# Medford Aspen II
# Proposed Action

## Project Area Location

The project area is located on National Forest System land in the northern portion of the Medford landbase of the Medford-Park Falls Ranger District, on the Chequamegon-Nicolet National Forest, approximately 10 miles northwest of Medford, Wisconsin. The general project area falls within 5 separate areas all of which are north of Taylor County Highway M. The legal description for the project area is: Township 32 North, Range 1 E, sections 4-10 and 15-21; Township 32 North, Range 1 West, sections 1-6, 9, 12-15, and 23; Township 32 North, Range 2 West, sections 3-10 and 16-19; Township 32 North, Range 3 West, sections 1, 12, 13, and 24; Township 33 North, Range 1 East, sections 6-7 and 31-32; Township 33 North, Range 1 West, sections 1-4, 9-14, 18-19, and 27-35; Township 33 North, Range 2 West, sections 2-5, 8-16, 21-28, and 34-36; Township 34 North, Range 1 East, section 31; and Township 34 North, Range 2 West, sections 32-34; 4$^{th}$ Principal Meridian. A Vicinity Map showing the location of the general project area is attached at the end of this document, in Appendix B.

## Project Area Background Information

The project area is about 29,200 acres in size of which about 25,800 acres is federal ownership. Of the approximate 25,800 acres of National Forest System land, a little less than one third is lowland/wetland and a little more than two thirds is upland (about 68 percent). Upland forest types in the project area are comprised of about 67 percent aspen with other hardwood types, balsam fir, paper birch, red pine, white pine, and white spruce comprising the remaining 33 percent of the upland.

**TABLE 1: MEDFORD ASPEN II ACRES SUMMARY**

| | |
|---|---|
| Management Area 1A | 25710 |
| Management Area 8E | 50 |
| Management Area 8F | 36 |
| Private Land | 3405 |

The Record of Decision (ROD) for the 2004 Chequamegon-Nicolet National Forests Land and Resource Management Plan (Plan or Forest Plan) identifies the majority of federal ownership (25,700 acres) in this project area as Management Area (MA) 1A. Vegetation management emphasis is towards early successional forest communities with aspen being the most prevalent tree species. Human caused disturbance that maintains early successional communities can be evident and frequent in this landscape. Aspen is maintained in a variety of age classes with the use of even-aged management. This results in a landscape with a high degree of edge habitat. See Plan pages 3-3 and 3-4.

## Need for Change or Purpose and Need for Action

The need for a proposal comes from the differences between the existing conditions and the desired conditions for the project area. In general, the Plan provides the desired outcomes for the area by identifying goals and assigning a MA designation for the area. The overall purpose and need for this project is focused on regenerating older early successional forest types to maintain their species

representation percentage about the same across the 5 areas and to do that in a way that benefits early successional wildlife species.

More specifically, the purpose, need, and objectives for this project proposal are:

**A. NEED TO IMPROVE / MAINTAIN FOREST HEALTH (Forest Plan Goal 1.4 – Provide terrestrial ecosystems in healthy, diverse and productive conditions that support the diversity of plant and animal species; Forest Plan Goal 1.5 - Conserve habitat capable of supporting viable populations of existing native and desired non-native species, and retain the integrity and function of key habitat areas; Forest Plan Goal 2.1 –Maintain or enhance the diversity and quality of recreation experiences within acceptable limits of change to ecosystem stability and condition; and Forest Plan Goal 2.2 - Maintain or enhance the quality of scenic resources to provide desired landscape character).**

**Objectives 1 and 2: Maintain Early Successional Forest Types on the Landscape and Improve Age Class Distribution (Aspen, Balsam Fir, and Paper Birch)**

The primary project-specific need is to address the older declining aspen, much of which is approaching 60 years of age and losing the ability to regenerate itself back into productive, healthy aspen forest. As stated earlier, MA 1A areas are expected to be maintained in primarily early successional forest types, such as aspen, paper birch, and balsam fir. Without intervention (natural or human), these types do not maintain themselves over time. As these types of forest species age, individual trees decline and understories of later successional tree species develop.

The most unique characteristic about aspen is its ability to naturally regenerate from its root system. The aspen stands that we see today are actually clones. They are uniform in adaptations to the present environment and genetic makeup. Aspen becomes mature at around age 40-50 in the Lake States. This is described as the pathological rotation age. When aspen develops beyond this age, it is susceptible to many disease and insect attacks which can have a detrimental effect on future clone development. Environmental conditions, such as drought, affect aspen growth and vigor by weakening the trees which ultimately makes the tree more susceptible to insect and disease attacks. According to Stanosz and Patton 1987, as an aspen stand begins to deteriorate, individual trees die. The crown space created by the individual tree creates an opening, but the canopies of surrounding trees will not expand to close the opening. As a result, the residual stand is susceptible to an increase in wind, sunlight and evaporation, and increased activity from pathogens and insects. The deterioration of an aspen stand can occur in less than five years. It is at this point, unless a stand initiating disturbance (such as clearcutting) occurs, the stand will continue to deteriorate to a “shrubwood” with only a few aspen suckers. Instead of healthy aspen clones from root suckers, what eventually dominates the stand is determined by soil regimes. If tolerant hardwoods or balsam fir are present within the aspen stand, these species will eventually dominate the stand because of their ability to regenerate under their own shade (Silvics of North America 1990). If intolerant tree species are present, they can outlive the aspen and eventually dominate but in turn, will again be replaced by the shrubwood type. In order to regenerate successfully, aspen requires disturbances such as clear-cut harvest followed by site preparation, wind, or fire events. Due to these characteristics, clear-cutting is used to mimic natural disturbances such as wind throw or wild fire events and is the primary silvicultural tool for managing aspen.

The federal upland within the project area is about 66 percent aspen (Table 2). This is within the Forest Plan desired range for aspen which is 50 to 75 percent of MA 1A (Plan page 3-3).

**TABLE 2: SUMMARY OF MA 1A UPLAND ACRES COMPARED TO FOREST PLAN DESIRED RANGE**

| Upland Type | Acres | Percent | Forest Plan Desired Range (%) |
|---|---|---|---|
| Aspen | 11503 | 66 | 50-75 |
| Balsam fir | 127 | 1 | 0-10 |
| Paper birch | 379 | 2 | 0-5 |
| Jack pine | 0 | 0 | 0-2 |
| Red/White pine | 181 | 1 | 5-15 |
| Northern hardwoods | 4099 | 24 | 5-20 |
| Oak | 16 | <1 | 0-5 |
| Other forest types | 1015 | 6 | 0-5 |
| Upland Open | 73 | <1 | 1-4 |

About 21 percent of the aspen in the project area is 46 years of age or older and is in various stages of decline (Table 3). The Forest Plan (Plan page 2-5) identifies the desired range of older aspen to be between 5 percent and 15 percent with a target of 10 percent. By harvesting about half of the older aspen, the percentage of aspen that is 45 years or older will be in alignment with the Forest Plan desired range and would be maintained across the landscape in MA 1A.

**TABLE 3: ASPEN AGE CLASS, ALL PROJECT AREA MA 1A AREAS COMBINED COMPARED TO FOREST PLAN DESIRED RANGE**

| Age Class | Acres | Percent | Desired % Range | Target |
|---|---|---|---|---|
| 0-10 | 2384 | 21 | 15-25 | 20 |
| 11-20 | 1420 | 12 | 15-25 | 20 |
| 21-45 | 5313 | 46 | 45-55 | 50 |
| 46+ | 2386 | 21 | 5-15 | 10 |
| **Grand Total** | **11503** | **100** | | |

Paper birch, another early successional species, usually propagates by seed and also requires minimal competing vegetation to establish itself. In the past, paper birch likely became established following wild fire events that left behind a seed source as well as a suitable seed bed. Due to these characteristics, regeneration treatments could include a shelterwood harvest which leaves some of the mature overstory to provide adequate light and seeding opportunities for regenerating paper birch. This type of harvest would be followed by mechanical site preparation or prescribed burning to scarify the ground surface and expose mineral soil for an adequate seed bed.

Only about 2 percent of the upland within the project area is paper birch. This is within the Forest Plan desired range for paper birch which is 0-5 percent of MA 1A (Plan page 3-3).

The average age of these paper birch stands is 83 years old, which means that near all the paper birch is in the oldest desired age class (61 years and older) and is in some stage of decline.

While there is no specific Forest Plan requirement to maintain these stands of paper birch in this location, we know that paper birch continues to be important to Native American Indian tribes and is also of scenic value to the recreating public and their experience of the Forest.

- For these reasons, about 2700 acres of the older aspen or aspen mix types with balsam fir and/or a spruce component are being considered for clearcut harvest and natural regeneration to aspen.
- For these reasons, about 240 acres of older paper birch are being considered for shelterwood harvest and mechanical scarification for natural regeneration to paper birch.

**Objective 3: Restore Healthy Forest Conditions on Areas Impacted by Spruce Decline**

Over the past decade, spruce decline has killed thousands of acres of white spruce across the Forest. Spruce decline is caused by a combination of factors including: spruce budworm, needle cast fungi, drought stress, root disease, and marginal site conditions. Stands exhibiting spruce decline are not growing on normal sites for white spruce. In previous centuries, spruce stands were not common on the forest. The origin of many spruce stands resulted from planting in the 1930s through the 1960s. Site conditions of the planted stands do not always match those best suited for the species. In the 1930s there was an urgency to reforest the land and spruce was readily available. Spruce was planted on sites better adapted to other tree species in many areas of the forest.

The rapid mortality of white spruce creates a need to reforest many sites. Normal mortality of spruce usually occurs in small patches within stands and contributes to desired forest woody debris and snag habitat for wildlife. These patches eventually regenerate to desired tree species without further management actions; however, spruce decline is affecting entire stands. Due to the large amount of mortality, a majority of the area would not regenerate promptly, would not regenerate to desirable species, or would not be adequately stocked.

In April of 2005 and April of 2006, the Forest Supervisor issued decisions to salvage spruce on thousands of acres and monitor additional acres with spruce decline symptoms. Since those decisions, previously unaffected spruce stands have been monitored and have reached decline levels that are similar to those that triggered past salvage harvest proposals.

- For these reasons, about 296 acres of white spruce or spruce mix types are being considered for salvage clearcut harvest and natural regeneration to aspen. It should be noted that some of these salvage areas would result in temporary openings that exceed 40 acres in size which is consistent with guidance in the National Forest Management Act and Forest Plan (Plan page 2-4).

**Objective 4: Maintain and Restore Habitat for Early Successional Wildlife Species**

One of the goals of the Forest Plan is to conserve habitat capable of supporting viable populations of existing native species of wildlife (Plan page 1-4). By maintaining the aspen type and improving the age-class distribution of the aspen, habitat for many native wildlife species would be maintained or improved.

The importance of aspen to early successional wildlife species is based on both the long-term maintenance of the aspen type, and the amount of young age aspen. By maintaining the aspen type and improving the age-class distribution of the aspen, habitat for many native wildlife species would be maintained or improved. Game species that utilize clearcuts include white-tailed deer, ruffed grouse, and American woodcock. Songbirds utilizing clearcuts include chestnut-sided warbler, clay-colored sparrow, Eastern towhee, Nashville warbler, and white-throated sparrow. Golden-winged warbler (another songbird) utilizes upland and lowland shrub habitat, which in Wisconsin, is largely aspen clearcuts less than 10 years old and alder swamps. In fact, bird surveys conducted by Natural Resources Research Institute (NRRI) have found over 150 bird species utilizing regenerating aspen since 1992 (Danz etal, 2008).

Recent assessments conducted on the forest indicate a negative trend in the amount of young age class aspen, as well as aspen cover types across the forest (Quinn, et.al, 2006, Quinn and Schmidt, 2007, CNNF Fiscal Year 2011 Monitoring and Evaluation Report). These assessments note that harvest to regenerate aspen has decreased on the forest as compared to the past, and that there is a substantial percentage of aspen cover type that is beginning to succeed to other forest types due to advanced age.

Ruffed grouse are one of the species most closely tied to the aspen resource. Throughout much of its range, aspen appears to be the most important species for grouse (Gullion, 1984, p. 3). Counts of drumming males in spring indicate that northern hardwood forests typically reach a density of 1-2 drumming males/ 40 hectares, while aspen forests in the Lake States can support 4-8 drumming males/ 40 hectares (Dessecker and McAuley, 2001, p. 457).

American woodcock is an early successional species that uses many of the same habitats as ruffed grouse, including various ages of aspen. Yearly spring singing ground surveys are conducted across the eastern United States. There has been a long-term (1968-2009) decline of 1.8% per year in woodcock populations in the central region, which includes the state of Wisconsin (Kelly 2007).

The golden-winged warbler is a neo-tropical migrant songbird with a breeding range centered on the northern Great Lakes and northwest into Canada. Northern Wisconsin is in the core range for the species, with about 80% of the total population occurring in the upper Midwest (Hanowski, 2002, p. 127). Currently there are concerns over long-term, range-wide declines in the species. Populations of golden-winged warbler have declined across their range with a 2.4% rate of decline throughout, and a 2.1% decline in Wisconsin (Martin et al 2007). One possible reason includes loss of breeding habitat (they strongly favor both young aspen and lowland shrubs, especially alder).

A host of songbirds from alder flycatchers to golden-winged warblers breed in shrub wetlands. Ruffed grouse often hunker down there, and woodcock probe the damp soil to feed on earthworms and other invertebrates. Some shrub wetlands may not need to be managed if they have many small openings grown up with herbaceous plants and sedge tussocks, or scattered patches or clumps of woody shrubs that don't exist in large blocks, or if natural processes such as floods, fires, or beaver activity regularly set the vegetation back to a stage featuring thick and vigorous stem growth.

Often though, wetlands shrubs become overmature and their stem density decreases substantially. The understory becomes overgrown with grasses so that ground-dwelling birds like woodcock can't move about and feed freely. An alder stand is usually too old to provide high-quality habitat when the shrubs' limbs become thick and grow horizontally instead of vertically. By this definition, much of the alder wetlands within the project area would be considered overmature.

For early successional wildlife species which utilize regenerating habitat, particularly along edges, smaller patches of habitat would be desired as this increases the amount of habitat that can be utilized. It is also beneficial to have this habitat available throughout the planning period.

- For these reasons, most of the regeneration harvest treatments being proposed, about 3000 acres) are focused on regenerating aspen which provides habitat for early successional wildlife. Regeneration of stands in the 10-15 acre size range (Areas A, C, and E) along with a two staged implementation approach with a 5-7 year time interval in between harvests is proposed in order to increase the amount of habitat available to utilize throughout the next decade.
- For these reasons, about 19 sites have been proposed for alder regeneration / shearing treatments. Due to operational feasibility, regeneration of alder is proposed in upland/wetland transition zones adjacent to other planned harvest activities (about 3 to 8 acres per site, 19 sites).

**Objective 5: Decrease the Amount of Early Successional Forest Species along the Ice Age National Scenic Trail**

In October 1980, Federal legislation authorized the establishment of the Ice Age National Scenic Trail (Ice Age NST) as a component of the National Trails System. It is one of only eleven trails in the United States authorized by Congress to be designated a National Scenic Trail. The Ice Age NST extends for more than 1,000 miles across the State of Wisconsin, winding through a myriad of ecosystems and political jurisdictions. Its design, construction and maintenance are carried out through a joint effort between National Park Service, Wisconsin Department of Natural Resources, Ice Age Trail Alliance; plus an army of dedicated volunteers and other private organizations throughout 31 counties in Wisconsin. Understandably, the level of trail building experience and user opportunities have often differed amongst those involved. With the increasing popularity of the Ice Age NST, there is greater public expectation of a superlative hiking experience on this unique National Scenic Trail.

The March 1994 Ice Age NST Corridor Plan Decision and Direction recognized that timber harvest activities were an ongoing and needed management tool along the trail, but identified the need to promote long lived tree species and big tree character where possible. This type of management provides the high scenic quality expected on the Congressionally designated trail and also improves visitor safety and reduces trail maintenance by encouraging forest tree species that are aesthetically pleasing and possibly less susceptible to catastrophic loss.

A portion of the Ice Age NST traverses Area C of the Medford Aspen II project area. Many of the forested stands that are adjacent to the trail are mature/over mature aspen. Forest Plan guidelines for High Scenic Integrity of the trail call for limiting harvest activities that would result in temporary openings within 200 feet. Clearcuts create these kinds of temporary openings which would be the method of harvest needed to keep and regenerate the area back to aspen.

- For these reasons, about 65 acres of old aspen along the trail are being proposed for a shelterwood harvest and underplanting of long-lived hardwood and conifer species. The intent is to convert these acres to long lived species which would improve scenic integrity of the trail over time and result in less overall maintenance costs and safety considerations.

**B. UTILIZE RENEWABLE RESOURCES (Forest Plan Goal 2.5– Forest Commodities: Contribute toward satisfying demand for wood products and Forest Plan Goal 3.1 – Capital Infrastructure: Build and maintain safe, efficient, and effective infrastructure that supports public and administrative uses of National Forest System lands).**

**Objective 6: Provide Wood Products to Meet Demand**

Forest Plan Goal 2.5 (Plan page 1-6) states that the Forest should contribute toward satisfying demand for wood products through environmentally responsible harvest. As identified previously in this document, there are about 3300 acres of forest in need of treatment to improve forest health and vigor, to maintain the aspen component within MA 1A, to improve the age class diversity of the aspen types, to restore health to forest impacted by disease (spruce decline), to improve early successional wildlife habitat, and to improve the scenic quality of the Ice Age NST. Local demand for wood products remains high as evidenced from recent timber sales offered and sold on the Medford-Park Falls District.

- For this reason, maintenance of and improvements to forest health would be accomplished primarily with ground based logging systems and would include the sale of marketable wood products, including tops of trees for biomass. (a rough volume estimate of about 54,000 CCF / 34 MMbf of mostly aspen pulpwood and about 23,000 tons of biomass could be available) Note: 1 CCF = 1 hundred cubic feet. 1 MMbf = 1 million board feet.

**Objective 7: Maintain a Road System that Meets Current Transportation Needs**

Roads are needed for hauling timber products. While we have been managing forest vegetation in the project area for decades, not all potential harvest areas have current road access. For this reason, some type of road construction is needed. The potential harvest areas would not have to be accessed for another 40 plus years for removal of wood products. In these areas, only temporary road construction is desired, because the road would not be needed again for a prolonged time and could be decommissioned following project activity.

There are some existing roads in the project area that access the potential harvest areas that have not been added to the Forest's permanent transportation system. Following harvest activity, some of these roads would not be needed for forest management activity again for 40 plus years. These roads could be decommissioned following use for this project because they have little or no established public use, they do not contribute to Forest Service administrative use, and they do not contribute access to private land. A few of these existing roads would be needed to manage the forest within another 10 to 20 years so it makes sense to add them to the Forest's permanent transportation system.

Some of the existing roads and trails needed for access to the potential harvest activities are in need of culvert replacement, repair, clearing of brush, or ditching. All existing roads utilized for timber harvest activity could require some repair and maintenance.

- For these reasons, there is a need to construct about 14.2 miles of temporary roads which would be decommissioned following use, to decommission about 0.6 miles of existing road, and to add about 2.7 miles of existing road to the Forest's permanent transportation system.

## Proposed Action

The proposed action was designed to meet the purpose and need as described in the previous section and includes all applicable Forest Plan standards and guidelines. Table 4 provides definitions of the proposed vegetation and road treatments and Table 5 summarizes the amount of activities being proposed. A more detailed project treatment table can be found in Appendix A of this document. Appendix B includes detailed project maps.

Forest Plan standards and guidelines are available on the Forest's web page at: http://www.fs.usda.gov/detail/cnnf/landmanagement/planning/?cid=stelprdb5117262. Applicable Forest Plan standards and guidelines and other measures needed for protection of resources will be identified as the analysis progresses.

**TABLE 4: PROJECT ACTIVITY DEFINITIONS**

| |
|---|
| **Clearcut** – A regeneration harvest method that removes essentially all the live overstory trees in a stand, except for reserve trees left on site for management objectives other than regeneration. The result is a new age class of trees that grows following the harvest treatment. This method allows for natural regeneration of forest species which are light tolerant. |

**TABLE 4: PROJECT ACTIVITY DEFINITIONS**

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|---|
| **Shelterwood -** A regeneration harvest method that removes essentially most of the overstory except to retain a partial live overstory to provide seed and shade for regeneration. Reserve trees are also left on site for management objectives other than regeneration. The result is a new age class of trees that grows following the harvest treatment. The partial overstory that is left would be removed once seedlings and saplings are established (unless stated otherwise). |
| **Shelterwood and Plant -** A regeneration harvest method that removes essentially most of the overstory except to retain a partial live overstory to provide seed and shade for regeneration. Reserve trees are also left on site for management objectives other than regeneration. These stands will be underplanted with long lived hardwood and conifer species (white pine, red pine, hemlock, and oak). The result is a new age class of trees that grows following the harvest treatment. In these stands, any live overstory remaining once the seedlings are established will remain on site. |
| **Shearing** - Shearing is a regeneration method used for cutting small diameter trees or shrubs. The result of this treatment is a new age class of trees or shrubs that grows following the treatment. This treatment is generally conducted with mechanized equipment, but in some cases can be accomplished with hand tools. |
| **Road Maintenance** - Activity that results in the basic upkeep of the road in its current or already approved condition. Maintenance includes activities associated with the upkeep of the road surface, shoulders, parking and side areas, and traffic-control devices. Maintenance may include replacement of culverts. |
| **Temporary Road Construction** – Temporary roads are not intended to be a part of the forest transportation system and not necessary for resource management for many years. They are generally low standard, native surface travelways with only the necessary improvement needed to prevent resource damage. Any improvements would be removed on project completion. |
| **Decommissioning** – Activities that result in the stabilization and restoration of unneeded roads to a more natural state and rendered inaccessible. |

**TABLE 5: PROPOSED ACTION SUMMARY**

| | |
|---|---|
| Aspen / Fir Clearcut Harvest (Acres) | 2698 |
| Spruce Salvage Clearcut Harvest (Acres) | 296 |
| Paper Birch Shelterwood (Acres) | 237 |
| Aspen Shelterwood with Planting (Acres) | 65 |
| TOTAL HARVEST ACRES | 3298 |

**TABLE 5: PROPOSED ACTION SUMMARY**

| | |
|---|---|
| Temporary Road Construction (Miles) | 14.2 |
| Road Decommissioning (Miles)(includes temporary road miles) | 14.8 |
| Existing Inventoried Roads to Add to Permanent Forest Road and Trail System (Miles) | 2.7 |
| | |
| Alder Shearing (# of Locations) | 19 |

The intent of aspen, fir, and spruce clearcut treatments is to naturally regenerate a new stand of primarily aspen species. The intent of aspen shelterwood treatments with planting is to regenerate a stand of longer lived tree species such as white pine, red pine, hemlock, and oak. The intent of paper birch shelterwood treatments is to naturally regenerate a new stand of paper birch. All shelterwood treatments could include mechanical site preparation for seeding or planting. Mechanical site preparation results in exposed mineral soil in order to provide conditions for establishment and growth of tree seedlings.

## Affected Environment and Environmental Issues

This section includes a brief summary of the key issues for this project, as determined from preliminary scoping and review by the interdisciplinary team. An issue generally describes an impact that is unavoidable or unintentional and could occur as a result of project implementation. As stated in the previous section, design measures for each of the issues will be identified during the analysis and would reduce or eliminate any potential impacts that could occur. Once design measures have been identified, each issue will be examined to determine the context and intensity of any residual or unwanted impacts.

In addition to the following project objectives, several concerns about other potential effects of the project will be analyzed and are identified in the remainder of this section:

- Objectives 1 and 2: Maintain Early Successional Forest Types on the Landscape and Improve Age Class Distribution (Aspen, Balsam Fir, and Paper Birch).
- Objective 3: Restore Healthy Forest Conditions on Areas Impacted by Spruce Decline.
- Objective 4: Maintain and Restore Habitat for Early Successional Wildlife Species.
- Objective 5: Decrease the Amount of Early Successional Forest Species along the Ice Age National Scenic Trail.
- Objective 6: Provide Wood Products to Meet Demand.
- Objective 7: Maintain a Road System that Meets Current Transportation Needs.

### Vegetation – Management Indicator Habitat (Regenerating Aspen)

The CNNF Forest Plan (Appendix II) identifies four Management Indicator Habitats (MIH), of which regenerating aspen forest is one that would be affected by this proposal. Regenerating aspen is a community that indicates suitable habitat conditions for a number of song birds, game birds and game animals including house wren, chestnut-sided warbler, indigo bunting, white-tailed deer, American woodcock, and ruffed grouse. Although the Forest Plan does not define what age group identifies regenerating aspen, the analysis in the Plan's FEIS defines this MIH as "aspen less than 20 years of age" (FEIS p 2-55). Since regenerating aspen is used as an indicator of environmental health of associated species, the overall trend for this indicator and how it is affected at the project and Forest scale will be examined.

## Threatened, Endangered, and Sensitive Species

Federally endangered eastern timber wolf, federally threatened northern long-eared bat, and Regional Forester Sensitive Species including wood turtle, tri-color bat, little brown bat, and black-backed woodpecker are the species that have been identified as potentially being impacted by timber harvest activities in the Medford Aspen II project area.

Endangered or threatened species refer to those species covered by the federal Endangered Species Act. The Endangered Species Act (ESA) requires federal agencies to "… implement a program to conserve fish, wildlife, and plants . . . to insure their actions do not jeopardize the continued existence of any threatened or endangered species or result in the destruction or adverse modification of critical habitat." To that end, all proposed projects include an evaluation of threatened and endangered species to determine potential impacts. These evaluations also include any conservation measures and practices needed to ensure that adverse effects of management activities are either eliminated or mitigated

Regional Forester Sensitive Species (RFSS) are those plants and animals, identified by the Regional Forester, for which population viability is a concern, as evidenced by current or predicted downward population or habitat trends (Forest Service Manual FSM 2670.5). The Forest Service is directed to ensure the viability of sensitive species and preclude trends towards listing under the Endangered Species Act. To that end, all proposed projects include an evaluation of RFSS species to determine potential impacts. These evaluations also include any project design features and practices needed to ensure that RFSS would not trend towards federal listing as a result of implementation.

## Heritage and Cultural Resources

Cultural resources are defined as irreplaceable properties that relate primarily, but not exclusively, to past human life. They include archaeological sites, historic architecture and structures, memorials, cultural landscapes, and objects. They also include intangible phenomena such as social values, folklore, and oral history. They possess scientific value in that they are keys to understanding the development of human cultural systems. They possess cultural importance through the values they convey to the public relative to the heritage left by both native and immigrant Americans. Land and resource management activities, such as vegetation management, have the potential to impact the physical aspects of cultural sites primarily through the use of heavy equipment for ground based logging systems. Those sites that may be eligible for inclusion in the National Register of Historic Places (NRHP) would be of particular concern.

All areas impacted by the proposal have been surveyed for the presence of sites that could be eligible for the NRHP. The analysis for this project will include identifying any of the treatments that could impact a site and then establishing measures to avoid those impacts.

## Aquatic Resources

Timber harvest and activities associated with timber harvesting, including permanent and temporary road construction, road reconstruction, and road decommissioning, may impact streams and other surface water bodies in the project area. There is a concern that logging and road building could lead to an increase in peak flows and sediment loads into streams resulting in undesirable effects to downstream aquatic resources.

## Soils

Soil disturbance caused by heavy equipment used for harvesting or site preparation activities may have negative effects on soil physical, chemical and biological properties and could reduce long-term forest soil productivity. Use of heavy rubber-tired or tracked equipment creates risk of soil compaction,

rutting, displacement, or erosion. Removal of merchantable tree boles could affect total site nutrients. If the severity, areal extent, and duration of soil disturbance are great enough to negatively influence the availability of water, nutrients, and/or oxygen to tree roots, then the ability of a forest soil to sustain productive forest growth could be reduced. Soil carbon storage could also be impacted by changes in vegetation.

### Scenic Integrity (Ice Age National Scenic Trail)

The harvest treatments being proposed along this trail could negatively impact visual quality and scenic integrity along those stretches of trail. The visual impact could be discernable to trail users for several years.

## Alternatives

Two alternatives are currently being considered for this project: the Proposed Action (Alternative 2) and the No Action alternative (Alternative 1).

The Proposed Action is generally and specifically described in this document (Proposed Action section) and includes salvage and live tree harvest and temporary road construction and road reconstruction. The proposal includes applicable Forest Plan standards and guidelines as well as more specific design measures that will be developed during the analysis to protect/improve potentially impacted resources. As an example, in order to decrease the potential for soil compaction or erosion from harvest activity, the Forest Plan directs us to operate heavy equipment only when soils are not saturated or when the ground is frozen. This guideline, along with other applicable Forest Plan standards and guidelines would be identified and included as part of any action alternatives analyzed in detail, including this proposal.

Under the No Action alternative, none of the proposed harvest treatments would occur. No associated or connected actions such as temporary road construction and decommissioning would occur. While it is not required to conduct a detailed consideration of the No Action alternative, we have opted to develop it in detail in order to compare the ability of the Proposed Action to achieve the desired outcomes.

Public and internal issues will be reviewed to determine where environmentally harmful resource effects can be resolved by project design and mitigation measures and where they cannot. When an issue cannot be resolved with design measures, alternative approaches that resolve the issue, yet still achieve the purpose and need, will be reviewed. In such cases, additional alternatives to the proposal will be developed to the extent needed to determine whether or not it is reasonable to study them in detail.

## What Our Decisions Will or Will Not Address and Timeframes

An environmental assessment (EA) will be prepared for this project. Assuming that the analysis supports a finding of no significant impact (FONSI), a Decision Notice (DN) and FONSI will be prepared. The decision to be made is whether to implement the actions in the proposal (including any project design measures identified during the analysis to reduce impacts) or an alternative to the proposal.

This project and associated activities are focused primarily on improving and maintaining regenerating, early successional forest across the landscape. The decision will include what harvest activities and wildlife habitat improvement activities will take place. The decision will include only the transportation needs associated with those specific activities.

The decision will not address long term transportation system needs within the project area (including designation of public motorized access travel ways). Many of those decisions (including roads open to

public motorized travel) were made with the 2009 Record of Decision for the Medford Aspen project. The decision for the Medford Aspen II project will address road access needs specific to administer the activities that are currently being proposed and include maintenance of existing roads and new construction of temporary access routes. All temporary access routes would be decommissioned upon project completion.

Expected completion of the Environmental Assessment for this project and publication of a draft Decision Notice and Finding of No Significant Impact is in January 2017.

## Who Makes the Decision

The Responsible Official for the decision is the Medford-Park Falls District Ranger.

## How to Comment on This Project

Comments in response to this proposal should focus on 1) the proposal; 2) issues or impacts from the proposal; and 3) possible alternatives for addressing issues associated with the proposal that would still meet the specific needs identified. We are especially interested in information that might identify a specific undesired result of implementing the proposed actions.

The Medford Aspen II project is a project implementing the Chequamegon-Nicolet Forest Plan and is subject to the pre-decisional administrative review (objection) process found in 36 CFR 218, Subparts A and B. Comments are welcome at any time, but only those who submit timely, project-specific, written comments during a Forest Service designated public comment period would be eligible to file an objection.

The Forest Service will accept comments on this proposal for 30 days, beginning on the first day after publication of a notice in The Star News, Medford, Wisconsin, which is the exclusive means for calculating the designated comment period and is expected on Thursday, July 7, 2016. Comments should be within the scope of the proposed action, have a direct relationship to the proposed action, and must include supporting reasons for the Responsible Official to consider (36 CFR 218.2). Other eligibility requirements are defined by 36 CFR 218.25(a)(3) and include name, postal address, title of the project and signature or other verification of identity upon request and the identity of the individual or entity who authored the comments.

Submit written comments to Bob Hennes, District Ranger, by one of the following methods; hand delivery or mail: Attn: Jane Darnell, 850 N. 8th St., Medford, WI 54451; facsimile (715) 748-5675; or email: comments-eastern-chequamegon-nicolet-medford-falls@fs.fed.us (please put “comments on Medford Aspen II Project” in the subject line). Office hours, for those who wish to hand deliver their comments, are 9:00 a.m. to 3:00 p.m., Wednesday – Thursday (except Federal holidays). Acceptable formats for electronic comments are text or html e-mail, Adobe portable document format, and formats viewable in Microsoft Office applications. It is the responsibility of the sender to ensure timely receipt of any comments submitted.

The published news notice and other project documents will be posted to the project web page at http://www.fs.usda.gov/project/?project=48388. Questions or additional information requests regarding this action can be directed to Jane Darnell at 715-748-4875 ext. 38, email: jdarnell01@fs.fed.us.

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*USDA is an equal opportunity provider, employer, and lender.*

# Appendix A: Detailed Treatment Tables

Table A-1 is the key for the header information in Table A-2. Table A-2 identifies the site specific vegetation management that is being proposed.

**TABLE A-1: TABLE A-2 HEADER DEFINITIONS**

| | |
|---|---|
| Stand ID | This is an identifier for each area in our vegetation database and includes the Compartment and Stand number as described below and also District, Forest, and Region identifying numbers. |
| Map Label | Label for a particular treatment area that is comprised of a compartment number (1st 4 digits) and a stand number (last 3 digits). The number may be followed by a letter when a single stand was broken up into smaller pieces. Each label has a counterpart shown on the maps in Appendix B. |
| Map Area | The Medford Aspen II project is located in 5 separate areas across the Medford landbase of the Medford-Park Falls Ranger District. Each of these areas (A-E) were given an identifying letter which is also shown on the map key in Appendix B. |
| Stand Acres | This identifies the acres in each stand. |

**TABLE A-1: TABLE A-2 HEADER DEFINITIONS**

| | |
|---|---|
| Treat Acres | This identifies the acres in that stand that are being treated. |
| Current Forest Type | Represents the type of trees that would be the majority of the current overstory. |
| Stand Age | Represents an approximate current age of the overstory trees. |
| Treatment | The type of vegetation management proposed in each area. These are defined in Table 4 of the main document. |
| Treat Year | Identifies the approximate year the treatment would take place. |
| Regeneration | Identifies the forest type that is intended to grow following the harvest treatment. |
| Temp Road | Indicates that temporary road construction would be needed to reach this area for treatment. Note: A single unique Temporary Road may access 1 or more stands. |

**TABLE A-2: STAND TREATMENT TABLE**

| Stand ID | Map Label | Map Area | Stand Acres | Treat Acres | Current Forest Type | Stand Age | Treatment | Treat Year | Regeneration | Temp Road |
|---|---|---|---|---|---|---|---|---|---|---|
| 09130103001001 | 3001001 | B | 30 | 30 | Quaking aspen | 71 | Clearcut | 2025 | Aspen or Aspen Mix | Yes |
| 09130103001022 | 3001022 | B | 18 | 18 | Quaking aspen | 63 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103009010 | 3009010 | A | 35 | 35 | Quaking aspen | 68 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103010002 | 3010002 | A | 13 | 13 | Quaking aspen | 49 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103010009 | 3010009 | A | 15 | 15 | Bigtooth aspen | 48 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103010012 | 3010012a | A | 91 | 40 | Quaking aspen | 47 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103010012 | 3010012b | A | 91 | 25 | Quaking aspen | 47 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103010020 | 3010020 | A | 27 | 27 | Quaking aspen | 58 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103010033 | 3010033 | A | | 3-8 | Alder (YR 002) | | Shear | 2019 | Alder | |
| 09130103010044 | 3010044 | A | | 3-8 | Alder (YR 001) | | Shear | 2019 | Alder | |
| 09130103010066 | 3010066a | A | 69 | 38 | Quaking aspen | 49 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103010096 | 3010096a | A | 45 | 34 | Quaking aspen | 71 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103012019 | 3012019 | A | 13 | 13 | Aspen-white spruce/balsam fir | 71 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103020013 | 3020013 | B | 36 | 36 | Quaking aspen | 52 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103023004 | 3023004a | A | 74 | 18 | Quaking aspen | 68 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103023004 | 3023004b | A | 74 | 11 | Quaking aspen | 68 | Clearcut | 2025 | Aspen or Aspen Mix | |
| 09130103023004 | 3023004c | A | 74 | 25 | Quaking aspen | 68 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103023004 | 3023004d | A | 74 | 10 | Quaking aspen | 68 | Clearcut | 2025 | Aspen or Aspen Mix | |
| 09130103023004 | 3023004e | A | 74 | 10 | Quaking aspen | 68 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103023005 | 3023005a | A | 29 | 16 | Quaking aspen | 61 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103023005 | 3023005b | A | 29 | 12 | Quaking aspen | 61 | Clearcut | 2025 | Aspen or Aspen Mix | |
| 09130103023008 | 3023008 | A | 13 | 13 | White spruce-basalm fir | 51 | Salvage Clearcut | 2025 | Aspen or Aspen Mix | |
| 09130103023011 | 3023011 | A | 27 | 27 | White spruce-basalm fir | 46 | Salvage Clearcut | 2025 | Aspen or Aspen Mix | Yes |
| 09130103023018 | 3023018 | A | 7 | 7 | White spruce-basalm fir | 46 | Salvage Clearcut | 2025 | Aspen or Aspen Mix | |
| 09130103023026 | 3023026a | A | 47 | 40 | Quaking aspen | 74 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103023034 | 3023034 | A | 7 | 7 | White spruce-basalm fir | 46 | Salvage Clearcut | 2025 | Aspen or Aspen Mix | |
| 09130103023040 | 3023040 | A | 31 | 31 | Quaking aspen | 68 | Clearcut | 2019 | Aspen or Aspen Mix | |

**TABLE A-2: STAND TREATMENT TABLE**

| Stand ID | Map Label | Map Area | Stand Acres | Treat Acres | Current Forest Type | Stand Age | Treatment | Treat Year | Regeneration | Temp Road |
|---|---|---|---|---|---|---|---|---|---|---|
| 09130103025005 | 3025005 | A | 9 | 9 | Quaking aspen | 45 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103025006 | 3025006a | A | 69 | 31 | Quaking aspen | 45 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103025006 | 3025006b | A | 69 | 19 | Quaking aspen | 45 | Clearcut | 2025 | Aspen or Aspen Mix | |
| 09130103025006 | 3025006c | A | 69 | 20 | Quaking aspen | 45 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103025010 | 3025010 | A | 20 | 20 | Aspen-white spruce/balsam fir | 44 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103025012 | 3025012 | A | 19 | 19 | Aspen-white spruce/balsam fir | 43 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103025013 | 3025013 | A | | 3-8 | Alder (YR 003) | | Shear | 2019 | Alder | |
| 09130103025014 | 3025014a | A | 68 | 40 | Quaking aspen | 43 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103025014 | 3025014b | A | 68 | 27 | Quaking aspen | 43 | Clearcut | 2025 | Aspen or Aspen Mix | Yes |
| 09130103025015 | 3025015 | A | 27 | 27 | Quaking aspen | 45 | Clearcut | 2025 | Aspen or Aspen Mix | Yes |
| 09130103025016 | 3025016a | A | 58 | 35 | Quaking aspen | 44 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103025016 | 3025016b | A | 58 | 22 | Quaking aspen | 44 | Clearcut | 2025 | Aspen or Aspen Mix | Yes |
| 09130103026005 | 3026005 | A | 21 | 21 | Quaking aspen | 49 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103026009 | 3026009 | A | 12 | 12 | Quaking aspen | 44 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103028004 | 3028004a | A | 81 | 40 | Quaking aspen | 45 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103028004 | 3028004b | A | 81 | 36 | Quaking aspen | 45 | Clearcut | 2025 | Aspen or Aspen Mix | Yes |
| 09130103028006 | 3028006 | A | | 3-8 | Alder (YR 005) | | Shear | 2019 | Alder | |
| 09130103028009 | 3028009 | A | | 3-8 | Alder (YR 004) | | Shear | 2025 | Alder | |
| 09130103028041 | 3028041 | A | 8 | 8 | Quaking aspen | 62 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103029017 | 3029017 | B | 14 | 14 | Quaking aspen | 64 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103029048 | 3029048 | B | 8 | 8 | Quaking aspen | 55 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103030007 | 3030007 | B | 28 | 28 | Quaking aspen | 34 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103032003 | 3032003 | B | 13 | 13 | Quaking aspen | 61 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103032006 | 3032006a | B | 46 | 26 | Quaking aspen | 61 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103032008 | 3032008 | B | 24 | 24 | Paper birch | 65 | Shelterwood | 2019 | Paper Birch | Yes |
| 09130103032009 | 3032009a | B | 46 | 33 | Quaking aspen | 60 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103032011 | 3032011 | B | 25 | 25 | Quaking aspen | 80 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |

**TABLE A-2: STAND TREATMENT TABLE**

| Stand ID | Map Label | Map Area | Stand Acres | Treat Acres | Current Forest Type | Stand Age | Treatment | Treat Year | Regeneration | Temp Road |
|---|---|---|---|---|---|---|---|---|---|---|
| 09130103032015 | 3032015 | B | 10 | 10 | Quaking aspen | 58 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103032036 | 3032036 | B | 15 | 15 | Quaking aspen | 80 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103034006 | 3034006a | B | 35 | 18 | Quaking aspen | 42 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103034010 | 3034010 | B | | 3-8 | Alder (Steve Cr 001) | | Shear | 2019 | Alder | |
| 09130103034022 | 3034022a | B | 58 | 21 | Quaking aspen | 50 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103034034 | 3034034 | B | 22 | 22 | White spruce-basalm fir | 66 | Salvage Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103034035 | 3034035 | B | 13 | 13 | White spruce-basalm fir | 72 | Salvage Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103034036 | 3034036 | B | 47 | 40 | White spruce-basalm fir | 77 | Salvage Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103035001 | 3035001a | B | 104 | 32 | Quaking aspen | 43 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103035001 | 3035001b | B | 104 | 32 | Quaking aspen | 43 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103035002 | 3035002 | B | 19 | 19 | Quaking aspen | 43 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103035003 | 3035003 | B | | 3-8 | Alder (Steve Cr 002) | | Shear | 2019 | Alder | |
| 09130103035007 | 3035007 | B | 5 | 4 | Quaking aspen | 44 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103035010 | 3035010 | B | 10 | 10 | Quaking aspen | 42 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103035012 | 3035012 | B | 12 | 12 | Quaking aspen | 44 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103035018 | 3035018 | B | 4 | 4 | Quaking aspen | 70 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103035025 | 3035025 | B | 9 | 9 | Quaking aspen | 75 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103037004 | 3037004 | B | 12 | 11 | Quaking aspen | 56 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103037012 | 3037012a | B | 60 | 6 | Quaking aspen | 55 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103037013 | 3037013 | B | 12 | 12 | Quaking aspen | 62 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103037024 | 3037024 | B | 42 | 40 | Quaking aspen | 58 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103037031 | 3037031 | B | 17 | 17 | Quaking aspen | 93 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103037039 | 3037039 | B | 9 | 9 | Quaking aspen | 63 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103037042 | 3037042 | B | 19 | 19 | Quaking aspen | 62 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103044019 | 3044019a | C | 41 | 18 | Quaking aspen | 47 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103044019 | 3044019b | C | 41 | 22 | Quaking aspen | 47 | Clearcut | 2025 | Aspen or Aspen Mix | |
| 09130103044020 | 3044020 | C | 24 | 23 | Quaking aspen | 34 | Clearcut | 2025 | Aspen or Aspen Mix | |

**TABLE A-2: STAND TREATMENT TABLE**

| Stand ID | Map Label | Map Area | Stand Acres | Treat Acres | Current Forest Type | Stand Age | Treatment | Treat Year | Regeneration | Temp Road |
|---|---|---|---|---|---|---|---|---|---|---|
| 09130103044030 | 3044030 | C | | 3-8 | Alder (IA 005) | | Shear | 2025 | Alder | |
| 09130103044033 | 3044033 | C | | 3-8 | Alder (IA 001) | | Shear | 2019 | Alder | |
| 09130103046010 | 3046010a | B | 64 | 22 | Quaking aspen | 38 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103046010 | 3046010b | B | 64 | 14 | Quaking aspen | 38 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103046012 | 3046012a | B | 61 | 22 | Quaking aspen | 36 | Clearcut | 2025 | Aspen or Aspen Mix | |
| 09130103046012 | 3046012b | B | 61 | 18 | Quaking aspen | 36 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103046016 | 3046016 | B | 15 | 15 | Quaking aspen | 40 | Clearcut | 2025 | Aspen or Aspen Mix | Yes |
| 09130103046017 | 3046017a | B | 48 | 13 | Quaking aspen | 41 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103046017 | 3046017b | B | 48 | 16 | Quaking aspen | 41 | Clearcut | 2025 | Aspen or Aspen Mix | Yes |
| 09130103046020 | 3046020a | B | 23 | 13 | Quaking aspen | 36 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103046020 | 3046020b | B | 23 | 10 | Quaking aspen | 36 | Clearcut | 2025 | Aspen or Aspen Mix | |
| 09130103047002 | 3047002a | B | 23 | 13 | Quaking aspen | 56 | Clearcut | 2025 | Aspen or Aspen Mix | Yes |
| 09130103047002 | 3047002b | B | 23 | 11 | Quaking aspen | 56 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103048015 | 3048015a | B | 32 | 7 | Quaking aspen | 35 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103053002 | 3053002a | D | 118 | 26 | Quaking aspen | 42 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103053002 | 3053002b | D | 118 | 22 | Quaking aspen | 42 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103053002 | 3053002c | D | 118 | 16 | Quaking aspen | 42 | Clearcut | 2025 | Aspen or Aspen Mix | Yes |
| 09130103053010 | 3053010 | D | 22 | 22 | Quaking aspen | 39 | Clearcut | 2025 | Aspen or Aspen Mix | |
| 09130103053011 | 3053011 | D | 19 | 19 | White spruce-basalm fir | 78 | Salvage Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103053015 | 3053015 | D | 70 | 28 | Quaking aspen | 46 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103053027 | 3053027 | D | 5 | 5 | Quaking aspen | 39 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103053029 | 3053029 | D | 6 | 6 | White spruce-basalm fir | 80 | Salvage Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103053031 | 3053031 | D | 19 | 19 | Quaking aspen | 39 | Clearcut | 2025 | Aspen or Aspen Mix | |
| 09130103057005 | 3057005 | C | 14 | 14 | Quaking aspen | 59 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103057011 | 3057011a | C | 25 | 15 | Quaking aspen | 59 | Clearcut | 2025 | Aspen or Aspen Mix | Yes |
| 09130103057011 | 3057011b | C | 25 | 10 | Quaking aspen | 59 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103057015 | 3057015 | C | | 3-8 | Alder (IA 002) | | Shear | 2025 | Alder | |

**TABLE A-2: STAND TREATMENT TABLE**

| Stand ID | Map Label | Map Area | Stand Acres | Treat Acres | Current Forest Type | Stand Age | Treatment | Treat Year | Regeneration | Temp Road |
|---|---|---|---|---|---|---|---|---|---|---|
| 09130103057025 | 3057025 | C | 17 | 17 | Quaking aspen | 74 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103057045 | 3057045a | C | 15 | 7 | Quaking aspen | 64 | Clearcut | 2025 | Aspen or Aspen Mix | Yes |
| 09130103057045 | 3057045b | C | 15 | 8 | Quaking aspen | 64 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103058001 | 3058001 | C | 10 | 10 | Quaking aspen | 64 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103058004 | 3058004 | C | 11 | 11 | White spruce-basalm fir | 2 | Salvage Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103058005 | 3058005 | C | 10 | 10 | Quaking aspen | 81 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103058007 | 3058007 | C | 8 | 8 | Quaking aspen | 76 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103058009 | 3058009 | C | 9 | 9 | White spruce-basalm fir | 82 | Salvage Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103058012 | 3058012 | C | 10 | 10 | Quaking aspen | 46 | Clearcut | 2025 | Aspen or Aspen Mix | |
| 09130103058015 | 3058015 | C | 23 | 23 | Paper birch | 71 | Shelterwood | 2019 | Paper Birch | |
| 09130103058016 | 3058016 | C | 17 | 17 | Paper birch | 74 | Shelterwood | 2019 | Paper Birch | |
| 09130103059002 | 3059002 | C | 20 | 20 | Quaking aspen | 75 | Shelterwood / Plant | 2019 | Mix: White/Red Pine, Hemlock, Oak | |
| 09130103059009 | 3059009a | C | 20 | 9 | Aspen-white spruce/balsam fir | 67 | Clearcut | 2025 | Aspen or Aspen Mix | Yes |
| 09130103059009 | 3059009b | C | 20 | 10 | Aspen-white spruce/balsam fir | 67 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103059012 | 3059012 | C | 34 | 34 | Paper birch | 103 | Shelterwood | 2019 | Paper Birch | Yes |
| 09130103059014 | 3059014 | C | 12 | 12 | Paper birch | 73 | Shelterwood | 2019 | Paper Birch | Yes |
| 09130103059022 | 3059022a | C | 32 | 13 | Quaking aspen | 63 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103059022 | 3059022b | C | 32 | 19 | Quaking aspen | 63 | Clearcut | 2025 | Aspen or Aspen Mix | Yes |
| 09130103059023 | 3059023 | C | 6 | 6 | Aspen-white spruce/balsam fir | 73 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103059042 | 3059042 | C | 11 | 11 | Quaking aspen | 59 | Shelterwood / Plant | 2019 | Mix: White/Red Pine, Hemlock, Oak | |
| 09130103064019 | 3064019 | D | 8 | 8 | Quaking aspen | 80 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103064023 | 3064023a | D | 58 | 18 | Quaking aspen | 42 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103064026 | 3064026 | D | 13 | 13 | Quaking aspen | 41 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103068007 | 3068007 | C | 10 | 10 | White spruce-basalm fir | 52 | Salvage Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103068017 | 3068017 | C | 29 | 29 | White spruce-basalm fir | 58 | Salvage Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103068026 | 3068026 | C | 8 | 8 | Quaking aspen | 74 | Shelterwood / Plant | 2019 | Mix: White/Red Pine, Hemlock, Oak | Yes |
| 09130103068046 | 3068046 | C | 14 | 14 | Quaking aspen | 58 | Clearcut | 2025 | Aspen or Aspen Mix | Yes |

**TABLE A-2: STAND TREATMENT TABLE**

| Stand ID | Map Label | Map Area | Stand Acres | Treat Acres | Current Forest Type | Stand Age | Treatment | Treat Year | Regeneration | Temp Road |
|---|---|---|---|---|---|---|---|---|---|---|
| 09130103070002 | 3070002 | C | 6 | 6 | Quaking aspen | 75 | Shelterwood / Plant | 2019 | Mix: White/Red Pine, Hemlock, Oak | |
| 09130103070003 | 3070003a | C | 30 | 17 | Quaking aspen | 35 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103070003 | 3070003b | C | 30 | 13 | Quaking aspen | 35 | Clearcut | 2025 | Aspen or Aspen Mix | Yes |
| 09130103070004 | 3070004a | C | 24 | 11 | Balsam fir | 77 | Clearcut | 2025 | Aspen or Aspen Mix | Yes |
| 09130103070004 | 3070004b | C | 24 | 13 | Balsam fir | 77 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103070037 | 3070037 | E | | 3-8 | Alder (Mondo 002) | | Shear | 2019 | Alder | |
| 09130103070059 | 3070059 | C | 10 | 10 | Quaking aspen | 60 | Shelterwood / Plant | 2019 | Mix: White/Red Pine, Hemlock, Oak | |
| 09130103070060 | 3070060 | C | 11 | 11 | Quaking aspen | 60 | Shelterwood / Plant | 2019 | Mix: White/Red Pine, Hemlock, Oak | |
| 09130103071043 | 3071043 | C | | 3-8 | Alder (IA 004) | | Shear | 2025 | Alder | |
| 09130103071047 | 3071047 | C | 10 | 10 | Quaking aspen | 41 | Clearcut | 2025 | Aspen or Aspen Mix | |
| 09130103071050 | 3071050 | E | 8 | 8 | Quaking aspen | 61 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103073003 | 3073003 | E | | 3-8 | Alder (Mondo 005) | | Shear | 2019 | Alder | |
| 09130103074016 | 3074016 | E | | 3-8 | Alder (Mondo 003) | | Shear | 2019 | Alder | |
| 09130103074030 | 3074030a | E | 38 | 23 | Quaking aspen | 71 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103074030 | 3074030b | E | 38 | 15 | Quaking aspen | 71 | Clearcut | 2025 | Aspen or Aspen Mix | |
| 09130103075004 | 3075004a | E | 46 | 30 | Aspen-white spruce/balsam fir | 64 | Clearcut | 2025 | Aspen or Aspen Mix | Yes |
| 09130103075004 | 3075004b | E | 46 | 16 | Aspen-white spruce/balsam fir | 64 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103075005 | 3075005 | E | 25 | 25 | Aspen-white spruce/balsam fir | 49 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103075020 | 3075020 | E | 15 | 15 | Aspen-white spruce/balsam fir | 58 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103075023 | 3075023 | E | 12 | 12 | Aspen-white spruce/balsam fir | 57 | Clearcut | 2025 | Aspen or Aspen Mix | |
| 09130103075025 | 3075025 | E | | 3-8 | Alder (Mondo 001) | | Shear | 2019 | Alder | |
| 09130103079007 | 3079007 | D | 21 | 21 | Quaking aspen | 44 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103079011 | 3079011 | D | 9 | 9 | White spruce-basalm fir | 81 | Salvage Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103079012 | 3079012 | D | 10 | 10 | Quaking aspen | 43 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103079013 | 3079013 | D | 8 | 8 | Quaking aspen | 86 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103079015 | 3079015 | D | 37 | 37 | Quaking aspen | 52 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103079025 | 3079025a | D | 143 | 4 | Quaking aspen | 36 | Clearcut | 2019 | Aspen or Aspen Mix | |

**TABLE A-2: STAND TREATMENT TABLE**

| Stand ID | Map Label | Map Area | Stand Acres | Treat Acres | Current Forest Type | Stand Age | Treatment | Treat Year | Regeneration | Temp Road |
|---|---|---|---|---|---|---|---|---|---|---|
| 09130103079025 | 3079025b | D | 143 | 8 | Quaking aspen | 36 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103079025 | 3079025c | D | 143 | 18 | Quaking aspen | 36 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103079025 | 3079025d | D | 143 | 21 | Quaking aspen | 36 | Clearcut | 2025 | Aspen or Aspen Mix | |
| 09130103079025 | 3079025e | D | 143 | 22 | Quaking aspen | 36 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103079025 | 3079025f | D | 143 | 29 | Quaking aspen | 36 | Clearcut | 2025 | Aspen or Aspen Mix | |
| 09130103079031 | 3079031 | D | 20 | 20 | Quaking aspen | 43 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103079032 | 3079032 | D | | 3-8 | Alder (Silver Ck 001) | | Shear | 2019 | Alder | |
| 09130103079042 | 3079042 | D | 52 | 52 | Quaking aspen | 28 | Salvage Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103085012 | 3085012a | E | 40 | 10 | Quaking aspen | 46 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103085012 | 3085012b | E | 40 | 30 | Quaking aspen | 46 | Clearcut | 2025 | Aspen or Aspen Mix | Yes |
| 09130103085026 | 3085026 | E | | 3-8 | Alder (Mondo 006) | | Shear | 2025 | Alder | |
| 09130103085046 | 3085046 | E | 23 | 23 | Aspen-white spruce/balsam fir | 87 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103086024 | 3086024 | E | 27 | 27 | Quaking aspen | 49 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103086032 | 3086032a | E | 59 | 26 | Quaking aspen | 69 | Clearcut | 2025 | Aspen or Aspen Mix | |
| 09130103086036 | 3086036 | E | 26 | 26 | Quaking aspen | 49 | Clearcut | 2025 | Aspen or Aspen Mix | Yes |
| 09130103086038 | 3086038a | E | 71 | 28 | Quaking aspen | 49 | Clearcut | 2025 | Aspen or Aspen Mix | |
| 09130103086038 | 3086038b | E | 71 | 40 | Quaking aspen | 49 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103086041 | 3086041a | E | 54 | 40 | Quaking aspen | 47 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103086041 | 3086041b | E | 54 | 11 | Quaking aspen | 47 | Clearcut | 2025 | Aspen or Aspen Mix | Yes |
| 09130103086042 | 3086042a | E | 47 | 25 | Quaking aspen | 47 | Clearcut | 2019 | Aspen or Aspen Mix | |
| 09130103086042 | 3086042b | E | 47 | 22 | Quaking aspen | 47 | Clearcut | 2025 | Aspen or Aspen Mix | |
| 09130103087012 | 3087012 | E | 43 | 40 | Paper birch | 105 | Shelterwood | 2025 | Paper Birch | Yes |
| 09130103087044 | 3087044 | E | 16 | 16 | Paper birch | 95 | Shelterwood | 2025 | Paper Birch | |
| 09130103087050 | 3087050 | E | | 3-8 | Alder (Mondo 004) | | Shear | 2025 | Alder | |
| 09130103089001 | 3089001 | E | 18 | 18 | Paper birch | 93 | Shelterwood | 2019 | Paper Birch | |
| 09130103089002 | 3089002 | E | 12 | 12 | Paper birch | 69 | Shelterwood | 2019 | Paper Birch | Yes |
| 09130103089025 | 3089025 | E | 37 | 37 | Paper birch | 69 | Shelterwood | 2019 | Paper Birch | Yes |

**TABLE A-2: STAND TREATMENT TABLE**

| Stand ID | Map Label | Map Area | Stand Acres | Treat Acres | Current Forest Type | Stand Age | Treatment | Treat Year | Regeneration | Temp Road |
|---|---|---|---|---|---|---|---|---|---|---|
| 09130103097029 | 3097029 | E | 8 | 8 | Aspen-white spruce/balsam fir | 79 | Clearcut | 2025 | Aspen or Aspen Mix | |
| 09130103097039 | 3097039 | E | 11 | 11 | Quaking aspen | 63 | Clearcut | 2025 | Aspen or Aspen Mix | |
| 09130103098028 | 3098028 | C | | 3-8 | Alder (IA 003) | | Shear | 2025 | Alder | |
| 09130103098030 | 3098030a | C | 47 | 14 | Quaking aspen | 81 | Clearcut | 2025 | Aspen or Aspen Mix | Yes |
| 09130103098030 | 3098030b | C | 47 | 11 | Quaking aspen | 81 | Clearcut | 2019 | Aspen or Aspen Mix | Yes |
| 09130103098038 | 3098038 | C | 15 | 15 | White spruce-basalm fir | 59 | Salvage Clearcut | 2019 | Aspen or Aspen Mix | Yes |

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# Appendix B: Proposed Action Maps