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## Department of the Interior

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50 CFR Part 17
Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for *Lepidium papilliferum* (Slickspot Peppergrass); Proposed Rule

**DEPARTMENT OF THE INTERIOR**

**Fish and Wildlife Service**

**50 CFR Part 17**

**[Docket No. FWS–R1–ES–2010–0071; MO 92210–0–0009]**

**RIN 1018–AX16**

# Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for Lepidium papilliferum (Slickspot Peppergrass)

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Proposed rule.

**SUMMARY:** We, the U.S. Fish and Wildlife Service, propose to designate critical habitat for *Lepidium papilliferum* (slickspot peppergrass) under the Endangered Species Act of 1973, as amended. In total, we are proposing to designate 23,374 hectares (57,756 acres) as critical habitat for *Lepidium papilliferum,* in Ada, Elmore, Payette, and Owyhee Counties in Idaho.

**DATES:** To provide us with adequate time to consider your comments, comments must be received on or before July 11, 2011. Please note that if you are using the Federal eRulemaking Portal (see **ADDRESSES** section, below), the deadline for submitting an electronic comment is 11:59 p.m. Eastern Standard Time on this date. We must receive requests for public hearings, in writing, at the address shown in the **FOR FURTHER INFORMATION CONTACT** section by June 24, 2011.

**ADDRESSES:** You may submit comments by one of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* In the box that reads "Enter Keyword or ID," enter the docket number for this proposed rule, which is FWS–R1–ES–2010–0071. Check the box that reads "Open for Comment/Submission," and then click the Search button. You should see an icon that reads "Submit a Comment." Please ensure that you have found the correct rulemaking before submitting your comment.
- *U.S. mail or hand-delivery:* Public Comments Processing, Attn: FWS–R1–ES–2010–0071; Division of Policy and Directives Management; U.S. Fish and Wildlife Service; 4401 N. Fairfax Drive, Suite 222; Arlington, VA 22203.

We will post all comments on *http://www.regulations.gov.* This generally means that we will post any personal information you provide us (see the Public Comments section below for more information).

**FOR FURTHER INFORMATION CONTACT:** Brian Kelly, State Supervisor, U.S. Fish and Wildlife Service, Idaho Fish and Wildlife Office, 1387 S. Vinnell Way, Room 368, Boise, ID 83709; telephone 208–378–5243; facsimile 208–378–5262. If you use a telecommunications device for the deaf (TDD), call the Federal Information Relay Service (FIRS) at 800–877–8339.

**SUPPLEMENTARY INFORMATION:**

## Public Comments

We intend that any final action resulting from this proposal will be based on the best scientific and commercial data available and be as accurate and as effective as possible. Therefore, we request comments or information from other concerned government agencies, the scientific community, industry, or other interested parties concerning this proposed rule. We particularly seek comments concerning:

(1) The reasons why we should or should not designate habitat as "critical habitat" under section 4 of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 *et seq.*), including whether there are threats to *Lepidium papilliferum* from human activity, the degree to which threats from human activity can be expected to increase due to the designation, and whether that increase in threats outweighs the benefit of designation such that the designation of critical habitat may not be prudent.

(2) Specific information on:

- The amount and distribution of *Lepidium papilliferum* habitat;
- What areas occupied at the time of listing and that contain features essential to the conservation of *Lepidium papilliferum* should be included in the designation and why;
- The habitat components (primary constituent elements) essential to the conservation of the species, such as specific soil characteristics, plant associations, or pollinators, and the quantity and spatial arrangement of these features on the landscape needed to provide for the conservation of the species;
- What areas not occupied at the time of listing are essential for the conservation of the species, if any, and why; and
- Special management considerations or protections that the features essential to the conservation of *Lepidium papilliferum* may require, including managing for the potential effects of climate change.

(3) Land use designations and current or planned activities in the subject areas and their possible impacts on proposed critical habitat.

(4) Any probable economic, national security, or other relevant impacts of designating any area that may be included in the final designation. We are particularly interested in any impacts on small entities, and the benefits of including or excluding areas that are subject to these impacts.

(5) Whether the benefits of excluding any particular area from critical habitat outweigh the benefits of including that area in critical habitat under section 4(b)(2) of the Act, after considering both the potential impacts and benefits of the proposed critical habitat designation. Under section 4(b)(2) of the Act, we may exclude an area from critical habitat if we determine that the benefits of such exclusion outweigh the benefits of including that particular area as critical habitat, unless failure to designate that specific area as critical habitat will result in the extinction of the species. We are considering the possible exclusion of areas under private ownership, in particular, as we anticipate the benefits of exclusion may outweigh the benefits of inclusion in those areas. We therefore request specific information on:

- The benefits of including any specific areas in the final designation and supporting rationale,
- The benefits of excluding any specific areas from the final designation and supporting rationale, and
- Whether any specific exclusions may result in the extinction of the species and why (see Exclusions section below).

(5) The use of Public Land Survey System quarter-quarter sections to delineate the proposed critical habitat designation; we used quarter-quarter sections in this proposed rule because they are the most-commonly-used minimum size and method for delineating land ownership boundaries within the range of *Lepidium papilliferum*.

(6) Information on the projected and reasonably likely impacts of climate change on *Lepidium papilliferum* and on the critical habitat areas we are proposing.

(7) Whether we could improve or modify our approach to designating critical habitat in any way to provide for greater public participation and understanding, or to better accommodate public concerns and comment.

Our final determination concerning critical habitat for *Lepidium papilliferum* will take into consideration all written comments we receive during the comment period,

including comments from peer reviewers, comments we receive during any public hearing should one be requested, and any additional information we receive during the 60-day comment period. All comments will be included in the public record for this rulemaking. On the basis of peer reviewer and public comments, we may, during the development of our final determination, find that areas within the proposed designation do not meet the definition of critical habitat, that some modifications to the described boundaries are appropriate, or that areas may or may not be appropriate for exclusion under section 4(b)(2) of the Act.

You may submit your comments and materials concerning this proposed rule by one of the methods listed in the **ADDRESSES** section. We will post your entire comment—including any personal identifying information—on *http://www.regulations.gov*. If you provide personal identifying information, such as your name, street address, phone number, or e-mail address, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so.

Comments and materials we receive, as well as supporting documentation we used in preparing this proposed rule, will be available for public inspection on *http://www.regulations.gov,* or by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, Idaho Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

## Background

*Lepidium papilliferum* was listed as a threatened species under the Act on October 8, 2009 (74 FR 52014). In this proposed rule, we intend to discuss only those topics directly relevant to the designation of critical habitat for this species. For more detailed information on the genetics and biology of *L. papilliferum,* please refer to the final listing rule published in the **Federal Register** on October 8, 2009 (74 FR 52014). Detailed information on *L. papilliferum* directly relevant to designation of critical habitat is discussed under the Primary Constituent Elements section below.

### *Species Information*

*Lepidium papilliferum* is a small, flowering plant in the mustard family (Brassicaceae). The plant grows in unique microsite habitats known as slickspots (described below, under "Ecology and Habitat"), which are found within the semiarid sagebrush-steppe ecosystem of southwestern Idaho. The species is endemic to this region, known only from the Snake River Plain and its adjacent northern foothills (an area approximately 145 by 40 kilometers (km) (90 by 25 miles (mi)), or 5,800 square kilometers ($km^2$) (2,250 square miles ($mi^2$))), with a smaller, disjunct population on the Owyhee Plateau (an area of approximately 18 by 19 km (11 by 12 mi), or 342 $km^2$ (132 $mi^2$)). Rangewide, *L. papilliferum* is associated with slickspots that cover a relatively small cumulative area within the larger sagebrush-steppe ecosystem. Additionally, although *L. papilliferum* is found almost exclusively in slickspots, very few existing slickspots are occupied by *L. papilliferum.*

*Lepidium papilliferum* is herbaceous and relatively low-growing, averaging 5 to 20 centimeters (cm) (2 to 8 inches (in)) high, but occasionally reaching up to 40 cm (16 in) in height. It is an intricately branched, tap-rooted plant, with numerous, small, white, four-petalled flowers. Fruits (siliques) are round in outline, flattened, and two-seeded (Moseley 1994, pp. 3, 4; Holmgren *et al.* 2005, p. 260). The species is monocarpic (it flowers once and then dies) and displays two different life history strategies—an annual form and a biennial form. The annual form reproduces by flowering and setting seed in its first year, and dies within one growing season. The biennial life form initiates growth in the first year as a vegetative rosette, but does not flower and produce seed until the second growing season. The proportion of annuals versus biennials in a population can vary greatly (Meyer *et al.* 2005, p. 15), but in general annuals appear to outnumber biennials (Moseley 1994, p. 12).

Like many short-lived plants growing in arid environments, above-ground numbers of *Lepidium papilliferum* individuals can fluctuate widely from one year to the next, depending on seasonal precipitation patterns (Mancuso and Moseley 1998, p. 1; Meyer *et al.* 2005, pp. 4, 12, 15; Palazzo *et al.* 2005, p. 9; Menke and Kaye 2006a, p. 8; Menke and Kaye 2006b, pp. 10, 11; Sullivan and Nations 2009, p. 44). Mancuso and Moseley (1998, p. 1) note that sites with thousands of above-ground plants one year may have none the next, and vice versa. Above-ground plants represent only a portion of the population; the seed bank (a reserve of dormant seeds, generally found in the soil) contributes the other portion, and in many years constitutes the majority of the population (Mancuso and Moseley 1998, p. 1).

### *Ecology and Habitat*

*Lepidium papilliferum* gets its common name, slickspot peppergrass, from its almost exclusive association with slickspot microsite habitats. "Slickspots" are visually distinct openings in the sagebrush-steppe community characterized by soils with high sodium content and distinct clay layers; they tend to be highly reflective and light in color, making them easy to detect on the landscape (Fisher *et al.* 1996, p. 3). Within the range of *L. papilliferum,* slickspots cover a relatively small cumulative area within the larger sagebrush-steppe ecosystem. For example, an intense field inventory within the U.S. Air Force Juniper Butte Range in 2002 found that of the 4,480 ha (11,070 ac) surveyed, approximately 1 percent (44.1 ha) (109 ac) consisted of slickspot microsites; of those slickspots, only 4 percent were occupied by individuals of *L. papilliferum.* It is not known how long slickspots take to form, but it is hypothesized to take several thousands of years (Nettleton and Peterson 1983, p. 193; Seronko 2006, *in litt.*). Climate conditions that allowed for the formation of slickspots in southwestern Idaho are thought to have occurred during a wetter Pleistocene period. As slickspots appear to have formed during the Pleistocene and new slickspots are not being formed, the loss of a slickspot is considered a permanent loss. Some slickspots subjected to only light disturbance in the past may apparently be capable of re-forming (Seronko 2006, *in litt.*). Disturbances that alter the physical properties of the soil layers, however, such as deep disturbance and the addition of organic matter, may lead to destruction and permanent loss of slickspots.

Several analyses have shown a positive association between above-ground abundance of *Lepidium papilliferum* and spring precipitation in the same year. More recently, Sullivan and Nations (2009, pp. 30, 41) analyzed 18 years of data and found that both plant density and plant abundance were positively related to mean monthly precipitation in late winter and spring (January through May). This correlation of abundance with spring rainfall is important, as it at least partially explains annual fluctuations in *L. papilliferum* population numbers. In contrast, precipitation in the fall or early winter may have a negative effect on *L. papilliferum* abundance the following spring (Meyer *et al.* 2005, p. 15; Sullivan and Nations 2009, p. 39). It has been suggested this negative relationship may be the result of prolonged flooding of the slickspot microsites, causing

subsequent mortality of overwintering biennial rosettes (Meyer *et al.* 2005, pp. 15–16).

*Threats*

The primary threat factors that affect the habitat and survival of *Lepidium papilliferum* in southwest Idaho include the invasion of nonnative annual grasses, such as *Bromus tectorum* (cheatgrass), and increased fire frequency. *Bromus tectorum* can impact *L. papilliferum* directly through competition, but it also acts indirectly on the species by providing continuous fine fuels that contribute to the documented increased frequency and extent of wildfires in southwest Idaho. Frequent wildfires ultimately result in the conversion of the sagebrush-steppe habitat to nonnative annual grasslands, with consequent losses of native species diversity and natural ecological function. This creates a positive feedback loop between nonnative annual grasses and fire, which makes it difficult to separate out the effects that each of these threats independently have on *L. papilliferum.*

Development also poses a threat to *Lepidium papilliferum,* both directly through the destruction of populations and loss of slickspot microsites, as well as indirectly through habitat fragmentation. The loss of slickspots is a permanent loss of habitat for *L. papilliferum,* because the species is specifically adapted to occupy these unique microsite habitats that developed in the Pleistocene era, and new slickspots are no longer being formed (Nettleton and Peterson 1983, pp. 166, 191, 206).

In addition to wildfire, nonnative plants, and development, livestock use poses a secondary threat to *Lepidium papilliferum,* primarily through mechanical damage to individual plants and slickspot habitats. Livestock trampling can disrupt the soil layers of slickspots, altering slickspot function (Seronko 2004*, in litt.;* Colket 2005, p. 34; Meyer *et al.* 2005, pp. 21–22). Trampling when slickspots are dry can lead to mechanical damage to the slickspot soil crust, potentially resulting in the invasion of nonnative plants and altering the hydrologic function of slickspots. In water-saturated slickspot soils, trampling by livestock can break through the restrictive clay layer; this is referred to as penetrating trampling (State of Idaho *et al.* 2006, p. 9). Trampling that alters the soil structure and the functionality of slickspots (Rengasamy *et al.* 1984, p. 63; Seronko 2004, *in litt.*) likely impacts the suitability of these microsites for *L. papilliferum.* Trampling can also negatively affect the seed bank by pushing seeds too deeply into the soil for subsequent successful germination and emergence. The current livestock management conditions and associated conservation measures address this threat such that it does not appear to pose a significant risk to the species at this time, but more monitoring information is needed to determine the significance of this threat to *L. papilliferum* rangewide.

*Lepidium papilliferum* is primarily an outcrossing species, and depends upon a diversity of insect pollinators for more successful fruit production and to maintain genetic variability by genetic exchange with distant populations. Some of the primary threats identified may have indirect effects on *L. papilliferum* by negatively impacting the native insect populations that the species depends on for pollination and genetic exchange. Changes in native habitat caused by residential or agricultural development, or conversion of the native plant community to nonnative species, may impact insect pollinator populations by removing specific food sources or habitats required for breeding or nesting. In addition, habitat isolation and fragmentation resulting from activities such as development or road construction may result in decreased pollination of L. papilliferum from distant sources, possibly resulting in decreased reproductive potential (*e.g.,* lower seed set) and reduced genetic diversity.

The Owyhee harvester ant was recently identified as a potentially-important seed predator of *Lepidium papilliferum.* A native species, the harvester ants appear to favor areas dominated by nonnative annual grasses, such as *Bromus tectorum,* and in the wake of disturbance factors such as wildfire, these ants are beginning to colonize areas that were historically unsuitable for nesting. This expansion is increasingly bringing them into contact with *L. papilliferum,* which experiences high rates of seed predation by the ants with potential negative consequences for the seed bank and recruitment. Our current understanding of how pervasive harvester ant colonies have become within the range of *L. papilliferum,* and their overall significance on the long-term viability of the species, is limited due to the short-term nature of the research so far.

For a detailed analysis of the threats to *Lepidium papilliferum,* please refer to the final listing rule for the species published October 8, 2009 (74 FR 52014).

*Previous Federal Actions*

On July 15, 2002, we proposed to list *Lepidium papilliferum* as endangered (67 FR 46441). On January 12, 2007, we published a document in the **Federal Register** withdrawing the proposed rule (72 FR 1622), based on a determination at that time that listing was not warranted (for a description of Federal actions concerning *L. papilliferum* between the 2002 proposal to list and the 2007 withdrawal, please refer to the 2007 withdrawal document). On April 6, 2007, Western Watersheds Project filed a lawsuit challenging our decision to withdraw the proposed rule to list *L. papilliferum.* On June 4, 2008, the U.S. District Court for the District of Idaho (Court) reversed the decision to withdraw the proposed rule, with directions that the case be remanded to the Service for further consideration consistent with the Court's opinion (*Western Watersheds Project* v. *Kempthorne,* Case No. CV 07–161–E–MHW (D. Idaho)).

After issuance of the Court's remand order, we published a public notification of the reinstatement of our July 15, 2002, proposed rule to list *Lepidium papilliferum* as endangered and announced the reopening of a public comment period on September 19, 2008 (73 FR 54345). To ensure that our review of the species' status was complete, we announced another reopening of the comment period on March 17, 2009, for a period of 30 days (74 FR 11342). On October 8, 2009, we published a final rule (74 FR 52014) listing *L. papilliferum* as a threatened species throughout its range.

**Critical Habitat**

*Background*

Critical habitat is defined in section 3 of the Act as:

(i) The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological features.

(I) Essential to the conservation of the species, and

(II) Which may require special management considerations or protection; and

(ii) Specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Conservation, as defined under section 3 of the Act, means to use and the use of all methods and procedures that are necessary to bring an

endangered or threatened species to the point at which the measures provided under the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

Critical habitat receives protection under section 7 of the Act through the prohibition against Federal agencies carrying out, funding, or authorizing the destruction or adverse modification of critical habitat. Section 7(a)(2) requires consultation on Federal actions that may affect critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation does not allow the government or public to access private lands. Such designation does not require implementation of restoration, recovery, or enhancement measures by non-Federal landowners. Where a landowner seeks or requests Federal agency funding or authorization for an action that may affect a listed species or critical habitat, the consultation requirements of section 7(a)(2) would apply, but even in the event of a destruction or adverse modification finding, the Federal action agency and the applicant's obligation is not to restore or recover the species, but to implement reasonable and prudent alternatives to avoid destruction or adverse modification of critical habitat.

For inclusion in a critical habitat designation, the habitat within the geographical area occupied by the species at the time it was listed must contain the primary constituent elements (PCEs) essential to the conservation of the species, and be included only if those features may require special management considerations or protection. Critical habitat designations identify, to the extent known using the best scientific data available, habitat areas that provide essential life-cycle needs of the species (areas on which are found the PCEs laid out in the appropriate quantity and spatial arrangement for the conservation of the species). Under the Act and regulations at 50 CFR 424.12, we can designate critical habitat in areas outside the geographical area occupied by the species at the time it is listed only when we determine that those areas are essential for the conservation of the species and that a designation limited to those areas occupied at the time of listing would be inadequate to ensure the conservation of the species.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific data available. Further, our Policy on Information Standards under the Endangered Species Act (published in the **Federal Register** on July 1, 1994 (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106–554; 114 Stat. 2763A–153–54)), and our associated Information Quality Guidelines (available online at *http://www.fws.gov/informationquality/topics/IQAguidelines-final82307.pdf*), provide criteria, establish procedures, and provide guidance to ensure that our decisions are based on the best scientific data available. They require our biologists, to the extent consistent with the Act and with the use of the best scientific data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat.

When we are determining which areas should be designated as critical habitat, our primary source of information is generally the information developed during the listing process for the species. Additional information sources may include the recovery plan for the species (if available), articles in peer-reviewed journals, conservation plans developed by States and counties, scientific status surveys and studies, biological assessments, or other unpublished materials, including expert opinion or personal knowledge.

Habitat is often dynamic, and species may move from one area to another over time. In particular, we recognize that climate change may cause changes in areas of occupied habitat. In the Pacific Northwest, regionally averaged temperatures have risen 0.8 degrees Celsius (C) (1.5 degrees Fahrenheit (F)) over the last century (as much as 2 degrees C (4 degrees F) in some areas), and are projected to increase by another 1.5 to 5.5 degrees C (3 to 10 degrees F) over the next 100 years (Mote *et al.* 2003, p. 54; Karl *et al.* 2009, p. 135). Arid regions such as the Great Basin where *Lepidium papilliferum* occurs are likely to become hotter and drier, fire frequency is expected to accelerate, and fires may become larger and more severe (Brown *et al.* 2004, pp. 382–383; Neilson *et al.* 2005, p. 150; Chambers and Pellant 2008, p. 31; Karl *et al.* 2009, p. 83). Under projected future temperature conditions, the cover of sagebrush in the Great Basin region is anticipated to be dramatically reduced (Neilson *et al.* 2005, p. 154). Warmer temperatures and greater concentrations of atmospheric carbon dioxide create conditions favorable to the invasive annual grass *Bromus tectorum,* and perpetuate the positive feedback cycle between annual grasses and fire frequency that poses a significant threat to the sagebrush matrix habitat of *L. papilliferum* (Chambers and Pellant 2008, p. 32; Karl *et al.* 2009, p. 83).

The direct, long-term impact from climate change to the habitat of *Lepidium papilliferum* is yet to be determined. Under the current climate-change projections discussed above, we anticipate that future climatic conditions will favor further invasion by *Bromus tectorum,* that fire frequency will continue to increase, and that the extent and severity of fires may increase as well, further changing the species composition of southwest Idaho's sagebrush-steppe habitat.

Although the Intergovernmental Panel on Climate Change (IPCC) projects that the changes to the global climate system in the 21st century will likely be greater than those observed in the 20th century (IPCC 2007, p. 45), there are, nonetheless, limitations to our ability to estimate the scope or magnitude of the effects. Therefore, we recognize that critical habitat designated at a particular point in time may not include all of the habitat areas that we may later determine necessary for the recovery of the species. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not be required for recovery of the species.

Areas that are important to the conservation of the species, but are outside the critical habitat designation, will continue to be subject to conservation actions we implement under section 7(a)(1) of the Act. Those areas outside the critical habitat designation that support populations are also subject to the regulatory protections afforded by the section 7(a)(2) jeopardy standard, as determined on the basis of the best available scientific information at the time of the agency action. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans (HCPs), or other species conservation planning efforts if new information available at the time of

these planning efforts calls for a different outcome.

*Methods*

As required by section 4(b)(2) of the Act, in developing this proposed rule we used the best scientific data available in determining those specific areas within the geographical area occupied at the time of listing that contain the features essential to the conservation of *Lepidium papilliferum* and that may require special management considerations or protection.

We reviewed available information that pertains to the habitat requirements of this species. These sources of information included, but were not limited to, data used to complete the final rule to list the species (74 FR 52014; October 8, 2009); information from biological surveys, peer reviewed articles, various agency reports and databases for or by the Idaho Natural Heritage Program (INHP), U.S. Bureau of Land Management (BLM), Idaho Army National Guard, State of Idaho, U.S. Air Force, and nongovernmental cooperators; discussions with species experts; and data and information presented in academic research theses. Additionally, we utilized regional Geographic Information System (GIS) data (such as species occurrence data, land use, topography, aerial imagery, soil data, and land ownership maps) for area calculations and mapping.

The long-term probability of the survival and recovery of *Lepidium papilliferum* is dependent upon protecting existing population sites of sufficient quality and viability to contribute meaningfully to the conservation of the species; maintaining ecological function within these sites, including preserving the integrity of the slickspot soils and connectivity within and between populations in close geographic proximity to one another (to facilitate pollinator activity); and keeping these areas free of major habitat-disturbing activities, including the establishment of invasive, nonnative plant species and frequent wildfire. Because slickspots cover a relatively small cumulative area within the larger sagebrush-steppe matrix, we did not restrict the designation to individual occupied slickspots, but included some adjacent sagebrush-steppe habitat to provide for ecosystem function. This contiguous habitat provides the requisite PCEs for *L. papilliferum,* including native flowering plants and habitat to support pollinators, and additionally provides the essential feature of habitat free from disturbances, such as invasive species, development, and recreation. The areas we are proposing to designate as critical habitat were all occupied at the time of listing, and provide physical and biological features essential for the conservation of *L. papilliferum* that may require special management considerations or protection. We do not propose to designate areas outside of the geographical area presently occupied by the species.

Our first step in delineating proposed critical habitat units was to identify areas that provide for the conservation of *Lepidium papilliferum* within the three physiographic regions where the species was known to occur at the time of listing (74 FR 52020; October 8, 2009). These areas include the Boise Foothills, the Snake River Plain and its adjacent northern foothills, and a single disjunct population on the Owyhee Plateau. We are proposing to designate critical habitat in all three physiographic regions to conserve the genetic variability represented by *L. papilliferum* across its range and because these areas are representative of the entire known historical geographic distribution of the species (50 CFR 424.12(b)(5)).

We then identified areas within these geographic units that were occupied by *Lepidium papilliferum* at the time of listing utilizing the element occurrence (EO) data provided to us by the Idaho Natural Heritage Program (INHP), and information used in the final rule to list *Lepidium papilliferum* published in the **Federal Register** on October 8, 2009 (74 FR 52014). Element occurrences of *L. papilliferum* are defined by grouping occupied slickspots that occur within 1 km (0.6 mi) of each other; all occupied slickspots within a 1-km (0.6-mi) distance of another occupied slickspot are aggregated into a single EO. The definition of a single EO is based on the distance over which individuals of *L. papilliferum* are believed to be capable of genetic exchange through insect-mediated pollination (Colket and Robertson 2006, pp. 1–2). INHP assigned to each EO an identifying number and a qualitative rank based on measures of population size and habitat quality. Using the EO area ranking system developed by the INHP, we evaluated specific areas to propose for designation as critical habitat (see Criteria Used to Identify Critical Habitat, below). The ranking given to each area takes into account those features that are essential to *L. papilliferum,* including the presence of slickspots, habitat conditions within and surrounding the area, and the conditions of the surrounding landscape features necessary to support pollination and other life-history requirements. Each EO for *L. papilliferum* is given a ranking of A, B, C, D, E, F, H, or X by the INHP; higher rankings (the highest rank would be an "A") indicate sites with greater habitat quality and larger population sizes, which we infer are more likely to persist and sustain the species. As of February 2009, there were no A-ranked EOs of *L. papilliferum.* Rankings of B, C, and D indicate a decreasing continuum of detectable plants, native plant community, habitat condition, and overall landscape context within 1 km (0.6 mi) of occupied slickspots, with a B ranking signifying a greater number of plants and better habitat conditions and a D ranking signifying few plants and poor conditions. Areas ranked E are those records with confirmed *L. papilliferum* presence but for which no additional habitat information is available. Areas ranked H indicate historical occurrences, X rankings connote extirpated occurrences, and F rankings indicate areas where no *L. papilliferum* individuals were found when last visited by a qualified surveyor.

Critical habitat boundaries were initially determined based on the minimum delineation of EO areas. Using GIS, we included an area of approximately 250 meter (m) (820 feet (ft)) around each EO to provide the PCEs for the species, including habitat of sufficient quantity and quality to support pollinators of *Lepidium papilliferum* in occupied slickspots. This areal extent was chosen to provide the minimum area needed to sustain an active pollinator community for *L. papilliferum.* This distance is not meant to capture all habitat that is potentially used by pollinators, but it is meant to capture a sufficient area to allow for pollinators to nest, feed, and reproduce in habitat that is adjacent and connected to *L. papilliferum* EOs. Although the species is served by a variety of pollinators, we delineated this pollinator-use area based on one of *L. papilliferum's* important pollinators with a relatively limited flight distance, the solitary bee, assuming that potential pollinators with long-range flight capabilities would be capable of using this habitat as well. Research suggests that solitary bees have fairly small foraging distances (Steffan-Dewenter *et al.* 2002, pp. 1427–1429; Gathmann and Tscharntke 2002, p. 762); a study by Gathmann and Tscharntke suggested a maximum foraging range between 150 and 600 m (495 and 1,970 ft). Based on this data, we chose 250 m (820 ft) as a reasonable mid-range estimate of the distance needed to provide sufficient

habitat for the pollinator community. As noted, many other insects also contribute to the pollination of *L. papilliferum,* and some of these insects may travel greater distances than solitary bees; however, these pollinators may also find habitat within 250 m (820 ft) of *L. papilliferum* EOs. We did not delineate a pollinator use area larger than 250 m (820 ft) around *L. papilliferum* EOs, because that could include habitats that may not directly contribute to the survival or recovery of the species. In addition to supporting the pollinator community, this area surrounding EOs of *L. papilliferum* provides the essential feature of habitat free from disturbance, such as development and recreation, for the species.

Using GIS, we intersected the 250-m (820-ft) buffered EOs with a quarter-quarter section shapefile based on the Public Land Survey System. The Public Land Survey System is a rectangular survey system commonly used in the western United States that divides the land into 6-mile square townships (equivalent to 1,554 ha), which are then further subdivided into 1-mile square sections (259 ha). These sections may be surveyed into smaller squares by repeated halving and quartering; a quarter section is 160 ac (65 ha), and the smallest unit normally utilized is a "quarter-quarter section," equal in size to 40 ac (16 ha) (about 1/16 of a square mile, or 400 m across). Quarter-quarter sections that contained delineated EOs and surrounding buffers were initially identified as proposed critical habitat. We chose this strategy because, in our judgment, this scale of analysis is the appropriate scale for defining the critical habitat boundaries of this particular species. We based our determination to use this scale of analysis on the following reasons: (1) Quarter-quarter sections are the most-commonly-used minimum size and method for delineating land ownership boundaries within the range of *Lepidium papilliferum;* (2) the Public Land Survey System is a commonly-used method in Idaho and the sections are easily identified on standard maps, which will assist the public and land management agencies in easily identifying proposed critical habitat areas; (3) quarter-quarter section boundaries are commonly used for partitioning lands for management purposes such as livestock allotment boundaries; and (4) quarter-quarter section descriptions minimize the number of coordinates necessary to define the shapes of the critical habitat units, and avoid a false sense of precision that might be inferred from the use of other mapping tools; we would not consider mapping on a finer scale to represent reliable data with regard to location information.

*Primary Constituent Elements (PCEs)*

In accordance with subsections 3(5)(A)(i) and 4(b)(1)(A) of the Act and our implementing regulations at 50 CFR 424.12, in determining those areas within the geographical area occupied by the species at the time of listing to propose as critical habitat, we consider the physical or biological features essential to the conservation of the species that may require special management considerations or protection. These may include, but are not limited to:

(1) Space for individual and population growth and for normal behavior;

(2) Food, water, air, light, minerals, or other nutritional or physiological requirements;

(3) Cover or shelter;

(4) Sites for breeding, reproduction, or rearing (or development) of offspring; germination, or seed dispersal; and generally

(5) Habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.

We derived the specific PCEs essential to the conservation of *Lepidium papilliferum* based on the known biological needs of the species. We consider the physical or biological features essential to the conservation of *L. papilliferum* to be those PCEs laid out in the appropriate quantity and spatial arrangement to provide for the conservation of the species. All areas proposed as critical habitat for *L. papilliferum* are currently occupied, were occupied at the time of listing, and are within the species' historical geographic range.

With rare exception, *Lepidium papilliferum* is known only to occur in slickspot habitat microsites scattered within the greater semiarid sagebrush-steppe ecosystem of southwestern Idaho. The restricted distribution of *L. papilliferum* is likely due to its adaptation to the specific conditions within these slickspot habitats. Slickspots are distinguished from the surrounding sagebrush habitat as having the following characteristics: microsites where water pools when rain falls (Fisher *et al.* 1996, pp. 2, 4); sparse native vegetation; distinct soil layers with a columnar or prismatic structure, higher alkalinity and clay content, and natric (sodic, high sodium) properties (Fisher *et al.* 1996, pp. 15–16; Meyer and Allen 2005, pp. 3–5, 8; Palazzo *et al.* 2008, p. 378); and reduced levels of organic matter and nutrients due to lower biomass production (Meyer and Quinney 1993, pp. 3, 6; Fisher *et al.* 1996, p. 4). Although the low permeability of slickspots appears to help hold moisture (Moseley 1994, p. 8), once the thin crust dries out, the survival of *L. papilliferum* seedlings depends on the ability of the plant to extend the taproot into the argillic horizon (soil layer with high clay content) to extract moisture from the deeper natric zone (Fisher *et al.* 1996, p. 13).

Ecologically functional slickspots have the following three primary layers: the surface silt layer, the middle restrictive layer, and an underlying moist clay layer. Although slickspots can appear homogeneous on the surface, the actual depth of the silt and restrictive layer can vary throughout the slickspot (Meyer and Allen 2005, Tables 9, 10, and 11). The top two layers (surface silt and restrictive) of slickspots are normally very thin; the surface silt layer varies in thickness from a few mm to 3 cm (0.1 to 1.2 in) in slickspots known to support *Lepidium papilliferum,* and the restrictive layer varies in thickness from 1 to 3 cm (0.4 to 1.2 in) (Meyer and Allen 2005, p. 3). Fisher *et al.* (1995, p. 4) describe the smooth surface layer of slickspots as crustlike, with prominent vesicular pores. Below the surface layer, the soil clay content increases abruptly and creates a strongly-structured, finely-textured boundary (horizon) formed by the concentration of silicate clay materials, known as an argillic horizon. Slickspot soil profiles are distinctive and distinguished from the surrounding soil matrix by very thin surface layers that form prominently vesicular crusts, natric-like argillic horizons that occur just below the soil surface, and by increasingly saline and sodic conditions with depth (Fisher *et al.* 1995, pp. 11, 16). Disturbances that alter the physical properties of slickspot soil layers, such as deep disturbance and the addition of organic matter, may lead to destruction and permanent loss of slickspots. Slickspot soils are especially susceptible to mechanical disturbances when wet (Rengasmy *et al.* 1984, p. 63; Seronko 2004, *in litt.*). Such disturbances disrupt the soil layers important to *L. papilliferum* seed germination and seedling growth, and alter hydrological function.

The biological soil crust, also known as a microbiotic crust or cryptogamic crust, is another component of quality habitat for *Lepidium papilliferum.* Such crusts are commonly found in semiarid

and arid ecosystems, and are formed by living organisms, primarily bryophytes, lichens, algae, and cyanobacteria, that bind together surface soil particles (Moseley 1994, p. 9; Johnston 1997, p. 4). Microbiotic crusts play an important role in stabilizing the soil and preventing erosion, increasing the availability of nitrogen and other nutrients in the soil, and regulating water infiltration and evaporation levels (Johnston 1997, pp. 8–10). In addition, an intact crust appears to aid in preventing the establishment of invasive plants (Brooks and Pyke 2001, p. 4, and references therein; see also Serpe *et al.* 2006, pp. 174, 176). These crusts are sensitive to disturbances that disrupt crust integrity, such as compression due to livestock trampling or off-road vehicle (ORV) use, and are also vulnerable to damage by fire. Recovery from disturbance is possible but occurs very slowly (Johnston 1997, pp. 10–11).

The native, semiarid sagebrush-steppe habitat of southwestern Idaho where *Lepidium papilliferum* is found can be divided into two plant associations, each dominated by the shrub *Artemisia tridentata* ssp. *wyomingensis* (Wyoming big sagebrush): (1) *A. tridentata* ssp. *wyomingensis-Achnatherum thurberianum* (formerly *Stipa thurberiana*) (Thurber's needlegrass); and (2) *A. tridentata* ssp. *wyomingensis–Agropyron spicatum* (bluebunch wheatgrass) habitat types. The perennial bunchgrasses *Poa secunda* (Sandberg's bluegrass) and *Sitanion hysrix* (bottlebrush squirreltail) are commonly found in the understory of these habitats, and the species *Artemisia tridentata* ssp. *tridentata* (basin big sagebrush), *Chrysothamnus nauseosus* (grey rabbitbrush), *Chrysothamnus viridiflorus* (green rabbitbrush), *Eriogonum strictum* (strict buckwheat), *Purshia tridentata* (bitterbrush), and *Tetradymium glabrata* (little-leafed horsebrush) form a lesser component of the shrub community. Under relatively undisturbed conditions, the understory is populated by a diversity of perennial bunchgrasses and forbs, including species such as *Achnatherum* (formerly *Oryzopsis*) *hymenoides* (Indian ricegrass), *Achillea millefolium* (common yarrow), *Phacelia heterophylla* (varileaf phacelia), *Astragalus purshii* (Pursh's milkvetch), *Phlox longifolia* (longleaf phlox), and *Aristida purpurea* var. *longiseta* (purple threeawn).

*Lepidium papilliferum* is primarily an outcrossing species requiring pollen from separate plants for more successful fruit production; it exhibits low seed set in the absence of insect pollinators (Robertson 2003, p. 5; Robertson and Klemash 2003, p. 339; Robertson and Ulappa 2004, p. 1707; Billinge and Robertson 2008, pp. 1005–1006). *Lepidium papilliferum* is capable of self-pollinating, however, with a selfing rate (rate of self-pollination) of 12 to 18 percent (Billinge 2006, p. 40; Robertson *et al.* 2006a, p. 40).

Known *Lepidium papilliferum* insect pollinators include several families of bees (Hymenoptera), including Apidae, Halictidae, Sphecidae, and Vespidae; beetles (Coleoptera), including Dermestidae, Meloidae, and Melyridae; flies (Diptera), including Bombyliidae, Syrphidae, and Tachinidae; and others (Robertson and Klemash 2003, p. 336; Robertson *et al.* 2006b, p. 6). Seed set does not appear to be limited by the abundance of pollinators (Robertson *et al.* 2004, p. 14). However, studies have shown a strong positive correlation between insect diversity and the number of *L. papilliferum* flowering at a site (Robertson and Hannon 2003, p. 8). Measurement of fruit set per visit revealed considerable variability in the effectiveness of pollination by different types of insects. Since *L. papilliferum* has a wide array of pollinators, general pollinator management practices for conservation of pollinators should be practiced at sites designated as critical habitat. These practices include "a diversity of native plants whose blooming times overlap to provide flowers for foraging throughout the seasons; nesting and egg-laying sites, with appropriate nesting materials; sheltered, undisturbed places for hibernation and overwintering; and a landscape free of poisonous chemicals" (Shepherd *et al.* 2003, pp. 49–50). An intact native sagebrush community, as opposed to a monoculture of nonnative annual grasslands such as *Bromus tectorum,* is more likely to support a wider array of pollinators. Many pollinators depend on native plants and may be unable to access resources from introduced species; many bees, for example, not only require large numbers of flowers to provide nectar and pollen, but also need a variety of flowering plants to sustain them throughout the growing season (Kearns and Inouye 1997, p. 298).

To ensure that sufficient habitat and a diversity of native flowering plants are available to support the pollinator community required for the viability of *Lepidium papilliferum* populations, we determined that each EO should be surrounded by a minimum pollinator-use area extending 250 m (820 ft) from the periphery. We chose this extent as a reasonable estimate of the area needed to sustain an active pollinator community for *L. papilliferum* (see Methods, above). The areas proposed as critical habitat will ensure maintenance and continuity of foraging habitats for insect pollinators adjacent to occupied slickspots, which helps to increase seed viability and production and is essential for maintaining genetic diversity in the species over the long term. Additionally, the provision of sufficient native sagebrush-steppe habitat protects *L. papilliferum* from wildfire, nonnative plant invasions, and colonization by harvester ants, and it helps to maintain local ecosystem characteristics within the larger landscape, which are crucial for protecting the species and its seed bank. The seed bank is an essential feature of *L. papilliferum's* biology because it provides the species with resilience in the face of stochastic impacts and variation in environmental conditions.

All areas designated as critical habitat for *Lepidium papilliferum* were occupied at the time of listing, are within the species' historical geographic range, and provide sufficient PCEs to support at least one life-history function. Based on the above needs and our current knowledge of the life history, biology, and ecology of the species and the habitat requirements for sustaining the essential life history functions of the species, we have determined that *Lepidium papilliferum's* PCEs include:

(1) Ecologically-functional microsites or "slickspots" that are characterized by:

(a) A high sodium and clay content, and a three-layer soil horizonation sequence, which allows for successful seed germination, seedling growth, and maintenance of the seed bank. The surface horizon consists of a thin, silty, vesicular, pored (small cavity) layer that forms a physical crust (the silt layer). The subsoil horizon is a restrictive clay layer with an abruptic (referring to an abrupt change in texture) boundary with the surface layer, that is natric or natric-like in properties (a type of argillic (clay-based) horizon with distinct structural and chemical features) (the restrictive layer). The second argillic subsoil layer (that is less distinct than the upper argillic horizon) retains moisture through part of the year (the moist clay layer); and

(b) Sparse vegetation with low to moderate introduced, invasive, nonnative plant species cover.

(2) Relatively-intact, native *Artemisia tridentata* ssp. *wyomingensis* (Wyoming big sagebrush) vegetation assemblages, represented by native bunchgrasses, shrubs, and forbs, within 250 m (820 ft) of *Lepidium papilliferum* element occurrences to protect slickspots and *Lepidium papilliferum* from disturbance

from wildfire, slow the invasion of slickspots by nonnative species and native harvester ants, and provide the habitats needed by *L. papilliferum's* pollinators.

(3) A diversity of native plants whose blooming times overlap to provide pollinator species with sufficient flowers for foraging throughout the seasons and to provide nesting and egg-laying sites; appropriate nesting materials; and sheltered, undisturbed places for hibernation and overwintering of pollinator species. In order for genetic exchange of *Lepidium papilliferum* to occur, pollinators must be able to move freely between slickspots. Alternative pollen and nectar sources (other plant species within the surrounding sagebrush vegetation) are needed to support pollinators during times when *Lepidium papilliferum* is not flowering, when distances between slickspots are large, and in years when *L. papilliferum* is not a prolific flowerer.

(4) Sufficient pollinators for successful fruit and seed production, particularly pollinator species of the sphecid and vespid wasp families, species of the bombyliid and tachnid fly families, honeybees, and halictid bee species, most of which are solitary insects that nest outside of slickspots in the surrounding sagebrush-steppe vegetation, both in the ground and within the vegetation.

The space for individual and population growth is provided by PCEs 1, 2, and 3; the need for food, water, air, light, minerals, or other physiological requirements is provided by PCEs 1 and 2; the need for cover and shelter is met by PCEs 1 and 2; sites for reproduction, germination, and seed dispersal are provided by PCEs 1, 2, 3, and 4; and habitat free from disturbance is met by PCE 2. All of the above described PCEs do not have to occur simultaneously within a unit for the unit to constitute critical habitat for *Lepidium papilliferum.* All units and subunits proposed in this rule as critical habitat contain at least one of the PCEs to provide for one or more of the life-history functions of *L. papilliferum.*

*Special Management Considerations or Protection*

Within the geographical area occupied by the species at the time it was listed, section 3(5)(A) of the Act defines critical habitat as those specific areas on which are found those physical or biological features essential to the conservation of the species and that may require special management considerations or protection. Accordingly, when designating critical habitat, we assess whether the PCEs within the areas occupied at the time of listing may require special management consideration or protections.

A detailed discussion of the threats affecting the physical and biological features essential to the conservation of *Lepidium papilliferum,* and that may require special management consideration or protection, can be found in the final listing rule published in the **Federal Register** on October 8, 2009 (74 FR 52014). The primary threats to the PCEs for *L. papilliferum* include the following direct and indirect effects: The current wildfire regime (*i.e.,* increasing frequency, size, and duration), invasive, nonnative plant species (*e.g., Bromus tectorum*), and habitat loss and fragmentation due to agricultural and urban development. One of the indirect threats experienced by *L. papilliferum* is the negative impact on insect pollinators caused by conversion and fragmentation of native habitats due to invasive, nonnative plant species and various forms of development. Another indirect threat is the potential increase in seed predation by harvester ants resulting from the conversion of sagebrush-steppe to nonnative annual grasses such as *B. tectorum.* Livestock pose a threat to *L. papilliferum,* primarily through mechanical damage to individual plants and slickspot habitats; however, current livestock management conditions and associated conservation measures address this potential threat such that it does not pose a significant risk to the viability of the species as a whole. Other, less significant factors that have the potential to impact the species include the effects from rangeland revegetation projects, wildfire management practices, recreation, and military use.

*Current Wildfire Regime*

The current wildfire regime and invasive, nonnative plant species were cited in the final listing rule as the primary cause for the decline of *Lepidium papilliferum.* The invasion of nonnative plant species, particularly annual grasses such as *Bromus tectorum* and *Taeniatherum caput-medusae* (medusahead), has contributed to increasing the amount and continuity of fine fuels across the landscape, and as a result, the wildfire frequency interval has been shortened from between 60 to 110 years historically to less than 5 years in many areas of the sagebrush-steppe ecosystem at present (Wright and Bailey 1982, p. 158; Billings 1990, pp. 307–308; Whisenant 1990, p. 4; USGS 1999, *in litt.,* pp. 1–9; West and Young 2000, p. 262). These wildfires tend to be larger and burn more uniformly than those that occurred historically, resulting in fewer patches of unburned vegetation, which can affect the post-fire recovery of native sagebrush-steppe vegetation (Whisenant 1990, p. 4). The result of this altered wildfire regime has been the conversion of vast areas of the former sagebrush-steppe ecosystem to nonnative annual grasslands (USGS 1999, *in litt.,* pp. 1–9). Frequent wildfires can also promote soil erosion and sedimentation (Bunting *et al.* 2003, p. 82) in arid environments such as the sagebrush-steppe ecosystem. Increased sedimentation can result in a silt layer that is too thick for optimal *L. papilliferum* germination (Meyer and Allen 2005, pp. 6–7).

I. Several researchers have noted signs of increased habitat degradation for *Lepidium papilliferum,* most notably in terms of exotic species cover and wildfire frequency (*e.g.,* Moseley 1994, p. 23; Menke and Kaye 2006b, p. 19; Colket 2008, pp. 33–34), but only recently have analyses demonstrated a statistically significant, negative relationship between the degradation of habitat quality, both within slickspot microsites and in the surrounding sagebrush-steppe matrix, and the abundance of *L. papilliferum.* Sullivan and Nations (2009, pp. 114–118, 137) found a consistent, statistically significant, negative correlation between wildfire and the abundance of *L. papilliferum* across its range. Their analysis of 5 years of Habitat Integrity and Population (HIP) monitoring data indicated that *L. papilliferum* "abundance was lower within those slickspot [sic] that had previously burned" (Sullivan and Nations 2009, p. 137), and the relationship between *L. papilliferum* abundance and fire is reported as "relatively large and statistically significant," regardless of the age of the fire or the number of past fires (Sullivan and Nations 2009, p. 118). The nature of this relationship was not affected by the number of fires that may have occurred in the past; whether only one fire had occurred or several, the association with decreased abundance of *L. papilliferum* was similar (Sullivan and Nations 2009, p. 118).

Special management to protect the proposed critical habitat areas and the features essential to the conservation of *Lepidium papilliferum* from the effects of the current wildfire regime may include preventing or restricting the establishment of invasive, nonnative plant species, post-wildfire restoration with native plant species, and reducing the likelihood of wildfires affecting the nearby plant community components. Local fire agencies can achieve the latter

by providing a rapid response or mutual support agreement for wildfire control.

*Invasive, Nonnative Plant Species*

The conversion of sagebrush-steppe habitat to nonnative annual grasslands over the past several decades has reduced or degraded suitable habitat for *Lepidium papilliferum,* in addition to fragmenting and isolating extant occupied areas. There are two primary ways for invasive, nonnative plants to become established in *L. papilliferum* habitats, through natural spreading (unseeded) or revegetation projects (seeded). The rates at which nonnative unseeded species are spreading, oftentimes into relatively intact habitats, is of major concern to natural resource managers. Invasive, nonnative plants can alter various attributes of ecosystems including geomorphology, wildfire regime, hydrology, microclimate, nutrient cycle, and productivity (for a summary see Dukes and Mooney 2003, entire). Additionally, these invasive, nonnative plants can negatively affect native plants, including rare plants like *L. papilliferum,* through competitive exclusion, niche displacement, hybridization, and competition for pollinators; examples of these negative effects are widespread among different taxa, locations, and ecosystems (D'Antonio and Vitousek 1992, pp. 63–87; Olson 1999, p. 5; Mooney and Cleland 2001, p. 1). Recent analyses have revealed a significant, negative association between the presence of weedy species and the abundance or density of *L. papilliferum,* to the point that *L. papilliferum* may be excluded from slickspots (Sullivan and Nations 2009, pp. 109–112). Although the specific mechanisms are not well understood, some of these plants, such as *Agropyrum cristatum* (crested wheatgrass) and *Bromus tectorum,* are strong competitors in this arid environment for such limited resources as moisture, which tends to be concentrated in slickspots (Pyke and Archer 1991, p. 4; Moseley 1994, p. 8; Lesica and DeLuca 1998, p. 4), at least in the subsurface soils (Fisher *et al.* 1996, pp. 13–16).

Special management to protect the features essential to the conservation of *Lepidium papilliferum* in the areas proposed as critical habitat from the effects of invasive, nonnative unseeded plant species may include the following: (1) protecting remnant blocks of native vegetation, (2) educating the public about invasive, nonnative species, (3) supporting research and funding for nonnative plant species control, (4) preventing or restricting the establishment of nonnative plant species, (5) washing vehicles prior to any travel into areas containing *L. papilliferum,* (6) quarantining livestock prior to entering allotments containing *L. papilliferum,* and (7) reducing the likelihood of wildfires.

*Livestock Use*

The most visible effect to *Lepidium papilliferum* and its habitat from livestock use is through trampling impacts. Livestock trampling can affect the fragile soil layers of slickspots (Colket 2005, p. 34; Meyer *et al.* 2005, pp. 21–22; Seronko 2004, *in litt.*). Trampling when slickspots are dry can lead to mechanical damage to the slickspot soil crust, potentially resulting in invasion of nonnative plants into the slickspots and altering the hydrologic function of slickspots, but is hypothesized to be less of an impact to *L. papilliferum* habitats than trampling of wet slickspot soils. Livestock trampling of water-saturated slickspot soils that breaks through the restrictive layer (referred to as "penetrating trampling" (State of Idaho *et al.* 2006, p. 9)) has the potential to alter the soil structure and the functionality of slickspots (Rengasamy *et al.* 1984, p. 63; Seronko 2004, *in litt.*). Penetrating trampling that occurs when slickspots are wet also has the potential to affect the seed bank for *L. papilliferum* by pushing the seeds below a depth where they can germinate (*i.e.,* below 3 cm (1.5 in.)) (Meyer and Allen 2005, pp. 9–10; Meyer *et al.* 2006, pp. 891, 901–902).

There are also indirect effects from livestock use that have impacted the sagebrush-steppe ecosystem. Livestock use has been suggested as a contributing factor to the spread of invasive, nonnative plant species (Frost and Launchbaugh 2003, pp. 43–45). The spread of *Bromus tectorum* on the Snake River Plain in particular has been attributed to several causes, including the past practice of heavy, unmanaged livestock use in the late 1800s (Mack 1981, pp. 145–165). Today, invasive, nonnative annual plants such as *B. tectorum* are so widespread that they have been documented spreading into areas that have not been disturbed (Tisdale *et al.* 1965, pp. 349, 351). Therefore, the absence of livestock use is no longer sufficient, by itself, to protect the landscape from invasive, nonnative species (Frost and Launchbaugh 2003, p. 44).

With careful management, livestock grazing may be used as a tool to select for certain native species, or even to control *B. tectorum* (Frost and Launchbaugh 2003, p. 43). For example, under the revised Juniper Butte Range Integrated Natural Resources Management Plan (INRMP), the U.S. Air Force will continue to use livestock throughout the majority of the Juniper Butte Range to reduce the amount of standing grass biomass to in turn reduce wildfire risk (U.S. Air Force 2004, pp. 6–37 through 6–39). However, this requires intensive management and timing that is not typically feasible over large areas.

Research designed to specifically examine the relationship between livestock use and *Lepidium papilliferum* is currently being conducted by the University of Idaho and the State of Idaho in cooperation with the Service (State of Idaho *et al.* 2006, p. 119).

Special management to protect the features essential to the conservation of *Lepidium papilliferum* from the effects of livestock use in the areas proposed as critical habitat may include conservation measures and actions to minimize the effects of livestock use on these lands. Existing conservation plans contain numerous measures to avoid, mitigate, and monitor the effects of livestock use on *L. papilliferum.* Livestock-grazing conservation measures implemented through the State of Idaho Candidate Conservation Agreement (CCA) and the U.S. Air Force INRMP apply to all Federal and State-managed lands within the occupied range of *L. papilliferum* (approximately 95 percent of the total occupied area). Existing conservation measures include prescribing a minimum distance for the placement of salt and water troughs, identifying livestock use restrictions to reduce trampling of slickspots during wet periods, constructing fences, or potentially modifying current livestock use. We recognize the potential for negative impacts to *L. papilliferum* populations and slickspots that may result from seasonal, localized trampling events. However, under current management conditions, we do not consider livestock use to pose a significant threat to *L. papilliferum.* We encourage the continued implementation of conservation measures and associated monitoring to ensure potential impacts of livestock trampling to *L. papilliferum* are avoided or minimized.

*Residential and Agricultural Development*

Past residential and agricultural development was responsible for five documented extirpations and four probable extirpations of *Lepidium papilliferum* (Colket *et al.* 2006, p. 4). The long-term viability of *L. papilliferum* on private land on the Snake River Plain and adjacent Boise

foothills is uncertain due to the continuing residential and urban development in and around Boise (Moseley 1994, p. 20). Residential and agricultural development can affect *L. papilliferum* and slickspot habitat through habitat conversion, increased nonnative plant invasions, increased ORV use, increased wildfire, changes to insect populations, and increased fragmentation. Utility lines such as power and gas lines, as well as roads, also fragment *L. papilliferum* occupied areas and act as corridors for nonnative plant invasions.

Special management to protect the features essential to the conservation of *Lepidium papilliferum* from the effects of residential and agricultural development in the areas proposed may include creating managed plant reserves and open spaces; limiting disturbances to and within suitable habitats; increasing compliance inspections with permit holders; requiring project fencing with adjacent construction activities; disallowing new roads; and evaluating the need for and conducting restoration or revegetation of native plants in open spaces, plant preserves, or disturbed areas, such as cuts for powerlines.

The designation of critical habitat does not imply that lands outside of critical habitat do not play an important role in the conservation of *Lepidium papilliferum.* Activities with a Federal nexus that may affect those areas outside of critical habitat, such as development, agricultural, or road construction activities, are still subject to review under section 7 of the Act if they may affect *L. papilliferum.* The prohibitions of section 9 of the Act include the import or export of listed species, and the removal to possession or malicious damage or destruction of a species under Federal jurisdiction (16 U.S.C. 1538(a)(2)).

*Criteria Used To Identify Critical Habitat*

As required by section 4(b)(2) of the Act, we used the best scientific data available in determining those specific areas within the geographical area occupied at the time of listing that contain the features essential to the conservation of *Lepidium papilliferum* and that may require special management considerations or protection. Our proposed designation of critical habitat for *L. papilliferum* is based on the information and procedures detailed in the Methods section, above. As described, we are proposing to designate critical habitat within the three physiographic regions where the species was known to occur at the time of listing (October 8, 2009), the Boise Foothills, the Snake River Plain, and the Owyhee Plateau. The areas we are proposing to designate as critical habitat were all occupied at the time of listing, and provide physical and biological features essential for the conservation of *L. papilliferum* that may require special management considerations or protection. All proposed areas provide one or more of the PCEs for life history function. We do not propose to designate areas outside the geographical area presently occupied by the species.

We included all *Lepidium papilliferum* EOs with INHP rankings of B, BC, and C in the proposed critical habitat. We conclude that areas with these rankings provide the physical and biological features essential to the conservation of the species, as they are most likely to provide for viable populations of *L. papilliferum* that will contribute to the conservation and recovery of the species, and each provides one or more of the PCEs as defined in this proposed rule. EOs ranked as B have one or more of the following features: More than 399 individuals, low nonnative plant species cover, predominantly unburned, few anthropogenic disturbances, and a surrounding landscape that is only minimally or partially fragmented within a distance of 1 km (0.6 mi). EOs ranked C have one or more of the following features: More than 50 individuals; low to moderate nonnative plant species cover; only partially burned; few to moderate anthropogenic disturbances; and a surrounding landscape within 1 km (0.6 mi) that is not predominantly fragmented by development, nonnative annual grasslands, or nonnative seeding projects. For the purposes of the proposed critical habitat analyses, we categorized areas containing B- or BC-ranked EOs (intermediate between B-rank and C-rank, see Colket *et al.* 2006, p. 5) as having high conservation value for the slickspot peppergrass, while areas containing C-ranked EOs were categorized as having medium conservation value for the species. Because data on condition, landscape context, and size are used to calculate the EO rankings, it is important to keep in mind that while some EOs included as critical habitat have lower habitat quality than others, their higher ranking may reflect their larger size. Based on the ranking definitions detailed above, EOs ranked as B, BC, and C are considered to contain some or all of the PCEs essential to the conservation of *Lepidium papilliferum.* We considered those EOs ranked C or higher to provide the PCEs for *L. papilliferum* in the quantity and spatial arrangement essential to the conservation of the species, and determined that these EOs are collectively sufficient to achieve the conservation and recovery of the species.

We did not include sites ranked D or lower in the proposed designation. D-ranked sites have 50 or fewer individuals of *Lepidium papilliferum,* and the quality of the habitat is poor. Few components of the native plant community remain, introduced plant species cover is high, and the slickspots themselves have high invasive, nonnative plant cover or have been subject to livestock disturbance. Few or several moderately severe anthropogenic disturbances are evident at such sites, and each site has been predominantly to completely burned (Colket *et al.* 2006, p. 4). Portions of these sites may have been drill-seeded (seeded using a specialized attachment on a tractor to mechanically plant seeds), which alters the slickspot soil layers. The landscape around such sites is moderately to completely fragmented by agricultural lands, residential or commercial development, introduced annual grasslands, or drill-seeding projects (Colket *et al.* 2006, p. 4). Due to the poor condition of the habitat around D-ranked sites, the low viability of the small *L. papilliferum* populations remaining at such sites, and the fragmented nature of the surrounding landscape, we determined that EOs ranked D or lower do not provide the PCEs in sufficient quantity or spatial arrangement to be essential to the conservation of the species, and are therefore not expected to make any meaningful contribution to the recovery of the species. Based on our evaluation of EOs ranked C or higher, we did not consider sites ranked D or lower to be necessary to achieve the conservation of the species. Therefore, we did not include EOs ranked D or lower in the proposed designation.

Based on this analysis, we are proposing to designate four units as critical habitat for *Lepidium papilliferum:* The Ada County Unit, the Elmore County Unit, the Owyhee County Unit, and the Payette County Unit. Two of these units are further divided into subunits; the Ada County Unit has four subunits and the Elmore County Unit has three subunits. Subunits are used for ease of mapping. There are 17 EOs within the Ada County Unit, 12 EOs within the Elmore County Unit, 11 EOs within the Owyhee County Unit, and 3 EOs within the Payette County Unit, for a total of 43 EOs, ranked B, BC, or C, included in this

designation. After applying the above criteria, we mapped the critical habitat unit boundaries for each of the four units. We created maps in a GIS using aerial imagery, 7.5 minute topographic maps, contour data, Idaho Natural Heritage Data, and Public Land Survey System data.

When determining proposed critical habitat boundaries within this proposed rule, we made every effort to avoid including developed areas such as lands covered by buildings, pavement, and other structures because such lands lack PCEs for *Lepidium papilliferum.* The scale of the maps we prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of such developed lands. Any such lands inadvertently left inside critical habitat boundaries shown on the maps of this proposed rule have been excluded by text in the proposed rule and are not proposed for designation as critical habitat. Therefore, if the critical habitat is finalized as proposed, a Federal action involving these lands would not require section 7 consultation with respect to critical habitat, nor would it trigger the requirement of no adverse modification, unless the specific action would affect the PCEs in the adjacent critical habitat.

**Proposed Critical Habitat Designation**

We are proposing four units as critical habitat for *Lepidium papilliferum.* The critical habitat areas we describe below constitute our current best assessment of areas that meet the definition of critical habitat for *L. papilliferum.* The four areas we propose as critical habitat are: (1) The Ada County Unit, (2) the Elmore County Unit, (3) the Owyhee County Unit, and (4) the Payette County Unit. All units were occupied at the time of listing and are currently occupied. The approximate areas of each proposed critical habitat unit and associated subunits, if any, are shown in Table 1.

TABLE 1—PROPOSED CRITICAL HABITAT UNITS AND AREA (HECTARES (ACRES)) BY LAND OWNERSHIP FOR *Lepidium Papilliferum*

[Area estimates reflect all land within proposed critical habitat unit boundaries]

| Unit or subunit | Federal | State | Municipal (county) | Private | Total |
|---|---|---|---|---|---|
| Unit 1—Payette County | 257 ha (635 ac) | 0 ha (0 ac) | 0 ha (0 ac) | 16 ha (40 ac) | 273 ha (675 ac) |
| Unit 2—Ada County | 4,842 ha (11,964 ac) | 1,149 ha (2,840 ac) | 340 ha (840 ac) | 667 ha (1,648 ac) | 6,998 ha (17,292 ac) |
| 2a | 644 ha (1,592 ac) | 0 ha (0 ac) | 340 ha (840 ac) | 291 ha (719 ac) | 1,275 ha (3,151 ac) |
| 2b | 2,676 ha (6,613 ac) | 98 ha (241 ac) | 0 ha (0 ac) | 32 ha (80 ac) | 2,806 ha (6,934 ac) |
| 2c | 512 ha (1,265 ac) | 98 ha (242 ac) | 0 ha (0 ac) | 311 ha (768 ac) | 921 ha (2,275 ac) |
| 2d | 1,009 ha (2,494 ac) | 954 ha (2,357 ac) | 0 ha (0 ac) | 33 ha (81 ac) | 1,996 ha (4,932 ac) |
| Unit 3—Elmore County | 3,483 ha (8,606 ac) | 97 ha (239 ac) | 0 ha (0 ac) | 418 ha (1,034 ac) | 3,998 ha (9,879 ac) |
| 3a | 696 ha (1,721 ac) | 0 ha (0 ac) | 0 ha (0 ac) | 241 ha (595 ac) | 937 ha (2,316 ac) |
| 3b | 656 ha (1,621 ac) | 97 ha (239 ac) | 0 ha (0 ac) | 49 ha (120 ac) | 801 ha (1,980 ac) |
| 3c | 2,130 ha (5,264 ac) | 0 ha (0 ac) | 0 ha (0 ac) | 129 ha (319 ac) | 2,259 ha (5,583 ac) |
| Unit 4—Owyhee County | 11,505 ha (28,428 ac) | 600 ha (1,482 ac) | 0 ha (0 ac) | 0 ha (0 ac) | 12,105 ha (29,910 ac) |
| All Units | 20,086 ha (49,633 ac) | 1,846 ha (4,561 ac) | 340 ha (840 ac) | 1,102 ha (2,722 ac) | 23,374 ha (57,756 ac) |

NOTE: Area sizes may not sum exactly due to rounding.

We present brief descriptions of all units and their constituent subunits below. Each of these units provide one or more PCEs essential to the conservation of the species. As described above under *Criteria Used To Identify Critical Habitat,* EOs included within the units were chosen using the EO area ranking system developed by the INHP, which takes into account those physical and biological features that are essential to *L. papilliferum* (*i.e.,* slickspots, habitat condition within and surrounding the area, and the conditions of the surrounding landscape features necessary to support pollination and other life-history requirements), and that we have determined may require special management considerations or protection. We are not proposing to designate any areas outside the geographical area occupied by the species at the time of listing as critical habitat.

The PCEs in each of these units may require special management considerations or protection to address threats from wildfire, invasive, nonnative plant species, and activities such as livestock trampling or development that may occur in the area. See the *Special Management Considerations or Protection* section of this proposed rule for a discussion of the threats to *L. papilliferum* habitat and potential management considerations. Further details on threats *to L. papilliferum* are provided in the final listing rule for the species, published in the **Federal Register** on October 8, 2009 (74 FR 52014).

Unless otherwise cited, information used to develop these descriptions is based on the 2010 INHP Element Occurrence Records (EOR) (INHP 2010, *in litt.*) and the Element Occurrence review and update for *Lepidium papilliferum,* which describes how each individual EO was ranked (Colket *et al.* 2006).

*Unit 1: Payette County*

The Payette County unit consists of 273 ha (675 ac). The northern boundary of Unit 1 is approximately 7.6 km (4.8 mi) south of New Plymouth, Idaho.

*Lepidium papilliferum* was known to occupy this unit at the time of listing; currently 257 ha (635 ac) are Federally managed by the BLM, and 16 ha (40 ac) are privately owned. This unit is composed of three *L. papilliferum* EOs: 66, 68, and 70. This unit contains PCEs and is important to the conservation of *L. papilliferum* because it contains the northernmost occurrences for *L. papilliferum* and potentially has the highest numbers of individual plants.

The plant community of EO 66 is composed of a fragmented *Artemisia tridentata* ssp. *wyomingensis/Vulpia octoflora* (six weeks fescue) community that has had a mosaic burn and was subsequently seeded with *Agropyron cristatum* (crested wheatgrass). This is a large occurrence, with over 6,700 *Lepidium papilliferum* individuals observed along HIP transects in 2008. Invasive, nonnative plants, wildfire, and residential development are threats to this EO. Use of ORVs and livestock are potential threats, although an exclosure protects portions of the EO from livestock and ORV use.

The second EO in Unit 1, EO 68, is primarily composed of a *Sisymbrium altissimum* (tumble mustard)/*Poa secunda* community, at times adjacent to small *Artemisia tridentata* ssp. *wyomingensis* fragments. This EO is adjacent to Interstate 84 and is located less than 500 m (1,640 ft) from commercial development. Historically, this EO has had high *Lepidium papilliferum* abundance; however, the occurrence and surrounding area is very weedy and has burned in the past. Wildfire, invasive, nonnative plants, and livestock use are threats to this occurrence.

The third EO in Unit 1 is EO 70, composed of a contiguous, unburned *Artemisia tridentata* ssp. *wyomingensis/Vulpia octoflora* community with low introduced, invasive, nonnative species cover. While a relatively intact landscape surrounds the occurrence, historical wildfire and residential development have occurred within 250 m (820.2 ft) of the EO. The immediate threat to EO 70 is wildfire. In addition, the surrounding area seems to be used as a dumping ground, with trash and garbage evident. Livestock use is also a potential threat.

*Unit 2: Ada County*

The Ada County unit consists of 6,998 ha (17,292 ac) divided into four subunits: 2a, 2b, 2c, and 2d. *Lepidium papilliferum* was known to occupy this unit at the time of listing. 4,842 ha (11,964 ac) of this unit are Federally managed by the BLM, 1,149 ha (2,840 ac) are managed by the State of Idaho, 340 ha (840 ac) are managed by Ada County, and 667 ha (1,648 ac) are on private lands. This unit is composed of 17 *L. papilliferum* EOs split among the four subunits. This unit contains PCEs important to the conservation of *L. papilliferum;* many of the subunits are large, and contain the most intact areas of sagebrush-steppe habitat that has had little impact from wildfire.

*Subunit 2a*

Subunit 2a contains the city of Eagle, Idaho, and the southern boundary of the unit is approximately 7.2 km (4.5 mi) northwest of Boise, Idaho. It is composed of six EOs: 38, 52, 65, 76, 107, and 108.

Nonnative, annual weedy species dominate the landscape within EO 38, with scattered *Purshia tridentata, Artemisia tridentata* ssp. *wyomingensis,* and *Ericameria nauseosa* (rubber rabbitbrush). This EO is almost completely contained within the Ada County Landfill Complex (Cole 2008, entire) and is located in close proximity to the Idaho Velodrome and Cycling Park and Eagle Sports Complex. In 2008, survey efforts (Cole 2008) found an additional 5,000 *L. papilliferum* plants, which resulted in a subsequent upgrade to the EO rank. Primary threats to this EO include wildfire (the western portion of this EO burned in 2009 (Ada County 2010, *in litt.*)); human recreation associated with the construction of authorized and unauthorized trails for mountain biking and hiking (some slickspots have already been impacted); and invasive, nonnative weed invasions and expansions (Cole 2008, pp. 10, 13). Livestock use occurred in the past, but ceased in the area approximately 10 years ago (T. Hutchinson, pers. comm. in Cole 2008, p. 12), and we have no evidence to suggest that livestock use is likely to pose a threat to this EO within the foreseeable future.

EO 52 is composed of a varied plant community, including scattered islands of *Purshia tridentata/Artemisia tridentata* ssp. *wyomingensis/Chrysothamnus viscidiflorus* (yellow rabbitbrush) with an understory primarily composed of *Bromus tectorum* and *Poa secunda.* It is a large EO, with thousands of plants documented. This EO is located near the Eagle/Boise urban area and receives substantial recreational use through hiking, equestrian riding, biking, and ORV use. Residential development occurs within 500 m (1,640 ft) of this subunit. EO 52 is known to be threatened by wildfire, invasive, nonnative plant species, recreation, and development.

EO 65 is composed of an *Artemisia tridentata* ssp. *wyomingensis/Purshia tridentata/Bromus tectorum/Taeniatherum caput-medusae* plant community. The Seaman's Gulch Ridge to Rivers trail system runs through and around a portion of this EO south of Seaman's Gulch road (Cole 2008, p. 9). While there is a high diversity of forbs within the EO, the area is generally weedy overall. Biological soil crust cover in the general area is fairly high. Wildfire, invasive, nonnative plant species, and unauthorized recreation trail travel are threats to EO 65.

The vegetative community of EO 76 is *Artemisia tridentata* ssp. *tridentata/Vulpia octoflora* with low cover of both native forbs and invasive, nonnative annuals. The surrounding landscape is completely disturbed from a combination of burned areas, residential development, and agricultural lands. However, this is a large occurrence, with approximately 4,800 *Lepidium papilliferum* individuals observed on the HIP transects in 2008. This EO is threatened by wildfire, invasive, nonnative plant species, livestock use, recreation, and residential and road development.

EO 107 is located on private land. The vegetative community is characterized as degraded *Artemisia tridentata* ssp. *wyomingensis* habitat with an understory of *Bromus tectorum* and *Aristida purpurea* var. *longiseta.* At the time of the survey, there were signs of recent fire in the area. This EO is threatened by wildfire and invasive, nonnative plant species.

EO 108 occurs in an *Artemisia tridentata* ssp. *tridentata/Artemisia tridentata* ssp. *wyomingensis/Chrysothamnus viscidiflorus-Ericameria nauseosus* community with a mix of native and nonnative understory species. The plant community within this EO is in various states of transition given historical disturbance regimes such as fire and use by livestock (URS 2008, p. 6). However, 2007 and 2008 survey data indicate an estimated 1,117 *Lepidium papilliferum* individuals are located within this EO. Threats to EO 108 include invasive, nonnative plant species, wildfires, livestock use, recreation (including ORV use), and residential and road development.

*Subunit 2b*

The northern boundary of Subunit 2b is approximately 4.2 km (2.6 mi) south of Kuna, Idaho. Subunit 2b is composed of three EOs: 18, 24, and 25.

EO 18 is a large occurrence composed of *Artemisia tridentata/Poa secunda, B. tectorum/Sisymbrium altissimum,* and *B. tectorum/Bassia prostrata* communities. It is located approximately 14.5 km (9 mi) (14.5 km)

south to southwest of Kuna and near the Kuna/Boise urban areas. *Bromus tectorum* is abundant throughout the area, with *P. secunda* being the most common bunchgrass. Wildfire destroyed the original sagebrush habitat throughout portions of EO 18 in the mid-1990s. Future wildfires, invasive, nonnative plant species, and recreation are the likely long-term threats facing this EO.

EO 24 is a large EO; the following vegetative communities are just a few of those found within this EO: *Artemisia tridentata* ssp. *wyomingensis*/*Bromus tectorum, B. tectorum,* and *B. tectorum*/*Agropyron spicatum.* It is located approximately 6.4 km (4 mi) south to southwest of Kuna and near the Kuna/Boise urban area. The surrounding area has been highly disturbed by wildfires and roads, with much of the land surrounding Kuna Butte being converted for agricultural use. This EO is known to be threatened by wildfire, invasive, nonnative plant species, and recreation.

The vegetative community of EO 25 is characterized as degraded *Artemisia tridentata* ssp. *wyomingensis* habitat. This EO is located near the Kuna/Boise urban area, approximately 6.4 km (4 mi) northeast of Melba. Much of the area has burned and is now predominantly comprised of *Bromus tectorum, Sisymbrium altissimum,* and *Salsola kali* with some *Poa secunda.* EO 25 is threatened by wildfire, invasive, nonnative plant species, and recreation.

*Subunit 2c*

The northern boundary of Subunit 2c is approximately 8 km (5 mi) south of Boise, Idaho. It is composed of four EOs: 22, 32, 48, and 64.

Information from previous visits describes vegetation within EO 22 as an *Artemisia tridentata* spp. *wyomingensis* community with an understory dominated by *Bromus tectorum.* It is located about 2.4 km (1.5 mi) north of Pleasant Valley. Portions of this EO have burned, with scattered slickspots degraded to varying degrees. Threats to EO 22 include wildfires and their effects on the remaining patches of sagebrush. Other threats include development of surrounding private land for suburban and commercial purposes.

The vegetative community of EO 32 is composed of an *Artemisia tridentata* ssp. *tridentata*/*Bromus tectorum* and *A. tridentata* ssp. *wyomingensis*/*Poa secunda* community with an understory dominated by invasive, nonnative annual species. Records demonstrate a fair to good number of *Lepidium papilliferum* plants over a large area. It is located approximately 5.6 km (3.5 mi) southwest of the Boise Airport. This EO is known to be threatened by wildfire, invasive, nonnative plant species, recreation (ORV use), and development. Development is also a potential threat given the proximity of this EO to private lands.

EO 48 is composed of an *Artemisia tridentata* ssp. *wyomingensis*/*Bromus tectorum*/*Elymus elymoides* plant community. There is a high cover of litter and biological soil crust in slickspots within this EO. The primary threat to EO 48 is from wildfires. Other threats include invasion and expansion of nonnative invasive plant species, livestock use, and recreational use by hunters and ORVs that utilize the adjacent powerline roadway.

*Artemisia tridentata* ssp. *wyomingensis* community with *Bromus tectorum* dominates the understory of EO 64. The EO is located from 50 to 500 m (164 to 1,640 ft) south of the Boise airport and associated development. The slickspots in this EO are in fair condition and have high cover of biological soil crust. Population vigor ranges from moderate to excellent. This EO is threatened by wildfire, invasive, nonnative plant species, and potential development associated with airport activities.

*Subunit 2d*

The northern boundary of subunit 2d is approximately 24.8 km (15.4 mi) southeast of Boise, Idaho. Subunit 2d is composed of four EOs: 27, 72, 77, and 104.

The dominant vegetation of EO 27 consists of *Artemisia tridentata* ssp. *wyomingensis*/*Poa secunda*/*Ceratocephala testiculata* and *A. tridentata* ssp. *wyomingensis*/*Bromus tectorum*/*Lepidium perfoliatum,* predominantly the former. It is located approximately 35 km (21 mi) southeast of Boise. Some parts of this EO have burned in the past, although the entire EO is relatively intact and constitutes one of the largest blocks of unburned sagebrush-steppe habitats left on the western Snake River Plain. A portion of this EO includes the Orchard Training Area (OTA), managed by the Idaho Army National Guard, and we are proposing to exempt this area from the designation of critical habitat under section 4(a)(3) of the Act (see Exemptions, below). This EO is known to be threatened by wildfire, invasive, nonnative plant species, and livestock disturbances.

Vegetative communities of EO 72 include the following: *Artemisia tridentata* ssp. *tridentata*/*Bromus tectorum, Chrysothamnus viscidiflorus*/*A. tridentata* ssp. *wyomingensis*/*Poa secunda, A. tridentata* ssp. *wyomingensis*/*P. secunda*/*B. tectorum*/*A. tridentata* ssp. *tridentata,* and *Agropyron cristatum*/*P. secunda.* This EO is located roughly 23 km (14 mi) south of Boise. Most of the EO has burned at least once in the past couple of decades resulting in a mix of small-to-fairly-large shrub patches intermixed with invasive, nonnative, annual-grassland vegetation. This EO is known to be threatened by wildfire, invasive, nonnative plant species, and livestock trampling.

The plant community of EO 77 is composed of an *Artemisia tridentata* ssp. *wyomingensis*/*Bromus tectorum*/*Poa seconda.* While the EO is unburned, the surrounding area is partially burned. *Bromus tectorum* is growing abundantly throughout the general EO. Wildfires are the primary threat to this EO because of the existing *Bromus tectorum* understory. Livestock trampling of slickspots is also a continued threat.

The primary community type of EO 104 is a *Bromus tectorum*/*Poa secunda* and *Chrysothamnus* spp./*P. secunda*/*B. tectorum.* This EO is located approximately 23 km (14 mi) south of Boise. Most of the EO has burned at least once in the past 20 years resulting in a mix of small to fairly large shrub patches and areas of annual grassland. Invasive, nonnative plants, wildfire, and livestock are threats to this EO.

*Unit 3: Elmore County*

The Elmore County unit consists of 3,998 ha (9,879 ac) divided into three subunits: 3a, 3b, and 3c. *Lepidium papilliferum* was known to occupy this unit at the time of listing. 3,483 ha (8,606 ac) of this unit are Federally managed, of which 3,418 ha (8,446 ac) are managed by BLM and 65 ha (160 ac) by the Bureau of Reclamation (BOR), 97 ha (239 ac) are managed by the State of Idaho, and 418 ha (1,034 ac) are privately owned. This unit is composed of 12 *L. papilliferum* EOs. This unit contains PCEs and is important to the conservation of *L. papilliferum* because it contains EOs with good habitat, represents a significant portion of the species' range, and contains several EOs with high numbers of *L. papilliferum* individuals.

*Subunit 3a*

The northern boundary of subunit 3a is approximately 6.8 km (4.2 mi) south of Mayfield, Idaho, while the southern boundary is approximately 19.6 km (12.2 mi) northwest of Mountain Home, Idaho. Subunit 3a is composed of three EOs: 20, 30, and 31.

EO 20 is composed of *Artemisia tridentata*/*Poa secunda*/*Bromus*

*tectorum* and introduced invasive, nonnative, annual-grassland communities. This EO is located adjacent to Interstate 84 and Old Highway 30. Residential development occurs within 250 m (820 ft) of the EO. Portions of this EO have burned in the past, and *Agropyron cristatum* drill-seeding is evident along the northeast edge of the EO. The primary threats to this EO are wildfires, invasive, nonnative weeds, and development on private lands.

The plant community of EO 30 contains a large stand of intact, mature sagebrush-steppe habitat with various size classes of *Artemisia tridentata* ssp. *wyomingensis* represented, and a grass-dominated understory. This EO is located in close proximity to Old Highway 30 and private lands. Although the EO area is unburned, the adjacent areas and surrounding landscape have been burned and are fragmented. This is a large EO with over 7,000 *Lepidium papilliferum* plants observed in 2000. It is known to be threatened by wildfire, invasive, nonnative plants, urban development, and recreation.

The plant community of EO 31 is composed of *Artemisia tridentata* spp. *wyomingensis*/*Poa secunda, A. tridentata* spp. *wyomingensis*/*B. tectorum,* and introduced grasses. It consists of a mid-size population in good-to-fair habitat condition. Part of the EO has burned, and the surrounding landscape is predominantly burned. This EO is threatened by wildfires, livestock trampling, private land development, and ORV use.

*Subunit 3b*

The boundaries of subunit 3b contain the city of Mountain Home, Idaho, while the northern boundary is approximately 63.9 km (39.7 mi) southeast of Boise, Idaho. Subunit 3b is composed of seven EOs: 2, 21, 29, 50, 51, 61, and 62.

EO 2 is composed of a large, unburned *Artemisia tridentata* ssp. *wyomingensis*/*Poa secunda* plant community with low-to-moderate cover of *Bromus tectorum, Salsola kali,* and *Lepidium perfoliatum.* It is located approximately 11 km (7 mi) west of Mountain Home. Wildfire and livestock disturbances are the major threats to this relatively intact EO.

EO 21 consists of a largely-intact stand of sagebrush-steppe habitat that consists of a community of native species including *Artemisia tridentata* ssp. *wyomingensis* and *Poa secunda,* and the introduced, nonnative plant *Ceratocephala testiculata.* It is located approximately 6 km (4 mi) west of Mountain Home and 1.6 km (1.0 mi) south of Interstate 84. There is low understory cover, but high biological crust cover. This occurrence has not been burned, although the surrounding landscape is predominantly burned. This EO is threatened by wildfire, invasive, nonnative, annual plant species, and recreation.

Although the overstory in the area of the third EO in this subunit, EO 29, is composed of *Artemisia tridentata* ssp. *wyomingensis,* the understory is now dominated by *Bromus tectorum.* This EO is located about 3 km (2 mi) southeast of Mountain Home, between Interstate 84 (about 65 m (210 ft) away) and burned, nonnative, annual-grassland habitat. There is a fairly high biological soil crust cover of approximately 30 percent in the surrounding landscape, and slickspots also tend to have a relatively high crust cover. This EO is threatened by wildfire and invasive, nonnative plant species.

EO 50 has a largely-native-species overstory, with fairly contiguous *Artemisia tridentata* ssp. *wyomingensis* cover; however, the understory is dominated by *Bromus tectorum.* It is located approximately 5.6 km (3.5 mi) southeast of Mountain Home. The EO itself is unburned, although surrounding BLM and private lands have burned in the past. Slickspots are clumped in several areas within this occurrence. The surrounding landscape is fragmented due to a combination of burned areas, residential development, and agricultural lands. This EO is threatened by invasive, nonnative plant species and wildfire. Urban encroachment is occurring on adjacent, privately-owned lands, which could lead to further fragmentation of the surrounding landscape.

The plant community of EO 51 consists of a mix of native and nonnative plant species, primarily *Artemisia tridentata* ssp. *wyomingensis* in the overstory and *Ceratocephala testiculata* and *Descurainia pinnata* (western tansymustard) in the understory. It is located roughly 5 km (3 mi) east of Mountain Home. There is a low diversity and abundance of native forbs but only trace amounts of *Bromus tectorum.* The EO and adjacent landscape have not burned. Slickspots are widespread, and good biological soil crust cover is represented in some places. Threats to this EO include wildfire and invasive, nonnative, annual plant species.

The landscape in and surrounding EO 61 is predominantly burned, resulting in a highly-fragmented mosaic of remnant *Artemisia tridentata* ssp. *wyomingensis* patches, with an understory dominated by invasive, nonnative plant species and herbaceous openings that support a mix of *Agropyron cristatum,* scattered native bunchgrasses, and *Bromus tectorum.* It is located approximately 3 km (2 mi) southeast of Reverse, Idaho. Weedy forbs are widespread and locally abundant. Much of surrounding landscape has been converted to agricultural lands. Wildfires and nonnative, invasive plant species continue to threaten this EO. Disturbance from livestock is also a threat.

The vegetation in the last EO in this subunit, EO 62, is made up of an *Artemisia tridentata* ssp. *wyomingensis*/*Ceratocephala testiculata*/*Poa secunda* community. It is located approximately 6 km (4 mi) east of Mountain Home. The EO is located on an unburned area. Where *Lepidium papilliferum* is found, slickspots are locally abundant. *Bromus tectorum* is locally common, but sparse in most places. Threats to this EO include invasive, nonnative plant species, wildfire, and livestock use.

*Subunit 3c*

The southern boundary of subunit 3c is approximately 0.6 km (1.0 mi) northeast of Hammett, Idaho, while the western boundary is 24 km (15 mi) southeast of Mountain Home, Idaho. This subunit is composed of two EOs: 8 and 26.

One of the most extensive populations of *Lepidium papilliferum* known is found in EO 8. The habitat quality ranges from poor to good. Areas mainly east of Bennett Road are represented by intact sagebrush-steppe habitat, primarily *Artemisia tridentata* ssp. *wyomingensis*/*Poa secunda* communities. West of Bennett Road is former habitat that burned; has been reseeded; and is now dominated by nonnative grasses, such as *Agropyron cristatum* and some *Bromus tectorum,* as well as weedy annual forbs. Widely scattered *A. tridentata* ssp. *wyomingensis* occurs throughout the burned area. Many *L. papilliferum* individuals have been observed in both burned and unburned areas some years. This EO is threatened by wildfire, invasive, nonnative plant species, and recreational use.

The other EO in this subunit, EO 26, is located in an area of extensive sagebrush-steppe habitat, primarily *Artemisia tridentata* ssp. *wyomingensis*/*Poa secunda* communities. It is approximately 8 km (5 mi) northwest of Glenns Ferry. This EO is made up of a relatively-large population of *Lepidium papilliferum;* since 2002, estimates have placed the population size at approximately 5,000 individuals. The habitat quality ranges from relatively-

good ecological condition with little disturbance, to disturbed areas with invasive, nonnative plant species cover. Biological soil crust cover is high in places. Residential and commercial development is located within 250 to 500 m (820 to 1,640 ft) of the occurrence. Wildfire, invasive, nonnative plants, livestock trampling, and development are threats to this EO.

*Unit 4: Owyhee County*

The Owyhee County unit consists of 12,105 ha (29,910 ac). The northern boundary of unit 4 is approximately 86.9 km (54.0 mi) south of Mountain Home, Idaho, while the eastern boundary is 51.8 km (32.2 mi) west of Rogerson, Idaho. *Lepidium papilliferum* was known to occupy this unit at the time of listing. 11,505 ha (28,428 ac) of this unit are Federally managed by the BLM, while 600 ha (1,482 ac) are managed by the State of Idaho. This unit contains PCEs and is important to the conservation of *L. papilliferum* because it contains the largest amount of contiguous habitat with little fragmentation or development. This unit is composed of eleven EOs: 74, 80, 84, 85, 92, 95, 96, 97, 98, 99, and 16.

The plant community of EO 74 is primarily made up of a degraded *Artemisia tridentata* ssp. *wyomingensis/Pseudoroegneria spicata* (bluebunch wheatgrass) community. *Poa secunda* is the dominant understory species. Overall habitat quality ranges from good to fair. Invasive, nonnative, annual plant species, wildfire, and livestock pose an ongoing threat to this EO.

Plants within EO 80 consist of *Artemisia tridentata* ssp. *wyomingensis/Pseudoroegneria spicata* and *A. tridentata* ssp. *wyomingensis/Achnatherum thurberianum* (Thurber's needlegrass) community types. The surrounding landscape has a mosaic burn. Overall habitat is in good-to-fair condition. Invasive, nonnative plants and wildfire are the primary threats, particularly because the landscape is a mix of burned and unburned areas. Livestock grazing is also a potential threat.

The plant community of EO 84 habitat is primarily an *Artemisia tridentata* ssp. *wyomingensis/Poa secunda* community. Both the EO and surrounding landscape are unburned. The population is estimated at greater than 400 *Lepidium papilliferum* individuals. While the surrounding landscape will help protect it, wildfire still poses the greatest threat to this unburned EO. Livestock use and invasive, nonnative plant species are additional threats to this EO. A two-track road also runs through the EO, which increases the likelihood of disturbance from recreation and ORV use.

An *Artemisia tridentata* ssp. *wyomingensis/Pseudoroegneria spicata* community with low *A. tridentata* ssp. *wyomingensis* cover makes up the plant community of EO 85. Although this EO was initially ranked E (due to a lack of information) a somewhat thorough survey was conducted in 2006. During the survey, six occupied slickspots were found and the rank was changed to a C. Potential threats to this EO include wildfire, invasive, nonnative plant species, and livestock trampling.

The fifth EO in this unit, EO 92 is made up of an *Artemisia tridentata* ssp. *wyomingensis/Poa secunda* community that has been seeded with *Agropyron cristatum.* It is located approximately 8 km (5 mi) southwest of Clover Butte. Although this EO is unburned, the surrounding landscape has been predominately to completely burned. This EO is threatened by wildfire, invasive, nonnative plant species, and livestock use.

Plants within EO 95 habitat consist of *Artemisia tridentata* ssp. *wyomingensis/Poa secunda* and *Agropyron cristatum/P. secunda* communities. Although the occurrence is unburned, some of the surrounding areas have burned, and portions of this area, as well as the surrounding landscape, have been seeded with *A. cristatum* and other species. Threats include wildfire, invasive, nonnative plant species, and livestock use.

EO 96 includes *Artemisia tridentata* ssp. *wyomingensis/Poa secunda* and *Agropyron cristatum/P. secunda* plant communities. The occurrence and surrounding landscape is unburned to predominately burned, and includes areas that were seeded after fire. Overall site quality has been assessed as fair to good. Threats include invasive, nonnative plant species, wildfire, and livestock trampling.

EO 97 is made up of an *Artemisia tridentata* ssp. *wyomingensis/Poa secunda* community. This occurrence is located in the vicinity of Juniper Butte. Overall condition of the occurrence has been assessed as excellent with a fair population size. The EO has not burned, and the surrounding landscape is predominately unburned. Threats to this EO include wildfire, invasive, nonnative plant species, and livestock use.

EO 98 is an *Artemisia tridentata* ssp. *wyomingensis/Poa secunda* community. It is located in the vicinity of Burnt Butte. Although the population size is small, the habitat quality of the occurrence and surrounding area has been assessed as good. The occurrence is unburned, and the adjacent areas and surrounding landscape are predominantly unburned as well. Threats to this EO include invasive, nonnative plant species, livestock use, and potentially wildfire.

EO 99 is described as an *Ericameria nauseosa/Artemisia tridentata* ssp. *wyomingensis/Poa secunda* community. This EO is located southeast of Burnt Butte. Habitat quality has been assessed as good. Both the EO and surrounding landscape are predominately unburned. This EO is threatened by wildfire, invasive, nonnative plant species, and livestock trampling.

EO 16 includes 8 sub-EOs. Because of its large size, site quality varies significantly from one area to another, ranging from healthy and unburned sagebrush-steppe, to degraded annual grasslands or *Agropyron cristatum* seedings. There are estimated to be thousands of *Lepidium papilliferum* plants across this large area. The surrounding landscape includes unburned to completely burned areas. General threats to the population include wildfire, invasive, nonnative plant species, and livestock use.

**Effects of Critical Habitat Designation**

*Section 7 Consultation*

Section 7(a)(2) of the Act requires Federal agencies, including the Service, to ensure that actions they fund, authorize, or carry out are not likely to destroy or adversely modify critical habitat. Decisions by the Fifth and Ninth Circuits Courts of Appeals have invalidated our regulatory definition of "destruction or adverse modification" (50 CFR 402.02) (see *Gifford Pinchot Task Force* v. *U.S. Fish and Wildlife Service,* 378 F. 3d 1059 (9th Cir 2004) and *Sierra Club* v. *U.S. Fish and Wildlife Service et al.,* 245 F.3d 434, 442F (5th Cir 2001)), and we do not rely on this regulatory definition when analyzing whether an action is likely to destroy or adversely modify critical habitat. Under the statutory provisions of the Act, the key factor in determining whether an action will destroy or adversely modify critical habitat is whether, with implementation of the proposed Federal action, the affected critical habitat would remain functional (or retain those PCEs that relate to the ability of the area to support the species) to serve its intended conservation role for the species.

If a species is listed or critical habitat is designated, section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of the species or to destroy or adversely modify its critical

habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us. As a result of this consultation, we document compliance with the requirement of section 7(a)(2) through our issuance of:

(1) A concurrence letter for Federal actions that may affect, but are not likely to adversely affect, listed species or critical habitat; or

(2) A biological opinion for Federal actions that may affect, and are likely to adversely affect, listed species or critical habitat.

When we issue a biological opinion concluding that a project is likely to jeopardize the continued existence of a listed species or destroy or adversely modify critical habitat, we provide reasonable and prudent alternatives to the project, if any are identifiable. We define "Reasonable and prudent alternatives" at 50 CFR 402.02 as alternative actions identified during consultation that:

- Can be implemented in a manner consistent with the intended purpose of the action,
- Can be implemented consistent with the scope of the Federal agency's legal authority and jurisdiction,
- Are economically and technologically feasible, and
- Would, in the Director's opinion, avoid jeopardizing the continued existence of the listed species or destroying or adversely modifying critical habitat.

Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Regulations at 50 CFR 402.16 require Federal agencies to reinitiate consultation on previously reviewed actions in instances where we have listed a new species or subsequently designated critical habitat that may be affected and the Federal agency has retained discretionary involvement or control over the action (or the agencies discretionary involvement or control is authorized by law). Consequently Federal agencies may need to request reinitiation of consultation with us on actions for which formal consultation has been completed, if those actions with discretionary involvement or control may affect subsequently listed species or designated critical habitat.

Federal activities that may affect *Lepidium papilliferum* or its designated critical habitat require section 7 consultation under the Act. Activities on State, Tribal, local, or private lands requiring a Federal permit (such as a permit from the U.S. Army Corps of Engineers under section 404 of the Clean Water Act (33 U.S.C. 1251 *et seq.*) or a permit from us under section 10 of the Act) or involving some other Federal action (such as funding from the Federal Highway Administration, Federal Aviation Administration, or the Federal Emergency Management Agency) are subject to the section 7 consultation process. Federal actions not affecting listed species or critical habitat, and actions on State, Tribal, local, or private lands that are not Federally funded, authorized, or permitted, do not require section 7 consultations.

## Application of the Jeopardy and Adverse Modification Standards

### *Jeopardy Standard*

Currently, the Service applies an analytical framework for *Lepidium papilliferum* jeopardy analyses that relies heavily on the importance of habitat parameters at known population sites essential to the species' survival and recovery. The Service focuses its section 7(a)(2) analysis not only on these populations but also on the habitat conditions necessary to support them.

The jeopardy analysis usually expresses the survival and recovery needs of *Lepidium papilliferum* in a qualitative fashion without making distinctions between what is necessary for survival and what is necessary for recovery. Generally, the jeopardy analysis focuses on the rangewide status of *L. papilliferum,* the factors responsible for that condition, and what is necessary for the species to survive and recover. An emphasis is also placed on characterizing the conditions of *L. papilliferum* and its habitat in the area affected by the proposed Federal action and the role of affected populations in the survival and recovery of *L. papilliferum.* That context is then used to determine the significance of the adverse and beneficial effects of the proposed Federal action and any cumulative effects for purposes of making the jeopardy determination.

### *Application of the "Adverse Modification" Standard*

The key factor related to the adverse modification determination is whether, with implementation of the proposed Federal action, the affected critical habitat would continue to serve its intended conservation role for the species. Generally, the conservation role of *Lepidium papilliferum* critical habitat units is to support the various life-history needs and provide for the conservation of the species. Activities that may destroy or adversely modify critical habitat are those that alter the PCEs to an extent that appreciably reduces the conservation value of the critical habitat as a whole for *L. papilliferum.*

Section 4(b)(8) of the Act requires us to briefly evaluate and describe in any proposed or final regulation that designates critical habitat, activities involving a Federal action that may destroy or adversely modify such habitat, or that may be affected by such designation.

Activities that, when carried out, funded, or authorized by a Federal agency, may affect critical habitat and therefore result in consultation for *Lepidium papilliferum* include, but are not limited to:

(1) Actions that would result in the loss of, or ground disturbance to, slickspot microsites. Such activities could include, but are not limited to: Residential or recreational development and associated infrastructure, ORV activity, dispersed recreation, new road construction or widening, existing road maintenance, new or expansion of existing energy projects, existing energy corridor maintenance, wildfire suppression and post-wildfire rehabilitation activities, military training activities, and incompatible livestock use practices (such as grazing during periods of saturated soil conditions, when slickspots are wet and trampling is most likely to disrupt the underlying clay layer). These activities could cause direct loss of *Lepidium papilliferum*-occupied areas, and affect slickspot microsites by damaging or eliminating habitat, altering soil composition due to increased erosion, and increasing densities of nonnative plant species. Ground disturbance may also result in deep burial of *L. papilliferum* seeds such that germinants can not successfully reach the soil surface to flower and set seed.

In addition, changes in soil composition may lead to changes in the vegetation composition, such as an increase in invasive, nonnative plant cover within and adjacent to slickspot microsites, resulting in decreased density or vigor of individual *Lepidium papilliferum* plants. These activities may also lead to changes in water flows and inundation periods that would degrade, reduce, or eliminate the habitat necessary for the growth and reproduction of *L. papilliferum.*

(2) Actions that would result in the significant alteration of intact, native, sagebrush-steppe habitat within the range of *Lepidium papilliferum.* Such activities could include: Residential or recreational development and

associated infrastructure, ORV activity, dispersed recreation, new road construction or widening, existing road maintenance, new energy projects or expansion of existing energy projects, existing energy corridor maintenance, fuels management projects such as prescribed burning, and post-wildfire rehabilitation activities using plant species that may compete with *L. papilliferum* or not adequately address habitat requirements for insect pollinators. These activities could result in the replacement or fragmentation of sagebrush-steppe habitat through the degradation or loss of native shrubs, grasses, and forbs in a manner that promotes increased wildfire frequency and intensity, and an increase of cover of invasive, nonnative plant species that would compete for soil matrix components and moisture necessary to support the growth and reproduction of *L. papilliferum.*

(3) Actions that would significantly reduce pollination or seed set (reproduction). Such activities could include, but are not limited to: Residential or recreational development and associated infrastructure, use of pesticides, inappropriately-managed livestock use, mowing, fuels-management projects such as prescribed burning, and post-wildfire rehabilitation activities using plant species that may compete with *Lepidium papilliferum.* These activities could prevent reproduction by removal or destruction of reproductive plant parts and could impact the habitat needs of generalist insect pollinators through habitat degradation and fragmentation, reducing the availability of insect pollinators for *L. papilliferum* reproduction.

We consider all of the units proposed as critical habitat to contain the physical and biological features essential to the conservation of *Lepidium papilliferum.* All units are within the historical geographic range of the species and are currently occupied by *L. papilliferum.* To ensure that their actions do not jeopardize the continued existence of *L. papilliferum,* Federal agencies already consult with us on activities in areas currently occupied by the plant species, or in unoccupied areas if the species may be affected by the action.

**Exemptions**

*Application of Section 4(a)(3)(B)(i) of the Act*

The Sikes Act Improvement Act of 1997 (Sikes Act) (16 U.S.C. 670a) required each military installation that includes land and water suitable for the conservation and management of natural resources to complete an integrated natural resources management plan (INRMP) by November 17, 2001. An INRMP integrates implementation of the military mission of the installation with stewardship of the natural resources found on the base. Each INRMP includes:

- An assessment of the ecological needs on the installation, including the need to provide for the conservation of listed species;
- A statement of goals and priorities;
- A detailed description of management actions to be implemented to provide for these ecological needs; and
- A monitoring and adaptive management plan.

Among other things, each INRMP must, to the extent appropriate and applicable, provide for fish and wildlife management; fish and wildlife habitat enhancement or modification; wetland protection, enhancement, and restoration where necessary to support fish and wildlife; and enforcement of applicable natural resource laws.

The National Defense Authorization Act for Fiscal Year 2004 (Pub. L. 108–136, 117 Stat. 1392) amended the Act to limit areas eligible for designation as critical habitat. Specifically, section 4(a)(3)(B)(i) of the Act (16 U.S.C. 1533(a)(3)(B)(i)) now provides: "The Secretary shall not designate as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense (DOD), or designated for its use, that are subject to an integrated natural resources management plan prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation."

We consult with the military on the development and implementation of INRMPs for installations with listed species. We analyzed INRMPs developed by military installations located within the range of the proposed critical habitat designation for *Lepidium papilliferum* to determine if they are exempt under section 4(a)(3)(B)(i) of the Act.

*Approved INRMPs*

Military activities within the range of *Lepidium papilliferum* include ordnance-impact areas, training activities, and military development. Military-training activities occur at, or near, four EOs: Three at the OTA on the Snake River Plain, and a portion of one EO at the Juniper Butte Range on the Owyhee Plateau. INRMPs have been developed and implemented for both the Juniper Butte Range and the OTA. The INRMPs provide management direction and conservation measures to address or eliminate the effects from military-training exercises on *L. papilliferum* and its habitat. Both the Idaho Army National Guard (Quinney 2008; ICDC 2008, p. 21) and the U.S. Air Force (CH2MHill 2008a, pp. 1, 17) conduct annual monitoring to ensure impacts to the species due to training activities are either avoided or minimized.

*Idaho Army National Guard—Gowen Field/Orchard Training Area*

The Idaho Army National Guard's Gowen Field/Orchard Training Area (OTA) on the Snake River Plain has an INRMP in place that provides a conservation benefit for *Lepidium papilliferum.* This INRMP has been in place for this military training facility since 1997. The OTA contains 7,213 ac (2,919 ha) of occupied *L. papilliferum* habitat, 7,163 ac (2,899 ha) of which represents nearly 60 percent of the highest quality occupied *L. papilliferum* habitat in the Snake River Plain region. The continuing high quality of this habitat suggests the conservation measures are effective in maintaining generally–intact, native-plant vegetation and limiting anthropogenic disturbances on the OTA (Sullivan and Nations 2009, p. 91).

The INRMP for the OTA provides a framework for managing natural resources. Conservation measures included in the INRMP avoid or minimize impacts on *Lepidium papilliferum,* slickspot microsites, and sagebrush-steppe habitat while allowing for the continued implementation of the Idaho Army National Guard's mission. These measures include management actions such as restricting off-road motorized vehicle use, intensive wildfire suppression efforts, and the restriction of ground-operated military training to areas where the plants are not found. For example, the INRMP includes objectives for maintaining and improving *L. papilliferum* habitat and restoring areas damaged by wildfire. The plan specifies that the OTA will use native species and broadcast seeding, collecting, and planting small amounts of native seed not commercially available, and will monitor the success of seeding efforts (IDARNG 2004, pp. 72–73). Since 1991, the OTA, using historical records, has restored several areas using native seed and vegetation that was present prior to past wildfires. The Idaho Army National Guard continues to use restoration methods that avoid or minimize impacts to *L.*

*papilliferum* or its habitat, with an emphasis on maintaining representation of species that were present in presettlement times (IDARNG 2004, p. 73). Since 1987, the Idaho Army National Guard has demonstrated that efforts to suppress wildfire and the use of native species with minimal ground-disturbing activities are effective in reducing the wildfire threat, as well as in reducing rates of spread of nonnative, invasive species associated with wildfire management activities (IDARNG 2004, p. 73). In 2008, the Idaho Army National Guard also initiated maintenance on a series of identified fuel breaks on the OTA. These fuel breaks are designed to act as barriers to prevent fires that might be ignited by military training activities from spreading into adjacent *L. papilliferum* habitat (U.S. BLM 2008a, p. 20).

Based on the above considerations, and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that the identified lands are subject to the Idaho Army National Guard's OTA INRMP and that conservation efforts identified in the INRMP are being actively implemented, are effective, and will provide a benefit to *Lepidium papilliferum* occurring in habitats within or adjacent to the OTA. Therefore, lands within this installation are exempt from critical habitat designation under section 4(a)(3)(B)(i) of the Act. We are not including approximately 4,664 ha (11,525 ac) of habitat in this proposed critical habitat designation because of this exemption. The acreage exempted appears to be greater than the occupied habitat because the occupied habitat is based purely on EO acreage, and does not include the surrounding sagebrush-steppe habitat that would be included in critical habitat to provide for sufficient pollinator populations and protection of the *L. papilliferum* populations from other impacts, such as fire or recreational use.

*Mountain Home Air Force Base—Juniper Butte Range*

The U.S. Air Force, Mountain Home Air Force Base, which includes the Juniper Butte Range in the Owyhee Plateau region, has an INRMP that has been in place for this military training facility since 2004. The U.S. Air Force manages 810 ha (2,030 ac) of occupied *Lepidium papilliferum* habitat within the Juniper Butte Range. Conservation measures and implementation actions for *L. papilliferum* include reseeding disturbed areas with native vegetation, eradicating noxious weeds prior to their spreading, cleaning vehicles and equipment to remove nonnative invasive plants, avoiding pesticide use within 8 m (25 ft) of slickspots, and delaying livestock turnout onto the range if slickspot microsites are saturated. The INRMP contains specific measures developed to minimize the impacts from military training at the local level, or general measures designed to improve the ecological condition of native, sagebrush-steppe vegetation at a landscape scale, inclusive of areas supporting *L. papilliferum,* while allowing for the continued implementation of the Air Force mission. For example, the U.S. Air Force has a number of ongoing efforts to address wildfire prevention and suppression on the entire 4,611 ha (11,393 ac) Juniper Butte Range. Prevention measures that are implemented on the Juniper Butte Range include reducing standing fuels and weeds, planting fire-resistant vegetation in areas with a higher potential for ignition sources, such as along roads, and using wildfire indices to determine when to restrict military activities when the wildfire hazard rating is extreme (U.S. Air Force 2004, pp. 6–55). As a result of implementing these measures, the threat from wildfire to *Lepidium papilliferum* associated with U.S. Air Force training activities is expected to be effective in reducing fires within the Juniper Butte Range.

For both specific and general conservation measures, improvements to habitat condition since the implementation of the 2004 INRMP measures 6 years ago have been difficult to detect with available monitoring data. *Lepidium papilliferum* is an annual or biennial plant that responds to spring precipitation and has seeds that remain viable for up to 12 years in the seed bank. Thus, detecting the effectiveness of specific conservation measures using the 7 years of available U.S. Air Force monitoring data is difficult, as this is too limited a time series to be able to detect any changes for a species with such great inter-annual variability and seeds that may still be viable yet lie dormant in the seed bank. We expect that decades will be necessary to determine the effectiveness of general conservation measures designed to improve native, sagebrush-steppe ecological condition, although ongoing research may provide information and techniques to accelerate these types of recovery efforts.

Based on the above considerations, and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that the identified lands are subject to the U.S. Air Force INRMP for the Juniper Butte Range (Mountain Home Air Force Base) and that conservation efforts identified in the INRMP are being implemented, are likely effective, and will provide a conservation benefit to *Lepidium papilliferum* occurring in habitats within or adjacent to the Juniper Butte Range. Therefore, lands within this installation are exempt from critical habitat designation under section 4(a)(3)(B)(i) of the Act. We are not including 4,611 ha (11,393 ac) of habitat in this proposed critical habitat designation because of this exemption.

Table 2 below provides approximate areas of lands that meet the definition of critical habitat but are exempt from designation under section 4(a)(3)(B)(i) of the Act.

TABLE 2—EXEMPTIONS BY CRITICAL HABITAT UNIT

| Unit | Specific area | Basis for exclusion/ exemption | Areas meeting the definition of critical habitat in hectares (acres) | Areas exempted in hectares (acres) |
|---|---|---|---|---|
| 2 | IDARNG—OTA | 4(a)(3)(B)(i) | 4,664 ha (11,525 ac) | 4,664 ha (11,525 ac) |
| 4 | MHAFB—JBR | 4(a)(3)(B)(i) | 4,611 ha (11,393 ac) | 4,611 ha (11,393 ac) |

**Exclusions**

*Application of Section 4(b)(2) of the Act*

Section 4(b)(2) of the Act states that the Secretary must designate and revise critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. The Secretary may exclude an area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, based on the best scientific data available, that the failure to

designate such area as critical habitat will result in the extinction of the species. In making that determination, the legislative history is clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor.

Under section 4(b)(2) of the Act, we consider all relevant impacts, including economic impacts. In compliance with section 4(b)(2) of the Act, we are preparing an analysis of the economic impacts of this proposed designation of critical habitat. We will announce the availability of the draft economic analysis as soon as it is completed, at which time we will seek public review and comment. At that time, copies of the draft economic analysis will be available for downloading from the Internet at *http://www.regulations.gov,* or from the Idaho Fish and Wildlife Office directly (see **FOR FURTHER INFORMATION CONTACT**). During the development of the final designation, we will consider economic impacts, public comments, and other new information. Certain areas may be excluded from the final critical habitat designation under section 4(b)(2) of the Act and or implementing regulations at 50 CFR 424.19.

At this time, we are not proposing any specific exclusions of areas from critical habitat under section 4(b)(2) of the Act for *Lepidium papilliferum.* However, we are considering applying section 4(b)(2) to currently occupied private lands, which represent less than 5 percent of the proposed designation. During the comment period for the proposed designation of critical habitat, we will consider any available information about areas covered by conservation or management plans that we should consider for exclusion from the designation under section 4(b)(2) of the Act, including whether the benefits of exclusion would outweigh the benefits of their inclusion and whether exclusion would or would not result in the extinction of the species. We consider whether landowners have developed any conservation plans for the area, as well as any social or other impacts that might occur because of the designation. For example, we consider whether there are conservation partnerships that would be encouraged or discouraged by designation of, or exclusion from, critical habitat in an area. Many non-Federal landowners derive satisfaction in contributing to endangered species recovery. However, private landowners are often wary of the possible consequences of encouraging endangered species conservation on their property, and of regulatory action by the Federal Government under the Act. Social research has demonstrated that for many private landowners, government regulation under the Act is perceived as a loss of individual freedoms, regardless of whether that regulation may in fact result in any actual impact to the landowner (Brook *et al.* 2003, pp. 1644–1648; Conley *et al.* 2007, p. 141). The magnitude of this negative outcome is greatly amplified in situations where active management measures (such as reintroduction, fire management, and the control of invasive species) are necessary for species conservation (Bean 2002, pp. 3–4). Furthermore, in a recent study of private landowners who have experience with regulation under the Act, only 2 percent of respondents believed the Federal Government rewards private landowners for good management of their lands and resources (Conley *et al.* 2007, pp. 141, 144). Therefore, we will carefully weigh the potential benefits of any designation on private lands.

We consider the benefits of including private lands as designated critical habitat in this case to be minimal since monitoring has been limited, data is generally lacking on the overall status of *Lepidium papilliferum* on privately-owned lands, and any activities that would trigger the benefits of consultation on critical habitat under a Federal nexus are highly unlikely. Additionally, most of the current and ongoing interagency conservation efforts are focused on management of State, county, and Federal lands, where approximately 95 percent of the occupied habitat occurs. As discussed previously, Federal activities that may affect *L. papilliferum* or its designated critical habitat require section 7 consultation under the Act; this also includes activities on State, Tribal, local, or private lands requiring a Federal permit. We believe that in some cases designation can negatively affect the potential working relationships and conservation partnerships formed with private landowners to provide conservation benefits. As described above, private landowners are often wary of the possible consequences of encouraging endangered species conservation on their property, and of regulatory action by the Federal Government under the Act. Therefore, we believe it is possible that the benefit of excluding areas on private lands may outweigh the benefits of including those areas in critical habitat. The Secretary can exclude lands when there is no benefit of inclusion or if that benefit is negligible, and if the designation may actually harm the species (*i.e.,* there are benefits to the species from exclusion). We are specifically asking for public comment on the benefits of exclusion versus inclusion of private lands in the designation of critical habitat, and will determine whether any such lands may merit exclusion from the designation under section 4(b)(2) of the Act. Furthermore, we will evaluate all comments provided during the public comment period of this proposed rule on whether the benefits of excluding any particular area from critical habitat outweigh the benefits of including that area in critical habitat under section 4(b)(2) of the Act.

We have determined that there are currently no habitat conservation plans (HCPs) in the proposed critical habitat area, and the proposed designation does not include any Tribal lands or trust resources. We anticipate no impact to Tribal lands, partnerships, or HCPs from this proposed critical habitat designation.

**Peer Review**

In accordance with our joint policy published in the **Federal Register** on July 1, 1994 (59 FR 34270), we will seek the expert opinions of at least three appropriate and independent specialists regarding this proposed rule. The purpose of peer review is to ensure that our critical habitat designation is based on scientifically sound data, assumptions, and analyses. We will send peer reviewers copies of this proposed rule immediately following publication in the **Federal Register**. We will invite these peer reviewers to comment, during the public comment period, on the specific assumptions and conclusions regarding the proposed designation of critical habitat.

We will consider all comments and information received during the 60-day comment period on this proposed rule as we prepare our final rulemaking. Accordingly, the final decision may differ from this proposal.

**Public Hearings**

The Act provides for one or more public hearings on this proposal, if requested. Requests must be received within 45 days after the date of publication of this proposed rule in the **Federal Register**. Such requests must be made in writing and be addressed to the State Supervisor (see **FOR FURTHER INFORMATION CONTACT** section). We will schedule public hearings on this proposal, if any are requested, and announce the dates, times, and places of those hearings in the **Federal Register** and local newspapers at least 15 days prior to the first hearing.

**Required Determinations**

*Regulatory Planning and Review—Executive Order 12866*

The Office of Management and Budget (OMB) has determined that this rule is not significant under Executive Order 12866 (E.O. 12866). OMB bases its determination upon the following four criteria:

(a) Whether the rule will have an annual effect of $100 million or more on the economy or adversely affect an economic sector, productivity, jobs, the environment, or other units of the government.

(b) Whether the rule will create inconsistencies with other Federal agencies' actions.

(c) Whether the rule will materially affect entitlements, grants, user fees, loan programs, or the rights and obligations of their recipients.

(d) Whether the rule raises novel legal or policy issues.

*Regulatory Flexibility Act*

Under the Regulatory Flexibility Act (RFA); 5 U.S.C. 601 *et seq.,* as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996, whenever an agency must publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of the agency certifies the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended RFA to require Federal agencies to provide a certification statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities.

At this time, we lack the specific information necessary to provide an adequate factual basis for the required RFA finding. On the basis of the development of our proposal, we have identified certain sectors and activities that may potentially be affected by a designation of critical habitat for *L. papilliferum.* These sectors include ranching, recreation, residential and commercial development, as well as the associated infrastructure such as roads, storm water drainage, bridge and culvert maintenance, transmission lines and right of ways, natural gas transmission lines, and water lines. We recognize not all of these sectors qualify as small business entities. However, recognizing these sectors and activities may be affected by this designation, we are collecting information and initiating an analysis to determine (1) which of these sectors or activities are, or involve, small business entities; and (2) to what extent the effects are related to *L. papilliferum* being listed as threatened under the Act (baseline effects), or whether the effects are attributable to the designation of critical habitat (incremental effects). We believe the potential incremental effects resulting from a designation will be small. We are requesting any specific economic information related to small business entities that may be affected by this designation and how the designation may impact their business. Therefore, we defer the initial RFA finding until completion of a draft economic analysis prepared under section 4(b)(2) of the Act and E.O. 12866.

The draft economic analysis will provide the required factual basis for the RFA finding. Upon completion of the draft economic analysis, we will announce its availability in the **Federal Register** and reopen the public comment period for the proposed designation. We will include with this announcement, as appropriate, an initial regulatory flexibility analysis or a certification that the rule will not have a significant economic impact on a substantial number of small entities accompanied by the factual basis for that determination. We have concluded that deferring the RFA finding until completion of the draft economic analysis is necessary to meet the purposes and requirements of the RFA. Deferring the RFA finding in this manner will ensure that we make a sufficiently-informed determination based on adequate economic information and provide the necessary opportunity for public comment.

*Unfunded Mandates Reform Act*

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 *et seq.*), we make the following findings:

(a) This rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, or Tribal governments, or the private sector, and includes both "Federal intergovernmental mandates" and "Federal private sector mandates." These terms are defined in 2 U.S.C. 658(5)–(7). "Federal intergovernmental mandate" includes a regulation that "would impose an enforceable duty upon State, local, or Tribal governments" with two exceptions. It excludes "a condition of Federal assistance." It also excludes "a duty arising from participation in a voluntary Federal program," unless the regulation "relates to a then-existing Federal program under which $500,000,000 or more is provided annually to State, local, and Tribal governments under entitlement authority," if the provision would "increase the stringency of conditions of assistance" or "place caps upon, or otherwise decrease, the Federal Government's responsibility to provide funding," and the State, local, or Tribal governments "lack authority" to adjust accordingly. At the time of enactment, these entitlement programs were: Medicaid; Aid to Families with Dependent Children work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement. "Federal private sector mandate" includes a regulation that "would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance or (ii) a duty arising from participation in a voluntary Federal program."

The designation of critical habitat does not impose a legally-binding duty on non-Federal-Government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply, nor would critical habitat shift the costs of the large entitlement programs listed above onto State governments.

(b) We do not believe this rule will significantly or uniquely affect small governments. The lands being proposed for critical habitat for *Lepidium papilliferum* are primarily Federal BLM lands, with a small area of Federal BOR lands and some lesser areas owned by the County or State of Idaho. Therefore, a Small Government Agency Plan is not required. However, we will further evaluate this issue as we conduct our economic analysis, and review and revise this assessment if appropriate.

*Takings*

In accordance with E.O. 12630 (Government Actions and Interference with Constitutionally Protected Private Property Rights), we have analyzed the potential takings implications of designating critical habitat for *Lepidium papilliferum* in a takings implications assessment. The takings implications assessment concludes this proposed designation of critical habitat for *Lepidium papilliferum* would not pose significant takings implications for lands within or affected by the designation.

*Federalism*

In accordance with E.O. 13132 (Federalism), this proposed rule does not have significant Federalism effects. A Federalism assessment is not required. In keeping with Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of, this proposed critical habitat designation with appropriate State resource agencies in Idaho. If adopted, the designation may have some benefit to these governments because the areas that contain the features essential to the conservation of the species are more clearly defined, and the physical and biological features of the habitat necessary to the conservation of the species are specifically identified. This information does not alter where and what Federally-sponsored activities may occur. However, it may assist local governments in long-range planning (rather than having them wait for case-by-case section 7 consultations to occur).

Where State and local governments require approval or authorization from a Federal agency for actions that may affect critical habitat, consultation under section 7(a)(2) would be required. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency.

*Civil Justice Reform*

In accordance with E.O. 12988 (Civil Justice Reform), the Office of the Solicitor has determined this proposed rule does not unduly burden the judicial system and that it meets the requirements of sections 3(a) and 3(b)(2) of the Order. We have proposed designating critical habitat in accordance with the provisions of the Act. This proposed rule uses standard property descriptions and identifies the physical and biological features within the designated areas to assist the public in understanding the habitat needs of *Lepidium papilliferum.*

*Paperwork Reduction Act of 1995*

This rule does not contain any new collections of information that require approval by OMB under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*). This rule will not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations. 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 OMB control number.

*National Environmental Policy Act (NEPA)*

It is our position that, outside the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit, we do not need to prepare environmental analyses as defined by NEPA (42 U.S.C. 4321 *et seq.*) in connection with designating critical habitat under the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This position was upheld by the U.S. Court of Appeals for the Ninth Circuit (*Douglas County* v. *Babbitt,* 48 F.3d 1495 (9th Cir. 1995), *cert. denied,* 516 U.S. 1042 (1996)).

*Clarity of the Rule*

We are required by Executive Orders 12866 and 12988 and by the Presidential Memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

(a) Be logically organized;

(b) Use the active voice to address readers directly;

(c) Use clear language rather than jargon;

(d) Be divided into short sections and sentences; and

(e) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in the **ADDRESSES** section. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the numbers of the sections or paragraphs that are unclearly written, which sections or sentences are too long, the sections where you feel lists or tables would be useful, *etc.*

*Government-to-Government Relationship With Tribes*

In accordance with the President's memorandum of April 29, 1994, Government-to-Government Relations with Native American Tribal Governments (59 FR 22951), E.O. 13175, the Department of the Interior's manual at 512 DM 2, and the Native American Policy of the U.S Fish and Wildlife Service, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 "American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act," we readily acknowledge our responsibilities to work directly with Tribes in developing programs for healthy ecosystems, to acknowledge that Tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to Tribes.

We have determined there are no Tribal lands occupied at the time of listing that contain the features essential for the conservation, and no Tribal lands that are essential for the conservation, of *Lepidium papilliferum.* Therefore, we have not proposed designation of critical habitat for *L. papilliferum* on Tribal lands.

*Energy Supply, Distribution, or Use*

On May 18, 2001, the President issued Executive Order 13211—Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use—governing regulations that significantly affect energy supply, distribution, and use. E.O. 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. Based on analysis of areas included in this proposal, we have determined that this proposed rule to designate critical habitat for *Lepidium papilliferum* is not expected to significantly affect energy supplies, distribution, or use. Therefore, this action is not a significant energy action, and a Statement of Energy Effects is not required. However, we will further evaluate this issue as we conduct our economic analysis, and review and revise this assessment as warranted.

**References Cited**

A complete list of references cited is available on the Internet at *http://www.regulations.gov* and upon request from the Idaho Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

## Authors

The primary authors of this package are the staff members of the Idaho Fish and Wildlife Office.

## List of Subjects in 50 CFR Part 17

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

## Proposed Regulation Promulgation

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

## PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

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

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

2. In § 17.12(h), revise the entry for "*Lepidium papilliferum*" under "FLOWERING PLANTS" in the List of Endangered and Threatened Plants to read as follows:

### § 17.12 Endangered and threatened plants

* * * * *

(h) * * *

| Species | | Historic range | Family | Status | When listed | Critical habitat | Special rules |
|---|---|---|---|---|---|---|---|
| Scientific name | Common name | | | | | | |
| **Flowering Plants** | | | | | | | |
| * | * | * | * | * | * | | * |
| *Lepidium papilliferum* | slickspot peppergrass. | U.S.A. (ID) | Brassicaceae | T | 765 | 17.96(a) | NA |
| * | * | * | * | * | * | | * |

3. In § 17.96, amend paragraph (a) by adding an entry for "*Lepidium papilliferum (slickspot peppergrass*)" in alphabetical order under Family Brassicaceae to read as follows:

### § 17.96 Critical habitat—plants.

(a) *Flowering plants.*

* * * * *

**Family Brassicaceae:** *Lepidium papilliferum* **(slickspot peppergrass)**

(1) Critical habitat units are depicted for Payette, Ada, Elmore, and Owyhee Counties, Idaho, on the maps below.

(2) The physical and biological features of critical habitat for the *Lepidium papilliferum* are:

(i) Ecologically-functional microsites or "slickspots" that are characterized by:

(A) A high sodium and clay content, and a three-layer soil horizonation sequence, which allows for successful seed germination, seedling growth, and maintenance of the seed bank. The surface horizon consists of a thin, silty vesicular, pored (small cavity) layer that forms a physical crust (the silt layer). The subsoil horizon is a restrictive clay layer with an abruptic (referring to an abrupt change in texture) boundary with the surface layer, that is natric or natric-like in properties (a type of argillic (clay-based) horizon with distinct structural and chemical features) (the restrictive layer). The second argillic subsoil layer (that is less distinct than the upper argillic horizon) retains moisture through part of the year (the moist clay layer); and

(B) Sparse vegetation with low to moderate introduced, invasive, nonnative plant species cover.

(ii) Relatively-intact, native *Artemisia tridentata* ssp. *wyomingensis* (Wyoming big sagebrush) vegetation assemblages, represented by native bunchgrasses, shrubs, and forbs, within 250 m (820 ft) of *Lepidium papilliferum* element occurrences to protect slickspots and *Lepidium papilliferum* from disturbance from wildfire, slow the invasion of slickspots by nonnative species and native harvester ants, and provide the habitats needed by *L. papilliferum's* pollinators.

(iii) A diversity of native plants whose blooming times overlap to provide pollinator species with flowers for foraging throughout the seasons and to provide nesting and egg-laying sites; appropriate nesting materials; and sheltered, undisturbed places for hibernation and overwintering of pollinator species. In order for genetic exchange of *Lepidium papilliferum* to occur, pollinators must be able to move freely between slickspots. Alternative pollen and nectar sources (other plant species within the surrounding sagebrush vegetation) are needed to support pollinators during times when *Lepidium papilliferum* is not flowering, when distances between slickspots are large, and in years when *L. papilliferum* is not a prolific flowerer.

(iv) Sufficient pollinators for successful fruit and seed production, particularly pollinator species of the sphecid and vespid wasp families, species of the bombyliid and tachnid fly families, honeybees, and halictid bee species, most of which are solitary insects that nest outside of slickspots in the surrounding sagebrush-steppe vegetation, both in the ground and within the vegetation.

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, runways, roads, and other paved areas) and the land on which they are located existing within the legal boundaries on the effective date of this rule.

(4) *Critical habitat map units.* Data layers defining map units were created using a quarter-quarter section shapefile, based on the Public Land Survey System, in a Geographic Information System.

(5) Index map of critical habitat units for *Lepidium papilliferum* (slickspot peppergrass) follows:

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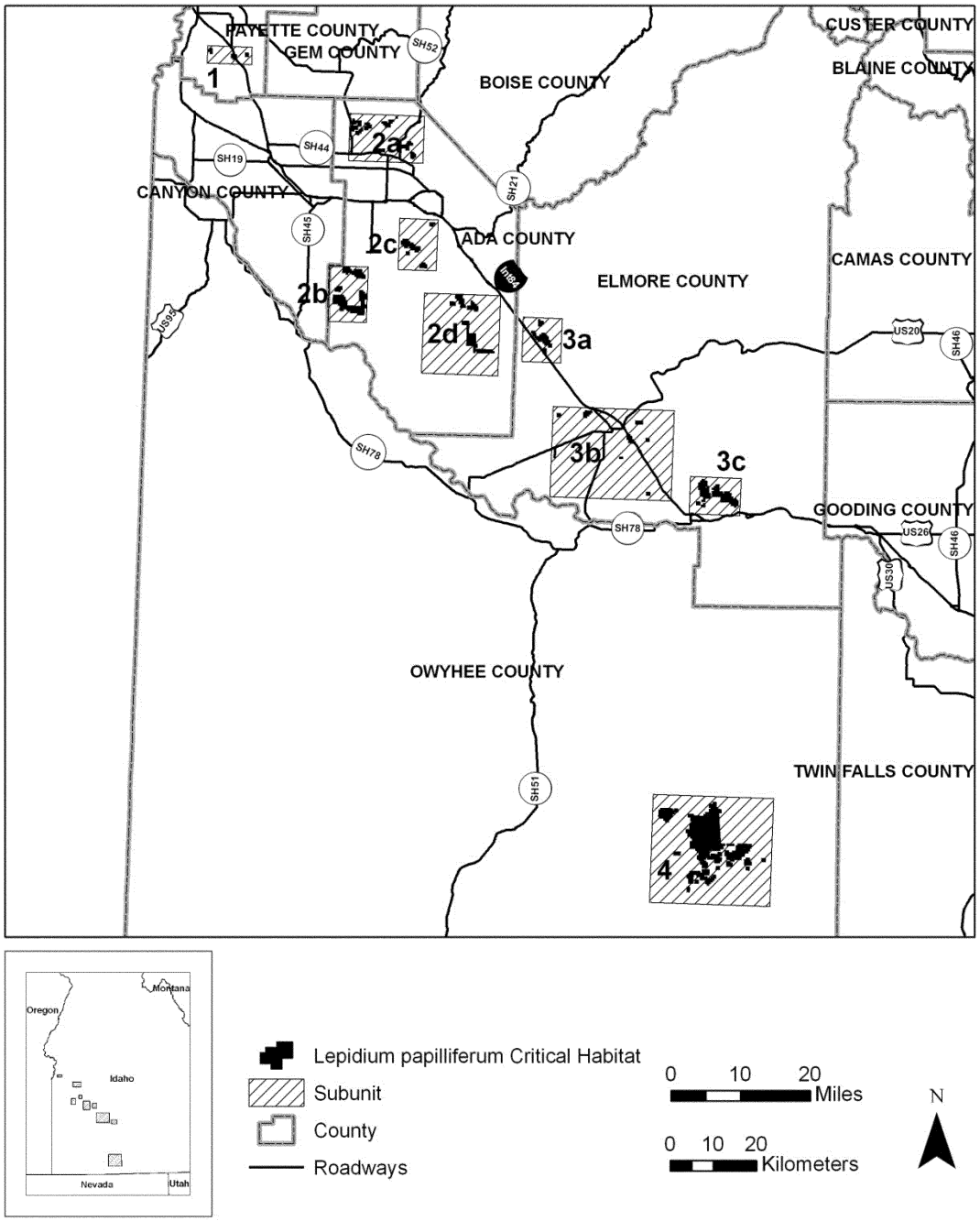
Critical Habitat for *Lepidium papilliferum* (slickspot peppergrass)

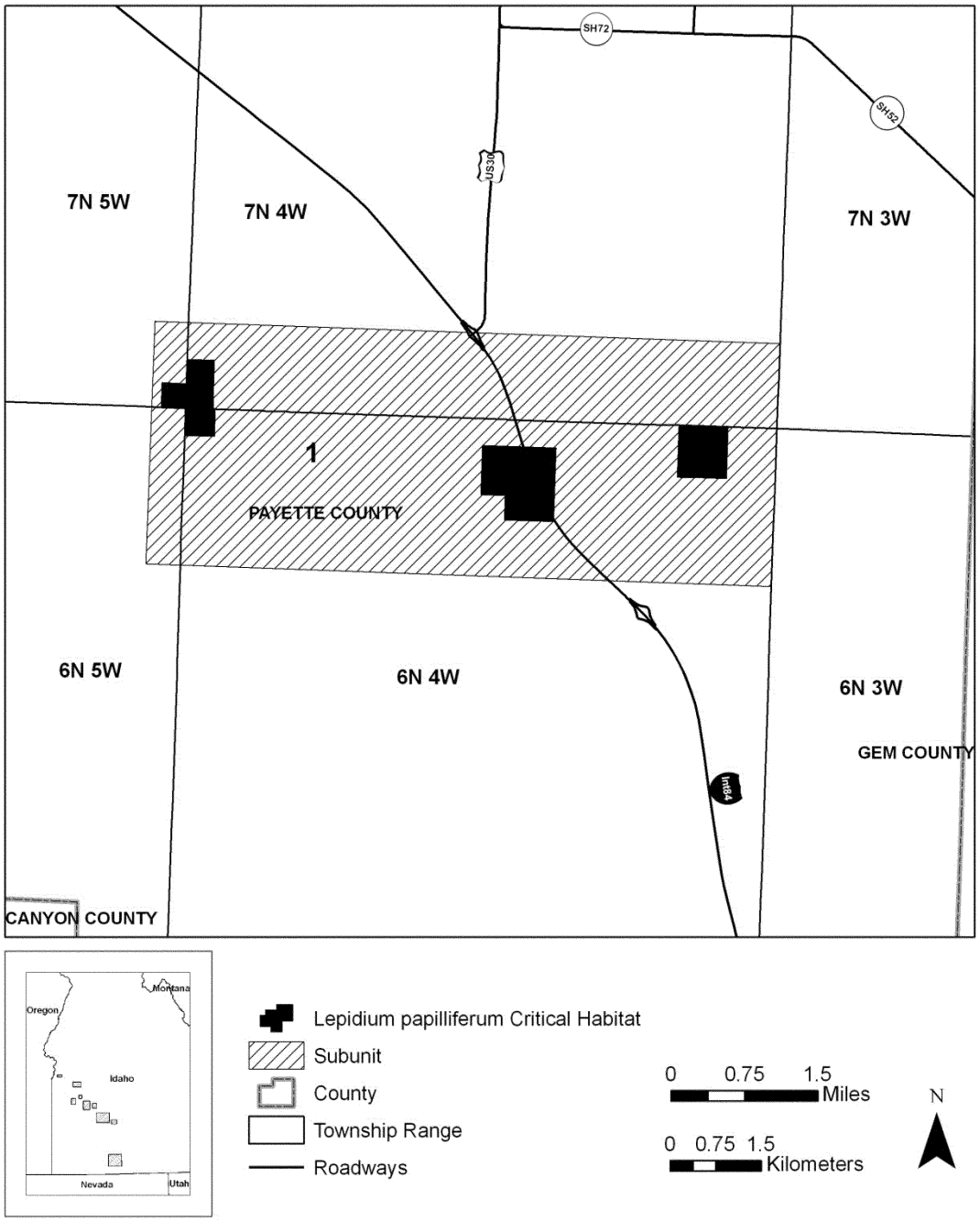



(6) Unit 1: Payette County, Idaho.

(i) [Reserved for unit description.]

(ii) Map of Unit 1 follows:

Critical Habitat for *Lepidium papilliferum* (slickspot peppergrass)
Unit 1

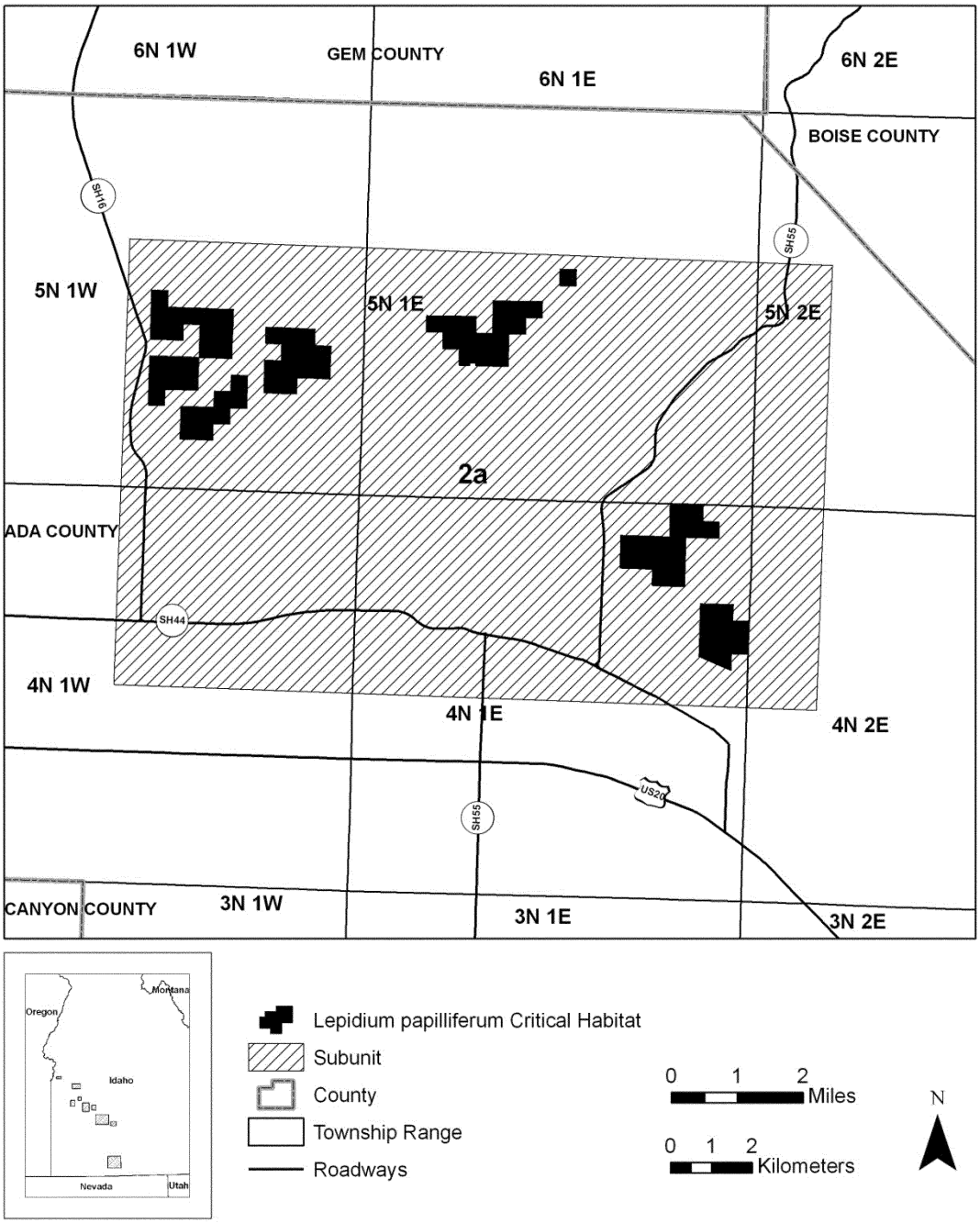



(7) Unit 2: Ada County, Idaho.

(i) Subunit 2a [Reserved for subunit description.]

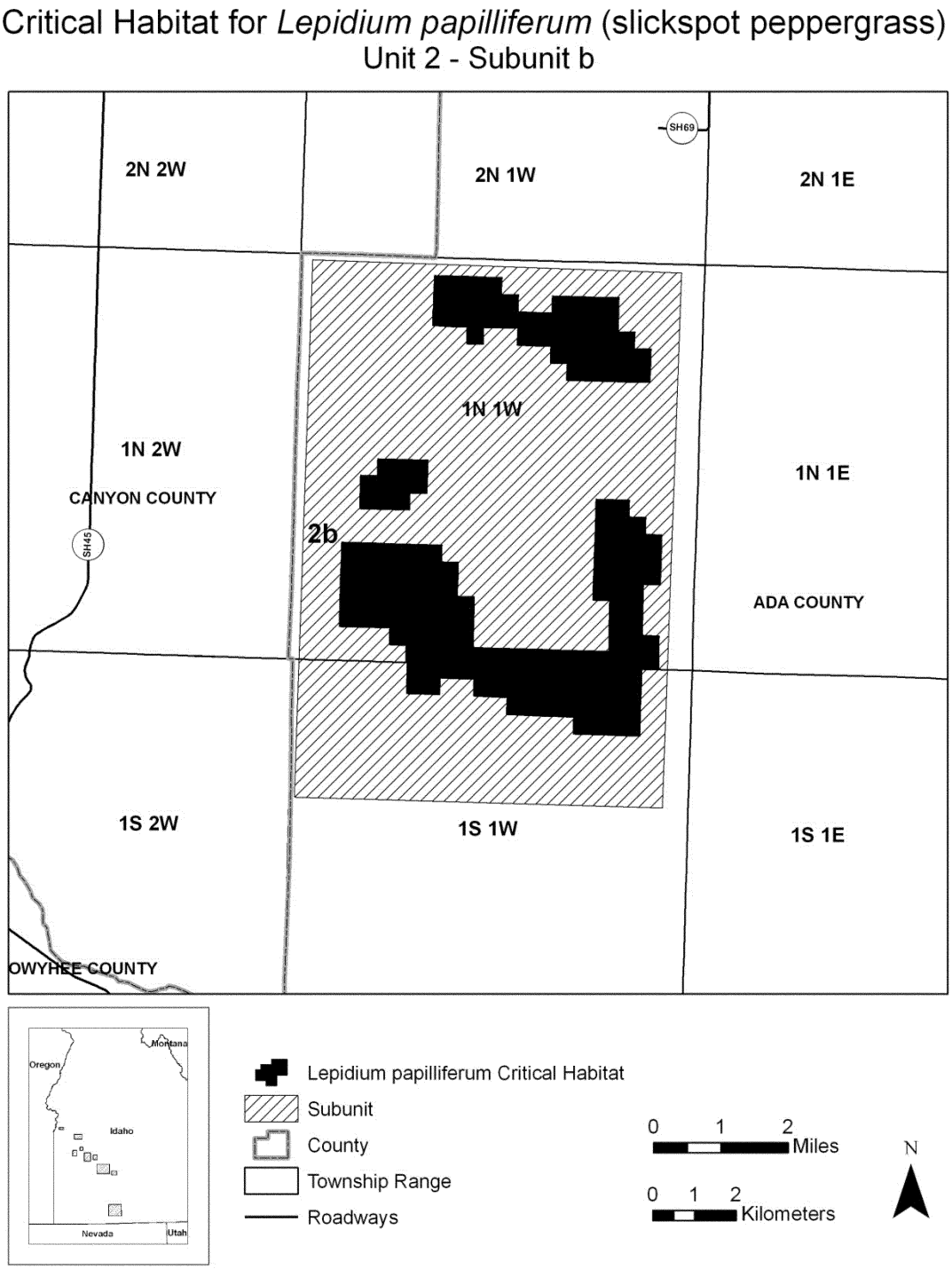
(ii) Map of Unit 2, Subunit a, follows:

Critical Habitat for *Lepidium papilliferum* (slickspot peppergrass)
Unit 2 - Subunit a




(iii) Subunit 2b. [Reserved for subunit description.]

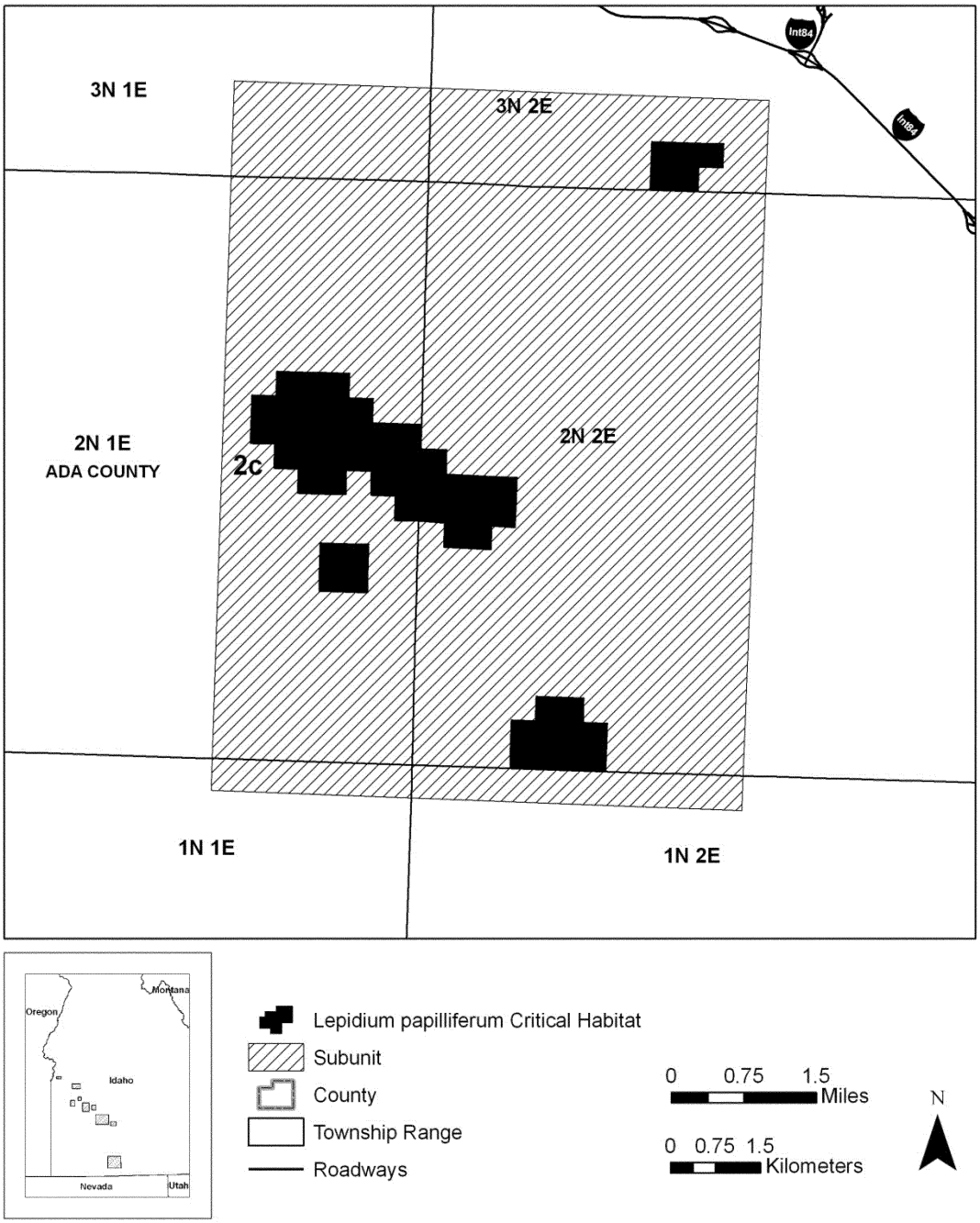
(iv) Map of Unit 2, Subunit b, follows:




(v) Subunit 2c. [Reserved for subunit description.]

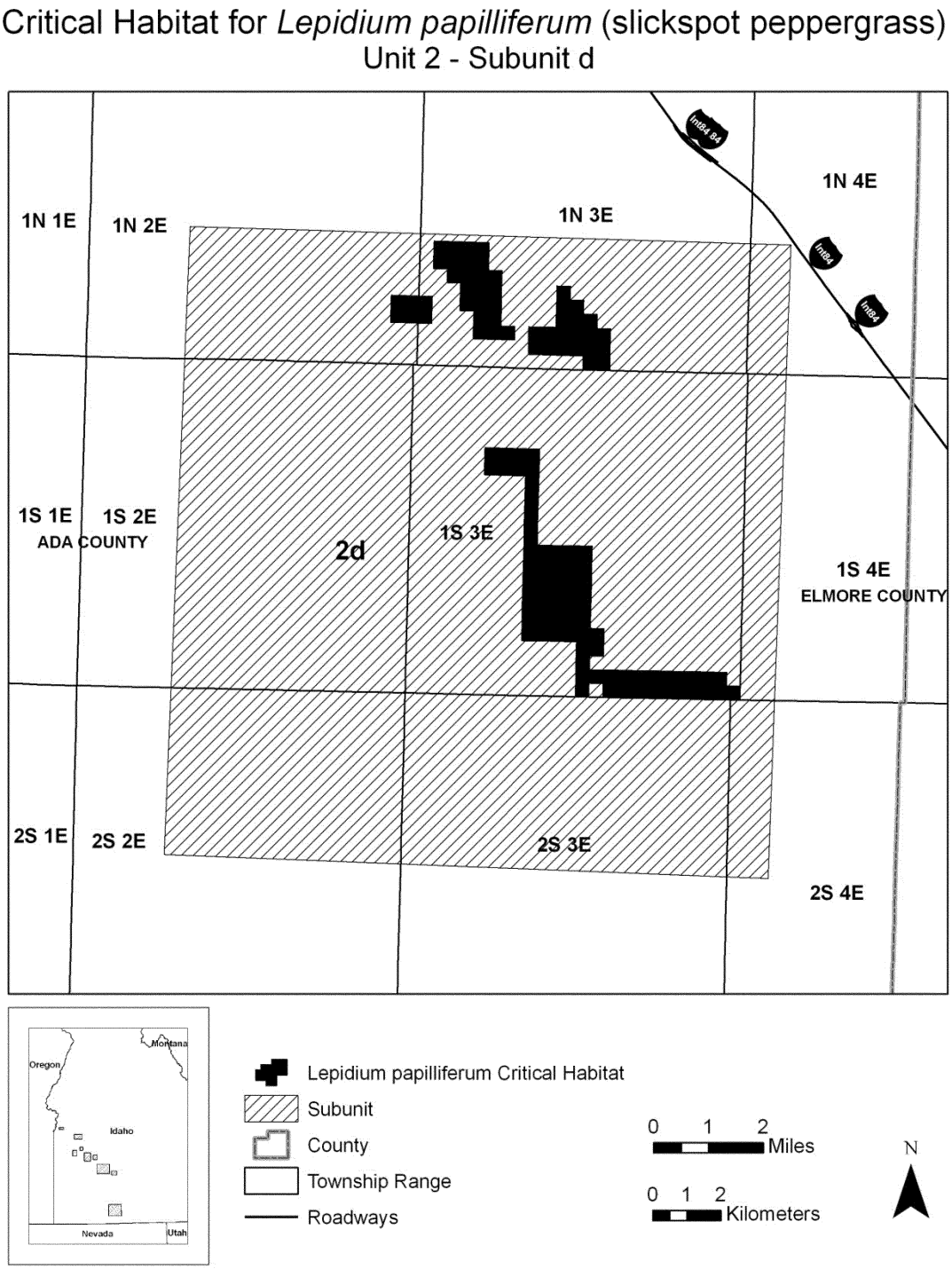
(vi) Map of Unit 2, Subunit c, follows:

Critical Habitat for *Lepidium papilliferum* (slickspot peppergrass)
Unit 2 - Subunit c




(vii) Subunit 2d. [Reserved for subunit description.]

(viii) Map of Unit 2, Subunit d, follows:

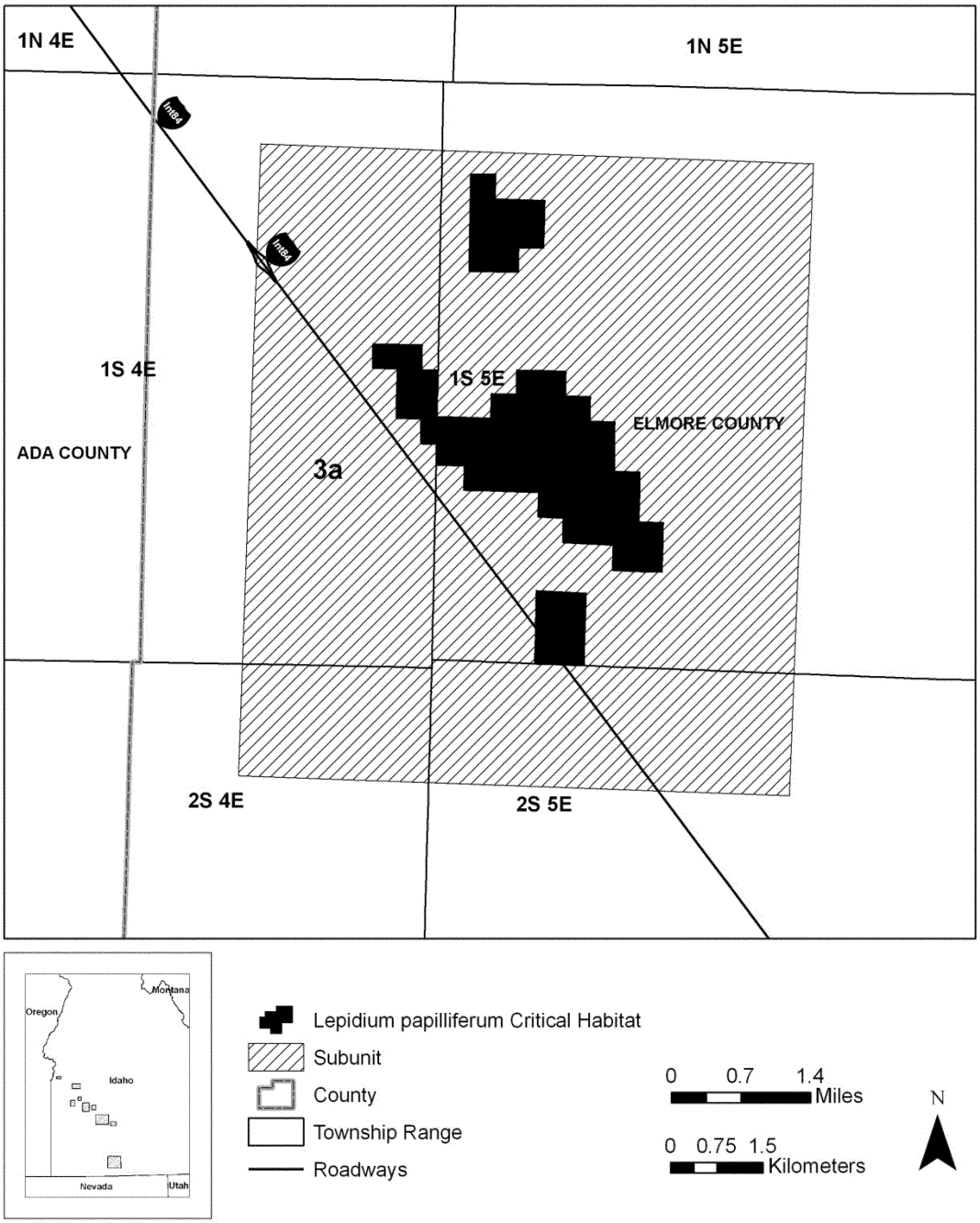



(8) Unit 3: Elmore County, Idaho.

(i) Subunit 3a. [Reserved for subunit description.]

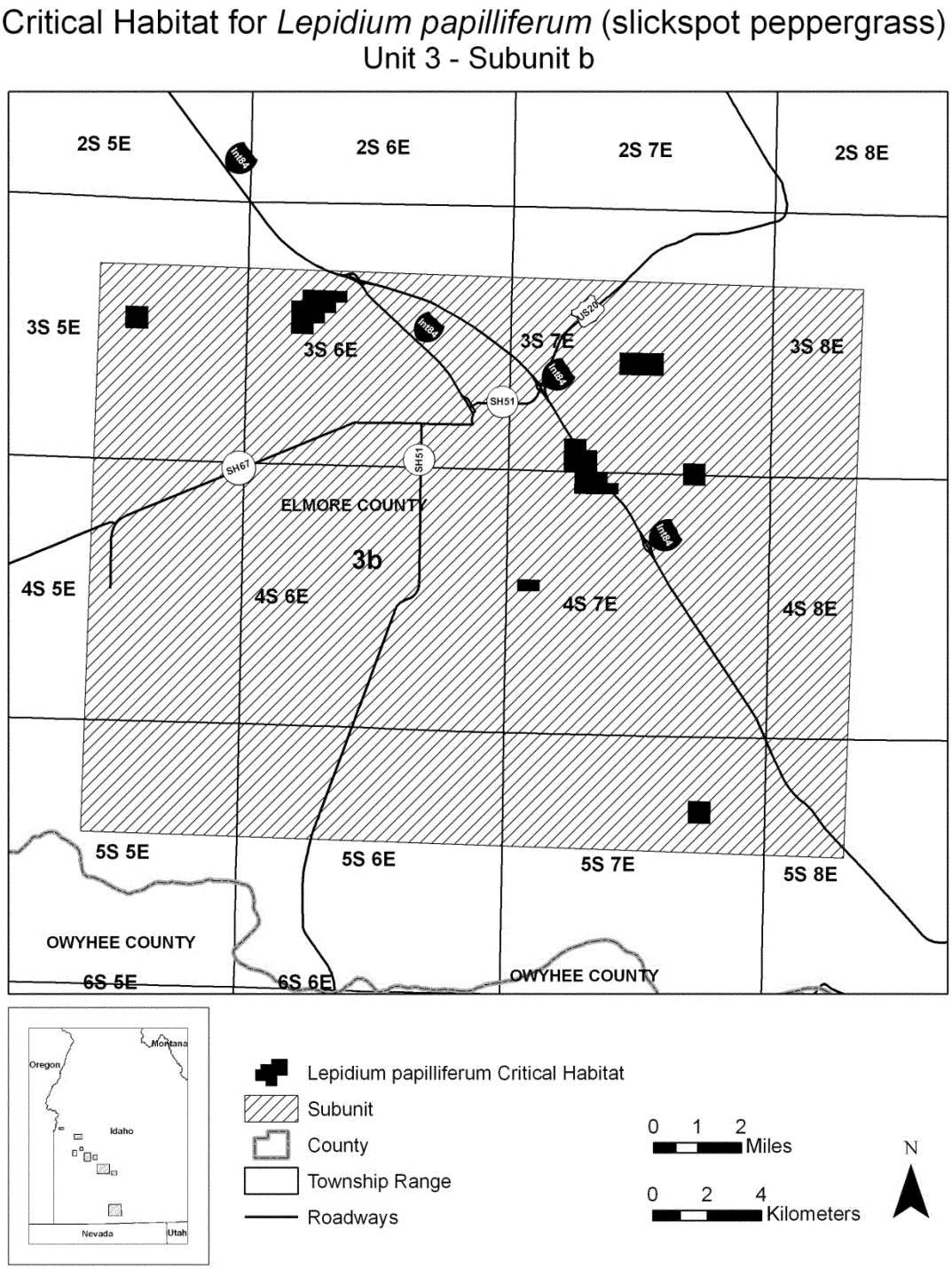
(ii) Map of Unit 3, Subunit a, follows:

Critical Habitat for *Lepidium papilliferum* (slickspot peppergrass)
Unit 3 - Subunit a




(iii) Subunit 3b. [Reserved for subunit description.]

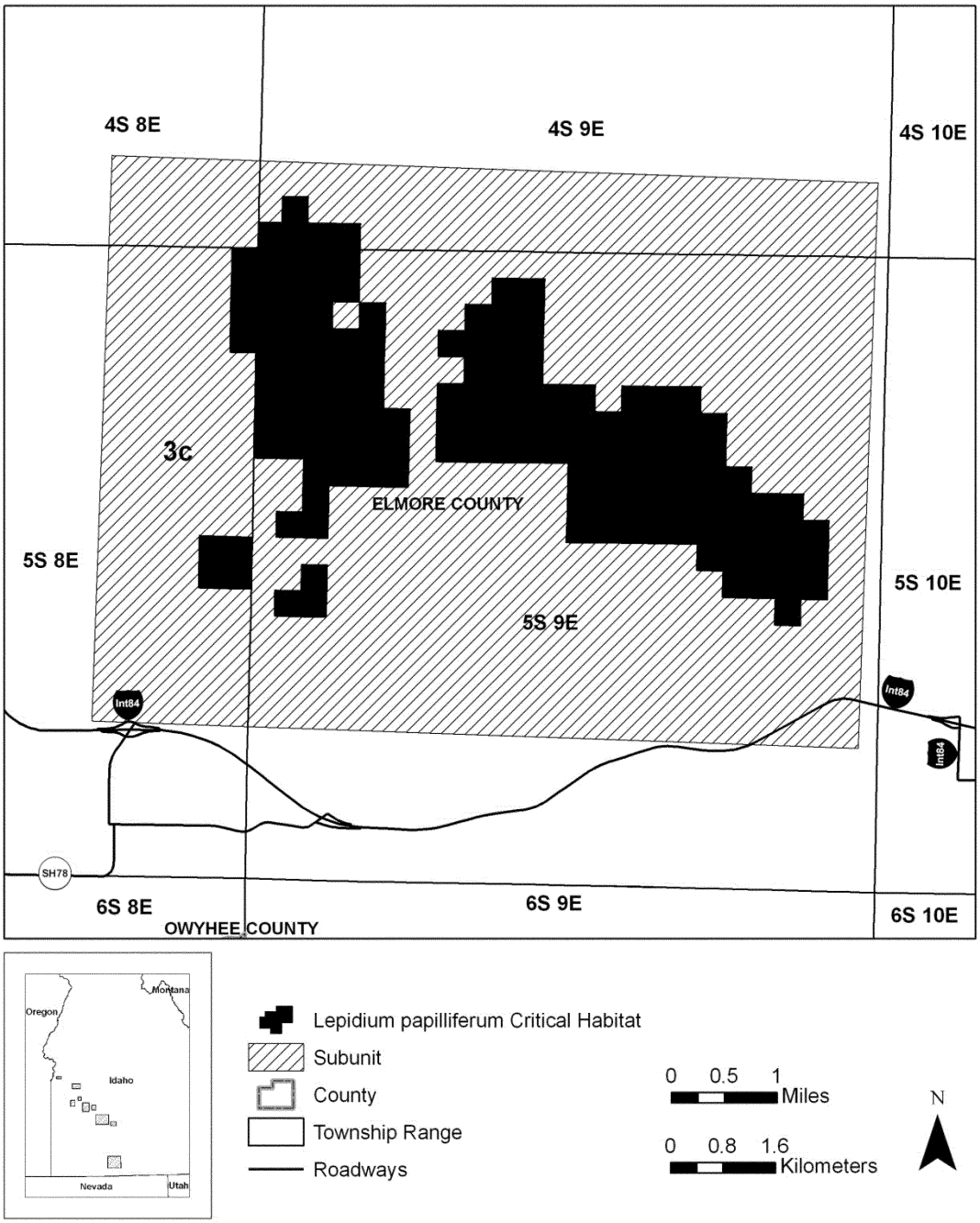
(iv) Map of Unit 3, Subunit b, follows:




(v) Subunit 3c. [Reserved for subunit description.]

(vi) Map of Unit 3, Subunit c, follows:

Critical Habitat for *Lepidium papilliferum* (slickspot peppergrass)
Unit 3 - Subunit c

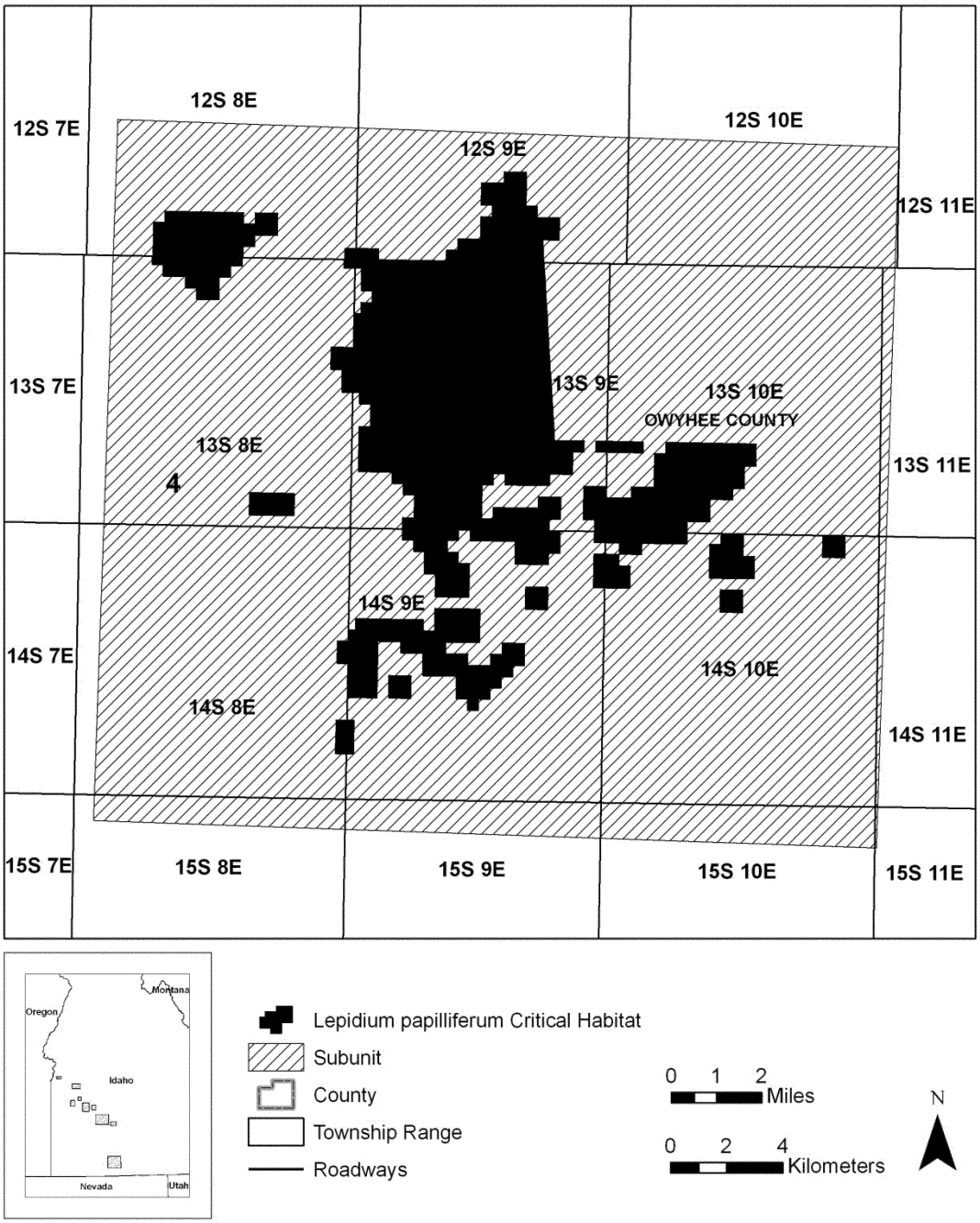



(9) Unit 4: Owyhee County, Idaho.

(i) [Reserved for unit description.]

(ii) Map of Unit 4 follows:

Critical Habitat for *Lepidium papilliferum* (slickspot peppergrass)
Unit 4




* * * * *

Dated: April 19, 2011.

**Will Shafroth,**

*Acting Assistant Secretary for Fish and Wildlife and Parks.*

[FR Doc. 2011–10753 Filed 5–9–11; 8:45 am]

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