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50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Listing All Chimpanzees as Endangered Species; Final Rule

DEPARTMENT OF THE INTERIOR**Fish and Wildlife Service****50 CFR Part 17**

[Docket No. FWS-R9-ES-2010-0086;
4500030115]

RIN 1018-AZ52

**Endangered and Threatened Wildlife
and Plants; Listing All Chimpanzees as
Endangered Species**

AGENCY: Fish and Wildlife Service,
Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), determine endangered species status for all chimpanzees (*Pan troglodytes*) under the Endangered Species Act of 1973, as amended (Act). This rule eliminates the separate classification of captive and wild chimpanzees under the Act. We are also amending the rule issued under section 4(d) of the Act for primates, which is set forth at 50 CFR 17.40(c), by removing chimpanzees from that rule. This final rule implements the Federal protections provided by the Act for all chimpanzees, whether found in captivity or in the wild.

DATES: This rule is effective September 14, 2015.

ADDRESSES: This final rule is available on the Internet at <http://www.regulations.gov> and comments and materials received, as well as supporting documentation used in the preparation of this rule, will be available for public inspection, by appointment, during normal business hours at: U.S. Fish and Wildlife Service; 5275 Leesburg Pike; Falls Church, VA 22041.

FOR FURTHER INFORMATION CONTACT: Janine Van Norman, Chief, Branch of Foreign Species, Ecological Services Program, U.S. Fish and Wildlife Service; telephone 703-358-2171; facsimile 703-358-1735. If you use a telecommunications device for the deaf (TDD), call the Federal Information Relay Service (FIRS) at 800-877-8339.

SUPPLEMENTARY INFORMATION:

Executive Summary

I. Purpose of the Regulatory Action

We are listing all chimpanzees, whether in the wild or in captivity, as endangered under the Endangered Species Act of 1973, as amended (Act). We have determined that the Act does not allow for captive chimpanzees to be assigned separate legal status from their wild counterparts on the basis of their captive state, including through

designation as a separate distinct population segment (DPS). It is also not possible to separate out captive chimpanzees for different legal status under the Act by other approaches.

Therefore, we are eliminating the separate classification of chimpanzees held in captivity and listing the entire species, wherever found, as an endangered species under the Act.

II. Major Provision of the Regulatory Action

This action eliminates separate classifications for wild and captive chimpanzees under the Act. All chimpanzees, whether in the wild or in captivity, will be listed as one entity that is an endangered species in the List of Endangered and Threatened Wildlife at 50 CFR 17.11(h). This action will also remove the chimpanzee and paragraph (c)(3) from the rule issued under section 4(d) of the Act for primates, which is set forth at 50 CFR 17.40(c), and extend the Act's protections for endangered species to all chimpanzees.

Background

The Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 *et seq.*), is a law that was passed to prevent extinction of species by providing measures to help alleviate the loss of species and their habitats. Before an animal or plant species can receive the protection provided by the Act, it must first be added to the Federal List of Endangered and Threatened Wildlife or the Federal List of Endangered and Threatened Plants; section 4 of the Act and its implementing regulations at 50 CFR part 424 set forth the procedures for adding species to these lists.

Previous Federal Actions

On October 19, 1976, we published in the **Federal Register** a rule listing the chimpanzee and 25 other species of primates under the Act (41 FR 45990); the chimpanzee and 13 of the other primate species were listed as threatened species. The chimpanzee was found to be a threatened species based on: (1) Commercial logging and clearing of forests for agriculture and the use of arboricides; (2) capture and exportation for use in research labs and zoos; (3) diseases, such as malaria, hepatitis, and tuberculosis contracted from humans; and (4) inadequacy of existing regulatory mechanisms. We simultaneously issued a rule under section 4(d) of the Act ("4(d) rule") that the general prohibitions provided to the threatened species would apply except for live animals of these species held in captivity in the United States on the effective date of the rulemaking

(November 18, 1976; 41 FR 45990), progeny of such animals, or the progeny of animals legally imported into the United States after the effective date of the rulemaking (November 18, 1976).

On November 4, 1987, we received a petition from the Humane Society of the United States, World Wildlife Fund, and Jane Goodall Institute, requesting that the chimpanzee be reclassified from a threatened species to an endangered species. On March 23, 1988 (53 FR 9460), we published in the **Federal Register** a finding, in accordance with section 4(b)(3)(A) of the Act, that the petition had presented substantial information indicating that the requested reclassification may be warranted and initiated a status review. We opened a comment period, which closed July 21, 1988, to allow all interested parties to submit comments and information.

On December 28, 1988 (53 FR 52452), we published in the **Federal Register** a finding that the requested reclassification was warranted with respect to chimpanzees in the wild. This decision was based on the petition and subsequent supporting comments that dealt primarily with the status of the species in the wild and not with the circumstances of captive populations. We did not propose reclassification of captive chimpanzees. We found that the 4(d) rule exempting captive chimpanzees in the United States from the general prohibitions may encourage propagation, providing surplus animals and reducing the incentive to remove animals from the wild. On February 24, 1989 (54 FR 8152), we published in the **Federal Register** a proposed rule to implement such reclassification. With publication of the proposed rule, we opened a 60-day comment period to allow all interested parties to submit comments and information.

On March 12, 1990, we published in the **Federal Register** (55 FR 9129) a final rule reclassifying the wild populations of the chimpanzee as endangered species. The captive chimpanzees remained classified as threatened species, and those within the United States continued to be covered by the 4(d) rule allowing activities otherwise prohibited.

On March 16, 2010, we received a petition dated the same day, from Meyer Glitzenstein & Crystal on behalf of The Humane Society of the United States, the American Association of Zoological Parks and Aquariums, the Jane Goodall Institute, the Wildlife Conservation Society, the Pan African Sanctuary Alliance, the Fund for Animals, Humane Society International, and the New England Anti-Vivisection Society

(hereafter referred to as “petitioners”) requesting that captive chimpanzees (*Pan troglodytes*) be reclassified as endangered species under the Act. The petition clearly identified itself as such and included the requisite identification information for the petitioners, as required by 50 CFR 424.14(a). The petition contained information on what the petitioners reported as potential threats to the species from habitat loss, poaching and trafficking, disease, and inadequate regulatory mechanisms. On October 12, 2010, we received a letter from Anna Frostic, Staff Attorney with the Humane Society of the United States, on behalf of the petitioners clarifying that the March 16, 2010, petition was a petition to list the entire species (*Pan troglodytes*) as an endangered species, whether in the wild or in captivity, pursuant to the Act.

On September 1, 2011, we published in the **Federal Register** a finding that the March 16, 2010, petition presented substantial scientific or commercial information indicating that the requested action may be warranted, and we initiated a status review (76 FR 54423).

On November 1, 2011, we published in the **Federal Register** a notice correcting an incorrect Docket Number given under the **ADDRESSES** section of the September 1, 2011, petition finding. We also gave notice that we were making the large volume of supporting documents submitted with the petition available to the public. To allow the public adequate time to review the supporting documents, we extended the period of time for submitting information to January 30, 2012 (74 FR 67401). On June 12, 2013, the Service published in the **Federal Register** a proposed rule to list all chimpanzees as an endangered species under the Act and remove chimpanzees from the 4(d) rule for primates set forth at 50 CFR 17.40(c) (78 FR 35201).

Summary of Changes From the Proposed Rule

We fully considered comments from the public and the peer reviewer on the proposed rule to determine our final listing status of chimpanzees. This final rule incorporates changes to our proposed rule based on the comments that we received that are discussed below and newly available scientific and commercial information. We made some technical corrections and incorporated additional information into our discussion of diseases. On the basis of an evaluation of the information we received or incorporated into this final rule we affirm our determination

that listing the chimpanzee as an endangered species is warranted.

Evaluation of Captive Chimpanzees as a Separate Listable Entity

Under section 3(16) of the Act, we may consider for listing any species, which includes subspecies of fish, wildlife, and plants, or any distinct population segment (DPS) of vertebrate fish or wildlife that interbreeds when mature (16 U.S.C. 1532(16)). Such entities are considered eligible for separate listing status under the Act (and, therefore, referred to as listable entities) should we determine that they meet the definition of an endangered species or threatened species.

The Service was petitioned to list all chimpanzees, whether in the wild or in captivity, as endangered species. Essentially, this request is to eliminate the separate classification of captive chimpanzees from chimpanzees located in the wild. This petition raised questions regarding whether the Service has any discretion to differentiate the listing status of chimpanzees in captivity from those in the wild.

The Service has not had an absolute policy or practice with respect to this issue, but generally has included wild and captive animals together when it has listed species. The example set by the separate chimpanzee listings was used as support for two petitions the Service received in 2010 to delist U.S. captive and U.S. captive-bred members of three antelope species in the United States. In the 2005 listing determination for the scimitar-horned oryx (*Oryx dammah*), dama gazelle (*Gazella dama*), and addax (*Addax nasomaculatus*) (70 FR 52310, September 2, 2005), the Service found that a differentiation in the listing status of captive specimens of these antelopes in the United States was not appropriate. The petitioners, Exotic Wildlife Association, Safari Club International, and Safari Club International Foundation, asserted that the treatment by the Service of chimpanzees in 1990 warranted similar treatment for these antelope species. Because the Service had not specifically examined whether the current statute, regulations, and applicable policies provide any discretion to differentiate the listing status of specimens in captivity from those in the wild, we reviewed the issues raised by these petitions to ensure the Act is implemented appropriately. On June 5, 2013, we found that delisting U.S. captive and U.S. captive-bred members of the three antelope species was not warranted (78 FR 33790). In addition, on August 9, 2013, the U.S. District Court for the District of Columbia

upheld the Service’s decision to include U.S. captive-bred antelope in its 2005 listing of the three antelope species as endangered (see *Safari Club Int’l v. Jewell*, 960 F. Supp. 2d 17 (D.D.C. 2013)).

For similar reasons and as discussed below, we find that the Act does not allow for captive chimpanzees to be assigned separate legal status from their wild counterparts on the basis of their captive state, including through designation as a separate distinct population segment (DPS).¹ It is also not possible to separate out captive chimpanzees for different legal status under the Act by other approaches (see *Other Potential Approaches for Separate Legal Status*).

Provisions of the Act

The legal mandate of section 4(a)(1) is to determine “whether any *species* is an endangered species or a threatened species . . .” (emphasis added). In the Act, a “species” is defined to include any subspecies and any DPS of a vertebrate animal, as well as taxonomic species. Other than a taxonomic species or subspecies, captive specimens (of a vertebrate animal species) would have to qualify as a “distinct population segment . . . which interbreeds when mature” to qualify as a separate DPS.² Nothing in the plain language of the definitions of “endangered species,” “threatened species,” or “species” expressly indicates that captive chimpanzees can or cannot have separate status under the Act on the basis of their state of captivity. However, certain language in the Act is inconsistent with a determination of separate legal status for captive chimpanzees.

Under section 4(c)(1), the agency is to specify for each species listed “over what portion of its range” it is an

¹ As compared to populations that exist in the wild, “captivity” is defined as “living wildlife . . . held in a controlled environment that is intensively manipulated by man for the purpose of producing wildlife of the selected species, and that has boundaries designed to prevent animal [sic], eggs or gametes of the selected species from entering or leaving the controlled environment. General characteristics of captivity may include but are not limited to artificial housing, waste removal, health care, protection from predators, and artificially supplied food” (50 CFR 17.3).

² The analysis in this document addresses only where it is not disputed that the specimens are members of a wildlife species, such as chimpanzees. This analysis does not address situations where members of a species have been held in captivity for a sufficiently long period that they have developed into a separate domesticated form of the species, including where the domesticated form is sufficiently distinct to be considered a separate taxonomic species or subspecies (e.g., domesticated donkey vs. the African wild ass).

endangered or threatened species.³ “Range,” while not defined in the Act, consistently has been interpreted under the Act as the general geographical area of the species *in the wild*. Thus, chimpanzees held in captivity and analyzed as a separate listable entity have no “range” separate from that of the species to which they belong, at least as that term has been applied under the Act.

As demonstrated in various species’ listings at 50 CFR 17.11 and 17.12, information in the “Historic Range” column is the range of the species in the wild. For none of these species does the “range” information include countries or geographic areas on the basis of where specimens are held in captivity, even though the Service knows that specimens of many of these species have long been held in facilities outside their native range, including in the United States.

Also, in analyzing the “present or threatened destruction, modification, or curtailment of [a species’] habitat or range” (emphasis added) (see section 4(a)(1)(A) of the Act), the Service has traditionally analyzed habitat threats in the native range of wild specimens and not included other geographic areas where specimens have been moved to and are being held in captivity. We are not aware of any Service listing decision where analysis of threats to the “range” has included geographic areas outside the native range where specimens are held in captivity.

In analyzing other threats to a species (see sections 4(a)(1)(B), 4(a)(1)(C), 4(a)(1)(D), and 4(a)(1)(E) of the Act), the Service has also limited its analysis to threats acting upon wild specimens within the native range of the species, and has not included analysis of “threats” to animals held in captivity except as those threats impact the potential for the captive population to contribute to recovery of the species in the geographic area where wild specimens are native.

In addition to the use of “range” in sections 4(a)(1) and 4(c)(1), the definitions of “endangered species” and “threatened species” found in section 3 of the Act also discuss the role of the species’ range in listing determinations. The Act defines an endangered species as “any species which is in danger of extinction throughout all or a significant portion of its range,” and a threatened species as “any species which is likely

³ Even though the Service has taken the position in its significant portion of the range (SPR) policy (79 FR 37578) that the range information called for under section 4(c)(1) is for information purposes, this statutory language still informs the question of Congress’ intent under the statute.

to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” The Service’s 2014 Final Policy on Interpretation of the Phrase “Significant Portion of Its Range” in the Endangered Species Act’s Definitions of “Endangered Species” and “Threatened Species” (79 FR 37578; July 1, 2014) interprets “range” as the “general geographical area within which that species can be found at the time [the Service] or [the National Marine Fisheries Service (NMFS)] makes any particular status determination. This range includes those areas used throughout all or part of the species’ life cycle, even if they are not used regularly (e.g., seasonal habitats). Lost historical range is relevant to the analysis of the status of the species, but it cannot constitute a significant portion of a species’ range.” The “general geographical area within which that species can be found” is broad enough to include geographic areas where animals have been moved by humans and are being held in captivity. However, the Service has not applied the term in this manner in the past and does not intend to do so in the future. “Significant portion of its range” (SPR) analyses have been and will be limited to geographic areas where specimens are found in the wild.

Thus, throughout the Act “range” has consistently been interpreted by the Service as being the natural range of the species *in the wild*.⁴ For all the reasons discussed above, chimpanzees held in captivity should not have separate legal status under the Act because they have no “range” that is separate from the range of the species in the wild to which they belong, as that term is used in the Act.

Certain provisions in sections 9 and 10 of the Act show that Congress anticipated that captive animals would have the same legal status as their wild counterparts by providing certain

⁴ See also Endangered Species Act: Hearings on H.R. 37, H.R. 470, H.R. 471, H.R. 1461, H.R. 1511, H.R. 2669, H.R. 2735, H.R. 3310, H.R. 3696, H.R. 3795, H.R. 4755, H.R. 2169 and H.R. 4758 Before the House Subcomm. on Fisheries and Wildlife Conservation and the Environment, House Comm. on Merchant Marine and Fisheries, 93d Cong. 198 (1973) (hereinafter 1973 Hearing on H.R. 37 and others) (Letter from S. Dillon Ripley, Secretary of Smithsonian Institute, to Chairman, House Comm. on Merchant Marine and Fisheries, April 23, 1973 (lauding H.R. 4758, the Administration’s legislative proposal that contained a definition of “endangered species” substantially similar to the statutory definition eventually adopted by Congress in the 1973 Act: “In effect the bill offers a great deal of flexibility by providing that a species may be placed on the list if the Secretary determines that it is presently threatened with extinction, not only in all of its *natural* range, but in a significant part thereof, as well.”) (emphasis added)).

exceptions for animals held in captivity. Section 9(b)(1) of the Act provides an exemption from certain section 9(a)(1) prohibitions for listed animals held in captivity or in a controlled environment as of the date of the species’ listing (or enactment of the Act), provided the holding in captivity and any subsequent use is not in the course of a commercial activity. Section 9(b)(2) of the Act provides an exemption from all section 9(a)(1) prohibitions for raptors held in captivity or in a controlled environment as of 1978 and their progeny. Section 10(a)(1)(A) of the Act allows permits to “enhance the *propagation* or survival” of the species (emphasis added). This demonstrates that Congress recognized the value of captive-holding and propagation of listed specimens held in captivity, but intended that such specimens would be protected under the Act, with these activities generally regulated by permit.⁵ If captive specimens could simply be excluded through the listing process, none of these exceptions and permits would be needed.

Purpose of the Act

Meaning of Section 2(b) of the Act

The full purposes of the Act, stated in section 2(b), are “to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved [hereafter referred to as the first purpose], to provide a program for the conservation of such endangered species and threatened species [hereafter referred to as the second purpose], and to take such steps as may be appropriate to achieve the purposes of the treaties and conventions set forth in subsection (a) of this section [hereafter referred to as the third purpose].” It has been stated, without explanation, that the language of section 2(b) of the Act supports protecting only specimens that occur in the wild. However, the purposes listed in section 2(b) indicate that the three provisions are intended to have independent meaning, with little to indicate that Congress’ intent was to protect only specimens of endangered or threatened

⁵ See Endangered Species Conservation Act of 1972: Hearing on S. 249, S. 3199 and S. 3818 Before the Senate Subcomm. on the Environment, Senate Comm. on Commerce, 92nd Cong. 211–12 (1972) (statement of Deborah Appel, Assistant to the Director for Public Information, National Audubon Society) (endorsing S. 3199, a bill considered by the Senate that contained similar language eventually adopted by Congress in the purpose section of the 1973 Act, but advising against a specific mandate requiring captive propagation because “the capture of specimens for experiment in captive propagation may in itself endanger the chances of some rare species for survival in the wild.”).

species found in the wild. The treaties and conventions under the third purpose are expressly those listed in section 2(a)(4) of the Act, all of which are for the protection of wildlife and plants, and none of which is limited to protection of endangered or threatened specimens in the wild.⁶ The first purpose calls for conservation of ecosystems, independent of conservation of species themselves (which is separately listed as the second purpose). This does focus on protection of native habitats (those inhabited by the species in the wild in its native range), as it is generally the ecosystems or habitats within which a species has evolved that are those upon which it “depends.” However, the phrase “upon which endangered species and threatened species depend” indicates only that ecosystem (*i.e.*, habitat) protection should be focused on that used by endangered and threatened species, and does not indicate that the sole focus of the Act is conservation of species within their native ecosystems. Several provisions in the Act provide authority to protect habitat, independent of authorities applicable to protection and regulation of specimens of listed species themselves. See, for example, section 5 (Land Acquisition), section 6 (Cooperation With the States), section 7 (Interagency Cooperation), and section 8 (International Cooperation).

It is the second purpose under section 2(b) of the Act that speaks to the conservation of species themselves that are endangered or threatened species. However, nothing in the language of the second purpose indicates that conservation programs should be limited to specimens located in the wild. The plain language of section 2(b) refers to “species,” with no distinction between wild specimens of the species as compared to captive specimens of the species. Thus, nothing in the plain language indicates that captive specimens should be excluded from the Act’s processes and protections that would contribute to recovery (*i.e.*, “conservation”) of the entire taxonomic species. It is true that the phrasing of the second purpose (“to provide a program for the conservation of *such* endangered species and threatened species” (emphasis added)) links the second purpose of species recovery to the first purpose of ecosystem (*i.e.*, native habitat) protection, thus making the *goal* of the statute recovery of endangered and threatened species in their natural ecosystems. But there is nothing in the

phrasing to indicate that the specific provisions of the statute for meeting this goal should be limited to specimens of the species located within the ecosystems upon which they depend.

Separate Legal Status Is Inconsistent With Section 2(b)

The potential consequences of captive chimpanzees having separate legal status under the Act on the basis of their captive state, particularly where captive specimens could have no legal protection while wild specimens are listed as an endangered species,⁷ indicate that such separate legal status is not consistent with the section 2(b) purpose of conserving endangered and threatened species. Congress specifically recognized “overutilization for commercial, recreational, scientific, or educational purposes” as a potential threat that contributes to the risk of extinction for many species. If captive chimpanzees have separate legal status under the Act, particularly with no protections under the Act, the threat of overutilization would potentially increase. The United States is one of the world’s largest markets for wildlife and wildlife products.⁸ Poachers and smugglers would have increased incentive to remove animals from the wild and smuggle them into captive-holding facilities in the United States for captive propagation or subsequent commercial use, because once in captivity there would be no Act restrictions on use of the captive specimens or their offspring. This would be a particular issue for foreign species such as chimpanzees where States regulate native wildlife (and therefore captive domestic endangered or threatened specimens would continue to be regulated under State law), but often do not regulate use of nonnative wildlife. This could be a particularly lucrative trade for poachers and smugglers because many endangered and threatened species (particularly foreign species such as chimpanzees) can be at risk of extinction because of their high commercial value in trade (as trophies

or pets, or for their furs, horns, ivory, shells, or medicinal or decorative use).

Once removed from the wild, species such as chimpanzees would potentially be subject to increased trade in “laundered” wild-caught specimens to feed U.S. or foreign market demand because protected wild specimens would be generally indistinguishable from unprotected captive specimens. Because there would be no restriction or regulation on the taking, sale, import, export, or transport in the course of commercial activities in interstate or foreign commerce of captive specimens by persons subject to U.S. jurisdiction, there would be a potential legal U.S. market in captive specimens and their progeny operating parallel to any illegal U.S. market (or U.S. citizen participation in illegal foreign markets) in wild specimens. With the difficulty of distinguishing captive from wild specimens, especially if they are broken down into their parts and products, illegal wild specimens of commercial value could likely easily be passed off as legal captive specimens and thus be traded as legal specimens. As the court found in *Safari Club Int’l v. Jewell*, listing captive members of the species along with the wild members “avoids any confusion about the source of the [animals]” and therefore is consistent with the purposes of the Act (960 F. Supp. 2d at 67).

Congress included the similarity-of-appearance provision in section 4(e) to allow the Service to regulate species under the Act where one species so closely resembles an endangered or threatened species that enforcement personnel cannot distinguish between the protected and unprotected species and this difficulty is a threat to the species. The Service’s only option in the situations described above would be to complete separate similarity-of-appearance listings for captive animals not regulated under the Act. A similarity-of-appearance listing under the Act for such captive specimens would become the only means to make captive specimens subject to the same restrictions as listed wild specimens and thereby protect the wild populations from overutilization for commercial, recreational, scientific, or educational purposes.

Operation of Key Provisions of the Act

As described in the following subsections, operation of key provisions in sections 4 and 7 of the Act also indicate that it would not be consistent with Congressional intent or the purpose of the Act to treat captive chimpanzees as a separate listable entity on the basis of their captive state.

⁶Nor are these treaties and conventions limited to protection of species listed as endangered or threatened under the Act.

⁷If it were determined that captive chimpanzees can have separate legal status on the basis of their captive state, proponents of separate legal status could argue that these captive specimens do not qualify as endangered or threatened species at all because they do not face “threats” that create a substantial risk of extinction to the captive specimens such as those faced by the wild population, in which case captive chimpanzees would have no protections under the Act (see *Section 4: Listing Effects on Captive Animals*).

⁸See USFWS Office of Law Enforcement Annual Report for FY 2009 p. 7.

Section 4: Listing Effects on Captive Animals

The section 4 listing process is not well suited to analyzing threats to an entirely captive group of specimens that are maintained under controlled, artificial conditions, and the process could lead to consequences that are not consistent with the purposes of the Act.

The majority of the section 4(a)(1) factors would be difficult to apply to captive specimens with a range independent of wild specimens because the five factors are not readily suited to evaluating specimens held in captivity. There may be situations where only disease threats (factor C) and other natural or manmade factors (factor E) would be applicable to consideration of purely captive groups of specimens. The present or threatened destruction, modification, or curtailment of habitat or range (factor A) may not be a threat for a listable entity consisting solely of captive specimens, because the physical environment under which captive specimens are held is generally readily controllable and, in many cases, optimized to ensure the physical health of the animal. Overutilization (factor B) is unlikely to be a factor threatening the continued existence of groups of captive specimens where both breeding and culling are managed to ensure the continuation of stock at a desired level based on ownership interest and market demand. Predation (factor C) may rarely be a factor for captive specimens because predators may be more readily controlled in captive situations. In addition, human management may provide for all essential life functions, thereby eliminating selection or competition for mates, food, water resources, and shelter.

It is unclear how the “inadequacy of existing regulatory mechanisms” (factor D) would apply to captive specimens with a range independent of wild specimens because this factor generally applies in relationship to threats identified under the other factors. Regulatory mechanisms applicable to wild specimens usually include measures to protect natural habitat and laws that regulate activities such as take, sale, and import and export. However, there might be no regulatory mechanisms applicable when the group of specimens under consideration is in captivity (except perhaps general humane treatment or animal health laws).

That the section 4 process is not well suited to listings of entirely captive specimens is demonstrated by the previous listing action for the

chimpanzee. The chimpanzee was originally listed in its entirety as a threatened species (41 FR 45990, October 19, 1976). On March 12, 1990 (55 FR 9129), the Service reclassified wild populations of chimpanzees as a separate endangered species, noting that wild populations had declined due to massive habitat destruction, excessive hunting and capture by people, and lack of effective national and international controls. But the reclassification rule never analyzed whether the newly designated DPS consisting of chimpanzees “wherever found in captivity” separately met the definition of a threatened species based on the five factors found in section 4(a)(1) of the Act. Instead, the rule discussed estimated numbers of animals in captivity and known captive-breeding programs, stating in response to a comment that some chimpanzee breeding groups were being managed in the United States with the objective of achieving self-sustainability. The five-factor analysis in both the proposed and final listing rules considered only information applicable to wild populations and within the taxonomic species’ native range.

That the section 4 listing process is not well suited to separate consideration of captive specimens could result in consequences that would be contrary to the purposes of the Act. Because captive members of the species and wild members of the species would be under separate consideration for listing under the Act and therefore under separate five-factor analyses, some would argue that captive chimpanzees do not meet the definition of a threatened species or an endangered species under the statutory factors when the scope of the section 4 analysis would be the conditions under which the captive specimens are kept, not the conditions of the members of the species as a whole. They might argue that captive chimpanzees as well as captive members of other species do not meet the definition of an endangered species (in danger of extinction throughout all or a significant portion of its range) or a threatened species (likely to become endangered within the foreseeable future throughout all or a significant portion of its range) when the conditions for individual animals’ survival are carefully controlled under human management and therefore not subject to “threats,” especially for species that readily breed in captivity, where breeding has resulted in large numbers of genetically diverse animals, or where there are no known

uncontrollable conditions such as disease.

If wild specimens and captive specimens could qualify as separate listable entities and it was determined that captive chimpanzees do not qualify as a threatened species or an endangered species under the section 4 analysis because they do not face “threats,” captive chimpanzees would receive no assistance or protection under the Act even where wild populations continue to decline, even to the point of the taxonomic species being extirpated from the wild with the animals in captivity being the only remaining members of the species and survival of the entire taxonomic species being dependent on the survival of the captive animals. Indeed, we have been petitioned at least once in the past to delist captive members of three species—the three African antelope, one of which is extirpated from the wild—where the petitioner argued that captive members should be removed from the list because the captive animals had “recovered.” This would not be consistent with the purposes of the Act.

Section 4: Listing Effects on Wild Populations

If wild populations and captive chimpanzees could qualify as separate listable entities, and because the analysis for determining legal status of wild populations would be separate from the analysis for determining legal status of captive specimens, the wild population would likely qualify for delisting in the event that all specimens are extirpated from the wild (in other words, if they became extinct in the wild), thereby removing both incentives and protections for conservation of the species in the wild and the conservation of its ecosystem.

Under the Service’s standard section 4 process, both captive and wild specimens of the species are members of the listed entity and have legal status as endangered or threatened species. In situations where all specimens in the wild are gone, either because they are extirpated due to threats or because, as a last conservation resort, the remaining wild specimens are captured and moved into captivity, the species remains listed until specimens from captivity can be reintroduced to the wild and wild populations are recovered. However, if captive specimens and wild populations could have separate legal status, once all members of the wild population were gone from the wild, the wild population could be petitioned for and would likely qualify for delisting under 50 CFR 424.11(d)(1) as a “species” that is now extinct. As shown above, the separate

captive members of the taxonomic species might not qualify for legal status as endangered or threatened species, due to the lack of “threats.” With no protected members of the species and therefore no authority to use funding or other provisions of the Act for the species, the Service would lose valuable tools for recovery of the species to the wild. This would clearly not be consistent with the purposes of the Act.

Section 7: Consultation

All Federal agencies have a legal obligation to ensure that their actions are not likely to jeopardize the continued existence of endangered and threatened species. This means that for separately listed captive endangered or threatened specimens, any Federal agency that is taking an action within the United States or on the high seas that may affect the captive listed species arguably would have a legal duty to consult with the Service. However, the section 7 consultation process is not well suited to analysis of adverse impacts posed to a purely captive group of specimens given that such specimens are maintained under controlled, artificial conditions.

Section 4: Designation of Critical Habitat

For any listed entity located within the United States or within U.S. jurisdictional territories or waters, we have a section 4 duty to designate critical habitat unless such designation is not prudent.⁹ Although it is appropriate not to designate critical habitat for foreign species or to limit a critical habitat designation to natural habitats for U.S. species when a listing is focused on the species in the wild (even when some members of the species may be held in captivity within the United States), it is not clear how the Service would support not designating critical habitat when the listed entity would consist entirely of captive specimens (when the focus of captivity is within the United States). As with the consultation process, the critical habitat designation duty is not well suited for listings that consist entirely of captive specimens, especially given the anomaly of identifying the physical and biological features that would be essential to the conservation of a species consisting entirely of captive animals in a controlled environment. These complexities related to section 7 consultations and

designation of critical habitat indicate that Congress did not intend the Service to treat captive specimens as separate listable entities on the basis of their captive state.

Legislative History

Legislative history surrounding the 1978 amendment of the definition of “species” in the Act indicates that Congress intended designation of a DPS to be used for wild vertebrate populations, not separation of captive specimens from wild members of the same taxonomic species. The original (1973) definition of species was “any subspecies . . . and any other group of fish or wildlife of the same species or smaller taxa in common spatial arrangement that interbreed when mature” (Pub. L. 93–205). In 1978, Congress amended the Act to the Act’s current definition of species, substituting “any distinct population segment” for “any other group” and “common spatial arrangement” following testimony on the inadequacy of the original definition, such as the exclusion of one category of populations commonly recognized by biologists: Disjunct allopatric populations that are separated by *geographic barriers* from other populations of the same species and are consequently reproductively isolated from them physically (See Endangered Species Act Oversight: Hearing Before Senate Subcommittee on Resource Protection, Senate Committee on Environment and Public Works, 95th Cong. 50 (July 7, 1977) (hereafter 1977 Oversight Hearing) (letter from Tom Cade, Program Director, The Peregrine Fund, to Director of the Service). Although there was discussion regarding population stocks and reproductive isolation generally, particularly in association with development of the 1973 definition,¹⁰ discussions that provide additional context on the scope of the definition of “species” show that Congress thought of the population-based listing authority as appropriate for populations that are distinct for natural and evolutionary reasons. For example, one witness discussed “species” as associated with the concept of geographic reproductive isolation and including characteristics of a population’s ability or inability to freely exchange genes *in nature* (See 1977 Oversight Hearing at 50 (Cade letter)). There is no evidence that Congress intended for the agency to use the authority to separately list groups of

animals that have been artificially separated from other members of the species through human removal from the wild and maintenance in a controlled environment. Examples in testimony for which population-based listing authority would be appropriately used were all for wild populations (See 1973 Hearing on H.R. 37 and others at 307 (statement of Stephen Seater, Defenders of Wildlife); Endangered Species Act of 1973: Hearings on S. 1592 and S. 1983 Before the Senate Subcomm. on Environment, Senate Comm. on Commerce, 93d Cong. 98 (1973) (statement of John Grandy, National Parks and Conservation Assoc.); Endangered Species Authorization: Hearings on H.R. 10883 Before the House Subcomm. on Fisheries and Wildlife Conservation and the Environment, House Comm. on Merchant Marine and Fisheries, 95th Cong. 560 (1978) (statement of Michael Bean, Environmental Defense Fund)). No examples were given suggesting designation of captive vertebrates as a DPS.

Other Potential Approaches for Separate Legal Status

In addition to separate designation as “species,” there are two other approaches under which it could be argued that captive chimpanzees could be given separate legal status from their wild counterparts: (1) Directly excluding captive chimpanzees from the Act’s protections, or (2) designating only wild chimpanzees as a DPS, with captive chimpanzees not included in the DPS. However, neither approach would be consistent with Congress’ intent for the Act.

One court already determined that captive specimens of a listable entity cannot simply be excluded when they are members of the listable entity and the Service agrees with the court’s reasoning in this case. The Service cannot exclude captive animals from a listing once these animals are determined to be part of the species. This case—*Alea Valley Alliance v. Evans*—involved the listing of coho salmon by NMFS. NMFS’s 1993 Hatchery Policy (58 FR 17573, April 5, 1993) stated that hatchery populations could be included in the listing of wild members of the same evolutionary significant unit (equivalent to a DPS), but only if the hatchery fish were “essential to recovery.” In 1998, NMFS listed only “naturally spawned” specimens when it listed an evolutionary significant unit (ESU) of coho salmon (63 FR 42587, August 10, 1998). This decision was challenged in court, and the Court found NMFS’s

⁹Making a not determinable finding is also an option under section 4(b)(6) of the statute, but only delays the requirement to designate such critical habitat.

¹⁰See 1973 Hearing on H.R. 37 and others p. 286 (statement of John Grandy, National Parks and Conservation Assoc.) p. 307 (statement of Stephen Seater, Defenders of Wildlife), and pp. 299–300 (statement of Tom Garrett, Friends of the Earth).

listing decision invalid because it excluded hatchery populations (which are fish held in captivity) even though they were part of the same DPS (or ESU) (*Alesea Valley Alliance v. Evans*, 161 F. Supp. 2d 1154 (D. Or. 2001)). The Court held that “Congress expressly limited the Secretary’s ability to make listing distinctions below that of subspecies or a DPS of a species,” which was the practical result of excluding all hatchery specimens. NMFS subsequently changed its Hatchery Policy in 2005, stating that all hatchery fish that qualify as members of the ESU would be considered part of the ESU, would be considered in determining whether the ESU should be listed as an endangered or threatened species, and would be included in any listing under the Act (70 FR 37204, June 28, 2005). NMFS’s 2005 Hatchery Policy was upheld by the Ninth Circuit Court in *Trout Unlimited v. Lohn*, 559 F. 3d 946 (2009).

For the same reasons as discussed earlier in this document, the Service also cannot simply designate wild chimpanzees as a DPS, leaving all captive animals unlisted. Although this would avoid designating captive animals as a separate DPS and would not technically be excluding animals that otherwise have been found to be members of a DPS (and thereby avoid the error the court found in the *Alesea Valley Alliance v. Evans* decision), the result would be separate legal status and no legal protections for captive chimpanzees, and many of the same legal and conservation consequences discussed above would occur. For these reasons, we also find this outcome to be inconsistent with Congress’ intent for the Act, primarily as inconsistent with the purposes of the Act.

Listing Evaluation

Now that we have determined that all chimpanzees, including captive and wild animals, should be considered as a single listable entity under the Act, we will next assess the status of the species and determine if the species meets the definition of endangered or threatened under the Act. In 1990, we determined that chimpanzees in the wild are endangered. This analysis considers new information in light of that previous determination and includes the extent to which captive chimpanzees create or contribute to threats to the species or remove or reduce threats to the species by contributing to the conservation of the species.

Species Information

Taxonomy and Species Description

In 1990, when the wild populations of chimpanzees were reclassified as endangered species, only three subspecies were recognized. Since that time, the correct taxonomic labeling for chimpanzees has been debated and includes the use of a two-subspecies system, a four-subspecies system, and the use of the species level without subspecific designations (Carlsen *et al.* 2012, p. 5; Morgan *et al.* 2011, p. 7; Plumptre *et al.* 2010, p. 2; Ghobrial *et al.* 2010, p. 2; Oates *et al.* 2008, unpaginated). Today, four subspecies are commonly recognized and include the Central African chimpanzee (*Pan troglodytes troglodytes*), East African chimpanzee (*P. t. schweinfurthii*), West African chimpanzee (*P. t. verus*), and Nigeria–Cameroon chimpanzee (*P. t. ellioti*) (Morgan *et al.* 2011, p. 7; Oates *et al.* 2009, pp. 78–80; Gonder *et al.* 2006, p. 1120; Gonder *et al.* 1997, p. 337).

Characteristics of the chimpanzee include an opposable thumb and prominent mouth. The skin on a chimpanzee’s face, ears, palms, and soles of the feet are bare, whereas the rest of the body is covered with brown to black hair. Arms extend beyond the knees. This species walks “on all four” but is able to walk on just its legs for more than a kilometer (0.6 miles (mi)) (WWF n.d., unpaginated). The male stands over 1.2 meters (m) (4 feet (ft)) tall and weighs 59 kilograms (kg) (130 pounds (lb)); the female is closer to 0.9 m (3 ft) tall and weighs less than 45 kg (100 lb) (AZA 2000, p. 1).

Chimpanzees live in social communities that range from 5 to 150 individuals (Oates *et al.* 2008, unpaginated). A male dominance hierarchy forms the core of the community. Males work together to defend a home range and will occasionally attack and kill individuals from another community (Lonsdorf 2007, pp. 72, 74). These communities do not move around in a group like gorillas or monkeys, but rather spend most of their time in subgroups called parties (Pusey *et al.* 2007, p. 626; Plumptre *et al.* 2003, p. 9). Members of a community may join, or leave, at any time and parties may change frequently in size and composition depending on presence of receptive females, food availability, and activity of the party (Lonsdorf 2007, p. 72; Lehmann and Boesch 2004, p. 207; Humle 2003, p. 17; Plumptre *et al.* 2003, p. 9).

Males remain in the community in which they were born; however, once females become sexually mature,

between the ages of 9 and 13, they leave the community to join a new one (Humle 2003, p. 16). Chimpanzees are slow breeders; females do not give birth until they are 12 years of age or older and only have one infant every 5 or 6 years. Infants are weaned around 4 years old, and stay with their mothers until they are about 8 to 10 years old (Lonsdorf 2007, p. 72; Kormos 2003, p. 1; Plumptre *et al.* 2003, pp. 8, 10, 13). The relationship between the mother and her offspring is critical; young may not survive being orphaned, even after they are weaned (Lonsdorf 2007, p. 72).

Essential Needs of the Species

The chimpanzee lives in a variety of moist and dry forest habitats including savanna woodlands, mosaic grassland forests, and tropical moist forests (Oates *et al.* 2008, unpaginated; Pusey *et al.* 2007, p. 626; GRASP 2005a, p. 6; Butynski 2003, p. 6). In general, chimpanzees need large areas to provide sufficient resources for feeding, nesting, and shelter (Carter 2003b, p. 158). However, home ranges may vary depending on the quality of habitat and community size; competition for food and predation risk may also play a role. Home ranges average 12.5 square kilometers (km²) (8 square miles (mi²)), but can range from 5–400 km² (3–249 mi²) (Oates *et al.* 2008, unpaginated; Humle 2003, pp. 17–18).

Chimpanzees are omnivores; half their diet is ripe fruit, but they also feed on leaves, bark, stems, insects, and mammals, mostly red colobus (*Procolobus* spp.), but also black-and-white colobus (*Colobus guereza*), and occasionally blue duikers (*Philantomba monticola*) and red-tailed guenons (*Cercopithecus ascanius*). Diets vary seasonally and between populations, depending on food availability and habitat type (Oates 2013, pers. comm.; Oates *et al.* 2008, unpaginated; Pusey *et al.* 2007, p. 626; Humle 2003, pp. 13–14; Watts and Mitani 2002, p. 7).

Chimpanzees build arboreal nests in which they sleep at night and may rest during the day (Plumptre *et al.* 2003, p. 10; Humle 2003, p. 15). Nests are constructed by preparing a foundation of solid side branches; bending, breaking, and interweaving side branches crosswise; then bending smaller twigs in a circle around the rim. Chimpanzees exhibit strong preferences for certain tree species for nesting, independent of their availability in the habitat. Choice of nesting sites is variable across populations and communities of chimpanzees and is dependent on habitat structure, resource distribution, predation levels, and human disturbance. Chimps can be

deterred from nesting in certain areas where human habitation is concentrated. As a result, human presence influences nesting behavior and can put chimpanzees at risk of predators, as habitats where they relocate nests to avoid humans may not provide sufficient protection (Humble 2003, pp. 15–16).

Range and Population

Historically, this species may have spanned most of Equatorial Africa, from Senegal to southwest Tanzania, ranging over 25 countries (Butynski 2003, p. 6). Today, the chimpanzee is reported as extirpated in Benin, Togo, and Burkina Faso; however, there are a few recent

reports of chimpanzees in eastern Togo and reports of chimpanzees migrating into Burkina Faso from Côte d'Ivoire during the rainy season. The species now occurs in a wide but discontinuous distribution over 22 countries in an area approximately 2,342,000 km² (904,000 mi²) (Mitchell and Gonder 2013, p. 1; Oates 2013, pers. comm.; Carlsen *et al.* 2012, p. 5; Oates *et al.* 2008, unpaginated; Kormos and Boesch 2003, p. 1; Butynski 2003, pp. 6, 7; Brownell 2003a, p. 117; Brownell 2003b, p. 121).

Chimpanzees are thought to have numbered in the millions at the beginning of the 20th century, although there are no hard data to support this. Chimpanzee populations are believed to

have declined by 66 percent, from 600,000 to 200,000 individuals before the 1980s (Kormos and Boesch 2003, p. 1). Since the 1980s, estimates for the chimpanzee have varied, but in general have increased over the past three decades (see Table 1) (Oates 2006, pp. 102–104; Butynski 2003, p. 10). Using the latest population estimates for each subspecies, the chimpanzee, today, totals between 294,800 and 431,100 individuals; although we note that this estimate does not factor in a recent calamitous decline in the chimpanzee population of Côte d'Ivoire (see below). The range countries and most recent population estimates for each subspecies are outlined in Table 2.

TABLE 1—HISTORICAL POPULATION ESTIMATES FOR CHIMPANZEE

Year	Estimated population	Source
1900	1,000,000	Teleki in Butynski 2003, p. 10; Oates 2006, p. 104.
1900	2,000,000	Goodall 2000 in Butynski 2003, p. 10.
1960	>1,000,000	Goodall 2000 in Butynski 2003, p. 10.
1979	20,000–200,000	Lee <i>et al.</i> 1988 in Oates 2006, p. 103.
1987	151,000–235,000	Teleki in Butynski 2003, p. 10; Oates 2006, p. 104.
1989	≤150,000	Goodall 2000 in Butynski 2003, p. 10.
1989	145,000–228,000	Teleki 1991 in Butynski 2003, p. 10.
2000	152,200–254,600	Butynski 2001 in Oates 2006, p. 104.
2003	173,000–300,000	Butynski 2003, p. 10.

TABLE 2—RANGE COUNTRIES AND POPULATION ESTIMATES FOR EACH CHIMPANZEE SUBSPECIES

Subspecies	Range countries	Population estimate	Reference
Eastern (<i>P.t. schweinfurthii</i>).	Burundi, Central African Republic, Democratic Republic of Congo, Rwanda, Sudan, Tanzania, Uganda.	200,000–250,000	Plumptre <i>et al.</i> 2010, p. 22.
Nigeria-Cameroon (<i>P.t. ellioti</i>).	Cameroon, Nigeria	3,500–9,000	Morgan <i>et al.</i> 2011, p. 4.
Central (<i>P.t. troglodytes</i>).	Angola, Cameroon, Central African Republic, Congo, The Democratic Republic of Congo, Equatorial Guinea, Gabon.	70,000–116,500	Butynski 2003, p. 8.
Western (<i>P.t. verus</i>)	Burkina Faso, Côte d'Ivoire, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Nigeria, Senegal, Sierra Leone.	21,300–55,600	Kormos and Boesch 2003, p. 3; Butynski 2003, p. 8.
Total	294,800–431,100	

As stated above, the chimpanzee population has appeared to increase since the 1980s. However, this estimated increase is believed to be a result of previous difficulties in producing accurate estimates combined with the more recent availability of new information, rather than an actual increase in chimpanzee numbers (Oates 2006, p. 104). Some of the difficulties associated with earlier estimates include: Few areas being adequately surveyed; some chimpanzee populations survived at densities too low for accurate detection; survey methods lacked precision to enable extrapolation to large areas of potential

habitat; some surveys were outdated; and in many cases estimates were simply best guesses (Morgan *et al.* 2011, p. 9; Plumptre *et al.* 2010, pp. 5, 7, 9, 31, 41; Campbell *et al.* 2008, p. 904; Oates 2006, p. 102; Tutin *et al.* 2005, p. 6; GRASP 2005a, p. 7; Butynski 2003, p. 5; Kormos and Bakarr 2003, p. 29). When more careful surveys of chimpanzees are made, higher estimates are produced, indicating that previous estimates underestimated the size of surviving populations (Oates 2006, p. 104). Therefore, the estimated increase in chimpanzees is not evidence of steady increase in the population, but

a result of inaccurate early estimates to which newer estimates are compared.

Despite the appearance of an increase in chimpanzee numbers, experts agree that chimpanzee populations are declining (Plumptre *et al.* 2010, p. 1; Greengrass 2009, pp. 77, 80–82; Kabasawa 2009, p. 37; Campbell *et al.* 2008, pp. 903–904; Oates *et al.* 2008, unpaginated; Oates 2006, p. 110; Tutin 2005, p. 2; GRASP 2005a, p. 3; Kormos and Boesch 2003, p. 2; Butynski 2003, p. 11; Nishida *et al.* 2001, pp. 45–46). Data to support a declining trend come from nationwide surveys of Gabon, Côte d'Ivoire, and Tanzania; data from long-term chimpanzee research sites; a

questionnaire survey of great ape field researchers; and the expansion and increasing intensity of threats (Junker *et al.* 2012, p. 3; Plumptre *et al.* 2010, p. 8; Oates 2006, pp. 105–106; Nishida *et al.* 2001, p. 45; Campbell *et al.* 2008, pp. 903–904; Tutin *et al.* 2005, p. 32). One of the greatest documented losses of chimpanzees comes from a 2007 survey of Côte d'Ivoire, which found a 90 percent decline in the total nest encounter rate since the last survey conducted in 1989–1990, indicating a significant loss of chimpanzees from a country once thought to be one of the final strongholds of the western chimpanzee (Campbell *et al.* 2008, p. 903). Many remaining populations are now small and isolated, and face serious threats (Oates 2006, pp. 104, 110). Furthermore, the chimpanzee is reported to already have been extirpated from three countries. Due to national populations fewer than 1,000 individuals, there is concern that the chimpanzee could soon be extirpated from Senegal, Ghana, and Guinea-Bissau (Carlsen *et al.* 2012, p. 5; Butynski 2003, p. 11).

In addition to wild populations, chimpanzees are held in captivity in several countries around the world, including African countries and the United States. We do not have detailed information on the number, subspecies, or location of captive chimpanzees. However, we did find information indicating that 70 chimpanzees are living in sanctuaries in Cameroon and Nigeria (Morgan *et al.* 2011, p. 9). Approximately 171 chimpanzees are living in sanctuaries throughout West Africa; another 478 chimpanzees in the region are known to be held outside of sanctuaries (*e.g.*, in homes or hotels) (Kormos and Boesch 2003, p. 4). Within the United States, approximately 2,000 chimpanzees are in captivity (ChimpCare 2013, unpaginated; Ross *et al.* 2008, p. 1,487).

Summary of Threats

Threats to the chimpanzee have intensified and expanded since 1990, when wild populations of the chimpanzee were listed as an endangered species. Across its range, high deforestation rates are destroying, degrading, and fragmenting forests the chimpanzee needs to support viable populations and provide food and shelter. Widespread poaching, capture for the pet trade, and outbreaks of disease are removing individuals needed to sustain viable populations; recovery from the loss of individuals is more difficult given the slow reproductive rates of chimpanzees. These actions are exacerbated by an

increasing human population, the expansion of settlements, and increasing pressure on natural resources to meet the needs of the growing population (Morgan *et al.* 2011, p. 10; Plumptre *et al.* 2010, p. 2; Kabasawa 2009, p. 37; Campbell *et al.* 2008, p. 903; Lonsdorf 2007, p. 72; Unti 2007a, p. 4; Unti 2007b, p. 5; Bennett 2006, p. 885; Tutin *et al.* 2005, p. 1; GRASP 2005a, p. 3; Kormos 2003, pp. ix, 1; Kormos and Boesch 2003, p. 4; Nisbett *et al.* 2003, p. 97; Walsh *et al.* 2003, pp. 611–612; Carter *et al.* 2003, p. 38).

Deforestation, with consequent access and disturbance by humans, remains a major factor in the decline of chimpanzee populations across their range. Although some large forest blocks remain, commercial logging and the conversion of forests to agricultural land, especially for oil palm production, continue to severely reduce and fragment chimpanzee habitat (Morgan *et al.* 2011, pp. 12, 18, 19, 26, 31; Plumptre *et al.* 2010, p. 2; Oates *et al.* 2008, unpaginated; Unti 2007a, p. 4; Unti 2007b, p. 5; CBFP 2006, p. 16; Fa *et al.* 2006, p. 498; Tutin *et al.* 2005, pp. 1, 2, 10, 12, 14–17, 21–23; Humle 2003, p. 150; Carter *et al.* 2003, p. 38; Duvall *et al.* 2003, p. 47; Gippoliti *et al.* 2003, p. 57; Hanson-Alp *et al.* 2003, p. 83; Herbinger *et al.* 2003, pp. 106, 109; Kormos *et al.* 2003b, p. 71; Kormos *et al.* 2003c, p. 151; Magnuson *et al.* 2003, p. 113; Nisbett *et al.* 2003, pp. 95, 97; Oates *et al.* 2003, p. 129; Walsh *et al.* 2003, p. 613; Parren and Byler 2003, p. 135). As the human population and economic development have increased, pressure on forest resources has also increased. This increasing pressure has led to uncontrolled legal and illegal forest conversion within and outside of protected areas (*e.g.*, national parks and forest reserves), leaving them destroyed and fragmented (Greengrass 2009, pp. 77, 80; Campbell *et al.* 2008, p. 903; CBFP 2006, pp. 16, 33; Nasi *et al.* 2006, p. 14; Carter *et al.* 2003, p. 38; Duvall *et al.* 2003, p. 47; Herbinger *et al.* 2003, p. 109; Magnuson *et al.* 2003, p. 113; Oates *et al.* 2003, p. 129; Parren and Byler 2003, pp. 135, 137).

The natural protection once afforded to chimpanzees by large blocks of suitable habitat, isolated from human activities, is disappearing due to logging activity. Much of the chimpanzee's range is already allocated to logging concessions, and logging operations, both legal and illegal, are expanding (Morgan *et al.* 2011, pp. 12, 26; Laporte *et al.* 2007, p. 1451; Morgan and Sanz 2007, pp. 3, 5; CBFP 2006, p. 29; Hewitt 2006, p. 43; Nasi *et al.* 2006, p. 14; Tutin 2005, pp. 2, 4, 12, 30, 32; Kormos *et al.* 2003a, p. 29). Heavy pressures on timber

resources have led to cutting cycles that occur too frequently in an area to allow for proper regrowth, resulting in rapid degradation of forests (Parren and Byler 2003, p. 135). In addition to clearing forests, logging operations often create a network of roads for transporting timber. These roads provide greater access to forests that were once inaccessible, facilitate the establishment of human settlements, and are accompanied by further deforestation from the conversion of forests to agriculture (Junker *et al.* 2012, p. 7; Morgan *et al.* 2011, p. 12; Plumptre *et al.* 2010, p. 2; Greengrass 2009, p. 80; Laporte *et al.* 2007, p. 1451; Hewitt 2006, p. 44; Duvall 2003, p. 143; Oates *et al.* 2003, p. 129; Parren and Byler 2003, pp. 133, 137–138).

Human population growth and agricultural expansion have destroyed and fragmented forests across the range of the chimpanzee and are two of the greatest threats to chimpanzee survival. The spread of large-scale commercial plantations, including oil palm plantations, results in additional land being cleared of most vegetation and planting crops in monocultures; plantations and farms have been established in suitable chimpanzee habitat, including within protected areas (Oates 2013, pers. comm.; Plumptre *et al.* 2010, p. 9; Greengrass 2009, p. 80; Unti 2007a, p. 4; Unti 2007b, p. 5; Tutin *et al.* 2005, p. 20; Duvall 2003, p. 143; Gippoliti *et al.* 2003, pp. 55, 57; Hanson-Alp *et al.* 2003, p. 83; Humle 2003, p. 147; Kormos *et al.* 2003b, p. 63; Magnuson *et al.* 2003, p. 113; Parren and Byler 2003, p. 138). In West Africa, most unreserved forests have been converted to cultivation (Parren and Byler 2003, p. 138). Agricultural practices are largely unsustainable and are encroaching into additional forested areas (Parren and Byler 2003, p. 133).

Chimpanzees are highly adaptive and occur in a variety of habitats, including primary, secondary, and regenerating forests, logged forests, and plantations; they have even been found living in close proximity to humans. However, the loss, or even the degradation, of the chimpanzee's traditional habitat can affect their survival by impacting the species' food resources, behavior, susceptibility to disease, and abundance and distribution (Morgan and Sanz 2007, p. 1; Carter *et al.* 2003, p. 36; Hanson-Alp *et al.* 2003, p. 83; Kormos and Boesch 2003, p. 18; Nisbett *et al.* 2003, p. 97; Parren and Byler 2003, p. 137).

Although chimpanzees feed on a wide variety of foods, their energy requirements, as large primates with

large home ranges, predispose them to a reliance on high-energy fruits (Greengrass 2009, p. 81). Removal, or lowering the quality, of habitat through logging activity or establishment of agricultural lands destroys the structure and composition of the forest, eliminating essential food sources, which can affect sociability, condition of individuals, and female reproductive success, and increase vulnerability to diseases or parasites and infant and juvenile mortality (Greengrass 2009, pp. 81–82). Even in areas with lower levels of logging where essential food sources were unaffected, chimpanzee densities have declined significantly and remained low for years. Clear-cutting results in total habitat loss, and because of severe soil erosion, the potential for future forest regeneration is also lost (Parren and Byler 2003, pp. 137–138).

The loss or reduction of food sources and the noise and disturbance from logging activity can cause chimpanzee communities to abandon their home range to find a new home range with sufficient resources and less human activity. These chimpanzees may enter another community's territory, which can lead to further competition for resources and conflict that can lead to death. As habitat is lost or fragmented and chimpanzee populations are forced into smaller forest fragments, lethal interactions with other chimpanzees may increase. Furthermore, chimpanzees may be cautious about re-inhabiting previous home ranges where they were displaced by humans (Morgan *et al.* 2011, p. 12; Lonsdorf 2007, p. 74; Carter *et al.* 2003, p. 36; Parren and Byler 2003, pp. 137–138). If the displacement of chimpanzees forces them into suboptimal habitat, they may not have sufficient protection from predators, especially at night (Humle 2003, pp. 15–16).

The loss or reduction of food sources due to expanding logging, agriculture, and human settlements into chimpanzee habitat has also resulted in increased conflicts between humans and chimpanzees (Tacugama Sanctuary 2013, unpaginated; Unti 2007b, p. 5; Tweheyo *et al.* 2005, pp. 237–238, 244; Herbinger *et al.* 2003, p. 106; Humle 2003, p. 147; Kormos *et al.* 2003b, p. 71; Naughton-Treves *et al.* 1998, pp. 597, 600). Lack of sufficient wild food and an increase in farming and human presence have increased the occurrence of crop raiding to supplement the chimpanzee's diet. Crop raiding can cause substantial losses to farmers, reduce the tolerance of humans to chimpanzee presence, and increase killing chimpanzees to protect valuable crops or in retaliation for the destruction of crops (Tacugama

Chimpanzee Sanctuary 2013, unpaginated; Oates *et al.* 2008, unpaginated; Bennett *et al.* 2006, p. 885; Tweheyo *et al.* 2005, p. 245; Duvall 2003, p. 144; Carter *et al.* 2003, p. 36; Gippoliti *et al.* 2003, p. 57; Humle 2003, pp. 147, 150; Parren and Byler 2003, p. 138; Naughton-Treves 1998, p. 597).

Unsustainable hunting for the bushmeat trade is one of the major causes of the decline in chimpanzees, and continues to be a major threat to the survival of chimpanzees in protected and unprotected areas (Ghobrial *et al.* 2011, pp. 1, 2, 11; Morgan *et al.* 2011, p. 10; Hicks *et al.* 2010, pp. 1, 3, 6, 11; Plumtre *et al.* 2010, p. 2; Kabasawa 2009, p. 37; Campbell *et al.* 2008, p. 903; Oates *et al.* 2008, unpaginated; Lonsdorf 2007, p. 74; Unti 2007b, p. 5; Tutin *et al.* 2005, pp. 1, 10–23, 27–28; Herbinger *et al.* 2003, p. 109; Humle 2003, p. 17; Kormos and Boesch 2003, pp. 2, 14, 16, 19; Kormos *et al.* 2003b, p. 63; Kormos *et al.* 2003c, p. 151; Magnuson *et al.* 2003, pp. 111, 113; Nisbett *et al.* 2003, p. 95; Oates *et al.* 2003, pp. 123, 129; Nishida *et al.* 2001, p. 47; Bowen-Jones 1998, p. 12). Growth in the human population in Africa has increased the demand for wild animal meat, or bushmeat. Expansion of logging activities, including the construction of logging roads, has facilitated a significant market, much of it illegal, for commercial bushmeat to meet this demand (Amati *et al.* 2009, p. 6; Kabasawa 2009, pp. 50–51; AV Oates *et al.* 2008, unpaginated; Fa *et al.* 2006, pp. 503, 506; Magazine 2003, p. 7; Kormos *et al.* 2003c, p. 151; Walsh *et al.* 2003, p. 613; Nishida *et al.* 2001, p. 47; Bowen-Jones 1998, pp. 1, 11). Logging roads and vehicles provide access to the forests and a means to export meat to markets and cities. Logging operations are accompanied by an onslaught of workers who are encouraged to hunt to provide for their own needs and commercial hunters who operate in forests to supply the needs of forestry workers and to trade outside of the forested areas (Plumtre *et al.* 2010, p. 2; Kormos *et al.* 2003c, p. 151; Nisbett *et al.* 2003, p. 95; Walsh *et al.* 2003, p. 613; Nishida *et al.* 2001, p. 47; Bowen-Jones 1998, p. 1). Furthermore, bushmeat trade is also an important livelihood and the primary source of protein for humans in much of the chimpanzee's range (Abwe and Morgan 2008, p. 26; Fa *et al.* 2006, p. 507; Bennett *et al.* 2006, p. 885; Kormos *et al.* 2003c, p. 155; Wilkie and Carpenter 1999, p. 927).

The intensity of hunting chimpanzees varies by country and region (Kormos *et al.* 2003c, pp. 151–152). Religious, traditional, and familial taboos against

the killing of chimpanzees and the consumption of their meat exist in many areas (Hicks *et al.* 2010, p. 9; Plumtre *et al.* 2010, p. 2; Greengrass 2009, p. 81; Kabasawa 2009, p. 51; Unti 2007a, p. 4; Carter *et al.* 2003, pp. 31, 38; Duvall *et al.* 2003, p. 47; Gippoliti *et al.* 2003, pp. 55, 57; Humle 2003, p. 18; Kormos and Boesch 2003, pp. 10, 13; Kormos *et al.* 2003b, p. 63, 71; Kormos *et al.* 2003c, pp. 152, 154; Nisbett *et al.* 2003, p. 95; Oates *et al.* 2003, p. 129; Waller and Reynolds 2001, p. 135; Bowen-Jones 1998, pp. 19, 27). However, these areas may be hunted by people from surrounding areas where there is demand for chimpanzee meat (Kormos *et al.* 2003b, p. 72). Furthermore, these traditions and beliefs are not necessarily being passed down to younger generations and cannot be relied on to protect chimpanzees in the future (Hicks *et al.* 2010, p. 9; Unti 2007a, p. 4; Oates *et al.* 2003, p. 129).

Despite the high demand for bushmeat, primates do not represent the majority of animals killed for the bushmeat trade (AV Magazine 2003, p. 7; Magnuson *et al.* 2003, p. 113; Walsh *et al.* 2003, p. 613; Nishida *et al.* 2001, p. 47; Bowen-Jones 1998, p. 1). In fact, studies have found that chimpanzee meat makes up only a small fraction of the meat found in markets; estimates from different regions have ranged from 0.01 to 3 percent (Kabasawa 2009, p. 38; Fa *et al.* 2006, p. 502; Herbinger *et al.* 2003, p. 106; Kormos and Boesch 2003, p. 2; Kormos *et al.* 2003c, pp. 151–152). However, because the sale of ape meat is often hidden and the meat may be eaten in villages and never make it to markets, the proportion of chimpanzee meat in bushmeat markets could be greater than reported (Kabasawa 2009, p. 38; Kormos *et al.* 2003c, pp. 151–152; Bowen-Jones 1998, p. 21). Hunting pressure even at a low level is enough to result in the local extirpation of large chimpanzee populations. Low population densities and slow reproductive rates prevent chimpanzees from recovering easily from the loss of several individuals (Oates *et al.* 2008, unpaginated; Fa *et al.* 2006, p. 503; AV Magazine 2003, p. 7; Duvall *et al.* 2003, p. 47; Herbinger *et al.* 2003, p. 106; Kormos and Boesch 2003, p. 2; Kormos *et al.* 2003c, pp. 151, 153; Nisbett *et al.* 2003, p. 95; Magnuson *et al.* 2003, p. 113; Bowen-Jones 1998, p. 13).

Threats to the chimpanzee from habitat loss and commercial hunting have been exacerbated by civil unrest that has occurred in several chimpanzee range countries (Plumtre *et al.* 2010, pp. 4–5; Campbell *et al.* 2008, p. 903; CBFP 2006, p. 16; Hanson-Alp *et al.* 2003, p. 85; Nisbett *et al.* 2003, p. 89,

95; Draulans and Van Krunkelsven 2002, pp. 35–36). During civil conflict, many people, including refugees, military groups, and rebels, take shelter in interior forests and protected areas (Plumptre *et al.* 2010, p. 4; CBFP 2006, p. 16). The presence of soldiers and displaced refugees increases the number of people that rely on bushmeat for protein. Not only do soldiers hunt, but they also supply locals with weapons and ammunition to hunt them (Plumptre *et al.* 2010, p. 5; Hanson-Alp *et al.* 2003, p. 85; Draulans and Van Krunkelsven 2002, pp. 35–36). Civil unrest has contributed to a significant loss of wildlife, including chimpanzees (Campbell *et al.* 2008, p. 903; Hanson-Alp *et al.* 2003, p. 85).

Capture of live chimpanzees for the pet trade has been one of the major causes of the decline in chimpanzees. Today, illegal capture and smuggling of chimpanzees continue for the pet trade across Africa and, to some extent, the international market (Ghobrial *et al.* 2010, pp. 1, 2, 11; Kabasawa 2009, pp. 37, 48–49; Oates *et al.* 2008, unpaginated; Carter 2003b, p. 157; Kormos and Boesch 2003, p. 4; Nisbett *et al.* 2003, p. 95). A recent increase in orphaned chimpanzees has been attributed to the growing bushmeat crisis. Killing a mother with an infant earns twice the income for the hunter; the mother's body is sold in the bushmeat trade while the infant enters the pet trade (Kabasawa 2009, p. 50; Carter 2003b, p. 157). Furthermore, hunters have found a lucrative market for pet chimpanzees with military personnel, police, government officials, and traditional chiefs (Hicks *et al.* 2010, p. 8; Draulans and Van Krunkelsven 2002, pp. 35–36). The intensity of trade differs among countries, but is reportedly a substantial problem in The Democratic Republic of the Congo, Côte d'Ivoire, Sierra Leone, Ghana, and Guinea (Hicks *et al.* 2010, pp. 3, 6, 11; Plumptre *et al.* 2010, p. 2; Unti 2007, p. 5; Unti 2007a, p. 4; Hanson-Alp *et al.* 2003, p. 84; Herbing *et al.* 2003, p. 106; Kormos *et al.* 2003b, p. 72; Magnuson *et al.* 2003, p. 113). It is not possible to determine how many wild chimpanzees are captured for the pet trade, but the number of chimpanzees in sanctuaries that were either confiscated from owners by authorities, surrendered by owners after being informed about wildlife laws, or voluntarily donated or abandoned by owners indicates it is a significant problem. Since 2000, the number of chimpanzees in African sanctuaries has increased 59 percent (Kabasawa 2009, pp. 37, 44–45, 50).

The petitioners assert that the exploitation of chimpanzees in the U.S.

entertainment and pet industries is seen around the world and misleads the public into believing chimpanzees are well protected in the wild and make good pets, further fueling the demand for chimpanzees. Studies suggest a link between seeing chimpanzees portrayed in the media and misperceptions about the species' status in the wild. This misperception may also affect conservation efforts (Ross *et al.* 2011, pp. 1, 4–5; Schroepfer *et al.* 2011, pp. 6–7; Ross 2008a, pp. 25–26; Ross *et al.* 2008b, p. 1487). However, we did not find evidence that this situation was a significant driver in the status of the species under the Act.

The effects of the pet trade are particularly devastating to wild populations because the mother and other family members may be killed to capture an infant. Researchers estimate that as many as 10 chimpanzees may be killed for every infant that enters the pet trade. Furthermore, the infant is likely to die of malnutrition, disease, or injury (Hicks *et al.* 2010, p. 8; Kabasawa 2009, p. 49; Lonsdorf 2007, p. 74; Carter 2003b, p. 157; Hanson-Alp *et al.* 2003, p. 84; Kormos and Boesch 2003, p. 4). The loss of even just a few individuals from a population can have devastating effects due to the slow reproductive rate of chimpanzees. Because so many chimpanzees may be killed to secure an infant, the pet trade has a significant draining effect on remaining populations, and threatens the survival of wild chimpanzees (Kabasawa 2009, p. 49; Carter 2003b, p. 157; Magnuson *et al.* 2003, p. 113).

Historically, wild chimpanzees were captured and exported to meet a significant demand for chimpanzees in biomedical research in countries around the world, significantly impacting chimpanzee distribution and abundance (Unti 2007a, p. 4; Unti 2007b, p. 5; Kormos *et al.* 2003b, p. 72). A substantial number of countries do not permit or conduct research on chimpanzees, and the international research community is no longer seeking access to wild chimpanzees (Hicks 2011, pers. comm.; Unti 2007a, p. 4; Unti 2007b, p. 5). Although some biomedical research on captive chimpanzees continues in the United States and Gabon, in the United States, there is a decreasing scientific need for chimpanzee studies due to the emergence of non-chimpanzee models and technologies (Institute of Medicine 2011, pp. 5, 66–67).

As previously stated, chimpanzees are held in captivity in several countries around the world, including African countries and the United States. Chimpanzees in captivity are bred and

sold as pets, used in the entertainment industry (*e.g.*, movies, television, and advertisements), exhibited in hotels and roadside shows, used as party entertainment or animal encounters, displayed in zoos, and used for biomedical research. It is thought that self-sustaining breeding groups of captive chimpanzees provide surplus animals for research and other purposes, thereby reducing the demand for wild individuals. Although captive chimpanzees may have removed the demand for wild chimpanzees in biomedical research, given that threats to the chimpanzee have expanded and intensified, and capture for the illegal pet trade continues to be a major threat to remaining chimpanzee populations, it does not appear that the availability of captive chimpanzees has reduced any threats to the species.

National laws exist within all range countries to protect chimpanzees. In general, hunting, capture, possession, and commercial trade of chimpanzees are prohibited. Laws also protect chimpanzee habitat, including the establishment of protected areas, in many of the range countries. However, as evidenced by the continuing and increasing habitat destruction and hunting and trading of this species (Ghobrial *et al.* 2010, pp. 1, 2, 11; Hicks *et al.* 2010, pp. 8–9; Kabasawa 2009, p. 39; Laporte *et al.* 2009, p. 1451; Unti 2007a, pp. 4, 6, 10–11; Unti 2007b, p. 6, 8, 10; Bennett *et al.* 2006, p. 885; AV Magazine 2003, p. 7; Carter 2003a, p. 52; Carter 2003b, p. 157; Carter *et al.* 2003, pp. 31, 32, 38; Duvall *et al.* 2003, p. 47; Hanson-Alp *et al.* 2003, pp. 79, 87; Herbing *et al.* 2003, pp. 100, 106; Kormos and Boesch 2003, p. 6; Kormos *et al.* 2003b, p. 64; Kormos *et al.* 2003c, p. 155; Magnuson *et al.* 2003, p. 112; Nisbett *et al.* 2003, pp. 90, 95; Oates *et al.* 2003, p. 123), even within protected areas, these laws are not often enforced. A lack of resources, limited training, limited personnel, lack of basic logistical support, corrupt officials, and weak legislation prevent government agencies charged with the protection of wildlife and forest management from providing effective protection (Hicks *et al.* 2010, p. 9; Unti 2007a, pp. 4, 6, 8; Unti 2007b, p. 7–10; Bennett *et al.* 2006, p. 887; AV Magazine 2003, p. 7; Duvall *et al.* 2003, p. 47; Hanson-Alp *et al.* 2003, pp. 79, 87; Magnuson *et al.* 2003, p. 112; Nisbett *et al.* 2003, p. 95; Oates *et al.* 2003, p. 125). Furthermore, penalties for violations are not adequate to serve as a deterrent (Unti 2007b, p. 8; Hanson-Alp *et al.* 2003, pp. 79; Kormos and Boesch 2003, p. 6; Kormos *et al.* 2003c, p. 155).

The chimpanzee is also protected under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), an international agreement between governments to ensure that the international trade of CITES-listed plant and animal species does not threaten species' survival in the wild. Under this treaty, CITES Parties (member countries or signatories) regulate the import, export, and reexport of specimens, parts, and products of CITES-listed plant and animal species. Trade must be authorized through a system of permits and certificates that are provided by the designated CITES Management Authority of each CITES Party. All chimpanzee range countries are Parties to CITES.

The chimpanzee is listed in Appendix I of CITES. An Appendix-I listing includes species threatened with extinction whose trade is permitted only under exceptional circumstances, which generally precludes commercial trade. The import of an Appendix-I species generally requires the issuance of both an import and export permit. Import permits for Appendix-I species are issued only if findings are made that the import would be for purposes that are not detrimental to the survival of the species and that the specimen will not be used for primarily commercial purposes (CITES Article III(3)). Export permits for Appendix-I species are issued only if findings are made that the specimen was legally acquired and trade is not detrimental to the survival of the species, and if the issuing authority is satisfied that an import permit has been granted for the specimen (CITES Article III(2)).

Based on CITES trade data from 1990–2011, obtained from United Nations Environment Programme–World Conservation Monitoring Center (UNEP–WCMC) CITES Trade Database, there has been significant legal trade of chimpanzees and their parts, and products worldwide. However, legal trade in wild specimens, including live animals, bones, scientific specimens, and hair has been limited. Trade of these wild specimens for commercial purposes was reported for 14 live specimens, 121 scientific specimens, and 10 skulls. From 2002–2012, exports and re-exports of wild specimens from the United States have numbered 8 scientific specimens for scientific purposes. Imports of wild specimens into the United States have been limited and have included hairs, scientific specimens, a skull, and one unspecified specimen for personal, scientific, educational, and medical purposes.

As human settlements expand and populations of chimpanzees and their habitat are reduced, the frequency of interactions between chimpanzees and humans or human waste increases, leading to greater risks of disease transmission with a similar magnitude of impact on wild chimpanzee populations as habitat loss and poaching. A close genetic relationship allows for easy transmission of infectious diseases between chimpanzees and humans (Ryan and Walsh 2011, p. 1; Plumptre *et al.* 2010, p. 2; Oates *et al.* 2008, unpaginated; Lonsdorf 2007, p. 73; Tutin *et al.* 2005, p. 29; Formenty *et al.* 2003, p. 169; Huijbregts *et al.* 2003, p. 437). Rural communities that share the same habitat as chimpanzees have no access to health care and are not vaccinated against diseases that can spread through ape populations and result in high mortality rates. Additionally, exposure to humans through conservation and research activities, such as habituation, ecotourism, and reintroductions, can also increase the risk of disease transmission (Ryan and Walsh 2011, p. 2; Plumptre *et al.* 2010, p. 2; Köndgen *et al.* 2008, p. 260; Oates *et al.* 2008, unpaginated; Pusey *et al.* 2008, p. 738; Tutin *et al.* 2005, p. 29; Huijbregts *et al.* 2003, p. 437; Nishida *et al.* 2001, p. 48).

As discussed below, disease transmission is a major threat to remaining populations of the central and eastern chimpanzees (Fausther-Bovendo *et al.* 2012, p. 3; Ryan and Walsh 2011, p. 2; Morgan *et al.* 2011, p. 10; Plumptre *et al.* 2010, p. 2; Pusey *et al.* 2008, p. 743; GRASP 2005a, p. 7; Tutin *et al.* 2005, p. 2; Leendertz *et al.* 2004, p. 451; Walsh *et al.* 2003, p. 612). Five subtypes of the Ebola virus have been identified: Zaire, Sudan, Côte d'Ivoire, Bundibugyo, and Reston. All five are lethal to great apes. Repeated epidemics have resulted in dramatic declines in ape populations in Côte d'Ivoire, Gabon, Democratic Republic of the Congo, and the Republic of Congo. The Zaire strain alone has killed nearly one-third of the world's chimpanzees (Fausther-Bovendo *et al.* 2012, p. 1; Ryan and Walsh 2011, p. 2; Plumptre *et al.* 2010, p. 2; Köndgen *et al.* 2008, p. 261; Oates *et al.* 2008, unpaginated; Tutin *et al.* 2005, p. 29; Leendertz *et al.* 2004, p. 451; Huijbregts *et al.* 2003, pp. 437, 441; Walsh *et al.* 2003, pp. 612–613; Formenty *et al.* 2003, pp. 169–172).

Chimpanzees are naturally infected with simian immunodeficiency viruses (SIVs), the precursor to acquired immunodeficiency syndrome (AIDS), but it was long thought that SIVs were non-pathogenic (not capable of inducing disease) and did not generally cause

AIDS. However, testing from 2000 to 2008 found that SIV is, in fact, pathogenic in wild chimpanzees. Chimpanzees infected with SIV showed AIDS-like symptoms and had a 10- to 16-fold increased chance of death than uninfected chimpanzees. Additionally, females were less likely to give birth and had higher infant mortality (Keele *et al.* 2009, pp. 517–518).

Other infectious diseases, including Marburg virus, polio, anthrax, pneumonia, human respiratory syncytial virus, and human metapneumovirus have resulted in widespread death of chimpanzees, even within national parks (Ryan and Walsh 2011, pp. 2, 3; Rudicell *et al.* 2010, pp. 1, 10; Oates *et al.* 2008, unpaginated; Köndgen *et al.* 2008, pp. 260–262; Pusey *et al.* 2008, pp. 740, 741; Williams *et al.* 2008, pp. 766, 768–770; Leendertz *et al.* 2004, pp. 451–452; Nishida *et al.* 2001, p. 48). Disease can have a particularly devastating impact to ape populations since they have little resilience to diseases. For example, recovery of a gorilla population from a single disease outbreak can range from 5 years for a low mortality (4 percent) respiratory disease outbreak to 131 years for an Ebola outbreak with high mortality (96 percent); this does not take into account other impacts to the populations such as additional disease outbreaks or Allee effects. Recovery for a chimpanzee population would be longer as they have a lower maximum population growth rate than gorillas (Ryan and Walsh 2011, pp. 2, 3).

There are several strategies that can be taken to protect wild chimpanzees from diseases. Some “hands off” approaches include educating governments about the cost of too much tourism, stricter enforcement of health guidelines for approaching habituated animals, excluding humans from protected areas, and health programs for staff and local populations. However, tourism is a substantial source of revenue, and enforcement of guidelines is often weak, making these strategies difficult to implement (Ryan and Walsh 2011, pp. 5–6; Pusey *et al.* 2008, p. 742).

A more interventionist approach is treatment and vaccination of wild apes via darting or oral baiting (Fausther-Bovendo *et al.* 2012, p. 4; Ryan and Walsh 2011, p. 5). At this time, treatment is not practical, as there are no licensed anti-viral drugs effective against Ebola and anti-viral drugs have limited effectiveness against respiratory viruses. Furthermore, a reactive type strategy, such as treatment, requires a sufficient monitoring system to detect symptoms and a veterinary infrastructure to effectively implement

treatment (Ryan and Walsh 2011, p. 6). However, one of the reasons the Kasekela community in Gombe National Park has maintained its size through periodic epidemic diseases is that efforts were made to treat sick chimpanzee when possible. Chimpanzees were given Ivermectin during a mange epidemic and antibiotics during a respiratory epidemic (Pusey *et al.* 2008, p. 741).

There have only been a few occasions in which wild apes have been vaccinated against diseases. Chimpanzees in the Kasekela community were given a polio vaccine in 1966, during a polio epidemic; gorillas were vaccinated during a measles outbreak in 2011; and a few gorillas were vaccinated against tetanus when immobilized for treatment of snare wounds (Ryan and Walsh 2011, p. 6; Walsh 2011, p. 3; Academy of Achievement 2009, p. 9; Pusey *et al.* 2008, p. 741). There are approximately 16 human vaccines that could potentially be used to protect wild apes, including chimpanzees (Ryan and Walsh 2011, p. 6). However, vaccines for great apes require the same standard of testing and ethical review as a vaccine for humans (Fausther-Bovendo *et al.* 2012, p. 5). Because management authorities place a strong emphasis on animal welfare, it is preferable that vaccines be tested on captive apes. Captive chimpanzees in the United States could be used to test vaccines before they are given to wild populations. In 2011, for the first time, captive chimpanzees were used in an experiment aimed to help wild chimpanzees. The experiment assessed the safety of an Ebola vaccine and its ability to trigger an immune response. Ultimately, the vaccine could be given to gorillas and chimpanzees in the wild to protect them against Ebola (Cohen 2011, unpaginated; Walsh 2011, p. 3). Similar experiments on vaccines and treatments against other diseases known to pose a high risk to wild apes, including respiratory pathogens, gastrointestinal parasites, SIV, and malaria, are planned for the future (Walsh 2011, p. 3). At this time, these types of experiments have been extremely limited and have not yet contributed to a reduction in any threats to chimpanzees from diseases.

Once a chimpanzee population has been reduced, whether by hunting, capture for the pet trade, or disease, its ability to recover is limited due to very slow reproductive rates and complex social behavior (Plumptre *et al.* 2010, p. 1; Kabasawa 2009, p. 49; Bennett *et al.* 2006, p. 885; Tutin *et al.* 2005, p. 32; Leroy *et al.* 2004, p. 389; Kormos *et al.*

2003c, pp. 151, 155; Wilkie and Carpenter 1999, p. 927). Even low levels of hunting can have a devastating effect on the population. The loss of reproductive-age female chimpanzees can be particularly devastating, further reducing the population's ability to recover from the loss (Carter 2003b, p. 157; Kormos *et al.* 2003b, p. 72). The occurrence of chimpanzees at low densities coupled with slow reproductive rates can lead to the rapid extinction of even large populations (Oates *et al.* 2008, unpaginated; Kormos and Boesch 2003, p. 2).

The current threats to the chimpanzee, as described above, are not likely to improve in the foreseeable future, resulting in a continuing decline of chimpanzee populations. Threats to this species are driven by the needs of an expanding human population. Within the range countries of the chimpanzee, the human population is expected to continue to increase and will inevitably increase the pressures on natural resources. Therefore, impacts to remaining populations of chimpanzees, as described above, from deforestation, hunting, commercial trade, and disease are likely to continue or even intensify (Morgan *et al.* 2011, p. 10; Ryan and Walsh 2011, p. 5; Plumptre *et al.* 2010, pp. 50, 71; Fitzherbert *et al.* 2008, pp. 538–539, 544; Oates *et al.* 2008, unpaginated; CBFP 2006, p. 33; Fa *et al.* 2006, p. 506; Hewitt 2006, pp. 44, 48–49; Nasi *et al.* 2006, p. 14; Carter *et al.* 2003, p. 38; Duvall 2003, p. 145; Parren and Byler 2003, p. 137; Nishida *et al.* 2001, p. 45; Wilkie and Carpenter 1999, pp. 927–928).

Continuing threats acting on chimpanzee populations, coupled with the species' inability to recover from population reductions, will likely lead to the loss of additional populations. Chimpanzees could be lost from an additional three countries due to threats acting on populations that are already below what is considered the minimum for a viable population (Carlsen *et al.* 2012, p. 5; Butynski 2003, p. 11; Kormos and Boesch 2003, p. 3). Many remaining populations are small and isolated, putting them at an increased risk of extinction (Morgan *et al.* 2011, p. 12).

Many management plans have been developed to conserve the chimpanzee (e.g., Morgan *et al.* 2011; Plumptre *et al.* 2010; GRASP 2005a; GRASP 2005b; Tutin *et al.* 2005; Kormos and Boesch 2003; Kormos *et al.* 2003). These plans lay out goals and research needs to address the threats faced by chimpanzees. Development of forest management plans with the goal of sustainable forestry practices has increased (Hewitt 2006, p. 43; Nasi *et al.*

2006, pp. 17–19). However, implementation of these management plans faces challenges, and the effect of these plans has yet to be determined. There is no evidence that management plans have reduced threats to the species. Chimpanzees are found in numerous protected areas. In some cases, these areas provide adequate protection and support substantial populations of chimpanzees. Unfortunately, many protected areas have weak or nonexistent management with poor law enforcement and are illegally logged, converted to agricultural lands, and hunted (Campbell *et al.* 2011, p. 1). Furthermore, we have no evidence that enforcement of legislation to protect chimpanzees and their habitat, including protected areas, will improve.

Finding

Section 4 of the Act (16 U.S.C. 1533) and implementing regulations (50 CFR part 424) set forth procedures for adding species to, removing species from, or reclassifying species on the Federal Lists of Endangered and Threatened Wildlife and Plants. Under section 4(a)(1) of the Act, a species may be determined to be an endangered species or a threatened species based on any of the following five factors:

- (A) The present or threatened destruction, modification, or curtailment of its habitat or range;
- (B) Overutilization for commercial, recreational, scientific, or educational purposes;
- (C) Disease or predation;
- (D) The inadequacy of existing regulatory mechanisms; or
- (E) Other natural or manmade factors affecting its continued existence.

As required by the Act, we conducted a review of the status of the species and considered the five factors in assessing whether the chimpanzee is in danger of extinction throughout all or a significant portion of its range or likely to become endangered within the foreseeable future throughout all or a significant portion of its range. We examined the best scientific and commercial information available regarding the past, present, and future threats faced by the chimpanzee. We reviewed the petition, information available in our files, and other available published and unpublished information.

One approach we can use to determine whether a species is an endangered species or a threatened species, as defined under the Act, is to evaluate the viability of the species. In this context, viability refers to the ability of a species to persist over the long term, and conversely, avoid

extinction over the long term. A species can be considered viable if it has a sufficient degree of resiliency, representation, and redundancy. However, a species that is deficient in one or more of these characteristics will have a lower probability of being viable and, therefore, a greater risk of extinction.

Species have certain needs at the individual, population, and species level that are to be met in order to be viable. Using the concepts of resiliency, representation, and redundancy, we can evaluate threats to these needs, determine the effect on the species, and gauge the probability of viability. In evaluating threats to the needs of the species and considering whether a species may warrant listing under any of the five factors, we look beyond the species' exposure to a potential threat or aggregation of threats under any of the factors, and evaluate whether the species responds to those potential threats in a way that causes actual impact to the species. The identification of threats that might impact a species negatively may not be sufficient to compel a finding that the species warrants listing. The information must include evidence indicating that the threats are operative and, either singly or in aggregation, affect the status of the species. Threats are significant if they drive, or contribute to, the risk of extinction of the species, such that the species warrants listing as an endangered species or a threatened species, as those terms are defined in the Act.

Resiliency describes the characteristics of a species and its habitat that allow it to recover from periodic disturbance. Species-level resiliency is measured through the resiliency of its collective populations. Healthy populations allow for recovery after stochastic events or periodic disturbances. Populations lacking healthy characteristics will be less likely to bounce back and are thus less resilient.

Chimpanzee habitat is continually subjected to disturbance. Chimpanzees need large areas to provide sufficient resources for food, nesting, and shelter. However, across its range, habitat that is needed to support viable chimpanzee populations is being fragmented and lost to logging operations and conversion to agriculture. Logging operations often create a network of roads for transporting timber. These roads provide greater access to forests that were once inaccessible, facilitate the establishment of human settlements, and are accompanied by further deforestation from the conversion of

forests to agriculture. Additionally, agricultural practices are largely unsustainable and are encroaching into additional forested areas. As the human population and economic development have increased, pressure on forest resources has also increased. This increasing pressure has led to uncontrolled legal and illegal forest conversion within and outside of protected areas (e.g., national parks and forest reserves), leaving them destroyed and fragmented. Cutting cycles that occur too frequently in an area to allow for proper regrowth, clear-cutting that results in total habitat loss, and severe soil erosion results in the loss of future forest regeneration and recovery of vital habitat.

The loss, or even the degradation, of the chimpanzee's traditional habitat can affect their survival by impacting the species' food resources, behavior, susceptibility to disease, and abundance and distribution. Removal, or lowering the quality, of habitat through logging activity or establishment of agricultural lands destroys the structure and composition of the forest, eliminating essential food sources, which can affect sociability, condition of individuals, and female reproductive success, and increases vulnerability to diseases or parasites and infant and juvenile mortality. Even in areas with lower levels of logging where essential food sources were unaffected, chimpanzee densities declined significantly and were unable to recover, remaining low for years.

Chimpanzee populations are also continually subjected to disturbance. Individuals needed to maintain viable populations are lost to hunting for the bushmeat trade, trade in pet chimpanzees, disease, and conflicts with humans. Hunting pressure even at a low level is enough to result in the local extirpation of large chimpanzee populations. The loss of reproductive-age female chimpanzees can be particularly devastating, further reducing the population's ability to recover from the loss. The pet trade has a significant draining effect on remaining populations, and threatens the survival of wild chimpanzees, because so many chimpanzees may be killed to secure one infant. Repeated epidemics have resulted in dramatic declines in ape populations in Côte d'Ivoire, Gabon, Democratic Republic of the Congo, and the Republic of Congo. The Zaire strain of the Ebola virus alone has killed nearly one-third of the world's chimpanzees. Disease, such as SIV increase the chance of death by 10- to 16-fold, decreases the likelihood of females giving birth, and increases

infant mortality. Disease can have a particularly devastating impact to ape populations since they have little resilience to diseases. For example, recovery of a gorilla population from a single disease outbreak can range from 5 years for a low mortality (4 percent) respiratory disease outbreak to 131 years for an Ebola outbreak with high mortality (96 percent); this does not take into account other impacts to the populations such as additional disease outbreaks or Allee effects. Recovery for a chimpanzee population would be longer as they have a lower maximum population growth rate than gorillas.

Once a chimpanzee population has been reduced, whether by hunting, capture for the pet trade, or disease, its ability to recover is limited due to very slow reproductive rates and complex social behavior. Females do not give birth until 12 years of age and have only one infant every 5 to 6 years. Infants are weaned around 4 years old, and stay with their mothers until they are about 8 to 10 years old. Even after being weaned, young may not survive if orphaned. The occurrence of chimpanzees at low densities coupled with slow reproductive rates can lead to the rapid extinction of even large populations.

Continuing threats acting on chimpanzee habitat and populations, coupled with the loss of future forest regeneration and recovery of vital habitat and the species' inability to recover from population reductions, will lead to the loss of additional populations and is evidence that neither chimpanzees, nor its habitat, are resilient.

Representation is the species' ability to adapt to changing environmental conditions, whether natural or human caused. The species' adaptive capabilities are supported by the range in variation found within and between populations. Representation can be measured through the breadth of genetic diversity within and among populations and/or ecological diversity occupied by populations across the species range. In short, sufficient representation is having the genetic flexibility and/or inhabiting varying environmental conditions to allow the populations to respond to changing environmental conditions through adaptation. Species without diversity within and among populations are thought to be more likely to go extinct as conditions change.

Genetic diversity in chimpanzees is evident by the four-subspecies taxonomic classification. Determining intraspecific variation among natural populations is more difficult. Given that some chimpanzee populations are

small, isolated and continue to face threats, it is reasonable to conclude that these particular populations may have, or will experience, decreased genetic diversity. However, we found no information to suggest that genetic exchange is particularly low for the species as a whole or chimpanzee populations in general.

Chimpanzee habitats, diet, and choice of nesting sites vary across populations and communities. In regards to habitat, chimpanzees are highly adaptive, occurring in primary, secondary, and regenerating forests, logged forests, and plantations; they have even been found living in close proximity to humans. However, the loss, or even the degradation, of the chimpanzee's traditional habitat can affect their survival by impacting the species' food resources, behavior, susceptibility to disease, and abundance and distribution. Although chimpanzees feed on a wide variety of foods, their energy requirements, as large primates with large home ranges, predispose them to a reliance on high-energy fruits. Removal, or lowering the quality, of habitat through logging activity or establishment of agricultural lands destroys the structure and composition of the forest, eliminating essential food sources, which can affect sociability, condition of individuals, female reproductive success, and increase vulnerability to diseases or parasites and infant and juvenile mortality. Choice of nesting sites is variable across populations and communities of chimpanzees, but chimpanzees exhibit strong preferences for certain tree species for nesting, independent of their availability in the habitat. Chimps can also be deterred from nesting in certain areas where human habitation is concentrated. As a result, chimpanzees are at a greater risk of predation, as habitats where they relocate nests may not provide sufficient protection. Furthermore, the loss or reduction of food sources and the noise and disturbance from logging activity can cause chimpanzee communities to abandon their home range to find a new home range with sufficient resources and less human activity. These chimpanzees may enter another community's territory, which can lead to further competition for resources and conflict that can lead to death. As habitat is lost or fragmented and chimpanzee populations are forced into smaller forest fragments, lethal interactions with other chimpanzees may increase. Chimpanzees may also be cautious about re-inhabiting previous

home ranges where they were displaced by humans.

Chimpanzees are ecologically diverse across subspecies, populations, and communities. However, this species faces ongoing threats that impact the various habitat types and result in declining populations across its range. As stated above, these impacts are particularly devastating to populations as their ability to recover from these ongoing disturbances is limited due to very slow reproductive rates and complex social behavior. Therefore, we find that chimpanzees do not have sufficient representation to adapt to changing environmental conditions.

Redundancy is the ability of a species to withstand catastrophic events either by having populations that are unaffected or by having populations that can recover following such an event. Sufficient redundancy is having enough populations distributed across the landscape to provide a margin of safety for the species to withstand catastrophic events. This can be measured by the number of populations comprising the species and how they are distributed across the landscape. Additionally, because the species depends on its habitat, the ability of its habitat to withstand, or recover from, a catastrophic event should be considered.

Chimpanzee populations occur across 22 African countries. Affected populations, owing to the lack of resiliency, would be unlikely to recover after a catastrophic event, leaving the species more depleted and fragmented than its current state. Additionally, unaffected populations would continue to face ongoing threats, and owing to a lack of resiliency, will be unlikely to sufficiently recover from these continuous disturbances. Similarly, the habitat types occupied by chimpanzees across the 22 range countries are not likely to be all be directly impacted by a catastrophic event, but the ability of the habitat to recover, given the current threats acting on chimpanzee habitat and the lack of forest regeneration, is unlikely. Furthermore, unaffected habitat will continue to face threats and will be unable to recover due to heavy pressures to meet the demands and needs of the growing human population. Therefore, we find that chimpanzee populations do not represent sufficient redundancy to withstand a catastrophic event.

In summary, wild chimpanzees were listed as an endangered species in 1990 due to habitat loss, excessive hunting, capture for the pet trade, disease, and lack of effective national and international laws. Since then, threats to

the chimpanzee have only expanded and intensified. The chimpanzee is a species whose declining and fragmented populations are not resilient to current ongoing disturbances. Despite the ecological diversity of the species, threats to the chimpanzee and its habitat are such that the representation is not sufficient to allow chimpanzees to adapt to the ongoing changes in its environment. In the event of a catastrophic event, the remaining populations would likely not recover due to ongoing threats. Due to the current, ongoing threats and impacts to the chimpanzee and its habitat, resiliency, representation, and redundancy are not sufficient to characterize the chimpanzee as a viable species. Laws exist throughout the range countries and internationally to protect the chimpanzee, but enforcement of national laws is lacking. Impacts to the chimpanzee and its habitat are expected to continue into the future as the human population continues to expand and pressures on natural resources to meet the demands of the human population increase.

Threats and the impact of these threats to the chimpanzee and its habitat are at a level that compromises the viability of the species. We do not find that the chimpanzee is likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Rather, we find that the chimpanzee (including consideration of all members, both captive and wild) is not a viable species and is currently in danger of extinction throughout all of its range. Therefore, we are retaining the status of the chimpanzee as an endangered species, but with this listing we are now including all members of the species in the endangered classification.

We also examined the chimpanzee to analyze if any other listable entity under the definition of "species," such as subspecies or distinct population segments, may qualify for a different status. Because of the magnitude and uniformity of the threats throughout its range, we find that there are no other listable entities that may warrant a different determination of status. In addition, because we find that the chimpanzee is in danger of extinction throughout all of its range, consistent with our Final Policy on Interpretation of the Phrase "Significant Portion of Its Range" in the Endangered Species Act's Definitions of "Endangered Species" and "Threatened Species" (79 FR 37578; July 1, 2014) it is not necessary to consider whether the species might qualify for a different status based on some "significant portion of its range"

because if a species is endangered or threatened throughout its range, no portions of its range can qualify as "significant." Therefore, on the basis of the best available scientific and commercial information, we have determined that the chimpanzee meets the definition of an endangered species under the Act. Consequently, we are revising the listing of chimpanzees under the Act so that all chimpanzees, wherever found, are listed as endangered species.

A rule normally becomes effective 30 days after publication of a final rule in the **Federal Register**; however, our final determination to list all chimpanzees as endangered species under the Act will become effective in 90 days (see **DATES**, above). We are delaying the effective date to allow time to process applications for ongoing activities involving chimpanzees that would require a permit under the Act. This will allow persons who qualify for a permit to avoid unnecessary suspension of their activities, which include important ongoing medical and scientific research. Delaying the effective date will not adversely affect wild populations of chimpanzees or significantly affect captive chimpanzees.

4(d) Rule

For threatened species, section 4(d) of the Act gives the Service discretion to specify the prohibitions and any exceptions to those prohibitions that are appropriate for the species, as well as include provisions that are necessary and advisable to provide for the conservation of the species. A 4(d) rule allows us to develop regulatory provisions that are tailored to the specific conservation needs of the threatened species and which may be more or less restrictive than the general provisions for threatened wildlife at 50 CFR 17.31 and 17.32. Because captive chimpanzees in the United States were previously classified as threatened species, they were exempt from the general prohibitions for threatened wildlife at 50 CFR 17.31 under a 4(d) rule for primates set forth at 50 CFR 17.40(c). However, because 4(d) rules can be applied only to threatened species, and we find that all chimpanzees, both wild and captive, are an endangered species, the 4(d) rule for captive chimpanzees can no longer be applied. Therefore, we are removing the chimpanzee, including a provision specific to the chimpanzee, from the 4(d) rule found at 50 CFR 17.40(c).

Available Conservation Measures

Conservation measures provided to species listed as endangered or

threatened species under the Act include recognition, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing results in public awareness, and encourages and results in conservation actions by Federal and state governments, private agencies and groups, and individuals.

Section 7(a) of the Act, as amended, and as implemented by regulations at 50 CFR part 402, requires Federal agencies to evaluate their actions within the United States or on the high seas with respect to any species that is proposed or listed as endangered or threatened species and with respect to its critical habitat, if any is being designated. However, given that the chimpanzee is not native to the United States, we are not designating critical habitat for this species under section 4 of the Act.

Section 8(a) of the Act authorizes the provision of limited financial assistance for the development and management of programs that the Secretary of the Interior determines to be necessary or useful for the conservation of endangered and threatened species in foreign countries. Sections 8(b) and 8(c) of the Act authorize the Secretary to encourage conservation programs for foreign endangered species and to provide assistance for such programs in the form of personnel and the training of personnel.

In 2000, the U.S. Congress passed the Great Ape Conservation Act to protect and conserve the great ape species, including the chimpanzee, listed under both the Endangered Species Act and CITES. The Great Ape Conservation Act granted the Service the authority to establish the Great Ape Conservation Fund to provide funding for projects that aim to conserve great apes through law enforcement training, community initiatives, and other conservation efforts. The Service's Wildlife Without Borders program, through the Great Ape Conservation Fund, is supporting efforts to fight poaching and trafficking in great apes; to increase habitat protection by creating national parks and protected areas; and to engage the community through local initiatives to conserve the most threatened great ape species.

The Endangered Species Act and its implementing regulations set forth a series of general prohibitions and exceptions that apply to all endangered wildlife and to threatened wildlife that are not regulated through a 4(d) rule. These prohibitions, at 50 CFR 17.21 and 17.31, in part, make it illegal for any person subject to the jurisdiction of the United States to "take" (take includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or to

attempt any of these) within the United States or upon the high seas; import or export; deliver, receive, carry, transport, or ship in interstate or foreign commerce in the course of commercial activity; or sell or offer for sale in interstate or foreign commerce any endangered or threatened wildlife species. To possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken in violation of the Act is also illegal. Certain exceptions apply to agents of the Service and State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving endangered and threatened wildlife species under certain circumstances. Regulations governing permits are codified at 50 CFR 17.22 for endangered wildlife and 17.32 for threatened wildlife. For endangered wildlife, a permit may be issued for scientific purposes, to enhance the propagation or survival of the species, and for incidental take in connection with otherwise lawful activities. For threatened species, a permit may be issued for the same activities, as well as zoological exhibition, education, and special purposes consistent with the Act.

Summary of Comments and Recommendations

We based this action on a review of the best scientific and commercial information available, including all information received during the public comment period. In the June 12, 2013, proposed rule, we requested that all interested parties submit information that might contribute to development of a final rule. We also contacted appropriate scientific experts and organizations and invited them to comment on the proposed listing. We received tens of thousands of comments.

We reviewed all comments we received from the public for substantive issues and new information regarding the proposed listing of this species, and we address those comments below. Overall, most commenters supported the proposed listing, but did not provide additional scientific or commercial data for consideration. We have not included responses to comments that supported the listing decision but did not provide specific information for consideration. Most of the commenters that did not support the proposed listing were affiliated with the biomedical industry and opposed the rule due to potential impacts on biomedical research. Additionally, we received comments opposing our finding that the Act does not allow for captive chimpanzees to be assigned separate legal status from their

wild counterparts on the basis of their captive state, including through designation as a separate distinct population segment.

Peer Review

In accordance with our policy published on July 1, 1994 (59 FR 34270), we solicited expert opinions from five individuals with scientific expertise that included familiarity with the species, the geographic region in which wild members of the species occur, and conservation biology principles. We received responses from one of the peer reviewers from whom we requested comments. The peer reviewer found the proposed rule generally accurate and comprehensive in its description of the biology, habitat, population trends, and distribution of chimpanzees, including the factors affecting the species. The peer reviewer provided comments for our consideration to improve the accuracy of the rule. Those comments are addressed below. Technical corrections suggested by the peer reviewer have been incorporated into this final rule. In some cases, a technical correction is indicated in the citations by “personal communication” (pers. comm.), which could indicate either an email or telephone conversation; in other cases, the research citation is provided.

Peer Reviewer Comments

(1) *Comment:* The peer reviewer provided technical corrections, including more appropriate citations, on the species’ taxonomy, description, diet, and population estimates.

Our Response: We reviewed the recommended citations and made minor changes to the *Taxonomy and Species Description*, *Essential Needs of the Species*, and *Range and Population* sections.

(2) *Comment:* The Service’s statement that chimpanzees have been lost from Benin, Togo, and Burkina Faso is too definitive, as there are a few recent, second-hand reports of chimpanzees in Togo, one of which has led a primatologist to plan a new survey to investigate.

Our Response: The loss of chimpanzees from Togo is widely reported in scientific literature; therefore, in the absence of a survey confirming the presence of chimpanzees in this country we will continue to rely on the best scientific data available, which indicates that chimpanzees have been extirpated from Togo. However, we acknowledge these recent reports in our *Range and Population* section.

(3) *Comment:* The peer reviewer disagrees that the chimpanzee could be

extirpated from Nigeria. The current population of chimpanzees in just one national park in Nigeria, Gashaka-Gumti, appears to be over 1,000 individuals and is relatively well protected.

Our Response: In light of this information we have reevaluated our analysis of potential extirpation from specific countries. According to Carlsen *et al.* (2012, p. 5) and Butynski (2003, p. 11), the western chimpanzee is highly threatened; combined with national populations fewer than 1,000 chimpanzees, survival in Senegal, Guinea-Bissau, and Ghana is a concern. Because the population in a well-protected national park in Nigeria is over 1,000 chimpanzees, we have revised our analysis under our *Range and Population* section. However, this did not change our finding that the chimpanzee meets the definition of an endangered species under the Act.

Public Comments

(4) *Comment:* The inclusion of non-native species under the Endangered Species Act is a misdirection of agency resources that does little to protect wild habitat and merely imposes regulatory burdens on those who maintain these in human care domestically.

Our Response: The Act requires the Service to determine if species qualify as endangered or threatened species regardless of whether a species is native to the United States. Benefits to the species include prohibitions on certain activities including import, export, take, and certain commercial activity in interstate or foreign commerce. By regulating these activities, the Act helps to ensure that people under the jurisdiction of the United States do not contribute to the further decline of listed species. Although the Act’s prohibitions regarding listed species apply only to people subject to the jurisdiction of the United States, the Act can generate additional conservation benefits such as increased awareness of listed species, research efforts to address conservation needs, or funding for in-situ conservation of the species in its range countries.

(5) *Comment:* Several commenters oppose the elimination of the separate classification of chimpanzees held in captivity and the listing of the entire species, wherever found, as an endangered species under the Act, stating that it is unlikely to benefit chimpanzees in the wild and will have little effect on the major threats to chimpanzees.

Our Response: Our determination that the Act does not allow for captive chimpanzees to be assigned separate

legal status from their wild counterparts is based on a detailed analysis on whether the current statute, regulations, and applicable policies provide any discretion to differentiate the listing status of specimens in captivity from those in the wild. Therefore, benefits to the species or the effect of the listing decision is not relevant to what constitutes a listable entity and is eligible for separate listing status under the Act. We did, however, consider to what extent captive chimpanzees contribute to or create threats to the species or reduce or remove any threats to the species as a whole.

(6) *Comment:* Commenters requested chimpanzees located in the United States to continue to be regulated under the existing rule issued under section 4(d) of the Act, or that the special rule for chimpanzees be revised in order to allow certain activities with chimpanzees to be undertaken without the administrative burden and delays associated with obtaining permits under the Act.

Our Response: Because special rules under section 4(d) authority can only apply to threatened species, the special rule that includes captive chimpanzees at 50 CFR 17.40(c) will no longer be available once this listing action and the accompanying removal of the special rule as applied to chimpanzees become effective.

(7) *Comment:* Several commenters oppose the listing of all chimpanzees as endangered species, and removal of chimpanzees from the 4(d) rule for primates, because essential biomedical research for both human and chimpanzee health, including critical research needed to develop preventions and treatments of infectious diseases in wild chimpanzee populations, that uses chimpanzees could be prohibited. Furthermore, the utilization of research chimpanzees is currently well-regulated under other Federal statutes, including the Animal Welfare Act (AWA), the Public Health Service Act, and the Chimp Act of 2000, as well as other Federal policies and guidelines.

Our Response: It is not our intent to prevent any biomedical research. However, research involving chimpanzees that could cause harm to the animal (*i.e.*, “take”) will require a take permit under the Act. While take includes harassment of individual animals, our regulations specify that when captive animals are involved, harassment does not include animal husbandry practices that meet or exceed AWA standards, breeding procedures, or veterinary care that is not likely to result in injury (see the definition of harass at 50 CFR 17.3). In addition,

research that does not adversely affect chimpanzees, such as observations in behavioral research, are not considered take and will not require a permit. For activities that may result in a prohibited act such as a taking, permits may be issued for scientific purposes or to enhance the propagation or survival of the species. Enhancement may be direct, such as developing a vaccination to be administered to chimpanzees in the wild (*in situ*), or indirect such as contributions that are made to *in situ* conservation.

Additionally, the comment appears to imply that additional regulation under the Act is not needed for captive chimpanzees in the United States. Whether or not additional regulation is needed is not a factor considered when evaluating whether a species meets the definition of a threatened or endangered species. Having concluded that we had no discretion to treat captive chimpanzees as a separate listable entity from wild chimpanzees, the Service properly assessed the status of the "species" to determine if it met the definition of a "threatened species" or an "endangered species" due to any one or a combination of the five factors found in section 4(a)(1) of the Act. We properly applied the five factors under section 4(a)(1) to the species, including the extent to which captive chimpanzees create or contribute to the threats to the species or remove or reduce threats to the species. Having determined that all chimpanzees qualify as an "endangered species," the Act's protections for endangered species are extended to all chimpanzees.

(8) *Comment:* There is no causal nexus between research with chimpanzees in the United States and the removal of specimens from the wild by "poachers and smugglers," and the Service has provided no example of illegal trafficking attributable to research.

Our Response: In assessing whether captive chimpanzees actually create or contribute to the threat of overutilization to the species as part of its status review, the Service did not find evidence that captive animals used for research in the United States were contributing to or creating any threats to the species. In fact, the availability of captive chimpanzees may have removed the demand for wild chimpanzees in biomedical research.

(9) *Comment:* Several commenters are concerned that the permitting process may delay time-sensitive research.

Our Response: The Service intends to work with research institutions to minimize the time needed to authorize activities under the Act. However, it

should be noted that the permitting process includes a 30-day comment period required by statute for permit applications involving endangered species. Given that it takes time to plan and implement any research studies, we do not believe the permitting process will be problematic or result in any critical delays in research.

(10) *Comment:* The Service should amend the permitting requirements so that details of requests for biomedical research permits are not required to be published in the **Federal Register**.

Our Response: We do not publish the details of permit applications in the **Federal Register**; we publish only a notice to the public that we have received a permit application. Information received as part of any application is available to the public, however, as a matter of public record.

(11) *Comment:* How many and for which type of biomedical research will the Service issue permits?

Our Response: All determinations of whether particular entities and particular activities qualify for permits under the Act are made on a case-by-case basis depending on the facts of the situation. We do not set a limit on the number of permits we issue; however, in the course of reviewing permit applications we may refer back to all applications we have received and issued for a particular species and activity. We cannot foresee what biomedical research would be authorized because up until the effective date of this rule (see DATES), permits for activities involving chimpanzees have not been required. Further, to list those activities prior to reviewing them during the course of the permitting procedure would be predecisional. We will issue permits for activities that meet the requirements of 50 CFR 17.22.

(12) *Comment:* The Service's proposed listing rule does not consider the inadequacy of existing regulatory mechanisms for permitting biomedical research with captive chimpanzees under the Act.

Our Response: The commenter appears to be referencing factor D and appears to maintain that inadequate permitting of research negatively impacts wild chimpanzees because such regulations impede research that has the potential to treat diseases that impact chimpanzees. As stated above, biomedical research involving chimpanzees that benefits chimpanzees in the wild would likely meet enhancement requirements and, therefore, would likely be authorized. Thus, the issue mentioned by the commenter is not applicable.

(13) *Comment:* The impact of this rule on the biomedical community will endanger human populations. The Service should include biomedical research aimed at improving human health within the definition of "scientific purposes" under the Act.

Our Response: The purposes of the Act are to conserve species and the ecosystems on which they depend, and any permit issued must meet the standards under section 10(a) and 10(d) of the Act. While not intended to impact research involving human health, there are requirements that must be met when endangered species, such as the chimpanzee, are involved. We will evaluate each application for a permit on a case-by-case basis to determine if it qualifies under the Act, including for scientific purposes. We will work with institutions applying for a permit to minimize adverse effects to research activities.

(14) *Comment:* An enhancement-of-survival permit for biomedical research on chimpanzees would require research programs to provide a conservation benefit to species in the wild, a huge imposition on research institutions' resources.

Our Response: The Service does not believe that requiring biomedical institutions to obtain authorization to carry out otherwise prohibited activities would impose a significant imposition on their resources. In discussions with a number of the institutions currently holding chimpanzees, it appears that there are ways these institutions could benefit chimpanzees in the wild through currently on-going activities or activities that could be reasonably developed. Behavioral studies, the development of veterinary treatments, and support for in-situ conservation efforts like orphan care, currently carried out by some institutions, all would support the issuance of an endangered species permit by the Service. The Service will continue to work with research institutions on ways to continue their current activities, while ensuring that the standards of the Act are met.

(15) *Comment:* Additional information on diseases and the threat they pose to the viability of wild chimpanzees was provided.

Our Response: We have incorporated additional information into our discussion of diseases, including the potential impact of disease outbreaks on chimpanzee populations and the potential for captive chimpanzees in the United States to be used to test vaccines for wild populations. This information did not change our finding that the chimpanzee meets the definition of an endangered species under the Act.

Rather, it provided additional support to our finding that disease is a threat to chimpanzees.

(16) *Comment:* The Service only used literature related to wild chimpanzees and included very limited scientific data related to captive chimpanzees, especially information on the use of captive chimpanzees in research to advance both human and chimpanzee health.

Our Response: Consistent with the Act, we assessed the status of the species to determine whether chimpanzees meet the definition of an endangered or threatened species and should be listed under the Act. This included assessing the extent to which captive chimpanzees create or contribute to threats to the species or remove or reduce threats to the species by contributing to the conservation of the species. We have included in our Summary of Threats section information on the potential for captive chimpanzees to contribute to a reduction in threats to chimpanzees from diseases. Because the use of captive chimpanzees in the advancement of human health does not impact chimpanzees, either positively or negatively, this information is not relevant in assessing the status of the species.

(17) *Comment:* Some commenters claimed listing all chimpanzees as endangered species would hurt conservation efforts to the extent that the Service would set limitations on the exhibition of endangered chimpanzees in zoological settings.

Our Response: The Act does not prohibit the exhibition of listed species. Listing all chimpanzees will not set any limitations on exhibition. The Service disagrees, however, that listing all chimpanzees as endangered would have any negative impact on conservation efforts. Instead, the listing will most likely promote greater participation in conservation efforts by zoological institutions and the public. Before the listing, individuals wishing to sell and engage in certain other commercial activities with captive chimpanzees could do so without providing any conservation benefits to the species. With this listing, otherwise prohibited activities, such as these commercial activities, will require authorization from the Service and this authorization can be issued only if the activity meets the requirements of the Act.

(18) *Comment:* The listing petition's general arguments regarding exhibitors' commercial gain from their exhibition of captive chimpanzees should have no bearing on Service's decision regarding the conservation status of captive

chimpanzees under the Act. Furthermore, the Service should clarify that commercial gains from educational and entertainment activities are not illegal under the Act.

Our Response: The Service's listing determination is based upon an analysis of the best available scientific and commercial information relative to the statutory standards under the Act indicating that chimpanzees as a species meet the definition of an endangered species under the Act. Thus, the appropriate conservation status of the species was not based upon the issue mentioned by the commenter. Additionally, the Act and our implementing regulations set forth the prohibitions that apply to all endangered wildlife. These prohibitions make it illegal for any person who is subject to the jurisdiction of the United States to, among other things, sell or offer for sale an endangered species in interstate or foreign commerce or to deliver, receive, transport, carry, or ship an endangered species in interstate or foreign commerce in the course of a commercial activity. Services provided by persons who own captive chimpanzees such as those provided by circuses and appearances in movies, television, advertisements, or parties are not unlawful unless the person engages in one of the prohibited activities.

(19) *Comment:* The Service's differentiation between threatened and endangered species permits issued for the purpose of exhibition is misplaced because the Service's regulatory definition of "enhancement of propagation or survival" includes "exhibition of living wildlife in a manner designed to educate the public about the ecological role and conservation needs of the affected species." Thus, in the event that the Service designates captive chimpanzees as endangered under the Act, the Service should expressly reaffirm that public exhibition continues to be permitted.

Our Response: The Act does not prohibit the exhibition of listed species. Therefore, the Service does not issue permits for public exhibition or education. However, the Act does regulate, among other things, import; export; sale and offer for sale in interstate and foreign commerce; and delivery, receipt, transport, carrying, and shipment in interstate or foreign commerce in the course of a commercial activity. As pointed out in the proposed rule, Section 10(a)(1)(A) of the Act for endangered species states that the Secretary may permit "any act otherwise prohibited by section 9 for scientific purposes or to enhance the

propagation or survival of the affected species . . ." In addition, any permit issued under section 10(a)(1)(A) must, among other things, be consistent with the policies and purposes of the Act. Therefore, when considering whether a permit can be issued to authorize activities that would otherwise be prohibited with an endangered species, the purposes of the activity must be for either scientific purposes or for enhancement, not solely for educational or exhibition purposes.

The commenter is correct, however, in referencing that the definition of "enhance the propagation or survival" in the regulations (50 CFR 17.3) does identify exhibition of living wildlife as part of an overall approach to enhancement for captive wildlife. Specifically, the regulations state: *Enhance the propagation or survival*, when used in reference to wildlife in captivity, the following activities when it can be shown that such activities would not be detrimental to the survival of wild or captive populations of the affected species:

(a) Provision of health care, management of populations by culling, contraception, euthanasia, grouping or handling of wildlife to control survivorship and reproduction, and similar normal practices of animal husbandry needed to maintain captive populations that are self-sustaining and that possess as much genetic vitality as possible;

(b) Accumulation and holding of living wildlife that is not immediately needed or suitable for propagative or scientific purposes, and the transfer of such wildlife between persons in order to relieve crowding or other problems hindering the propagation or survival of the captive population at the location from which the wildlife would be removed;

(c) Exhibition of living wildlife in a manner designed to educate the public about the ecological role and conservation needs of the affected species.

This definition was established primarily in relation to the Captive-bred Wildlife Registration program (50 CFR 17.21(g)) to facilitate captive breeding of listed species as part of an overall captive management program. Therefore, public display in a manner designed to educate the public about the ecological role of the species, along with being part of a captive breeding program that strives for a self-sustaining captive population that ensures maximum genetic diversity and vitality could be permitted under the Act.

(20) *Comment:* Several commenters opposed the proposed rule, and the

associated regulation of captive chimpanzees, stating that captive populations are essential for the perpetuation of global chimpanzee populations and repopulating African countries.

Our Response: The status of all chimpanzees as endangered does not affect the ability to maintain captive populations. The Act does not prohibit captive breeding of listed species.

(21) *Comment:* One commenter requested amending the Service's regulatory definition of the phrase "industry and trade" found in the Act's definition of the term "commercial activity," as well as revising the Service's Captive-Bred Wildlife Regulations under 50 CFR 17.21(g) to require the agency to respond in the **Federal Register** to public comments received on applications for captive-bred wildlife registrations.

Our Response: The comment is outside the scope of this agency action to consider whether all chimpanzees should be listed as endangered species under the Act.

(22) *Comment:* Some commenters believed that this rulemaking was not the appropriate vehicle for issuing new agency policy regarding whether captive animals, in general, may be assigned separate legal status from their wild counterparts on the basis of their captive state. One commenter explained that the Service could not use a petition-specific determination to promulgate a new interpretive rule, and the law requires such action to be done via a more direct and thorough public process, not as an adjunct to a species listing petition. One commenter maintained that the Service's actions violated section 4(h) of the Act. Thus, these commenters indicated promulgation of such a policy or interpretive rule should be subject to separate public notice and comment procedures pursuant to the Administrative Procedure Act and the Endangered Species Act.

Our Response: The Service was petitioned to list all chimpanzees, whether in the wild or in captivity, as an endangered species, thereby eliminating the separate classification of captive chimpanzees from chimpanzees located in the wild. As explained in the preamble of our proposed listing rule, we therefore examined the question raised by the petition as to whether the Service has discretion under the Act to differentiate the listing status of chimpanzees in captivity from those in the wild. Because the Service had not specifically examined whether the Act, its implementing regulations, and applicable policies provide such

discretion prior to receiving the petitions for chimpanzees and the African antelope, we reviewed the issue in order to ensure that we addressed each petition in accordance with the Act. Nonetheless, each assessment is specific to the petitioned species. The rule has been revised to clarify that the Service's analysis is specific to the issue of whether captive chimpanzees should have separate legal status on the basis of their captivity.

Furthermore, this listing decision does not establish new agency policy. In fact, this listing determination is consistent with the Service's general practice for captive members of a species to be afforded the same legal status under the Act as those members of the species in the wild.

In compliance with the Endangered Species Act and the Administrative Procedure Act, the Service's listing determination, which included its evaluation of whether captive chimpanzees may have separate legal status under the Act, was subject to public notice and comment. The Service was under no legal requirement, as suggested by the commenter, to subject the analysis used in evaluating this petition to an additional and separate rulemaking process or to develop agency guidelines such as those identified under section 4(h) of the Act.

(23) *Comment:* Commenters expressed concern that the Service's broad statements of policy regarding its legal authority to recognize exemptions from the Act for captive animals is beyond the scope of the petition. According to one commenter, the petition is specific to the listing of chimpanzees only, and the Service's proposal should be as well.

Our Response: Assuming that the commenters are characterizing the authority to designate separate legal status under the Act for captive animals as an "exemption," the Service disagrees that the issue of designating separate legal status for captive chimpanzees is beyond the scope of the petition. Because the petition requested, in essence, the elimination of the separate classification for captive chimpanzees from chimpanzees located in the wild, the Service appropriately considered, as an initial matter, whether it had any discretion to designate legal status under the Act to captive members separate from their wild counterparts. Assessing whether the petitioned action involves an entity eligible for legal status under the Act is part of the Service's standard practice in making petition-findings. *See, e.g.,* 12-Month Findings on Petitions to Delist U.S. Captive Populations of the Scimitar-horned Oryx, Dama Gazelle, and Addax

78 FR 33790, 33791 (June 5, 2013) (including a discussion on the "Evaluation of Listable Entities"); 12-Month Finding on a Petition to List 14 Aquatic Mollusks as Endangered or Threatened, 77 FR 57922, 57923 (September 18, 2012) (including a discussion on the "Evaluation of Listable Entities"); 12-Month Finding on Petition to List the Wanton's Cave Meshweaver as Endangered or Threatened, 79 FR 47413, 47415 (August 13, 2014) (including a discussion on "Evaluation of Listable Entities"); 90-Day Finding on a Petition to List Thermophilic Ostracod as Endangered or Threatened, 77 FR 9618, 9618 (February 17, 2012) (including a discussion on the "Evaluation of Listable Entities"); 90-Day Finding on Petition to List Sphinx Date Palm, 77 FR 71757 (including a discussion on the "Evaluation of Listable Entities"). Thus, the issue was properly part of the Service's petition-finding and determination to list all chimpanzees as an endangered species. In addition, as noted above the rule has been revised to clarify that the Service's analysis is specific to the issue of whether captive chimpanzees should have separate legal status on the basis of their captivity.

(24) *Comment:* One commenter stated that for a notice of a new policy to be effective, particularly one that modifies, or at least substantially impacts, the Captive-Bred Wildlife rule, it must alert the public that a change in policy is being considered.

Our Response: The commenter fails to identify any new policy or a change in policy being issued through this listing determination. As explained in the preamble of our proposed listing rule, the Service has not had an absolute policy or practice with respect to the designation of separate legal status under the Act for captive animals, but generally has included wild and captive animals together when it has listed species. Thus, this action does not involve a change in policy, nor does it involve any modification or impact to the Captive-Bred Wildlife rule. In fact, this listing action is consistent with the Service's general practice of listing captive and wild members of a species together. As part of the Service's evaluation of the petition to list all chimpanzees as endangered, this action included an examination of whether the agency has any discretion to differentiate the listing status of specimens in captivity from those in the wild. The Service's listing determination, including its analysis of whether captive chimpanzees may have separate legal status under the Act from

their wild counterparts, was subject to public notice and comment.

(25) *Comment:* The Service received comments that it should base this listing determination on the conservation status of the captive specimens, focusing on an assessment of whether the five factors require listing of captive chimpanzees, rather than a position or policy that the agency lacks authority to assign a separate legal status to all captive species by virtue of their captive status. Other commenters claimed that the Service's failure to analyze whether captive chimpanzees are an endangered species due to the five factors under section 4(a)(1) constituted a violation of the Act. Some commenters further contended that captive chimpanzees are not in danger of extinction due to any of the five factors set forth under section 4(a)(1) of the Act.

Our Response: Having concluded that we do not have discretion to treat captive chimpanzees as a separate listable entity from wild chimpanzees, the Service properly assessed the status of the "species" to determine if it met the definition of a "threatened species" or an "endangered species" due to any one or a combination of the five factors found in section 4(a)(1) of the Act. See *Trout Unlimited v. Lohn*, 559 F. 3d 946, 955–956 (9th Cir 2009) (distinguishing between two analytical phases of the listing process—the "composition phase" involving the "neutral" task of defining a "species" and the subsequent decision to list due to the factors under section 4(a)(1) of the Act). As part of the assessment of the status of the "species," the Service examined the extent to which captive chimpanzees created or contributed to threats to the species or remove or reduce threats to the species by contributing to the conservation of the species. This approach of considering the contribution of captive members on their wild counterparts in a status assessment of the species has been upheld by the Ninth Circuit in *Trout Unlimited v. Lohn*, 559 F. 3d at 961 (upholding NMFS's 2005 Hatchery Policy which established that the effects of hatchery fish will be included in assessing the status of the entire Evolutionary Significant Unit in the context of their contributions to conserving natural self-sustaining populations). But having found for a number of reasons that the Service does not have the discretion to give captive chimpanzees separate legal status, it was both unnecessary and would be inappropriate to conduct a listing analysis on just captive chimpanzees.

(26) *Comment:* The proposed rule states that captive populations of

wildlife do not have their own recognizable range and that a species' range consists only of those portions of the species' historic range where the species is found in the wild. This approach ignores the importance that adaptation plays in species conservation. If the Service refuses to recognize a species' range as the habitat in which the population currently lives, whether in the wild or in captivity, then the Service will be powerless to accommodate circumstances that change wildlife behavior patterns.

Our Response: It appears that the commenter may have misunderstood our interpretation of "range." Nonetheless, we stand by our position noted in the proposed rule and this final rule that "range" has consistently been interpreted by the Service as being the natural range of the species in the wild. Furthermore, the Service's 2014 policy on the meaning of the phrase "significant portion of its range" (SPR) (79 FR 37577; July 1, 2014) defines "range" as the "general geographic area within which that species can be found at the time [the Service] or [the National Marine Fisheries Service] makes any particular status determination," which we interpret also to apply to the range of the species in the wild. Therefore, the Service's definition of range does not ignore the importance of adaptation in species conservation. If circumstances change wildlife behavior patterns, changes in areas where the species is found in the wild would be considered part of its range.

(27) *Comment:* One commenter asserted that the Service's interpretation of the term "range" under section 4(c)(1) of the Act as including the general geographical area where the species is found in the wild would prevent the Service from complying with its statutory obligation to specify for each species listed over what portion of its range it is an endangered species or a threatened species in the event a species no longer exists in the wild and can only be found in captivity.

Our Response: Under this hypothetical, the Service disagrees that its interpretation of the term "range" would prevent it from specifying "over what portion of its range" it is an endangered species or a threatened species in accordance with section 4(c)(1) of the Act. For a species that only exists in captivity, the Service indicates the range of the species in the wild that would occur but for the conditions that have led to extirpation from the wild in the "Historic Range" column of the listing at 50 CFR 17.11 or 17.12, consistent with our interpretation. For example, the listing of the Scimitar-

horned oryx at 50 CFR 17.11 indicates the historic range as North Africa, even though the Service acknowledged the oryx may no longer exist in the wild. See Final Rule to List the Scimitar-horned oryx, Addax, and Dama Gazelle as Endangered, 70 FR 52319 (September 2, 2005).

(28) *Comment:* The Service's position that the Act deprives it of the authority to separately classify a population made exclusively of captive members contradicts the Service's litigation position in *Safari Club International v. Salazar, et al.* in which the Service maintained that it possessed the authority to make decisions about the listing status of captive populations on a case-by-case basis.

Our Response: Prior to fully analyzing the issue of designating separate legal status for captive animals for consistency with the statutory standards, an issue raised in the petitions to delist U.S. captive populations of Scimitar-horned oryx, addax, and dama gazelle and the petition to list all chimpanzees as an endangered species, we acknowledge that the Service provided the same listing status to all members of a species as the default, unless the facts indicated that there should be a different result. See *Safari Club International v. Jewell*, 960 F.Supp 2d 17, 64 (D.D.C. 2013) (upholding the Service's 2005 final determination to list Scimitar-horned oryx, addax, and dama gazelle as being consistent with the agency's general policy and practice). Having now examined the language, purpose, operation of key provisions, and the legislative history of the Act in response to the issue raised in the above-mentioned petitions, we have concluded that the Service does not have the discretion to designate separate legal status under the Act for captive chimpanzees from wild members of the same species, which is consistent with our findings on the antelope petitions. As noted above, the rule has been revised to clarify that the Service's analysis is specific to the petitioned species.

(29) *Comment:* The Service expresses a general concern that captive chimpanzees might not meet the Act's definition of "threatened species" or "endangered species," leaving captive chimpanzees unprotected by the Act. In order to avoid this result, the Service proposes that captive chimpanzees must receive the same listing as wild chimpanzees to ensure that they receive protections, even though they do not qualify for listing. Such an approach is inconsistent with the Act's purpose to promote conservation of the species and

DPS which are actually endangered or threatened species.

Our Response: It is unclear whether the commenter believes that the Service found that captive chimpanzees would not qualify for listing under the Act if the required analysis were conducted or whether the commenter believes that captive chimpanzees do not qualify for listing. To process the petition, we had to consider whether captive chimpanzees had appropriately been considered separate listable entities previously. Part of this analysis included potential conservation outcomes if a section 4(a) analysis were conducted solely on captive chimpanzees (which was not done when we designated captive chimpanzees as a separate threatened DPS in 1990) and whether the potential consequences of this approach would be consistent with Congress' intent for the Act. Having found for a number of reasons that the Service does not have the discretion to give captive animals separate legal status, it was both unnecessary and would be inappropriate to conduct a listing analysis on just captive chimpanzees. For all the reasons explained in this rule, we find that this decision is consistent with the purposes of the Act and Congress' intent.

In fact, if the separate designation of wild chimpanzees and captive chimpanzees were maintained, proponents of separate legal status could argue that captive specimens do not qualify as endangered or threatened species under an analysis of the best available scientific information related to the five factors found under section 4(a)(1) of the Act. Indeed, we note that this commenter appears to contend that captive chimpanzees do not qualify for listing. Because under this line of thinking captive chimpanzees might not meet the definitions of endangered or threatened species under the statutory factors, captive chimpanzees could be petitioned for, and arguably would qualify for, delisting. These animals would therefore lose any legal protections of the Act, even as wild chimpanzees face threats that have intensified and expanded since 1990, continue to decline, and have already been extirpated from some range countries. Unfortunately it is conceivable that all wild chimpanzees could be extirpated at some point in the future and therefore, under the commenter's line of reasoning, wild chimpanzees would qualify for delisting as extinct under 50 CFR 424.11(d)(1) while captive chimpanzees would still have no protections under the Act. Such potential consequences due to separate

listings of chimpanzees would be inconsistent with the Act's purpose of protecting threatened and endangered species.

(30) Comment: The Service should reconsider its definition of "captivity." If a species' existence outside of its historic range involves a lifestyle closely resembling life in the wild, then the Service should treat that population more like wild populations than captive ones. In captivity, chimpanzees do not have a lifestyle that even remotely mimics their existence in the wild.

Our Response: The request to reconsider the Service's regulatory definition of "captivity" is beyond the scope of this action to consider whether all chimpanzees should be listed as an endangered species under the Act.

(31) Comment: In its new interpretation, the Service did not address the fact that the Act recognizes the "scientific" value of wildlife and acknowledges "scientific" purposes as a separate animal use in addition to other possible uses, *i.e.*, commercial, recreational, or educational purposes, when the potential for overutilization is considered.

Our Response: In determining whether we had any discretion to designate separate legal status under the Act to captive chimpanzees, the Service specifically acknowledged that Congress recognized "overutilization for commercial, recreational, *scientific*, or education purposes" as a potential threat that contributes to the risk of extinction for many species. We found that if captive specimens could have separate legal status under the Act, the threat of overutilization could increase. Such a consequence would be inconsistent with section 2(b)'s purpose of conserving endangered and threatened species. The role of scientific use of endangered wildlife is also acknowledged under section 10(a)(1)(A) as one of the purposes for which a permit may be issued to conduct otherwise prohibited activities.

(32) Comment: Although the Service noted past examples of and concerns about the possibility of not being able to distinguish between captive and wild specimens in its proposed rule, chimpanzees currently located at U.S. research facilities are not only few in number, but also individually identified and recorded.

Our Response: The comment appears to be referring to the Service's conclusion that, as a general matter, separate legal status for captive animals would be inconsistent with the purpose of section 2(b) of the Act due to the potential for increased take and trade in "laundered" wild-caught specimens

that would generally be indistinguishable from unprotected, captive specimens. In assessing whether captive chimpanzees actually create or contribute to the threat of overutilization to the species, the Service did not find evidence that captive specimens specifically held in U.S. research facilities were contributing to or creating any threats to the species. Nonetheless, even if captive chimpanzees in U.S. research facilities are currently few in number and all captive chimpanzees at these facilities are individually identified and recorded, this may not be the case in the future. In addition, it does not appear that captive chimpanzees generally have reduced any threats to the species, including removal of animals from the wild for the pet trade, as threats to the species have only intensified since the 1990 reclassification of the wild population from a threatened species to an endangered species.

(33) Comment: Some commenters indicated their support for the Service's continued reliance on its policy regarding the *Recognition of Distinct Vertebrate Population Segments under the Endangered Species Act* to assign separate legal status under the Act for chimpanzees held in captivity. Other commenters noted that captive chimpanzee population in the U.S. qualifies as a "distinct population segment" under the plain language of the Act and the interagency policy on distinct population segments.

Our Response: Based upon an examination of the language, purpose, operation of key provisions, and the legislative history of the Act, the Service has concluded that it does not have the discretion to assign legal status under the Act for captive specimens of chimpanzees separate from their wild counterparts, which includes designating captive chimpanzees and wild chimpanzees as separate distinct population segments pursuant to our 1996 policy regarding the *Recognition of Distinct Vertebrate Population Segments under the Endangered Species Act*. Although the Service's 1990 final reclassification rule for chimpanzees, issued prior to the promulgation of the 1996 policy, designated captive and wild chimpanzees as separate distinct population segments, that designation was not analyzed as to how it was consistent with the statutory standards.

(34) Comment: The Service received comments indicating that the Act does not limit the Service's authority to assign captive animals separate legal status from specimens of the same species or subspecies that occur in the wild. Some commenters noted that

nothing in the plain language, purpose, or legislative history of the Act precludes according separate legal status to captive animals and their wild counterparts. Other commenters maintained that the Act provides broad authority to the Service to carry out animal conservation and protection requirements, as well as flexibility for the agency to take a variety of regulatory approaches.

Our Response: We agree that nothing in the Act expressly specifies whether or not captive specimens can or cannot have separate legal status based on their captive state. However, our analysis of the language, purpose, operation, and legislative history of the Act, when considered together, indicates that Congress did not intend for captive specimens of wildlife to be subject to separate legal status on the basis of their captive state. We believe that this is a reasonable construction of the Act and is consistent with our general practice of designating the same legal status to captive and wild members of the same species.

As for the authority under the Act to carry out animal conservation and protection programs, such programs, as well as other regulatory options, are only available if the entity qualifies as an endangered or threatened species. For the reasons explained in this final rule, as well as past petitions received and comments received during this rulemaking, it is possible that captive animals considered as separate listable entities would not qualify as endangered or threatened species.

(35) Comment: The Service received comments that this agency action overturns 37 years of previous policy according separate conservation status of captive chimpanzees without justification. Observing that an agency's long-standing policies or statutory interpretations are entitled to deference, one commenter indicated that the agency failed to explain its reasoning for departing from its prior interpretation through this action. Another commenter noted that the Service cannot cite to any change in the language of the Act since it adopted the split-listing of captive and wild chimpanzees to support its departure from its 37-year-old policy.

Our Response: Because the Service has had no absolute policy or practice concerning differentiating the listing status of specimens in captivity from those in the wild, but has generally listed captive and wild members together, we do not believe that this listing determination represents a departure from any policy on that matter. To the extent that the commenters maintain that this action is

a departure from how the Service has previously treated chimpanzees listed under the Act, we agree that there has been no statutory change prompting the Service to list all chimpanzees as an endangered species. However, the Service's 1990 decision to reclassify wild chimpanzees from a threatened species to an endangered species, while maintaining the threatened species classification for captive chimpanzees, did not include a thorough analysis of whether it was appropriate under the Act to accord legal status for captive members separate from wild members of the same species. In response to a comment that there was no legislative history suggesting that captive populations could be treated as distinct species and no precedent for doing so, the 1990 final chimpanzee rule stated only that captive animals are distinct from wild populations and have the potential to interbreed when mature, an apparent reference to the DPS provision within the Act's definition of "species," and that some captive chimpanzees were specifically being managed as an interbreeding population. The 1990 final rule also noted one situation—the Nile crocodile—where the Service had previously listed captive specimens separately from wild specimens.

In response to the issues raised in this petition, we evaluated the language, purposes, operation, and legislative history of the Act to reasonably conclude that Congress did not intend for captive chimpanzees to be subject to separate legal status on the basis of their captive state. After determining that all chimpanzees, including captive and wild animals, should be considered a single listable entity under the Act, we evaluated the status of the "species" to find that endangered is the correct conservation status for the chimpanzee. The Service's justification for designating all chimpanzees as an endangered species was thoroughly detailed in our 12-month finding and proposed rule and is explained again here.

We acknowledge, however, that the Service has indicated in a limited number of situations that captive wildlife can have separate legal status from wild members of the species. In 1992, the Service received a petition to reclassify cotton-top tamarins held in captivity in North America and found that the petition presented substantial information indicating that the petitioned action may be warranted (58 FR 64927, December 10, 1993). But the notice provided no analysis of how the captive animals could be given separate legal status and no further action was taken on the petition. The taxonomic

species remains listed as an endangered species in its entirety. In 2011, we found that a petition to list plains bison did not present substantial information indicating that listing may be warranted and in the notice stated that we only considered wild bison in the evaluation because the Service did not consider it to be within the intent of the Act to consider bison "in commercial herds" for listing (76 FR 10299, February 24, 2011). This notice did not contain a thorough analysis like that conducted in response to the antelope petitions or this petition, however, and we likely would not reach the same conclusion today.

Other than the chimpanzee listing decision in 1990, there is only one time where we have given separate legal status to captive specimens on the basis of their captive state. On June 17, 1987, we published a final rule reclassifying captive Nile crocodiles in Zimbabwe from an endangered species to a threatened species (52 FR 23148). The rule provided no explanation for how captive Nile crocodiles in Zimbabwe could qualify as a separate listed entity, however, and appears to have been based on a concurrent change in the specimens' status under CITES from Appendix I to Appendix II, not on any analysis under the Act. The differing listings statuses for captive and wild Zimbabwe Nile crocodiles were resolved a little more than a year later when wild Nile crocodiles in Zimbabwe were also reclassified from endangered to threatened (53 FR 38451, September 30, 1988). Importantly, both the chimpanzee and the Nile crocodile split listings were completed prior to the development of our 1996 DPS Policy (61 FR 4722, February 7, 1996) and thus before we had fully considered the appropriateness of separate legal status for captive specimens under the Act.

(36) Comment: The Service has not followed certain legal procedures required in publishing the proposed listing rule. Specifically, the Service failed to make certain documents available for review and comment by the public. In addition, the Service failed to have this regulatory action reviewed by the Office of Information and Regulatory Affairs, as required by Executive Order 12866.

Our Response: The Service observed all procedural requirements in promulgating this listing determination. Consistent with the Administrative Procedure Act, all information upon which this determination is based was identified in the Service's listing proposal in order to allow for meaningful public comment on this rulemaking. Additionally, as noted in

the Conference Report to the 1982 Amendments to the Act, economic factors cannot be considered when assessing the legal status of a species under the Act. Thus, this action is not subject to review by the Office of Information and Regulatory Affairs pursuant to Executive Order 12866.

(37) *Comment:* The Service contends that captive chimpanzees cannot qualify as a species because they have no "habitat" or "range." However, the Act's definitions of "species," "habitat," or "range" does not require the Service to list all chimpanzees as an endangered species. Just because the Service may interpret "range" as the "geographical area where the species is found in the wild," this does not mean that the Act precludes a definition which would encompass geographic areas where animals are held in captivity.

Our Response: We agree that nothing in the Act, including its definition of "species," "endangered species," or "threatened species," expressly precludes designating legal status under the Act for captive chimpanzees based on their captive state. However, as part of our evaluation as to whether captive and wild chimpanzees can have separate legal status, we reviewed, among other things, the language of the Act. Although the Act does not contain a definition of the term "range," the Service has consistently interpreted that term to mean the geographical area where the species is found in the wild. Thus, given the Service's consistent interpretation of "range," among other things, we have found that inconsistencies would exist under a determination of separate legal status for captive animals. Overall, we believe that the analysis shows that our interpretations of "range" and "species" are consistent with Congress' intent and the most appropriate approach under the Act.

(38) *Comment:* Nothing in the Act's permitting provisions under section 10(a)(1) of the Act or any other provision addressing exceptions for animals in captivity precludes the Service from issuing a split-listing. Thus, there is no inconsistency between the listing procedures of the Act and those provisions that permit otherwise unlawful activities that would result from designating legal status to animals held in captivity from members of the same species or subspecies that occur in the wild.

Our Response: We believe the exceptions in section 9(b)(1) and section 9(b)(2), as well as the availability of permits for the propagation of the species under section 10(a)(1)(A) of the Act, shows that Congress intended that

captive animals would generally have the same legal status as their counterparts. Otherwise, if captive specimens could simply be excluded through the listing process, none of these provisions would be needed.

(39) *Comment:* The case law cited by the Service does not require that captive chimpanzees be listed with the same conservation status as wild chimpanzees.

Our Response: We agree that there is no case law specifically addressing whether captive chimpanzees must be listed with the same conservation status as wild chimpanzees. However, the decision in *Aalsea Valley Alliance v. Evans*, 161 F. Supp. 2d 1154 (D.Or. 2001), in which the Court found that captive specimens, in that case hatchery fish, cannot simply be excluded under the Act when they are members of the listable entity, supports our conclusion that other potential approaches besides separate designation as a DPS cannot be used to provide separate legal status under the Act for captive specimens from their wild counterparts.

(40) *Comment:* In its factual findings promulgated in the 1990 rule to reclassify wild chimpanzees as endangered species, the Service indicated that to the extent self-sustaining breeding groups of captive chimpanzees provide surplus animals for research and other purposes, there may be reduced probability that other individuals of that species will be removed from the wild. The Service's failure to address or distinguish its 1990 finding that research with captive chimpanzees may conserve the wild chimpanzee population is irrational and inconsistent with the Act's purpose to promote conservation of the species.

Our Response: In this listing action, we examined whether captive chimpanzees create or contribute to threats to the species or remove or reduce threats to the species. Although we stated in the 1990 rule that captive chimpanzees may reduce the probability that individuals of the species would be removed from the wild, we found that given that threats to wild chimpanzees have expanded and intensified since 1990, and capture for the illegal pet trade continues to be a major threat, it doesn't appear that the availability of captive chimpanzees have reduced any threats to the species. Therefore, we disagree that our analysis is irrational and inconsistent with the purposes of the Act.

(41) *Comment:* Excluding captive species is consistent with the Act's purposes, set forth in section 2(b), because it provides a pool of genetic diversity and stock which can form the

basis for repopulation in the wild, or provide important research that assists in wild species management and protection. As long as maintenance of a captive population presents no threat to the species in the wild and may assist in their conservation and protection, there is no barrier in law to their exclusion.

Our Response: We disagree that the Act allows the Service to exclude captive chimpanzees as long as they provide no threat to their wild counterparts or may assist in their conservation and protection. While captive animals may provide stock for reintroduction efforts or provide important research for management and protection of the species in the wild, we reasonably concluded that Congress did not intend for captive chimpanzees to be subject to separate legal status under the Act from specimens that occur in the wild based on the language, purposes, operation of key provisions, and the legislative history of the Act. In addition, sections 9 and 10 of the Act contain provisions that allow the development and maintenance of genetically diverse captive stock for use in reintroductions or research that assists the species in the wild while at the same time providing these animals the appropriate legal protections under the Act.

(42) *Comment:* The petition requests the Service for a new legal opinion, as well as a repeal of the current 4(d) rule that applies to captive chimpanzees; however, the Act does not provide the public a right to petition for these types of relief.

Our Response: In making our 90-day finding, we determined that the petition clearly identified itself as a petition under the Endangered Species Act to request reclassification of captive chimpanzees from threatened species to endangered species and contained the requisite information required of petitions under our implementing regulations at 50 CFR 424.14(a). In a subsequent October 2010 letter, the petitioners clarified that their petitioned action was to list the entire species as an endangered species, whether in the wild or in captivity. Thus, we found that the petition to reclassify chimpanzees was appropriate under the Act. The petitioners did not petition for a new legal opinion. The petitioners also did not specifically petition for revision of the 4(d) rule as applied to chimpanzees, although petitioning for such a rulemaking is available under the Administrative Procedure Act and our regulations at 50 CFR 424.14(a).

(43) *Comment:* Listing captive chimpanzees as endangered species is

not warranted. No scientific information, substantial or otherwise, has been presented suggesting that U.S. captive chimpanzees meet the listing criteria set forth in the law and are in danger of extinction. By the Service's own account, the availability of captive chimpanzees has had, at worst, a neutral effect on wild populations.

Our Response: All chimpanzees, including captive and wild animals, are considered by the Service to be a single listable entity under the Act for the reasons explained in the proposed rule and this final rule. As such, we did not evaluate whether captive chimpanzees, alone, met the definition of an "endangered species" or a "threatened species" due to the five factors under section 4(a)(1) of the Act. Rather, in our review of the status of the "species" pursuant to section 4(b)(1) of the Act, we properly applied the five factors under section 4(a)(1) to the species, including considering the extent to which captive chimpanzees create or contribute to the threats to the species or remove or reduce threats to the species in order to determine that all chimpanzees are in danger of extinction.

(44) *Comment:* The Service hypothesizes that if captive and wild specimens have different legal status under the Act, there will be increased poaching, smuggling, and laundering of protected wild specimens, and that wild populations would decline while survival of the species would depend on unprotected members in captivity. However, these hypotheticals cannot serve as valid authority for eliminating the separate legal status of captive and wild chimpanzees under the Act because the Service recognizes that, despite the current classification, trade in wild chimpanzee specimens has in fact been limited.

Our Response: Although we noted that *legal* trade in wild chimpanzee specimens has been limited, that finding does not affect our conclusion that chimpanzees, including captive and wild animals, should be treated as a single listable entity, which is consistent with how we have evaluated other species. In evaluating whether we have discretion to provide separate legal status for captive chimpanzees, we found that Congress did not intend for captive specimens to be subject to separate legal status on the basis of their captive state, in part because of the potential consequences of such designation. The Service appropriately considered the conservation consequences of designating legal status under the Act to captive members separate from wild members of the same species in order to determine whether such designation would be consistent with the purposes of the Act and Congress' intent. Given the potential for increased take and trade in "laundered" wild-caught specimens that would generally be indistinguishable from unprotected and unregulated captive specimens, we concluded that separate legal status under the Act for captive animals would be inconsistent with the purpose under section 2(b) of the Act.

Required Determinations

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

We have determined that we do not need to prepare an environmental assessment, as defined under the authority of the National Environmental Policy Act of 1969, in connection with regulations adopted under section 4(a) of the Act for the listing, delisting, or reclassification of species. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244).

References Cited

A list of all references cited in this document is available at <http://www.regulations.gov> at Docket No. FWS-R9-ES-2010-0086, or upon request from the U.S. Fish and Wildlife Service, Endangered Species Program, Branch of Foreign Species (see **FOR FURTHER INFORMATION CONTACT**).

Authors

The primary authors of this rule are staff members of the Branch of Foreign Species, Endangered Species Program, U.S. Fish and Wildlife Service.

List of Subjects in 50 CFR Part 17

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

Regulation Promulgation

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

PART 17—[AMENDED]

- 1. The authority citation for part 17 continues to read as follows:
Authority: 16 U.S.C. 1361–1407; 1531–1544; 4201–4245, unless otherwise noted.
- 2. Amend § 17.11(h) in the List of Endangered and Threatened Wildlife by:
 - a. Revising the entry for "Chimpanzee (*Pan troglodytes*)" ("Wherever found in the wild"); and
 - b. Removing the entry for "Chimpanzee (*Pan troglodytes*)" ("Wherever found in captivity").

The revision reads as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *
(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
MAMMALS							
Chimpanzee	<i>Pan troglodytes</i>	Africa	Entire	E	16, 376, 852	NA	NA

- 3. Amend § 17.40 by revising paragraph (c)(1) and removing paragraph (c)(3).

The revision reads as follows:

§ 17.40 Special rules—mammals.

(c) * * *

(1) Except as noted in paragraph (c)(2) of this section, all provisions of § 17.31 apply to the lesser slow loris (*Nycticebus pygmaeus*); Philippine tarsier (*Tarsius syrichta*); white-footed tamarin (*Saguinus leucopus*); black howler monkey (*Alouatta pigra*); stump-

tailed macaque (*Macaca arctoides*); gelada baboon (*Theropithecus gelada*); Formosan rock macaque (*Macaca cyclopis*); Japanese macaque (*Macaca fuscata*); Toque macaque (*Macaca sinica*); long-tailed langur (*Presbytis potenziani*); purple-faced langur

(Presbytis senex); and Tonkin snub-

nosed langur (*Pygathrix [Rhinopithecus]*
avunculus).

* * * * *

Dated: June 1, 2015.

Stephen Guertin,

Acting Director, Fish and Wildlife Service.

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