DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R1–ES–2022–0061; FXES1113090FEDR–224–FF09E22000]

RIN 1018–BF61

Endangered and Threatened Wildlife and Plants; Establishment of a Nonessential Experimental Population of the Guam Kingfisher, or Sihek, on Palmyra Atoll, USA

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service or USFWS), are releasing (meaning introducing) the Guam kingfisher (*Todiramphus cinnamominus*), known locally as the sihek, on Palmyra Atoll as an experimental population under the Endangered Species Act of 1973, as amended (Act). Currently, sihek exists only in captivity and has been extinct in the wild for more than 30 years. The introduction on Palmyra Atoll is outside sihek's historical range because its primary habitat within its native range on Guam has been indefinitely altered by the accidental introduction of the predatory brown treesnake (*Boiga irregularis*) in the mid-twentieth century. Tools to manage brown treesnakes at a landscape level are beginning to be deployed, but it will take time before these tools are effective enough for the reintroduction of sihek on Guam. We anticipate significant declines in sihek population that threaten the species' viability before reintroduction to Guam could occur. The introduction of sihek to Palmyra Atoll is not intended to be a permanent introduction that would support a self-sustaining population; rather, it is intended to facilitate the gathering of information and analysis to optimize efforts for reestablishment of the species on Guam once brown treesnakes can be sufficiently controlled at a landscape scale. The introduction of sihek to Palmyra Atoll is also likely to help increase the global population of this extinct-in-the-wild species in advance of a reintroduction effort on Guam. We classify this population as a nonessential experimental population (NEP) under the Act and provide regulations for the take of sihek within the NEP area. The best available data indicate the introduction of sihek to Palmyra Atoll is biologically feasible and will promote the conservation of the species.

DATES: This final rule is effective May 4, 2023.

ADDRESSES: Comments and materials we received in response to our proposed rule, as well as supporting documents we used in preparing this final rule, are available on *https://www.regulations.gov* under Docket No. FWS–R1–ES–2022–0061.

FOR FURTHER INFORMATION CONTACT: Megan Laut, Pacific Islands Fish and Wildlife Office, U.S. Fish and Wildlife Service, 300 Ala Moana Blvd., Rm 3–122, Honolulu, HI 96850; telephone 808–779–9939. Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States.

SUPPLEMENTARY INFORMATION:

Executive Summary

Why we need to publish a rule. Under section 10(j) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*), a population of a threatened or endangered species may be designated as an experimental population prior to its reintroduction. Experimental populations can be designated only by issuing a rule (hereafter referred to as a ''10(j) rule'').

What this document does. This rule will designate sihek (*Todiramphus cinnamominus*) introduced to Palmyra Atoll as a nonessential experimental population on the List of Endangered and Threatened Wildlife in title 50 of the Code of Federal Regulations at 50 CFR 17.11(h) with a rule set forth at 50 CFR 17.84.

The basis for our action. Based on the best scientific and commercial data available (in accordance with 50 CFR 17.81), we find that introducing sihek to Palmyra Atoll, with the regulatory provisions in this final rulemaking, will further the conservation of the species. The nonessential experimental population status is appropriate for the introduced population because we have determined that it is not essential to the continued existence of the species in the wild.

In the making of our finding that this action will further the conservation of the species, we evaluate any possible adverse effects on the captive population of sihek, the likelihood that any such experimental population will become established and survive in the foreseeable future, the relative effects that establishment of an experimental population will have on the recovery of the species, and the extent to which the introduced population may be affected by existing or anticipated Federal or State actions or private activities within or adjacent to the experimental population area. This rule also identifies the boundaries of the experimental population, explains our rationale for why the population is not essential to the continued existence of the species, describes management restrictions, protective measures, or other special management concerns of that population, and explains our rationale for determining that the habitat for sihek has been indefinitely altered or destroyed, currently a requirement under section 10(j) of the Act, and our regulations in title 50 CFR 17.81, for introducing a species outside its historical range.

Peer review and public comment. To ensure that our findings were based on scientifically sound data, assumptions, and analysis—and consistent with our Policy for Peer Review in Endangered Species Act Activities (59 FR 34270, July 1, 1994), and additional guidance (USFWS in litt. 2016)—we invited six objective and independent specialists to review our proposed rule. We received three responses. We also considered all comments and information received during the public comment period. All comments received during the peer review process and the public comment period have been incorporated into this final rule or are addressed below in Summary of Comments and Recommendations.

Background

On August 31, 2022, we published in the **Federal Register** a proposed rule to establish a nonessential experimental population of sihek on Palmyra Atoll (87 FR 53429, August 31, 2022). The comment period on the proposed rule was open for 30 days, through September 30, 2022. Comments on the proposed rule are addressed below under Summary of Comments and Recommendations.

Statutory and Regulatory Framework for Experimental Populations

Species listed as endangered or threatened are afforded protection primarily through the prohibitions in section 9 of the Act. Section 9 of the Act, among other things, prohibits take of endangered wildlife. ''Take'' is defined by the Act as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct. Section 7 of the Act outlines the procedures for Federal

interagency cooperation to conserve federally listed species and protect designated critical habitat. Section 7 mandates that Federal agencies use their existing authorities to further the purposes of the Act by carrying out programs for the conservation of listed species. It also requires that Federal agencies, in consultation with the Service, ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Section 7 of the Act does not affect activities undertaken on private land unless they are authorized, funded, or carried out by a Federal agency.

The Act was amended in 1982 to include section 10(j), which allows for the designation of reintroduced populations of listed species as ''experimental populations.'' The provisions of section 10(j) were enacted to ameliorate concerns that reintroduced populations will negatively impact landowners and other private parties, by giving the Secretary greater regulatory flexibility and discretion in managing the reintroduced species to encourage recovery in collaboration with partners, especially private landowners. Under section 10(j) of the Act, and our regulations in title 50 of the Code of Federal Regulations at 50 CFR 17.81, the Service may designate an endangered or threatened species that has been or will be released within its probable historical range as an experimental population. The Service may also designate an experimental population for an endangered or threatened species outside of the species' probable historical range in extreme cases when the Director of the Service finds that the primary habitat of the species within its historical range has been unsuitably and irreversibly altered or destroyed. All experimental populations are classified as ''nonessential'' unless we determine that the loss of the experimental population would be likely to appreciably reduce the likelihood of the survival of the species in the wild. The sihek population we are establishing on Palmyra Atoll is designated as nonessential.

The nonessential experimental population (NEP) designation allows us to develop tailored ''take'' prohibitions that are necessary and advisable to provide for the conservation of the species. The protective regulations adopted for an experimental population in a section 10(j) rule contain the applicable prohibitions and exceptions for that population and apply to all areas described for the nonessential population.

Section 7(a)(2) of the Act requires that Federal agencies, in consultation with the Service, ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or adversely modify its critical habitat. For the purposes of section 7 of the Act, we treat an NEP as a threatened species when the population is located within a National Wildlife Refuge or unit of the National Park Service. When NEPs are located outside of a National Wildlife Refuge or National Park Service unit, for the purposes of section 7 we treat the population as proposed for listing and only sections 7(a)(1) and 7(a)(4) of the Act apply. In these instances, a section 10j rule provides additional flexibility in managing the nonessential population because Federal agencies are not required to consult with us under section 7(a)(2) for an NEP. Section 7(a)(1) requires Federal agencies to use their authorities to carry out programs for the conservation of listed species. Section 7(a)(4) requires Federal agencies to confer (rather than consult) with the Service on actions that are likely to jeopardize the continued existence of a species proposed to be listed.

Section 10(j)(2)(C)(ii) of the Act states that critical habitat shall not be designated for any experimental population that is determined to be nonessential. Accordingly, we do not designate critical habitat in areas where we establish an NEP.

Before authorizing the release as an experimental population of an endangered or threatened species, and before authorizing any necessary transportation to conduct the release, the Service must find that the release will further the conservation of the species. In making such a finding, the Service uses the best scientific and commercial data available to consider the following factors (see 50 CFR 17.81(b)):

(1) Any possible adverse effects on extant populations of a species as a result of removal of individuals, eggs, or propagules for introduction elsewhere (see Donor Stock Assessment and Effects on Donor Population, below);

(2) the likelihood that any such experimental population will become established and survive in the foreseeable future (see Likelihood of Population Establishment and Survival, below);

(3) the relative effects that establishment of an experimental population will have on the recovery of the species (see Importance of the NEP to Recovery Efforts, below); and

(4) the extent to which the introduced population may be affected by existing or anticipated Federal or State actions or private activities within or adjacent to the experimental population area (see Management, below).

Furthermore, as set forth at 50 CFR 17.81(c), all regulations designating experimental populations under section 10(j) of the Act must provide:

(1) Appropriate means to identify the experimental population, including, but not limited to, its actual or proposed location, actual or anticipated migration, number of specimens released or to be released, and other criteria appropriate to identify the experimental population (see Location and Boundaries of the NEP Area, below);

(2) a finding, based solely on the best scientific and commercial data available, and the supporting factual basis, on whether the experimental population is, or is not, essential to the continued existence of the species in the wild (see Is the Experimental Population Essential or Nonessential?, below);

(3) management restrictions, protective measures, or other special management concerns for that population, which may include, but are not limited to, measures to isolate and/or contain the experimental population designated in the regulation from natural populations (see Management, below; and

(4) a process for periodic review and evaluation of the success or failure of the release and the effect of the release on the conservation and recovery of the species (see Monitoring and Evaluation, below).

Under 50 CFR 17.81(d), the Service must consult with appropriate State fish and wildlife agencies, local governmental entities, affected Federal agencies, and affected private landowners in developing and implementing experimental population rules. To the maximum extent practicable, section 10(j) rules represent an agreement between the Service, the affected State and Federal agencies, and persons holding any interest in land that may be affected by the establishment of an experimental population.

Legal Status of the Species and Previous Federal Actions

We listed sihek as an endangered species under the Act on August 27, 1984 (49 FR 33881). At the time of listing, sihek was known as the Guam Micronesian kingfisher (*Halcyon cinnamomina cinnamomina*). On June 23, 2015 (80 FR 35860), we updated our List of Endangered and Threatened

Wildlife (50 CFR 17.11) to reflect new taxonomic information indicating that the Guam Micronesian kingfisher (*Halcyon cinnamomina cinnamomina*) is now considered the Guam kingfisher (*Todiramphus cinnamominus*). Throughout this document, we refer to the species as sihek because that is the locally used common name on Guam. We designated critical habitat for sihek on October 28, 2004 (69 FR 62944), consisting of 376 ac (153 ha) on northern Guam. We finalized the Native Forest Birds of Guam and Rota of the Commonwealth of the Northern Mariana Islands Recovery Plan in 1990 and the Revised Recovery Plan for Sihek or Guam Micronesian Kingfisher (*Halcyon cinnamomina cinnamomina*) in 2008 (73 FR 67541, November 14, 2008).

Biological Information

Species Description

Sihek is a sexually dimorphic (the sexes are outwardly different in appearance) forest kingfisher (Baker 1951, p. 229). The adult male has a brown head, neck, upper back, and underparts. A black line extends around the nape (back of the neck), and the eye ring is black. The lower back, lesser and underwing coverts, and shoulder feathers are greenish-blue, and the tail is blue. The bill is black. The female's markings are similar to the adult male, but the upper breast, chin, and throat are paler, and the remaining underparts are white instead of cinnamon. Sihek are relatively small, about 8 inches (in) (20 centimeters (cm)) in length (Del Hoyo et al. 2001, p. 220). Adult sihek range in weight from 1.7–3.0 ounces (oz) (53 to 85 grams (g)) (Baker 1951, p. 228; Jenkins 1983, p. 21).

Historical and Current Range

Sihek is a nonmigratory species endemic to Guam and historically occurred in all habitats throughout Guam except pure savanna and wetlands (Marshall 1949, p. 210, Baker 1951 p. 229; Jenkins 1983, pp. 22–23). They were described as ''fairly common'' by Baker (1951, p. 229). However, the population declined rapidly in the mid-twentieth century due primarily to predation by the brown treesnake. The last remaining wild sihek were taken into captivity between 1984 and 1986, and sihek were considered extinct in the wild by 1988 (Wiles et al. 2003, p. 1357). For more than 30 years, the species has existed only in captivity, as discussed further in the *Recovery Efforts to Date* section, below.

Life Cycle

Sihek are socially monogamous, and breeding activity appears to be concentrated from December to July (Marshall 1949, p. 210; Baker 1951, p. 228; Jenkins 1983, p. 23). They nest in cavities, with nests documented in a variety of trees, including *Ficus* spp. (banyan), *Cocos nucifera* (coconut), *Artocarpus* spp. (breadfruit), *Pisonia grandis* (umumu), and *Tristiropsis obtusangula* (faniok) (Baker 1951, p. 228; Jenkins 1983, p. 24; Marshall 1989, p. 473). Both male and female sihek incubate eggs and brood and feed nestlings (Jenkins 1983, p. 24). Eggs are white, and reported clutch sizes from wild populations (n=3) were either one or two eggs (Baker 1951, p. 228; Jenkins 1983, p. 24; Marshall 1989, p. 474). Incubation, nestling, and fledgling periods for sihek in the wild are unknown. However, incubation and nestling periods of captive birds averaged 22 and 33 days, respectively (Bahner et al. in litt. 1998, p. 21).

Sihek feed entirely on animal matter including skinks (Scincidae), geckos (Gekkonidae), various insects, segmented worms (Annelida), and hermit crabs (*Coenobita* spp.) (Marshall 1949, p. 210; Baker 1951, pp. 228–229; Jenkins 1983, pp. 23–24). Seale (1901, p. 45) also reported that sihek were known to prey on the chicks of domestic fowl, and Marshall (1949, p. 210) noted fish scales in the stomach contents of collected sihek. They typically forage by perching motionless on exposed branches or telephone lines and swooping down to capture prey off the ground with their bill (Jenkins 1983, pp. 23–34). They will also capture prey off nearby foliage and have been observed gleaning insects from bark (Maben 1982, p. 78).

Habitat Use

Relatively little is known about the habitat use of sihek. Mature forests with appropriate nest sites were probably an important component for successful reproduction and survival. Sihek are cavity nesters and apparently requires large, standing dead trees. Nest trees were reported as averaging 43 centimeters (17 inches) in diameter (Marshall 1989, p. 475). Sihek also appear to require diverse vegetative structure capable of providing a wide range of both invertebrate and vertebrate prey as well as exposed perches and areas of open ground for foraging (USFWS 2002, p. 63739). Good-quality sihek habitat would therefore provide a combination of closed canopy forest with large, standing dead trees for nesting, and areas of open understory or forest edges for foraging (Jenkins 1983, pp. 22–23; Marshall 1989, pp. 475–476; USFWS 2002, p. 63739).

Movement Ecology

Records of distributions and intraspecific territorial behaviors for sihek suggest they maintained exclusive year-round territories (Jenkins 1983, pp. 24–25). Little else is known about their movement ecology. On the island of Pohnpei, Micronesian kingfishers (*Todiramphus reichenbachii*), a species from the same genus as sihek, demonstrated an average territory size of 8.1 hectares (ha) (20 acres (ac)) and showed stable boundaries within and between years (Kesler and Haig 2007, p. 387); birds dispersing from their home territory were observed to establish new territories a maximum distance of 4,501 feet (1,372 meters) from the original site (Kesler and Haig 2007, p. 389). Sihek is an island endemic that has not been observed flying over open ocean.

Causes of Decline and Threats

The primary cause of sihek's extinction in the wild was due to predation by the introduced brown treesnake (USFWS 2008, p. 21). Individuals of this invasive species probably arrived on Guam prior to 1950 as stowaways on shipping materials (Savidge 1987, p. 662). Brown treesnakes were likely introduced in southern Guam and expanded their range, reaching the northernmost point of the island by 1968 (Savidge 1987, p. 663). Sihek were last recorded from southern Guam in the 1970s (Drahos 1977, pp. 153–154), and by 1985, Marshall (1989, p. 476) reported only 30 sihek in the northern part of the island. Sihek were considered extinct in the wild by 1988 (Wiles et al. 2003, p. 1357). The continued island-wide presence of brown treesnakes on Guam currently precludes consideration of Guam as a viable reintroduction site for sihek. Future reintroductions to Guam could be considered only if brown treesnakes were suppressed or eradicated at a scale that would allow for the survival of a reintroduced population of sihek.

Other factors that likely impacted sihek on Guam include predation by feral cats *(Felis catus*), rats (*Rattus* spp.), and monitor lizards (*Varanus tsukamotoi*), habitat degradation from development and typhoons, human persecution, contaminants, and competition with and harassment by black drongos (*Dicrurus macrocercus*) (USFWS 2008, pp. 16–17). Our Revised Recovery Plan for Sihek or Guam Micronesian Kingfisher (USFWS 2008,

pp. 16–26) provides further description of these threats.

Recovery Efforts to Date

Criteria for reclassifying sihek from an endangered to threatened species (''downlisting'') include the establishment of two subpopulations on Guam (one in the north and one in the south) of at least 500 individuals each that are stable to increasing over at least 5 consecutive years; the protection and management of habitat sufficient to achieve the population criteria; and the management of brown treesnakes and other introduced predators at levels sufficient to meet the population criteria. The criteria to delist (remove protections of the Act for) the sihek include two subpopulations on Guam of at least 1,000 individuals each (one in the north and one in the south) that are stable or increasing, with sufficient habitat and predator control to support the population criteria (USFWS 2008, pp. 40–43). Our recovery plan acknowledged that the interim step of introducing sihek outside of its historical range may be necessary before we are able to reestablish sihek populations on Guam (USFWS 2008, p. 40).

Habitat Protection

Over the past 30 years, the Service has worked with a number of stakeholders to provide habitat protection in support of recovering Guam's native species. The habitat protections described below were intended for federally listed species on Guam in anticipation of the eventual ability to control brown treesnakes and allow the reintroduction of sihek and other locally extinct species. In 1993, the U.S. Air Force, U.S. Navy, and the Service entered into a memorandum of understanding to create the Guam National Wildlife Refuge. As per the terms of the memorandum of understanding, the two military branches entered into cooperative agreements with the Service in 1994 to designate Department of Defense lands as overlay units in the Guam National Wildlife Refuge (*i.e.,* these overlay units of Refuge lands are under the jurisdiction of the Department of Defense but managed by the Service as part of the Refuge). Currently the Guam National Wildlife Refuge includes 152 ha (376 ac) of lands under the jurisdiction of the Service and 9,300 ha (22,980 ac) of overlay lands under the jurisdiction of the U.S. Navy and U.S. Air Force, and all are managed by the Service as the Refuge.

Additionally, the Government of Guam established four reserves for habitat protection. These lands are under the jurisdiction of the CHamoru Land Trust Commission of the Government of Guam. The Commission has the authority to change the status of these lands to non-conservation areas as they deem appropriate. Please see the Revised Recovery Plan for Sihek or Guam Micronesian Kingfisher (USFWS 2008, pp. 33–37) for further description and maps of the Department of Defense and Government of Guam protected areas.

More recently, the Department of Defense and the Service entered into two agreements to protect or manage habitat for sihek and other federally listed species on Guam. A 2020 memorandum of understanding between Joint Region Marianas and the Service outlined a mutual understanding regarding the intentions and future considerations of a Department of Defense readiness and environmental protection integration initiative to address conservation of upland vegetation communities for sihek as well as other federally listed species on Guam (USFWS 2020). In 2015 a memorandum of agreement between the Department of the Navy and the Service designated 2,118 ha (5,234 ac) of habitat for the recovery and survival of sihek in Northern Guam in response to loss of habitat described in the Service's 2015 Marine Corps Relocation Biological Opinion (USFWS 2015, entire).

Brown Treesnake Control

We currently lack adequate tools to eradicate brown treesnakes from Guam, and the continued presence of brown treesnakes throughout the landscape prevents the successful reestablishment of sihek on Guam in the foreseeable future. However, there is incremental progress in addressing this threat. Since 2010, the interagency Brown Treesnake Technical Working Group has advanced landscape-scale brown treesnake suppression capabilities with the development and refinement of an aerial delivery system for toxicant baiting, comprising an automated bait manufacturing system and an automated dispensing module for applying baits from aircraft. Aerial toxicant baiting has recently been evaluated in both fenced and non-fenced 55-ha (136-ac) sites; brown treesnake suppression, but not eradication, has been validated using this technique (Siers et al. in litt. 2020, p. 4). Further, simulated aerial baiting for brown treesnake eradication within a 5-ha (12-ac) brown treesnake exclusion area indicates that some brown treesnake size classes do not consume baits and additional control tools are needed to achieve suppression objectives and/or eradication (Siers et al. in litt. 2020, p. 4).

Island-wide eradication of invasive vertebrates has been achieved on 965 islands for various taxonomic groups (see Keitt et al. 2011, *http://diise.islandconservation.org/*); however, snake eradication efforts are rare, and there is only one other documented ongoing effort to eradicate snakes from an island (*http://diise.islandconservation.org/*). Additional technological and methodological advancements along with community engagement are still needed to achieve landscape-scale eradication of brown treesnakes on Guam. The aerial delivery system tools are operational, but full operational implementation of the aerial suppression program will require further understanding of site-specific effects of the technology and development of efficient monitoring protocols. Therefore, while technological advances to control brown treesnakes show promise as a tool, they currently do not control snakes to a level sufficient to allow the return of sihek to Guam before significant declines in the captive population of sihek are likely to occur, discussed further below. Thus, interim conservation measures for sihek are necessary to reduce its extinction risk while brown treesnake suppression and eradication methods are perfected and implemented.

Captive-Breeding Efforts

In 1983, the Association of Zoos & Aquariums (AZA) initiated the Guam Bird Rescue Project in response to the widespread decline of Guam's native birds. Sihek was one of the Guam birds selected under this program for captive (ex situ) conservation efforts (Hutchins et al. in litt. 1996, p. 4). Between 1984 and 1986, 29 sihek were translocated from Guam to several zoos in the mainland United States. The program was established with the intent of being a short-term rescue but due to the continued presence of brown treesnakes on Guam, ultimately led to an ongoing breeding program. By 1990, the ex situ population increased to 61 sihek in 12 mainland zoos. Currently, an estimated 139 sihek are held at 25 AZA institutions and in a facility at the Guam Department of Agriculture's Division of Aquatic and Wildlife Resources (DAWR) (Newland, S., in litt. 2022a).

A Species Survival Plan Program for sihek, developed by the AZA, has been in place since 1986. In general, Species Survival Plan Programs are established to oversee the population management of species within AZA-accredited facilities. The plans typically include a

population studbook and an annual breeding and transfer plan to ensure the genetic and demographic health of the population. The donor population is carefully managed through the Species Survival Plan Program to ensure the population's long-term viability.

Sihek are relatively difficult to manage in zoos because of their aggressive territorial behavior and moderately expensive diet. In addition, little forward progress toward a recovery program in the wild has led to few new institutions willing to hold or breed the species, which ultimately limits population growth. The small founding population, as well as the limited ability to increase the population beyond its current size, has serious implications for long-term survival of sihek.

Two separate population viability analyses (PVAs) demonstrated rapid declines in the population under current conditions (Johnson et al. in litt. 2015, p. 8; Trask et al. 2021, p. 6). Without changes to management practices that increase reproduction (*i.e.,* reproductive output stays the same), the sihek population is predicted to decline to below 100 individuals by the year 2040 (Johnson et al. 2015, p. 8); and with a slight decrease in reproductive output of just 7 percent, the population is projected to decrease to 25 individuals by 2040 (Johnson et al. 2015, p. 9). One of the PVAs incorporated an inbreeding coefficient into their models and demonstrated, among other things, a rapid decline in the population without an increase in reproductive output such that in 50 years the mean population size is projected to decline to approximately 30 individuals (Trask et al. 2021, entire). The ex situ population of sihek is therefore sensitive to even slight reductions in reproductive output and is at a heightened risk of extinction due to small population dynamics in their existing limited breeding and holding space. However, a small increase in average annual reproductive output (from 2.54 hatchlings per female per year to 2.70 hatchlings per female per year) could support long-term (50-year) sihek population viability as well as a release program (Trask et al. 2021, p. 6).

Breeding facilities for sihek are currently at capacity. Without the ability to release sihek, the species' population growth is constrained. The sihek's current small population size puts the species at risk from stochastic environmental events (*e.g.,* disease outbreaks in the ex situ population or changes in the ability of facilities to house and breed sihek) and demographic threats (*e.g.,* sex-ratio biases, as well as from genetic threats from increasing rates of loss of genetic diversity and accumulation of inbreeding). Further, maintaining the species entirely under captive environmental conditions puts the species at risk from genetic adaptations to captivity (Frankham 2008, entire). This situation could result in individuals having reduced fitness under wild conditions and could negatively impact the success of efforts to ultimately recover the species on Guam.

Reintroduction

No efforts have been made to reintroduce sihek to its native range on Guam due to the continued presence of brown treesnakes, the primary threat that caused its extinction in the wild. Further, until recently, the ex situ population of sihek was not large enough to sustain a release program. Analyses have shown that, with captive management aimed at increasing reproductive output, the ex situ population can support the releases for an experimental population on Palmyra Atoll (Trask et al. 2021 p. 7).

Location and Boundaries of the NEP Area

The NEP area for sihek occurs outside the species' historical range and encompasses the 618 ac (250 ha) of emergent land distributed among the 25 islands that make up Palmyra Atoll (Collen et al. 2009, p. 712), and inclusive of the lagoons surrounding those islands. The islands vary in size from approximately 0.24 to 242 ac (0.1 to 97.9 ha). Palmyra Atoll is located in the Northern Line Islands, approximately 1,000 miles (1,609 km) south of Honolulu, Hawaii, and 3,647 miles (5,869 km) east of Guam (5°53′ N latitude, 162°05′ W longitude). Palmyra Atoll is considered a wet atoll with high humidity, typically greater than 90 percent, and temperatures between 75 and 81 °F (24–27 °C) and rainfall averages 175 inches (in) (444.5 centimeters (cm)) per year (Hathaway et al. 2011, p. 6), without a specific rainy season. Temperatures on Guam are slightly higher, ranging 75–90 °F (24–32 °C), with rainfall averaging 98 in (249 cm), with the greatest rainfall occurring between July and November (*https://www.weather-us.com/en/guam-usa-climate*).

The closest landmass is more than 144 mi (232 km) from Palmyra. Given this and the fact that sihek are an island endemic not known to undertake long-distance flights over open ocean, it is extremely unlikely that sihek would move outside of the NEP area and survive. Also, no other kingfisher species occur on Palmyra Atoll, thus all kingfishers on the atoll will be members of the NEP.

Land Ownership

Palmyra Atoll is currently owned and managed by the Service, The Nature Conservancy, and the Cooper family. The majority of the islands (390 ac (158 ha)), waters, and the coral reefs surrounding Palmyra Atoll, up to 12 nautical miles to sea, are owned by the United States and managed by the Service as a National Wildlife Refuge. Palmyra Atoll National Wildlife Refuge was established in 2001 to protect, restore, and enhance migratory birds, coral reefs, and threatened and endangered species in their natural setting. The Nature Conservancy owns two islands, Cooper and Menge (226 ac (91.5 ha)), and cooperatively manages the atoll with the Service. Home Island (1.8 ac (0.71 ha)) is under private fractional ownership by the Cooper family, and the Service provides stewardship for this island, providing it the same protections as Refuge property (Kropidlowski, in litt. 2021). Palmyra Atoll is also part of the Pacific Remote Islands Marine National Monument, which was established in 2009 and is co-managed by the Service and the National Oceanic and Atmospheric Administration.

Likelihood of Population Establishment and Survival

In late 2020, we established a recovery team for sihek whose purpose is to assist the Service in developing and implementing a conservation strategy for reestablishing sihek in the wild. Members of this team developed a phased approach whereby learning sites (sites used to test conservation translocation procedures as well as demographic and behavioral responses of target species) help achieve the overarching objectives of reducing global sihek extinction risk, while also refining techniques to establish viable wild populations on Guam. Based on habitat suitability, food resource availability, and willing partners, we have identified Palmyra Atoll as a learning site.

The best available scientific data indicate that the introduction of sihek into suitable habitat is biologically feasible and would promote the conservation of the species. Coarse-scale modeling indicated Palmyra could support up to 15 breeding pairs (Laws and Kesler in litt. 2011, p. 65). We evaluated the ecological suitability of Palmyra Atoll and concluded sufficient habitat conditions and food resources are available to support the small

number of sihek needed for a temporary training site (USFWS unpublished data). No known predators of sihek occur on the Atoll. Further, we developed a release and monitoring program that includes interventions such as supplemental feeding if needed to increase the chances of survival. We assessed the potential environmental impacts of introducing sihek and designating the population as an NEP on Palmyra in an environmental assessment (USFWS 2023) (See *National Environmental Policy Act* section, below). To minimize risk to the ecosystem on Palmyra Atoll associated with the introduction, we will monitor for potential environmental impacts as part of the release program (see Monitoring and Evaluation, below).

Potential Effects of Activities on Palmyra Atoll on Introduced Sihek

The effects of Federal, State, or private actions and activities on Palmyra Atoll that are ongoing and expected to continue are not likely to adversely affect the sihek within the NEP area. Public access to Palmyra Atoll is extremely limited and available in only the following ways: (1) working for, contracting with, or volunteering for the Service or The Nature Conservancy; (2) conducting scientific research via Service special use permits; (3) invitation through the Service or The Nature Conservancy; or (4) by private recreational sailboat or motorboat. With prior approval by the Service, privately owned vessels are permitted to access the Palmyra Atoll National Wildlife Refuge. A maximum of two vessels are allowed at one time. Access to Cooper Island must be arranged and secured through The Nature Conservancy. Activities currently occurring in the NEP area, and those likely to occur, are not likely to impede the introduction effort. Current activities on Palmyra Atoll include an ongoing rainforest restoration project, operation of a research station, and limited recreation. The rainforest restoration project includes control of nonnative coconut trees, and opportunistic planting and seeding of native tree species. The Nature Conservancy manages a research station, and visiting scientists are required to obtain a permit from the Service to ensure compatibility with the mission of the Refuge. The Nature Conservancy also provides guided recreational activities (fishing, kayaking) to a small number of visitors to the Atoll. No significant development is planned on the Atoll for the foreseeable future.

Importance of the NEP to Recovery Efforts

This nonessential experimental population of sihek on Palmyra Atoll will promote the conservation and recovery of the species. The International Union for the Conservation of Nature's Guidelines for Reintroduction and Other Conservation Translocations (2013, p. 4) identifies several criteria to consider prior to undertaking a reintroduction, including ''strong evidence that the threat(s) that caused any previous extinction have been correctly identified and removed or sufficiently reduced.'' Although the basic habitat components required by sihek on Guam are still present, they have been made unavailable to sihek due to the ongoing and pervasive threat of brown treesnakes (see *Recovery Efforts to Date*). Innovations in brown treesnake management show promise for controlling their populations at a landscape level but not within the time needed before we expect deleterious declines in the ex situ sihek population. The current captive-only sihek population is at high risk of extinction, and a moderate decline in reproductive output is likely to have long-term negative consequences on the survival probability for this species (see *Captive-Breeding Efforts* and *Reintroduction*). The number of breeding institutions participating in sihek management is limited and declining (Newland in litt. 2021b), further increasing the risk of reduced breeding effort and its associated population decline. Advancements in brown treesnake control show promise for reintroducing sihek to its native range on Guam in the future and that remains a recovery goal, but current control methods are not likely to be able to eradicate this threat prior to substantial forecasted declines in the sihek population.

Introducing a species outside its historical range per our current regulation at 50 CFR 17.81 requires the Service to find that a species' primary habitat has been irreversibly altered or destroyed. While sihek's primary habitat on Guam has not been irreversibly altered or destroyed in perpetuity, we interpret the meaning of ''irreversibly altered or destroyed'' in the context of the unique conditions facing sihek and the very limited current alternatives to prevent its extinction. The habitat on Guam has been irreversibly altered and destroyed for a period of time meaningful to the survival of the species. The ex situ population of sihek is extremely vulnerable to rapid population decline and extinction risk under current reproductive conditions (Johnson et al 2015, p. 8, Trask et al. 2021, p. 6) such that increased reproductive output is paramount for population viability (Trask et al 2021, p. 7). Holding and breeding space at breeding institutions is limited, preventing growth of the ex situ population. Methods to control brown treesnakes on Guam are not sufficient to prevent significant predation on native bird species at this time and prevents us from releasing sihek there presently. Improvements in landscape-scale snake management are under development and are making incremental progress but will not be available for use prior to expected significant declines in the sihek population. Because of the immediate need to increase reproductive output and due to the continued presence of brown treesnakes on Guam, we find that sihek's habitat on Guam is irreversibly altered or destroyed for the purpose of this action, that is, until management of snakes at a landscape level makes it suitable for reintroduction and recovery.

We are releasing sihek onto Palmyra Atoll, which is outside its historical range, for the following purposes: (1) invigorate the ex situ conservation program to increase reproductive output by increasing breeding space at existing facilities and/or recruiting additional facilities to join the ex situ conservation program; and (2) develop and refine release and monitoring methods to be applied when reestablishing a population on Guam to recover the species. Release of sihek on Palmyra Atoll will improve the likelihood of successful reintroduction and recovery on Guam by: (1) providing the opportunity to develop and test release and monitoring techniques, (2) providing information on sihek's ability to survive in the wild, (3) assessing how much human intervention is required to support a wild population, (4) increasing the global population of sihek as an extension of the ex situ population as well as invigorating the breeding program, and (5) potentially serving as a source of wild-hatched birds for future releases on Guam or other sites.

Is the Experimental Population Essential or Nonessential?

When we establish experimental populations under section 10(j) of the Act, we must determine whether that population is essential or nonessential to the continued existence of the species. This determination is based solely on the best scientific and commercial data available. We consider an experimental population essential if its loss would be likely to appreciably

reduce the likelihood of survival of that species in the wild (50 CFR 17.80(b)). We are designating the population of sihek on Palmyra Atoll as nonessential for the following reasons:

(1) No populations of sihek occur in the wild currently;

(2) the experimental population area is too small to support a self-sustaining wild population of sihek (Laws and Kesler 2011, p. 63) and is intended only as a temporary training site (*i.e.,* approximately 10 or more years) for us to improve release techniques, monitoring, and adaptive management for population establishment on Guam, when its habitat is available; and

(3) loss of the experimental population would not preclude other recovery options, including future efforts to establish sihek populations elsewhere.

In addition, we evaluated the potential impacts of the establishment of the experimental population on the ex situ population. Establishment of the experimental population will not affect the potential to establish a future, self-sustaining, wild population of sihek on Guam for the following reasons:

(1) The majority of the sihek population will remain in an ex situ population distributed among 25 facilities, where they are carefully managed according to the Species Survival Plan Program (Newland in litt. 2021a); and

(2) only a small number of individuals will be removed from the ex situ population for release on Palmyra Atoll, and these removals are expected to have minimal impact on the survival of the ex situ population (see Donor Stock Assessment and Effects on Donor Population, below).

As mentioned above in Importance of the NEP to Recovery Efforts, the introduction on Palmyra Atoll will further the conservation of sihek both in terms of improving the status of the ex situ population and in increasing the likelihood of success in establishing wild populations. In the near term, we anticipate that the introduction of sihek to Palmyra Atoll will invigorate the ex situ breeding program and result in more breeding space at existing facilities, more institutions joining the program, or both, ultimately resulting in a larger population if additional institutions join. Space is a limiting factor for this extinct-in-the-wild species, and demonstrating our continued efforts to recover it in the wild will likely increase interest in the species (Newland in litt. 2022b). In the longer term, the information gathered from observing the species under wild conditions, development of suitable release and monitoring methods, and assessment of how much human intervention might be needed to support a wild population will improve future release efforts. Lastly, wild-hatched sihek could be a complementary source, alongside captive-bred birds, for translocation to Guam or other sites.

Release Procedures

Late-stage nestlings or recent fledglings will be flown to Palmyra Atoll where they will be held in release aviaries for up to 1 month. Three sets of three flight aviaries will be established across Palmyra Atoll at, or close to, locations where habitat appears most suitable. During this time, sihek will undergo acclimation and training to respond to supplementary feeding signals. Prior to release, all sihek will be fitted with a radio transmitter consistent with the Bird Banding Laboratory of North America's guidelines that transmitters be no more than 3 percent of a bird's body weight (Gustafson et al. 1997).

Release from aviaries will be via opening of a panel in the aviary wall to allow individuals to come and go freely. We will monitor each sihek daily, immediately after release and throughout their first year of release. Once released, sihek will be exposed to conditions in the wild that the species has not encountered in more than 30 years. While still being held in pre-release aviaries on Palmyra Atoll, we will provide natural prey items as much or as often as necessary so the sihek can learn to forage on multiple food sources. Further, sihek will be trained to come to feeders through reinforcement with a whistle, thus allowing for a way to provide supplemental food if needed. We will also conduct a thorough health assessment on each individual prior to release to ensure they are in good body condition. After release, we will monitor sihek daily, and if an individual is sick or injured, we may intervene and bring it back under human care temporarily.

After the first year, we may reduce the intensity of monitoring if few or no problems are observed. Sihek monitoring will cover a range of components, including general behavior (maintenance, foraging, locomotion, conspecific interactions); health (weights collected remotely at feeding stations, fecal samples, and semiannual capture and assessment); and breeding (pairing, territoriality, nest excavation, nest building, egg laying and clutch size, hatch date, nestling survival, and fledge success). Additional details of the release procedures are provided in the Sihek Management Plan (Andrews et al. in litt. 2022).

Donor Stock Assessment and Effects on Donor Population

The donor population for the introduction of sihek to Palmyra Atoll is the ex situ population of sihek. This population is distributed among 25 breeding facilities in the U.S. mainland and on Guam (24 AZA institutions and 1 Guam Division of Aquatic and Wildlife Resources (DAWR) facility), with the population being managed through the Sihek Species Survival Plan Program (see *Captive-Breeding Efforts*). The most recent population count documented 139 birds (Newland in litt. 2022a). The population size remains below the target of 200 individuals identified in the 2020 Species Survival Plan Program (Newland et al. 2020, p. 2) in large part due to limited holding capacity across the breeding facilities. Recent funding for the construction of another facility at Brookfield Zoo, as well as for the transfer to and maintenance of sihek at that facility, has allowed for growth of the population. The current Species Survival Plan Program coordinator is actively seeking additional AZA institutions to participate in the sihek breeding effort, and this solicitation will likely be aided by releases to Palmyra Atoll and the recent progress in recovery planning for the species.

Population models indicate that an increase in breeding (*i.e.,* production of hatchlings) is required to ensure the sustainable removal of individuals from the ex situ population for release to Palmyra (Johnson et al. 2015, p. 13, and Trask et al. 2021, p. 6). We have observed measurable population increases when there has been focused management to increase productivity in the ex situ population. Between 2004 and 2013, the sihek population increased from 61 birds to a peak of 157 birds because of increased reproductive output using multiple clutching (when a breeding pair is induced to produce more than one clutch of eggs per year by removing and artificially incubating the first clutch of eggs) (Newland et al. in litt. 2020, pp. 4–5). The best available information indicates that increasing ex situ reproductive output to rates seen between 2004 and 2013 is likely to support a release program on Palmyra without negatively impacting the long-term viability of the species (Trask et al. 2021, p. 6).

Only a small number of sihek will be removed from the ex situ population for release on Palmyra Atoll. We plan to remove up to 9 in the first year, and fewer than 9 in subsequent years, to

ultimately achieve a target of 10 breeding pairs. The release cohort will consist of hatch-year sihek that will be reared under pathogen- and vector-free conditions. All individuals will be health-screened prior to release. Release cohorts will consist of sihek that are relatively unrelated to each other (*i.e.,* sihek with low mean kinship), and that have a relatively low individual inbreeding coefficient. In addition to genetic considerations for released individuals, retaining maximum genetic diversity within the ex situ population is a priority; therefore, individuals identified as genetically valuable (*i.e.,* with a low mean kinship coefficient, such that they are genetically underrepresented in the ex situ population) will be retained in the ex situ population. We will assess selection of individuals in release cohorts for follow up translocations based on both the sex ratio and genetics of the introduced population on Palmyra Atoll, as well as that of the donor population.

Species Survival Plan Program annual reports (see *Captive-Breeding Efforts*) will continue throughout the releases and will be reviewed to ensure that removal of individuals for release will not be detrimental to the stability of the ex situ population. If negative impacts on the donor population are detected, we will pause releases while donor population health is improved. Given the careful management of the donor population, the ability to increase its productivity via multiple clutching, and the relatively small number of sihek that will be released annually, negative impacts to the donor population are expected to be minimal.

Management

We will collaborate with Guam DAWR, Zoological Society of London, AZA, Palmyra Atoll National Wildlife Refuge, and The Nature Conservancy on releases, monitoring, coordination, and other tasks as needed to ensure successful introduction of the species to Palmyra Atoll. A few specific management considerations are addressed below.

Incidental Take: Experimental population rules contain specific prohibitions and may provide exceptions regarding the taking of individual animals under the Act. The specific prohibitions and exceptions we adopt in this final rule are compatible with most routine human activities anticipated in the NEP area (*e.g.,* resource monitoring, invasive species management, and research; see Importance of the NEP to Recovery Efforts, above). Section 3(19) of the Act defines ''take'' as ''to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.'' ''Incidental take'' is further defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Incidental take of sihek within the experimental population area will be allowed, provided that the take is unintentional and not due to negligent conduct.

Special Handling/Intentional Take: Employees of the Service, Guam DAWR, The Nature Conservancy, Zoological Society of London, AZA facilities holding sihek, and authorized agents acting on behalf of the Service or these other entities may intentionally take sihek through handling sihek for scientific purposes; relocating individuals or bringing individuals into captivity for the purposes of increasing sihek survival or fecundity; aiding sick or injured sihek; salvaging dead sihek; disposing of a dead specimen; or aiding in law enforcement investigations involving the sihek. Any other person would need to acquire a permit from the Service for these activities.

Interagency Consultation: For purposes of section 7(a)(2) of the Act, section 10(j) of the Act and our regulations (50 CFR 17.83) provide that nonessential experimental populations are treated as species proposed for listing under the Act except on National Park Service and National Wildlife Refuge System lands, where they are treated as threatened species for the purposes of section 7(a)(2) of the Act. We will address our section 7(a)(2) consultation obligations for sihek within the Palmyra National Wildlife Refuge through a programmatic intra-Service consultation completed prior to releasing birds. Any activities outside of those analyzed in our programmatic consultation that may affect sihek within the NEP area will be addressed through future individual intra-Service section 7 consultations.

Public Awareness and Cooperation: On November 18, 2021, in cooperation with Guam DAWR, we engaged the Governor of Guam and constituents to inform them of our plans to introduce sihek to Palmyra Atoll. We coordinated closely with the co-manager of Palmyra Atoll (The Nature Conservancy) throughout the planning process, and we expect our coordination with them will continue through the duration of the project. We publicized availability of the proposed rule (87 FR 53429, August 31, 2022) and the opportunity for comment with a press release (*https://fws.gov/story/2022-08/usfws-proposes-experimental-population-sihek-palmyra-atoll*). We also sent letters to 14 conservation partners, notifying them of the availability of the proposed rule and requesting comments.

Monitoring and Evaluation

We will monitor the health, habitat use, behavior, foraging activity, movement, breeding, and survival of all sihek released and hatched at Palmyra Atoll. We will attempt to weigh sihek daily at supplementary feeding platforms with inbuilt scales. Passive collection of fecal material from these supplementary feeding platform visits will be screened for gastrointestinal parasite loads and examination of diet. We will attempt to capture individuals twice each year for a more thorough physical examination (weight, condition, ectoparasite load, feather fault bar analysis). During these captures, we will take a blood sample, which will be stored in ethanol for later diagnostics of blood parasites, and a blood smear made for visual examination of blood parasites and white blood cell count analysis. Further, we will collect a fecal sample opportunistically and a cloacal swab for later bacterial culture.

Once each sihek is released, we will track it and attempt to log its location at least once daily to document post-release movement patterns and territory establishment. Individuals will be located via radio transmitter tracking or visual searches. During observations, we will record behaviors including maintenance, perching, ingestion, excretion, locomotion, vocalizations, and interactions. We will record food items whenever feeding is observed in free-flying sihek.

We will attempt to closely monitor all breeding attempts to determine timing of pairing, nest building, egg laying and clutch size, hatch date, nestling survival, and fledge success. Unhatched eggs will be collected for analysis of fertility and embryo development. Recovered dead nestlings will be necropsied in the field and samples taken for later laboratory analysis for cause of death. Where possible, surviving nestlings will be weighed every third day throughout development until banding age. During banding, we will collect a range of samples as specified above for adult health sampling.

We will create a resighting history for each sihek released or hatched into the population. We intend to monitor sihek and their prey species with the full-time presence of staff on Palmyra, at least until intensive monitoring shows: (1) sihek are foraging independently and

exhibiting behaviors typical of *Todiramphus* species; and (2) sihek are not having undesirable impacts on prey species populations (undesirable impacts are discussed further in the sections below). If the two situations described above occur, then we may reduce staffing to less than full time and monitor sihek and the environment less intensively. If undesirable impacts on prey species populations are not resolvable, we would evaluate whether this was an unacceptable impact requiring termination of the program. Unacceptable impacts are discussed below, in *Exit Strategy.*

Ecosystem Impacts

As Palmyra Atoll is outside the native range of the sihek, introduction of sihek to Palmyra Atoll could have potential impacts on native species. The International Union for the Conservation of Nature, Species Specialist Commission, Invasive Species Specialist Group recognizes several different mechanisms of impact that introduced species (that others have sometimes called alien species) can have on native ecosystems (Pagad et al. 2015, pp. 130–132). These include impacts through predation, competition, hybridization, or transmission of disease-causing pathogens to native species (Blackburn et al. 2014, pp. 4–7).

To assess the potential impacts that sihek may have on Palmyra Atoll and the mechanisms through which these impacts may occur, researchers on the recovery team conducted an environmental impact assessment, based on the Environmental Impact Classification for Alien Taxa (EICAT) (Blackburn et al. 2014, entire) and the Generic Impact Scoring System (Nentwig et al. 2010, entire). This process involved consulting with a range of relevant experts (n=19), who were asked to provide their judgment on the level of impact that sihek may have through each potential impact mechanism. Impact levels were described in a range from the lowest level of ''minimal,'' where effects are negligible, to the highest level of ''massive,'' where impacts result in local extinction(s) and community-level changes are irreversible. We evaluated the relative risk of competition, hybridization, predation impacts, and disease transmission in an environmental assessment. Based on our analysis in the environmental assessment, we conclude there is no risk of competition or hybridization, and there are sufficient measures in place to prevent disease transmission from the introduction. In addition, the planned intensive monitoring will be sufficient to detect, and provide a timely response to, potential impacts of the sihek on the recipient ecosystem on Palmyra Atoll.

In the EICAT assessment, experts considered predation by sihek to be the most likely impact of sihek introduction to Palmyra (although the magnitude of this factor was judged to be moderate at most). The EICAT assessment experts' scoring generally assessed the introduction of a novel avian predator. Therefore, we will focus post-release environmental monitoring on potential sihek prey species that are native to Palmyra Atoll. We will obtain sihek diet information through behavioral observation and fecal samples, as described above (Release Procedures and Monitoring and Evaluation). This information will highlight major components of sihek post-release diet and help guide more focused monitoring.

At a minimum, we will coordinate with The Nature Conservancy and Palmyra National Wildlife Refuge to carry out annual monitoring on a range of suitable prey items, as described above. We will use the most appropriate survey methods for different taxa. If dietary and behavioral observations of released sihek suggest a particular prevalence and abundance of specific prey items that are of conservation concern, we will establish more frequent monitoring surveys. We will analyze post-release monitoring data to obtain estimates of abundance and density for reference taxa. These estimates will then be compared with pre-release monitoring data, collected in the weeks prior to release, with estimates from paired locations across the island in a before-after, control-impact experimental design. In the event we find estimated impacts to be unacceptably high, such as preferential prey selection for one species such that it has population-level effects, we will activate an appropriate response (see *Exit Strategy,* below).

Our present monitoring plan relies on a combination of targeted prey species surveys and information from existing monitoring of released birds. Our monitoring approach balances the negative impacts of frequent invasive surveys with the need to identify serious negative consequences of the sihek releases on the recipient site. Active monitoring will be for 2 years after the first release, and we will regularly assess results through monthly summaries, analyses at 6-month intervals, and annual predictive modeling. After the first 2 years, we will determine whether to continue at full intensity, reduce the intensity of our monitoring, or discontinue monitoring. Factors that will impact our decision making regarding monitoring include evidence of:

- Sihek prey selection for a single species, which could indicate population impacts to that species;
- detection of significant changes in abundance of prey in areas with sihek compared with areas without sihek; or
- shifts in community composition and diversity that differ significantly between areas with sihek and areas without sihek.

If any undesirable impacts are causally linked to the introduction of sihek, we will weigh the benefits and risks in consultation with the recovery team and The Nature Conservancy to determine whether to continue ongoing management, adopt risk mitigation strategies, or terminate the program (see *Exit Strategy,* below).

Annual reports summarizing monitoring and management activities will be developed by the Zoological Society of London in collaboration with the Service, The Nature Conservancy, and the Sihek Recovery Team.

Exit Strategy

Depending on the circumstances, the Service may either terminate or pause the release program to address identified issues before possibly resuming. These scenarios and the Service's expected response are detailed below.

The Service will terminate the release program on Palmyra Atoll if:

(1) Monitoring indicates the benefits from the Palmyra population (including learning and refining release and support strategies for eventual releases on Guam) no longer outweigh the risks to the species or the welfare of the NEP or ex situ population; or

(2) monitoring shows unacceptable impacts on the ecosystem that can be clearly causally linked to the introduction of sihek.

In addition to these ''must terminate'' scenarios, the Service may also terminate the release program:

(3) When the purposes of the program have been realized (*e.g.,* we have developed successful release and monitoring methodologies to apply to future release efforts or we have demonstrated sihek can survive and reproduce in the wild without human intervention, see Importance of the NEP to Recovery Efforts), although we do not anticipate this scenario until 10 or more years after the first release.

The Service may also temporarily suspend the program to address issues that arise before program termination under any of the three scenarios above. The monitoring team will summarize

information they collect on a regular basis and will share it with the recovery team and the managers of Palmyra Atoll (the Service and The Nature Conservancy). If results indicate the program is approaching scenario (1) or (2) above, then the Service, in consultation with the recovery team and The Nature Conservancy, will determine if terminating the program is the best way to avoid these outcomes, or whether the program should be paused, and adaptive steps taken to address them before resuming the program.

Regular monitoring and reporting will also inform progress toward achieving program goals and scenario (3) above: The Service will determine—in consultation with the recovery team and The Nature Conservancy—when the purpose of the NEP has been achieved such that the program can come to an end. When the Service terminates the program, the Service will also address what will happen with any remaining individuals in the NEP, *i.e.,* whether they will be relocated to captivity, relocated to other suitable habitat, or remain on Palmyra, based on the circumstances at the time of termination.

Summary of Comments and Recommendations

In the proposed rule published on August 31, 2022 (87 FR 53429), we requested that all interested parties submit written comments on the proposal by September 30, 2022. In addition, in accordance with our joint policy on peer review published in the **Federal Register** on July 1, 1994 (59 FR 34270), and updated guidance issued on August 22, 2016 (USFWS 2016, entire), we solicited peer review of our proposed rule from six knowledgeable individuals with scientific expertise in conservation translocation, endangered species management, Pacific Island birds, and Guam native bird species. We received responses from three peer reviewers. We also contacted appropriate Federal and State agencies, local experts, and organizations, and other interested parties and invited them to comment on the proposal.

We reviewed all comments received from the public and peer reviewers for substantive issues and new information regarding the establishment of an experimental population of sihek on Palmyra Atoll. Comments on these issues and information are addressed in the following summary and have been incorporated into this final rule as appropriate. Changes other than minor word changes for clarification or correction incorporated into the final rule are summarized in the Summary of Changes from the Proposed Rule section, below.

Peer Review Comments

All peer reviewers expressed support for the introduction of an experimental population of sihek with an associated 10(j) rule and agreed that the action is likely to contribute to the conservation of the species. Comments from peer reviewers resulted in updates in two areas of this final rule (see Summary of Changes from Proposed Rule).

(1) Comment: One peer reviewer indicated their support for establishing a 10(j) experimental population because of the negative consequences of maintaining a species solely in captivity, including risks associated with small population size and inbreeding depression.

Response: Recent population viability models (Johnson et al. 2015 in litt and Trask et al. 2021) have demonstrated rapid declines in the captive population if the reproductive rate remains the same. Breeding facilities are currently at capacity, and the sihek's population growth is constrained. The establishment of an experimental population of sihek on Palmyra Atoll will provide an opportunity to increase the sihek population, and to expose a portion of this population to habitat conditions in the wild for the first time in more than 30 years.

(2) Comment: Multiple reviewers commented that, at present, sihek habitat on Guam is compromised by the continued presence of brown treesnakes. They stated that, nevertheless, good progress is being made towards the eventual eradication of brown treesnakes such that future restoration of sihek to Guam remains an attainable goal.

Response: Reestablishing populations of sihek on Guam is an essential component of the recovery strategy for sihek, as expressed in the recovery criteria of the sihek recovery plan (USFWS 2008, pp. 42–43). We presently cannot release sihek within their historical range due to the continued presence of brown treesnakes. The establishment of an experimental population on Palmyra Atoll will allow us the needed testing of field techniques for the future reintroduction of sihek on Guam, once landscape-scale management of brown treesnakes is implemented and effective. In recent years, technological advances to control brown treesnakes show promise as a tool to control snakes at a landscape level. However, they are not yet sufficient to protect sihek from unsustainable predation, and therefore it is not possible to reintroduce sihek to Guam before significant declines in the ex situ population are expected to occur. Thus, the establishment of an experimental population on Palmyra Atoll helps reduce sihek extinction risk while brown treesnake control methods are refined and implemented.

(3) Comment: One reviewer stated that releasing sihek onto Palmyra Atoll as an experimental population is reasonable and scientifically sound. They went on to state that considerable work has been conducted to assess the suitability of Palmyra for Guam kingfishers, and to consider the possibilities of negative consequences to the fauna of Palmyra. The reviewer further stated that the process of introducing, managing, and monitoring sihek on Palmyra would provide invaluable knowledge for doing so eventually on Guam. As a result, the reviewer stated that the 10(j) experimental population of sihek will greatly increase the probability of success for a future Guam reintroduction.

Response: Introducing a species outside its historical range has inherent risks, both to the species and the ecosystem into which it is being introduced. We evaluated the extinction risk to sihek and determined the experimental population on Palmyra Atoll would further the species' recovery by increasing the worldwide population, developing and refining release techniques, and establishing a source of wild-adapted birds for future releases. We also evaluated the suitability of Palmyra Atoll for sihek through an assessment of prey availability and habitat suitability based on available information. We will monitor sihek and prey species to evaluate potential impacts to their populations. If negative changes in populations are causally linked to sihek and are undesirable, we will weigh the benefits and risks in consultation with the recovery team and The Nature Conservancy to determine whether to continue ongoing management, adopt risk mitigation strategies, or terminate the program (see *Exit Strategy,* above).

(4) Comment: One reviewer commented that successfully establishing a population of sihek on Palmyra would not only allow the species to exist in the wild again, allowing for beneficial behaviors and adaptations to be maintained, but would also be an important source of individuals for the reintroduction of sihek to Guam when conditions allow. Additionally, the process of introducing, managing, and monitoring sihek on Palmyra would provide invaluable knowledge for doing so

eventually on Guam. Therefore, the reviewer stated that the 10(j) experimental population of sihek will greatly increase the probability of success for a future Guam reintroduction.

Response: The successful establishment of the experimental population on Palmyra will advance conservation and recovery of the species. .

Public Comments

(1) Comment: Several commenters shared their support for the proposed 10(j) experimental population as a first step toward recovering the sihek.

Response: In our efforts to further the conservation of sihek, we will learn valuable information that will inform future release efforts, including release techniques, behavior in wild conditions, and monitoring methods. We will also increase the number of sihek in existence and have a small population of wild birds to potentially help source future translocation efforts. Without the forethought of those who brought sihek into captivity and the effort of the institutions that have managed the populations during this time, the sihek would have been lost.

(2) Comment: One commenter noted the importance of involving CHamoru scientists and cultural practitioners in the development and implementation of the project.

Response: The Service values incorporating biological and cultural perspectives of the CHamoru people in sihek recovery efforts. At the beginning of translocation site selection and project development in 2019, the Service held a workshop on Guam to receive input and feedback from cultural leaders. The intent of the workshop was to acknowledge and better understand the significant connection the sihek has with the CHamoru people and their culture. We recognize that the release of sihek is about much more than saving a species. Given the sihek's cultural and biological importance to Guam, the Service developed several objectives for connecting with the community that are reflected in work plans that complement this 10(j) regulatory process under the Act. Throughout project planning, in coordination with our partners, we actively sought out local and indigenous community involvement. Today, the Service continues to work with the Guam DAWR, scientists, cultural practitioners, and the public as we collaborate to return the sihek back to the wild. At the time of introduction, due to limited transportation infrastructure and the distance of Palmyra Atoll from Guam, accommodating more local involvement or protocols may be challenging. The Service welcomes continued discussions with the CHamoru community to address scientific and cultural protocols for the sihek.

(3) Comment: One commenter noted the importance of an outreach program on Guam to increase awareness of sihek and to engender support for the establishment of an experimental population on Palmyra Atoll.

Response: A partner on Guam was awarded a nationally competitive grant to assist with Guam outreach efforts. It is a multifaceted, multiyear outreach program to be implemented prior to and concurrent with the Service's sihek release and monitoring projects. The program was developed by the Service's partners and Guam-based collaborators with expertise in science and education, as well as with CHamoru language and culture. This outreach will engage 40 teachers, train high school students, and engage more than 2,000 fourth-grade students in the first year. This program will also empower students and teachers to take action to protect the sihek and Guam's natural resources, while promoting an appreciation of the sihek's cultural significance. A CHamoru Sihek Storybook will be produced in the CHamoru language, along with a sihek activity book, and a website with updateable sihek resources and student contributions. A sihek-focused curriculum will be created and shared with teachers and students.

The outreach program is designed to increase awareness of the sihek's story: its threats, the status and importance of the sihek captive population, and future goals of the sihek recovery project. Expanding its reach beyond schools and with the public, the outreach program will share information at island-wide events and through local media and will enable the Service and its partners to showcase outreach milestones and successes.

(4) Comment: One commenter expressed concern about our proposal to decrease ecosystem and prey monitoring if we detect negligible impacts from the introduction of sihek and suggested that we further define ''unacceptable'' impacts.

Response: Many potential prey species occur on Palmyra Atoll, and we have relatively little knowledge about what sihek will preferentially feed upon after release, other than using general assumptions about prey size and *Todiramphus* biology. Detecting the impact of released sihek on prey species and the recipient ecological community is likely to require a relatively large sample size, replicated in space and time, to achieve sufficient statistical power. Our monitoring plan relies on a combination of targeted prey species surveys and information from monitoring released birds. Our monitoring approach balances the negative impacts of frequent invasive surveys with the need to identify serious negative consequences of the sihek releases on the recipient site. Active monitoring will occur for at least 2 years after the first release, and we will regularly assess results through monthly summaries, more in-depth analyses at 6-month intervals, and annual predictive modeling. After the first 2 years, we will determine whether to continue at full intensity, downscale, or discontinue monitoring.

In this final rule we have clarified that we will evaluate if impacts are undesirable relative to sihek predation on local species for purposes of our monitoring strategy based on the following factors:

- sihek prey selection for a single species, which could indicate population impacts to that species;
- detection of significant changes in abundance of prey in areas with sihek compared with areas without sihek; or
- shifts in community composition and diversity that differ significantly between areas with sihek and areas without sihek.

If any undesirable impacts are causally linked to the introduction of sihek, we will weigh the benefits and risks in consultation with the recovery team and The Nature Conservancy to determine whether to continue ongoing management, adopt risk mitigation strategies, or terminate the program (see *Exit Strategy,* above).

As to the commenter's request that we provide specific definitions for ''unacceptable'' impacts that require termination of the program, we are unable to define specific, quantitative parameters to do so. Rather, through our continued monitoring and coordination and consultation with the recovery team and The Nature Conservancy, we expect to keep ahead of any potential negative impacts to the ecosystem as a result of the introduction in order to adaptively respond before termination would be required.

(5) Comment: One commenter stated that the removal of eggs from the captive population would have a deleterious impact and increase extinction risk, particularly if the released individuals do not survive.

Response: We intend to introduce a small number of sihek to Palmyra Atoll: 9 individuals in the first year, with additional, likely smaller, cohorts of

birds in subsequent years to reach a target population of 20 birds. Evaluation has shown that a small increase in the average annual reproductive output (from 2.54 hatchlings per female per year to 2.70 hatchlings per female per year) could support long-term (50-year) sihek population viability as well as a release program (Trask et al. 2021, p. 6). Further, we would remove eggs from captive-breeding pairs during incubation, and allow the pair to lay another clutch, thus replacing the birds removed from the ex situ (captive) population, which will—from a demographic standpoint—negate the loss of these individuals. The ex situ population is the only population of sihek in the world, so we will monitor it closely to ensure that there are no negative impacts to its viability and potential growth. We have included triggers for pausing or ending the release program; a negative impact to the ex situ population is one of the triggers for enacting one of those strategies.

(6) Comment: One commenter noted that the captive (ex situ) sihek population is small, and that measures will need to be in place to ensure the introduced population on Palmyra can survive.

Response: We recognize the importance of ensuring the integrity of the captive (ex situ) population of sihek and implementing measures to maximize the odds that the introduced population on Palmyra survives. Only a small number of sihek will be removed from the ex situ population (up to nine in the first year), and the best available information indicates the ex situ population can support this program without negative impacts to its viability. Once released on Palmyra, sihek will be exposed to conditions in the wild—conditions that the species has not encountered in more than 30 years. While still being held in pre-release aviaries on Palmyra Atoll, we will provide natural prey items as necessary so the sihek can learn to forage on multiple food sources. Further, birds will be trained to come to feeders through reinforcement with an associated sound, thus allowing supplemental food provisioning if needed. We will also conduct a thorough health assessment of each individual prior to release to ensure they are in good body condition. After release, we will monitor individuals daily. If a bird is sick or injured, we may intervene and bring it in under veterinary care as needed.

(7) Comment: One commenter was concerned that sihek might consume prey items with residual amounts of rodenticide from the 2011 eradication of rats from Palmyra Atoll.

Response: Amplification of toxicants through the food chain can be a concern in predator eradication programs. A study to evaluate potential impacts on Palmyra Atoll (Wegmann et al. 2019, entire) collected samples of numerous species, including potential sihek prey items, and tissue analyses showed no residue in invertebrates or geckos 3 years after the rat eradication. Thus, secondary exposure to rodenticide through consumption of exposed prey items is highly unlikely.

(8) Comment: One commenter expressed concern that sihek might consume prey items that have ingested rodenticides used to prevent rats from reinvading Palmyra Atoll.

Response: Rodents were eradicated from Palmyra in 2011, and efforts to reduce the likelihood of reintroduction include a limited use of rodenticide when planes or ships arrive at the Atoll. Rodenticide is applied only around the points of entry (runway and dock), and baits are contained within bait boxes (Wegmann in litt. 2022a). This application occurs for two days prior to a plane or ship arriving and remains in place for four days after the arrival of a plane and for 16 days after the arrival of a ship. The bait stations are monitored for rodent signs, and hermit crabs (*Coenobita brevimanus* and *C. perlatus*) on which sihek feed. The bait stations are placed on ''crab-resistant'' platforms to minimize entry by crabs, so very few crabs access the bait stations, and those that are found weigh generally around 2.8 oz (80g), which is well outside the size class of prey that sihek can take (Wegmann in litt. 2022b, Andrews et al. 2022, p. 19). Further, research showed no residue in invertebrates 3 years after the rat eradication (Wegmann et al. 2019). As a result, secondary exposure to rodenticide through consumption of exposed crustaceans is highly unlikely. If this unlikely scenario occurs, we will evaluate methods to further minimize such exposure risk (*e.g.,* improving the stations to further reduce the ability of crabs to enter), while balancing the need to prevent the reinvasion of Palmyra by rodents. We would also consider the use of non-toxicant biosecurity methods.

(9) Comment: Three commenters were concerned about potential predation of sihek by brown treesnakes on Palmyra Atoll.

Response: No brown treesnakes occur on Palmyra Atoll. Sihek released on Palmyra Atoll will not be exposed to any predation pressure as no known predators of sihek occur on the Atoll.

(10) Comment: One commenter was concerned with introduced sihek competing with other species on Palmyra Atoll, such as black drongo.

Response: Black drongos occur on Guam but do not occur on Palmyra Atoll.

No other native or nonnative species on Palmyra Atoll share the same diet or habitat preferences as the sihek. Thus, sihek will not directly compete with any species on Palmyra Atoll.

Summary of Changes From Proposed Rule

Comments received by the public and peer reviewers resulted in updates in two areas from the proposed rule to the final rule. In the final rule preamble, we:

- Provide more detail regarding how we will determine if releasing sihek on Palmyra Atoll will have undesirable impacts to prey species (see *Ecosystem Impacts*); and
- Provide more detail regarding management of released sihek (see Release Procedures).

Findings

Based on the best scientific and commercial data available (in accordance with 50 CFR 17.81), we find that releasing sihek onto Palmyra Atoll with the regulatory provisions in this rulemaking will further the conservation of the species. We find that the continued presence of the brown treesnake on Guam means that sihek's native habitat has been unsuitably and irreversibly altered or destroyed for the foreseeable future such that the introduction of sihek to Palmyra Atoll outside of its probable historical range is warranted and consistent with our regulations at 50 CFR 17.81. We define the foreseeable future as the period of time before significant declines in the ex situ population of sihek are likely to occur. The nonessential experimental population status is appropriate for the introduced population; the potential loss of the experimental population would not appreciably reduce the likelihood of the survival of the species in the wild because there are currently no sihek remaining in the wild.

Required Determinations

Regulatory Planning and Review (Executive Orders 12866 and 13563)

Executive Order 12866 provides that the Office of Information and Regulatory Affairs (OIRA) in the Office of Management and Budget will review all significant rules. OIRA has determined that this rule is not significant.

Executive Order 13563 reaffirms the principles of E.O. 12866 while calling

for improvements in the Nation's regulatory system to promote predictability, to reduce uncertainty, and to use the best, most innovative, and least burdensome tools for achieving regulatory ends. The Executive order directs agencies to consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice for the public where these approaches are relevant, feasible, and consistent with regulatory objectives. E.O. 13563 emphasizes further that regulations must be based on the best available science and that the rulemaking process must allow for public participation and an open exchange of ideas. We have developed this rule in a manner consistent with these requirements.

Regulatory Flexibility Act (5 U.S.C. 601 et seq.)

Under the Regulatory Flexibility Act (as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996; 5 U.S.C. 601 *et seq.*), whenever a Federal agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare, and make available for public comment, a regulatory flexibility analysis that describes the effect of the rule on small entities (*i.e.,* small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of an agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. SBREFA amended the Regulatory Flexibility Act to require Federal agencies to provide a statement of the factual basis for certifying that a rule will not have a significant economic impact on a substantial number of small entities. We certify that this rule does not have a significant economic effect on a substantial number of small entities. The following discussion explains our rationale.

The areas that are affected under this rule are restricted to Palmyra Atoll. Because of the regulatory flexibility for Federal agency actions provided by the NEP designation and the exemption for incidental take in the rule, we do not expect this rule to have significant effects on any activities within Federal, State, or private lands within the NEP area. In regard to section 7(a)(2) of the Act, the sihek population will be treated as proposed for listing, and, therefore, Federal action agencies are not required to consult on their activities, except on National Wildlife Refuge System lands, where the NEP will be treated as a threatened species for the purposes of section 7 of the Act.

Section 7(a)(4) of the Act requires Federal agencies to confer (rather than consult) with the Service on actions that are likely to jeopardize the continued existence of a species proposed for listing. However, because the NEP is, by definition, not essential to the survival of the species, and no sihek exist in the wild outside of the NEP area that could be impacted, conferring will likely never be required for the sihek population within the NEP area. Furthermore, the results of a conference are advisory in nature and do not restrict agencies from carrying out, funding, or authorizing activities. Section 7(a)(1) of the Act requires Federal agencies to use their authorities to carry out programs to further the conservation of listed species, which would apply on any lands within the NEP area. On National Wildlife Refuge System lands within the NEP area, the sihek would be treated as a threatened species for the purposes of section 7 of the Act. As a result, and in accordance with our regulations, some modifications to proposed Federal actions within National Wildlife Refuge System lands may occur to benefit the sihek, but we do not expect projects to be substantially modified because these lands are already administered in a manner that is compatible with sihek conservation.

This rule broadly authorizes incidental take of the sihek within the NEP area. The regulations implementing the Act define ''incidental take'' as take that is incidental to, and not the purpose of, carrying out an otherwise lawful activity, such as habitat management, infrastructure maintenance, and other activities in the NEP area that are in accordance with Federal, Tribal, State, and local laws and regulations. Intentional take for authorized data collection or recovery purposes by authorized personnel are also allowed under the NEP designation. Other forms of intentional take would require a section 10(a)(1)(A) recovery permit under the Act.

The only private landowners on Palmyra Atoll are The Nature Conservancy and the Cooper family. The principal activities on private property near the release site are associated with scientific field station operations, including the operation of a landing strip for aircraft, and some limited recreation. The presence of the sihek is not likely to significantly affect the use of lands for these purposes because no new or additional economic or regulatory restrictions will be imposed upon private landowners due to the presence of the sihek. Therefore, this rulemaking is not expected to have any significant adverse impacts to activities on private lands within the NEP area.

Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 *et seq.*):

(1) This rule does not ''significantly or uniquely'' affect small governments. We have determined and certify pursuant to the Unfunded Mandates Reform Act, that, if adopted, this rulemaking would not impose a cost of $100 million or more in any given year on local or State governments or private entities. A small government agency plan is not required. Small governments are not affected because the NEP designation does not place additional requirements on any city, county, or other local municipalities.

(2) This rule will not produce a Federal mandate of $100 million or greater in any year (*i.e.,* it is not a ''significant regulatory action'' under the Unfunded Mandates Reform Act). This NEP designation for sihek does not impose any additional management or protection requirements on the States or other entities.

Takings (E.O. 12630)

In accordance with Executive Order 12630, the rule does not have significant takings implications. When introduced populations of federally listed species are designated as nonessential experimental populations, the Act's regulatory requirements regarding the introduced population are significantly reduced. This rule would allow for the taking of sihek when such take is incidental to an otherwise legal activity.

A takings implication assessment is not required because this rule: (1) Would not effectively compel a property owner to suffer a physical invasion of property and (2) would not deny all economically beneficial or productive use of the land or aquatic resources. This rule would substantially advance a legitimate government interest (conservation and recovery of a listed species) and would not present a barrier to all reasonable and expected beneficial use of private property.

Federalism (E.O. 13132)

In accordance with Executive Order 13132, we have considered whether this rule has significant federalism effects and have determined that a federalism assessment is not required. This rule does not have substantial direct effects on the States, on the relationship

between the Federal Government and the States, or on the distribution of power and responsibilities among the various levels of government. In keeping with Department of the Interior policy, we requested information from and coordinated development of this rule with the affected resource agencies in Guam. Achieving the recovery goals for this species will contribute to its eventual delisting. No intrusion on Territory policy or administration is expected, roles or responsibilities of Federal or Territory governments would not change, and fiscal capacity would not be substantially directly affected. The rule operates to maintain the existing relationship between the Territory and the Federal Government and is being undertaken in coordination with the Territory of Guam. We have coordinated closely with the Guam Department of Agriculture in the preparation of this rule. Therefore, this rule does not have significant federalism effects or implications to warrant the preparation of a federalism assessment pursuant to the provisions of Executive Order 13132.

Civil Justice Reform (E.O. 12988)

In accordance with Executive Order 12988 (February 7, 1996, 61 FR 4729), the Office of the Solicitor has determined that this rule would not unduly burden the judicial system and meets the requirements of sections (3)(a) and (3)(b)(2) of the Order.

Paperwork Reduction Act

This rule does not contain any new collection of information that requires approval by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*). OMB has previously approved the information collection requirements associated with permitting and reporting requirements associated with native endangered and threatened species, and experimental populations, and assigned the following OMB Control Numbers:

- 1018–0094, ''Federal Fish and Wildlife Permit Applications and Reports—Native Endangered and Threatened Species; 50 CFR parts 10, 13, and 17'' (expires 01/31/2024), and
- 1018–0095, ''Endangered and Threatened Wildlife, Experimental Populations, 50 CFR 17.84'' (expires 9/30/2023).

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act

In compliance with all provisions of the National Environmental Policy Act of 1969 (NEPA), we have analyzed the impact of this final rule. In cooperation with The Nature Conservancy, we prepared an environmental assessment, and we determined based on that assessment that the proposed action of implementing the introduction of sihek to Palmyra Atoll will not have a significant impact on the environment, which we documented in a finding of no significant impact (FONSI) (USFWS 2023).

Energy Supply, Distribution, or Use (E.O. 13211)

Executive Order 13211 requires agencies to prepare statements of energy effects when undertaking certain actions. This rule is not expected to significantly affect energy supplies, distribution, and use. Therefore, this action is not a significant energy action, and no statement of energy effects is required.

References Cited

A complete list of all references cited in this rule is available upon request from the Pacific Islands Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**) or online at *https://www.regulations.gov* in Docket No. FWS–R1–ES–2022–0061.

Author

The primary author of this rule is Megan Laut of the Pacific Islands Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

List of Subjects in 50 CFR Part 17

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

Signing Authority

Wendi Weber, Acting Director of the U.S. Fish and Wildlife Service, approved this action on February 13, 2023, for publication. On March 19, 2023, Martha Williams, Director of the U.S. Fish and Wildlife Service, authorized the undersigned to sign the document electronically and submit it to the Office of the Federal Register for publication as an official document of the U.S. Fish and Wildlife Service.

Regulation Promulgation

Accordingly, we hereby 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. In § 17.11, in paragraph (h), amend the List of Endangered and Threatened Wildlife under BIRDS by revising the entry for ''Kingfisher, Guam (sihek)'' (as added February 2, 2023, at 88 FR 7134, and effective May 3, 2023) to read as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Common name	Scientific name	Where listed	Status	Listing citations and applicable rules
*	*	*	*	*
Birds				
*	*	*	*	*
Kingfisher, Guam (=sihek).	*Todiramphus cinnamominus*.	Wherever found, except where listed as an experimental population.	E	49 FR 33881, 8/27/1984; 50 CFR 17.95(b) [CH].
Kingfisher, Guam (=sihek).	*Todiramphus cinnamominus*.	U.S.A. (Palmyra Atoll)	XN	88 [*Insert* FEDERAL REGISTER *page where the document begins*], 4/4/2023; 50 CFR 17.84(a) [10j].
*	*	*	*	*

■ 3. Amend § 17.84 by adding paragraph (a) to read as follows:

§ 17.84 Special rules—vertebrates.

(a) Guam kingfisher, sihek (*Todiramphus cinnamominus*).

(1) *Where is the occurrence of sihek designated as a nonessential experimental population (NEP)?* The nonessential experimental population (NEP) area for the sihek is Palmyra Atoll. Palmyra Atoll is located in the Northern Line Islands, approximately 1,000 miles (1,609 km) south of Honolulu, Hawaii (5° 53′N latitude, 162° 05′W longitude). The extent of the NEP area for sihek is the 250 ha (618 ac) of emergent land distributed among 25 islands, inclusive of the lagoons surrounding those islands.

(2) *What take of sihek is allowed in the NEP area?* (i) Throughout the sihek NEP area, you will not be in violation of the Act if you take a sihek, provided such take is nonnegligent and incidental to a lawful activity, such as habitat management, invasive species management, or scientific research and monitoring, and you report the take as soon as possible as provided under paragraph (a)(2)(iii) of this section.

(ii) Any person with a valid permit issued by the Service under § 17.32 may take sihek in the NEP area, pursuant to the terms of the permit. Additionally, any employee or authorized agent of the Service, Guam Division of Aquatic and Wildlife Resources, The Nature Conservancy, Zoological Society of London, or Association of Zoos and Aquariums, who is designated and trained to capture, handle, band, attach transmitters, and collect biological samples, when acting in the course of official duties, may take a sihek within the NEP area if such action is necessary to:

(A) Handle birds for scientific purposes such as banding, measuring, and sample collection;

(B) Relocate individuals or bring individuals into captivity for the purposes of increasing sihek survival or fecundity;

(C) Aid a sick, injured, or orphaned sihek;

(D) Salvage a dead specimen that may be useful for scientific study;

(E) Dispose of a dead specimen;

(F) Aid in law enforcement investigations involving the sihek; or

(G) Take sihek into captivity in accordance with the exit strategy of the program (see paragraph (a)(5) of this section).

(iii) Any take pursuant to paragraph (a)(2)(i) or (a)(2)(ii)(C) through (E) of this section must be reported as soon as possible to the Permits Coordinator, Pacific Islands Fish and Wildlife Office, 300 Ala Moana Boulevard, Room 3–122, Honolulu, Hawaii 96850 (808/792–9400), who will determine the disposition of any live or dead specimens.

(3) *What take of sihek is not allowed in the NEP area?* (i) Except as expressly allowed in paragraph (a)(2) of this section, all of the provisions of § 17.31(a) and (b) apply to the sihek in areas identified in paragraph (a)(1) of this section, and any manner of take of a member of the NEP not described under paragraph (a)(2) of this section is prohibited.

(ii) You must not possess, sell, deliver, carry, transport, ship, import, or export, by any means whatsoever, any sihek or part thereof from the experimental population taken in violation of the regulations in this paragraph (a) or in violation of applicable Territorial laws or regulations or the Act.

(iii) It is unlawful for you to attempt to commit, solicit another to commit, or cause to be committed, any take of sihek, except as expressly allowed in paragraph (a)(2) of this section.

(4) *How will the effectiveness of this introduction be monitored?* The Service will evaluate the introduction on an annual basis. This evaluation will include, but will not be limited to, a review and assessment of management issues, sihek movements, and post-release behavior; food resources and dependence of sihek on supplemental food; fecundity of the population; causes and rates of mortality; program costs; impacts to the ex situ population; and information gathered to inform releases on Guam or other sites.

(5) *When will this introduction end?* Depending on the circumstances, the Service may either terminate the release program or temporarily pause the release program to address identified issues before resuming. When the Service terminates the program, the Service will address the disposition of any remaining individuals in the NEP, *i.e.,* whether they will be relocated to captivity or to other suitable habitat or whether they would remain on Palmyra, based on the circumstances at the time of termination.

(i) The Service will terminate the release program on Palmyra Atoll if monitoring indicates that:

(A) The benefits from the Palmyra population (including developing and refining release and support strategies for eventual releases on Guam) no longer outweigh the risks to the species or the welfare of the NEP or ex situ population; or

(B) Unacceptable impacts on the ecosystem can be clearly causally linked to the introduction of sihek.

(ii) The Service may also terminate the release program when one or more of the objectives of the program have been achieved (*e.g.,* we have developed successful release and monitoring methodologies to apply to future release efforts or we have demonstrated that sihek can survive and reproduce in the wild without human intervention).

* * * * *

Madonna Baucum,

Regulations and Policy Chief, Division of Policy, Economics, Risk Management, and Analytics of the Joint Administrative Operations, U.S. Fish and Wildlife Service.

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