

## Stonewall Unit Descriptions

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### Group 1: Intermediate Harvest Treatment to Promote Mature, Open Forests

Units 6, 7, 8, 15, 23, 24, 26, 30, 31, 32, 33, 38, 44, 45, 46, 47, 54, 55. Approximately 1161 acres.

This group is recommended for intermediate harvest to create open, late-seral forested habitat by removing dead/dying trees and undesirable live trees to a target density. The forests are a mix of mature Douglas-fir, lodgepole pine, and ponderosa pine trees growing at high density. There is high pine mortality from the mountain pine beetle occurring in the pines. After treatment, the sites would be dominated by mature Douglas-fir and potentially some surviving ponderosa pine. Density would be fairly open, with trees spaced an average of 20 to 40 feet apart. The residual forest would have low susceptibility to insects and disease, and low intensity prescribed fire can be used to keep fuels low and enhance fire resiliency. Most sites are proposed for an underburn following harvest.

*Photo 1 & 2: Existing condition*



*Photo 3: Example of target condition*



## Stonewall Unit Descriptions

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### **Group 2: Intermediate Treatment to Thin Young Forests Established after Previous Harvest**

Units 3, 14, 16, 18, 21, 48, 49, 50, 51, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 75.  
Approximately 1087 acres.

Group 2 is recommended for pre-commercial thinning; these are sites containing dense, small diameter trees generally less than 40 years old and smaller than 6" diameter. These are areas of previous harvest that have regenerated, and are in need of thinning to maintain forest health, species diversity, and ensure vigorous maturity is reached. Some of the larger diameter pine trees are susceptible to mountain pine beetle. Mechanical equipment entry or hand treatment is proposed depending on accessibility and size of the trees to be cut. Seral species such as ponderosa pine, aspen, and western larch would be enhanced where possible. After treatment these young forests would contain trees generally spaced 12 to 20' apart. Some sites are proposed for jackpot or handpile/burning to reduce surface fuels following the cutting treatment.

*Photo 1 & 2: Existing condition*



## Stonewall Unit Descriptions

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### Group 3: Regeneration Harvest in Areas of High Mortality, Retaining Seed and Shelter Trees

Units 1, 9, 11, 12, 13, 20, 22, 25, 29, 34, 39, 40, 41, 42, 43, 53, 57, 58. Approximately 770 acres.

These areas are recommended for regeneration treatments where many of the existing mature trees would be harvested. This would leave behind very widely-spaced or grouped live trees to provide seed and shelter to establish a new stand of seedlings underneath. These are areas generally dominated by lodgepole pine or ponderosa pine. Mountain pine beetle has killed the bulk of the mature trees, but there are some live healthy trees of other species present. The seed and shelter trees would be left on the site indefinitely. The distribution of seed and shelter trees would vary; in general the stands would appear very open, but in some cases only relatively small groups of trees would be removed. The trees left behind would consist of Douglas-fir, surviving ponderosa pine, Englemann spruce, subalpine fir, and aspen, depending on the site. The species of regeneration would also vary by site, but seral species such as ponderosa pine, western larch, and aspen would be encouraged where possible. Tree planting may occur after harvest to achieve regeneration goals. Some sites already contain some natural regeneration which may be promoted. Many sites are proposed for a site preparation and/or jackpot burn to reduce surface fuels and promote desired regeneration.

*Photos 1 & 2: Existing condition*



*Photos 3 & 4: Examples of target conditions, after regeneration establishes*



## Stonewall Unit Descriptions

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### Group 4: Regeneration Harvest in Areas of High Mortality, Retaining Rare Live Trees

Units 10, 17, 19, 27, 35, 36, 37, 52, 56, 74. Approximately 223 acres.

These areas are recommended for regeneration treatments where most of the existing mature trees would be harvested. This would leave behind only rare live mature trees, and establish a new stand of seedlings. This is proposed in areas heavily dominated by lodgepole or ponderosa pine that have been killed by mountain pine beetle. Unlike Group 3, there are only very few trees of other species present. Where live healthy trees occur they would be left behind to provide habitat structure, but they are not plentiful enough to provide seed or shelter to the new seedlings. Natural regeneration of lodgepole pine would likely be successful from the seed source on the ground, and planting may occur to promote diversity of other species. Some sites already contain some natural regeneration which may be promoted. Most of these sites are also proposed for a site preparation burn following harvest to reduce surface fuels and promote desirable regeneration.

*Photo 1 & 2: Existing condition*



*Photo 2: Example of target condition, after regeneration is established*



## Stonewall Unit Descriptions

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### **Group 5: Intermediate Treatment to Remove Minor Amounts of Dead/Dying Trees**

Units 4 & 5. Approximately 25 acres.

A few small areas are proposed for an intermediate treatment to harvest dead/dying trees. The amount of these trees is minor in nature unlike the more extensive treatments described in Groups 1, 3, and 4. These are mixed forests on a riparian setting where the lodgepole pine component is dead from mountain pine beetle and its removal leaves behind a fully stocked mature forest of Engelmann spruce, subalpine fir, and Douglas-fir. Further green tree removal is not warranted to meet desired conditions in these riparian sites, and the residual density would be fairly high with trees spaced approximately 10-15' apart on average. These sites contain multiple layers of younger trees, and therefore slashing and handpile/burning is recommended to thin this material to reduce fuels.

*Photo 1 & 2: Existing condition*



## Stonewall Unit Descriptions

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### Group 6: Low Severity Prescribed Fire to Create Mortality Patches 5 or 10 acres

Units 76, 78, 85. Approximately 304 acres.

These units are proposed for low-severity prescribed fire treatment. Sites are located in rugged, inaccessible areas where harvest is not appropriate. However, there is a need to change the homogeneous stand structure and fuel loadings to create a mosaic of conditions on the landscape. This would allow wildfire to play a more natural role in the ecosystem while protecting nearby communities. The forests in these areas are generally dominated by Douglas-fir with varying amounts of ponderosa pine and other species. There are areas containing lodgepole pine with high mountain pine beetle mortality. There are some natural openings and meadows. Treatment may include mechanical thinning with chainsaws to remove small trees and create a fuelbed conducive to carrying a low intensity fire. The treatment is designed to increase age class diversity, structure, and heterogeneity of the forest. The application of prescribed fire would remove ladder fuels and consume fine woody debris which would then modify wildfire behavior. These units are proposed for an underburn that would reduce fuel loadings, kill pockets of ladder fuels, and open up tree density. Generally, direct mortality from fire would be low. However, the fire may cause mortality of mature trees in patches up to 5 to 10 acres in size. These areas would naturally regenerate to various conifer species and/or aspen depending on the site. Natural meadows may be expanded and enhanced. Overall, the fire intensity and effects to vegetation and the soil surface would be low.

*Photos 1, 2, & 3: Existing condition*



## Stonewall Unit Descriptions

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### Group 7: Mixed Severity Fire to create mortality patches up to 5, 10, or 20 acres

Units 80, 86, 87. Approximately 410 acres.

These units are proposed for mixed-severity prescribed fire. The results would yield patches of mature tree mortality less than 5, 10, or 20 acres depending on the unit. Sites are located in rugged, inaccessible areas where harvest is not appropriate. However, a change in homogeneous stand structure and fuel loadings is needed to create a mosaic of conditions on the landscape which would allow wildfire to play a more natural role in the ecosystem while protecting nearby communities. Douglas-fir is the dominant species although there are components of aspen, ponderosa pine, and whitebark pine at higher elevations. There are areas containing lodgepole pine with high mountain pine beetle mortality and there are some natural openings and meadows. Treatment may include mechanical thinning with chainsaws to remove small trees and create a fuelbed conducive for carrying a low intensity fire. The treatment is designed to increase age class diversity, structure, and heterogeneity of the forest. Treatment objectives include creating small openings and reducing stand density and competition by other conifers. The application of prescribed fire would remove ladder fuels and consume fine woody debris which modifies wildfire behavior. The severity of the fire would be mixed, creating some openings of high mortality where new regeneration would establish while underburning other areas. Aspen and whitebark pine would be encouraged with fire by lowering competition from other conifers and creating suitable seedbeds. Natural meadows may be enhanced. These units are adjacent to private land.

*Photos 1, 2, 3, 4: Existing condition*



## Stonewall Unit Descriptions

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### **Group 8: Mixed severity fire to create mortality patches up to 30 or 75 acres**

Units 77, 79, 81, 82, 83, 84, 88. Approximately 4,658 acres.

These units are proposed for mixed-severity prescribed fire. The results are expected to be at the higher severity end of the category with maximum patches of mature tree mortality less than 30 or 75 acres, depending on the unit. Sites are located in rugged, inaccessible areas where harvest is not appropriate. However, a change in homogeneous fuel loadings is needed to create a mosaic of conditions on the landscape which would allow wildfire to play a more natural role in the ecosystem while protecting nearby communities. These units are best classified as mixed conifer dominated by lodgepole pine and Douglas-fir, although nearly pure lodgepole pine dominates some areas. The lodgepole pine mortality from mountain pine beetle is high. There is some ponderosa pine at lower elevations and whitebark pine at higher elevations, and grasslands and aspen scattered throughout. The treatment is designed to increase age class diversity, structure, and heterogeneity of the forest. Fire would also promote grasslands, ponderosa pine, and whitebark pine by removing competing conifers and creating openings suitable for regeneration. Treatment may include mechanical thinning with chainsaws to remove small trees and create a fuelbed conducive for carrying a low intensity fire. The severity of the fire would be mixed, with some patches of high mortality where new regeneration would establish while underburning other areas. The application of prescribed fire would remove ladder fuels and consume fine woody debris which modifies wildfire behavior.

*Photos 1, 2, 3, 4: Existing condition*

