

ARIZONA BALD EAGLE 2002 NEST SURVEY

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INTRODUCTION

In 1978, the U.S. Fish and Wildlife Service (USFWS) classified the bald eagle as endangered in 43 states, including Arizona, and as threatened in 5 others (USFWS 1982). After protection measures were instituted, including the 1972 ban on DDT use in the United States, the species slowly began to recover. The bald eagle was subsequently downlisted to threatened status (USFWS 1995), and later proposed for delisting (USFWS 1999). Until delisting, bald eagle protection continues under the Endangered Species Act. Thereafter, protection will be provided under the Airborne Hunting Act, the Bald and Golden Eagle Protection Act, the Lacey Act, the Migratory Bird Treaty Act, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and A.R.S. Title 17.

In Arizona, only three breeding areas (BA) were known to exist when bald eagle nest surveys began in 1972 (Rubink and Podborny 1976). These annual surveys have continued to the present, excluding 1976 and 1977 (Glinski 1985, 1986; Grubb 1986; Hildebrandt and Glinski 1987; Gooch and others 1988; Tibbitts and others 1989, 1990; Corman and Rayner 1991; Driscoll and others 1992, 1995a, 1995b, 1997, 1998, 1999; Driscoll and Beatty 1994; Koloszar and Driscoll 2001a, 2001b). The Arizona Game and Fish Department (AGFD) administered and performed the 2002 nest survey, in cooperation with the 18 members of the Southwestern Bald Eagle Management Committee. These include: Arizona Public Service (APS), Arizona State Parks Department, Army Corps of Engineers, Fort McDowell Yavapai Nation, Geo-Marine (U.S. Air Combat Command), Maricopa County Parks and Recreation Department, Salt River Pima-Maricopa Indian Community, Salt River Project (SRP), San Carlos Apache Recreation and Wildlife Department, U.S. Bureau of Indian Affairs, U.S. Bureau of Land Management, U.S. Bureau of Reclamation (USBR), U.S. Department of Defense (Luke Air Force Base), U.S. Forest Service (USFS), USFWS, U.S. National Park Service, Verde Valley Train, and White Mountain Recreation and Wildlife Department.

The nest survey enhances our understanding of breeding bald eagles in Arizona. Discovery of new BAs and alternate nests, coupled with the knowledge of current and historical BAs, allows for an accurate description of the distribution, status, and annual productivity of Arizona's breeding population. Timely discovery of BAs also identifies sensitive areas requiring proactive management from potentially adverse impacts.

SURVEY AREA

We conducted the nest surveys primarily along creeks, reservoirs, and rivers in Arizona. Survey boundaries extended north to Sullivan Lake, south to Aravaipa Creek, west to the Bill Williams River below Alamo Dam, and east to the Little Colorado River near Springerville. Survey elevations ranged from 293 m (960 ft) at the Bill Williams River, to 2106 m (6910 ft) at Springerville.

Most surveys were conducted within five biotic communities, which were identified according to Brown (1982): Great Basin Conifer Woodland, Interior Chaparral, Plains and Great Basin Grasslands, Rocky Mountain and Madrean Montane Conifer Forest, and Sonoran Desertscrub-Arizona Upland Subdivision. Other biotic communities visited include Chihuahuan Desertscrub, Mohave Desertscrub, and Sonoran Desertscrub-Lower Colorado Subdivision.

Most of Arizona's bald eagle breeding habitat exists between 329 and 1,719 m (1,080 and 5,640 feet) elevation in central Arizona. These BAs occur within the Upper and Lower Sonoran Life Zones and transition areas (Brown 1982). Representative vegetation includes blue paloverde (*Cercidium floridum*), mesquite (*Prosopis* spp.), ironwood (*Olyneya tesota*), saguaro (*Carnegia gigantea*), teddy bear cholla (*Opuntia bigelovii*), Fremont cottonwood (*Populus fremontii*), Goodding willow (*Salix gooddingii*), Arizona sycamore (*Platanus wrightii*), introduced salt cedar (*Tamarix* spp.), juniper (*Juniperus* spp.), and pinyon (*Pinus* spp.).

The Becker BA is within a Plains and Great Basin Grassland biotic community (Brown 1982). An isolated patch of cottonwoods along the eastern shore of the reservoir creates local nesting habitat similar to the riparian areas of the Upper and Lower Sonoran Life Zones.

Dupont, Luna, Lynx, and Rock Creek BAs are in Montane-Conifer Forest (Brown 1982). Representative vegetation includes; blue spruce (*Picea pungens*), Engelmann spruce (*P. engelmannii*), white fir (*Abies concolor*), Douglas fir (*Pseudotsuga menziesii*), ponderosa pine (*Pinus ponderosa*), quaking aspen (*Populus tremuloides*), Gambel oak (*Quercus gambelii*), and common juniper (*Juniperus communis*). Riparian vegetation includes narrowleaf cottonwood (*Populus angustifolia*), thinleaf alder (*Alnus tenuifolia*), Bebb's willow (*Salix bebbiana*) and coyote willow (*S. exigua*). Dupont, Lynx, and Rock Creek BAs are located in isolated patches of ponderosa pine surrounded by Interior Chaparral, which consists mainly of pinyon – juniper woodland, shrub live oak (*Quercus turbinalla*), pointed and pringle manzanita (*Arctostaphylos pungens* and *A. pringlei*).

METHODS

The presence of nests, habitat quality, previous bald eagle sightings, and spacing of current BAs prioritized survey areas. We monitored breeding activity at historical and current BAs, and nest sites discovered between 1992 and 2001 (Driscoll and others 1992, 1995a, 1995b, 1997, 1998, 1999; Driscoll and Beatty 1994; Koloszar and Driscoll 2001a, 2001b). Also investigated were reports of bald eagles and nests by other biologists, agencies, and the public.

A one to three person team conducted surveys between January and June 2002. Boats, helicopters, and trucks were used to access survey areas. We used Questar® spotting scopes (40-160x), binoculars (10x), and nest map atlases from Hunt and others (1992) and SRP (1998) to aid observations, relocate historical BAs, and find alternate nests in existing BAs.

Numbers assigned to new nests were consecutive to the last number assigned in that breeding area. Nest numbers assigned before this document can be found in Driscoll and others (1992, 1995a, 1995b, 1997, 1998, 1999), Driscoll and Beatty (1994); Hunt and others (1992) and Koloszar and Driscoll (2001a, 2001b).

Determination of breeding status followed operational definitions derived from Postupalsky (1974, 1983) and Steenhof and Kochert (1982) (Appendix A). "Tall" and "short," "large" and "small" are terms used in this report to describe cliff height, and the size of trees and nests. "Tall" and "large" refer to structures suitable for breeding bald eagles (compared to current Arizona bald eagle nests and locations). The terms "short" and "small" refer to structures of inadequate height and size.

The winter count flights (January) and monthly occupancy and reproduction assessment (ORA) flights (February to June) helped locate nests and survey for new BAs. Timing of the ORA flights corresponded with the different breeding stages (i.e. incubation, nestling, fledging). Helicopters, provided by APS, SRP, and USBR, flew at approximately 70 m (200 ft) above ground level and at 50 to 60 kt (45 to 70 mph). Drainage topography, high-tension wires, and wind influenced altitude and speed. If nest occupancy could not be determined from the air, a ground survey ensued.

RESULTS

We examined all 47 BAs for breeding activity (Fig. 1). In 41 occupied BAs, there were 34 breeding attempts, and 23 pairs successfully produced 37 fledglings (Appendix B).

We surveyed 22 locations for new BAs, found 1 new BA, and observed bald eagles in 5 (Appendix C, Table 3). Surveyed areas included: the Agua Fria River, American Gulch, Ash Creek, Black Canyon Lake, Black River Drainage, Burro Creek (Six Mile Crossing), Dry Beaver Creek, Little Colorado River, Nelson Reservoir, Oak Creek, Red Creek, Lower Salt River, Upper Salt River, Lower San Pedro River, Tanks Canyon (near the Salt River Canyon), Lower Verde River, Upper Verde River, West Clear Creek, Wet Beaver Creek, White Mountain Lakes, Willow Lake, and Willow Springs Lake. A new BA was located on Oak Creek. We recorded sightings of bald eagles at Oak Creek, lower Salt River, upper Salt River, lower Verde River, and Willow Lake.

Of the 24 historical BAs in Arizona, we examined 9 for occupancy, found 2 new nests, relocated historic nests in 3, and observed bald eagles in 2 (Hunt and others 1992, Driscoll and others 1997 and 1999) (Appendix C, Table 4). Surveyed historical BAs include: Ash, Chino, Eagle, Hell Point, LF, Muldoon, Needle Rock, Sullivan, and Willow. Contractors for the Arizona Bald Eagle Nestwatch Program at the Box Bar BA found the Needle Rock historical BA reoccupied and incubating in a new cottonwood tree nest #2, and discovered an alternate cottonwood tree nest #3. We relocated historic nests at Devils Post, Hell Point, and Muldoon, and had sightings of bald eagles at LF, and Muldoon.

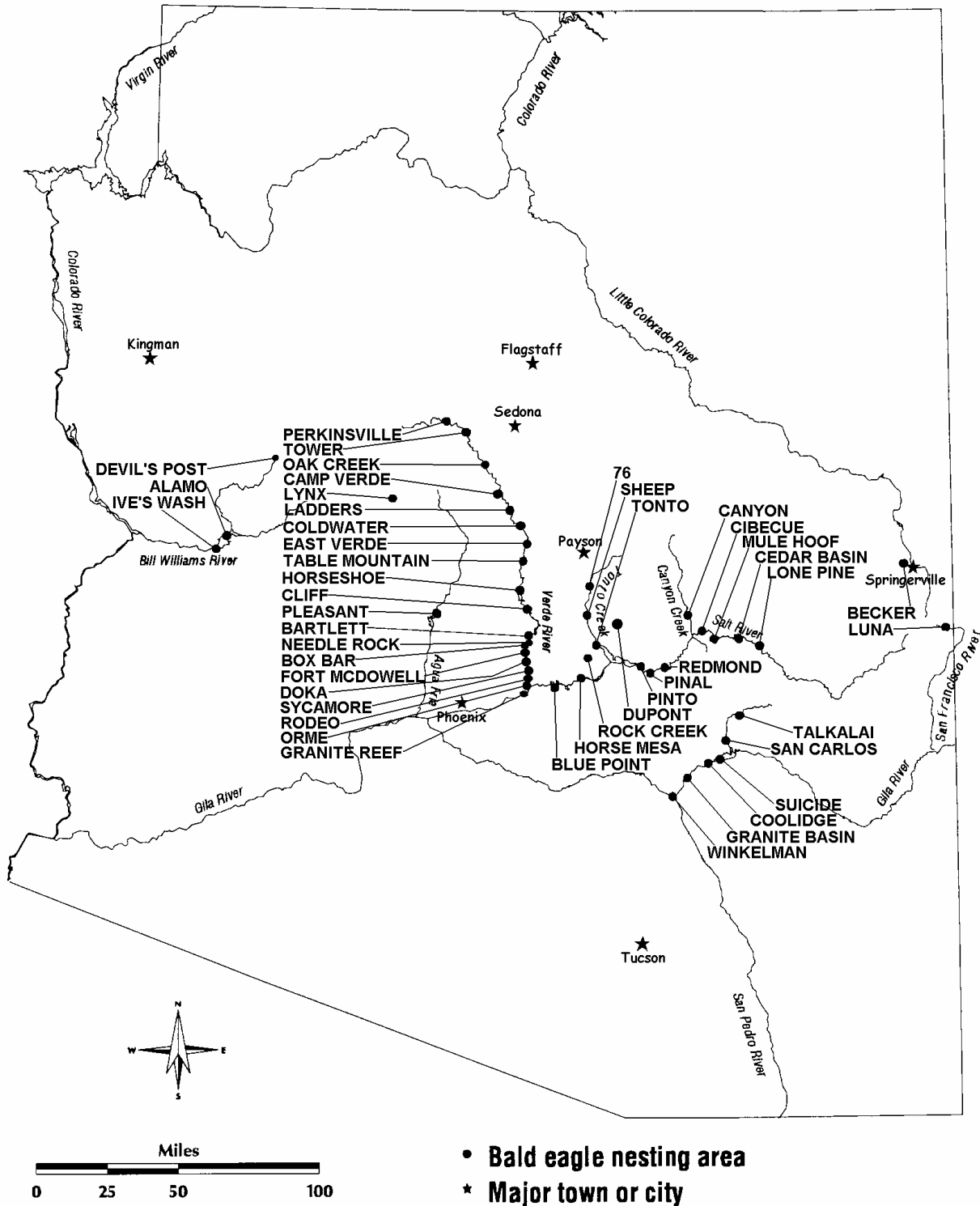


Figure 1. Known Arizona Bald Eagle BAs, 2002.

We monitored 7 nest sites of other or unknown species for bald eagle activity (Driscoll and others 1992, 1995a, 1995b, 1997, 1998, 1999; Driscoll and Beatty 1994; Koloszar and Driscoll 2001a, 2001b) (Appendix C, Table 5). These include 5 golden eagle (Big Bend, Granite, Mormon Pocket, Sullivan Lake, and Watson Lake) and 2 osprey nest sites (Granite Reef and Lynx Lake). Big Bend, Granite, and Watson were occupied by golden eagles, and we observed bald eagles at Mormon Pocket and Watson Lake nest sites. We found bald eagles incubating in the Lynx Lake osprey nest, and bald eagles built a new nest (nest #2) near the Granite Reef osprey nest site.

Surveys in 18 known BAs revealed 3 new or rebuilt bald eagle nests, and 3 fallen nests. We found new alternate nests at Doka (nest #2), Rodeo (nest #2) and Suicide (nest #2). Doka nest #1 fell before December 2001. Tower nest #1 fell prior to the winter count flight. Needle Rock nest #2 fell on May 4, 2002.

DISCUSSION

Summaries of the winter count and ORA flights are located in Appendix D. Areas worthy of further discussion (bald eagle sightings, fallen nests, new nests, potential nest sites) are described in this section. Nest locations are sensitive, considered confidential by AGFD, and omitted from this report. Management agencies requiring specific locations should contact the AGFD Heritage Data Management System at (602)-789-3612.

SURVEY SITES

American Gulch

We focused our attention on the upper portion of the East Verde River after receiving reports of bald eagles foraging near the Payson golf course and the Tonto Creek fish hatchery, and the recovery of a dead adult bald eagle north of Payson in 1999. We surveyed the area on May 10 and June 6, but found no bald eagles or nests. Suitable nesting substrate seems to be the limiting factor close to Payson, however, large ponderosa pines and cliffs suitable for nesting exist along the Mogollon Rim north of town.

Agua Fria River

Our nest survey efforts have concentrated on Lake Pleasant since the rise of the lake in 1993 increased suitable habitat. Due to the nestwatchers observing an additional pair of adults and a juvenile upstream from the Pleasant BA this year, we surveyed the drainage from Rock Springs to the Pleasant BA for a possible second BA on January 7 and May 10. Our survey found no new nests or bald eagles. However, there are large cliffs and trees in the drainages off the main channel of the Agua Fria River that could support a nest structure.

Black River Drainage

Due to a surprisingly high concentration of bald eagles wintering along the Black River (n=105), and the abundance of existing osprey nest structures, we conducted a ground survey along the East and West Forks, and main Black River from June 8-10, 2002 (Driscoll and others 2002,

Vahle and Beatty 1994). We observed 2 ospreys and relocated 4 osprey nests between Buffalo Crossing and Horse Springs. An osprey pair was perched at snag nest #6, but the nest was in poor condition. Two nests were in good repair (nests #7 and #9), and the remaining nest (#8) was not occupied. On the West Fork Black River, two additional osprey nests were relocated, and nest #3 had fallen. At least 2 osprey were in the area and 1 osprey was brooding on nest #4. The second nest (nest #5) appeared to be unused. We found 1 new active osprey nest and at least 2 territorial osprey pairs on the Black River below Buffalo Crossing. We did not observe any bald eagles in these areas. Surveys did not include the Black River between Beaver Creek and the tribal lands.

Oak Creek

After years of unconfirmed sightings of bald eagles on Oak Creek, we found a new cottonwood tree nest #1 active on April 22, 2002 (Driscoll et al, 1997). The nest is on Forest Service land adjacent to private property. A nearby landowner reported the pair has occupied the BA for about 6 years alternating between a tree (#1) and cliff (#2) nest. Although we have surveyed that area multiple times since 1997, our efforts were impeded due to limited access to the creek.

Lower Verde River

There are now 8 BA's between Bartlett Dam and the Salt River confluence. Although this stretch of river has the highest density of BA's in the state, bald eagles are still reoccupying historic areas like Needle Rock (2002), or creating new BAs like Rodeo (2000) and Sycamore (1997). We continued to monitor the lower Verde River on every ORA flight, and an additional nest survey flight on the May 21. No new nests or bald eagles were observed.

Lower Salt River

The density and reoccupancy of the lower Verde River, the presence of existing nests, and the persistent sightings of bald eagles suggest a potential for expansion on the lower Salt River. We surveyed this area on the January through April ORA flights from the Verde River confluence and Roosevelt Dam. We found subadult bald eagles below Stewart Mountain Dam on each flight and 1 adult perch just upstream from Mormon Flat Dam on Canyon Lake. No new nests were observed.

White Mountain Lakes

High concentrations of osprey nests and the presence of suitable bald eagle habitat around the White Mountain Lakes prompted ground surveys from June 8-10, 2002 (Vahle and Beatty 1994). We found no bald eagles, but verified ospreys breeding and foraging throughout the White Mountain area. We observed osprey foraging at Becker Lake, Big Lake, Crescent Lake, and Lee's Valley Lake.

HISTORICAL BAS

Needle Rock

Reports of a nest in a saguaro cactus in 1937 prompted Hunt and others (1992) to declare Needle Rock a historical BA, although no occupancy has ever been documented. We have surveyed the Needle Rock BA nearly every year since ORA flights began due to its proximity to the Bartlett BA. This February, nestwatchers from the Box Bar BA observed a bald eagle defending an area north of the BA. On March 1, 2002, they found an adult incubating in a new nest (nest #2). We found a second nest (nest #3) on the April ORA flight, suggesting there may have been breeding activity in previous years. However in 2000 and 2001, Box Bar nestwatchers documented daily interactions between osprey and bald eagles. After the interaction ended, the osprey would always fly in the direction of Needle Rock indicating possible osprey occupancy.

On May 4, Needle Rock nest #2 fell while the nestling was 8 weeks old. Attempts to repair the nest were thwarted due to the presence of a beehive in the tree. This nestling was subsequently placed in nest #3 on May 5, where it fell out 4 days later. We replaced this nestling in a temporary artificial nest structure built in a nearby tree, from which, it successfully fledged.

SURVEY SITES WITH EXISTING LARGE NESTS

Granite Reef

The Granite Reef nest site was created by ospreys in 1997, and was consistently occupied through 2001 (Driscoll and others 1998, 1999; Koloszar and Driscoll 2001a, 2001b). The osprey constructed the nest on top of a power pole near the Granite Reef Dam. Due to possible arcing of the powerline, Salt River Project constructed a platform and moved the nest away from the high voltage lines. We observed bald eagles, including a possible uncompleted nest in 2001, but no breeding activity occurred. In 2002 during the March ORA flight, we found a new pair of bald eagles, and a new cottonwood tree nest (nest #2) located upstream from the osprey nest.

Lynx

We have monitored the osprey nests and platform at Lynx Lake for more than 10 years (Driscoll and others 1992, 1995a 1995b, 1997, 1998, 1999; Koloszar and Driscoll 2001a, 2001b). Osprey occupied the site from 1998 to 2001. In 2001, we had reports of bald eagles late in the breeding season at Goldwater Lake, but extensive surveys revealed no activity. During the January winter count flight, we observed a bald eagle incubating in nest #1 on Lynx Lake.

BREEDING AREAS

Cliff

The resident bald eagles occupying the Cliff BA have not laid eggs since 1994. Since then, we have annually surveyed the BA for new nests, and monitored the presence of bald eagles (Driscoll and others 1992, 1995a, 1995b, 1997, 1998, 1999; Driscoll and Beatty 1994; Koloszar and Driscoll 2001a, 2001b). Our surveys exhausted all suitable nesting habitat close to the river,

so this year, we began searching the cliffs to the east of the river. We surveyed the drainages surrounding the Cliff BA on April 23 and June 6. Although we observed bald eagles on multiple ORA flights and ground visits, all known nests were empty and no new nests were located.

Doka

Nest #1 was reported to have fallen the first week of October in 2001. During December ground surveys, we observed the branch supporting nest #1 had broken, and discovered new nest #2 in a snag just downstream.

Granite Basin

On April 16, we found a large nest with large sticks in a cottonwood tree just upstream from nest #1. However, we observed only 1 adult in the area in 6 ORA flights, and no bald eagles were observed at this nest.

Ive's Wash

During the March and April ORA flights we observed bald eagles in the nest area. During a March 15 ground visit, we observed an adult standing, and briefly sitting in incubation posture in nest #3. The adult left the nest, and we observed no further breeding activity.

Mule Hoof

Mule Hoof was last occupied in 1992. Since then, annual surveys have shown this BA has remained unoccupied and no new nests have been constructed. Mule Hoof BA will be removed from the list of known BA's in 2003, and designated historical, after remaining unoccupied for 10 consecutive years.

Rodeo

In 2001, we observed a large nest in a cottonwood tree, upstream and across the river from nest #1. Due to the consistent presence of Harris' hawks and great blue herons, we believed one of those species originally constructed this nest. However, on the winter count flight, we found an adult bald eagle standing, and later on a ground visit, incubating in the renovated nest (nest #2).

Tower

On the winter count flight, we discovered Tower nest #1 fell during the winter. The breeding pair continued to use nest #8 this year.

Suicide

Even though we observed adults on the winter count and the February ORA flights, we did not find new nest #2 until the March 12 ORA flight. The new nest is located higher on the cliff, under a less conspicuous overhang than nest #1.

OVERVIEW

Significant findings of the 2002 nest survey include the discovery of 3 new BAs (Granite Reef, Lynx, and Oak Creek), and 1 reoccupied historic BA (Needle Rock). We found 6 new alternate bald eagle nests and discovered 3 nests had fallen.

Through our conversations with a private landowner, the Oak Creek BA may have been occupied for 6 years before our discovery. This would be consistent with the 1996 reports of bald eagles observed in that area. Due to these sightings, we surveyed Oak Creek and continued to monitor suitable habitat around this area annually, but found no bald eagle activity (Driscoll and others, 1997, 1998, 1999; Koloszar and others 2001). Even with our extensive surveys, it is possible that we could have missed this BA, as the current nest location is not visible from the Verde River. However, we did not observe the consistent adult sightings typical of discovering new BAs in other portions of the state. Therefore, we caution against any extrapolation of past occupancy due to these reports.

Continuous observations of bald eagles in the Cliff BA will maintain our future focus of survey efforts in this area. Since the pairs last breeding attempt in 1996, many factors may affect our ability to document breeding attempts (adult replacement, disturbance during the breeding cycle, unknown nest locations, etc.). We have extensively surveyed the Cliff BA since 1997, and we are confident we exhausted our search image along the Verde River corridor. This year we surveyed non-typical locations by searching adjacent drainages and cliff structures off the main corridor. Although we were not able to locate a new nest, we did document a pair in the BA on the March and June flights.

The Devil's Post and Mule Hoof BAs will be removed from the list of known BA's and designated historical, after remaining unoccupied for ten consecutive years. Annual surveys have shown both BAs have been unoccupied and no new nests have been constructed since 1992.

The continued expansion and distribution of Arizona bald eagles further demonstrates the necessity and importance of ORA flights. These flights allow for consistent monitoring of population numbers and their reproductive success in the rugged terrain of Arizona. Without the aid of these flights, we would not be able to accurately document these important demographic parameters.

MANAGEMENT RECOMMENDATIONS

Future survey efforts should monitor historical BAs, potential BAs, and large nests reported in Driscoll and others (1992, 1995a, 1995b, 1997, 1998, 1999), Driscoll and Beatty (1994), Hunt and others (1992), and Koloszar and Driscoll (2001a and b). These documents are useful tools for locating new BAs.

On 2 separate occasions, bald eagles banded in Arizona have been observed near, or on El Novillo Reservoir, Sonora. This suggests that the current distribution of our population may

extend into Sonora, Mexico. A preliminary ground based survey during the breeding season will provide an opportunity to address this issue. In addition, any resights will help to accurately describe our survivorship estimates.

Surveyors should continue to use the nest survey, ORA, and winter count flights, in concert with follow-up ground surveys to inspect areas. From the air, surveyors can easily cover large sections of bald eagle habitat. Follow-up ground surveys thoroughly investigate an area.

Examine the following areas for breeding bald eagles and/or nests:

- Agua Fria River drainage - Lake Pleasant for a second BA.
- Big Sandy River drainage - Upper Trout Creek.
- Bill Williams River drainage - Bill Williams National Wildlife Refuge
- Black River drainage - Little and Big Bonito creeks to the confluence of the Black River, Paucity Creek, Pacheta Creek, Reservation Creek, osprey nesting areas on East and West Fork and main stem of the Black River.
- Central and Eastern Mountain Lakes – Bear Canyon, Black Canyon, Blue Ridge, Casadore Springs, Chevelon Canyon, Cholla, Christmas Tree, Doney Park, Dry, George's Basin, Knoll, Nash Creek, Phillips Park Tank, Paucity Lake, Point of Pines, Roger's, Tonto, Willow Springs.
- Colorado River drainage - Lake Mead (Grand Wash), Gene Wash Reservoir, Nankoweap Creek, Lee's Ferry.
- North Fork of White River - Known osprey nesting locations
- Gila River drainage - Lower Blue River, San Francisco River to Gila River confluence, Gila Box.
- Salt River drainage - Blue Point BA to Orme BA, Gun/Tonto creek confluence, Mormon Flat Dam, Redmond BA to Canyon BA, Cibecue BA to Cedar Basin BA, Tanks Canyon.
- White Mountain Lakes – Big Lake, Canero Lake, Crescent Lake, Lee's Valley Lake, Nelson Reservoir, Nutrioso, Sierara Blanca Lake.
- White River – Whiteriver to confluence with Black and Salt rivers.

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APPENDIX A: RAPTOR REPRODUCTIVE STATUS CRITERIA

Breeding Area (BA): An area containing 1 or more nests within the range of 1 mated pair of birds. Operationally, once a BA is established, we consider it a BA whether it is occupied by bald eagles in a given year or not, until or unless it is designated historical.

Occupied BA/Nest: An occupied BA must have an occupied nest, which is any nest, where at least 1 of the following activity patterns was observed during the breeding season:

- a. Young were raised.
- b. Eggs were laid.
- c. One adult sitting low in the nest, presumably incubating.
- d. Two adults present on or near the nest.
- e. One adult and 1 bird in immature plumage at or near a nest, if mating behavior was observed (display flight, nest repair, coition).
- f. A recently repaired nest with fresh sticks, or fresh boughs on top, and/or droppings and/or molted feathers on its rim or underneath.

Active Nest: One in which eggs have been laid. Activity patterns (a), (b), and (c) above are diagnostic of an active nest.

Unoccupied BA/Nest: A nest or group of alternate nests at which none of the activity patterns diagnostic of an occupied nest were observed in a given breeding season. BAs must exist as occupied before they can be recognized and classified as unoccupied.

Successful BA/Nest: An occupied nest from which at least one young fledged during the breeding season under consideration. Nests were successful if at least one young was raised past 8 weeks of development.

Failed BA/Nest: An occupied nest from which no young fledged due to any cause.

Historical BA: A BA that has remained unoccupied for 10 consecutive years. Given that some records of breeding occupancy are sparse in the literature before 1973, this term also applies to any BA recorded not showing signs of occupancy since.

Reoccupied Historical BA: A Historical BA, which shows signs indicative of being active.

Pioneer Effort: The occupancy of a new nest, in previously undocumented breeding habitat, where there is no evidence of prior activity. These occur in areas monitored by the ORA flights before discovery due to 1) the presence of a large nest built by another or unknown species, or 2) the observed suitability of the habitat.

Existing Status: A BA that shows signs of prior occupancy (e.g. multiple large nests) and/or signs of prior activity (e.g. prey remains below an existing nest) upon discovery.

APPENDIX B: 2002 BALD EAGLE REPRODUCTION SUMMARIES

Table 1. Arizona bald eagle breeding area productivity summary, 2002.								
Breeding Area	Status ¹	Nest ²	Incubation Date	Eggs	Hatch Date	Young	Fledged	Fledge Date
Alamo	S	4	<2/1	1+	2/1-3/11	1	1	4/23-5/9
Bartlett*	F	2	1/7-2/1	1+	3/9	1	Failed 3/22.	
Nestling died in nest at 1 week old.								
Becker	O							
Blue Point	S	10	1/8-2/5	2+	2/5-22	2	2	5/10-21
Box Bar*	S	3	<1/7	2+	2/9-11	2	1	4/26
One nestling taken to rehab on 3/22. Cross-beak and non-releasable.								
Camp Verde	U							
Canyon	U							
Cedar Basin	O							
Cibecue	F	2	2/5-3/12	1+	Failed 3/12-4/16.			
Cliff	O							
Coldwater	S	3	2/1-3/11	2+	3/11-4/23	2	2	5/21-6/6
Coolidge	F	2	2/5-3/12	2+	3/12-4/16	2	Failed 6/6-20	
Two nestlings died in nest at 8-10 weeks old.								
Devil's Post	U							
Doka*	S	2	12/7-1/7	2+	1/7-2/1	2	2	4/13, 4/27
Dupont	U							
East Verde	F	6	2/1-26	2	Failed 3/11-4/23.			
Fort McDowell*	S	16	12/7-1/7	2+	1/7-2/12	2	2	4/26
Granite Basin	O							
Granite Reef*	S	2	2/8-10	2+	3/18-21	2	2	6/2
Horse Mesa	S	4	1/8-2/5	1+	2/5-3/12	1	1	5/21-6/6
Horseshoe	S	11	1/7-2/1	2+	3/11-4/14	2	2	5/21-6/6
One nestling last observed at 8.5 weeks of age.								
Ive's Wash	O							
Ladders*	S	3	2/1-2/21	2+	3/11-3/16	2	2	6/8, 6/15
Lone Pine	F	2	1/8-2/5	1+	Failed 2/5-3/12.			
Luna*	S	1	<1/10	2+	3/8-9	2	2	6/2, 6/8
Lynx*	F	1	<1/7	1+	Failed 3/1.			
Mule Hoof	U							
Needle Rock*	S	2	<3/1	2+	<3/1	1	1	5/16
	Nestling and nest fell out on 5/4 and 5/11. Returned to alternate nests on 5/5 and 5/14. Injured and taken to rehab on 5/18.							
Oak Creek	S	1	<4/23	2+	<4/23	2	2	5/3-6/6
Orme*	S	6	1/7-2/1	2+	2/26	2	2	5/26-31
Perkinsville	F	4	2/1-25	1	Failed 3/18-4/23.			
Pinal	S	6	<3/12	1	<3/12	1	1	>6/6
Pinto	F	4	1/8-2/5	1+	Failed 2/5-3/4.			
Pleasant*	S	2	1/7-2/10	1+	2/18-22	1	1	5/15

¹ Breeding area status codes (Postupalsky 1974): U=unoccupied, O=occupied, S=successful, F=failed.

² Nest numbers are from Hunt and others 1992; Driscoll and others 1992; Driscoll and Beatty 1994; Driscoll and others 1995a, 1995b, 1997, 1998, 1999, Koloszar and Driscoll 2001a, 2001b.

* Nests monitored by the Arizona Bald Eagle Nestwatch Program.

Table 1 (continued).								
Breeding Area	Status ¹	Nest ²	Incubation Date	Eggs	Hatch Date	Young	Fledged	Fledge Date
Redmond	F	5	1/8-2/5	2	Failed 3/12-29.			
Rock Creek	S	2	2/5-3/12	1+	3/12-5/20	1	1	>6/6
Rodeo*	S	2	1/7-2/1	2	3/2	1	1	5/24
San Carlos	F	3	2/5-3/12	1+	3/12-4/16	1	Failed 5/22-6/6.	
	Nestling died in nest at 6-8 weeks old.							
76	O							
Sheep	S	3	1/8-2/5	2+	2/5-3/6	2	2	5/21-6/6
Suicide	F	2	<3/12	3+	<3/12	3	Failed 4/16-5/10.	
	All three nestlings died in nest at 11 weeks old.							
Sycamore*	S	4	12/18-1/7	2+	2/1-8	2	1	4/27
	One nestling taken to rehab on 3/20 with broken tarsus and broken pelvic bone.							
Table Mountain	O							
Talkalai	S	6	1/8-2/5	2+	2/5-3/12	2	2	5/10-6/6
Tonto*	S	2	1/8-2/5	2+	2/18-22	2	2	5/15-21
Tower*	S	8	1/7-24	2+	2/28	2	2	5/27-31
Winkelman	U							

¹ Breeding area status codes (Postupalsky 1974): U=unoccupied, O=occupied, S=successful, F=failed.

² Nest numbers are from Hunt and others 1992; Driscoll and others 1992; Driscoll and Beatty 1994; Driscoll and others 1995a, 1995b, 1997, 1998, 1999; Koloszar and Driscoll 2001a, 2001b.

* Nests monitored by the Arizona Bald Eagle Nestwatch Program.

Table 2. Arizona bald eagle productivity summary, 2002.			
Number of BAs	47	Number of Active BAs	34
Number of Occupied BAs	41	Number of Failed Breeding Attempts	11
Number of Eggs	57+	Number of Successful Breeding Attempts	23
Nest Success = 23/41	0.56	Number of Young Hatched	46
Mean Brood Size = 37/24	1.54	Number of Young Fledged	37
		Productivity = 0.56 x 1.54	0.86

APPENDIX C: NEST SURVEY SUMMARIES

Table 3. Arizona bald eagle nest survey summary: new locations surveyed, 2002.			
New Locations	Date	Method	Results
Agua Fria River	1/7, 5/10	Helicopter	No new nests or bald eagles.
American Gulch	5/10, 6/6	Helicopter	No new nests or bald eagles.
Ash Creek	4/16	Helicopter	No new nests or bald eagles.
Black Canyon Lake	1/10	Helicopter	No new nests or bald eagles.
Black River Drainage	6/8, 6/10	Ground	No bald eagles.
Burro Creek	2/1, 3/11	Helicopter	No new nests or bald eagles.
Dry Beaver Creek	5/10	Helicopter	No new nests or bald eagles.
Little Colorado River	5/21	Helicopter	No new nests or bald eagles.
Nelson Reservoir	4/22, 6/7	Ground	All known nest empty. No new nests or bald eagles.
Oak Creek	4/23	Helicopter	New nest #1, 1 adult and 2 6-week old nestlings.
Red Creek	3/11	Helicopter	No new nests or bald eagles.
Lower Salt River	1/8, 2/5, 3/12, 4/16	Helicopter	One subadult below Stewart Mountain Dam and one blue-banded adult just above Mormon Flat Dam on 1/8. Three subadults in area and Orme #5 in good shape on 2/5. Two subadults and two ospreys near Goldfield Ranger Station on 3/12 and 4/16, respectively.
Upper Salt River	1/10, 2/5, 3/12, 4/16	Helicopter	No new nests. Three adults and 5 subadult upstream of Carrizo Creek confluence on 1/10. Seven adults and 4 subadults in area on 3/12.
Lower San Pedro River	2/5	Helicopter	No new nests or bald eagles.
Tanks Canyon	1/8, 2/5, 3/12, 4/16	Helicopter	No new nests or bald eagles.
Lower Verde River	2/1, 3/11, 4/23	Helicopter	No new nests. Two adults perched together on north end of Bartlett Lake on 2/1.
Upper Verde River	2/1, 3/11, 4/23	Helicopter	Two golden nests on east side of river upstream from Brown's Ranch on 2/1. Golden eagle incubating between Browns Ranch and Big Bend on 3/11.
West Clear Creek	1/7	Helicopter	No new nests or bald eagles.
Wet Beaver Creek	5/10	Helicopter	No new nests or bald eagles.
White Mountain Lakes	6/6-6/10	Helicopter	One adult and subadult in area on 2/1.
Willow Lake	2/1,4/23	Helicopter	One adult and subadult in area on 2/1.
Willow Springs Lake	1/10	Helicopter	Nest and osprey platform below dam.

Table 4. Arizona bald eagle nest survey summary: historical BAs surveyed, 2002.			
Historical BAs	Date	Method	Results
Ash	1/8, 2/5, 3/12, 4/16	Helicopter	No new nests or bald eagles.
Chino	2/1	Helicopter	No new nests or bald eagles.
Eagle	1/11	Helicopter	No new nests or bald eagles.
Hell Point	1/7, 2/1, 3/11, 4/23	Helicopter	All known nests empty. No bald eagles.
LF	1/7, 2/1, 3/11, 4/23	Helicopter	No new nests. One adult and subadult in area on 1/7. Three subadults spread out along river on 2/1.
Muldoon	1/7, 2/1, 3/11, 4/23	Helicopter	One adult perched on nest cliff on 1/7. One adult in area on 2/1. One adult and 1 subadult upstream on 3/11.
Needle Rock	1/7, 2/1, 3/1,4/23	Helicopter Ground	Two adults perched in tree on 1/7. Subadult in area on 2/1. On 3/1, Box Bar Nestwatcher found incubating adult in new nest #2. See alternate nest #3 upstream on 4/23.
Sullivan	1/7, 2/1, 3/11, 4/23	Helicopter	No new nests or bald eagles.
Willow	1/11	Helicopter	No new nests or bald eagles.

Table 5. Arizona bald eagle nest survey summary: nest sites surveyed, 2002.			
Nest Sites	Date	Method	Results
Granite	1/7, 2/1, 3/11, 4/23	Helicopter	All known nests empty. No bald eagles. Two golden eagles on 3/11.
Granite Reef	1/8, 2/1, 2/5	Helicopter	Two adults perched in tree near a partial nest on 1/8. One adult standing in new nest #2, and second adult downstream on 2/5.
Hell Canyon	2/1, 4/23	Helicopter	No new nests or bald eagles.
Lynx	1/7, 2/1, 3/11, 4/23	Helicopter	Incubating bald eagle in nest #1.
Mormon Pocket	2/1, 3/11, 4/23	Helicopter	All known nests empty. One adult and subadult in area on 2/1.
Sullivan Lake	1/7, 2/1, 3/11, 4/23	Helicopter	No new nests or bald eagles.
Watson Lake	1/7, 2/1, 4/23	Helicopter	All known nests empty. One adult on 1/8. Two subadults on lake on 2/1.

Table 6. Arizona bald eagle nest survey summary: BAs surveyed, 2002.			
Breeding Area	Date	Method	Results
Becker	1/16, 2/16, 4/22, 5/21	Helicopter Ground	All known nest empty. No new nests or bald eagles. Regional personnel observed a single adult on 2 occasions
Camp Verde	1/7, 2/1, 3/11, 4/23	Helicopter	One adult in area on 1/7. Three adults near confluence of Beaver Creek on 2/1.
Canyon	1/10, 2/5, 3/12, 4/16	Helicopter	One adult and 1 subadult downstream on 3/12.
Cedar Basin	1/10, 2/5, 3/12, 4/16	Helicopter	One adult in area on 3/12.
Cliff	12/13, 1/7, 2/1, 3/8, 3/11, 4/23, 6/6	Helicopter Ground	One adult in area on 12/13. Adult near dam and downstream on red cliffs on 2/1. SRP pilot saw two adults perched on nest cliff on 3/8. Extensive search in Sheep Creek and Lion Mountain to the east on 4/23, no new nests or bald eagles. Two adults downstream on 6/6.
Devil's Post	2/1, 3/11, 4/23	Helicopter	All known nests empty. No bald eagles.
Doka	12/7 (2001)	Ground	Nest #1 has fallen out but a new nest #2 has been built.
Dupont	1/8, 2/5, 3/12	Helicopter	All known nests empty. No bald eagles.
Granite Basin	1/8, 2/5, 3/12, 4/16, 5/10, 6/6	Helicopter	One adult in area on 1/8. Find nest # 2 in tree in narrow canyon on 4/16.
Ive's Wash	2/1, 3/11, 3/15, 4/23	Helicopter	Adult and near adult near nest #3 with new sticks on 3/11. One adult seen standing and in incubation posture for 9 minutes on 3/15. Two adults in area of nest #3 on 4/23.
Mule Hoof	1/10, 2/5, 3/12, 4/16	Helicopter	All known nests empty. One subadult in area on 4/16.
Pinto	1/8, 2/5, 3/4 -3/5, 3/12, 4/16, 5/10, 6/10	Helicopter Ground	Adult incubating in nest #4 on 2/5. On 3/4 - 3/5 visits, nest #4 failed and new sticks in nearby snag, incomplete. Possible alternate nest not completed in snag on 3/12 & 4/16.
Rodeo	12/18, 1/7, 2/1	Helicopter Ground	One adult at new nest #2 on 1/7. Incubating on nest #2 on 2/1
76	1/8, 2/5, 3/5, 3/12, 6/6	Helicopter Ground	All known nest empty. One adult perched on nest #3 on 1/8. Two adults in area on 2/5. Near adult perched on nest #3 tree on 3/5 and 3/12. New sticks on nest #3 on 3/12.
Table Mountain	2/1, 3/11, 4/23, 5/10	Helicopter	All known nest empty. Two adults 5 minutes upstream but south of Squaw Butte on 3/11. Adult and near adult in area on 4/23. One adult soaring in area on 5/10.
Tower	1/7	Helicopter	Nest #1 has fallen.
Suicide	1/8, 2/5, 3/12	Helicopter	Two adults and 1 adult in area on 1/8 and 2/5, respectively. Nest #2 found on 3/12.
Winkelman	1/8, 2/5, 3/12, 4/16	Helicopter	All known nests empty. No bald eagles.

APPENDIX D: 2002 WINTER COUNT/ORAL FLIGHT SUMMARIES

Table 7. Results of January 7, 2002, winter count.		
Location	Time	Comments
Orme	0749	One adult at nest #6. Nest # 1 and #3 empty.
Rodeo	0751	One adult at new nest #2.
Sycamore	0759	One adult incubating in nest #4. Second adult perched just upstream.
Doka	0804	One adult incubating in new nest #2. Nest #1 fell first week of October 2001 Second adult perched nearby.
Ft. McDowell	0807	One adult incubating in nest #16.
Box Bar	0811	One adult incubating in nest #3. Second adult in area.
Needle Rock historical BA	0816	Two adults perched in tree together. No new nests.
Bartlett	0822	All known nests empty. No bald eagles.
Cliff	0847	All known nests empty. No bald eagles.
Horseshoe	0856	All known nests empty. No bald eagles. Horseshoe Lake is almost empty.
Table Mountain	0920	All known nests empty. No bald eagles.
LF historical BA	0938	No new nests. One adult and subadult downstream.
East Verde	0959	All known nests empty. One adult flying in area.
Coldwater	1002	All known nests empty. One adult perched across river from nest #2. One adult standing in nest #3 and 1 adult flying in area.
Ladders	1019	Nest #3 is built up with 1 adult perched nearby.
Camp Verde	1109	No new nests or bald eagles. One adult in area.
Tower	1338	One adult and subadult in area. Nest #1 fell.
Perkinsville	1401	All known nests empty. One adult golden eagle in area.
Hell Point historical BA	1410	All known nests empty. No bald eagles.
Muldoon historical BA	1415	All known nests empty. One adult perched on nest cliff.
Granite nest site	1421	All known nests empty. No bald eagles.
Sullivan Lake nest site	1424	All known nests empty. No bald eagles.
Sullivan historical BA	1425	All known nests empty. Four subadults on dead cow.
Watson Lake nest site	1504	All known nests empty. One adult on the lake.
Lynx Lake nest site	1510	Adult bald eagle incubating in new nest #1, a former osprey nest. Second adult in area.
Pleasant	1527	All known nests empty. One adult near built up nest #2.

Table 8. Results of January 8, 2002, winter count.		
Location	Time	Comments
Granite Reef nest site	0804	Osprey platform is empty. Two adults in tree near a large nest that seems to be falling out.
Orme	0810	One adult at nest #6, not sure if it is the one from above.
Lower Salt River	0815	One subadult in area.
Blue Point	0826	All known nests empty. No bald eagles.
Horse Mesa	0843	All known nests empty. No bald eagles
Rock Creek	0850	In the right area but could not find nest or bald eagles.
Tonto	0912	All known nests empty. No bald eagles.
Sheep	0925	Two adults perched in nest #3 tree.
76	0937	All known nests empty. One adult perched on nest #3 tree.
Dupont	0951	All known nests empty. No bald eagles.
Pinto	1150	Nest #4 is built up. No bald eagles.
Pinal	1213	All known nests empty. Two adults perched on power poles on river.
Redmond	1217	All known nests empty. No bald eagles.
Tanks Canyon	1253	One adult in the area.
Ash	1255	No new nests or bald eagles.
Talkalai	1317	One adult perch near nest # 6.
San Carlos	1350	Nest #3 is built up. No bald eagles.
Suicide	1401	All known nests empty. Two adults in area.
Coolidge	1416	All known nests empty. Two subadults in area.
Granite Basin	1500	All known nests empty. One adult in area.
Winkelman	1513	All known nests empty. No bald eagles.

Table 9. Results of January 10, 2002, winter count.		
Location	Time	Comments
Canyon	0958	All known nests empty. No bald eagles.
Cibecue	1015	All known nests empty. No bald eagles.
Mule Hoof	1029	All known nests empty. No bald eagles.
Cedar Basin	1048	All known nests empty. No bald eagles.
Upper Salt River	1105	No new nests. Three adults and 5 subadults upstream from Carrizo Creek confluence.
Lone Pine	1112	All known nests empty. An adult and subadult at confluence of White River.

Table 10. Results of January 11, 2002, winter count.		
Location	Time	Comments
Willow historical BA	1026	No bald eagles.
Eagle historical BA	1035	All known nests empty. Three adults and 2 subadults in area.

Table 11. Results of February 1, 2002, ORA flight.		
Location	Time	Comments
Granite Reef nest site	0806	All known nests empty. No bald eagles.
Orme	0811	One adult incubating in #6 nest.
Rodeo	0813	One adult incubating in #2 nest.
Sycamore	0817	One adult incubating in nest #4.
Doka	0820	Two adults brooding nestlings.
Ft. McDowell	0822	One adult incubating in #16 nest. Second adult in area.
Box Bar	0825	One adult incubating in nest #3.
Needle Rock historical BA	0826	No new nests. One subadult in the area.
Bartlett	0830	One adult incubating in #2 nest.
Lower Verde River	0845	No new nests. Two adults perched together on north end of Bartlett Lake.
Cliff	0841	No new nests. Adult near dam and 1 adult downstream on red cliffs.
Horseshoe	0858	One adult on nest #11.
Table Mountain	0905	All known nests empty. No bald eagles.
LF Historical BA	0919	No new nests. Three subadults spread out along river.
East Verde	0930	Nest #6 has new sticks. Two adults upstream near Coldwater nest #2.
Coldwater	0940	All known nests are empty. No bald eagles.
Upper Verde River	0947	Two golden nests on east side of river upstream from Brown's Ranch.
Ladders	0950	Nest #3 renovated. Two adults in area.
Camp Verde	1010	No new nests. Three adult eagles near Beaver Creek confluence.
Tower	1133	One adult incubating in nest #8.
Mormon Pocket nest site	1139	All known nests empty. Adult and subadult in area.
Perkinsville	1147	All known nests empty. Two adults in area.
Hell Point historical BA	1155	All known nests empty. No bald eagles.
Muldoon historical BA	1201	All known nests empty. One adult in area.
Granite nest site	1208	All known nests empty. No bald eagles.
Sullivan Lake nest site	1212	All known nests empty. No bald eagles.
Sullivan historical BA	1213	All known nests empty. No bald eagles.
Watson Lake nest site	1336	All known nests empty. Two subadults on lake.
Lynx	1343	Adult incubating in nest #1, second perched near by.
Devil's Post	1414	All known nests empty. No bald eagles.
Burro Creek	1420	No new nests or bald eagles.
Chino historical BA	1437	No new nests or bald eagles.
Alamo	1442	One adult incubating in nest #4. Second adult in area.
Ive's Wash	1505	All known nests empty. No bald eagles.

Table 13. Results of February 5, 2002, ORA flight.		
Location	Time	Comments
Granite Reef nest site	0804	One osprey near platform. One adult standing in new nest #2. Second adult in area downstream.
Orme	0810	One adult incubating in nest #6.
Lower Salt River	0812	Three subadults in area and Orme #5 in good shape. No new nests.
Blue Point	0820	One adult incubating in nest #10. Second adult soaring in area.
Horse Mesa	0833	One adult incubating in nest #4.
Rock Creek	0837	All known nests empty. No bald eagles.
Tonto	0843	One adult incubating in nest #2. Second adult in area.
Sheep	0851	One adult incubating in artificially built nest #3.
76	0857	Two adults in area. All known nests empty.
Dupont	0910	All known nests empty. No bald eagles.
Pinto	0919	One adult incubating in nest #4. Second adult in area.
Pinal	0925	One adult standing in nest #6.
Redmond	0929	One adult incubating in nest #5.
Canyon	0944	All known nests empty. No bald eagles.
Cibecue	1100	Two adults perched near nest #3.
Mule Hoof	1117	All known nests empty. No bald eagles.
Cedar Basin	1125	All known nests empty. No bald eagles.
Upper Salt River	1130	No new nests or bald eagles.
Lone Pine	1143	One adult incubating in nest #2. Second adult in area.
Tanks Canyon	1313	No new nests or bald eagles.
Ash historical BA	1318	No new nests or bald eagles.
Talkalai	1339	One adult incubating 2 eggs in nest #7. Second adult on Talkalai Lake.
San Carlos	1350	Nest #3 newly renovated. One adult in area.
Suicide	1400	All known nests empty. One adult in area.
Coolidge	1403	All known nests empty. One adult in area.
Granite Basin	1435	All known nests empty. No bald eagles.
Winkelman	1443	All known nests empty. No bald eagles.

Table 14. Results of March 11, 2002, ORA flight.		
Location	Time	Comments
Orme	0732	Two nestlings in nest #6. No adults.
Rodeo	0734	Two adults at nest #2.
Sycamore	0739	One adult and 2 5-week old nestlings.
Doka	0742	Two adults and 2 6-week old nestlings.
Fort McDowell	0744	Two adults in area.
Lower Verde River	0754	No new nests or bald eagles.
Cliff	0809	All known nests empty. No bald eagles.
Horseshoe	0828	One adult incubating in nest #11.
Table Mountain	0835	All known nests empty. Two adults 5 minutes upstream south of Squaw Butte.
LF Historical BA	0855	All known nests empty. No bald eagles. Black hawk observed.
East Verde	0907	One adult incubating in nest #6.
Coldwater	0919	One adult incubating in nest #3.
Upper Verde River	0923	Golden eagle incubating between Browns Ranch and Big Bend.
Ladders	0926	One adult incubating in nest #3.
Camp Verde	0941	No new nests or bald eagles.
Mormon Pocket nest site	1100	All known nests empty. No bald eagles.
Perkinsville	1103	Nest #3 renovated. No bald eagles.
Hell Point historical BA	1114	All known nests empty. No bald eagles.
Muldoon historical BA	1125	All known nests empty. One adult and 1 subadult upstream.
Granite nest site	1129	Two adult golden eagles in area.
Sullivan Lake nest site	1131	No new nests or bald eagles.
Lynx	1149	Nest # 1 failed and empty. One adult in area.
Devil's Post	1330	All known nests empty. No bald eagles.
Alamo	1356	One adult and 1 2-week old nestling.
Ive's Wash	1403	One adult and 1 near adult near nest #3 with new sticks.

Table 15. Results of March 12, 2002 ORA flight.		
Location	Time	Comments
Lower Salt River	0750	Two subadults near Goldfield Ranger Station.
Blue Point	0757	One 1-week old nestling and 1 egg.
Horse Mesa	0816	One adult and 1 1-week old nestling.
Rock Creek	0823	One adult incubating in nest #2.
Sheep	0834	Adult female (see transmitter) and 2 1-week old nestlings.
76	0844	One near adult perched on nest tree. Nest has new sticks.
Dupont	0855	All known nests empty. No bald eagles.
Pinto	0907	All known nests empty. No bald eagles. Few new sticks in nearby snag.
Pinal	0918	One adult brooding unknown number of young.
Redmond	0922	One adult incubating in nest #5.
Canyon	0945	One adult and one subadult downstream.
Cibecue	1120	One adult incubating in nest #2.
Mule Hoof	1123	All known nests empty. No bald eagles.
Cedar Basin	1135	One adult in area.
Upper Salt River	1139	Seven adults and four subadults in area.
Lone Pine	1148	Nest failed and empty. One adult in area. Dozer work on ridge half mile upstream on west side of river.
Tanks Canyon	1343	No new nests or bald eagles.
Ash historical BA	1349	No new nests or bald eagles.
Talkalai	1410	One adult and 2 3-week old nestlings.
San Carlos	1421	One adult incubating in nest #3.
Suicide	1429	New nest #2 found with 1 adult brooding unknown number of young.
Coolidge	1432	One adult incubating in nest #2.
Granite Basin	1448	All known nests empty. No bald eagles.
Winkelman	1500	All known nests empty. No bald eagles.

Table 16. Results of April 16, 2002 ORA flight.		
Location	Time	Comments
Granite Reef nest site	0750	All known nests empty. No bald eagles.
Lower Salt River	0754	Two ospreys near Goldfield Ranger Station.
Blue Point	0758	Two 6-week old nestlings.
Horse Mesa	0812	One adult and 1 6-week old nestling.
Rock Creek	0815	Skipped because of fog.
Sheep	0825	Two big nestlings in nest.
Pinto	0838	Incomplete nest built in another snag. No adults.
Pinal	0844	One adult and 1 3-week old nestling.
Redmond	0848	All known nests empty. No bald eagles.
Canyon	0859	All known nests empty. No bald eagles.
Lone Pine	1029	All known nests empty. No bald eagles. Blue tarp on ridge behind nest.
Upper Salt River	1031	No new nests or bald eagles.
Cedar Basin	1038	All known nests empty. No bald eagles.
Mule Hoof	1047	All known nests empty. Subadult in area (3 year old).
Cibecue	1052	All known nests empty. One adult in area.
Ash historical BA	1221	No new nests or bald eagles.
Talkalai	1243	One adult and 2 nestlings.
San Carlos	1248	Two adults and 1 2-week old nestling.
Suicide	1300	Three 5-week old nestlings.
Coolidge	1304	One adult incubating/brooding.
Granite Basin	1333	Find nest #2 in tree in narrow canyon upstream. No bald eagles.
Winkelman	1340	All known nests empty. No bald eagles.
Ash Creek	1352	No new nests or bald eagles.

Table 17. Results of April 23, 2002, ORA flight.		
Location	Time	Comments
Needle Rock	0737	Found a new nest #3 upstream.
Bartlett	0740	No new nests or bald eagles.
Cliff	0746	No new nests or bald eagles.
Horseshoe	0818	One adult and 2 4-week old nestlings in nest.
Table Mountain	0828	One adult and near adult in area.
East Verde	0844	Adult lands on edge of nest with 2 eggs. Second adult in area.
Coldwater	0854	Two 4-week old nestlings. No adults.
Camp Verde	0856	No new nests or bald eagles.
Oak Creek	0914	New nest #1 with 2 6-week old nestlings.
Mormon Pocket nest site	0926	No new nests or bald eagles.
Perkinsville	0928	Nest failed large rock in nest, 2 adults in area.
Hell Point historical BA	0940	All known nests empty. No bald eagles.
Muldoon historical BA	0945	All known nests empty. No bald eagles.
Granite nest site	0950	No new nests or bald eagles.
Sullivan Lake nest site	0955	No new nests or bald eagles.
Sullivan historical BA	0956	No new nests or bald eagles.
Willow Lake	1119	No new nests or bald eagles.
Watson Lake nest site	1122	All known nests empty. No bald eagles.
Lynx	1127	All known nests empty. No bald eagles.
Devil's Post	1200	All known nests empty. No bald eagles.
Alamo	1223	One large nestling. No adults.
Ive's Wash	1238	All known nest empty. Two adults in area of nest #3.

Table 18. Results of May 10, 2002, ORA flight.		
Location	Time	Comments
Blue Point	0800	Two 9-week old nestlings in nest. No adults observed.
Horse Mesa	0810	One 9-week old nestling in nest. No adults observed.
Rock Creek	0815	One 5-week old nestling in nest. No adults observed.
Talkalai	0858	Two 9-week old nestlings in nest.
San Carlos	0902	One adult and 1 5-week old nestling in nest.
Suicide	0908	Two dead nestlings in/near nest. Nest partially fallen out. No adults observed.
Coolidge	0912	One adult and 2 3-week old nestlings in nest.
Granite Basin	0919	All known nests empty. No bald eagles.
Pinal	0938	One 6-week old nestling in nest. No adults observed.
Pinto	0941	All known nests empty. No bald eagles.
American Gulch	1000	No new nests or bald eagles.
Sheep	0955	Two 9-week old nestlings standing in nest. No adults observed.
Horseshoe	1053	Two 7-week old nestlings in nest.
Table Mountain	1058	All known nests empty. One adult soaring in area.
East Verde	1109	All known nests empty. No bald eagles.
Coldwater	1113	One adult and 2 5-week old nestlings.
Wet /Dry Beaver Creeks	1121	No new nests or bald eagles.
Oak Creek	1138	Two nestlings in nest.
Agua Fria River	1400	No new nests or bald eagles.

Table 19. Results of May 21, 2002, ORA flight.		
Location	Time	Comments
Blue Point	0731	All known nests empty. No bald eagles.
Horse Mesa	0740	One nestling in nest.
Rock Creek	0747	One 5-week old nestling in nest. No adults observed.
Tonto	0750	One adult and 1 nestling in nest tree.
Sheep	0803	Two 10.5-week old nestlings in nest. No adults observed.
Becker	0838	All known nests empty. No bald eagles.
Horseshoe	1130	Found 2 nestlings on the ground near nest tree, returned them to nest.
Coldwater	1545	Two week old nestlings in nest. No adults observed.

Table 20. Results of June 6, 2002, ORA flight.		
Location	Time	Comments
Blue Point	0728	All known nests empty. No bald eagles.
Granite Basin	0823	No new nests or bald eagles.
Coolidge	0829	Two 8-week old nestlings in nest. No adults observed.
Suicide	0834	Nothing in nest or below.
San Carlos	0841	One dead 6 to 8-week old nestling in nest. No adults observed.
Talkalai	0847	One juvenile observed flying into nest #6. No adults observed.
Redmond	0914	All known nests empty. No bald eagles.
Pinal	0918	One adult and 1 10 to 11-week old nestling in nest #6.
Pinto	0921	All known nests empty. No bald eagles.
Rock Creek	0935	Two adults and 1 9 to 10-week old nestling in nest.
Horse Mesa	0936	All known nests empty. No bald eagles.
Tonto	1004	One adult and juveniles in the area.
Sheep	1008	Two juveniles in the area of nest #3.
76	1024	All known nests empty. No bald eagles.
East Verde	1056	All known nests empty. No bald eagles.
Coldwater	1101	All known nests empty. No bald eagles. Lots of white wash.
Oak Creek	1111	All known nests empty. No bald eagles.
Table Mountain	1301	All known nests empty. No bald eagles.
Horseshoe	1316	One juvenile below nest in tree. No adults observed.
Cliff	1326	Two adults downstream.