

APPENDIX J – PLANTS SPECIES AND EFFECTS

The following information is a brief description of the 20 Sensitive species known to occur or have potential habitat in the FC–RONRW. The following species information is from the 1999 Idaho Native Plant Conference proceedings and Idaho Conservation Data Center (ICDC) database Element Occurrence records, 1998.

Allium validum, Tall swamp onion

This species is sparsely distributed and occurs in swampy meadows, seeps and along streams in subalpine habitats, above elevations of 4000 feet. The tall swamp onion forms dense clumps in sedge-dominated wet meadows and is easy to distinguish from surrounding vegetation, even in a vegetative state, by its flat, succulent, relatively wide, light green leaves. A capitate cluster with many bright pink flowers usually stands above the surrounding, mostly graminoid vegetation. This species flowers in July and August.

Allotropa virgata, Candystick

Candystick is a coastal disjunct which is restricted to central Idaho and adjacent Montana in its inland range. Its preferred habitat is lodgepole pine forest, most often with beargrass, grouse whortleberry, and blue huckleberry. This species lacks chlorophyll and has a red and white striped stem and flowers. It is dependent on a symbiotic relationship between a conifer tree and a mycorrhizal fungus (which grows on the tree's roots) for survival. Ground disturbance destroys candystick's shallow roots, and removal of the host tree breaks the symbiotic balance, resulting in loss of the plant. Most occurrences are in the cool Douglas fir and high elevation forest. This species is known to occur in the wilderness area.

Astragalus paysonii, Payson's milkvetch

This species is a regional endemic known only from central and southeastern Idaho and southern Wyoming. The milkvetch is a perennial, which has small white flowers from June to August. It is a seral species that requires mineral soil (from disturbances such as fire or landslides) for establishment. Fire suppression (which contributes to plant succession and canopy closure) may be decreasing the potential habitat for this species (Lorain 1990). The habitat for Payson's milkvetch is openings within coniferous forests of ponderosa pine, Douglas fir, and sometimes lodgepole pine. This species is known to occur in the wilderness area.

Botrychium lanceolatum var. lanceolatum, Lanced-leaved moonwort

This species is sparsely distributed and occurs in a variety of habitats such as grassy and rocky slopes, woods, and roadsides. It generally occurs at fairly high elevations 1500 – 6000 feet.

Botrychium pinnatum, Northern moonwort

This species is sparsely distributed within shaded moist sites under conifers; dry to moist meadows, at 1500 to 8000 feet.

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Bryum calobryoides, beautiful bryum

Rare in the Western United States, this species grows in cool, moist sites on cliff faces at an elevation range of 3000 to 6000 feet. There is potential habitat for the beautiful bryum in the FC–RONRW.

Buxbaumia aphylla, Leafless bug on-a -stick

This is a rare, inconspicuous moss, which is sparsely distributed throughout northwestern North America, Europe, and China. Its habitat is restricted to old growth areas in moist grand fir forests, where it grows on large diameter decayed logs. There is minimal grand fir habitat in the FC–RONRW.

Buxbaumia viridis, Green bug-on-a-stick

This rare, inconspicuous moss that is sparsely distributed throughout the northwestern North America, Europe, and China. Its habitat is restricted to old growth areas in moist grand fir forests, where it grows on large diameter decayed logs. It is known to occur or have habitat in one location on the Nez Perce National Forest. There is minimal grand fir habitat in the FC–RONRW.

Calamagrostis tweedyi, Cascade reedgrass

This perennial grows in subalpine slopes and moist meadows, often found in timber. This species is known to occur in the FC–RONRW.

Carex buxbaumii, Buxbaum's sedge

This sedge is a circumboreal species, which is uncommon in North America. It is known to occur on one location on the Nez Perce National Forest, but has not been found in the wilderness area. Its habitat is peat bogs and wet meadows, at elevations from 2000 to 6500 feet. Like most wet site sedges, this species would probably only be top-killed by fire, since the rhizomes would be protected in wet soil (Elzinga and Rosentreter, 1998). Potential habitat is grassland riparian cover type.

Carex hendersonii, Henderson's sedge

This large vigorous sedge species is a coastal disjunct, found inland only in north-central Idaho. The habitat is moist shaded western red cedar and grand fir forests, generally on streamside alluvial benches in low elevation river canyons. Associated species include grand fir, Pacific yew, red-osier dogwood, and wild ginger.

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Cetraria subalpina, Iceland-moss lichen

This species occurs on rotten logs, peaty soil and humus, in shady, humid coniferous forests, from low to subalpine elevations, usually on rotten logs in an advanced stage of decay.

Cypripedium fasciculatum, Clustered Lady's – Slipper

This locally rare orchid species is distributed throughout the Rocky Mountains. It is typically found in mid to late seral plant communities, in habitat ranging from cool moist western red cedar, to warm, dry grand fir and Douglas fir, often in old growth. Flowering occurs April through July. Canopy removal leads to reduced numbers, or in some cases loss of the population (Greenlee 1997). It is found in the Nez Perce National Forest, but there are no known occurrences in the wilderness.

Douglasia idahoensis, Idaho douglasia

Idaho douglasia is a mat-forming perennial. The habitat is subalpine, open, gravelly sites. Some associated species are subalpine fir and beargrass.

Epipactis gigantea, Giant helleborine

The giant helleborine is an orchid that is sparsely distributed throughout the intermountain west. Its habitat is restricted to thermal and calcareous springs, bogs, and fens. There is suitable habitat along both the Middle Fork and Salmon Rivers and there are documented occurrences of this plant. Monitoring has been conducted numerous times for this plant at Barth Hotspring with the most recent monitoring occurring in 2003 (Hanson, 2003). The 2003 Monitoring results documented two plants growing along side the trail leading from the river to the hot spring and numerous plants behind and above the hot springs in the rocks and cliffs. The survey also indicated that this plant species seemed to be secure and there are currently more plants now than in the past. In addition to Barth Hot Springs, there are other known occurrences of this plant along both rivers.

Halimolobos perplexia var. *perplexa* and *lemhiensis*, Puzzling halimolobos

Puzzling halimolobos is another regional endemic. There are two varieties: *perplexa*, known only from the Salmon River watershed in west central Idaho, and *lemhiensis*, which has populations in east-central Idaho and adjacent Montana. Like Payson's milkvetch, it is a seral species requiring disturbance and bare soil to become established. Its habitat is gravelly, sandy, or grassy slopes adjacent to rock outcrops in open ponderosa pine and Douglas fir forests.

Mimulus clivicola, bank monkey flower

This species is a regional endemic known from north and west-central Idaho and extreme northeastern Oregon. It is a diminutive annual with a showy pink flower, which blooms from

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late May through mid-July. The general habitat is open ponderosa pine stands within a mesic macroclimate (such as a moist drainage). The specific habit requirements are very restricted: south aspects between 1500 and 4100 feet, in moist pockets of open mineral soil (such as depressions in a big game trail).

Penstemon lemhiensis, Lemhi penstemon

This plant is a tall perennial regional endemic, known from east-central Idaho and adjacent Montana. Its blue flowers appear in June to July. Lemhi penstemon is an early serial species, which requires bare soil to become established. It occurs in a variety of habitats, including dry grasslands, big sagebrush/Idaho fescue communities, and open conifers/grasslands of ponderosa pine and Douglas fir. Elevations range from 3200 to 8100 feet.

Sphagnum mendocinum, Mendocino sphagnum

The Mendocino sphagnum's habitat is poor to rich fens, apparently always confined to somewhat minerotrophic sites. In different places within its range it is known from near sea level to high in the mountains.

Waldsteinia idahoensis, Idaho barren strawberry

This species is endemic to north-central Idaho. The strawberry-like leaves are a distinctive shiny dark green, and the flowers are yellow. Its habitat is moist grand fir forests, under closed canopies and in forest openings. Canopy opening may increase reproduction in the short-term, and low-intensity fire will not affect the species (Crawford 1980).

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| Table I.1 Sensitive Plant Species for the FC–RONRW | | | | | |
|---|---|-------------------------|--|------------------------|------------------------------------|
| Sensitive Plant / <i>Species Name</i> | Species more at risk from Proposed Activities | Geographic Distribution | Habitat or Community Type | Elevation Range (feet) | Phenology (flowers or sporophytes) |
| <i>Allium validum</i> , tall swamp onion | YES | Sparsely distributed | Swampy meadows, seeps & along streams in subalpine habitats | Above 4,500 feet | July - August |
| <i>Allotropa virgata</i> , Candystick | NO | Coastal Disjunct | Lodgepole pine, beargrass, well drained, infertile soils | 4000 – 7000 feet | June - July |
| <i>Astragalus paysonii</i> , Payson's milkvetch | NO | Regional Endemic | Openings/gaps in mixed conifer forests | 4000 – 7000 feet | June - August |
| <i>Botrychium lanceolatum</i> var. <i>lanceolatum</i> , Lanced – leaved moonwort | YES | Sparsely distributed | Shaded moist sites under conifers; dry to moist meadows | 1500 –6,000 feet | Leaves, June - August |
| <i>Botrychium pinnatum</i> , Northern moonwort | YES | Sparsely Distributed | Shaded moist sites under conifers; dry to moist meadows | 1500 – 6000 feet | Leaves, June - August |
| <i>Bryum calabryoides</i> , beautiful bryum | NO | Rare in the Western US | Cool, moist sites on cliff faces | 3000 – 6000 feet | N/A |
| <i>Buxbaumia aphylla</i> , Leafless bug on-a - stick | NO | Sparsely distributed | Openings in moist grand fir forest on large decayed logs/ash soils | 1500 – 5000 feet | June - September |
| <i>Buxbaumia aphylla</i> , green bug on-a - stick | NO | Sparsely distributed | Openings in moist grand fir forest on large decayed logs/ash soils | 1500 – 5000 feet | June - September |

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| Sensitive Plant / <i>Species Name</i> | Species more at risk from Proposed Activities | Geographic Distribution | Habitat or Community Type | Elevation Range (feet) | Phenology (flowers or sporophytes) |
| | | | logs/ash soils | | |
| <u><i>Calamagrostis tweedyi</i></u> , Cascade reedgrass | NO | Regional Endemic | Openings/meadows/ beargrass /subalpine fir | 7000 – 8000 feet | June - July |
| <u><i>Carex buxbaumii</i></u> , Buxbaum's sedge | YES | Circumboreal/ uncommon | Peat bogs and wet meadows | 2000 – 6500 feet | August |
| <u><i>Carex hendersonii</i></u> , Henderson's sedge | NO | Costal Disjunct | Shaded understory of western red cedar; streamside benches in river canyons | 2000 – 4000 feet | May - June |
| <u><i>Cetraria subalpina</i></u> , <i>Cetraria</i> lichen | NO | Coastal Disjunct | Subalpine zone on ericaceous shrubs | Above 6000 feet | July - October |
| <u><i>Cypripedium Fasciculatum</i></u> , Clustered Lady's - Slipper | NO | Sparsely distributed | Partial shade of moist cedar, grand fir, or Douglas fir | 1600 – 4,800 feet | |
| <u><i>Douglasia idahoensis</i></u> , Idaho douglasia | NO | Local Endemic | Open, broad, subalpine ridges; unstable granitic substrate | 7000 – 8000 feet | July |
| <u><i>Epipactis gigantea</i></u> , Giant helleborine | YES | Sparsely distributed | Mineral seeps and springs, thermal areas | 1800 – 5000 feet | June - July |

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| Table I.2 Sensitive Plant Species for the FC–RONRW | | | | | |
|---|----|------------------|---|------------------|------------------------|
| <u><i>Halimolobos perplexia</i></u> var. <u><i>perplexa</i></u> , Puzzling halimolobos | NO | Local Endemic | Ponderosa pine/ grassland zone adjacent to rock outcrops in shallow soils | 3000- 7300 feet | May - June |
| <u><i>Mimulus clivicola</i></u> , Bank monkey flower | NO | Regional Endemic | Pockets of exposed soil in grassland and open ponderosa pine | 2000 – 4000 feet | June |
| <u><i>Penstemon lemhiensis</i></u> , Lemhi penstemon | NO | Local Endemic | Grasslands and open ponderosa pine stands | 3200 –8100 feet | June |
| <u><i>Sphagnum mendocinum</i></u> , Mendocino sphagnum | NO | Coastal Disjunct | Wetlands in montane – subalpine zone | Above 5500 | Surveys July - October |
| <u><i>Waldsteinia idahoensis</i></u> , Idaho strawberry | NO | Local Endemic | Open forest of red fir, subalpine fir, red cedar | 3000 – 5000 feet | June - July |

Plant Effects

Threatened and Endangered Plant Species

There is no potential habitat or known occurrences for any threatened or endangered plant species in the FC–RONRW. Therefore, there would be no effects to any of these species from any of the alternatives.

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Sensitive Plant Species

Sensitive plant species are susceptible to human activities such as hiking, camping, recreational livestock grazing (horses and llamas), permitted livestock grazing, trail riding, and river floating. The potential for greatest risk to sensitive plants is in areas where recreational use is concentrated such as portal or trailheads, primary trails, administrative sites, designated camping sites along the main river corridors, landing strips, and high use areas that contain outstanding. There are four sensitive species (tall swamp onion, lance-leaved moonwort, northern moonwort, and Buxbaum's sedge) that occur either in or around lake basins, wet meadows, moist sites, or spring seeps or have habitat where the concentration of human use is considered high. Within these areas, individual species could be affected from the recreational activities, including being grazed by recreational livestock. However, these activities should not reduce that plant species overall population viability. Actions proposed under any of the alternatives in these habitat types could also affect individual plants, but again would not reduce that plant species overall population viability.

The giant helleborine as stated in Chapter 3 occurs in minerotrophic seeps, springs and thermal waters. This species and its habitat occur along both the Middle Fork and Salmon Rivers. Existing and proposed recreational activities have the potential to affect this species, especially near the trail to Barth Hotspring and other heavily visited hot springs. Monitoring has indicated this sensitive plant at Barth Hotspring is secure. However, other documented areas have habitat that could be degraded by noxious weeds and other exotics. Existing and proposed actions, under any of the alternatives, could affect individual plants but would not reduce this plant species' overall population viability.

In addition to the 5 sensitive plant species listed above, 13 other sensitive plant species have potential habitat within the FC-RONRW. These species occur in habitat where human activity is considerably less than the high attraction areas. Because the use of these habitat areas is less, potential effects to the 13 sensitive plants species would be reduced. Individual plants could be affected by existing recreational activities or proposed actions under any of the alternatives. However, this would not reduce any of these plant species overall population viability.

Other Rare Plant Species

There is potential habitat for Kellogg's lewisia, bent-flower milkvetch, Borsch's stonecrop, least moonwort, slender lungwort, Davis' stickseed, pored lungwort, blandow's helodium, wolf's currant, gray willow, Sierra sanicle, short-style tofieldia, and nail lichen. Three of these species: Davis' stickseed, pored lungwort and blandow's helodium have known occurrences in the FC-RONRW.

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The current activities that are occurring in the FC–RONRW or the proposed actions in all of the alternatives could affect some individual Forest Watch rare plants but should not reduce that

Management Indicator Species

Western yarrow and Canadian thistle are MIS plants that indicate disturbance in riparian areas. Within the FC–RONRW, there are many areas where these species occur because of either existing recreational use or natural processes. The 2000 fires caused considerable disturbance in the wilderness and these plants have shown up in riparian areas. In areas along the two river corridors, most of the more heavily used campsite areas/hotspring areas have Canadian thistle growing. Under all the alternatives, there could be a slight increase in Canadian thistle or western yarrow in the existing disturbed areas from overnight camping or trailing to hotspring.

Cumulative Effects – TES and MIS Plants

The cumulative effects analysis area would be restricted to the 2.4 million acre wilderness boundary. All past and present effects from activities within the wilderness are considered the existing condition and have been analyzed above for all TES and MIS plants. The only foreseeable future action planned for the wilderness is the treatment of noxious weeds. Treatment plans for noxious weeds include inventory or site assessments, mechanical, or spraying. Mitigation measures have been identified in the 1999 Noxious Weed EIS and these measures would be applied to the supplement to the EIS. The mitigation measures are designed to protect and maintain population viability and habitat of TES plants and will be incorporated into future treatment practices. Therefore, there would not be any cumulative effects to TES or MIS plants under any of the alternatives.