

THREATENED AND SENSITIVE PLANTS

Introduction

The authority to list species as threatened or endangered under the Endangered Species Act is shared by the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service. A species is designated as threatened if it is determined that it will likely become endangered in the foreseeable future. An endangered species is one considered being in imminent danger of extinction throughout all of a significant portion of its range. A species is designated as sensitive if the Regional Forester recognizes it as one of 53 species for the Flathead National Forest (FNF) that has the potential for their populations to be at risk due to observed or predicted downward trends in numbers or available habitat (Exhibit P-14).

Differences Between the DEIS and FEIS

This Threatened and Sensitive Plants section of the FEIS differs from the same section in the DEIS in that Alternative F was considered in the analysis of environmental consequences. The results of surveys completed for a representative number of units included in Alternative F is disclosed. Otherwise, only minor wording changes were made for clarity.

Information Sources

Data sources used for this analysis includes the Montana Natural Heritage Program's Element Occurrence Database; the FNF's Threatened, Endangered, and Sensitive Species (TES) Survey Atlas; and the FNF's TES Plant Location Database. All other sources of information are cited in the text. Prior to implementing any action alternative, ground surveys would be conducted to determine the existence of any TES species.

Analysis Area

The analysis area used to examine the impacts of the proposed action and its alternatives on sensitive plants is the same as described for vegetation in the previous section.

Affected Environment

Threatened and Endangered Plant Species

There are currently no federally listed endangered plant species in Montana. Two threatened plant species, water howellia (*Howellia aquatilis*) and Spalding's catchfly (*Silene spaldingii*),

do occur in Montana and have been identified by the U.S. Fish and Wildlife Service as having potential to occur within the Logan Creek project area.

Water howellia (*Howellia aquatilis*)

Water howellia is distributed throughout the Pacific Northwest in scattered clumps across Montana, Idaho, Washington, and California. Over half of the global population (131 known occurrences) is found in the Swan Valley in Montana. This population is 50 to 70 air miles from the Logan Creek project area. The National Heritage Program Network has ranked water howellia as G2, meaning that it is globally imperiled because of rarity or other factors demonstrably making it very vulnerable to extinction throughout its range. The Montana Natural Heritage Program has assigned an S2 ranking to this species that signifies the same status (MNHP 2002).

Water howellia is an aquatic plant restricted to small, freshwater, glacially formed pothole ponds or to oxbow sloughs long since isolated from flowing surface waters of the adjacent river. These wetland habitats are generally shallow (about three feet deep). The ponds typically occur in a matrix of forest vegetation, and are nearly always surrounded in part by a small ring of deciduous vegetation. The bottom substrate of the wetland usually consists of firm consolidated silts and clays overlain by 0 to 24 inches of organic sediments. These ponds are generally filled by snowmelt run-off and spring rains, later drying out to varying degrees by the end of the growing season, depending on annual patterns of temperature and precipitation. Water howellia occurs between elevations of 10 feet in Washington to 4500 feet in Montana; all Montana occurrences lie between 3100 feet and 4500 feet and are found only in the Swan River Valley from just south of the community of Swan Lake south to the Clearwater/Swan divide. In the Swan Valley, 129 ponds and two old river oxbows are known to contain water howellia.

The USFWS has identified all areas below 5000 feet on the FNF to be within the range of water howellia. Consequently, all areas above that elevation are outside the range of the species. Elevations in the Logan Creek drainage typically do not exceed 5000 feet, so most of the project area is evaluated in this EIS with regards to current status and effects to water howellia even though it has not been found in the Logan Creek area. Areas exceeding 5000 feet in elevation will be excluded from this evaluation.

Aerial photo interpretation was conducted for the entire project area to locate potential sites for water howellia, which are easily discernable because they would be aquatic pothole ponds. Several potential ponds were located.

Spalding's Catchfly (*Silene spaldingii*)

Spalding's catchfly is a Palouse Prairie endemic with 52 known populations across its range in Montana, Idaho, Oregon, Washington, and British Columbia. This species has experienced considerable habitat loss and fragmentation due to agricultural and urban development, grazing, herbicide treatment, and exotic weed invasion (Schassberger 1988, Lichthardt 1997). The National Heritage Program Network has ranked this species as G2, meaning that it is globally imperiled because of rarity, or because of other factors demonstrably making it a very vulnerable to extinction throughout its range. Montana's Natural Heritage Program has

ranked the species as S1, meaning that it is critically imperiled in Montana because of extreme rarity or because of some factor of its biology making it especially vulnerable to extinction (MNHP 2002).

Ten occurrences are known from Montana, all in grassland plant communities located in the northwestern portion of the state. Added to the scarcity of occurrences is the paucity of individuals in these 10 populations. The population at the Nature Conservancy's Dancing Prairie Preserve in the Tobacco Valley has thousands of plants in what is believed to be the largest remaining population of this species in the world. All other Montana locations have less than 150 plants each. The two nearest existing populations are in the Tobacco Valley, approximately 38 air miles to the north, and the Lost Prairie National Wildlife Refuge, approximately 10 air miles west of the project area. No populations are known from the FNF; however, a population in the vicinity of Columbia Falls was last recorded from a herbarium specimen dated 1894. A search in the area was conducted, but the species was not found (Schassberger 1988). It is likely that the valley floor grassland where this collection was made over 100 years ago has been converted into agriculture or developed.

Suitable habitat for Spalding's catchfly does exist in the FNF, although it is extremely scarce. Grasslands dominated by rough fescue (*Festuca campestris*, formerly *F. scabrella*), bluebunch wheatgrass (*Pseudoroegneria spicata* formerly *Elymus spicatus*), and/or Idaho fescue (*Festuca idahoensis*) are the typical plant community associated with Spalding's catchfly. These sites may also have scattered ponderosa pine (*Pinus ponderosa*) trees. Although there are numerous mountain grasslands on the FNF with similar species composition, it appears that Spalding's catchfly prefers mesic sites within a matrix of drier grassland communities in the foothill and valley floor zones.

On the FNF, small isolated suitable habitats exist along the North Fork of the Flathead River floodplain from the Canadian border to Polebridge, in very small isolated grasslands in the Swan Valley, and in larger open fescue bunchgrass prairies in the South Fork of the Flathead and Danaher Creek Drainages within the Bob Marshall Wilderness. There may be suitable grasslands in the Hog Heaven Range of the Swan Island Unit and on the south slopes near Ashley Lake, as well. Although these sites are not specifically mapped, their entire area would not exceed more than one percent of the land base of the FNF. None of these sites are within the Logan Creek project area; however, the location near Ashley Lake is within five miles of the southern boundary for this project.

Sensitive Plants

The Regional Forester has recognized 53 species as sensitive on the FNF (Exhibit P-14) (USDA Forest Service 1999b). Several steps have been taken, and will be taken to determine which of these species, if any, have some probability of being affected by the Logan Creek project. First, rare plant location databases were queried to determine if any sensitive plant species are known to occur in the project area or within a five-mile buffer of the project area. Second, probable habitat types for sensitive plants were identified using aerial photographs, topographic maps, and landtype maps. All known vegetation types and elevation ranges of the project area were considered for this step. Areas characteristic of sensitive plant habitats--streamsides, moist forest ecotones, seeps, wet meadows, and fens--were delineated and excluded from the proposed action and any action alternatives. Third, on-the-ground floristic

surveys of all areas scheduled for ground-disturbing activities would be conducted during the summer in 2003, before initiating any activities. These surveys would focus on species identified in steps 1 and 2 as having the highest potential to be in the area.

Three locations of sensitive plants are known from within the project area, all in its northern portion. These are one occurrence each of Beck water marigold (*Bidens beckii*) and water star-grass (*Heteranthera dubia*), aquatic species in Tally Lake; one occurrence of scapose scalepod (*Idahoia scapigera*) near Johnson Peak; and one occurrence of tufted clubrush (*Scirpus cespitosus*) along Sanko Creek. None of these are within proposed treatment areas. Five more sensitive plant occurrences are within five miles of the project area. These include tufted clubrush (*Scirpus cespitosus*) near Gregg Creek; wood fern (*Dryopteris cristata*) near Potter Creek; northern adder's tongue (*Ophioglossum pusillum*) east of Stillwater Lake; mountain moonwort (*Botrychium montanum*) and crenulate moonwort (*Botrychium crenulatum*) in Miller Creek.

Other sensitive plants having potential to occur in the project area based on the presence of suitable vegetation types are included in Project File Exhibit P-14.

REGULATORY FRAMEWORK

Threatened or endangered status affords a species and its habitat special protection from adverse effects resulting from federally authorized or funded projects. It is the responsibility of the Forest Service to design activities that contribute to the recovery of listed species in accordance with recovery plans developed as directed by the Endangered Species Act (ESA) (50 CFR part 402). The Flathead National Forest's Amendment 20 to the Forest Plan provides for conservation measures to ensure the protection of water howellia. Amendment 21 to the Forest Plan has a goal to "provide sufficient habitat to promote the recovery of threatened and endangered species and conserve the ecosystems upon which they depend."

Federal laws and direction applicable to sensitive species include the National Forest Management Act (NFMA 1976) and Forest Service Manual 2670. Amendment 21 to the FNF's Forest Plan has standards to conduct reviews of programs and activities to determine their potential effects on sensitive species and to prepare a biological evaluation. It also states "adverse impacts to sensitive species or their habitats should be avoided. If impacts cannot be avoided, the significance of potential adverse effects on the population or its habitat, within the area of concern and on the species as a whole, will be analyzed. Project decisions would not result in loss of species viability or create significant trends towards federal listing." Future conservation strategies for each species would present direction on maintaining habitat diversity and managing for population viability, as required by the NFMA and LRMP Amendment 21. The USDA Forest Service is bound by federal statutes (Endangered Species Act, National Forest Management Act), regulation (USDA 9500-4) and agency policy (FSM 2670) to conserve biological diversity on National Forest System lands. A goal in Forest Plan Amendment 21 is to "ensure that Forest Service actions do not contribute to the loss of viability of native species."

Environmental Consequences

Effects of The No-Action Alternative For Threatened And Sensitive Plant Species

No is proposed by this alternative. Therefore, there would be no short-term effects on any listed threatened or sensitive plant species or their habitats. Long-term effects would depend on disturbances such as fire or floods.

Effects Common To All Action Alternatives For Threatened Plant Species

The analysis of the existing condition revealed there is no suitable habitat for Spalding's catchfly in the project area. There may be suitable habitat for water howellia in some ponds within the project area. However, no activities are proposed near any ponds or wetlands. Therefore, this project would have no effect on either of these species.

Effects Common To All Action Alternatives For Sensitive Plant Species

Surveys were conducted on a representative number of harvest units (refer to Project File Exhibit P-24 for survey results). No sensitive plant species were found. For those areas for which ground disturbing activities are proposed, surveys will be conducted before implementing any activities that may affect plant habitats. If any sensitive plants are found in or near the proposed activities, the actions will be modified or eliminated to ensure the sensitive plant populations and their habitats are not adversely affected.

All of the timber harvest is proposed in upland coniferous forest. Several stands have forest openings. These forested habitats on the Tally Lake Ranger District generally have low potential for the occurrence of sensitive plants, other than species in the genus *Botrychium*. Timber harvesting would generally not be located in riparian areas, on talus slopes, and in wet forest habitats. Therefore, it is unlikely that any harvest activities would affect sensitive plants and any potential effects will be mitigated or avoided.

Precommercial thinning on either 310 or 3783 acres, depending on alternative, and hand treating fuels on 182 acres are not ground-disturbing activities that would directly affect sensitive plant populations. However, these activities would change habitat conditions such as available light and moisture that could affect sensitive plants. Precommercial thinning is proposed only in stands that have been previously harvested and reforested, so the potential for sensitive plants, other than *Botrychiums*, is very low. Fuels reduction activities, with slash piling and burning, could affect sensitive plant occurrences in those stands. Again, if any sensitive plants are found during surveys, the treatments will be modified to eliminate any effects.

Prescribed burning is unlikely to affect sensitive plant populations that may occur in those areas. Most species that occur in those drier forest and forest openings can survive the low-severity spring burns that are proposed.

Trail construction and road construction, reconstruction, and reclamation have the potential to affect riparian plants if they occur where stream crossings are installed. Again, sensitive plant occurrences will be protected if any are located in surveys done before project implementation.

No habitat exists in this project area for sensitive plant species not listed in Project File Exhibit P-14; therefore, these actions will have “no impact” on those sensitive plant species. For other species, it is possible that some individuals may be affected by this action. However, most of the project area has low potential for occurrences of these species, and if any sensitive plants are found during surveys the activities in that area would be modified or eliminated. Therefore, it has been preliminarily determined that this action “may impact individuals and habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the populations or species” for the species listed in Project File Exhibit P-14.

REGULATORY CONSISTENCY

All proposed harvest units and roads to be constructed have not been surveyed for sensitive plants. However, all units would be surveyed before ground-disturbing activities commence. If sensitive plant species were discovered prior to treatment operations, the plant and its habitat would be protected. Consequently, no direct or indirect effects are anticipated. All alternatives meet the direction in Forest Service Manual (FSM) 2670 and comply with the Endangered Species Act of 1973. Contract Provision C6.250, Protection of Habitat of Endangered Species, would be included in all timber sale contracts.