

Biological Evaluation

PROPOSED, ENDANGERED, THREATENED AND SENSITIVE PLANT SPECIES  
Beaverhead-Deerlodge National Forest

Project Name: Barton Springs Commercial Thinning  
Ranger District: Pintler Ranger District

Date: June 4, 2007

PREFIELD REVIEW

The R1 Sensitive vascular plant list dated October 2004 was reviewed. The forest sensitive plant GIS coverage was checked for occurrence of managed or protected areas in proposed project area. Yes X No \_\_\_\_\_

Known occupied habitat occurs in the project area. Yes \_\_\_\_\_ No X

Protected or managed habitat occurs in proposed project area. Yes \_\_\_\_\_ No X

FIELD RECONNIASSANCE

Pre-disturbance Survey required: Yes X No \_\_\_\_\_

Site was surveyed on: June 1, 2007

Type of survey performed: Field Check X Intuitive Controlled \_\_\_\_\_ Complete \_\_\_\_\_

**Results of field survey:** The proposed Barton Springs Commercial Thinning Project was dominated by *Pinus ponderosa* (ponderosa pine) and *Pseudotsuga menzeisii* (Douglas-fir) forest with a variety of understory associate species. Small moist and dry meadows occurred within forested openings of the project area and a large *Festuca campestris* (rough fescue) and *Festuca idahoensis* (Idaho fescue) dominated park was adjacent to the proposed project (south). *Bromus tectorum* (cheatgrass), *Centaurea stroebe* (spotted knapweed), and *Verbascum thapsus* (mullein) were all observed in the proposed project area; *B. tectorum* and *C. stroebe* were abundant in nearby meadows and roadside environments exposed to ongoing and/or previous disturbance.

Thirteen Region 1 sensitive plant species occur or are believed to occur on the Pintler Ranger District (Table 1). These plant taxa are associated with a wide variety of plant communities and elevation ranges. Several of the Region 1 sensitive plant species known to occur on the Pintler Ranger District have low likelihood of occurring in the project area due to lack of habitat. *Antennaria densifolia*, *Saussurea weberi*, and *Saxifraga tempestiva* occur at higher elevations, in different mountain ranges, and in different habitats from those of the proposed project area. *Lesquerella paysonii* and *Phlox kelseyi* var *missoulensis* are limited to limestone derived soils and *Thalictrum alpinum* occurs in moist alkaline meadows; these conditions are absent within the proposed project area. No fens or sphagnum associated with *Scheuchzeria palustris* habitat exists in the proposed project area. The proposed project area is deficient of wet meadows and woods known to

support populations of *Adoxa moschatellina* and *Botrychium crenulatum*. The Barton Springs Commercial Thinning Project is proposed for dry forest vegetation dissimilar to habitat of 11 of the 13 Region 1 sensitive plant species known or suspected to occur on the Pintler Ranger District. None of the aforementioned species were observed during botanical surveys for this project.

Table 1. Region 1 sensitive plant species known to occur on the Pintler Ranger District. (Region 1 Sensitive Plant List, 2004) APW = Anaconda-Pintler Wilderness; \* = suspected to occur on the Pintler RD

Botanical Name (common name)	Elevation (feet)	Habitat	Known Pintler RD Locations
<i>Adoxa moschatellina</i> (musk-root)*	4400-6000	Vernally mesic woods and rock crevices	Rock Creek Drainage (Lolo NF)
<i>Allium acuminatum</i> (tapertip onion)	2600-8000	Dry, open forests & grasslands	APW
<i>Antennaria densifolia</i> (dense-leaved antennaria)	9148	Limestone talus near or above timberline	Goat Flat (APW)
<i>Botrychium crenulatum</i> (wavy moonwort)	2440-7680	Wet meadows and diverse vegetation near water	Georgetown Lake area
<i>Botrychium hesperium</i> (Western moonwort)	3200-8200	Dry to moist gravely and lightly disturbed grasslands	Anaconda & Sapphire Ranges
<i>Botrychium paradoxum</i> (peculiar moonwort)	3550-8480	Wet meadows associated with spruce & lodgepole	Anaconda Range
<i>Lesquerella paysonii</i> (Payson's bladderpod)	5600-7550	Gravely calcareous slopes & ridgetops	Sapphire Mtns, W Fork Buttes SIA
<i>Phlox kelseyi</i> var <i>missoulensis</i> (Missoula phlox)	3600-8100	Open, exposed limestone- derived slopes	W Fork Buttes SIA & near Georgetown Lake
<i>Saussurea weberi</i> (Weber's saw-wort)	9400	Moist meadows in the alpine zone	Goat Flat (APWA)
<i>Saxifraga tempestiva</i> (storm saxifrage)	7920-9900	Vernally moist, open soil in meadows & on rock ledges	Anaconda & Flint Creek Ranges, Bitterroot Mtns
<i>Scheuchzeria palustris</i> (pod grass)	4000-8000	Wet, organic soil of fens, usually with sphagnum	Sapphire Mountains
<i>Thalictrum alpinum</i> (alpine meadowrue)	4855-8280	Moist, alkaline meadows	Anaconda Range
<i>Veratrum californicum</i> (California false-hellebore)	6100-7360	Wet meadows and stream banks	Anaconda Range

Dry forests and grassy meadows throughout the proposed project area were suspected of supporting *Allium acuminatum*, *Botrychium hesperium*, *Botrychium paradoxum*, and *Veratrum californicum*. On June 1, 2007 prior to project area botanical surveys, known *Botrychium* populations were visited to verify individuals occurring within the proposed project area would be detected and identifiable. A population of *Botrychium hesperium* occurs ¼ mile north of the proposed project area and was observed in a meadow with *Carex geyeri* (Elk sedge), *Fragaria virginiana* (strawberry), *Thalictrum occidentale* (Western meadowrue), *Agoseris taraxacum* (common dandelion), and moss. No *Botrychium hesperium* were observed during botanical surveys. Known *Botrychium paradoxum* populations located on the Pintler Ranger District occur in moist meadows dominated by *Festuca campestris* with *Fragaria virginiana* and *Potentilla fruticosa*. No *Botrychium paradoxum* were observed during botanical surveys. *Allium acuminatum*

populations are known to occur in dry, open forests and grasslands. An *Allium* species was abundant within the proposed project area and in the adjacent meadows; however the species observed was not in flower and bulb characteristics of *A. accuminatum* (globose with brown, honeycombed coats) were absent from individuals observed during surveys. No *Veratrum californicum* were observed during botanical surveys. None of the Region 1 sensitive plant species suspected of occurring in the proposed Barton Springs Commercial Thinning Project were observed during June 2007 field surveys.

**Mitigation Measures:** No R1 sensitive plant species were found in the proposed project area during field surveys, therefore no mitigation measures pertaining to Region 1 sensitive plant species are required.

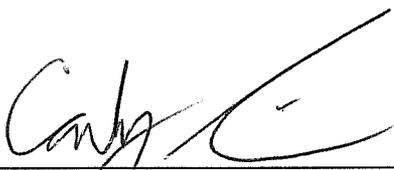
**Recommendation:**

1. Since invasive species are located in the proposed project area, ground disturbance associated with the project should be monitored and treated for invasive plant species establishment and expansion. Invasive plant monitoring and treatment should be initiated following completion of the proposed project and continue for up to five years. Invasive plants treatments should be implemented at a time of year when treatment is most effective, rather than when plants are in flower or seed.
2. All equipment must be washed prior to entering the project area to reduce potential for noxious weed spread as a result of activities associated with the proposed project.
3. To aid in prevention of non-native plant species, facilitate native species colonization of disturbed sites, and minimize erosion potential; slash and native material (e.g. needle mulch) can be spread over bare soil generated as a result of the proposed project. Consider storage of displaced topsoil and native plants for use to restore disturbed sites. Utilization of native seed harvested from USFS lands within 5 miles of the project area is recommended where seeding is deemed necessary. Use of hybrids, cultivars, or species uncommon to the Pintler Ranger District is not recommended for seeding.

ANALYSIS OF EFFECTS: No federally proposed, threatened, or endangered plant taxa occur in the proposed project area or on the Beaverhead-Deerlodge National Forest; therefore no effects to proposed, threatened, or endangered plant species will occur as a result of any alternatives selected for this project.

DETERMINATION OF IMPACTS: No R1 sensitive plant species are known to occur on USFS lands proposed for use in this project; therefore the Barton Springs Commercial Thinning Project west of Hall, Montana, will have no direct or cumulative impact or cause a loss of viability or trend to federal listing of any R1 sensitive plant species or potential habitat.

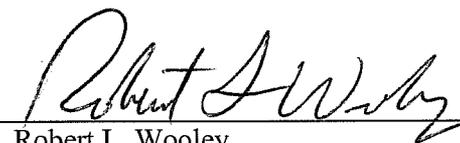
Prepared by:



Carly E. Gibson  
Ecologist  
Beaverhead-Deerlodge National Forest

4 June, 2007  
Date

Reviewed by:



Robert L. Wooley  
Forest Botanist/ Ecologist  
Beaverhead-Deerlodge National Forest

6/4/2007  
Date

**Barton Springs Commercial Thinning Project  
Plant Species List**

<b>Scientific Name</b>	<b>Common Name</b>
<i>Achillea millefolium</i>	common yarrow
<i>Allium</i> species	onion species
<i>Antennaria microphylla</i>	littleleaf pussytoes
<i>Arabis nuttallii</i>	Nuttall's rockcress
<i>Arabis holboellii</i>	Holboell's rockcress
<i>Arctostaphylos uva-ursi</i>	kinnikinnik
<i>Arnica cordifolia</i>	heart-leaf arnica
<i>Arnica longifolia</i>	longleaf arnica
<i>Artemisia tridentata</i> ssp. <i>vaseyana</i>	mountain big sagebrush
<i>Astragalus</i> sp.	milkvetch species
<i>Balsamorhiza sagittata</i>	arrow-leaved balsamroot
<i>Bromus tectorum</i>	cheatgrass
<i>Calamagrostis rubescens</i>	pinegrass
<i>Camassia quamash</i>	blue camas
<i>Capsellia bursa-pastoris</i>	sheperd's purse
<i>Carex geyeri</i>	elk sedge
<i>Carex microptera</i>	smallwing sedge
<i>Castilleja</i> sp.	paintbrush species
<i>Centaurea stoebe</i>	spotted knapweed
<i>Cirsium arvense</i>	Canada thistle
<i>Cerastium arvense</i>	field chickweed
<i>Claytonia lanceolata</i>	spring beaury
<i>Collinsia parviflora</i>	blue-eyed-Mary
<i>Collomia linearis</i>	narrow-leaf collomia
<i>Crepis</i> sp.	hawksbeard species
<i>Delphinium bicolor</i>	little larkspur
<i>Dodecatheon pulchellum</i>	shootingstar
<i>Dodecatheon</i> sp.	shootingstar species
<i>Erigeron compositus</i>	cutleaf daisy
<i>Eriogonum flavum</i>	yellow buckwheat
<i>Erythronium grandiflorum</i>	glacier lily
<i>Festuca campestris</i>	rough fescue
<i>Festuca idahoensis</i>	Idaho fescue
<i>Fragaria virginiana</i>	Virginia strawberry
<i>Fragaria vesca</i>	woodland strawberry
<i>Fraseria speciosa</i>	green gentian
<i>Fritillaria putica</i>	yellowbells
<i>Geranium viscosissimum</i>	sticky geranium
<i>Geum triflorum</i>	prairie smoke
<i>Heuchera</i> spp.	alumroot species
<i>Hydrophyllum capitatum</i>	ballhead waterleaf
<i>Iris missouriensis</i>	Iris
<i>Linnaea borealis</i>	twinflower

Scientific Name	Common Name
<i>Lithophragma parviflorum</i>	woodland-star
<i>Lithospermum ruderale</i>	field gromwell
<i>Lomatium triternatum</i>	nineleaf biscuitroot
<i>Lupinus</i> sp.	lupine species
<i>Mahonia repens</i>	Oregon grape
<i>Melica spectabilis</i>	purple oniongrass
<i>Mertensia oblongifolia</i>	oblongleaf bluebells
<i>Mertensia</i> sp.	bluebells species
<i>Orthocarpus</i> sp.	owl-clover species
<i>Osmorhiza berteroi</i>	sweetcicely
<i>Penstemon procerus</i>	littleflower penstemon
<i>Phleum pratense</i>	timothy
<i>Phlox longifolia</i>	long-leaved phlox
<i>Pinus contorta</i>	lodgepole pine
<i>Pinus ponderosa</i>	ponderosa pine
<i>Poa secunda</i>	Sandberg bluegrass
<i>Polygonum bistortoides</i>	American bistort
<i>Populus tremuloides</i>	quaking aspen
<i>Potentilla</i> sp.	cinquefoil species
<i>Prunus virginiana</i>	chokecherry
<i>Pseudotsuga menziesii</i>	Douglas-fir
<i>Pseudoroegneria spicata</i>	bluebunch wheatgrass
<i>Ranunculus eschscholtzii</i>	mountain buttercup
<i>Ribes</i> sp.	currant species
<i>Rosa</i> sp.	rose species
<i>Saxifraga oregana</i>	Oregon saxifrage
<i>Sedum lanceolatum</i>	spearleaf stonecrop
<i>Senecio</i> spp.	groundsel species
<i>Taraxacum officinale</i>	dandelion
<i>Thalictrum occidentale</i>	western meadowrue
<i>Trifolium longipes</i>	long-leaved clover
<i>Trifolium repens</i>	white clover
<i>Triteleia grandiflora</i>	wild hyacinth
<i>Urtica dioica</i>	stinging nettle
<i>Vaccinium scoparium</i>	grouse whortleberry
<i>Valeria sitchensis</i>	Sitka valerian
<i>Verbascum thapsus</i>	mullein
<i>Violaadunca</i>	blue violet
<i>Viola orbiculata</i>	round-leaf violet
<i>Zigadenus venenosus</i>	meadow death-camas