

BEFORE THE SECRETARY OF INTERIOR

**PETITION TO LIST THE BLACK-FOOTED ALBATROSS
(*PHOEBASTRIA NIGRIPES*) AS A THREATENED OR
ENDANGERED SPECIES UNDER THE ENDANGERED SPECIES
ACT**

**EARTHJUSTICE
ON BEHALF OF
CENTER FOR BIOLOGICAL DIVERSITY
TURTLE ISLAND RESTORATION NETWORK**

SEPTEMBER 28, 2004

NOTICE OF PETITION

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Date this ____ day of September, 2004

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Pursuant to Section 4(b) of the Endangered Species Act (“ESA”), 16 U.S.C. §1533(b), Section 553(3) of the Administrative Procedures Act, 5 U.S.C. § 553(e), and 50 C.F.R. §424.14(a), Earthjustice on behalf of the Center for Biological Diversity and Turtle Island Restoration Network hereby petitions the Secretary of the Interior, through the United States Fish and Wildlife Service (“USFWS”), to list the Black-footed Albatross (*Phoebastria nigripes*) as a threatened or endangered species and designate critical habitat to ensure its recovery.

Turtle Island Restoration Network (“TIRN”) is a nonprofit, public interest environmental organization with approximately 10,000 members throughout the United States and the world, each of whom shares a commitment to the study, protection, enhancement, conservation, and preservation of the world’s marine and terrestrial ecosystems, including protection of migratory seabirds such as the Black-footed Albatross.

The Center for Biological Diversity ("Center") is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over 10,000 members throughout the United States, including Hawai`i. The Center and its members are concerned with the conservation of endangered species, including the Black-footed Albatross, and the effective implementation of the ESA.

USFWS has jurisdiction over this petition. This petition sets in motion a specific process, placing definite response requirements on USFWS. Specifically, USFWS must issue an initial finding as to whether the petition “presents substantial scientific or commercial information indicating that the petitioned action may be warranted.” 16 U.S.C. §1533(b)(3)(A). USFWS must make this initial finding “[t]o the maximum extent practicable, within 90 days after receiving the petition.” *Id.* Petitioners need not demonstrate that listing *is* warranted, rather, Petitioners must only present information demonstrating that such listing *may* be warranted. While Petitioners believe that the best available science demonstrates that listing the Black-footed Albatross as endangered *is* in fact warranted, there can be no reasonable dispute that the available information indicates that listing the species as either threatened or endangered *may* be warranted. As such, USFWS must promptly make a positive initial finding on the petition and commence a status review as required by 16 U.S.C. § 1533(b)(3)(B).

The term “species” is defined broadly under the ESA to include “any subspecies of fish or wildlife or plants and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature.” 16 U.S.C. § 1532 (16). A Distinct Population Segment (“DPS”) of a vertebrate species can be protected as a “species” under the ESA even though it has not formally been described as a “species” in the scientific literature. A species may be composed of several DPSs, some or all of which warrant listing under the ESA. As described in this petition, the Black-footed Albatross is currently recognized by most albatross taxonomists as a single species, *Phoebastria nigripes*. However, recent genetics work has led to a proposal to split the Japanese and Hawaiian breeding populations into two separate species, *Phoebastria nigripes* and *Phoebastria nihonus*. If and when this taxonomic change is accepted, Petitioners request that USFWS review and, as appropriate, list under the ESA both *Phoebastria nigripes* and *Phoebastria nihonus*. Regardless of whether these populations are recognized by USFWS as biological species, each of these populations currently constitute DPSs under the ESA and USFWS’s “Policy Regarding the Recognition of Distinct Vertebrate Population Segments under the Endangered Species Act.” 61 Fed. Reg. 4721. As such, each population constitutes a “species” under the ESA. Petitioners therefore request that USFWS evaluate whether either or both “species” of Black-footed Albatross is threatened or endangered throughout all or a significant portion of its range.

EXECUTIVE SUMMARY

The Black-footed Albatross (*Phoebastria nigripes*) warrants listing under the Endangered Species Act (“ESA”) because it suffers from a rapidly declining population, swiftly increasing human threats, and inadequate regulatory safeguards. Protection should be granted to the currently recognized Black-footed Albatross species as whole, or in the alternative to either or both of its genetically unique Hawaiian and Japanese breeding Distinct Population Segments.

The world experts on the status of seabirds, BirdLife International and the World Conservation Union, have recently concluded that the Black-footed Albatross should be classified as Endangered. (IUCN Red List 2003). This recommendation was made based on observed and projected declines in the species’ breeding populations. The primary threat to the species is drowning from entanglement on longline fishing gear. Unlike many endangered species, the threats to the Black-footed Albatross are obvious and manageable. Longline fishing kills as many as 14,000 Black-footed Albatross every year. Scientists estimate that the shallow sets of swordfish longlining kill Black-footed Albatross at the highest rates. Black-footed Albatross are also killed in the deep sets of the tuna fishing industry as well as in bottom longlines targeting groundfish. Unfortunately, the limited seabird bycatch mitigation measures required by federal regulators do not effectively prevent the drowning of seabirds. Federal bycatch mitigation requirements do not rely on the best scientific data available, do not address the needs of the Black-footed Albatross in the North Pacific Ocean, and are not consistently enforced for lack of infrastructure and personnel. Moreover, regardless of these limited measures’ efficacy, such mitigation measures generally are not required in the international fleets, which account for a significant portion of Black-footed Albatross bycatch.

Though techniques to minimize the incidental bycatch of Black-footed Albatross are readily available, international and national laws have been unable to ensure they are used on all U.S. and international commercial fishing vessels. Listing the Black-footed Albatross will assist the USFWS in enforcing the pragmatic solutions that will support the fishing industry while encouraging the Black-footed Albatross to make the turn away from extinction.

NATURAL HISTORY AND STATUS

Taxonomy

Albatross taxonomy is currently in flux. At least eighty-two different taxa of albatross have been recognized in formal literature since the times of Linnaeus. (Tickell 2000). Recent use of mitochondrial DNA sequencing as a taxonomic tool has enabled a reassessment of the relationship between traditional albatross taxonomy and their evolution (Nunn *et al.* 1996). Over the last decade, major revisions of albatross systematics elevated the total number of generally accepted species from the previous fourteen within two genera, to between twenty-one and twenty-four across four genera. (Nunn *et al.* 1996; Robertson and Nunn 1997; Brooke 2004). While the Black-footed Albatross has only recently been assigned to the genus *Phoebastria*, the validity of the species has long been recognized in all taxonomies. *Id.* The Black-footed Albatross is one of three albatross species (*Diomedidae*), along with the Short-tailed Albatross (*Phoebastria albatrus*) and Laysan Albatross (*Phoebastria immutabilis*) endemic to the North

Pacific Ocean. (Brooke 2004). A fourth species in the genus, the Waved Albatross (*Phoebastria irrorata*) breeds in the Galapagos Islands. *Id.*

Recent genetic work, however, has indicated that the Hawaiian and Japanese breeding populations of the currently recognized Black-footed Albatross (*Phoebastria nigripes*) may in fact constitute two separate species, *Phoebastria nigripes* and *Phoebastria nihonus*. (Walsh and Edwards 2004). These two populations, while overlapping in foraging range, demonstrate genetic and geographical isolation on their respective nesting groups in Hawai`i and Japan. *Id.* Because Black-footed Albatross are extremely loyal to their natal nesting grounds, there is a low level of breeding interaction and a high level of genetic isolation between groups from Hawai`i and Japan. *Id.* As a result, the genetic differences between the Black-footed Albatross that breed in the Northwest Hawaiian Islands and those that breed on small islands off the coast of Japan are so significant that Walsh and Edwards (2004) state “Hawaiian and Japanese Black-footed Albatross essentially fulfill the criteria for separate phylogenetic species, and we believe that full species designations should be accorded to these groups.” The Japanese Black-footed Albatross is also reported to be slightly smaller than its Hawaiian counterpart. (NMFS 2004). Regardless of whether the current *Phoebastria nigripes* is ultimately recognized as two distinct species, these separate populations clearly qualify as Distinct Population Segments (“DPSs”) under the ESA as they are both “discrete” and “significant.” As the ESA allows the protection of species, subspecies and Distinct Population Segments, under any taxonomy, both the Hawaiian and Japanese Black-footed Albatross populations are entitled to and warrant full protection under the ESA.

Species Account

Description

The Black-footed Albatross has dark brown plumage with white feathers encircling the base of its brown bill, underling its dark eyes, and defining the base of its mid-sized tail. (Cousins and Cooper 1999). Its legs and feet are black throughout all stages of its life. *Id.* The juvenile Black-footed Albatross is most easily distinguished from the adult by the lack of white plumage on its tail. *Id.* Differences between male and female members of the species are, however, too slight to be distinguishable. *Id.* Individuals weighs between 2 and 4 kilograms and ranges in length from 64 to 74 centimeters with a wing span between 193 and 216 centimeters, and a bill length between 9 and 11 centimeters. *Id.* There is a slight possibility of confusion with all-dark juvenile Short-tailed Albatross which always have pink, not dark, bill and pale legs. (Brooke 2004). The Black-footed Albatross is also closely related to the Laysan Albatross (*Phoebastria immutabilis*), which has a considerably larger world population, but is noticeably smaller and lighter than the Black-footed Albatross. *Id.* The Japanese Black-footed Albatross is also reported to be slightly smaller than its Hawaiian counterpart. (NMFS 2004).

Distribution & Habitat

Breeding Locations

The bulk of the world's Black-footed Albatross today nest in the Northwestern Hawaiian Islands. (Brooke 2004). NMFS (2004) estimates that 55,775 breeding pairs nest in the NWHI in 9 colonies. The two largest of these colonies are found on Laysan Island (37%) and Midway Atoll (34%). (Lewison and Crowder 2003). While sporadic observations of the Black-footed Albatross were conducted on Midway Atoll in the 1940's, consistent monitoring of the breeding colony did not begin until 1954. *Id.* The species is a winter breeder that breeds in the North Pacific, rarely north of 35°N. *Id.* Black-footed Albatross are also known to breed in the high Hawaiian Islands, with 110 pairs on Necker, 30 pairs on Nihua, and five pairs on Kaula. *Id.*

In Japan, about 3000 or fewer breeding pairs of the Black-footed Albatross are known from the Senkaku Islands (Kita-Kojima), Bonin Island (Chichijima), and Izu Island (Torishima). (NMFS 2004).

Foraging Ranges

Hawaiian breeders generally forage to the northeast, towards coastal waters of North America. (Brooke 2004). Generally speaking, breeding Black-footed Albatross consistently forage south of, and in warmer waters than, Laysan Albatrosses. *Id.* In the summer, the Black-footed Albatross occurs further north, mostly north of 30°N, and some enter the Bering Sea. *Id.* They then occur across the full width of the North Pacific from the Sea of Okhotsk, via waters off northern Japan and the Aleutians, to seas south of the Alaska panhandle. *Id.* The Japanese breeders overlap in foraging range with the Hawaiian breeders, occurring in the North Pacific north of Hawaii and along the Aleutians. *Id.*

Life History

Diet and Feeding Behavior

Black-footed Albatross feed by surface-seizing, contact-dipping, and scavenging, probably mostly within 1m of the ocean surface. (Brooke 2004). Scavenging is the activity that often brings the birds into contact with vessels, and Black-footed Albatross most likely obtain more of their food by this method than the more slightly built Laysan Albatross. *Id.* Harrison *et al.* (1983) studied food brought to chicks on Midway Atoll and found by volume it was 49% fish, 32% squid, 5% crustaceans, and 14% other prey.

Breeding Behavior

For breeding, the Black-footed Albatross occupies more or less open areas covered by grass and herbs. (Brooke 2004). The birds shun the dense scrub that grows on many low coralline islands where the species breeds. *Id.* It nests on a grass pad but, in the absence of vegetation, constructs little more than a scrape. *Id.* Maximum nest density is 0.25/m² and egg-laying occurs between about November 12 and December 1. *Id.* Hatching occurs mid-January to mid-February. *Id.* Chicks are brooded for a mean of 19 days and guarded another 10. *Id.* During chick-feeding, the parents mix short trips with longer trips to the North American continental shelf. *Id.* Breeding success has been estimated by several studies, with an overall mean of 49.9%. *Id.* Of 100 eggs laid, 6.9 on average produce recruits to the breeding population. *Id.*

Conservation Status

Historic & Current Abundance and Trends

During the early and mid 20th century, the Black-footed Albatross partially recovered from over-harvesting by feather hunters. (Brooke 2004). Despite the lack of historical population data, scientists agree that the history of overexploitation for the egg and feather trade is evidence that the Black-footed Albatross was much more widely distributed throughout the Pacific during the 19th Century. (Lewison and Crowder 2003). Evidence of former Black-footed Albatross breeding colonies has also been discovered on Johnston Atoll, Wake Island, Taongi Atoll, Marcus Island, Iwo Jima Group, and the Northern Marianas. *Id.* Unfortunately, all of these colonies were extirpated within the last 150 years. *Id.* The extirpation of the Black-footed Albatross from these historic breeding localities demonstrates that the species has already declined in a significant portion of its range. Moreover, its pre-exploitation abundance was likely similarly much larger than at present.

Recent global and breeding population estimates for the Black-footed Albatross vary somewhat between sources. Brooke (2004) estimates approximately 64,500 breeding pairs, with a total world population of about 275,000 birds. NMFS (2004) estimates 58,898 breeding pairs and 327,753 individuals. BirdLife International and IUCN estimate 54,500 breeding pairs and 278,000 total birds. (IUCN Red List 2003).¹

Regardless of the exact size of the current Black-footed Albatross population, the evidence is clear that the species has experienced and continues to experience substantial declines in abundance. Again, depending on the years compared and areas surveyed, the estimates of rates of decline vary somewhat. The BirdLife International and IUCN uplisting to Endangered was based on a measured and calculated 19% drop from 1995 to 2000 and consequent projections that the species will experience at least a 60% decrease of its global population over the next 60 years. (IUCN Red List 2003). Similarly, NMFS (2004) concludes that “[a]nalysis of the breeding pair counts for Midway Atoll, Laysan Island, and French Frigate Shoals between 1992 and 2003, suggest that the black-footed albatross population is annually declining by about 1%.” Additionally, according to a January 8, 2004 USFWS-Hawaii Press Release: “Black-footed Albatrosses currently breed at 12 sites and are estimated to have a world population of about 57,000 breeding pairs. Since 1998, at least 75 percent of the world's breeding population is counted less frequently, but all sites except one have been surveyed at least once since 1991. At Midway, Laysan Island, and French Frigate Shoals, the three sites where the Service conducts annual complete counts of nesting pairs, a 9.8 percent decline in the breeding population was recorded between 1996 and 2001.”

While there are in fact documented declines of the Black-footed Albatross, population modeling suggests more dramatic declines are likely. Lewison and Crowder (2003) found declines likely based on known and projected levels of fisheries related mortality, and that under a best-case

¹ IUCN data available at www.birdlife.net/action/science/species/sowb/pdfs.htm or www.iucnredlist.org/search.details.php?species=40283.

scenario, the status quo will reduce the black-footed albatross population by at least half over the next three albatross generations. A moderate scenario predicts a seventy-five percent reduction, and a worst-case scenario predicts a reduction to less than ten percent of the current population:

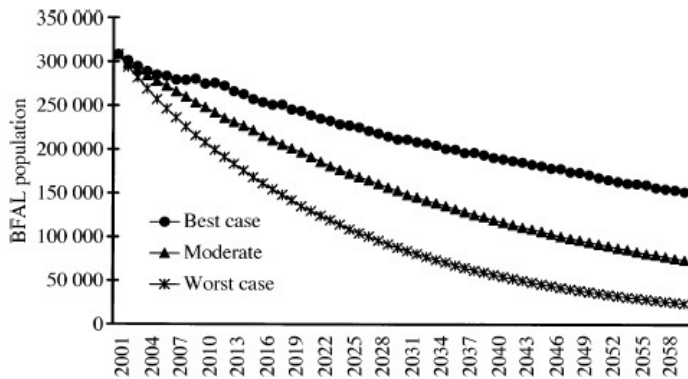


FIG. 6. Population trajectories for Black-footed Albatross (BFAL) over the next 60 years in response the three levels of estimated mortality from pelagic longlining in the North Pacific.

The Japanese Black-footed Albatross is particularly vulnerable. Scientists estimate the Japanese Black-footed Albatross have less than 3000 breeding pairs, which “underscore the particular vulnerability of the Japanese population to extinction. . . . Small populations are particularly vulnerable to rapid loss of genetic variation due to genetic drift, and the low genetic variability of the Japanese population may cause it consequently to suffer from inbreeding depression.” (Walsh and Edwards 2004). “The Japanese species in particular may be most vulnerable to extinction given its depressed level of genetic diversity for its observed population size.” (Walsh and Edwards 2004). While, the Japanese population is likely most vulnerable, the global survival of the Black-footed Albatross is compromised by the current high mortality and consequent population declines the species faces from longline fishing.

The Impact of Longline Fishing

Commercial pelagic longline fishing is an industrial fishing method whereby each vessel, typically seeking tuna or swordfish, reels out up to 60 miles of monofilament line bearing up to several thousand baited hooks on shorter branch lines. The line (or “set”) is suspended in the water by floats. Tuna longlines are fished up to 1,200 feet beneath the surface, while swordfish lines are “shallow set” in the upper 2-300 feet of the water column. In both cases, the hooks soak for hours before being hauled in. In addition to the target fish, they routinely hook a large number and variety of non-target fish, marine mammals, turtles, birds, and sharks (collectively known as “bycatch”). (NMFS 2001). The Hawai`i-based longline fleet currently has about 110 active vessels, up to 101 feet in length. In 2003, the Hawai`i-based tuna longline fishery alone set about 30 million hooks, and the number continues to climb. *Id.*

Longline fishing kills many thousands of migratory seabirds each year by turning otherwise natural foraging habits into acts of unwitting suicide. Some 26 species of seabirds, including most of the world’s 21 species of albatross, are threatened with extinction due primarily to longlining. (IUCN 2003).

Most of the birds caught on hooks fished by the Hawai`i-based longline fishery are Black-footed and Laysan Albatross. The Short-tailed Albatross, numbering only about 1,700 globally and listed as endangered under the Endangered Species Act, is also known to be present in areas where the fishery operates, although, due to the species' rarity, capture of a Short-tailed Albatross on a Hawai`i longline has not been confirmed.

Although 96 percent of all Black-footed albatross breed in the Northwestern Hawaiian Islands, they travel the expanse of the North Pacific Ocean—from 20 to 50° North latitude—in search of food. They scavenge by diving on or scooping up prey along the surface of the open ocean. Black-footed Albatross feed primarily on flying fish eggs, which float on the ocean surface, but they are also known to eat squid, fish, offal, and human refuse. (Brooke 2004).

Black-footed albatross often follow longline fishing boats. Relying on their normally successful foraging techniques, the albatross dive on baited hooks that float on the ocean's surface and either swallow the baited hook or are caught by their wings or necks, and are then pulled under to drown. (NMFS 2004). Study data suggests that younger birds are more vulnerable to being caught on longline gear. (Cousins 2001). This finding was similar to reports from longline fisheries operating in the Southern Hemisphere, where about four times as many juveniles as adult albatrosses were taken. *Id.*

Hawai`i-based longlines targeting swordfish are particularly deadly. According to NMFS observers, when longline vessels target tuna, an average of 0.013 seabirds are caught per longline set; when targeting swordfish, the rate is 58 times greater (0.758 birds per set). (NMFS 2001). This is primarily due, first, to the overlap between the swordfish fishing grounds and the foraging range of the seabirds; the birds breed in the NWHI, and when seeking food to feed their chicks, forage to the north and northeast of the Hawaiian archipelago, where swordfish is targeted. *Id.* Second, the baited hooks on the shallow-set swordfish longlines sink more slowly, giving the birds following the vessels more opportunity to dive on the baited hooks. Third, swordfish vessels tend to set their hooks at dusk, when the birds' foraging activity is high. *Id.*

The Hawai`i-based longline fishery began as early as 1917. (Cousins 2001). The fishery has fluctuated over the decades, peaking in the mid-1950s with landings exceeding 2,000 tons. *Id.* With the establishment of the 200-nautical mile U.S. Exclusive Economic Zone (EEZ) in 1976, foreign fleets were removed, allowing further development of the domestic Hawaiian fisheries. *Id.* The Hawai`i longline fishery grew from 37 vessels in 1987, to 80 in 1989, and then increased again to 144 vessels in 1991. *Id.* The new entrants in the longline fishery were mostly steel-hulled vessels up to 33 meters in length. *Id.* The operators of these vessels were mainly former participants in the U.S. East Coast tuna and swordfish fisheries. *Id.* Because of increased navigation technologies, the range of the longline fishery expanded, with some vessels fishing up to 1,000 nautical miles from the Main Hawaiian Islands. *Id.* The expansion of the fishery between 1987 and 1991 was followed by a moratorium on permit issuance in 1991 and a prohibition on fishing within 50 nautical miles of the Northwestern Hawaiian Islands to prevent interactions between the fishery and endangered populations of monk seals (*Monachus schauinslandi*). *Id.* At present, vessels in the Hawai`i-based longline fishery are categorized in three size classes: small (< 56 ft), medium (56-74 ft), and large (> 74 ft) vessels. *Id.*

Prior to the 2001-2004 closure, NMFS estimated that the Hawai`i-based swordfish fishery typically resulted in the mortality of about 3,200 Black-footed and Laysan Albatross each year. (NMFS 2001). This is a very conservative estimate. First, at the upper limit of the 95 percent confidence range, the annual average is more than 4,000 birds per year. *Id.* Second, NMFS has acknowledged that the actual numbers may have been much higher, since these estimates are based on the numbers of birds actually counted by observers as the longlines were hauled on to the vessels, and did not include those birds that had dropped off the hooks or were pulled off by predators. NMFS estimated the possible undercount at 30 to 95 percent. (NMFS 2001). Thus, using NMFS's own figures, the actual number of mortalities may have been as high as 8,000 birds annually. Moreover, these estimates were based on observer reports during a period in which less than 5 percent of the vessels carried observers. *Id.*

After imposing the ban on swordfish longlining, NMFS estimated that about 116 albatross were caught in the Hawai`i-based fishery in 2002 -- a reduction of over 95 percent. Now, that ban has been lifted and mortality rates similar to those prior to the closure can be expected to return.

Prior to the closure of the swordfish fishery, Hawai`i-based vessels accounted for 15 to 38 percent of all Black-footed Albatross mortality in North Pacific fisheries. (Lewison and Crowder 2003). Black-footed Albatross are also regularly taken in Gulf of Alaska, Bering Sea, and Aleutian Islands demersal longline fisheries as well as in Alaska trawl fisheries. (NMFS 2003). From 1993 through 2002, 143,000 seabirds were killed in the Alaskan demersal longline fishery, including 6,020 Laysan Albatross, 1,935 Black-footed Albatross, and 12 ESA-listed Short-tailed Albatross. *Id.* Foreign pelagic and demersal longline fisheries account for a significant, though poorly studied portion of the global annual mortality of Black-footed Albatross. (Lewison and Crowder 2003). With the aid of satellite telemetry, scientists documented the considerable overlap between regulated longline fishing operations and Black-footed Albatross habitat in the Pacific. (Hyrenbach and Dotson 2003). Longline fisheries targeting tuna, swordfish and other marine animals traverse the majority of the natural foraging habitat of the Black-footed Albatross. It is impossible, however, to accurately estimate the amount of seabirds killed by unregulated or pirate fishing vessels. *Id.* It is reasonable, nonetheless, to speculate that the average take of seabirds by these vessels is considerably higher as it is unlikely that pirate fishing vessels use any mitigation measures to prevent incidental seabird takes.

In sum, worldwide, fishing vessels inadvertently drown at least 1% and likely as much as 5% of the global Black-footed Albatross population every year. (Hyrenbach and Dotson 2003; Lewison and Crowder 2003). With 570 million hooks deployed each year in the North Pacific alone, the longline fishing industry kills as many as 14,000 Black-footed Albatross every year. (Cooper 2000; Lewison and Crowder 2003; IUCN Red List). Such mortality is simply not sustainable.

Incidental mortality caused by longline fishing is the single greatest threat to Black-footed Albatross. (IUCN Red List). Historically, the principal human activity threatening the Black-footed and other albatross was poaching for the egg and feather trade. (Cousins and Cooper 1999; Lewison and Crowder 2003). More recently, driftnet fishing killed approximately 4,000 Black-footed Albatross a year before the fishing technique was banned in 1992. (Lewison and

Crowder 2003). Scientists estimate that “Black-footed Albatross mortality from pelagic longlines may be two to three times higher than the mortality incurred by the high seas driftnet fishery.” *Id.*

As Lewison and Crowder (2003) and Cousins and Cooper (1999) clearly demonstrate, the impact of longline fishing related mortality on the Black-footed Albatross is having population level effects. The death of one Black-footed Albatross has an exponential impact on the breeding success of the species. Black-footed Albatross mate for life, returning to the same nest site each year to reunite with their mates. (Cousins and Cooper 1999; Walsh and Edwards 2004). If one mate fails to return to the nest, then the remaining mate will likely miss three breeding cycles before it will mate with a new life-partner. (Cousins and Cooper 1999). Although the Black-footed Albatross will breed multiple times during its life, each pair will only attempt to rear one chick per breeding season. *Id.*

Black-footed Albatross chicks have a very low survival rate. (Cousins and Cooper 1999). After incubating an egg for approximately 65 days, both parents dedicate their time to protecting their chick from the elements. From December to February, the parents are usually found in the vicinity of their breeding colony because chick-rearing forces them to limit their foraging to relatively nearby waters. *Id.* After the initial rearing stage, however, parents make increasingly longer foraging trips, at first returning every 2 to 4 days, but quickly increasing their trips to 28 days. *Id.* Because the parents do not fully coordinate their foraging, the chicks are sometimes left alone for long periods of time. *Id.* Black-footed Albatross chick mortality is primarily due to other adult albatross, as well as tiger sharks, exposure to the elements, starvation, and dehydration. *Id.* High chick mortality can also occur due to poor nesting habitat. In the 1970’s, scientists discovered that the great majority of Black-footed Albatross instinctually return to the exact same nest, despite significant human alterations to their habitat. *Id.* On Midway Atoll, Black-footed Albatross ignored the usually preferable shoreline breeding grounds, which large scale dredging had created anew after the construction of a Navy harbor, and instead chose to nest in their original sites now located in considerably less beneficial conditions farther inland. *Id.* “K-selected” species are known to invest more effort in meeting their own needs than that of their offspring. *Id.* Scientists find this to be especially true of Black-footed Albatross because they spend considerably more time on the open sea than with the breeding colony. *Id.* Studies show that only about 27% of Black-footed Albatross chicks survive to reproduce. *Id.*

Because the Black-footed Albatross species has a slow reproduction rate, the impact of an incidental loss of individual seabirds ripples disruption throughout the population. Scientists have concluded that “like other long-lived species with low reproductive output, albatrosses are most vulnerable to perturbations that cause declines in adult survival. As a result, small changes in adult survival can lead to large changes in population dynamics, regardless of the initial size of the population.” (Lewison and Crowder 2003). “History tells us that even formerly abundant species can go extinct if the causes of their declines are not addressed promptly.” (IUCN Red List).

Additionally, due to slight differences in foraging strategy, it appears that female Black-footed Albatross are disproportionately killed by longlines. (Walsh and Edwards 2004). This only exacerbates the problem: “Significant female-biased mortality for Black-footed Albatross

bycatch suggests that. . . [b]ecause of extreme social monogamy in this species, the effect of differential mortality between the sexes is to exacerbate the impact of fisheries-induced mortality. . . .” *Id.*

To calculate the population size and trends of the Black-footed Albatross, scientists periodically capture and mark adult and juvenile birds (Cousins and Cooper 1999). Based on the recapture rates of these marked birds, scientists can determine the survival rates for the overall species. Unfortunately, in the case of the Black-footed Albatross, this data is delayed by the seabird’s postponed sexual maturity. (Cousins and Cooper 1999; Walsh and Edwards 2004).

“Vulnerability of the Black-footed Albatross to population declines is compounded by the delayed reproductive maturity that is characteristic of all albatross species. [T]he impact of current fisheries-induced mortality will not be detected at breeding colonies for up to eight years (when the now-youngest cohort of juvenile birds recruits into the breeding population).” (Walsh and Edwards 2004). Scientists must wait five to eight years before marked juveniles are mature enough to return to their breeding colonies and begin mating. (Cousins and Cooper 1999). Once the population is fully sampled, scientists can then extrapolate the global population size given factors such as survival rates, habitat size and availability. *Id.*

Human activity that reduces Black-footed Albatross survival must be closely monitored because it could easily push this unique seabird to extinction before scientists can fully document its decline. *Id.* While declines in Black-footed Albatross populations have been documented in many parts of their range, “waiting for... an unequivocal signal of a decline in the overall population would present a formidable challenge to the conservation efforts of the Black-footed Albatross Here we suggest a proactive approach using existing information to . . . project likely impacts of this mortality [rate] at the population level before catastrophic declines occur.” (Lewison and Crowder).

IUCN LISTING

The IUCN’s Red List is a key tool scientists rely on to guard against unanticipated declines of threatened species. With current criteria devised by the IUCN in 1994, the Red List is an “objective framework for the classification of the broadest range of species according to their extinction risk.” (IUCN Red List Criteria at § 1). Where a species is listed on the IUCN Red List depends on the severity of its situation relative to several factors, including: 1) the rate of population decline of the species over three generations, 2) fragmentation or fluctuations in the geographic range of the species, and 3) probability of extinction based on the quantitative analysis of the species over a 10-20 year period. (IUCN Red List Criteria at § 5). The IUCN originally listed the Black-footed Albatross in 2000 as “Vulnerable” because its population was expected to decline by 20% over the next three generations, which is approximately 60 years. (IUCN Red List). However, in 2003 scientists uplisted the Black-footed Albatross to “Endangered” based on a rapid population decline that could mean at least 60% of the species will be lost over the next three generations. *Id.* This dramatic decline in the projected population of the Black-footed Albatross requires immediate action. While the IUCN Listing affords no actual regulatory protection to the Black-footed Albatross, such listing is an unequivocal statement from scientists that the species warrants protection at the national and international level. As such, prompt protection of the species under the ESA must be instituted.

THE BLACK-FOOTED ALBATROSS WARRANTS LISTING UNDER THE ESA

Under the ESA, 16 U.S.C. § 1533(a)(1), USFWS is required to list a species for protection if it is in danger of extinction or threatened by possible extinction in all or a significant portion of its range. In making such a determination, USFWS must analyze the species' status in light of five statutory listing factors. 16 U.S.C. § 1533(a)(1)(A)-(E); 50 C.F.R. § 424.11(c)(1) - (5). As described below, each of these factors necessitates the listing of the Black-footed Albatross under the ESA.

A. PRESENT OR THREATENED DESTRUCTION, MODIFICATION, OR CURTAILMENT OF HABITAT OR RANGE

The Black-footed Albatross has experienced a severe reduction in its historic breeding range. As described above, the species formerly nested on Johnston Atoll, Wake Island, Taongi Atoll, Marcus Island, Iwo Jima Group, and the Northern Marianas. (Lewison and Crowder 2003). The species has been eliminated as a breeder in each of these locations, most likely from feather and egg collecting. *Id.* As such, it has experience a significant curtailment of its historic range. This factor alone is sufficient to warrant listing under the ESA. Moreover, as described in detail below, various other factors have modified its breeding and foraging habitat to such a degree that the continued survival of the species is in question.

B. INADEQUACY OF EXISTING REGULATORY MECHANISMS

Existing regulatory mechanisms have been ineffective at preventing the decline of the Black-footed Albatross or addressing any of the threats to the species. In particular, no mechanism has effectively eliminated or sufficiently reduced mortality from longline fishing. The very fact that the species has declined, and is projected to continue to decline, is itself the best evidence of the inadequacy of such mechanisms. Several of these regulatory schemes are discussed further below.

Federal Law

The federal government has long recognized the importance of protecting seabirds. In 1909, the U.S. established the Hawaiian Island Bird Reservation to preserve the natural breeding habitat of seabirds in the Pacific. (Cousins and Cooper 1999). This reservation included all of the Northwest Hawaiian Islands, with the exception of Midway Atoll as it was under the control of the U.S. Navy at the time. *Id.* The reservation eventually evolved into the Hawaiian Islands National Wildlife Refuge under the control of the USFWS. *Id.* The federal government's effort to preserve the Black-footed Albatross's breeding habitat, however, did little to temper the unnecessary slaughter of tens of thousands of birds on the open ocean.

Longline fishing's growing burden on the ocean ecosystem forced NMFS to heavily regulate the industry. In 1999, NMFS imposed a moratorium on all commercial swordfishing based out of Hawai'i. Fisheries Off West Coast United States and in the Western Pacific; Western Pacific Pelagic Fisheries; Hawai'i-based Pelagic Longline Area Closure; Emergency Interim Rule, 65 Fed.Reg. 51992 (August 25, 2000). Although the closure was intended to prevent the bycatch of endangered sea turtles, it was the single most successful deterrent to Black-footed Albatross bycatch. (Kinan 2002). During the moratorium, the incidental killing of Black-footed Albatross from the Hawai'i-based fishery dropped to about 200 per year. The moratorium on swordfish fisheries, however, was lifted in April 2004. Fisheries Off West Coast States and in the Western Pacific; Western Pacific Pelagic Fisheries; Pelagic Longline Fishing Restrictions, Seasonal Area Closure, Limit on Swordfish Fishing Effort, Gear Restrictions, and Other Sea Turtle Take Mitigation Measures, 69 Fed. Reg. 17,329 (April 2, 2004). As a result, the bycatch of Black-footed Albatross is expected to surge once again.

Mitigation of seabird bycatch is addressed in 50 C.F.R. § 660.712(c). Currently, longline fisheries are required to minimize the incidental take of all seabirds by employing the following measures: line setting machines for deep water sets, 45-gram weights to encourage lines to sink, thawed and blue-dyed bait to reduce seabird attraction, strategically discharged offal, night setting for shallow sets, and rescue procedures for those seabirds brought on-board alive.

Experts, however, question the effectiveness of NMFS' mitigation measures in avoiding the incidental take of seabirds. "Fishery operations were not designed to experimentally test deterrents. Deterrents were not utilized independently of other measures, there were no 'control' sets, nor were they tested independently of changing fishery management strategies." (Kinan 2002). In other words, the effectiveness of deterrent measures required by NMFS cannot be quantified because they were employed in conjunction with other deterrent measures, as well as along with significant policy changes like the moratorium on swordfish operations. *Id.* Additionally, research has established that current mitigation measures are often not very effective. For example, blue dye does not adhere to the mackerel bait now being required in the Hawai'i-based swordfish fishery, crews often do not even try to use the dye regardless of the type of bait, and its use is difficult to verify and enforce. (Gilman 2003).

Faced with the return of swordfish fishing, NMFS adopted new bycatch avoidance plans. Of principal concern are the recent changes to 50 C.F.R. § 223 and 50 C.F.R. § 660, relating to the impact of swordfish operations on sea turtles in the Pacific Ocean. 50 C.F.R. § 223 prohibits all shallow longline sets by West Coast-based longliners on the high seas east of 150 degrees West longitude. Taking of Threatened or Endangered Species Incidental to Commercial Fishing Operations, 69 Fed. Reg. 11,540 (Mar. 11, 2004). Further regulations prohibit shallow longline sets by West Coast-based longliners on the high seas West of 150 degrees West longitude. However, these regulations do not apply to Hawai'i-based longliners. Additionally, current regulations do not require any seabird mitigation south of 23° North latitude, although a substantial amount of longlining (principally for tuna) occurs there.

In January 2004, NMFS imposed additional mitigation requirements to reduce the incidental take of seabirds by the longlining industry, specifically in Alaska. Fisheries of the Exclusive Economic Zone off Alaska; Halibut Fisheries in U.S. Convention Waters Off Alaska

Management Measures to Reduce Seabird Incidental Take in the Hook-and-Line Halibut and Groundfish Fisheries, 69 Fed. Reg. 1930 (Jan. 13, 2004). This rule requires that longline fishing vessels operating in the Gulf of Alaska and the Bering Sea use deterrent techniques to minimize the incidental catch of seabirds. These techniques include the following: sink-baited hooks, strategic offal discharge, buoy bags, and single or paired streamers. 69 Fed. Reg. 1930 at 1948. The rule further stipulates varying minimum combinations of these techniques based on the size of the vessel and the weather conditions of the voyage. *Id.* In addition, every fishery operator must develop a vessel-specific seabird avoidance plan that includes the procedures for the safe release of live seabirds. *Id.* In a four-year study taken prior to these new regulations, a yearly average of only 31 Black-footed Albatross birds were killed in the Bering Sea and 611 in Gulf of Alaska. (Hyrenbach and Dotson 2003). Moreover, like all previous mitigation efforts, the effectiveness of these new requirements cannot be accurately quantified. Nor can they be effectively monitored for compliance as not all vessels carry observers.

The Migratory Bird Treaty Act of 1918 also fails to protect the Black-footed Albatross from the longline fishing industry. Although the MBTA expressly prohibits the unpermitted taking of migratory birds, USFWS does not enforce this law against the industry. Section 2 of the MBTA provides that "it shall be unlawful at any time, by any means or in any manner," to, among many other prohibited actions, "pursue, hunt, take, capture, [or] kill" any migratory bird included in the terms of the treaties. 16 U.S.C. § 703. The term "take" is defined as to "pursue, hunt, shoot, wound, kill, trap, capture, or collect." 50 C.F.R. § 10.12 (1997). Despite this expansive language, USFWS has failed to regulate the incidental takes of Black-footed Albatross by the longline fishing industry or to prosecute those engaged in longline fishing practices for the death of these and other migratory seabirds. The current regulatory system has failed to protect the Black-footed Albatross. Listing this species under the ESA is necessary to reduce the threats human activities pose to the continued existence of the Black-footed Albatross.

International Law

Non-U.S. flagged longline vessels in the North Pacific also pose a substantial threat to the Black-footed Albatross. No international instrument adequately protects the species. In a review of 24 international and multilateral agency agreements, Cooper (2000) found only seven that might possibly address the issue of incidental seabird mortality due to longline fishing. Most of these agreements however are non-binding or not yet in force. *Id.* Even the most promising of these, the *Agreement on the Conservation of Albatrosses and Petrels* (ACAP) is unlikely to protect the Black-footed Albatross in the foreseeable future. This treaty went into force in January 2004. At present, only South Africa, Australia, New Zealand, Ecuador and Spain have ratified the treaty. Another six countries, Argentina, Brazil, Chile, France, Peru, and the United Kingdom have signed ACAP, and it is hoped that they will become party to the Agreement soon. Unfortunately, none of the countries that fish with longline gear in the North Pacific in the range of the Black-footed Albatross such as the U.S., Japan, China, Taiwan, Russia, or Mexico have signed or ratified the Agreement. In sum, no binding international regulatory regime currently exists or is in operation that actually provides any protection to the Black-footed Albatross.

C. OVERUTILIZATION FOR COMMERCIAL, RECREATIONAL, SCIENTIFIC, OR EDUCATIONAL PURPOSES

As described under Historic and Current Abundance above, direct harvest of Black-footed Albatross albatrosses caused a severe decline in population numbers and led to the extirpation of the species from Johnston Atoll, Wake Island, Taongi Atoll, Marcus Island, Iwo Jima Group, and the Northern Marianas. (Lewison and Crowder 2003). Today, however, direct harvest of Black-footed Albatross is likely quite rare.

D. DISEASE OR PREDATION

Disease and predation have likely always affected the Black-footed Albatross. However, now that the species is declining due to longline fishing, naturally occurring diseases and predators, as well as introduced predators and human-spread diseases pose an ever greater threat to the species. As a good portion of their ranges overlap, much of the disease and predation factors affecting the Black-footed Albatross are the same as those described by USFWS in the final listing rule for the Short-tailed Albatross. That final listing rule explains that "[a]n avian pox has been observed in chicks of albatross species on Midway Atoll . . . (T. Work, D.V.M., USGS, Hawai'i)." FINAL RULE TO LIST THE SHORT-TAILED ALBATROSS AS ENDANGERED IN THE UNITED STATES, 65 Fed. Reg. 46643, 46649 (July, 31, 2000).

For predation, the rule explains:

Sharks (subclass elasmobranchii) may take fledgling short-tailed albatrosses as they desert the colony and take to the surrounding waters (Harrison 1979). Shark predation is well documented among other albatross species, but has not been documented for the short-tailed albatross. The crow, *Corvus* sp., is the only historically known avian predator of chicks on Torishima. Hattori (in Austin 1949) reported that one-third of the chicks on Torishima were killed by crows, but crows are not present on the island today (H. Hasegawa pers. comm. 1997). Black or ship rats were introduced to Torishima at some point during human occupation, but their effect on short-tailed albatrosses is unknown. Cats were also present, most likely introduced during the feather hunting period. They have caused damage to other seabirds on the island (Ono 1955), but there is no evidence to indicate an adverse effect to short-tailed albatrosses. Cats were present on Torishima in 1973 (Tickell 1975), but Hasegawa (1982) did not subsequently find any evidence of cats on the island.

65 Fed. Reg. 46643, 46649 (2000).

A recently published study on Southern Ocean albatross concludes that introduced diseases such as avian cholera, spread by increased human visitation, and made more virulent by warmer temperatures from global warming are having substantial negative effects on albatross populations and could result in further declines in the future. (Weimerskirch 2004). Similar threats, such as West Nile Virus, will likely impact the Black-footed Albatross as well.

E. OTHER NATURAL AND ANTHROPOGENIC FACTORS

In addition to the chronic threat of longline fishing, the Black-footed Albatross is also threatened by numerous factors such as habitat modification in key nesting locations, like Midway Atoll, and toxic contamination from plastic ingestion. (Lewison and Crowder 2003; IUCN Red List; Cousins and Cooper 1999). Some of the more significant threats to the species are discussed here.

Marine Pollution

Plastics

Production of plastics in the U.S. increased from 3 million tons in 1960 to nearly 48 million tons in 1995, reflecting only a larger worldwide trend. (Tickell 2000). Floating plastic on all oceans has increased accordingly, including raw plastic, and the fragmented, weathered remains of manufactured items like bottles, disposable cigarette lighters, toothbrushes, and children's toys. The North Pacific Ocean is said to have the largest quantity, mostly discharged from Japan and the U.S. (Tickell 2000). Moore, *et al.*, (2001) found that in the North Pacific central gyre the mass of plastic was approximately six times that of plankton. Floating plastic is frequently mistaken for food by albatrosses while feeding on the surface of the ocean. This can lead to starvation if their digestive tracts become blocked with flotsam. (Auman *et al.* 1997). The possible effects of ingestion of plastics include starvation, suppressed appetite and reduced growth, lower fledging masses, increased deposition, increased PCB and other organochlorine assimilation, obstruction in the gut, as well as causing psychological stress, affecting survival during the nestling period and perhaps after fledging. (Sivert and Sileo 1993; Auman *et al.* 1997). Birds with heavy plastic loads reduced resistance to the effects of lead poisoning and the avian pox virus. (Auman *et al.* 1997). Plastics have been found in most, if not all, species of albatrosses. *Id.* In the North Pacific, Laysan and Black-footed Albatrosses contained large quantities, picking up pieces from Hawaiian waters and the Gulf of Alaska. *Id.* In 1987, a study done at Midway Atoll on 350 birds revealed 27% of Laysan Albatross chicks contained more than 22cm² of plastic. (Tickell 2000). In necropsies conducted on 251 Laysan Albatross chicks, Auman *et al.* (1997) found that more than 97% of the chicks contained plastic. The plastic items found within the chicks included chips and shards of unidentified plastic, Styrofoam, beads, fishing line, buttons, chequers, disposable cigarette lighters, toys, PVC pipe and other PVC fragments, golf tees, dish-washing gloves, magic markers and caylume light sticks. *Id.*

Contaminants

Chemical contaminants may also be transported through the ingestion of plastics by albatrosses. (Auman *et al.* 1997). The effects of contaminants and marine debris on albatross populations are largely unquantified. However, for at least the past several decades, it is likely that toxins causing egg-shell thinning and deleterious effects on embryos have been regularly consumed by the Black-footed Albatross. (Ludwig *et al.* 1997). Albatrosses in the North Pacific Ocean are at greater risks from organochlorines and DDT because of the extensive use of such compounds in south and south-east Asia. Contaminants and toxins are toxic equivalence factors of PCBs, PCDD and PCDF in the eggs of Black-footed and Laysan Albatrosses in the Pacific Ocean have

been found at levels where species show adverse reproductive effects. (Jones *et al.* 1994). About 10% of productivity decreases since the 1990s in Black-footed Albatross have been attributed to the effects of organochlorine contaminants. (Ludwig *et al.* 1997). Similar studies have shown substantial impacts on other albatross species. *Id.* Since the 1970s, there has been a 20% reduction in egg-shell thickness and an increased occurrence of chicks dead in the shell or immediately after hatching in Northern Royal Albatross breeding in the Chatham Island. (Robertson 1997). Similarly, Becker *et al.*, (2002) found elevated levels of mercury in the feathers of albatross species on South Georgia Island. Significantly, mercury levels in the feathers of Grey-headed Albatross more than doubled between 1989 and 1998. *Id.* Similar impacts are likely occurring to the Black-footed Albatross.

Lead-containing paint from decommissioned military buildings on Midway has been shown to serve as a significant source of lead poisoning in Laysan Albatross. (Finkelstein, *et al.* 2003). A 2003 study found that Laysan Albatross chicks are exposed to lead-based paint by picking at and ingesting deteriorating paint directly from buildings or by ingesting paint chips that have in or near their nests as the buildings weather. *Id.* The elevated blood levels that the study observed in albatross chicks were sufficiently high to indicate immunological and neurological toxic effects which could decrease both their fitness and survival. *Id.* While this study focused on the Laysan Albatross, the Black-footed Albatross also breeds on Midway and is likely similarly impacted to some degree.

Oil Contamination

Again, because a good portion of the Black-footed Albatross' range overlaps with the Short-tailed Albatross, the oil contamination discussion included in USFWS's final listing rule for the Short-tailed Albatross is applicable to the Black-footed Albatross as well. That final listing rule explains that:

Another potential threat to the species' conservation and recovery is damage or injury related to oil contamination, which could cause physiological problems from petroleum toxicity and by interfering with the bird's ability to thermoregulate. Oil spills can occur in many parts of the short-tailed albatrosses' marine range. Oil development has been considered in the past in the vicinity of the Senkaku Islands (Hasegawa 1981, *in litt.*). Future industrial development would introduce the risk of local marine contamination, or pollution due to blowouts, spills, and leaks related to oil extraction, transfer, and transportation. Historically short-tailed albatrosses rafted together in the waters around Torishima (Austin 1949), and small groups of individuals have occasionally been observed at sea (Service unpublished data). An oil spill in an area where a large number of individuals were rafting, such as near breeding colonies, could affect the population significantly. The species' habit of feeding at the surface of the sea makes them vulnerable to oil contamination. Dr. Hiroshi Hasegawa (pers. comm. 1997) has observed some birds on Torishima with oil spots on their plumage.

65 Fed. Reg. 46643, 46650 (2000).

Airplane Collisions

The final listing rule for the Short-tailed Albatross also points out the documented danger of airline collisions for seabirds in the region:

We have documented seabird collisions with airplanes on Midway Atoll National Wildlife Refuge since operation of the airfield was transferred from the Department of Defense to the Department of the Interior in July 1997.

65 Fed. Reg. 46643, 46651 (2000). Such impacts to the Black-footed Albatross are likely to occur during the limited flights currently visiting Midway and will be even more significant if regular commercial air service is resumed.

Climate Change

Despite the complexity involved with the science of global warming and the difficulties making predictions of climate change, there is a wealth of information suggesting that the rate of warming is occurring even faster than models have projected. Several authors have expressed concern about the potential threat posed to seabirds by climate change and the submergence of coastal areas, changes in marine productivity, and increases in ambient temperatures and storms. (summarized in Brooke 2004). Negative impacts to the Black-footed Albatross are likely from any such climate change scenario.

CONCLUSION

The Black-footed Albatross is at a critical juncture between forced extinction and future existence. Federal law requires the USFWS to list any species in danger of extinction in all or a significant portion of its range. 16 U.S.C. § 1533(a)(1). If the pelagic longline fishing industry continues to kill thousands of Black-footed Albatross every year, then this species is surely doomed. (Cooper 2000; Lewison and Crowder 2003; IUCN Red List). Delaying protection of this species until its population decline is more substantial will only undermine any future conservation efforts. (Lewison and Crowder 2003). If, however, federal regulatory forces can be mustered to protect this majestic seabird from destructive human activity, then it will have a renewed chance at survival. Listing this rare and fragile seabird species now will ensure bycatch mechanisms will be implemented to the fullest extent possible.

CRITICAL HABITAT

The ESA mandates that, when the USFWS lists a species as endangered or threatened, the agency generally must also concurrently designate critical habitat for that species. Section 4(a)(3)(A)(i) of the ESA states that, “to the maximum extent prudent and determinable,” the USFWS:

shall, concurrently with making a determination . . . that a species is an endangered species or threatened species, designate any habitat of such species which is then considered to be critical habitat

16 U.S.C. § 1533(a)(3)(A)(i); *see also id.* at § 1533(b)(6)(C). The ESA defines the term “critical habitat” to mean:

- i. the specific areas within the geographical area occupied by the species, at the time it is listed . . . , on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and
- ii. specific areas outside the geographical area occupied by the species at the time it is listed . . . , upon a determination by the Secretary that such areas are essential for the conservation of the species.

Id. at § 1532(5)(A).

Petitioners expect that USFWS will comply with this unambiguous mandate and designate critical habitat concurrent with the listing of the Black-footed Albatross. We believe that all current and historic nesting islands for the species under U.S. jurisdiction, as well as the state and federal waters and EEZ utilized by the species for foraging off Hawaii, Alaska and the U.S. West Coast meet the criteria for designation as critical habitat and must therefore be designated as such.

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