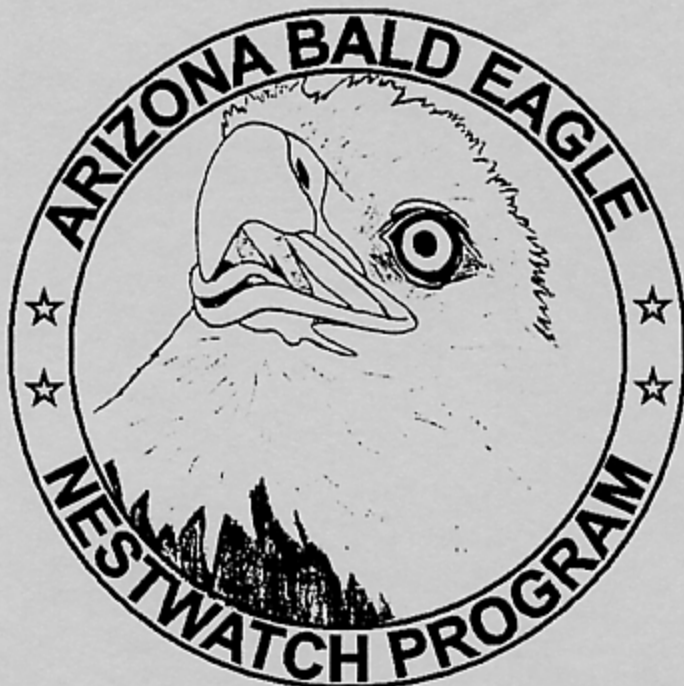


# ARIZONA BALD EAGLE NESTWATCH PROGRAM: 1999 – 2000 SUMMARY REPORT

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# ARIZONA BALD EAGLE NESTWATCH PROGRAM: 1999 - 2000 SUMMARY REPORT

James T. Driscoll and John G. Koloszar

## INTRODUCTION

In 1978 the U.S. Fish and Wildlife Service (USFWS) classified the bald eagle (*Haliaeetus leucocephalus*) as endangered in 43 states (including Arizona) and threatened in five others (USFWS 1982). In Alaska, the USFWS did not list the species and it does not occur in Hawaii. The USFWS downlisted the bald eagle to threatened in 1995 (USFWS 1995), and has proposed to delist in the future (USFWS 1999). Until delisting, the bald eagle remains protected under the Endangered Species Act. Thereafter, the Airborne Hunting Act, the Bald and Golden Eagle Protection Act, the Lacey Act, and the Migratory Bird Treaty Act, and Arizona Revised Statute Title 17 will protect the species.

Due to urban sprawl and an increase in metropolitan Phoenix's human population, many Arizona bald eagle breeding areas (BAs) are located near high recreation areas. As land and wildlife management agencies became more informed on the affects of human recreation to bald eagles in these areas, the demand for protective management increased. In 1978, efforts began to monitor these areas when the U.S. Forest Service (USFS) and two Maricopa Audubon Society volunteers monitored a BA near Bartlett Reservoir. This monitoring effort eventually expanded into other areas, and developed into the Arizona Bald Eagle Nestwatch Program (ABENWP).

To adequately address the needs for Arizona's breeding bald eagles, the ABENWP operates under three goals: conservation, data collection, and education. Due to high recreation pressures along some of Arizona's lakes and rivers, land management agencies enact seasonal closures to protect the bald eagle breeding cycle. Nestwatchers interact with members of the public who visit these areas, educate them on bald eagles, distribute brochures, and/or direct them out of the closures. To help the land and wildlife management agencies make better decisions, nestwatchers collect basic demographic information and behaviors in response to human activities. Possibly the most tangible benefit of the ABENWP is determining when the bald eagles are in life threatening situations. Daily monitoring allows for the rescue of bald eagles in those situations.

As we found new BAs, interagency coordination became more important. To provide oversight and increase communication, the land and wildlife management agencies formed the Southwestern Bald Eagle Management Committee (SWBEMC) in 1984. The SWBEMC is comprised of various federal, state, and county land and wildlife management agencies, Native American Tribes, and private organizations interested in bald eagle conservation. In 1986, the USFWS assumed coordination of the ABENWP on behalf of the SWBEMC, and expanded its scope. In 1991, as a result of the passage of the Heritage Initiative, the USFWS transferred the lead to the Arizona Game and Fish Department (AGFD).

This report summarizes significant discoveries at each monitored BA in 1999 and 2000. Detailed reports of each monitored BA are centralized at AGFD, and distributed to the land and wildlife management agencies where the BA occurs.

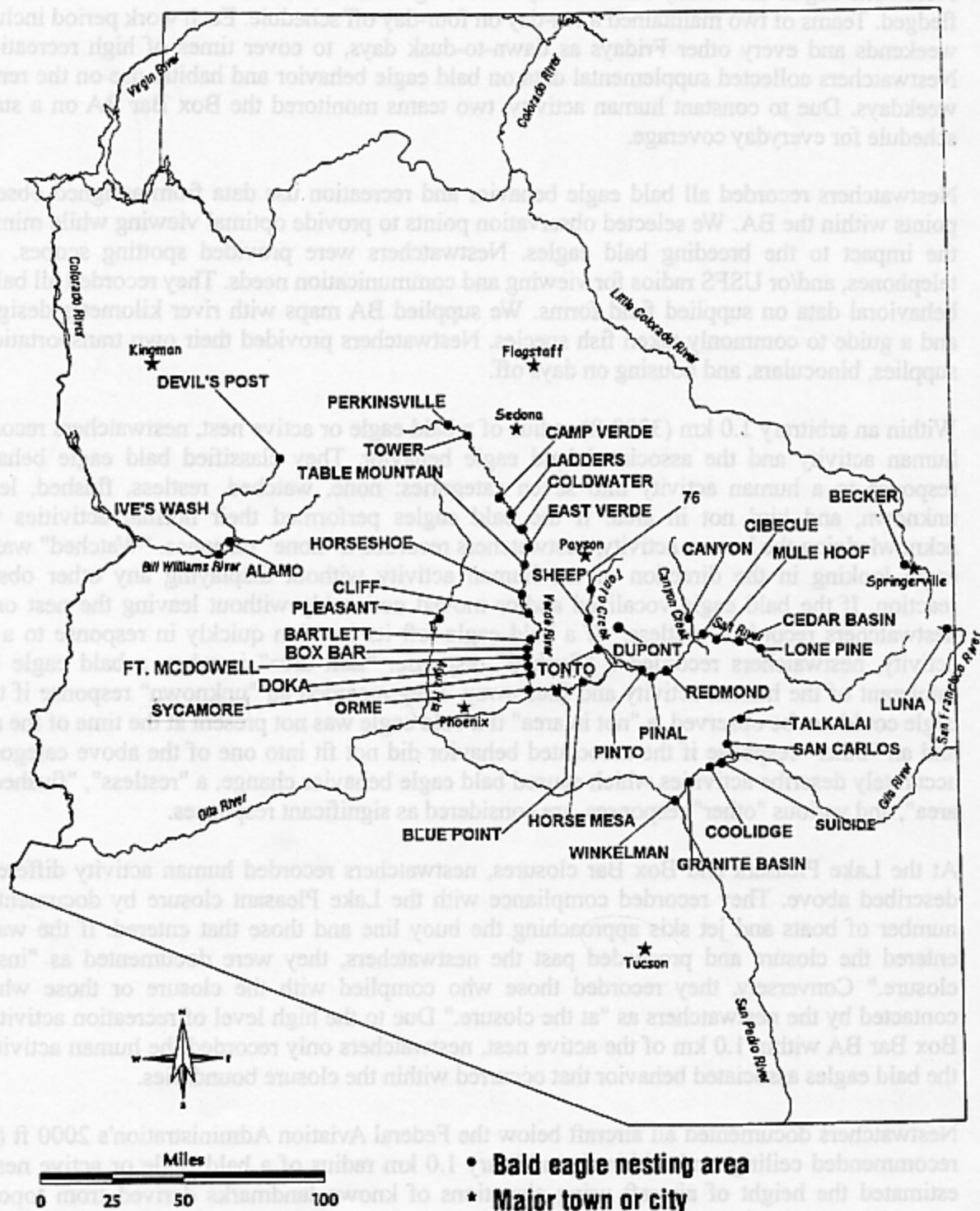


Figure 1. Location of known bald eagle BAs in Arizona, 2000.



Fieldwork began the Friday immediately following orientation, and continued until the nestlings fledged. Teams of two maintained a ten-day on four-day off schedule. Each work period included all weekends and every other Fridays as dawn-to-dusk days, to cover times of high recreation use. Nestwatchers collected supplemental data on bald eagle behavior and habitat use on the remaining weekdays. Due to constant human activity, two teams monitored the Box Bar BA on a staggered schedule for everyday coverage.

Nestwatchers recorded all bald eagle behavior and recreation use data from assigned observation points within the BA. We selected observation points to provide optimal viewing while minimizing the impact to the breeding bald eagles. Nestwatchers were provided spotting scopes, cellular telephones, and/or USFS radios for viewing and communication needs. They recorded all bald eagle behavioral data on supplied field forms. We supplied BA maps with river kilometer designations and a guide to commonly taken fish species. Nestwatchers provided their own transportation, gas, supplies, binoculars, and housing on days off.

Within an arbitrary 1.0 km (3300 ft) radius of a bald eagle or active nest, nestwatchers recorded all human activity and the associated bald eagle behavior. They classified bald eagle behavior in response to a human activity into seven categories: none, watched, restless, flushed, left area, unknown, and bird not in area. If the bald eagles performed their normal activities without acknowledging the human activity, nestwatchers recorded a "none" response. "Watched" was a bald eagle looking in the direction of the human activity without displaying any other observable reaction. If the bald eagle vocalized and/or moved noticeably without leaving the nest or perch, nestwatchers recorded "restless." If a bald eagle left its location quickly in response to a human activity, nestwatchers recorded a "flushed" response. "Left area" is when a bald eagle became intolerant of the human activity and flies away. They recorded an "unknown" response if the bald eagle could not be observed, a "not in area" if a bald eagle was not present at the time of the activity, and an "other" response if the associated behavior did not fit into one of the above categories. To accurately describe activities which caused bald eagle behavior change, a "restless", "flushed", "left area", and various "other" responses, are considered as significant responses.

At the Lake Pleasant and Box Bar closures, nestwatchers recorded human activity different than described above. They recorded compliance with the Lake Pleasant closure by documenting the number of boats and jet skis approaching the buoy line and those that entered. If the watercraft entered the closure and proceeded past the nestwatchers, they were documented as "inside the closure." Conversely, they recorded those who complied with the closure or those who were contacted by the nestwatchers as "at the closure." Due to the high level of recreation activity at the Box Bar BA within 1.0 km of the active nest, nestwatchers only recorded the human activities and the bald eagles associated behavior that occurred within the closure boundaries.

Nestwatchers documented all aircraft below the Federal Aviation Administration's 2000 ft (600 m) recommended ceiling, and within the arbitrary 1.0 km radius of a bald eagle or active nest. They estimated the height of aircraft using elevations of known landmarks derived from topographic maps. We sent the forms with known identification numbers and aircraft type to the USFWS Law Enforcement Division for processing.

Nestwatchers documented all aspects of the bald eagle's behavior at their BA. They documented interactions with other wildlife; forage events; frequency, type, and prey species delivered to the nest; incubation time; time attending the nest; and feeding frequency. In this report, we only discuss foraging attempts, prey deliveries, human activity, and management recommendations.

Management recommendations included in this report are taken directly from the individual BA reports and therefore are not the opinions of the authors or AGFD. We have included them as informational material for land and wildlife management agencies reviewing this report, and for further discussion and possible implementation at the next SWBEMC meeting.

The ABENWP contractors concentrate their monitoring efforts within the BA, and therefore a bias must be considered when extrapolating conclusions about habitat utilization. Information gathered by this method informs land and wildlife management agencies about a breeding pair's behavior and potential conflicts only within the BA. Therefore, other habitat use by a particular pair should be considered when proposing projects or habitat alterations near known BAs.

## RESULTS AND DISCUSSION

### PROGRAM

The ABENWP monitored 11 BAs in 1999, and 12 BAs in 2000. Those BAs monitored both years include: Bartlett, Box Bar, Doka, Fort McDowell, Luna, Orme, Pleasant, Sheep, Sycamore, Tonto, and Tower. Additionally, we monitored the Horseshoe BA in 2000. The final status of monitored BAs was: 1 failed, 10 successful, 14 fledged in 1999; and 5 failed, 7 successful, 13 fledged in 2000.

Some BAs were not monitored the entire season due to breeding attempt failures (Bartlett BA 2000, Box Bar BA 1999, Sycamore BA 2000, and Tonto BA 2000), subsequent moving contractors to new sites (Orme BA 1999 and 2000, Luna BA 1999 and 2000, and Sheep BA 1999 and 2000), and incidental observations (Doka BA 1999 and 2000). Therefore observation days vary, and all collected data reflects only those instances observed during the documented time frame. Since the Doka BA was monitored only for supplemental information by the Fort McDowell nestwatchers, the summary is not included in this report.

### INTERVENTION 1999

#### Sycamore Breeding Area

On May 20, one nestling was attempting to fly when the branch in which it was perched broke. The nestling was able to grab a lower branch of the nest tree and right itself. However, the nestling had not eaten since its sibling fledged two days prior. On May 21, we captured, hydrated, and placed it back into the nest.

Overnight the nestling fell out of the nest a second time. On May 23, we recaptured it on the ground, fed, hydrated, and placed it back into the nest a second time. The nestling successfully fledged the next morning.