Introduction: The Plateau Facility Fire Protection Project (PFFPP) would treat vegetation at 33 structures and sites (facilities) on the North Kaibab Ranger District. This report will evaluate potential effects from proposed thinning and prescribed burning activities, including repeat entries, in order to protect life, property, and provide for public safety. The purpose and need of the project is to:

- Reduce forest fuel loads and tree densities adjacent to federal, state, and private facilities
- Reduce ladder fuels and increase tree crown base height
- Create openings in the forest canopy that helps drop fire to the surface
- Provide a defensible space around facilities that protect property and help insure public safety
- Change overall fire behavior to reflect a more manageable surface fire strategy

Forest Plan Direction for Scenery/Visuals:

Goals: NZ: Manage facilities and use to minimize resource degradation, and to provide for the safety and well being of the public while in the Forest. NZ: Design resource activities to maintain and enhance visual quality. (pg 18)

GA 13 Forestlands Planning Guidelines:

1. Identify, describe, and geographically locate existing conditions in the implementation land area, regarding: q. NZ: Visual quality objectives; SZ: Scenic Integrity Objectives. (p 39)

Guidelines for Visual Resource Operations:

1. NZ: Refer to Visual Quality Objective (VQO) Map for visual management objectives and the location of visual features. 2. NZ: Manage visual features to meet their assigned visual quality objective. 3. NZ: Enhance visual resource diversity in areas with retention VQO. (p 41)

Geographic Area 12 Western North Kaibab Woodland:

Work Activities, Standards and Guidelines - Geographic Areas 1, 3, 8, 9, 12 & 16

NZ: Visual Resources: 1. Refer to Visual Quality Objective Map for management objectives and the location of visual features. 2. Manage visual features specified is site specific analysis to meet their assigned visual quality objectives in accordance with the following standards:

   a. Visual resource management standards for visual features in coniferous forest foreground areas with assigned retention or partial retention objective are: (1) Treat vegetation to achieve the
following condition class distribution within the visual feature for retention objective: (a) Seedling and sapling: 10 to 30 percent of area. (b) Immature and mature poletimber: 10 to 30 percent of area. (c) Mature and overmature sawtimber: 60 to 80 percent of area. (2) Treat vegetation to achieve the following condition class distribution within the visual feature for partial retention objective: (a) Seedling and sapling: 10 to 30 percent of area. (b) Immature and mature poletimber: 20 to 40 percent of area. (c) Mature and overmature sawtimber: 40 to 60 percent of area. (3) Provide for prompt cleanup of activity slash. (4) Created opening is not larger than two acres in retention and not larger than four acres in partial retention. (5) Maintain or enhance species diversity. (6) Modify intermediate or any even-aged vegetation treatments to: (a) Reduce typical stand size to 10 – 60 acres. (b) Maintain relatively high residual basal area to minimize visual vulnerability. (c) Feather edges of treatment areas. (d) Maintain vertical diversity through retention of groups of older and larger trees.

b. NZ: Visual resource management standards for visual features in woodland foreground areas with assigned retention or partial retention objective are: (1) Treat vegetation to enhance visual diversity in large homogenous areas in the visual feature. (2) Prompt cleanup of activity slash. (3) Modify vegetation treatments to: (a) Reduce typical stand size. (b) Maintain relatively high residual basal area to minimize visual vulnerability. (c) Feather edges of treatment areas. (d) Maintain vertical diversity through retention of groups of older and larger trees.

c. NZ: Vegetation treatments in middleground and background areas with assigned retention and partial retention visual quality objective are visually subordinate to the characteristic landscape. Modify Treatments to: (1) Reduce typical stand size. (2) Maintain relatively high residual basal area to minimize visual vulnerability. (3) Feather edges of treatment areas. (4) Maintain vertical diversity through retention of groups of older and larger trees. (p 70-71)

Land Use Zone 21 – Existing Developed Recreation Sites:

NZ: Manage developed recreation sites for the visual quality objective of partial retention foreground. (pg 108) Treatment of Activity Fuels: NZ: Dispose of all activity created slash. (p.111)

**Background**

Implementation of the Forest Service Visual Management System acknowledges the variation of forest landscape scenic quality, the visual sensitivity of different areas, and provides guidance for analyzing the ability of a landscape to undergo alteration.

Visual quality objectives (VQO) combine the characteristics of natural features (vegetation, land form and water) and the public’s concern for scenic quality into five visual quality objectives. The five VQO’s named preservation, retention, partial retention, modification and maximum modification, represent a spectrum of change and the acceptable degrees of landscape alteration. The characteristics of the VQO are summarized in Table 1.
Table 1. Summary of visual quality objective definitions.

<table>
<thead>
<tr>
<th>Visual Quality Objective</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preservation</td>
<td>Provides for ecological change only</td>
</tr>
<tr>
<td>Retention</td>
<td>Human activities are generally not evident to the casual forest visitor. Must meet the VQ immediately after treatment.</td>
</tr>
<tr>
<td>Partial Retention</td>
<td>Human activities may be evident, but remain subordinate to the characteristic landscape. Must meet the VQ after 1 year.</td>
</tr>
<tr>
<td>Modification</td>
<td>Human activities may dominate the landscape, but must at the same time, utilize naturally established line, form, color and texture. Must meet the VQ within 2 years.</td>
</tr>
<tr>
<td>Maximum Modification</td>
<td>Human activities may dominate the landscape. Must meet the VQ within 3 years.</td>
</tr>
</tbody>
</table>

The Kaibab National Forest Management Plan does not include comprehensive visual quality objective mapping for the North Kaibab Ranger District. As shown in Figure 1, only special features and corridors have been mapped. With the guidance provided, the 14 areas where thinning and burning activities are proposed will be analyzed.
Figure 1. North Kaibab Ranger District visual quality objectives.
Existing Condition

Information for each location is included in the following discussion. Sites with similar features have been combined in order to avoid repetition of similar information. Table 2 summarizes this information at the end of this section.

1. LeFevre Overlook – The area is located within Geographic Area (GA) 12, Western North Kaibab Woodland. This is a Forest Service developed recreation site located on Hwy 89A on the way to Fredonia, AZ. Use at developed recreation sites has been categorized as low, medium or high per the Kaibab NF Developed Recreation Facility Analysis completed in 2008. LeFevre Overlook receives high use per this information. Facilities include an asphalt parking lot, historic overlook shelter on the bluff and restroom facilities. There is a concrete walkway to the shelter. Construction materials include native limestone, heavy timbers at the shelter, exposed aggregate concrete toilet buildings, and colored concrete sidewalk. Primary vegetation is pinyon-juniper, with cliffrose and understory shrubs and grasses.

The proposed activity is mechanical vegetation treatment that will affect the foreground (within ¼ mile of the viewer) landscape. In the foreground, details of the vegetation and land form are viewed. Landscape features include pinyon and juniper trees which are upright linear elements with rounded shapes, grasses and exposed rock and soil horizontal elements. Colors include olive to grey green tree canopy, dark brown trunks, grey green to tan understory, and buff colored sandstone and soil. This site has a visual quality objective of partial retention.

2. Jacob Lake Vicinity – The area is located within GA 13, Forestlands. Facilities include a number of facilities such as the special use permitted Arizona Department of Transportation (ADOT) Maintenance Yard, Cooper Ridge and Jacob Lake Communication Sites, and Jacob Lake Inn. Forest Service developed recreation sites including Jacob Lake Campground, Picnic Area, Amphitheatre and Group Area, Kaibab Plateau Visitor Center, and Jacob Lake Ranger Cabin. Forest Service fire or administrative sites: Jacob Lake Administrative Site and Jacob Lake Lookout. In addition, within this area is the private inholding CampeRVillage and associated water feature of Jacob Lake. The level of development and concentration of facilities at this location give a sense of a small town or settlement; it is a hub of activity and visitor use at developed recreation sites is high. Construction materials are varied and typical of an urban setting. Roads include highways 89A and 67, paved roads and parking at Jacob Lake Inn and Visitor Center, aggregate surfaced campground roads, and improved forest roads. Vegetation at this site is dominated by ponderosa pine with a shrubby-grassy understory.

The proposed activities are mechanical vegetation treatments and prescribed fire that will affect the foreground (within ¼ - ½ mile of the viewer) landscape. In the foreground, details of the vegetation and land form are viewed. Landscape features include ponderosa trees which are upright linear elements with angular to rounded shapes, grasses and exposed rock and soil horizontal elements. Colors include olive to grey green tree canopy, dark brown trunks, grey
green to tan understory, and buff colored sandstone and soil. The visual quality objective is retention.

3. Arizona Trail 89A Trailhead, Kaibab Plateau 205 Trailhead, Indian Hollow Campground and East Rim Trailhead - These areas are developed recreation facilities located within GA 13, Forestlands, with the exception of Indian Hollow which is in GA 12. The trailheads include aggregate surfaced parking, restroom building, wooden fencing and information signing at each site. The campground is developed in a lower, more rustic manner that reflects the semi-primitive motorized recreation opportunity spectrum class at this site. Use at the Arizona Trail trailheads is moderate; it is high at East Rim Trailhead and low at Indian Hollow Campground. Construction materials use a naturalistic color palette including a brown colored concrete toilet buildings, natural wood pole fencing, and standard FS sign colors. Vegetation at this site is dominated by ponderosa pine at Arizona and Kaibab trailheads and Indian Hollow Campground, and mixed conifer at East Rim Viewpoint, with shrubby-grassy understory.

The proposed activity at the Arizona Trailhead is prescribed fire, activities at the Kaibab Plateau Trailhead are mechanical vegetation treatments and prescribed fire. At Indian Hollow and East Rim Viewpoint, the activities will be mechanical vegetation treatment. At all sites foreground (within ¼ - ½ mile of the viewer) landscapes will be affected. In the foreground, details of the vegetation and land form are viewed. Landscape features include ponderosa trees which are upright linear elements with angular to rounded shapes, mixed conifer which are linear elements and conical shapes, grasses and exposed rock and soil horizontal elements. Colors include olive to grey green tree canopy, dark brown and grey trunks, green, grey green to tan understory, and buff colored limestone outcrops and soil. Visual quality objectives are retention along Hwy 89A, Hwy 67 and FR 225, and partial retention along FR 205, at East Rim Viewpoint and Indian Hollow Campground.

4. Ryan Site, Mangum Camp and Warm Springs Water Tank - Ryan and Mangum Camp are located within Geographic Area (GA) 12, Western North Kaibab Woodland, and Warms Springs Water Tank is in GA 13. These are Forest Service special use permitted areas and receive little or no recreation visitor use. Facilities include administrative buildings and a water storage tank. Construction materials include wood, concrete and steel. Vegetation includes pinyon-juniper, ponderosa pine, cliffrose, New Mexico locust and understory shrubs and grasses.

The proposed activity is mechanical vegetation treatment that will affect the foreground (within ¼ mile of the viewer) landscapes. In the foreground, details of the vegetation and land form are viewed. Landscape features include ponderosa pine, pinyon and juniper trees which are upright linear elements with angular and/or rounded shapes, grasses and exposed rock and soil horizontal elements. Colors include olive to grey green tree canopy, dark brown trunks, grey green to tan understory, and buff colored sandstone and soil. These sites have a visual quality objective of partial retention.
5. Big Ridge, VT, and South Canyon Communication Sites – the facilities are located in GA 13 Forestlands and are operated under Forest Service special use permits. They receive little to no recreation visitor use. Facilities include communication towers and utilities and storage buildings. Construction materials include wood, concrete, and steel. Vegetation is dominated by ponderosa pine at Big Ridge, and mixed conifer at VT and South Canyon with understory shrubs and grasses.

The proposed activity is mechanical vegetation treatment at Big Ridge and South Canyon, and mechanical treatment and prescribed fire at VT. These activities will affect the foreground (within ¼ - ½ mile of the viewer) landscape. In the foreground, details of the vegetation and land form are viewed. Landscape features include ponderosa trees which are upright linear elements with angular to rounded shapes, mixed conifer which are linear elements and conical shapes, shrub and grass horizontal elements. Colors include olive to blue green tree canopy, dark brown and grey trunks, green understory. The visual quality objective is retention along Hwy 67 (Big Ridge Communication Site) and FR 225 and modification at VT and South Canyon Communication Sites.

6. Big Springs Station, Big Springs Lookout Tower, and Dry Park Administrative Sites – the facilities are located in GA’s 12 and 13. These are Forest Service administrative or fire facilities. All receive use from the FS and occasional forest visitors. Construction materials include wood, concrete, and steel. Vegetation is dominated by ponderosa pine at Big Springs and the lookout tower, and mixed conifer at Dry Park, as well as understory shrubs and grasses. The grassy/shrubby valley bottom along Nail Canyon near Big Springs and high elevation meadow at Dry Park create strong horizontal elements.

The proposed activity is mechanical vegetation treatment at Big Springs and the lookout tower, and mechanical treatment and prescribed fire at Dry Park. These activities will affect the foreground (within ¼ - ½ mile of the viewer) landscape. In the foreground, details of the vegetation and land form are viewed. Landscape features include ponderosa trees which are upright linear elements with angular to rounded shapes, mixed conifer which are linear elements and conical shapes, shrub and grass horizontal elements. Colors include olive to blue green tree canopy, dark brown and grey trunks, green understory. The visual quality objective is partial retention at these sites.

7. Pleasant Valley and Big Saddle Cabins - These facilities are located in GA 13. These are range permittee facilities and receive use from the FS, range permittees, and occasional forest visitors. Construction materials are primarily wood. Vegetation is dominated by ponderosa pine at Big Saddle, and mixed conifer at Pleasant Valley. The high elevation meadow at Pleasant Valley creates a strong horizontal element.

The proposed activity is mechanical vegetation treatment at Pleasant Valley, and mechanical treatment and prescribed fire at Big Saddle. These activities will affect the foreground (within ¼ mile of the viewer).
- ½ mile of the viewer) landscape. In the foreground, details of the vegetation and land form are viewed. Landscape features include ponderosa trees which are upright linear elements with angular to rounded shapes, mixed conifer which are linear elements and conical shapes, shrub and grass horizontal elements. Colors include olive to blue green tree canopy, dark brown and grey trunks, green understory. The visual quality objective is retention at Pleasant Valley Cabin, and partial retention at Big Saddle Cabin.

8. DeMotte Vicinity - The area is located within GA 13, Forestlands. Facilities include the special use permitted Kaibab Lodge and North Rim Country Store, and Forest Service developed recreation site DeMotte Campground. The level of development and concentration of facilities at this location is somewhat more rural than at Jacob Lake. Visitor use is high near the developed recreation sites in these locations. Construction materials are varied and typical of a rural setting, including wood, concrete, and steel. Roads include Highway 67, a paved road at the North Rim Country Store, aggregate roads and parking at Kaibab Lodge and DeMotte Campground, and improved forest roads. Vegetation at this site is dominated by mixed conifer with a shrubby-grassy understory.

The proposed activities are mechanical vegetation treatments and prescribed fire that will affect the foreground (within ¼ - ½ mile of the viewer) landscape. In the foreground, details of the vegetation and land form are viewed. Landscape features include mixed conifer trees which are upright linear elements with conical shapes, grassy meadows and some exposed rock create a strong horizontal element. Colors include blue green tree canopy, dark grey trunks, green to tan understory, and buff colored limestone. The visual quality objective is retention along Highway 67, and partial retention along FR 22, 611, 610 and FR 462 as well as at DeMotte Campground.

The varied treatments, geographic areas and visual quality objectives are listed below in Table 2 by individual site.
Table 2. Summary of existing condition elements.

<table>
<thead>
<tr>
<th>Location</th>
<th>Geographic Area</th>
<th>Proposed Acres</th>
<th>Mechanical Treatment</th>
<th>Prescribed Fire</th>
<th>Visual Quality Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>LeFevre Overlook</td>
<td>12 Woodland</td>
<td>12/0*</td>
<td>X</td>
<td></td>
<td>Partial Retention</td>
</tr>
<tr>
<td>Jacob Lake Vicinity</td>
<td>13 Forestland</td>
<td>712/712</td>
<td>X</td>
<td>X</td>
<td>Retention</td>
</tr>
<tr>
<td>ADOT Yard and Communication Site</td>
<td>13 Forestland</td>
<td>94/94</td>
<td>X</td>
<td>X</td>
<td>Retention</td>
</tr>
<tr>
<td>Arizona Trailhead</td>
<td>13 Forestland</td>
<td>0/652</td>
<td>X</td>
<td></td>
<td>Partial Retention and Retention</td>
</tr>
<tr>
<td>Kaibab Plateau Trailhead</td>
<td>13 Forestland</td>
<td>6/255*</td>
<td>X</td>
<td>X</td>
<td>Retention</td>
</tr>
<tr>
<td>Indian Hollow Campground</td>
<td>12 Woodland</td>
<td>11/0</td>
<td>X</td>
<td></td>
<td>Partial Retention</td>
</tr>
<tr>
<td>East Rim Trailhead</td>
<td>13 Forestland</td>
<td>9/0</td>
<td>X</td>
<td></td>
<td>Partial Retention</td>
</tr>
<tr>
<td>Ryan House</td>
<td>12 Woodland</td>
<td>29/0</td>
<td>X</td>
<td></td>
<td>Partial Retention</td>
</tr>
<tr>
<td>Ryan Substation</td>
<td>12 Woodland</td>
<td>12/0</td>
<td>X</td>
<td></td>
<td>Partial Retention</td>
</tr>
<tr>
<td>Mangum Camp</td>
<td>13 Forestland</td>
<td>27/0</td>
<td>X</td>
<td></td>
<td>Partial Retention</td>
</tr>
<tr>
<td>Warm Springs Tank</td>
<td>13 Forestland</td>
<td>4/0</td>
<td>X</td>
<td></td>
<td>Partial Retention</td>
</tr>
<tr>
<td>Warm Springs RAWS</td>
<td>13 Forestland</td>
<td>13/13</td>
<td>X</td>
<td>X</td>
<td>Retention</td>
</tr>
<tr>
<td>Big Ridge Communications Site</td>
<td>13 Forestland</td>
<td>6/0</td>
<td>X</td>
<td></td>
<td>Retention</td>
</tr>
<tr>
<td>South Canyon Communications Site</td>
<td>13 Forestland</td>
<td>6/0</td>
<td>X</td>
<td></td>
<td>Partial Retention</td>
</tr>
<tr>
<td>Big Springs Field Station</td>
<td>13 Forestland</td>
<td>15/0</td>
<td>X</td>
<td></td>
<td>Partial Retention</td>
</tr>
<tr>
<td>Big Springs Lookout</td>
<td>13 Forestland</td>
<td>70/0</td>
<td>X</td>
<td></td>
<td>Partial Retention</td>
</tr>
<tr>
<td>Dry Park Lookout</td>
<td>13 Forestland</td>
<td>87/450</td>
<td>X</td>
<td>X</td>
<td>Partial Retention</td>
</tr>
<tr>
<td>Big Saddle Cabin</td>
<td>13 Forestland</td>
<td>45/957</td>
<td>X</td>
<td>X</td>
<td>Partial Retention</td>
</tr>
<tr>
<td>Pleasant Valley Cabin</td>
<td>13 Forestland</td>
<td>37/0</td>
<td>X</td>
<td></td>
<td>Retention</td>
</tr>
<tr>
<td>DeMotte Vicinity and VT Communication Site</td>
<td>13 Forestland</td>
<td>1702/1702</td>
<td>X</td>
<td>X</td>
<td>Retention, Partial Retention and Modification</td>
</tr>
</tbody>
</table>

*Mechanical treatment acres/burn acres

Mitigation Measures
Slash created in the foreground of retention and partial retention areas must be treated (acceptable methods include chipping, hand piling and burning, and hauling away) as soon as possible or within one year following mechanical treatment.

Feather the boundary of the treatment areas to reduce the visual contrast between mechanically treated and untreated areas.

Notify the public about the thinning and burning activities. Use several means of notification including flyers at the Visitor Center, campgrounds, permitted resorts and store, CampeRVillage, the burn boundary along main road boundaries and at recreation sites where treatments will occur.

**Effects Analysis**

Each of the Forest Plan scenery guidance elements for Forestland and Woodland areas will be considered in the effects analysis for the facilities.

**Alternative 1, No Action**

Woodland Areas and Forestland Areas: LeFevre Overlook, Indian Hollow Campground, Ryan House – Partial Retention; Jacob Lake Vicinity, ADOT Yard and Communication Site, Kaibab Plateau Trailhead, DeMotte Vicinity Hwy 67 foreground area – Retention; Dry Park and Big Saddle Cabin – Partial Retention; East Rim, Mangum Camp, Warm Springs Water Tank, South Canyon Communication Site, Big Springs Field Station, Big Springs Lookout, Pleasant Valley Cabin – Partial Retention; VT Communication Site and DeMotte Vicinity middleground and background area – Modification.

The effects of the no action alternative are the same for each site and every visual quality objective.

*Enhance species and maintain vertical diversity*

The existing overstocked condition of vegetation puts the facilities in these areas at high risk from crown fire and high intensity surface fire. Vertical diversity does not include all ages and sizes of tree species. In addition, many understory species are not growing at their potential due to crowded conditions. The characteristic landscape based on historic conditions for these areas is not present at this time. The continuing threat from high intensity fire and overstocked vegetation does not allow the retention, partial retention or modification visual quality objective to be fully expressed, continuation of this would result in an overall decrease in visual quality.

*Treat activity slash*

No slash would be created with the no action alternative, and there are no effects.

*Creation of openings*
The current vegetation pattern is continuous except for the openings created by the constructed facilities. Lack of such openings does not reflect historic vegetation patterns, and adds to the risk of crown fire and high intensity surface fire. Since there will be no change in existing vegetation patterns, the desired landscape character is not present at this time. The visual quality of the vegetation around the facilities does not allow the retention, partial retention, or modification visual quality objective to be fully expressed; continuation of this would result in an overall decrease in visual quality.

*Feather edges*

No change in conditions is proposed in the no action alternative, and there are no effects.

*Maintain relatively high residual basal area to minimize visual vulnerability*

There will be no change in basal area. The risk of high intensity surface fire and crown fire is high in all of the project areas. While this project will retain the high basal area, the high risk of fire and effects of such an occurrence, if it were to occur, would cause a drastic decrease in visual quality throughout the project area. The effects on retention, partial retention and modification visual quality objectives would be very negative if a fire burns through these areas, otherwise with the status quo, the effects are slightly downward as the trees grow and the basal area continues to increase at all sites.

**Alternative 2, Proposed Action**

Woodland Areas Mechanical Thin Only: LeFevre Overlook, Indian Hollow Campground, Ryan House – Partial Retention

*Enhance species and maintain vertical diversity*

Mechanical thinning in these areas will improve performance of understory vegetation by allowing better water penetration, reducing vegetation competition, and creating a more characteristic vegetation structure. Thinning will retain vertical elements including pinyon and juniper trees and promote cliffrose (mid-height). Large, old trees will be favored during thinning which will also retain dominant vertical elements.

*Treat activity slash*

Slash produced from mechanical thinning will cause short term negative effects. If slash treatment cannot meet the one-year timeline for Partial Retention visual quality objectives, a timeline for completion should be included in the decision for this project. Upon completion, the area must meet the visual quality objective.

*Creation of openings*
The intention of mechanical thinning is to create openings within the vegetation cover (often referred to as “groups and gaps”). Such openings better reflect historic vegetation patterns, and help to drop fire to the surface (per the purpose and need of this project). The Kaibab forest plan restricts the size of openings to two to four acres. Moving vegetation toward historic conditions increases the sustainability of the plants, and improves the landscape character of the area since it better reflects historic, sustainable patterns. This will improve the visual quality of the area over time.

*Feather edges*

Mechanical thinning will reduce the overall tree density surrounding the facilities at this site. This will create noticeable contrast between the site and adjacent forested areas. Feathering the edges near the treatment boundary will help to reduce this contrast and make the transition into untreated areas less noticeable. Application of this mitigation measure will meet the requirements for visual quality objectives.

Forestland Mechanical Thin and Burn: Jacob Lake Vicinity, ADOT Yard and Communication Site, Kaibab Plateau Trailhead, DeMotte Vicinity Hwy 67 foreground area - Retention

*Enhance species and maintain vertical diversity*

Mechanical thinning in these areas will improve performance of understory vegetation by allowing better water penetration, reducing vegetation competition, promoting vegetation health, and creating a more characteristic vegetation structure and pattern. Thinning will retain vertical elements including ponderosa pine, blue spruce, white spruce, Engelmann spruce, Gambel oak trees and promote shrubby (mid-height) elements. Large, old trees will be favored during thinning which will also retain dominant vertical elements. Use of fire will also raise crown base heights and promote nutrient recycling making nutrients more available for all remaining plant species.

*Treat activity slash*

Use of fire to treat slash is encouraged. Slash produced from mechanical thinning will cause short term negative effects. If slash treatment cannot meet the timelines for retention visual quality objectives (at the project completion), a timeline for completion should be included in the decision for this project. Fire effects such as burnt ground, black tree trunks and scattered fire scorched trees are visible following burning. Burnt bark on tree trunks and fire scorched trees are part of a fire adapted ecosystem and the characteristic landscape for this vegetation type. It is very difficult to meet the retention visual quality objective until at the next growing season when the blackened ground is no longer evident. Upon completion and in the next growing season, the area must meet the retention visual quality objective.
Creation of openings

The intention of mechanical thinning is to create openings within the vegetation cover (often referred to as “groups and gaps”). Such openings better reflect historic vegetation patterns, and help to drop fire to the surface (per the purpose and need of this project). The Kaibab forest plan restricts the size of openings to two to four acres. Moving vegetation toward historic conditions increases the sustainability of the plants, and improves the landscape character of the area since it better reflects historic, sustainable patterns. This will improve the visual quality of the area over time.

Feather edges

Mechanical thinning will reduce the overall tree density surrounding the facilities at this site. This will create noticeable contrast between the site and adjacent forested areas. Feathering the edges near the treatment boundary will help to reduce this contrast and make the transition into unthinned areas less noticeable. Application of this mitigation measure will meet the requirements for visual quality objectives.

Maintain relatively high residual basal area to minimize visual vulnerability

This project will not meet this forest plan guideline. Keeping a high residual basal area would be contrary to the need to provide a defensible space around the Jacob Lake facilities that protect property and help insure public safety. Use of mitigation to feathering edges, as well as the mechanical thinning activities to create groups and gaps, enhance of species diversity and maintain vertical diversity will meet and over time improve the visual quality objectives for these sites.

Forestland Mechanical Thin and Burn: Dry Park and Big Saddle Cabin – Partial Retention

Enhance species and maintain vertical diversity

Mechanical thinning in these areas will improve performance of understory vegetation by allowing better water penetration, reducing vegetation competition, promoting vegetation health, and creating a more characteristic vegetation structure. Thinning will retain vertical elements including ponderosa pine, blue spruce, white spruce, Engelmann spruce, Gambel oak trees and promote shrubby (mid-height) elements. Large, old trees will be favored during thinning which will also retain dominant vertical elements. Use of fire will also raise crown base heights and promote nutrient recycling making nutrients more available for all remaining plant species.

Treat activity slash

Use of fire to treat slash is encouraged. Slash produced from mechanical thinning will cause short term negative effects. If slash treatment cannot meet the timelines for partial retention visual quality objectives (at the project completion), a timeline for completion should be
included in the decision for this project. Fire effects such as burnt ground, black tree trunks and scattered fire scorched trees are visible following burning. Burnt bark on tree trunks and fire scorched trees are part of a fire adapted ecosystem and the characteristic landscape for this vegetation type. It may be possible to meet the partial retention visual quality objective of one year following completion of treatment the next growing season when the blackened ground is no longer evident.

Creation of openings

The intention of mechanical thinning is to create openings within the vegetation cover (often referred to as “groups and gaps”). Such openings better reflect historic vegetation patterns, and help to drop fire to the surface (per the purpose and need of this project). The Kaibab forest plan restricts the size of openings to two to four acres. Moving vegetation toward historic conditions increases the sustainability of the plants, and improves the landscape character of the area since it better reflects historic, sustainable patterns. This will improve the visual quality of the area over time.

 Feather edges

Mechanical thinning will reduce the overall tree density surrounding the facilities at this site. This will create noticeable contrast between the site and adjacent forested areas. Feathering the edges near the treatment boundary will help to reduce this contrast and make the transition into unthinned areas less noticeable. Application of this mitigation measure will meet the requirements for visual quality objectives.

Maintain relatively high residual basal area to minimize visual vulnerability

This project will not meet this forest plan guideline. Keeping a high residual basal area would be contrary to the need to provide a defensible space around the Dry Park and Big Saddle Cabin facilities that protect property and help insure public safety. Use of mitigation to feathering edges, as well as the mechanical thinning activities to create groups and gaps, enhance of species diversity and maintain vertical diversity will meet and over time improve the visual quality objectives for these sites.

Forestland Mechanical Treatment Only: East Rim, Mangum Camp, Warm Springs Water Tank, South Canyon Communication Site, Big Springs Field Station, Big Springs Lookout, Pleasant Valley Cabin – Partial Retention

Enhance species and maintain vertical diversity

Mechanical thinning in these areas will improve performance of understory vegetation by allowing better water penetration, reducing vegetation competition, promoting vegetation health, and creating a more characteristic vegetation structure. Thinning will retain vertical elements including ponderosa pine, juniper, pinyon, blue spruce, white spruce, Engelmann spruce, Gambel
oak trees and promote shrubby (mid-height) elements. Large, old trees will be favored during thinning which will also retain dominant vertical elements.

_Treat activity slash_

Slash produced from mechanical thinning will cause short term negative effects. **If slash treatment cannot meet the timelines for partial retention visual quality objectives (at the project completion), a timeline for completion should be included in the decision for this project.** It may be possible to meet the partial retention visual quality objective of one year following completion of slash treatment the next growing season.

_Creation of openings_

The intention of mechanical thinning is to create openings within the vegetation cover (often referred to as “groups and gaps”). Such openings better reflect historic vegetation patterns, and help to drop fire to the surface (per the purpose and need of this project). The Kaibab forest plan restricts the size of openings to two to four acres. Moving vegetation toward historic conditions increases the sustainability of the plants, and improves the landscape character of the area since it better reflects historic, sustainable patterns. This will improve the visual quality of the area over time.

_Feather edges_

Mechanical thinning will reduce the overall tree density surrounding the facilities at this site. This will create noticeable contrast between the site and adjacent forested areas. Feathering the edges near the treatment boundary will help to reduce this contrast and make the transition into unthinned areas less noticeable. Application of this mitigation measure will meet the requirements for visual quality objectives.

_Maintain relatively high residual basal area to minimize visual vulnerability_

This project will not meet this forest plan guideline. Keeping a high residual basal area would be contrary to the need to provide a defensible space around the East Rim, Mangum Camp, Warm Springs Water Tank, South Canyon Communication Site, Big Springs Field Station, Big Springs Lookout, Pleasant Valley Cabin facilities that protect property and help insure public safety. Use of mitigation to feathering edges, as well as the mechanical thinning activities to create groups and gaps, enhance of species diversity and maintain vertical diversity will meet and over time improve the visual quality objectives for these sites.

Forestlands Mechanical Thin and Burn: VT Communication Site and DeMotte Vicinity middleground and background area – Modification

Mechanical thinning in these areas will improve performance of understory vegetation by allowing better water penetration, reducing vegetation competition, promoting vegetation health,
and creating a more characteristic vegetation structure. Thinning will retain vertical elements including ponderosa pine, blue spruce, white spruce, Engelmann spruce, Gambel oak trees and promote shrubby (mid-height) elements. Large, old trees will be favored during thinning which will also retain dominant vertical elements. Use of fire will also raise crown base heights and promote nutrient recycling making nutrients more available for all remaining plant species.

**Treat activity slash**

Use of fire to treat slash is encouraged. Slash produced from mechanical thinning will cause short term negative effects. **If slash treatment cannot meet the timelines for modification visual quality objectives (at the project completion), a timeline for completion should be included in the decision for this project.** Fire effects such as burnt ground, black tree trunks and scattered fire scorched trees are visible following burning. Burnt bark on tree trunks and fire scorched trees are part of a fire adapted ecosystem and the characteristic landscape for this vegetation type. It may be possible to meet the modification visual quality objective of two years following completion of treatment the next growing season when the blackened ground is no longer evident.

**Creation of openings**

The intention of mechanical thinning is to create openings within the vegetation cover (often referred to as “groups and gaps”). Such openings better reflect historic vegetation patterns, and help to drop fire to the surface (per the purpose and need of this project). The Kaibab forest plan restricts the size of openings to two to four acres. Moving vegetation toward historic conditions increases the sustainability of the plants, and improves the landscape character of the area since it better reflects historic, sustainable patterns. This will improve the visual quality of the area over time.

**Feather edges**

Mechanical thinning will reduce the overall tree density surrounding the facilities at this site. This will create noticeable contrast between the site and adjacent forested areas. Feathering the edges near the treatment boundary will help to reduce this contrast and make the transition into unthinned areas less noticeable. Application of this mitigation measure will meet the requirements for visual quality objectives.

**Maintain relatively high residual basal area to minimize visual vulnerability**

This project will not meet this forest plan guideline. Keeping a high residual basal area would be contrary to the need to provide a defensible space around the Dry Park and Big Saddle Cabin facilities that protect property and help insure public safety. Use of mitigation to feathering edges, as well as the mechanical thinning activities to create groups and gaps, enhance of species
diversity and maintain vertical diversity will meet and over time improve the visual quality objectives for these sites.

Cumulative Effects

The cumulative effects area includes North Kaibab Ranger District over a 20 year period from 2011 to 2031. Potential cumulative actions are found in the EA Cumulative Action Table.

**Scenic Resources**

Past experience has shown that implementation of best management practices and careful project design has helped minimize the effect from past activities on scenic resources. These effects (e.g. ground disturbance, slash and dust) have been and are anticipated to continue to be temporary and localized to the project area. For example, over time the understory vegetation is invigorated and health of remaining trees is improved and this helps to improve the scenic integrity of a timber stand with ground disturbance. The effects of past, present, and reasonably foreseeable activities when combined with the direct and indirect effects of implementing Alternative 1 (i.e. threat to facilities from high intensity wildfire, etc.) would likely increase the negative effects on scenic resources. However, the cumulative effect is negligible because activities such as vegetation management and prescribed burning do not all occur at the same time and are spatially distributed across the District. This results in a fluctuating trend of effects on scenic resources defined by effects that are short in duration and localized to the project area.

**Proposed Action**

**Scenic Resources**

Past experience has shown that implementation of best management practices and careful project design has helped minimize the effect from past activities on scenic resources. These effects (e.g. ground disturbance and dust) have been and are anticipated to continue to be temporary and localized to the project area. For example, over time the understory vegetation is invigorated and the health of remaining trees is improved and this helps to improve the scenic integrity of a timber stand with ground disturbance. The effects of past, present, and reasonably foreseeable activities when combined with the direct and indirect effects of implementing Alternative 2 (i.e. creation of linear routes, rutting, etc.) would likely increase the negative effects on scenic resources. However, the cumulative effect is negligible because activities such as vegetation management and prescribed burning do not all occur at the same time and are spatially distributed across the District. This results in a fluctuating trend of effects on scenic resources defined by effects that are short in duration and localized to the project area. The cumulative effects are anticipated to be minor and are not likely to impede the attainment of Forest Plan scenic integrity objectives.
Below is an example of a certification statement for NEPA Resource Specialist Reports. The statement can be added up front or at the end of the document, but preferably it should be placed be directly before your signature and date block on the report.

PFFPP Environmental Assessment

Visuals Specialist Report

Charlotte Minor

Forest Landscape Architect

Supervisors Office – Williams, AZ

Kaibab National Forest

This Resource Specialist report was completed utilizing the best available science, a consideration of responsible opposing views, and the acknowledgment of any incomplete or unavailable information, scientific uncertainty, and risk. The EA incorporates information from this Resource Specialist report. Based on my professional experience and judgment, I certify that this Resource Specialist report is to the best of my knowledge, complete, true and accurate.

Signed /S/ Chelsea McKinney ___________________________ Date __01/25/2012________