

Toolbox Fire Recovery Project

Scenery Resource Report

Introduction

The Toolbox Fire Recovery Project area is characterized by a very gentle topography, with elevations ranging between 4,450 and 6,778 feet (top of Foster Butte) above sea level. The sideslopes are between zero and 10 percent on approximately 70 percent of the project area. Silver Creek and West Fork Silver Creek flow through canyons that are up to 450 feet deep with localized side slopes of up to 70 percent. The Fremont National Forest website states, the “diversity in temperature and precipitation on the Fremont National Forest results in a sequence of distinct climatic regimes which support a wide variety of plant and animal communities, with habitats ranging from near-desert to lush coniferous forests.” (Fremont National Forest website, 2003). Abundant mixed conifer stands that occur throughout the project area include white fir, ponderosa pine (including distinctive large orange-barked trees), and lodgepole pine. Drought-tolerant tree species such as juniper also occur in the project area. Travelers through the Toolbox Fire Recovery Project are afforded a variety of natural appearing views and human-altered landscapes. Natural disturbances such as past wildfires, insect and disease infestation, or storm damage are evident. Past timber harvest and road systems are the most obvious alterations to the natural landscape. As a result of the Toolbox Fire, the area is currently characterized by a mosaic of burned forest conditions, ranging from unburned to fire-killed ponderosa pine, lodgepole pine, and mixed conifer stands, interspersed with young fire-damaged plantations.

Approximately 20 miles of the Fremont National Recreation Trail (NRT) are within the project area boundary. As described on the Fremont National Forest website (Fremont National Forest Trails System, 2003), this trail “passes through a variety of environments including open ponderosa pine stands, . . . dense lodgepole pine stands, mountain mahogany thickets, trout-filled mountain streams, and colorful rock outcrops. It climbs to the summit of Hager Mountain for more panoramic vistas of the mountains and the deserts of the northern Great Basin. The contrasts between the green valleys and sparkling lakes and the stark vertical rock formations like Table Rock and Winter Rim are striking.” The trail also provides scenic vistas of the Cascade Mountain Range. Although the bridges on the portions of the NRT within the Toolbox project area were destroyed during the fire, the fire intensity may have actually improved visual opportunities along the trail by removing dense lodgepole pine stands that were blocking scenic vistas in some cases. Table 1 displays the burn intensities along the trail following the Toolbox Fire. The Forest Plan guidelines for scenic management along the Fremont NRT also apply to FS Road 2901, which is included in Table 1.

Approximately 7 miles of FS Roads 27 and 28 are within the Toolbox project and are designated as scenic corridors. Sections of FS Road 27 received a higher degree of burn intensity than FS Road 28. The existing scenery along these corridors, after the Toolbox Fire, ranges from unburned green trees to areas of severe burn intensity (see Table 1). As in the case of the NRT, some areas of higher burn intensity have opened up more vistas along these scenic corridors by removing dense stands of lodgepole pine and ponderosa pine reproduction.

Table 1: Scenic Corridor Burn Intensity Within the Toolbox Fire Recovery Project

Corridor	Number of Miles Within Project Area	Percent in 0-25 % Mortality	Percent in 26-50 % Mortality	Percent in 51-85 % Mortality	Percent in 86-100 % Mortality
FS Road 27	4.3	9	5	16	70
FS Road 28	1.5	7	87	0	6
FS Road 2901	7.8	82	1	5	12
Fremont NRT	27.9	24	19	12	45

The following photographs illustrate the four categories of burn intensity within the Toolbox project area.



Figure 1: 0–25 Percent Mortality



Figure 2: 26–50 Percent Mortality



Figure 3: 51–85 Percent Mortality



Figure 4: 86–100 Percent Mortality

Regulatory Framework

The Silver Lake Ranger District scenic resource is managed by direction provided in the Fremont National Forest Land and Resource Management Plan (1989). In the Forest Plan, Visual Quality is assessed and evaluated under direction found in National Forest Landscape Management, Volumes 1 and 2 in the Department of Agriculture Visual Management System Handbook. The Fremont-Winema National Forests visual resources are managed under the USDA National Forest Landscape Management System. This system employs an inventory of the attributes of each Forest acre to produce a Visual Quality Objective (VQO) that would correspond appropriately to Management Area (MA) prescriptions developed in the Forest Plan. Further direction is found in Forest Service Manual 2380 and Forest Service Handbook 2309.33 (Landscape Management).

Visual Quality Objectives for areas within the Toolbox Fire Recovery Project, as designated in the Forest Plan, are based on “visual quality levels,” (Partial Retention and Maximum Modification). It is difficult to judge visual quality levels without considering the position from which the scene is to be primarily observed.

Foreground views (1/4 to 1/2 mile from the center of the road) allow visual scrutiny of details. In the immediate foreground, it is virtually impossible for roads, structures, etc., not to be evident.

Middleground and background (3-5 miles) views do not permit the visual scrutiny of details, but they usually provide conditions in which the management activity can be seen in perspective with its surroundings. It is entirely possible that management activities may stand out in sharper contrast from middleground views than from foreground, thus not meeting the same visual quality level. Generally, as the distance increases, contrasts soften (Fremont National Forest Land and Resource Management Plan, 1989; 114, 153-158).

The Visual Quality Objective for Partial Retention provides that management activities remain visually subordinate to the characteristic landscape. For example, the average public would detect the presence of a management activity without having it pointed out to them, but it would not have enough contrast to form a new focal point or focal area when viewed from a middleground distance. When viewed from background distances, the same management activity should not be evident (FSH 2309.22; 230-3).

Within the project planning area there are approximately 7 miles of scenic corridor, along FS Roads 27 and 28 that are allocated to Management Area (MA) 6A (Scenic Viewsheds). The overall objective in MA-6A is to provide an attractive, natural appearing forest visual character. An objective in MA-6A visual corridors is to “provide high to moderately high visual quality concerns within selected viewsheds on the Forest,” and to “retain or create the desired forest character in an attractive sequential arrangement over time and space.” Among the important landscape elements listed in the LRMP for MA-6A are “large trees with distinctive bark.” Specifically, this means large orange-barked ponderosa pine trees (Forest Plan Appendix 4, 39-40).

Forest-wide Standards for Visual Quality require that scenic corridors would generally have visual foreground zones extending ¼ to ½ mile out from the centerline of the road and would be managed for Retention or Partial Retention. Harvesting methods meeting the needs for foreground Partial Retention would be used in these areas.

The Visual Quality Objective for Maximum Modification provides that vegetative and landform alterations may dominate the characteristic landscape when viewed as background, but, even at that distance, must borrow heavily from natural form, line, color, and texture. The Maximum Modification VQO may dominate as obviously man-caused alterations in foreground and middleground. However, when this same management activity is viewed as background, it may be a minor focal point but should not be the primary focal point in the entire scene viewed (FSH 2309.22; p. 230-7)

Although the Fremont National Forest Recreation Trail and FS Road 2901 are not designated as scenic corridors, guidelines to ensure the visual integrity of landscapes in the foreground viewing zones of those corridors include direction to, “take extra care in the clean-up of logging slash, root wads, and logging debris; smooth earth over skid and tire tracks; paint or mark trees on the side of the tree facing away from the road; adjust cutting boundaries to blend into the natural indigenous landscape; and encourage uneven-aged management techniques in these areas.”

The Fremont Forest Plan Visual Quality Objectives for the Toolbox Fire Recovery Project Management Areas are as follows:

MA-1, MA-2, MA-3/14, MA-5, MA-12, MA-15

- The VQOs are generally Maximum Modification.

- Lands generally within 300 feet of major fisheries riparian areas will be managed to maintain Partial Retention VQO.

MA-6A – Scenic Corridors (as designated on the Forest Plan map)

- The VQO is Foreground Partial Retention – FS Roads 27 and 28.

MA-6B – Maximum Modification with special guidelines (as designated on the Forest Plan map)

- The VQO is Maximum Modification with special guidelines to ensure visual integrity along the Fremont NRT and FS Road 2901.

Analysis Area

The Toolbox Fire Recovery Project totals approximately 47,000 acres of Fremont National Forest Lands within T 29 S, R 13-16 E, T 30 S, R 13-16 E, and T 31 S, R 13-15 E, W.M, and includes both the Toolbox/Winter and Silver Fire portions.

Existing Condition

The Toolbox project area is currently characterized by a mosaic of burned forest conditions ranging from unburned to fire-killed ponderosa pine, lodgepole pine, and mixed conifer stands, interspersed with young fire-damaged plantations. An unburned strip varying between 3 and 7 miles wide runs between the Silver Fire portion of the project and the Toolbox Fire portion, and is not included in the project area boundaries.

Analysis Methods

Management activities such as timber harvest, reforestation, thinning, fuel treatment, road construction, snag retention, mule deer habitat protection and restoration, and soil and riparian protection and restoration can affect forest scenic quality by changing the predominant form, color, line, or texture in a given viewing area. The degree of visibility of these events depends on the interaction of certain elements to the viewers such as:

- Slope and aspect of the land
- Surrounding landscape
- Frequency and duration of view
- Fuel reduction treatment methods used
- Slash disposal methods

These factors have been incorporated into the analysis of the effects of each alternative in meeting VQO. VQOs are minimum guidelines for meeting Forest Plan visual goals.

Watershed activities were not reviewed in detail, as watershed activities such as road decommissioning would have a beneficial effect on the landscape. Road decommissioning and closure amounts are shown for each alternative later in this document.

Common to Alternatives C, D, E, G, and H

The following management activities would occur in varying degrees in all of the action alternatives:

- Commercial salvage harvest outside RHCAs
- Reforestation
- Activities fuel treatments including prescribed burning
- Snag retention
- Mule deer habitat protection and restoration
- Soil and riparian protection and restoration
- Road closure and decommissioning

- Reconstruction of some existing unclassified roads

Common to Alternatives C, D, G, H

Plantation thinning would occur in all alternatives except Alternative E.

Common to Alternatives C, E, G, H

The following management activities would occur in all alternatives except Alternative D:

- Prescribed burn outside of salvage areas
- Construction of new temporary roads

Common to Alternatives C, E, G

Commercial salvage within RHCAs would occur in all Alternatives except D and H.

Environmental Consequences

Direct and Indirect Effects

Alternative A

No harvest or reforestation activities would occur and vegetative recovery would take place at a slower rate than if planted. Road decommissioning would not take place and road cuts would remain on the landscape. It may be decades before young sapling/pole size trees exist. There would be no fuel treatment to reduce the existing fuel load, which would increase the risk of a stand-replacing fire in the future. Scorched/burned trees would be evident on the landscape for decades. If a wind event occurs, blow down of the burned/scorched trees may occur which could lead to large areas of trees stacked on the forest floor. This is a natural occurrence and would meet VQOs.

Alternative C

Commercial Salvage

Harvest activities would occur on 14,441 acres within a total of 312 harvest units, including 297 ground-based units and 15 helicopter units. The project area includes 176 harvest units on the Toolbox Fire portion and 136 harvest units on the Silver Fire portion. The estimated volume for Alternative C is 73.3 mmbf (million board feet).

For units adjacent to MA-6A and MA-6B, logs would be yarded away from the roads and trails. Landings would be in the foreground viewing zone, but toward the back of the zone as much as terrain and existing road locations allow. Helicopter logging results in very little impact to the visual resource, as there is little to no ground disturbance (no roads or skid trails). Logs would be flown away from the scenic corridor roads. One proposed helicopter landing would be located in the switchback section of FS Road 2901, in an area of high burn intensity. Other proposed landings located outside of the Foreground Partial Retention zone may still be visible from the scenic corridor, due to the loss of vegetative screen as a result of the fire. These activities would have short-term negative impacts on the landscape.

Within 1 to 2 years after use, all landings would be scarified or sub-soiled, natural drainage patterns would be reestablished, slash accumulation would be treated, and the area would be reforested. Ten to thirty percent of the slash piles would be left on the landscape to provide habitat for small mammals. These slash piles would be located outside of MA-6A (Foreground Partial Retention) and MA-6B (Maximum Modification with special guidelines).

Roadside Hazard Treatment - Included in the total commercial salvage proposal are approximately 1,300 acres that are within 150 feet of a maintenance level 3, 4, or 5 road (covered under the Highway Safety Act) or other roads with an aggregate (gravel) surface. Clumps of dead trees would be retained in the roadside corridors within salvage units to jointly meet visual and wildlife habitat objectives. In all cases, such clumps would only include trees that are not tall enough to reach the road. General visual objectives are to leave sufficient scattered clumps to break up the potentially objectionable look of long stretches of treeless landscape in the frontage zone along roadside corridors. These clumps should be primarily in the 86-100 percent mortality areas, and secondarily in the 50-85 percent mortality areas. Areas with mortality below these levels would not require any special design to meet visual objectives.

Reforestation

Within the approximately 34,000 acres that experienced loss of stocking due to fire, it is estimated that 20,906 acres of these would actually be planted. This includes approximately 10,687 acres of planting in proposed salvage units, 8,949 acres of planting in “other” areas (such as previous overstory removal units, previous partial cut units, or areas without a commercially viable salvage component), and 1,270 acres in existing plantations. Seedlings would be planted between 130 and 250 trees per acre.

Site preparation for reforestation outside of harvest units would occur on approximately 5,301 acres. This would consist of falling dead material, lopping and scattering, and extra mastication, if needed, to minimize visual impacts. In the short term, the plantation would appear open, due to slow seedling growth. After 10 years, the plantation would appear as a fairly open stand of 10-foot tall trees at 100 trees per acre to promote the long-term development of a sustainable late and old structure (LOS) forest conditions. Within 100 years, with management of natural regeneration, the stand should appear as a LOS forest stand, with widely-spaced 20-inch dbh trees.

Thinning

Approximately 2,214 acres of precommercial thinning would occur in existing plantations in order to promote the long-term development of sustainable LOS forest conditions while maintaining big game hiding cover. Thinning and slash treatment would be with either chainsaws or low ground pressure mechanized equipment. Specifically, leave stand density objective would be approximately 130 trees per acre, including one small un-thinned cover patch per acre. The objective of partial retention would be met and visual impacts would be minimal.

Fuel Treatment and Reduction

Fuel treatment and reduction may consist of several types that are discussed in detail in Chapter 2, for activities fuels within harvest units and for areas outside of harvest units. For activities fuels, by using whole tree yarding and yarding with tops attached-to-last-log, the commercial salvage operation itself would provide the initial step of fuels reduction. The use of whole tree yarding is designed to initiate a reduction of risk from activities-generated fuels. In all salvage units, trees 21 dbh or less would be whole tree yarded. Limbs and tops piled at the landings would be disposed of later or utilized as chips or firewood.

Within salvage units, fuels treatment in addition to whole tree yarding and leaving tops attached would occur on approximately 10,244 acres. This would include reduction of fuels created by the fire and by salvage activity. These treatments are planned for salvage units in which the majority of the acres would be expected to exceed 20 tons of fuel per acre within 15 years if no action is taken. Such additional fuels treatments would occur following salvage activity, with the method to be determined through post-sale monitoring. Methods for all alternatives could include: underburning, broadcast burning, jackpot burning, machine (low ground pressure) pile and burning, grapple pile and burning, hand pile and burning, air curtain destructors, ladder fuel reduction (thinning – dead trees only), crushing, mastication, or other methods.

Prescribed fire would be used primarily outside of harvest units, but there would be some overlap into units.

Approximately 3,572 acres are proposed for prescribed fire as part of an additional fuels strategy and as a means of contributing to the long-term promotion of sustainable LOS conditions. Among the criteria for proposing prescribed fire in this alternative include selecting areas that experienced low mortality during the 2002 wildfire and areas that could effectively be “blocked up” in at least 100 acre parcels. Smaller areas would be selected if containment features exist. The desired condition is to produce a mosaic of shrub habitat and cover while increasing forest sustainability. The objective would be to achieve a 40-60 percent **burned** / 60-40 percent **unburned** mosaic.

The proposed types of treatment would have little impact to the visual quality of the project area. Slash piles may be on the landscape until sufficient burning factors are met.

Other Activities

Temporary Road Construction and Road Reconstruction - The salvage harvest activities in Alternative C are expected to require the use of approximately 37.4 miles of temporary road. New construction would be required for approximately 16.0 miles and approximately 21.4 miles would be re-opening of existing unclassified roads. Most of these new temporary and reconstructed roads would not be visible from the scenic corridors, and those that are visible would be mostly perpendicular to the scenic corridors so the visual impact when driving past would be minimal. After salvage harvest is complete, the contractor would be required to remove bridges and culverts, eliminate ditches, outslope the roadbed, remove ruts and berms, and effectively block the road to normal vehicular traffic. Grass and herbaceous forbs should cover 75-80 percent of

the roadbed in the first year after closure, and brush should begin adding to the cover by the second year, effectively removing visual impacts of the roadbeds from scenic corridors.

Road Closure and Decommissioning - Several roads in Alternative C would be wither decommissioned or closed for purposes of promoting watershed recovery and / or reducing impacts to wildlife. Road decommissioning would accelerate a return to a more natural state. In this alternative, 72.9 miles of road would be closed, 69.0 miles would be decommissioned, and 129.1 would remain open.

Snag Retention – Retention of snags for cavity dependent species would be achieved through strategies of identifying suitable blocks of habitat in no-salvage areas and retention prescriptions within salvage units. Snag retention in no-salvage areas would not change the existing landscape. Within commercial salvage units, three different criteria would be used for snag retention, depending on snag size and elevation. See Appendix B of the Toolbox Fire Recovery Project EIS for more information on snag retention criteria. Clumping and distribution would vary within harvest units to manage for clump size, snag requirements, and distribution required for different cavity-dependent species. No area greater than 10 acres would be left completely deficient of snags. Within a 10-acre area, a minimum of one snag clump with 20 trees is required. Except for roadside hazard treatment corridors, clumps would be located at least 200 feet from any road. Visual objectives would be met by leaving sufficient scattered clumps to break up the potentially objectionable look of long stretches of treeless landscape.

All cover in the mule deer winter range would be retained, and would not change the existing landscape.

Riparian buffers for perennial and intermittent streams range from 300 feet on each side of the stream to 50 feet. Wetlands would have a 150-foot riparian buffer around the wetland. These buffers may, at times, have a straight line delineating the buffer (untreated) from the treated part of the unit. Generally, these should look natural, since riparian areas usually have naturally occurring stringers of dense growth along streams that are noticeable on the landscape.

Approximately 690 acres of aspen habitat have been identified for treatments designed to protect or enhance the aspen clone. Treatments would be designed to mitigate grazing by livestock and big game or the effects of encroachment of conifers and junipers. Aspen treatments should not affect the scenic quality of the landscape, as visible from the scenic corridors. Placement of large woody debris in streams and deciduous planting of approximately 7 acres are also planned for riparian areas. These enhancements would not be visible from scenic corridors and should have no impacts to scenic quality.

Alternative D

Commercial Salvage

Harvest activities would occur on 6,367 acres within a total of 197 harvest units, including 189 ground-based units and 8 helicopter units. The project area includes 109 harvest units on the Toolbox Fire portion and 88 harvest units on the Silver Fire portion. The estimated volume for Alternative D is 33.7 mmbf (million board feet).

For units adjacent to MA-6A and MA-6B, logs would be yarded away from the roads and trails. Landings would be in the foreground viewing zone, but toward the back of the zone as much as terrain and existing road locations allow. Helicopter logging results in very little impact to the visual resource, as there is little to no ground disturbance (no roads or skid trails). Logs would be flown away from the scenic corridor roads. One proposed helicopter landing would be located in the switchback section of FS Road 2901, in an area of high burn intensity. Other proposed landings located outside of the Foreground Partial Retention zone may still be visible from the scenic corridor, due to the loss of vegetative screen as a result of the fire. These activities would have short-term negative impacts on the landscape.

Within 1 to 2 years after use, all landings would be scarified or sub-soiled, natural drainage patterns would be reestablished, slash accumulation would be treated, and the area would be reforested. Ten to thirty percent of the slash piles would be left on the landscape to provide habitat for small mammals. These slash piles would be located outside of MA-6A (Foreground Partial Retention) and MA-6B (Maximum Modification with special guidelines).

Roadside Hazard Treatment –Included in the total commercial salvage proposal are approximately 1,300 acres that are within 150 feet of a maintenance level 3, 4, or 5 road (covered under the Highway Safety Act) or other roads with an aggregate (gravel) surface. Clumps of dead trees would be retained in the roadside corridors within salvage units to jointly meet visual and wildlife habitat objectives. In all cases, such clumps would only include trees that are not tall enough to reach the road. General visual objectives are to leave sufficient scattered clumps to break up the potentially objectionable look of long stretches of treeless landscape in the frontage zone along roadside corridors. These clumps should be

primarily in the 86-100 percent mortality areas, and secondarily in the 50-85 percent mortality areas. Areas with mortality below these levels would not require any special design to meet visual objectives.

Reforestation

Within the approximately 34,000 acres that experienced loss of stocking due to fire, it is estimated that 20,743 acres of these would actually be planted. This includes approximately 5,139 acres of planting in proposed salvage units, 14,334 acres of planting in “other” areas (such as previous overstory removal units, previous partial cut units, or areas without a commercially viable salvage component), and 1,270 acres in existing plantations. Seedlings would be planted between 130 and 250 trees per acre.

Site preparation for reforestation outside of harvest units would occur on approximately 10,603 acres. This would consist of falling dead material, lopping and scattering, and extra mastication, if needed, to minimize visual impacts. In the short term, the plantation would appear open, due to slow seedling growth. After 10 years, the plantation would appear as a fairly open stand of 10-foot tall trees at 100 trees per acre to promote the long-term development of a sustainable late and old structure (LOS) forest conditions. Within 100 years, with management of natural regeneration, the stand should appear as a LOS forest stand, with widely-spaced 20-inch dbh trees.

Thinning

Approximately 2,214 acres of precommercial thinning would occur in existing plantations in order to promote the long-term development of sustainable LOS forest conditions while maintaining big game hiding cover. Thinning and slash treatment would be with either chainsaws or low ground pressure mechanized equipment. Specifically, leave stand density objective would be approximately 130 trees per acre, including one small un-thinned cover patch per acre. The objective of partial retention would be met and visual impacts would be minimal.

Fuel Treatment and Reduction

Alternative D follows the same principle as Alternative C, but, due to less areas of harvest, there would be less fuel treatment. Fuel treatment and reduction may consist of several types that are discussed in detail in Chapter 2, for activities fuels within harvest units and for areas outside of harvest units. For activities fuels, by using whole tree yarding and yarding with tops attached-to-last-log, the commercial salvage operation itself would provide the initial step of fuels reduction. The use of whole tree yarding is designed to initiate a reduction of risk from activities-generated fuels. In all salvage units, trees 21 dbh or less would be whole tree yarded. Limbs and tops piled at the landings would be disposed of later or utilized as chips or firewood.

Within salvage units, fuels treatment in addition to whole tree yarding and leaving tops attached would occur on approximately 5,680 acres. This would include reduction of fuels created by the fire and by salvage activity. These treatments are planned for salvage units in which the majority of the acres would be expected to exceed 20 tons of fuel per acre within 15 years if no action is taken. Such additional fuels treatments would occur following salvage activity, with the method to be determined through post-sale monitoring. Methods for all alternatives could include: underburning, broadcast burning, jackpot burning, machine (low ground pressure) pile and burning, grapple pile and burning, hand pile and burning, air curtain destructors, ladder fuel reduction (thinning – dead trees only), crushing, mastication, or other methods.

Prescribed fire would be used primarily outside of harvest units, but there would be some overlap into units. Approximately 2,450 acres are proposed for prescribed fire as part of an additional fuels strategy and as a means of contributing to the long-term promotion of sustainable LOS conditions. Among the criteria for proposing prescribed fire in this alternative include selecting areas that experienced low mortality during the 2002 wildfire and areas that could effectively be “blocked up” in at least 100 acre parcels. Smaller areas would be selected if containment features exist. The desired condition is to produce a mosaic of shrub habitat and cover while increasing forest sustainability. The objective would be to achieve a 40-60 percent **burned** / 60-40 percent **unburned** mosaic.

The proposed types of treatment would have little impact to the visual quality of the project area. Slash piles may be on the landscape until sufficient burning factors are met.

Other Activities

Road Reconstruction – No new temporary roads would be developed in Alternative D. The salvage harvest activities in this alternative are expected to require the re-opening of approximately 5.7 miles of existing unclassified roads. Most of these reconstructed roads would not be visible from the scenic corridors, and those that are visible would be mostly perpendicular to the scenic corridors so the visual impact when driving past would be minimal. After salvage harvest is complete, the

Forest Service would remove bridges and culverts, eliminate ditches, outslope the roadbed, remove ruts and berms, and effectively block the road to normal vehicular traffic. Grass and herbaceous forbs should cover 75-80 percent of the roadbed in the first year after closure, and brush should begin adding to the cover by the second year, effectively removing visual impacts of the roadbeds from scenic corridors.

Road Closure and Decommissioning - Several roads in Alternative D would be wither decommissioned or closed for purposes of promoting watershed recovery and / or reducing impacts to wildlife. Road decommissioning would accelerate a return to a more natural state. In this alternative, 75.5 miles of road would be closed, 71.6 miles would be decommissioned, and 123.9 would remain open.

Snag Retention – Retention of snags for cavity dependent species would be achieved through strategies of identifying suitable blocks of habitat in no-salvage areas and retention prescriptions within salvage units. Snag retention in no-salvage areas would not change the existing landscape. Within commercial salvage units, three different criteria would be used for snag retention, depending on snag size and elevation. See Appendix B of the Toolbox Fire Recovery Project EIS for more information on snag retention criteria. Clumping and distribution would vary within harvest units to manage for clump size, snag requirements, and distribution required for different cavity-dependent species. No area greater than 10 acres would be left completely deficient of snags. Within a 10-acre area, a minimum of one snag clump with 20 trees is required. Except for roadside hazard treatment corridors, clumps would be located at least 200 feet from any road. Visual objectives would be met by leaving sufficient scattered clumps to break up the potentially objectionable look of long stretches of treeless landscape.

All cover in the mule deer winter range would be retained, and would not change the existing landscape.

Riparian buffers for perennial and intermittent streams range from 300 feet on each side of the stream to 50 feet. Wetlands would have a 150-foot riparian buffer around the wetland. These buffers may, at times, have a straight line delineating the buffer (untreated) from the treated part of the unit. Generally, these should look natural, since riparian areas usually have naturally occurring stringers of dense growth along streams that are noticeable on the landscape.

Approximately 690 acres of aspen habitat have been identified for treatments designed to protect or enhance the aspen clone. Treatments would be designed to mitigate grazing by livestock and big game or the effects of encroachment of conifers and junipers. Aspen treatments should not affect the scenic quality of the landscape, as visible from the scenic corridors. Placement of large woody debris in streams and deciduous planting of approximately 7 acres are also planned for riparian areas. These enhancements would not be visible from scenic corridors and should have no impacts to scenic quality.

Alternative E

Commercial Salvage

Harvest activities would occur on 11,490 acres within a total of 236 harvest units, including 233 ground-based units and 3 helicopter units. The project area includes 131 harvest units on the Toolbox Fire portion and 105 harvest units on the Silver Fire portion. The estimated volume for Alternative E is 66.1 mmbf (million board feet).

For units adjacent to MA-6A and MA-6B, logs would be yarded away from the roads and trails. Landings would be in the foreground viewing zone, but toward the back of the zone as much as terrain and existing road locations allow. Helicopter logging results in very little impact to the visual resource, as there is little to no ground disturbance (no roads or skid trails). Logs would be flown away from the scenic corridor roads. One proposed helicopter landing would be located in the switchback section of FS Road 2901, in an area of high burn intensity. Other proposed landings located outside of the Foreground Partial Retention zone may still be visible from the scenic corridor, due to the loss of vegetative screen as a result of the fire. These activities would have short-term negative impacts on the landscape.

Within 1 to 2 years after use, all landings would be scarified or sub-soiled, natural drainage patterns would be reestablished, slash accumulation would be treated, and the area would be reforested. Ten to thirty percent of the slash piles would be left on the landscape to provide habitat for small mammals. These slash piles would be located outside of MA-6A (Foreground Partial Retention) and MA-6B (Maximum Modification with special guidelines).

Roadside Hazard Treatment –Included in the total commercial salvage proposal are approximately 1,300 acres that are within 150 feet of a maintenance level 3, 4, or 5 road (covered under the Highway Safety Act) or other roads with an aggregate (gravel) surface. Clumps of dead trees would be retained in the roadside corridors within salvage units to jointly meet visual and wildlife habitat objectives. In all cases, such clumps would only include trees that are not tall enough to reach the road. General visual objectives are to leave sufficient scattered clumps to break up the potentially objectionable

look of long stretches of treeless landscape in the frontage zone along roadside corridors. These clumps should be primarily in the 86-100 percent mortality areas, and secondarily in the 50-85 percent mortality areas. Areas with mortality below these levels would not require any special design to meet visual objectives.

Reforestation

Within the approximately 34,000 acres that experienced loss of stocking due to fire, it is estimated that 20,753 acres of these would actually be planted. This includes approximately 8,801 acres of planting in proposed salvage units, 10,674 acres of planting in “other” areas (such as previous overstory removal units, previous partial cut units, or areas without a commercially viable salvage component), and 1,278 acres in existing plantations. Seedlings would be planted between 130 and 250 trees per acre.

Site preparation for reforestation outside of harvest units would occur on approximately 5,330 acres. This would consist of falling dead material, lopping and scattering, and extra mastication, if needed, to minimize visual impacts. In the short term, the plantation would appear open, due to slow seedling growth. After 10 years, the plantation would appear as a fairly open stand of 10-foot tall trees at 100 trees per acre to promote the long-term development of a sustainable late and old structure (LOS) forest conditions. Within 100 years, with management of natural regeneration, the stand should appear as a LOS forest stand, with widely-spaced 20-inch dbh trees.

Thinning

No precommercial thinning would occur in this alternative.

Fuel Treatment and Reduction

Fuel treatment and reduction may consist of several types that are discussed in detail in Chapter 2, for activities fuels within harvest units and for areas outside of harvest units. For activities fuels, by using whole tree yarding and yarding with tops attached-to-last-log, the commercial salvage operation itself would provide the initial step of fuels reduction. The use of whole tree yarding is designed to initiate a reduction of risk from activities-generated fuels. In all salvage units, trees 21 dbh or less would be whole tree yarded. Limbs and tops piled at the landings would be disposed of later or utilized as chips or firewood.

Within salvage units, fuels treatment in addition to whole tree yarding and leaving tops attached would occur on approximately 6,723 acres. This would include reduction of fuels created by the fire and by salvage activity. These treatments are planned for salvage units in which the majority of the acres would be expected to exceed 30 tons of fuel per acre within 15 years if no action is taken. Such additional fuels treatments would occur following salvage activity, with the method to be determined through post-sale monitoring. Methods for all alternatives could include: underburning, broadcast burning, jackpot burning, machine (low ground pressure) pile and burning, grapple pile and burning, hand pile and burning, air curtain destructors, ladder fuel reduction (thinning – dead trees only), crushing, mastication, or other methods.

Prescribed fire would be used in this alternative beyond the fuels treatments described above.

The proposed types of treatment would have little impact to the visual quality of the project area. Slash piles may be on the landscape until sufficient burning factors are met.

Other Activities

Temporary Road Construction and Road Reconstruction - The salvage harvest activities in Alternative E are expected to require the use of approximately 29.1 miles of temporary road. New construction would be required for approximately 15.8 miles and approximately 13.3 miles would be re-opening of existing unclassified roads. Most of these new temporary and reconstructed roads would not be visible from the scenic corridors, and those that are visible would be mostly perpendicular to the scenic corridors so the visual impact when driving past would be minimal. After salvage harvest is complete, the Forest Service would remove bridges and culverts, eliminate ditches, outslope the roadbed, remove ruts and berms, and effectively block the road to normal vehicular traffic. Grass and herbaceous forbs should cover 75-80 percent of the roadbed in the first year after closure, and brush should begin adding to the cover by the second year, effectively removing visual impacts of the roadbeds from scenic corridors.

Road Closure and Decommissioning - Several roads in Alternative E would be either decommissioned or closed for purposes of promoting watershed recovery and / or reducing impacts to wildlife. Road decommissioning would accelerate a return to a more natural state. In this alternative, 67.4 miles of road would be closed, 14.6 miles would be decommissioned, and 188.9 would remain open.

Snag Retention – Retention of snags for cavity dependent species would be achieved through strategies of identifying suitable blocks of habitat in no-salvage areas and retention prescriptions within salvage units. Snag retention in no-salvage areas would not change the existing landscape. Within commercial salvage units, three different criteria would be used for snag retention, depending on snag size and elevation. See Appendix B of the Toolbox Fire Recovery Project EIS for more information on snag retention criteria. Clumping and distribution would vary within harvest units to manage for clump size, snag requirements, and distribution required for different cavity-dependent species. No area greater than 10 acres would be left completely deficient of snags. Within a 10-acre area, a minimum of one snag clump with 20 trees is required. Except for roadside hazard treatment corridors, clumps would be located at least 200 feet from any road. Visual objectives would be met by leaving sufficient scattered clumps to break up the potentially objectionable look of long stretches of treeless landscape.

All cover in the mule deer winter range would be retained, and would not change the existing landscape.

Riparian buffers for perennial and intermittent streams range from 300 feet on each side of the stream to 50 feet. Wetlands would have a 150-foot riparian buffer around the wetland. These buffers may, at times, have a straight line delineating the buffer (untreated) from the treated part of the unit. Generally, these should look natural, since riparian areas usually have naturally occurring stringers of dense growth along streams that are noticeable on the landscape.

Soil and riparian protection projects include placement of large woody debris in 9.6 miles of fish-bearing stream. These enhancements would not be visible from scenic corridors and should have no impacts to scenic quality.

Alternative G

Commercial Salvage

Harvest activities would occur on 14,419 acres within a total of 311 harvest units, including 297 ground-based units and 14 helicopter units. The project area includes 176 harvest units on the Toolbox Fire portion and 135 harvest units on the Silver Fire portion. The estimated volume for Alternative G is 73.2 mmbf (million board feet).

For units adjacent to MA-6A and MA-6B, logs would be yarded away from the roads and trails. Landings would be in the foreground viewing zone, but toward the back of the zone as much as terrain and existing road locations allow. Helicopter logging results in very little impact to the visual resource, as there is little to no ground disturbance (no roads or skid trails). Logs would be flown away from the scenic corridor roads. One proposed helicopter landing would be located in the switchback section of FS Road 2901, in an area of high burn intensity. Other proposed landings located outside of the Foreground Partial Retention zone may still be visible from the scenic corridor, due to the loss of vegetative screen as a result of the fire. These activities would have short-term negative impacts on the landscape.

Within 1 to 2 years after use, all landings would be scarified or sub-soiled, natural drainage patterns would be reestablished, slash accumulation would be treated, and the area would be reforested. Ten to thirty percent of the slash piles would be left on the landscape to provide habitat for small mammals. These slash piles would be located outside of MA-6A (Foreground Partial Retention) and MA-6B (Maximum Modification with special guidelines).

Roadside Hazard Treatment –Included in the total commercial salvage proposal are approximately 1,300 acres that are within 150 feet of a maintenance level 3, 4, or 5 road (covered under the Highway Safety Act) or other roads with an aggregate (gravel) surface. Clumps of dead trees would be retained in the roadside corridors within salvage units to jointly meet visual and wildlife habitat objectives. In all cases, such clumps would only include trees that are not tall enough to reach the road. General visual objectives are to leave sufficient scattered clumps to break up the potentially objectionable look of long stretches of treeless landscape in the frontage zone along roadside corridors. These clumps should be primarily in the 86-100 percent mortality areas, and secondarily in the 50-85 percent mortality areas. Areas with mortality below these levels would not require any special design to meet visual objectives.

Reforestation

Within the approximately 34,000 acres that experienced loss of stocking due to fire, it is estimated that 20,728 acres of these would actually be planted. This includes approximately 10,489 acres of planting in proposed salvage units, 8,969 acres of planting in “other” areas (such as previous overstory removal units, previous partial cut units, or areas without a commercially viable salvage component), and 1,270 acres in existing plantations. Seedlings would be planted between 130 and 250 trees per acre.

Site preparation for reforestation outside of harvest units would occur on approximately 3,580 acres. This would consist of falling dead material, lopping and scattering, and extra mastication, if needed, to minimize visual impacts. In the short

term, the plantation would appear open, due to slow seedling growth. After 10 years, the plantation would appear as a fairly open stand of 10-foot tall trees at 100 trees per acre to promote the long-term development of a sustainable late and old structure (LOS) forest conditions. Within 100 years, with management of natural regeneration, the stand should appear as a LOS forest stand, with widely-spaced 20-inch dbh trees.

Thinning

Approximately 2,214 acres of precommercial thinning would occur in existing plantations in order to promote the long-term development of sustainable LOS forest conditions while maintaining big game hiding cover. Thinning and slash treatment would be with either chainsaws or low ground pressure mechanized equipment. Specifically, leave stand density objective would be approximately 130 trees per acre, including one small un-thinned cover patch per acre. The objective of partial retention would be met and visual impacts would be minimal.

Fuel Treatment and Reduction

Fuel treatment and reduction may consist of several types that are discussed in detail in Chapter 2, for activities fuels within harvest units and for areas outside of harvest units. For activities fuels, by using whole tree yarding and yarding with tops attached-to-last-log, the commercial salvage operation itself would provide the initial step of fuels reduction. The use of whole tree yarding is designed to initiate a reduction of risk from activities-generated fuels. In all salvage units, trees 21 dbh or less would be whole tree yarded. Limbs and tops piled at the landings would be disposed of later or utilized as chips or firewood.

Within salvage units, fuels treatment in addition to whole tree yarding and leaving tops attached would occur on approximately 11,354 acres. This would include reduction of fuels created by the fire and by salvage activity. These treatments are planned for salvage units in which the majority of the acres would be expected to exceed 20 tons of fuel per acre within 15 years if no action is taken. Such additional fuels treatments would occur following salvage activity, with the method to be determined through post-sale monitoring. Methods for all alternatives could include: underburning, broadcast burning, jackpot burning, machine (low ground pressure) pile and burning, grapple pile and burning, hand pile and burning, air curtain destructors, ladder fuel reduction (thinning – dead trees only), crushing, mastication, or other methods.

Alternative G includes proposals for fuels treatment in areas that would not receive fuels treatment under the criteria used in Alternative C. These include areas within harvest units (within ¼ mile of the boundary between National Forest System lands and private lands) in which the majority of the acres would not be expected to exceed 20 tons of fuel per acre within 15 years if no action is taken. This accounts for 1,132 acres, which are included in the total of 11,354 acres reported above. Alternative G also includes fuels treatment in areas outside harvest units that are within conifer ecotypes (excluding juniper) and that are within ¼ mile of the boundary between National Forest system lands and private lands, regardless of predicted fuel loading. This accounts for approximately 5,596 acres.

The desired condition is to produce a mosaic of shrub habitat and cover while increasing forest sustainability. The objective would be to achieve a 40-60 percent **burned** / 60-40 percent **unburned** mosaic. The proposed types of treatment would have little impact to the visual quality of the project area. Slash piles may be on the landscape until sufficient burning factors are met.

Other Activities

Temporary Road Construction and Road Reconstruction - The salvage harvest activities in Alternative G are expected to require the use of approximately 37.4 miles of temporary road. New construction would be required for approximately 16.0 miles and approximately 21.4 miles would be re-opening of existing unclassified roads. Most of these new temporary and reconstructed roads would not be visible from the scenic corridors, and those that are visible would be mostly perpendicular to the scenic corridors so the visual impact when driving past would be minimal. After salvage harvest is complete, the Forest Service would remove bridges and culverts, eliminate ditches, outslope the roadbed, remove ruts and berms, and effectively block the road to normal vehicular traffic. Grass and herbaceous forbs should cover 75-80 percent of the roadbed in the first year after closure, and brush should begin adding to the cover by the second year, effectively removing visual impacts of the roadbeds from scenic corridors.

Road Closure and Decommissioning - Several roads in Alternative G would be either decommissioned or closed for purposes of promoting watershed recovery and / or reducing impacts to wildlife. Road decommissioning would accelerate a return to a more natural state. In this alternative, 10.4 miles of road would be closed, 71.6 miles would be decommissioned, and 188.9 would remain open.

Snag Retention – Retention of snags for cavity dependent species would be achieved through strategies of identifying suitable blocks of habitat in no-salvage areas and retention prescriptions within salvage units. Snag retention in no-salvage areas would not change the existing landscape. Within commercial salvage units, three different criteria would be used for snag retention, depending on snag size and elevation. See Appendix B of the Toolbox Fire Recovery Project EIS for more information on snag retention criteria. Clumping and distribution would vary within harvest units to manage for clump size, snag requirements, and distribution required for different cavity-dependent species. No area greater than 10 acres would be left completely deficient of snags. Within a 10-acre area, a minimum of one snag clump with 20 trees is required. Except for roadside hazard treatment corridors, clumps would be located at least 200 feet from any road. Visual objectives would be met by leaving sufficient scattered clumps to break up the potentially objectionable look of long stretches of treeless landscape.

All cover in the mule deer winter range would be retained, and would not change the existing landscape.

Riparian buffers for perennial and intermittent streams range from 300 feet on each side of the stream to 50 feet. Wetlands would have a 150-foot riparian buffer around the wetland. These buffers may, at times, have a straight line delineating the buffer (untreated) from the treated part of the unit. Generally, these should look natural, since riparian areas usually have naturally occurring stringers of dense growth along streams that are noticeable on the landscape.

Approximately 690 acres of aspen habitat have been identified for treatments designed to protect or enhance the aspen clone. Treatments would be designed to mitigate grazing by livestock and big game or the effects of encroachment of conifers and junipers. Aspen treatments should not affect the scenic quality of the landscape, as visible from the scenic corridors. Placement of large woody debris in streams and deciduous planting of approximately 7 acres are also planned for riparian areas. These enhancements would not be visible from scenic corridors and should have no impacts to scenic quality.

Alternative H

Commercial Salvage

Harvest activities would occur on 13,031 acres within a total of 288 ground-based harvest units. No helicopter units are proposed for this alternative. The project area includes 161 harvest units on the Toolbox Fire portion and 127 harvest units on the Silver Fire portion. The estimated volume for Alternative H is 63.8 mmbf (million board feet).

For units adjacent to MA-6A and MA-6B, logs would be yarded away from the roads and trails. Landings would be in the foreground viewing zone, but toward the back of the zone as much as terrain and existing road locations allow. Helicopter logging results in very little impact to the visual resource, as there is little to no ground disturbance (no roads or skid trails). Logs would be flown away from the scenic corridor roads. One proposed helicopter landing would be located in the switchback section of FS Road 2901, in an area of high burn intensity. Other proposed landings located outside of the Foreground Partial Retention zone may still be visible from the scenic corridor, due to the loss of vegetative screen as a result of the fire. These activities would have short-term negative impacts on the landscape.

Within 1 to 2 years after use, all landings would be scarified or sub-soiled, natural drainage patterns would be reestablished, slash accumulation would be treated, and the area would be reforested. Ten to thirty percent of the slash piles would be left on the landscape to provide habitat for small mammals. These slash piles would be located outside of MA-6A (Foreground Partial Retention) and MA-6B (Maximum Modification with special guidelines).

Roadside Hazard Treatment –Included in the total commercial salvage proposal are approximately 1,300 acres that are within 150 feet of a maintenance level 3, 4, or 5 road (covered under the Highway Safety Act) or other roads with an aggregate (gravel) surface. Clumps of dead trees would be retained in the roadside corridors within salvage units to jointly meet visual and wildlife habitat objectives. In all cases, such clumps would only include trees that are not tall enough to reach the road. General visual objectives are to leave sufficient scattered clumps to break up the potentially objectionable look of long stretches of treeless landscape in the frontage zone along roadside corridors. These clumps should be primarily in the 86-100 percent mortality areas, and secondarily in the 50-85 percent mortality areas. Areas with mortality below these levels would not require any special design to meet visual objectives.

Reforestation

Within the approximately 34,000 acres that experienced loss of stocking due to fire, it is estimated that 20,721 acres of these would actually be planted. This includes approximately 9,485 acres of planting in proposed salvage units, 9,966 acres of planting in “other” areas (such as previous overstory removal units, previous partial cut units, or areas without a

commercially viable salvage component), and 1,270 acres in existing plantations. Seedlings would be planted between 130 and 250 trees per acre.

Site preparation for reforestation outside of harvest units would occur on approximately 4,695 acres. This would consist of falling dead material, lopping and scattering, and extra mastication, if needed, to minimize visual impacts. In the short term, the plantation would appear open, due to slow seedling growth. After 10 years, the plantation would appear as a fairly open stand of 10-foot tall trees at 100 trees per acre to promote the long-term development of a sustainable late and old structure (LOS) forest conditions. Within 100 years, with management of natural regeneration, the stand should appear as a LOS forest stand, with widely-spaced 20-inch dbh trees.

Thinning

Approximately 2,214 acres of precommercial thinning would occur in existing plantations in order to promote the long-term development of sustainable LOS forest conditions while maintaining big game hiding cover. Thinning and slash treatment would be with either chainsaws or low ground pressure mechanized equipment. Specifically, leave stand density objective would be approximately 130 trees per acre, including one small un-thinned cover patch per acre. The objective of partial retention would be met and visual impacts would be minimal.

Fuel Treatment and Reduction

Alternative H follows the same principle as Alternative C, but, due to somewhat less areas of harvest, there would be less fuel treatment. Fuel treatment and reduction may consist of several types that are discussed in detail in Chapter 2, for activities fuels within harvest units and for areas outside of harvest units. For activities fuels, by using whole tree yarding and yarding with tops attached-to-last-log, the commercial salvage operation itself would provide the initial step of fuels reduction. The use of whole tree yarding is designed to initiate a reduction of risk from activities-generated fuels. In all salvage units, trees 21 dbh or less would be whole tree yarded. Limbs and tops piled at the landings would be disposed of later or utilized as chips or firewood.

Within salvage units, fuels treatment in addition to whole tree yarding and leaving tops attached would occur on approximately 9,070 acres. This would include reduction of fuels created by the fire and by salvage activity. These treatments are planned for salvage units in which the majority of the acres would be expected to exceed 20 tons of fuel per acre within 15 years if no action is taken. Such additional fuels treatments would occur following salvage activity, with the method to be determined through post-sale monitoring. Methods for all alternatives could include: underburning, broadcast burning, jackpot burning, machine (low ground pressure) pile and burning, grapple pile and burning, hand pile and burning, air curtain destructors, ladder fuel reduction (thinning – dead trees only), crushing, mastication, or other methods.

Prescribed fire would be used primarily outside of harvest units, but there would be some overlap into units. Approximately 2,450 acres are proposed for prescribed fire as part of an additional fuels strategy and as a means of contributing to the long-term promotion of sustainable LOS conditions. Among the criteria for proposing prescribed fire in this alternative include selecting areas that experienced low mortality during the 2002 wildfire and areas that could effectively be “blocked up” in at least 100 acre parcels. Smaller areas would be selected if containment features exist. The desired condition is to produce a mosaic of shrub habitat and cover while increasing forest sustainability. The objective would be to achieve a 40-60 percent **burned** / 60-40 percent **unburned** mosaic.

The proposed types of treatment would have little impact to the visual quality of the project area. Slash piles may be on the landscape until sufficient burning factors are met.

Other Activities

Temporary Road Construction and Road Reconstruction - The salvage harvest activities in Alternative H are expected to require the use of approximately 34.6 miles of temporary road. New construction would be required for approximately 19.7 miles and approximately 14.9 miles would be re-opening of existing unclassified roads. Most of these new temporary and reconstructed roads would not be visible from the scenic corridors, and those that are visible would be mostly perpendicular to the scenic corridors so the visual impact when driving past would be minimal. After salvage harvest is complete, the Forest Service would remove bridges and culverts, eliminate ditches, outslope the roadbed, remove ruts and berms, and effectively block the road to normal vehicular traffic. Grass and herbaceous forbs should cover 75-80 percent of the roadbed in the first year after closure, and brush should begin adding to the cover by the second year, effectively removing visual impacts of the roadbeds from scenic corridors.

Road Closure and Decommissioning - Several roads in Alternative H would be either decommissioned or closed for purposes of promoting watershed recovery and / or reducing impacts to wildlife. Road decommissioning would accelerate a return to a more natural state. In this alternative, 72.9 miles of road would be closed, 71.6 miles would be decommissioned, and 126.5 would remain open.

Snag Retention – Retention of snags for cavity dependent species would be achieved through strategies of identifying suitable blocks of habitat in no-salvage areas and retention prescriptions within salvage units. Snag retention in no-salvage areas would not change the existing landscape. Within commercial salvage units, three different criteria would be used for snag retention, depending on snag size and elevation. See Appendix B of the Toolbox Fire Recovery Project EIS for more information on snag retention criteria. Clumping and distribution would vary within harvest units to manage for clump size, snag requirements, and distribution required for different cavity-dependent species. No area greater than 10 acres would be left completely deficient of snags. Within a 10-acre area, a minimum of one snag clump with 20 trees is required. Except for roadside hazard treatment corridors, clumps would be located at least 200 feet from any road. Visual objectives would be met by leaving sufficient scattered clumps to break up the potentially objectionable look of long stretches of treeless landscape.

All cover in the mule deer winter range would be retained, and would not change the existing landscape.

Riparian buffers for perennial and intermittent streams range from 300 feet on each side of the stream to 50 feet. Wetlands would have a 150-foot riparian buffer around the wetland. These buffers may, at times, have a straight line delineating the buffer (untreated) from the treated part of the unit. Generally, these should look natural, since riparian areas usually have naturally occurring stringers of dense growth along streams that are noticeable on the landscape.

Approximately 690 acres of aspen habitat have been identified for treatments designed to protect or enhance the aspen clone. Treatments would be designed to mitigate grazing by livestock and big game or the effects of encroachment of conifers and junipers. Aspen treatments should not affect the scenic quality of the landscape, as visible from the scenic corridors. Placement of large woody debris in streams and deciduous planting of approximately 7 acres are also planned for riparian areas. These enhancements would not be visible from scenic corridors and should have no impacts to scenic quality.

Cumulative Effects

The Toolbox Fire Recovery Project Area is bounded on the east by the north-south trending fault block feature known as Winter Rim. An unburned strip varying between 3 and 7 miles wide runs between the Silver Fire portion of the project area and the Toolbox Fire portion of the project area. Within this unburned area are locally familiar landmarks such as Thompson Reservoir and Hager Mountain. The affected area of the fire is frequently viewed by travelers along the project area's two main scenic corridors, FS Road 27 and FS Road 28. The fire mosaic can also be seen from FS Road 2901 and the Fremont National Recreation Trail, as well as other corridors not designated for special scenery considerations. For most resources, the area of cumulative effects analysis for the Toolbox project is defined by the eight hydrologic subwatersheds in which the project occurs (listed below), extended beyond the project boundary to include the entirety of the eight subwatersheds, regardless of ownership.

Silver Creek Watershed (five subwatersheds)

- Middle Silver Creek
- West Fork Silver Creek
- Upper Silver Creek
- Thompson Reservoir
- Benny Creek

Silver Lake Watershed (three subwatersheds)

- Upper Duncan Creek
- East Duncan Creek
- Lower Duncan Creek

The activities that have occurred or would occur within these eight subwatersheds are analyzed for cumulative effects pertaining to scenery resources of the portions of the four main scenic corridors within, or immediately adjacent to, the project area.

Actions With Possible Visual Cumulative Effects

Past Wildfire Activity

Effects of wildfire on scenery, whether by human or natural ignition, are usually perceived as natural. Some activities associated with prescribed fire, such as slashing and fire line construction, are perceived as human-caused and may adversely affect scenic quality. Past fires, including the Alder Fire of 1996 and the Toolbox Complex Fire of 2002, add to the fire mosaic on the Toolbox project area. The lack of visual evidence of past suppression actions as well as suppression actions from the fire of 2002 help retain a natural-appearing (although significantly changed) character throughout most of the Toolbox project area.

Timber Harvest

FS Road 27:

Past Forest Service harvest partially visible from this corridor includes the Alder Timber Sale of 1992, which retained substantial overstory, and the Ridge Timber Sale, a salvage harvest with snag retention. The West Fork Timber Sale was an active contract at the time of the Toolbox Complex Fire; however, many of the West Fork units were burned over and the timber sale contract was cancelled. The remaining West Fork units are being evaluated in the Toolbox Fire Recovery Project EIS with regard to future harvest activity.

On industrial private land within the project area, extensive logging occurred throughout the twentieth century. During the 1940s through the 1990s, harvest included substantial overstory removal. By 2000 nearly all commercial forest stands on private land were harvested at least once. During this same period sporadic logging occurred on non-industrial private lands in order to remove some of the larger trees to supplement incomes or for stand management. From 2000 through July of 2002 the remaining merchantable timber was harvested from private holdings near the 500 Reload along FS Road 27. During this same period, United States Timberland Company (UST) reentered and harvested approximately 6,000 acres of stands that contained commercial volume. In the fall and winter of 2003-2003, UST salvaged 16,000 acres of timber within the Toolbox project area, including both dead and green trees. Some salvage of fire-killed and large green timber on private non-industrial land occurred in the fall and winter of 2002-2003, and would continue to occur until 2005. Harvest on private industrial and non-industrial lands along this scenic corridor would have fairly long term negative impacts to the scenic quality of this scenic corridor.

FS Road 28:

Past Forest Service harvest activity partially visible from this corridor includes the Hogleg Timber Sale of 1988, in which substantial overstory removal occurred. The Feast Timber Sale was an active contract at the time of the Toolbox Complex Fire. Partial harvest was completed before the contract was cancelled due to the fire. A small portion of harvested units is visible from FS Road 28. The harvest activity is only slightly noticeable, however, as this was a project to remove trees under 21 inch dbh to promote development of late and old structure stands in keeping with Forest Plan Standards and Guidelines, and very little harvest was accomplished before the fire occurred. The remaining Feast units are being evaluated in the Toolbox Fire Recovery Project EIS with regard to future harvest activity. Other future timber harvest activity would include the Triad Timber Sale, with thinning of less than 21 inch dbh trees to promote development of late and old structure stands. Portions of units in the Triad Sale would be visible from a 1-mile section of FS Road 28, but should not affect scenic quality to any great extent.

The portion of FS Road 28 that occurs within the Toolbox project area lies within National Forest Lands, so harvest activities on private lands are not a factor, visually, for this corridor.

FS Road 2901

Past Forest Service harvest activities include the Rockpie Timber Sale of 1989 in which substantial overstory removal occurred. Only a small portion of this past harvest is visible from FS Road 2901, so the effects of this harvest activity on the scenery resource are minimal.

The portion of FS Road 2901 that occurs within the Toolbox project area lies mostly within National Forest Lands, so harvest activities on private lands are not a factor, visually, for this corridor.

Fremont National Recreation Trail (NRT)

Past Forest Service harvest activities include the Rockpie Timber Sale of 1989 in which substantial overstory removal occurred. Only a small portion of this past harvest is visible from the NRT, so the effects of this harvest activity on the scenery resource is minimal. Portions of the Farm and Alder Timber Sales harvest activities are visible from the NRT; however, both retained substantial overstory and the visual impacts to users of the NRT are minimal.

The West Fork Timber Sale, portions of which are visible from the NRT, was an active contract at the time of the Toolbox Complex Fire; however, many of the West Fork units were burned over and the timber sale contract was cancelled. The remaining West Fork units are being evaluated in the Toolbox Fire Recovery Project EIS with regard to future harvest activity.

The portion of the NRT that occurs within the Toolbox project area lies mostly within National Forest Lands, so harvest activities on private lands are not a factor, visually, for this corridor.

Reforestation

FS Road 27:

Generally, planting has occurred where harvest and wildfire occurred on National Forest Lands within the Toolbox Fire Recovery Project to reestablish stands. Planting occurred in the Alder Fire burn area in 1997. This plantation is visible from FS Road 27, and the vexar tubing currently on the seedlings would remain for another two years. Other plantations are screened by taller tree stands and not visible from the scenic corridor. Most of the planting treatments for past harvest areas have been very light.

In the 1970s, planting increased on private harvested lands within the Toolbox project area. By 2000, approximately 17 percent of the industrial private land was in plantations. In the fall and winter of 2002-2003, UST completed site preparation for planting on 5,000 acres and may do more site preparation in 2003. In the period from 2003 through 2005, UST plans to plant approximately 18,000 acres. During this same period, planting to State of Oregon density requirements would occur on private non-industrial lands. These plantations would be visible from the scenic corridor and would have a negative impact on scenic quality. The stands would take approximately 50 years to reach 14 inches dbh. On the positive side, the open areas would provide more opportunities for distant scenic vistas for travelers along the corridor.

FS Road 28:

Generally, planting has occurred where harvest and wildfire occurred on National Forest Lands within the Toolbox Fire Recovery Project to reestablish stands. Plantations are screened by taller tree stands and not visible from the scenic corridor. Most of the planting treatments for past harvest areas have been very light.

The portion of FS Road 28 that occurs within the Toolbox project area lies within National Forest Lands, so planting activities on private lands in association with harvest activities and wildfire are not a factor, visually, for this corridor.

FS Road 2901:

Generally, planting has occurred where harvest and wildfire occurred on National Forest Lands within the Toolbox Fire Recovery Project to reestablish stands. Plantations are screened by taller tree stands and not visible from the scenic corridor. Most of the planting treatments for past harvest areas have been very light.

The portion of FS Road 2901 that occurs within the Toolbox project area lies mostly within National Forest Lands, so planting activities on private lands in association with harvest activities and wildfire are not a factor, visually, for this corridor.

Fremont National Recreation Trail (NRT):

Generally, planting has occurred where harvest and wildfire occurred on National Forest Lands within the Toolbox Fire Recovery Project to reestablish stands. Plantations are screened by taller tree stands and not visible from the scenic corridor. Most of the planting treatments for past harvest areas have been very light.

The portion of the NRT that occurs within the Toolbox project area lies mostly within National Forest Lands, so planting activities on private lands in association with harvest activities and wildfire are not a factor, visually, for this corridor.

Thinning

FS Road 27:

Past thinning activities on National Forest Lands within the Toolbox project area were tight (not much removal) and resulted in dense stands. Past thinning has occurred in advanced reproduction (60-80 year old stands of natural regeneration). Thinning activities are now designed to develop late and old structure components, reduce hazard stand replacement fire, and facilitate more intense underburning, and occur in plantations or younger natural regeneration stands.

Current and future thinning activities designed for fuels considerations and to develop late and old structure consist of a lop and scatter method, resulting in a considerable amount of debris on the ground which is visible from scenic corridors. However, juvenile wood decays much faster than advanced reproduction so the visual impacts from thinning would lessen fairly rapidly.

By 2000, almost all commercial forest stands on private lands within the Toolbox project area were harvested at least once. Almost no precommercial thinning activities took place on the private lands. At this time, future thinning activities are not planned on private lands within the project area.

FS Road 28:

Thinning effects on scenery resources for this corridor are similar to those for FS Road 27.

FS Road 2901:

Thinning effects on scenery resources for this corridor are similar to those for FS Road 27.

Fremont National Recreation Trail (NRT):

Thinning effects on scenery resources for this corridor are similar to those for FS Road 27.

Fuel Treatment and Reduction

A variety of fuel reduction methods have been used in the past to reduce accumulated ladder fuels, duff, and brush, and to reverse a trend of overly dense stands in order to develop late and old stand structure components. Methods include prescribed burning, pretreatment (thinning by size and species rather than spacing, in preparation for burning), mowing (and mulching manzanita and other brush in order to reduce fuel depth), piling slash (some piles are burned while others are left for small mammal habitat), crushing (pretreatment followed by crushing with heavy machinery to break up and reduce the fuel depth).

Fuel reduction activities on National Forest System lands that occurred on the eight project area subwatersheds between 1985 and 2000 are, for the most part, no longer noticeable from the four scenic corridors. In areas of the more recent controlled burns, the viewer may see small seedlings with brown needles and larger trees with blackened bark. These effects would remain on the landscape for 5-8 years after treatment, gradually returning to a more natural-looking state.

FS Road 27:

Future fuel reduction activities are planned on 6000 acres in Benny, Thompson Reservoir, and Middle Silver Creek subwatersheds. These activities would not be visible from FS Road 27 and would have no effect on the scenic quality of that corridor.

No fuel reduction activities are planned on private lands adjacent to this corridor.

FS Road 28:

The future fuel reduction activities mentioned above would be visible from FS Road 28; however, the proposed types of treatment would have little impact to the visual quality of the project area.

No fuel reduction activities are planned on private lands adjacent to this corridor.

FS Road 2901:

The future fuel reduction activities mentioned above would not be visible from FS Road 2901 and would have no effect on the scenic quality of that corridor.

No fuel reduction activities are planned on private lands adjacent to this corridor.

Fremont National Recreation Trail (NRT):

The future fuel reduction activities mentioned above would be visible from the NRT; however, the proposed types of treatment would have little impact to the visual quality of the project area. The fuel treatment activity may open up more scenic vistas for users of the trail by reducing stand densities.

No fuel reduction activities are planned on private lands adjacent to this corridor.

Actions Not Expected To Have Cumulative Visual Effects

Past, ongoing, and future firewood gathering activity would not have cumulative visual effects within or adjacent to the project area due to the dispersed nature of the activity.

Mitigations

These mitigation measures are designed to assure compliance with scenic quality standards outlined in the Forest Plan for Management Areas 6A (Foreground Partial Retention) and 6B (Maximum Modification with special guidelines).

Mitigation	Unit Numbers	Alternative
Landings may be located in the foreground viewing zone, but toward the back of the zone as much as terrain and existing road locations allow.	26, 27, 139, 141, 148, 149, 150, 155, 161, 162, 163, 168, 181, 185, 190, 191, 192, 193, 194, 195, 204, 212, 213, 214, 215, 217, 223, 224, 236, 237	C, G, H
	All of the above except 185, 195, 204, 223, 224	D
	All of the above except 192, 194, 195, 204, 223	E
Units within MA-6A and MA-6B should utilize snag clumps to break up any straight line that may occur when units are adjacent to the scenic corridor, where it is not a safety hazard.	26, 27, 139, 141, 148, 149, 150, 155, 161, 162, 163, 168, 181, 185, 190, 191, 192, 193, 194, 195, 204, 212, 213, 214, 215, 217, 223, 224, 236, 237	C, G, H
	All of the above except 185, 195, 204, 223, 224	D
	All of the above except 192, 194, 195, 204, 223	E
For units adjacent to MA-6A and MA-6B, logs should be yarded away from roads where possible, except for roadside hazard units within RHCAs.	26, 27, 139, 141, 148, 149, 150, 155, 161, 162, 163, 168, 181, 185, 190, 191, 192, 193, 194, 195, 204, 212, 213, 214, 215, 217, 223, 224, 236, 237	C, G, H
	All of the above except 185, 195, 204, 223, 224	D
	All of the above except 192, 194, 195, 204, 223	E
Slash piles should be located outside of MA-6A and MA-6B as much as possible and should be high priority for burning.	26, 27, 139, 141, 148, 149, 150, 155, 161, 162, 163, 168, 181, 185, 190, 191, 192, 193, 194, 195, 204, 212, 213, 214, 215, 217, 223, 224, 236, 237	C, G, H
	All of the above except 185, 195, 204, 223, 224	D
	All of the above except 192, 194, 195, 204, 223	E

Objective: To assure meeting Forest Plan scenic quality objectives during and following implementation.

Effectiveness: Locating landings toward the back of the foreground viewing zone as much as existing terrain allows, would minimize visual impacts from scenic corridors. Retaining snag clumps in roadside corridors (where they do not pose a safety hazard) breaks up the potentially objectionable “look” of long stretches of treeless landscape in the frontage zone along scenic corridors. Yarding logs away from scenic corridors would minimize the visibility of harvest activity from scenic corridors. Locating slash piles outside of MA-6A and MA-6B would minimize the visibility of harvest from scenic corridors.

Consistency with Fremont Forest Plan

All of the alternatives described in this analysis would meet Forest Plan standards and visual quality goals as long as mitigating measures are adhered to

Pertinent Forest-wide Standard would be met, as follows:

MA-1, MA-2, MA3/14, MA-5, MA-12, MA-15:

The VQO of Maximum Modification would be met.

Lands generally within 300 feet of riparian areas would be managed to maintain the Partial Retention VQO. This standard would be met as a 300-foot buffer alongside major fisheries stream is mandatory in all alternatives.

MA-6A:

The VQO of Foreground Partial Retention would be met.

MA-6B:

The VQO of Maximum Modification with special guidelines would be met.

This Toolbox Fire Recovery Project specialist report was prepared during March, April and May of 2003. It will be used, along with specialist reports from multiple resource areas, to prepare a Draft Environmental Impact Statement (DEIS) for the Toolbox Fire Recovery project. This specialist report will become a part of the planning record for the project, filed under:

“Toolbx/ Planning Record/ E_Specialists_reports_data_inventory_and_collection”

This report will be filed both in the ‘hard-copy’ planning record binders, on file at the Silver Lake Ranger District, and on the Fremont National Forest “K-Drive”. In the interest of planning process efficiency, particularly in light of time and budget constraints, editing that occurs to the content of this report during the preparation of the DEIS will be reflected in the DEIS and will not necessarily be entered back into the content of this report. To insure the accuracy of such edits, I will review the content of both the DEIS and the (Final) FEIS and certify that their content is consistent with the analytical conclusions in this report. If during DEIS or FEIS editing, substantially different conclusions or interpretations are reached or substantial additional analysis is prepared from that displayed in this report, an addendum to this report will be prepared.

Specialist: /S/ Mary L. Pierce Discipline: Toolbox IDT Writer/Editor Date: 05/08/03

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