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AESO/SE
02-21-04-F-0109

June 24, 2004

Memorandum

To: Superintendent, Grand Canyon National Park, Grand Canyon, Arizona

From: Field Supervisor

Subject: Biological Opinion for the Bright Angel Trout Reduction Project in Grand Canyon National Park

This biological opinion responds to your request for consultation with the U.S. Fish and Wildlife Service (FWS) pursuant to section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544), as amended (Act). Your request for formal consultation was contained in a February 9, 2004, email message. At issue are impacts that may result from the proposed Bright Angel Creek Trout Reduction Project in Grand Canyon National Park (Park) located in Coconino County, Arizona, on the threatened bald eagle (*Haliaeetus leucocephalus*).

In a December 22, 2003, memorandum, you also requested our concurrence that the proposed action is not likely to adversely affect the humpback chub (*Gila cypha*) or the California condor (*Gymnogyps californianus*). We concur that the proposed project is not likely to adversely affect those species for the reasons stated in the appendix to this biological opinion.

This biological opinion is based on information provided in a December 16, 2003, biological assessment amendment, telephone conversations, and other sources of information. Literature cited in this biological opinion is not a complete bibliography of all literature available on the species of concern, construction and its effects, or on other subjects considered in this opinion. A complete administrative record of this consultation is on file at this office.

Consultation History

Table 1 is a summary of the consultation history for the proposed project.

Table 1. Consultation history for the Bright Angel Creek Trout Reduction Project in Grand Canyon National Park.

<i>Date</i>	<i>Event</i>
December 29, 2003	We received a December 16, 2003, biological assessment and request for concurrence with a “not likely to adversely affect” determination for the humpback chub, California condor, and bald eagle.
February 9, 2004	We received an email message containing additional information regarding the humpback chub and a request for formal consultation for the bald eagle.
March 2, 2004	We issued a draft biological opinion.
June 21, 2004	The Park confirmed that no changes to the draft biological opinion were necessary.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

Most of the information regarding the proposed action in this document is taken from the project Biological Assessment (BA; Ward 2003). The project is intended to reduce the non-native trout population in Bright Angel Creek.

The project will occur from the winter of 2004 through January 2007 (Ward 2003). Beginning in November of each year, a weir will be placed in Bright Angel Creek near the mouth to capture spawning rainbow and brown trout. Supplemental removal efforts using electroshocking techniques will be conducted over a 10-day period. All captured trout will be sacrificed and pertinent biological data will be collected from each individual. The carcasses will be transported to a landfill. During the spring and summer of each year, the response of the native fish community to trout removal will be examined by sampling Bright Angel Creek with standard fisheries techniques.

Conservation Measures

The Park has developed several measures to reduce the potential for adverse effects that will be implemented as part of the proposed project (Ward 2003). The measures that relate directly to the bald eagle include:

Biologists and biological technicians will be instructed to refrain from interacting with any eagles that may be present.

If an eagle is observed in the area, biologists and technicians will note its behavior and report it to the Park biologist.

All fish will be disposed of in such a manner as to avoid creating an attractant to eagles.

STATUS OF THE SPECIES

The bald eagle south of the 40th parallel was listed as endangered under the Endangered Species Preservation Act of 1966, on March 11, 1967 (U.S. Fish and Wildlife Service 1967), and was reclassified to threatened status on July 12, 1995 (U.S. Fish and Wildlife Service 1995). No critical habitat has been designated for this species. The bald eagle was proposed for delisting on July 6, 1999 (U.S. Fish and Wildlife Service 1999). The bald eagle is a large bird of prey that historically ranged and nested throughout North America except extreme northern Alaska and Canada, and central and southern Mexico.

The bald eagle occurs in association with aquatic ecosystems, frequenting estuaries, lakes, reservoirs, major river systems, and some seacoast habitats. Generally, suitable habitat for bald eagles includes those areas which provide an adequate food base of fish, waterfowl, and/or carrion, with large trees for perches and nest sites. In winter, bald eagles often congregate at specific wintering sites that are generally close to open water and offer good perch trees and night roosts (U.S. Fish and Wildlife Service 1995).

Although not considered a separate subspecies, 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. A recovery plan was developed in 1982 for bald eagles in the Southwest recovery region. We determined that bald eagles in the Southwest recovery region are part of the same bald eagle population found in the remaining lower 48 states (U.S. Fish and Wildlife Service 1995). We proposed delisting of the bald eagle in the lower 48 states, including Arizona, stating that the number of breeding pairs in the Southwest Recovery Unit has more than doubled in the last 15 years (U.S. Fish and Wildlife Service 1999).

In addition to breeding bald eagles, Arizona provides habitat for wintering bald eagles, which migrate through the state between October and April. In 1997, the standardized statewide Arizona winter count totaled 343 bald eagles, including 193 adults, 134 subadults, and 16 of unknown age; in 1998, 183 adults, 103 subadults, and 4 of unknown age were recorded. The highest numbers of bald eagles, in both years, occurred on the Verde River and at San Carlos Reservoir (Beatty and Driscoll 1999).

Even though the bald eagle has been reclassified to threatened, and the status of the birds in the Southwest is on an upward trend, the Arizona population remains small and under threat from a

variety of factors. Human disturbance of bald eagles is a continuing threat which may increase as numbers of bald eagles increase and human development continues to expand into rural areas (U.S. Fish and Wildlife Service 1999). The bald eagle population in Arizona is exposed to increasing hazards from the regionally increasing human population. Because water is a scarce resource in the Southwest, recreation is concentrated along available watercourses. Some of the continuing threats and disturbances to bald eagles include entanglement in monofilament fishing line and fishing tackle; overgrazing and related degradation of riparian vegetation; malicious and accidental harassment, including shooting, off-road vehicles, recreational activities (especially watercraft), and low-level aircraft overflights; alteration of aquatic and riparian systems for water distribution systems and maintenance of existing water development features such as dams or diversion structures; collisions with transmission lines; poisoning; and electrocution (Stalmaster 1987).

ENVIRONMENTAL BASELINE

The environmental baseline includes past and present impacts of all Federal, State, or private actions in the action area, the anticipated impacts of all proposed Federal actions in the action area that have undergone formal or early section 7 consultation, and the impact of State and private actions which are contemporaneous with the consultation process. The environmental baseline defines the current status of the species and its habitat in the action area to provide a platform to assess the effects of the action now under consultation.

A. Status of the species within the action area

Three (Nankoweap Creek, Bright Angel Creek, and Twin Overlooks) confirmed winter roost areas are known within park boundaries. Bald eagles are known to concentrate occasionally along Colorado River tributaries where rainbow trout spawning occurs. Bald eagles have concentrated at Nankoweap Creek at river mile 52 since the early 1980s. Monitoring of wintering bald eagles along the upper Colorado River corridor within Grand Canyon from 1991 to 1995 resulted in counts ranging from 2 to 24 individuals. A single adult bald eagle occurs regularly in the winter along Bright Angel Creek. It roosts in riparian habitat along a 0.25 mile portion of the creek between the campground and the development at Phantom Ranch. An adult bald eagle has been observed at Twin Overlooks, roosting occasionally in pine snags adjacent to the Twin Overlooks parking area and East Rim Drive.

B. Factors affecting the species' environment within the action area

Previous actions have included construction of a new bunkhouse at Phantom Ranch which occurred during the time the bald eagle was present. There are no planned construction projects in the vicinity of Nankoweap Creek or the Twin Overlooks bald eagle wintering areas. Projects proposed for the Phantom Ranch area include Bright Angel Campground Restroom Rehabilitation, Phantom Ranch Ranger Station Rehabilitation, and Phantom Ranch Restroom Rehabilitation. Those projects focus primarily on the interior and exterior of buildings and

would not require construction equipment. No disturbance of existing vegetation would occur. The work is not expected to result in significantly higher than average noise levels in the area. Implementation of a proposed Upgrade Corridor Area Fire Protection Project (02-21-02-F-0462) at Phantom Ranch is an action that will affect the species at that location.

EFFECTS OF THE ACTION

Effects of the action refer to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated and interdependent with that action, that will be added to the environmental baseline. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration. Indirect effects are those that are caused by the proposed action and are later in time, but are still reasonably certain to occur.

The proposed action would not result in any direct modification of winter roosting or foraging habitat. However, the action could result in a reduction of the food supply for the wintering bald eagle at Bright Angel Creek. Although the usual foraging behavior of the individual is not known, it is likely that the eagle winters at Bright Angel Creek at least partially because of the spawning activity of the non-native trout that occur there. In addition, human activity resulting from the implementation of the proposed action may disturb the normal foraging behavior of the wintering eagle in the area.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

The action area occurs entirely on Federal land, and therefore non-Federal actions are likely to be minimal. Private actions that are likely to occur within the action area include various forms of recreation such as hiking and camping.

CONCLUSION

After reviewing the current status of the bald eagle, the environmental baseline for the action area, the effects of the proposed project in Grand Canyon National Park and the cumulative effects, it is our biological opinion that the Bright Angel Creek Trout Reduction Project in Grand Canyon National Park, as proposed, is not likely to jeopardize the continued existence of the bald eagle.

We present this conclusion for the following reasons:

1. Only one wintering bald eagle may be affected by the proposed action.
2. No modification of roosting habitat would occur.

The conclusions of this biological opinion are based on full implementation of the project as described in the Description of the Proposed Action section of this document, including any Conservation Measures that were incorporated into the project design.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. "Take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. "Harm" is defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering (50 CFR 17.3). "Harass" is defined as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering (50 CFR 17.3). "Incidental take" is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

AMOUNT OR EXTENT OF TAKE

We do not anticipate the proposed action will incidentally take any bald eagles.

Disposition of Dead or Injured Listed Species

Upon locating a dead, injured, or sick listed species, initial notification must be made to our Law Enforcement Office, 2450 West Broadway Road, Suite 113, Mesa, Arizona 85202 (telephone: 480/967-7900) within three working days of its finding. Written notification must be made within five calendar days and include the date, time, and location of the animal, a photograph if possible, and any other pertinent information. The notification shall be sent to the Law Enforcement Office with a copy to this office. Care must be taken in handling sick or injured animals to ensure effective treatment and care, and in handling dead specimens to preserve the biological material in the best possible state.

Superintendent, Grand Canyon National Park

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

1. We recommend that the Park provide our Flagstaff Suboffice with all existing and any future documentation regarding the occurrence of bald eagles in Grand Canyon National Park.
2. We recommend that the Park provide our Flagstaff Suboffice with all data, particularly regarding bald eagle behavior, collected during the implementation of the project.

REINITIATION NOTICE

This concludes formal consultation on the action(s) outlined in the request. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

We appreciate Grand Canyon National Park's efforts to identify and minimize effects to listed species from this project. For further information, please contact Bill Austin (928) 226-0614 (x102) or Brenda Smith (x101). Please refer to the consultation number, 02-21-04-F-0109, in future correspondence concerning this project.

/s/ Steven L. Spangle

cc: Regional Director, Fish and Wildlife Service, Albuquerque NM (ARD-ES)
Field Supervisor, Fish and Wildlife Service, Albuquerque NM
Director, Science Center, Grand Canyon National Park, Grand Canyon AZ

Acting Chief, Habitat Branch, Arizona Game and Fish Department, Phoenix AZ

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- Ward, R. V. 2003. Biological assessment; Bright Angel Creek trout reduction project. Grand Canyon National Park, Grand Canyon. 12 pp.

APPENDIX A - CONCURRENCE

This appendix contains our concurrence with your “may affect, not likely to adversely affect” determinations for humpback chub and California condor.

humpback chub (*Gila cypha*)

We concur with your determination that the proposed project may affect, but is not likely to adversely affect, the humpback chub. We base this concurrence on the following conservation measure that is part of the proposed action (as indicated in the February 9, 2004, email message):

- 1) If any humpback chub or other listed fish species are encountered in the weir or as a result of electroshocking, all operations will cease and the Park will reinitiate consultation.

California condor (*Gymnogyps californianus*)

We concur with your determination that the proposed project may affect, but is not likely to adversely affect, the California condor. We base this concurrence on the following conservation measures that are part of the proposed action:

- 1) If a California condor occurs within 300 feet of the project site, activity will cease until the bird(s) leave on their own, or until approved techniques are employed by permitted personnel that result in the birds leaving the area.
- 2) Biologists and biological technicians will be instructed to refrain from interactions with condors and to immediately contact appropriate Park personnel if condors occur at the site.
- 3) All fish will be disposed of in a manner that will avoid creating an attractant to condors.
- 4) The project site will be cleaned up at the end of each workday to minimize the likelihood of condors visiting the site.