

## **COPWRR Project-Level Ecosystem Monitoring Report Form**

Project: Newberry Estates Hazardous Fuels Reduction	
Date: September 17, 2007	
Interdisciplinary Team Members Participating: Steve Castillo, Ed Horn, Terry Nelson, Steve Robertson, Jenny Moffitt	
Other Participants in Field Evaluation: Marilyn Miller, Glen Ardt, Jim Larsen, Amy Waltz, Andy Eglitis, Pete Powers, Jack Barringer, Courtney Shaff, Jim Crocker, Matt Delaney, Cindy Glick	
Unit #: 3	Acres in Unit: 304
Other Units from Project Being Monitored: 4, 5, 6	

### **Background**

<p>Purpose and Need for Treatment of Unit:</p> <p>The 2500+ acre Newberry Estates Hazardous Fuels Reduction project area historically contained a higher proportion of ponderosa pine. Through selective harvest of mature trees, lightning strikes, mortality from western pine beetle, and mortality from competitive stress, the dominance and average size of ponderosa pine has been greatly reduced. Prior to this project the area was characterized by dense stands of lodgepole pine with individual ponderosa pine trees and small groups widely scattered throughout the area. The goals of this project were:</p> <p>To restore the size and extent of the ponderosa pine component of local forest stands to historic ranges and to protect remnant old-growth ponderosa pine trees</p> <p>To increase the resiliency of forest stands to fire, insects and disease and improve forest health</p> <p>To reduce the risk of uncharacteristically severe wildfire and improve the ability to suppress wildfires on publicly managed lands that border private property (wildland urban interface) to enhance public and fire fighter safety</p> <p>To enhance the aesthetics of forest stands in the project area</p>
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<p>Management Objectives for Unit:</p> <p>The overall project goals of ponderosa pine restoration, increasing forest resiliency and health, reducing catastrophic wildfire risk in the WUI, and enhancing aesthetics apply to this unit.</p>
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There is a particular emphasis in Unit 3 on enhancing aesthetics, protecting and releasing individual ponderosa pine, reducing shading and winter icing on Highway 97, and creating a fire break along Highway 97 and for the Wickiup Junction business and residential developments.

Treatment Summary for Unit:

Thinning of small diameter ( $\leq 10''$  DBH) lodgepole pine and some diseased or leaning trees within 100' to 150' of homes.

Thinning of larger lodgepole ( $\leq 14''$  DBH) within 30' of ponderosa pine trees.

In areas within .25 miles of domiciles and major roads there would be 100 to 150 trees per acre, evenly spaced, after treatment.

In areas beyond .25 miles of domiciles and major roads thinning would be less intense, leaving 150 to 200 trees per acre, evenly spaced.

Pruning of leave trees up to a height of 12' within 100-150' of private property.

Piling, chipping, lop/scattering or removing residual woody debris.

Closing of unnecessary two-track firewood roads.

Implement treatment in a mosaic pattern across the entire 2500 acre project area over the course of 3-5 years.

Selected Implementation Guidelines, Management Measures, and BMPs to Evaluate:

Snags greater than 8'' DBH will not be cut except those with the potential to fall on homeowners property or access roads.

Downed logs greater than 10'' DBH will not be disturbed.

Widely spaced 2-10 acre thickets will be left untouched for wildlife cover.

If any threatened and endangered species, raptor nests or cultural resource artifacts are found, work would stop immediately; pending evaluation by trained personnel.

The west half of Section 7, T22S, R11E would be untouched until a survey has been done for special status plants.

The area of the known population of *Botrychium pumicola* in a portion of Section 12, T22S, R10E will be left untouched.

The actions would avoid the period of April 1 through August 30 for sensitive nesting bird species in identified critical areas.

Loading of biomass material, firewood, and post and poles would occur on existing roads and two track trails.

### **Unit Evaluation**

Were the treatments implemented as described in the decision document or Record of Decision? Were the treatments implemented in accordance with the Selected Implementation Guidelines, Management Measures and BMPs identified above? If not, please explain why.

After reading the treatment summary and Description of Proposed Action for this project and then traveling to the site, field review participants were surprised by the low density (40 to 100 TPA) and small size class of trees left in this unit. They felt the CE emphasized the removal of small lodgepole (less than 10" diameter) except in close proximity to homes and ponderosa pine trees. But outside of the wildlife leave areas there were very few large lodgepoles remaining. The CE Proposed Action did include the condition that some larger lodgepoles that were diseased or leaning could be removed and Steve Castillo explained that almost all of the trees in this unit were diseased (beetle damage, mistletoe, gall rust).

Field review participants felt that the treatment could have been more clearly explained in the CE to create the expectation that most of the big lodgepole pine would be removed and that fairly low densities might be possible under this project. The field review participants were not so much upset by the outcome of the treatment as they were that the treatment description in the CE did not seem to match the result of the implementation. The group was generally sympathetic to the fact that managing lodgepole is complicated and rarely leads to results that managers can feel fully satisfied with on all fronts (fuels, wildlife, aesthetics, etc). Agency staff made a reasonable argument that clearcutting might be an appropriate treatment in old lodgepole stands to mimic historic disturbance patterns.

Treatments were implemented over snow in winter 2005-2006 to protect soil and ground resources as specified in the CE.

Some of the two track fire roads through the unit area had been closed. One road which the field review participants came across could have been closed more fully.

Rather than the 2-10 acre leave patches specified in the CE, the operator left a mosaic of smaller leave patches scattered across the unit area plus a few very large leave patches (5-10 acres or more). Field reviewers thought the pattern of leave patches looked good. Review participants thought that specifying a percentage of the unit or project area to be left in cover patches would be good. One participant suggested that feathering the edges of the leave patches would be a good additional touch for future projects.

Operators were careful to leave all stick and cavity nests and snags found. Snags were also created at a rate of approximately one per every 10 acres.

The group discussed the crushing of remaining slash that was done at the end of the treatment of the unit. Some participants raised the concern that the potential cost and soil compaction related to the crushing might not be worth the fuels reduction benefits of flattening and breaking up the residual slash.

For each Management Objective for this Unit please evaluate whether the objective has been achieved. If the objective has not been achieved, please comment on barriers, constraints, limitations, etc and what might be needed for future projects to achieve the objective.

The CE did not specifically identify Management Objectives. The Management Objectives listed in this report form were interpolated from the Purpose and Need and Proposed Action. The group did agree that the project helped to reduce catastrophic fire risk in the near term and address forest health. No one either praised or criticized the aesthetics of the unit, recognizing that the results of leaving lodgepole alone or managing it both may not result in a very aesthetically attractive outcome. The unit-specific objective of establishing a fire break along HWY 97 has been achieved.

### **Project Evaluation**

Were the results of this project what was anticipated and intended? Have treatments addressed the Purposes and Needs for this Unit? If not, why not?

The group felt that the treatment definitely addressed the fire risk reduction objectives laid out in the Purpose and Need. One long term management issue to think about is the regrowth of bitterbrush in treated areas now that the canopy has been opened.

The group felt that the treatment addressed forest health by reducing the mistletoe in the unit area.

The group asked the question “how can you manage to enhance aesthetics in lodgepole pine stands?” No one had a great answer.

If the long term goals for this unit area are to maintain a fire break that can be used for future fire suppression efforts and to replace diseased trees with healthy trees then the treatments that have been implemented have some logic behind them.

Please share any observations or comments about the project planning, implementation, or results that are important to understanding management of this unit or important for improving future management in similar projects.

Participants in the field review would like to see future Categorical Exclusions include more background and contextual information to help evaluate what the potential of a project area

might be and what environmental aspects need to be protected. Specifically, on this project they would have liked to know what the potential site productivity of the stands were and also what wildlife species currently use or historically used the project area.

Participants in the field review would also have liked to have seen some specific habitat goals laid out in the Purpose and Need for the project or specified in the Proposed Action. Incorporating leave areas helped to ensure that habitat needs of deer and elk are being met. But there was an interest in ensuring that the habitat needs of other species, especially migratory and nesting birds, are also being met. Habitat planning needs to be done at the landscape-scale. Also, while a wildlife biologist helped to survey the project area there were not wildlife biologists involved in layout of the treatments.

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Other Participants in Field Evaluation: Marilyn Miller, Glen Ardt, Jim Larsen, Amy Waltz, Andy Eglitis, Pete Powers, Jack Barringer, Courtney Shaff, Jim Crocker, Matt Delaney, Cindy Glick	
Unit #: 4	Acres in Unit: 35
Other Units from Project Being Monitored: 3, 5, 6	

### **Background**

<p>Purpose and Need for Treatment of Unit:</p> <p>The 2500+ acre Newberry Estates Hazardous Fuels Reduction project area historically contained a higher proportion of ponderosa pine. Through selective harvest of mature trees, lightning strikes, mortality from western pine beetle, and mortality from competitive stress, the dominance and average size of ponderosa pine has been greatly reduced. Prior to this project the area was characterized by dense stands of lodgepole pine with individual ponderosa pine trees and small groups widely scattered throughout the area. The goals of this project were:</p> <ul style="list-style-type: none"><li>To restore the size and extent of the ponderosa pine component of local forest stands to historic ranges and to protect remnant old-growth ponderosa pine trees</li><li>To increase the resiliency of forest stands to fire, insects and disease and improve forest health</li><li>To reduce the risk of uncharacteristically severe wildfire and improve the ability to suppress wildfires on publicly managed lands that border private property (wildland urban interface) to enhance public and fire fighter safety</li><li>To enhance the aesthetics of forest stands in the project area</li></ul>
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<p>Management Objectives for Unit:</p> <p>The overall project goals of ponderosa pine restoration, increasing forest resiliency and health, reducing catastrophic wildfire risk in the WUI, and enhancing aesthetics apply to this unit.</p>
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There is a particular emphasis in Unit 4 on protecting existing old-growth ponderosa pine and reducing fuel loading next to a subdivision, while leaving cover for wildlife.

Treatment Summary for Unit:

Thinning of small diameter ( $\leq 10''$  DBH) lodgepole pine and some diseased or leaning trees within 100' to 150' of homes.

Thinning of larger lodgepole ( $\leq 14''$  DBH) within 30' of ponderosa pine trees.

In areas within .25 miles of domiciles and major roads there would be 100 to 150 trees per acre, evenly spaced, after treatment.

In areas beyond .25 miles of domiciles and major roads thinning would be less intense, leaving 150 to 200 trees per acre, evenly spaced.

Pruning of leave trees up to a height of 12' within 100-150' of private property.

Piling, chipping, lop/scattering or removing residual woody debris.

Closing of unnecessary two-track firewood roads.

Implement treatment in a mosaic pattern across the entire 2500 acre project area over the course of 3-5 years.

Selected Implementation Guidelines, Management Measures, and BMPs to Evaluate:

Snags greater than 8'' DBH will not be cut except those with the potential to fall on homeowners property or access roads.

Downed logs greater than 10'' DBH will not be disturbed.

Widely spaced 2-10 acre thickets will be left untouched for wildlife cover.

If any threatened and endangered species, raptor nests or cultural resource artifacts are found, work would stop immediately; pending evaluation by trained personnel.

The west half of Section 7, T22S, R11E would be untouched until a survey has been done for special status plants.

The area of the known population of *Botrychium pumicola* in a portion of Section 12, T22S, R10E will be left untouched.

The actions would avoid the period of April 1 through August 30 for sensitive nesting bird species in identified critical areas.

Loading of biomass material, firewood, and post and poles would occur on existing roads and two track trails.

### **Unit Evaluation**

Were the treatments implemented as described in the decision document or Record of Decision? Were the treatments implemented in accordance with the Selected Implementation Guidelines, Management Measures and BMPs identified above? If not, please explain why.

Lodgepole has largely been cleared from within this stand of old-growth ponderosa pine as part of the treatment. This may have been more aggressive removal of lodgepole than specified in the Proposed Action in the CE document. But the group felt that the treatment was appropriate given the goal of ponderosa pine restoration and that the current condition of the stand looked good.

The group discussed the snag creation Management Measure. Some participants in the review would like to see numeric objectives for snag creation in CE documents in the future. Others suggested that it would be helpful to know a historic range of variability for how many snags would have been in this area in the past in order to set goals for snag numbers in the future.

Wildlife cover patches were maintained.

No T&E species, nests, special status plants, or cultural artifacts were found on this unit or other units on the project.

For each Management Objective for this Unit please evaluate whether the objective has been achieved. If the objective has not been achieved, please comment on barriers, constraints, limitations, etc and what might be needed for future projects to achieve the objective.

The CE did not specifically identify Management Objectives. The Management Objectives listed in this report form were interpolated from the Purpose and Need and Proposed Action. However, the group agreed that the treatment had addressed the objectives of ponderosa pine restoration, reducing catastrophic fire risk, improving forest health, and improving aesthetics.

### **Project Evaluation**

Were the results of this project what was anticipated and intended? Have treatments addressed the Purposes and Needs for this Unit? If not, why not?

The BLM faces significant challenges in this unit - protecting a patch of old-growth ponderosa pines that has had a subdivision built right next to it (Newberry Estates) and has had lodgepole encroach into it.

Steve Castillo indicated that there was still mistletoe present in the unit but that to reduce mistletoe presence even more would have required removal of some of the old-growth ponderosa pine. The BLM wanted to retain the maximum amount of this old-growth possible.

BLM fuels staff were happy with the results of the treatment. They found the unit to be relatively clean and felt that the planned prescribed burn would address the remaining slash fuel at the unit. Someone expressed concern about the impacts that prescribed burning might have on the big, old ponderosas. Someone else asked how the BLM will review the effects of the burning treatment. COFMS monitoring and the burn plan review should help to provide this formal evaluation of burn results.

Some participants in the field review had concerns about maintaining manageable fuel conditions in the unit in future decades. They recommended prescribed burning to keep the lodgepole regeneration in check, but thought this might be difficult with Newberry Estates right next to the unit.

The group liked the post-treatment state of this ponderosa pine stand. Some thought that the site was almost at capacity and that the variety of age classes looked good and boded well for future stand condition.

Some participants in the field review commented that the treated stand would serve well as white headed woodpecker habitat with its open structure, big trees and cover patches.

Please share any observations or comments about the project planning, implementation, or results that are important to understanding management of this unit or important for improving future management in similar projects.

Field review participants expressed some additional reservations about the use of Categorical Exclusions to implement projects such as this. As noted in the report for Unit 3, some reviewers would have liked to see a greater level of background and treatment description detail in the CE for this project and each unit. There are also concerns that the process for a CE may happen so quickly that interested stakeholders will not be able to get meaningfully involved in review. Finally, it is unclear how landscape-scale considerations and considerations of cumulative effects should be/can be incorporated into a CE. Perhaps a larger scale programmatic analysis can be completed and then CEs rolled out of it?

The Prineville BLM District completed the planning for this project during the peak of the Upper Deschutes RMP development process. This necessitated doing a lot of the work with backfill staff while many of the more senior staff were working on the RMP. And planning for this project was also done in a period when the use of the CE authority for fuels reduction projects was relatively new and unfamiliar.

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Other Participants in Field Evaluation: Marilyn Miller, Glen Ardt, Jim Larsen, Amy Waltz, Andy Eglitis, Pete Powers, Jack Barringer, Courtney Shaff, Jim Crocker, Matt Delaney, Cindy Glick	
Unit #: 5	Acres in Unit: 353
Other Units from Project Being Monitored: 3, 4, 6	

### **Background**

<p>Purpose and Need for Treatment of Unit:</p> <p>The 2500+ acre Newberry Estates Hazardous Fuels Reduction project area historically contained a higher proportion of ponderosa pine. Through selective harvest of mature trees, lightning strikes, mortality from western pine beetle, and mortality from competitive stress, the dominance and average size of ponderosa pine has been greatly reduced. Prior to this project the area was characterized by dense stands of lodgepole pine with individual ponderosa pine trees and small groups widely scattered throughout the area. The goals of this project were:</p> <ul style="list-style-type: none"><li>To restore the size and extent of the ponderosa pine component of local forest stands to historic ranges and to protect remnant old-growth ponderosa pine trees</li><li>To increase the resiliency of forest stands to fire, insects and disease and improve forest health</li><li>To reduce the risk of uncharacteristically severe wildfire and improve the ability to suppress wildfires on publicly managed lands that border private property (wildland urban interface) to enhance public and fire fighter safety</li><li>To enhance the aesthetics of forest stands in the project area</li></ul>
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<p>Management Objectives for Unit:</p> <p>The overall project goals of ponderosa pine restoration, increasing forest resiliency and health, reducing catastrophic wildfire risk in the WUI, and enhancing aesthetics apply to this unit.</p> <p>There is a particular emphasis in Unit 5 on releasing existing ponderosa pine trees by thinning lodgepole while maintaining cover for wildlife.</p>
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Treatment Summary for Unit:

Thinning of small diameter ( $\leq 10''$  DBH) lodgepole pine and some diseased or leaning trees within 100' to 150' of homes.

Thinning of larger lodgepole ( $\leq 14''$  DBH) within 30' of ponderosa pine trees.

In areas within .25 miles of domiciles and major roads there would be 100 to 150 trees per acre, evenly spaced, after treatment.

In areas beyond .25 miles of domiciles and major roads thinning would be less intense, leaving 150 to 200 trees per acre, evenly spaced.

Pruning of leave trees up to a height of 12' within 100-150' of private property.

Piling, chipping, lop/scattering or removing residual woody debris.

Closing of unnecessary two-track firewood roads.

Implement treatment in a mosaic pattern across the entire 2500 acre project area over the course of 3-5 years.

Selected Implementation Guidelines, Management Measures, and BMPs to Evaluate:

Snags greater than 8'' DBH will not be cut except those with the potential to fall on homeowners property or access roads.

Downed logs greater than 10'' DBH will not be disturbed.

Widely spaced 2-10 acre thickets will be left untouched for wildlife cover.

If any threatened and endangered species, raptor nests or cultural resource artifacts are found, work would stop immediately; pending evaluation by trained personnel.

The west half of Section 7, T22S, R11E would be untouched until a survey has been done for special status plants.

The area of the known population of *Botrychium pumicola* in a portion of Section 12, T22S, R10E will be left untouched.

The actions would avoid the period of April 1 through August 30 for sensitive nesting bird species in identified critical areas.

Loading of biomass material, firewood, and post and poles would occur on existing roads and two track trails.

## **Unit Evaluation**

Were the treatments implemented as described in the decision document or Record of Decision? Were the treatments implemented in accordance with the Selected Implementation Guidelines, Management Measures and BMPs identified above? If not, please explain why.

As was the case at Unit 3 the field review participants felt that the Unit had been treated more intensively than they had anticipated based on the description of the Proposed Action in the CE. They were surprised by the low density and the relative absence of large trees.

One of the reasons that this unit was treated so intensively is that the BLM is trying to force the site towards a ponderosa pine structure. Historically, the site was probably mixed ponderosa and lodgepole. But if the BLM can shift it more towards a ponderosa structure then fire will be easier to manage in this site adjacent to the subdivision. Steve Castillo also suggested that the Unit 5 needed to be intensively cleared because the forested area immediately west of Unit 5 (on the other side of the road) had very thick fuels and would not be thinned any time soon.

The participants in the field review asked whether more large lodgepole could have been left in this Unit. The issue of disease in larger lodgepole was discussed again as a reason for removal. Steve Castillo also indicated that there were fewer large lodgepole in this Unit than in others.

Field review participants again stated that they would like to see a closer match between the Proposed Action in CE documents and the implemented treatment.

For each Management Objective for this Unit please evaluate whether the objective has been achieved. If the objective has not been achieved, please comment on barriers, constraints, limitations, etc and what might be needed for future projects to achieve the objective.

The CE did not specifically identify Management Objectives for this Unit. The Management Objectives listed in this report form were interpolated from the Purpose and Need and Proposed Action.

## **Project Evaluation**

Were the results of this project what was anticipated and intended? Have treatments addressed the Purposes and Needs for this Unit? If not, why not?

The group generally agreed that the treatment has reduced hazardous fuel concentrations and helped to restore ponderosa pine in this unit. There may have been more frustration about the disconnect between the described treatment (in the CE) and the implemented treatment then there was concern about the treatment itself.

The BLM and the contractor left a significant size wildlife leave patch in this unit. Field review participants were enthusiastic about the size of the leave patch. Someone did ask whether an alternative location for the patch might have been better though. The thought behind this question was that if the leave patch caught on fire and winds were from the south and west (which is common), dangerous flame lengths could be carried towards the Newberry Estates subdivision. Steve Castillo said that he tried to use the best available pieces of forest vegetation in the Unit for the leave patch and that was the reason it was placed where it was.

Please share any observations or comments about the project planning, implementation, or results that are important to understanding management of this unit or important for improving future management in similar projects.

Again it should be noted that the Prineville BLM completed the planning for this project at a real “bottleneck” time for the agency and that time and resources were limited.

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Other Participants in Field Evaluation: Marilyn Miller, Glen Ardt, Jim Larsen, Amy Waltz, Andy Eglitis, Pete Powers, Jack Barringer, Courtney Shaff, Jim Crocker, Matt Delaney, Cindy Glick	
Unit #: 6	Acres in Unit: 107
Other Units from Project Being Monitored: 3, 4, 6	

### Background

#### Purpose and Need for Treatment of Unit:

The 2500+ acre Newberry Estates Hazardous Fuels Reduction project area historically contained a higher proportion of ponderosa pine. Through selective harvest of mature trees, lightning strikes, mortality from western pine beetle, and mortality from competitive stress, the dominance and average size of ponderosa pine has been greatly reduced. Prior to this project the area was characterized by dense stands of lodgepole pine with individual ponderosa pine trees and small groups widely scattered throughout the area. The goals of this project were:

To restore the size and extent of the ponderosa pine component of local forest stands to historic ranges and to protect remnant old-growth ponderosa pine trees

To increase the resiliency of forest stands to fire, insects and disease and improve forest health

To reduce the risk of uncharacteristically severe wildfire and improve the ability to suppress wildfires on publicly managed lands that border private property (wildland urban interface) to enhance public and fire fighter safety

To enhance the aesthetics of forest stands in the project area

#### Management Objectives for Unit:

The overall project goals of ponderosa pine restoration, increasing forest resiliency and health, reducing catastrophic wildfire risk in the WUI, and enhancing aesthetics apply to this unit.

There is a particular emphasis in Unit 6 on releasing existing ponderosa pine trees by thinning lodgepole while maintaining cover for wildlife. (In this unit the BLM delegated responsibility to the stewardship contractor to select the leave patches).

#### Treatment Summary for Unit:

Thinning of small diameter ( $\leq 10''$  DBH) lodgepole pine and some diseased or leaning trees within 100' to 150' of homes.

Thinning of larger lodgepole ( $\leq 14''$  DBH) within 30' of ponderosa pine trees.

In areas within .25 miles of domiciles and major roads there would be 100 to 150 trees per acre, evenly spaced, after treatment.

In areas beyond .25 miles of domiciles and major roads thinning would be less intense, leaving 150 to 200 trees per acre, evenly spaced.

Pruning of leave trees up to a height of 12' within 100-150' of private property.

Piling, chipping, lop/scattering or removing residual woody debris.

Closing of unnecessary two-track firewood roads.

Implement treatment in a mosaic pattern across the entire 2500 acre project area over the course of 3-5 years.

#### Selected Implementation Guidelines, Management Measures, and BMPs to Evaluate:

Snags greater than 8'' DBH will not be cut except those with the potential to fall on homeowners property or access roads.

Downed logs greater than 10'' DBH will not be disturbed.

Widely spaced 2-10 acre thickets will be left untouched for wildlife cover.

If any threatened and endangered species, raptor nests or cultural resource artifacts are found, work would stop immediately; pending evaluation by trained personnel.

The west half of Section 7, T22S, R11E would be untouched until a survey has been done for special status plants.

The area of the known population of *Botrychium pumicola* in a portion of Section 12, T22S, R10E will be left untouched.

The actions would avoid the period of April 1 through August 30 for sensitive nesting bird species in identified critical areas.

Loading of biomass material, firewood, and post and poles would occur on existing roads and two track trails.

### **Unit Evaluation**

Were the treatments implemented as described in the decision document or Record of Decision? Were the treatments implemented in accordance with the Selected Implementation Guidelines, Management Measures and BMPs identified above? If not, please explain why.

The treatment that was implemented in this unit more closely matched field review participants expectations based on their reading of the Proposed Action described in the CE. At the eastern end of the unit lodgepole had been aggressively thinned between medium and large ponderosa pine trees, restoring and safeguarding the future of the ponderosa pine stand. In addition, a higher density of larger lodgepoles were left in this Unit (on the western end, which was more lodgepole dominated) in comparison to other Units visited.

Leave trees were left in smaller clumps throughout the Unit rather than the larger size clumps specified in the CE. Field review participants felt that this arrangement worked well for providing needed cover and also for aesthetics.

Some two-track firewood roads were obliterated in this Unit.

For each Management Objective for this Unit please evaluate whether the objective has been achieved. If the objective has not been achieved, please comment on barriers, constraints, limitations, etc and what might be needed for future projects to achieve the objective.

The CE did not specifically identify Management Objectives for this Unit. The Management Objectives listed in this report form were interpolated from the Purpose and Need and Proposed Action.

### **Project Evaluation**

Were the results of this project what was anticipated and intended? Have treatments addressed the Purposes and Needs for this Unit? If not, why not?

Field review participants felt that the treatment provided an effective 600 foot wide fuel break along Reed Road, providing enhanced ability to suppress wildfire in the project area.

The group also felt that the treatment addressed the goal of ponderosa pine restoration in the eastern end of the Unit where ponderosa pine was more concentrated.

One of the field review participants asked whether more aggressive road closure work could have been done on this project. Steve Castillo told the group that in order to do more comprehensive closure and obliteration of unnecessary roads a more in-depth NEPA analysis would have been required and this might have slowed the completion of the time-sensitive fuels reduction work.

Please share any observations or comments about the project planning, implementation, or results that are important to understanding management of this unit or important for improving future management in similar projects.

While visiting Unit 6 Steve Castillo took the opportunity to show field review participants a unit where a salvage treatment had been implemented in 1985 (Redman Sale). Mountain Pine Beetle had not killed all of the trees in this site and during the salvage treatment 5 to 12 seed trees per acre had been left. The salvage provided wood products for the community and created open conditions that allowed vigorous regeneration and growth among replacement trees. At this point, the site had both mature trees and a number of very large and vigorous ~30 year old trees and small trees and low fuels were just beginning to reach densities and volumes which might be a fuels problem. Key issues to balance with this kind of treatment were 1) the reduction of wildlife cover tradeoff with open conditions that produce rapid regeneration and 2) the tradeoff of getting a dense bitterbrush understory if dense lodgepole crown cover was removed.