Scenic Environment

INTRODUCTION

The scenery visible to people visiting the Boise, Payette, and Sawtooth National Forests constitutes the scenic environment. Scenery is described as the general appearance of a place or landscape, or the features of a landscape. The visual condition varies by location and is dependent on human developments and natural features such as geology, vegetation, and landforms.

The Sawtooth, Payette, and Boise National Forests provide some of the highest quality scenic landscapes in the Intermountain West. Enjoyment of these scenic resources is an integral part of many recreation experiences, and these scenic attractions have contributed to making a number of locations on these Forests nationally recognized recreation destinations. As an example, the Sawtooth National Recreation Area was established in 1972 based on, among other things, the preservation of the high quality scenic environment as a backdrop for recreational pursuits (Public Law 92-400).

Issues and Indicators

Issue Statement – Forest Plan management strategies may affect the scenic environment.

Background – No significant issues directly related to scenic resources were identified during scoping or the Need For Change analysis process. However, comments received on the DEIS suggested that visual impacts related to insect and disease and large-scale uncharacteristic wildfire should be considered in greater depth. Other comments were concerned with Forest-wide management direction for the scenic environment and with implementation of the Scenery Management System.

Management activities have the potential for directly, indirectly, and cumulatively affecting scenic resources through vegetation management, restoration, or development activities. These activities are related to many of the Need For Change topics, and could be implemented under any of the alternatives. Disturbance events of epidemic insect infestations and uncharacteristic wildfire events can also affect scenic resources. The potential effects on the scenic environment are analyzed in this section.

Indicators - The following indicators are used to measure effects of management activities and disturbance events on the scenic environment on the three Forests by alternative.

- *Indicator 1 - Acres of each Visual Quality Objective class*. This indicator reflects differing levels for allowable change to the scenic landscape that would be associated with each alternative.

- *Indicator 2 - Acres of change in Visual Quality Objective class from current levels*. This indicator reflects the relative change from the current allowable levels of change in scenic resources.

- *Indicator 3 - Levels of landscape-changing management activities*. Modeling estimates are used to gauge vegetation treatments and road construction and reconstruction, under each alternative, as a relative comparison of the potential change to the landscape. This indicator differs from the VQO indicators above in that, while VQOs reflect the allowable levels of change to the scenic environment, this indicator reflects the potential levels of change under each alternative based on anticipated management activity levels.

- *Indicators 4 and 5 - Uncharacteristic wildfire hazard index for forested vegetation and insect hazard index for forested vegetation*. These indicators will display the relative differences in alternatives in terms of the potential for visual changes from disturbance processes.

For the cumulative effects analysis, the above indicators are again used to display potential effects on an Ecogroup scale.

Affected Area

The affected areas for direct and indirect effects to scenic environment are the lands administered by the three National Forests in the Ecogroup. These areas represents the National Forest System lands where the scenic environment exists, and the lands where those resources could receive impacts from both management activities and disturbance events. The affected area for cumulative effects includes the lands administered by the three National Forests, and lands of other ownership both within and adjacent to these National Forest boundaries. Cumulative effects to resources on other land ownerships are addressed to lend a broader perspective to the importance of scenic resources on the Forests and to acknowledge the inter-relationships with those lands.

CURRENT CONDITIONS

The present landscape is a result of the interactions of existing vegetation and landforms on line, form, color, and texture of the viewed scenery. Visual conditions vary by location and are dependent on such influences as geology, water, vegetation, landforms, and human developments and activities. The scenic landscape is a dynamic medium and is continuously modified by both human and natural forces. Much of the landscape that comprises the three Forests has been altered by human developments and activities as well as recent disturbance events such as large-scale wildland fires. Some of these altered landscapes are not obvious to casual viewers because they still present natural-appearing landscapes. This is especially true when looking at some of the vegetation conditions that have resulted from fire exclusion and prescribed fire use. The Visual Management System is a management tool that

determines scenic values and establishes allowable levels of human-caused change to the scenic environment. This system is used to plan project activities in order to keep visual impacts within varied levels of acceptable change. More details regarding the Visual Management System can be found in Chapter 1, The Visual Management System of Volume 2, National Forest Landscape Management (USDA Forest Service 1974).

Management of the scenic environment using the Visual Management System requires the determination of Visual Quality Objectives (VQOs) for all areas within the National Forests. VQOs provide the scenic yardstick used to gauge the effects of activities. The Visual Management System and VQOs are primarily responsive to management-induced changes and do not respond well to landscape changes due to disturbance elements. Accordingly changes related to such events will be discussed independently from the assessment of VQO changes. The five established classes of VQOs are Preservation, Retention, Partial Retention, Modification, and Maximum Modification, and are determined by consideration of viewer sensitivity, viewing distance zones, and inherent scenic qualities. Each VQO describes a differing degree of acceptable alteration of natural-appearing landscapes. Differences between each VQO classification are displayed in Table SE-1.

VQOs were originally inventoried using a prescribed systematic approach with criteria adapted to our specific land features and resources. The adopted VQOs were the result of decisions based on intended management outcomes and comments expressed by the public during the initial round of forest planning. The current levels of VQOs established on each Forest are displayed in Table SE-2.

Table SE-1. Visual Quality Objectives Descriptions

VQO	Description
Preservation	Allows ecological changes only. Management activities, except for very low visual impact recreation facilities, are prohibited. Applies to Wilderness areas, primitive areas, Wild River corridors, other specially classified areas, areas awaiting classification, and some unique management units that do not justify special classification.
Retention	Allows management activities that are not visually evident. Activities may only repeat form, line, color, and texture that are frequently found in the characteristic landscape. Changes in size, amount, intensity, direction, pattern, etc., should not be evident.
Partial Retention	Allows management activities that remain visually subordinate to the characteristic landscape. Activities may repeat form, line, color, and texture common to the characteristic landscape but changes in their qualities of size, amount, intensity, direction, pattern, etc., remain visually subordinate to the characteristic landscape. Activities may also introduce form, line, color, or texture that are found infrequently or not at all in the characteristic landscape, but they should remain subordinate to the visual strength of the characteristic landscape.

VQO	Description
Modification	Allows management activities that may visually dominate the original characteristic landscape. However, activities of vegetative and land form alteration must borrow from naturally-established form, line, color, or texture so completely and at such a scale that its visual characteristics are those of natural occurrences within the surrounding area or character type. Additional parts of these activities such as structures, roads, slash, root wads, etc., must remain visually subordinate to the proposed composition. Introduction of facilities such as buildings, signs, roads, etc., should borrow naturally established form, line, color, or texture so completely and at such a scale that its visual characteristics are compatible with the natural surroundings.
Maximum Modification	Allows management activities that may dominate the characteristic landscape. However, when viewed as background, the visual characteristics must be those of natural occurrences within the surrounding area or character type. When viewed as foreground or middle ground, they may not appear to completely borrow from naturally established form, line, color, or texture. Alterations may also be out of scale or contain details that are incongruent with natural occurrences as seen in foreground or middle ground. Introduction of structures, roads, slash, root wads, etc., must remain visually subordinate to the proposed composition as viewed in the background.

Table SE-2. Acres and Percent of Visual Quality Objectives by Forest

Visual Quality Objective	Boise NF		Payette NF		Sawtooth NF		Ecogroup	
	Acres	%	Acres	%	Acres	%	Acres	%
Preservation	200,000	09	1,014,000	44	492,000	23	1,718,000	26
Retention	599,000	27	112,000	05	271,000	16	1,078,000	16
Partial Retention	1,059,000	48	568,000	25	596,000	25	2,334,000	36
Modification	258,000	12	606,000	26	555,000	26	1,200,000	18
Maximum Modification	87,000	04	0	0	197,000	09	284,000	04

ENVIRONMENTAL CONSEQUENCES

Effects Common to All Alternatives

Resource Protection Methods

Management area goals and prescriptions have been considered together with existing scenic resources and values to produce scenic environment standards and VQOs. In most cases, the originally inventoried VQOs have been adopted as the management standard. Some have been modified to compliment unique circumstances, such as recommended wilderness, scenic byways, and Wild and Scenic Rivers. Forest Plan standards and guidelines will direct rehabilitation, enhancement of visual quality, integration of aesthetics in resource planning, and efforts to vary stand densities to create vegetation diversity. As such, they are used in project design to protect important scenic values, while allowing an acceptable level of landscape change where appropriate. VQOs are established for all areas within the Forests. The VQOs reflect sensitive areas of high visual concern as well as areas of

low scenic priority. Project proposals are designed or modified to meet the established VQOs. Examples of mitigation efforts commonly used include revegetation of disturbed sites, choice of materials and colors for structures that reduce their visibility, placement of utilities underground, design of timber harvest units to blend with the natural-appearing landscape, and use of locations that provide vegetation screening.

General Effects

Scenery is an integral component of all national forest settings, and contributes to the quality of the user's experience. It has also been altered in numerous locations across the Ecogroup by both human and natural forces. Obvious and significant effects on visual resources arise from a variety of resource management activities and public uses such as logging, mining, and utility corridors that alter vegetation and landscape appearances. The relative amount of these activities and uses may, in some cases, vary by alternative. However, they are likely to be present to some extent in all alternatives.

Visual effects of management activities and disturbance events are seldom limited to the specific location of the activity or the event. As seen from a travel route or use area, such alterations can affect the visual appearance of the entire viewed landscape or "viewshed".

Restoration Activities – These activities may include timber harvest, road construction, reconstruction, and decommissioning, prescribed fire, facility relocation and modification, fish habitat improvement, streambank stabilization, slope stabilization, and mining reclamation. Their effects are described in greater detail below.

Timber Harvest - Effects can vary depending upon the quantity and type of timber removed, logging methods, and the setting. Generally, timber removal—and any associated roads, skid trails and slash treatments—results in adverse effects to the scenic environment arising from vegetation change or removal and ground disturbance. These impacts are usually the most dramatic in areas where no visible evidence of human development activities has previously occurred. Thinnings and selection harvests usually have lower impacts and are also evident for a shorter duration than overstory removals, shelterwood harvests, and clearcuts. Helicopter logging does not create skid trails or yarding corridors that contribute to the visual impacts of ground-based and cable logging systems. Timber management may also be used to improve scenic quality, particularly where there are opportunities to enhance scenic views, to provide a landscape associated with the public's expectation, and to achieve timber stand characteristics that are more visually appealing.

Roads and Trails - Construction, reconstruction, and decommissioning can all affect the scenic environment. Road construction and reconstruction are usually associated with timber harvest, facility development, utility corridors, telecommunications sites, mineral and energy development, and recreation activities. Roads and trails create a long-term visual impression on the landscape from associated vegetation clearing and ground disturbance activities. These effects are usually magnified by the linear nature of the pattern of disturbance, especially in forested landscapes. The extent of the impact depends upon topography, service type, soils, geology, and the nature of surrounding vegetation. The visual impact from trails is usually somewhat less due to their smaller width, which reduces the level

of ground disturbance and makes impacts easier to mitigate in most cases. Road and trail decommissioning includes a variety of management actions ranging from simple closures to complete obliteration. Obliteration can often eliminate the visual impacts of a road or trail over the long term as vegetation matures in former road or trail locations; however, temporary or short-term effects of ground disturbance are often greater than closures.

Mineral and Energy Exploration, Development, and Reclamation – Exploration and development activities can result in both short-term and long-term effects from associated structures, vegetation clearing, and ground disturbance activities. The effects on scenic resources vary depending largely on the scale and location of development. Small scale developments of a few acres, or underground mining, would have very limited impacts, while large scale surface mining operations typically have major effects on the scenic quality of the surrounding area. Mining reclamation activities can also result in temporary or short-term effects to the scenic environment, but these effects are generally no worse than the conditions being reclaimed, and reclamation results in long-term improvement to the visual landscape. In that the level of mineral exploration and development is largely driven by market forces and regulated by existing mining law, there would be little difference between the alternatives in effects on the scenic environment. Reclamation activities may vary depending on differences in alternative restoration emphasis.

Facilities and Structures – These include a broad array of physical developments and structures, such as administrative facilities, dams and diversions authorized under special use authorizations, and mining facilities. Usually, there are both short-term and long-term visual effects from structures, vegetation clearing, and ground disturbance activities. These effects vary depending on the scale and nature of the development, as well as the setting. Road construction for installation and/or maintenance purposes can contribute to the impacts of the facility.

Utility Developments – These developments include pipelines and overhead powerline clearings that can result in both short-term and long-term effects from associated permanent structures, reflective materials, vegetation clearing, and ground-disturbance activities. These effects are usually magnified by the linear nature of the pattern of disturbance, especially in forested landscapes. Road construction for installation and/or maintenance purposes often contributes to the impacts of the utility line. Corridors for anticipated utility line needs are described in the Management Area sections of the Forest Plan. Site-specific analysis would be required prior to approval or implementation of any utility corridor development.

Telecommunications Sites - Communications developments can result in short and long-term effects from associated permanent structures, vegetation clearing, and ground disturbance activities. These effects are usually localized at individual sites that cover five acres or less in size. However, communication sites often must be located on highly visible peaks or along well-traveled corridors that make mitigation of visual impacts difficult if not impossible. Road construction for installation and/or maintenance purposes can contribute to the impacts of the telecommunication site. Site-specific analysis would be required prior to approval or implementation of any telecommunication site development.

Recreation - Activities can result in impacts to the scenic environment depending on recreation activity levels, and soil and vegetation types. Off-road and off-trail travel and dispersed camping can cause erosion, ground disturbance, or de-vegetation. Although all forms of travel have the potential to cause these types of impacts, effects associated with most forms of motorized travel are usually the most pronounced due to the combination of vehicle weights, widths, and their creation of continuous track lines. In snow-covered landscapes, high numbers of snowmobile or ski tracks across a scenic view can also result in a temporary visual impact.

In addition to the visible effects of activities, recreation developments can contribute to the loss of natural-appearing landscape character by introducing numerous vehicles, groups of buildings, and conspicuous structures. As with other structures and facilities, the effects range from short to long term in duration and can vary depending on the scale and nature of the development, as well as the setting.

Scenic Byways – Five state and one federally designated Scenic Byways cross National Forest System lands within the Ecogroup. This designation is an indicator that scenic resources along these routes are especially attractive and important to the public. VQOs for these corridors will reflect the heightened importance and provide sufficient protection to maintain their high scenic values.

Sawtooth National Recreation Area – The law that established the SNRA in 1972 emphasized preservation of the visual resource as a backdrop for recreational pursuits. This law limits developments within the SNRA to ones that do not have detrimental effects to scenic values. This constraint does not vary and is present in every alternative.

Range Management - Livestock grazing and range improvements may result in an altered landscape appearance. Changes to the landscape appearance may include differences in the type and amount of vegetation on the land, vegetation trampling, and range improvement structures. Effects from grazing depend largely on the intensity and timing of forage utilization. Normally, allotment management plans require permittees to move their livestock so that they do not concentrate in sensitive areas, like meadows and riparian areas. Although there could be effects from seasonal trampling and heavy utilization of the forage, the potential for change to the scenic environment is relatively slight. However, long-term conversion of plant communities is known to have occurred and, in some instances, has been heavily influenced by management activities. Structural improvements, such as fences, may be visually evident and can detract from the natural-appearing landscape character. Mitigation may include relocating or redesigning fences where possible, or removing them where they are no longer needed. Generally, improvements are small and localized, and have a minor effect on the scenic quality of the surrounding area.

Watershed Improvements - A broad array of physical alterations may include streambank stabilization structures (rock gabions, rock riprap, etc.), road reconstruction (culvert replacements, road re-alignment, etc.), slope stabilization structures, and re-vegetation planting. Some structural improvements such as contour trenches, directionally felled trees in burned areas, and sequential check dams and gully plugs can be visually evident and can detract from the

natural-appearing landscape character. Duration of effects from these types of structures range from short term to long term and also depend on the scale of the structures themselves. Generally, most improvements are relatively small and localized, and have a minor effect on the scenic quality of the surrounding area.

Fish and Wildlife Habitat Improvements - A broad array of physical alterations may include vegetation manipulations (stand, structure, and composition cuts, browse species plantings, etc.), prescribed burning, and habitat improvement structures. Some structural improvements may be visually evident and can detract from the visual landscape, but are infrequently used. Others may be designed to improve the scenic environment over time. Negative impacts may be mitigated through design and location considerations, and vegetative cover plantings where possible. Generally, improvements are small and localized, and have a minor effect on the scenic quality of the surrounding area.

Disturbance Events – Scenic resources comprise a dynamic environment. Changes to scenery will occur with or without human activity. Wildland fire, insects, disease, landslides, and other disturbances can greatly affect scenic resources, especially when the scale of these events is large.

Insect and disease outbreaks can result in large areas of dead trees. Stands of predominantly dead trees can then become fire hazards, for a period of time, indirectly increasing the potential for wildfire effects to scenic resources. In some cases, salvage logging is used to capture economic value in large areas of tree mortality, but additional or different visual long-term impacts may occur from new roads and salvage harvest units.

Effects on scenic resources from wildland fire vary depending upon a number of factors. The visual effects from an individual fire depend upon the severity, intensity, and magnitude or scale of the fire. A low to moderate intensity fire of mixed severity can result in a vegetation mosaic across the landscape producing a long-term positive visual benefit by increasing the diversity of vegetative species, structure, size and age classes, snags, and coarse woody debris. On the other hand, large-scale burning, ground scorching, and tree and shrub mortality can alter the scenic values associated within an area and reduce the inherent visual complexity and scenic values of a landscape. The large-scale loss of vegetation can have short-term negative impacts from burned landscapes, as well as long-term impacts in the form of a more simplified landscape mosaic. Additionally, many people find burned landscapes visually unappealing and unattractive. Uncharacteristic fires that burn with uniformly high intensity and severity across large areas have the greatest impacts on visual resources and are long term in duration. Wildland fire usually also results in temporary visibility impairment from smoke. Smoke from fires can partially or completely obscure the high-value scenic attractions that characterize much of the Ecogroup area.

In areas where disturbance events dominate the landscape, the potential for dramatic visual effects is likely to substantially increase over the long term. It is difficult to predict how or where or when these changes might occur due to influential variables such as vegetation patterns, disturbance regimes, climate, and topography.

Wildfire Suppression – Fire suppression activities produce effects to the scenic environment both directly and indirectly. Some firefighting activities, such as mechanical fire line and safety zone construction, can result in direct, long-term effects from vegetation clearing and ground disturbance. In the case of fire line construction, these effects are usually magnified by the linear nature of the pattern of disturbance. In some vegetation types, fire suppression can and has produced vegetative conditions that would not be present had fire occurred at historical levels. Fire exclusion has allowed some late seral or climax forest cover types, such as Douglas fir, to dominate the visual landscape in some locations for longer time periods than they would without excluding fire. To some extent, this has resulted in landscapes with less visual diversity than what would be present in the absence of fire suppression.

Prescribed Fire – Prescribed fire can result in temporary visibility impairment from smoke. Smoke from fires can partially or completely obscure the high value scenic attractions that characterize much of the Ecogroup. Prescribed fires usually also result in both short-term and long-term visual effects in the form of landscapes having burned appearances. In many cases, fires are designed to mimic historical fires in post-fire appearance over time. However, many people find the post-fire appearance of burned vegetation to be unattractive. Prescribed fire is generally used in areas comprised of vegetation characterized by non-lethal or mixed1 fire regimes to reduce ladder fuels and restore or maintain desired vegetative conditions. In these circumstances, fire intensity, severity, and scale are generally lower and smaller, and result in less visual impacts of shorter duration than wildland fire events. In some cases, fire may be used to improve scenic quality. For instance, fire can be used to reduce slash or to achieve timber stand characteristics that are more visually appealing, such as open stands of large trees.

Direct and Indirect Effects by Alternative

Indicators 1 and 2 - Changes In Visual Quality Objectives

Each of the alternatives has the potential to maintain, alter, or enhance the scenic character of the Forest landscapes to varying degrees. Projects implemented on each Forest under any alternative would require a site-specific assessment of their potential impacts on the scenic environment. The Visual Management System, which is used to develop VQOs, is based on the concept that a natural-appearing landscape character is preferred. As such, VQOs reflect the threshold of the greatest acceptable deviation from a natural appearance. The VQOs are used to design management activities so that an individual project does not exceed the established threshold of change to the scenic environment.

In general, VQOs are established from consideration of the combination of scenic values, human sensitivities, and the needs for management of other resources. All of these factors vary by location across the Ecogroup, which results in varied levels of each VQO class for each Forest. VQOs can constrain management activities to protect scenic resources. In some cases, management decisions are made that constrain activities to levels below those allowed by established VQOs to protect other resource values. This is a benefit to scenic resources in that it is always acceptable to retain more of the natural-appearing landscape character.

One method of estimating each alternative's potential for changing the scenic environment is to compare anticipated acreages of each VQO class in each alternative. Individual projects are tailored to fit the

VQOs established in the Forest Plans. Once established, the VQOs become a fixed obligation or criteria for project level performance and must be constraining enough to limit changes to the visual landscape to an acceptable level. At the same time, VQOs must also be consistent with the attainment of the established multi-resource goals and objectives stated in the Forest Plan. In that management emphasis, direction, and activities are likely to vary according to assigned management prescriptions associated with each alternative; VQOs would also need to vary to some extent by alternative. For example, VQOs for a commodity-driven management scenario would need to reflect higher thresholds for the greatest acceptable deviation from the natural-appearing landscape than one for a scenario focused on preserving a natural-appearing environment.

The acreage totals for each VQO were estimated for each alternative considering the assigned management emphasis and are displayed in Table SE-3. The potential for change in the scenic environment is reflected in the proportion of the VQO classes associated with each alternative. The anticipated VQOs for each action alternative can also be compared with those of Alternative 1B to reflect the extent to which each varies from the current VQOs. These figures are also displayed in Table SE-3.

Table SE-3. Anticipated Acres* of VQO and Acres of Change by Alternative
(*Measured in thousands of acres)

Alt.	Preservation		Retention		Partial Retention		Modification		Maximum Modification	
	Acres	Acres of Change From Existing	Acres	Acres of Change From Existing	Acres	Acres of Change From Existing	Acres	Acres of Change From Existing	Acres	Acres of Change From Existing
Boise National Forest										
1B	200	0	599	0	1,059	0	258	0	87	0
2	200	0	280	-319	1,104	45	501	243	118	31
3	200	0	280	-319	1,104	45	501	243	118	31
4	746	546	254	-345	893	-166	232	-26	78	-9
5	21	-179	264	-335	1,203	144	590	332	125	38
6	200	0	281	-318	1,363	304	282	24	77	-10
7	200	0	239	-360	1,105	46	541	283	118	31
Payette National Forest										
1B	1,013	0	112	0	568	0	607	0	0	0
2	1,028	15	316	204	514	-54	442	-165	0	0
3	1,028	15	316	204	514	-54	442	-165	0	0
4	1,668	655	93	-19	243	-325	296	-311	0	0
5	802	-211	390	278	628	60	480	-127	0	0
6	1,013	0	339	227	690	122	258	-349	0	0
7	1,013	0	338	226	670	102	279	-328	0	0
Sawtooth National Forest										
1B	492	0	271	0	596	0	555	0	197	0

Alt.	Preservation		Retention		Partial Retention		Modification		Maximum Modification	
	Acres	Acres of Change From Existing	Acres	Acres of Change From Existing	Acres	Acres of Change From Existing	Acres	Acres of Change From Existing	Acres	Acres of Change From Existing
2	492	0	271	0	596	0	555	0	197	0
3	492	0	271	0	596	0	555	0	197	0
4	1,147	655	142	-129	293	-303	347	-208	182	-15
5	218	-274	372	101	720	124	604	49	197	0
6	492	0	271	0	989	393	214	-341	145	-52
7	492	0	271	0	596	0	555	0	197	0

On a Forest-wide basis, changes in the appearance of the landscape as a result of VQO shifts would take place over time because implementation of projects would not happen all at once. Landscape changes occurring from disturbances would also accrue gradually over a period of a number of years and would be heavily influenced by climate trends and individual weather events. While some viewsheds are likely to have significant alterations over the next decade, others may not be altered or altered only lightly for several decades. The duration of the visual effects would generally be both short and long-term, but could also vary depending on the nature of the management activity or development.

As noted above, VQOs are used to limit human-caused changes that reduce natural-appearing landscape character. In some cases, all viewers may not desire a natural appearance. Disturbance events, such as wildland fire, can create dramatic changes to the landscape, such as stands of burned, dead trees that may be objectionable to some viewers. However, the view they present is still considered "natural" and would meet a VQO of preservation. Levels of potential scenic resource change due to disturbance events also vary by alternative and must be considered in combination with human-caused change to understand the full potential effects offered under each alternative.

Some effects relationships are consistent across the Ecogroup area. Alternative 4 presents the greatest shift towards preservation of all the alternatives because of its elevated levels of recommended wilderness. Alternative 4 also shows a large net decrease in acres of modification or maximum modification on all three Forests. Under the VQO of preservation, human-induced landscape changes are prohibited, allowing only disturbance events to create landscape changes. Landscapes with noticeable human-induced alterations would be relatively low, with low levels of timber harvest and road construction. This alternative does have lower hazard ratings for uncharacteristic wildfires on all three Forests. This, combined with the high levels of VQOs, would result in an alternative that maintains a very high level of scenic quality.

Alternative 6 has a large shift of VQO acres from modification to partial retention. This shift is a reflection of the development limiting management direction in Alternative 6. Management direction under Alternative 6 requires that Inventoried Roadless Areas remain undeveloped and allow very limited potential development in unroaded areas. This, in combination with recommended and existing

Wilderness Areas, create large areas of natural-appearing landscape. It is also likely that the VQOs in the Inventoried Roadless Areas and unroaded areas would allow greater levels of change than what management activities are likely to create. Thus, considerably less human-caused change than what the VQOs would permit would occur over much of the Ecogroup area under this alternative. Alternative 6 has the least amount of VQOs of modification and maximum modification that allow strong or dominant changes in the landscape from management activities.

On the Boise and Sawtooth, Alternative 5 would allow the highest level of human-caused change to occur to the scenic environment, while maintaining the lowest levels of preservation VQOs on all three Forests. With its emphasis on commodity production and related developments, landscapes altered by human activity are likely to be most noticeable under this alternative. Timber harvest, new road construction and reconstruction, and livestock grazing would be relatively high. The high levels of commodity production would result in an alternative that would likely display high amounts of human-caused changes in the landscape.

Boise National Forest - On the Boise, all alternatives, except Alternative 4 would have more acres of modification or maximum modification than the current plan. Also, compared to the alternative representing the current plan (1B), all other alternatives have fewer acres of the retention VQO. The primary reason for this shift is that Alternative 1B has considerable acreage that was assigned an undeveloped recreation prescription that was allocated to a retention VQO. In all other alternatives these areas were assigned various mixes of VQOs depending upon the assigned MPCs. Alternative 5 has the least of amount of VQOs that allow for ecological changes only or subtle changes due to management activities. Alternative 5 also has the most amounts of modification and maximum modification VQOs. As a result it is anticipated that Alternative 5 would be likely to display the most noticeable and dominant changes in the landscape. The mix of VQOs assigned to Alternatives 2, 3, 6, and 7 is fairly consistent. They all allow greater amounts of landscape change than the current plan alternative. Adverse impacts to scenic resources would range from short term, such as those of fire use in grass and shrub vegetation types, to long term, such as road construction and regeneration timber harvests.

Payette National Forest – All action alternatives reduce the amount of modification VQO and almost all action alternatives increase the amount of VQOs over Alternative 1B that maintain high levels of scenic quality (retention and preservation). Alternative 5 is the exception in the case of preservation and Alternative 4 is the exception in the case of retention. Alternatives 2, 3, 6, and 7 are similar in that they increase the amount of retention roughly three-fold. Alternative 5 has the least amount of preservation but does have the most acres of retention. None of the alternatives have any maximum modification VQO assigned. Compared to Alternative 1B, all alternatives reflect a shift towards more restrictive VQOs that allow for more subtle landscape changes, with fewer areas allowing landscape alterations that dominate the viewsheds.

Sawtooth National Forest - The Sawtooth has a limited capacity for change due to the fact that maintaining law mandates a high level of visual quality for the Sawtooth NRA. VQOs in Alternatives 2, 3, and 7 have little to no variance from the current VQOs. Alternative 4 would maintain the highest

levels of visual quality, while Alternative 5 would allow the most change. Alternative 5 displays the greatest shift in VQO acres due to a lack of recommended wilderness that results in acres of preservation VQOs being shifted to retention, partial retention, and modification.

Indicator 3 - Activities Affecting The Scenic Environment

Some of the alternatives present considerable differences in the amounts and types of activities that would occur across the landscape. Some activities would have relatively minor potential to cause noticeable change in the landscape, while others are likely to cause very noticeable changes. The actual social impact of such changes in the landscape will vary according to the visibility of activities, the surrounding landscape setting, and the visual sensitivity of the travel route or use area from which the activity might be viewed. The assignment of various visual quality objectives may control the magnitude and intensity of such changes permitted across the landscape in some areas. While in other areas, other factors such as the presence of Threatened and Endangered species or high levels of water quality concern may play an even greater role in controlling the magnitude and intensity of changes to the landscape.

While the specific effect of an individual activity is dependent on many site-specific variables, the overall amount of various activities can be used as a gross indicator of the overall changes that would occur across the landscape and how those would vary by alternatives. Alternatives with greater amounts of mechanical vegetation treatments and road construction would, as a general rule, result in landscape settings that appear more manipulated or altered by other than ecological processes.

Groupings of similar activities for tracking such potential changes by alternatives were made in order to simplify and capture those activities that have the most potential for affecting change on the landscape. Six different activity groupings were made:

- *Even-Aged Regeneration Harvest* - This activity grouping consists of clearcut with reserve trees, reserve tree regeneration, and shelterwood harvests. These activities have the greatest potential of all vegetation treatments to create very noticeable long-term changes in the forested landscape from the removal of substantial portions of the forested canopy.

- *Intermediate Vegetation Treatments* - This grouping consists of commercial thinning, selection harvest, and pre-commercial thinning. While there is a wide range of potential effects due to the variability in the intensity of tree removal, generally the change is subtle and does not dominate the landscape. Temporary visual effects generally would occur from ground disturbance and potential logging residue from harvest operations. Short- and long-term visual effects would occur from the reduction in forested cover density and a more open forested appearance. In some vegetation types, such as the dry Ponderosa pine stands, intermediate treatments may result in more open, park-like stands characterized by large trees with greatly reduced understories. These vegetation treatments are likely to have much lower visual impacts than even-aged regeneration harvest treatments.

- *Fire Use* - This activity consists of using prescribed and wildland fire for achieving various management goals. Visual impacts can vary considerably with the magnitude and intensity of the fire. The effects are often dominant on the landscape immediately following the activity and for a few following years. With accelerated regrowth of herbaceous and understory vegetation, the major visual effects are usually temporary or short term. Often these effects may be perceived as resulting from the natural occurrence of fire in the landscape. Long-term visual effects are subtler, resulting in more open stand conditions, again depending on the intensity of the fire. As noted above under *General Effects*, fire intensity, severity, and scale are generally lower and smaller in prescribed fire than in wildland fire. As a result, prescribed fires usually produce visual impacts of shorter duration and reduced severity than uncharacteristic wildfire events and characteristic wildfire events in lethal fire regimes. This is also true of wildland fire use although it may be to a lesser extent than prescribed fire. Wildland fire use will also generally occur under prescribed conditions that will limit intensity, duration, and severity to acceptable levels. In most cases, wildland fire will not be used during extremely dry, burning season peaks when burning intensities and severity would be at their worst. However, the effects of wildland fire use may be similar to wildfire in characteristically lethal vegetation types, such as lodgepole pine.

- *Road Construction* – The building of new roads has the potential to create very noticeable long-term alterations in natural-appearing landscape character. A number of site-specific variables such as elevation changes and cross slopes can influence the degree of impact, but typically road construction produces long narrow openings through vegetation that do not appear natural. Although vegetation regrowth may occur on road cut and fill slopes over time, the road prism and associated infrastructure remain highly visible indefinitely.

- *Road Reconstruction* – The Forest Service implements a wide variety of existing road improvement activities under the category of reconstruction. The visual impacts of these activities vary considerably. Partial road relocation, for example, would have long-term impacts similar to road construction. Road widening can also have long-term impacts, though typically not as noticeable as relocation. Other activities — such as bridge repair, culvert replacement, or road graveling — may have minor and temporary visual impacts during implementation, but can also be designed to improve the immediate scenic environment for road users over the long term.

- *Road Decommissioning* - There may also be opportunities to reduce visual impacts on the landscape through activities that decrease the effects of existing development. One such activity that has that potential, and that has been analyzed for revision, is road decommissioning. Although decommissioning can range from road closures to complete road obliteration and restoration, all activities would generally allow for some revegetation to occur along road prisms and cut and fill slopes. This revegetation would reduce the visual impact of existing road openings. Usually the visual benefit from road decommissioning is a long-term benefit that increases in effectiveness over time as vegetation is re-established.

Alternative Comparison by Forest – Management Activity Groupings - All numbers in Tables SE-4, SE-5, and SE-6 are estimates from SPECTRUM modeling of levels of activities that could occur given budget and management constraints (see Appendix B for modeling assumptions and application). These numbers can be used for the relative comparison of alternatives, but are not intended to represent actual acres or miles of projected activities.

Boise National Forest - Table SE-4 compares activities by alternative that would likely affect visual quality on the Boise National Forest over the next two decades, using annual averages from the model.

Alternatives 3 and 4 would have the least amount of even-aged regeneration harvest over the next two decades, followed in ascending order by Alternatives 6, 2, 7, 1B, and 5. Alternative 4 would have the least amount of intermediate treatments, followed in ascending order by Alternatives 6, 1B, 7, 5, 2, and 3. Alternative 5 would have the least amount of fire use acres, followed in ascending order by Alternatives 1B, 3, 7, 2, 4, and 6. Alternative 6 would have the least amount of road construction, followed in ascending order by Alternatives 4, 3 and 7, 1B, 5, and 2. Alternative 4 would have the least amount of road reconstruction activities, followed in ascending order by Alternatives 6, 3, 7, 1B, 2, and 5.

Table SE-4. Activities by Alternative - Boise National Forest
(Annual averages of acres or miles for the first two decades)

Activity Group	Activity Acres or Miles						
	Alt 1B	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7
Acres of even-aged harvest	3,790	350	0	0	4,070	20	1,580
Acres of intermediate treatment	6,440	10,595	13,240	4,155	9,500	4,325	8,870
Acres of fire use	6,995	10,880	8,800	16,135	2,780	16,325	9,610
Miles of road construction	10.8	18.3	9.8	3.0	13.6	2.5	10.2
Miles of road reconstruction	50.3	57.9	48.5	13.8	64.9	18.1	49.5
Miles of road decommissioning	31.8	53.4	62.9	30.6	38.1	14.9	38.2

Overall ranking of the alternatives relative to potential impacts to scenic resources is complicated by the fact that the potential effects are not the same for each activity group. The visual effects of intermediate treatments cannot be considered on an equal basis with even-aged regeneration harvests and road construction. The visual effects of even-aged regeneration harvests and road construction are likely to be obvious and long term. Intermediate treatments are likely to be subtler in appearance and more short term in duration. Similarly, the effects of the fire use treatments would generally be much shorter in duration than those of even-aged regeneration harvests and road construction and cannot be considered on an equal basis for potential effects. The alternatives presenting the highest levels of potential visual effects are likely to be the ones that present the highest levels of even-aged regeneration harvest and road construction.

It should also be noted that this analysis is not spatial and does not consider potential mitigations that might be possible for actual implementation. Some of the treatments and road construction are likely to occur in areas with low visual sensitivity or areas that allow vegetative or topographic screening techniques, which can greatly reduce visual impacts. Since mitigation potential is determined spatially, on a site-specific basis, it cannot be predicted and considered in a programmatic analysis.

With the highest levels of even-aged regeneration harvest, road construction, and road reconstruction, Alternative 5 would likely have the greatest long-term changes to the landscape on the Boise National Forest. Alternative 1B would have almost as high a level of long-term landscape changes as Alternative 5. Alternative 7 would probably result in fewer long-term impacts than Alternatives 5 and 1B although it would have substantially more impacts than any of the remaining alternatives. Alternatives 6 and 4 would produce the highest levels of short-term impacts from prescribed fire and wildland fire use treatments. However, these effects might be offset to some extent, by reductions in the risk of large, uncharacteristic wildfires, which could create somewhat more severe visual impacts than those of prescribed fire and wildland fire use. Overall, Alternative 4 would be likely to produce the lowest level of vegetation-impacts to the scenic environment. Alternatives 2 and 3 would likely result in moderate levels of both short and long-term impacts.

Payette National Forest - Table SE-5 compares activities by alternative that would likely affect visual quality on the Payette Forest over the next two decades, using annual averages from the SPECTRUM model.

Table SE-5. Activities by Alternative - Payette National Forest
(Annual averages of acres or for the first two decades)

Activity Group	Activity Acres or Miles						
	Alt 1B	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7
Acres of even-aged harvest	2,010	55	65	0	2,720	35	950
Acres of intermediate treatment	4,685	5,275	6,865	1,510	4,625	2,590	4,740
Acres of fire use	6,995	8,490	7,135	13,370	3,825	12,340	8,100
Miles of road construction	13.8	10.2	10.6	2.2	15.4	0.5	11.5
Miles of road reconstruction	48.4	36.4	38.7	7.5	54.5	14.7	40.6
Miles of road decommissioning	18.8	21.8	35.9	11.4	21.4	8.1	19.4

On the Payette National Forest, Alternative 4 would have the least amount of even-aged regeneration harvest over the next two decades, followed in ascending order by Alternatives 6, 2, 3, 7, 1B, and 5. Alternative 4 would also have the least amount of intermediate treatments, followed in ascending order by Alternatives 6, 5, 1B, 7, 2, and 3. Alternative 5 would have the least amount of fire use acres, followed in ascending order by Alternatives 1B, 3, 7, 2, 6, and 4. Alternative 6 would have the least amount of road construction, followed in ascending order by Alternatives 4, 2, 3, 7, 1B, and 5. Alternative 4 would have the least amount of road reconstruction activities, followed in ascending order by Alternatives 6, 2, 3, 7, 1B, and 5.

Alternative 5 would be likely to have the greatest long-term changes to the landscape on the Payette National Forest as well. Again, this would result from having the highest levels of even-aged regeneration harvest, road construction, and road reconstruction of any of the alternatives. Alternatives 1B and 7 would probably have less long-term impacts than Alternative 5, although they would have substantially more impacts than any of the remaining alternatives. Alternatives 6 and 4 would produce the highest levels of short-term impacts from prescribed fire and wildland fire use treatments. However, these effects might be offset to some extent by reductions in the risk of large uncharacteristic wildfires, which could create somewhat more severe visual impacts than those of prescribed fire and wildland fire use. Overall, Alternative 4 would likely produce the lowest level of vegetation-impacts to the scenic environment. Alternatives 2 and 3 would likely result in moderate levels of both short and long-term impacts.

Sawtooth National Forest - Table SE-6 compares activities by alternative that would likely affect visual quality on the Sawtooth Forest over the next two decades, using annual averages from the SPECTRUM model.

Table SE-6. Activities by Alternative - Sawtooth National Forest
(Annual averages of acres or miles for the first two decades)

Activity Group	Activity Acres or Miles						
	Alt 1B	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7
Acres of even-aged harvest	660	195	0	0	740	0	480
Acres of intermediate treatment	430	1,570	2,365	410	625	270	1,500
Acres of fire use	700	5,470	4,140	3,765	785	4,755	5,940
Miles of road construction	0.9	0.7	0.8	0.2	1.5	0.2	0.7
Miles of road reconstruction	3.3	3.5	4.6	1.0	5.0	0.6	3.4
Miles of road decommissioning	3.4	7.3	10.7	1.9	4.3	1.2	6.2

On the Sawtooth National Forest, Alternatives 3, 4, and 6 would have the least amount (none) of even-aged regeneration harvest over the next two decades, followed in ascending order by Alternatives 2, 7, 1B, and 5. Alternative 6 would have the least amount of intermediate treatments, followed in ascending order by Alternatives 4, 1B, 5, 7, 2, and 3. Alternative 1B would have the least amount of fire use acres, followed in ascending order by Alternatives 5, 4, 3, 6, 2, and 7. Alternatives 4 and 6 would have the least amount of road construction, followed in ascending order by Alternatives 2 and 7, 3, 1B, and 5. Alternative 6 would have the least amount of road reconstruction activities, followed in ascending order by Alternatives 4, 1B, 7, 2, 3, and 5.

Activity levels on the Sawtooth are generally much lower than those on the Boise and Payette, making the scale of potential visual impacts substantially lower overall. Alternative 5 would also be likely to have the greatest long-term changes to the landscape on the Sawtooth National Forest as well. Alternatives 3, 1B, 7, and 2 would all produce somewhat lower levels of long-term impacts than

Alternative 5. Alternatives 7 and 2 would both produce the highest levels of short-term impacts from prescribed fire and wildland fire use treatments. Alternatives 6, 3, and 4 would produce somewhat lower levels of fire use-related impacts. Overall, Alternative 4 would be likely to produce the lowest level of vegetation-impacts to the scenic environment.

Changes Related To Disturbance Events

While extremely difficult to predict or model with any degree of reliability, disturbance events can have considerable effect on the scenic landscape. Two of the most widespread landscape disturbances, epidemic insect outbreaks and uncharacteristic wildfire, were evaluated for the relative propensity to influence visual changes in the landscape. The *Vegetation Hazard* section in this Chapter of the EIS discusses these two elements in much greater detail. Data used here for alternative comparison is taken directly from that section. For evaluating visual effects this section will focus on those two disturbance elements in the forested vegetation complexes only. This is because the more long-term visual effects of these disturbance agents generally occur in forested vegetation. The changes that occur in the non-forested complexes are usually more subtle and temporary or short term.

Indicator 4 - Uncharacteristic Wildfire Hazard

Uncharacteristic wildfire events affect scenic quality in the short and long term depending on the severity, intensity and scale of the event. While it is recognized that characteristic, large-scale, lethal wildfire that can occur in some mixed and lethal fire regimes also may have visual impacts, these types of disturbance events were not modeled. This was due to the wildfire issue primarily being centered on uncharacteristic wildfires, or wildfires within wildland-urban interfaces. Public scoping and internal issue development did not identify characteristic wildfire occurrence as an issue outside of wildland-urban interface areas. As a result, this section on assessing visual impacts from wildfire focuses on uncharacteristic wildfire hazards.

The *Vegetation Hazard* section of this chapter utilizes an uncharacteristic wildfire hazard index to compare alternatives. These indices are comparative values that represent a relative measure of the hazards that contribute to the rise in uncharacteristic wildfire. A higher value indicates a more hazardous condition compared to a lower value. Table SE-7 displays the current index and the indices calculated at the fifth decade in forested areas outside of designated wilderness.

Table SE-7. Uncharacteristic Wildfire Hazard Indices for the Current Condition and the Fifth Decade by Alternative

Forest	Current Index	Index for Fifth Decade						
		Alt. 1B	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7
Boise	0.65	0.81	0.45	0.41	0.38	0.57	0.41	0.57
Payette	0.50	0.62	0.43	0.38	0.38	0.50	0.38	0.49
Sawtooth	0.36	0.46	0.36	0.35	0.30	0.42	0.35	0.31

In considering the results of this analysis, the preceding analysis addressing management activities should also be taken into consideration. For example, Alternatives presenting the lowest indices for uncharacteristic wildfire hazard may be the result of vegetation treatments that also have visible effects on the scenic environment. In the cases of intermediate vegetation treatments and fire use, the long-term visual effects are likely to be less than those of large-scale, uncharacteristic wildfire.

Alternative 1B is higher than all other alternatives on each Forest because it is the only alternative that did not include reduction of uncharacteristic wildfire hazard as one of the modeling goals for emulating the National Fire Plan objectives.

Boise National Forest – Alternative 1B followed by Alternatives 5 and 7 would have the greatest risk for large-scale landscape changes due to uncharacteristic wildfire. Alternative 4 followed by 3 and 6 are the lowest, with Alternative 2 occupying a middle position. These alternatives would therefore be less likely to have large-scale landscape changes from uncharacteristic wildfire compared to Alternatives 1B, 5, and 7. Alternative 4 ranks lowest due to it having the highest amount of planned fire use directed at reducing wildfire hazards. Alternatives 1B, 5 and 7 which rank the highest, have lesser amounts of fire use and carry more area in moderate tree density in order to meet growth and yield themes.

Payette National Forest – Like the Boise, Alternative 1B followed by Alternatives 5 and 7 would have the highest likelihood of large-scale uncharacteristic wildfire events. Alternatives 3, 4, and 6 would be the lowest likelihood, while Alternative 2 occupies the middle range. Alternative 4 has the greatest amount of fire use directed at lowering wildfire hazards, while Alternative 7 has the least. Alternatives 1B, 5 and 7 carry more area in moderate tree density than those ranking lower in risk.

Sawtooth National Forest – The Sawtooth has less variation in changes in the uncharacteristic wildfire indices, and most of the alternatives have lower risk of uncharacteristic wildfire when compared to the Boise or Payette. This is due to the current hazard being lower than the other Forests because of the vegetative types that support more mixed and lethal fire regimes that do not produce the same kind of uncharacteristic wildfire hazard as nonlethal regimes. The mixed and lethal regimes found on the Sawtooth have naturally occurring lethal and larger-scale fires that are not considered "uncharacteristic". Alternative 1B is the highest followed by Alternative 5. Alternative 5 is the only other alterative with a higher index rating than the current condition. Alternatives 4 and 7 are the lowest, with the others (2, 3, and 6) occupying the middle range.

Indicator 5 - Insect Hazard

Insect hazard is defined as a relative measure of predisposing conditions for damage caused by insects. Damage from insects means that tree mortality can be expected to be higher than normal. The actual impact to visual resources is highly variable and dependent on a wide range of variables such as visual sensitivity of the area observed, as well as the magnitude, scale, and intensity of mortality from insect hazard. The *Vegetation Hazard* section of this chapter utilizes an insect hazard index that displays the relative hazard by alternatives. The *Vegetation Hazard* section contains detail on the assumptions and foundations for the calculations of hazard indices that are used here. Hazard ratings generally increase with increasing tree size and density. There are also unpredictable environmental factors such as rainfall and drought conditions that could significantly affect the actual levels of insect infestation and mortality.

While there are no quantifiable estimations expressed in acreages, the indices serve primarily as a comparative tool for assessing alternatives. As such, the predicted impact on visual resources can also only be expressed as function of comparative risk between alternatives.

Generally a forested setting has the ability to absorb endemic levels of mortality such that the visual impacts would be fairly minor. The larger-scale epidemic levels of tree mortality from insect infestations often result in very noticeable changes and visual effects that are usually considered negative. The perceived sensitivity to this change is also dependent on variables such as the location and visibility of areas of mostly continuous mortality. The most dramatic visual impact occurs during the first few years following stress and mortality when the orange needle condition appears in conifers. Once these needles fall the visual effect is reduced considerably, particularly in middleground or background viewing distances.

Table SE–8. Average Insect Hazard Indices by Alternative and Forest After Five Decades

Forest	Current Index	Index for Fifth Decade						
		Alt. 1B	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7
Boise	1.41	1.71	1.66	1.70	1.72	1.68	1.72	1.65
Payette	1.36	1.78	1.76	1.77	1.79	1.73	1.77	1.78
Sawtooth	1.38	2.05	1.87	1.96	1.89	2.01	1.99	1.76

Table SE-8 shows that on each Forest the hazard index calculated for the fifth decade indicates an increased hazard for insect infestation in all alternatives compared with the current condition. Index values greater than 2 represent an expected higher propensity for epidemic levels of infestation. The indices in Table SE-8 represent Forest-wide averages; accordingly one would expect to find a range of lands from low hazard to high hazard ratings in each alternative. The indices serve primarily as a relative measure to compare alternatives and to track changes relative to the existing and desired conditions. It is expected that the lands managed with vegetation treatments will result in lower hazard ratings, while untreated stands of high density and advanced age will have higher levels of insect hazard ratings.

Boise National Forest - At the fifth decade all alternatives show relatively little variation, and each alternative has a higher index than the current condition. Alternatives 4 and 6 have the highest ratings, while Alternatives 2 and 7 are the lowest. Because the variations between alternatives are minor, it is expected that there would be little visual differences between alternatives related to insect mortality. All alternatives rank somewhat higher than the current condition. It is expected that the amount of visual change from insect mortality could be expected to increase somewhat. It is likely there could be an increase in localized epidemic infestations due to increased areas that have a higher level of propensity for such infestations.

Payette National Forest - At the fifth decade all alternatives show relatively little variation, and each alternative has a higher index than the current condition. Alternatives 1B, 4, and 7 have the highest ratings, while Alternative 5 is the lowest. Because the variations between alternatives are minor, it is expected that there would be little visual differences between alternatives related to insect mortality. All alternatives rank higher than the current condition. It is expected that the amount of visual change from insect mortality could be expected to increase in all alternatives. It is likely there would be an increase in localized epidemic infestations due to areas that have a higher level of propensity for such infestations.

Sawtooth National Forest - The Sawtooth displays a bit more variation between the alternatives at the fifth decade. Alternative 1B ranks the highest and Alternative 7 is the lowest. Variations between alternatives are still relatively small and it is expected that there would be little visual difference between alternatives related to insect mortality. All the alternatives on the Sawtooth show a considerable increase in insect hazard indices when compared to the current condition. It is expected that the amount of visual change from insect mortality could be expected to increase in all alternatives. It is likely there would be increased amounts of epidemic infestation levels due to areas that have a higher level of propensity for such infestations, especially in Alternatives 3, 6, 5, and 1B.

Cumulative Effects

Indicators 1 and 2 - Changes in Visual Quality Objectives

Each alternative's potential for changing the scenic environment can be examined for the entire Ecogroup to estimate large-scale, cumulative changes to the scenic environment. This potential is indicated by the anticipated acreages of each VQO class and the acres of VQO shifts. These figures are displayed in Table SE-9.

In general, the VQO and alternative relationships noted in the Direct and Indirect Effects are also evident over the cumulative effects area. Alternative 5 would allow the most human-caused change with its elevated levels of a modification VQO and the least amount of preservation VQO. As a result Alternative 5 is likely to display the most changes in the landscape resulting from management activities. Alternative 4 is likely to display the least change due to the high levels of preservation from the increased amounts of recommended wilderness. Similarly, Alternative 6 would retain a high level of visual quality as it has the least amounts of modification and maximum modification VQOs. Alternatives 2, 3 and 7 reduce the amount of retention and shift those acres to partial retention, modification, or maximum modification.

Table SE-9. Acres* of VQO and VQO Change by Alternative for the Ecogroup
(*Measured in thousands of acres)

Alt.	Preservation		Retention		Partial Retention		Modification		Maximum Modification	
	Acres	Acres of Change From Existing	Acres	Acres of Change From Existing	Acres	Acres of Change From Existing	Acres	Acres of Change From Existing	Acres	Acres of Change From Existing
1B	1,705	0	982	0	2,223	0	1,420	0	284	0
2	1,720	15	867	-115	2,214	-9	1,498	78	315	31
3	1,720	15	867	-115	2,214	-9	1,498	78	315	31
4	3,561	1,856	489	-493	1,429	-794	875	-545	260	-24
5	1,041	-664	1,026	44	2,551	328	1,674	254	322	38
6	1,705	0	891	-91	3,042	819	754	-666	222	-62
7	1,705	0	848	-134	2,371	148	1,375	-45	315	31

Indicator 3 - Management Activities within the Southwest Idaho Ecogroup

Table SE-10 compares activities by alternative that would likely affect visual quality across the entire Ecogroup area over the next two decades, using annual averages from the SPECTRUM model. These values are also graphically displayed in Figures SE-1, SE-2, SE-3, and SE-4.

As noted in the Direct and Indirect Effects discussion, visual effects of even-aged regeneration harvests and road construction cannot be considered on an equal basis with those of intermediate treatments and fire use. Effects from intermediate treatments are likely to be more subtle and shorter in duration. Fire use treatments would be much shorter in duration than those of even-aged regeneration harvests and road construction and also cannot be considered on an equal basis for potential effects.

Table SE-10. Activities by Alternative – Southwest Idaho Ecogroup Area
(Annual averages of acres or miles for the first two decades)

Activity Group	Activity Acres or Miles						
	Alt 1B	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7
Acres of even-aged harvest	6,460	600	65	0	7,530	55	3,010
Acres of intermediate treatment	11,555	17,440	22,470	6,075	14,750	7,185	15,110
Acres of fire use	14,690	24,840	20,075	33,270	7,390	33,420	23,650
Miles of road construction	25.5	29.2	21.2	5.3	30.4	3.1	22.4
Miles of road reconstruction	102.0	97.7	91.7	22.2	124.3	33.3	93.4
Miles of road decommissioning	54.0	82.5	109.5	43.8	63.7	24.1	63.7

As discussed under the direct and indirect effects, even-aged regeneration harvests have the most potential for highly noticeable, long-term visual impacts on the landscape. For the Ecogroup area, the least amount of even-aged regeneration harvest over the next two decades would occur under Alternative 4, followed in ascending order by Alternatives 6, 3, 2, 7, 1B, and 5.

Intermediate vegetation treatments, like tree thinning and selective harvest, would remove trees and open up stand conditions, but these treatments tend to blend much better into the natural-appearing landscape and have far less visual impact than larger regeneration openings or long road cuts. For the Ecogroup area, Alternative 4 would also have the least amount of intermediate treatments, followed in ascending order by Alternatives 6, 1B, 5, 7, 2, and 3.

The visual impacts of fire use, if implemented properly, should be short term and natural appearing, particularly if fire lines are kept to a minimum and burns are designed to emulate low-intensity wildland fire. For the Ecogroup area, Alternative 5 would have the least amount of fire use acres, followed in ascending order by Alternatives 1B, 3, 7, 2, 4, and 6.

Road construction would also have highly noticeable, long-term visual impacts on the landscape, primarily in the form of linear openings in the vegetation. Alternative 6 would have the least amount of road construction, followed in ascending order by Alternatives 4, 3, 7, 2, 1B, and 5.

The visual impacts of road reconstruction are highly variable due to the wide variety of activities that fall under the reconstruction title. Some, like road relocation, can be highly visible, while others, like road graveling, typically have little effect and can even be designed to reduce visual impacts. Alternative 4 would have the least amount of road reconstruction activities, followed in ascending order by Alternatives 6, 3, 7, 2, 1B and 5.

Overall, Alternative 4 would have the least amount of visual impacts over the next two decades from the vegetation and road management activities described above. This alternative would have the least amount of acres in even-aged regeneration harvests and intermediate vegetation treatments, the least amount of miles of road reconstruction, and the second lowest amount of road construction miles. These ratings indicate a very low level of development, not unexpected in an alternative that emphasizes ecological processes. Alternative 6 would also have a relatively low level of visual impacts from proposed development. Although both Alternatives 4 and 6 have high potential acres of fire use, fire is an ecological process, and the effects of properly implemented fire use would likely be short term and result in a natural-appearing landscape character.

Alternative 3 would have the next overall lowest amount of visual impacts. Potential effects from even-aged regeneration harvests and road construction, the two most obvious forms of development, would be relatively low. This alternative would have the highest amount of intermediate vegetation treatments, but those treatments would be designed to move vegetation toward its Historic Range of Variability, which should have beneficial visual effects over the long term, compared to large-scale stand-replacing disturbance from even-aged regeneration harvests or wildfire.

Alternatives 1B, 2, and 7 would likely have moderate effects to the Scenic Environment, although effects would vary depending on the type of impact. Alternative 1B, for example, would have more impacts from even-aged regeneration harvests and road reconstruction than 2 or 7, but Alternative 2 would have more impacts from road construction than 1B or 7. Alternative 5 would have the most impacts from even-aged regeneration harvests, road construction, and road reconstruction, and would therefore likely have the highest overall visual impact of all alternatives.

There may also be opportunities to reduce visual impacts on the landscape through activities that decrease the effects of existing development. One such activity that has that potential, and that has been analyzed for revision, is road decommissioning. Over the next two decades, Alternative 3 would decommission the most roads across the Ecogroup area, followed in descending order by Alternatives 2, 5, 7 (same as 5), 1B, 4, and 6 (see Table SE-10).

Figure SE-1. Regeneration Harvest by Alternative for the Ecogroup Area

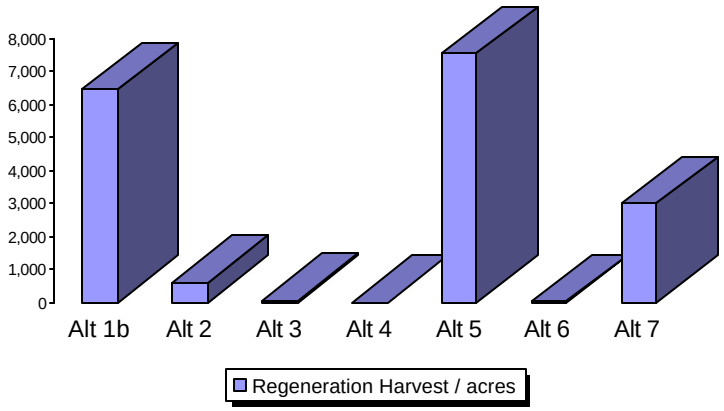


Figure SE-2. Intermediate Treatment Acres by Alternative for the Ecogroup Area

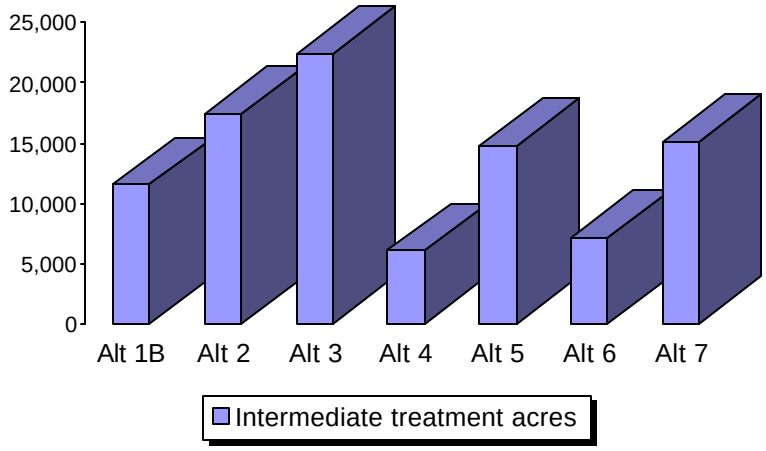


Figure SE-3. Fire Use by Alternative for the Ecogroup Area

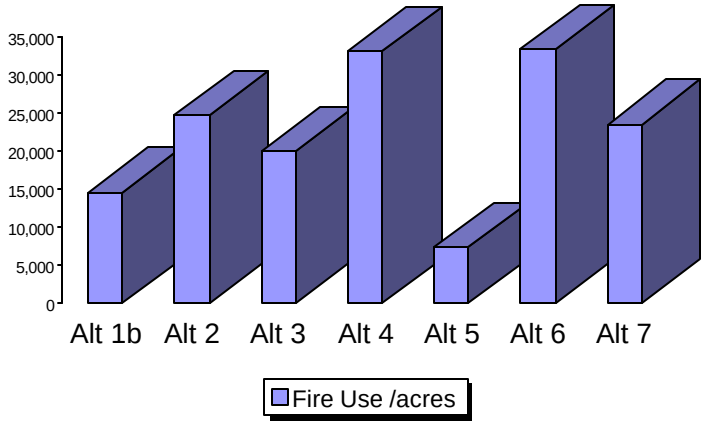
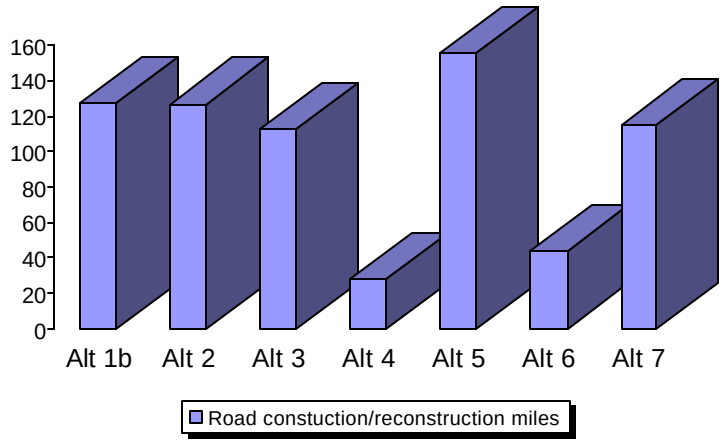


Figure SE-2. Road Construction/Reconstruction by Alternative for the Ecogroup Area



Indicator 4 - Disturbance Events – Uncharacteristic Wildfire Hazard

Table SE-11 displays the uncharacteristic wildfire hazard indices for the current condition and for the fifth decade for forested areas outside of designated wilderness for the entire Southwest Idaho Ecogroup area.

Table SE-11. Uncharacteristic Wildfire Hazard Indices for the Current Condition and the Fifth Decade by Alternative

Current Index	Index for Fifth Decade						
	Alt. 1B	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7
0.53	0.66	0.42	0.39	0.36	0.51	0.39	0.48

Alternative 1B has the highest index and would have the highest probability for uncharacteristic wildfires that could affect the scenic quality of the landscape. Alternative 1B is also the only alternative with an index rating higher than the current condition. Alternatives 5 and 7 have the next highest ratings, followed in order by 2, 6, 3, and 4. It is likely that Alternative 4 would have the lowest probability of uncharacteristic wildfires compared to all the other alternatives. This is somewhat due to that alternative having the highest acreage of fire use that is targeted at areas of high risk (see Table SE-10, Activities by Alternative). Alternatives 1B and 5, which rank the highest, have the least amount of fire use and carry more area in moderate tree densities than the others in order to meet growth and yield themes.

Indicator 5 - Disturbance Events – Insect Hazard

Table SE-12 displays the insect hazard indices for the current condition and for the fifth decade for forested areas outside of designated wilderness for the Southwest Idaho Ecogroup Forests.

Table SE-12. Average Insect Hazard Indices for the Current Condition and the Fifth Decade by Alternative

Current Index	Index for Fifth Decade						
	Alt. 1B	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7
1.38	1.82	1.75	1.79	1.78	1.77	1.80	1.72

At the fifth decade Alternative 7 has the lowest ranking, while Alternatives 1b and 6 are the highest. Alternative 7 could be expected to have slightly less insect caused mortality than the other alternatives. All alternatives have higher hazard indices than the current situation. As a result it is expected that there would be continued and increased amounts of visual change in the landscape from insect-caused mortality in all alternatives. The magnitude and intensity of that impact is difficult to predict, as the actual impact will vary tremendously depending on the location and intensity of infestations relative to sensitive viewing locations such as trails, Forest highways and roads, and popular recreational use areas.

Other Cumulative Effects on Scenic Quality

Smoke emanating from off-Forest agricultural burning and wildfires can result in or contribute to visibility impairments in Forest areas. Normally, on-Forest prescribed fire activities are restricted whenever off-Forest sources are causing adverse effects within shared airsheds. Visibility impairments due to smoke from wildfires and prescribed fire use are temporary but can affect very large areas, such as entire National Forests.

In areas of interspersed ownership within National Forest System lands, there is potential for combined effects to visual resources from National Forest activities and those evident on other ownership lands. In many highly scenic locations within the Ecogroup, National Forest System lands are mingled with those of other government agencies and private lands such as Cascade Reservoir and along the South Fork of the Boise River. Management activities on other lands that do not blend into the landscape can negatively affect the experiences of Forest users who are viewing scenery. Although, most land management agencies follow some type of scenery management policy, no constraints apply to private lands to preserve visual qualities, except for within the SNRA. Development and timber harvest on private lands adjacent to National Forest are often accomplished with different objectives than on public lands. Harvest types vary on commercial, private timberlands, and harvest levels generally tend to increase as federal timber supplies decrease, given stable or improving market conditions. Effects to visual resources may or may not be a consideration in the management or developments of these private lands, potentially resulting in developments that can contribute to the loss of natural-appearing landscape character. In that these harvests may increase with reduced levels of timber sales on federal lands, the potential effects associated with this development are likely to be highest under Alternatives 4 and 6, and lowest under Alternative 5.

As mining claims were patented and public lands were homesteaded, private lands within the Forests increased. Over time, a number of these inholdings have been developed into private residences. Another recent development trend is the conversion of adjacent agricultural land to rural residences.

Private land development trends generally run parallel to national economic trends, and increased with the strong economy in the late 1990s. The development of these private lands has affected the scenic quality of the landscape of the Forests as well as the experiences of scenery viewers. This development includes signs, utility lines, access roads, timber harvests, residences, and business structures. Some homeowners cut or thin their timber stands to provide views. Much private land occupies drainage bottoms and travel routes. Public desires to live in a rural, mountain environment have resulted in urbanization of some adjacent ownerships. Development of agricultural lands to rural residences can result in pastoral landscapes changing to rural or, in higher density developments, near-urban landscapes. In some areas, summer home developments are defining the Forest boundaries. When structures are designed to blend into the landscape, the visual effect can be minimal. Structures and development that do not blend with the landscape can have more severe impacts. These effects are likely to vary under any alternative with the national economy.

Another issue related to urbanization is the desire of property owners to preserve their scenic views of the surrounding Forest. Private lands near the Forest generally are more valuable when there is a scenic view of National Forest System lands from the property. If management activities detrimentally alter the forest scenery, there is potential to result in lower property values. Thus, property values may increase or decrease adjacent to the Forest depending, to some extent, upon the quality of the scenic environment.