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Mr. Steve Spangle, Field Supervisor
U.S. Fish and Wildlife Service
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U.S. Fish and Wildlife Service
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Subject: Audubon Arizona Comments on Bald Eagle Status Review in the Sonoran Desert

Dear Mr. Spangle:

Audubon Arizona is the state office of the National Audubon Society and receives guidance from a managing board of Arizona citizens. We have previously commented against the delisting of the Sonoran Desert population of the Bald Eagle (*Haliaeetus leucocephalus*) in central Arizona and northwestern Mexico. Audubon Arizona believes that the available science supports identifying these birds as a distinct population segment and that the threats to breeding areas (BAs) are significant enough to warrant listing as threatened under the Endangered Species Act of 1973, as amended (Act).

We share the concerns of the Raptor Research Foundation, Mr. Richard Glinski and the Center for Biological Diversity about the viability of the Southwest population of Bald Eagles based on the low number of breeding pairs, relatively low productivity, relatively high adult mortality, and threats of habitat alteration and human disturbance. Data submitted by the Arizona Game and Fish Department shows increasing trends in human activities proximate to BAs.

Although the breeding pairs have increased from nearly none to now as many as 56 breeding pairs we are not aware of any data showing a clear, long-term increase in the Southwest Bald Eagle population (Arizona, New Mexico, and Mexico). The delisting proposal noted that there were 46 occupied breeding territories in Arizona and New Mexico in 2003, and that Arizona's 41 pairs produced an estimated 0.75 young/pair in 2004. The Arizona Game and Fish Department has recently updated the productivity data to reflect 0.79 young/pair for the time period of 1987-2007. We agree with the analysis of the Raptor Research Foundation that "This is a relatively small population for such a large geographic area, and productivity is lower than in any other part of the eagle's range." We note that the national productivity average is .94 young/pair. Coupled with relatively low productivity, adult mortality is relatively high: 12-16% of the breeding population per year (Arizona Game and Fish Department 1999). In most eagle populations, natural mortality of adults is usually less than 10% (McCollough 1986, Wood

1992, Bowman et al. 1995). Since 1983, the Arizona Nest Watch Program has been involved in the rescue of more than 50 nestlings and eggs. Clearly this program directly contributes to the higher productivity numbers.

Compounding conservation difficulties posed by low numbers, lower productivity, and higher adult mortality, the Southwest population is faced with a variety of threats related to rapidly increasing human populations. For example, in 1996 and 1997, almost 14,000 human activities and nearly 4,000 gunshots were recorded within 1 km of 13 different nests in Arizona (Arizona Game and Fish Department 1999). The most productive eagle breeding areas in the Southwest population are in the Salt and Verde drainages in or adjacent to Maricopa County. The human population in this area is projected to double to 6 million people within the next 30 years (Arizona Game and Fish Department 1999). Significant threats to the Arizona population of Bald Eagles include human developments, recreational disturbance, fishing-line entanglement, and habitat modification due to grazing and flood control (Arizona Game and Fish Department 1999). In summary, we do not believe that the Southwest Bald Eagle population is secure, and we question whether even current numbers can be sustained without active management and habitat protection.

Our Southwest desert nesting population meets the criteria for a distinct population segment (DPS). Audubon Arizona believes the Arizona Game and Fish Department has submitted a credible and complete analysis determining that the bald eagle in the Sonoran Desert Area meet DPS criteria. The fact that 99% of the Arizona Bald Eagles are born in Arizona and that despite co-mingling there is virtually no ingress to the population from other populations that have any reasonable numbers of birds is a compelling argument that this is a discreet population. Simply put, if the Arizona population begins to decline there is no reasonable expectation that Bald Eagles from elsewhere will ingress to maintain the population.

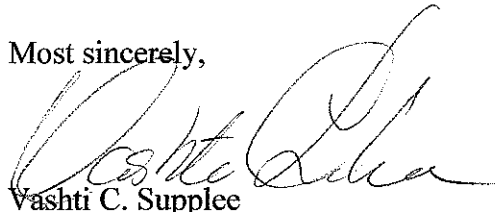
Numbers for this population are building but the trend is not yet established as we wait for younger birds to join the breeding cohort. The precarious nature of this sub-population (low numbers and uncertain trends) would warrant caution. Information submitted by Robert Magill, former Arizona Game and Fish Department Avian Biologist, Richard Glinski, author of *Raptors of Arizona*, and the Raptor Research Foundation offer supporting argument to retain the Southwest Desert Bald Eagle population on the Endangered Species list as Threatened (current status). Analysis of sub-adult recruitment rates into the breeding population over the next 5-10 years would allow for a more complete Population Viability Analysis (PVA) that will better reveal population trends, as is recommended by Taylor (PVA 2006 Addendum) and Taylor and Silver (PVA 2006).

The alarming information about our desert birds is that survival of young birds seems to be declining. So yes, there are more nest sites than in the 1970s, but return rate of fledged young as adults seems to be dropping. A recently completed study (Taylor, Martin. 2006) evaluated data over the past 30 years and corrected it for age bias. Corrected data yields a re-sighting probability percent of 65% for birds fledged in years of 1994-2003 as compared to 74.8% for birds fledged in years 1985-1993. (uncorrected data yields 11% re-sighted for birds fledged from 1995-2003 as compared to 31% re-sighted for birds fledged between 1986 and 1994). The author cautions that the 11% value as compared to the 31% value is biased by the behavior of younger

birds that are in the non-breeding "floater" population and therefore not observable. The relevant observation is the downward trend of the modeled data that corrects for that bias. So even though there are more young being fledged, the survivorship is declining for a potential net loss.

In closing, Audubon Arizona believes supporting science warrants recognition of the Sonoran desert area bald eagle as a distinct population segment (DPS) and threats resulting from a human population growth predication in the region warrant retaining the population as a threatened species under the Endangered Species Act.

Most sincerely,



Vashti C. Supplee
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Audubon Arizona

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