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Subject bald eagle discussion



DPS significance sjq.doc

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**Draft - Significance language for Sonoran desert nesting bald eagle 90-day rule  
(WO 7/24/06)**

(Place language immediately following the discreteness analysis)

**Significance**

If we determine that a population segment is discrete under one of the above conditions, we must then consider its biological and ecological significance to the taxon to which it belongs, within the context that the DPS policy be used “sparingly” while encouraging the conservation of genetic diversity (61 FR 4722; February 7, 1996). This consideration may include, but is not limited to the following: (1) Evidence of the persistence of the population segment in an ecological setting that is unique for the taxon; evidence that loss of the population segment would result in a significant gap in the range of the taxon; (3) evidence that the population segment represents the only surviving natural occurrence of a taxon that may be more abundant elsewhere as an introduced population outside of its historic range; and (4) evidence that the discrete population segment differs markedly from other populations of the species in its genetic characteristics.

**Significance Criteria** 1. Persistence of the population segment in an ecological setting that is unique for the taxon.

Information Provided in the Petition

The petition contends that the Sonoran desert nesting bald eagle persists in the unique ecological setting of the Sonoran life zones of the desert Southwest (AGFD 1999a, 2000; Hunt et al. 1992; USFWS 2002a, 2003b). With the exception of a single 8,000 foot elevation nest (Luna BA), the petition states that all known Arizona BAs are located in the Sonoran Desert in the central part of the State in Upper and Lower ~~Sonoma~~Sonoran Desert habitats from elevations of 1,080 feet (330 meters) to 5,640 feet (1,720 meters), and are closely associated with the Salt, Verde, and Gila ~~River~~river drainage waters (Beatty and Driscoll 1994, 1996a; Beatty et al. 1995a, 1995b, 1998; Driscoll and Beatty 1994; Driscoll et al. 1992; Hunt et al. 1992). The petition further identifies several Arizona tree species native to the desert Southwest as representative vegetation for these areas (Brown 1994).

#### Response to the Petition

The breeding range of the bald eagle is associated with aquatic habitats (coastal areas, river, lakes, and reservoirs) with forested shorelines or cliffs in North America (Buehler 2000). The ecological setting in which the bald eagle persists in the Sonoran desert may at first seem uncommon for the species. However, despite the desert setting, bald eagles of the Sonoran desert are consistently associated with preferred bald eagle habitat, the riparian ecosystem (USFWS 1982). The petition clearly states that the Sonoran desert nests are closely associated with the Salt, Verde, and Gila ~~River~~river drainage waters and cites Brown (1994) when describing the forested vegetation of these areas. As with all populations of bald eagles throughout the lower 48 states, suitable riparian habitat is an essential prerequisite to successful eagle reproduction in the desert Southwest (USFWS 1982). Riparian ecosystems occupied by

nesting bald eagles in the Sonoran life zones of the desert Southwest, therefore, do not constitute a unique setting for the species. The persistence of the bald eagle in this setting in fact likely represents an example of a species occupying the extreme edge of its range of suitable habitats. Therefore, we conclude that the petition does not present substantial evidence that the population is persisting in an ecological setting that is unique for the taxon.

Significance Criteria 2. Loss of the population segment would result in a significant gap in the range of the taxon.

#### Information Provided in the Petition

The petition contends that for more than twenty years, ~~USFWS~~ the Service has recognized the fact that the Southwest represents a significant portion of the bald eagle range and further states that it follows logically ~~then~~ that the loss of the [Sonoran] Desert nesting population would result in a significant gap in the range of the bald eagle (Hunt et al. 1992; USFWS 1982, 1994a, 1995, 2001a). The petition claims that bald eagles in the Southwestern United States have been considered as a distinct population for the purposes of consultation and recovery efforts under the Act (USFWS 2003b).

The petition further contends that several authors have speculated about the consequences of this population's loss (AGFD 1994b; Hunt et al. 1992), and ~~CBD~~ the Center can find no credible evidence that bald eagles elsewhere possess the ability to adapt to the unique and hostile

environmental habitat in which the [Sonoran] Desert nesting population has evolved. Specifically the petition quotes Hunt et al. (1992):

“[W]ere the [Southwestern Desert Nesting Bald Eagle] population extirpated, there is no firm reason to believe that bald eagles released into Arizona from elsewhere would posses [sic] the adaptations required to increase their numbers.”

\_\_\_\_\_ The petition further quotes an Arizona Game and Fisheries Department interoffice memo (1994b):

“Because Arizona continues to possess nearly the entire breeding population within the Southwestern Region, concerns remain over retaining the genetic integrity of this population...Should a population crash occur in Arizona, the pool of eagles to repopulate the Southwest could be left to the few pairs in the neighboring states or Mexico. However, at this time, there is no documentation of eagles from these neighboring Southwestern states breeding in Arizona or vice versa.”

## Response to the Petition

The petition cites several ~~USFWS-Service~~ publications (1982, 1994a, 1995, 2001a) in addition to a report prepared by Hunt et al. (1992) when making their claim, but does not make specific reference to instances in which the “USFWS has recognized the fact that the Southwest represents a significant portion of the Bald Eagle range”. Therefore, for this analysis we will

assume that the petition is referring to the fact that the USFWS has continued to identify the Southwest population of the bald eagle as one of five recovery populations in the lower 48 states for more than twenty years (Hunt et al. 1992; USFWS 1982, 1994a, 1995, 2001a).

In establishing a recovery program for the species in the mid-1970's, the Service divided the bald eagles of the lower 48 states into five recovery populations, based on geographic location, termed Recovery Regions. This was ~~due as a result of to~~ the wide distribution of the bald eagle in the lower 48 states. Recovery plans were prepared for the five Recovery Regions, including the Southwest Recovery Region (USFWS 1982), by separate recovery teams composed of species experts in each geographic area. The Service views the establishment of recovery regions as a management tool allowing for effective regional coordination and planning among State and Federal conservation agencies and species experts. The existence of a recovery region does not, in itself, imply significance under the DPS policy, as the petitioner claims.

The petition is correct in that early biological opinions finalized by the Arizona Fish and Wildlife Office referred to the Southwestern population as a ~~distinct population segment (DPS)~~ (USFWS xxxx). However, in the 1995 final rule to reclassify bald eagles from endangered to threatened (USFWS 1995), the Service affirmed that the Southwestern population of the bald eagle is not a DPS. Some biological opinions dated after the final rule note that the Southwestern population of the bald eagle was previously considered a DPS, but no longer is considered as such (USFWS xxx). In the February 16, 2006 proposed rule to delist the bald eagle the Service further explains that when preparing Biological Opinions the potential effects to the southwestern or any of the other four populations are considered in terms of whether they

appreciably reduce the likelihood of both survival and recovery of the bald eagle throughout the lower 48 States, not solely for the geographic area in which the impacts may occur (USFWS 2006). Therefore, the bald eagles in the Southwestern United States are not considered as a distinct population for the purposes of consultation and recovery efforts under the Act.

While the statements of two authors who have “speculated” about the consequences of the Sonoran desert population’s loss are accurately quoted, these statements do not specifically address how the loss of the Sonoran desert nesting bald eagle population would constitute a significant gap in the range of the species. Furthermore, the petitioner provides no supporting evidence to substantiate the authors’ speculations.

Therefore, we conclude that the petition does not present substantial information that loss of the population segment would result in a significant gap in the range of the bald eagle.

Significance Criteria 3. The population segment represents the only surviving natural occurrence of a taxon that may be more abundant elsewhere as an introduced population outside its historical range.

\_\_\_\_\_The petition does not address this factor. The bald eagle occurs naturally throughout the contiguous 48 states.

Significance Criteria 4. The discrete population segment differs markedly from other populations of the species in its genetic characteristics.

## Information Provided in the Petition

\_\_\_\_\_The petition contends that review of all information regarding genetic analysis of the Southwestern desert nesting bald eagle reveals consistent uncertainty and the current understanding of genetics does not refute the discrete and isolated nature of the Desert Nesting Bald Eagle (CBD 2004e; Hunt et al. 1992; SWCBD 1999). The petition specifically quotes excerpts from Hunt et al. (1992) which discusses the enzyme electrophoresis and the DNA fingerprinting study methods, results, and conclusions.

## Response to the Petition

We have addressed the genetic evidence provided by the petitioner ~~under~~ in the analysis of discreteness above. Although we have determined that substantial information is provided in the petition to suggest that the Sonoran desert nesting population may be discrete, we also find that the best available genetic information is inconclusive with regard to discreteness of the population and is therefore also inconclusive with regard to significance. We conclude that the petition does not present substantial information that the population differs markedly from other populations of the species in its genetic characteristics.

## Finding



We have reviewed the information presented in the petition, and have evaluated the information in relation to information readily available in our files. On the basis of our review, we find that the petition does not present substantial scientific or commercial information to indicate that listing the Sonoran desert nesting population of the bald eagle may be warranted. This finding is based on the lack of substantial scientific evidence to indicate that the Sonoran desert nesting population of the bald eagle constitutes a valid DPS. Although the population is discrete, neither the information in the petition nor the information readily available in our files constitutes substantial scientific information that the Sonoran desert nesting population of the bald eagle is significantly unique in relation to the remainder of the taxon. Therefore, we conclude that the Sonoran desert nesting population is not a listable entity pursuant to section 3(15) of the ~~ESA~~Act.

#### Additional Literature Citations

Buehler, D.A. 2000. Bald Eagle (*Haliaeetus leucocephalus*). In *The Birds of North America* No. 506 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.

USFWS 2006. Proposed rule; reopening of public comment period with new information, Endangered and Threatened Wildlife and Plants; Removing the Bald Eagle in the Lower 48 States from the list of Endangered and Threatened wildlife; Department of the Interior Fish and Wildlife Service, Federal Register 71 FR 8238; February 16, 2006.