



Questions and Answers

Final Rule to Remove Island Fox Subspecies on Northern Channel Islands from the Endangered Species List Due to Recovery

Q. What action is the U.S. Fish and Wildlife Service taking?

The U.S. Fish and Wildlife Service (Service) is removing three subspecies of island fox on San Miguel, Santa Rosa, and Santa Cruz Islands from the Federal List of Threatened and Endangered Wildlife under the Endangered Species Act (ESA) due to recovery. The Service is also downlisting the Santa Catalina Island fox subspecies from endangered to threatened.

Q. What is a Channel Islands fox?

A. The island fox is an endemic species that inhabits the six largest California Channel Islands off the coast of southern California (San Miguel, Santa Rosa, Santa Cruz, San Nicolas, Santa Catalina, and San Clemente Islands). Smaller than their mainland grey fox relatives, they weigh around three to five pounds and stand approximately 12 inches tall. Island foxes are omnivores and forage opportunistically on a wide variety of seasonally available plants and animals. Although primarily nocturnal, the island fox is more diurnal than the mainland gray fox. This diurnal behavior could be a result of the historical absence of large predators and freedom from human harassment on the islands.

Q. What role do Channel Island foxes play in both the broader ecosystem and cultural history of the Channel Islands?

A. The island fox plays not only an important role within the individual island ecosystems, but also has cultural and historical significance for the Channel Islands. As top predators in their ecosystem, these mid-sized omnivores keep prey populations such as mice and skunks in balance. The island fox was also a revered and culturally significant species for indigenous peoples – the Chumash of the north and Tongva of the south – who inhabited the islands for thousands of years.

Q. What caused the population declines of the three island fox subspecies?

A. In the late 1990s, island foxes on the northern Channel Islands of Santa Rosa, Santa Miguel, and Santa Cruz Islands plummeted by 90 percent to near catastrophic levels due to predation by golden eagles. These eagles were attracted to the northern Channel Islands by nonnative prey such as feral pigs. On Santa Catalina Island, a canine distemper outbreak in 1998 killed approximately 90 percent of Santa Catalina Island's fox population.

Due to these declines, in March 2004, the four endemic subspecies of island fox on San Miguel, Santa Rosa, Santa Cruz and Santa Catalina Islands were designated as federally endangered under the Endangered Species Act.

Q. What does “federally endangered” mean?

A. The term “endangered species” under the Endangered Species Act indicates the species is in danger of extinction throughout all or a significant portion of its range. Under the Act, no party may “take” a listed species without prior consultation and authorization from the Service. Take is defined broadly in the Act as meaning “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”

Q. What conservation and management actions have been implemented to prevent the extinction of Channel Island fox?

A. To halt the downward spiral of island fox populations, the Service partnered with the National Park Service, The Nature Conservancy, Santa Catalina Island Conservancy, Institute for Wildlife Studies, and other conservation partners to launch a series of recovery actions. These actions included: breeding island foxes in captivity and releasing them to the wild; monitoring wild island fox populations; reducing the threat of disease through vaccinations; relocating golden eagles from the northern Channel Islands; removing nonnative species such as feral pigs that are prey for golden eagles; and reestablishing bald eagles to their historic territories on the Channel Islands. As a result of these strategies, the island fox subspecies on the four islands have shown dramatic improvement.

Q. Which major partners were involved in the recovery efforts?

A. The Service collaborated with land managers of the Channel Islands including the National Park Service, The Nature Conservancy, Santa Catalina Island Conservancy, as well as a team of over 300 stakeholders including scientific experts from academia, state and local governments, private, and non-profit organizations, including the Friends of the Island Fox and the Institute for Wildlife Studies, to identify and address threats to the island fox.

Q. What was the role of the captive breeding program in island fox recovery?

A. Due to the sharp population decline of the four island fox subspecies in the 1990s, a captive breeding program was established as an emergency effort to protect island foxes on Santa Catalina, San Miguel, Santa Cruz, and Santa Rosa Islands from extinction. The highly successful program was initiated in 1999 and ended in 2008 with all captive foxes being returned to the wild.

Q. Why was the relocation of golden eagles, reestablishment of bald eagles, and removal of feral pigs beneficial to island fox?

A. The relocation of golden eagles, reestablishment of bald eagles, and eradication of feral pigs on the islands played an important role in supporting island fox recovery and restoring balance to the island ecosystem.

Golden eagle predation drove the endemic island fox to the brink of extinction on San Miguel, Santa Rosa, and Santa Cruz Islands between 1994 and 2000. Golden eagles, a species that never

bred historically on the islands, established territories on the islands in the mid-1990s, attracted by the presence of nonnative prey species such as feral pigs. Golden eagles are primarily specialized and terrestrial hunters that prey mainly on small rodents and mammals such as feral pigs. Over 5,000 pigs were eradicated as part of an effort to save the island fox and return balance to the island ecosystem.

Bald eagles disappeared from their historic territories on the Channel Islands by the early 1960s, due to human impacts, primarily pollution. Bald eagles primarily prey on fish, smaller birds or carrion, thus posing little threat to island foxes. The presence of bald eagles also discourages golden eagles from returning to the islands.

Q. How many Channel Islands foxes are there in the wild today?

A. Population estimates from 1999/2000 and 2015 are shown below for each island.

Table: Estimated number of wild adult and juvenile island foxes for each listed subspecies.

Island/Subspecies	1999/2000 Estimate	2015 Estimate
San Miguel	15	700
Santa Rosa	15	1200
Santa Cruz	55	2100
Santa Catalina	103	1800

Q. Why is the Service removing island foxes on the Northern Channel Islands from the Endangered Species List?

As of 2015, island fox populations have increased to near or above historical levels with more than 700 individuals on San Miguel Island, 1,200 on Santa Rosa Island, and 2,100 on Santa Cruz Island. The best available scientific data suggest that the threats to San Miguel, Santa Rosa, and Santa Cruz Island fox subspecies have been reduced or eliminated and populations have recovered to self-sustaining levels.

Q. Why is the Service proposing to change the status of island fox on Santa Catalina Island from endangered to threatened?

A. While data suggest island fox populations on Santa Catalina have also increased to pre-decline levels, the potential for a disease outbreak remains an existing threat; therefore, the Service is reclassifying the Santa Catalina subspecies from endangered to threatened. While an endangered species is defined under the ESA as any species that is in danger of extinction throughout all or a significant portions of its range, a threatened species is defines as any species that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Threatened wildlife is afforded the same protections under the ESA as endangered wildlife.

Q. Is there a Recovery Plan in place for the four island fox subspecies?

A. Yes. In March 2015, the Service released the final [Recovery Plan](#) for the four island fox subspecies, outlining proven methods to ensure the subspecies' long-term viability in the wild, including a golden eagle management strategy and epidemic response plan. Recovery plans provide a blueprint for conservation partners and land managers to take steps to recover a species so that protection under the Endangered Species Act is no longer necessary. A recovery plan includes scientific information about the species and provides criteria and actions necessary for the Service to be able to improve the status from endangered to threatened or remove the species from the list of Federally Threatened and Endangered Species entirely.

The Service and conservation partners proceeded with a series of recovery actions to halt the downward spiral of island fox populations. Over time, actions recommended by the recovery partners have been implemented, and the recovery plan was refined as new information and data was collected.

Q. What process was used to make this determination?

A. The Service conducted status reviews of the four listed island fox subspecies and published a proposed rule for public comment in the Federal Register in March 2016. The Service accepted comments on the proposed rule and based upon this evaluation and comments on the proposed rule, the Service made the determination to publish a final rule to remove the San Miguel, Santa Rosa, and Santa Cruz subspecies from the Endangered Species list, and to reclassify the Santa Catalina subspecies from endangered to threatened.

Q. What information did the Service look for in the rule-making process?

A. The Service accepted comments on the proposed rule from February 16, 2016 to April 18, 2016, related to:

- Additional information on island fox distribution, population size, and population trend;
- Relevant information concerning any current or likely future threats (or lack thereof) to island foxes;
- Current or planned activities within the range of the island fox and their possible impacts;
- Regional climate change models and whether they are reliable and credible to use in assessing the effects of climate change on island foxes and its habitat; and
- Post-delisting monitoring plan.