

**O'Toole Mountain Forest Health Protection
and Fuels Hazard Project
Environmental Assessment (EA#OR135-FY02-2)**

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O'Toole Mountain Forest Health Protection/Fuels Hazard Project Environmental Assessment (EA#OR135-FY02-2)

Introduction and Background

The proposed project encompasses approximately 130 acres on O'Toole Mountain in T. 38 N., R. 39 E., W.M., portions of Section 9 (see map). This area is in northeast Stevens County, approximately 17 miles north of Colville and 8 miles southwest of Northport, Washington. It is within the Northeast Management Area in the Border Resource Area, Spokane District, Bureau of Land Management (BLM). Forested lands in this area have been designated for commercial forest management (page 22, Spokane District RMP, 1987).

The project area has had previous non-commercial forest harvest activities, primarily fuelwood cutting, but no commercial harvesting activity.

Purpose and Need

The primary need for proposing management in this area is that a 1999 forest inventory identified it as needing forest health improvement. Douglas-fir and western larch have heavy dwarf mistletoe infection in all size classes and canopy levels. Many of the infected overstory trees have dead tops or have died due to the disease. In addition to the dwarf mistletoe infection, there are scattered active root rot pockets. There are openings in the vegetative cover where nearly all Douglas-fir and grand fir have succumbed to the disease, and many trees on the perimeter also show signs of infection.

In addition, there is a need to reduce the amount of available fuels to reduce risk of a large wildland fire developing on public lands in close proximity to rural communities, as called for in National Fire Plan Congressional direction. The Spokane District Fire Plan (2002) has the objective of containing all wildland fires in this area to 10 acres or less, which would be difficult to accomplish with the existing fuel quantity and arrangement. Reducing fuels would minimize the potential for future timber volume losses from disease and fire. Removing fuels would prevent wildfire from moving into the tree crowns and minimize the potential for uncontrolled fire to be carried into residential areas on the east slope of O'Toole Mountain.

Description of Alternatives

Two alternatives (Proposed and No Action) were identified; these are explained individually below.

Alternative 1 - Proposed Action

The Proposed Action is to harvest dwarf mistletoe-infected Douglas-fir and western larch (8-20 inches dbh) that have commercial value. The commercial volume to be removed is estimated at approximately 350 MBF. Yarding would be done by helicopter on all but 30 acres. The remaining 30 acres would be tractor yarded. Large (>21 inches dbh) dwarf mistletoe and/or root rot-infected Douglas-fir, western larch, and grand fir would be girdled and reserved for wildlife habitat.

All Douglas-fir and grand fir infected with root rot would be harvested. Susceptible trees between 8-20 inches dbh and within 40 feet of the nearest infected tree would also be harvested for commercial value. All trees equal to or greater than 8 inches dbh that are not threatened by root rot infection and/or have a DMR equal to or less than 2 would be retained. No ponderosa pine or western redcedar would be harvested. A spur road of approximately 1,000 feet would be constructed to access the helicopter landing (see map).

Openings and root rot-infected areas would be spot planted as needed with non-susceptible tree species, such as ponderosa pine, lodgepole pine and/or white pine. After harvesting is complete, road building slash and stumps would be spread out over the first 100 feet of the spur road. Landings and remaining 350 of the spur road would be closed by ripping and seeding.

Brush would be manually chopped. Remaining understory trees less than 8 inches in diameter (dbh) would be thinned to a minimum 16-foot spacing, retaining healthy trees with large live crown ratios. Brush, as well as the tops and branches of the harvested and thinned trees, would be lopped and scattered to a depth not to exceed 24 inches.

Following the harvest and thinning operations, underburning would be done to reduce the residual ground fuels. Lower branches of retained trees would be pruned to a height above the expected underburn flame heights.

Project Design Features

Surveys for goshawks will be completed the spring of 2002. If an active goshawk nest is found during harvesting, no road building or other disturbance activities will be done from April 1 to July 15 within a minimum of 30 acres of the most suitable habitat surrounding the nest. Within post fledging areas, as determined by a biologist, no harvest or related disturbance activities will occur between July 15 and August 30 to minimize disturbance during the bonding and nesting period.

No harvest or harvest-related activities, including road construction, will occur between November 15 and June 1 to prevent disturbance to wildlife, specifically big game fawning protection and displacement of wintering grouse from important habitat.

In a few locations where healthy trees can be found, some islands of trees will be retained around designated snags to create structurally diverse habitats and to maintain adequate habitat to support viable populations of cavity-dependent wildlife. Where available, at least two wildlife reserve trees (green trees or culls that are a minimum of 12 inches in diameter and at least 10 feet in height) will be retained per acre to maintain a viable population level of cavity-dependent wildlife and to provide for biological diversity in the area.

A 100-foot limited disturbance buffer will be placed around the spring area and outflow stream from place of origin to the point where it ends ephemeral flow (see map). Disturbance within the buffer zone will be limited and designed to retain stand structure for big game winter thermal cover.

Where available, a minimum of 14 snags greater than 20 inches diameter and at least 50 feet in length will be retained per 100 acres to maintain nesting habitat for pileated and black-backed woodpeckers. If less than 14 snags this size class are available per 100 acres, then the next largest sizes will be retained. Also, down logs greater than 12 inches in diameter will be retained, to a maximum range of 30 to 35 tons per acre. Where this size class cannot be left due to site conditions, the largest available downed woody material will be retained.

Vehicles and equipment operating on the project area will be cleaned prior to entering the area as a precautionary against weed introduction or invasion.

Noxious weeds will be treated, as needed, using chemical and biological control methods. Noxious weed control will be implemented under the guidelines set forth in the *Final EIS for Vegetation Treatment on BLM Lands in Thirteen Western States* dated July 1991 and the Spokane District Noxious Weed Control Environmental Assessment (1998-2000), and any subsequent updates.

A special status plant survey will be conducted in June 2002 prior to implementation of any proposed activities. If special status plant species are found, the project could be modified to provide needed protection. If any federally listed plant species are found on the parcel, consultation with the Fish and Wildlife Service will be initiated.

All burning will be conducted in accordance with the Spokane District Fire Plan (2002).

A cultural resources survey will be conducted on the project area prior to project implementation and the project altered, if needed, to protect cultural resource values. Protective measures for cultural resources will include:

- A 50-foot buffer will be established around the site perimeter. No tractor operation, road or landing construction, fireline construction, or other ground-disturbing activities will take place within this zone. Underburning will take place only if cultural properties can be adequately buffered from prescribed fire.
- Diseased trees within the 50-foot buffer will be directionally felled away from the site. The tree may be removed if over-the-snow or full suspension logging techniques are used (using rubber-tired tractors/skidlers).
- Trees will not be girdled within a tree-height distance of historic structures (including collapsed structures).
- If cultural resources are located during project implementation, activities in the proximity of the resource will be halted, a BLM archaeologist will be notified for assessment, and the project will be redesigned to avoid impacting the site. If the site cannot be avoided, consultation will be conducted with the Office of Archaeology and Historic Preservation, the Kalispel Tribe, the Confederated Tribes of the Colville Reservation, and the Spokane Tribe of Indians.

Alternative 2 - No Action

Under the No Action Alternative, the subject area would not be harvested. Actions to limit fuels hazards and further infection would not be undertaken.

Affected Environment and Environmental Consequences

Vegetation

Affected Environment

The predominant plant communities in the project area are Douglas-fir/Ninebark on the upper slopes and Cedar/Queencup beadlily on the lower, north-facing slope. Most trees are second-growth large pole to sawtimber size, with scattered large Douglas-fir (greater than 21-inch DBH). Other species include western larch, ponderosa pine, western redcedar, and grand fir.

Douglas-fir and western larch are susceptible to dwarf mistletoe, the major forest health problem in this area. It is a vegetative parasite that saps the tree's vigor, reducing growth and eventually killing the tree. Tops have been killed in many of the trees and scattered mortality is evident throughout. The average Dwarf Mistletoe Rating (DMR) level is approximately 3 (out of a possible 6) with many more heavily infected trees. Many of the overstory-infected larch have a DMR of 6. Nearly all of the understory trees within a 40-foot radius of the infected overstory have visible infection to include dense branch infections (witches brooms).

At least two pockets of Armillaria root rot are located in the area; one east of the saddle near the main road, and one on the ridge to the west of the saddle near the mainline road (see map). Douglas-fir and grand fir are the two tree species most susceptible to the disease. Other merchantable tree species in the area (western larch, ponderosa pine and western redcedar) are resistant. Both areas of root rot are active with many of the perimeter trees showing symptoms of infection and recent mortality.

Conditions for catastrophic wildfire are prevalent throughout the area. The large dwarf mistletoe infection provides a fuel ladder for fire to move into tree crowns. Much of the advanced Douglas-fir regeneration is infected with dwarf mistletoe.

Environmental Consequences

Alternative 1 - Proposed Action

Harvesting of the merchantable dwarf mistletoe infected Douglas-fir and western larch would limit infection spread into the understory and adjacent trees. As a result, the infection rating of the overstory retention trees would be substantially reduced. Sanitizing (thinning out infected trees) the understory would allow remaining trees to reach merchantable size with a minimum level of infection, supporting the management objectives of this area.

Harvesting of root rot infected and susceptible trees in the root rot centers and those trees within 40 feet of the nearest infected tree would result in the removal of those trees most likely to be impacted by the pathogen. Planting root rot centers and perimeter openings with non-susceptible tree species (ponderosa pine, lodgepole pine and/or white pine) would allow trees to grow to maturity free of infection.

With harvest, potential snags and large downed woody debris sources would be removed. The remaining thinned and pruned understory trees would be free of branches within expected underburning flame heights. Fuel sources would be limited to tops and branches of thinned trees. Chopped brush combined with other ground fuels would allow underburning to take place without threat to the retention trees. Controlled underburning would remove the potential for catastrophic wildfire. Interplanting openings and root rot pockets immediately following the burn would allow the trees to out compete brush.

Alternative 2 - No Action

Where no actions would be undertaken, severe mortality in the heavily infected western larch could be expected within the next 5-10 years. Additional western larch and Douglas-fir would become infected.

Root rot infection would continue to spread, killing susceptible species. Root rot spreads underground at the rate of 1-3 feet per year. Infected trees could succumb within 5-10 years. Reproduction of susceptible species within the root rot centers would die prior to reaching merchantable size. Mortality and tree damage could continue and possibly accelerate as more trees become infected by both agents (dwarf mistletoe and root rot).

Pathways for fire movement into the overstory would increase in the advanced regeneration and small pole sized trees as the lower infected branches (witches brooms) increase in density and size. Mortality and deadfall from both dwarf mistletoe and root rot would contribute several tons per acre in large diameter down and dead woody fuels, which would increase the potential for wildfire and pose potential threat to adjacent and nearby property and resource values.

Stand replacement fires are a certainty if no efforts are made to treat these stands. Biological processes would be unaffected and would continue indefinitely or return to an early successional state as the result of a stand replacement fire. Uncontrolled dwarf mistletoe infection would provide a long-term, continuous opportunity for fire movement into the crowns of these multi-storied stands with the potential for catastrophic wildfire. Growth would continue to decline, branch density and infections would continue to expand in size, and more understory would become infected. The tall dense brush, prevalent in much of the area, would provide another pathway for vertical fire movement.

Special Status Plant Species

Affected Environment

Plants of Cultural Importance: Berry-producing shrubs used by original peoples, including serviceberry, kinnikinnick, Oregon grape, rose, raspberry, and thimbleberry, are present on the parcel.

Distribution records (Washington Natural Heritage Information System 1999) indicated several special status plant species were potentially present in the area. Two of these, yellow lady's slipper (Washington endangered) and giant helleborine (Washington sensitive), have been recorded one township to the south of the O'Toole Mountain project area. Habitat for these wetland species is extremely limited in the area. It is unlikely that the small spring in the center of the project area supports species of concern, because it is very small, very close to the existing road, and quite open and disturbed.

Other special status plant species potentially present in the area are black snakeroot (Washington sensitive), northern twayblade (Washington sensitive), grapefern species (Washington sensitive and Review Group), and Idaho gooseberry (Washington sensitive). Suitable habitat is lacking for most of the special status species, or is limited to the ~~western redcedar/queencup~~ **beadlily** association north of the access road in Section 9.

Environmental Consequences

Considering the absence of suitable habitat in the project area, as well as the project design feature providing for protection for species found if located during a proposed surveyed, it is unlikely that any special status plant species would be impacted.

Recreation

Affected Environment

The primary public recreational use of the BLM-administered lands in the project area are hunting of upland birds and deer, but those uses area limited due to lack of public access into the area. Private timber lands surround the area.

Environmental Consequences

Alternative 1 would have little impact on current recreational uses of the area. Implementation of the No Action Alternative would result in habitat degradation and the likelihood of stand replacement fires over the long term. As a result, hunting opportunities for big game and grouse would be lost or greatly reduced by a large wildfire for a period of approximately 5 to 15 years depending on severity of the wildfire and recovery response of the habitat.

Wildlife - Terrestrial and Aquatic

Affected Environment

The single block of Douglas-fir, larch and ponderosa pine habitat that has been partially modified in the past by selective tree removal provides habitat for various wildlife species. Few large trees remain and the stands are experiencing rapid early seral stage degradation. Tree removal along with insect and disease-related pockets of tree mortality have created small openings that are now dominated by shrubs and young tree regeneration. A few large snags are present, and large down logs are common throughout the project area. Remnant late-successional habitat and the wildlife values associated with them are rapidly deteriorating.

Aquatic habitats in the project area are limited to a small spring at T38N, R39E, Sec 9, and a small perennial stream outflowing from the spring. The spring and stream are adjacent to an access road. The width of the outflow is about one foot most of the year, but may be slightly wider during spring runoff.

Species Present - Wildlife species likely to occur in the planning area were determined from the Washington State Natural Heritage Database and from Cassidy et al. (1997). Species that are common throughout northeastern Washington coniferous forests in similar habitats include the following:

- **Mammals**: black bear, mule deer, white-tailed deer, elk, moose, bat species (California myotis), pine squirrel, northern flying squirrel and yellow pine chipmunk.
- **Cavity Nesters**: pileated woodpecker, black-backed woodpecker, red-naped sapsucker, Williamson's sapsucker, northern flicker, hairy woodpecker, black-capped chickadees and mountain chickadees.
- **Neotropical Birds**: Townsend's warbler, red crossbill, pine siskin, red-breasted nuthatch, golden-crowned kinglet, ruby-crowned kinglet, winter wren, yellow-rumped warbler, Swainson's thrush, and dark-eyed junco.
- **Upland Game Birds**: blue grouse and ruffed grouse

Special status species that could occur in the project area include three Federally Threatened species (Northern Bald Eagle, Canada Lynx, and Gray Wolf) and one state Threatened species (Fisher). There are also six species of concern (Northern Goshawk, Columbia Spotted Frog, Long-legged myotis, Long-eared myotis, Townsend's big-eared bat, and Willow flycatcher). The likelihood of these special status species occurring in the project area is explained below:

Bald Eagle: The bald eagle is known to make year-round use of the Columbia River corridor, located approximately two miles from the project area. Documented bald eagle nests are within two miles of the project area. Although Bald eagles could nest in the project area, it is very unlikely given the distance of the project area from the Columbia River.

Canada Lynx: The project area is located outside mapped Canada lynx habitat as defined under the Lynx Conservation Assessment and Strategy (2000). The nearest defined lynx habitat is about 5 miles to the south, and another block of habitat is located about 7 miles to the north. The nearest documented observation of lynx or lynx sign is within 10 miles of the project area. Given the large home

range of lynx and their tendency to wander outside of their territories, lynx could occasionally pass through or hunt in the project area.

Gray Wolf: The proposed project is located outside the designated recovery areas of the gray wolf and does not contain habitat proposed as critical or identified as linkage habitat between recovery areas. No wolves have been verified to occur within the project area, but they have been reported within three miles of the project area. Any use of the project area by gray wolf would likely be by transient individuals passing through or hunting in the area since no denning activities have been documented recently in this part of Washington.

Other wildlife species are discussed below:

The primary game species within the project area include mule deer, white-tailed deer, ruffed grouse, and blue grouse; in addition, elk, moose and turkeys could occur in the area but are not common.

Aquatic species in the area could include Columbia spotted frogs (documented within 0.25 miles of the project area), tree frogs, and other small aquatic wildlife and invertebrates using the spring and outflow ephemeral stream. The small stream channel flows with water during wet periods and then only for short distance (100-200 yards) before returning underground. There are no known fish in the stream, and the stream has no continuity with larger bodies of water downstream.

Goshawks have been observed within five miles south and west of the project area, and the project area has suitable habitat for goshawk nesting and foraging.

Other raptors that could occur within the project area include osprey (nesting) and the following species (nesting and foraging): golden eagle, red-tailed hawk, turkey vulture, raven, Cooper's hawk, sharp-shinned hawk, great horned owl, pygmy owl, and great gray owl.

Bats (myotis) species of concern could occur in the area, as well as some common bat species. Bats could roost in large snags in the project area, but are likely not abundant because of the area's lack of open water.

Willow flycatchers could occur in the area in shrub-dominated openings.

Environmental Consequences

Alternative 1 - Proposed Action

This alternative would greatly reduce the number of mature trees in the project area and create a very open condition. The hiding cover for deer that is now provided by some patches of trees and tall shrubs will be reduced; however, some patches of hiding cover would remain. Hiding cover created by shrub regrowth would recover to near existing levels within five years. Forage for deer would improve considerably, as old shrubs and suppressed grasses and forbs are rejuvenated by prescribed fire.

As this stand is converted from a mature and remnant late successional stand, to a young-aged stand dominated by young conifer regeneration, late successional associated wildlife would decrease or discontinue use of the project area. With the existing mistletoe and root rot largely controlled, the stand would transition over time into mature conifers and eventually return to an late successional condition if left unharvested.

Late-successional dependent wildlife species such as pileated woodpeckers, brown creepers, northern goshawk, pine squirrel and fisher would continue to use the area, foraging on and nesting or denning in the snags that remain, but the use of the area by these species would be greatly reduced. Species that prefer young forests and dense shrubs, such as orange-crowned warblers, snowshoe hares and mule deer could move into the area.

As documented by the biological assessment for this project, no species listed under the Federal Endangered Species Act would be adversely affected by this alternative. The endangered gray wolf would be able to continue use of the project area if it occurs in or passes through the area. The Canada lynx would be less likely to den in the project area, but would be more likely to forage in the area as snowshoe hare populations increase. Bald eagles would still be able to nest in remaining trees such as ponderosa pine which would not be harvested.

No species listed by the State of Washington or listed as a species of concern would be adversely affected by this alternative. Fisher would be less likely to den in the project area, but would be more likely to forage in the project area as snowshoe hare populations increase. Columbia spotted frogs would be protected by the riparian buffer created adjacent to the spring and ephemeral stream course. Bats could roost in the remaining snags. Willow flycatchers would benefit by the additional shrub growth in the created openings.

Alternative 2 - No Action

In the short term, late-successional associated wildlife species in the O'Toole area (pileated woodpecker, hairy woodpecker, brown creeper, northern goshawk, big brown bat, pine squirrel, pine marten, and fisher) would continue to use the area. The project area would provide a small patch of late successional habitat within the larger areas of mature forest in the surrounding landscape.

Over the longer term, the stand would continue to lose large trees to insects and disease, while becoming at greater risk to loss from wildland fire. Deer and other common wildlife species would not use the area for a few years until hiding cover and shrub cover returns. Under this alternative, late successional vegetative species would eventually be lost and the stand would naturally regenerate to early successional forest similar to Alternative 1. The high mistletoe levels would likely preclude stands from reaching late successional stage as under Alternative 1; the stands could continue for a long period in some intermediate status with a very open, decadent condition. That scenario would lead to an abundance of dead snags and down logs, but very few large live conifers. As wildlife habitat, this condition could function as low quality late successional, as well as low quality regeneration habitat.

No species listed under the Federal Endangered Species Act would be adversely affected by this alternative. The endangered gray wolf would be able to use or pass through the project area in the future. The Canada lynx could potentially den in the project area, but would be more likely to forage in the area as snowshoe hare populations increase and late successional decreases.

No species listed by the State of Washington would be adversely affected by this alternative. Over the long term, fisher would be less likely to den in the project area, but would be more likely to forage in the project area as snowshoe hare populations increase. Columbia spotted frogs would not be affected by this alternative.

Cultural Resources

Affected Environment

The project area is located within the traditional use area of the Lakes and Colville people of the Confederated Tribes of the Colville Reservation, and the Kalispel Tribe of Indians. The surrounding mountains, valleys and riverine areas were used by a number of Native American groups and individuals for fishing, hunting, gathering, and other traditional activities.

The Native American seasonal cycle of economic pursuits involved spring gathering of plants and roots, summer salmon and steelhead fishing, and fall hunting and gathering of berries. Semi-permanent villages were occupied in the colder winter months. Within the O'Toole Mountain area, expected Native American uses include gathering of forest materials such as lichens, fungi, ferns, and other plants for subsistence needs while wildlife resources hunted and utilized in the region would include deer, bear, elk, and moose. Traditional religious or spiritual pursuits may have occurred in the project area.

Historically, the O'Toole area has seen mining and homesteading activity. A review of historical records indicates two homestead applications filed in 1903 and 1910 within the project area. Neither homestead application was patented, but there remains a possibility that the area was homesteaded at that time. Government Land Office surveys and maps made in 1897 show mining activity in the NW 1/4 of section 9 (the Independence Claim tunnel). One collapsed historic log structure is located within the project area.

A complete review of BLM historic land use, survey and site records/databases and the Washington State Office of Archaeology and Historic Preservation's site database has been undertaken. This area was first surveyed by BLM archaeologists in 1977 as part of a timber sale project. During the 1977 survey, several sites were recorded, one of which was the partially collapsed log structure mentioned above. In 1981, as part of a proposed minerals development operation, the cabin site was monitored and subsequently protected from any land disturbance associated with the mining activity. This cabin site, as well as any other sites found as a result of the survey for the proposed O'Toole Mountain Forest Health Project, would be protected so as not to affect the National Register of Historic Places eligibility status.

Environmental Consequences

Alternative 1

Although this alternative proposes ground-disturbing activities (tree felling, tree girdling, tractor skidding, helicopter yarding, road and landing construction, fireline construction, manual brush treatments and underburning of ground fuels), cultural resources would be protected by buffer zones designed to eliminate any potential direct or indirect adverse impacts to the resources. Treatment of fuels and the resultant reduction in catastrophic wildfire potential would add an increased level of protection to wooden historic structures and/or their remains.

Alternative 2

This alternative would have no direct impacts to cultural resources. Over time, however, fuels buildup would increase the potential for catastrophic wildfire, indirectly increasing the potential for damage or loss of at least one known historic cabin site within the project area, and perhaps loss of other previously identified and unknown nearby wooden historic structures.

Soils

Affected Environment

The primary soil within the O'Toole Mountain project boundary is Smackout Loam 20 to 40 percent and 40 to 60 percent slopes. Smackout Loam is very deep and well drained, with moderately slow permeability and very high available water capacity. This soil has rapid to very rapid runoff, as well as high to very high water erosion hazard.

Soils within the proposed project area are in stable condition and show no evidence of slope failure, (mass wasting) slumps or soil creep. Some minor sloughing of cut banks and soil compaction is evident on existing roads.

Environmental Consequences

Alternative 1

Designed management actions (including proper road layout and design, road closures and restoration of disturbed areas) of this alternative would minimize the potential for soil compaction, erosion, and loss of soil productivity. Soils could be displaced or compacted in portions of the proposed project area where tractor skidding is utilized (approximately 30 acres). Underburning activities may include some fire line construction to bare soils. Overall, however, there would be little impact to soils as a result of this alternative.

Alternative 2

Soil erosion and displacement would continue at its present level. Allowing forest health to decline could cause extensive stand mortality and subsequent heavy fuel loading, creating potential for an intense wild fire. Intense fires could damage soils, thereby reducing their productivity. Soil impacts would include accelerated surface erosion and displacement within the project area and increased sediment delivery within the affected watershed.

Water Resources

Affected Environment

The proposed harvest area has one spring source, but does not contain any perennial streams. However, the northeast boundary of the proposed cutting unit lies approximately 0.5 mile south of the headwaters of Crown Creek, which is an intermittent, first order, type 5 surface water. The Washington State Forest Practice Rules describe a Type 5 water as follows:

Type 5 waters - This classification includes streams with or without well-defined channels, areas of perennial or intermittent seepage ponds, natural sinks, and drainage ways having short periods of spring or storm runoff.

The Crown Creek drainage channel diminishes, and runoff dissipates into pastureland prior to reaching Lake Roosevelt.

Environmental Consequences

Alternative 1

Streams and riparian values are not expected to be impacted. The buffer around the existing spring would be adequate to protect the water source.

Alternative 2

A wildfire event would result in impacts to the water resource. Stand replacement fires would result in surface erosion and increased sediment delivery within the affected watershed

Air Quality

Affected Environment

Air quality at the proposed project area is rated high and is generally maintained throughout the year. Natural factors influencing air quality here are mountainous topography, prevailing southwesterly winds from the Columbia Basin, and weather fronts from the Pacific Ocean and Canada.

Environmental Consequences

Alternative 1 - Proposed Action

Under Alternative 1, air quality could be temporarily degraded by timber harvest activities, including road construction and maintenance, tree falling, yarding, and hauling. These activities produce the most dust during the dry months of the year. Suspended dust adversely impacts air quality only during periods of active logging and log hauling.

Slash pile burning would have the most noticeable impacts on air quality. Environmental factors such as wind direction, atmospheric stability, and moisture content of slash are crucial influences on smoke dispersion. Slash burning would degrade local air quality of the atmosphere for short periods of time.

Burning of slash piles over a five-year period on a small portion of the proposed project area would reduce local air quality for an estimated one to three days per ignition.

Alternative 2 - No Action

Under Alternative 2, air quality could be degraded in the short term by elevated smoke levels as a result of an intense wildfire event.

Noxious Weeds

Affected Environment

No noxious weeds were observed within the proposed project. However, diffuse knapweed was observed in openings on adjacent lands.

Environmental Consequences

Alternative 1 - Proposed Action

Although noxious weeds are not present within the proposed project area, the site could become more susceptible to weed infestations from adjacent lands as a result of soil disturbances associated with the project and opening of the forest canopy. Management direction to clean vehicles and equipment prior to entering the project area would reduce the potential of weeds becoming introduced and established.

Alternative 2 - No Action

Noxious weeds would likely continue to spread from such sources as vehicle traffic on the access road through the area, hikers, wildlife movement, and prevailing winds.

Socioeconomics

Affected Environment

Several homes have been built on small acreages within the general area southeast of the project site, and additional housing is likely to be developed. The nearest homes are 0.5 mile away from the project boundary, and the project area is approximately 3 miles west of the Onion Creek community.

Environmental Consequences

Alternative 1 - Proposed Action

Impacts to nearby residents would be minimal. There would be no overflight by helicopters. Project access (hauling and road use) would not occur on Stevens County and private roads east of the project area near the residences. Planned underburning could result in short-term smoke movement into residential areas east of O'Toole Mountain.

Alternative 2 - No Action

Considering the stand's present decadent condition and the likelihood for additional decline due to mistletoe infestation and root rot if left unmanaged, there could be potential for an intense stand replacement wildfire. Such a fire could threaten residential structures east of the project area, as well as the Onion Creek community and store. Intense fires occurring in unmanaged stands also carry potential for more severe smoke impacts, because the fires could occur at times when wind direction carries the smoke into the residential areas and when the condition of the fuels is prone to produce heavier or more particulate matter in the air.

Environmental Justice

No disproportionately high and adverse human health or environmental effects on minority or low-income populations are expected to result from implementation of any of the alternatives addressed in this EA.

Critical Elements That Were Considered

- Wild and scenic rivers
- Prime/unique farmlands
- Floodplain
- Wastes (Hazardous or Solid)
- Special area designations (including Areas of Critical Environmental Concern)
- Wilderness
- Invasive non-native species
- Adverse impacts to energy

The elements listed above either do not occur or would not be impacted by the alternatives.

Cumulative Effects

The cumulative effects area for wildlife analysis includes all areas within a 5-mile radius around the project area. This encompasses an area large enough to incorporate the local deer population and the home range of wide-ranging predators such as lynx.

Road densities within this area are high (more than 2 miles per square mile) east of the project area and moderate (less than 2 miles per square mile) west of project area.

Habitats surrounding the planning area are primarily managed woodlands comprised of thinned, mature conifers, often creating a single story, mid-aged stand. Understory vegetation is primarily scattered shrubs with areas of dense shrubs in and around openings of the forest canopy.

Road patterns west of the project area can be described as moderate densities of secondary access roads with a gravel or dirt surface. Road densities are typical of northeastern Washington at about 3 miles per section, but higher road densities occur on private lands to the west of the project area. No major arterial roads are adjacent to the project area.

Alternative 1: The changes in forest structure (increased young forest habitat and decreased late successional habitat) would contribute cumulatively to the percentage of young forest created by other forest management projects within the surrounding landscape as evidenced by recent logging on private lands to the east and west of the project area. Most of the surrounding land is managed by the Washington Department of Natural Resources or is privately owned, and the predominant management treatment is commercial forest management, which is likely to continue into the foreseeable future. Late successional habitat would likely continue to decrease within the cumulative effects area in the foreseeable future, while young aged forest would continue to increase.

In general, these habitat changes would favor deer populations by creating additional forage as trees are thinned and forest canopies opened up. Clear cuts are not common in the area, and thinning appears to be the predominant management prescription over much of the area. This technique would maintain some hiding cover, as well as create forage, resulting in adequate cover and forage for big game in the future. This management could continue to slightly decrease biological diversity in the forest as unmanaged stands are brought under management, resulting in a population decrease for species that prefer late successional and dense forest.

This alternative would not contribute to an increase in road densities, since the only short piece of road built would be closed and obliterated.

Alternative 2: In the short term, an unmanaged patch of forest would be maintained within the larger managed landscape. This would have the opposite effects on wildlife habitat from the proposed action (Alternative 1). Species that use late-successional habitat for most of their habitat (such as pileated woodpeckers) would benefit more than early-successional species (such as deer). Biological diversity within the landscape would be maintained as at present.

Over the long term, however, the stand would not contribute to late successional habitat as it continues to deteriorate. It is also possible that the mistletoe from this stand could continue to spread into adjacent stands and cause additional tree mortality, eventually resulting in more tree harvesting by adjacent landowners.

This alternative would not contribute to a greater road density since no road would be built.

Coordination/Consultation With Other Agencies, Groups and Individuals

This environmental assessment was prepared by an interdisciplinary team of BLM resource specialists representing various resource values, including soils, hydrology (water), wildlife habitat, botany, recreation, and cultural values (see EA cover sheet).

The BLM staff coordinated the proposed project with the following agencies, groups, and individuals:

- U.S. Fish and Wildlife Service, Linda Hallock
- U.S. Forest Service, Jim Hadfield, Forest Pathologist
- Washington State Department of Natural Resources

The BLM also coordinated the proposed project with adjacent private landowners (Boise, M. J. Matney, and Vaagen Brothers).

Consultation with the Kalispel Tribe, the Confederated Tribes of the Colville Reservation, the Spokane Tribe, the Stevens County Historical Society, and the Washington State Office of Archaeology and Historic Preservation was initiated through letters sent December 3, 2001. The Washington State Office and the Spokane Tribe have since responded. No additional cultural properties, traditional use areas, environmental resources, or sacred areas have been identified; no concerns have been expressed regarding the proposed project at this time.

All potentially interested parties were requested to provide input to the proposed action and to identify any concerns with the project. A 30-day comment on the proposed action was requested.

The environmental assessment will be made available for public review and comment, through a news release in the Colville Statesman Examiner, Colville, Washington as well as the Spokane BLM Internet website <www.or.blm.gov/spokane>. Copies of the EA will also be mailed to the above listed agencies, individuals or groups, adjacent landowners, as well as others by request.