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U.S. Fish and Wildlife Service
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AESO/SE
02-21-04-F-0107

August 26, 2004

Ms. Elaine J. Zieroth
Forest Supervisor
Apache-Sitgreaves National Forests
P.O. Box 640
Springerville, Arizona 85938-0640

RE: Big Lake Campground Expansion Biological Opinion

Dear Ms. Zieroth:

Thank you for your request for formal 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 was dated January 14, 2004, and received by us on January 20, 2004. At issue are impacts to bald eagles (*Haliaeetus leucocephalus*) that may result from the proposed Big Lake Campground Expansion located in Apache County, Arizona.

In your letter, you requested our concurrence that the proposed action was not likely to adversely affect Mexican spotted owl (*Strix occidentalis lucida*) and Apache trout (*Oncorhynchus apache*). We provided those concurrences in our March 8, 2004, letter to you.

This biological opinion is based on information provided in the January 20, 2004, biological assessment, telephone conversations with Terry Myers, Vicente Ordonez, and Charles Denton of your staff, a site visit, 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 recreation activities and their effects, or on other subjects considered in this opinion. A complete administrative record of this consultation is on file at this office.

Consultation History

- October 8, 2003: Site visit to Big Lake. Attended by representatives from Apache-Sitgreaves National Forests and U.S. Fish and Wildlife Service.
- January 14, 2004: The Forest requested formal consultation for the proposed Big Lake Campground Expansion.

- March 8, 2004: We sent a 30-day letter initiating consultation. Included in the letter were concurrences for the Mexican spotted owl and Apache trout. The letter noted that the consultation period would end on June 30, 2004.
- May 12, 2004: A draft biological opinion was sent to the Forest.
- June 30, 2004: We received comments on the draft biological opinion from the Forest over the telephone. We sent notes from the telephone conversations to ensure that all comments were accurately recorded and asked that the Forest respond with corrections or with instructions to finalize the document.
- On July 28, 2004, Jennifer Graves talked with Vicente Ordonez concerning additional comments on the draft biological opinion. Jennifer then emailed a copy of the updated biological opinion to Vicente to ensure that all points were addressed.
- August 4, 2004: Due to continuing telephone discussions regarding the draft biological opinion we sent a letter to the Forest requesting written comments about the draft opinion and requested an extension of the consultation period.
- August 17, 2004: We received written comments about the draft biological opinion. Within the comments the Forest indicated that they are modifying the proposed action to include many of the terms and conditions that were contained in the draft biological opinion. The Forest will complete a Crescent Lake Bald Eagle Recreation Mitigation Plan that will identify and implement measures that minimize recreation-related impacts to the nesting bald eagles and their habitat within the Big Lake Recreation Area. The Forest also granted an extension of the consultation timeframe in the letter.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

The proposed project consists of two main components. The first component is the expansion of the Big Lake Multi-family Campground. The second component is a Crescent Lake Bald Eagle Recreation Mitigation Plan.

Big Lake Multi-family Campground

The Big Lake Multi-family Campground project is an expansion of an already existing recreation area. The project consists of a new multi-family campground including underground utilities, roads, buildings, individual campsites, and group campsites. The underground utilities include water, sewer, and electric.

Proposed features include:

127 total campsites (100 standard sites and 25 disability-accessible sites)

2 campground host sites

5 buildings with toilets and showers

1 sewer dump station

- 1 entry station
- 1 garbage dumpster pad (to accommodate 10 dumpsters)
- 1 free-standing information kiosk
- 10 small ramadas scattered throughout the campground
- 1 double cattleguard at the campground entrance
- 5 double gates within the campground
- 1 campsite group of 15 including a large ramada (the 15 campsites are included in the 127 total)
- 1 campsite group of 25 including a large ramada (the 25 campsites are included in the 127 total)
- 45 campsites will have full hook-ups - sewer, water and electric (the 45 campsites are included in the 127 total)

The Big Lake Multi-Family Campground is a multi-year project. Phase 1A will consist of installation of all the underground utilities, installation of all electrical components, and construction of roads, spurs, and pull-through spurs to subgrade. Phase 1B will consist of installation of above-ground utility hookups and construction of all buildings and structures. Phase 1C will consist of asphalt pavement of the entire campground. The entire campground will meet American Disability Act standards for accessibility. Construction will begin in 2004 and is likely to last for three years.

Crescent Lake Bald Eagle Recreation Mitigation Plan

The Crescent Lake Bald Eagle Recreation Mitigation Plan proposed by the Forest will identify and implement measures that minimize recreation-related impacts to the nesting bald eagles and their habitat within the Big Lake Recreation Area. The Forest will coordinate with Arizona Game and Fish Department and Fish and Wildlife Service during plan development. The Plan will consist of the following components:

- Species data collection: General bald eagle behavior and habitat use data was collected during the 2004 bald eagle breeding season at Crescent Lake and is scheduled to continue per the Forest Highway 43 biological opinion. The Springerville Ranger District will utilize three to four years of this baseline data to identify important habitat needs and bald eagle/recreation conflicts within the Big Lake Recreation Area.
- Existing and future condition of Big Lake Recreation Area: The District will inventory the existing and projected future improvements within the Big Lake Recreation Area. The inventory will include expected maintenance and any relevant information collected from the increase or change in recreation use patterns resulting from the completion of the Forest Highway 43 project.
- Mitigation Plan: After three to four years of bald eagle baseline data collection, the District will complete a “Crescent Lake Bald Eagle Recreation Mitigation Plan” by 2008. Key issues the plan will address include: the need for seasonal closures around the nest area and/or foraging sites; the need for establishing a long-term Arizona Bald Eagle Nest Watcher program at the site; impacts of future development and maintenance within Big Lake Recreation Area; the establishment of monofilament recovery stations; and proactive measures to increase public awareness to reduce human/eagle conflicts.

- **Interim Actions:** If the situation warrants, the District will implement measures that will reduce human/bald eagle conflicts with the Big Lake Recreation Area before the comprehensive mitigation plan is completed in 2008. The District is currently implementing a monofilament disposal program at all fishable lakes on the District with full implementation expected by the spring of 2005. The program includes the construction and placement of monofilament stations at key locations around the lakes, and will rely on Boy Scouts to pick up monofilament that currently exists at all lakes. The clean up and monofilament recovery stations at Big Lake Recreation Area will be fully implemented by the fall of 2004.

DEFINITION OF THE ACTION AREA

The “action area” means all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. The action area for the proposed action includes the Big Lake Recreation Complex including all campgrounds (Brookchar Campground, Cutthroat Campground, Grayling Campground, and Rainbow Campground) and facilities. Additionally, the action area encompasses Big and Crescent lakes and the lands surrounding these lakes. Big Lake and Crescent Lake are connected by Forest Road 273. Since recreation is often a dispersed activity, areas that may be utilized by Big Lake visitors are also part of the action area. These areas include land along the lakes, hiking destinations, and smaller water bodies (i.e. Dipping Vat Reservoir and Basin Lake) in the area. The total area is approximately 15 square miles. Appendix A, Figure 1 contains a general map of the area.

STATUS OF THE SPECIES

BALD EAGLE

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.

Initial eagle population declines probably began in the late 1800s, and coincided with declines in the number of waterfowl, shorebirds, and other prey species. Direct killing of bald eagles was also prevalent. Additionally, there was a loss of nesting habitat. These factors reduced bald eagle numbers until the 1940s when protection for the bald eagle was provided through the Bald Eagle Protection Act (16 U.S.C. 668). This Act accomplished significant protection and slowed the decline in bald eagle populations by prohibiting numerous activities adversely affecting bald eagles and increasing public awareness of bald eagles. The widespread use of dichloro-diphenyl-trichloroethane (DDT) and other organochlorine compounds in the 1940s for mosquito control and as a general insecticide caused additional declines in bald eagle populations. DDT was banned in the United States in 1972 (U.S. Fish and Wildlife Service 1995). Recreation continues to influence distribution of bald eagles in Arizona. High-elevation lakes are critical for wintering

and migratory bald eagles. Further information on this species is summarized on our web page (arizonaes.fws.gov) under Document Library, Document by Species. If you do not have access to the Internet or can not otherwise access the information, please contact this office.

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

One bald eagle nest has been documented in the action area. At present, little is known on the foraging patterns for the eagles that nest at Crescent Lake. According to AGFD, the eagles laid eggs but they failed to hatch in 2003 (James Driscoll, AGFD, pers comm., June 16, 2003). In 2004, the pair was found at the same nest as in 2003. Informal monitoring of the pair indicates that the birds breed later than the pair at nearby Luna Lake. In mid-March the pair was observed displaying mating behavior (Charles Denton, Apache-Sitgreaves National Forest, pers comm., March 16, 2004). The bald eagles successfully fledged one young on July 24, 2004 (Joe Peddie, Arizona Game and Fish Department Bald Eagle Nestwatchers Program, pers comm., August 2, 2004). Information on wintering bald eagles is not available but they likely pass through the area.

Eagles are likely foraging at numerous lakes and reservoirs in the action area. Basin, Crescent, and Big lakes, and Dipping Vat and Lee Valley reservoirs are all within a reasonable foraging distance for these eagles. Wintering eagles and infrequent summering eagles have been detected at Big Lake which is immediately adjacent to the project site and within the action area. The Forest Service has not closed the nesting area to recreation use.

B. FACTORS AFFECTING SPECIES' ENVIRONMENT WITHIN THE ACTION AREA

Bald eagle nesting was first documented within the action area in 2003. Crescent Lake may be one location where the eagles are foraging. Basin Lake is located approximately 1 mile northwest of the eagle nest and 3 miles northwest of the project site. Basin Lake was fenced as part of a waterfowl habitat improvement project. Dipping Vat Reservoir is another wetland approximately 1 ½ miles north of the nest and is fenced to exclude livestock. Dipping Vat Reservoir contains amphibians and numerous species of waterfowl and shorebirds. Mandan Lake was also fenced in part of the waterfowl habitat improvement project and is located 1 ½ miles east of the eagle nest. These areas may provide excellent foraging opportunities for the eagles. However, it is also likely that the eagles are using Big and Crescent lakes for foraging.

Crescent Lake has suffered winter kills of fish in 2001-2002 and 2002-2003. The kills were most likely due to the depletion of oxygen under the ice. Winter kills such as this occur commonly at Crescent Lake, but conditions have been worsened by the low water levels in the last several years.

Crescent Lake is an extremely fertile lake, which grows trout quickly, but also leads to vascular weed problems and algae blooms (both bluegreen and green). This in turn leads to high pH problems, which occasionally leads to a summer kill (most recently in 2000). Normally the Arizona Game and Fish Department cuts as many of the vascular aquatic plants as possible during the summer with a weed harvester. Due to the low water levels, the Arizona Game and Fish Department has been unable to launch the weed harvester at any of the boat ramps in the last three years.

According to Arizona Game and Fish, Big Lake is perhaps the best lake for fishing in the White Mountains area (Mike Lopez, Arizona Game and Fish Department, pers comm., October 21, 2003). Big Lake maintains good water quality throughout the year and has not had a fish kill in decades. Arizona Game and Fish stocks Big Lake to meet high recreational use. It is stocked each spring and fall with trout. Big Lake also maintains open water longer into the winter and earlier in the spring than Crescent Lake because of its size and exposure to winds.

Roads into Big Lake are open May to November, with snowmobile access in the winter. Big Lake is very popular among campers and families. Big Lake facilities include a grocery store, boat rental, minor auto repair service, and campsites. Boats of 8 horsepower or less are allowed.

The paving of Forest Highway 43, the main route into the Big Lake Recreation Area, is also in the early planning phases and was addressed in a separate consultation. The biological opinion was issued on April 27, 2004 (consultation number 02-21-97-F-0229). The direct and indirect effects of the proposed Forest Highway 43 included sustained or increased human activity levels, increased possibility of disturbance by construction noise, possible conflicts during foraging attempts, and increases in the potential for direct and indirect conflicts between recreationists and eagles. We determined that the proposed action was not likely to jeopardize the continued existence of the bald eagle. The FWS determined that take would occur and reasonable and prudent measures and associated terms and conditions were given to minimize the take of bald eagles. The project is scheduled to begin in 2005.

The Apache-Sitgreaves National Forest participated in the National Visitor Use Monitoring (NVUM) project from October 2000 through September 2001. The project uses surveys to better understand the use and importance of satisfaction with national forest system recreation opportunities. According to the surveys, recreation use on the Apache-Sitgreaves National Forest was 1.98 million forest visits (80 percent confidence level) during the 2001 fiscal year (USFS 2002). The most used facilities were: forest roads, non-motorized trails, scenic byways, picnic areas, and developed campgrounds (USFS 2002).

Recreation Resource Management of America is the campground concessionaire that operates the Big Lake Recreation Area. Visitation reports for 5/11/03 - 12/31/03 for the Big Lake Recreation Area indicated the following numbers of visitors:

- Brookchar Campground - 3,304
- Cutthroat Campground - 4,717
- Grayling Campground - 6,013
- Rainbow Campground - 28,278

The total number of visitors for this timeframe was 45,370. This number is only the visitors who stayed in the campgrounds; there are also visitors who participate in other day-use activities such as picnicking, fishing, sightseeing, and wildlife viewing.

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.

Construction

Construction activities will be phased in over a four-year period. The project site is in a high-use recreation area and disturbance from construction activities is not expected to measurably impact species or habitat above existing disturbance levels. Due to the small project size (50 acres), the project is not expected to modify bald eagle perching, roosting, or nesting habitat. Best Management Practices will be utilized to minimize impacts during campground construction phases. The project area is in primarily mixed conifer, aspen, spruce-fir, and grass vegetation types. Bald eagles typically roost in dense stands of ponderosa pine. There is only one stand of ponderosa pine (approximately ½ acre) within the project area, and it is an open stand within a grassland. The proposed project plans were designed to minimize the cutting of live trees and snags. Construction of the campground expansion will utilize open areas to prevent potential disturbance to the species.

Recreation

The draft Bald Eagle Conservation Assessment and Strategy (Arizona Game and Fish 1999) notes that recreational pressures are increasing in Arizona due to the expansion of the Phoenix metropolitan area, and the scarcity of water-based recreational opportunities in the desert. Even the high-elevation breeding areas (nearby Luna Lake) are exposed to increasing recreational use. The Big Lake campground is already receiving high use during the summer months. In addition to the campground expansion the Forest Service is planning, the Federal Highway Administration is planning to pave Forest Highway 43, one of the main routes leading to the Big Lake complex, which will also facilitate additional visitor use of the area. The Big Lake complex is currently at capacity on most holiday weekends during the summer months. In 2003, the Big Lake Recreation complex had a total annual visitation by campers of 45,370. Given that

Rainbow Campground has 152 campsites and in 2003 had an annual visitation of 28,278, and the Big Lake Multi-Family will add 127 sites, it is reasonable to anticipate that the site will result in an annual increase in visitation of approximately 20,000.

As people enter an area, the effects on bald eagles can include altered behavior, increased stress, or changes in productivity and diet. However, the number of people using a given area plays a smaller role in human-wildlife relationships than selected characteristics of recreational use, such as frequency of use, type of use, and the behavior of visitors (Knight and Gutzwiller 1995).

Effects of recreation use on foraging bald eagles depends on many factors, including timing and availability of food, the number and quality of foraging sites available to the eagles, and the persistence, timing, intensity, and proximity of recreation activities in the vicinity. Successful and adequate foraging during nesting season is important for reproductive success. Some individual birds may habituate to differing levels of disturbance or noise, but high levels of disturbance have been shown to cause strong reactions in nesting birds. Reactions of the bald eagles in this area are unpredictable; they could range from continued foraging and nesting in the area, to moving their nest farther away and continuing to forage (with or without reproductive success), to abandonment of nesting and foraging at this site. More detailed information on eagle use of the area is needed for proper management of recreation in the area.

Several studies have demonstrated how recreation can influence the behavior of foraging and nesting eagles. Knight and Knight (1984) found that the total number of boats and people can be an inappropriate measure of recreational intensity because the presence of a single boat might be just as disturbing as the presence of many. McGarigal et al. (1991) discovered that foraging eagles typically avoided an area around a stationary boat. Their study confirmed that boating activities have the potential to significantly affect eagle spatial use patterns and can effectively cause eagles to avoid use of an area. Another study along the Gulkana River in Alaska (Steidl and Anthony 1999) assessed the effects of increased recreation to nesting eagles. Human activity decreased some eagle activity by 59 percent and the time they left their nest area unattended increased 24 percent. This resulted in birds consuming 29 percent less prey per day. It is possible that the bald eagles at Crescent and Big lakes may experience similar effects. Due to recreation use in the areas the eagles may travel longer distances to forage and in turn spend less time at the nest. This could ultimately result in lower productivity for this breeding pair.

Disturbance to foraging Crescent Lake bald eagles will likely increase during late spring and early summer, peak in mid-summer, and continue until the road closes or the weather turns too cold (Forest Highway 43 is closed due to snow during the winter months). The frequency of disturbance from people at this site is likely to be highest and most often during the daylight hours during the summer months. Anecdotal information indicates that the Big Lake campgrounds are at capacity during holiday weekends, so the project will likely increase the capacity of the campground. Improved access and more Forest users could lead to more recreation-related conflicts with the eagles. Campground users are not required to remain within the footprint of the campground. Recreationists will likely use other facilities and activities available in the area including boating and fishing at Big and Crescent lakes and hiking.

The eagles at Crescent Lake will likely be raising young during the height of the recreation season. These birds are breeding a little later than birds in southern parts of the state. We believe that in 2004 they laid eggs near the end of March. The eggs take 35 days to hatch (approximately the beginning of April) with the female and male taking turns incubating. Nestlings fledge at approximately 12 weeks after hatching (June and July) and are completely dependent upon the adults for food until they migrate north. If disturbance levels are too high or activities and presence of people in or on the lakes alters or prevents successful foraging, bald eagle nesting success could suffer. During breeding season, bald eagles spend approximately half their time incubating eggs or attending nestlings and half their time foraging. If forced by disturbance to forage for longer periods of time, or to shift foraging sites, time and energy expended would be taken from incubation or nestling attendance. Eggs and young would be more vulnerable and exposed to temperature changes and predation for longer periods of time. This could result in reduced or failed nesting success.

Another concern with increased recreation at Big Lake is the use and disposal of fishing line. Big Lake is heavily stocked with fish. Fishing line and tackle have been found in nests and entangling bald eagles. The Draft Conservation Assessment and Strategy for the Bald Eagle in Arizona note that since 1986, 62 separate instances and 19 breeding areas have had fishing line and/or tackle in nests or entangling individuals (Arizona Game and Fish 1999). The nearby Luna Lake breeding area has had fishing line and or tackle occurrences every year it has been checked. Two Arizona nestlings are known to have died due to entanglement in fishing line (Beatty 1992, Hunt et al. 1992).

Bald eagles will likely come into contact with fishing line most commonly by catching dead or dying fish with the material still attached. They may also bring fishing line to the nest as nest material. However, the species may encounter fishing line in a variety of other ways. Elsewhere in Arizona, an adult became entangled in discarded fishing line while perched on the shoreline (Beatty et al. 1998). Another adult swallowed fishing line (and possibly a hook) while feeding on a dead fish (Beatty et al. 1998). Adults have brought dead shorebirds and waterfowl to the nest, killed by fishing line entanglement (Hunt et al. 1992, Beatty et al. 1998). The persistent occurrence of this litter in nests is a testament to the level of recreational pressures existing in many breeding areas.

In summary, human activity can disturb bald eagles, and the growing popularity of outdoor recreation increases the potential for direct conflicts between recreationists and eagles. The effects of human activity on the distribution, occupancy, activity, success, and productivity of bald eagle nesting sites have been widely studied (Stalmaster and Kaiser 1998, Grubb and King 1991, McGarigal et al. 1991) and significant disturbances to eagles have been documented. General management plans are available for protecting bald eagles; however, the recommendations often do not apply for the specific circumstances at individual breeding areas. The Forest is planning on developing a management plan for the eagles in three years when their habits and foraging patterns are better understood. The Crescent Lake breeding area may benefit from management that reduces recreational activities at foraging and breeding areas around Crescent and Big lakes. The direct and indirect effects of the proposed project may take the form of sustained or increased human activity levels, increased possibility of disturbance by

recreationists, entanglement and encounters with fishing line, and possible conflicts during foraging attempts. These impacts would occur during the life of the proposed project.

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. Since the entire project area is within the Apache-Sitgreaves National Forests, all legal actions likely to occur are considered Federal actions. Improper disposal of fishing line may occur due to the high fishing use at Big Lake.

CONCLUSION

After reviewing the current status of bald eagles, the environmental baseline for the action area, the effects of the proposed Big Lake Campground Expansion and the cumulative effects, it is our biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of the bald eagle. No critical habitat has been designated for this species, therefore, none will be affected. We present this conclusion for the following reasons:

1. The population status of the bald eagle continues to improve both within the Southwest and range-wide.
2. This is a new territory that has never been known to nest successfully. Thus, even if this territory is prevented from becoming a contributor to the population of the Southwest, it would not be a significant setback to the species' survival and recovery.

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 regulations 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 (50 CFR 17.3) 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. "Harass" is defined (50 CFR 17.3) 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. "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.

The measures described below are non-discretionary, and must be undertaken by the Forest Service so that they become binding conditions of any grant or permit issued, as appropriate, for the exemption in section 7(o)(2) to apply. The Forest Service has a continuing duty to regulate the activity covered by this incidental take statement. If the Forest Service (1) fails to assume and implement the terms and conditions or (2) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the Forest Service must report the progress of the action and its impact on the species to the FWS as specified in the incidental take statement. [50 CFR §402.14(i)(3)].

AMOUNT OR EXTENT OF TAKE

Using available information as summarized within this document, we have identified conditions of likely incidental take for the bald eagles at Crescent Lake associated with increased recreation as a result of the Big Lake Campground Expansion. Based on the best available information concerning bald eagles, habitat needs of the species, the project description, and information furnished by the Forest Service, take is anticipated for the bald eagles as a result of predicted high levels of recreation use within the Big Lake Recreation Area.

We anticipate that the eagles at Crescent Lake will have a lowered productivity due to increased recreation in the area. The incidental take is expected to be in the form of harassment of foraging bald eagles and nesting eagles during spring and summer months. We anticipate that the pair will be unsuccessful in breeding or will have lower productivity. This take is expected to occur for the life of the campground.

Currently little is known about the potential productivity rates of the eagles at Crescent Lake since the breeding area was established in 2002. We know that the eagles have laid eggs for two consecutive breeding seasons. We assume that, once established, the eagles at Crescent Lake will have an average productivity similar to the statewide average (Table 1). Therefore, we will consider authorized incidental take to be exceeded if, during 5 year intervals beginning in 2004, the birds’ breeding productivity falls to 80% or less of the statewide average and this reduced productivity is linked to recreation in the area. Therefore, authorized incidental take will be exceeded if the eagles do not fledge an average of 3 birds every five years. If the eagles fail to nest or fledge and the cause is unknown then we assume natural causes for the nest failure.

Table 1: Statewide Bald Eagle Productivity Summary
(Total Fledged Bald Eagles/Occupied Breeding Areas)

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Average
Statewide	.66	.83	.83	.67	.58	.86	.57	.75	.9	.58	.723

The Fish and Wildlife Service will not refer the incidental take of any migratory bird or bald eagle for prosecution under the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. §§ 703-712), or the Bald and Golden Eagle Protection Act of 1940, as amended (16 U.S.C. §§ 668-668d), if such take is in compliance with the terms and conditions (including amount and/or number) specified herein.

EFFECT OF THE TAKE

In this biological opinion, the FWS determined that this level of anticipated take is not likely to result in jeopardy to bald eagles. No critical habitat has been designated, therefore none will be affected.

REASONABLE AND PRUDENT MEASURES AND TERMS AND CONDITIONS

In order to be exempt from the prohibitions of section 9 of the Act, the Forest Service must comply with the following terms and conditions, which implement the reasonable and prudent measures described below and outline required reporting/monitoring requirements. These terms and conditions are non-discretionary.

The Forest Service has incorporated many measures into the proposed action to reduce the extent of take. These include a recreation plan to address recreational use in the area, monofilament recovery efforts, and immediate action if the situation warrants. We have not identified any additional measures that would further reduce the extent of the take. However, the Forest must still monitor to determine when the amount of extent of take has been exceeded.

1. The Forest Service shall monitor incidental take resulting from the proposed action and report the findings of that monitoring to the FWS.
 - A. The Forest Service shall monitor the project area and other areas that could be affected by the proposed action to ascertain take of individuals of the species and/or loss of its habitat that causes harassment to the species. This monitoring will be accomplished using the following protocol:
 - i. Project area monitoring needs to determine, at a minimum, the location of nest sites and alternate nests, confirmation of incubation, confirmation of number of young between 1-4 weeks old, confirmation of young 4-8 weeks old, and confirmation of young 10-12 weeks old.
 - ii. Any bald eagle egg, nestling, juvenile, or adult, injured or dead, will be salvaged and the FWS and AGFD will be immediately notified.
 - B. The Forest Service shall submit a report to this office each year. This report shall include monitoring results for bald eagles, a description and explanation of any project mitigation measures which were or were not implemented or which had a result not otherwise expected, and complete and accurate records of any incidental take that occurred during the course of the project.

Review requirement: The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the effects of incidental take that might otherwise result from the proposed action. If, during the course of the action, the authorized level of incidental take is exceeded, such incidental take would represent new information requiring review of the reasonable and prudent measures provided. The Forest Service must immediately provide an explanation of the causes of the taking and review with the AESO and AGFD the need for possible modification of the reasonable and prudent measures.

Disposition of Dead or Injured Listed Species

Upon locating a dead, injured, or sick listed species initial notification must be made to the FWS's Law Enforcement Office, 2450 W. Broadway Rd, 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.

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 Forest Service fund a study to look at habitat use among bald eagles at the high elevation lakes.
2. If bald eagles are delisted, we recommend that the Forest Service work with the Arizona Game and Fish Department to implement recommendations within the Conservation Assessment and Strategy for the Bald Eagle in Arizona for the continued success of eagles on the Forest.

In order for the FWS to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the FWS requests notification of the implementation of any conservation recommendations.

REINITIATION NOTICE

This concludes formal consultation on the action(s) outlined in the (request/reinitiation 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.

The FWS appreciates the Forest Service's efforts to identify and minimize effects to listed species from this project. For further information please contact Jennifer Graves (x232) or Debra Bills (x239). Please refer to the consultation number, 02-21-04-F-0107, in future correspondence concerning this project.

Sincerely,

/s/ Steven L. Spangle
Field Supervisor

cc: Regional Director, Fish and Wildlife Service, Albuquerque, NM (ARD-ES)
District Ranger, Springerville Ranger District, Springerville, AZ

Bob Broscheid, Arizona Game and Fish Department, Phoenix, AZ

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