

(2) From 10 p.m. to 6 a.m., the draw shall open on signal if at least two hours notice is given.

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Dated: May 3, 2000.

Thomas E. Bernard,

*Captain, U.S. Coast Guard, Acting
Commander, Fifth Coast Guard District.*

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AF84

Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for the Plants *Lomatium cookii* (Cook's lomatium) and *Limnanthes floccosa* ssp. *grandiflora* (Large-flowered Woolly Meadowfoam) in Oregon

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose to list two plants, *Lomatium cookii* (Cook's lomatium) and *Limnanthes floccosa* ssp. *grandiflora* (large-flowered woolly meadowfoam) as endangered species pursuant to the Endangered Species Act of 1973, as amended (Act). Both of these plants inhabit seasonally wet habitats known as vernal pools in the Agate Desert, an area north of Medford (Jackson County), Oregon. Researchers know of only 13 occurrences of *L. cookii* and 10 occurrences of *L. f. ssp. grandiflora* in the Agate Desert. An additional 10 occurrences of *L. cookii* are known in French Flat, Josephine County. The continued existence of *L. cookii* and *L. f. ssp. grandiflora* is threatened primarily by destruction of their habitat by industrial and residential development, including road and powerline construction and maintenance. Agricultural conversion, certain grazing practices, off-road vehicle use, and competition with nonnative plants also contribute to population declines. *Lomatium cookii* sites in Josephine County are additionally threatened by habitat alteration associated with gold mining, certain proposed timber projects, and woody species encroachment resulting from fire suppression. This proposal, if made final, would extend the Act's protection to these plants.

DATES: Comments from all interested parties must be received by July 14, 2000. Public hearing requests must be received by June 29, 2000.

ADDRESSES: You may submit comments and materials on this proposal in person or by mail to: Field Supervisor, U.S. Fish and Wildlife Service, Oregon State Office, 2600 S.E. 98th Avenue, Portland, Oregon 97266. Alternatively, you may send comments via the Internet to loli@r1.fws.gov. For further information please see section entitled "Public Comments Solicited."

FOR FURTHER INFORMATION CONTACT: Judy Jacobs, U.S. Fish and Wildlife Service, Oregon State Office (see **ADDRESSES** section) (telephone 503/231-6179; facsimile 503/231-6195).

SUPPLEMENTARY INFORMATION:

Background

Vernal pools are seasonal wetlands that form only in regions where certain soil and climatic conditions exist. During fall and winter rains typical of Mediterranean climates, water collects in shallow depressions in areas where downward percolation of water is prevented by the presence of an impervious hard pan or clay pan layer below the soil surface (Keeley and Zedler 1998). Later in the spring, when rains decrease and the weather warms, the water evaporates, and the pools generally disappear by May. Vernal pools thus provide unusual "flood and drought" habitat conditions to which certain plants and animals have specifically adapted. *Lomatium cookii* (Cook's lomatium) and *Limnanthes floccosa* ssp. *grandiflora* (large-flowered woolly meadowfoam) are two such plant taxa that occur in vernal pool habitats in a small area of Jackson County, southwestern Oregon. *Lomatium cookii* also occurs in seasonally wet habitats at a few locations in Josephine County, the adjacent county to the west. The *L. f. ssp. grandiflora* is believed to be extant in only 10 locations in Jackson County, while *L. cookii* is believed to occur at 13 sites in Jackson and 10 in Josephine County (Oregon Natural Heritage Program (ONHP) Database 1998).

Lomatium cookii is a perennial forb in the carrot family (Apiaceae) that grows 1.5 to 5 decimeters (6 to 20 inches (in)) tall from a slender, twisted taproot. Leaves are smooth, finely dissected, and strictly basal (growing directly above the taproot on the ground, not along the stems). One to four groups of clustered, pale-yellow flowers produce boat-shaped fruits 8 to 13 millimeters (mm) (0.3 to 0.5 in) long with thickened margins. The taproot can often branch at ground level to produce multiple stems.

The branching taproot distinguishes *L. cookii* from *L. bradshawii* (indigenous to wet prairies from southern Willamette Valley, Oregon, to southwest Washington) and *L. humile* (found in vernal pools in northern California) (Kagan 1986). *Lomatium utriculatum*, found on mounds adjacent to pools in the Agate Desert, is distinguished from *L. cookii* by its more intense yellow flowers, the different shape of its involucre bractlets (leaflike structures below the flowers), and thin-winged fruits (Kagan 1986). *Lomatium tracyi*, occurring in California and the Illinois Valley, Oregon, has a similar appearance to *L. cookii*, but *L. tracyi* has slender-margined fruits and can grow on dry sites. *Lomatium cookii* has boat or pumpkin-shaped fruits and grows on seasonally wet sites (Lincoln Constance, Prof. Emeritus, University of California, Berkeley, pers. comm. 1992).

James Kagan first collected *Lomatium cookii* in 1981 from vernal pools in the Agate Desert, Jackson County, Oregon, and subsequently described the species (Kagan 1986). Additional populations were found at French Flat in the Illinois Valley, Josephine County, Oregon in 1988 (ONHP Database 1998). Plants in the French Flat populations grow on seasonally wet soils. Slight morphological differences exist between *L. cookii* populations in the Agate Desert and French Flat, but these differences are not considered significant enough to separate the species into subspecies (*L. Constance, in litt.* 1992). Preliminary genetic work has not revealed any differences between the Agate Desert and French Flat *L. cookii* populations (Matt Gitzendanner, Washington State University, pers. comm. February 1998).

Limnanthes floccosa ssp. *grandiflora* is a delicate annual in the meadowfoam, or false mermaid, family (Limnanthaceae). *Limnanthes floccosa* ssp. *grandiflora* grows 5 to 15 centimeters (cm) (2 to 6 in) tall, with 5 cm (2 in) leaves divided into 5 to 9 segments. The stems and leaves are sparsely covered with short, fuzzy hairs. The flowers, and especially the calyx (outer whorl of floral parts), are densely covered with woolly hairs. Each of the 5 yellowish to white petals is relatively long for the genus, 6 to 13 mm (0.2 to 0.5 in.), and has 2 rows of hairs near its base.

In his monograph of the genus *Limnanthes*, Mason (1952) described three varieties of *Limnanthes floccosa* but did not recognize *grandiflora* as distinct. Based on her study of specimens grown under controlled conditions from field-collected seed, Arroyo (1973) elevated Mason's varieties to subspecies and described

two additional subspecies, including ssp. *grandiflora*. This subspecies is distinguished from other subspecies of *L. floccosa* by its larger flower size, sparsely hairy stems and leaves, and two lines of hairs at the petal base (Arroyo 1973). Over much of its range, *L. f. ssp. grandiflora* overlaps with *L. f. ssp. floccosa*. However, *L. f. ssp. floccosa* grows on the slightly drier, outer fringes of the pools, whereas *L. f. ssp. grandiflora* grows on the relatively wetter, inner fringe of the pools (Arroyo 1973; Darren Borgias, The Nature Conservancy, pers. comm. 1998).

Limnanthes floccosa ssp. *grandiflora* and *Lomatium cookii* both occur in and around vernal pools within an 83 square kilometer (km²) (32 square mile (mi²)) landform in southwestern Oregon known as the Agate Desert in Jackson County. Located on the floor of the Rogue River basin north of Medford, the Agate Desert is characterized by shallow, Agate-Winlow complex soils, a relative lack of trees, sparse prairie vegetation, and agates (fine-grained sands that have striped, cloudy, and rounded spots or patches of a color or shade different from their background) commonly found on the soil surface (ONHP 1997). *Lomatium cookii* also occurs in another area encompassing some 10 km² (4 mi²) in adjacent Josephine County. This area, referred to as French Flat, is located within the Illinois Valley near the Siskiyou Mountains.

In the Agate Desert, researchers know of only 13 occurrences of *Lomatium cookii* and 10 occurrences of *Limnanthes floccosa* ssp. *grandiflora*. Mapped habitat for these species in the Agate Desert totals some 54 hectares (ha) (133 acres (ac)) for *L. cookii* and 80 ha (198 ac) for *L. f. ssp. grandiflora* (ONHP Database 1998). However, due to recent alteration and destruction of vernal pools in the Agate Desert (ONHP 1997), habitat currently occupied by these plants is considerably less, an estimated 28 ha (69 ac) and 47 ha (116 ac) for *L. cookii* and *L. f. ssp. grandiflora*, respectively (ONHP Database 1998). These two taxa occur in five of the same vernal pool systems, constituting three "occurrences" as defined by ONHP. In French Flat, Josephine County, there are 10 known occurrences of *L. cookii*, occupying up to 61 ha (150 ac) of habitat, but many of these sites are very small (50 individuals or less), and current status is not well known.

Two occurrences each of *Lomatium cookii* and *Limnanthes floccosa* ssp. *grandiflora* occur partially or entirely within the Agate Desert Preserve (Preserve), owned by The Nature

Conservancy (TNC). The Preserve contains the only large populations on private land managed for protection of these species.

Two occurrences of each taxon are on State land, mainly in the Ken Penman Wildlife Area, where much of the habitat has been altered and planted to grasses. Portions of two *Lomatium cookii* and three *Limnanthes floccosa* ssp. *grandiflora* occurrences are on lands owned by the City of Medford, within an area designated as the Whetstone Industrial Park. Portions of two *L. f. ssp. grandiflora* and four *L. cookii* occurrences are located in highway or powerline rights-of-way (ONHP Database 1998), where they are subject to herbicide spraying and other maintenance activities conducted by the State or counties. In French Flat, there are 10 known occurrences of *L. cookii*. Three occurrences of *L. cookii* occur on private land. Two of these occurrences are located on land managed by Jackson County; one of these has been largely extirpated by construction of a baseball sports complex. The remaining seven populations of *L. cookii* in Josephine County are located partially or entirely on land managed by the Bureau of Land Management (BLM).

The Agate Desert landscape consists of a gentle mound-swale topography with a characteristic appearance in aerial photographs that is sometimes referred to as patterned ground. During the fall and winter rainy season, a striking pattern of shallow pools develops in the swales. These vary in size from 1 to 30 meters (m) (3 to 100 feet (ft)) across, and attain a maximum depth of about 30 cm (12 in) (ONHP 1997). Plants native to these pools, including *Limnanthes floccosa* ssp. *grandiflora* and *Lomatium cookii*, are adapted to grow, flower, and set seed during the relatively short time that water is available in the spring. Special assemblages of plants blooming in concentric rings toward the deepest part of the pools can be seen as soil moisture recedes throughout the spring (ONHP 1997). Native plants that occur with *Lomatium cookii* and *Limnanthes floccosa* ssp. *grandiflora* in these vernal pools include *Plagiobothrys bracteatus* (popcorn flower), *Juncus uncialis* (a rush), *Navarretia* spp. (*Navarretia*), and *L. f. ssp. floccosa* (common woolly meadowfoam) (Kagan 1987).

The historical range for *Limnanthes floccosa* ssp. *grandiflora* and *Lomatium cookii* in the Agate Desert may have originally encompassed over 130 km² (50 mi²), within a 17-km (11-mi) radius of White City (ONHP 1997). Vernal pool habitat, formerly widespread south of the Rogue River, is now almost

completely eliminated (Brock 1987; ONHP 1997).

During January and February of 1998, we conducted a preliminary study of vernal pool invertebrates at a number of vernal pools in the Agate Desert. This study revealed the presence of a federally threatened species, the vernal pool fairy shrimp (*Branchinecta lynchi*), at six of the pools sampled (May Consulting Services 1998). Two of these pools are on property managed by BLM, and the remainder are on TNC land. This fairy shrimp, previously believed to be endemic to vernal pools in California, was listed as a federally threatened species in 1994 (59 FR 48136). The presence of this threatened species underscores the need to conserve and restore remaining vernal pool habitat in the Agate Desert area.

In French Flat, *Lomatium cookii* grows in wet meadow areas underlain with floodplain bench deposits that contain sufficient clay to form a clay pan at 60 to 90 cm (24 to 35 in) below the soil surface (U.S. Department of Agriculture 1983). The clay pan creates seasonally wet areas similar to the vernal pools of the Agate Desert, but mostly lacking the latter area's distinctive mound-swale topography. Common plants associated with *L. cookii* in French Flat include *Danthonia californica* (oatgrass), *Plagiobothrys bracteatus*, *Horkelia congesta* (horkelia), *Calochortus uniflorus* (mariposa lily), and *Erythronium howellii* (trout lily). The surrounding forest contains *Pseudotsuga menziesii* (Douglas fir) and *Pinus jeffreyi* (Jeffrey pine). Shrub species that grow on serpentine (rocky mineral consisting mostly of magnesium that gives it a green mottled color) soils, such as *Ceanothus cuneatus* (buckbrush) and *Arctostaphylos viscida* (manzanita), are found within the area of *L. cookii* sites (Linda Knight, BLM, *in litt.* 1992).

The historical range of *Lomatium cookii* in French Flat may have included seasonally wet meadows along the East Fork of the Illinois River. Fire suppression, grazing, residential development, and extensive gold mine dredging (Shenon 1933) altered *L. cookii* habitat in this area. However, some native perennial communities remain in wet meadows that were not affected by mining. Gold mining imminently threatens *L. cookii* habitat in French Flat (Joan Seevers, BLM, pers. comm. 1998).

Previous Federal Action

Federal action on *Limnanthes floccosa* ssp. *grandiflora* began with section 12 of the Act (16 U.S.C. 1531 *et seq.*), which directed the Secretary of the Smithsonian Institution to prepare a

report on those plants considered to be endangered, threatened, or extinct in the United States. This report, designated as House Document No. 94–51, was presented to Congress on January 9, 1975, and included *L. f. ssp. grandiflora* as endangered. We published a notice on July 1, 1975, (40 FR 27823) of our acceptance of the Smithsonian Institution report as a petition within the context of section 4(c)(2) (petition provisions are now found in section 4(b)(3) of the Act) and our intention to review the status of the identified plant species. On June 16, 1976, we published a proposal (41 FR 24523) to determine approximately 1,700 vascular plant species, including *L. f. ssp. grandiflora*, to be endangered species pursuant to section 4 of the Act. The list of 1,700 plant taxa was assembled on the basis of comments and data received by the Smithsonian Institution and us in response to House Document No. 94–51 and our July 1, 1975, **Federal Register** publication.

General comments received regarding the 1976 proposal were summarized in an April 26, 1978, notice (43 FR 17909). The Act Amendments of 1978 required that all proposals over 2 years old be withdrawn. A 1-year grace period was given to proposals already more than 2 years old. On December 10, 1979, we published a notice of withdrawal (44 FR 70796) of the June 6, 1976, proposal, along with four other proposals that had expired.

We published a Notice of Review for plants on December 15, 1980 (45 FR 82480). This notice included *Limnanthes floccosa* ssp. *grandiflora* as a category 1 candidate for Federal listing. Category 1 candidates were those taxa for which we had on file substantial information on biological vulnerability and threats to support preparation of listing proposals. On November 28, 1983, we published a supplement to the Notice of Review (48 FR 53640). However, in the September 27, 1985, Notice of Review (50 FR 39526), the status of this taxon was changed to category 2. Category 2 candidates were those taxa for which data in our possession indicated listing was possibly appropriate, but for which substantial data on biological vulnerability and threats were not currently known or on file to support proposed rules.

Category 2 status was maintained for *Limnanthes floccosa* ssp. *grandiflora* in the Notice of Review published on February 21, 1990 (55 FR 6184). *Lomatium cookii* was first included in that 1990 Notice of Review as a category 1 candidate species. We made no changes to the status of the two species

in the plant notice published on September 30, 1993 (58 FR 51144). In our February 28, 1996, Notice of Review (61 FR 7596), we discontinued the use of multiple candidate categories, and now only those taxa meeting the definition of the former category 1 are considered candidates for listing purposes. *Lomatium cookii* was maintained as a candidate species, but *L. f. ssp. grandiflora* was not. Our September 18, 1997, Notice of Review (62 FR 49397) included both *L. f. ssp. grandiflora* and *L. cookii* as candidates. The most recent Notice of Review (64 FR 57534), published on October 25, 1999, included both *L. f. ssp. grandiflora* and *L. cookii* as candidates.

Section 4(b)(3)(B) of the Act requires the Secretary to make certain findings on pending petitions within 12 months of their receipt. Section 2(b)(1) of the 1982 amendments further requires that all petitions pending on October 13, 1982, be treated as having been newly submitted on that date. This provision applied to *Limnanthes floccosa* ssp. *grandiflora* because the 1975 Smithsonian report had been accepted as a petition. On October 13, 1983, we found that the petitioned listing of this species was warranted but precluded by other pending listing actions, in accordance with section 4(b)(3)(B)(iii) of the Act; notification of this finding was published on January 20, 1984 (49 FR 2485). Such a finding requires the petition to be reviewed annually pursuant to section 4(b)(3)(C)(i) of the Act. For the purpose of making these annual petition findings, we made an administrative decision to treat all candidate plants as if their listings had been petitioned prior to 1982. Therefore, the “warranted but precluded” finding also applies to *Lomatium cookii*, which first appeared in the February 21, 1990, Notice of Review. The warranted but precluded finding for both species has been reviewed annually through 1999. Publication of this proposal constitutes the final finding for the petitioned action.

The processing of this proposed rule conforms with our Listing Priority Guidance published in the **Federal Register** on October 22, 1999 (64 FR 57114). The guidance clarifies the order in which we will process rulemakings. Highest priority is processing emergency listing rules for any species determined to face a significant and imminent risk to its well-being (Priority 1). Second priority (Priority 2) is processing final determinations on proposed additions to the lists of endangered and threatened wildlife and plants. Third priority is processing new proposals to add species to the lists. The

processing of administrative petition findings (petitions filed under section 4 of the Act) is the fourth priority. The processing of critical habitat determinations (prudence and determinability decisions) and proposed or final designations of critical habitat will no longer be subject to prioritization under the Listing Priority Guidance. Processing of this proposed rule is a Priority 3 action and is being completed in accordance with the current Listing Priority Guidance.

Peer Review

In accordance with interagency policy published on July 1, 1994 (59 FR 34270), upon publication of this proposed rule in the **Federal Register** we will solicit expert reviews by at least three specialists regarding pertinent scientific or commercial data and assumptions relating to the taxonomic, biological, and ecological information for *Lomatium cookii* and *Limnanthes floccosa* ssp. *grandiflora*. The purpose of such a review is to ensure that listing decisions are based on scientifically sound data, assumptions, and analyses, including the input of appropriate experts.

Summary of Factors Affecting the Species

Section 4 of the Endangered Species Act and regulations (50 CFR part 424) that implement the listing provisions of the Act established the procedures for adding species to the Federal lists. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Lomatium cookii* (Cook's lomatium) and *Limnanthes floccosa* ssp. *grandiflora* Arroyo (large-flowered woolly meadowfoam) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* The vernal pools and other seasonally wet soils where *Lomatium cookii* and *Limnanthes floccosa* ssp. *grandiflora* grow are susceptible to various land use disturbances. The primary threats to the vernal pool habitat of *L. cookii* and *L. f. ssp. grandiflora* in the Agate Desert are industrial, commercial, and residential development and related road and utilities construction and maintenance, including mowing and herbicide spraying; firebreak construction; and hydrologic alteration, particularly the conversion of nonirrigated land to irrigated agricultural use (D. Borgias, pers. comm. 1999). Competition, particularly from introduced annual grass species (see Factor E of this

section), and grazing, especially during the fall and winter months, can also reduce or eliminate populations of both species (Kagan 1987; James Kagan, Oregon Natural Heritage Program (ONHP), pers. comm. 1998). Josephine County populations of *L. cookii* are additionally threatened by proposed gold mining operations, the uncontrolled use of off-road vehicles (ORVs) in the areas occupied by this species, certain timber harvesting activities, and tree encroachment into open areas associated with fire suppression.

Human-related impacts to vernal pool habitat in the Agate Desert began in the mid-1800's, when the area was grazed by cattle and sheep (ONHP 1997). In 1905, a land speculation company acquired a large part of the area and attempted to establish pear orchards by constructing an extensive system of shallow irrigation ditches and, in some cases, blasting through the hardpan layer. This effort failed, and grazing continued as the dominant land use until 1942, when the U.S. military purchased a large segment of the Agate Desert for a training center. When this center was decommissioned in 1946, a 158-ha (390-ac) portion of the area west of Highway 62 was purchased by a timber industry consortium, and a timber mill industrial center began to grow (ONHP 1997). Other industries were drawn to the area, and around 1980 the City of Medford established the 290-ha (720-ac) Whetstone Industrial Park. Much of this area has been leveled and compacted, destroying any vernal pools, although some potential vernal pool habitat remains in the area (ONHP 1997). Another area west of Highway 62, encompassing some 728 ha (1,800 ac), is State land managed as the Ken Denman Wildlife Area (ONHP 1997). Devoted to waterfowl production, much of this area has been covered with log deck debris, plowed in strips, and planted with nonnative wildlife food plants (Brock 1987; J. Kagan, pers. comm. 1997).

East of Highway 62, much of the Agate Desert landform was subdivided into 2-ha (5-ac) homesites in the 1950's, many of which were leveled. Because grazing was removed from some of these sites when they were offered for sale, this area has recovered somewhat and harbors some intact vernal pool habitat (Brock 1987; ONHP 1997).

The southernmost section of the historical Agate Desert has been largely modified by cultivation for pasture. The Medford-Jackson County Airport occupies some 374 ha (925 ac) at the southern limit of the landform. A new building that will house a Foreign Trade

Zone at the airport is currently under development (Bern Case, Director, Medford-Jackson County Airport, pers. comm. 1998), and construction associated with this facility could impact *Lomatium cookii* plants at the site.

Jackson County is experiencing rapid population increase. It is the ninth fastest growing county in Oregon, and the majority of this growth is centered in the Medford area (Oregon Center for Population Research and Census, pers. comm. 1998). Much of this development has occurred in and around *Lomatium cookii* and *Limnanthes floccosa* ssp. *grandiflora* habitat near Medford and White City.

A recent habitat assessment map and report (ONHP 1997) indicates that residential, commercial, and industrial development, along with land leveling, have claimed nearly 60 percent of the historic Agate Desert vernal pool landscape. According to this assessment, no pristine vernal pool habitat remains due to the presence of introduced plants throughout the Agate Desert. The highest quality remaining vernal pool habitat occurs on 23 percent of the landform. By overlaying ONHP plant occurrence polygons on the habitat assessment base map, one can determine that over 50 percent of *Lomatium cookii* sites and nearly 50 percent of *Limnanthes floccosa* ssp. *grandiflora* sites originally mapped in the Agate Desert during the 1980's have been severely altered. While most of these sites were altered prior to the 1980's (D. Borgias, pers. comm. 1999), habitat alterations in the Agate Desert are continuing at a rapid rate, as indicated by numerous examples below.

In 1992, a sewage line was built by the City of Medford across the southwest corner of the Cardinal Avenue site in the Agate Desert. A large department store was built on land adjacent to this site. The Cardinal Avenue site is proposed for inclusion in the Foreign Trade Zone at the Medford-Jackson County Airport, and development on the 1.2-ha (3-ac) site is very likely (Gerald Anderson, Medford City Manager, pers. comm. 1998). The Cardinal Avenue site, with a population of approximately 140 *Lomatium cookii* individuals, was graded in January 1993 (J. Kagan, pers. comm. 1998). The landowner was contacted by TNC to request permission to remove some plants for experimental transplantation. The landowner agreed to allow removal of the plants, but TNC was able to obtain only one individual prior to completion of grading and was unable to successfully transplant the individual (D. Borgias, pers. comm. 1999).

In 1986, private lands with 4 ha (10 ac) of *Lomatium cookii* habitat and some 500 individual plants were developed into a sports park complex by Jackson County with Federal Land and Water Conservation Funds. The area was leveled, and playing fields and parking lots were constructed. Approximately 80 percent of the available habitat was removed at this site. Inventory of this population in 1992 documented 150 plants at this site (Kagan 1987). Based on preliminary surveys in 1997, these plants may have been extirpated (J. Kagan, pers. comm. 1998).

Another project related to increased development of the Agate Desert area and that resulted in adverse effects to *Lomatium cookii* and *Limnanthes floccosa* ssp. *grandiflora* habitat is a 500-kilovolt powerline that Pacific Power and Light constructed in June 1992 (Gerald Nielsen, Pacific Power Co., pers. comm. 1992). The powerline directly affected 7.5 ha (18.5 ac) out of a total of 80 ha (198 ac), or 9.3 percent of the existing *L. f. ssp. grandiflora* habitat in the Agate Desert. About 2.6 ha (6.4 ac), or 4.8 percent of the existing *L. cookii* habitat, was affected in the Agate Desert. Maintenance activities along the powerline corridor may continue to adversely impact *L. cookii* and *L. f. ssp. grandiflora* habitat.

Two sites where *Limnanthes floccosa* ssp. *grandiflora* was collected in 1969 have been destroyed, one by construction of a mill, and another by construction of a large industrial plant (J. Kagan, pers. comm. 1997). Additional sites of *L. f. ssp. grandiflora* occurrences (50 percent of the total extant) have been severely degraded as follows (J. Kagan, pers. comm. 1998): (1) One site, at the intersection of three major roads, has been reduced to a few fragmented patches. The site is now bordered by two fast-food restaurants, a powerline, and residential development, leaving virtually no opportunity for conservation. (2) Another site occurs at the corner of a building adjacent to railroad tracks and has been reduced to approximately 5 square meters (54 square feet), leaving no avenue for site conservation. (3) A sewer plant for the City of Medford has reduced the type locality for this taxon to two small pools. (4) In 1985, *L. f. ssp. grandiflora* was estimated to cover some 16 ha (40 ac) at one of two occurrences of *L. f. ssp. grandiflora* on Denman Wildlife Area, since then the site has been leveled and scraped for planting tall wheatgrass as wildlife food, as a result by 1993, coverage had been reduced to 1.2 ha (3 ac), a 92 percent reduction. (5) More recently, over two-thirds of the second site found on Denman Wildlife Area

(29.5 ha (73 ac) in size) has been leveled, grazed, and piped for irrigation.

In the early 1990's, a proposed highway connector between Interstate 5 and Highway 140 across the Agate Desert would have impacted a number of occurrences of both *Lomatium cookii* and *Limnanthes floccosa* ssp. *grandiflora*.

Although that specific project is no longer under consideration, the Oregon Department of Transportation (ODOT) is currently considering a number of alternatives for moving traffic through the area, some of which could impact vernal pools. The vernal pools that are not directly impacted by the highway project are often impacted by projects that result from increased access to the area, such as industrial and residential development.

The only *Lomatium cookii* and *Limnanthes floccosa* ssp. *grandiflora* habitat protected from industrial, residential, or commercial development in the Agate Desert area is the habitat located on the Preserve managed by TNC for the protection of these species. Approximately 7 ha (17 ac) of *L. cookii* habitat and 16.7 ha (41.2 ac) of *L. f. ssp. grandiflora* habitat exist on the Preserve.

The Preserve, supporting the largest populations of *Lomatium cookii* and *Limnanthes floccosa* ssp. *grandiflora*, is located in an area that may soon be surrounded by commercial and industrial developed land. Although the Preserve land is protected, the alteration of land adjacent to the Preserve could disrupt the hydrologic processes within the Preserve. For example, a road was built along the southern edge of the Preserve in 1988. Water runs off the road into a ditch after rainstorms, where it would have normally remained in pools in the Preserve. This ditch drained several of the vernal pools on the southern portion of the Preserve, further reducing approximately 0.2 ha (0.5 ac) of vernal pools available to *L. cookii* and *L. f. ssp. grandiflora* in the Preserve (J. Kagan, pers. comm. 1998). In addition, potential habitat that borders the west side of the Preserve was partitioned and developed into industrial property in January 1993 (J. Kagan, pers. comm. 1998). Hydrology and available management (e.g., prescribed burning) were also altered by the development. During development of land west of the Preserve, land-moving equipment trespassed onto a portion of the Preserve. At the time, vernal pools on the Preserve had no fences or physical barriers to prevent trespass by ORVs or land-moving equipment (D. Borgias, pers. comm. 1998).

To summarize these plants' status in the Agate Desert, *Limnanthes floccosa* ssp. *grandiflora* is presently declining at seven of its ten known occurrences, and its status is unknown at two additional sites and is known to be stable at only one site. Populations of *Lomatium cookii* are declining at 11 of the 13 known occurrences in the Agate Desert. Habitat originally mapped for these species in the Agate Desert totals some 54 ha (133 ac) for *L. cookii* and 80 ha (198 ac) for *L. f. ssp. grandiflora* (ONHP Database 1998). However, habitat currently occupied by these plants is considerably less, an estimated 28 ha (69 ac) and 47 ha (116 ac) for *L. cookii* and *L. f. ssp. grandiflora*, respectively (ONHP Database 1998). Thus, the current ranges of both species are roughly 50 percent less than the area of historical habitat in the Agate Desert.

Occurrences of *Lomatium cookii* in Josephine County are also subject to numerous threats. The only habitat for this plant on federally owned land is located near French Flat, which is managed by BLM. Gold mining operations threaten approximately 10 percent of the federally owned portion of this habitat. Approximately 600 plants occur in the area threatened by mining. Mining activities could result in direct habitat loss for the species and limit recovery at this site.

Indirect effects from mining operations in French Flat could also occur due to off-site activities, such as road construction, which are likely to alter hydrologic cycles at *Lomatium cookii* habitat sites. These changes could cause seasonally saturated soils to drain and could impede seed germination or lead to death of seedlings and mature plants. Currently, no safeguards exist to protect habitat in the French Flat area from mining operations.

Habitat for *Lomatium cookii* on BLM-managed land at French Flat continues to experience damage from ORV use. In 1992, ORV use damaged a large wet meadow in this area, creating ruts that punctured the clay pan layer and allowed soil moisture to drain from the wet meadow habitat. Heavy ORV use of *L. cookii* habitat in the area is continuing. To date, ORV use has caused puncturing and draining of 6 ha (15 ac) of meadow habitat in the French Flat population. As a result, 20 percent of the remaining *L. cookii* habitat on federally managed land has been destroyed. The BLM intends to gate part of the area to discourage ORV trespass, but restricting access to this large, open area is difficult (Linda Mazzu, BLM, pers. comm. 1998; J. Seevers, pers. comm. 1998). If recently proposed mining actions on BLM lands are

implemented, habitat destruction would be substantially increased beyond 20 percent.

Lomatium cookii occurrences in French Flat are also threatened by a timber sale presently under consideration by BLM. Additionally, one recently discovered occurrence at Indian Hill, which is in a long, narrow meadow, is threatened by encroachment of woody species from the surrounding forest. Fire suppression activities have caused an increase in the invasion of trees and shrubs that shade out *L. cookii* plants and decrease available water (L. Mazzu, pers. comm. 1998).

Residential development and road building in the Illinois Valley also threaten populations of *Lomatium cookii*. For example, construction of a residential driveway and roto-tilling on private ground extirpated a Josephine County population of this species in 1991 (J. Kagan, pers. comm. 1998).

B. Overutilization for commercial, recreational, scientific, or educational purposes. *Lomatium cookii* and *Limnanthes floccosa* ssp. *grandiflora* have no known commercial, recreational, or scientific use at this time. No evidence exists of overcollection by botanists and/or horticulturists at this time. However, *Limnanthes floccosa* ssp. *grandiflora* may be of interest to collectors and researchers; some members of the genus have the potential to become important new crop plants because they possess a seed oil that exhibits stability at high temperature and pressure. This oil could be used as a lubricant for various industrial uses (University of California-Davis 1998). *Limnanthes alba*, a wildflower found in California, is now poised to become a multimillion dollar crop in the Willamette Valley of Oregon for its oil (Savonen 1997). To domesticate the species and improve strains, seeds were, and still are, collected from wild *L. alba*, as well as other *Limnanthes* species to cross with the domesticated plants. *Limnanthes floccosa* ssp. *grandiflora* could have this potential, though no known research has been conducted on this subject. This species may be sought for collection if its rarity and population locations become well known. Vandalism or intentional destruction also could occur. Most of the remaining populations of the species are so small, and their distribution so limited, that even limited collecting pressure could have significant adverse impacts.

Eighty-three percent of *Lomatium cookii* occurrences and 40 percent of *Limnanthes floccosa* ssp. *grandiflora* occurrences are concentrated on 2 ha (5 ac) of land or less. Easy access exists to

occurrences of these plants in the Agate Desert, and to *L. cookii* sites near Cave Junction, since they occur near heavily traveled roads. Most sites for these species lack fences or appropriate signs to discourage collectors or others from accessing the sites.

C. Disease or predation. No data exist to substantiate whether disease threatens *Lomatium cookii* or *Limnanthes floccosa* ssp. *grandiflora*. An unidentified *Ascomycete* fungus was responsible for the mortality of four *L. cookii* plants in a single population (Kagan 1987). Since this fungus has not been observed at other sites, no conclusions can be drawn regarding the threat of the fungus to the species as a whole. Predation has been observed on *L. cookii* from gophers, other rodents, and black-tailed jackrabbits feeding on vegetative portions; wireworms and other insect larvae eat the roots of plants, and insects prey on *L. cookii* seeds (Kagan 1987).

Cattle grazing causes substantial impacts to *Lomatium cookii* and *Limnanthes floccosa* ssp. *grandiflora*. Tracts heavily grazed from October to April are less likely to support these taxa. The majority of the seasonal growth occurs during the winter. If the plants are grazed during fall and winter, they are less likely to survive to produce seed in the spring or early summer (Brock 1987).

The effects of cattle grazing on *Lomatium cookii* and *Limnanthes floccosa* ssp. *grandiflora* are exemplified by the history of land use on what is now TNC's Agate Desert Preserve. Prior to TNC's acquisition of this tract, the area was grazed for a number of years. An estimated 480 individuals of *L. f.* ssp. *grandiflora* were noted at this site between 1984 and 1987. Cattle were removed in 1987, and in 1988, the *L. f.* ssp. *grandiflora* population had soared to over 7,000 individuals. By 1991, the population had grown to an estimated 17,600 plants, and it is now stable or increasing (D. Borgias, pers. comm. 1998). Despite the potential negative effects of fall to spring cattle grazing, carefully managed and timed grazing may actually reduce competition with introduced grass species (see Factor E of this section).

D. The inadequacy of existing regulatory mechanisms. The majority of *Lomatium cookii* and all *Limnanthes floccosa* ssp. *grandiflora* plants grow in association with vernal pools, which are classified as wetlands. Under section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (Corps) regulates the discharge of dredged or fill material into waters of the United States, including wetlands (33 CFR parts

320–330). To be in compliance with the Clean Water Act, parties are generally required to notify the Corps prior to undertaking any activity that would result in the discharge of fill, including soil, into wetlands under the Corps' jurisdiction. An individual permit is required in many cases. The Nationwide Permit Program (33 CFR part 330) was designed to eliminate the need for individual permits for some activities. Nationwide Permit Number 26, as conditioned by the Portland District of the Corps for application within the State of Oregon, allows the discharge of fill affecting up to only 0.8 ha (2 ac) of wetlands, if the wetlands are isolated or above the headwater point of a stream (average annual flow of less than 0.14 cubic meters per second (5 cubic feet per second)). Also, the permittee must notify the Corps prior to discharge and comply with the terms and conditions of the nationwide permit. Fills affecting less than 0.13 ha (0.32 ac) do not require Corps notification. However, the Corps is aware of the sensitivity of the Agate Desert vernal pools and may require individual permits on a case-by-case basis. The Clean Water Act does not regulate drainage of wetlands unless that action results in the discharge of dredged or fill material into a wetland.

Most *Lomatium cookii* and *Limnanthes floccosa* ssp. *grandiflora* sites occupy wetlands less than 2 ha (5 ac) in size, often in wetlands with no surface drainage to streams (*i.e.*, isolated). Therefore, activities resulting in the filling of vernal pools often fall under Nationwide Permit Number 26. Currently, the Corps is not required to request consultation under section 7 of the Act on fill activities that may affect *L. cookii*, *L. f.* ssp. *grandiflora*, or other unlisted species. If *L. cookii* and *L. f.* ssp. *grandiflora* are listed, consultation with us would be required by the Nationwide Permit conditions prior to the Corps authorization of an activity that would adversely affect the species. The Portland District has issued General Regulatory Conditions that accompany all nationwide permits. One of these conditions indicates that if at any time the permittee becomes aware of the presence of a listed species within the authorized project area, all work activity must cease immediately, the Corps must be notified, and work must not resume until approved by the Corps. If *L. cookii* and *L. f.* ssp. *grandiflora* are listed, these regulatory conditions would apply to the seasonal wetlands these species occupy.

State of Oregon wetland laws do not protect many *Lomatium cookii* or *Limnanthes floccosa* ssp. *grandiflora* sites due to their small size. The

Removal-Fill Law of 1989 (ORS 196.800–196.990), administered by the Oregon Division of State Lands, does not regulate activities that involve less than 38 cubic meters (m³) (50 cubic yards (yd³)) of fill. Such an amount of fill could seriously impact many smaller vernal pool wetlands in which *L. cookii* and *L. f.* ssp. *grandiflora* occur.

Lomatium cookii and *Limnanthes floccosa* ssp. *grandiflora* are listed as endangered species under the State of Oregon threatened or endangered plant law (OAR 603–73–070). In general, State-listed plant populations on private lands are not subject to this law. The law prohibits the "take" of State-listed plants only on State, county, and city-owned or leased lands. And on these lands, the State law does not guarantee the protection of State-listed plants because it allows for the loss of populations if a proposed project or activity is considered to be a public benefit (Tom Kaye, Oregon State University, pers. comm. 1999). Because *Lomatium cookii* is listed as a Federal candidate, lands owned by the BLM will seek to provide a protection buffer when a plant population may be impacted by a proposed project (e.g., mining permit) (L. Mazzu, pers. comm. 1999).

E. Other natural or manmade factors affecting its continued existence. Herbicide spraying, mowing, grading, and other road maintenance activities threaten small *Lomatium cookii* sites adjacent to roads on private lands near Cave Junction in the Illinois Valley. In the Agate Desert, *L. cookii* and *Limnanthes floccosa* ssp. *grandiflora* individuals in road or powerline rights-of-way could be accidentally destroyed by local public works departments, highway districts, fire departments, or private citizens when carrying out maintenance activities (Rose Hayden-Owens, ODOT, pers. comm. 1998).

Invasion of nonnative annual plants in the Agate Desert altered native perennial plant communities (Brock 1987) where *Lomatium cookii* and *Limnanthes floccosa* ssp. *grandiflora* grow. Native bunch grasses on mounds between vernal pools have been replaced by introduced European grasses such as *Bromus mollis* (brome grass), *Taeniatherum caput-medusae* (medusahead), *Cynosurus echinatus* (dogtail), and *Poa bulbosa* (bluegrass). *Taeniatherum caput-medusae* competes with *L. cookii* and *L. f.* ssp. *grandiflora* on seasonally wet mounds between the pools. Seeds of both the native taxa are not able to germinate under the dense thatch produced by introduced annual species. Competition with introduced plant species is exacerbated on the Denman Wildlife Area, where game bird

food plots are seeded with nonnative plant species. Brock (1987) supports the contention that the main cause of the reduction of *L. cookii* populations has been intensive cattle grazing accompanied by the negative competitive effects of introduced grasses, specifically *T. caput-medusae*.

Mowing, burning, light grazing, or even raking of vernal pool habitat after *Lomatium cookii* and *Limnanthes floccosa* ssp. *grandiflora* seeds have matured, but before the fall growth period, may help reduce plant cover from exotic annual plants (Brock 1987). In a small experiment conducted on the Preserve, germination and seedling survivorship of the rare plants was increased on plots that were raked, as compared with untreated, or raked and scarified plots (D. Borgias, pers. comm. 1998).

Catastrophic events, such as fire, could eliminate the large occurrences of *Lomatium cookii* and *Limnanthes floccosa* ssp. *grandiflora* located on the Preserve (J. Kagan, pers. comm. 1998). Demographic extinction is possible for nine other occurrences of *L. cookii*, mostly in the French Flat area, because of their small size (fewer than 100 plants). Many of the known French Flat sites are found directly adjacent to roads, increasing the possibility of extirpation.

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by *Lomatium cookii* and *Limnanthes floccosa* ssp. *grandiflora* in determining to propose this rule. These species occupy an extremely restricted geographic range, with roughly 80 ha (200 ac) and 47 ha (116 ac) of known occupied habitat for *L. cookii* and *L. f. ssp. grandiflora*, respectively. The majority of these plants' remaining occupied habitat is threatened by commercial, industrial, and residential development; road and utilities construction and maintenance, including herbicide spraying; leveling for agriculture or pasture; ill-timed grazing or mowing; competition with introduced plants; mining; ORV use; certain timber sale activities; encroachment of trees and shrubs associated with fire suppression; and random natural events. Based on this evaluation, the preferred action is therefore to propose the listing of *L. cookii* and *L. f. ssp. grandiflora* as endangered species. Other alternatives to this action were considered but not preferred because not listing or listing as threatened would not be consistent with the Act.

Critical Habitat

Critical habitat is defined in section 3, paragraph (5)(A) of the Act as the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protection; and specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of the Act, upon a determination by the Secretary that such areas are essential for the conservation of the species. "Conservation" means the use of all methods and procedures needed to bring the species to the point at which listing under the Act is no longer necessary.

Critical habitat designation, by definition, directly affects only Federal agency actions through consultation under section 7(a)(2) of the Act. Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species or destroy or adversely modify its critical habitat.

Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.12) require that, to the maximum extent prudent and determinable, we designate critical habitat at the time the species is determined to be endangered or threatened. Our regulations (50 CFR 424.12(a)(1)) state that the designation of critical habitat is not prudent when one or both of the following situations exist—(1) the species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the degree of threat to the species, or (2) such designation of critical habitat would not be beneficial to the species.

The Final Listing Priority Guidance for FY 1999/2000 (64 FR 57114) states that the processing of critical habitat determinations (prudence and determinability decisions) and proposed or final designations will no longer be subject to prioritization under the Listing Priority Guidance. Critical habitat determinations, which were previously included in final listing rules published in the **Federal Register**, may now be processed separately, in which case stand-alone critical habitat determinations will be published as notices in the **Federal Register**. We will undertake critical habitat determinations and designations during

FY 2000 as allowed by our funding allocation for that year. As explained in detail in the Listing Priority Guidance, our listing budget is currently insufficient to allow us to immediately complete all of the listing actions required by the Act.

We propose that critical habitats designations are prudent for both *Lomatium cookii* and *Limnanthes floccosa* ssp. *grandiflora*. In the last few years, a series of court decisions have overturned Service determinations regarding a variety of species that designation of critical habitat would not be prudent (e.g., *Natural Resources Defense Council v. U.S. Department of the Interior* 113 F. 3d 1121 (9th Cir. 1997); *Conservation Council for Hawaii v. Babbitt*, 2 F. Supp. 2d 1280 (D. Hawaii 1998)). Based on the standards applied in those judicial opinions, we believe that designation of critical habitat would be prudent for both *L. cookii* and *L. f. ssp. grandiflora*.

Due to the small number of populations both, *Lomatium cookii* and *Limnanthes floccosa* ssp. *grandiflora* are vulnerable to unrestricted collection, vandalism, or other disturbance. We are concerned that these threats might be exacerbated by the publication of critical habitat maps and further dissemination of locational information. However, at this time we do not have specific evidence for either *Lomatium cookii* or *Limnanthes floccosa* ssp. *grandiflora* of taking, vandalism, collection, or trade of this species or any similarly situated species. Consequently, consistent with applicable regulations (50 CFR 424.12(a)(1)(i)) and recent case law, we do not expect that the identification of critical habitat will increase the degree of threat to this species of taking or other human activity.

In the absence of a finding that critical habitat would increase threats to a species, if there are any benefits to critical habitat designation, then a prudent finding is warranted. In the case of this species, there may be some benefits to designation of critical habitat. The primary regulatory effect of critical habitat is the section 7 requirement that Federal agencies refrain from taking any action that destroys or adversely modifies critical habitat. While a critical habitat designation for habitat currently occupied by this species would not be likely to change the section 7 consultation outcome because an action that destroys or adversely modifies such critical habitat would also be likely to result in jeopardy to the species, there may be instances where section 7 consultation would be triggered only if

critical habitat is designated. Examples could include unoccupied habitat or occupied habitat that may become unoccupied in the future. There may also be some educational or informational benefits to designating critical habitat. Therefore, we propose that critical habitat is prudent for both *Lomatium cookii* and *Limnanthes floccosa* ssp. *grandiflora*. However, the deferral of the critical habitat designation for these species will allow us to concentrate our limited resources on higher priority critical habitat (including court ordered designations) and other listing actions, while allowing us to put in place protections needed for the conservation of both *L. cookii* and *L. f. ssp. grandiflora* without further delay. However, because we have successfully reduced, although not eliminated, the backlog of other listing actions, we anticipate in FY 2000 and beyond giving higher priority to critical habitat designation, including designations deferred pursuant to the Listing Priority Guidance, such as the designation for these species, than we have in recent fiscal years.

We plan to employ a priority system for deciding which outstanding critical habitat designations should be addressed first. We will focus our efforts on those designations that will provide the most conservation benefit, taking into consideration the efficacy of critical habitat designation in addressing the threats to the species, and the magnitude and immediacy of those threats. We will make the final critical habitat determination with the final listing determination for both *Lomatium cookii* and *Limnanthes floccosa* ssp. *grandiflora*. If this final critical habitat determination is that critical habitat is prudent, we will develop a proposal to designate critical habitat for both *Lomatium cookii* and *Limnanthes floccosa* ssp. *grandiflora* as soon as feasible, considering our workload priorities. Unfortunately, for the immediate future, most of Region 1's listing budget must be directed to complying with numerous court orders and settlement agreements, as well as due and overdue final listing determinations.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain activities. Recognition through listing results in public awareness and conservation actions by Federal, State, and local agencies, private organizations, and

individuals. The Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. The protection required of Federal agencies and the prohibitions against certain activities involving listed plants are discussed, in part, below.

Section 7(a) of the Act, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) of the Act requires Federal agencies to confer with us on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into consultation with us.

Seven occurrences of *Lomatium cookii* exist on Federal land managed by the BLM. Should this species be listed, BLM actions that may affect the species (including permits governing mining activities) would be subject to section 7 of the Act. BLM has conducted some conservation actions for *L. cookii*, including regular surveys of certain sites and attempts to exclude ORVs from vulnerable populations (L. Mazzu, pers. comm. 1998). The Federal Aviation Administration could be involved in section 7 consultation on the Medford Airport project. In areas that presently support *L. cookii* or *Limnanthes floccosa* ssp. *grandiflora*, housing loans insured by the Department of Housing and Urban Development could be subject to consultation.

The Corps has been involved with vernal pool protection through its permitting authority under section 404 of the Clean Water Act. By regulation, Corps permits may not be issued where a federally listed endangered or threatened species may be affected by the proposed project without first completing consultation pursuant to section 7 of the Act. Due to the recent discovery of the threatened vernal pool fairy shrimp in the Agate Desert, consultation will now be required for wetland fills in the area. Consultation

would also be required for the two plants that are the subject of this rulemaking, should they be listed.

In 1997, the Oregon Department of Corrections was considering placing a new prison facility in the Agate Desert area (D. Borgias, pers. comm. 1999). One of the potential locations for this facility would have impacted a number of extant *Lomatium cookii* and *Limnanthes floccosa* ssp. *grandiflora* sites. This location was not chosen. However, any further developments of this nature requiring Federal involvement would require consultation pursuant to section 7 of the Act for the vernal pool fairy shrimp, and for the two plants that are the subject of this proposed rulemaking, should they be listed.

With regard to recovery, *Lomatium cookii* and *Limnanthes floccosa* ssp. *grandiflora* plants in the Agate Desert may be able to repopulate a site that was disturbed, if the hard pan soil layer and the historical or otherwise appropriate hydrologic patterns remain intact. These plants may also be able to repopulate historical habitat naturally, if a sufficient amount of seed remains in the soil and young plants are not grazed or sprayed (J. Kagan, pers. comm. 1998). For example, *L. cookii* appears to have repopulated the Antelope Road site after the area was leveled in the 1940's. Plant numbers at this site, however, decreased from 1,000 in 1987 to 500 in 1992. The reason for this decline is unknown. The Avenue H site was leveled in 1954 but the site was repopulated because the hard pan layer was not disturbed, thus allowing soil moisture to remain sufficiently high. Plant counts at this site also decreased from approximately 14,000 in 1987 to 6,000 in 1992, again for unknown reasons (J. Kagan, pers. comm. 1998). Any proposed habitat creation or restoration work for these plants would require careful planning prior to implementation, and close monitoring thereafter.

The Oregon Department of State Parks has undertaken protective measures for the *Lomatium cookii* site that occurs on park property. The Department recently fenced the entrance road to exclude ORV use from areas near the road where this rare plant occurs. The Departments proposed plans for a campground in the area will be designed to protect this rare plant (M. Stenberg, pers. comm. 1998).

Listing these two plants would provide for development of a recovery plan (or plans). Such plan(s) would bring together both State and Federal efforts for conservation of the plants. The plan(s) would establish a framework for agencies to coordinate activities and cooperate with each other in conservation efforts. The plan(s)

would set recovery priorities and estimate costs of various tasks necessary to accomplish them. The plan(s) also would describe site-specific management actions necessary to achieve conservation and survival of the two plants. Additionally, pursuant to section 6 of the Act, we would be able to grant funds to the State of Oregon for management actions promoting the protection and recovery of these species.

The Act and its implementing regulations set forth a series of general prohibitions and exceptions that apply to all endangered plants. All prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, for endangered plants, apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export, transport in interstate or foreign commerce in the course of a commercial activity, sell or offer for sale in interstate or foreign commerce, or remove and reduce to possession from areas under Federal jurisdiction any such plant. In addition, the Act prohibits malicious damage or destruction on areas under Federal jurisdiction and the removal, cutting, digging up, or damaging or destroying of such plants in knowing violation of any State law or regulation, or in the course of violation of State criminal trespass law. Certain exceptions to the prohibitions apply to our agents and State conservation agencies.

The Act and 50 CFR 17.62 and 17.63 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered plant species. Such permits are available for scientific purposes and to enhance the propagation or survival of the species. We anticipate that few trade permits would ever be sought or issued because these plants are not in cultivation or common in the wild.

As published in the **Federal Register** on July 1, 1994 (59 FR 34272), it is our policy to identify to the maximum extent practicable at the time a species is listed those activities that would or would not constitute a violation of section 9 of the Act. The intent of this policy is to increase public awareness of the effect of this listing on proposed and ongoing activities within the species' range. *Limnanthes floccosa* ssp. *grandiflora* is not presently known to occur on Federal land, although two occurrences are known from the vicinity of Table Rock, where BLM manages some land. *Lomatium cookii* is known to occur on lands under the jurisdiction of the BLM.

We believe that, based upon the best available information, the following

actions affecting these plants on Federal property would not likely result in a violation of section 9, provided these activities are carried out in accordance with existing regulations and permit requirements:

(1) Activities authorized, funded, or carried out by Federal agencies (e.g., livestock grazing, agricultural conversions, wetland and riparian habitat modification, flood and erosion control, residential development, recreational trail development, road construction, hazardous material containment and cleanup activities, prescribed burns, pesticide/herbicide application, pipelines or utility lines crossing suitable habitat) when such activity is conducted in accordance with any reasonable and prudent measures given by us in a consultation conducted under section 7 of the Act;

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

(3) Activities on private lands that do not require or involve Federal funding, permits, or authorization, such as livestock grazing, agricultural conversions, flood and erosion control, residential development, road construction, and pesticide/herbicide application when consistent with label restrictions; and

(4) Residential landscape maintenance (including irrigation) and the clearing of vegetation around one's personal residence as a firebreak.

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

(1) Unauthorized collecting of the species on Federal lands; and

(2) Interstate or foreign commerce and import/export without previously obtaining an appropriate permit. Permits to conduct activities are available for purposes of scientific research and enhancement of propagation or survival of the species.

Questions regarding whether specific activities would constitute a violation of section 9 should be directed to the State Supervisor of our Oregon State Office (see **ADDRESSES** section).

Requests for copies of the regulations regarding listed plants and inquiries regarding prohibitions and permits may be addressed to the U.S. Fish and Wildlife Service, Ecological Services, Endangered Species Permits, 911 N.E. 11th Avenue, Portland, Oregon, 97232-4181 (telephone 503/231-2063; facsimile 503/231-6243).

Public Comments Solicited

We intend that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, we solicit comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule. Comments are particularly sought concerning:

(1) Biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to *Lomatium cookii* or *Limnanthes floccosa* ssp. *grandiflora*;

(2) The location of any additional occurrences of *L. cookii* or *L. f.* ssp. *grandiflora* and the reasons why any habitat of these species should or should not be determined to be critical habitat pursuant to section 4 of the Act;

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

(4) Current or planned activities in the subject areas, including possible mining operations on federally managed land, and their possible impacts on *L. cookii* or *L. f.* ssp. *grandiflora*.

A final determination on *Lomatium cookii* and *Limnanthes floccosa* ssp. *grandiflora* will take into consideration the comments and any additional information received by us, and such communications may lead to a final determination that differs from this proposal.

You may submit comments and materials on this proposal should in person or by mail to: Field Supervisor, U.S. Fish and Wildlife Service, Oregon State Office, 2600 S.E. 98th Avenue, Portland, Oregon 97266. Alternatively, you may send comments via the Internet to loli@r1.fws.gov. Please submit Internet comments as an ASCII file avoiding the use of special characters and any form of encryption. Please also include "Attn: RIN 1018-AF84" and your name and return address in your Internet message. If you do not receive a confirmation from the system that we have received your Internet message, please contact us directly by calling our Oregon State Office at phone number 503-231-6179. Please note that the Internet address "loli@r1.fws.gov" will be closed out at the termination of the public comment period.

Comments and materials received, will be available for public inspection, by appointment, during normal business hours at the above address. Our practice is to make comments, including names and home addresses of respondents, available for public review. We will make all submissions from

Dated: April 12, 2000.

Jamie Rappaport Clark,

Director, Fish and Wildlife Service.

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AF98

Endangered and Threatened Wildlife and Plants; Reopening of Comment Period on Proposed Determination of Critical Habitat for the Alameda Whipsnake (*Masticophis lateralis euryxanthus*)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule; reopening of comment period and notice of public hearing.

SUMMARY: The U.S. Fish and Wildlife Service (Service) gives notice of a public hearing on the proposed rule to designate critical habitat for the threatened Alameda whipsnake (*Masticophis lateralis euryxanthus*). In addition, the comment period which originally closed on May 8, 2000, will be reopened. The new comment period and hearing will allow all interested parties to submit oral or written comments on the proposal. We are seeking comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested parties concerning the proposed rule. Comments already submitted on the proposed rule need not be resubmitted as they will be fully considered in the final determination.

DATES: The comment period for this proposal now closes on June 12, 2000. Any comments received by the closing date will be considered in the final decision on this proposal. The public hearing will be held from 1:00 p.m. to 3:00 p.m. and from 6:00 p.m. to 8:00 p.m. on June 1, 2000, in San Ramon, California.

ADDRESSES: The public hearing will be held at the San Ramon Marriott, 2600 Bishop Drive, Salon E, San Ramon, California. Comments and materials concerning this proposal should be sent to the Field Supervisor, Sacramento Fish and Wildlife Office, U.S. Fish and Wildlife Service, 2800 Cottage Way, Suite W-2605, Sacramento, California 95825. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT:

Jason Davis or Heather Bell, at the above address, phone 916-414-6600, facsimile 916-414-6710.

SUPPLEMENTARY INFORMATION:

Background

On March 8, 2000, the Service published a proposed rule to designate critical habitat for the threatened Alameda whipsnake in the **Federal Register** (65 FR 12155). The original comment period closed on May 8, 2000. The comment period now closes on June 12, 2000. Written comments should be submitted to the Service (see **ADDRESSES** section).

A total of approximately 164,663 hectares (406,708 acres) of land fall within the boundaries of the proposed critical habitat designation. Proposed critical habitat is located in Contra Costa, Alameda, San Joaquin, and Santa Clara counties, California. If this proposal is made final, section 7 of the Act prohibits destruction or adverse modification of critical habitat by any activity funded, authorized, or carried out by any Federal agency. Section 4 of the Act requires us to consider economic and other impacts of specifying any particular area as critical habitat.

Section 4(b)(5)(E) of the Act (16 U.S.C. 1531 *et seq.*), requires that a public hearing be held if it is requested within 45 days of the publication of a proposed rule. In response to three such requests, the Service will hold a public hearing on the date and at address described in the **DATES** and **ADDRESSES** sections above.

Anyone wishing to make an oral statement for the record is encouraged to provide a written copy of their statement and present it to the Service at the hearing. In the event there is a large attendance, the time allotted for oral statements may be limited. Oral and written statements receive equal consideration. There are no limits to the length of written comments presented at the hearing or mailed to the Service. Legal notices announcing the date, time, and location of the hearing will be published in newspapers concurrently with the **Federal Register** notice.

Comments from the public regarding the accuracy of this proposed rule are sought, especially regarding:

(1) The location of any additional populations of Alameda whipsnakes and the reasons why any habitat should or should not be determined to be critical habitat;

(2) Additional information regarding the validity of the primary constituent elements described in the proposed rule; and (3) Additional information regarding areas that may be essential as travel corridors for connecting individual Alameda whipsnake populations.

Reopening of the comment period will enable the Service to respond to the request for a public hearing on the proposed action. The comment period on this proposal now closes on June 12, 2000. Written comments should be submitted to the Service office listed in the **ADDRESSES** section.

Author

The primary authors of this notice are Jason Davis and Heather Bell (see **ADDRESSES** section).

Authority

The authority for this action are the Endangered Species Act of 1973 (16 U.S.C. 1531 *et seq.*).

Dated: May 2, 2000.

John Engbring,

Manager.

[FR Doc. 00-11450 Filed 5-12-00; 8:45 am]

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