Billing Code 4333–15

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R4–ES–2018–0043; 4500030113]

RIN 1018–BD13

Endangered and Threatened Wildlife and Plants; Threatened Species Status for Black-capped Petrel with a Section 4(d) Rule

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose to list the black-capped petrel (*Pterodroma hasitata*), a pelagic seabird species that nests on the island of Hispaniola and forages off the coast of the eastern United States, as a threatened species under the Endangered Species Act of 1973, as amended (Act). If we finalize this rule as proposed, it would extend the Act's protections to this species. We are also proposing a rule issued under section 4(d) of the Act to provide for the conservation of this species. We have determined that designation of critical habitat for the black-capped petrel is not prudent at this time, but are seeking public comment on that determination.

DATES: We will accept comments received or postmarked on or before [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]. Comments submitted electronically using the Federal eRulemaking Portal (see **ADDRESSES**, below) must be received by 11:59 p.m. Eastern Time on the closing date. We must receive requests for public hearings, in writing, at the address shown in **FOR**

FURTHER INFORMATION CONTACT by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may submit comments by one of the following methods:

(1) *Electronically*: Go to the Federal eRulemaking Portal: *http://www.regulations.gov*. In the Search box, enter FWS–R4–ES–2018–0043, which is the docket number for this rulemaking. Then, click on the Search button. On the resulting page, in the Search panel on the left side of the screen, under the Document Type heading, click on the Proposed Rule box to locate this document. You may submit a comment by clicking on "Comment Now!"

(2) *By hard copy*: Submit by U.S. mail or hand-delivery to: Public Comments Processing, Attn: FWS–R4–ES–2018–0043; U.S. Fish and Wildlife Service, MS: BPHC, 5275 Leesburg Pike, Falls Church, VA 22041-3803.

We request that you send comments only by the methods described above. We will post all comments on *http://www.regulations.gov*. This generally means that we will post any personal information you provide us (see **Information Requested**, below, for more information).

FOR FURTHER INFORMATION CONTACT: Edwin Muñiz, Field Supervisor, U.S. Fish and Wildlife Service, Caribbean Ecological Services Field Office, P.O. Box 491, Road 301 Km 5.1, Boquerón, PR; telephone 787–851–7297. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Relay Service at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Information Requested

We intend that any final action resulting from this proposed rule will be based on the best scientific and commercial data available and be as accurate and as effective as possible. Therefore, we request comments or information from other concerned governmental agencies, Native American tribes, the scientific community, industry, or any other interested parties concerning this proposed rule. Because we will consider all comments and information we receive during the comment period, our final determination may differ from this proposal. We particularly seek comments concerning:

(1) The black-capped petrel's biology, range, and population trends, including:

(a) Biological or ecological requirements of the species, including habitat requirements for feeding, breeding, and sheltering that apply to both the foraging and nesting areas;

(b) Genetics and taxonomy;

(c) Historical and current range, including distribution patterns;

(d) Historical and current population levels, and current and projected trends; and

(e) Past and ongoing conservation measures for the species, its habitat, or both.

(2) Factors that may affect the continued existence of the species, which may include habitat modification or destruction, overutilization, disease, predation, the inadequacy of existing regulatory mechanisms, or other natural or manmade factors on both the nesting and foraging grounds and migratory routes, including:

(a) Impacts to prey species;

(b) Predicted changes in the Gulf Stream current due to climate change;

(c) Impacts from offshore and coastal lighting;

(d) Impacts from offshore oil and gas exploration, development, production, and operations; and

(e) Impacts from offshore wind energy operations.

(3) Biological, commercial trade, or other relevant data concerning any threats (or lack thereof) to this species and existing regulations that may be addressing those threats.

(4) Additional information concerning the historical and current status, range, distribution, and population size of this species, including confirmed locations of any additional populations of this species.

(5) Information on nesting sites on the islands of Cuba or Dominica, or other Caribbean islands.

(6) Information concerning activities that should be considered under a rule issued in accordance with section 4(d) of the Act (16 U.S.C. 1531 *et seq*.) as a prohibition or exemption within U.S. territory that would contribute to the conservation of the species.

(7) The reasons why we should or should not designate habitat as "critical habitat" under section 4 of the Act, including whether there are threats to the species from human activity, the degree of which can be expected to increase due to the designation, and whether a designation could increase threats to the species such that the designation of critical habitat may not be prudent. We specifically request information on foraging habitat for the petrel, the only habitat located within U.S. jurisdiction, and its relationship to the biological needs of the species, to help us determine whether such habitat meets the definition of critical habitat under the Act.

You may submit your comments and materials concerning this proposed rule by one of the methods listed in **ADDRESSES**. We request that you send comments only by the methods described in **ADDRESSES**.

Please include sufficient information with your submission (such as scientific journal articles or other publications) to allow us to verify any scientific or commercial information you include. All comments submitted electronically via *http://www.regulations.gov* will be presented on the website in their entirety as submitted. For comments submitted via hard copy, we will post your entire comment—including your personal identifying information—on *http://www.regulations.gov*. You may request at the top of your document that we withhold personal information, such as your street address, phone number, or e-mail address, from public review; however, we cannot guarantee that we will be able to do so.

Please note that submissions merely stating support for or opposition to the action under consideration without providing supporting information, although noted, will not be considered in making a determination, as section 4(b)(1)(A) of the Act directs that determinations as to whether any species is an endangered or a threatened species must be made "solely on the basis of the best scientific and commercial data available."

Comments and materials we receive, as well as supporting documentation we used in preparing this proposed rule, will be available for public inspection on *http://www.regulations.gov*, or by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, Caribbean Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Public Hearing

Section 4(b)(5) of the Act provides for a public hearing on this proposal, if requested. Requests must be received within 45 days after the date of publication of this proposed rule in the *Federal Register* (see **DATES**). Such requests must be sent to the address shown in **FOR FURTHER INFORMATION CONTACT**. We will schedule a public hearing on this proposal, if requested, and announce the date, time, and place of the hearing, as well as how to obtain reasonable accommodations, in the *Federal Register* and local newspapers at least 15 days before the hearing.

Previous Federal Actions

The black-capped petrel was included as a category 2 candidate species in a *Federal Register* notice of review dated November 15, 1994 (59 FR 58982). Category 2 candidates were taxa for which information was available indicating that listing was possibly appropriate, but insufficient data were available regarding biological vulnerability and threats. In a February 28, 1996, notice of review (61 FR 7596), we discontinued the use of multiple candidate categories and removed category 2 species, including the black-capped petrel, from the candidate list.

We were petitioned by WildEarth Guardians on September 1, 2011, to list the species as endangered or threatened under the Act. On June 21, 2012, we published a 90-day finding, which determined there was substantial scientific or commercial information indicating that listing the species is warranted (77 FR 37367). On February 18, 2015, Center for Biological Diversity (CBD) filed a complaint against the Service for failure to complete a 12-month finding for the black-capped petrel. On September 9, 2015, the Service entered into a settlement agreement with CBD to resolve the complaint; the court approved the agreement on September 15, 2015. The agreement specified that a 12-

month finding for the black-capped petrel would be delivered to the *Federal Register* by September 30, 2018. This document serves as our 12-month finding on the September 2011 petition.

Species Status Assessment

A species status assessment (SSA) team prepared an SSA report for the black-capped petrel; the science provided in the SSA, version 1.1, is the basis for this proposed rule (Service 2018). The SSA team was composed of Service biologists, in consultation with other species experts. The SSA report represents a compilation of the best scientific and commercial data available concerning the status of the species, including the impacts of past, present, and future factors (both negative and beneficial) affecting the species. The SSA report underwent independent peer review by scientists with expertise in seabird biology, habitat management, and stressors (factors negatively affecting the species) to the species. The SSA report and other materials relating to this proposal can be found on the Service's Southeast Region website at *https://www.fws.gov/southeast/* and at *http://www.regulations.gov* under Docket No. FWS–R4–ES–2018–0043.

Background

A thorough review of the taxonomy, life history, and ecology of the black-capped petrel (*Pterodroma hasitata*) is presented in the SSA report (Service 2018); available at https://www.fws.gov/southeast and at *http://www.regulations.gov* under Docket No. FWS–R4–ES–2018–0043.

The black-capped petrel is a pelagic seabird that is in the order Procellariiformes, family Procellariidae. This order is distinguished by sheathed nostrils in horny tubes from the base of the bill (Warham 1990, p. 2). It is a medium-sized seabird in the

Pterodroma or gadfly genus with long slender wings and markings of a black cap and dark mantle separated by a white collar. The wings are black or dark in color on the top surface as well as the edges of the underwing. Certain morphological characteristics may vary across the species with "black-faced," "white-face," and "intermediate" variations of the species having different plumage coloration and patterns (Howell and Patteson 2008, p. 70). A study that compared the genetics of the dark birds to the light and intermediate-colored birds found a substantial differentiation indicating population breeding isolation (Manly *et al*. 2013, p. 231). The black-capped petrel is the only gadfly petrel species to breed in the West Indies. Petrels tend to maintain a strong relationship with their breeding grounds and return to the same nesting areas each year (Warham 1990, pp. 231–234). This site fidelity of these nesting birds tends to isolate breeding populations and can influence genetic, behavioral, and morphological variation due to limited genetic exchange. The variation between the dark and light birds included phenological, morphological, and behavioral differences (Howell and Patteson 2008, entire).

Black-capped petrels currently breed at four locations on the island of Hispaniola (Pic Macaya, Haiti; Pic la Visite, Haiti; Morne Vincent/Sierra de Bahoruco, Haiti/Dominican Republic; and Valle Nuevo, Dominican Republic). Historically, the species also nested on Martinique, Dominica, Guadeloupe, and, possibly, Cuba (Simons *et al*. 2013, pp. S11–S19). Currently, at least 90 percent of the known nests are found within Parc National La Visite (Pic la Visite) in the Massif de la Selle mountain range in Haiti (Goetz *et al* 2012, p. 5).

Black-capped petrels spend most of their time at sea in the western Atlantic. The at-sea geographic distribution (marine range) of the black-capped petrel includes waters

off the eastern coast of North America from latitude 40° N (approximately New Jersey) south to latitude 10° N (approximately northern South America) (Goetz *et al.* 2012, p. 4; Jodice *et al.* 2015, entire). Off the eastern coast of the United States, petrels forage primarily in the Gulf Stream, from northern North Carolina to northern Florida, in areas of upwelling; off the coast of North Carolina, the species is most commonly observed offshore seaward from the western edge of the Gulf Stream and in areas of deeper waters. Near-shore waters off the northern coast of Central and South America also serve as foraging areas for some black-capped petrels during the breeding season (Jodice *et al.* 2015, pp. 26–27). Recent surveys have also found black-capped petrels in the northern Gulf of Mexico (Haney 2018, pers. comm.). The range and extent of the species within the Gulf of Mexico is yet to be determined, but surveys are ongoing.

Black-capped petrels feed mostly at night and pick their food from the water surface either solitarily or in close proximity to other foraging seabird species. The diet of black-capped petrels is not fully understood; however, stomach contents of black-capped petrels include squid, fish, crustaceans, and *Sargassum* or marine algae (Haney 1987, pp. 163-164; Simons *et al.* 2013, p. S30). The plant materials in the stomach suggest the species may forage around *Sargassum* mats, which tend to attract prey species leading to the ingestion of the algae materials while the petrels feed on their preferred prey. The limited amount of algae found within digestive tracts further suggests that petrels may only be incidentally foraging at the *Sargassum* (Moser and Lee 1992, p. 67).

Black-capped petrel nesting areas are in high-elevation (greater than or equal to 1,500 meters (4,921 feet)), montane forests with steep slopes and rocky substrate with or

without vegetation or humus cover that provides cavities for nesting burrows. They may also burrow at the base of native arborescent ferns (Jean and Brown 2018, in litt.). The nesting season begins around January, with high parental investment in the nest and chick rearing. The female lays only one egg each season, with an alternating male and female incubation period of 50 to 53 days, followed by shared parenting of the chick for a minimum of 80 days. Adults that are raising young may travel 500 to 1,500 kilometers (km) (310 to 932 miles (mi)) to obtain food for the young and have been found foraging in the Caribbean Sea (Jodice *et al.* 2015, pp. 26–27). Chicks fledge between May and July, and head out to sea to feed on their own (Simons *et al.* 2013, pp. S21–S22). When adult birds leave the nesting areas, they may migrate up to 2,200 km (1,367 mi) from the breeding grounds to primary offshore foraging areas off the mid-Atlantic and southern coasts of the United States (Jodice *et al.* 2015, p. 23).

The travel of adults to and from nests during foraging bouts for the young generally occurs at night; this makes visual observations difficult. The nests are also in rugged montane areas that are not easily accessed, and burrows are difficult to detect. The species was historically used as a food source for the island inhabitants, as the young chicks are easily captured once a burrow is located. The petrels were also drawn in using manmade fires (Sen Sel) intended to disorient the birds, causing them to fly towards the light of the fire and ultimately crashing into the land nearby where they were captured for food (Wingate 1964, p. 154).

Due to the cryptic nature of the species as described above, the species was thought to be extinct until it was rediscovered in by Wingate in 1963, in the Massif de la Selle mountain range in Haiti. The estimated population at that time was around 2,000

pairs, based on potential occupied suitable habitat; however, there is some uncertainty of the accuracy of this estimate due to the methods used to extrapolate. Wingate suggested the population may have been even higher (Wingate 1964, p. 154).

Summary of Biological Status and Threats

The Act directs us to determine whether any species is an endangered species or a threatened species because of specific factors affecting its continued existence (stressors). Under section 4(a)(1) of the Act, we may list a species based on (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence. The SSA report documents the results of our comprehensive biological status review for the black-capped petrel, including an assessment of the potential stressors to the species. It does not represent a decision by the Service on whether the species should be proposed for listing as an endangered or threatened species under the Act. It does, however, provide the scientific basis that informs our regulatory decision, which involves the further application of standards within the Act and its implementing regulations and policies. The following is a summary of the key results and conclusions from the SSA report.

Risk Factors for Black-capped Petrel

We reviewed the potential risk factors (*i.e.*, threats or stressors) that are affecting the black-capped petrel now and into the future. In this proposed rule, we will discuss in detail only those threats that we conclude are driving the status and future viability of the species. The primary threat to the species on the breeding grounds is habitat loss due to

deforestation and forest fires (Factors A and E); additional threats that have affected the species include introduced mammals (Factor C), communication towers (Factor E), and artificial lighting (Factor E). The effects of climate change are also expected to affect the species through increased storm intensity and frequency, resulting in flooding of burrows and erosion of suitable nesting habitat (Factor E). Historically, human predation for consumption (Factor B) and natural disasters (Factor E), such as earthquakes and volcano eruptions, affected the viability of the species. However, there is no evidence that the species is still regularly harvested for consumption. While this was a threat to the species historically, causing the extirpation of some breeding populations, we do not currently consider it a threat to the species. Natural disasters, such as earthquakes and volcanic eruptions, are not regularly occurring events in the Caribbean. While geologic events such as these have occurred in the past, there is no information to indicate these would occur in the near future and were not considered in our analysis.

At sea, the species may be affected by coastal and offshore wind farms (Factor E), offshore oil and gas development (Factor E), marine fisheries (Factor E), and mercury and plastic marine debris (Factor E). Lighting from fisheries and offshore energy operations can disorient the petrels. The predicted increase in strong Atlantic storms or hurricane frequency is also expected to lead to an increase in land strandings (Factor E).

Synergistic interactions are possible between effects of climate change and effects of other potential threats such as habitat degradation, deforestation, agricultural development, and coastal or offshore energy development.

We discuss each of these factors in more detail below.

Deforestation

Deforestation, and associated loss and degradation of nesting habitat, is considered the most significant threat to the black-capped petrel (Goetz *et al.* 2012, entire). Many of the Caribbean islands where petrels were historically reported have experienced extremely high rates of forest conversion and loss since European colonization. Urbanization, agricultural development, and tree harvest for building materials and charcoal production, are driving the changes in the forested areas where the petrels breed. Charcoal, along with firewood, is used for cooking and is one of the primary sources of energy in Haiti. The overwhelming dependence of the human population of Haiti on wood-based cooking fuels has resulted in substantial deforestation and forest conversion in both Haiti and adjacent regions of the Dominican Republic.

On Hispaniola, where all known active petrel nesting sites occur, estimates of current deforestation range from over 90 percent (and increasing) for the Haitian portion (Churches *et al.* 2014, entire), to slightly less than 90 percent for the Dominican Republic portion (Castro *et al.* 2005, entire; BirdLife International 2010, entire; Simons *et al.* 2013, p. S31). Deforestation in the Haitian nesting areas is particularly significant for the petrel, given that up to 90 percent of all active nest sites of the species may occur in forested areas (Goetz *et al.* 2012, p. 5; J. Goetz, pers. comm.). Although deforestation in petrel nesting areas of the Dominican Republic has been comparatively lower, recent increases in forest clearing for subsistence agriculture and charcoal production in the Sierra de Bahoruco and other areas adjacent to the Haitian border have resulted in concomitant increases in nesting habitat loss and degradation there (Checo 2009, entire; Grupo Jaragua 2011, entire; Goetz *et al.* 2012, p. 7; Simons *et al.* 2013, p. S31).

Forested nesting areas that appear to be suitable for the black-capped petrel occur on the nearby islands of Dominica and Cuba. However, black-capped petrels do not currently breed on these islands. The island of Dominica retains over 60 percent of native forests; likewise, Cuba retains approximately 24 percent of native forest cover (BirdLife International 2010, entire).

Forest Fires

Because the black-capped petrel is primarily a pelagic species, forest fires only affect the species directly during the nesting season. However, effects may be significant and potentially long-term, as fires set to clear land for agriculture can result in substantial loss and conversion of forested nesting habitat. Moreover, fires during the incubation and brooding phase can cause injury or mortality for adults and nestlings within nest burrows.

The incidence of anthropogenic fires increases with growth of human populations (Wingate 1964, p. 154; Simons *et al.* 2013, p. S31). Although natural fires resulting from lightning strikes also occur, these tend to occur mainly during the wetter summer months (Robbins *et al.* 2008, entire). Naturally-occurring fires may help maintain open, park-like pine savannahs at higher elevations, which may be more accessible to petrels (Simons *et al.* 2013, p. S31). In contrast, most anthropogenic fires occur during the winter dry season, when petrels are actively nesting (Simons *et al.* 2013, p. S31) and thereby constitute more of a direct threat. Dry season fires also tend to be more intense, delaying or inhibiting forest recovery due to destruction of seed banks and organic humus layers (Rupp and Garrido 2013, entire).

Fires also indirectly affect petrel nesting habitat by increasing erosion and mudslides following elimination of previously existing vegetation and ground cover. In

the Massif de la Selle in Haiti, deliberately-set fires likely caused increased erosion of cliffs used for nesting by petrels; the fires were set to facilitate clearing of land and for fuel wood harvesting (Woods *et al.* 1992, pp. 196–205; Simons *et al.* 2013, p. S33). For years, such fires have also denuded large swaths of forest cover in the petrel nesting areas of Pic Macaya in the Massif de la Selle of Haiti (Sergile *et al.* 1992, pp. 5–12). In the petrel nesting areas of the Dominican Republic, fires are also at times deliberately set in retaliation for actions taken by government officials to evict or otherwise deter Haitian migrants engaged in illegal land-clearing activities (Rupp and Garrido 2013, entire).

Nonnative Species

Like most native Antillean species, the black-capped petrel evolved in the absence of mammalian ground predators. However, following European colonization, many Caribbean islands quickly became host to populations of introduced black rats (*Rattus rattus*), Norway rats (*Rattus norvegicus*), domestic dogs (*Canis familiaris*), feral pigs (*Sus scrofa*), and domestic cats (*Felis domesticus*). In the late 1800s, the deliberate introduction of the small Indian mongoose (*Herpestes javanicus*) resulted in apparently uncontrollable mongoose populations on all islands (except Dominica) where the petrel is known or suspected to nest or have once nested (Barun *et al.* 2011, pp. 19–20; Simons *et al.* 2013, p. S31). Following initial introduction to Jamaica in 1872, the mongoose was promptly introduced to Cuba (1882), Hispaniola (1895), Martinique (1889), and Guadeloupe (1880–1885; Simons *et al.* 2013; p. S31). Although introduced also on Dominica during the 1880s, that introduction of the mongoose was apparently unsuccessful (Henderson 1992, p. 4).

While all of these introduced mammals have negatively affected other native Caribbean species (*e.g.*, Henderson 1992, entire; White *et al.* 2014, pp. 35–38), their current impact on the black-capped petrel is largely unknown (Goetz *et al.* 2012, p. 7; Simons *et al.* 2013, p. S31). Nevertheless, rats in particular are known nest predators and have been observed at entrances to petrel nest burrows (Goetz *et al.* 2012, p. 7); thus, the potential clearly exists for rat predation on petrel nests. Mongooses, rats, and dogs likely played a major role in the extirpation of the Jamaican petrel (*Pterodroma caribbaea*) (Lewis *et al.* 2010, p. 2; Goetz *et al.* 2012, pp. 13–14; Simons *et al.* 2013, pp. S16–S17).

Dogs are commonly kept by security personnel and allowed to roam free at night at communication towers near petrel nest sites in the Dominican Republic (Rupp *et al.* 2011, entire), and may excavate petrel nest burrows or prey on fledgling or adult petrels at or near nest entrances (Woods 1987, pp. 196–205; Goetz *et al.* 2012, p. 7). In fact, there are historical accounts of local inhabitants on Guadeloupe using trained dogs to assist in harvesting petrels for food (Simons *et al.* 2013, p. S12).

Feral cats have also been documented at elevations up to 2,100 meters in the Sierra de Bahoruco of the Dominican Republic at the base of petrel nesting cliffs (Simons *et al.* 2013, p. S31). Feral cats are significant predators of Hawaiian petrels and of great-winged petrels (*P. macroptera*) on Kerguelen Island (Simons *et al.* 2013, p. S31), as well as of Barau's petrels (*P. baraui*) on Reunion Island (Faulquier *et al.* 2009, entire). Accordingly, any feral cats within black-capped petrel nesting areas should be considered potential threats.

While these introduced species currently appear to be relatively scarce and at low densities near known black-capped petrel nest locations, even low numbers of these avian

nest predators could significantly impact the few active nests that currently exist, particularly those in more accessible sites (Simons *et al.* 2013, pp. S31–S32). For example, a pack of only three free-ranging dogs reduced a breeding colony of white-tailed tropicbirds (*Phaethon lepturus*) on a Bahamian island by 80 percent in only 4 years (Simons *et al.* 2013, p. S32). It is not known whether current nest site selection by the black-capped petrel reflects the quality of the habitat or is the product of increased predation pressure (Simons *et al.* 2013, pp. S31–S32).

Communication Towers and Artificial Lighting

Recent years have seen the proliferation of telecommunication towers throughout the Caribbean islands. These towers are typically located on high mountain ridges, hills, and other prominent topographic features, and the structures extend several meters above canopy level. Many of the tallest are also secured by numerous guy wires (Longcore *et al.* 2008, entire; Simons *et al.* 2013, p. S32). Because of the nocturnal habits of black-capped petrels, combined with the high speed at which they fly, they are highly vulnerable to aerial collisions with these unseen structures, especially on foggy nights typical of the petrel nesting season (Goetz *et al.* 2012, p. 8; Longcore *et al.* 2013, entire; Simons *et al.* 2013, p. S32). There have been numerous documented cases of black-capped petrels being killed or injured by aerial collisions with these structures in or near their breeding areas (Goetz *et al.* 2012, p. 8; Simons *et al.* 2013, p. S32).

Wind Farms

The increasing use of wind farms on and near Caribbean islands may constitute a potential threat to flying petrels (Simons *et al.* 2013, p. S32). As with communication towers, land-based wind farms tend to be located on high ground, where winds are higher

and more constant. Threats are not only associated with collisions with fan blades, but also disorientation from associated lights with which such structures are equipped. Offshore wind farms can cause localized upwelling of marine currents, thereby attracting potential food sources of petrels and further attracting them to such sites. Collisions with wind turbines are a potential concern, and displacement of seabirds from offshore wind farm areas has also been documented (Garthe *et al.* 2016, entire). However, most such proposed sites are located nearer to shore than the pelagic areas typically used by petrels for feeding, so this specific threat appears comparatively low (Simons *et al.* 2013, p. S32). Recent construction of inland wind farms near petrel nesting areas on Hispaniola (Jodice, in litt.) may constitute an additional and yet unquantified threat, given that there are currently no data on the flying height of black-capped petrels when approaching nesting areas.

Offshore Oil and Gas

Offshore oil and gas activity occurs off the coast of Cuba and northern South America near Venezuela and Colombia. Black-capped petrels use the area of the Caribbean Sea off Hispaniola to northern South America (Jodice *et al.* 2015, p. 28); accordingly, the birds that are foraging or resting in the waters near Cuba could be directly affected by petroleum or petroleum byproducts. Lighting from offshore platforms can also disorient the petrels.

In the United States, proposed exploratory test drilling for oil and production along the edge of the continental shelf off the coast of North Carolina (Simons *et al.* 2013, p. S32) may be a future threat to black-capped petrels. The discovery of petroleum reserves in this zone, and within the main foraging area of the petrel, would most likely

result in establishment of drilling and production structures. Petroleum residues or discharged contaminants from production could potentially increase the probability of incidental ingestion of petroleum fragments by surface-feeding birds (Simons *et al.* 2013, p. S32), as well as fouling of plumage from floating residues or oil spills. Although a black-capped petrel was once reportedly found with oil-fouled feathers, as well as one with petroleum fragments in the crop (Simons *et al.* 2013, p. S32), such incidents are relatively few and the genus *Pterodroma* is considered by some (*e.g.*, Clapp *et al.* 1982, p. 1) to be less vulnerable than other species to such exposure, although there are few data regarding the validity of this assertion (Simons *et al.* 2013, p. S32).

Oil platforms and related structures are also typically well-lit for worker safety, and lights disorient flying petrels, especially on foggy nights. Moreover, helicopters are frequently used to transport crew and equipment to offshore production facilities, and the effects of these low-altitude overflights on foraging petrels is unknown. Regardless, because most petrels that forage in this area are adults (Simons *et al.* 2013, pp. S23–S28), any increase in losses from threats on the foraging grounds would disproportionally affect the adult segment of the population.

Although black-capped petrels have recently been recorded in the central and northeastern Gulf of Mexico where oil and gas activities are ongoing, the extent of use of this area is not yet understood. The species has recently been detected in the northern Gulf of Mexico (Service 2018, appendix A). Oil and gas operations are well-established in the northern Gulf of Mexico; however, based on the best available information, black-capped petrels have not been detected in close proximity to platforms (Farnsworth and Russell 2007, entire). Black-capped petrels were also not identified as a species affected

by the Deepwater Horizon oil spill in 2010, which occurred in the northern Gulf of Mexico (NOAA 2016 pp. 4-461–4-515; Haney *et al.* 2014a, entire; Haney *et al.* 2014b, entire).

Mercury and Plastic Pollution

In a long-term study of plastic ingestion by seabirds off the coast of North Carolina, plastic was present in stomach contents of over 55 percent of 38 species sampled (Moser and Lee 1992, entire). However, only 1.8 percent of 57 black-capped petrels sampled during the study contained plastic. Black-capped petrels appear far less likely to incidentally ingest plastic fragments than many other seabirds (Simons *et al.* 2013, p. S33).

Black-capped petrels do not forage heavily in areas along current edges where such residue and flotsam tend to collect, but rather in areas of current upwelling where nutrient-rich waters promote increased abundance of primary producers and prey species; this aspect of black-capped petrel foraging behavior may make them less vulnerable to incidental ingestion of such material (Simons *et al.* 2013, p. S33). However, black-capped petrels have been reported with relatively high concentrations of mercury (Simons *et al.* 2013, p. S33), with amounts up to seven to nine times higher than that of most other pelagic species sampled. Such high levels have been associated with reduced reproductive output and neurological damage in other avian species (Simons *et al.* 2013, p. S33). In fact, Procellariforms are known to be particularly susceptible to heavy metal bioaccumulation compared to other seabirds (Kim *et al.* 1996, pp. 262–265; Kojadinovic 2007a, entire; Kojadinovic 2007b, entire). It is postulated that increases in offshore oil drilling may increase such levels of contamination, via direct release of mercury and

other heavy metals into the marine food chain (Simons *et al.* 2013, p. S33). Any black-capped petrels potentially foraging in the northern Gulf of Mexico may already be exposed to such contaminants. Although current implications of these findings for the black-capped petrel remain unknown, because of the well-documented adverse effects of mercury contamination and accumulation for wildlife species, any increases in such levels would logically not bode well for the black-capped petrel, which is apparently already exposed to higher than normal levels of this contaminant.

Marine Fisheries

Marine fisheries contribute to injury and mortality of seabirds through entanglement in clear monofilament fishing lines or getting caught in hooks (Furnuss 2003, entire, Li *et al.* 2012, p. 563). Because of the surface-feeding habits of the black-capped petrel, the species is not considered particularly vulnerable to effects of either long-line or pelagic gill net commercial marine fisheries (Simons *et al.* 2013, p. S33). There are no known reports of *Pterodroma* bycatch in any marine fisheries of the northern Gulf of Mexico, Atlantic, or Caribbean. There is little information from foreign fishing fleets regarding the impacts from fisheries (Simons *et al.* 2013, p. S33). Petrels tend to concentrate foraging activities in deep pelagic zones, rather than in areas of the continental shelf where most inshore fisheries occur. Thus, marine fisheries and associated activities are considered only a minor (albeit unquantified) threat to the black-capped petrel (Simons *et al.* 2013, p. S33).

Climate Change

Under current projections of climate change, the black-capped petrel faces potential effects on both the foraging and breeding areas (Simons *et al.* 2013, p. S33),

although by different mechanisms. First, the observed very strong association of the black-capped petrel with Gulf Stream waters and associated current upwelling off the coast of the southeastern United States make the species vulnerable to any climate-induced changes to existing marine hydrology in this zone. Changes in either the direction or temperature of these marine currents could significantly alter the foraging ecology of the species. Because there are currently no specific projections of climate-induced changes or reversal of either the Florida Current or Gulf Stream proper, the threat to the petrel from this aspect of climate change is believed to be low (Simons *et al.* 2013, p. S33). However, projected climate-related increases in the frequency and intensity of Atlantic hurricanes over the next century could substantially increase the numbers of black-capped petrels driven inland and stranded by these storms, thereby increasing mortality (Hass *et al.* 2012, entire).

Threats from climate change to the terrestrial requirements of black-capped petrel ecology are considered greater (Simons *et al.* 2013, p. S33). Among the primary projections for categorical climate-induced changes for the Caribbean basin are sea level rise and increased temperatures. Because of the petrels' use of high-elevation areas for nesting, changes in sea level are not considered to threaten the species. However, predicted temperature increases (Campbell *et al.* 2011, entire; Karmalkar *et al.* 2013, entire) may manifest in numerous ways that could likely affect the petrel. First, associated changes in precipitation may result in increased episodes of heavy rainfall from storms and hurricanes, which, under current landscape conditions, would likely result in increased erosion and the flooding and loss of nesting burrows and nesting sites (Simons *et al.* 2013, p. S33). On the other hand, decreases in precipitation combined

with higher temperatures (Campbell *et al*. 2011, entire; Karmalkar *et al*. 2013, entire) may increase frequency of drought and attendant susceptibility of breeding areas to forest fires. Increased intensity of hurricanes and tropical storms (Hass *et al*. 2012, entire) may also adversely affect the petrel by further accelerating erosion and degradation of nesting areas (Simons *et al*. 2013, p. S33). Finally, increased temperatures may likely also increase incidents of new invasive or vector-borne diseases. Black-capped petrels may be immunologically vulnerable to such pathogens (Simons *et al*. 2013, pp. S33–S34); thus, these may pose an additional climate-induced risk for the species.

Current Condition of the Black-capped Petrel

To assess black-capped petrel viability, we used the three conservation biology principles of resiliency, representation, and redundancy (together, "the three Rs," (3Rs)) (Shaffer and Stein 2000, pp. 306–310). Briefly, resiliency refers to the ability of populations to withstand environmental and demographic stochasticity (for example, wet or dry, warm or cold years or fluctuations in recruitment or adult survival); representation refers to the ability of the species to adapt over time to long-term changes in the environment that influence adaptive capacity through natural selection processes (for example, climate changes); and redundancy refers to the ability of the species to withstand catastrophic events (for example, droughts, hurricanes). In general, the more redundant and resilient a species is and the more representation it has, the more likely it is to sustain populations over time, even under changing environmental conditions. Using these principles, we identified the species' ecological requirements for survival and reproduction at the individual, population, and species levels, and described the beneficial and risk factors influencing the species' viability.

The SSA process can be divided into three sequential stages. During the first stage, we used the 3Rs to evaluate individual life-history needs. During the next stage, we assessed the historical and current condition of species' demographics and habitat characteristics, including explaining how the species arrived at its current condition. In the final stage, we made predictions about the species' responses to positive and negative environmental and anthropogenic influences.

We assessed a range of conditions to allow us to consider the species' resiliency, representation, and redundancy. For redundancy, populations were defined as isolated nesting areas across the known breeding range of the species. The four known extant nesting areas are on the island of Hispaniola: Pic Macaya, Pic la Visite, Morne Vincent/Sierra de Bahoruco, and Valle Nuevo. Black-capped petrels have also been detected through acoustic detections and radar "petrel-like targets" on the island of Dominica, but breeding has not been confirmed there, and, therefore, we will not consider this area as a population until more information is available. Accordingly, we conclude that there are four populations of the black-capped petrel.

These populations were evaluated for resiliency based the number of acoustic and radar detections and nest success. To provide context for the current condition of the species, we considered the historic range to assess the species' resiliency, redundancy, and representation in the past. However, in addressing the species' current condition, only extant populations were analyzed. We evaluated the condition of each population based on nest success, the number of radar petrel-like targets per night and acoustic detections per minute. Overall population condition rankings and habitat condition rankings were determined by combining these factors and elements.

We described representation for the black-capped petrel based on the two distinct color forms of unknown genetic or geographic origins. Geographic representation for the species consists currently of a loose assemblage of the four breeding populations on a single Caribbean island, Hispaniola.

The black-capped petrel spends most of its life at sea, except during breeding, which takes place in high-elevation areas on Caribbean islands. The actual population size of the black-capped petrel is unknown: published estimates range from approximately 2,000 to 4,000 birds, among which are 500 to 1,000 breeding pairs (Simons *et al.* 2013, p. S22). Though uncertain, recent estimates suggest that the numbers of breeding pairs at sites in the Dominican Republic may be currently be in the 10s to 100s (Simons *et al.* 2013, p. S22), while those in neighboring Haiti may range from approximately 500 to 1,500 (Goetz *et al.* 2012, pp. 4–5). Nesting areas in Haiti may contain up to 95 percent of currently known nest sites for this species (Simons *et al.* 2013, p. 23; Goetz *et al.* 2012, pp. 4–5). Using recent advances in detection methodology, specifically digital acoustic monitoring, evidence of approximately 60 active nest sites was found in the nesting areas of southwestern Dominican Republic (McKown 2014, entire).

Population resiliency is the ability to respond to stochastic disturbances that may affect individual populations; examples of such disturbances affecting the black-capped petrel include climatic factors such as droughts (and associated fires), hurricanes, and excessive rainfall. These disturbances can reduce habitat quality and nesting success on the breeding grounds, and thus may negatively affect population growth. The black-capped petrel has a large parental investment, as they typically produce only one egg per

year. The low reproductive output subjects the species to declines in nesting success due to varying environmental conditions (Simons 1984, entire). Resiliency, measured at the population level, is best characterized by the number of individuals per breeding population and nest success. A resilient black-capped petrel population requires multiple areas of suitable nesting habitat and consistent and adequate pelagic food resources in traditional feeding areas. There is currently an estimated total of 500 to 1,000 breeding pairs across the species' range given data and observations over the past 10 to 15 years (Simons *et al.* 2013, p. S22). Although the number of breeding pairs has declined precipitously from historic times to the present, the success of existing nests is relatively high (5-year mean of 75 percent; n=175 nests). After correcting for search effort, the average number of black-capped petrels seen annually, from 1979 to 2016, along defined transects on foraging grounds in the western Atlantic region is relatively low.

To determine and quantify current species-level overall resiliency, we compared current population resiliency to the historical optimal, based on known prior distribution and number of breeding populations. From the calculations, the current overall resiliency of the black-capped petrel is low, being approximately one-third (.333) of its historical resiliency. The results of our assessment reflect that the black-capped petrel has experienced a progressive reduction in two key demographic parameters over (at least) the past five centuries: (1) Population size and (2) number of breeding populations. These components are not mutually exclusive, as loss of breeding populations typically results in a decline in total population. Historical information also indicates that reductions were, and continue to be, primarily a result of human activities on the Caribbean islands, which historically hosted black-capped petrel breeding populations.

Although declines largely occurred following European colonization of the Caribbean region in the 16th century, at least one breeding population (Martinique) was eliminated during pre-Columbian times by overharvesting for food by the resident Carib Indians. Thus, the cumulative actions of human populations on Caribbean islands have progressively reduced the overall extent of known black-capped petrel breeding populations from that of at least seven populations on four different islands, to four current populations, all located on one island (*i.e.*, southwestern Hispaniola). Geographic isolation increases the vulnerability of the species to catastrophic events, such as major hurricanes. Our estimates of little to no redundancy and representation are reflective of the species' vulnerability to such events.

Once breeding populations of the black-capped petrel became geographically limited to southwestern Hispaniola, a suite of additional factors began to work synergistically to further reduce the overall population of the species. Among these, habitat loss and degradation have been, and continue to be, the most pernicious. Anthropogenic habitat loss and associated factors threaten the remaining breeding populations on Hispaniola and have almost certainly contributed to the substantial decline in overall numbers of the black-capped petrel over the past 50 years. There has also been an apparent concomitant decrease in petrel numbers within most individual breeding populations. Our estimate of low resiliency for the black-capped petrel reflects extensive nesting habitat loss and degradation, and subsequent declines in petrel population size.

Redundancy reflects the capacity of a species to persist in the face of catastrophic events, and is best achieved by having multiple, widely distributed populations across the geographical range of the species. Black-capped petrel redundancy is characterized by the

number and geographic dispersion of breeding populations. Historically, the species' breeding range included Hispaniola, Dominica, Guadaloupe, Martinique, and possibly Cuba. Currently, redundancy is characterized by only four known breeding populations occurring on one island. Moreover, given the relatively close proximity and analogous life-history characteristics of all known nesting colonies, the probability that all colonies would be similarly affected by a given extreme climatic event is quite high. Although total numbers of nests per population are highly uncertain, the majority (80 to 90 percent) of nests are believed to be within the Pic Visite nesting area (J. Goetz, pers. comm.), an area currently subject to significant and increasing pressure from deforestation and other anthropogenic activities.

Current representation in terms of nesting habitat is limited to a relatively narrow range of characteristics shared by all four known breeding areas. Historical records up to at least the early 19th century documented nesting by the petrel on at least three additional islands: Dominica, Guadeloupe, and Martinique (Simons *et al.* 2013, pp. S10–S13). Of these, there is credible evidence of the possible existence of an extant breeding population only on Dominica (Brown 2015, entire). Thus, there are credible past records of up to at least seven breeding populations of the species within the Caribbean, compared to perhaps only four currently, for an approximate 43-percent reduction in geographic representation since the early 19th century.

Conservation Actions

Over at least the past decade, the threats to continued viability of the black-capped petrel have become well-known both locally (*i.e.*, on Hispaniola) and internationally, and several nongovernment organizations (NGOs) are

currently working in both Haiti and the Dominican Republic in an effort to reduce or otherwise mitigate the severity of these threats. These NGOs include international organizations (*e.g.*, BirdsCaribbean, Environmental Protection in the Caribbean, Plant with Purpose, American Bird Conservancy, International Black-capped petrel Conservation Group) as well as local organizations (*e.g.*, Grupo Jaragua, Société Audubon Haiti).

Because most of the threats to the black-capped petrel are directly the result of anthropogenic activities, these NGOs have been providing technical assistance and education on sustainable agricultural practices, watershed management, and reforestation of previously deforested and degraded areas in the regions where petrels nest. These actions are in addition to "traditional" conservation efforts such as environmental education and heightened awareness of, and appreciation for, the black-capped petrel at the local level.

For example, in the community of Boukan Chat, Haiti (adjacent the Morne Vincent petrel nesting area), NGOs have developed black-capped petrel educational programs for local schoolchildren, provided financial and technical assistance with construction of freshwater cisterns, and provided tree seeds and technical assistance for local reforestation projects. Some residents of Boukan Chat have also been hired to work toward improving community awareness of the black-capped petrel and its plight, and how sustainable land management can be mutually beneficial to both the community and the petrel.

Other such NGO efforts include production of a documentary video highlighting the black-capped petrel and detailing local efforts to save the species.

Additional efforts include active monitoring for forest fires near petrel nesting areas, continued monitoring of petrel nest success in the Morne Vincent/Sierra del Bahoruco nesting area, continued radar and bioacoustical monitoring for petrel detections, and working with owners of a local communication tower to reduce nocturnal lighting intensity as a means to reduce black-capped petrel collisions with these structures (Brown 2016, entire; IBPCG 2016, entire; IBPCG 2017, entire). However, these NGO efforts, albeit locally successful, are still relatively limited in both geographic scope and funding, and there are yet other areas of Hispaniola that harbor black-capped petrel nesting colonies (*e.g.*, Pic Macaya, Pic La Visite) that could likely benefit from similar efforts.

The black-capped petrel was added to an existing international agreement in 2014, under the Protocol Concerning Specially Protected Areas and Wildlife in the Wider Caribbean Region (SPAW). The SPAW Protocol is pursuant to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region. The SPAW Protocol was adopted in 1990, and entered into force in 2000. The United States ratified the SPAW Protocol in 2003. There are currently 16 State Parties to the SPAW Protocol from throughout the wider Caribbean region. At least 90 to 95 percent of all black-capped petrel nests are within Haiti or along its border with the Dominican Republic. Although the Dominican Republic is a party to the SPAW Protocol, Haiti is not, and the lack of conservation efforts in Haiti leaves the species vulnerable to ongoing and future impacts to the petrel's nesting habitat.

Future Condition of the Black-capped Petrel

To assess the future condition of the species, we define viability as the ability of the species to sustain wild populations, both across its range and among representative units beyond a biologically meaningful timeframe. The estimated generation time of the black-capped petrel is 5 years (Goetz *et al*. 2012, p. 5; Simons *et al*. 2013, p. S22); 50 years encompasses approximately 10 generations, which we believe is an appropriate time horizon to realize predicted effects of factors acting on species viability. However, we also examined factors affecting species viability at shorter time intervals (10 and 25 years), corresponding to approximately two and five black-capped petrel generations, so that we could understand dynamics affecting the species from current condition to the end of the 50-year predictive time horizon (Service 2018, p. 45).

We used the best available information to assess the predicted future viability of the black-capped petrel. In doing so, we considered all recognized threats to the species and how and why they may impinge upon species viability. In the process, we observed that the numerous distinct threats shared common underlying drivers, and of these, the two that encompassed virtually all threats were (1) Regional climate change, and (2) human population growth, particularly on Hispaniola, where all currently known nesting by the petrel occurs. Importantly, for both of these identified drivers, there exists a body of empirical data on which to base reasonable predictions of future conditions for the black-capped petrel. Rather than attempting to predict future levels of all of the diverse threats, many of which lack adequate quantitative data, we chose instead to examine future projections for these two overarching drivers. To employ this approach, we used a combination of black-capped petrel population trajectories over the past 50 years, past trends and current levels of threats, and recognized causal relationships between and

among drivers and threats, to incorporate them into a model to arrive at what we believe to be the most likely future status of the black-capped petrel.

When determining the effects of climate on the black-capped petrel, we used the most recent analyses of projected future climate patterns in the Caribbean region that predict a median increase in annual surface air temperature of 2.8 degrees Celsius (°C) (37 degrees Fahrenheit (°F)) within the current petrel nesting areas on Hispaniola by year 2080 (Campbell *et al.* 2010, entire; Karmalkar 2013, entire). Additionally, precipitation is projected to substantially decrease during both the early (May to July) and late (August to October) wet seasons for these same areas with a generally drier precipitation pattern year-round. Percentage decreases in early wet season precipitation are projected to be greater (median -41 percent) than decreases in late wet season precipitation (median -22 percent). In general, decreases in wet season precipitation are particularly significant, as those months are when the greatest amount of annual rainfall occurs (Karmalkar *et al.* 2013, pp. 301–303). Decreases in dry season precipitation are projected to be comparatively less than decreases during the wet seasons by current models (Karmalkar *et al.* 2013, pp. 301–303), resulting in an overall future reduction in the degree of bimodality of current wet and dry seasons in the western Caribbean (*e.g.*, Hispaniola). Thus, the local climate of the currently known black-capped petrel nesting areas on Hispaniola is projected to become hotter and drier over the next 50 to 60 years with less differentiation between wet season and dry season rainfall amounts.

Although the full ecological effects of a projected hotter and drier climate in the current black-capped petrel nesting areas on Hispaniola are complex and yet unknown, such a change will likely increase the frequency and intensity of forest fires. Currently,

anthropogenic forest fires cause substantial habitat degradation and loss both within and adjacent to the petrel nesting areas (Sergile *et al.* 1992, entire; Goetz *et al.* 2012, p. 7; Rupp and Garrido 2013, entire; Simons *et al.* 2013, p. S31), and any increases in this disturbance are likely to have significant adverse effects on species viability. Decreased rainfall and humidity during the traditional wet seasons may also exacerbate effects of naturally occurring fires from lightning strikes. Fires would likely become more intense and extensive, mimicking the effects of the more damaging dry season anthropogenic fires. Such effects include elimination of naturally occurring seed banks, increased erosion and mudslides, and loss of accumulated organic humus layers that may be used as nest sites by black-capped petrels. Moreover, because the early wet season (May to July) is projected to experience the greatest reduction in precipitation, increased occurrence of forest fires at such time may increase risks to nesting black-capped petrels as well as fledglings, which leave nests during this season.

Changes in temperatures and rainfall patterns are not the only projected effects of regional climate change for Hispaniola. Recent projections indicate the frequency of intense hurricanes (*i.e.*, Categories 4 and 5) are predicted to not only increase for the region, but also the amount of precipitation associated with these atmospheric events is projected to increase by at least 11 percent, with up to 20- to 30-percent increases in precipitation near the center of these storms (Elsner *et al.* 2008, entire; Knutson *et al.* 2013, entire). Fewer Atlantic hurricanes are projected; however, the intensity of the storms is expected to increase (Bender *et al.* 2010, p. 458). In upper elevation Caribbean forests, intense hurricanes cause widespread and severe damage to vegetation at all strata, including large accumulations of organic debris that may block or otherwise impede

access by petrels to previously existing nest burrows. The physical and ecological effects of these storms may persist for decades (Lugo 2008, entire) and include redirection of ecological succession, changes in the ecological space available to organisms, and wholesale changes in forest microhabitats. In particular, hurricane-induced erosion and landslides could have potentially severe effects on black-capped petrels by degrading or eliminating currently productive nesting areas, particularly if said areas undergo prior degradation and ground cover loss due to forest fires or anthropogenic land-clearing. A massive landslide is believed to have eliminated the only known nesting area for the black-capped petrel on the island of Guadeloupe, resulting in the species' extirpation from that island (Simons *et al.* 2013, pp. S11–S12).

Projected climate change and associated effects on hurricane intensities may also have repercussions for black-capped petrels in their marine foraging areas. Over 100 years of data were used in a model that depicted the relationship between black-capped petrel inland strandings (*i.e.*, birds found far inland from normal marine habitat) and resultant mortalities in the continental United States in relation to Atlantic hurricane intensities and trajectories; it was found that on at least eight occasions over the past century, major (Categories 3 to 5) hurricanes had likely resulted in mortalities of tens to hundreds of black-capped petrels (Hass *et al.* 2012, entire). Also, projected increases in major hurricane activity in the region are expected due to climate change (Bender *et al.* 2010, entire; Knutson *et al.* 2010, entire), and hurricane-related mortalities of black-capped petrels could nearly double over the next 100 years (*i.e.*, 50 percent increase over a 50-year period), particularly from the powerful "Cape Verde" hurricanes for which landfall rates along the southeastern U.S. coast are projected to increase 10 percent per

decade over the next century (Hass *et al.* 2012, pp. 256–257). Because black-capped petrels tend to congregate at high densities on marine foraging grounds off the eastern United States during the peak of the Atlantic hurricane season, they are especially vulnerable to such atmospheric events (Hass *et al.* 2012, pp. 258–260). Based on climatic projections, such losses could constitute up to 5 to 10 percent of the current known breeding population of the species over the next 50 years (Hass *et al.* 2012, entire). However, any reductions in the current black-capped petrel breeding population from other unrelated factors (*e.g.*, predation, tower collisions, and forest fires) could thereby amplify and exacerbate the effective proportion of hurricane-related losses.

The factor that is expected to have the greatest effect on black-capped petrel is human population growth in Haiti. The projected increases in human population discussed below will increase the energy needs of Haiti, further influencing habitat loss due to charcoal production or agricultural conversion.

To assess the influence of human population growth on petrel nesting habitat on Hispaniola, we considered three different plausible scenarios. The three scenarios correspond to baseline, baseline plus 20 percent, and baseline minus 20 percent, of United Nations (UN) population growth projections for Haiti and the Dominican Republic. By "bracketing" our projections, we were attempting to account for inherent uncertainties that can arise from long-term projections. By accounting for potential variation, we increased our confidence that the "true" population growth, and its subsequent effects on black-capped petrel nesting habitat, was captured within the range of our scenarios. This also provided a means of graphically depicting and examining relative differences in population growth over time, which may allow for the

identification of "critical time points" beyond which certain threats may more rapidly increase in severity. In order to provide a better understanding of the projected trajectory of the future scenarios, we predicted factors affecting black-capped petrel status at two intermediate time frames, 10 and 25 years, as well as 50 years, which is the end of our predictive time horizon. The complete analyses for all three scenarios are provided in the SSA report (Service 2018, pp. 43–56).

Scenario 1: Human population of Hispaniola increases per current UN projections

The current population of Haiti is around 11 million people (United Nations 2018). If the population of Hispaniola increases as currently projected, by 2070, there will be 28 million inhabitants on the island, of which 15 million will reside in Haiti. At such time, the human population density of Haiti will exceed 545 persons per square kilometer (/km^2), with most people living in densely populated urban areas where charcoal is currently the primary fuel used for cooking. Unless there is a significant shift away from the use of wood-based fuels to (perhaps) propane gas (as is the case in the Dominican Republic), our analysis indicates the rate of land-clearing and forest degradation both within and near black-capped petrel nesting areas will likely increase by 62 percent over the next 50 years. Moreover, the demand for food and building materials to support the human population will also increase substantially over current levels, resulting in additional deforestation for agricultural purposes. Deforestation concurrent with population growth is expected to occur in both in Haiti and adjacent areas of the Dominican Republic. Anthropogenic fires associated with land-clearing activities are also expected to increase, further threatening black-capped petrel nesting habitat. Given the level of this threat to nesting areas and the magnitude of forest conversion (*i.e.*, for

charcoal production, agriculture), the resiliency of the black-capped petrel is predicted to be very low.

The black-capped petrel populations most likely to be adversely affected under this scenario are those within Haiti and along the Haiti-Dominican Republic border. In particular, the Pic Macaya and Pic La Visite breeding populations in Haiti, which have apparently suffered the greatest recent declines in both habitat quality and quantity (Goetz *et al.* 2012, pp. 9–10; Simons *et al.* 2013, pp. S13–S15), and a subsequent loss in the number of nesting petrels, are likely to face extirpation. If these breeding populations are adversely affected, this could potentially result in a loss of 85 to 95 percent of the currently known breeding population of the black-capped petrel (see Goetz *et al.* 2012, p. 5). The Haitian portion of the Morne Vincent/Sierra del Bahoruco breeding colony, having already been largely deforested, may experience slightly less adverse effects from continued deforestation. However, there is a significant potential for increased land clearing for agricultural activity in this nesting area, as it is not within any officially protected area. In contrast, although the Dominican Republic portion of this nesting area will most likely also be subject to at least some increased clearing for agricultural activities as well as charcoal production, much of this nesting habitat is at least somewhat officially protected in the Dominican Republic, which may help to reduce or slow future degradation. The remaining, and only recently discovered, nesting area is in Valle Nuevo National Park in the central mountains of the Dominican Republic. This nesting area faces many similar threats but is more remote and slightly more distant from the growing market for charcoal in Haiti. This distance from anthropogenic influence, along with its protected status, may result in this nesting area being less adversely affected than the

others. However, only one black-capped petrel nest has been identified in Valle Nuevo National Park, so this area's overall importance to species resiliency and persistence is uncertain at best.

Scenario 2: Human population of Hispaniola increases at annual rates 20 percent less than UN projections

In Scenario 2, the human population on Hispaniola is projected to increase at an annual rate that is 20 percent less than currently predicted, resulting in approximately 27.5 million inhabitants by 2070, of which 14.6 million of those inhabitants will reside in Haiti. Note that this projected total population is only about 2 percent less than was projected in Scenario 1. Likewise, the projected population density of Haiti under this scenario is 532 persons/km^2, only about 2 percent less than projected in Scenario 1. Accordingly, the future for black-capped petrel under Scenario 2 is expected to look very similar to that described in Scenario 1, resulting in a predicted very low future resiliency.

Scenario 3: Human population of Hispaniola increases at annual rates 20 percent greater than UN projections

In Scenario 3, the human population on Hispaniola is projected to increase at an annual rate that is 20 percent greater than predicted in Scenario 1. Under Scenario 3, there will be approximately 34 million inhabitants on the island by 2070, of which just over 20 million will reside in Haiti. Under this scenario, human population densities would reach 740 persons/km^2 in Haiti, and 285 persons/km^2 in the Dominican Republic. At such time, the projected demand for charcoal and firewood in Haiti (assuming all other required resources would support such a population) would result in a 220-percent increase in the amount of deforested and degraded areas on Hispaniola just for energy

production. In addition to deforestation for charcoal, additional forest lost is projected to occur as a result of intensified agricultural activities. Under these projections, the magnitude of forest conversion would likely result in widespread catastrophic loss of nesting habitat and, in turn, likely extinction of the species in the wild. Because of the inherent uncertainty of projections for the more severe outcome of Scenario 3, we opted to subdivide this scenario into two equally likely outcomes: Scenario 3a (one remaining very low resiliency population; *i.e.*, Valle Nuevo National Park), and Scenario 3b (no remaining populations; *i.e.*, species extinction).

All three of the future scenarios indicate a decline in the species' viability through the loss of resiliency, redundancy, and representation. As the human population on Hispaniola increases, the attendant anthropogenic factors that currently influence species viability are virtually certain to increase concomitantly. Future increases in the human population of Haiti will almost certainly result in increased deforestation rates throughout black-capped petrel nesting areas, both for production of charcoal and for necessary agricultural products and building materials. Based on the best available information, our more conservative projections suggest a future increase of approximately 0.56 to 0.65 percent per year in the areal extent of forest conversion on Hispaniola. Of the four known breeding populations on Hispaniola, two (Pic Macaya and Pic La Visite) are likely to face extirpation by 2070 under all three projected future scenarios: Pic Macaya because of the lack of control of human access or ongoing conservation efforts, and Pic La Visite because of ongoing and increasing rates of degradation and its close proximity to the capital city, Port-au-Prince, where anthropogenic demand for resources (food, fuel, building material) is very high. In the case of Pic La Visite, the discovery of any

additional petrel nesting sites in the adjacent and contiguous areas of Pic La Selle could potentially attenuate such losses, but no such additional nest sites have been found to date. The loss of these two breeding populations would represent a potential loss of up to 85 to 95 percent of the entire currently known breeding population of the black-capped petrel.

The primary effects of anthropogenic actions on black-capped petrel viability have apparently occurred over the past four or five centuries, a relatively short time in an evolutionary context. The petrel has been subject to the stochastic occurrences of tropical storms and hurricanes in the Caribbean for much longer, and has presumably evolved adaptive strategies in response to such storm events. However, such adaptations evolved in the context of multiple breeding populations across multiple islands and larger populations, and under previous regional climatic regimes. Furthermore, the conditions in which the black-capped petrel evolved have drastically changed, and this is only predicted to worsen. In the case of regional climate regimes, the best available information suggests a hotter and drier future climate within the specific area where black-capped petrels currently nest, along with a steady increase in the number of intense (Category 3 to Category 5) hurricanes across the region over the next century. Although major hurricanes were likely not a threat to the black-capped petrel under their historic (*i.e.*, pre-Columbian) population conditions, the combination of fewer and smaller breeding populations, ongoing nesting habitat loss and degradation, and more frequent and intense tropical storms will likely result in adverse effects to the petrel from these stochastic atmospheric phenomena. Based on past trends and evidence, these adverse

effects will likely also include increased mortalities of adults on the western Atlantic foraging grounds due to increased frequency of hurricane-induced inland strandings.

There remains an additional factor that we were unable to evaluate that could conceivably influence black-capped petrel viability. For many species, particularly those that form breeding colonies or other such aggregations, as population numbers decline they may reach a "critical level" below which normal social and ecological interactions become impaired or inhibited. This is commonly referred to as the Allee effect (see, *e.g.*, Courchamp *et al.* 1999, entire; Stephens *et al.* 1999, entire). Examples of such effects include increased *per capita* demographic effects of mortalities, disruption of normal pair-bond formation, skewed sex ratios, lower reproductive success, and reduced foraging efficiency. These combined effects can result in an extinction vortex from which a species cannot demographically recover (Dennis 2002; entire). As the population declines, the potential for future manifestations of demographic Allee effects in this species should not be discounted or ignored.

Finally, the best available science at the time of the analysis indicates that the future viability of the black-capped petrel is linked to the complex and challenging socioeconomic and environmental landscape within Haiti, where as many as 90 to 95 percent of all known black-capped petrel nest sites occur. The current and future challenges faced by Haiti in terms of political and economic stability, environmental protection, food security, and public health are daunting. Also, while there are, and will continue to be, numerous successful initiatives by both local and international conservation and humanitarian organizations to provide needed financial and technical support for environmental conservation in Haiti, these efforts are nonetheless subject to

the vicissitudes of donor funding in an ever unpredictable global financial setting. Natural resource conservation and management in Haiti would be seriously hampered in the event of a major global financial crisis, widespread social unrest in Haiti, or a military confrontation between Haiti and the Dominican Republic, all of which have occurred at some point in the past. Meanwhile, Haiti, and to a lesser but still significant degree, the Dominican Republic remain highly vulnerable to stochastic and catastrophic natural events such as major earthquakes and hurricanes, which can result in significant setbacks for ongoing conservation efforts (Castro *et al*. 2005, entire; Smucker *et al.* 2007, entire). In the end, the future of the black-capped petrel will depend in large measure on the long-term effectiveness of ongoing and future conservation efforts in Haiti.

Determination

Section 4 of the Act (16 U.S.C. 1533), and its implementing regulations at 50 CFR part 424, set forth the procedures for adding species to the Federal Lists of Endangered and Threatened Wildlife and Plants.

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats to the black-capped petrel. Habitat loss and degradation due to deforestation for agricultural development and charcoal production are currently the major threats to the species on its nesting grounds on the island of Hispaniola (Factor A). Historically, the black-capped petrel also nested on the islands of Guadeloupe, Martinique, Dominica, and possibly Cuba. The species was extirpated from Martinique in pre-Columbian times by island residents that over-harvested the petrel for consumption (Factor B). Nonnative mammalian species are a threat to native wildlife on islands and contributed to the loss and probable extirpation of

the species on the island of Dominica in the late 19th century (Factor C). The species' nesting range is limited to the steep, high-elevation areas that can be affected by erosion due to increased hurricane intensity and frequency, reducing available cavities or access to nesting sites (Factor E). Due to the loss of nesting areas across the historical range of the species, the black-capped petrel is currently only confirmed to be reproducing on the island of Hispaniola. The species' range reduction has led to the loss of redundancy of populations, with only four known nesting colonies, all confined to one island, remaining. This also contributes to the loss of representation, as the species has high fidelity to the same nesting sites each year; there is limited genetic exchange between populations. With the loss of populations on other islands, this reduces the potential for additional genetic lineages to increase genotypic diversity within the species.

The Act defines an endangered species as any species that is "in danger of extinction throughout all or a significant portion of its range" and a threatened species as any species that is "likely to become endangered within the foreseeable future throughout all or a significant portion of its range." Foreseeable future was determined to be between 30 and 50 years; based on available data regarding human population growth on Hispaniola and associated sociological factors (energy sources/demand, resource availability, increased need/conversion of land to agriculture to support increasing human populations) and climate change projections, we can reasonably project future conditions out that far.

Climate change data are less reliable in the Caribbean, augmenting the level of uncertainty and reliability of the projections. The most important driving factor for breeding habitat changes into the future is human population growth

and resource use (*e.g.*, charcoal). The greatest threats to the species currently affect the species on their breeding grounds. Due to deforestation from agricultural development and charcoal production, the breeding range has been reduced from its historical range; the remaining habitat and populations are threatened by a variety of factors acting in combination to reduce the overall viability of the species. Viability in terms of resiliency, redundancy, and representation was analyzed and described in the SSA report. In summary, the species' resiliency is expected to decline, as well as its redundancy and representation.

The current condition of each of the breeding populations was evaluated using the number of radar targets per night, acoustic detections per hour, and nest success at each of the confirmed nesting areas. To determine and quantify current species-level overall resiliency we compared current population resiliency to the historical optimal, based on known prior distribution and number of breeding populations (Service 2018, p. 39-41). In respect to redundancy, the number of populations has declined due to the extirpation of the species on Guadaloupe, Martinique, and Dominica. The contraction of the breeding range and loss of populations on the additional islands results in low redundancy and leaves the species more vulnerable to catastrophic events.

The risk of extinction in the foreseeable future is high because the remaining populations are small, suitable habitat is limited for additional nesting areas, and the impacts from stressors acting on the species on the nesting grounds are expected to increase. Therefore, on the basis of the best available scientific and commercial

information, we find that the black-capped petrel is likely to become endangered within the foreseeable future throughout its entire range because of the threats facing the species. However, the current status of the species as evaluated in the SSA report indicates the species is presently not at risk of extinction throughout its range (*i.e.*, endangered throughout its range), because the species has retained resiliency, with four extant breeding populations on Hispaniola and with a current population estimated to be between 2,000 to 4,000 individuals, an estimated 500 to 1,000 breeding pairs, and an overall nesting success rate of around 75 percent (Service 2018, pp. 17–19).

Under the Act and our implementing regulations, a species may warrant listing if it is endangered or threatened throughout all or a significant portion of its range. Because we have determined that the black-capped petrel is likely to become an endangered species within the foreseeable future throughout its range, we find it unnecessary to proceed to an evaluation of potentially significant portions of the range. Where the best available information allows the Services to determine a status for the species rangewide, that determination should be given conclusive weight because a rangewide determination of status more accurately reflects the species' degree of imperilment and better promotes the purposes of the statute. Under this reading, we should first consider whether listing is appropriate based on a rangewide analysis and proceed to conduct a "significant portion of its range" analysis if, and only if, a species does not qualify for listing as either endangered or threatened according to the "all" language. We note that the court in *Desert Survivors v. Department of the Interior*, No. 16-cv-01165-JCS, 2018 WL 4053447 (N.D. Cal. Aug. 24, 2018), did not address this issue, and our conclusion is therefore consistent with the opinion in that case.

Therefore, we propose to list the black-capped petrel as a threatened species across its entire range in accordance with sections 3(20) and 4(a)(1) of the Act.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened species under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing results in public awareness, and conservation by Federal, State, Tribal, and local agencies; private organizations; and individuals. The Act encourages cooperation with the States and other countries, and calls for recovery actions to be carried out for listed species. The protection required by Federal agencies and the prohibitions against certain activities are discussed, in part, below.

The primary purpose of the Act is the conservation of endangered and threatened species and the ecosystems upon which they depend. The ultimate goal of such conservation efforts is the recovery of these listed species, so that they no longer need the protective measures of the Act. Subsection 4(f) of the Act calls for the Service to develop and implement recovery plans for the conservation of endangered and threatened species. The recovery planning process involves the identification of actions that are necessary to halt or reverse the species' decline by addressing the threats to its survival and recovery. The goal of this process is to restore listed species to a point where they are secure, self-sustaining, and functioning components of their ecosystems.

Recovery planning includes the development of a recovery outline shortly after a species is listed and preparation of a draft and final recovery plan. The recovery outline guides the immediate implementation of urgent recovery actions and describes the

process to be used to develop a recovery plan. Revisions of the plan may be done to address continuing or new threats to the species, as new substantive information becomes available. The recovery plan also identifies recovery criteria for review of when a species may be ready for reclassification (*e.g.*, from endangered to threatened, also called "downlisting") or removal from listed status ("delisting"), and methods for monitoring recovery progress. Recovery plans also establish a framework for agencies to coordinate their recovery efforts and provide estimates of the cost of implementing recovery tasks. Recovery teams (composed of species experts, Federal and State agencies, NGOs, and stakeholders) are often established to develop recovery plans. When completed, the recovery outline, draft recovery plan, and the final recovery plan will be available on our website (*http://www.fws.gov/endangered*), or from our Caribbean Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Implementation of recovery actions generally requires the participation of a broad range of partners, including other Federal agencies, States, Tribes, NGOs, businesses, and private landowners. Examples of recovery actions include habitat restoration (*e.g.*, restoration of native vegetation), research, captive propagation and reintroduction, and outreach and education. The recovery of many listed species cannot be accomplished solely on Federal lands because their range may occur primarily or solely on non-Federal lands. To achieve recovery of these species requires cooperative conservation efforts on private, State, and Tribal lands, and areas outside of U.S. jurisdiction. If this species is listed, funding for recovery actions will be available from a variety of sources, including Federal budgets, State programs, and cost share grants for non-Federal landowners, the academic community, and nongovernmental organizations. In addition, pursuant to

section 6 of the Act, the State of North Carolina would be eligible for Federal funds to implement management actions that promote the protection or recovery of the black-capped petrel because North Carolina State waters are the only place in the United States where the species is found aside from vagrant or extralimital occurrences. Information on our grant programs that are available to aid species recovery can be found at: *http://www.fws.gov/grants*.

Although the black-capped petrel is only proposed for listing under the Act at this time, please let us know if you are interested in participating in recovery efforts for this species. Additionally, we invite you to submit any new information on this species whenever it becomes available and any information you may have for recovery planning purposes (see **FOR FURTHER INFORMATION CONTACT**).

Section 7(a) of the Act requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as an endangered or threatened species and with respect to its critical habitat, if any is designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any action that is likely to jeopardize the continued existence of a species proposed for listing or result in destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of the species or destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into consultation with the Service.

Federal agency actions within the species' habitat that may require conference or consultation or both as described in the preceding paragraph include management of and any other landscape-altering activities on Federal waters used by the Department of Defense or National Oceanic and Atmospheric Administration (NOAA); and offshore energy activities of the Bureau of Ocean Energy Management (BOEM) and Bureau of Safety and Environmental Enforcement (BSEE).

Provisions of Section 4(d) of the Act

The Act and its implementing regulations set forth a series of general prohibitions and exceptions that apply to threatened wildlife. Under section 4(d) of the Act, the Secretary of the Interior has the discretion to issue such regulations as he deems necessary and advisable to provide for the conservation of threatened species. The Secretary also has the discretion to prohibit, by regulation with respect to any threatened species of fish or wildlife, any act prohibited under section 9(a)(1) of the Act. The prohibitions of section 9(a)(1) of the Act, codified at 50 CFR 17.31, make it illegal for any person subject to the jurisdiction of the United States to take (which includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect; or to attempt any of these) threatened wildlife within the United States or on the high seas. In addition, it is unlawful to import; export; deliver, receive, carry, transport, or ship in interstate or foreign commerce in the course of commercial activity; or sell or offer for sale in interstate or foreign commerce any listed species. It is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. The Service has exercised discretion under section 4(d) of the Act to develop a rule that is tailored to the specific threats and conservation needs of this species.

The black-capped petrel is protected by the Migratory Bird Treaty Act (MBTA). The MBTA makes it unlawful "at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, offer for sale, sell, offer to barter, barter, offer to purchase, purchase, deliver for shipment, ship, export, import, cause to be shipped, exported, or imported, deliver for transportation, transport or cause to be transported, carry or cause to be carried, or receive for shipment, transportation, carriage, or export, any migratory bird, [or] any part, nest, or egg of any such bird . . ." included in the terms of four specific conventions between the United States and certain foreign countries (16 U.S.C. 703). See 50 CFR 10.13 for the list of migratory birds protected by the MBTA.

This proposed rule under section 4(d) of the Act adopts existing requirements under the MBTA as the appropriate regulatory provisions for the black-capped petrel. Accordingly, under the proposed 4(d) rule, incidental take is not prohibited, and purposeful take is not prohibited if the activity is authorized or exempted under the MBTA. Thus, if a permit is issued for activities resulting in purposeful take under the MBTA, it would not be necessary to have an additional permit under the Act.

The terms "conserve", "conserving", and "conservation" as defined by the Act, mean to use and the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary. Due to threats acting on the black-capped petrel on the nesting grounds and the projected impacts to the species and its habitat in the foreseeable future, the viability of the species is expected to decline. The loss of habitat due to deforestation along with increased precipitation and drought events leave

the species vulnerable to becoming endangered in the foreseeable future. The species that was once abundant continues to decline due to the conditions at the nesting locations on Hispaniola. The primary stressors to the species are occurring on the breeding grounds in Haiti and the Dominican Republic; therefore, prohibiting incidental take in the United States is not going to contribute meaningfully to the conservation of the species. Prohibiting unregulated, purposeful take is beneficial in order to protect the black-capped petrel from activities that may occur within U.S. territory and from import/export of the species or any of its parts, nests, or eggs.

For the reasons discussed above, we find that this rule under section 4(d) of the Act is necessary and advisable to provide for the conservation of the black-capped petrel. We do, however, seek public comment on whether there are additional activities that should be considered under the 4(d) provision for the black-capped petrel (see **Information Requested**, above). This proposal will not be made final until we have reviewed comments from the public and peer reviewers.

Critical Habitat Designation

Background

Critical habitat is defined in section 3 of the Act as:

(1) The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological features

(a) Essential to the conservation of the species, and

(b) Which may require special management considerations or protection; and

(2) Specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Prudency Determination

Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.12), require that, to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time the species is determined to be endangered or threatened. Our regulations (50 CFR 424.12(a)(1)) state that the designation of critical habitat is not prudent when one or both of the following situations exist: (1) The species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the degree of threat to the species, or (2) such designation of critical habitat would not be beneficial to the species. In determining whether a designation would not be beneficial, the factors the Service may consider include but are not limited to, whether the present or threatened destruction, modification, or curtailment of a species' habitat or range is not a threat to the species, or whether any areas meet the definition of "critical habitat." As explained below, we conclude that designation of critical habitat would not be beneficial to the black-capped petrel.

Breeding and Nesting Habitat

As stated previously in this proposed rule, black-capped petrels have only been confirmed to currently breed and nest on the island of Hispaniola within the countries of Haiti and the Dominican Republic. There are past anecdotal accounts and recent indirect indications of the possible nesting activity on the islands of Cuba and Dominica (Goetz *et al.* 2012, p. 13; Simons *et al.* 2013, p. S15; Brown 2015, entire). There are no historical

or current records of the species nesting within the United States. Under **Determination**, above, we found that deforestation due to agricultural development and charcoal production (Factor A) due to increased population growth on Hispaniola is the primary current and future threat to the black-capped petrel. This present or threatened destruction, modification, or curtailment of the petrel's breeding and nesting habitat occurs outside of U.S. jurisdiction, and we can only designate critical habitat on lands under U.S. jurisdiction; therefore, we cannot designate the petrel's breeding and nesting habitat on Hispaniola as critical habitat for the species.

Marine, Foraging Habitat

The black-capped petrel is widely distributed throughout much of its range during the non-breeding season and is considered to have flexible foraging habitat requirements. The species tends to forage near areas of upwelling and other areas where prey species are abundant, and the species is typically found in warmer waters associated with the Gulf Stream (Haney 1987, p. 157; Simons *et al.* 2013, entire; Jodice *et al.* 2015, entire). The best scientific information available on foraging habitat suggests that where the black-capped petrel is found, it is widely distributed in pelagic waters offshore of the eastern United States down to northern South America. The species' foraging range extends approximately from latitude 40° North and south to 10° North near northern South America (Goetz *et al.* 2012, p. 4; Jodice *et al.* 2015, entire). Marine habitat contains elements that the black-capped petrel needs (foraging, resting, and commuting between nesting and foraging habitat); however, the best available information indicates that the species' specific needs and preferences for these habitat elements are relatively

flexible, plentiful, and widely distributed, and there are no habitat-based threats to the species in the foraging range.

Summary

The critical habitat regulations at 50 CFR 424.12(a)(1)(ii) provide two examples of when designating critical habitat may not be beneficial to the species and, therefore, may be not prudent. These examples are where the present or threatened destruction, modification, or curtailment of a species' habitat or range is not a threat to the species, or where there are no areas that meet the definition of "critical habitat" for the species. In the preamble to the final rule in which these two examples were expressly added to the regulations (81 FR 7414, February 11, 2016), the Service explains: "[I]n some circumstances, a species may be listed because of factors other than threats to its habitat or range, such as disease, and the species may be a habitat generalist. In such a case, on the basis of the existing and revised regulations, it is permissible to determine that critical habitat is not beneficial and, therefore, not prudent. It is also permissible to determine that a designation would not be beneficial if no areas meet the definition of 'critical habitat'" (81 FR 7425). Although the present or threatened destruction, modification, or curtailment of nesting habitat is a threat to the petrel's current breeding and nesting habitat, such habitat is not located within U.S. jurisdiction thus cannot be designated as critical habitat. The foraging habitat for the black-capped petrel falls within the second example; although there are extensive areas of foraging habitat within U.S. jurisdiction, the species faces no habitat-based threats there, and designation would not be beneficial to the species.

Therefore, we preliminarily conclude that the designation of critical habitat for the black-capped petrel is not prudent, in accordance with 50 CFR 424(a)(1), because destruction of habitat is not a threat to the species in the U.S. portions of the range. However, we seek public comment on the characteristics of black-capped petrel foraging habitat and its relationship to the needs of the species.

Required Determinations

Clarity of the Rule

We are required by Executive Orders 12866 and 12988 and by the Presidential Memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

(1) Be logically organized;

(2) Use the active voice to address readers directly;

(3) Use clear language rather than jargon;

(4) Be divided into short sections and sentences; and

(5) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in **ADDRESSES**. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the numbers of the sections or paragraphs that are unclearly written, which sections or sentences are too long, the sections where you feel lists or tables would be useful, etc.

National Environmental Policy Act (42 U.S.C. 4321 et seq.)

We have determined that environmental assessments and environmental impact statements, as defined under the authority of the National Environmental Policy Act, need

not be prepared in connection with listing a species as an endangered or threatened species under the Endangered Species Act. We published a notice outlining our reasons for this determination in the *Federal Register* on October 25, 1983 (48 FR 49244).

References Cited

A complete list of references cited in this rulemaking is available on the Internet at *http://www.regulations.gov* and upon request from the Caribbean Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Proposed Regulation Promulgation

Accordingly, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

1. The authority citation for part 17 continues to read as follows:

AUTHORITY: 16 U.S.C. 1361-1407; 1531-1544; and 4201-4245, unless otherwise noted.

2. Amend § 17.11, paragraph (h), in the Table the "List of Endangered and Threatened Wildlife", under the heading BIRDS, by adding a new entry for "Petrel, black-capped" in alphabetical order to read as set forth below:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Common name	Scientific name	Where listed	Status	Listing citations and applicable rules
* * * * * * *				
BIRDS				
* * * * * * *				
Petrel, black-capped	*Pterodroma hasitata*	Wherever found	T	[*Federal Register* citation when published as a final rule]; 50 CFR 17.41(g)[4d].
* * * * * * *				

3. Amend §17.41 by adding a paragraph (g) to read as set forth below:

§17.41 Special rules—birds.

* * * * *

(g) Black-capped petrel (*Pterodroma hasitata*).

(1) Except as noted in paragraphs (g)(2) and (g)(3) of this section, all prohibitions and provisions of §§ 17.31 and 17.32 of this part apply to the black-capped petrel.

(2) Incidental take of black-capped petrel is not prohibited.

(3) None of the prohibitions in § 17.31 of this part apply to any activity conducted in a manner that is consistent with the Migratory Bird Treaty Act (MBTA), 16 U.S.C. 703–712, provided that the person carrying out the activity has complied with the terms and conditions that apply to that activity under the provisions of the MBTA and its implementing regulations.

* * * * *

Dated: _September 20, 2018_____

James W. Kurth
Deputy Director,
U.S. Fish and Wildlife Service,
Exercising the Authority of the Director,
U.S. Fish and Wildlife Service.

[FR Doc. 2018-21793 Filed: 10/5/2018 8:45 am; Publication Date: 10/9/2018]