First collected in the vicinity of the Clearwater River, Idaho, between 1836 and 1847, Silene spaldingii was originally described by Watson (Watson 1875). Hitchcock and Cronquist (1973) retained this taxon as a full species in a comprehensive regional flora. Silene spaldingii, by having petal blades 2 millimeters (mm) (0.08 in.) in length, differs from the related, common species Silene scouleri, which has deeply lobed petal blades that are 6 to 7 mm (0.24 to 0.28 in.) long. Silene douglasii also occurs with S. spaldingii in some areas, but S. douglasii typically has multiple, slender stems, narrower leaves, and is rarely covered by sticky hairs (Lichthardt 1997).

The distribution and habitat of Silene spaldingii are limited. The total number of sites discussed in the 90-day finding for S. spaldingii (63 FR 63661) was 94, which is larger than the number of populations identified in this final rule. We based the number of sites stated in the petition finding primarily on location records (i.e., element occurrence records) available in State natural heritage data bases. In the proposed rule, and during the preparation of this final rule, we felt it was more appropriate to group certain element occurrence records for S. spaldingii together when approximately 1.6 kilometers (km) (1 mile (mi)) or less separate the sites. Thus, the difference in the number of S. spaldingii locations described in this final rule and the 90-day finding does not reflect the actual loss or extirpation of sites.

This species is most strongly known from a total of 52 populations in the United States and British Columbia, Canada. Of the 51 Silene spaldingii populations in the United States, 7 occur in Idaho (Idaho, Lewis, and Nez Perce counties), 7 in Oregon (Wallowa County), 9 in Montana (Flathead, Lake, Lincoln, and Sanders counties), and 28 in Washington (Asotin, Lincoln, Spokane, and Whitman counties). A population consists of one to several sites that are generally located less than 1.6 km (1 mi) apart. The number of S. spaldingii individuals within each population ranges from one to several thousand. Eighteen populations contain more than 50 individuals; only 6 of these populations are moderately large (i.e., contain more than 500 plants). Of the 6 largest populations, 2 are found in Oregon (Wallowa County), 1 in Idaho (Nez Perce County), 1 in Montana (Lincoln County), and 2 in Washington (Asotin and Lincoln Counties). The 6 moderately large populations contain approximately 84 percent (i.e., about 13,800 individuals) of the total number of Silene spaldingii. In addition, approximately 100 plants were located in British Columbia (Geraldine Allen, University of Victoria, in litt. 1996). The total number of S. spaldingii individuals for all 52 populations is about 16,500 (Edna Rey-Vizgirdas, Service, in litt. 1999).

Much of the remaining habitat occupied by Silene spaldingii is fragmented. For example, S. spaldingii populations in Oregon are located at least 64 km (40 mi) from the nearest known populations in eastern Washington. Silene spaldingii sites in Montana are approximately 190 km (120 mi) from occupied habitats in Idaho and Washington. Approximately 52 percent of extant S. spaldingii populations occur on private land, 10 percent on State land, 33 percent on Federal land, and 5 percent on Tribal land (E. Rey-Vizgirdas, in litt. 1999).

This species is primarily restricted to mesic (not extremely wet nor extremely dry) grasslands (prairie or steppe vegetation) that make up the Palouse region in southeastern Washington, northwestern Montana, adjacent portions of Idaho and Oregon, and in British Columbia. Palouse prairie is considered a subset of the Pacific Northwest bunchgrass habitat type (Tisdale 1986). In Idaho, Palouse prairie is confined to a narrow band along the western edge of central and north-central Idaho, centering on Latah County (Tisdale 1986; Erter and Moseley 1992). Large-scale ecological changes in the Palouse region over the past century including agricultural conversion, grazing, invasions of nonnative plant species, altered fire regimes, and urbanization (Noss et al. 1995). Some suitable habitat for S. spaldingii remains on the fringes of the Palouse region and in the forested portion of the channeled scablands in central Washington (John Gamon, Washington Natural Heritage Program, WNHP, in litt. 2000). Low-density subdivisions and developments, and increased use of lands in and around the forested portion of the channeled scablands in central Washington, likely pose significant threats to S. spaldingii populations remaining in this area (J. Gamon, in litt. 2000).

Silene spaldingii is also found in canyon grassland habitat, another division of the Pacific Northwest bunchgrass habitat type (Tisdale 1986). Canyon grasslands are dominated by the
same bunchgrass species as Palouse prairie, but the two habitat types differ slightly in their overall plant species composition (Janice Hill, The Nature Conservancy (TNC), in litt. 2000; Greg Yuncevich, Bureau of Land Management (BLM), in litt. 2000). In addition, canyon grasslands occur in steep, highly dissected canyon systems whereas Palouse grasslands generally occur on gently rolling plateaus. The steep slopes in canyon grasslands result in pronounced habitat diversity (G. Yuncevich, in litt. 2000). This steepness has also prevented conversion of canyon grasslands to other uses, such as agriculture. Nevertheless, other disturbances (e.g., livestock grazing and the invasion of nonnative plant species) have caused significant alterations of the native vegetation of canyon grasslands, although portions of this habitat type have not received heavy use by domestic livestock (G. Yuncevich, in litt. 2000).

Silene spaldingii is typically associated with grasslands dominated by native perennial grasses such as Festuca idahoensis (Idaho fescue) or Festuca scabrella (rough fescue). Other associated species include bluebunch wheatgrass (Agropyron spicatum), prairie junegrass (Koeleria cristata), snowberry (Symphoricarpos albus), Nootka rose (Rosa nutkana), yarrow (Achillea millefolium), prairie smoke avens (Geum triflorum), sticky purple geranium (Geranium viscosissimum), and arrowleaf balsamroot (Balsamorhiza sagittata) (Lichhardt 1997; Montana Natural Heritage Program (MNHP) 1998). Scattered individuals of ponderosa pine (Pinus ponderosa) may also be found in or adjacent to S. spaldingii habitat. Silene spaldingii sites range from approximately 460 meters (1,500 feet) to 1,600 meters (5,100 feet) elevation (Oregon Natural Heritage Program (ONHP) 1998; WNHP 1998).

**Previous Federal Action**

Federal Government actions for the plant began as a result of section 12 of the Act, (16 U.S.C. 1531 et seq.), which directed the Secretary of the Smithsonian Institution to prepare a report on those plants considered to be endangered, threatened, or extinct in the United States. This report, designated as House Document No. 94–51, was presented to Congress on January 9, 1975, and included Silene spaldingii as an endangered species. We published a notice on July 1, 1975, in the Federal Register (40 FR 27823) accepting the report of the Smithsonian Institution as a petition within the context of section 4(c)(2) (petition provisions are now found in section 4(b)(3) of the Act), and our intention to review the status of the plant taxa named in the report. The July 1, 1975, notice included the above taxon. On June 16, 1976, we published a proposal (41 FR 24523) to determine approximately 1,700 vascular plant species to be endangered species pursuant to section 4 of the Act. The list of 1,700 plant taxa was assembled on the basis of comments and data received by the Smithsonian Institution and us in response to House Document No. 94–51 and the July 1, 1975, Federal Register publication. We included Silene spaldingii in the June 16, 1976, proposal.

In 1978, amendments to the Act required that all proposals more than 2 years old be withdrawn. On December 10, 1979, we published a notice withdrawing that portion of the June 16, 1976, proposal that had not been made final, including the proposal to list Silene spaldingii (44 FR 70796). We published an updated Notice of Review for plants on December 15, 1980 (45 FR 82480). This notice included S. spaldingii as a category 1 candidate. Category 1 candidates were those for which we had sufficient information on biological vulnerability and threats to support proposals to list them as endangered or threatened species.

The 1982 amendments to the Act required that we treat all petitions pending on October 13, 1982, as having been newly submitted on that date. This provision applied to Silene spaldingii because we had accepted the 1975 Smithsonian report as a petition. On October 13, 1983, we found that the listing of the species was warranted but precluded by other pending listing actions, in accordance with section 4(b)(3)(B)(iii) of the Act. We published notification of this finding on January 20, 1984 (49 FR 2483). Our warranted but precluded finding required us to consider the petition as having been resubmitted, pursuant to section 4(b)(3)(C)(i) of the Act.

We included Silene spaldingii as a category 2 candidate in the November 28, 1983, supplement to the Notice of Review (48 FR 53640), as well as subsequent revisions on September 27, 1985 (50 FR 39526), February 21, 1990 (55 FR 6184), and September 30, 1993 (58 FR 51143). Category 2 candidates were those species for which information in our possession indicated that proposing to list as endangered or threatened was not practicable until such time as sufficient data to support proposed rules was not currently available. Upon publication of the February 28, 1996, Notice of Review (61 FR 7591), we ceased using category designations. Silene spaldingii was not included as a candidate species in this notice.

On February 27, 1995, we received a petition dated February 23, 1995, from the Biodiversity Legal Foundation of Boulder, Colorado; the Montana and Washington Native Plant Societies; and Mr. Peter Losica of Missoula, Montana, to list Silene spaldingii within the conterminous United States as threatened or endangered under the Act. The petition submitted information stating that this species is threatened by competition with nonnative and woody vegetation, improper livestock grazing practices, improper herbicide application, inbreeding depression, and fire suppression.

In April 1995, the enactment of Public Law 104–6 placed a moratorium on final listing determinations and critical habitat designations. It also rescinded $1.5 million from our budget for carrying out listing activities for the remainder of Fiscal Year 1995. From October 1, 1995, until April 26, 1996, the Department of the Interior operated without a regularly enacted full-year appropriations bill. On April 26, 1996, President Clinton approved the Omnibus Budget Reconciliation Act of 1996 and lifted the moratorium. At that time, we had accrued a backlog of proposed listings for 243 species, of which Region 1 had the lead on 199, or 82 percent. Due to this backlog, reduced budgets for the listing program, and litigation demands, completion of the processing of this petition was not practicable until November 16, 1998. On that date, we published a finding that the petition presented substantial information indicating that the petitioned action may be warranted (63 FR 63661) and commenced a status review for Silene spaldingii.

On December 3, 1999 (64 FR 67814), we published a proposal to list Silene spaldingii as a threatened species. In the proposed rule, we did not propose a critical habitat determination for S. spaldingii, but stated that we would publish such a determination for this species in the Federal Register subsequent to the proposed rule. On April 24, 2000 (65 FR 21711), we published a notice proposing that designation of critical habitat is prudent for S. spaldingii and reopened the public comment period. We reopened the comment period again on September 8, 2000 (65 FR 54472).
Summary of Comments and Recommendations

In the December 3, 1999, proposed rule (64 FR 67814) and associated notifications, we requested all interested parties to submit factual reports or information that might contribute to the development of a final listing decision. The comment period closed on February 1, 2000. We contacted appropriate State agencies, county governments, Federal agencies, scientific organizations, and other interested parties and requested them to comment. We reopened the public comment period for another 60 days on April 24, 2000 (65 FR 21711) when we issued the proposed Silene spaldingii critical habitat prudence determination, and the public was able to comment both on the proposed critical habitat determination and on the proposed rule to list the species as threatened. We did not receive any requests for a public hearing. We reopened the comment period again on September 8, 2000 (65 FR 54472) for another 15 days to provide notification of the proposal in a newspaper as required by the Act. We published announcements of the proposed rule in the Spokane Spokesman Review and the Moscow-Pullman Daily News on September 8, 2000, the Missoulian on September 9, 2000, and the LaGrande Observer on September 11, 2000.

We received 16 written comments during the comment periods. Six commenters expressed support for the listing proposal, seven were neutral to the listing and critical habitat proposals, and one was opposed. Four commenters supported the proposed determination that it is prudent to designate critical habitat for Silene spaldingii. We considered all comments and incorporated them, as appropriate, into the final rule.

We have grouped comments of a similar nature or point regarding the proposed rule into general issues, and our response to the issues are discussed below.

Issue 1: Threats to Silene spaldingii and its rarity are not sufficiently documented in the proposed rule.

Our Response: Data presented in the proposed rule demonstrate the decline and degradation of ecological communities in which Silene spaldingii occurs and the disappearance of S. spaldingii within these habitats. For example, the proposed rule describes the extensive loss of Palouse grassland that historically was the primary habitat for S. spaldingii and refers to the subsequent rarity of other species found principally in this declining habitat type. The proposed rule cites numerous ongoing threats to S. spaldingii, including trampling and consumption by livestock, expansion of invasive nonnative species in sites occupied by S. spaldingii, and housing developments. Moreover, S. spaldingii is evidently extirpated from at least 16 sites where knowledgeable observers had previously seen the species.

Issue 2: One commenter stated that Silene spaldingii should not be listed because economic impacts have not been considered.

Our Response: In accordance with section 4(b)(1)(A) of the Act and the Act’s implementing regulations, 50 CFR 424.11(b), listing decisions are made solely on the basis of the best available scientific and commercial data. Congress was very clear on this point, a House of Representatives’ committee report stated: “The only alternatives involved in the listing of species are whether the species should be listed as endangered or threatened or not listed at all. Applying economic criteria to the analysis of the alternatives and to any phase of the species listing process is applying economics to the determinations made under Section 4 of the Act and is specifically rejected by the inclusion of the word “solely” in this legislation” (H.R. Rep. No. 97–567 at 20 [1982]). Therefore, economic impacts cannot be considered when determining whether to list a species under the Act.

Issue 3: The Service should wait to list Silene spaldingii until it collects further information to substantiate its decline and rarity.

Our Response: Ongoing surveys for this species have documented the extirpation or near extirpation of numerous populations. We received information from all known experts on this species before and after publishing the proposed rule. No new populations of this species were reported to us during the public comment period. While it is possible that new populations of Silene spaldingii will be found in the future, we believe it is unlikely that such discoveries alone would alter the species’ status. Additionally, the almost complete destruction of Palouse grasslands (as discussed in the “Background” section), which evidently was the center of this species’ historical range, and the significant threats (e.g., invasive nonnative species) to S. spaldingii documented in its other important habitat type, canyon grasslands, are sufficient to list S. spaldingii as threatened at this time.

Issue 4: One commenter stated that the proposed rule did not adequately substantiate our claim that mowing is a threat to Silene spaldingii.

Our Response: The proposed rule did not list mowing as a threat to this species.

Issue 5: This species is simply obscure and not threatened.

Observations of the species do not prove absence at other sites, and it is likely present at sites that have not been surveyed. The Service should not list Silene spaldingii until its absence from apparently suitable habitats in the Blue Mountains of Oregon can be demonstrated. The Service should not list S. spaldingii until threats described in the proposed rule are shown experimentally to cause extirpation of the species from occupied habitats.

Our Response: It is true that Silene spaldingii is, at times, difficult to identify and locate. However, the surveys on which we relied to document the presence of S. spaldingii were made by qualified botanists who can identify this species and are familiar with the habitats in which it occurs. Botanists have been looking for this and other rare plant species in Palouse and canyon grasslands for several years. If the species were simply obscure, many new populations should have been located as a result of these widespread surveys.

It is true that observations and monitoring of known populations of Silene spaldingii do not prove that it is absent from unsurveyed sites. Unfortunately, Natural Heritage databases and other data sources generally do not contain data on sites that do not contain rare species, such as S. spaldingii, unless the species was previously observed there. Therefore, we could not present information on what proportion of sites surveyed have never had S. spaldingii observed. As stated above, however, in numerous cases, negative survey results were recorded at sites where botanists had formerly located S. spaldingii. These negative results clearly document numerous recent extirpations of this species. Surveys for this species have been conducted and are ongoing in various portions of Oregon’s Blue Mountains. Given the substantial information on the threats and decline of S. spaldingii throughout its range, waiting for the results of these surveys before listing this species would not be prudent. Similarly, awaiting the results of numerous experimental studies to quantify the effects of all threats to this species would also not be prudent.

Threats to plant species and population declines can be documented or inferred based on empirical observations by qualified professionals and on
information available in the scientific literature, as we have done for this species.

**Issue 6:** Understanding of the ecology and life history of *Silene spaldingii* is insufficient to allow listing.

*Our Response:* We have sufficient information regarding the ecology and life history of *Silene spaldingii*. While there are usually some unknown aspects of nearly every species’ life history, the available natural history information for *S. spaldingii* is sufficient to proceed with listing this species. Additionally, the Act requires us to make listing decisions based solely on the best available scientific and commercial information (section 4(b)(1)(A)). We cannot delay listing a species to gather more ecological or life history information when the best available scientific and commercial information currently demonstrates that the species meets the definition of threatened. This is the case for *S. spaldingii*.

**Issue 7:** Noxious weeds, such as knapweed species and yellow star-thistle, are not threats because habitat can be restored using various “treatments” and “revegetation techniques.”

*Our Response:* The proposed rule describes and cites examples of sites at which yellow star-thistle (*Centaurea solstitialis*) and other nonnative species have invaded habitat in which *Silene spaldingii* occurs. Various practices are being implemented throughout the range of *S. spaldingii* to control or eradicate nonnative species that threaten native plant communities. At many of these sites, however, these practices are not entirely successful in restoring the native plant communities. Based on information obtained from reports, personal communications, and scientific papers that we cited and summarized in the proposed rule, most or all of the nonnative species invasions that threaten *S. spaldingii* cannot be controlled with the current effort levels and techniques. For example, at Garden Creek Ranch, which contains the largest *S. spaldingii* population in Idaho (Idaho Conservation Data Center 1998), *C. solstitialis* spread from approximately 60 hectares (ha) (150 acres (ac)) in 1987 to 810 ha (2,000 ac) in 1998 (J. Hill, in litt. 1999). Numerous botanists and ecologists recognize that *S. spaldingii* is always, or almost always, found at sites that are generally free of nonnative plant species. We are not aware of any efforts that have been successful in returning a site dominated by nonnative species to one dominated by native species that include *S. spaldingii*.

**Issue 8:** Critical habitat designation does not seem to confer added protection for listed plant species, primarily because of limited protection for plants on non-Federal lands.

*Our Response:* The designation of critical habitat on Federal lands may provide a greater measure of protection than the limited prohibitions against take of plants on areas under Federal jurisdiction. Critical habitat may also confer additional protection for listed plant species because Federal actions may affect non-Federal lands. Moreover, critical habitat designation may educate and inform the public and help focus conservation efforts through future Federal, State, and local planning efforts and the public, by identifying the habitat needs and essential areas for *Silene spaldingii*.

**Issue 9:** Critical habitat designation may increase the chance that areas in which *Silene spaldingii* occurs that are not designated as critical habitat would be downgraded in importance when making land management decisions.

*Our Response:* As stated above, critical habitat may be critical to the protection of listed plant species. It is possible that *Silene spaldingii* would receive greater consideration in areas within the critical habitat designation than where it occurs outside critical habitat. However, it is the intention of critical habitat designation, however, to ensure that land managers and others are aware of areas that are essential to the conservation of listed species.

**Peer Review**

In accordance with our policy published on July 1, 1994 (59 FR 34270), we solicited the expert opinions of three independent specialists regarding pertinent scientific or commercial data and assumptions relating to the taxonomy, population status, and supportive biological and ecological information for the taxon under consideration for listing. The purpose of such review is to ensure that listing decisions are based on scientifically sound data, assumptions, and analyses, including input from appropriate experts and specialists. All three scientists responded to our request for peer review of this listing action, and provided information that supported and augmented the biological and ecological data presented in the proposed rule, and we incorporated the comments, as appropriate, into this final rule.

**Summary of Factors Affecting the Species**

After a thorough review and consideration of all information available, we determine that *Silene spaldingii* should be classified as a threatened species. We followed procedures found at section 4(a)(1) of the Act and regulations (50 CFR part 424) implementing the listing provisions of the Act. A species may be determined to be endangered or threatened due to one or more of the five factors described in section 4(a)(1). These factors, and their application to *Silene spaldingii* Watson, are as follows:

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

As discussed in the “Background” section above, the distribution and habitat of *Silene spaldingii* are limited. This species is primarily restricted to mesic slopes, flats, or depressions in grassland or steppe vegetation of the Palouse region in southeastern Washington, northwestern Montana, and adjacent portions of Idaho and Oregon. One site is located in British Columbia, Canada, directly adjoining a Montana population. In Idaho, Palouse prairie is confined to a narrow band along the western edge of central and north-central Idaho, centered on Latah County (Tisdale 1986; Erter and Moseley 1992), although the largest population of *S. spaldingii* in Idaho occurs in canyon grassland habitat. The areas that supported Palouse prairie are now extensively cultivated, with few remnants of native habitat (Tisdale 1986). About 94 percent of the grasslands have been converted to crop, hay, or pasture lands (Black et al. 1998), and more than 98 percent of the original Palouse prairie has been lost to all causes combined, including urbanization (Noss et al. 1995). Invasive nonnative species also seriously threaten canyon grasslands occupied by *S. spaldingii* in Idaho (J. Hill, in litt. 2000). This loss of habitat has resulted in the decline of numerous sensitive plant species including *S. spaldingii* (Tisdale 1961).

Although historical data on *Silene spaldingii* distribution and population size are incomplete, based on the former distribution of suitable Palouse habitat, this species was likely much more widespread in the past. According to Erter and Moseley (1992), “because of the exceptionally rich soil, a deep layer of loess, most of the grasslands have been converted to agriculture. Most of the Palouse prairie vegetation has, therefore, disappeared, and endemic species such as Aster jessicai Piper and Haplopappus latrorbis (Greene) St. John are threatened with extinction.” Both *A. jessicai* and *H. latrorbis* may be found within or near habitat occupied by *S. spaldingii* (Lichhardt 1997). Similar to *S. spaldingii*, *A.
jessicae and H. liatrisformis are considered globally rare and vulnerable to extinction by the Idaho Native Plant Society (Idaho Native Plant Society 2000).

Invasion by nonnative plant species, herbicide application, and/or grazing (including trampling and consumption of plants) threaten virtually all of the remaining populations of this species, including those present in areas administered by the BLM and U.S. Forest Service (Forest Service 1995; Lichthardt 1997; MNHP 1998; ONHP 1998; WNHP 1998).

Nonnative plant species are considered a major threat at nearly all sites supporting Silene spaldingii. Threats to S. spaldingii posed by nonnative plant species include competition for water, nutrients, and light, in addition to competition for pollinators (Lesica and Heidel 1996). Nonnative plant species such as St. John’s-wort (Hypericum perforatum), yellow star-thistle, leafy spurge (Euphorbia esula), teasel (Dipsacus fullonum), Russian knapweed (Acroptilon repens), Scotch thistle (Onopordum acanthium), and cheatgrass (Bromus tectorum) threaten S. spaldingii in Idaho, Oregon, Montana, and Washington (Lesica and Heidel 1996; Lichthardt 1997; MNHP 1998; ONHP 1998; WNHP 1998; J. Hill, in litt. 1999).

Some of these nonnative species can invade and displace native plant communities in a relatively short period of time. For example, at TNC’s Garden Creek Ranch, which contains the largest Silene spaldingii population in Idaho (Idaho Conservation Data Center 1998), yellow star-thistle spread from approximately 60 ha (150 ac) in 1987 to 810 ha (2,000 ac) in 1998 (J. Hill, in litt. 1999). Another site containing S. spaldingii in Idaho (Lawyer's Creek) was apparently eradicated by highway construction in 1990 and the invasion of yellow star-thistle.

Yellow star-thistle is found near all Silene spaldingii populations in Idaho (Lichthardt 1997). This aggressive nonnative species can form almost complete monocultures (a single species growing in an area to the exclusion of others), invading and out competing native species. Even small areas that experience soil disturbance are almost immediately colonized by yellow star-thistle or other nonnative winter annuals (Lichthardt 1997). Seeds of yellow star-thistle remain dormant in the soil for up to 10 years (Callihan and Miller 1997), making effective control of this aggressive nonnative extremely difficult.

Russian knapweed spreads readily by reproducing vegetatively, as well as by seed. Once established, knapweed forms single-species stands by producing chemicals that inhibit the survival of competing plant species, known as allelopathy (U.S. Geological Survey 1999). Knapweed (probably spotted knapweed, Centaurea maculosa) has been noted to displace Silene spaldingii plants in Montana. At this site, the number of S. spaldingii plants declined from 30 in 1993 to 14 in 1994, due to the invasion of knapweed (MNHP 1998). Spotted knapweed is considered “the number one weed problem on rangeland in western Montana” (Whitson 1996). Nonnative species also threaten the largest S. spaldingii populations in Montana (Biodiversity Legal Foundation et al. 1995; Brian Martin, TNC, in litt. 1998), Oregon (Jimmy Kagan, ONHP, pers. comm. 1998), and Washington (Scott Riley, Umatilla National Forest, pers. comm. 1999). Silene spaldingii and other native plants are generally unable to grow or successfully reproduce in areas dominated by yellow star-thistle and knapweed.

Herbicide drift also threatens Silene spaldingii habitat. Most remaining S. spaldingii populations are adjacent to agricultural fields, which are often treated with herbicides to control nonnative vegetation. Even S. spaldingii sites that are not located immediately adjacent to agricultural areas may be vulnerable to herbicide use due to the presence of nonnative species (Jerry Hustafa, Wallowa-Whitman National Forest, pers. comm. 1999). Herbicide overspray threatens populations in Idaho (Lichthardt 1997; J. Hill, in litt. 1999), Oregon (J. Hustafa, pers. comm. 1998; J. Kagan, pers. comm. 1998), and Washington (WNHP 1998). One population of S. spaldingii in Idaho (Lewis County) decreased by more than 80 percent in the past 11 years, apparently due to nonnative species invasion, herbicide spraying, and development (Lichthardt 1997). Herbicide spraying to control nonnatives threatens one of the two largest S. spaldingii sites on the Umatilla National Forest in Washington (S. Riley, pers. comm. 1999). In addition, knapweed recently invaded the largest S. spaldingii population in Oregon. Because knapweed blooms late (i.e., during the active growth period of S. spaldingii) and local weed control officials will likely demand spraying at this site, herbicide applications also pose a threat to this population (J. Kagan, in litt. 2000). A recent aerial herbicide spraying incident in Idaho County, Idaho, impacted the threatened plant species. MacFarlane’s four-o’clock (Mirabilis macfarlanei). Approximately 2,000 M. macfarlanei plants on Federal and private land were accidentally sprayed during treatment for nearby target nonnative species (Craig Johnson, BLM, in litt. 1997). This species occurs in similar habitats as S. spaldingii. At least two S. spaldingii sites in Idaho (Nez Perce County) are particularly vulnerable to herbicide drift because of their proximity to cropland (Lichthardt 1997).

In addition to direct consumption of plants (as discussed under Factor C of this section), grazing animals can also affect Silene spaldingii by trampling and changing the plant community composition by fostering the invasion of nonnative species. Impacts from trampling by native ungulates and domestic livestock have been observed at S. spaldingii sites in Washington (Gammon 1991; WNHP 1998). Grazing can indirectly affect S. spaldingii habitat by altering the species composition (Gammon 1991; Lichthardt 1997). Grazing and livestock grazing practices, agricultural developments, and urbanization for example, active housing development threatens to eliminate S. spaldingii habitat near Redbird Ridge in Idaho (Lichthardt 1997). Over the past 3 years, residential development immediately adjoining land owned by TNC, which has the largest S. spaldingii population in Montana, has destroyed potential habitat, increased the level of uncontrolled, competing nonnative vegetation, and reduced management options such as controlled burning on the preserve (B. Martin, in litt. 1998). Continued development in this area is expected (B. Martin, in litt. 1998).

Habitat for S. spaldingii on private land near Wallowa Lake in eastern Oregon, which supports the largest site in Oregon, may be threatened by development because of its proximity to existing recreational facilities and residences (E. Rey-Vargas, pers. obs. 1998). Other S. spaldingii sites on private land in Idaho, Montana, and
Washington may also be threatened by development.

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

The plant is not a source for human food, nor is it currently of commercial horticultural interest. Therefore, overutilization is not currently considered a threat to this species. However, should it occur, some populations of Silene spaldingii are small enough that even limited collection pressure would have adverse impacts on their reproductive or genetic viability.

C. Disease or Predation

Grazing or browsing of Silene spaldingii inflorescences by livestock and native herbivores has been observed and is considered a significant threat to the species (Kagan 1989; Lesica 1993; Heidel 1995; B. Benner, in litt. 1999). While grazing or browsing of S. spaldingii by native herbivores likely occurred historically, the effects of grazing or browsing become even more important as the plant’s population sizes decrease. Rodent activity is also considered a significant factor affecting the persistence of S. spaldingii at several sites in eastern Washington (B. Benner, in litt. 1999). For example, numerous S. spaldingii plants were marked with stakes and metal tags as part of a monitoring study on land managed by the BLM in Washington. On a site visit, the BLM botanist discovered that many of these plants were either broken off or missing completely and likely consumed by rodents, as evidenced by rodent burrowing activity in the area (B. Benner, in litt. 1999). Since S. spaldingii reproduces only by seed (Lesica 1992), grazing, browsing, or trampling directly affects reproduction of this species when flowers or seeds are removed or damaged.

Insect predation on flowers and fruits is also a threat for this species (Kagan 1989; Gamon 1991; B. Benner, in litt. 1999). Such predation likely results in reduced reproductive success for Silene spaldingii (Heidel 1995). For example, at one of the two largest S. spaldingii populations in Washington on land managed by the Forest Service, biologists monitoring the plants have consistently observed seeds consumed by insects. This consumption results in empty capsules with no seeds, thereby limiting sexual reproduction of affected S. spaldingii plants (S. Riley, pers. comm. 1999). Similarly, in Oregon, seed weevils destroyed a high percentage of S. spaldingii seed heads (Kagan 1989). Insect damage to the foliage of S. spaldingii has also been noted (Lichthardt 1997). Although some insect damage to plants may be expected, the effects on the survival of S. spaldingii are amplified as plant populations become small and fragmented.

D. The Inadequacy of Existing Regulatory Mechanisms

Silene spaldingii is listed as endangered by the State of Oregon (Oregon Department of Agriculture). However, the Oregon State Endangered Species Act does not provide protection for species on private land, so under State law, any plant protection is at the discretion of the landowner. Silene spaldingii is on the Washington Natural Heritage Program’s list of threatened species (Gamon 1991), but this designation offers no statutory protection (Ted Thomas, Service, in litt. 1998). In addition, although State natural heritage programs in Idaho and Montana consider S. spaldingii to be rare and imperiled, these States have no endangered Species Act designation that protect threatened or endangered plants. The majority of S. spaldingii habitat occurs on private land, which is not adequately protected by existing regulatory mechanisms.

In Canada, Silene spaldingii is listed on the British Columbia, Ministry of Environment, Lands and Park’s Red List. The Red List includes indigenous species or subspecies (taxa) that are either extirpated, endangered, threatened, or candidates for such status. Endangered taxa are those species facing imminent extirpation or extinction. Threatened taxa are likely to become endangered if limiting factors are not reversed. Silene spaldingii is a candidate for legal designation as an endangered or threatened species (British Columbia Conservation Data Center 1999). The Red List designation does not provide any statutory protection to this population, which occurs on private pasture land (Mike Miller, University of Victoria, in litt. 1999).

Silene spaldingii is considered a sensitive species by the BLM and Region 1 of the Forest Service. Both of these agencies have laws and regulations that address the need to protect sensitive, candidate, and federally listed species (e.g., the Federal Land Policy and Management Act and the National Forest Management Act). Monitoring of some S. spaldingii populations on Federal lands has already been initiated. Also, the BLM in eastern Washington has acquired several private land parcels that contain S. spaldingii habitat. However, these actions have not eliminated all of the threats to this species. For example, the effects of activities such as livestock grazing have not been evaluated for all S. spaldingii sites managed by the Forest Service and BLM. In addition, numerous sites on Federal lands are threatened by nonnative species, herbicide spraying, and habitat succession through fire suppression (see factors A and E of this section).

One Silene spaldingii population in eastern Washington occurs on the U.S. Department of Defense Fairchild Air Force Base (Base). The Base asked the WNHP to visit the area in 1999 to assess its habitat and ground-disturbing activities that would affect this species (J. Gamon, pers. comm. 1999). It was found that this population contains 77 plants in 8 subpopulations in an isolated fragment of native habitat. The area has been used for military training (WNHP 1998), although the WNHP has prepared a draft management plan and established a monitoring program for S. spaldingii for the Base. Two populations occur on lands owned by TNC. This organization protects the habitat and natural communities on lands that it owns. TNC will protect Silene spaldingii on its lands and actively manage the habitat to improve conditions for this species, such as controlling livestock grazing and nonnative vegetation (J. Hill, in litt. 1999; B. Martin, in litt. 1998). However, nonnative species cannot be entirely eliminated and will likely remain a threat to S. spaldingii in the future.

E. Other Natural or Manmade Factors Affecting Its Continued Existence

Competition with other species for a limited number of pollinators (e.g., bumblebees (Bombus fervidus)) has the potential to adversely affect both fecundity and individual fitness in Silene spaldingii (Lesica and Heidel 1996). Competition for pollinators occurs primarily at S. spaldingii sites with large populations of other flowering plants, and the competition can adversely affect the survival of these small populations of S. spaldingii. For example, the nonnative flowering plant St. John’s-wort competes for pollinators where this plant occurs with S. spaldingii in Idaho (Lesica and Heidel 1996; J. Hill, in litt. 1999; Karen Gray, botanist, in litt. 1999).

Reduced pollinator activity is associated with poor reproductive success of Silene spaldingii, particularly in small populations (Lesica 1993; Lesica and Heidel 1996). Agricultural fields do not provide suitable habitat for pollinators of S. spaldingii, which requires pollination by insects for maximum seed set and population.
Fish and Game, if the fire indirectly leads to increased consideration. In some cases, prescribed fire on aggressive, nonnative species, where they occur near prescribed fire on aggressive, nonnative composition, and season and intensity of burning (Lesica 1997). The effects of burning (Lesica 1997). Small fragments of habitat that contain S. spaldingii may not be large enough to support viable populations of pollinators (Lesica 1993). Small populations are vulnerable to natural and manmade disturbances and may lose a large amount of genetic variability because of genetic drift (loss of genetic variability that takes place as a result of chance), reducing their long-term viability. Many S. spaldingii populations are isolated from other populations by large distances, and the majority of the populations occur at scattered localities separated by habitat that is not suitable for this species, such as agricultural fields. Extinction appears to be imminent for at least two S. spaldingii populations in Idaho due to their small size and habitat degradation (Lichthardt 1997). One of these populations consists of four individuals, and the other population has only one S. spaldingii plant. With these very small population sizes, even if the habitat was completely undisturbed, these populations would not be considered viable.

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by the species in developing this final rule. Most of the remaining sites that support Silene spaldingii are small and highly fragmented, and the existing sites are vulnerable to impacts from factors including grazing, trampling, herbicide use, and nonnative vegetation, in addition to urban and agricultural development. Only 52 sites supporting this species remain with a total of approximately 16,500 individuals. The majority of this species (52 percent) occurs on private land with little or no protection. Only one-third (33 percent) of S. spaldingii populations occur on Federal land (managed primarily by the BLM and Forest Service) and may, therefore, be afforded some level of protection. Even the two S. spaldingii sites on land managed by TNC are not completely free of threats such as nonnative vegetation encroachment. As previously described, only 6 S. spaldingii populations (12 percent) contain more than 500 plants, and even these relatively large populations (which occur on private and Federal land) are variously threatened by one or more of the above factors. The Act generally defines an endangered species as any species that is in danger of extinction throughout all or a significant portion of its range. Although S. spaldingii is facing clear and significant threats, because of the number of remaining populations and the spatial distribution of the populations, we do not believe that S. spaldingii is currently in danger of extinction. Alternatively, as a result of threats we have discussed, we have determined that S. spaldingii is likely to become in danger of extinction within the foreseeable future throughout all or a significant portion of its range; therefore, S. spaldingii meets the Act’s definition of a threatened species. We discuss the reasons for not concurrently designating critical habitat for this species in the “Critical Habitat” section below.

Critical Habitat

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

Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.12) require that, to the maximum extent prudent and determinable, we designate critical habitat at the time the species is determined to be endangered or threatened. Our regulations (50 CFR 424.12(a)(1)) state that the designation of critical habitat is not prudent when one or both of the following situations exist—(i) 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 (ii) such designation viability (Lesica and Heidel 1996).

Populations of S. spaldingii that occupy small areas surrounded by land that does not support bumblebee colonies (e.g., crop lands) are not likely to persist over the long term, and the presence of pollinators is considered critical for the persistence of S. spaldingii (Lesica 1993; Lesica and Heidel 1996). In addition to agricultural conversion and pesticides, pollinators are vulnerable to herbicide application, domestic livestock grazing, and fire (Gamon 1991; Lesica 1993).

Climatic fluctuations can adversely affect this species and may contribute to the extirpation of small populations. For example, a population of Silene spaldingii at Wild Horse Island (Montana) declined from approximately 250 to 10 plants, due primarily to drought conditions in the late 1980s (Lesica 1988; Heidel 1995). Such reductions in population size are often exacerbated by other factors including pollinator competition and poor reproductive success. Habitats that have been related with fire suppression threaten this species, even at sites on public lands and those with some protective status (e.g., managed by TNC). Fire suppression can result in an overall decline in suitable habitat conditions for Silene spaldingii by facilitating encroachment by woody vegetation and other plant species and contributing to a build-up in the litter or duff layer. Competition from woody plants is frequently considered to reduce fecundity or recruitment of native prairie species (Menges 1995). In areas where the species have been altered or excluded, shrubs and trees can encroach on grassland habitats that support S. spaldingii and inhibit seed germination. Prescribed fire may have a positive effect on S. spaldingii by removing litter and creating suitable sites for recruitment (Lesica 1999).

Recruitment of S. spaldingii at study sites in Montana was enhanced following prescribed fire (Lesica 1992; Lesica 1999). However, the effects of fire will vary at different sites within the range of the species due to factors such as fuel moisture content, species composition, and season and intensity of burning (Lesica 1997). The effects of prescribed fire on aggressive, nonnative species, where they occur near S. spaldingii, must be carefully considered. In some cases, prescribed fires may adversely affect S. spaldingii if the fire indirectly leads to increased coverage of invasive nonnatives, such as yellow star-thistle (Idaho Department of Fish and Game, in litt. 2000).

Most populations of Silene spaldingii are restricted to small, remnant patches of native habitat (Gamon 1991; Lichthardt 1997; B. Heidel, in litt. 1999; S. Riley, pers. comm. 1999). When the number of populations of a species or the population size is reduced, the remnant populations (or portions of populations) have a higher probability of extinction from random events. Small populations are vulnerable to even relatively minor disturbances such as fire, herbicide drift, and nonnative species invasions, which could result in the loss of S. spaldingii populations (Gamon 1991). Small populations of Silene regia, a rare prairie species native to the Midwest, have low seed germination, presumably due to reduced pollinator competition and poor viability (Lesica and Heidel 1996). In addition to persistence of pollinators (Lesica 1988; Heidel 1995). Such small numbers of S. Riley, pers. comm. 1999). When the small of Silene regia, a rare prairie species native to the Midwest, have low seed germination, presumably due to reduced pollinator competition and poor viability (Lesica and Heidel 1996). In addition to persistence of pollinators (Lesica 1988; Heidel 1995). Such small numbers of
of critical habitat would not be beneficial to the species. In the last few years, a series of court decisions have overturned our critical habitat determinations for a variety of species (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)). In the proposed rule, we stated that we would publish a critical habitat determination for Silene spaldingii in the Federal Register subsequent to the proposed rule. Based on the standards applied in those judicial opinions, we published a notice on April 24, 2000, in which we proposed that designation of critical habitat for S. spaldingii is prudent (65 FR 21711).

Due to the small number of populations, Silene spaldingii is vulnerable to unrestricted collection, vandalism, or other disturbance. We are concerned that these threats might be exacerbated by the publication of critical habitat and further dissemination of location information. However, at this time we do not have specific evidence for S. spaldingii of taking, vandalism, collection, or trade of this species or any similarly situated species. Consequently, consistent with applicable regulations (50 CFR 424.12(a)(1)(i)) and recent case law, we believe that the identification of critical habitat is unlikely to increase the degree of threat to this species of taking or other human activity.

In the absence of a finding that identification of critical habitat would increase threats to a species, if any benefits would result from the designation of critical habitat, then a prudent finding is warranted. In the case of this species, designation of critical habitat may provide some benefits. For example, critical habitat designation may educate and inform the public and help focus conservation efforts through future Federal, State, and local planning efforts, by identifying the needs and crucial areas for Silene spaldingii. Therefore, we find that designation of critical habitat is prudent for S. spaldingii.

However, our budget for listing activities is currently insufficient to allow us to immediately complete all of the listing actions required by the Act. Listing Silene spaldingii without designation of critical habitat will allow us to concentrate our limited resources on other listing actions that must be addressed, while allowing us to invoke protections needed for the conservation of this species at further delay. This is consistent with section 4(b)(6)(C)(i) of the Act, which states that final listing decisions may be issued without critical habitat designations when it is essential that such determinations be promptly published. We will prepare a critical habitat designation in the future at such time when our available resources and priorities allow.

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 public awareness 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 State and requires that recovery plans be developed for all listed species. The protection required of Federal agencies and the prohibitions against certain activities involving listed plants are discussed, in part, below.

Section 7(a) of the Act requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) of the Act requires Federal agencies to confer with us on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. If a species is subsequently 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 may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with us.

Federal agencies that may have involvement with Silene spaldingii include the Federal Housing Administration and the Farm Services Agency, which may be subject to section 7 consultation through potential funding of housing and farm loans where this species or its habitat occurs. Highway construction and maintenance projects that receive funding from the U.S. Department of Transportation for Federal highway funds will also be subject to review under section 7 of the Act. The Natural Resources Conservation Service may also be involved with S. spaldingii through their farm conservation programs. In addition, section 2(c)(1) and 7(a)(1) of the Act require Federal agencies to utilize their authorities in furtherance of the purposes of the Act to carry out conservation programs for endangered and threatened species.

Listing of this plant will provide for development of a recovery plan for the plant. Such a plan will bring together both State and Federal efforts for conservation of this species. The plan will establish a framework for agencies to coordinate activities and cooperate with each other in conservation efforts. The plan will set recovery priorities, assign responsibilities, and estimate the costs of various tasks necessary to accomplish them. It will also describe site-specific management actions necessary to achieve conservation and survival of the plant.

Additionally, pursuant to section 6 of the Act, we will be able to grant funds to affected States for management actions promoting the protection and recovery of this species. The Act and its implementing regulations set forth a series of general prohibitions and exceptions that apply to all threatened plants. Pursuant to 50 CFR 17.71, generally all prohibitions of 50 CFR 17.61 apply to threatened plants. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export, transport or ship any endangered or threatened plant species in interstate or foreign commerce in the course of a commercial activity, sell or offer for sale such species in interstate or foreign commerce, or remove and reduce such species to possession from areas under Federal jurisdiction. Certain exceptions apply to our agents and State conservation agencies.

Our policy, published in the Federal Register on July 1, 1994 (59 FR 34272), is to identify, to the maximum extent practicable, those activities that would or would not constitute a violation of section 9 of the Act at the time of listing. The intent of this policy is to increase public awareness of the effects of the listing on proposed and ongoing activities within a species’ range. Collection, damage, or destruction of this species on Federal land is prohibited, although in appropriate cases, we may issue a Federal permit for scientific or recovery purposes.

We believe that, based upon the best available information, the following actions will not result in a violation of section 9, provided these activities are carried out in accordance with existing regulations and permit requirements: (1) Activities authorized, funded, or carried out by Federal agencies (e.g.,
grazing management, agricultural conversions, wetland and riparian habitat modification, flood and erosion control, residential development, recreational trail development, road construction, hazardous material containment and cleanup activities, prescribed burns, pesticide/herbicide application, and pipeline or utility line construction crossing suitable habitat), when such activity is conducted in accordance with any reasonable and prudent measures given by us in a consultation conducted under section 7 of the Act.

[2] Casual, dispersed human activities on foot or horseback (e.g., bird watching, sightseeing, photography, camping, hiking); and

(3) Activities on non-Federal lands that do not require Federal authorization and do not involve Federal funding.

We believe that the following might potentially result in a violation of section 9; however, possible violations are not limited to these actions alone:

(1) Unauthorized collecting, or damage to, the species on Federal lands; and

(2) Interstate or foreign commerce and import/export without previously obtaining an appropriate permit.

Questions regarding whether specific activities risk violating section 9 should be directed to the Field Supervisor of the Snake River Basin Office (see ADDRESSES section). The Act and 50 CFR 17.72 also provide for the issuance of permits to carry out otherwise prohibited activities involving threatened plant species under certain circumstances. Such permits are available for scientific purposes and to enhance the propagation or survival of the species. For threatened plants, permits also are available for botanical or horticultural exhibition, educational purposes, or special purposes consistent with the purposes of the Act. Requests for copies of the regulations on listed plants and animals, and general inquiries regarding prohibitions and permits, may be addressed to the U.S. Fish and Wildlife Service, Ecological Services, Endangered Species Permits, 911 N.E. 11th Ave., Portland, Oregon 97232–4181 (telephone 503/231–2063; facsimile 503/231–6243).

**National Environmental Policy Act**

We have determined that an environmental assessment and environmental impact statement, 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 Act. We published a notice outlining our reasons for this determination 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 a collection of information, unless it displays a currently valid control number. For additional information concerning permit and associated requirements for threatened plants, see 50 CFR 17.72.

**References Cited**

A complete list of all references cited herein, as well as others, is available upon request from our Snake River Basin Office (see ADDRESSES section).

**Author**

The primary authors of this final rule are Phil Delphey and Edna Rey-Vizgirdas, U.S. Fish and Wildlife Service, Snake River Basin Office (see ADDRESSES section).

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

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

**Regulation Promulgation**

Accordingly, we amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations as follows:

**PART 17—[AMENDED]**

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


2. Section 17.12(h) is amended by adding the following, in alphabetical order under FLOWERING PLANTS, to the List of Endangered and Threatened Plants.

§ 17.12 Endangered and threatened plants.

(h) * * *

<table>
<thead>
<tr>
<th>Species</th>
<th>Scientific name</th>
<th>Common 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><strong>FLOWERING PLANTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*</td>
<td>Silene spaldingii</td>
<td>Spalding's catchfly</td>
<td>U.S.A. (OR, ID, MT, WA), Canada (B.C.)</td>
<td>Caryophyllaceae</td>
<td>T</td>
<td>712</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>