

**SCOPE OF WORK  
NEPA CONTRACTOR  
SOUTH FARALLON ISLANDS HOUSE MOUSE ERADICATION ENVIRONMENTAL  
IMPACT STATEMENT**

**INTRODUCTION AND PROJECT DESCRIPTION:**

The South Farallon Islands are located about 27 miles west of San Francisco, California. The islands are part of the Farallon National Wildlife Refuge (Farallon NWR), managed by the U.S. Fish and Wildlife Service (Service), San Francisco Bay National Wildlife Refuge Complex (Complex). The Farallon NWR headquarters is located in Fremont, California.

The Farallon Islands host a unique ecosystem of the Northeast Pacific Ocean. The largest islands of the group, the South Farallon Islands, include two main islands (Southeast Farallon and West End Islands) and several smaller islets. These islands host the largest seabird breeding colony in the contiguous United States, with nearly 300,000 birds of 13 species. Three species have their largest colonies in the world here: ash storm-petrel (*Oceanodroma homochroa*), Brandt's cormorant (*Phalacrocorax penicillatus*) and western gull (*Larus occidentalis*). Five species of marine mammal also occur and breed there regularly. The islands host the endemic Farallon camel cricket (*Farallonophilus cavernicolus*), an endemic subspecies of the arboreal salamander (*Aneides lugubris farallonensis*), and many other species of insects and other invertebrates. The native plant community is unique and is dominated by the maritime goldfield (*Lasthenia maritima*), an annual composite that is endemic to California and Oregon seabird nesting islands.

House mice (*Mus musculus*) are native to Eurasia and were introduced to the South Farallon Islands, probably in the 19<sup>th</sup> century. The mice are highly invasive, and like thousands of islands worldwide, the South Farallones have experienced considerable ecosystem degradation as a result. On the Farallones, house mice experience strong population cycles: numbers peak in the fall, decline through winter, and are low in spring and summer. In the fall, peak mouse numbers attract migratory burrowing owls (*Athene cunicularia*), which then attempt to overwinter on the islands on a diet of house mice. When the mouse population crashes in winter, owls switch to preying primarily on ash storm-petrels (*Oceanodroma homochroa*), impacting this rare species' population. The invasive mice feed on a variety of items including native insects and other invertebrates, as well as plants and plant seeds, impacting their populations and disrupting the native Farallon ecosystem. Mice feed on the extremely rare and endemic Farallon camel cricket, found nowhere else. The mice likely suppress native plant populations and spread the seeds of invasive plants. Also, mice likely compete for food with the endemic Farallon arboreal salamander and may even feed on salamander eggs or young.

To address impacts from invasive house mice on the Farallon ecosystem, the Service has proposed eradicating the mice. Eradications of invasive mice and rats have been conducted on over 500 islands worldwide. On August 16, 2013, the Service's Farallon NWR published a draft Environmental Impact Statement titled *South Farallon Islands Invasive House Mouse Eradication Project: Draft Environmental Impact Statement* (DEIS). A slightly revised version

was released on October 25, 2013. The DEIS was prepared by the Service in cooperation with the non-profit organizations Island Conservation and Point Blue Conservation Science. In the DEIS, the Service considered three alternatives to address the problem of invasive mice on the South Farallones:

- A. *Alternative A: No Action, which would allow house mice to remain on the South Farallon Islands to continue to negatively impact storm-petrels and other native and endemic species of the islands;*
- B. *Alternative B: Eradicate invasive house mice from the South Farallon Islands by aerial broadcast of rodent bait containing Brodifacoum-25D Conservation as the primary method of bait delivery; and*
- C. *Alternative C: Eradicate invasive house mice from the South Farallon Islands by aerial broadcast of rodent bait containing Diphacinone-50 Conservation as the primary method of bait delivery.*

The DEIS outlined the proposed methods for each action alternative and analyzed the potential impacts to each of the three alternatives on the affected environment including fish, wildlife, plants, soil, water, wilderness, recreation, commercial enterprise, and others. The public comment period ended December 9, 2013. Over 500 comment correspondences were received. Following the comment period, a preliminary assessment of comments was conducted but little further progress has been made towards finalizing the EIS. Thus, the Service has a need to formally analyze public comments from the DEIS, conduct additional research to close information gaps, conduct additional analyses of potential impacts to the human environment, revise and finalize the EIS, and obtain a Record of Decision.

#### **AUTHORITIES:**

This agreement is authorized by the Fish and Wildlife Coordination Act, 16 U.S.C. Sections 661-666c; and the Fish and Wildlife Act of 1956 16 U.S.C. 742a-742j.

#### **PURPOSE AND NEED:**

The purpose of this EIS is to present a range of alternatives to meet the Service's management goal of eradicating invasive house mice from the Farallon NWR in order to eliminate their negative impacts on seabirds and other native species of the Farallon Islands.

The need of this EIS is to comply with the 2009 Farallon NWR Comprehensive Conservation Plan (CCP) which provided that the Service should, within five years of the completion of the CCP, develop a plan to reduce the impacts of non-native species on the islands' ecosystem. To implement this goal, the CCP determined that the Service would, "develop and implement a plan to eradicate the non-native house mouse and prevent future human introductions of mice."

It is anticipated that the complete removal of mice from the South Farallon Islands would allow many of the island's natural ecosystem processes to be restored. The following benefits to the Farallon Islands ecosystem are anticipated as a consequence of eradicating house mice:

1. **Seabirds:** Nesting seabirds are expected to benefit as a consequence of improved survivorship. In particular, eradicating house mice is expected to result in increased populations of at least two seabird species, the ashy storm-petrel (*Oceanodroma*

*homochroa*; Figure 1.1) and Leach's storm-petrel (*Oceanodroma leucorhoa*), by reducing the numbers of overwintering burrowing owls and resulting owl predation on storm-petrels.

2. **Salamanders:** The endemic Farallon arboreal salamander *is anticipated to benefit from* the removal of a likely competitor for invertebrate prey and a potential predator of salamander eggs and juveniles.
3. **Invertebrates:** Native invertebrates of the South Farallon Islands, including the endemic Farallon camel cricket (*Farallonophilus cavernicolus*), are expected to benefit from reduced predation pressure from invasive mice and other predators attracted to the islands by the mice, such as burrowing owls.
4. **Plants:** Native plants stand to benefit as a consequence of reduced seed and seedling predation by mice.
5. **Pinnipeds:** Marine mammals may benefit as a result of removing house mice, which are known vectors of pathogens that affect marine mammals.
6. **Burrowing owls:** Migrant burrowing owls (*Athene cunicularia*) stop at the islands each autumn. Attracted by the abundance of mice present in autumn, each year several owls remain through the winter or spring. In winter, after the mouse population crashes and storm-petrels begin arriving back at the island for breeding activities, owls switch their diet to feed primarily on rare ash storm-petrels, impacting storm-petrel populations. In addition to storm-petrels, terrestrial insects are also consumed. The loss of mice as a food resource would greatly reduce the suitability of the Farallon Islands as a wintering ground for burrowing owls, reducing or eliminating the combined impacts of owls and mice have on storm-petrels.

## PROJECT GOALS AND OBJECTIVES

The goal of this project is to procure a contract with an entity with demonstrated background, knowledge, and experience necessary to assist the Service with finalizing the EIS and other applicable regulatory compliance for the proposed Farallon house mouse eradication project so that a Record of Decision can be obtained. This will include analyzing public comments from the DEIS, conducting additional analyses based on new information obtained, resolving information gaps from the DEIS, revising the EIS, finalizing the EIS, and preparing documentation and permit applications for other regulatory compliance (depending upon the alternative chosen).

## BACKGROUND:

The Service, along with project partners Island Conservation and Point Blue Conservation Science, began work on an Environmental Assessment (EA) to develop and analyze alternatives for proposed house mouse eradication from the South Farallon Islands in 2006. After an initial draft was completed, a decision was made to switch from an EA to an EIS based on potential significant impacts to the human environment, including potential public controversy regarding the project. On April 13, 2011, the Service published a Notice of Intent (NOI) to develop an EIS to analyze and develop alternatives to eradicate house mice from the South Farallon Islands and a public meeting was held to describe the project and take public comments.

Starting with the NOI, the mouse eradication project has been controversial with certain public groups. Shortly after the NOI public meeting, Marin County-based wildlife rehabilitation facility

*Wildcare* circulated a petition denouncing the project because of the potential use of rodenticides in the eradication. Rodenticides, in particular the anti-coagulant rodenticides brodifacoum and diphacinone, have been the primary tools used in previous island eradications of invasive rats and mice worldwide, and the potential use of brodifacoum was stated in the NOI. The negative public sentiment on the use of rodenticides stems mainly from their effects on non-target wildlife that are exposed to the rodenticide by either consuming the rodent bait directly (direct exposure) or by consuming rodents that have eaten the bait (secondary exposure). These animals can then become sickened and die. Because of widespread household and agricultural use of rodenticides to control rodents, exposure and mortality of non-target wildlife is widespread.

Since the project's inception, the Service had been working with the non-profit organizations Island Conservation (formerly Island Conservation and Ecology Group) and Point Blue Conservation Science (Point Blue; formerly PRBO Conservation Science) to develop the NEPA documents for the proposed house mouse eradication project. Island Conservation is regarded as the leading expert organization in the United States in eradication of invasive rodents and certain other wildlife species from islands, and has conducted island rodent eradications both in the U.S. and abroad. Point Blue has operated a research field station on the South Farallon Islands since 1967, and has continuously held cooperative agreements with the Service for wildlife monitoring and refuge stewardship of the Farallon NWR since 1969. Their expertise on the Farallon ecosystem is unparalleled.

In August 2011, the Service entered into a Cooperative Agreement with Island Conservation to assist the Service with developing the mouse eradication EIS and provided funds for the task. The Service, Island Conservation, and Point Blue worked as a partnership on the draft EIS, including developing alternatives, conducting needed research to inform the EIS, and writing the DEIS, with Island Conservation performing the bulk of the writing and advising the Service on alternatives.

The public DEIS was released on August 16, 2013 with no preferred alternative selected. A slightly revised version of the DEIS was released on October 25, 2013. The public comment period ended December 9, 2013. Over 550 correspondences were received, including 212 People for the Ethical Treatment of Animals call to action letters (duplicated) and two petitions denouncing the project because of proposed use of rodenticides: one from *Wildcare*, and another from *Change.org* that was initiated by a private citizen.

Following the comment period, a preliminary review of comments was conducted. At that time, funds provided to Island Conservation for their work on the EIS were expended and no other funds were available to support the project. Island Conservation then notified the Service that they were discontinuing their efforts on the EIS and would no longer be a project cooperator. Without the needed support, little further progress has been made towards finalizing the EIS. However, funds have recently been obtained by the Service to re-start the process.

#### **SPECIFIC CONTRACTOR OBLIGATIONS:**

The successful contractor shall assist the Service with development of a final EIS (FEIS) for eradication of house mice from the South Farallon Islands, following USFWS guidelines, that

conforms in terms of format and content to the requirements of NEPA, its implementing regulations (40 CFR Sections 1500 – 1508) and Service policies. Tasks to be performed include:

**1. Scoping Report:**

Finalize a draft EIS scoping report to be provided by the Service.

**2. Analyses of public comments and other information:**

2a. Conduct analyses of DEIS public comments and preparation of a comment summary report. A draft report will be submitted to the Service and the Interdisciplinary Team for review and comment. Comments will then be incorporated into the report and the report finalized.

2b. At the direction of the Service, conduct analyses of potential impacts of the various alternatives to the affected environment based on new studies or new information obtained;

**3. Revise EIS based on public comments and other information**

3a. Revise the EIS to incorporate applicable public or agency comments, new studies or analyses, or other applicable information obtained. Provide an administrative draft copy of the revised EIS to the Service and the Interdisciplinary Team for review and comment. Incorporate comments and revise the document within 60 days of receipt of final comments.

3b. Prepare a draft final FEIS to be submitted to the Service, formatted based on the requirements of NEPA and instructions provided by the Service.

**4. Meetings:**

4a. Prepare schedules, agendas, minutes, presentations and other informational materials as requested for meetings with Service staff, project partners, cooperating or other agencies, interested organizations and members of the public as applicable;

4b. Attend and participate in meetings associated with the project, as requested. The majority of meetings will be held at the San Francisco Bay National Wildlife Refuge Complex headquarters in Fremont, California. Most other meetings will occur at various other locations within the Greater San Francisco Bay Area. A small number of meetings (likely no more than three) may require travel beyond the the Greater San Francisco Bay Area. In-person meetings will be held with Service staff or the Interdisciplinary Team at least every two months or more frequently as needed, with additional phone meetings as necessary.

**5. Additional Regulatory Compliance:**

If an action alternative is selected in the FEIS, the proposed mouse eradication would be carried out in compliance with all applicable Federal and state laws and regulations. The contractor will be responsible for preparing all necessary documentation (unless otherwise agreed upon in writing by the Service), which will be reviewed and approved by the Service, for the following additional compliance obligations. Unless a different time frame is specified by the Service, the contractor will prepare this documentation to coincide with the administrative draft of the FEIS (anticipated July 2017). These permit applications and additional compliance documents include but may not be limited to:

- A. Consistency Determination under the Coastal Zone Management Act;
- B. Application for Manager's Authorization from Greater Farallones National Marine Sanctuary;
- C. Application for incidental take of migratory birds (under the Migratory Bird Treaty Act);
- D. Application for National Pollution Discharge Elimination System individual permit (under the Clean Water Act);
- E. Application for marine mammal Incidental Harassment Authorization (under the Marine Mammal Protection Act);
- F. Documentation to obtain a Pesticide Use Permit from the Service;
- G. Documentation to support a Biological Opinion under the Endangered Species Act;
- H. Documentation to support authorization under the National Historic Preservation Act (Section 106);
- I. Documentation to support authorization under the Federal Insecticide, Fungicide and Rodenticide Act; and
- J. Other regulatory compliance as it may arise.

**6. Administrative Record:**

- 6A. Compile, maintain and deliver the Administrative Record for the project according to protocols provided by the Service.
  - 6B. Compile an Index according to protocols provided by the Service;
  - 6C. Deliver portions of the Administrative Record on a quarterly basis, to include all records accrued for the quarter
  - 6D. At the conclusion of the NEPA process, complete the compilation of the Administrative Record;
  - 6E. Deliver all Administrative Record materials, including all documents and Index, on three DVDs to the Project Officer.
7. Notify the Service Contracting Officer or Project Officer of developments that have a significant impact on activities covered by this agreement.

Any future deviations from the procedures or objectives specified in this purchase order must be presented to and approved by the Service for specific approval before implementation.

**U.S. FISH AND WILDLIFE SERVICE OBLIGATIONS**

- 1. Provide funds for the accomplishments of the tasks identified herein as the responsibility of the Contractor;
- 2. Provide an electronic copy of the public DEIS;
- 3. Provide an electronic copy of all public comments received on the DEIS.

4. Provide an electronic copy of public scoping comments received and draft public scoping report.
5. Provide names and contact information of Interdisciplinary Team members, cooperating agency staff, and other regulatory agency staff (when known);
6. Provide technical expertise to as it relates to the federally listed species, migratory birds, and other natural resources of the South Farallon Islands;
7. Serve as the lead agency for the National Environmental Policy Act (NEPA) compliance. Provide a NEPA expert to liase with the contractor and provide timely response to questions about process and content;
8. Throughout the NEPA process, maintain primary responsibility for the content of the EIS and associated compliance documents and independently evaluate information and analyses submitted by the contractor and assume responsibility for their accuracy;
9. Oversee the environmental analysis through a Service Interdisciplinary Team which will provide guidance to the contractor regarding the issues and alternatives to be addressed as part of the EIS;
10. Review draft materials of the scoping report, public comment summary report, other reports, and other regulatory compliance documents and provide comments within 30 working days of receipt. Make final determinations on the inclusion or deletion of material from such documents.
11. Review preliminary draft materials from portions of the FEIS as necessary and agreed upon by the Service, and provide comments within 30 working days.
12. Review an Administrative Draft of the FEIS and provide comments within 60 working days of receipt. Make final determinations on the inclusion or deletion of material from the FEIS;
13. Choose a preferred alternative;
14. Prepare a Minimum Requirements Analysis under the National Wilderness Act;
15. Prepare a Record of Decision on the project;
16. Direct the contractor on protocols for compiling, maintaining and delivering the Administrative Record for the project and directions for other record keeping practices.

#### **SCHEDULE:**

This tentative schedule assumes a performance start date of May 1, 2016. This schedule may require modifications due to a later (or earlier) start date, delays (or advance) in obtaining expected new information considered pertinent to the NEPA process, delays due to unavailability of critical Service or Interdisciplinary Team staff, delays (or advance) in obtaining required other regulatory compliance, completion of tasks prior to due dates, or other factors beyond the control of the contractor. Updates to the schedule will be done regularly as needed.

May 1, 2016: Start of performance period

May 10, 2016: Service delivers to the contractor electronic copies of the public DEIS, all public comments, draft summary of public comments, draft scoping report, names and contact

information of the Interdisciplinary Team and cooperating agency staff, and instructions for maintaining and compiling the Administrative Record.

June 10, 2016: Contractor delivers draft public comment summary report to the Service and Interdisciplinary Team.

July 1, 2016: Contractor delivers a revised draft scoping report to the Service and Interdisciplinary Team.

July 21, 2016: Service and the Interdisciplinary Team provide comments on the draft public comment summary report. Service provides instructions to the contractor for revising the comment summary report (due in 45 working days) and to begin revising the EIS.

July 31, 2016: Contractor delivers Administrative Record materials for the period May 1 to June 30, 2016.

August 11, 2016: Service and the Interdisciplinary Team provide comments on the revised draft scoping report. Service provides instructions to the contractor for revising the scoping report (due in 45 working days).

Ongoing: The Service, Interdisciplinary Team, and the Contractor conduct additional research, literature searches, meetings with experts, other agency staff, and potentially affected members of the public to gather additional information. Contractor incorporates updated information into analyses of alternatives.

October 31, 2016: Contractor delivers Administrative Record materials for the period July 1 to September 30, 2016.

January 15, 2017: Service chooses Preferred Alternative.

January 15, 2015 to May 31, 2017: Contractor finalizes analyses of alternatives, prepares administrative draft FEIS, prepares documents and permit applications for other regulatory compliance (pending preferred alternative chosen).

January 31, 2017: Contractor delivers Administrative Record materials for the period October 1 to December 31, 2016.

April 30, 2017: Contractor delivers Administrative Record materials for the period January 1 to March 31, 2017.

May 31, 2015: Contractor delivers administrative draft FEIS and other regulatory compliance documents (as applicable depending on preferred alternative) to the Service for review and comments by the Service and the Interdisciplinary Team.

July 31, 2017: Contractor delivers Administrative Record materials for the period May 1 to June 30, 2017.

August 22, 2017: Service and Interdisciplinary Team provide comments on the Administrative Draft FEIS and other regulatory compliance documents. Service provides instructions to the contractor to revise the FEIS and other regulatory compliance documents (as applicable depending on preferred alternative).

November 7, 2017: Contractor delivers draft final FEIS and applicable regulatory compliance documents to the Service.



October 31, 2016: Contractor delivers Administrative Record materials for the period July 1 to September 30, 2017.

December 1, 2017: End of performance period. Contractor submits the final compiled Administrative Record to the Service and final invoice.

## **REQUIREMENTS:**

Successful applicant must have a demonstrated professional knowledge and expertise in the laws and policies of the National Environmental Policy Act (NEPA), including requirements of an EIS. Substantial experience with the preparation of either an EA or EIS, including conducting research and analyses on potential impacts to the affected environment, are essential. Applicant must have demonstrated excellent writing skills and the ability to incorporate comments and other materials supplied by numerous individuals in an efficient manner. Additional consideration will be given to applicants with demonstrated knowledge and expertise in the following:

- The field of rodent eradication from islands, including the laws and policies governing these actions in the United States and the State of California;
- The laws and policies of the Service including the National Wildlife Refuge System;
- Other environmental compliance requirements including preparation of environmental compliance permit applications;
- Maintenance and compilation of a NEPA administrative record;
- Organizing meetings and preparing meeting agendas, minutes, presentations, and other materials; and
- Working in a diverse group with individuals from multiple federal, state, and private organizations.