number 1018–0094. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information, unless it displays a currently valid control number. For additional information concerning permit and associated requirements for endangered species, see 50 CFR 17.62.

References Cited

A complete list of all references cited herein is available upon request from the Oregon State Fish and Wildlife Office (see ADDRESSES section).

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Dated: November 30, 1999.
Jamie Rappaport Clark,
Director, Fish and Wildlife Service.
[FR Doc. 00–1562 Filed 1–24–00; 8:45 am]
BILLING CODE 4310–55–P

DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service

50 CFR Part 17
RIN 1018–AE53

Endangered and Threatened Wildlife and Plants; Endangered Status for “Erigeron decumbens” var. “decumbens” (Willamette Daisy) and Fender’s Blue Butterfly (“Icaricia icarioides fenderi”) and Threatened Status for “Lupinus sulphureus” ssp. “kincaidii” (Kincaid’s Lupine)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The U.S. Fish and Wildlife Service (“Service” or “we”) determines endangered status pursuant to the Endangered Species Act (Act) of 1973, as amended, for a plant and a butterfly, *Erigeron decumbens* var. *decumbens* (Willamette daisy) and Fender’s blue butterfly (*Icaricia icarioides fenderi*), and determines threatened status for a plant, *Lupinus sulphureus* ssp. *kincaidii* (Kincaid’s lupine). These species are restricted primarily to native prairie in the Willamette Valley of Oregon and are known currently from a few small remnants of a formerly widespread distribution. In addition to its Oregon occurrences, *L. sulphureus* ssp. *kincaidii* is known also from two small sites in southern Washington. Commercial and/or residential development, agriculture, silvicultural practices, road improvement, over-collection, herbicide use, and naturally occurring demographic and random environmental events threaten these three taxa. This final rule invokes the Federal protection and recovery provisions of the Act, as applicable for these plant and butterfly species.

EFFECTIVE DATES: February 24, 2000.

ADDRESSES: You may inspect the complete file for this rule, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, Oregon State Office, 2600 SE 98th Ave, Suite 100, Portland, Oregon 97266.

FOR FURTHER INFORMATION CONTACT: Dr. Andrew F. Robinson, Jr., Botanist; or Diana Hwang, Fish and Wildlife Biologist, U.S. Fish and Wildlife Service (see ADDRESSES section or telephone 503–231–6179, Facsimile 503–231–6195).

SUPPLEMENTARY INFORMATION:

Background

Fender’s blue butterfly (*Icaricia icarioides fenderi*), *Lupinus sulphureus* ssp. *kincaidii* (Kincaid’s lupine), and *Erigeron decumbens* var. *decumbens* (Willamette daisy) are restricted primarily to the Willamette Valley of Oregon. The valley is a 209-kilometer (130 miles) long and 32–64-km (20–40-mi) wide alluvial floodplain with an overall northward gradient (Orr *et al.* 1992). The valley is narrow and flat at its southern end, widening and becoming hilly near its northern end at the confluence of the Willamette and Columbia Rivers. We know of four sites containing *L. sulphureus* ssp. *kincaidii* approximately 60 km (38 mi) south of the Willamette Valley and within the Umpqua Valley of Douglas County, Oregon. In addition to its Oregon occurrences, *L. sulphureus* ssp. *kincaidii* is known from two small sites in Lewis County, southern Washington, 70 km (40 mi) north of the Willamette Valley.

The alluvial soils of the Willamette Valley and southern Washington host a mosaic of grassland, woodland, and forest communities. Fender’s blue butterfly, *Lupinus sulphureus* ssp. *kincaidii*, and *Erigeron decumbens* var. *decumbens* occupy native grassland habitats within the Willamette Valley. Based on the limited available evidence, most Willamette Valley grasslands are early seral (one stage in a sequential...
progression) habitats, requiring natural or human-induced disturbance for their maintenance (Franklin and Dryness 1973). The vast majority of Willamette Valley grasslands would likely be forested if left undisturbed (Johannessen et al. 1971). Important exceptions to this successional pattern are grass balds on valley hillsides that may be climax grasslands due to the presence of deep, fine-textured, self-mulching soils or xeric (very dry) lithosols (Franklin and Dryness 1973).

Two native prairie types occur in the Willamette Valley, wet prairie and upland prairie. Fender's blue butterfly and Lupinus sulphureus ssp. kincaidii are typically found in native upland prairie with the dominant species being Festuca rubra (red fescue) and/or Festuca idahoensis (Idaho fescue) and Calochortus tolmiei (Tolmie’s mariposa), Silene hookeri (Hooker’s catchfly), Fragaria virginiana (broadpetal strawberry), Silalcea virgata (rose check-mallow), and Lomatium spp. (common lomatium) serving as hardy indicator species (Hammond and Wilson 1993). These dry, fescue prairies make up the majority of habitat for Fender’s blue butterfly and L. sulphureus ssp. kincaidii. Although Fender’s blue butterfly and L. sulphureus ssp. kincaidii are occasionally found on steep, south-facing slopes and barren rocky cliffs, neither of these species are capable of occupying the most xeric rocky cliffs, neither of these species are capable of occupying the most xeric rock cliffs, neither of these species are capable of occupying the most xeric rock cliffs, neither of these species are capable of occupying the most xeric rock cliffs, neither of these species are capable of occupying the most xeric rock cliffs, neither of these species are capable of occupying the most xeric rock cliffs, neither of these species are capable of occupying the most xeric rock cliffs, neither of these species are capable of occupying the most xeric rock climates (Johannessen et al. 1971). Although much of the woody vegetation was prevented from becoming established on the grasslands by this treatment, the random survival of young fire-resistant species such as Quercus garryana (Oregon white oak) accounted for the widely spaced trees on the margins of the valley (Habecb 1961). After 1848, burning decreased sharply through the efforts of settlers to suppress large-scale fires. Consequently, the open, park-like nature of the valley floor was lost, replaced by agricultural fields, dense oak and fir forests, and scrub lands following logging.

The Willamette basin covers approximately 2,600,000 hectares (ha) (6,400,000 acres [ac]), which Lang (1885) estimated to consist of one-sixth prairie and five-sixths forest. We can analyze the extent of the prairie component through historical information from land survey records. Natural grasslands described by Federal land surveyors in the 1850s were broken down into three distinct types—oak savannah, upland prairie, and wet prairie (Habecb 1961). Of the estimated 409,000 ha (1,010,000 ac) of historic native grasslands extant prior to 1850, approximately 277,000 ha (685,000 ac) appears to have consisted of upland prairie and 132,000 ha (325,000 ac) of wet prairie (E. Alverson, The Nature Conservancy, Eugene, pers. comm., 1994). This extensive resource was rapidly depleted through the conversion of native prairie to agricultural use during European settlement. Within 30 years of passage of the Donation Land Act of 1850, European-American settlers, who quickly subdivided their original land grants to accommodate the rapid increase in population, occupied most prairie lands (Lang 1885). Settlers first plowed the level, open tracts of prairie (Lang 1885) and only boggy, flood-prone areas prevented complete conversion of the native grassland community to cropped monocultures. After 1836, the U.S. Army Corps of Engineers (Corps) overcame limitations on development that had been imposed by seasonal flooding and a high water table by initiating water projects to provide flood control and security for expanded agricultural activity. Fender’s blue butterfly, Lupinus sulphureus ssp. kincaidii, and Erigeron decumbens var. decumbens likely once occurred over a large distribution throughout the historic native prairie. Native prairie vegetation in the Willamette Valley was decimated by the rapid expansion of agriculture during the 140-year period from the 1850s to the present. Humans also began suppressing the fire disturbance regime on native prairie habitat. Fire suppression allowed shrub and tree species to overtake grasslands, while agricultural practices hastened the decline of native prairie species through habitat loss and increased grazing (Johannessen et al. 1971; Franklin and Dryness 1973). Fence rows and intervening strips of land along agricultural fields and roadsides served as the only refugia from these forces of change.

Although large prairie expanses dominated by native species had been lost by the early 1900s, many remnant grasslands with a large native species component have been recently identified. These remnants, often dominated by nonnative species, also support the only remaining occurrences of native prairie species in the Willamette Valley. Current estimates of the remaining native upland prairie in the Willamette Valley are less than 400 ha (988 ac) (Alverson, pers. comm. 1994). This estimate represents only one-tenth of one percent of the original upland prairie once available to Fender’s blue butterfly and Lupinus sulphureus ssp. kincaidii. Fender’s blue butterfly and/or L. sulphureus ssp. kincaidii and/or Erigeron decumbens var. decumbens currently occupy slightly more than one-half of this upland prairie habitat (62 sites, 210 ha (112.8 ac)). Within the remnant prairie habitat, E. decumbens var. decumbens occupies 28 sites across 116 ha (286 ac). L. sulphureus ssp. kincaidii occupies 54 sites across 158 ha (370 ac), while Fender’s blue butterfly occupies 32 sites across 165 ha (408 ac). Similar losses have occurred for wet prairie habitats, but estimates of current acreage are not available.

Fender’s Blue Butterfly

Fender’s blue butterfly is one of about a dozen subspecies of Boisduval’s blue butterfly (Icaricia icariodes). Icaricia icariodes is found in western North America; subspecies fenderi is restricted to the Willamette Valley (Dornfeld 1980;
R. H. T. Mattoni, University of California, pers. comm. to C. Nagano 1997; J. Emmel, Hemet, California, pers. comm. to C. Nagano 1997). Fender’s blue butterfly was described by Ralph W. Macey (1931) as *Plebejus maricopa fenderi* based on specimens he had collected in Yamhill County, Oregon. The species *maricopa* is currently considered to be a synonym of the species *icarioides* (Miller and Brown 1981). The species *icarioides* has been determined to be a member of the genus *Icaricia*, rather than the genus *Plebejus* (Miller and Brown 1981; R. H. T. Mattoni, pers. comm. to C. Nagano 1997). Some researchers considered subspecies *fenderi* to be a synonym of the pardinus blue butterfly (*Icaricia icarioides pardinus*), an inhabitant of the central California Coast Range near San Francisco (Downey 1975; Miller and Brown 1981). We consider Fender’s blue butterfly as a distinct taxon based on adult characters and geographic distribution (Dornfeld 1980; Hammond and Wilson 1993; R. H. T. Mattoni and J. Emmel, pers. comm. to C. Nagano 1997).

Fender’s blue butterfly is small with a wingspan of approximately 2.5 centimeters (cm) (1 inch (in)). The upper wings of the males are brilliant blue in color, and the borders and basal areas are black. The upper wings of the females are completely brown colored. The undersides of the wings of both sexes are creamish tan, with black spots surrounded with a fine white border or halo. The dark spots on the undersides of males and blue butterflies are small. In contrast, the dark spots on the undersides of the pardinus blue butterfly (*Icaricia icarioides pardinus*) are surrounded with wide white haloes, and the underside of the hindwings of Boisduval’s blue butterfly (*Icaricia icarioides*) is very pale whitish gray with broad haloes around the black spots.

We do not know the precise historic distribution of Fender’s blue butterfly due to the limited information collected on this subspecies prior to its description in 1931 (Macy 1931). Although Ralph W. Macy collected the type specimens for this butterfly in 1929, only a limited number of collections were made between the time of the subspecies’ discovery and Macy’s last observation on May 23, 1937, in Benton County, Oregon (Hammond and Wilson 1992a). A lack of information on the identity of the butterfly’s host plant caused researchers to focus their survey efforts on common lupine species known to occur in the vicinity of Macy’s collections. As a result, no Fender’s blue butterflies were observed during 20 years of widespread investigation. Finally, Dr. Paul Hammond rediscovered Fender’s blue butterfly in 1989 at McDonald Forest, Benton County, Oregon, on an uncommon species of lupine, *Lupinus sulphureus* ssp. *kincaidii*. Recent surveys have indicated that the insect is confined to the Willamette Valley and currently occupies 32 sites in Yamhill, Polk, Benton, and Lane Counties (Hammond and Wilson 1993; Schultz 1996). One population at Willow Creek is found in wet, *Deschampsia*-type prairie, while the remaining sites are found on drier upland prairies characterized by *Festuca* spp. Fender’s blue butterflies occupy sites located almost exclusively on the western side of the valley, within 33 km (21 mi) of the Willamette River.

Although researchers have made only limited observations of the early life stages of Fender’s blue butterfly, the life cycle of the species likely is similar to other subspecies of *Icaricia icarioides* (R. H. T. Mattoni, pers. comm. to C. Nagano 1997; G. Pratt, Riverside, California, pers. comm. to C. Nagano 1997; Hammond and Wilson 1993). Adult butterflies lay their eggs on perennial *Lupinus sp.* (Ballmer and Pratt 1988), the food plant of the caterpillar during May and June. Newly hatched larvae feed for a short time, reaching their second instar in the early summer, at which point they enter an extended diapause (maintaining a state of suspended activity). Diapausing larvae remain in the leaf litter at or near the base of the host plant through the fall and winter and may become active again in March or April of the following year. Some larvae may be able to extend diapause for more than one season depending upon the individual and environmental conditions (R. H. T. Mattoni pers. comm. to C. Nagano 1997). Once diapause is broken, the larvae feed and grow through three to four additional instars, enter their pupal stage, and then emerge as adult butterflies in April and May. Behavioral observations of Fender’s blue butterfly indicate the larvae are alert to potential predators, with individuals dropping from their feeding on lupine leaves to the base of the plant at the slightest sign of disturbance (C. Schultz, University of Washington, pers. comm. 1994). A Fender’s blue butterfly may complete its life cycle in 1 year.

The larvae of many species of lycaenid butterflies, including *Icaricia icarioides*, possess specialized glands that secrete a sweet solution sought by some ant species who may actively “tend” and protect them from predators and parasites (Ballmer and Pratt 1988; G. Pratt, pers. comm. to C. Nagano 1997). Although ants tend other sub species of Boisduval’s blue butterfly during their larval stage (Downey 1962, 1975; Thomas Reid Associates 1982; R. H. T. Mattoni and G. Pratt, pers. comm. to C. Nagano 1997), limited observations of Fender’s blue butterfly larvae in the field have failed to document such a mutualistic association (Hammond 1994). However, this situation may be due to the nocturnal activity patterns of the *Icaricia icarioides* larvae, because it appears that this species has an obligate relationship with ants (G. Pratt, pers. comm. to C. Nagano 1997). Schultz (pers. comm. 1994) has observed nonnative Argentine ants (*Iridomyrmex humilis*) tending Fender’s blue butterfly larvae during indoor rearing trials. Of the 32 sites where Fender’s blue butterfly occurs, *Lupinus sulphureus* ssp. *kincaidii co-occurs as a larval host plant at 27 of these. The near absence of the Fender’s blue butterfly at sites without *Lupinus sulphureus* ssp. *kincaidii* suggests that *L. laxiflorus* (spurred lupine) and *L. albicaulis* (sickle keeled lupine) may be secondary food plants used by the insect (Hammond and Wilson 1993). Occurrences where Fender’s blue butterfly apparently does not rely on *L. sulphureus* ssp. *kincaidii* as its primary host plant have been noted at Coburg Ridge where *L. laxiflorus* is the sole host plant across greater than 95 percent of the site (Schultz in litt. 1998), two other sites where *L. laxiflorus* is the primary food plant (Schultz 1996), and an additional two sites where *L. laxiflorus* co-occurs with *L. sulphureus* ssp. *kincaidii* (Hammond and Wilson 1993). Fender’s blue butterfly also occupies six sites where *L. albicaulis* is the primary food plant; however, the butterfly is declining at two of these sites.

At this time we have no information to suggest that *Lupinus albicaulis* and/or *L. laxiflorus* are inferior host plants either physically or biochemically, or that the oviposition behavior of the Fender’s blue butterfly prefers *L. sulphureus* ssp. *kincaidii*. It is possible that the co-occurrence of these two species is due to environmental factors favoring *L. sulphureus* ssp. *kincaidii* that also favor Fender’s blue butterfly. However, this phenomenon of food plant specificity has been documented in other species of butterflies and moths (Longcore et al. 1997). We may say, however, that at the majority of sites where Fender’s blue butterfly occurs, *L. sulphureus* ssp. *kincaidii* serves as the sole source for larval food and oviposition sites and native wildflowers for adult nectar. Research in collaboration with Katrina Dlugosh (Schultz in litt. 1998) indicates that native wildflowers in the Willamette...
Valley prairies provide more nectar than nonnative flowers; and that Fender’s blue butterfly population density is positively correlated with the density of native wildflowers. In Lane County, key native flowers include Allium ampectans, Calochortus tolmiei, Camassia quamash, Erigeron lanatum, and Sidalcea virgata (Schultz in litt. 1998).

Lupinus Sulphureus ssp. Kincaidiii

In 1924, C.P. Smith first described Lupinus sulphureus ssp. kincaidiii as L. oreganus var. kincaidiii from a collection made in Corvallis, Oregon (Kuykendall and Kaye 1993a). Phillips (1955) transferred the taxon to a subspecies status as L. sulphureus ssp. kincaidiii. Hitchcock et al. (1961) retained the position noted by Phillips (1955), but preferred the combination as a varietal rank, L. sulphureus var. kincaidiii. Lupinus sulphureus ssp. kincaidiii occupies 48 sites throughout the Willamette Valley. Four sites are in the Umpqua Valley of Douglas County, Oregon, and two sites are in southern Washington. The latitudinal range of the 54 sites of L. sulphureus ssp. kincaidiii spans from Lewis County, Washington, south to Douglas County, Oregon, and a distance of 400 km (320 mi). This distribution implies a close association with native upland prairie sites that are characterized by heavier soils with mesic to slightly xeric soil moisture levels. At the southern limit of its range, the subspecies occurs on well-developed soils adjacent to serpentine outcrops where the plant is often found under scattered oaks (Kuykendall and Kaye 1993a).

Lupinus sulphureus ssp. kincaidiii is easily distinguished from other sympatric members of the genus Lupinus with its low-growing habit and unbranched inflorescence. Its aromatic flowers have a slightly reflexed, distinctly ruffled banner, and are yellowish-cream colored, often showing shades of blue on the keel. The upper calyx lip is short, yet not obscured by the reflexed banner when viewed from above. The leaflets tend to a deep green with an upper surface that is often glabrous (smooth). The plants are 4 to 8 decimeters (dm) (16 to 32 in) tall, with single to multiple unbranched flowering stems and basal leaves that remain after flowering (Kuykendall and Kaye 1993a).

Lupinus sulphureus ssp. kincaidiii is a long-lived perennial species, with a maximum reported age of 25 years (M. Wilson, Oregon State University, in litt., 1993). Individual plants are capable of spreading laterally by horizontal stems, producing clumps of plants exceeding 20 meters (m) (66 feet (ft)) in diameter (P. Hammond, independent consultant, pers. comm. 1994). The long rhizomes do not produce adventitious roots (secondary roots growing from stem tissue), apparently do not separate from the parent clump, and the clumps may be short-lived, regularly dying back to the crown (Kuykendall and Kaye 1993a). L. sulphureus ssp. kincaidiii is pollinated by solitary bees and flies (P. Hammond, pers. comm. 1994). Seed set and seed production are low, with few (but variable) numbers of flowers producing fruit from year to year, and each fruit containing an average of 0.3–1.8 seeds (Liston et al. 1994). Seeds are dispersed from fruits that open explosively upon drying.

Erigeron Decumbens var. Decumbens

Thomas Nuttall (1840) based his description of Erigeron decumbens on a specimen he collected in the summer of 1835. The autonym E. decumbens var. decumbens was automatically established by Cronquist (1947) when he described E. decumbens var. robustior. Recent revisions of the Erigeron genus (Strother and Ferlatte 1988, Nesom 1989) treat the plant as a variety, E. decumbens var. decumbens. According to Strother and Ferlatte (1988), Erigeron decumbens var. decumbens is geographically limited to the Willamette Valley and the morphologically similar E. decumbens var. robustior is restricted to Humboldt and western Trinity Counties, California. Intermediate specimens of Erigeron from southern Oregon are considered by Strother and Ferlatte (1988) to be robust specimens of E. eatonii var. plantagineus.

Clark et al. (1993) reviewed herbarium specimens and found a historical distribution of Erigeron decumbens var. decumbens throughout the Willamette Valley. He found frequent collections from the period between 1881 and 1934, yet no collections or observations from 1934 to 1980 (Clark et al. 1993). The species was rediscovered in 1980 in Lane County, Oregon, and has since been identified at 28 sites in Polk, Marion, Linn, Benton, and Lane Counties, Oregon. With only 28 occurrences and 116 ha (286 ac) of occupied habitat, E. decumbens var. decumbens has the most restricted range of the species being listed herein. Erigeron decumbens var. decumbens is a perennial herb, 15 to 60 mm (0.6 to 2.4 in) tall, with erect to sometimes prostrate stems at the base. The basal leaves often wither prior to flowering and are mostly linear, 5 to 12 cm (2 to 5 in) long, 0.1 to 0.2 cm (0.04 to 0.08 in) wide. Flowering stems produce two to five heads, each of which is daisy-like, with pinkish to pale blue ray flowers and yellow disk flowers. Ray flowers often fade to white with age (Siddall and Chambers 1978). The morphologically similar E. eatonii occurs east of the Cascade Mountains, while the sympatric species Aster hallii flowers later in the summer. In its vegetative state, Erigeron decumbens var. decumbens can be confused with A. hallii, but close examination reveals the reddish stems of A. hallii in contrast to the green stems of E. decumbens var. decumbens (Clark et al. 1993).

With many species in the family Asteraceae, Erigeron decumbens var. decumbens produces large quantities of wind-dispersed seed. Flowering typically occurs in June and July with pollination carried out by syrphid flies and solitary bees. Seeds are released in July and August. Although the seeds are wind-dispersed, the short stature of this species likely prevents the long-distance travel of many of these seeds. Erigeron decumbens var. decumbens is capable of vegetative spreading and is commonly found in large clumps scattered throughout a site (Clark et al. 1993).

Previous Federal Action

Erigeron decumbens var. decumbens was initially included as a category 2 candidate in a Notice of Review (NOR) published by us on December 15, 1980 (45 FR 82506). At that time, category 2 candidates were those species for which we had information indicating that listing may be appropriate, but for which additional information was needed to support the preparation of a proposed rule. On November 28, 1983, we published an NOR upgrading this species to category 1 status (48 FR 53649). At that time, category 1 taxa were those for which we had sufficient data to support preparation of listing proposals. Subsequently, E. decumbens var. decumbens was reassigned category 2 candidacy in an NOR published on September 27, 1985 (50 FR 39527). On February 21, 1990, we published an NOR (55 FR 6202) that reinstated E. decumbens var. decumbens as a category 1 candidate and also designated Lupinus sulphureus ssp. kincaidiii as a category 2 candidate (55 FR 6121). We published an NOR on February 28, 1996 (61 FR 7596), which updated the candidate species list and discontinued the use of categories. Erigeron decumbens var. decumbens was retained as a candidate species (a candidate was defined as any taxa meeting the definition of former category 1 species). Lupinus sulphureus ssp. kincaidiii and other former category 2 candidates were not retained as...
candidates. Since that NOR was published, we have reevaluated the available information and determined that listing is warranted for *L. sulphureus* ssp. *kincaidii*.

Fender’s blue butterfly was initially assigned to category 3A taxa in the NOR published on January 6, 1989 (54 FR 572). The best available information at that time indicated that this butterfly was likely extinct because the subspecies had last been observed in 1937. Category 3A taxa were taxa for which we had pervasive evidence of extinction, however, if rediscovered, such taxa might be reconsidered for listing. The rediscovery of this butterfly in May 1989 prompted us to change the status of the subspecies to a category 2 candidate in the NOR published on November 21, 1991 (56 FR 58830). In the NOR published on February 28, 1996 (61 FR 7506), we retained Fender’s blue butterfly as a candidate for listing. On January 27, 1998, we published a proposed rule (63 FR 3863) to list the Fender’s blue butterfly (*Icaricia icarioides fenderi*, *Lupinus sulphureus* ssp. *kincaidii* (Kincaid’s lupine), and *Erigeron decumbens* var. *decumbens* (Willamette daisy)) under the Act.

The processing of this final rule conforms with our Listing Priority Guidance published in the *Federal Register* on October 22, 1999 (64 FR 57714). The guidance clarifies the order in which we will process rulemakings. Highest priority is processing emergency listing rules for any species determined to face a significant and imminent threat to its well-being (Priority 1). Second priority (Priority 2) is processing final determinations on proposed additions to the lists of endangered and threatened wildlife and plants. Third priority is processing new proposals to add species to the lists. The processing of administrative petition findings (petitions filed under section 4 of the Act) is the fourth priority. The processing of critical habitat determinations (prudence and determinability decisions) and proposed or final designations of critical habitat will no longer be subject to prioritization under the Listing Priority Guidance. This final rule is a Priority 2 action and is being completed in accordance with the current Listing Priority Guidance.

**Summary of Comments and Recommendations**

In the January 27, 1998, proposed rule (63 FR 3863) and associated notifications, all interested parties were requested to submit factual reports or information that might contribute to the development of a final listing decision. Appropriate State agencies, county governments, city governments, Federal agencies, scientific organizations, private landowners, industrial landowners and other interested parties were contacted and requested to comment. Newspaper notices inviting public comments were published in the *Oregonian* on February 25–27, 1998, and the *Eugene Register Guard* on February 26–27, 1998. Following the publication of the proposed rule, we received 29 written comments during the comment period.

Five commenters opposed, and 24 favored the listing of *Erigeron decumbens* var. *decumbens* and *Icaricia icarioides fenderi* as endangered and *Lupinus sulphureus* ssp. *kincaidii* as threatened. Several commenters provided information on the status of, and threats to, various populations of *Erigeron decumbens* var. *decumbens*, *Icaricia icarioides fenderi*, and *Lupinus sulphureus* ssp. *kincaidii* that updated the information presented in the proposed rule. We incorporated that information into the Background and Summary of Factors Affecting the Species sections of this final rule, and we took it into consideration in the listing determination. We grouped comments questioning or opposing the proposed rule into issues that are discussed below.

**Issue 1:** One commenter stated that the information presented in the proposed rule was not accurate for his area and raised questions regarding the accuracy of data in other areas.

*Our Response:* We reviewed all the data concerning information regarding the area in question. On March 10, 1998, we sent three detailed maps depicting the area in question. On March 10, 1998, we sent three detailed maps depicting the area in question. On March 10, 1998, we sent three detailed maps depicting the area in question.
primarily the Corps, to ensure that certain actions on these sites, including the issuance of wetland permits under section 404 of the Clean Water Act, are not likely to jeopardize the continued existence of this species. In some cases, the Corps may require that private landowners who apply for permits reduce the scope or extent of their proposed fill project if the fill would adversely affect E. decumbens var. decumbens.

Landowners will be able to use occupied Fender’s blue butterfly habitat (165 ha [407 ac]) as long as the use does not involve the take of the butterfly. The Act and its implementing regulations set forth a series of prohibitions and exceptions that apply to endangered wildlife, including prohibition of take (16 U.S.C. 1538). Take includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect; or to attempt any of these (16 U.S.C. 1532). Permits may be issued to carry out otherwise prohibited activities involving endangered wildlife under certain circumstances. If certain requirements are met, these permits are available for incidental take in connection with otherwise lawful activities.

Executive Order 12630, Government Actions and Interference with Constitutionally Protected Property Rights, require that a Taking Implication Assessment (TIA) be conducted “as a part of the final rulemaking to evaluate the risk of and strategies for avoidance of the taking of private property.” However, the Attorney General’s guidelines state that TIA’s used to analyze the potential for Fifth Amendment “taking claims” are to be prepared after, rather than before, an agency makes a restricted discretionary decision. In enacting the Act, Congress required the Department to list a species based solely upon scientific and commercial data indicating whether or not the species is in danger of extinction. We may not withhold a listing based upon economic concerns. Therefore, even though a TIA may be required, a TIA for a listing action is finalized after other habitat loss has occurred. The final determination is made regarding whether to list the species.

Peer Review

In accordance with interagency policy published on July 1, 1994 (59 FR 34270), we solicited the expert opinions of appropriate and independent specialists regarding pertinent scientific or commercial biological and ecological data for Erigeron decumbens var. decumbens, Fender’s blue butterfly, and Lupinus sulphureus ssp. kincaidii. We solicit such a review to ensure that listing decisions are based upon scientifically sound data, assumptions, and analyses, including input of appropriate experts and specialists.

Comments provided by Cathy L. Maxwell, Dr. Robert Michael Pyle, Cheryl B. Schultz, and Dr. Mark Wilson, Associate Professor of Botany and Plant Pathology at Oregon State University were incorporated into the final rule. Cathy L. Maxwell; Dr. Robert Michael Pyle; Cheryl B. Schultz; Dr. Mark Wilson; David Brittell, Assistant Director, Wildlife Management Program, Washington Department of Fish and Wildlife; and Diane S. Doss, Conservation Chair, Washington Native Plant Society, supported our position that Erigeron decumbens var. decumbens and Fender’s blue butterfly were endangered and Lupinus sulphureus ssp. kincaidii was threatened throughout their limited range in the Willamette Valley of western Oregon and Boistfort Valley, Lewis County, Washington.

Summary of Factors Affecting the Species

Section 4 of the Endangered Species Act and regulations (50 CFR Part 424) issued 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 Fender’s blue butterfly (Icaricia icarioioides fenderi), Lupinus sulphureus ssp. kincaidii (Kincaid’s lupine), and Erigeron decumbens var. decumbens (Willamette daisy) are as follows:

A. The present or threatened destruction, modification, or curtailment of its habitat or range. Over the last 140 years, humans have extensively altered native prairie in the Willamette Valley (see Background section of the final rule), which has resulted in a loss of greater than 99 percent of the only known habitat area for the Fender’s blue butterfly, Lupinus sulphureus ssp. kincaidii, and Erigeron decumbens var. decumbens (E. Alverson, pers. comm. 1994).

Within the 88 remnants of native prairie occupied by these species in the Willamette Valley, the Fender’s blue butterfly occurs at 32 sites (Hammond and Wilson 1993, Schultz 1996), Lupinus sulphureus ssp. kincaidii occurs at 54 sites (Kuykendall and Kaye 1993a), and Erigeron decumbens var. decumbens occurs at 26 sites (Clark et al. 1993). Fender’s blue butterfly and L. sulphureus ssp. kincaidii are found in close association, occurring together at a total of 26 sites. Erigeron decumbens var. decumbens co-occurs with L. sulphureus ssp. kincaidii at only one site and with Fender’s blue butterfly at only this same site, Baskett Butte. Typically these sites are small, with extirpation likely in the near future. Activities that destroy, modify, or curtail the habitat of L. sulphureus ssp. kincaidii, E. decumbens var. decumbens, and Fender’s blue butterfly are discussed below.

The immediacy of the threat of habitat loss in the last remaining 88 remnants of native prairie occupied by these species has been well documented. Habitat at 80 percent of the sites (68 sites) is rapidly disappearing due to agriculture practices, development activities, forestry practices, grazing, roadside maintenance, and commercial Christmas tree farming.

Agricultural Activities

Agricultural activities likely impact at least 12 prairie remnants. Five of these remnants are wetland prairies occupied by Erigeron decumbens var. decumbens, seven are upland prairies of which six are occupied by Lupinus sulphureus ssp. kincaidii, and two are occupied by Fender’s blue butterfly. In one case, a wheat field boundary adjustment near Buell in Polk County (Mill Creek Road South) is likely to lead to loss of a population of Fender’s blue butterfly and L. sulphureus ssp. kincaidii (Hammond 1994). By 1996, this boundary adjustment was implemented with a diminished population of L. sulphureus ssp. kincaidii and Fender’s blue butterfly still present. No Fender’s blue butterflies, however, were observed at this site in 1997 (Hammond, pers. comm. 1997). The majority of the habitat supporting populations of each of these species are habitat remnants, such as small habitat patches remaining after other habitat loss has occurred. Small habitat patches that occur along State and county roadways face greater threats from agriculture than those occurring along non-roadside areas. In past decades, many roadside habitats were less disturbed, but today roadside stretches of habitats adjoining grass seed farms are now being disked and/or sprayed with herbicides to kill all roadside vegetation (A. Robinson, U.S. Fish and Wildlife Service, pers. obs. 1997). Grass seed farms commonly use herbicide spraying to create bare soil to prevent the spread of weeds from roadways into the grass seed fields. Many of these roadways are areas inhabited by populations of E. decumbens var. decumbens.
Development

Urban development has caused additional loss of prairie habitat (Clark et al. 1993; Hammond and Wilson 1992a, 1992b, 1992c, 1994, 1996; Kuykendall and Kaye 1993a; Liston et al. 1994; Schultz, 1996; Sidall and Chambers 1978). Destruction of upland prairie habitat occupied by Fender’s blue butterfly and Lupinus sulphureus ssp. kincaidii at several sites since 1992 has caused the butterflies at these sites to either completely die out or to be reduced to low, non-viable numbers. Future losses for 47 prairie remnants are projected as a result of urban development (Hammond 1994, 1996), which is the largest single factor currently threatening the survival of these prairie species. Nineteen of these remnants are wetland prairies supporting Erigeron decumbens var. decumbens, and the other 28 are upland prairie remnants supporting populations of Fender’s blue butterfly and/or L. sulphureus ssp. kincaidii.

Examples of this type of threat are the Dallas-Oakdale Avenue sites 1 and 2 covering about 2 ha (5 ac) occupied by Fender’s blue butterfly and Lupinus sulphureus ssp. kincaidii near the town of Dallas in Polk County. These sites are expected to be lost due to planned housing development (Hammond 1996). The loss of native prairie habitat is further exemplified by the destruction of a site supporting 6,000 plants in Lane County, formerly the largest occurrence of Erigeron decumbens var. decumbens, plowed under in 1986 prior to the development of an industrial and residential site (Kagan and Yamamoto 1987). Construction of a single driveway resulted in the loss of one site occupied by Fender’s blue butterfly and L. sulphureus ssp. kincaidii in Kings Valley (Hammond 1994). Future highway construction potentially threatens the Nielson Road site of E. decumbens var. decumbens located in a highway expansion corridor in Lane County (USFSW 1994). The populations of Fender’s blue butterfly and L. sulphureus ssp. kincaidii at Wren in Benton County occur at 2 sites and cover about 9 ha (22 ac). Only a portion of the populations (7.4 ha) (18 ac) occur on land owned by The Nature Conservancy (TNC). Heavy clearing and mowing activities on private lands adjacent to the TNC property has caused the decline of the lupine and is reducing the butterfly population at the Wren site to a non-viable state (Hammond and Wilson 1993). At the Willow Creek Main site, occupied by TNC, Fender’s blue butterfly and L. sulphureus ssp. kincaidii occur together. This site is actively managed for the benefit of the species, and the lands are considered relatively secure from development threats. Although this TNC site is considered a secure habitat area, extensive damage to habitat occupied by Fender’s blue butterfly and L. sulphureus ssp. kincaidii occurred in 1996 during high-voltage power-line repair work conducted on a utility corridor easement. Two other moderately sized habitat patches occupied by E. decumbens var. decumbens face habitat loss from trash dumping (at the Grande Ronde site) and urbanization (at the west Eugene site) (Clark et al. 1993).

Forestry Practices

Silvicultural activities for timber production have threatened 6 percent (5 sites) of the remaining 88 prairie occurrences. The Coburg Ridge area-2 site in Lane County is the largest site operated by Fender’s blue butterfly and is among the best examples of remnant upland native prairie in the Willamette Valley (Hammond 1994). Native species were severely damaged, however, by the application of grass-specific herbicide that eliminated grasses and severely damaged other herbaceous species prior to tree planting activities. Approximately 4 ha (10 ac) were sprayed with herbicide. The saddle section of Coburg Ridge (area-2) that received aerial application of the herbicide is used by Fender’s blue butterfly due to the presence of Lupinus laxiflorus, an alternate host plant, but this site does not contain L. sulphureus ssp. kincaidii (Schultz 1996). Loss of such alternate host plant sites further limits the habitat that is available to support Fender’s blue butterfly. Additional tree-planting efforts by an adjacent Coburg Ridge landowner threaten to alter a different portion of the grassland in area-2, which has displayed the highest levels of butterfly activity on Coburg Ridge in previous years (Schultz 1996). This site received spot herbicide application during the planting efforts, rather than the aerial broadcast method of the first case; therefore, the immediate effects to the habitat were not as severe. However, tree saplings were planted and as the trees grow they will eventually shade out the native prairie species, resulting in the loss of butterfly habitat.

Herbicide spraying associated with reforestation, after logging, has also altered habitat and caused a decline of a Lupinus sulphureus ssp. kincaidii population on Bureau of Land Management properties. At the BLM Letitia Creek Site, L. sulphureus ssp. kincaidii is located within a timber sale unit proposed for future harvest at the beginning of year 2020. The Callahan Ridge BLM site is located on the boundary between timber available for harvest and a non-commercial rocky area that has been withdrawn from the timber base. No timber harvest has been scheduled for the timber portion of this site for the next 30 years. The Letitia Creek area, where plants of L. sulphureus ssp. kincaidii are located, was impacted when the jeep trail running along the ridge was renovated and the surrounding forest selectively logged. Renovation of the jeep road destroyed most of the plants along the road and only a small portion of the original population remains. The other large occurrence of the butterfly and L. sulphureus ssp. kincaidii is in Benton County on McDonald State Forest and adjacent private lands that could be similarly affected by surrounding silvicultural operations.

Grazing

Grazing currently impacts 13 of the occupied habitat patches, with 5 of these being wetlands occupied by Erigeron decumbens var. decumbens. Most of the habitat at the Oak Ridge south site, in Yamhill County, occupied by Fender’s blue butterfly and Lupinus sulphureus ssp. kincaidii, has been lost due to heavy grazing (Hammond 1996). Another site of L. sulphureus ssp. kincaidii, covering about 4.6 ha (11 ac) at Crabtree Hill in Lane County, is being damaged by extensive livestock grazing. The Crabtree Hill population of 6,000 plants is the largest known L. sulphureus ssp. kincaidii population. At Boistfort Cemetery, cattle grazing remains as a threat to the L. sulphureus ssp. kincaidii population on the cemetery hill. Cattle at the Boistfort site had full access to the cemetery hill in the mid-1980s when cattle trails criss-crossed the hill and few lupines were observed (Maxwell in litt. 1998). In 1986, Maxwell estimated the plants on the cemetery hill to be 50 to 60 individuals (Maxwell in litt. 1998). In 1991, after cattle were removed from the site, Maxwell inventoried the cemetery hill and estimated 1,685 individuals of L. sulphureus ssp. kincaidii, with 58 plants located on the west-facing side of the hill where there was no evidence of cattle grazing, but where horses occurred (Maxwell in litt. 1998). Subsequent inventories at the cemetery site recorded similar numbers of individuals as the 1991 data, with minimal increases and decreases that could be accounted for by sampling error and environmental fluctuation. These data suggest that the removal of cattle from the hillside has helped to
increase the size of the L. sulphureus ssp. kincaidi population (Maxwell *in litt*. 1998). *Lupinus sulphureus* ssp. *kincaidi* on the west-facing part of the hill where horses continue to occur, however, show evidence of trampling, and populations have not experienced a similar upward trend (Maxwell *in litt*. 1998).

**Roadside Maintenance**

Another common threat to these species is roadside maintenance activities. At least 34 sites occur along roadways and are impacted by maintenance activities. Five of these are wetland areas supporting *Erigeron decumbens* var. *decumbens*. Twenty-nine are upland sites (*Lupinus sulphureus* ssp. *kincaidi* occurs at 27 sites and Fender’s blue butterfly occurs at 11 sites). Populations of Fender’s blue butterfly and *L. sulphureus* ssp. *kincaidi* were recently lost due to road maintenance activities at the Oak Ridge north site. When planned developments are complete, the Oak Ridge south site, the butterfly and lupine will essentially be extirpated from the Oak Ridge area (Hammond 1996). Two sites on Oregon Department of Transportation (ODOT) property and one site on land owned by the City of Corvallis receive only limited protection and could potentially be impacted by future development and highway maintenance activities. Publicly owned roadside sites receive varying degrees of protection on a district-by-district basis. Although some roadside sites have been marked as no-spray zones by the Native Plant Society of Oregon, this protective measure is not always effective. The roadside portion of a *L. sulphureus* ssp. *kincaidi* population in Kings Valley continues to receive herbicide application during roadside weed control activities, despite efforts to restrict spraying. Other roadside sites receive only sporadic protection during herbicide application. Privately managed roadside occurrences are also impacted by maintenance activities. Extensive mowing at the Wren sites in Benton County and Fir Butte Road roadside sites in Lane County have caused declines in Fender’s blue butterfly and *L. sulphureus* ssp. *kincaidi* populations (Hammond 1994).

With frequent weed control efforts ongoing, as well as highway and driveway construction, small roadside occurrences of Fender’s blue butterfly, *Lupinus sulphureus* ssp. *kincaidi*, and *Erigeron decumbens* var. *decumbens* are unlikely to persist. For example, another sensitive *Spiranthus leucophaeum*, in Boistfort Valley, Lewis County, Washington, has been damaged by roadside herbicide spraying by the County. The spraying swath is sometimes 0.9 to 1.2 m (3 to 4 ft.) wide. Several *D. leucophaeum* plants were damaged by spray in 1991 (Maxwell *in litt*. 1998). Botanists met with the roadside management crew in May of 1991 to point-out and discuss no-spray zones where *D. leucophaeum* occur. Since then, *D. leucophaeum* plants have been lost twice because of landowners spraying the roadways to control weedy nonnative species that invade their pastures and fields (Maxwell *in litt*. 1998). The *L. sulphureus* ssp. *kincaidi* population within the Boistfort Valley does not occur along the roadways, but along a path that leads up to a pioneer cemetery. Since monitoring began in 1991, a 3-m (1-ft) wide strip has been sprayed with herbicides along the path and steps leading up to the cemetery. Some of the *Lupinus sulphureus* ssp. *kincaidi* plants are damaged by the annual spraying (Maxwell *in litt*. 1998). Between 1994 and 1996, Fender’s blue butterfly populations disappeared from (or were considered no longer viable) at least seven small roadside sites (Liberty Road, Monmouth Falls City Road, Fern Corner, Grant Creek, and McTimmonds Valley in Polk County, and two sites at Wren), and populations at many of the remaining roadside sites continue to decline. Between 1990 and 1992, three sites occupied by both Fender’s blue butterfly and *L. sulphureus* ssp. *kincaidi* were lost in the McTimmond’s Valley to the expansion of Christmas tree farming operations (Hammond 1994). Conversion of these three sites destroyed approximately 3 ha (7 ac) of habitat along roadside and private land that comprised the nucleus of two Fender’s blue butterfly populations and a substantial number of *L. sulphureus* ssp. *kincaidi* plants. The two roadside occurrences of the butterfly that remain nearby are no longer considered viable due to the loss of the source butterfly populations and considerable numbers of *L. sulphureus* ssp. *kincaidi* plants. We do not know if the two roadside occurrences but if they do, they are not expected to persist for more than a few additional years (Hammond 1994).

In summary, habitat loss from a wide variety of causes (e.g., urbanization, agriculture, silvicultural practices, and roadside maintenance) is a severe problem faced by Fender’s blue butterfly, *Lupinus sulphureus* ssp. *kincaidi*, and *Erigeron decumbens* var. *decumbens* are unlikely to persist. For example, another sensitive *Spiranthus leucophaeum*, in Boistfort Valley, Lewis County, Washington, has been damaged by roadside herbicide spraying by the County. The spraying swath is sometimes 0.9 to 1.2 m (3 to 4 ft.) wide. Several *D. leucophaeum* plants were damaged by spray in 1991 (Maxwell *in litt*. 1998). Botanists met with the roadside management crew in May of 1991 to point-out and discuss no-spray zones where *D. leucophaeum* occur. Since then, *D. leucophaeum* plants have been lost twice because of landowners spraying the roadways to control weedy nonnative species that invade their pastures and fields (Maxwell *in litt*. 1998). The *L. sulphureus* ssp. *kincaidi* population within the Boistfort Valley does not occur along the roadways, but along a path that leads up to a pioneer cemetery. Since monitoring began in 1991, a 3-m (1-ft) wide strip has been sprayed with herbicides along the path and steps leading up to the cemetery. Some of the *Lupinus sulphureus* ssp. *kincaidi* plants are damaged by the annual spraying (Maxwell *in litt*. 1998). Between 1994 and 1996, Fender’s blue butterfly populations disappeared from (or were considered no longer viable) at least seven small roadside sites (Liberty Road, Monmouth Falls City Road, Fern Corner, Grant Creek, and McTimmonds Valley in Polk County, and two sites at Wren), and populations at many of the remaining roadside sites continue to decline. Between 1990 and 1992, three sites occupied by both Fender’s blue butterfly and *L. sulphureus* ssp. *kincaidi* were lost in the McTimmond’s Valley to the expansion of Christmas tree farming operations (Hammond 1994). Conversion of these three sites destroyed approximately 3 ha (7 ac) of habitat along roadside and private land that comprised the nucleus of two Fender’s blue butterfly populations and a substantial number of *L. sulphureus* ssp. *kincaidi* plants. The two roadside occurrences of the butterfly that remain nearby are no longer considered viable due to the loss of the source butterfly populations and considerable numbers of *L. sulphureus* ssp. *kincaidi* plants. We do not know if the two roadside occurrences but if they do, they are not expected to persist for more than a few additional years (Hammond 1994).
damage the populations through loss of individuals and genetic variability (Gall 1984b; Murphy 1988; Singer and Wedlake 1981). Collection of females dispersing from a colony also can reduce the probability that new colonies will be founded. Butterfly collectors pose a threat because they may be unable to recognize when they are depleting butterfly colonies below the thresholds of survival or recovery, especially when they lack appropriate biological training or the area is visited for a short period of time (Collins and Morris 1985).

The 1989 rediscovery of this insect generated a great deal of publicity and interest, which in turn increased demand by collectors. Therefore, remaining populations of Fender's blue butterfly face strong pressure from some members of the collecting community. Collectors who highly prize rare butterflies often take all wild specimens obtainable for use in trade (U.S. Department of Justice, in litt. 1993). Because many of the Fender's blue butterfly populations occur along public roadsides, the species is easily acquired. The extremely limited numbers and distribution of many of the remaining populations makes this species vulnerable to extinction due to collection.

No current evidence exists of horticultural collection or other overutilization for scientific purposes for either Erigeron decumbens var. decumbens or Lupinus sulphureus ssp. kincaidii. However, the potential threat posed by collectors for personal herbarium specimens may be significant, particularly where populations are small, due to the species’ rarity and the relative accessibility of roadside populations.

C. Disease or predation. Although most lepidopteran larvae suffer significant mortality from parasitoid attack, no instances of parasitism (Hammond and Wilson 1993) or disease (R.H.T. Mattoni, pers. comm. to C. Nagano 1997) have been documented for Fender's blue butterfly. Predation of adult Fender's blue butterflies by crab spiders has been observed on at least two occasions (Schultz in litt. 1998). The white and/or yellow crab spiders hide in the flowers of Lupinus sulphureus ssp. kincaidii, and in a variety of species that the Fender’s blue butterfly uses for nectar, such as Allium ampelans (Schultz in litt. 1998). Under normal circumstances, predation likely was not a significant threat, but because the species has been reduced to such low levels, predation may significantly impact the persistence of remaining populations.

Lupinus sulphureus ssp. kincaidii evidently hosts a number of herbivorous and parasitic insect species. Gall-forming insects attack unopened flowers and the bases of woody stems. Weevils lay eggs in the developing floral embryos, and their offspring stimulate the fruit to produce callous tissue as a food source. Misdirection of the developing fruit by weevil larvae effectively prevents viable seed formation in the parasitized fruits (Kuykendall and Kaye 1993b). Weevil damage at some sites (e.g., Willow Creek) can be high, with some plants suffering 90 percent loss of mature fruits (E. Alverson, pers. comm. 1994). Herbivory has been documented at all three Fern Ridge Reservoir sites. Loss of floral parts through herbivory can also significantly reduce reproduction. Larvae of the silvery blue butterfly (Glaucopsyche lygdamus) graze flowers for pollen and in doing so effectively destroy them. At the Fir Butte site, silvery blue butterfly larvae cause significant seed damage, as well as pollen damage to L. sulphureus ssp. kincaidii. They often chew through maturing pods, devour some or all of the seeds, then move on to the next pod (Schultz in litt. 1998). Silvery blue larvae can reach high population densities at some of the sites and may reduce the fecundity of L. sulphureus ssp. kincaidii, but do not appear to cause the death of mature individual plants (C. Schultz, pers. comm. 1994). On July 14, 1991, at the Boistfort Prairie site, pods of L. sulphureus ssp. kincaidii were observed with larvae feeding on them, and ants were feeding on the juices excreted from the larvae (Maxwell in litt. 1998). In a sample of 10 L. sulphureus ssp. kincaidii plants, 5 damaged pods were observed (Maxwell in litt. 1998). In 1992, adult silvery blue butterflies were positively identified as being present, and the caterpillars of the blue were observed feeding on L. sulphureus ssp. kincaidii. In 1993, damage to L. sulphureus ssp. kincaidii pods was observed again, but less than in the previous 2 years (Maxwell in litt. 1998). Under normal circumstances, insect herbivory likely was not a significant threat, but because the species has been reduced to such low levels, herbivory may significantly impact the persistence of remaining populations.

Evidence of insect herbivory on Erigeron decumbens var. decumbens is limited. Insect species collected on E. decumbens var. decumbens in 1993 included sap-sucking insects (Hemiptera), a bruchid beetle, thrips, and mites (Clark et al. 1993). Other threats from herbivory include consumption of E. decumbens var. decumbens by cattle. However, no plants were found in areas currently or recently grazed during surveys conducted in 1986 (Kagan and Yamamoto 1987), and only one site was observed to support E. decumbens var. decumbens in the presence of cattle in 1993 (Clark et al. 1993).

D. The inadequacy of existing regulatory mechanisms. In 1963, the protection of natural botanical resources by the State of Oregon was initiated with the passage of the Oregon Wildflower Law (ORS 564.010–564.040). This law was designed to protect specific showy botanical groups including lilies, shooting stars, orchids, and rhododendrons from collection and trade by horticulturists interested in the cultivation of these species. It also prohibits the collection of wildflowers from “within 500 feet of the centerline of any public highway” (ORS 564.020 (2)). Although protective in spirit, the Oregon Wildflower Law carries minimal penalties and is rarely enforced. We doubt that this law is effective in protecting Lupinus sulphureus ssp. kincaidii and Erigeron decumbens var. decumbens populations.

In 1987, Oregon Senate Bill 533 was passed to augment the legislative actions available for the protection of the State’s threatened and endangered species, both plant and animal. This bill, known as the Oregon Endangered Species Act, mandates responsibility for threatened and endangered species in Oregon to two State agencies—the Oregon Department of Agriculture (ODA) for plant species (ORS 564.105) and the Oregon Department of Fish and Wildlife (ODFW) for “wildlife” species (ORS 496.172). As re-authorized in 1995 (HB 2120), the Oregon Endangered Species Act does not include invertebrate animals in the definition of “wildlife.” Therefore, Fender’s blue butterfly receives no protection under the Oregon Endangered Species Act. The Oregon Natural Heritage Program is the only State agency which tracks locations of and works to protect the rare, threatened and endangered invertebrates of Oregon” (Oregon Natural Heritage Program 1993). The Heritage program has created a Sensitive Species invertebrate list, which includes Fender’s blue butterfly as a “priority 1 species.” Priority 1 species are “taxa that are threatened or endangered throughout their range” (Oregon Natural Heritage Program 1993). The program can assist planning agencies in managing lands for the benefit of rare invertebrate taxa, but it has no regulatory authority over rare

The Oregon Endangered Species Act directs the ODA to maintain a strong program to conserve and protect native plant species classified by the State as threatened or endangered. Erigeron decumbens var. decumbens, as a State-listed endangered species, and Lupinus sulphureus var. kincaidii, as a State-listed threatened species, receive protection on State-managed lands under the Oregon Endangered Species Act. The ODA is able to regulate the import, export, or trafficking of State-listed plant species when they are in transit (under ORS 564.1200). The ODA’s ability to protect plant populations, by restricting take under the Oregon Endangered Species Act, is limited to “land owned or leased by the state, or for which the state holds a recorded easement” (ORS 564.115). “Nothing in ORS 564.100 to 564.130 is intended . . . to require the owner of any commercial forest land or other private land to take action to protect a threatened species or endangered species” on their lands (ORS 564.135 (1)). As a result, populations of L. sulphureus var. kincaidii and E. decumbens var. decumbens on private lands receive minimal protection from their State status as endangered or threatened.

ODOT owns and manages roadside habitat where Lupinus sulphureus var. kincaidii and Erigeron decumbens var. decumbens are present. The Oregon Endangered Species Act requires the protection of these State-listed species on this State-managed land. In conjunction with Oregon State University researchers and the Native Plant Society of Oregon, ODOT has responded by providing road crews with maps of these areas and instructions to avoid herbicide use in these areas. Lupinus sulphureus var. kincaidii, Erigeron decumbens var. decumbens, and Fender’s blue butterflies receive protection within the boundaries of the Service’s National Wildlife Refuges. All three species occur together only at Baskett Slough National Wildlife Refuge, where habitat for the benefit of these species is actively managed. The BLM and the Forest Service (FS) manage lands occupied by Lupinus sulphureus var. kincaidii. On lands managed by the BLM, this species receives some protection through a general conservation agreement that applies to all Federal candidate species on BLM property. The population of L. sulphureus var. kincaidii that occurs in the Umpqua National Forest is not covered under any conservation agreement.

On Corps lands, discretion for the protection and management of State-listed and Federal candidate species lies at the local level. Funds may be available in some years to proactively manage these species. Lupinus sulphureus ssp. kincaidii, Erigeron decumbens var. decumbens, and Fender’s blue butterfly have received habitat protection, as well as support for research activity from the Corps through allocation of personnel and supplies to these projects. This protection and cooperation is voluntary for candidate species and is dependent on the continuation of sufficient funding.

Populations of Erigeron decumbens var. decumbens occur in seasonally flooded wet prairies with hydric soils (Clark et al. 1993). Under section 404 of the Clean Water Act (CWA), the Corps regulates the discharge of fill into waters of the United States, including navigable waters, wetlands (e.g., wet prairies), and other waters (33 CFR parts 320–330). The CWA requires project proponents to obtain a permit from the Corps prior to undertaking many activities (e.g., grading, discharge of soil or other fill material) that would result in the filling of wetlands subject to the Corps’ jurisdiction. The Corps published nationwide permit number 26 (NWP 26) to address fill of isolated or headwater wetlands. Under the 1996 reauthorization of NWP 26 (61 FR 65873), the Corps may automatically approve project proposals that involve the fill of wetlands less than 0.13 ha (0.33 ac) in size. Filling areas between 0.13 ha and 0.4 ha (0.33–1 ac) requires only notification to the Corps. When placement of fill would adversely modify between 0.4 and 1.2 ha (1 and 3 ac) of wetland, the Corps circulates a pre-discharge notification to us and other interested parties for comment to determine whether an individual permit should be required for the proposed fill activity and associated impacts. Individual Corps permits are required for discharge of material that would fill or adversely modify greater than 1.2 ha (3 ac) of wetlands. The review process for individual permits is more rigorous than for nationwide permits. Unlike nationwide permits, a cumulative analysis of wetland impacts is required for individual permit applications. Resulting permits may include special conditions that require potential avoidance or mitigation for environmental impacts. On nationwide permits, the Corps has discretion to approve or deny an individual permit if the Corps believes that resources are sufficiently important, regardless of the wetland’s size. In practice, however, the Corps generally does not require an individual permit when a project qualifies for a nationwide permit unless a threatened or endangered species or other significant resources would be adversely affected by the proposed activity. When a listed species may be affected, consultation requirements of section 7 of the Act do pertain to the Corps’ regulatory process.

Disking and some other farming, ranching, and silvicultural practices can degrade or destroy wetland habitat without a permit from the Corps because these activities are exempt from regulation under the CWA (33 CFR 323.4(a)). The discontinuous configuration of the existing wet prairies further obscures these wetland losses. Occurrences of Lupinus sulphureus ssp. kincaidii and Fender’s blue butterfly in upland (non-wetland) areas receive no protection under section 404 of the CWA.

Trust primary inadequacies in existing regulatory mechanisms pertain to populations of Fender’s blue butterflies, Lupinus sulphureus ssp. kincaidii, and Erigeron decumbens var. decumbens that occur on private lands. Privately owned lands where populations of these species occur constitute a significant portion of the range of these species and play a substantial role in their continued existence.

E. Other natural or manmade factors affecting its continued existence. The small and fragmented populations characteristic of the remaining Fender’s blue butterfly, Lupinus sulphureus ssp. kincaidii, and Erigeron decumbens var. decumbens constitute a factor in affecting the continued existence of these taxa. Small populations are more vulnerable to all the natural and manmade factors that would not likely negatively influence relatively large and contiguous populations. Generally, the direct and indirect effects of small population size on most species, plant and animal, include loss of connectivity for dispersal, a decrease in genetic exchange, a resultant loss of population viability and vigor, and a hastening towards extinction (Gilpin and Soulé 1986).

Although few large sites (greater than 10 ha (25 ac)) are secure from habitat loss, large sites currently support relatively stable populations of Fender’s blue butterflies, Lupinus sulphureus ssp. kincaidii, and Erigeron decumbens var. decumbens and provide the greatest potential for long-term persistence of these species if the current condition of these sites can be sustained or improved. The only large site occupied
by all of the species and that is considered relatively secure from habitat loss is Basket Slough National Wildlife Refuge in Polk County, although the habitat condition is declining from invasion by nonnative weedy species (Hammond 1994, 1996; Hammond and Wilson 1993; Schultz 1994). The two remaining large butterfly sites (Coburg Ridge area-1 and 2, and McDonald State Forest 1) and the one remaining large L. sulphureus ssp. kincaidii site (McDonald State Forest 1) are not considered secure because these sites face loss or degradation of habitat through adjacent silviculture operations, ecological succession to shrub and forest, and competition from nonnative weedy species (Hammond 1994, Kuykendall and Kaye 1993a).

Erigeron decumbens var. decumbens occupies three large sites. One site on Corps property and another on TNC property are being managed to benefit native prairie species and are relatively secure. The third site occurs on private land and is not managed for native prairie species and is not protected from habitat loss.

The sites with small acreage where these three taxa occur, such as roadside and fence line/boundaries, face an immediate threat of destruction from a variety of disturbances. These disturbances include development, agriculture, silvicultural practices, roadside maintenance, and herbicide application. Of the 54 sites occupied by Lupinus sulphureus ssp. kincaidii, 45 occur on less than 3.4 ha (8.3 ac). On sites where blue butterflies are found to co-occur with L. sulphureus ssp. kincaidii, a similar pattern is suggested, with 24 of the 32 populations occurring on parcels of 3.4 ha (8.3 ac) or less. Of the 28 sites occupied by Erigeron decumbens var. decumbens, 20 are less than 3.4 ha (8.3 ac).

Given the impact of such habitat losses on these small habitat patches, the extirpation of most of the small Fender’s blue butterfly populations is anticipated within the next 5 years.

Lupinus sulphureus ssp. kincaidii may, however, survive for a longer time in these small sites. Nonetheless, because of the extensive habitat loss caused by development and agriculture, the extirpation of L. sulphureus ssp. kincaidii on the 45 small sites is also anticipated in the future. Similarly, these habitat losses are expected to also cause the extirpation of the 20 small populations of Erigeron decumbens var. decumbens. Should these smaller populations disappear, only large habitat sites remain. Only eight sites of Fender’s blue butterfly (75 percent reduction), nine sites of L. sulphureus ssp. kincaidii (74 percent reduction), and eight sites of E. decumbens var. decumbens (72 percent reduction) will remain.

The importance of these small populations, particularly for the Fender’s blue butterfly, lies in their potential to serve as stepping stones between larger neighboring populations. The loss of these populations and the accompanying potential habitat would severely compromise the ability of Lupinus sulphureus ssp. kincaidii and Erigeron decumbens var. decumbens or the Fender’s blue butterfly to disperse from larger sites (Hammond and Wilson 1993, Schultz 1996). Larger populations would become more isolated and extinction-prone as opportunities for migration and/or recolonization are limited.

A less visible threat to the smaller populations is a decrease in vigor and viability. For the Fender’s blue butterfly, small numbers and localized populations increase the risk of loss through random genetic or demographic factors (Gilpin and Soule 1986, Kuykendall and Kaye 1993b, Lacy 1992, Hammond and Wilson 1993). Nineteen of the 32 Fender’s blue butterfly sites contain an estimated 50 or fewer individuals. The threat of extinction due to naturally occurring genetic or demographic events can play a significant role in the instability of the species as a whole. The isolation of these small populations due to habitat fragmentation limits the potential for dispersal and migration and the resultant exchange of genetic material. Small, isolated populations with no opportunity of rescue from neighboring populations more easily become non-viable and/or extirpated.

This pattern of extinction and recolonization of connected colonies of butterflies has been disrupted by the extensive fragmentation of remaining habitat and the disruption of the disturbance regimes that have maintained them. The remnant populations, now small in numbers, are either unconnected or exchange individuals to a very limited degree. With their limited dispersal abilities, low numbers, and dwindling habitat, a majority of the remaining populations of Fender’s blue butterfly likely face permanent extirpation.

The effects of random environmental events are magnified in small populations. For instance, one small population of Erigeron decumbens var. decumbens previously found on Finley National Wildlife Refuge was lost due to a change in a drainage pattern in a small waterway course (Meinke 1980). Large fluctuations in Fender’s blue butterfly populations have been correlated with random variations in weather conditions from year to year (Shultz 1996). These large fluctuations make Fender’s blue butterfly extremely susceptible to loss of habitat and host plants due to human-caused disturbance or invasive nonnative plants. Maxwell (in litt. 1998) observed fluctuations in the inventory counts for both Lupinus sulphureus ssp. kincaidii and Delphinium leucophacum over a 4-year period on the Boistfort Prairie. Lupinus sulphureus ssp. kincaidii counts ranged from 742 to 2,266 plants and strong evidence existed that these fluctuations in numbers were closely tied to weather patterns (Maxwell in litt. 1998). The timing of spring rains is very critical for production of above-ground biomass for these two species. In years with lower than average precipitation, these plant species may not even appear.

A serious long-term threat to all Fender’s blue butterfly, Lupinus sulphureus ssp. kincaidii, and Erigeron decumbens var. decumbens sites is the conversion in community structure due to plant succession. Continuing plant succession has been documented on 70 of the 88 relic prairie sites occupied by 1 or more of these species. Invasion by alien plant species has been documented at 37 of these 88 prairie sites. The natural transition of grassland to forest in the absence of disturbance such as fire will lead to the eventual loss of these prairie sites unless they are actively managed (Clark et al. 1993; Franklin and Dyrness 1973; Hammond and Wilson 1993; Johansson et al. 1971; Kuykendall and Kaye 1993a). The presence of tall, fast-growing nonnative species speeds the conversion of upland native prairie to dense, rank grasslands and shrub lands. Invasive woody species of concern include nonnative plants such as Rubus discolor (Himalayan blackberry) and Cytisus scoparius (Scotch broom), and the native species Toxicodendron diversiloba (poison oak). Nonnative weedy herbaceous species include Cirsium arvense (Canada thistle). Nonnative grass species aggressive enough to suppress L. sulphureus ssp. kincaidii and E. decumbens var. decumbens include Holcus lanatus (velvet grass), Dactylis glomerata (orchard grass), Brachypodium sylvaticum (false-brome), and Arhenatherum elatius (tall oat-grass) (Hammond 1996). At prairie remnant roadside sites, the degree of the threat of succession varies, depending on the vegetation control employed by each county. Many Fender’s blue butterfly populations are close to local extinction at small
roadside sites. Populations along the roadside generally have low numbers of individuals because habitat, often degraded, can be invaded by nonnative grasses. This situation usually leads to succession by shrubs and trees (Hammond 1996). For instance, one roadside site at Oak Ridge previously considered stable has declined since 1992 because large thickets of Rubus ssp. (blackberry) and Cytisus scoparius have invaded the site (Hammond 1996).

Non-roadside prairie remnant sites in general face the greatest threat from succession/weed expansion and invasion due to a lack of disturbance that disrupts successional progress. For instance, otherwise secure habitat on one Corps site has been heavily invaded by the nonnative plant Arrhenatherum elatius. The Fender’s blue butterfly population on this site is becoming extremely small (Schultz 1996). Prime habitat occupied by Erigeron decumbens var. decumbens at the Baskett Butte site is rapidly being overtaken by native woody plants, nonnative grasses and trees (Hammond 1996). Approximately 25 percent of the large Coburg Ridge site occupied by Fender’s blue butterfly and Lupinus sulphureus ssp. kincaidi was threatened by the profuse shrub growth of Cytisus scoparius (Hammond 1996). Regardless of the size of the site, invasion by nonnative plants is a threat at all sites occupied by any of the three species addressed in this rule.

Compounding the threat of nonnative plant species is the control of weedy nonnative species by herbicides. Twenty-three Lupinus sulphureus ssp. kincaidi plants on the west side of the Boistfort Cemetery hill site were damaged by herbicide spray applied by a helicopter to eradicate Scotch broom and Canada thistle (Maxwell in litt. 1998). The application of pesticides and biological control agents to control insect pests, such as gypsy moths, is also a threat to Fender’s blue butterfly. The potential threat from use of gypsy moth control agents on habitats occupied by the Fender’s blue butterfly should not be dismissed even though the sensitivity of Fender’s blue butterfly larvae to specific insecticides is not known (Hammond 1994). The use of microbial insecticides, such as Bacillus thuringiensis (Bt), has been shown to have significant residual toxic impacts on native butterflies. This negative impact is evident under field conditions, even with heavy rain and ultraviolet light exposure (Scriber and Gage 1995).

Summary

Natural and human-caused factors threaten the remaining populations of Fender’s blue butterflies, Lupinus sulphureus ssp. kincaidi, and Erigeron decumbens var. decumbens. As a result of their small size, nearly all of the populations are threatened by either nonnative species, natural succession, or demographic and genetic factors. Populations of Fender’s blue butterfly at all 32 sites currently are threatened by at least 1 of these factors. All 28 sites of E. decumbens var. decumbens and all 54 sites of L. sulphureus ssp. kincaidi are threatened by these factors. The encroachment of nonnative plants, the successional advance of tree and shrub species, and other naturally occurring random events will, if unchecked, lead to further reductions in population size and number leading to reduced population viability and, ultimately, the extinction of these three native prairie species.

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by these species in developing this final rule. Threats to Fender’s blue butterfly are more imminent than threats to Lupinus sulphureus kincaidi because the butterfly has a unique biology and shorter lifespan. Fender’s blue butterfly will exhibit more rapid declines in numbers and in the face of threats will be extirpated more quickly at any one location than either of the two plant species. Because of the longer lifespan of a perennial plant, small numbers of L. sulphureus ssp. kincaidi plants are likely to persist longer in any given habitat than are small numbers of butterflies. The threats to Erigeron decumbens var. decumbens are more imminent than threats to L. sulphureus ssp. kincaidi because of the small number of E. decumbens var. decumbens populations. Also, many of the E. decumbens var. decumbens populations grow along roadsides adjacent to agricultural development (especially grass seed farms) where herbicide spraying to create bare soil is common practice. Based on our evaluation of all the available information, Fender’s blue butterfly and E. decumbens var. decumbens are presently in danger of extinction throughout all or a significant portion of their respective ranges, while L. sulphureus ssp. kincaidi is likely to become endangered within the foreseeable future. Therefore, we find that listing of Fender’s blue butterfly (Icaricia icarioides fenderi) and E. decumbens var. decumbens (Williamette daisy) as endangered is appropriate, and listing of L. sulphureus ssp. kincaidi (Kincaid’s lupine) as threatened is appropriate.

Critical Habitat

Critical habitat is defined in section 3(5)(A) 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 focused 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. The term “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 (16 U.S.C. 1532(3)(5)(A)).

Our 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.

In the proposed rule, we indicated that designation of critical habitat was not prudent for Fender’s blue butterfly (Icaricia icarioides fenderi), Lupinus sulphureus ssp. kincaidi (Kincaid’s lupine), and Erigeron decumbens var. decumbens (Williamette daisy) because of a concern that publication of precise maps and descriptions of critical habitat in the Federal Register could increase the vulnerability of these species to incidents of collection and/or vandalism. We also indicated that designation of critical habitat was not prudent because we believed the limited benefit provided by designation was outweighed by the increase in threats from collection and/or vandalism.

In the last few years, a series of court decisions have overturned our determinations regarding a variety of species that designation of critical habitat would not be prudent (e.g., Natural Resources Defense Council v. U.S. Department of the Interior 113 F. 3d 1121 (9th Cir. 1997); Conservation Council for Hawaii v. Babbitt, 2 F. Supp. 2d 1280 (D. Hawaii 1998)). Based on the standards applied in those judicial opinions, we have reexamined the question of whether critical habitat for Fender’s blue butterfly (Icaricia
The Final Listing Priority Guidance for FY 2000 (64 FR 57114) states that the processing of critical habitat determinations (prudence and determinability decisions) and proposed or final designations of critical habitat will no longer be subject to prioritization under the Listing Priority Guidance. Critical habitat determinations, which were previously included in final listing rules published in the Federal Register, may now be processed separately, in which case stand-alone critical habitat determinations will be published as notices in the Federal Register. We will undertake critical habitat determinations and designations during FY 2000 as allowed by our funding allocation for that year. As explained in detail in the Listing Priority Guidance, our listing budget is currently insufficient to allow us to immediately complete all of the listing actions required by the Act. Deferral of the critical habitat designation for Fender’s blue butterfly (Icaricia icarioides fenderi), Lupinus sulphureus ssp. kincaidii (Kincaid’s lupine), and Erigeron decumbens var. decumbens (Willamette daisy) without further delay. However, because we have successfully reduced, although not eliminated, the backlog of other listing actions, we anticipate in FY 2000 and beyond giving higher priority to critical habitat designation, including designations deferred pursuant to the Listing Priority Guidance, such as the designation for these species, than we have in recent fiscal years.

We plan to employ a priority system for deciding which outstanding critical habitat designations should be addressed first. We will focus our efforts on those designations that will provide the most conservation benefit, taking into consideration the efficacy of critical habitat designation in addressing the threats to the species, and the magnitude and immediacy of those threats. We will develop a proposal to designate critical habitat for the Fender’s blue butterfly (Icaricia icarioides fenderi), Lupinus sulphureus ssp. kincaidii (Kincaid’s lupine), and Erigeron decumbens var. decumbens (Willamette daisy) as soon as feasible, considering our workload priorities.

Unfortunately, for the immediate future, most of Region 1’s listing budget must be directed to complying with numerous court orders and settlement agreements, as well as due and overdue final listing determinations (like the one at issue in this case).

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 encourages and results in conservation actions by Federal, State, and private agencies, groups, 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 of plants and certain activities involving listed plants are discussed, in part, below.

Section 7(a)(2) of the Act, as amended, 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 implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402. If a species is listed, section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out, are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action is likely to adversely affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with us.

The Federal Highway Administration provides partial funding for State highway maintenance. Therefore, any roadside habitat supporting Erigeron decumbens var. decumbens, Lupinus sulphureus ssp. kincaidii, and/or Fender’s blue butterfly populations would be subject to section 7 consultation on any federally funded maintenance activities. Also, if the U.S. Department of Housing and Urban Development, a Federal agency, is involved in the issuance of housing loans on private property supporting occurrences of E. decumbens var. decumbens, L. sulphureus ssp. kincaidii, or Fender’s blue butterfly, such loans would be subject to review under section 7 of the Act. The BLM, FS, and Corps manage lands that are
known to contain existing populations of \textit{E. decumbens} var. \textit{decumbens}, \textit{L. sulphureus} ssp. \textit{kincaidi}, and Fender’s blue butterfly. In these cases, consultation requirements placed upon Federal agencies by the Act would be required for actions that may affect these species. Furthermore, opportunities for land acquisition, conservation agreements, and other recovery strategies would be bolstered by listing these species as endangered or threatened.

Active management of native prairie remnants is being carried out by the Portland District Corps, our Western Oregon National Wildlife Refuge complex, Eugene District BLM, and the Washington and Oregon field offices of TNC. In 1997, the Corps initiated an attempt to create two new \textit{Lupinus sulphureus} ssp. \textit{kincaidi} populations from seed collected from five areas around Fern Ridge Reservoir. One site was adjacent to the Green Oaks site at Fern Ridge, and the other is at Row Point at Dorena Reservoir. Both are on Corps lands and both are protected. Thirty-nine seedlings resulted at Row Point and 200 seedlings survived at Green Oak in 1998.

We have conducted research at Basket Slough National Wildlife Refuge on the effects of prescribed fire, fire suppression, mowing, and herbicide on native and nonnative prairie species including \textit{Lupinus sulphureus} ssp. \textit{kincaidi} and \textit{Erigeron decumbens} var. \textit{decumbens} and Fender’s blue butterflies. We have also controlled tall oatgrass in Fender’s blue butterfly habitat and completed demographic studies of \textit{E. decumbens} var. \textit{decumbens}. In addition to efforts directed at managing and rehabilitation the remnant prairie habitat on Basket Butte, we have been involved in projects to restore prairie habitat in former farm fields on Basket Slough and William L. Finley National Wildlife Refuges. At the William L. Finley Refuge, the population of \textit{E. decumbens} var. \textit{decumbens} that was lost to erosion during the 1980s along a cut bank of Muddy Creek was located less than 0.5 km (0.3 mi) from a field that was retired from cultivation for the purpose of a prairie restoration project. The current intent is to reestablish \textit{Erigeron decumbens} var. \textit{decumbens} on this restored prairie. Also, Bald Top Knoll of the William L. Finley National Wildlife Refuge has been identified as a potential restoration site for the Willamette Valley dry prairie ecotype.

Management of the six prairie remnants in the west Eugene wetlands of Lane County on BLM lands includes control of nonnative invasive species, primarily blackberry, tansy ragwort, meadow knapweed, and Scotch broom. BLM will use methods such as tractor mowing, hand pulling or cutting, and will remove native hardwoods and/or conifers needed to maintain these prairie remnants. As part of the West Eugene Wetlands Acquisition Program, BLM will acquire additional habitat supporting sensitive Willamette Valley prairie species as opportunities occur. At the Boistfort Cemetery, extensive Canada thistle patches at the base of the south side of the hill near \textit{Lupinus sulphureus} ssp. \textit{kincaidi} were pulled by TNC volunteers in 1993. On June 25, 1994, TNC volunteers pulled Canada thistle and cut scotch broom on the north side of the hill. Volunteers did weed control by hand at this private site to aid the landowner and in turn reduce herbicide use thus helping to preserve rare plant populations.

On the TNC Willow Creek Natural Area, seedlings of \textit{Lupinus sulphureus} ssp. \textit{kincaidi} were introduced initially in 1995, then in the fall of 1996, the spring of 1997, and the spring of 1998. TNC plans to continue monitoring through the year 2000 to evaluate how successful these efforts were.

The Act and its implementing regulations set forth a series of general prohibitions and exceptions that apply to all endangered and threatened plants. The prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61 for endangered plants and 50 CFR 17.71 for threatened plants, apply. These prohibitions, 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 listed 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 and to enhance the propagation or survival of the species, and/or for incidental take in connection with otherwise lawful activities.

Our policy, as published in the \textit{Federal Register} on July 1, 1994 (59 FR 34272), is 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 the listing on proposed and ongoing activities within the range of a species. \textit{Erigeron decumbens} var. \textit{decumbens} and \textit{Lupinus sulphureus} ssp. \textit{kincaidi} are known to occur on Federal lands under the jurisdiction of the Service, Corps, BLM, or FS. With issuance of this final rule, these species...
on Federal lands are protected from collection. *Erigeron decumbens* var. *decumbens* is protected from malicious damage or destruction on Federal land under section 9 of the Act. In appropriate cases, collection of these species could be allowed through the issuance of a Federal permit. We are not aware of any otherwise lawful activities being conducted or proposed on private land that will be affected by this listing and result in a violation of section 9 for these plants.

With issuance of this final rule, Fender’s blue butterfly receives more extensive protection under the Act than described for *Erigeron decumbens* var. *decumbens*, and *Lupinus sulphureus* ssp. *kincaidii*. Section 9 prohibits the take of any listed wildlife species by any person subject to the jurisdiction of the United States. We believe that, based on the best available information, the following actions would not be violations of section 9:

1. Possession, delivery, or movement, including interstate transport involving no commercial activity, dead specimens of Fender’s blue butterfly that were collected prior to the date of publication in the *Federal Register* of this final regulation adding this taxon to the list of endangered species;
2. Actions that may affect Fender’s blue butterfly and are authorized, funded, or carried out by a Federal agency when the action is conducted in accordance with incidental take statements included in biological opinions issued under section 7 of the Act;
3. Land actions or management carried out under a habitat conservation plan approved by us pursuant to section 10(a)(1)(B) of the Act; and
4. Scientific research carried out under a permit issued by us pursuant to section 10(a)(1)(A) of the Act.

Potential activities involving Fender’s blue butterfly that would likely be considered a violation of section 9 include, but are not limited to, the following:

1. Take of Fender’s blue butterfly without a permit pursuant to section 10(a)(1)A or an incidental take permit pursuant to section 10(a)(1)(B) of the Act (this includes harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting, or attempting any of these actions);
2. Possessing, selling, delivering, carrying, transporting, or shipping illegally taken specimens of Fender’s blue butterfly;
3. Release of chemical or biological control agents that attack, damage, or kill any stage of this taxon, if not approved through section 7 consultation;
4. In areas where Fender’s blue butterfly occurs, the removal or destruction of the food plants being utilized by Fender’s blue butterfly, defined as *Lupinus sulphureus* ssp. *kincaidii*, *Erigeron decumbens* var. *decumbens*, *Lupinus albicaulis*, and *Lupinus laxiflorus*; and
5. Destruction or alteration of Fender’s blue butterfly habitat by grading, leveling, plowing, moving, burning, herbicide or pesticide spraying, intensively grazing, or otherwise disturbing grasslands that result in the death or injury of adult Fender’s blue butterflies and/or their larvae or eggs, through significant impairment of the species’ essential breeding, foraging, sheltering, or other essential life functions.

You may direct questions regarding whether specific activities risk a violation of section 9 to the State Supervisor of our Oregon State Office (see *ADDRESSES* above). Requests for copies of the regulations concerning listed plant and animal species and general inquiries regarding prohibitions and permits may be addressed to the U.S. Fish and Wildlife Service, Endangered Species Permits, 911 N.E. 11th Avenue, Portland, Oregon 97232–4181 (telephone 503–231–2063; FAX 503–231–6243).

**National Environmental Policy Act**

We have 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 our reasons for this determination was published in the *Federal Register* on October 25, 1983 (48 FR 49244).

**Paperwork Reduction Act**

This rule does not contain any new collections of information other than those already approved under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq., and assigned Office of Management and Budget clearance number 1018–0094. An agency may not conduct or sponsor, and a person is not required to respond to, collection of information, unless it displays a currently valid control number. For additional information concerning permit and associated requirements for endangered plant species, see 50 CFR 17.62 and 17.63.

**Executive Order 12866**

This rule has not been reviewed by the Office of Management and Budget under Executive Order 12866.

**References Cited**

You may request a complete list of all references cited herein, as well as others, from the Oregon State Office (see *ADDRESSES* above).

**Author**

The primary author of this final rule is Dr. Andrew F. Robinson, Jr., Fish and Wildlife Biologist (see *ADDRESSES* section).

**List of Subjects in 50 CFR Part 17**

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

**Final Regulation Promulgation**

For the reasons outlined in the preamble, we 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:


2. Amend § 17.11(h) by adding the following, in alphabetical order under INSECTS, to the List of Endangered and Threatened Wildlife:

   **§ 17.11 Endangered and threatened wildlife.**

   *(h) * * * * *

   *INSECTS*
<table>
<thead>
<tr>
<th>Species</th>
<th>Scientific name</th>
<th>Historic range</th>
<th>Vertebrate population where endangered or threatened</th>
<th>Status</th>
<th>When listed</th>
<th>Critical habitat</th>
<th>Special rules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butterfly, Fender’s blue.</td>
<td><em>Icaricia icarioides fenderi</em></td>
<td>U.S.A. (OR)</td>
<td>...........</td>
<td>NA</td>
<td>.................</td>
<td>E</td>
<td>*</td>
</tr>
</tbody>
</table>

3. Amend § 17.12(h) by adding the following, in alphabetical order, under FLOWERING PLANTS, to the List of Endangered and Threatened Plants:

<table>
<thead>
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<th>Species</th>
<th>Common name</th>
<th>Scientific name</th>
<th>Historic range</th>
<th>Family</th>
<th>Status</th>
<th>When listed</th>
<th>Critical habitat</th>
<th>Special rules</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Erigeron decumbens var. decumbens.</em></td>
<td>Willamette daisy</td>
<td>U.S.A. (OR)</td>
<td>...........</td>
<td>Asteraceae</td>
<td>...........</td>
<td>E</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td><em>Lupinus sulphureus ssp. kincaidii.</em></td>
<td>Kincaid’s lupine</td>
<td>U.S.A. (OR, WA)</td>
<td>....</td>
<td>Fabaceae</td>
<td>...........</td>
<td>T</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

Dated: January 5, 2000.

Rowan W. Gould,
Acting Director, Fish and Wildlife Service.

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 660

[FR Doc. 00–1561 Filed 1–24–00; 8:45 am]

BILLING CODE 4310–55–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 660

[FR Doc. 00–1561 Filed 1–24–00; 8:45 am]

BILLING CODE 4310–55–P