access to eliminate disturbance to waterbirds incubating eggs and rearing young. In the past, this closure has occurred during ‘alae ke‘oke‘o nesting period as needed; however, this is not necessary every year, likely due to the location of their nests (in emergent vegetation) hidden from view. In addition, during brood rearing, the young have the capability of swimming into the vegetation away from people. In contrast, closures are more typical during ae‘o nesting season (May-June) because of the location of their nests (on the ground, adjacent to water) and the chicks’ limited ability to escape.

Restoration of the ponds will be based on the needs of endangered waterbirds; therefore, specific planning and design of non-wetland areas will simultaneously occur to evaluate options for public access that minimizes impacts to waterbirds yet increases the quality of the viewing experiences. Areas outside of the perimeter levees for both ponds will be planted with native species to provide a barrier between the public and waterbirds. This natural blind will minimize disturbance to waterbirds and provide quality viewing opportunities by the public. A viewing platform along the entrance road will be designed to provide a higher vantage point for the viewing public but not at such a height that would minimize their exposure from the waterbirds’ vantage point. This type of planning is expected to minimize short- and long-term effects to waterbirds.

Refuge staff will continue to monitor public use activities and evaluate potential disturbance in future planning and design of public use facilities. Future planning will also include methods to provide a high-quality experience to the public.

**Cumulative impacts:** The level and type of use from activities described in this CD is not expected to result in any significant cumulative impacts.

**Public Review and Comment:**

Public review and comments were solicited in conjunction with release of the draft Kakahai‘a NWR draft CCP/ EA (2011) in order to comply with the National Environmental Policy Act and Service policy. This CD was released as integral part of the CCP and received the same level of public review and comments as the CCP, in accordance with Service planning policy.

**Determination: (check one below)**

Use is Not Compatible

Use is Compatible With Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

- Visitors under SUP are required to stay on trails and designated paths throughout the year;
- Use of proposed viewing platform would be restricted to daylight hours only;
- Pets are not allowed;
- Regulations and information will be available to the public through a Refuge brochure and interpretive kiosk;
- Directional, informational, and interpretive signs will be available and maintained to help educate the public on minimizing wildlife and habitat disturbance;
- Human use levels will be monitored by Refuge staff during SUP programs, as well as periodic site visits; and
- Temporary closure of trails will occur during waterbird nesting season, if necessary, to eliminate disturbance.

**Justification:**

Wildlife observation, photography, and interpretation are three of the six wildlife-dependent recreational uses of the Refuge System identified in the Administration Act as legitimate and appropriate priority general public uses. The six uses — hunting, fishing, wildlife observation and photography, and EE and interpretation — are to receive enhanced consideration in planning and management over all other general public uses of the Refuge System. Wildlife observation, photography, and interpretation receive enhanced consideration in the CCP process, and are considered priority public uses when determined compatible. Although these activities can result in disturbance to wildlife, these activities would occur on a small percentage of Refuge acres. The relatively limited number of individual plants and animals expected to be adversely affected will not cause wildlife populations to materially decline, the physiological condition and production of Refuge species will not be impaired, their behavior and normal activity patterns will not be altered dramatically, and their overall welfare will not be negatively impacted. Thus, allowing wildlife observation, photography, and interpretation to occur under the stipulations described above will not materially detract or interfere with the purpose for which the Refuge was established or the Refuge System mission. Wildlife observation, photography, and interpretation programs complement the Refuge purpose, vision, and goals, and help fulfill the mission of the Refuge System.

**Mandatory Reevaluation Date:**

September

\_\_\_\_\_ 2026 Mandatory 15-year reevaluation date (for wildlife-dependent public uses)

\_\_\_\_\_ Mandatory 10-year reevaluation date (for all uses other than wildlife-dependent public uses)

**NEPA Compliance for Refuge Use Decision:** (check one below)

\_\_\_\_\_ Categorical Exclusion without Environmental Action Statement

\_\_\_\_\_ Categorical Exclusion and Environmental Action Statement

Environmental Assessment and Finding of No Significant Impact

\_\_\_\_\_ Environmental Impact Statement and Record of Decision

**Refuge Determination:**

Prepared by:

Refuge Planner,  
Hawaiian and Pacific Islands NWRC

Laura Beauregard  
(Signature)

9-20-11  
(Date)

Project Leader,  
Maui National Wildlife Refuge Complex  
Approval:

Yupina Nakai  
(Signature)

09-20-11  
(Date)

**Concurrence:**

Project Leader,  
Hawaiian and Pacific Islands NWRC

Barry W. Steg  
(Signature)

9/22/11  
(Date)

Regional Chief,  
National Wildlife Refuge System:

Art S. West  
(Signature)

9/28/11  
(Date)

### **B.3 Compatibility Determination for Environmental Education**

**Refuge Name(s):** Kakahai‘a National Wildlife Refuge

**County and State:** Maui County, Hawai‘i

**Establishing and Acquisition Authority(ies):**

Kakahai‘a NWR was established in 1976 under the authority of the:

- Fish and Wildlife Coordination Act of 1956, as amended (16 U.S.C. 742a – 742j)
- Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1544)

**Refuge Purpose(s):**

“...to conserve (A) fish and wildlife which, are listed as endangered or threatened species... or (B) Plants ...” 16 U.S.C. 1534, Endangered Species Act of 1973.

**National Wildlife Refuge System Mission:**

“The mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.”

**Description of Use(s):**

The National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the National Wildlife Refuge System Improvement Act of 1997 identifies environmental education among wildlife-dependent public uses which, when compatible with the purpose(s) of the refuge, are priority public uses and receive special consideration in planning for and management of the Refuge System.

Environmental education is a non-consumptive, wildlife-dependent public use. Environmental education programs at Kakahai‘a NWR are conducted by nongovernmental organizations (Nēnē O Moloka‘i, Maui Digital Bus) under a Special Use Permit (SUP). All outdoor classes are coordinated to not impact the Refuge’s management programs (e.g., maintenance). Nēnē O Moloka‘i is a non-profit corporation that emphasizes education through community involvement. They have a longstanding relationship with the Refuge and SUP approvals since 1997 to access the Refuge to host school and other EE groups. The organization provides educational and volunteer opportunities to groups that include a well-rounded overview of the different types of wetland habitats on Moloka‘i with emphasis on the endangered waterbirds. Learning activities include wetland ecology, biology, cultural history, and the life history of endangered waterbirds, as well as volunteer efforts. A majority of the organization’s participants are from the local community and although the number of students is less than 100 each year, the value in exposing students to Moloka‘i’s natural resources is invaluable.

As the Refuge currently has a degraded wetland without suitable habitat for endangered waterbirds,

EE programs lately have been focusing on pest species and how they impact wetlands. Kakahai‘a NWR is used as a comparison to functional wetlands on the Island such as ‘Ōhi‘apilo Pond Bird Sanctuary, Kaunakakai Wastewater Reclamation Facility, and Kōheo Wetland.

The Maui Digital Bus is in the process of developing and implementing their program on Moloka‘i and once it is operational, the program is expected to reach more students. Both programs have quality EE programs that have shown to be successful on Maui. With the addition of a new visitor services manager for the Maui NWR Complex, Refuge-specific EE programs will be developed for local school groups of varying age levels. Volunteers would be recruited and trained to assist with the program. All EE programs will have a stewardship component where students would participate in a wetland restoration project.

**Availability of Resources:**

<b>Category and Itemization</b>	<b>One-time \$</b>	<b>Annual \$/yr</b>
Administration and management:	\$0	\$1,000
Maintenance:	\$0	\$900
Materials:	\$0	\$1,000
Special equipment, facilities, or improvements:	\$0	\$1,000
Offsetting revenues:	\$0	\$

Minimal costs of EE will be covered by Refuge visitor services funding provided in the annual Refuge budget.

**Anticipated Impacts of the Use(s):**

**Short-term impacts:** The number of school groups and students visiting the Refuge may vary from year to year but this variation is already considered in the guidelines and structure established for the program. There is a limit of 25 people per group and no more than 5 group visits are allowed annually, during the non-breeding season only. To date, the highest number of students to visit in one year was 35. A Refuge staff member or Refuge-approved volunteer docent accompanies each group under SUP to monitor the activity. The primary impacts come from temporary disturbance to individual animals (primarily birds) due to the presence and activity of the students as they are guided around the wetlands. The animals may flush, swim away, or seek cover and hide in vegetation. These impacts are mitigated by restricting the days, maximum number of students, and routes that EE activities take place. This allows the students to participate in the EE experience while causing temporary disturbance over the smallest area and to the fewest birds.

Because we anticipate 5 visitor groups of no more than 25 people each will visit the Refuge over the course of the school year and EE groups will only be allowed access to designated levee trails during non-breeding seasons, wildlife will have ample quantities of sanctuary for feeding and resting. Thus, allowing EE to occur under the described program will not result in any significant short-term impacts.

**Long-term impacts:** The current, ongoing EE program covered by this CD will not cause any significant long-term impacts. The EE program is expected to increase with restoration of the

wetlands, recruitment of a Visitor Services Manager, and development of a formal program designed to meet Hawai'i Department of Education curriculum requirements. A thorough evaluation of the impacts to existing resources and capability of the site to withstand additional groups will be reviewed in a Visitor Services Plan within 5 years.

**Cumulative impacts:** This EE program has been conducted in the current manner since 1997 and no cumulative impacts to wildlife resources on the Refuge have been observed or are anticipated.

**Public Review and Comment:**

Public review and comments were solicited in conjunction with release of the draft CCP/EA (2011) in order to comply with the NEPA and Service policy.

**Determination:** (check one below)

Use is Not Compatible

Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

User stipulations:

- Groups are required to stay on trails and designated paths throughout the year;
- Use is restricted to daylight hours only;
- Groups are limited to 25, including students, chaperones, and teachers;
- Special Use Permits will only be issued during non-breeding seasons and when no nesting is occurring;
- Use levels will be monitored by Refuge staff and/or approved volunteer docents; and
- Refuge staff periodically participates with the group to ensure compliance with Refuge's conditions and accuracy of information is maintained.

**Justification:**

Environmental education is one of the six wildlife-dependent recreational uses of the Refuge System as stated in the Improvement Act. The six uses — hunting, fishing, wildlife observation and photography, and EE and interpretation — are to receive enhanced consideration in planning and management over all other general public uses of the Refuge System. Environmental education receives enhanced consideration in the CCP process, and is considered a priority public use when determined compatible. By limiting the size of groups, providing structured activities, and providing closed areas for wildlife away from human disturbance, this program would limit disturbance to wildlife. There is a sufficient amount of undisturbed habitat available to Refuge wildlife for escape and cover, and wildlife populations will find sufficient food resources and resting places. The relatively limited number of individual plants and animals expected to be adversely affected will not cause wildlife populations to materially decline, the physiological condition and production of Refuge species will not be impaired, their behavior and normal activity patterns will not be altered

dramatically, and their overall welfare will not be negatively impacted. Thus, allowing EE to occur under the stipulations described above will not materially detract or interfere with the purposes for which the Refuge was established or the Refuge System mission. Environmental education contributes to the mission of the Refuge System by providing wildlife-dependent educational benefits to visitors. Environmental education programs on Refuge lands are inherently valuable to the Service because they will enhance the public's knowledge of the Refuge and its resources, and expand the number of visitors who engage in the Refuge's conservation mission.

**Mandatory Reevaluation Date:** (provide month and year for "allowed" uses only)

September

2026 Mandatory 15-year reevaluation date (for wildlife-dependent public uses)

\_\_\_\_\_ Mandatory 10-year reevaluation date (for uses other than wildlife-dependent public uses)

**NEPA Compliance for Refuge Use Decision:** (check one below)

\_\_\_\_\_ Categorical Exclusion without Environmental Action Statement

\_\_\_\_\_ Categorical Exclusion and Environmental Action Statement

Environmental Assessment and Finding of No Significant Impact

\_\_\_\_\_ Environmental Impact Statement and Record of Decision

**Refuge Determination:**

Prepared by:

Refuge Planner,  
Hawaiian and Pacific Islands NWRC

Lana Beauregard      9-20-11  
(Signature)                      (Date)

Project Leader,  
Maui National Wildlife Refuge Complex  
Approval:

Alpinia Nakai                      09-20-11  
(Signature)                      (Date)

**Concurrence:**

Project Leader,  
Hawaiian and Pacific Islands NWRC

Barry W. Steg                      9/22/11  
(Signature)                      (Date)

Regional Chief,  
National Wildlife Refuge System:

Dr. S. West                      9/25/11  
(Signature)                      (Date)



## **B.4 Compatibility Determination for Research, Scientific Collecting, and Surveys**

### **CD Terminology:**

*Research:* Planned, organized, and systematic investigation of a scientific nature.

*Scientific collecting:* Gathering of Refuge natural resources or cultural artifacts for scientific purposes.

*Surveys:* Scientific inventory or monitoring.

**Refuge Name(s):** Kakahai‘a National Wildlife Refuge

**County and State:** Maui County, Hawai‘i

### **Establishing and Acquisition Authority(ies):**

Kakahai‘a NWR was established in 1976 under the authority of the:

- Fish and Wildlife Coordination Act of 1956, as amended (16 U.S.C. 742a – 742j)
- Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1544)

### **Refuge Purpose(s):**

“...to conserve (A) fish and wildlife which, are listed as endangered or threatened species... or (B) Plants ...” 16 U.S.C. 1534, Endangered Species Act of 1973.

### **National Wildlife Refuge System Mission:**

“The mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.”

### **Description of Use(s):**

The Refuge staff receives periodic requests from non-Service entities (e.g., universities, State agencies, other Federal agencies, nongovernmental organizations) to conduct research, scientific collecting, and surveys on Refuge lands. These project requests can involve a wide range of natural and cultural resources as well as public use management issues, including basic absence/presence surveys, collection of new species for identification, habitat use and life-history requirements for specific species/species groups, practical methods for habitat restoration, extent and severity of environmental contaminants, techniques to control or eradicate pest species, effects of climate change on environmental conditions and associated habitat/wildlife response, identification and analyses of paleontological specimens, modeling wildlife populations, and assessing response of habitat/wildlife to disturbance from public uses. Projects may be species-specific, Refuge-specific, or evaluate the relative contribution of the Refuge to larger landscapes (e.g., eco-region, region, flyway, national, international) issues and trends.

The Service’s research and management and Appropriate Refuge Uses (603 FW1.10D(4)) policies indicate priority for scientific investigatory studies that contribute to the enhancement, protection, use, preservation, and management of native wildlife populations and their habitat as well as their natural diversity. Projects that contribute to Refuge-specific needs for resource management goals and objectives, where applicable, would be given a higher priority over other requests.

**Availability of Resources:**

Refuge staff responsibilities for projects by non-Service entities will primarily be limited to the following: review of proposals, prepare Special Use Permits (SUP) and other compliance documents (e.g., Section 7 of the ESA, Section 106 of the National Historic Preservation Act), and monitor project implementation to ensure that impacts and conflicts remain within acceptable levels (compatibility) over time. Additional administrative support, logistical and operational support may also be provided depending on each specific request. Estimated costs for one-time (e.g., prepare SUP) and annually recurring tasks by Refuge staff and other Service employees will be determined for each project. Sufficient funding in the general operating budget of the Refuge must be available to cover expenses for these projects. The terms and conditions for funding and staff support necessary to administer each project on the Refuge will be clearly stated in the SUP.

The Refuge has the following staffing and funding to administratively support and monitor research that is currently taking place on Refuge lands (see table below). Any substantial increase in the number of projects would create a need for additional resources to oversee the administration and monitoring of the investigators and their projects. Any substantial additional costs above those itemized below may result in finding a project not compatible unless expenses are offset by the investigator(s), sponsoring agency, or organization.

<b>Category and Itemization</b>	<b>One-time \$</b>	<b>Annual \$/yr</b>
Administration and management	\$0	\$4,000
Maintenance	\$0	\$0
Monitoring	\$0	\$6,900
Special equipment, facilities, or improvement	\$0	\$0
Offsetting revenues	\$0	\$0

**Anticipated Impacts of the Use:**

Use of the Refuge(s) to conduct research, scientific collecting, and surveys will generally provide information that would benefit fish, wildlife, plants, and their habitats. Scientific findings gained through these projects provide important information regarding life-history needs of species and species groups as well as identify or refine management actions to achieve resource management objectives in Refuge management plans (especially CCPs). Reducing uncertainty regarding wildlife and habitat responses to management actions in order to achieve desired outcomes reflected in resource management objectives is essential for adaptive management in accordance with Department of Interior (DOI) policy 522 DM 1.

If project methods impact or conflict with Refuge-specific resources, priority wildlife-dependent public uses, other high-priority research, and Refuge habitat and wildlife management programs, then

it must be clearly demonstrated that the scientific findings will contribute to resource management and that the project cannot be conducted off-Refuge for the project to be compatible. The investigator(s) must identify methods/strategies in advance required to eliminate or minimize the potential impact(s) and conflict(s). If unacceptable impacts cannot be avoided, then the project will not be compatible.

Impacts would be project- and site-specific, where they will vary depending upon nature and scope of the field work. Data collection techniques will generally have minimal animal mortality or disturbance, habitat destruction, no introduction of contaminants, or no introduction of nonnative species. In contrast, projects involving the collection of biotic samples (plants or animals) or requiring intensive ground-based data or sample collection will have short-term impacts. To reduce impacts, the minimum number of samples (e.g., water, soils, vegetative litter, plants, macroinvertebrates, vertebrates) will be collected for identification and/or experimentation and statistical analysis. Where possible, researchers would coordinate and share collections to reduce sampling needed for multiple projects.

Investigator(s) obtaining required State and Federal collecting permits will also ensure minimal impacts to fish, wildlife, plants, and their habitats. If, after incorporating the above strategies, the project results in long-term or cumulative effects, it will not be deemed compatible. A Section 7 consultation under the ESA will be required for activities that may affect a federally listed species and/or critical habitat. Only projects that have no effect or will result in not likely to adversely affect determinations will be considered compatible.

Spread of pest plants and/or pathogens is possible from ground disturbance and/or transportation of project equipment and personnel, but it will be minimized or eliminated by requiring proper cleaning of investigator equipment and clothing as well as quarantine methods, where necessary. If after all practical measures are taken, an unacceptable spread of pest species is anticipated to occur, then the project will be found not compatible without a restoration or mitigation plan.

Localized and temporary effects may occur from vegetation trampling, collecting of soil and plant samples, or trapping and handling of wildlife. Impacts may also occur from infrastructure necessary to support a project (e.g., permanent transects or plot markers, enclosure devices, monitoring equipment, solar panels to power unattended monitoring equipment). Some level of disturbance is expected with these projects, especially if investigator(s) enter areas closed to the public and collect samples or handle wildlife. However, wildlife disturbance (including altered behavior) will usually be localized and temporary in nature. Where long-term or cumulative unacceptable effects cannot be avoided, the project will not be found compatible. Project proposals will be reviewed by Refuge staff and others, as needed, to assess the potential impacts (short-term, long-term, and cumulative) relative to benefits of the investigation to Refuge management issues and understanding of natural systems.

At least 6 months before initiation of field work (unless an exception is made by prior approval of the refuge manager), project investigator(s) must submit a detailed proposal. Project proposals will be reviewed by Refuge staff and others, as needed, to assess the potential impacts (short-term, long-term, and cumulative) relative to benefits of the investigation to Refuge management issues and understanding of natural systems. This assessment will form the primary basis for allowing or denying a specific project. Projects that result in unacceptable Refuge impacts will not be found compatible.

If the proposal is approved, then the refuge manager will issue a SUP(s) with required stipulations (terms and conditions) of the project to avoid and/or minimize potential impacts to Refuge resources as well as conflicts with other public-use activities and Refuge field management operations. After approval, projects also are monitored during implementation to ensure impacts and conflicts remain within acceptable levels based upon documented stipulations.

Projects that are not covered by the CCP will require additional NEPA documentation.

**Public Review and Comment:**

Public review and comments were solicited in conjunction with release of the draft CCP/EA (2011) in order to comply with the NEPA and Service policy.

**Determination:** (check one below)

The use is not compatible.

The use is compatible with the following stipulations.

**Stipulations Necessary to Ensure Compatibility:**

Each project will require an SUP. Annual or other short-term SUPs are preferred; however, some permits will be a longer period, if needed, to allow completion of the project. All SUPs will have a definite termination date. Permit renewals will be subject to Refuge Manager review and approval based on timely submission of and content in progress reports, compliance with SUP stipulations, and required permits. Other stipulations and provisions would include the following:

- Projects will adhere to scientifically defensible protocols for data collection, where available and applicable.
- Investigators must possess appropriate and comply with conditions of State and Federal permits for their projects.
- If unacceptable impacts to natural resources or conflicts arise or are documented by the Refuge staff, then the refuge manager can suspend, modify conditions of, or terminate an on-going project already permitted by SUP(s) on a Refuge.
- Progress reports are required at least annually for multiple-year projects.
- Final reports are due 1 year after completion of the project unless negotiated otherwise with the refuge manager.
- Continuation of existing projects will require approval by the refuge manager.
- The Refuge staff will be given the opportunity to review draft manuscript(s) from the project before being submitted to a scientific journal(s) for consideration of publication.
- The Refuge staff will be provided with copies (including, but not limited to: reprints, videos, and CD) of all publications resulting from a Refuge project.
- The Refuge staff will be provided with copies of raw data (preferably electronic database format) at the conclusion of the project.
- Upon completion of the project or annually, all equipment and markers (unless required for long-term projects), must be removed and sites must be restored to the refuge manager's satisfaction. Conditions for clean-up and removal of equipment and physical markers will be stipulated in the SUP(s).

- All samples collected on Refuge lands are the property of the Service even while in the possession of the investigator(s). Any future work with previously collected samples not clearly identified in the project proposal will require submission of a subsequent proposal for review and approval. In addition, a new SUP will be required for additional project work. For samples or specimens to be stored at other facilities (e.g., museums), a memorandum of understanding will be necessary.
- Sampling equipment as well as investigator(s) clothing and vehicles (e.g., ATV, boats) will be thoroughly cleaned (free of dirt and plant material) before being allowed for use on Refuge lands and/or waters to prevent the introduction and/or spread of pests.
- The Service, specific Refuge unit, names of Refuge staff and other Service personnel who supported or contributed to the project will be appropriately cited and acknowledged in all written and oral presentations resulting from projects on Refuge lands.
- At any time, Refuge staff may accompany investigator(s) in the field.
- Investigator(s) and support staff will follow all Refuge-specific regulations that specify access and travel on the Refuge.

**Justification:**

Research, scientific collecting, and surveys on Refuge lands are inherently valuable to the Service because they will expand scientific information available for resource management decisions. In addition, only projects that directly or indirectly contribute to the enhancement, protection, use, preservation, and management of Refuge wildlife populations and their habitats generally will be authorized on Refuge lands. In many cases, if it were not for the Refuge staff providing access to Refuge lands and waters along with some support, the research project would likely not occur and less scientific information would be available to the Service to aid in managing and conserving resources. By allowing the use to occur under the stipulations described above, it is anticipated that wildlife species that could be disturbed during the use would find sufficient food resources and resting places so their abundance and use will not be measurably lessened on the Refuge. Additionally, it is anticipated that monitoring, as needed, will prevent unacceptable or irreversible impacts to fish, wildlife, plants, and their habitats. The combination of stipulations identified above and conditions included in any SUP(s) will ensure that proposed projects contribute to the enhancement, protection, conservation, and management of native wildlife populations and their habitats on the Refuge. As a result, these projects will not materially interfere with or detract from fulfilling Refuge purpose(s); contributing to the mission of the Service and Refuge System; and maintaining the biological integrity, diversity, and environmental health of the Refuge.

**Mandatory Re-evaluation Date:** (provide month and year for “allowed” uses only)

\_\_\_\_\_ Mandatory 15-year re-evaluation date (wildlife-dependent public uses)  
September

\_\_\_\_\_ 2021 Mandatory 10-year re-evaluation date (uses other than wildlife-dependent public uses)

**NEPA Compliance for Refuge Use Decision:** (check one below)

- Categorical Exclusion without Environmental Action Statement
- Categorical Exclusion and Environmental Action Statement
- Environmental Assessment and Finding of No Significant Impact
- Environmental Impact Statement and Record of Decision

**Refuge Determination:**

Prepared by:

Refuge Planner,  
Hawaiian and Pacific Islands NWRC

Laura Beauregard      9-20-11  
(Signature)                      (Date)

Project Leader,  
Maui National Wildlife Refuge Complex  
Approval:

Gymnias Nakai                      09-20-11  
(Signature)                      (Date)

**Concurrence:**

Project Leader,  
Hawaiian and Pacific Islands NWRC

Barry W. Stig                      9/22/11  
(Signature)                      (Date)

Regional Chief,  
National Wildlife Refuge System:

Sub. West                      9/28/11  
(Signature)                      (Date)

Kakahai'a National Wildlife Refuge Comprehensive Conservation Plan

FINDING OF APPROPRIATENESS OF A REFUGE USE

Refuge Name: Kakahai'a National Wildlife Refuge

Use: Research, Scientific Collecting, and Surveys

This form is not required for wildlife-dependent recreational uses; take regulated by the State, or uses already described in a Refuge CCP or step-down management plan approved after October 9, 1997.

Decision Criteria:	YES	NO
(a) Do we have jurisdiction over the use?	✓	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	✓	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	✓	
(d) Is the use consistent with public safety?	✓	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	✓	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	✓	
(g) Is the use manageable within available budget and staff?	✓	
(h) Will this be manageable in the future within existing resources?	✓	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	✓	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future?	✓	

Where we do not have jurisdiction over the use ("no" to (a)), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to (b), (c), or (d)) may not be found appropriate. If the answer is "no" to any of the other questions above, we will generally not allow the use.

If indicated, the Refuge manager has consulted with State fish and wildlife agencies. Yes  No

When the Refuge manager finds the use appropriate based on sound professional judgment, the Refuge manager must justify the use in writing on an attached sheet and obtain the Refuge supervisor's concurrence. Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate  Appropriate

Refuge Manager: *Quinn Nakai* Date: 09-20-11

If found to be Not Appropriate, the Refuge supervisor does not need to sign concurrence if the use is a new use. If an existing use is found Not Appropriate outside the CCP process, the Refuge supervisor must sign concurrence. If found to be Appropriate, the Refuge supervisor must sign concurrence.

Refuge Supervisor: *Barry W. Steeg* Date: 9/22/11

A compatibility determination is required before the use may be allowed.

02/06

**Attachment 1: Appropriate Uses Justification**

**Date:** May 5, 2011

**Refuge:** Kakahai‘a National Wildlife Refuge (Refuge)

**Project:** Research, Scientific Collecting, and Surveys

**Summary:** The Refuge receives requests to conduct scientific research on Refuge lands and waters. Research applicants must submit a proposal that would outline: 1) objectives of the study; 2) justification for the study; 3) detailed methodology and schedule; 4) potential impacts on Refuge wildlife and/or habitat, including disturbance (short-term and long-term), injury, or mortality; 5) personnel required; 6) costs to Refuge, if any; and 7) end products (i.e., reports, publications). Research proposals would be reviewed by Refuge staff, Regional Office Branch of Refuge Biology, and others as appropriate prior to the Refuge issuing a SUP. Projects will not be open-ended, and, at a minimum, will be reviewed annually.

**For each of the findings listed on FWS Form 3-2319, a justification has been provided below:**

**a. Do we have jurisdiction over the use?**

Some or all of the proposed activities would take place within Refuge boundaries. The Refuge has jurisdiction over those research projects that are sited within Refuge boundaries.

**b. Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?**

Proposed research activities should comply with all applicable laws and regulations. Any restrictions or qualifications that are required to comply with law and regulations would be specified in the SUP. The State of Hawai‘i DLNR was invited on two occasions to participate on core planning teams, but declined due to insufficient staffing. However, as this Appropriate Use Justification does not propose a significant deviation from the status quo, and no comments on this topic were received from the State during the comment period, we believe additional coordination is not necessary.

**c. Is the use consistent with applicable Executive orders and Department and Service policies?**

Through the review of individual projects, the Refuge would ensure that they are consistent with applicable policies, especially Research on Service Lands Policy (803 FW 1).

**d. Is the use consistent with public safety?**

Through individual project review, the Refuge will ensure that each project is consistent with public safety. If necessary, stipulations to ensure public safety will be included in the project’s SUP.

**e. Is the use consistent with goals and objectives in an approved management plan or other document?**

Research activities are approved in instances where they can provide meaningful data that may contribute to Refuge management and public appreciation of natural resources.

**f. Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?**

Earlier documented analysis has approved the use and touted the benefits of research, scientific collecting, and surveys on national wildlife refuges.

**g. Is the use manageable within available budget and staff?**

The Refuge receives <10 requests per year for this activity, and it is manageable with available budget and staff.

**h. Will this be manageable in the future within existing resources?**

The proposed activity at current levels would be manageable in the future with the existing resources.

**i. Does the use contribute to the public's understanding and appreciation of the Refuge's natural or cultural resources, or is the use beneficial to the Refuge's natural or cultural resources?**

The proposed use is beneficial to the Refuge's natural and cultural resources because the types of research projects approved are those that have the distinct likelihood to help achieve Refuge purposes by providing information useful for the management of trust resources and may contribute to the public's understanding and appreciation of natural and/or cultural resources.

**j. Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future?**

The Refuge will ensure that the research activities will not impair existing or future wildlife-dependent recreational use of the Refuge during individual project review, prior to issuing a SUP for the project.