Salt Timber Harvest and Fuels Hazard Reduction Project

Scenery Resource Report

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Abstract

The following report analyzes the existing conditions and characteristics of the scenic environment within the project area, as well as the effects of the various alternatives on those resources. The analysis area was analyzed as seen from sensitive viewing locations identified in the Shasta-Trinity Land and Resource Management Plan (LRMP), Highway 3 and 36. (LRMP 4-28)

Findings:

Alternative 1 (No Action) would be the least preferred alternative from a scenery perspective. The No Action alternative could impact the future landscape character by creating a forest with dense under growth, which creates less visual diversity and inhibits the sight distance of the viewer, thus resulting in a less interesting visual experience. This alternative could result in an increased tree mortality which would look 'natural', but may not meet the publics' expectations to see a green and healthy forest. Taking no action could possibly increase the risk of a catastrophic stand replacing fire. Charred, denuded forests are usually not preferred scenery.

Alternative 2 (Proposed Action) proposes thinning the existing forest and creating a fuel break. Research has shown that reducing competing vegetation increases the diameter and health of trees resulting in stands that are more resilient to disease and insect mortality. Larger, vigorous trees appear more scenic than small, diseased trees with dense understory to many people. The mature trees, increased visual access, and light-shadow patterns emulate a park-like setting which can be very scenic.

The meadow like openings and mature tree stands will enhance visual diversity in form, color, texture, and scale in vegetative material, which is seen as more interesting than a monotonous landscape.

Alternative 3 is the preferred alternative from a scenery perspective. It differs from Alternative 2 by retaining more vegetation in the thinning units and taking the fuel break boundary away from Hwy 36 in the immediate foreground. Leaving more trees would result in a more forested look, still open visual access into the stands and could help prevent catastrophic natural events.

Introduction

Overview of Issues Addressed

Scenery was not raised as an issue during public scoping. Potential affects to the scenic resource was considered in this analysis.

Why is scenery management important?

The US Forest Service Handbook for Scenery Management[i] addresses this question:

"People are concerned about the quality of their environment, including aesthetic values of landscapes, particularly scenery and spiritual values. People need natural-appearing landscapes to serve as psychological and physiological "safety valves", for these reasons:

- The world's urban population pressures are increasing.
- Technology is rapidly advancing.
- Demands for goods and services are increasing.
- People's lives are becoming more complex.
- Urban pressures are demanding more land for development.
- Once plentiful natural-appearing landscapes are becoming more scarce.

Research has shown that high-quality scenery: especially that related to natural-appearing forests, enhances people's lives and benefits society. Research findings support the logic that scenic quality and naturalness of the landscape directly enhance human well-being, both physically and psychologically, and contribute to other important human benefits. Specifically, these benefits include people's improved physiological well-being as an important by-product of viewing interesting and pleasant natural appearing landscapes with high scenic diversity.

Findings from psychological and physiological studies of people under stress, people recovering in hospitals, people in recreation settings, and people in other various settings, prove that natural landscape scenes have restorative and other beneficial properties. This is particularly important when contrasted with built urban environments such as pedestrian malls and commuter traffic routes.

In turn, when people feel better mentally and physically, they have increased on-the-job productivity, increased community involvement, and expanded family interaction; there is, therefore, and improved well-being of society in general.

The benefits of high-quality scenery are numerous despite the fact that a dollar value is seldom assigned to it except in regard to real estate appraisals and areas with major tourism influences.

Economists recognize that tourism is becoming the leading industry in many regions in the United States and in many foreign countries. In numerous communities adjacent to

national forests, tourism and recreation are replacing the former leading roles of timber harvesting, mining, ranching and farming. Scenic landscapes and recreational settings help to determine the success of recreation and tourism. The goal of scenery management system is to create and maintain landscapes having high scenic diversity, harmony, and unity for the benefit of society in general."

Regulatory Framework

Numerous Federal laws require all Federal land management agencies to consider scenery and aesthetic resources in land management planning, resource planning, and project design, implementation, and monitoring. These Federal laws include the following:

- National Forest Management Act of 1976.
- Wilderness Act of 1964.
- Wild and Scenic Rivers Act of 1968.
- National Trails System Act of 1968.
- National Environmental Policy Act of 1969.
- Environmental Quality Act of 1970.
- Forest and Rangeland Renewable Resources Planning Act of 1974.
- Surface Mining Control and Reclamation Act of 1977.
- Public Rangelands Improvement Act of 1978.

The National Environmental Policy Act of 1969 (42 U.S.C. 4321) directs the Federal Government to "(2) assure for all Americans . . . healthful, productive, and aesthetically and culturally pleasing surroundings; (3) attain the widest range of beneficial uses of the environment without degradation, [or] risk to health . . .; (4) preserve important historic, cultural, and natural aspects" of our environment. It further directs agencies to "insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decision making which may have an impact on man's environment." This act directs agencies to develop methods and procedures "which will insure that [scenery and other] unquantified environmental amenities and values may be given appropriate consideration in decision making along with economic and technical considerations."[ii]

The Shasta-Trinity Land and Management Plan directs the forest to "Maintain a diversity of scenic quality throughout the Forests, particularly along major travel corridors, in popular dispersed recreation areas, and in highly developed areas." (LRMP 4-5) The Forest wide Standards and Guides identified sensitive travel corridors as indicated on page 4-28.[iii]

Methodology for Analysis

The Shasta-Trinity Land and Resource Management Plan utilizes the Visual Management System (VMS) to reduce scenery impacts caused by management activities. VMS utilizes the distance of the project from the viewer, duration of the view, variety class and the sensitivity level of the viewpoint to assess visual impacts. During

the Forest Planning effort various Visual Quality Objectives (VQO's) were established for areas seen from travel routes. VQO's indicate allowable changes to scenery as a result of management activities. The VQO definitions and the VMS process are outlined below.[iv]

Visual Quality Objectives (as defined by the Visual Management System):

Retention: Management activities are not evident to the casual forest visitor.

Partial Retention: Management activities may be evident, but must remain subordinate to the characteristic landscape.

Modification: Management activities may dominate the characteristic landscape, but must follow naturally established form, line, color, and texture characteristics.

Maximum Modification: Management activities may dominate the characteristic landscape, but must follow naturally established form, line, color, and texture characteristics and should appear as a natural occurrence when viewed as background.

Unacceptable Modification: Size of activities is excessive or poorly related to scale of landform and vegetative patterns in characteristic landscape. Or overall extent of management activities is excessive. Or Activities or facilities that contrast in form, line, color, or texture are excessive. All dominance elements in the management activity are visually unrelated to those in the characteristic landscape. Unacceptable modification includes those visual impacts, which exceed 10 years duration.

Described below are the Visual Management System components that were used to develop the VQO's for the Shasta-Trinity National Forest:

Sensitivity Level
Sensitivity levels are a measure of people's concern for the scenic quality of an area. Travel routes, use areas and water bodies were rated according to the volume of use, duration and National or local importance.

Distance Zones:
The distance from which a landscape is viewed has an affect on how much detail, pattern, color, line, and texture a viewer sees. To capture this difference, various distance zones are established from sensitive viewing areas:

Foreground – The portions of a view between the observer and up to ¼ to ½ mile distant. The surface patterns on objects and visual elements are important in the 'foreground' views.

Middleground – The portions of a view between ¼ to ½ mile and three to five miles from the observer, (actual distance depends on actual viewing distances).

Background – The view beginning 3 to 5 miles from the observer and as far into the distance as the eye can detect the presence of objects.

Variety Class
A third component of the scenic environment relates to the degree of variety within a visual landscape (variety class). The more distinctive the variety class the more

restrictive the visual quality objective (VQO). For instance, if a site has unusual features such as water features or distinctive rock outcroppings, the landscape would be classified as a higher variety class. While, if a landscape has no distinctive features and has monotonous vegetation, if would be viewed as a more 'common' landscape, i.e. less visually interesting.
Site methodology comprised of site visits, photos, LRMP Standards and Guides, Visual Management System, Scenery Management System, other research and experience.

Affected Environment

Existing Condition

The project area is within the Klamath – Siskiyou Landscape Province Character Type as defined by the Visual Management System. The province is typified by highly forested repetitive ridges of similar but rising elevations towards the east. The ridge tops are often quite narrow and the canyons are deep in most places. The Salt Creek TS project area is typical of the Klamath-Siskiyou Character Type. The forest is comprised of mixed conifer stands with variable understory and hardwood species. Please refer to the silvicultural report for stand densities and stocking.

The existing VQO's in the foreground of Hwy 3 and 36 meet Retention to Partial Retention due to roads. The existing VQO for background views meets Partial Retention.

Desired Condition

The desired landscape character is a forest with a healthy ecosystem that primarily looks natural from sensitive viewpoints. Areas adjacent to Hwy 36 would have a multi-faceted vegetation structure which would include hardwoods and clumps of understory with randomly spaced mature trees.

There are 3 LRMP Prescriptions within the project area which support different landscape character goals. Prescription VIII (Commercial Wood Products Emphasis) emphasizes optimum timber growth and yield. The landscape goal of this Prescription is a forest that is more single story, with ingrowth and understory vegetation treatment to enhance timber stand growth and yield, improve forest stand health and forest protection from stand destroying wildfires. (LRMP 4-159)

The landscape character goal of Prescription III (Roaded Recreation) is a forest that is designed to meet recreation, visual and ecosystem management objectives. Hardwoods will be managed for sustainability. Timber harvest openings will be dispersed throughout the project area and average 5 acres or less. (LRMP 4-65)

The desired VQO is Retention in the foreground of Hwy 36 and Hwy 3 per the LRMP; the VQO in the rest of the project area is Modification.

Research has found that large mature trees are an important part of scenic beauty and should be retained in forest thinning projects. Forests with more open structure that

allow visual access through the understory are considered more scenic than forests with extremely dense understory vegetation. Partial clearing of up to 50% of trees in a dispersed pattern may be visually acceptable in moderately sensitive area, especially if large trees are preserved. Downed wood from timber harvesting and tree thinning is considered ugly and has negative impact on scenic beauty. Removing dead wood or chipping on site can greatly increase scenic ratings for tree thinning projects.[v]

Environmental Consequences

Mitigation and Monitoring

Vegetation treatments within an approximately 100' visual corridor adjacent to Hwy 36 and Hwy 3 have the following design features within this corridor (Applies to Units 1, 2C, 2B, 2A, 9A, 9B, and 26). The corridor may be wider than 100 feet, if it enhances other resource management objectives.

A) Employ a prescription that retains approximately 60% canopy closure with random tree spacing. Retain small groupings of young conifers and deciduous vegetation. Mark the backsides of the trees away from Hwy 36. Low stumps (less than 6" within the visual corridor.

B) Achieve a 'clean forest floor' look adjacent to the highway by removing, chipping and/or masticating slash.

C) Use old skid roads and existing landings where possible. Locate new landings away from the highway.

D) Remove trees and understory vegetation to enhance views of specimen (old growth trees) and hardwoods as seen from the highway.

Alternative 1 – No Action

Direct Effects

Scenery would remain the same for the No Action Alternative, thus there would not be any direct effects.

Indirect Effects

No Action would be the least preferred alternative from a scenery perspective. The No Action alternative could contribute to the future landscape character by perpetuating a forest with dense under growth, which would have less visual diversity and inhibit the sight distance of the viewer, thus resulting in a less interesting visual experience. This alternative could result in an increased tree mortality which would look 'natural', but may not meet the publics' expectations to see a green and healthy forest. Taking no action could possibly increase the risk of a catastrophic stand replacing fire. Charred, denuded forests are usually not preferred scenery. The No Action Alternative could reduce the scenic value of the area, if a stand replacing fire decimated the existing vegetation.

Alternative 2 – Proposed Action

A simplified description of the Proposed Action as it relates to scenery is: Two Regeneration Harvest - Green Tree Retention (GTR) units, two Shelterwood- Green Tree Retention units, multiple thinning units with 50% canopy cover retention and 1 shaded fuel break unit with 40% canopy cover retention after thinning. The fuelbreak is proposed to extend to the north side of Hwy 36.

Direct Effects

Alternative 2 proposes thinning the existing forest and creating a fuel break. Thinning the trees would remove some of the dense understory which would allow people to see further into the forest. The 40% to 50% canopy cover retention would considerably increase the amount of sun light on the forest floor resulting in shadow patterns and an increased growth of perennials and forbs the first year after the timber harvest. The new understory growth would diminish the visual changes from the timber harvest and add more interest visually.

Researchers believe that reducing competing vegetation increases the diameter and health of trees resulting in stands that are more resilient to disease and insect mortality. Vegetation modeling for this project shows faster diameter growth in stands thinned to 50% canopy cover retention (Silvicultural Report). Larger, vigorous trees appear more scenic than small, diseased trees with dense understory to many people. The mature trees, increased visual access, and light-shadow patterns emulate a park-like setting which can be very scenic.

The meadow like openings and mature tree stands will enhance visual diversity in form, color, texture, and scale in vegetative material, which is seen as more interesting than a monotonous landscape.

By implementing the mitigation measures described above for units 1, 2C, 2B, 2A, 9A, 9B, and 26, a VQO of retention in the foreground of Hwy 36 and Hwy 3 will be retained within 1 year of the project completion.

Indirect Effects

There are no indirect effects.

Alternative 3

Alternative 3 proposes no Regeneration Harvest - Green Tree Retention units. Two Shelterwood – Green Tree Retention units and multiple thinning units, which will retain 60% canopy cover after treatment will be treated. The fuelbreak would not cross Hwy 36, and the boundary was moved out of site distance from the highway.

Direct Effects

Alternative 3 is the preferred alternative from a scenery perspective. It differs from Alternative 2 by retaining more trees in the thinning units and taking the fuel break boundary away from Hwy 36 in the immediate foreground. Leaving more trees would result in a more forested look, but still open visual access into the stands.

By implementing the mitigation measures described above for units 1, 2C, 2B, 2A, 9A, 9B, and 26, a VQO of retention in the foreground of Hwy 36 and Hwy 3 will be retained within 1 year of the project completion.

Indirect Effects

There are no indirect effects.

Cumulative Effects

There are no cumulative effects for any of the alternatives, since there are not any direct or indirect effects.

Compliance with the Forest Plan and Other Regulatory Direction

Alternative 1 – No Action

Scenery would remain the same for the No Action Alternative, thus would meet LRMP direction.

Alternative 2 – Proposed Action

The project should meet a Retention VQO in the foreground of Hwy 36 and 3 per LRMP direction within 1 year of the project completion with the current harvest prescriptions and if the suggested mitigations are integrated into the project.

Views to the middleground and background of Highways 36 and 3 should meet Partial Retention upon project completion. The GTR units are small in scale and are seen for short durations and/or intermittent views.

Alternative 3

The foreground views would meet the same visual quality objectives as Alternative 2, however Alternative 3 would have less impact to visual resources due to the higher 60% canopy, no GTR and the shaded fuelbreak is setback from Hwy 36. The VQO's should be met upon project completion.

References

[i] Landscape Aesthetics, A Handbook for Scenery Management, Forest Service Agriculture Handbook Number 701

[ii]Forest Service Manual 2300: Recreation, Wilderness, and Related Resource Management; 2380.11.b – Environmental Analysis and Disclosure:

[iii] Shasta-Trinity National Forest Land and Resource Management Plan

[iv] USDA Forest Service. 1974. National Forest Landscape Management, Volume 2, Chapter 1 The Visual Management System, Handbook 462.

[v] Social Science to Improve Fuels Management: A Synthesis of Research on Aesthetics and Fuels Management, Robert L. Ryan, U.S. FS. North Central Research Station