

**Scope of Work**  
**Restoration Catalyst Fund Project: Farallon NEPA**  
**Point Blue Conservation Science**

As part of its cooperative agreement with the U.S. Fish and Wildlife Service – Farallon National Wildlife Refuge (Refuge), Point Blue Conservation Science (Point Blue) has been assisting the Refuge with National Environmental Policy Act (NEPA) compliance, including preparation of an Environmental Impact Statement (EIS), for a proposed house mouse eradication project. Point Blue’s assistance has included conducting or assisting with collection of baseline data on Farallon wildlife and conducting studies related to assessing the efficacy or potential impacts of potential eradication techniques.

One of the most crucial analyses of potential impacts to the Farallons Islands concerns the effectiveness of the western gull hazing program. The USFWS received several comments on the Draft EIS about the uncertainty surrounding the potential adverse impacts of western gulls being exposed secondarily to anticoagulant rodenticide bait. To address this uncertainty, Point Blue Conservation Science, Island Conservation, and USFWS completed a hazing trial in November and December 2012 to evaluate the effectiveness of a combination of non-lethal wildlife hazing techniques including biosonics, pyrotechnics, lasers, a helicopter, reflective objects and effigies, for temporarily reducing western gull numbers at the South Farallon Islands, and therefore reducing gull exposure to rodenticide. They examined the relative effectiveness of these tools for dissuading gulls as well as the impact of these treatments on pinnipeds and other non-target bird species present on the islands. The hazing trial successfully demonstrated the feasibility of keeping gulls off the islands for an extended period of time (in this case a 12-day interval) while having relatively minor impacts on other species, namely other seabird species and pinnipeds. Hazing efforts were 98% effective at keeping gulls off the island and away from areas that would be baited during an eradication effort.

As part of the Avian Risk Assessment for South Farallon Islands that was completed as a component of the Draft EIS, the western gull risk model determined that a hazing success of 90% or higher was necessary to avoid rodenticide having a population level impact as defined by a previously completed gull population viability analysis (see Appendix F – Western Gull Risk Assessment (December 10, 2012) from the Draft EIS for additional information). Point Blue is currently in the process of completing a manuscript for publication in Journal of Wildlife Management; however, funding support is needed to complete the final manuscript and submit it for publication. There are three other key eradication-related products (described below) that are essential to the restoration planning process and require additional funds so that they can be completed.

For the Restoration Catalyst Fund project, Point Blue will complete the following baseline studies for the Farallon mouse eradication project NEPA analyses:

1. Complete a manuscript reporting on the promising findings from the western gull hazing trials on Southeast Farallon Island (due April 30, 2016);
2. Complete a manuscript on a recent burrowing owl diet study (due April 30, 2016);

3. Complete updated ashy storm-petrel population modeling (due April 30, 2016);
4. Complete the western gull population viability analysis based on potential impacts from rodenticide exposure (due April 30, 2016); and
5. Continue to assist the Refuge with the NEPA process including review of potential alternatives, preparation and review of draft versions of the final EIS.

**Project Budget:**

<b>Point Blue Conservation Science</b>	
<i><b>Salaries and Benefits</b></i>	
Staff salaries - Project manager and support staff	\$18,500.00
Staff benefits (46.5%)	\$8,603.00
<i><b>Travel</b></i>	
Travel to local partner meetings	\$550.00
<i><b>Publication Fees</b></i>	
Fees for publishing four manuscripts to support EIS	\$2,000.00
Total Direct Costs	\$29,653.00
Indirect Costs (@35%)	\$10,378.00
<b>Total</b>	<b>\$40,031.00</b>