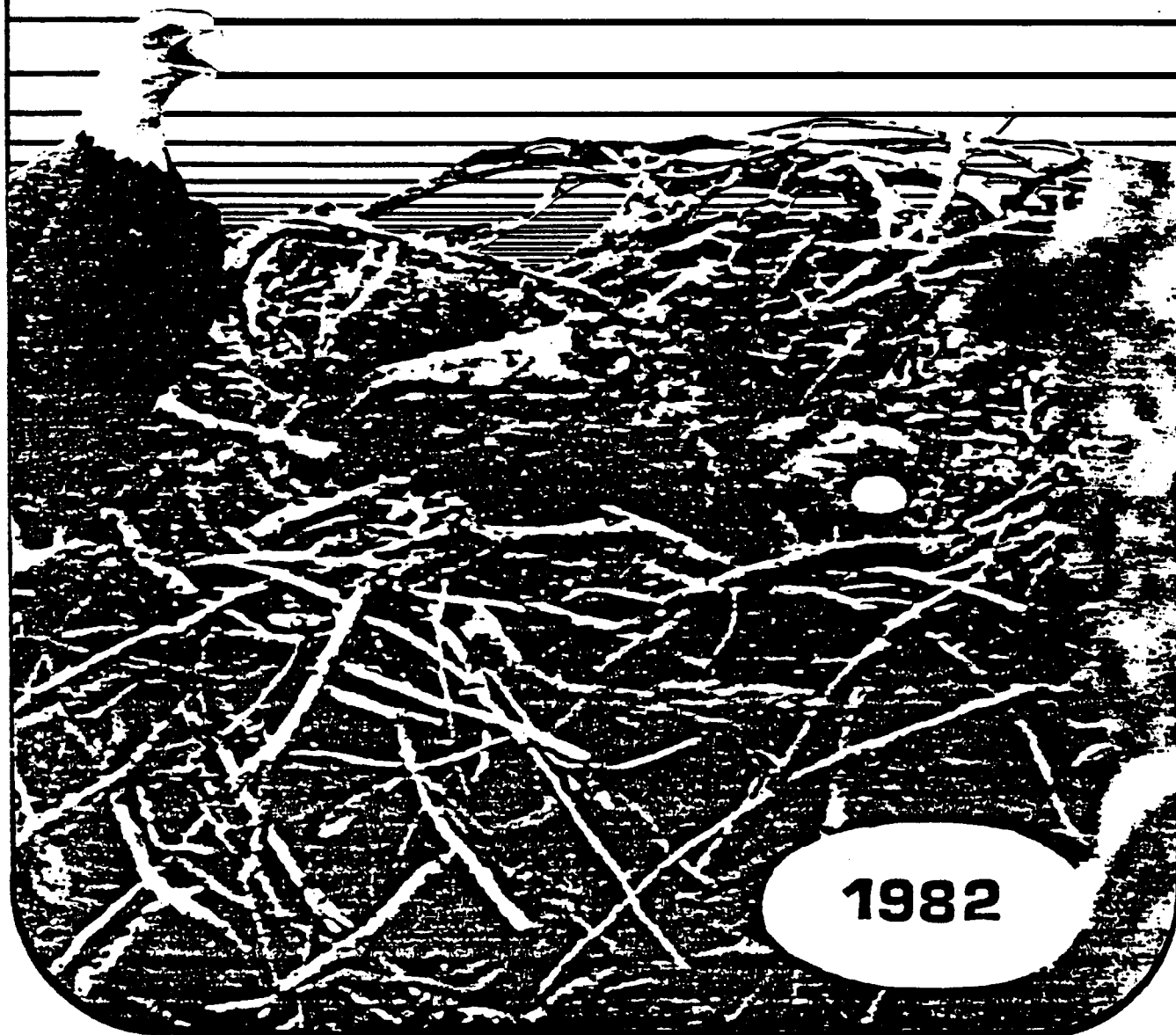


SOUTHWESTERN



BALD EAGLE

RECOVERY PLAN



1982

BALD EAGLE RECOVERY PLAN
(Southwestern Population)

PREPARED BY THE
BALD EAGLE RECOVERY TEAM

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9/8/92
Date

PART I - REVIEW

INTRODUCTION

The bald eagle (Haliaeetus leucocephalus), **our** national emblem, inhabits the North American continent from the Gulf of Mexico to the Arctic. It is usually found near the seacoast, **inland** lakes, and rivers. The largest breeding populations of bald eagles are **found** in southern Alaska, along the western **coast of Canada and** Washington, around the Great Lakes, and in Florida. Bald eagles are **common** along the Atlantic coast, especially Chesapeake **Bay**.

In 1978 all bald eagles in 43 of the 48 **contiguous** United States were classified as endangered (43 FR 6233, February 14, **1978**), and those in Minnesota, Wisconsin, Michigan, Oregon, and Washington were classified as threatened.

The recovery plan is concerned primarily with the population in the Southwest, hereafter referred to **as the southwestern bald eagle**. The geographic **area** of concern includes Oklahoma, Texas west of the 100th meridian, all of New Mexico and **Arizona**, and **that area of California** bordering the Lower Colorado **River** (Fig. 2). Some biological evidence indicates the population **extends** into **Baja California and** mainland Mexico; however, this recovery plan is concerned only with bald eagles occurring in the southwestern United States.

This recovery plan delineates specific **research and management** objectives designed to insure the continued survival of the **small** and possibly declining population of southwestern bald **eagles**. The southwestern bald eagle has **become** the subject of scientific investigation **in** recent years. Prior to the **mid-1970s**, no empirical data existed to document eagle population size or distribution in the **Southwest** south of the 40th parallel. The contention that the population **of this subspecies is** declining can only be inferred. The status and distribution of the eagles before the settlement and subsequent **development of** the Southwest cannot be established, but we can define the consistent use of preferred eagle habitat, the riparian ecosystem. Presently, 13 breeding **territories** of the southwestern bald eagle are known and all contain varying expanses of **mature** streamside forests. Though the relationship is not fully understood, suitable riparian habitat appears to be an essential prerequisite to successful eagle reproduction.

Brown et al. (1979) estimated that **within** the past 300 years the riparian forests in Arizona have been reduced to less than 20 percent of their original area. These **statistics** indicate the **status** and apparent trend of riparian habitats throughout the **range** of the southwestern bald eagle. Potential and actual eagle habitat were lost along **with** riparian areas. Currently, Federal, State and private interests are becoming aware of the intrinsic **values** of riparian systems.

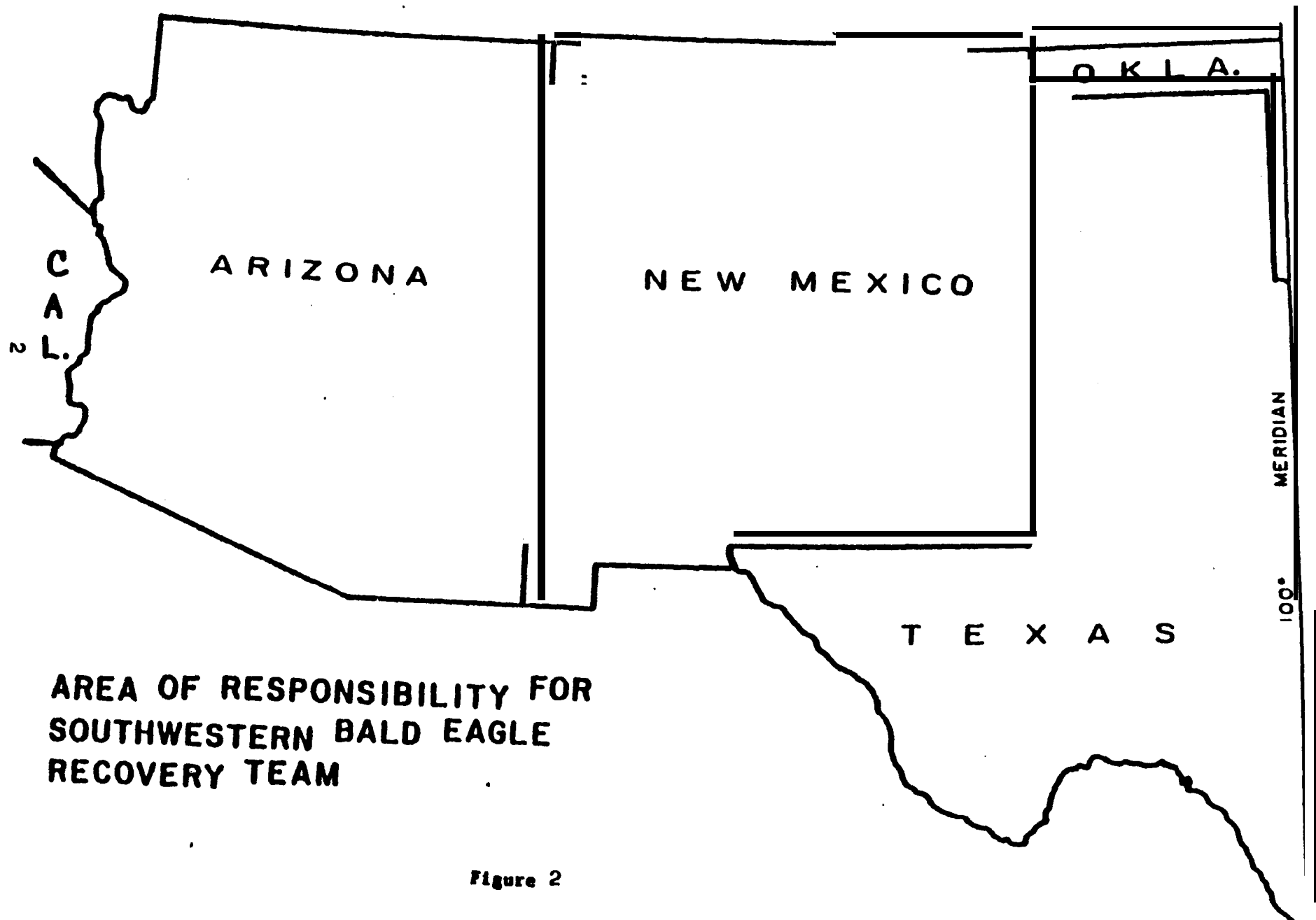


Figure 2

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PREFACE

The **Bald Eagle Recovery Plan** (Southwestern Population) was developed by the Bald Eagle Recovery Team, an independent group of biologists sponsored by the Albuquerque Regional Director of the U.S. Fish and Wildlife Service.

The recovery plan is based **upon** the belief that State **and** Federal **conservation agencies** and knowledgeable, interested individuals should endeavor to **preserve** the bald eagle and its habitat and to restore **them, as much as possible**, to their historic status. The **objective of** the plan is to make this belief a **reality**.

The recovery team has used **the best** information available to them as well as their collective knowledge and experience in producing this recovery plan. It is hoped the plan will be utilized by all agencies, institutions and individuals concerned **with** the bald eagle to coordinate conservation activities. Periodically, and **as the plan** is implemented, revisions will be necessary. Revisions will be **the responsibility** of the recovery team and implementation is the **task** of the managing agencies.

This completed Bald Eagle Recovery Plan **has** been approved by the **U.S.** Fish and Wildlife Service. The **plan does not necessarily** represent official positions or approvals of cooperating **agencies** and does not necessarily **represent** the views of all **recovery team** members. This plan is subject to modification as **dictated by** new findings **and** changes in species status and completion of tasks assigned in the plan. Goals and objectives will be attained and funds expended contingent upon appropriations, priorities, and other budgetary constraints.

Literature citations should read as follows:

U.S. Fish and Wildlife Service. **1982**. Bald Eagle Recovery Plan (Southwestern Population). U.S. Fish and Wildlife Service, Albuquerque **New Mexico**. **65 pp.**

ACKNOWLEDGMENTS

The Recovery Team wishes to express appreciation to the following consultants who provided valuable biological, technical and Logistical information: Teryl Grubb, John Hubbard, Robert Ohmart, AL Stumpf, Danny Soepston and Roland Wauer. In addition, we gratefully acknowledge the information and assistance provided by Ron Burraychak, Tom Hildebrandt, Carol Justice, Chuck Kennedy, Ron Sell and Jack Woody.



Fig: 1 Nesting bald eagles are a unique part of the Sonoran desert.



The ecologically sound land management policies that **now** protect riparian areas, coupled with specific legislation calling for national protection of the bald eagle, lead this recovery team to believe that the southwestern bald eagle population can increase.

In the Salt and Verde River systems of central Arizona the southwestern bald eagle reaches its greatest density with 12 of the 13 known breeding **territories** (Fig. 3). The recovery team and consultants estimate that approximately 50 percent of the apparently suitable habitat in the **Salt** and Verde River systems is presently unoccupied. In addition, riparian forests **and** perennial streams in adjacent drainages (e.g., upper **Gila, San Francisco, Chama** and San Juan) appear suitable for nesting bald eagles. Therefore, downlisting the species should not occur until the reproductive effort **has been** effectively doubled and the population range has expanded to include one or more of these river drainages in addition to the Salt and Verde systems. The recovery team proposes the following guidelines to unite and to optimize the **various** recovery, research, and **management** efforts : 1) Maintain and protect the existing nest territories; **2) enhance** nest territories to increase the production of young above the present average of 1.02 fledglings per **active** nest; 3) continue using a production index and annual monitoring **program** to determine whether the population is increasing, decreasing, or stable; 4) identify, maintain, **and** improve wintering habitat; and 5) promote **research** that **will** lead to increased eagle survival. All research and **management** projects, including the direct manipulation of nest **sites** and/or young and adult birds, will be reviewed through formal Section 7 (Endangered Species Act of 1973) procedures.

The recovery team members and consultants believe that with proper management of the extant breeding population, artificial rearing of **southwestern** bald eagles is **unwarranted at this time**. **However**, in the **event** a significant decline in reproductive success threatens the population, a contingency plan for artificial propagation should be considered. **A** significant decline would be if, for 3 consecutive **years**, the number of active nests decreased to less than five, and the number of fledged young per active nest decreased to **less** than 0.7 (Sprunt et al. 1973).

¹ Since 1975, net production of the known breeding territories has resulted in an average of 7.0 young/year (Table 1).

ARIZONA

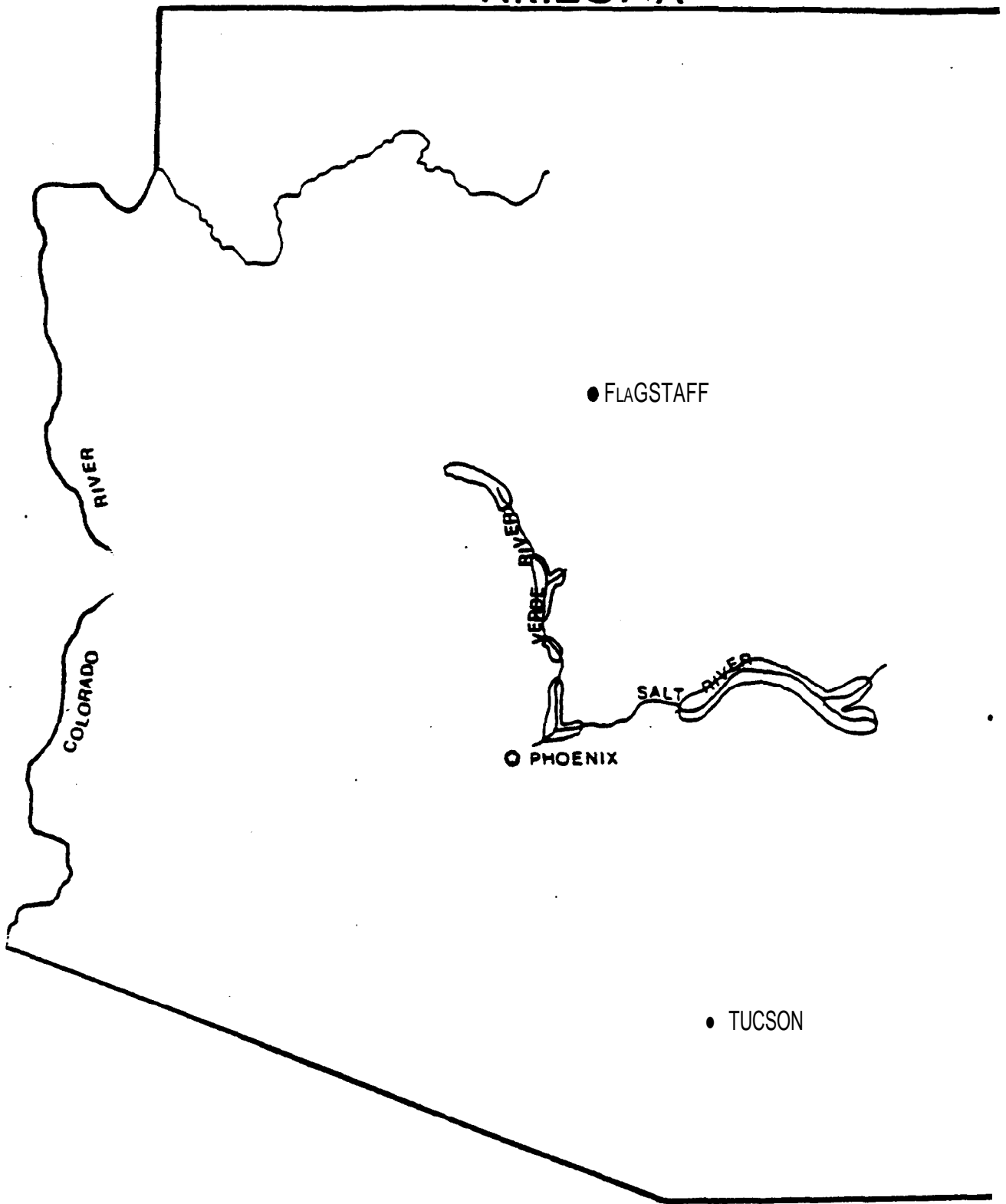


Figure 3 - Bald Eagle Nesting Habitat on the Salt and Verde Rivers:

Table 1* Southwestern bald eagle nesting productivity, 1975-1981.

	<u>75</u>	<u>76</u>	<u>77</u>	<u>78</u>	<u>79</u>	<u>80</u>	<u>81</u>	<u>7-yr.</u> <u>average</u>
No. of Territories	10	10	10	11 ¹	13 ²	13	143	
No. Checked	10	10	10	11	13	13	14	
No. Occupied	8	5	8	9	10	9	8	8.1
No. Active Nests	7	5	6	6	9	8	7	6.9
No. Successful	4	4	3	4	4	3	7	4.1
No. Young Fledged	5	6	6	7	6	5	14	7.0
No. Fledged/Occupied Territory	.63	1.2	.75	.78	.6	.56	1.75	.84
No. Fledged/Active Nest	.71	1.2	1.0	1.17	.67	.63	2.0	1.02
No. Fledged/Successful Nest	1.25	1.5	2.0	1.75	1.5	1.67	2.0	1.66

¹Cedar Basin Territory discovered in 1978.

²Pinal Creek and Gila Forest nest discovered in 1979.

³Seventy-Six Territory on Tonto Creek discovered in 1981.

*Sources included: USDA (1980), Haywood and Ohmart (1980), Teryl Grubb (1979), and Rubink and Podborny (1976). See attachment for updated productivity information.





Fig. 5. The known active nesting territories in Arizona are in riparian areas within the Sonoran Desert scrub habitat type.

HISTORY OF THE SOUTHWESTERN BALD EAGLE

Historical Documentation

The **oldest** available records generally pertain to casual **observations** from scattered locations in **New Mexico**, Arizona, and **Baja California** and adjacent islands. Documentation supplied by **Hargrave (1939)** reported prehistoric bones **found** near Flagstaff, Arizona. Howard (1930) included the species in a listing of Pleistocene **remains from the Tar Pits at Rancho La Brea, California.**

Coues (1866) reported that "Bald Eagles were frequently **observed** at different seasons in **the vicinity of Fort Whipple.**" During a zoological exploration expedition west of the 100th meridian, **Henshaw (1875)** reported the species **south of Fort Apache, Arizona, and near Zuni, New Mexico.** **Mearns (1890)** reported **a pair nesting at Stoneman Lake, Arizona.** **Bailey (1904)** reported sightings along the Upper **Pecos River, San Miguel County, New Mexico.** **Phillips et al. (1964)** cited **a nest at Saguaro Lake from 1930 to 1936, and nests at Bartlett Dam and Mulehoof Bend as early as 1935.**

Willett (1912) reported **breeding birds on the Santa Barbara Islands** off the **southern California coast.** In **Baja California,** breeding has been verified **on the Islands of Santa Margarita (Bryant 1890), Espiritu Santo (Brewster 1902), Coronados (Grinnell and Daggett 1903), Todos Santos (Kaeding 1905; Howell 1912, and Nelson 1921), San Francisco (Thayer 1909) and on the Gulf coast opposite Carmen Island (Brewster 1902) and Guadalupe Canyon (Huey 1927).**

In Texas, five historic breeding records **exist** west of the 100th meridian. **Lloyd (1887)** reported nesting in **Tom Green and Concho Counties** in 1886. **Oberholser (1974)** reported eggs collected in Potter County by **E. W. Gates** in 1916 and in Scurry County by **H. Smissen** in 1890. **Oberholser** also lists a sight record of breeding eagles in **Armstrong County** (undated). **Kirby (pers. comm., 1978)** reported an **active nest** in Wheeler County in 1938, **which had been active for about 20 years.**

Current Status

During the period 1972-1975, the Division of Wildlife Services (FWS), **with cooperation** from the U. S. Forest Service, State **game and fish departments,** Bureau of Land Management, Bureau of Indian Affairs, Bureau of Reclamation, and private individuals, made **a concerted effort** to determine the current breeding **status** of the **bald eagle in the Southwest.** Results of this survey follow:

Arizona - Forty-one or 42 unverified historic **nesting territories** have been reported. Twelve recently occupied territories are located along **the main stems of the Verde and Salt Rivers** and one additional recent territory **occurred** along the Colorado River.

New Mexico - The most recently verified nesting record of the bald eagle in New Mexico was in **in Catron County in** 1979. A cursory survey within the State was conducted by Thomas M. Smylie (**FWS**) in 1976, who reported negative results.

Texas - No nests are known **in** Texas west of the 100th meridian.

Oklahoma - No nests are **known** in Oklahoma west of the 100th meridian.

California - No nests are known **along** the Lower Colorado River in southeastern California.

Mexico - Henny and **Knoder** (1978) found two pairs of nesting bald eagles on the Pacific side of the Baja Peninsula during the course of an aerial osprey (Pandion hallaeetus carolinensis) survey in 1977.

BIOLOGICAL KNOWLEDGE

The breeding **nucleus** of the southwest bald eagle population is comprised of thirteen pairs, twelve of which are found on the Salt and Verde Rivers in central Arizona. Additional observations of non-territorial individual adult and immature bald eagles during the breeding season suggest that there may be a total population of **from** 25 to 30 eagles in Arizona. During recent years, an estimated five to nine pairs actually nest in any given year. Productivity surveys indicate a mean of approximately 1.0 young fledged per active nest. Reproductive health appears to be good, as evidenced by hatching **success** and low pesticide content' of eggs (**Grubb and Rubink** 1978). Most reproductive losses appear associated with accidental deaths of embryos and nestlings.

Breeding Chronology

Breeding bald eagles in central **Arizona** typically begin nesting activity during the months of November and December, with the peak of nest building and/or refurbishing occurring during **late** December and early January. Eggs are laid **from** January to March and hatch from February to April. Eaglets typically spend **10-12** weeks in the nest prior to fledging and 4-6 weeks on the parental **home** range prior to dispersal.

Home Ranges

Preliminary findings indicate that bald eagles in central Arizona occupy home ranges in excess of 3.2 km (2 ml.) **in** length along a river and approximately 0.8 km (**1/2 ml.**) adjacent to the river on each side of the nest site. Each nesting pair establishes use patterns **when** foraging, roosting, etc., which results in notable variation in home ranges.

Nest Sites

Nest sites usually are isolated and command a view of the surrounding area. They are located in trees, on cliffs **or** pinnacles. Factors such as shade and exposure appear to play an important role in nest site selection. Proximity to the river is also important. Cliff nests are generally located within **183** m (600 ft.) of the river bank and approximately 92 **m** (300 ft.) above **the** water.

Perches

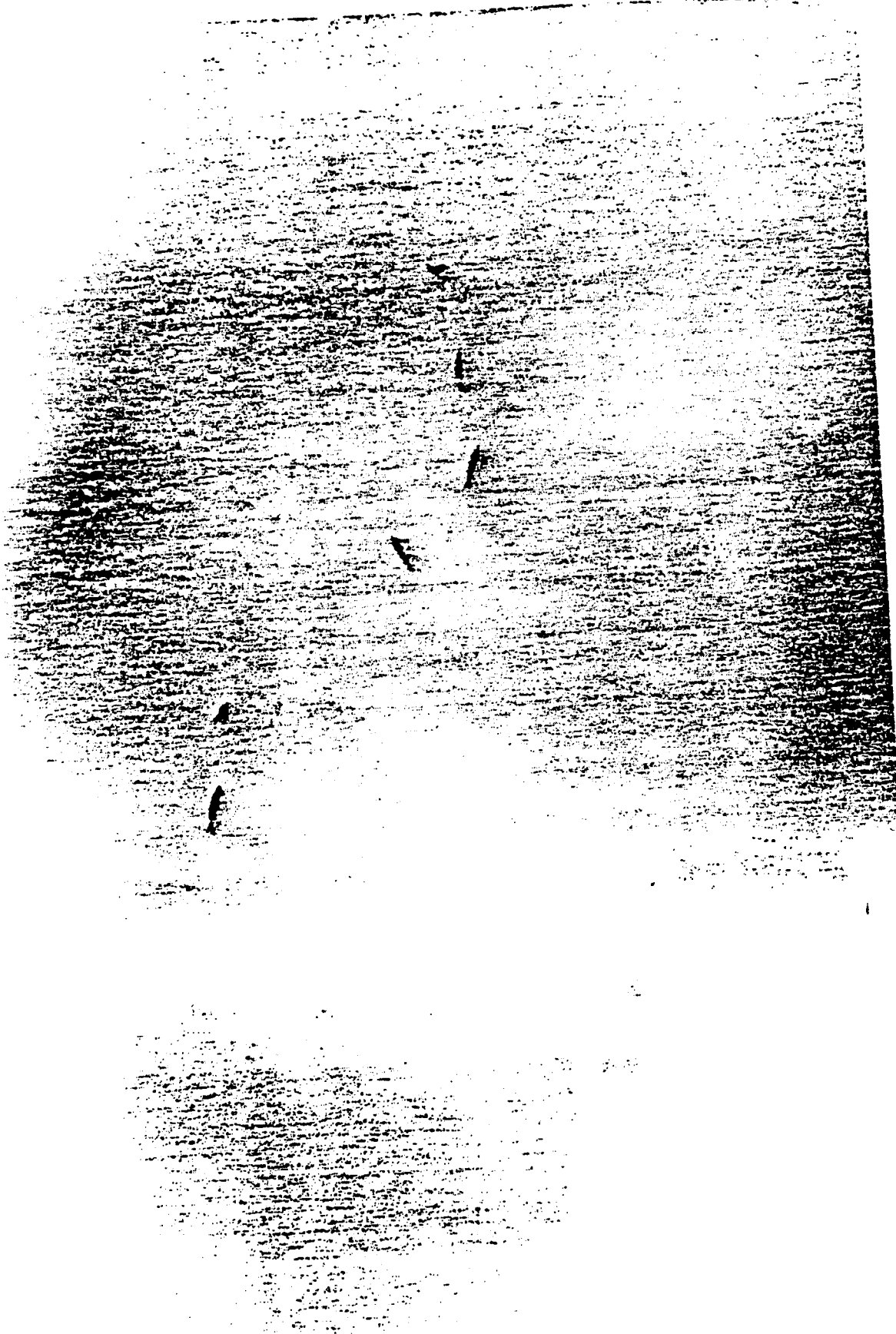
Bald eagle perches can be divided by function into four general categories: sentry, foraging, shade, and roost. Sentry perches are generally high in elevation, either on cliffs **or** ridgetops, or in the tops of prominent snags. These perches (usually 1-3 per home range)

have good **visibility** of the nest and the surrounding area. Foraging perches, typically in mesquites (Prosopis sp.), willows (Salix sp.), cottonwoods (Populus fremontii) and rock outcrops are usually low, 6-60 m (20-200 ft.) above the river level. Shade perches are selected for their sheltering characteristics. Roost perches are well sheltered, structurally stable and normally offer a good view of the nest and surrounding area.

Prey

The prey base of the bald eagle along the Salt and Verde Rivers in central Arizona appears to be comprised largely of four fish species, each common in both river systems: channel catfish (Ictalurus punctatus), carp (Cyprinus carpio), the Sonora sucker (Catostomus insignis), and the desert sucker (Catostomus clarki). These fishes account for approximately two-thirds of the collected prey remains. Foraging for fish takes place in riffles, pool edges and shallows, most often from a perch, but sometimes during flights, from a height of **15-45 m** (50-150 ft.). Cottontail rabbits (Sylvilagus sp.), black-tailed jackrabbits (Lepus californicus), and American coots (Fulica americana) are important auxiliary prey items (**10-15%** total), with miscellaneous fish, birds, and small mammals accounting for the remaining 20 percent **of** the diet.





... is - 6 ab. : card. a major prey species.

PART II - THE ACTION PLAN

RECOVERY PLAN STEPDOWN OUTLINE

- PRIME OBJECTIVES: 1) When the reproductive effort has been effectively doubled to **10-12** young per year over a **5-year** period, and the population **range has** expanded to include one or **more** river drainages **in** addition to the Silt **and** Verde Systems, **the** southwestern bald eagle should be **reclassified to threatened**. 2) Identify **and** maintain winter habitat important **to** migrant or resident bald eagles.
1. Collect, record, analyze, and maintain biological **data** on breeding and wintering bald eagles **in** the Southwest.
 11. Document his **torical** records.
 12. Determine population numbers, distribution, and **trends**.
 13. Determine patterns of movement **for** both breeding and **wintering** eagles, including fledglings, **immatures, and** adults.
 14. **Determine** factors **influcencing** the **population structure of breeding and** wintering bald eagles.
 15. Determine food habits.
 16. **Assess** the effects of pesticides and disturbance factors.
 2. Identify, **protect**, and improve existing and potential habitat for bald eagle population **contnuance and expans ion**.
 21. Determine essential **habitat**.
 211. Identify all **critical components** of bald **eagle** nesting habitat.
 2111. Analyze and monitor presently' **used** nesting locations and the surrounding **areas**.
 21111. Evaluate physical and biological parameters of each occupied nest site.
 21112. Determine disturbances occurring at each nest site and establish tolerances.
 2112. Identify, analyze and **monitor areas** formerly **used** by breeding eagles **an: identify** presently favorable areas.

- 2113. Locate and evaluate potential nest sites.
- 2114. Identify and describe important foraging habitat of nesting eagles.
- 212. **Identify** important non-nesting **habitats**.
 - 2121. Locate, map, and describe non-nesting habitats used by resident bald eagles.
 - 2122. Locate, map and describe habitats used by migrant bald eagles.
- 22. Maintain and upgrade suitable and potential habitats to insure they remain attractive to bald eagles.
 - 221. Monitor land-use changes within occupied and potential Bald Eagle habitats and respond to unfavorable operations.
 - 2211. Revlev. pertinent environmental impact assessments and statements.
 - 2212. Review pertinent land-use planning documents.
 - 2213. Alert responsible agencies where adverse plans appear.
 - 222. Improve key habitats by modifying, reducing or eliminating disturbances such as:
 - 2221. **Land-use practices** and developments which **alter** the character of the habitats.
 - 2222. Known disturbances near occupied nesting territories and other Important use areas.
 - 2223. Use of pesticides or other contaminants harmful to bald eagles or their prey.
 - 223. Protect essential habitat on private lands through purchase, lease, exchange **or** cooperative agreements.
 - 221. Cooperatively manage habitat on public lands.
 - 225. Find ways to improve habitats of nesting bald eagles and other important use areas where appropriate.
- 3. Conduct information programs designed to gain support **for** the protection of bald eagles.
 - 31. Implement laws and regulations relating to bald eagle protection.

- 311. Protect bald eagles through implementation of regulations.
 - 3111. Implement State regulations.
 - 3112. Implement Federal ~~r~~egulations.
- 312. Recovery Team upon request may review all permits, management plans and study proposals.
- 32. Develop and produce needed education and information materials.
 - 321. Develop press release kits with photographs.
 - 322. Develop audio-visual programs ~~for~~ loan to schools and conservation groups.
 - 323. Develop public service announcements.
 - 324. Develop and provide ~~audio-~~ ~~sual~~ packets for use on radio and television.
 - 325. Make **public** agencies aware of bald eagle habitat needs and recovery efforts currently underway and clarify agency responsibilities in the bald eagle recovery effort.



Fig. 8 Eight of the 'known nesting territories in Arizona have cliffs supporting the primary nest.

NARRATIVE FOR STEPDOWN RECOVERY PLAN

1. Collect, record, analyze, and maintain biological data on breeding and wintering Bald Eagles in the Southwest.

Good biological information on both breeding and wintering bald eagles in the Southwest is prerequisite to any protection, management, or enhancement efforts. Present data on numbers, trends, movements, productivity, food habits, and behavior are insufficient for an accurate determination of specific recovery needs.

11. Document historical records.

A review and compilation of historical records are the first steps in establishing available data, research needs, **population trends**, and variations in habitat utilization. State agencies, knowledgeable birdwatchers, and appropriate local organizations, etc., should be contacted for historical records. Each public agency should review its own records for historical data and make arrangements to keep these data, along with current updates, in an accessible, centralized location.

12. Determine population numbers, distribution, and trends.

Extensive, coordinated **aerial** and ground surveys can be used to locate and count wintering eagles, monitor activity at known nest sites, and search for new nests. A consistent level of survey efforts will be maintained for several years to establish norms and trends. Survey records and sighting reports must be maintained on a yearly basis and, as suggested in 11. above, should be kept in an accessible, centralized location.

13. Determine patterns of movement for both breeding and wintering eagles, including fledglings, immatures, and adults.

An understanding of spatial and **temporal** patterns of movement is needed to document habitat utilization and the extent of management and/or protection required. For breeding eagles, daily activity patterns (including foraging, loafing, and home range determination), post-fledgling dispersal from nesting areas, and migratory movements (for non-nesting use areas) should be considered. wintering movements to be studied include daily activity patterns, seasonal/lateral movements within winter range in response to prey base and to weather variations, and migration patterns to locate breeding areas of wintering eagles.

14. Determine factors influencing the population structure of resident and wintering bald eagles.

To **construct** a life table on the breeding population, the following should be determined: 1) Productivity including eggs laid, eggs hatched, young fledged, and young **surviving** first month; 2) recruitment into the breeding population from local production and migrants from other areas; and 3) mortality factors affecting each age class. Mortality factors and numbers of birds in each age class should also be documented for the wintering population.

15. Prey

The type, proximity to known use areas, and abundance of prey utilized in the nesting and wintering seasons must be determined for an accurate assessment of food habits and possible management requirements. The direct and long-term **response** in nesting success and winter distribution to variations in prey availability should also be considered.

16. Assess the effects of pesticides and disturbance factors.

Eggshell thicknesses *from* shell fragments or addled/sterile eggs *can* be compared with pre-1946 (pre-DDT) levels to determine the extent of eggshell thinning. Pesticide levels in eggs, nestlings, immatures, and adults and prey should be analyzed in conjunction **with** other research activities to determine the **effect** on productivity. **In** studying the effects of various disturbances on the behavior and distribution of both nesting and wintering **eagles**, the *type*, severity, proximity, and frequency of each possible disturbance must be evaluated.

2. Identify, protect, and improve existing and potential habitats for bald eagle population continuance and expansion.

Delineation and protection of the bald eagle's habitat are basic steps **for** maintaining and expanding the population. Much effort needs *to* be devoted to identifying habitat parameters. Occupied nest sites must be evaluated to determine those factors which make the sites **suitable for** occupancy. Information derived from each analysis **will** provide criteria to establish **the** suitability of inactive sites and designate potential nest *sites*. Non-nesting habitats must be analyzed and defined. Only after the above information **is** compiled can **positive** measures be implemented.

21. Determine essential habitat.

Habitats essential to the continued existence of southwestern bald eagles include nesting and non-nesting **areas**. The nesting areas include the nest site and adjacent feeding areas that support the breeding pairs and their **young**. Nesting habitats may be occupied by the breeding **population** for a period of more than six **months** each year. Non-nesting habitat, **usually** more difficult to **define** due to lack of movement data, generally includes **migration areas, wintering areas, and areas used by** the non-breeding segment of **the** population during the breeding **season**.

211. Identify all critical components of bald eagle nesting habitat.

Each nesting territory **is composed of the** nest site itself and associated areas used by breeding pairs **to sustain** themselves and their offspring. Any measures to protect nest sites must also be directed toward key use **areas as well**.

2111. Analyze and monitor presently used nesting locations and the surrounding areas.

Criteria **must** be established and refined **to** assist in the determination and eventual protection of critical nesting **sites and adjacent use areas**, including foraging sites. Nest sites **which were** active within the past **5 years** will be inspected and critical factors evaluated. The development of **a list** of critical **factors that are essential** to occupancy of sites by breeding pairs also will provide assistance in evaluating **the** suitability of unoccupied, **historic nests** as well as determining potential productive sites. In **addi** tion, important foraging areas of nesting adults **must** be identified and described to determine the specific types of **aquatic** habitats **where** prey is taken.

Because different **agencies and** individuals will be involved, uniformity must be maintained **when** gathering data used **for** the analysis of nesting locations. **The U.S. Fish and Wildlife Service** has overall responsibility for this recovery plan,

and will coordinate this task to assure that uniformity is maintained and, in addition, be responsible for surveying non-federally administered lands. Land management agencies will be responsible for surveying nesting habitat on lands under their jurisdiction.

21111. Evaluate physical and biological parameters of each occupied nest site.

Historically, a variety of nest sites have been used by bald eagles, the majority being either cliff or tree sites located in association with permanent water. Active and recently active sites should be investigated to establish those physical and biological parameters common to all sites.

Examples of factors which should be recorded for cliff sites include topography, elevation, presence and distance to water, geologic composition of the cliff, height and orientation of the cliff, and presence of alternate cliffs and nest sites. For tree nests, include age and condition of **tree**, nest height and condition, associated vegetation, and distance to water.

21112. Determine disturbances occurring at each nest site and establish tolerances.

Human activities, visual and audible disturbances, (i.e. hunting, ORV use, researchers, etc.) and land use practices should be determined at nest sites and surrounding use areas. Breeding pairs should be observed to determine reactions to **disturbances** in order to establish tolerance levels.

2112. Identify, analyze and monitor areas formerly used by breeding eagles and identify presently favorable areas.

In restoration efforts, it is essential to re-establish breeding pairs at formerly occupied nest sites presently capable of sustaining bald eagles. The

criteria developed in Job 2111 will be used to assess the suitability of unoccupied sites. These sites will be monitored periodically since they may be reoccupied in the event of a natural population expansion.

2113. Locate and evaluate potential nest sites.

Unoccupied habitat that ~~may~~ be potentially suitable for occupancy by breeding ~~pairs~~ **will** be surveyed and evaluated through criteria in Job 2111.

212. Analyze important non-nesting habitats.

Most research relating to the life history of the southwestern bald eagle has been devoted to nesting surveys with little or no information available on non-nesting resident and wintering birds.

2121. Locate, map and evaluate non-nesting habitats used by resident bald eagles.

Available information suggests that breeding bald eagles in the Southwest are non-migratory and may remain in the vicinity of nesting sites throughout the year.

2122. Locate, map and evaluate habitats used by transient bald eagles.

In fall and winter, migrant bald eagles, presumably birds from the northern population, have been observed in various locations throughout the Southwest. The degree to which these transient bald eagles use the same winter habitats as do the resident southwestern birds must be determined. Key wintering areas should be surveyed to determine the food base and evaluated to establish potential disturbances or mortality factors that may affect the eagles. This should be coordinated with other nationwide surveys.

22. Maintain suitable habitats and upgrade potential habitats to insure they remain attractive to bald eagles.

To allow for population expansion, currently suitable bald eagle habitats must be maintained. Historic and potential habitats that are presently unoccupied must be upgraded wherever feasible.

221. Monitor land-use changes within occupied and potential bald eagle habitats and respond to unfavorable operations.

Proposed detrimental habitat alterations or land-use practices within essential habitats (**Job 21**) must be eliminated. The most effective method **of** determining unfavorable habitat alteration is to review environmental impact assessments and statements (Job 2211) and land-use planning documents (Job 2212). **If** such plans are proposed for public lands, **the** appropriate agencies must be notified. The Section 7 consultation process required by law will cover the intent **of** this task where Federal agencies and funding are involved; **however, there** could be action on private or other lands where **it** is not required.

2211. Review pertinent environmental impact assessments and statements.

Environmental impact assessments or statements prepared for any developmental activity in bald eagle habitat will be reported to **the** responsible agency through the Fish and Wildlife Service.

2212. Review pertinent land-use planning documents.

Same as above.

2213. Alert responsible agencies where **adverse** plans **appear**.

Any potential damaging actions resulting from the reviews in Jobs 2211 and 2212 will be brought to the attention of the initiating agency and attempts will be made to eliminate the problem actions..

222. Improve key habitats by modifying, reducing, or eliminating disturbances such as:

2221. Land-use practices and developments which alter the character of the habitats.

A survey of currently occupied or potential nest sites and other important **use areas** and disturbances will be established in Job 2111. Permanent disturbances, such as developments or other human **activities**, should be prohibited.

2222. Known disturbances near occupied nesting territories and other important use areas.

Human activities which **adversely affect** breeding eagles will be eliminated. In some circumstances, it **may** be necessary to keep nest sites under constant surveillance to protect them from harassment or unnecessary disturbance. **In** these cases, personnel (nest wardens) should be assigned.

2223. Use of pesticides or other contaminants harmful to bald eagles or their prey.

Agricultural **use** of persistent pesticides has been **definitely** tied to the decline of bald eagles in various locations **throughout their range**. **Use of any substances harmful to bald eagles or their prey must be eliminated.**

223. Protect essential habitat on private lands through purchase, lease, exchange or cooperative agreements.

Consideration must be given **to** the protection of bald eagles utilizing private property. The best **way** to protect and manage these privately owned habitats **is** through binding agreements, lease, easement, exchange **or** purchase. Land acquisition programs should be coordinated between involved parties, groups and agencies. When Indian lands are involved, agreements should be entered into with the land **owners**.

224. Cooperatively manage habitat on public lands.

The **public** land agencies will enter into cooperative management plans with respective State **wildlife** agencies for the protection and/or enhancement of bald eagle habitat. Habitat on public lands not federally administered should be managed through **an** agreement with **the** respective agency, **the** State wildlife agency and the Fish and wildlife Service to assure **the** habitat **remains** suitable for the bald eagle.

225. Improve habitats of nesting bald eagles and other important use areas where appropriate.

Manipulation of nesting sites through clearing of debris, construction of artificial nests or shade, planting potential future nest trees, and building protective enclosures may be necessary to assure use by a breeding pair of bald eagles. Techniques for improvement of other habitat conditions should also be considered such as construction of hunting perches, or increasing prey through manipulation of aquatic habitats.

3. Conduct information programs designed to gain support for the protection of bald eagles.

The management of people and their activities **will** become one of the most important elements of bald eagle **recovery** efforts. **This** bird has already achieved national significance and, relative to other endangered species, is among the **most "popular"** in regard to public interest. A well-designed and executed public education program that includes the laws and regulations pertaining to bald eagle protection will shape agency and public opinion to assist efforts **in** maintaining the population.

A good communication program will help solve some of the problems facing the bald eagle through education of school-age children **as** well as adults to the need for maintaining all species, and by bringing about a reduction of human activity and disturbance in key production and foraging areas.

31. Implement laws and regulations relating to bald eagle protection.

Information and education materials will be produced that specify the provisions of the Bald Eagle Act and its amendments, the Endangered Species Act, all state laws and regulations, and any other Federal and State laws and regulations that are applicable.

311. Protect bald eagles through implementation of regulations.

In addition to protection of occupied and other suitable nest sites, certain measures are necessary **for** the protection of **the** species itself.

3111. Implement State regulations.

While all States have regulations protecting the bald eagle, **supplemental** manpower may be required to provide the **extra** protection necessary at occupied nest **es**. Depending on proximity **of** nest^s to each other within a **State**, proper protection may require a **nest** warden at **each** site during the entire nesting season.

3112. Implement Federal regulations.

Although State authorities for protection of the bald eagle are generally sufficient, provisions of the Bald Eagle Act of 1940 and **subsequent amendments**, and the Endangered Species Act of 1973, provide penalties and a broader scope of enforcement **to** be used in conjunction with **state regulations**.

312. Recovery team upon request may review **all permits**, management plan^s and study **proposals**.

The Recovery team will **assist** the Regional Director in an advisory capacity, and upon his request, may review endangered species permits, management plans, and research proposals concerning the southwestern bald eagle.

32. Develop and produce needed education and **information** materials.

Information and education programs designed to acquaint the public with the plight of the bald eagle and the efforts to maintain and restore it may be **the most** effective tool for **protection** in the long run. **Public** interest can be expected to **generate** support for the recovery **effort and strengthen law** enforcement measures.

The task of developing and disseminating newsletters, films, brochures and news releases will be **the** responsibility of all involved agencies with the Fish and Wildlife Service acting **as** the lead. Due to time, budget and personnel **constraints**, it may **not** be feasible to expect a public agency to perform this **task**. Therefore, a private marketing firm may be contracted to implement this program.

321. Develop press release kits with photographs.

Appropriate conservation agencies will be provided with press release kits tailored to each of the media (tapes or scripts for radio stations, color slides or film for television, glossy photographs and lead articles for newspapers) regarding pertinent bald eagle programs.

322. Develop audio-visual programs for loan to schools and conservation groups.

Slide series, film strips and movies will be developed for use in conservation-education programs and will be made available to the public through loan from various public agencies.

323. Develop public service announcements.

Considerable benefits are obtained by furnishing public service announcements to various magazine and newspaper publishers.

324. Develop and provide audio-visual packets for use on radio and television.

By FCC regulations, public service time is available on television and radio to broadcast information relative to the bald eagles' plight. Taped, one-minute spots will be prepared for television stations by appropriate State information and education departments. Likewise, prepared tapes or live-copy scripts should be made available to radio stations.

325. Make public agencies aware of bald eagle habitat needs and recovery efforts currently underway and clarify agency responsibilities in the bald eagle recovery effort.

Public agencies need additional clarification of their responsibilities for endangered species and critical habitats within their jurisdiction. Interagency communication and cooperation will ensure a coordinated and effective approach to sound eagle management.



Fig. 3 Pinnacles are one of three types of nest supports used by Southwestern Bald Eagles.

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IMPLEMENTATION SCHEDULE

The Implementation Schedule of this plan has been broken into separate components with assignment of effort to responsible agencies; it includes both a cost estimate and a work-month estimate. At the suggestion of Forest Service and Bureau of Land Management personnel, the team decided to express the required effort for each agency in estimated work-months. The dollar amount is included because it is the standard format for recovery plans. In preparing the budget section, a total work-months of effort was estimated for each job. The participating agencies were then assigned a percentage of the total effort required to complete the job. For this reason, some values in the Implementation Schedule are expressed in portions of months instead of whole numbers. Work-months were multiplied by a dollar figure which represents the approximate salary of a GS-11 biologist to derive the relative cost.

The jobs in the plan are ranked in order of priority for accomplishment; those jobs of equal importance are awarded the same priority ranking, and should be undertaken concurrently. The schedule, as proposed, will vary, depending upon funding available to the respective State, Federal or other cooperating agencies. Because of anticipated funding limitations and lack of cooperative agreements, it will not be possible to achieve perfect phasing of similar tasks in each State. We strongly recommend, however, that the work required in Arizona be given the highest funding priority.

Even though considerable background information on bald eagle recovery has already been accumulated, year one on the work-month tables corresponds to the Federal fiscal year following approval of this recovery plan.

ABBREVIATIONS FOR AGENCIES

Abbreviations

State Agencies

AGFD

Arizona Game and Fish Department

CDFG

California Department of Fish and Game

NMDGF

New Mexico Department of Game and Fish

ODWC

Oklahoma Department of Wildlife Conservation

TPWD

Texas Parks and Wildlife Department

Federal Agencies

BLM

Bureau of Land Management

FS

Forest Service

FWS

Fish and Wildlife Service

NPS

National Park Service

BR

Bureau of **Reclamation**

ESTIMATED FISCAL YEAR COSTS

(in thousands of dollars)

BY AGENCY

Agency	Fiscal Years				
	'83	'84	'85	'86	'87
Arizona Game and Fish Department	54	42	46	42	40
Bureau of Land Management	62	66	76	66	50
California Department of Fish and Game	4	6	6	8	6
Fish and Wildlife Service	552	438	212	166	140
Forest Service	226	244	258	226	170
National Park Service	26	20	22	16	12
New Mexico Department of Game and Fish	46	34	38	34	30
Oklahoma Department of Wildl. Cons.	12	10	10	12	10
Texas Parks and Wildlife Department	22	18	22	20	16
Bureau of Reclamation	34	28	34	34	26
TOTAL	1,050	906	724	624	500

IMPLEMENTATION SCHEDULE

General Category	Plan Task	Task #	Priority	Task Duration	Responsible Agency		Estimated Fiscal Year Costs (In Thousands of \$)						
					FWS		Other	Fiscal Year					Total
					Region	Program		'83	'84	'85	'86	'87	
1-14	Document historical records	11	3	ongoing	2			8.0	2.0	2.0	2.0	2.0	16.0
							FS	20.0	4.0	4.0	4.0	4.0	36.0
							BLM	8.2	2.0	2.0	2.0	2.0	16.2
							BR	12.0	1.2	1.2	1.2	1.2	16.4
							NPS	2.0	0.6	0.6	0.6	0.6	4.4
							AGFD	12.0	2.0	2.0	2.0	2.0	20.0
							CDFC	1.0	0.2	0.2	0.2	0.2	1.8
							NMDFG	12.0	2.0	2.0	2.0	2.0	20.0
							ODWC	1.0	0.2	0.2	0.2	0.2	1.8
							TPWL	4.0	1.0	1.0	1.0	1.0	8.0
							80.2	15.2	15.2	15.2	15.2	141.0	
I-1	Determ. population numbers, distribution, and trends	12	2	ongoing	2			12.0	12.0	12.0	12.0	1.0	49.0
							FS	8.0	8.0	8.0	8.0	0.4	32.4
							BLM	6.8	6.8	6.8	6.8	0.4	27.6
							BR	4.0	4.0	4.0	4.0	0.4	16.4
							NPS	2.0	2.0	2.0	2.0	0.4	8.4
							AGFD	6.0	6.0	6.0	6.0	6.0	30.0
							CDPC	1.0	1.0	1.0	1.0	0.2	4.2
							NMDFG	6.0	6.0	6.0	6.0	6.0	30.0
							DDWC	1.0	1.0	1.0	1.0	0.2	4.2
							TPWL	2.0	2.0	2.0	2.0	1.0	9.0
							48.8	48.8	48.8	48.8	16.0	211.2	

IMPLEMENTATION SCHEDULE

General Category	Plan Task	Task #	Priority	Task Duration	Agency Responsible			Estimated Fiscal Year Costs (In thousands of \$)						
					Other Regions	Other Programs	Other	'83	'84	'85	'86	'87	Total	
I-3	Determine patterns of movement for both breeding and wintering eagles, including fledglings, immature, and adults.	13	2	ongoing	2			38.0	30.0	38.0	38.0	46.0	190.0	
								FS	22.0	18.0	22.0	22.0	26.0	110.0
								BLH	6.6	6.6	13.0	12.6	12.6	51.4
								BR	4.0	4.0	9.0	11.0	11.0	39.0
								NPS	0.8	0.8	1.4	2.2	3.0	8.2
								AGFD	8.0	6.0	8.0	8.0	9.0	39.0
								CDFC	0.8	0.8	1.4	2.2	3.0	8.2
								NMDGF	8.0	6.0	8.0	8.0	9.0	39.0
								DDWC	0.8	0.8	1.6	2.2	3.0	8.4
								TPWL	1.4	1.4		4.6	6.0	16.4
									90.4	74.4	S E - -	110.8	128.6	509.6
								I-6	Determine factors influencing the population structure of breeding and wintering eagles.	14	2	ongoing	2	
FS	2.0	2.0	2.0	2.0	0.2	8.2								
BLH	1.8	1.8	1.8	1.8	- o -	7.2								
BR	1.0	1.0	1.0	1.0	- O -	4.0								
NPS	0.4	0.4	0.4	0.4	- O -	1.6								
AGFD	1.6	1.6	1.6	1.6	- n -	6.4								
CDFC	0.2	0.2	0.2	0.2	- n -	0.8								
NMDFG	1.6	1.6	1.6	1.6	- n -	6.4								
DDWC	0.2	0.2	0.2	0.2	- O -	0.8								
TPWL	0.4	0.4	0.4	0.4	- O -	1.6								
	12.2	12.2	12.2	12.2	0.4	49.2								

IMPLEMENTATION SCHEDULE

General Category	Plan Task	Task #	Priority	Task Duration	Responsible Agency		Estimated Fiscal Year Costs (In Thousands of \$)					Total	
					FWS Region	Other Program	'83	'84	'85	'86	'87		
I-3	Determine food habits	15	2	ongoing				10.0	12.0	12.0	12.0	14.0	60.0
								26.0	0.0	28.0	29.0	139.0	
							FS	2.2	4.2	6.2	6.2	21.0	
							BLM	2.0	3.0	3.0	3.0	13.0	
							BR	0.2	0.6	2.8	1.0	2.8	
							NPS	2.0	2.0	2.0	3.0	11.0	
							AGFD	0.2	0.6	0.8	1.0	2.8	
							CDFG	2.0	2.0	2.0	3.0	11.0	
							NMDGF	0.2	0.4	2.8	1.0	2.6	
							ODWC	0.6	1.0	1.4	2.0	5.6	
							TPWL	49.4	45.4	53.8	57.0	63.2	268.8
I-12	Assess the effects of pesticides and disturbance factors	16	2	ongoing			1.0	1.0	3.0	3.0	3.0	11.0	
							FS	1.0	3.0	3.0	3.0	11.0	
							BLM	-0-	0.6	0.6	0.6	1.8	
							BR	-0-	0.6	0.6	0.6	1.8	
							NPS	-0-	0.2	0.2	0.2	0.6	
							AGFD	1.0	3.0	3.0	3.0	11.0	
							CDFG	-0-	0.2	0.2	0.2	0.6	
							NMDGF	1.0	3.0	3.0	3.0	11.0	
							ODWC	-0-	0.2	0.2	0.2	0.6	
							TPWL	-0-	0.2	0.2	0.2	0.6	
								4.0	4.0	14.0	14.0	14.0	50.0

IMPLEMENTATION SCHEDULE

General Category	Plan Task	Task #	Priority	Task Duration	Responsible Agency		Estimated Fiscal Year Costs (In Thousands of \$)						
					FWS Region	Program	Other	1	2	3	4	5	Total
R-3	Evaluate physical and biological parameters at each occupied nest site	21111	2	5 yrs.	2			16.0	32.0	32.0	32.0	34.0	146.0
							FS	16.0	32.0	32.0	32.0	32.0	144.0
							BLH	3.0	5.0	5.0	5.0	5.0	23.0
							AGFD	2.0	2.0	2.0	2.0	3.0	11.0
							37.0	71.0	71.0	71.0	71.0	324.0	
H-3	Determine disturbances occurring at each nest site and establish tolerances	21112	1	5 yrs.	2			4.0	8.0	8.0	8.0	8.0	37.0
							FS	4.0	8.0	8.0	8.0	8.0	37.0
							BLH	2.0	5.0	5.0	5.0	5.0	22.0
							AGFD	1.0	2.0	2.0	2.0	2.0	9.0
							11.0	23.0	23.0	23.0	23.0	103.0	
I-3	Identify, analyze and monitor areas formerly used by breeding eagles and identify presently favorable areas	21112	3	ongoing	2			-0-	22.0	22.0	22.0	-0-	66.0
							FS	-0-	50.0	50.0	50.0	-0-	150.0
							BLM	-0-	8.2	8.2	8.2	-0-	24.6
							BR	-0-	4.8	4.8	4.8	-0-	14.4
							VPS	-0-	3.0	3.0	3.0	-0-	9.0
							AGFD	-0-	3.0	3.0	3.0	-0-	9.0
							EDFC	-0-	1.0	1.0	1.0	-0-	3.0
							MDFC	-0-	4.0	4.0	4.0	-0-	12.0
							DDWC	-0-	1.0	1.0	1.0	-0-	3.0
							CPWL	-0-	4.0	4.0	4.0	-0-	12.0
							-0-	01.0	01.0	01.0	-0-	303.0	

IMPLEMENTATION SCHEDULE

General Category	Plan Task	Task #	Priority	Task Duration	Responsible Agency		Estimated Fiscal Year Costs (In Thousands of \$)								
					FWS Region	Program	'83	'84	'85	'86	'87	Total			
I-3	Locate and evaluate potential nest sites	2113	2	ongoing			Other	-0-	-0-	2.4	2.4	2.4	2.4	7.2	
								FS	-0-	-0-	6.0	6.0	6.0	6.0	18.0
								BLM	0.2	0.2	1.4	1.4	1.4	1.4	4.6
								BR	0.2	0.2	0.6	0.6	0.6	0.6	2.2
								NPS	-0-	-0-	0.2	0.2	0.2	0.2	0.6
								AGFD	-0-	-0-	0.6	0.6	0.6	0.6	1.8
								CDFG	-0-	-0-	0.2	0.2	0.2	0.2	0.6
								NMDFG	-0-	-0-	0.6	0.6	0.6	0.6	1.8
								ODWC	-0-	-0-	0.2	0.2	0.2	0.2	0.6
								TPWL	-0-	-0-	0.2	0.2	0.2	0.2	0.6
									0.4	0.4	12.4	12.4	12.4	12.4	38.0
I-3	Locate, map, and evaluate non-nesting habitats used by resident bald eagles	2121	3	ongoing			Other	7.8	15.4	15.4	15.4	15.4	15.4	69.0	
								FS	20.0	40.0	40.0	40.0	40.0	40.0	180.0
								BLM	3.4	6.6	6.6	6.6	6.6	6.6	29.8
								BR	2.4	4.0	4.0	4.0	4.0	4.0	18.4
								NPS	1.2	2.4	2.4	2.4	2.4	2.4	10.8
								AGFD	1.2	2.4	2.4	2.4	2.4	2.4	10.8
								CDFG	0.2	0.4	0.4	0.4	0.4	0.4	1.8
								NMDFG	1.2	2.4	2.4	2.4	2.4	2.4	10.8
								ODWC	1.2	2.4	2.4	2.4	2.4	2.4	10.8
								TPWL	1.2	2.4	2.4	2.4	2.4	2.4	10.8
									39.8	78.4	78.4	78.4	78.4	78.4	353.4

IMPLEMENTATION SCHEDULE

General Category	Plan Task	Task #	Priority	Task Duration	Responsible Agency	Estimated Fiscal Year Costs (In Thousands of \$)						
						'83	'84	'85	'86	'87	Total	
I-3	Locate, map, and evaluate habitats used by transient bald eagles	2122	3	5 yrs.	FWS Region 2	33.2	10.2	10.2	10.2	10.2	74.0	
						Other	16.0	16.0	16.0	16.0	16.0	128.0
						FS	64.0	6.2	6.2	6.2	6.2	49.0
						BLM	24.2	1.6	1.6	1.6	1.6	10.4
						BR	4.0	2.8	2.8	2.8	2.8	22.4
						NPS	11.2	2.0	2.0	2.0	2.0	16.0
						AGFD	8.0	0.4	0.4	0.4	0.4	1.8
						CDFC	0.2	2.0	2.0	2.0	2.0	16.0
						NMDGF	8.0	0.8	0.8	0.8	0.8	6.4
						ODWC	3.2	1.6	1.6	1.6	1.6	12.8
						TPWL	6.4	43.6	43.6	43.6	43.6	336.8
M-3	Monitor land-use changes within occupied and potential bald eagle habitats and respond to unfavorable operations	221	1	ongoing	All Agencies	162.4	43.6	43.6	43.6	43.6	336.8	
						Other	43.6	43.6	43.6	43.6	43.6	336.8
						Cover by normal operations						

IMPLEMENTATION SCHEDULE

General Category	Plan Task	Task #	Priority	Task Duration	Responsible Agency		Estimated Fiscal Year Costs (In Thousands of \$)							
					FWS Region	Other	'83	'84	'85	'86	'87	Total		
M-3	Improve key habitats by modifying, reducing or eliminating disturbance	222	1	ongoing	2			6.0	6.0	6.0	6.0	6.0	6.0	30.0
								6.0	6.0	6.0	6.0	6.0	6.0	30.0
								3.2	3.2	3.2	3.2	3.2	3.2	16.0
								2.8	2.8	2.8	2.8	2.8	2.8	14.0
								2.0	2.0	2.0	2.0	2.0	2.0	10.0
								2.0	2.0	2.0	2.0	2.0	2.0	10.0
								0.4	0.4	0.4	0.4	0.4	0.4	2.0
								2.0	2.0	2.0	2.0	2.0	2.0	10.0
								2.0	2.0	2.0	2.0	2.0	2.0	10.0
								2.0	2.0	2.0	2.0	2.0	2.0	10.0
						28.4	28.4	28.4	28.4	28.4	28.4	142.0		
A-16	Protect essential habitat on private lands through purchase, lease, exchange, or cooperative agreements	223	1	ongoing	2			4.0	-0-	-0-	-0-	-0-	-0-	4.0
								2.0	-0-	-0-	-0-	-0-	-0-	2.0
								6.0	-0-	-0-	-0-	-0-	-0-	6.0
M-3	Cooperatively manage habitat on public lands	224	1	ongoing	2			4.0	-0-	-0-	-0-	-0-	-0-	4.0
								2.0	-0-	-0-	-0-	-0-	-0-	2.0
								2.0	-0-	-0-	-0-	-0-	-0-	2.0
								8.0	-0-	-0-	-0-	-0-	-0-	8.0

IMPLEMENTATION SCHEDULE

General Category	Plan Task	Task #	Priority	Task Duration	Responsible Agency		Estimated Fiscal Year Costs (1 Thousands of \$)						
					FWS Region	Other Program	'83	'84	'85	'86	'87	Total	
R-4	Improve habitats of nesting bald eagles and other use areas where appropriate	225	3	3 yrs.	2			16.0	16.0	16.0	-0-	-0-	48.0
						FS	32.0	32.0	32.0	-0-	- &	96.0	
						BLH	12.2	12.2	12.2	-0-	-0-	36.6	
						BR	2.2	2.2	2.2	-0-	-0-	6.6	
						NPS	5.6	5.6	5.6	-0-	-0-	16.8	
						AGFD	4.0	4.0	4.0	-0-	-0-	12.0	
						CDFG	0.8	0.8	0.4	-0-	-0-	2.0	
						NMDFG	4.0	4.0	4.0	-0-	-0-	12.0	
						DDWC	1.6	1.6	1.6	-0-	-0-	4.8	
						PPWL	3.2	3.2	3.2	-0-	-0-	9.6	
						81.6	81.6	81.2	-0-	-0-	244.4		
0-1	Develop press release kits with photographs	321	2	2 yrs.	2		100.0	150.0	-0-	-0-	-0-	450.0	
n-1	Develop audio-visual programs for loan to schools and conservation programs	322	2	1 yr.	2		-0-	60.0	-0-	-0-	-0-	60.0	
0-1	Develop public service announcements	323	3	3 yrs.	2		100.0	30.0	30.0	-0-	-0-	360.0	
0-1	Develop and provide audio-visual packets for use on radio and television	324	3	2 yrs.	2		60.0	30.0	-0-	-0-	-0-	90.0	

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ESTIMATED WORK-MONTHS OF EFFORT

BY AGENCY

Agency	Years				
	1	2	3	4	5
Arizona Game and Fish Department	27	1	23	21	20
Bureau of Land Management	31	33	38	33	25
California Department of Fish and Game	2	3	3	4	3
Fish and Wildlife Service ^{1/}	276	219	106	83	70
Forest Service	113	122	129	113	85
National Park Service	13	10	11	8	6
New Mexico Department of Game and Fish	23	17	19	17	15
Oklahoma Department of Wildl. Cons.	6	5	5	6	5
Texas Parks and Wildlife Department	11	9	11	10	8
Bureau of Reclamation	17	14	17	17	13
TOTAL	525	453	362	312	250

NOTE: A **work-month includes all** costs of putting a **person** in the field **or** on the-job for one **month**.

^{1/} **Estimated** work-month effort assigned to Fish and Wildlife Service includes information and education program **and work** in Mexico.

IMPLEMENTATION SCHEDULE

General Category	Plan Task	Task #	Pri- ority	Task Duration	Responsible Agency			Estimated Work-Months by Year						
					FWS		Other	1	2	3	4	5	Total	
					Region	Program								
I-14	Document historical records	11	3	ongoing	2									
								FS	4.0	1.0	1.0	1.0	1.0	8.0
								BLM	10.0	2.0	2.0	2.0	2.0	18.0
								BR	4.1	1.0	1.0	1.0	1.0	8.1
								NPS	6.0	0.6	0.6	0.6	0.6	8.4
								NPS	1.0	0.3	0.3	0.3	0.3	2.2
								ACFD	6.0	1.0	1.0	1.0	1.0	10.0
								CDFG	0.5	0.1	0.1	0.1	0.1	0.9
								NMDGF	6.0	1.0	1.0	1.0	1.0	10.0
								ODWC	0.5	0.1	0.1	0.1	0.1	0.9
		TPWL	2.0	0.5	0.5	0.5	0.5	4.0						
			40.1	7.6	7.6	7.6	7.6	7.6	10.5					
I-1	De termine population numbers, distribution , and trends	12	2	ongoing	2									
								FS	6.0	6.0	6.0	6.0	0.5	24.5
								BLM	4.0	4.0	4.0	4.0	0.2	16.2
								BLM	3.4	3.4	3.4	3.4	0.2	13.8
								BR	2.0	2.0	2.0	2.0	0.2	8.2
								NPS	1.0	1.0	1.0	1.0	0.2	4.2
								ACFD	3.0	3.0	3.0	3.0	3.0	15.0
								CDFG	0.5	0.5	0.5	0.5	0.1	2.1
								NMDGF	3.0	3.0	3.0	3.0	3.0	15.0
								ODWC	0.5	0.5	0.5	0.5	0.1	2.1
		TPWL	1.0	1.0	1.0	1.0	0.5	4.5						
			24.4	24.4	24.4	24.4	8.0	105.6						

IMPLEMENTATION SCHEDULE

General Category	Plan Task	Task #	Priority	Task Duration	Responsible Agency		Estimated Work-Months by Year					Total	
					FWS Region	Other Program	1	2	3	4	5		
I-3	Determine patterns of movement for both breeding and wintering eagles, including fledglings, immatures and adults.	13	2	ongoing	2			13.0	15.0	19.0	19.0	23.0	95.0
						FS	11.0	9.0	11.0	11.0	13.0	55.1	
						BLM	3.3	3.3	6.5	6.3	6.3	25.7	
						BR	2.0	2.0	4.5	5.5	5.5	19.5	
						NPS	0.4	0.4	0.7	1.1	1.5	4.1	
						AGFD	4.0	3.0	4.0	4.0	4.5	19.5	
						CDFG	0.4	0.4	0.7	1.1	1.5	4.1	
						NMDGF	4.0	3.0	4.0	4.0	4.5	19.5	
						ODWC	0.4	0.4	0.8	1.1	1.5	4.2	
						TPWL	0.7	0.7	1.5	2.3	3.0	0.2	
								45.2	37.2	52.7	55.4	64.3	254.8
I-6	Determine factors influencing the population structure of breeding and wintering eagles.	14	2	ongoing	2			1.5	1.5	1.5	1.5	0.1	6.1
						FS	1.0	1.0	1.0	1.0	0.1	4.1	
						BLH	0.9	0.9	0.9	0.9	-0-	3.6	
						BR	0.5	0.5	0.5	0.5	-0-	2.0	
						NPS	0.2	0.2	0.2	0.2	-0-	0.8	
						AGFD	0.8	0.8	0.8	0.8	-0-	3.2	
						CDFG	0.1	0.1	0.1	0.1	-0-	0.4	
						NMDFG	0.8	0.8	0.8	0.8	-0-	3.2	
						ODWC	0.1	0.1	0.1	0.1	-0-	0.4	
						TPWL	0.2	0.2	0.2	0.2	-0-	0.8	
								6.1	6.1	6.1	6.1	0.2	24.6

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IMPLEMENTATION SCHEDULE

General Category	Plan Task	Task #	Priority	Task Duration	Responsible Agency		Estimated Work-Months by Year					Total	
					FW Legion	Other Program	1	2	3	4	5		
I-3	Determine food habits	15	2	ongoing	2			6.0	5.0	6.0	6.0	7.0	30.0
						FS	14.0	13.0	14.0	14.0	14.5	69.5	
						BLH	1.1	1.1	2.1	3.1	3.1	10.5	
						BR	1.0	1.0	1.5	1.5	1.5	6.5	
						NPS	0.1	0.1	0.3	1.4	0.5	1.4	
						AGFD	1.0	1.0	1.0	1.0	1.5	5.5	
						CDFC	0.1	0.1	0.3	0.4	0.5	1.4	
						NMDGP	1.0	1.0	1.0	1.0	1.5	5.5	
						ODWC	0.1	0.1	0.2	1.4	0.5	1.3	
						TPWL	0.3	0.3	0.5	0.7	1.0	2.8	
						24.7	22.7	26.9	28.5	31.6	134.4		
I-12	Assess the effects of pesticides and disturbance factors	16	2	ongoing	2			0.5	0.5	1.5	1.5	1.5	5.5
						FS	0.5	0.5	1.5	1.5	1.5	5.5	
						BLH	-0-	-0-	0.3	0.3	0.3	0.9	
						BR	-0-	-0-	0.3	0.3	0.3	0.9	
						NPS	-0-	-0-	0.1	0.1	0.1	0.3	
						AGFD	0.5	0.5	1.5	1.5	1.5	5.5	
						CDFC	-0-	-0-	0.1	0.1	0.1	0.3	
						NMDFC	0.5	0.5	1.5	1.5	1.5	5.5	
						ODWC	-0-	-0-	0.1	0.1	0.1	0.3	
						TPWL	-0-	-0-	0.1	0.1	0.1	0.3	
						2.0	2.0	7.0	7.0	7.0	25.0		

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IMPLEMENTATION SCHEDULE

General Category	Plan Task	Task #	Priority	Task Duration	Responsible Agency		Estimated Work-Months by Year					Total	
					FWS	Other							
					Region	Program	1	2	3	4	5		
R-3	Evaluate physical and biological parameters at each occupied nest site	21111	2	5 yrs.	2			8.0	16.0	16.0	16.0	17.0	73.0
						FS	8.0	16.0	16.0	16.0	16.0	72.0	
						BLH	1.5	2.5	2.5	2.5	2.5	11.5	
						AGFD	1.0	1.0	1.0	1.0	1.5	5.5	
						18.5	35.5	35.5	35.5	37.0	162.0		
n-3	Determine disturbances occurring at each nest site and establish tolerances	11112	1	5 yrs.	2			2.0	4.0	4.0	4.0	4.0	18.5
						FS	2.0	4.0	4.0	4.0	4.0	18.5	
						BLH	1.0	2.5	2.5	2.5	2.5	11.0	
						AGFD	0.5	1.0	1.0	1.0	1.0	4.5	
						5.5	11.5	11.5	11.5	11.5	51.5		
I-3	Identify, analyze and monitor areas formerly used by breeding eagles and identify presently favorable areas	1112	3	ongoing	2			-o-	11.0	11.0	11.0	-0-	33.0
						FS	-D-	25.0	25.0	25.0	a -	75.0	
						BLM	a -	4.1	4.1	4.1	-o-	12.3	
						BR	-o-	2.4	2.4	2.4	-0-	7.2	
						NPS	-o-	1.5	1.5	1.5	-0-	4.5	
						AGFD	-o-	1.5	1.5	1.5	-o-	4.5	
						CDFG	-0-	0.5	0.5	0.5	-o-	1.5	
						NMDFG	-0-	2.0	2.0	2.0	-0-	6.0	
						DDWC	-o-	0.5	0.5	0.5	-0-	1.5	
						TPWL	-o-	2.0	2.0	2.0	-o-	6.0	
						-D-	50.5	50.5	50.5	-o-	151.5		

*

IMPLEMENTATION SCHEDULE

General Category	Plan Task	Task #	Priority	Task Duration	Responsible Agency		Estimated Work-Months Year					Total	
					FWS	Other							
					Region	Program	1	2	3	4	5		
I-3	Locate and evaluate potential nest sites	21.13	2	ongoing	2			-0-	-0-	1.2	1.2	1.2	3.6
							FS	-0-	-0-	3.0	3.0	3.0	9.0
							BLH	0.1	0.1	0.7	0.7	0.7	2.3
							BR	0.1	0.1	0.3	0.3	0.3	1.1
							NPS	-o-	-0-	0.1	0.1	0.1	0.3
							ACFD	-0-	-0-	0.3	0.3	0.3	0.9
							CDFC	-o-	-o-	0.1	0.1	0.1	0.3
							NMDFG	-o-	-0-	0.3	0.3	0.3	0.9
							ODWC	-0-	-o-	0.1	0.1	0.1	0.3
							TPWL	-0-	-o-	0.1	0.1	0.1	0.3
						0.2	0.2	6.2	6.2	6.2	19.0		
I-3	Locate, map , and evaluate non-nesting habitats used by resident bald eagles	2121	3	ongoing	2			3.9	7.7	7.7	7.7	7.7	34.7
							FS	10.0	20.0	20.0	20.0	20.0	90.0
							BLH	1.7	3.3	3.3	3.3	3.3	14.9
							BR	1.2	2.0	2.0	2.0	2.0	9.2
							NPS	0.6	1.2	1.2	1.2	1.2	5.4
							AGFD	0.6	1.2	1.2	1.2	1.2	5.4
							CDFC	0.1	0.2	0.2	0.2	0.2	0.9
							NMDFG	0.6	1.2	1.2	1.2	1.2	5.4
							ODWC	0.6	1.2	1.2	1.2	1.2	5.4
							TPWL	0.6	1.2	1.2	1.2	1.2	5.4
						19.9	39.2	39.2	39.2	39.2	176.7		



IMPLEMENTATION SCHEDULE

General Category	Plan Task	Task #	Priority	Task Duration	Responsible Agency		Estimated Work-Months by Year					Total
					FWS Region	Other Program	1	2	3	4	5	
I-3	Locate, map, and evaluate habitats used by transient bald eagles	1122	3	5 yrs.	2		16.6	5.1	5.1	5.1	5.1	37.0
						FWS	32.0	8.0	8.0	8.0	8.0	64.0
						BLM	12.1	3.1	3.1	3.1	3.1	24.1
						BIR	2.0	0.8	0.8	0.8	0.8	5.0
						WPS	5.6	1.4	1.4	1.4	1.4	11.2
						WFD	4.0	1.0	1.0	1.0	1.0	8.0
						WDFG	0.1	0.2	0.2	0.2	0.2	0.9
						WMDGF	4.0	1.0	1.0	1.0	1.0	8.0
						WDWC	1.6	0.4	0.4	0.4	0.4	3.2
						WPWL	3.2	0.8	0.8	0.8	0.8	6.4
							81.2	21.8	21.8	21.8	21.8	168.4
H-3	Monitor land-use changes within occupied and potential bald eagle habitats and respond to unfavorable operations	121	I	ongoing	2							
						All Agencies	Cover by normal operations					

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IMPLEMENTATION SCHEDULE

General Category	Plan Task	Task #	Priority	Task Duration	Responsible Agency		Estimated Work-Months by Year					Total	
					FWS Region	Other Program	1	2	3	4	5		
M-3	Improve key habitats by modifying, reducing or eliminating disturbance	222	1	ongoing	2			3.0	3.0	3.0	3.0	3.0	15.0
						FS	3.0	3.0	3.0	3.0	3.0	15.0	
						BLH	1.6	1.6	1.6	1.6	1.6	8.0	
						BR	1.4	1.4	1.4	1.4	1.4	7.0	
						NPS	1.0	1.0	1.0	1.0	1.0	5.0	
						AGFD	1.0	1.0	1.0	1.0	1.0	5.0	
						CDFG	0.2	0.2	0.2	0.2	0.2	1.0	
						NMDFG	1.0	1.0	1.0	1.0	1.0	5.0	
						ODWC	1.0	1.0	1.0	1.0	1.0	5.0	
						TPWL	1.0	1.0	1.0	1.0	1.0	5.0	
						14.2	14.2	14.2	14.2	14.2	71.0		
A-16	Protect essential habitat on private lands through purchase, lease, exchange, or cooperative agreements	223	1	ongoing	2			2.0	-0-	-0-	-0-	-0-	2.0
						AGFD	1.0	-0-	-0-	-0-	-0-	1.0	
							3.0	-0-	-0-	-0-	-0-	3.0	
M-3	Cooperatively manage habitat on public lands	224	1	ongoing	2			2.0	-0-	-0-	-0-	-0-	2.0
						FS	1.0	-0-	-0-	-0-	-0-	1.0	
						AGFD	1.0	-0-	-0-	-0-	-0-	1.0	
							4.0	-0-	-0-	-0-	-0-	4.0	

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IMPLEMENTATION SCHEDULE

General Category	Plan Task	Task #	Priority	Task Duration	Responsible Agency		Estimated Work-Months by Year					Total	
					FWS	Other	1	2	3	4	5		
					Region	Program		em-					
50	Improve habitat of nesting bald eagles and other use areas where appropriate	225	3	3 yrs.	2			a. 0	8. 0	8. 0	-0-	-0-	24. 0
								16. 0	16. 0	16. 0	-1-	-0-	48. 0
								6. 1	6. 1	6. 1	-n-	-0-	18. 3
								1. 1	1. 1	1. 1	-cl-	-0-	3. 3
								2. 8	2. 8	2. 8	-o-	-0-	8. 4
								2. 0	2. 0	2. 0	-0-	-0-	6. 0
								0. 4	0. 4	0. 2	-n-	-0-	1. 0
								2. 0	2. 0	2. 0	-cl-	-0-	6. 0
								0. 8	0. 8	0. 8	-o-	-0-	2. 4
								1. 6	1. 6	1. 6	-o-	-0-	4. 8
						40. 8	40. 8	40. 6	-D-	-0-	122. 2		
0-1	Develop press release kits with photographs	321	2	2 yrs.	2		150. 0	75. 0	-0-	-0-	-0-	225. 0	
0-1	Develop audio-visual programs for loan to schools and conservation programs	322	2	1 yr.	2		-0-	30. 0	-0-	-0-	-0-	30. 0	
0-1	Develop public service announcements	323	3	3 yrs.	2		150. 0	15. 0	15. 0	-0-	-0-	180. 0	
0-1	Develop and provide audio-visual packets for use on radio and television	324	3	2 yrs.	2		30. 0	15. 0	-0-	-0-	-0-	45. 0	

•

APPENDIX A

Letters received commenting
on the draft plan



IN REPLY REFER TO:

N1621
(WR)RNR

United States Department of the Interior

NATIONAL PARK SERVICE
WESTERN REGION
450 GOLDEN GATE AVENUE, BOX 1036
SAN FRANCISCO, CALIFORNIA 94142

November 14, 1979

1	Memorandum
2	Sec. 7
3	WABD
4	Admin.
5	ACTION
6	FILE

SE

- RD
- DRD
- AFA
- ARW
- AEV
- CSS
- LE
- ACTION
- FILE

Memorandum

To: Regional Director, U.S. Fish and Wildlife Service
Region 2, Southwest **Regional** Office, Albuquerque
ACTING

From: Regional Director, Western Region

Subject: Draft Southwestern Bald Eagle Recovery Plan

We appreciate the opportunity of **commenting** on the **Recovery** Plan forwarded vlt h your memorandum of September 17, 1979. Our **comments** follow:

- A-I
1. Inasmuch as planned studies **within** the State of **California** (see Ffigure 1) do not include areas administered by the National Park Service, we cannot financially support proposals requiring our involvement (see Proposed Budget Summarized by State, California p. 1).
 2. In the Arizona portion of **the** proposed budget, **must** be **recognized** that the limited funds available for all forms of National Park Service research would **limit** our abilities to study this relatively rare migrant.

In **summary**, as far as Western Region, National Park Service, **is** concerned, we vish we could help, but we **presently see this** project as lover priority in the states involved than **many** other projects. Hence, we reluctantly conclude that **we cannot commit** ourselves to **natural** science research funding at **this** time. Nevertheless, we believe **we should** get **more** involved **in** the public education **aspects** of the plan - both **in** developing and presenting information to the **public** and our Regional **Office** and field interpretive staff will help **with** these aspects.

3. Other states or portions thereof covered by **this Plan** form a portion of the National Park Service's **Southwest** Region vlt h its

cc: Duane Rubink/10-30-79/vah

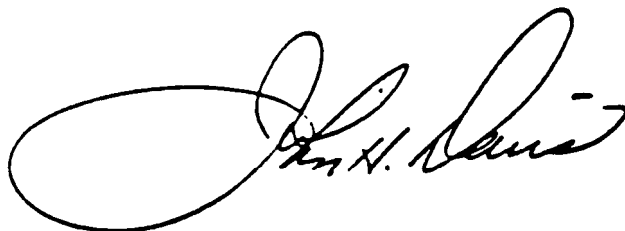


NOV 26 1979

NOV 26 1979

SE

office in Santa Fe, New Mexico. **We** presume you are in contact with this Office for proposed efforts scheduled for New Mexico, Oklahoma, and Texas.

A handwritten signature in black ink, appearing to read "J. H. Davis". The signature is highly stylized with large, sweeping loops and a cursive script.



United States Department of the Interior
BUREAU OF RECLAMATION

SOUTHWEST REGION
HERRING PLAZA BOX H-4977
AMARILLO, TEXAS 79101

OCT 29 1979

IN REPLY
REFER TO: 150
565.

RECEIVED
US FWS REG
OFFICE OF THE
REGIONAL DIRECTOR
OK
OCT 31 1979
S.W. 5/18/79
FILE

- RD
- DRD
- AFA
- ARW
- AEV
- CSS
- LE
- ACTION
- FIVE

Memorandum

To: Regional Director, U.S. Fish and Wildlife Service, Albuquerque, NM

From: **ACTING** Regional Director

Subject: Review of **Draft** Southwestern Bald Eagle Recovery Plan (Your Memorandum dated-September 17, 1979)

The **stepdown** plan presented in this recovery plan is biologically sound and incorporates the necessary broadness for a comprehensive **analysis** of the Bald Eagle in the Southwest. We would like to stress the importance of continued coordination **and** communication with cooperating agencies in this effort.

Former Status

B-2 Ligon (1961) reports two nest sites prior to 1961 on the Middle Fork and East Fork of **Gila River**, New Mexico.

Current status

B-3 The first active nest in New Mexico since 1962 we reported in 1979 by Teryl Grubb at the **Gila National Forest** (Ohmart and Sell, June 1979 - draft).

Document Historical Records

B-4 il. The Southwestern **Bald Eagle Recovery Team** should contact **all** the appropriate public agencies and request **any** historical data and **updates** with a view toward centralizing information **themselves**, preferably at the Office of **Endangered Species** of the **Southwest** Region of the Fish **and Wildlife Service**, Albuquerque, New Mexico.

cc: Duane Rubink/11-6-79/vah

F
A
OC

Stumpf and Creighton (1977) and Ohmart and Sell (June 1979 - draft) have completed a report for the Lower Colorado Region of the Bureau of Reclamation on the Bald Eagle in the Southwest, the latter being an annotated literature survey. Coupled with the recent Working Bibliography of the Bald Eagle (1979) published by the National Wildlife Federation Raptor Information Center, the Recovery Team has most of the basic literature search on the Bald Eagle in the Southwest at hand. The time required for the compilation of the Literature should be minimal.

Budget (man-months)

General

B-5

The amounts of effort estimated for the cooperating agencies are excessive. The first year budget for the Fish and Wildlife Service amounts to appointing 23 people to the recovery plan full-time. Total estimated manpower for the first year amounts to over 41 persons full-time, including all responsible agencies. It is doubtful that any of the agencies could meet the indicated manpower requirements. A reevaluation of the budget appears to be in order to promote more efficient use of each agency's time.

Specific

e-6

11. As explained above, existing information available to the Recovery Team significantly reduces the amount of time necessary to document historical records and conduct a literature search. Forty man-months for the first year is thus a substantial overestimate. Considering the recent surveys by the Bureau of Reclamation, 6 man-months of effort by the Bureau of Reclamation the first year is certainly excessive for historical documentation.

We recommend that the Bald Eagle Recovery Team solicit man-month estimates from each Bureau of Reclamation region involved (Upper Colorado, Lower Colorado, and Southwest) in order to more effectively budget their time and effort.

A. J. Hawks

References

- Ligon, J. S. 1961. New Mexico Birds. University of New Mexico Press, Albuquerque, New Mexico. XXI pp. 360.
- Lincer, J. L.; W. S. Clark; and M. N. LeFranc, Jr. 1979. Working Bibliography of the Bald Eagle. National Wildlife Federation Scientific/Technical Series No. 2, Washington, D. C. pp. 219.
- Ohmart, R. D. and Ronald Sell. June 1979 - Draft. An Annotated Literature Survey on Bald Eagles With Special Emphasis on Arizona. Lower Colorado Region of the Bureau of Reclamation, Boulder City, Nevada.
- Stumpf, W. A. and David E. Creighton, Jr. 1977 - Draft. The Bald Eagle of the Southwest. Lower Colorado Region of the Bureau of Reclamation, Boulder City, Nevada.



United States Department of the Interior

BUREAU OF RECLAMATION
UPPER COLORADO REGIONAL OFFICE
P.O. BOX 11566
SALT LAKE CITY, UTAH 84143

TO SE
C.V.F. 11/

Coordinator	
Asst. Dir.:	
Adm. Serv.	
Ext. Aff.	
Files & Com. Serv.	
Gen. Inv.	
Inspection	
Int. Aff.	
Lab.	
Legal Coun.	
Plan. & Insp.	
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IN REPLY
REFER TO UC-725
565.

NOV - 8 1979

S. W. B. E. Rec. Plan
FILE

Memorandum

To: Regional Director, Fish and Wildlife Service, Region 2,
P.O. Box 1306, Albuquerque, New Mexico 87103

From: **Acting** Regional Director

Subject: Review of **Draft Bald Eagle Recovery Plan**

The subject recovery plan appears to be complete both in the assessment of current status of southern bald eagles and additional research needs. We do not **invision** much, if any, **involvement from** our region, however, **since we** have no projects that would directly affect these eagles.

c-7 The **separation of** southwestern eagles from other subspecies **by states** seems to be rather arbitrary. **For example,** a pair of bald eagles nest near the **Animas-La Plata River** about **5 miles** from the **New Mexico** border. Being below the 40th parallel, perhaps these birds should be included in the recovery effort, especially in light of their proximity to the State of New Mexico which **is** a part of the draft plan.

C-8 The **term** "essential habitat" was used in the plan, we suppose, to distinguish from "critical habitat" which has a precise definition. Nonetheless, "essential habitat" implies that migration areas, **wintering** areas, feeding and roosting areas used by breeding or non-breeding eagles are essential to the continued existence of **the** southwestern species. Portions of these areas no doubt are very important **on a regional basis,** but there is no information supporting all these **areas** as essential. Essential or critical **habitat should apply** specifically to habitat for which no suitable **alternative replacement** is available. What level of protection would be afforded to "essential habitat?"

Although the Service **has** outlined funding procedures **for recovery** efforts, our participation till **generally** be based on specific project study requirements and the **availability of funds.** Should our programs adversely affect bald **eagle protection or recovery efforts,** we would participate fully to resolve such problems.

cc: Duane Rubink/11-19-79/vah

F. Phillip Sharpe REG 2 RECEIVED

NOV 14 1979

cc: Regional Director, Boulder City, Nevada

Salt River Project

WATER  POWER

BOX 1980 PHOENIX, ARIZONA 09001

TELEPHONE 273-590

November 15, 1979

Mr. J. L. Stegman, Acting Regional Director
U. S. Fish and Wildlife Service
P. O. Box 1306
Albuquerque, New Mexico 87103

RD	_____
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SE

Dear Mr. Stegman:

RE: Bald Eagle Recovery Plan

We have only limited **comments** on the Agency Review Draft of the above plan, as follows:

- Page **numbers** on the draft would have facilitated review and commenting.
- Introduction, second paragraph, fourth sentence: something appears to be missing.

Biological **knowledge**, Perches: Populus fremounti should be Populus fremontii

- D-9 - Map, Recommended Bald Eagle Essential Habitat In The Southwest: This both requires explanation and appears to be in error. Essential habitat is **not** discussed in the text. What is it? Who **recommended** it? And what does it mean as far as restricted actions are concerned? As we understand it, **USFWS** has recommended this area for designation as Critical Habitat, not Essential Habitat, which is an interim, unofficial designation without legal substance.
- D-10 - Step-down Portion: The numbering system is very awkward. Part 11 should follow Part 10, and not be a sub-head under Part 1. This has created problems in having sections reviewed **internally**.
- Salt River Project should be included on all distribution lists for topics that involve the Salt and Verde River Watersheds.

In order to expedite future review and **comment**, it would be helpful if all **communications** dealing with wildlife in general, and Bald Eagles in **particular**, could be directed to my attention.

cc: Duane Rubink/10-30-79/vah

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NOV 20 1979

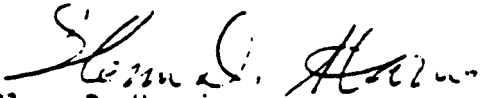
NOV 19 1979

REGIONAL DIRECTOR

Mr. J. L. Stegman
November 15, 1979
Page Two

Thank you for giving us the opportunity to comment on the Draft Recovery Plan.

Sincerely,


Glenn D. Harris
Environmental Services Department

GDH:rsg

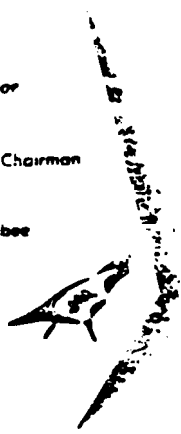
xc: Frank T. Daniento

DUANE RUBINK Governor

MILTON G. EVANS, Flagstaff, Chairman
C. GENE TOLLE, Phoenix
WILLIAM H. BEERS, Prescott
CHARLES F. ROBERTS O.D., Bisbee
FRANK FERGUSON, JR., Yuma
Director
ROBERT A. JANTZEN

Asst. Director, Operations
PHIL M. COSPER

Asst. Director, Services
ROGER J. GRUENEWALD



ARIZONA GAME & FISH DEPARTMENT

225 West Greenway Road Phoenix, Arizona 85023

October 25, 1979

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Mr. W. O. Nelson
Regional Director
U.S. Fish and Wildlife Service
P. O. Box 1306
Albuquerque, New Mexico 87103

Dear Mr. Nelson:

The Department has reviewed the Agency Review Draft of the Bald Eagle Recovery Plan. The review was made primarily by Ronald Horejsi, Research Biologist with the Department and a member of the Recovery Team.

The Department believes this is a well organized and thorough document with realistic goals concerning the recovery of this species. Considering the limited biological data available on the Southwest Bald Eagle, the plan sets out a well defined curriculum for updating the understanding and management of this bird, its habitat and survival.

How effectively this Department can participate in the various recovery tasks, as set forth in the budget section, will depend heavily on available funding. The Department's budget planning for future activities will make every effort to include funds for this recovery plan.

E-11 The only addition we feel would add to the plan is to better define the priority ranking system in the budget section and possibly adding time constraints where feasible.

We appreciate the opportunity to provide you these comments and to participate in the development of the plan.,

Sincerely,

cc: Duane Rubink/11-6-79/vah

Robert A. Jantzen, Director

RECEIVED
OCT 29 1979
OFFICE OF THE REGIONAL DIRECTOR

John N. Carr
John N. Carr, Supervisor
Planning and Evaluation Branch
FVS R
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JNC:dd

cc: Ronald Horejsi, AGFD
pave Roe, AGFD

OCT 31

GUBERNOR
 GOVERNOR
 SECRETARY
 SECRETARY
 ARNOLD OLSON

State of New Mexico



DEPARTMENT OF GAME AND FISH

STATE CAPITOL
 SANTA FE
 87503

End. Sn. R-2

Coordinator	
Memt.	
Sec. 7	
Admin.	
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FILE <i>Sis Bald Eagle</i>	

STATE GAME COMMISSION
 WARD MUNOZ, CHAIRMAN
 GALLUP
 J W JONES
 ALBUQUERQUE
 ROBERT W FORREST
 CARLSBAD
 ROBERT P GRIFFIN
 SILVER CITY
 BILL LITRELL
 CIMARRON

October 16, 1979

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Hr. W. O. Nelson, Jr.
 Fish and Wildlife Service
 P. O. Box 1306
 Albuquerque, New Mexico 87101

Dear Bill:

We have completed our review of what I presume to be the second draft of the Southwestern Bald Eagle Recovery Plan, as requested in your letter of September 17, 1979. In general, this draft represents both an improvement over the previous one and a good outline for the recovery of the species in the Southwest. I use the word "recovery" loosely, in that it does not appear that we have data to indicate that either the wintering or the breeding populations of the region have declined. However, ignoring this factor for the present, we agree that the draft does cover in a satisfactory manner the items that we need to address in order to manage this species' better in our region.

The few comments and criticisms that we have are minor ones. However, in the effort to polish the document somewhat, I believe that the items should be pointed out to you and the team. One of the first points is that the pages should be numbered, which would facilitate referencing. In the absence of page numbers, we have supplied our own--starting with the cover as page one. Other comments and criticisms are as follows:

12 Page 7. Races of animals or plants are not really "legally recognized"; the recognition is by people or institutions, and as far as we know some still recognize two races of bald eagles. The "legal" referred to here actually pertains to listing by the F.W.S. and has nothing to do with the standing of races. Southern and northern races are written in lower case, and the trinomial should be given for the sake of interested readers.

-13 Page 8. The historical records given for New Mexico are very incomplete, and the references that should be cited are Bailey (1928) and Ligon (1961)--not Bailey (1904). (Ligon is New Mexico birds and where to find them. Univ. New Mexico Press, Albuquerque.). The period referred to at the bottom of the page should be 1972-1976, not 1972-1975.

OCT 18

cc: Rubink, Rec. Team Leader/10-19-79/vah

SE

F-1 . Page 9. The only verified nesting for New Mexico is in Catron County in the' period March-April 1979. The 1962 nesting record was not at Navajo Dam but on the Animas River, and no positive proof of breeding was obtained. Tom Smiley's recommendations for search areas for breeding birds are not relevant and hardly bear citing. Should not the winter status be discussed here in some detail?

Page 12. Change Gila Mountain sucker and Sylvilagus sp. to Gila mountain sucker and Sylvilagus spp.

F-15 Page 15. Insert "analyze" in line 5 after "maintain". In line 10, what is the difference between "fledglings" and "juveniles"? Add a section 15a, i.e. "Determine habitat and other biological factors that are necessary to breeding and wintering eagles". Section 2 overlaps with 1. To eliminate this, move all research items to section 1.

We appreciate the opportunity to review this draft and commend the recovery team for its efforts in behalf of the bald eagles in the Southwest.

Sincerely,



Harold F. Olson
Director

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OFFICE OF THE
REGIONAL DIRECTOR

OCT 18 1979



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
ARIZONA STATE OFFICE
2400 VALLEY BANK CENTER
PHOENIX, ARIZONA 85073

Administrative routing slip with checkboxes and handwritten notes including 'PV', '6840 (932)', and 'FILE Bald Eagle Rec Plan'.

Mr. William O. Nelson, Jr.
Regional Director, Region 2
U.S. Fish and Wildlife Service
P.O. Box 1306
Albuquerque, New Mexico 87103

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Dear Mr. Nelson:

We have reviewed the Draft Bald Eagle Recovery Plan and find that it adequately discusses the occurrence and needs of the bald eagle on public lands in Arizona. We compliment you for your use of estimated work months rather than dollar figures. Work month needs remain constant over time, while dollar values keep changing.

G-16

In your proposed budget for California, pages 1 and 2, we suggest that half of your proposed costs for Bureau of Reclamation be assigned to BLM since the BLM and Bureau of Reclamation jointly manage the withdrawn reclamation land along the Lower Colorado River.

Sincerely,

Handwritten signature of Glendon E. Collins

Glendon E. Collins
Acting State Director

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US FWS REG 2
OFFICE OF THE
REGIONAL DIRECTOR

cc: Duane Rubink/10-29-79/vah

OCT 18 1979

FWS
RE...

OCT 22 1979

SE

TEXAS
PARKS AND WILDLIFE DEPARTMENT



CHARLES O. TRAVIS
EXECUTIVE DIRECTOR
4200 Smith School Road
Austin, Texas 78744

Exec. Sec.	
Asst. Dir.:	
Adm. Serv.	
Inv. & Reg.	
Law Enfc.	
Plan. & Insp.	
Rec. Mgmt.	
Tech. Serv.	
Training	
Off. Aff.	
Public Aff.	
Safety	
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SE

COMMISSIONERS

PERRY R. BASS
Chairman, Fort Worth

JAMES R. PAXTON
Vice-Chairman, Palestine

PEARCE JOHNSON
Austin

COMMISSIONERS

JOE K. FULTON
Lubbock

EDWIN L. CDX.
Dallas

W. B. OSBORN,
Santa Elena

Send copy
to S.E. Team

October 18, 1979

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Mr. Jerry L. Stegman
Acting Regional Director
11. S. Fish and Wildlife Service
P. O. Box 1306
Albuquerque, New Mexico 87103

Dear Mr. Stegman:

This is in response to your letter of **September** 17, 1979, requesting this **Department** review and **comment** on the draft of the Southwest Bald Eagle Recovery Plan.

17-17 We **recommend** approval of the Recovery Plan in its present form. Sane **assignments** made to this Department have already been accomplished by previous research, and **attempts** will be made to complete the other objectives depending on availability of manpower and funds. One minor discrepancy would be failure to include this Department in the table entitled "Estimated Man Months of Effort by Agency."

Thank you for the opportunity to **comment** on this Recovery Plan;

Sincerely,

William C. Brownlee
WILLIAM C. BROWNLEE
Program Director, Nongame

WCB:DAS:ah

cc: Duane Rubink/10-31-79/vah

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REGIONAL DIRECTOR
OCT 26 1979

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OCT 29

DEPARTMENT OF FISH AND GAME
1416 NINTH STREET
SACRAMENTO, CALIFORNIA 95814
(916) 445- 3531

Handwritten routing slip with checkboxes and a stamp. Includes the name 'B. W. Balch Eagle' and 'NOV 19 1979'. A circular stamp is visible on the right side of the slip.

November 8, 1979

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Mr. Jerry L. Stezman
Acting Regional Director
U. S. Fish and wildlife Service
P. O. Box 1306
Albuquerque, New Mexico 87103

Dear Mr. Stezman:

We have reviewed the Agency Review Draft of the Bald Eagle Recovery Plan and have the following comments:

I-18 Introduction - The second paragraph should contain a reference to the federal Endangered Species Act of 1973, under which the endangered classification is made. Also, the legal classification of Bald Eagles in each of the southwest states involved in this plan should be described.

Note that the third sentence of the second paragraph in this section is grammatically incorrect.

History - In paragraph #3 and in Literature Cited, Grinnell is misspelled.

Proposed Budget - California Department of Fish and Game (CDFG) involvement in this recovery program will be influenced by our budgetary constraints and by our involvement in recovery programs that will be recommended under the Pacific Bald Eagle Recovery Plan. This plan has not yet been written, as this region's recovery team was formed just recently. We anticipate that this new team will coordinate with the Southwest team in recommending actions needed in the lower Colorado River area.

I-19 For now, we recommend that CDFG responsibilities under the Southwest team plan should deal primarily with winter habitat identification and protection and winter inventories of birds. With this in mind, we have revised estimated man-months for many of the tasks recommended for CDFG under the proposed budget. Our recommendations are as follows:

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REGIONAL DIRECTOR

Task 11 - Documentation of historical records and literature search for Bald Eagle activity along the Colorado River will not require 0.5 man-months the first year. We recommend the following man-month figures for the first five years: 0.1-0.1-0.1-0.1-0.1.

NOV 18 1979

FWS REG 2
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cc: Duane Rubink/10-30-79/vah

NOV 20 1979

Task 1 2 - Our winter inventories primarily will be coordinated through the annual mid-winter inventory, sponsored by National Wildlife Federation. We anticipate the following man-month figures: 0.3-0.3-0.3-0.3-0.1.

Task 1 3- As proposed in this draft plan, significantly more CDFG time would be spent on this task than any other along the Colorado River. Inasmuch as our Department and the new Pacific Recovery Team have not had an opportunity to discuss priorities for CDFG involvement in Bald Eagle research and management along the Colorado River, this proposal for CDFG man-hour responsibility under Task 13 is premature. Until such time as our Department and the two teams can discuss our Department's role in field investigations along the Colorado River, we recommend that CDFG man-month figures for Task 13 be significantly reduced to reflect only minimum Department assistance to other agencies. Suggested man-month figures are 0.1-0.1-0.2-0.2-0.2.

Tasks 14 through 16 - We feel these time recommendations are reasonable.

Task 2112 and 2121 - These tasks do not apply to California; thus, we recommend no involvement by CDFG.

Task 2113 - We feel there is a need for more intensive CDFG involvement in this task earlier in the five-year planning period, as follows: 0-0.2-0.6-0.2-0.

The draft plan contains no recommendation for CDFG involvement in tasks 212, 22 and 3. We feel our Department has a role to play in analyzing non-nesting habitats, maintaining and upgrading habitats, and conducting information programs in the Colorado River area. Thus, we recommend the following man-month figures for these tasks:

Task 212: 0.1-0.1-0.1-0.1-0.1
Task 22: 0.4-0.4-0.4-0.4-0.4
Task 3: 0.2-0.2-0.2-0.2-0.2

These recommendations total 9.3 man-months of CDFG time for the five-year planning period, broken down as follows: year 1, 1.6; year 2, 2.0; year 3, 2.0; year 4, 1.9; and year 5, 1.8 man-months. The five-year total is 3.6 man-months less than proposed in the draft plan.


Mr. Jerry L. Stezman

-3-

November 8, 1979

We appreciate the opportunity to comment on this draft recovery plan. If there are questions regarding these comments, our Department contact is Ronald Jurek of our Endangered Species section (phone 916-322-1377).

Sincerely,


Director

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Region 3
517 Gold Avenue, SW.
Albuquerque, New Mexico 87102

2630
January 23 1978
ACTIV



W. O. Nelson, Jr., Regional Director
USDI, Fish and Wildlife Service
P.O. Box 1306
Albuquerque, New Mexico 87103

Dear Mr. Nelson:

We have reviewed the Southwestern Bald Eagle Recovery Plan. The plan is well written **and with** some minor revisions should guide the cooperative recovery efforts.

- J-20 **The** introduction material should be revised to note the 1979 nesting record in New Mexico. **Comments** on the step-down portion are as follows:
- J-21 1. The prime objective is not quantified. At what population level will the species be "restored"? Has a viable population level been identified?
- J-22 2. With only eleven active territories and a **marginal** reproductive rate, the status of this population is tenuous at best. What contingency plans, if any, have been considered in the event of a significant decline in the number of breeding pairs or reproductive success?
- J-23 3. The scope of the second objective appears too narrow. We suggest that this objective be broadened to read "Identify, **protect**, and improve existing and potential habitat..."
- J-24 **Items** covered in objective 221, "monitor land use changes* **is** already a **normal** part of the Section 7 process and might be deleted from the plan since it adds no specific direction.
- J-25 Item 224, "Manage habitat on public lands" **is** vague. We **recommend** adding objectives that would better define specific tasks to be attained, such as "reestablish nesting habitats." How does 224 differ **from 221?**

cc: Duane Rubink/2-7-80/vah

FWS R
REGEN

JAN 2 1978

SE

J-26 Item 225. We suggest amending the objective by deleting the words "find ways **to**" so that the objective would then read "Improve habitat of nesting bald eagles..." We are not sure how 225 differs from 224.

J-27 4. Item 3112 should note that Federal land management regulations may also be invoked **to protect** endangered species habitats through closure orders. Secretary of Agriculture Regulation, 36 CFR 261.50, *is* appropriate to this purpose on National Forest System lands.

5. Several budget items are questionable.

J-28 **It** is not realistic to assign dollar or man-month values to tasks in the plan. The plan should focus on task priorities and identify agencies to accomplish the task. Let the agencies develop their own budget estimates and manpower needs.

We think the manpower estimates for Forest Service involvement are too high. Our suggestions are:

Task.

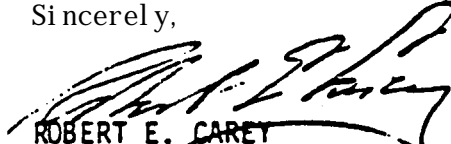
11	Historical records	10 man-months' too high, 4-6 more realistic
15	Food habits	FS involvement could be greater since foraging areas and prey base are key habitat factors.
2112	Former use areas	4-8 man-months adequate.
2121	Non-nesting habitat	FWS and FS roles reversed: FS not the sole source of non-nesting habitat.
2122	Migrant habitat	Much of task already completed. 28 man-months adequate.
221	Monitor changes	All agencies should be involved, not just FWS.

6. Task assignments reflect the team's composition of mostly Arizona biologists. The New Mexico Department of **Game** and Fish has a greater responsibility than indicated, and Bureau of Land Management involvement should be greater. Tasks between States are different. Arizona has most of the nesting population while New Mexico has a larger wintering population.

3

Thank you for the opportunity to **comment** on the draft **recovery** plan. The Forest Service has been deeply involved in **ba** eagle recovery efforts to date. Hopefully, our land management and research programs will play an **important** part in the implementation of the **final** recovery plan and in the successful recovery of the bald eagle in the Southwest.

Sincerely,



ROBERT E. CAREY
Acting Regional Forester



United States Department of the Interior

FISH AND WILDLIFE SERVICE
WASHINGTON, D.C. 20240

SF

- ADDRESS ONLY THE DIRECTOR, FISH AND WILDLIFE SERVICE
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In Reply Refer To:
FWS/OES 310.6

FEE-5 1980

Memorandum

To: Regional Director, Region 2
Acting Deputy Associate
Director

From: Director

Subject: Review of Bald Eagle Recovery Plan (Southwest) - Agency Review
Draft

E.O. 12812	
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We have reviewed the subject Recovery Plan. and have the following comments:

- K-26 1. Add a statement to the disclaimer sheet similar to the following:
"Goals and objectives will be attained and funds expended contingent upon appropriations, priorities, and other Mgetary constraints: This type of statement is going to be added to all disclaimer sheets to clarify that plan approval doe6 not constitute final approval of any particular funding or appropriations, in subsequent fiscal years, by the Fish and Wildlife Service or any other agency."
- K-27 2. Figure 1 does not include Mexico as stated In the Preface.
- K-28 3. The first sentence, third paragraph in the Preface should read: "... within a five year period following the year of plan approval . . ." ta agree with the last paragraph discussing the Budget.
- K-29 4. The Prime Objective should be quantified to identify a definite end point. There should be some method or criteria established to determine when the nesting population6 0000 • re6tDred.w Any changes in the objective should also be included in the Preface.
- 5. Law • nforcent activities don't seem to fit under information programs. Law enforcement should be a separate objective. This could be attained by changing #31 to #3 and renumbering the subobjectives accordingly. Then change #32 to #4 "Develop and produce needed education and information material6 to gain support for the protection of bald eagles."

cc: D. Rubink/2-12-80/vah



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JUL 28 1980

U. S. FISH & WILDLIFE SERVICE
AREA OFFICE PHOENIX, AZ

JAN 23 1980

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FEB 11 '80

6. Including man-months in the Implementation Schedule can be useful, but we also need dollar figures for programming and budgeting. The fiscal years should also be added in the final draft of the Plan. The first year should be the year following plan approval.
7. Same kind of information should be added to Appendix B 'Information and Education' or it should be covered elsewhere in the narrative.



C. Phillip Agee

RECOVERY TEAM REPLIES TO LETTERS OF COMMENT

- A-1 We concur with item one. In your item two, the budget items are suggestions and do not **commit** the agencies. Concerning item three, no comments were received.
- B-2 The correction was made.
- B-3 This data was reported after the release of **the** draft document and is included in the final draft.
- B-4 The **stepdown** plan identified all public agencies and private groups that furnish historical **data**. The function of the Recovery Team **is** not to **gather data**. The suggestion to centralize information in the Fish and Wildlife Service office in Albuquerque has been implemented.
- B-5 The **votk** months are estimates based **on' the best** available knowledge of current costs on bald eagle research in **the** Southwest.
- B-6 The work months are estimates by the Recovery Team to accomplish each task and does' not obligate or **commit the** resources of **the** various agencies.
- c-7 **This** area is **being** covered by the Northern Recovery Team.
- C-8 The intent of item 21 **is** to locate and identify habitat **that is** essential to the bald eagle. Management act ions and prot **ect** ion needs can then be determined in order to achieve the objectives of **the recovery** plan.
- D-9 Map was removed.
- D-10 This is the recommended Fish and Wildlife Service format used ' in all recovery plans.
- E-11 Priority ranking is explained in the introduction to **the** Budget Section.
- F-12 Suggestion incorporated.
- F-13 Correction made.
- F-14 Change made.
- F-15 Your suggestion has merit, hut in our view **the gain** does not justify a major reorganization **of** the final plan=

- G-16** In the final draft, the State summaries were omitted. Your **suggested change** was made in the final implementation schedule.
- H-17** Texas was added.
- I-18** Suggestions were included in **the plan**.
- I-19** Some changes were made in the budget. Since **the work** months are estimates and many differences were small, some changes were not **made**.
- J-20** Has been added.
- J-21** The introduction was rewritten to include estimates about when **the** population might be considered for **reclassification**.
- J-22** Change was made.
- J-23** Has been added.
- J-24** Changes were made.
- J-25** The **item** 224 title was changed to reflect the intent of **the** item. The umbrella of item 22 **contains** specific tasks, such as the one you suggested.
- J-26** Change was **made**.
- J-27** Change was made.
- J-2R** Some adjustments were made. **The** work months are estimates and do not commit resources **or** any agency in **item** 2121, the team included time required to develop a habitat model in addition to actual survey work.
- K-26** **Disclaimer**: sheet **omitted** in the final draft.
- K-27** Exclusion of Mexico In Figure 1 is explained in the introduction.
- K-28** Recommended **change** made.
- K-29** See J-21