DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018–AE40

Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for the Riparian Brush Rabbit and Riparian Woodrat

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Fish and Wildlife Service (Service) proposes to list the riparian brush rabbit (*Sylvilagus bachmani riparius*) and the riparian (San Joaquin Valley) woodrat (*Neotoma fuscipes riparia*) as endangered species pursuant to the Endangered Species Act of 1973, as amended (Act). The brush rabbit and woodrat inhabit riparian communities along the lower portions of the San Joaquin and Stanislaus rivers in the northern San Joaquin Valley, California. Only a single remaining population of each species has been confirmed. Potential threats to these species include flooding, wildfire, predation, and other random factors. This proposal, if made final, would extend the Act's protective provisions to these animals.

DATES: Comments from all interested parties must be received by January 20, 1998. Public hearing requests must be received by January 5, 1998.

ADDRESSES: Comments and materials concerning this proposal should be sent to the U.S. Fish and Wildlife Service, 3310 El Camino Ave., Suite 130, Sacramento, California 95821. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Diane Windham at the above address (telephone 916/979–2725).

SUPPLEMENTARY INFORMATION:

Background

The riparian brush rabbit (*Sylvilagus bachmani riparius*) was described as a distinct subspecies by Orr (1935) and is one of 13 subspecies of *S. bachmani* (Hall 1981). *Sylvilagus bachmani* belongs to the order Lagomorpha and family Leporidae. The riparian brush rabbit is a medium to small cottontail with a total length of 300 to 375 millimeters (mm) (11.8 to 14.8 inches (in)) and a mass of 500 to 800 grams (g) (1.1 to 1.8 pounds). It is unique in that the sides of the rostrum (nasal/upper jaw region of the skull), when viewed from above, are noticeably convex instead of straight or concave as in other races of *bachmani* (Orr 1940). The color varies from dark brown to gray above to white underneath. The subspecies visually resembles the desert cottontail (*Sylvilagus audubonii*), a species that also occurs in riparian habitats within the historic range of the riparian brush rabbit. In-hand identification is required to definitively distinguish between young individuals of these species (Williams 1993).

Brush rabbits in general breed between December and May or June (Mossman 1955). After a gestation period of 26 to 30 days, the young are born in nest cavities lined mainly with fur and covered with a grass plug (Davis 1936, Orr 1940, Orr 1942). The young are born naked, blind, and helpless and open their eyes in 10 days (Orr 1940, Orr 1942). Young rabbits remain in the nest about 2 weeks before venturing out, and the female will continue to suckle her young for 2 to 3 weeks after their birth. Orr (1940) reported a mean litter size of between three and four with a range of two to five, while Mossman (1955) reported an average of four with a range of three to six. Riparian brush rabbits grow to adult size in 4 to 5 months, but do not reach sexual maturity until the winter following birth. Females give birth to about 5 litters per season with an estimated average of 9 to 16 young per breeding season (Basey 1990). The percentage of females active during the breeding season is unknown, but in 1 study, 9 of 25, or 36 percent of, female adults examined showed no signs of reproductive activity (Basey 1990).

The habitat of the riparian brush rabbit is riparian forests with a dense shrub layer. Common food plants in riparian brush rabbit habitat include *Rosa californica* (California wild rose), *Rubus ursinus* (Pacific blackberry), *Vitis californica* (wild grape), *Sambucus mexicana* (elderberry), and grasses (Williams 1988, Basey 1990). Brush rabbits have relatively small home ranges that usually conform to the size and shape of available brushy habitat (Basey 1990). In general, the home ranges of males are larger than those of females but male home ranges do not overlap the primary activity centers within female territories (Basey 1990).

The riparian brush rabbit is currently restricted to a single population at Caswell Memorial State Park, San Joaquin County, along the Stanislaus River (Williams and Basey 1986). In surveys conducted in all potential habitat along the Merced, San Joaquin, Stanislaus, and Tuolumne rivers during 1985 and 1986, no additional populations of riparian brush rabbits were located (Williams 1988). A maximum of about 81 hectares (ha) (198 acres (ac)) in Caswell Memorial State Park are suitable habitat for riparian brush rabbit (Williams 1993). During periods of heavy flooding, when virtually no suitable habitat remains exposed as a refugium, the population can drop dramatically. Williams (1988) estimated a population low of 10 or fewer individuals after severe winter flooding in 1985–86. Extended flooding occurred during the winter and spring of 1997, but no population estimate is yet available (see factor A in the ''Summary of Factors Affecting the Species'' section). Such low population levels may make this subspecies extremely vulnerable to detrimental genetic processes and random events (see factor E in the ''Summary of Factors Affecting the Species'' section). Maximum population estimates from surveys conducted in recent years at Caswell Memorial State Park are 88 to 452 individuals (Williams 1988), 320 to 540 individuals (Basey 1990), and 170 to 608 individuals (Williams 1993).

Because this subspecies was not described until after it is believed to have been extirpated from most of its historic range, definitive information on its former distribution is lacking. Even though riparian brush rabbit specimen records and sightings were known only from along the San Joaquin River near the boundary of San Joaquin and Stanislaus counties, Orr (1940) believed, based on the presence of suitable habitat, that its historic range extended along the San Joaquin river system, from Stanislaus County north to the Sacramento-San Joaquin River Delta. It apparently has been extirpated from the Delta, as well as most of the lower San Joaquin River and its tributaries—the Stanislaus, Tuolumne, and Merced rivers (Williams 1986). The range of the subspecies likely extended farther upstream south of the Merced River, assuming that suitable habitat occurred historically along the length of the San Joaquin River system (Williams and Basey 1986).

The riparian (San Joaquin Valley) woodrat (*Neotoma fuscipes riparia*) was first described by Hooper (1938) and is 1 of 11 subspecies of *N. fuscipes* in the family Muridae (order Rodentia). The subspecies has been retained by Hall (1981) and Williams (1986 and 1993). The riparian woodrat is a medium-sized rodent, its total length averaging 443 mm (17.4 in), its tail length averaging 217 mm (8.5 in) (Hooper 1938), and its total weight, based on measurements of other subspecies, averaging about 227 g

(8 ounces), with marked seasonal variation (Williams *et al.* 1992). The riparian woodrat is predominantly gray and cinnamon above and whitish beneath, with white hindfeet. *Neotoma fuscipes riparia* is distinguished from other subspecies of *N. fuscipes* by size and coloration of the body, tail, ears, or feet, in addition to skull measurements and characteristics (Hooper 1938).

The following information is taken from a number of studies on *Neotoma fuscipes,* including *riparia* and related subspecies. Mostly active at night, the woodrat's diet is diverse and mainly herbivorous, with leaves, fruits, terminal shoots of twigs, flowers, nuts, and fungi comprising the bulk of ingested material (Williams *et al.* 1992). Females have one to five litters per year with three to four young each time. Reproduction occurs in all months, with the fewest pregnancies in December and the most in February. The number of juveniles appearing outside the nest is greatest in July and least in January and February (Williams *et al.* 1992).

The young are born in stick nest houses or lodges, which are located on the ground and measure 0.6 to 0.9 meters (m) (2 to 3 feet (ft)) high and 1.2 to 1.8 m (4 to 6 ft) in diameter. Most lodges are positioned over or against logs (Cook 1992, cited in Williams 1993). Unoccupied houses can persist for 20 to 30 years (Williams 1993). Unlike other subspecies, the riparian woodrat occasionally builds nests in cavities in trees and artificial wood duck nest boxes (Williams 1986). Nest houses usually are occupied by single adults. Young seldom disperse far from their natal houses, and nest clusters occupied by related individuals tend to develop in favored habitats. Unlike males, females remain in or near natal areas throughout their life (Williams *et al.* 1992). At Caswell Memorial State Park, Williams (1993) reported a mean density of houses of 8.3 per ha (3.4 per ac), or 757 houses on 91 ha (225 ac) of suitable habitat; occupancy of these houses was not verified.

In a study of another subspecies of *Neotoma fuscipes,* Linsdale and Tevis (1951, cited in Williams *et al.* 1992) found that 70 percent of the population survived less than 1 year, 27 percent survived 2 years, and 3 percent survived 3 years or more. Williams *et al.* (1992) also cited a number of studies that indicated woodrats are highly responsive to habitat alteration, with populations fluctuating widely in response to a variety of perturbations such as fire, flood, drought, habitat modification, and browsing and trampling by ungulates.

Historical localities for the riparian woodrat are distributed along the San Joaquin, Stanislaus, and Tuolumne rivers, and in Corral Hollow in San Joaquin, Stanislaus, and Merced counties (Hooper 1938, Williams 1986). This range is similar to the presumed historical range for the riparian brush rabbit. Thus, prior to the statewide reduction of riparian communities by nearly 90 percent (Katibah 1984), the riparian brush rabbit and woodrat probably occurred throughout the extensive riparian forests along major streams flowing onto the floor of the northern San Joaquin Valley.

The only known population of the riparian woodrat occurs in, and immediately adjacent to, Caswell Memorial State Park, also the site of the only riparian brush rabbit population (Williams 1993). A woodrat population was reported during the early 1970s near the type locality at Vernalis, but the current status of the population is unknown (D. Williams 1986, pers. comm. 1994). The site of an old record at Corral Hollow, San Joaquin County, no longer supports suitable habitat (D. Williams, pers. comm. 1994). Cook (1992) estimated the Caswell Park population at 637 woodrats over 102 ha (250 ac) of habitat. Williams (1993) estimated a peak population at Caswell of 437 animals, based on mean density of 4.8 woodrats per ha on 91 ha (225 ac) of suitable habitat.

Today, riparian forests of the lower San Joaquin River and its tributaries outside of Caswell Memorial State Park have nearly been eliminated. The remaining habitat is small, narrow forest patches confined within levees. These areas flood completely during major storm events. Because these forest remnants are small, isolated, and subject to periodic prolonged flooding (Williams and Basey 1986), their capability to support viable populations of these subspecies over the long-term is doubtful. Historic habitat and refugia from flooding in adjacent lands are now mainly cultivated fields, orchards, and vineyards, habitats unsuitable for these subspecies (Williams and Basey 1986). Flooding, wildfire, predation, and other factors imperil their continued existence.

Previous Federal Action

Federal action on these two species began on September 18, 1985, when the Service published the Vertebrate Wildlife Notice of Review (50 FR 37958), which included the riparian brush rabbit and riparian woodrat as category 2 candidate species. Category 2 candidates, a designation discontinued in a Notice of Review published by the Service on February 28, 1996 (61 FR 7596), were taxa for which information in possession of the Service indicated that proposing to list as endangered or threatened was possibly appropriate but for which conclusive data on biological vulnerability and threats were not currently available. In the January 6, 1989, Animal Notice of Review (54 FR 554), the Service elevated the riparian brush rabbit to a category 1 candidate species as a result of more intensive field work by Williams and Basey (1986) that identified only a single remaining population of this subspecies. Category 1 comprised taxa for which the Service currently had substantial information on biological vulnerability and threats to support proposals to list them as endangered or threatened species. The Service retained the riparian brush rabbit as a category 1 candidate and elevated the status of the riparian woodrat to category 1 in the November 21, 1991, Animal Notice of Review (56 FR 58804), based on a reevaluation of the information contained in the study conducted by Williams and Basey (1986). The November 15, 1994, Animal Notice of Review (59 FR 58987) included both subspecies in category 1. The February 28, 1996, combined Animal and Plant Notice of Review (61 FR 7596) included both subspecies as candidates.

The processing of this proposed listing rule conforms with the Service's listing priority guidance for fiscal year 1997 published in the **Federal Register** on December 5, 1996 (61 FR 64475). The guidance clarifies the order in which the Service will process rulemakings following two related events, the lifting, on April 26, 1996, of the moratorium on final listings imposed on April 10, 1995 (Public Law 104–6), and the restoration of significant funding for listing through passage of the omnibus budget reconciliation law on April 26, 1996, following severe funding constraints imposed by a number of continuing resolutions between November 1995 and April 1996. The guidance calls for giving highest priority to handling emergency situations (Tier 1) and second highest priority (Tier 2) to resolving the status of proposed listings. A lower priority is assigned to resolving the conservation status of candidate species and processing administrative findings on petitions to add species to the lists or reclassify species from threatened to endangered status (Tier 3). The lowest priority actions are in Tier 4, a category which includes processing critical habitat determinations, delistings, or other types of

reclassifications. Processing of this proposed rule is a Tier 3 action.

Summary of Factors Affecting the Species

Section 4 of the Endangered Species Act (16 U.S.C. 1533) and regulations (50 CFR part 424) promulgated to implement the listing provisions of the Act set forth the procedures for adding species to the Federal lists. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to the riparian brush rabbit (*Sylvilagus bachmani riparius*) and the riparian woodrat (*Neotoma fuscipes riparia*) are as follows:

A. The Present or Threatened Destruction, Modification, or Curtailment of its Habitat or Range

Both the riparian brush rabbit and the riparian woodrat inhabit riparian forests, and each has been extirpated from all of its historical range except for a single population at Caswell Memorial State Park along the Stanislaus River. Katibah (1984) estimated that only 41,300 ha (102,000 ac) remain of an estimated 373,000 ha (921,600 ac) of pre-settlement riparian forest in California's Central Valley, a reduction of 89 percent. Moreover, nearly one-half of the remaining forests are in a disturbed and/or degraded condition, and it is likely that the majority of the rest have been and continue to be heavily impacted by human activities. This elimination and modification of riparian forests along valley floor river systems was attributed to—urban; commercial, and agricultural development; wood cutting; land reclamation and flood control activities; groundwater pumping; river channelization; dam construction; and water diversions (Katibah 1984).

Several land use practices and related human activities have contributed to the decline of the riparian brush rabbit and riparian woodrat throughout their historical ranges. During the past 10 to 20 years, cultivation has expanded along the floodplains of the main tributaries of the lower San Joaquin River system (Basey 1990). Increased habitat conversion to agricultural uses has resulted from the recent construction of the following dams on tributaries that individually and collectively altered the timing, frequency, duration, and intensity of flooding—Exchequer Dam on the Merced River, New Melones Dam on the Stanislaus River, and New Don Pedro Dam on the Tuolumne River. Before these dams and other flood control projects were constructed, much of the floodplain was livestock pasture (Basey 1990). Uneven topography on the floodplains provided escape areas for species because some land remained above most flood levels and contained patches of shrubs and trees for cover. Sites like these probably provided refuge from flooding for brush rabbits. Williams and Basey (1986) stated that, ''virtually all areas outside of flood control levees now have been cleared, leveled, and planted to orchards, vineyards, or annual row crops.'' Conversion from pasture to cultivated fields also eliminated hedge rows and other residual patches of cover that provided travel corridors and refuge sites for the two subspecies. The effects of catastrophic flooding are discussed further under factor E.

Although brush clearing adversely affected the habitat of the riparian brush rabbit and riparian woodrat populations at Caswell State Park in the mid-1980s (Williams 1986), the State Park populations are no longer directly threatened by brush clearing, tree cutting, or the conversion of land to agricultural uses. Because the State Park harbors the only known populations of these species, these activities outside of the park do not pose a direct threat to either species. Such activities continue, however, to eliminate and fragment patches of remnant habitat within the historic range of these species.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Overutilization is not known to be a problem for either species. However, the very small population at the remaining site makes the riparian brush rabbit vulnerable to extinction from recreational hunting and collection for scientific or other purposes. The brush rabbit (*Sylvilagus bachmani*) is designated as a resident small game species in California and is hunted from July 1 through January 30 with a daily bag limit of five animals (Williams and Basey 1986). Hunting regulations set by the California Fish and Game Commission do not distinguish the riparian brush rabbit from other subspecies of S. bachmani. Therefore, riparian brush rabbits that disperse beyond the boundaries of Caswell Memorial State Park (as they may, especially during times of flooding) face a potential threat of being hunted.

C. Disease or Predation

All rabbits, including cottontails, are known to be susceptible to a variety of diseases that sometimes reach epidemic proportions. The small population size and restricted distribution of both the riparian brush rabbit and riparian woodrat increase their vulnerability to epidemic diseases, such as tularemia in the case of the brush rabbit (Williams 1988). However, the significance of the threat of disease to the riparian brush rabbit and riparian woodrat is not known.

Coyotes, gray foxes, long-tailed weasels, raccoons, feral cats and dogs, hawks, and owls are known predators of brush rabbits as well as other small mammals, including woodrats (Williams 1988, Verner and Boss 1980, Orr 1940). At currently depleted population levels, predation events could significantly affect the survival of these two subspecies.

D. The Inadequacy of Existing Regulatory Mechanisms

Federal, State, and local laws and regulations have not proven adequate to curb habitat losses for the riparian brush rabbit and riparian woodrat. The National Environmental Policy Act (NEPA) and section 404 of the Clean Water Act (CWA) represent the primary Federal laws that potentially may afford some protection for these species. However, neither NEPA nor the CWA protect candidate species. Moreover, brush clearing, tree cutting, and the conversion to agricultural uses that are adversely affecting these species are generally unregulated at any level of government. For example, pursuant to 33 CFR 323.4, the U.S. Army Corps of Engineers (Corps) has promulgated regulations that exempt some farming, forestry, and maintenance activities from the regulatory requirements of section 404.

Caswell Memorial State Park has a management plan for the riparian brush rabbit that provides some measure of protection to the population. This plan does not address the riparian woodrat. Despite the existence of a management plan, both the riparian brush rabbit and woodrat remain vulnerable to threats and hazards originating outside of the park (see factor E below).

The California Environmental Quality Act (CEQA) requires a full public disclosure of the potential environmental impact of proposed projects. The public agency with primary authority or jurisdiction over the project is designated as the lead agency, and is responsible for conducting a review of the project and consulting with other agencies concerned with resources affected by the project. Section 15065 of the CEQA guidelines requires a finding of significance if a project has the potential to ''reduce the number or restrict the

range of a rare or endangered plant or animal.'' Species that are eligible for listing as rare, threatened, or endangered but are not so listed are given the same protection as those species that are officially listed with the State. Once significant impacts are identified, the lead agency has the option to require mitigation for effects through changes in the project or to decide that overriding considerations make mitigation infeasible. In the latter case, projects may be approved that cause significant environmental damage, such as destruction of endangered species. Protection of listed species through CEQA is, therefore, at the discretion of the lead agency involved. The CEQA provides that when overriding social and economic considerations can be demonstrated, project proposals may go forward, even in cases where the continued existence of the species may be jeopardized, or where adverse impacts are not mitigated to the point of insignificance. Furthermore, proposed revisions to CEQA guidelines, if made final, may weaken protections for threatened, endangered, and other sensitive species.

The California Endangered Species Act affords the riparian brush rabbit some conservation benefits. The animal was listed as an endangered species by the State of California in May 1994. Although this State law provides a measure of protection to the species, resulting in the formulation of mitigation measures to reduce or offset impacts for any projects proposed in riparian brush rabbit habitat, this law is not adequate to prevent the ongoing loss of riparian habitat. Many of the threats facing the riparian brush rabbit and the riparian woodrat (see factor E below) are not amenable to management without supplementing the depleted habitat base upon which these species depend. Moreover, State listing does not provide a nexus with Federal agencies, such as the Corps, that regulate flood control and other activities in waters of the United States.

E. Other Natural or Manmade Factors Affecting its Continued Existence

Random events such as flooding or fire may be more critical than genetic considerations to the survival of species (Shaffer 1987, Gilpin 1987). This is especially true for taxa, like the riparian brush rabbit and woodrat, that are represented by only one or a few small, isolated populations. In such cases, little or no possibility of recolonization exists if a chance environmental or human-caused catastrophe affects the population. Riparian habitat at Caswell State Park is confined entirely within river levees, and offers less habitat value for these subspecies during periods of high stream flow. This habitat is routinely flooded during the wet winter season. Major flooding likely drowns a significant portion of the populations, eliminates foraging habitat and shelter for prolonged periods, and exposes brush rabbits and woodrats to increased predation by concentrating the population on high ground and in areas with little or no cover. Only about 3.6 ha (8.9 ac) in five small areas of the 104.5 ha (258 ac) park showed regular use by brush rabbits in the summer of 1986 after floods in February and March of that year (Williams 1988).

Williams (1986) found that riparian brush rabbits sometimes gain temporary shelter from floods by climbing trees, but he estimated that only 10 or fewer individual rabbits survived the severe winter flooding in 1985–86 (Williams 1988). Basey (1990) concluded, based on visual sightings and pellet surveys, that this same riparian brush rabbit population may have been reduced to fewer than 15 to 20 individuals during flooding in 1983.

The floods of January 1997 left about 85 percent of Caswell Memorial State Park under 0.6–3.0 m (2–10 ft) or more of water in most areas for at least 2 weeks and, in lower areas, for as long as 7 weeks. During efforts in January to locate and potentially rescue stranded riparian brush rabbits, only a single rabbit pellet was found (D. Williams, *in litt.* 1997). In areas of the park searched visually in March 1997, no rabbits or pellets were found, although searchers did find two mounds containing fresh grass. Such mounds, or ''forms'' are typically made by rabbits. In April 1997, searchers found two rabbit fecal pellets, but no other sign of rabbits or woodrat activity. Trapping surveys were initiated in early May, well after flood waters had receded, in hopes that any surviving rabbits would be located. During 22 nights of trapping, no rabbits were caught, one rabbit was sighted, and at another location, fresh rabbit tracks were found (D. Williams, *in litt.* 1997). In comparison, during trapping efforts of similar intensity in January 1993, 41 brush rabbits were captured and several rabbits were sighted (D. Williams, *in litt.* 1997). A significant increase in brush rabbit sign was noted during surveys after May 30, 1997, including the finding of four separate groups of fecal pellets, two separate groups of dust baths with rabbit tracks, about a dozen rabbit runways, and one rabbit sighted by spotlight (P. Kelly, San Joaquin Valley Endangered Species Recovery Program, *in litt.* 1997a, 1997b). Two sightings were also reported by park visitors (K. Graham, California Dept. of Parks and Recreation in Kelley, *in litt.* 1997a).

The riparian woodrat also is vulnerable to flooding, although its ability to nest in trees and wood duck nest boxes (Williams 1993) suggests some ability to avoid the negative effects of flooding. Nonetheless, the large majority of nests occur on the ground (Williams 1993, pers. comm. 1994). After the January 1997 floods left Caswell Memorial State Park under 0.6–3.0 m (2–10 ft) of water for 2 to 7 weeks, trapping and survey efforts in May 1997 resulted in capture of only eight woodrats (D. Williams, *in litt.* 1997). Trapping efforts of similar intensity in 1993 resulted in the capture of 57 woodrats (D. Williams, *in litt.* 1997). Severe flooding could eliminate the Caswell Memorial State Park populations of both the riparian brush rabbit and the riparian woodrat and result in the extinction of these subspecies.

Flooding is also likely to increase competition between riparian brush rabbits and desert cottontails, a species that occurs in a wider range of habitats, including riparian zones, within the same geographic area (Basey 1990). Riparian brush rabbits cannot return to their home areas if displaced more than about 340 m (1,116 ft). Desert cottontails, in contrast, may return home when displaced as much as 4.8 kilometers (3 miles). Therefore, if displaced by flooding more than about 340 m (1,116 ft) from their home areas, riparian brush rabbits may be stranded in habitats where desert cottontails have a competitive advantage.

The number of individuals in the sole population of each subspecies is now sufficiently low that the effects of inbreeding may result in the expression of deleterious genes in the population (Gilpin 1987). Deleterious genes reduce individual fitness in various ways, the most typical being decreased survivorship of young. Small populations are also more at risk due to the effects of genetic drift, a decrease in genetic variation due to random changes in gene frequency from one generation to the next. This reduction of variability within a population limits the ability of that population to adapt to environmental changes.

Although Caswell Memorial State Park provides protection to the riparian brush rabbit and the riparian woodrat against some threats, the park is also a recreational facility and consequently faces an increased threat of human-caused wildfires that may kill both the riparian brush rabbit and woodrat and destroy their habitat (Basey 1990). The

brushy areas most vulnerable to fire are important habitat for brush rabbits and woodrats (Basey 1990). Between 1975 and 1987, 10 wildfires were reported within the park. After a large area burned in 1981, no evidence of brush rabbits was found in the area (Basey 1990). The extent to which recreational activities, such as vehicular and pedestrian traffic, dogs, etc., also may affect habitat quality is unknown.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by these subspecies in determining to propose this rule. Based on this evaluation, the preferred action is to list the riparian brush rabbit (*Sylvilagus bachmani riparius*) and the riparian woodrat (*Neotoma fuscipes riparia*) as endangered. The single, small population of each of these two taxa render them vulnerable to a wide array of threats. Increases in human population and pressures associated with urban development, as well as the inadequacy of existing regulatory mechanisms have led to a significant loss of historic habitat and reduced these subspecies to the brink of extinction. Both subspecies currently face threats from floods, wildfires, and predation. Riparian forests, the habitat type upon which the riparian brush rabbit and woodrat depend, are so depleted along the San Joaquin River system that all habitat remnants outside of Caswell Memorial State Park are too small and isolated to support viable populations of these animals. Thus, even if the few remaining unsurveyed tracts of habitat do harbor these subspecies, the status of the riparian brush rabbit and woodrat would not change and listing of these taxa as endangered would be warranted.

Critical Habitat

Critical habitat is defined in section 3 of the Act as: (i) the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection and; (ii) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. ''Conservation'' means the use of all methods and procedures needed to bring the species to the point at which listing under the Act is no longer necessary.

Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.12) require that, to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time the species is determined to be endangered or threatened. Service regulations (50 CFR 424.12(a)) state that critical habitat is not determinable if information sufficient to perform required analyses of the impacts of the designation is lacking or if the biological needs of the species are not sufficiently known to permit identification of an area as critical habitat. Section 4(b)(2) of the Act requires the Service to consider economic and other relevant impacts of designating a particular area as critical habitat on the basis of the best scientific data available. The Secretary may exclude any area from critical habitat if he determines that the detriments of such exclusion outweigh the conservation benefits, unless to do such would result in the extinction of the species. Service regulations (50 CFR 424.12(a)(1)) state that designation of critical habitat is not prudent when one or both of the following situations exist—(1) The species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the degree of threat to the species, or (2) such designation of critical habitat would not be beneficial to the species.

The Service finds that the designation of critical habitat for the riparian brush rabbit and riparian woodrat is not prudent because such designation would not provide any additional benefit to the two species beyond that conferred by listing them as endangered species. The basis for these conclusions, including the factors considered in weighing the benefits against the detriments of designation, is explained below.

As discussed above, the sole site currently occupied by the riparian brush rabbit and the riparian woodrat is within Caswell Memorial State Park, and no other currently suitable habitat for these species is known to exist within their historical ranges (Basey 1990). State Park designation provides protection to the natural resources of the park, such as through hunting prohibitions, and facilitates appropriate resource management. This protection would not be increased through critical habitat designation.

A high potential for Federal involvement exists because of the flood control activities of the Corps and water regulation activities of the U.S. Bureau of Reclamation (BOR). Section 7 of the Act requires that Federal agencies refrain jeopardizing the continued existence of a listed species and from contributing to the destruction or adverse modification of critical habitat. However, implementing regulations (50 CFR part 402) define ''jeopardize the continued existence of'' and ''destruction or adverse modification of'' in virtually identical terms. Jeopardize the continued existence of means to engage in an action ''that reasonably would be expected . . . to reduce appreciably the likelihood of both the survival and recovery of a listed species.'' Destruction or adverse modification means an ''alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species.'' Common to both definitions is an appreciable detrimental effect on both survival and recovery of a listed species, in the case of critical habitat by reducing the value of the habitat so designated. In this case, because each species exists as a single, small population, it is even clearer that any activity that would destroy or adversely modify their habitat would also likely jeopardize their continued existence. For this reason, designation of critical habitat provides no benefit beyond that conferred by listing.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain activities. Recognition through listing results in public awareness and conservation actions by Federal, State, and local agencies, private organizations, and individuals. The Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. The protection required of Federal agencies and the prohibitions against taking and harm are discussed, in part, below.

Section 7(a) of the Act requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations that implement this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any action that is likely to jeopardize the continued existence of a species proposed for listing or result in destruction or adverse modification of proposed critical habitat. If a species is listed, section 7(a)(2) requires Federal

agencies to insure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of the species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service.

Federal actions that may require conference or consultation with the Service include the funding or authorization by the Corps of levee and channel maintenance projects along the lower San Joaquin River and its tributaries and the operation of upstream dams by the Corps and the BOR.

Listing the riparian brush rabbit and riparian woodrat as endangered species would also provide for the development of a recovery plan (or plans) for the taxa. Such a plan would establish a framework for State, Federal, and local governmental efforts to coordinate conservation planning for these animals. The plan would set recovery priorities and estimate costs of various tasks necessary to accomplish them. The plan also would describe site specific management actions necessary to achieve conservation and survival of these subspecies.

The Act and implementing regulations set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. These prohibitions, codified at 50 CFR 17.21, in part, make it illegal for any person subject to the jurisdiction of the United States to take (includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect; or to attempt any of these), import or export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any such species. It also is illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions 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 permits are codified at 50 CFR 17.22 and 17.23. Such permits are available for scientific purposes, to enhance the propagation or survival of the species, and/or for incidental take in connection with otherwise lawful activities. Under some circumstances, permits may be issued for a specified period for species in trade in order to relieve undue economic hardship that would be suffered if such relief were not available.

It is the policy of the Service, published in the **Federal Register** on July 1, 1994 (59 FR 34272), to identify to the maximum extent practicable at the time a species is listed those activities that would or would not constitute a violation of section 9 of the Act. The intent of this policy is to increase public awareness of the effect of this listing on proposed and ongoing activities within the range of the two species. The Service believes that, based on the best available information, the following actions will not result in a violation of section 9:

(1) Possession of legally acquired riparian brush rabbits and riparian woodrats;

(2) Light to moderate livestock grazing in riparian brush rabbit and riparian woodrat habitat that prevents or minimizes the encroachment of invasive plant species and does not significantly reduce shrub cover;

(3) Federally approved projects, such as those involving the discharge of fill material, draining, ditching, tiling, pond construction, stream channelization or diversion, or alteration of surface or ground water into or out of riparian areas (i.e., due to roads, impoundments, discharge pipes, stormwater detention basins, etc.), when conducted in accordance with any reasonable and prudent measures given by the Service in accordance with section 7 of the Act.

Activities that the Service believes could potentially harm the riparian brush rabbit and the riparian woodrat and result in ''take'' include, but are not limited to:

(1) Unauthorized collecting or handling of the species;

(2) Unauthorized destruction/alteration of occupied habitat of the riparian brush rabbit or riparian woodrat through the discharge of fill material, draining, ditching, tiling, pond construction, stream channelization or diversion, or the alteration of surface or ground water flow into or out of riparian habitat of these two species (i.e., due to the construction/installation of roads, impoundments, discharge pipes, stormwater detention basins, etc.);

(3) Any activity constituting a violation of discharge permits which results in death of or injury to riparian brush rabbits or riparian woodrats or which results in degradation of their occupied habitat;

(4) Burning, cutting, or mowing of riparian vegetation which results in death of or injury to riparian brush rabbits or riparian woodrats or which results in degradation of their occupied habitat;

(5) Application of pesticides in violation of label restrictions which results in death of or injury to riparian brush rabbits or riparian woodrats;

(6) Discharging or dumping toxic chemicals, silt, or other pollutants (i.e., sewage, oil, or gasoline) which results in death of or injury to riparian brush rabbits or riparian woodrats;

(7) Interstate and foreign commerce (commerce across State lines and international boundaries) and import/export (as discussed earlier in this section) without prior obtainment of an endangered species permit. (Permits to conduct these activities are available for purposes of scientific research and enhancement of propagation or survival of the species.)

Questions regarding whether specific activities will constitute a violation of section 9 should be directed to the Field Supervisor of the Service's Sacramento Field Office (see **ADDRESSES** section). Requests for copies of the regulations concerning listed wildlife and general inquiries regarding prohibitions and permits may be addressed to the U.S. Fish and Wildlife Service, Ecological Services, Endangered Species Permits, 911 N.E. 11th Avenue, Portland, Oregon, 97232–4181 (telephone 503/231–2063; facsimile 503/231–6243).

Public Comments Solicited

The Service intends that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule are hereby solicited. The Service will also comply with its policy on peer review, published on July 1, 1994 (59 FR 34270), in the processing of this proposed rule. Comments particularly are sought concerning:

(1) Biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to these species;

(2) The location of any additional populations of these species and the reasons why any habitat should or should not be determined to be critical habitat as provided by section 4 of the Act;

(3) Additional information concerning the range, distribution, and population size of these species;

(4) Current or planned activities in the subject area and their possible impacts on these species; and,

(5) Information on biological considerations, land ownership, habitat restoration potential, flood control constraints, and other factors that may lead to a critical habitat determination.

Final promulgation of the regulations for these species 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 Act provides for one or more public hearings on this proposal, if requested. Requests must be received within 45 days of the date of publication of the proposal in the **Federal Register**. Such requests must be made in writing and be addressed to the Field Supervisor, Sacramento Field Office (see **ADDRESSES** section).

National Environmental Policy Act

The Fish and Wildlife Service has determined that Environmental Assessments and Environmental Impact Statements, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244).

Required Determinations

The Service has examined this regulation under the Paperwork Reduction Act of 1995 and found it to contain no information collection requirements.

References Cited

A complete list of all references cited herein, as well as others, is available from the Field Supervisor, Sacramento Field Office (see **ADDRESSES** section).

Authors. The primary authors of this proposed rule are Peter Sorensen and Diane Windham, U.S. Fish and Wildlife Service, Sacramento Field Office (see **ADDRESSES** section), telephone 916/979–2725.

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Proposed Regulation Promulgation

Accordingly, the Service hereby proposes to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—[AMENDED]

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

Authority: 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1544; 16 U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat. 3500, unless otherwise noted.

2. Section 17.11(h) is amended by adding the following, in alphabetical order under MAMMALS, to the List of Endangered and Threatened Wildlife:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
MAMMALS							
*	*	*	*	*	*		*
Rabbit, riparian brush.	Sylvilagus bachmani riparius.	U.S.A. (CA)	Entire	E		NA	NA
*	*	*	*	*	*		*
Woodrat, riparian (San Joaquin Valley).	Neotoma fuscipes riparia.	U.S.A. (CA)	Entire	E		NA	NA
*	*	*	*	*	*		*

Dated: October 30, 1997.

Jamie Rappaport Clark,

Director, U.S. Fish and Wildlife Service.

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