
DEPARTMENT OF THE INTERIOR**Fish and Wildlife Service****50 CFR Part 17****Endangered and Threatened Wildlife and Plants; Proposed Endangered Status and Critical Habitat for the Fresno Kangaroo Rat**

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Service proposes to determine Endangered status and Critical Habitat for the Fresno kangaroo rat. This small, hopping mammal is restricted to the native grasslands of Fresno County in the San Joaquin Valley of California. From 1938 to April 1981, about 90 percent of the approximately 100,000 acres of these grasslands was destroyed by agricultural development. Just in the period from April to November 1981, 34 percent of the remaining habitat was eliminated, and the loss of additional areas appears imminent.

Moreover, most of the native grasslands still in existence are being adversely modified through grazing by domestic livestock. Although there are still about 6,417 acres of potentially suitable habitat, a recent survey found only about 857 acres to be actually occupied by the kangaroo rat. This proposal, if made final, would implement the protection of the Endangered Species Act of 1973, as amended, for the Fresno kangaroo rat. The Service seeks data and comments from the public.

DATES: Comments from the public and the State of California must be received by January 20 1984.

Public hearing request must be received by January 5, 1984.

ADDRESSES: Interested persons or organizations are requested to submit comments to the Regional Director, U.S. Fish and Wildlife Service, Lloyd 500 Building, Suite 1692, 500 Northeast Multnomah Street, Portland, Oregon 97232. Comments and materials received will be available for public inspection, by appointment during normal business hours, in the Service's Endangered Species Office at the above address.

FOR FURTHER INFORMATION CONTACT: Mr. Sanford R. Wilbur at the above address (503/231-6131 or FTS 429-6131).

SUPPLEMENTARY INFORMATION:

Background

The Fresno kangaroo rat (*Dipodomys nitratoides exilis*) is a small, hopping mammal, found only in the San Joaquin Valley of central California. It appears to have always been restricted to the native alkali sink-open grassland plant community of western Fresno County. Its original range is not entirely known, but probably covered an area of about 250,000 acres, extending in the north to the San Joaquin River, in the east to the town of Fresno, in the south to the Kings River, and in the west to the Fresno Slough (Hoffman 1974).

Shortly after its discovery in 1891, the Fresno kangaroo rat evidently became rare in response to agricultural development in its habitat, and for many years it was thought to be extinct. In 1933, however, it was rediscovered (Culbertson 1934). A survey in 1938 indicated the presence of about 100,000 acres of native alkali sink vegetation within the original range of the kangaroo rat (Knapp 1975). Because of the continued growth of agriculture and urbanization, the natural habitat declined to an estimated 15,000 acres by 1975 (Koos 1979). An aerial survey in April 1981, located about 10,000 acres of apparently suitable habitat, but by November 1981, 34 percent of this land had been converted to agriculture. Field studies in 1981-1982 found only about 857 acres, mostly State-owned, to actually be occupied by the kangaroo rat (Hoffman and Chesemore 1982). Nearly all of the other remaining potential habitat has deteriorated badly because of heavy grazing by domestic livestock. Some of this habitat will probably be converted to agriculture in the near future, and all of it may be eliminated, unless conservation measures are implemented.

Summary of Factors Affecting the Species

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations promulgated to implement the listing provisions of the Act (codified at 50 CFR Part 424; under revision to accommodate 1982 amendments) set forth the procedures for adding species to the Federal lists. The Secretary of the Interior shall determine whether any species is an Endangered species or a Threatened species due to one or more of the five factors described in Section 4(a)(1) of the Act. These factors and their application to *Dipodomys nitratoides exilis* (Fresno kangaroo rat) are as follows.

A. The present or threatened destruction, modification, or curtailment of its habitat or range. The Fresno kangaroo rat is one of a group of small mammals, the existence of which is closely associated with conditions of soil and vegetation. Its requirements in this regard seem even more restrictive than those of most kangaroo rats. It most have a land surface with hummocks as sites for its extensive, but shallow burrow systems, and a substrate of suitable compactness to permit burrow construction. A relatively dense growth of vegetation is required as cover for escape from predators and as a source of food. Conversion of an area of native vegetation for crop production completely eliminates the use of that area by the Fresno kangaroo rat. This animal, unlike some other rodents, is not known to utilize area that have been cultivated or irrigated. As indicated in the Background above, however, nearly all of the original habitat of the kangaroo rat has been taken over by agriculture, and the process is continuing. Associated urbanization has also reduced the amount of native vegetation.

Of the remaining potential habitat of the Fresno kangaroo rat, most is being adversely affected by livestock grazing. Evidence indicates that such grazing has a substantial impact on both the distribution and density of the kangaroo rat. The largest kangaroo rat populations are associated with the least grazing pressure (Koos 1977). Mean population densities were found to be about 6.0 individuals per acre in an ungrazed area, but only about 2.5 per acre in a grazed area (Warner 1976). Grazing may adversely influence kangaroo rat numbers by modifying vegetation structure, reducing escape cover, and decreasing food availability. The livestock may also directly damage the shallow burrows of the kangaroo rat (Koos 1979).

B. Overutilization for commercial, recreational, scientific, or educational purposes. Not known to be a problem.

C. Disease or predation. Not known to be a problem at present, but could be potentially disastrous if the habitat of the kangaroo rat becomes excessively restricted.

D. The inadequacy of existing regulatory mechanisms. The California State Fish and Game Commission lists the Fresno kangaroo rat as endangered and, therefore, regulations are in effect that prohibit taking. The main problem of the kangaroo rat, however, is not direct taking, but habitat loss to agricultural development and grazing.

E. Other natural or manmade factors affecting its continued existence. Hoffman and Chesemore (1982) suggested that the combination of a drought in 1977 and possible competition with the Heermann's kangaroo rat (*Dipodomys heermanni*) may have caused the extirpation of the Fresno kangaroo rat in areas of marginal habitat.

Critical Habitat

Section 4(a)(3) of the Endangered Species Act, as amended, requires the Secretary to designate the "Critical Habitat" of a species, concurrent with listing, "to the maximum extent prudent and determinable." The Act defines Critical Habitat as (i) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of Section 4 of this Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of Section 4 of this Act, upon a determination by the Secretary that such areas are essential for the conservation of the species.

The proposed Critical Habitat of the Fresno kangaroo rat comprises about 857 acres in western Fresno County, California. It is located generally to the south of the San Joaquin River, to the west of the town of Kerman, to the north of the Fresno Slough Bypass, and to the east of the Fresno Slough. Of this land, about 565 acres compose the State of California's Alkali Sink Ecological Reserve or are scheduled for addition to the Reserve, about 20 acres are part of the State-owned Mendota Wildlife Management Area, and the remainder is privately owned.

In considering designation of Critical Habitat, 50 CFR 424.12(b) requires focus on the biological or physical constituent elements within the defined area that are essential to the conservation of the species involved. With respect to the Fresno kangaroo rat, the area proposed as Critical Habitat satisfies all known criteria for the ecological, behavioral, and physiological requirements of the species. This area provides sufficient vegetative cover for escape from predators and to serve as a food source, land surface with hummocks to serve as secure burrowing sites, and substrate of suitable compactness to permit burrow construction. This area may not include the entire habitat of the Fresno kangaroo rat. The kangaroo rat could be discovered on or reintroduced to other areas within the general locality described above. Therefore, modifications to the Critical Habitat designation may be proposed in the future.

Subsection 4(b)(8) of the Act requires that, to the maximum extent practicable, any proposed or final rule to determine Critical Habitat be accompanied by a brief description and evaluation of those activities which, in the opinion of the Secretary, may adversely modify such habitat if undertaken, or may be affected by such designation. In the case of the Fresno kangaroo rat, as previously indicated, conversion of native vegetation for agricultural use destroys suitable habitat. Moderate to heavy livestock grazing adversely modifies habitat, so that the number of Fresno kangaroo rats that can be supported is severely reduced. Any other activities that disturb the native vegetation and ecosystem would probably also adversely affect the kangaroo rat. Conversely, the same kinds of actions could be affected by the protection of the Critical Habitat of the kangaroo rat, if they are likely to adversely modify such habitat, and if they are Federally authorized, funded or carried out (see "Available Conservation Measures," below).

Subsection 4(b)(2) of the Act requires the Service to consider economic and other impacts of specifying a particular area as Critical Habitat. Therefore, an impact analysis will be prepared prior to the time of a final rule and will be used as the basis of a decision on whether or not to exclude any area from Critical Habitat for the Fresno kangaroo rat. The Service is notifying Federal and State agencies that may have jurisdiction over the land and water under consideration. These agencies and other interested parties are requested to submit

information on economic or other impacts of the proposed measure.

No activities involving Federal agencies are presently known that may have an impact on the habitat of the Fresno kangaroo rat. However, construction of a solid waste disposal site is being contemplated by Fresno County in the vicinity of the intersection of Whites Bridge Road and James Road. This project is in the early planning stages and a specific site has not been selected. It is not known if there will be any Federal involvement in this activity.

It should be emphasized that Critical Habitat designation does not necessarily affect Federal activities. If appropriate, the impacts will be addressed during conferral or consultation with the Service as required by Section 7 of the Endangered Species Act, as amended. Modification, and not curtailment, of the affected Federal activity has traditionally been the result of Section 7 consultations.

Available Conservation Measures

Endangered Species regulations already published in Title 50, § 17.21 of the Code of Federal Regulations set forth a series of general prohibitions and exceptions which apply to all Endangered wildlife species. The prohibitions, in part, would make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of a commercial activity, or sell or offer for sale any Fresno kangaroo rat in interstate or foreign commerce. It also would be illegal to possess, sell, deliver, carry, transport, or ship any such wildlife which was illegally taken. Certain exceptions would apply to agents of the Service and State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving Endangered wildlife under certain circumstances. Regulations governing such permits are codified at 50 CFR 17.22 and 17.23. Such permits are available for scientific purposes, for incidental take in accordance with an approved conservation plan, or to enhance the propagation or survival of the species. In some instances, permits may be issued during a specified period of time to relieve undue economic hardship which would be suffered if such relief were not available.

Subsection 7(a) of the agencies to evaluate their actions with respect to any species that is proposed or listed as Endangered or Threatened. This proposed rule requires Federal agencies to satisfy their statutory obligations with respect to the Fresno kangaroo rat.

Agencies will now be required, in accordance with Section 7(a)(4), to informally confer with the Service on any action that is likely to jeopardize this species or result in the destruction or adverse modification of its Critical Habitat. If the Fresno kangaroo rat is ultimately added to the list of Endangered and Threatened Wildlife, Section 7 would require Federal agencies to insure that the actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of this species or result in the destruction or adverse modification of its Critical Habitat that has been determined by the Secretary.

This proposed rule would also bring Sections 5 and 6 of the Endangered Species Act into effect with respect to the Fresno kangaroo rat. Section 5 authorizes the acquisition of lands for the purpose of conserving Endangered and Threatened species. Pursuant to Section 6, the Fish and Wildlife Service would be able to grant funds (should they become available) to the State of California for management actions aiding the protection and recovery of the kangaroo rat.

Listing the Fresno kangaroo rat as Endangered would provide for development of a recovery plan for this mammal. Such a plan would draw together the State and Federal agencies having responsibility for conservation of the kangaroo rat. The plan would establish an administrative framework, sanctioned by the Act, for agencies to coordinate activities and cooperate with each other in conservation efforts. The plan would set recovery priorities and estimate the cost of the various tasks necessary to accomplish them. It would assign appropriate functions to each agency and a time frame within which to complete them.

National Environmental Policy Act

A draft environmental assessment has been prepared in conjunction with this proposal. It is on file at the Service's Portland Regional Office (see ADDRESSES section above) and may be examined by appointment during regular business hours. A determination will be made at the time of a final rule as to whether this is a major Federal action that would significantly affect the quality of the human environment within the meaning of Section 102(2)(C) of the National Environmental Policy Act of 1969 (implemented at 40 CFR Parts 1500-1508).

Public Comments Solicited

The Service intends that the rules finally adopted will be as accurate and

effective as possible in the conservation of any Endangered or Threatened species. Therefore, any comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, private interests, or any other interested party concerning any aspect of the proposed rules are hereby solicited. Comments particularly are sought concerning:

- (1) Biological, commercial, or other relevant data concerning any threat (or the lack thereof) to the Fresno kangaroo rat;
- (2) The location of and the reasons why any habitat of this mammal should or should not be determined to be Critical Habitat as provided for by Section 4 of the Act;
- (3) Additional information concerning the range and distribution of this mammal;
- (4) Current or planned activities that may adversely modify the areas that are being proposed for designation as Critical Habitat; and
- (5) The foreseeable economic and other impacts of the Critical Habitat designation on Federal activities, private individuals, etc.

Final promulgation of the regulations on the Fresno kangaroo rat will take into consideration the comments and any additional information received by the Service, and such communications may lead to a final regulation that differs from this proposal.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be filed within 45 days of the date of the proposal. Such requests should be made in writing and addressed to the Regional Director, U.S. Fish and Wildlife Service, Lloyd 500 Building, Suite 1692, 500 Northeast Multnomah Street, Portland, Oregon 97232.

Author

The primary author of this proposal is Dr. Kathleen E. Franzreb, Endangered Species Office, U.S. Fish and Wildlife Service, 1230 "N" Street, 14th Floor Sacramento, California 95814.

References

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 Warner, D. R. 1976. The effects of grazing on *Dipodomys nitratooides exilis* in an alkali sink community. M.S. thesis. California State University, Fresno.

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Proposed Regulations Promulgation

PART 17—[AMENDED]

Accordingly, it is hereby proposed to amend Part 17, Subchapter B of Chapter I Title 50 of the U.S. Code of Federal Regulations, as set forth below:

1. The authority citation for Part 17 is revised to read as follows:

Authority: Pub. L. 93-205, 87 Stat. 884; Pub. L. 95-832, 92 Stat. 3751; Pub L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411 [16 U.S.C. 1531 *et seq.*]

§ 17.11 [Amended]

2. It is proposed to amend § 17.11(h) by adding the following, in alphabetical order, to the List of Endangered and Threatened Wildlife under Mammals:

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical Habitat	Special rules
Common name	Scientific name						
Rat, Fresno kangaroo.	<i>Dipodomys nitratooides exilis</i> .	U.S.A. (California)	Entire	E	17.95(a)	N.A.	

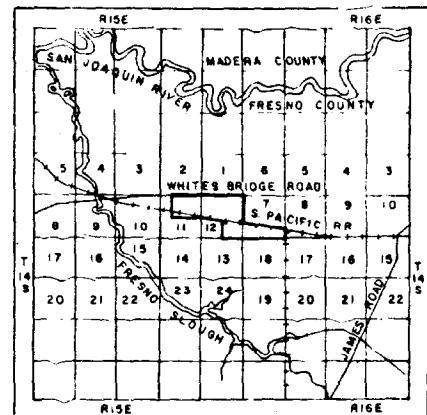
§ 17.95 [Amended]

3. It is further proposed that § 17.95(a), *Mammals*, be amended by adding the Critical Habitat of the Fresno kangaroo rat after that of the manatee as follows:

Fresno Kangaroo Rat (*Dipodomys nitratooides exilis*)

California. An area of land, water, and airspace in Fresno County, with the following components (Mt. Diablo Base Meridian): T14S R15E, E½NW¼ and NE¼ Sec. 11, that part of W½ Sec. 12 north of the Southern Pacific Railroad, E½ Sec. 12; T14S R16E, that part of Sec. 7 south of the Southern Pacific Railroad.

Within this area, the major constituent elements that are known to require special management considerations or protection are the hummocks and substrate that provide sites for burrow construction, and the natural alkali sink-open grassland vegetation that provides food and escape cover.



Dated: October 4, 1983.

J. Craig Potter,
 Acting Assistant Secretary for Fish and Wildlife and Parks.