

COPWRR Project-Level Ecosystem Monitoring Report Form

Project: East Tumbull Hazardous Fuel Reduction Project
NEPA Authority Used: Environmental Assessment
Date: June 4, 2008
Interdisciplinary Team Members Participating: Jim Schlaich, Bob Heiden, Tim Bisby
Other Participants in Field Evaluation: Marilyn Miller, Amy Waltz, Jim Larsen, Patti Gentilluomo, Carl Jansen, Glen Ardt, Tim Lillebo, Asante Riverwind, Anthony _____, Cindy Glick, Phil Chang
Unit #: EA Unit 104, NET Sale Unit 12 Acres in Sale Unit: 66 acres
Other Units from Project Being Monitored: EA Units 112 and 136, Cardinal Bridge

Background

<p>Purpose and Need for Treatment of Unit:</p> <p>Forests in the East Tumbull area generally burned historically with low severity fire every 0-35 years, but now have fuel loads that are substantially in excess of historic or desirable conditions; threatening resource values, public and firefighter safety. Hazardous fuels reduction treatments will be undertaken to:</p> <ol style="list-style-type: none">1) Reduce wildland fire risk to communities and present forest values. Specifically, to reduce the percentage of the project area that has a moderate to extreme fire hazard to 50 percent or less by reducing horizontal and ladder fuels within the WUI and along identified evacuation routes2) Provide defensible space access and escape routes from private property and developed recreation sites. Also to develop defensible space along key routes which would provide improved conditions from which to engage in fire suppression action.3) Reduce wildland fire risk to future forest values by strategically decreasing stand densities and susceptibility to insects and disease, improve the sustainability of frequent fire in our future forests, and eliminate unnecessary roads that contribute to elevated wildland fire risk.

<p>Management Objectives for Unit:</p> <p>This unit falls within Deschutes National Forest Land and Resource Management Plan Management Areas 7 and 9.</p> <p>MA – 7 (Mule Deer Habitat) is managed to provide optimum habitat conditions on deer winter and transition range while providing wood products, visual quality and recreation opportunities.</p>

MA – 9 (Scenic Views) is managed to provide high quality scenery that represents the natural character of Central Oregon. Landscapes seen from selected travel routes and use areas will be managed to maintain or enhance their appearance and forest health.

Treatment Summary for Unit:

Silvicultural Prescription: Thin to $< \text{ or } = 21''$ DBH, Handpile, Mow

Approximately 60 square feet of basal area per acre of conifer stocking would be retained in pine stands. In general, under the thinning from below prescriptions included with this alternative, the largest and healthiest trees in the stand would be retained; in addition to all the live trees larger than 12 or 21 inches dbh.

Contractually designate Ponderosa pine for removal, leaving largest tree on 16 foot limiting distance (Designation by Geometry)

Remove Lodgepole pine to 4" dbh and all live Western Juniper up to 20.9"

Retain 30% of area in no-thinning patches.

Thinning would be done on a variable spacing with the retention of one to two clumps per acre of (three to seven or more) trees to mimic natural ponderosa pine development patterns.

Commercial thinning will include whole tree yarding of trees between 8 and 21 inches dbh, with hand thinning and hand or mechanical piling of the small diameter trees less than 8 inches dbh. Boom mounted shears utilizing designated skid trails or logging over snow and/or frozen ground would be done in all commercial thinning EA units.

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

Soils Mitigation and Management:

__ Use old landings and skidding networks whenever possible. Assure that water control structures are installed and maintained on skid trails that have gradients of 10% or more. Ensure erosion control structures are working effectively.

__ In all proposed activity areas, locations for new yarding and transportation systems would be designated prior to the logging operations. This includes temporary roads, spur roads, log landings, and primary (main) skid trail networks.

__ Minimize erosive effects of concentrated water through proper design and construction of temporary roads.

__ Conduct regular preventive maintenance to avoid deterioration of the road surface and minimize the effects of erosion and sedimentations.

__ A burn plan, including soil moisture guidelines, will be completed before the initiations of prescribed fire treatments in planned activity areas.

__ Assure that on ponderosa pine sites a minimum of 5 to 10 tons per acre of coarse woody debris (greater than 3-inches in diameter) is retained within activity areas. On mixed conifer sites, a minimum of 10 to 15 tons per acre should be retained.

___ Strive to maintain fine organic matter (organic materials less than 3-inches diameter, i.e. duff layer) over at least 65 percent of activity area (pertains to both harvesting and post-harvest operations).

___ Use sale area maps for designating soil and water protection needs.

___ Maintain spacings of 100 to 150 feet for all primary (main) skid trail routes, except where converging at landings. Closer spacings due to complex terrain must be approved in advance by the Timber Sale Administrator.

___ Restrict skidders and tractors to designated areas and limit the amount of traffic from other specialized equipment off designated areas. Harvester shears will be authorized to operate off designated skid trails at 30 foot intervals and make no more than two equipment passes on any site-specific area to accumulate materials.

___ Use of directional felling techniques from pre-approved skid trails, and suspending the leading end of logs during skidding operations.

___ Avoid equipment operations during periods of high soil moisture, as evidenced by equipment tracks that sink deeper than during dry or frozen conditions.

___ Operate equipment over frozen ground or a sufficient amount of compacted snow to protect mineral soil. Equipment operations should be discontinued when frozen ground thaws or when there is too little compacted snow and equipment begins to cause soil puddling damage (rutting).

___ Reclaim specific segments of local system roads, all temporary roads, log landings, and main skid trails by applying appropriate rehabilitation treatments in activity areas where detrimental soil conditions are expected to exceed Regional Policy guidelines. Decommission (obliterate) logging facilities that will not be needed for future management. (Subsoiling, redistributing topsoil, and pulling available slash and woody materials over the treated surface).

Hydrology/Fisheries Mitigation and Management:

___ Decommissioning of 26.5 miles of system road and 5.8 miles of temporary road to occur during periods of dry weather to prevent overland flow of water. Termini of road decommissioning would be located outside of RHCA's on gentle slopes by the district fisheries biologist there the potential for overland flow to affect water quality is nonexistent.

Noxious Weeds Management:

___ Machinery involved in vegetation management and fuels reduction activities, road building, and road closures must be washed prior to entry into the project area and prior to going to the next work site.

___ Known weed sites would be mapped and, in some cases, flagged out, to avoid spreading noxious weeds to other locations.

Wildlife Management:

___ Restrictions of motorized and OHV recreation would be retained from December 1 to March 31 under the Tumalo Cooperative Winter Range Closure Area. Harvest and other activities may be waived at the discretion of the District Wildlife Biologist or District Ranger in order to mitigate the effects on other resources (e.g. logging on snow/frozen ground to reduce soil compaction). In general, avoid logging when the area is being heavily used or crossed by migrating deer.

___ Cover in MA 7 would comprise 40 percent of the land area. Approximately three quarters of cover areas should be thermal cover (i.e. 30 percent) with the remainder in hiding areas. Design to provide a mosaic of forested conditions which incorporates the concepts of escape, hiding, and thermal cover, travel corridors, visual screens, and harassment potential.

__ Forage conditions would be maintained or improved with emphasis on increasing the variety of plants available for forage and a mixture of age classes and shrubs.

__ Target open road densities would average 1.0 to 2.5 miles per square mile in MA 7. IN KEHA road densities should not exceed and overall average of .5 to 1.5 miles/ square mile.

__ Active raptor nest sites would be protected from disturbing activities within ¼ mile of the nest by restricting site disturbing operations during the species specific period of concern.

__ Within the Ryan Ranch KEHA provide 30 percent of the project area in screening clumps that have not been thinned for at least 20 years.

__ Public use in the Ryan Ranch KEHA will be encouraged on travel routes which will minimize conflict with elk.

__ Retain 10% of the prescribed fire EA units unburned and 25 percent of the moving EA units unmowed. This is in addition to maintaining 30 percent of the thin less than 21 inches dbh EA units and 20 percent of the thin less than 12 inches dbh EA units in no treatment wildlife clumps from 2 to 30 acres in size to meet desired cover mosaic levels.

__ The Eastside Screens specify that 100% of cavity nesting potential will be provided with snags and green tree retention . Fallen trees and other woody debris will be retained in sufficient quantity, distribution, and physical characteristics to provide habitat for viable populations of dependent wildlife species over time. (Current Eastside Screen recommendations are 1.4 % of CWD coverage per acre and 2.7 snags per acre.)

__ Eastside Screens require wildlife connectivity corridors between late and old structural state stands and designated Old Growth Management Areas and to manipulate vegetation to encourage the development of large diameter, open canopy structure, park-like stands in ponderosa pine where this condition occurred historically.

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 thinning treatment was implemented as described, using Designation by Description / Geometry and leaving the largest tree on a 16 foot limiting distance with clumps retained throughout each unit. Pile material was removed for utilization. The mowing and sub-soiling treatments will be implemented next.

Field review participants felt that all Management Measures specified in the NEPA and decision documents had been adhered to.

The group discussed the results of the 16 foot spacing in detail. Designation by Description is attractive because it always leaves the biggest tree and generally produces some diversity, but there were still a few critiques. In the western part of the unit, the prescription produced a very heterogeneous post-treatment spacing of trees (very clumpy, patchy, gappy) which everyone

liked. In the eastern part of the unit, the 16 foot spacing left a more uniform spacing which was less desirable. In this unit the 16 foot spacing prescription probably also left a bit more basal area than was targeted in the proposed treatment (maybe 80 ft instead of the targeted 60 feet). In addition, one field review participant pointed out that after the treatment there were probably 80 to 120 trees per acre while ultimately, if we are seeking to reproduce a historic old growth stand we will only want about 40 to 50 trees per acre. Using Designation by Description but using wider spacing may have produced a more heterogeneous, lower basal area stand. Jim Schlaich suggested that in the eastern part of this unit a 20 foot spacing, with an 18" diameter limit and clump retention might have come closer to what the group was looking for.

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 treatment supported the management objectives for MA – 7 (mule deer winter range, wood products, visual quality, and recreation opportunities) and MA – 9 (scenic views). As discussed above, a fine tuning of the designation by description prescription may have produced a more heterogeneous spacing and more “natural” long-term appearance on the unit. But the group was generally comfortable with the balance of long and short term winter range, the production of wood products, and the protection of recreational routes and infrastructure (trails) from high-severity fire.

One field review participant asked whether it was possible to create more snags in this project or in projects in similar stands in the future.

Forest Service staff pointed out that the paint on the trees that were retained in the unit would fade within a few years, reducing any visual impacts of marking.

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?

As stated above, the treatment produced a bit less spatial heterogeneity and slightly higher basal area than might have been anticipated. Otherwise, the results were largely as anticipated.

The field review participants agreed that the fuels reduction achieved through the treatment has reduced wildland fire risk to communities and present and future forest values and provided more defensible space access and more secure escape routes.

One field review participant asked how fuel build up directly beneath trees can be addressed by mowing. The answer was that it is not really practicable to mow beneath trees so mowing cannot manage fuels directly beneath trees the way that a burn could. Another participant suggested that

it might not be so important to protect each tree in this unit though (some fire mortality is acceptable).

One field review participant did express skepticism about our ability to actually reduce the probability of high severity fire to the degree desired in the Purpose and Need for the project.

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.

For a variety of ecological and managerial reasons, burning would be a desirable way to treat understory fuels on this unit. Because this unit is in such close proximity to Bend and because the community has demonstrated a low tolerance for smoke, the project planners chose to mow instead. This reduces complaints by residents and it probably saves the agency money in the short run (mowing is \$65/acre while a first burn is \$200/acre). But we miss out on the benefits of burning. If the community were more tolerant of smoke the agency would be more likely to plan for burns in areas such as this.

One field review participant asked again whether it was possible to create more snags or enhance cavity nesting habitat in other ways on projects such as these.

COPWRR Project-Level Ecosystem Monitoring Report Form

Project: East Tumbull Hazardous Fuel Reduction Project	
NEPA Authority Used: Environmental Assessment	
Date: June 4, 2008	
Interdisciplinary Team Members Participating: Jim Schlaich, Bob Heiden, Tim Bisby	
Other Participants in Field Evaluation: Marilyn Miller, Amy Waltz, Jim Larsen, Patti Gentilluomo, Carl Jansen, Glen Ardt, Tim Lillebo, Asante Riverwind, Anthony _____, Cindy Glick, Phil Chang	
Unit #: EA Unit 112	Acres in Unit: 357 acres
Other Units from Project Being Monitored: EA Units 104 and 136, Cardinal Bridge	

Background

<p>Purpose and Need for Treatment of Unit:</p> <p>Forests in the East Tumbull area generally burned historically with low severity fire every 0-35 years, but now have fuel loads that are substantially in excess of historic or desirable conditions; threatening resource values, public and firefighter safety. Hazardous fuels reduction treatments will be undertaken to:</p> <ol style="list-style-type: none">1) Reduce wildland fire risk to communities and present forest values. Specifically, to reduce the percentage of the project area that has a moderate to extreme fire hazard to 50 percent or less by reducing horizontal and ladder fuels within the WUI and along identified evacuation routes2) Provide defensible space access and escape routes from private property and developed recreation sites. Also to develop defensible space along key routes which would provide improved conditions from which to engage in fire suppression action.3) Reduce wildland fire risk to future forest values by strategically decreasing stand densities and susceptibility to insects and disease, improve the sustainability of frequent fire in our future forests, and eliminate unnecessary roads that contribute to elevated wildland fire risk.

<p>Management Objectives for Unit:</p> <p>This unit falls within Deschutes National Forest Land and Resource Management Plan Management Areas 9, 11, and 17.</p>
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MA – 9 (Scenic Views) is managed to provide high quality scenery that represents the natural character of Central Oregon. Landscapes seen from selected travel routes and use areas will be managed to maintain or enhance their appearance and forest health.

MA – 11 (Intensive Recreation) provides a wide variety of quality outdoor recreation opportunities within a Forest environment where the localized settings may be modified to accommodate large numbers of visitors at both developed and undeveloped recreation sites. Vegetation management is done to provide visual diversity, public safety and forest health.

MA – 17 (Wild and Scenic Rivers) The primary objective is to manage waterways that are components of the National Wild and Scenic Rivers System to protect the outstandingly remarkable values identified for each river segment in the Upper Deschutes River Management Plan. The Plan identified actions needed to restore, maintain and enhance vegetation values within the ponderosa pine plant association group while also reducing fuels within the urban forest interface area.

The Prescribed Fire Plan lists the following Resource Objectives for the burning: To reduce the potential for high intensity crown fire events. Reduce the risk to firefighters while improving public safety by reducing the threat of high intensity wildland fire. Forage conditions would be maintained or improved. Forest restoration.

Treatment Summary for Unit:

Prescribed burning consists of burning the surface fuels to consume dead and unwanted woody material such as needle litter, limbs, shrubs, and small trees. The underburning is carried out by Forest Service hand crews, supported by engines and support vehicles in the spring and fall under prescribed fuel moisture and atmospheric conditions to minimize consumption of CWD and meet Clean Air Standards.

Treatment of Unit 112 is primarily a maintenance treatment, following on previous mowing. An average of 10% of the prescribed burning EA units would not be treated to provide wildlife habitat.

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

- ___ Active raptor nests sites would be protected from disturbing activities within ¼ mile of the nest by restricting site disturbing operations during the species specific period of concern.
- ___ Protect any unknown heritage resource sites found by avoidance of the discovered site.
- ___ Retain 10% untreated (unburned) in a mosaic pattern. Plan prescribed fire with an intensity that will not result in hydrophobic soils.
- ___ Avoid burning through noxious weed patches (Spotted Knapweed, Dalmatian Toadflax)
- ___ Within scenic areas crown scorch will be kept to less than 1/3 of the crown.

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.

Prescribed burning was implemented as described in the NEPA and decision documents.

The large snow pack that lingered into spring this year presented some challenges. On the one hand, it made it easier to contain the fires that were set around the bases of trees. On the other hand, the burn did not consume as much fuel as the Forest Service would have liked because of ground moisture. Though they were able to get a lot of needle cast and small fuels, there was a lot of pine cone and large branch material left that they would have liked to have consumed.

Burn crews were able to adhere to all Management Measures. There were a few trees that had scorch marks high up the tree but it was well within the Management Measure of less than 1/3 of the crown.

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.

This area had burned almost 20 years ago in the Awbrey Hall fire. 2 years ago the area was mowed to about 6 to 8" high, leaving 30% of the area untreated. So this burn was in many ways a maintenance burn.

The treatment was able to meet the Resource Objectives laid out in the Prescribed Fire Plan: reducing potential for high-severity crown fire, improving public safety and fire fighter safety, maintaining forage conditions, and restoring the forest. The response of the native bunchgrasses was really good.

As discussed above, a little more fuel consumption would have been desirable. Tim Bisby suggested that it would be good to come back and treat understory fuels again in 9 -10 years. The treatment implemented this year should be a good pre-cursor to putting fire across the landscape in the future.

The group believed the burn supported the goals of MA – 9, MA – 11, and MA – 17, maintaining or enhancing scenic views, recreational opportunities, and the Wild and Scenic River corridor.

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?

As discussed above, the Forest Service would have liked greater consumption of mid-size fuels. But they were still able to consume a significant amount of the fuel load in the project area. Participants on the field visit agreed that the burning treatment definitely addressed the Purpose and Need for the project, reducing wildland fire risk to communities and present and future forest values and providing more defensible space access and more secure escape routes.

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.

Low community tolerance for prescribed fire in the Bend area is a significant challenge to completing treatments such as this one. During the treatment there were many complaints about nuisance smoke and many calls from people who were afraid that a wildfire had broken out. Fire managers who oversee these projects are anxious that they will be singled out to be criticized (or worse) by community leaders during burns. This will be a significant challenge to conducting broadcast burns in the future.

COPWRR Project-Level Ecosystem Monitoring Report Form

Project: Cardinal Bridge Fuels Reduction and Restoration Project	
NEPA Authority Used: Categorical Exclusion (CE)	
Date: June 4, 2008	
Interdisciplinary Team Members Participating: Jim Schlaich, Bob Heiden, Tim Bisbee	
Other Participants in Field Evaluation: Marilyn Miller, Amy Waltz, Jim Larsen, Patti Gentilluomo, Carl Jansen, Glen Ardt, Tim Lillebo, Asante Riverwind, Cindy Glick, Phil Chang	
Unit #: Cardinal Bridge	Acres in Unit: 16 acres
Other Units from Project Being Monitored: East Tumbull EA Units 104, 112 and 136	

Background

Purpose and Need for Treatment of Unit:

Cardinal Bridge and Road 4100280 is the emergency exit for Sunriver, Oregon in case of a wildfire. The predominant vegetation adjacent to this area is a “dog-haired” lodgepole pine stand with an average diameter of under 4.4” dbh and approximately 820 to 1090 trees per acre. The lodgepole pine trees larger than 8” dbh have suffered extensive pine beetle mortality during the past 20 years with a resultant heavy fuel load scattered throughout the dense lodgepole pine understory. The lodgepole pine understory is itself heavily infected with western gall rust (71-88% infection rate). The ladder fuels and heavy mortality provides an ideal situation for rapid fire spread. Although isolated adjacent to the river, there is a high potential for throwing burning embers into Sunriver under typical prevailing westerly winds. At the same time, fire within this area would eliminate road 4100280 and Cardinal Bridge as a feasible emergency evacuation route for Sunriver in the event of a wildfire or entrapment situation.

There is a need to: 1) reduce fuel loadings to lower crown fire potential and provide for defensible space for Sunriver and Cardinal Bridge exit route; 2) reduce tree density in order to return the area to a more historic disturbance regime while restoring the important remnant ecosystem components of ponderosa pine, aspen and willows and 3) maintain and protect scenic views from a stand replacing wildfire event.

Management Objectives for Unit:

The activities are being implemented to reduce the likelihood of a high intensity wildfire and to provide for defensible space adjacent to Sunrivers emergency exit route. In addition the project will promote riparian and forest health while emphasizing filtered scenic views.

Treatment Summary for Unit:

The 16 acre stand would be split into two types of fuel treatment and non-commercial thinning. Within the 8 acres adjacent to the riparian zone (Stand #1) encroaching lodgepole pine would be removed within 15 feet of existing willow shrubs. A vegetative screen would be retained adjacent to the riparian area to maintain existing scenic views. Within the “interior” of the 8 acre LP dominated stand (Stand #2), approximately 1.5 acres would be removed in four 0.03 to 0.9 acre fuel reduction patches to break up fuel continuity. The patch cuts would be designed to have natural appearing shapes and sizes. Leave patches between the patch cuts would be thinned to an average spacing of 6 to 10 feet with the lower limbs pruned to reduce ladder fuels and to provide filtered views. Within stand #1, all live, dead and down LP larger than 8” dbh would be retained. Thinning slash would be removed to existing native surface roads within the project area where it would be hand piled followed by either chipping or burning. A contiguous 8 acre stand (Stand #2) would have partial overstory removal and thinning of the understory to an average of 8 to 12 foot spacing. All encroaching lodgepole pine would be removed within 30 feet of ponderosa pine (estimated at 4 PP per acre) and within and adjacent to a one acre aspen stand. All dead standing trees larger than 8” dbh would be retained. Lodgepole pine overstory removal trees would be hand carried and skidded with animals to the existing access road for utilization as firewood. Similar to stand #1 slash would be removed to existing native surface roads within the project area where it would be hand piled, burned or chipped. Native willow cuttings taken from the project area and adjacent sources would be rooted and hand planted within the riparian area to restore streamside vegetation.

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

None specifically identified in CE document.

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 treatments were implemented as described in the Categorical Exclusion, making intensive use of Department of Correction crews.

No management measures were specified in the CE but the project was laid out and designed to have very light impacts (use of hand crews, exclusion of riparian zone and elk calving areas and cover, etc)

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.

Field review participants agreed that the treatment has reduced the likelihood of high intensity wildfire and provided for defensible space adjacent to the 4100280 road and Cardinal Bridge. In addition the project has promoted riparian and forest health while enhancing filtered scenic views. The group believed that riparian forest health could have been enhanced even more and perhaps fire risk reduction might have been pursued more aggressively (see below).

The aspen stand and the area surrounding it has been cleared of lodgepole, but little recruitment of young aspen appears to be occurring. One of the suggestions for improving recruitment was to fence the area to take browsing pressure off for a few years while young trees get established. Other suggestions included selectively burning the area or punching a spade into the ground to stimulate sprouting.

When this project was initially scoped, the Forest Service pictured treating a much more extensive area. However, the project area encompasses critical elk calving areas and cover so the goal of fire risk reduction had to be balanced with habitat protection.

One field review participant expressed concern that even though this treatment had been completed the riparian zone was not treated during the project. The worry was that a fire could travel up the riparian corridor along the Deschutes and spread extensively and damage the health of the riparian zone. In other areas of the Deschutes National Forest the kind of “riparian wicking” of fire described above had occurred in untreated riparian zones. Another participant suggested that in some of the riparian areas where there is a ponderosa pine component to the forest it would be interesting to try knocking out the lodgepole and seeing whether more desirable deciduous trees and shrubs would come back in the opened up area.

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 results were as anticipated and intended. The group felt that the treatment had addressed the purposes and needs for the project. But as noted above, the aspen regeneration and the fuels reduction in the riparian zone might be better.

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.

Intensive collaboration went into this small project. The Forest Service worked closely with Sunriver to initiate a project that would address the fire risk immediately across the river from the resort and protect the escape route that comes over Cardinal Bridge.

Then the Forest Service worked closely with ODF&W to target treatments to avoid elk calving areas and cover in the project area, using radio telemetry studies and other data to identify important habitat.

Then as the project moved towards implementation, the Forest was able to communicate the schedule for the burning activities through the Sunriver Owners Association to minimize surprises for residents and minimize complaints for the agency.

COPWRR Project-Level Ecosystem Monitoring Report Form

Project: East Tumbull Hazardous Fuel Reduction Project
NEPA Authority Used: Environmental Assessment
Date: June 4, 2008
Interdisciplinary Team Members Participating: Jim Schlaich, Bob Heiden, Tim Bisby
Other Participants in Field Evaluation: Marilyn Miller, Amy Waltz, Jim Larsen, Glen Ardt, Phil Chang
Unit #: EA Unit 136, SET Sale Unit 11 Acres in Sale Unit: 138 acres
Other Units from Project Being Monitored: EA Units 112 and 104, Cardinal Bridge

Background

<p>Purpose and Need for Treatment of Unit:</p> <p>Forests in the East Tumbull area generally burned historically with low severity fire every 0-35 years, but now have fuel loads that are substantially in excess of historic or desirable conditions; threatening resource values, public and firefighter safety. Hazardous fuels reduction treatments will be undertaken to:</p> <ol style="list-style-type: none">1) Reduce wildland fire risk to communities and present forest values. Specifically, to reduce the percentage of the project area that has a moderate to extreme fire hazard to 50 percent or less by reducing horizontal and ladder fuels within the WUI and along identified evacuation routes2) Provide defensible space access and escape routes from private property and developed recreation sites. Also to develop defensible space along key routes which would provide improved conditions from which to engage in fire suppression action.3) Reduce wildland fire risk to future forest values by strategically decreasing stand densities and susceptibility to insects and disease, improve the sustainability of frequent fire in our future forests, and eliminate unnecessary roads that contribute to elevated wildland fire risk.

<p>Management Objectives for Unit:</p> <p>This unit falls within Deschutes National Forest Land and Resource Management Plan Management Areas 8 and 9.</p> <p>MA – 8 (General Forest) emphasizes timber production while providing visual quality, wildlife habitat, and recreational opportunities for public use and enjoyment.</p>

MA – 9 (Scenic Views) is managed to provide high quality scenery that represents the natural character of Central Oregon. Landscapes seen from selected travel routes and use areas will be managed to maintain or enhance their appearance and forest health.

Treatment Summary for Unit:

Silvicultural Prescription: Thin to $< \text{ or } = 21''$ DBH, Handpile, Machine pile/Underburn
Approximately 60 square feet of basal area per acre of conifer stocking would be retained in pine stands. In general, under the thinning from below prescriptions included with this alternative, the largest and healthiest trees in the stand would be retained; in addition to all the live trees larger than 12 or 21 inches dbh.

Thin by removing all Lodgepole pine to 4'' - 20.9'' dbh, retaining residual Ponderosa pine
Also remove all Lodgepole pine up 4'' dbh.

Thinning would be done on a variable spacing with the retention of one to two clumps per acre of (three to seven or more) trees to mimic natural ponderosa pine development patterns.

Commercial thinning will include whole tree yarding of trees between 8 and 21 inches dbh, with hand thinning and hand or mechanical piling of the small diameter trees less than 8 inches dbh. Boom mounted shears utilizing designated skid trails or logging over snow and/or frozen ground would be done in all commercial thinning EA units.

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

Soils Mitigation and Management:

__ Use old landings and skidding networks whenever possible. Assure that water control structures are installed and maintained on skid trails that have gradients of 10% or more. Ensure erosion control structures are working effectively.

__ In all proposed activity areas, locations for new yarding and transportation systems would be designated prior to the logging operations. This includes temporary roads, spur roads, log landings, and primary (main) skid trail networks.

__ Minimize erosive effects of concentrated water through proper design and construction of temporary roads.

__ Conduct regular preventive maintenance to avoid deterioration of the road surface and minimize the effects of erosion and sedimentations.

__ A burn plan, including soil moisture guidelines, will be completed before the initiations of prescribed fire treatments in planned activity areas.

__ Assure that on ponderosa pine sites a minimum of 5 to 10 tons per acre of coarse woody debris (greater than 3-inches in diameter) is retained within activity areas. On mixed conifer sites, a minimum of 10 to 15 tons per acre should be retained.

__ Strive to maintain fine organic matter (organic materials less than 3-inches diameter, i.e. duff layer) over at least 65 percent of activity area (pertains to both harvesting and pos-harvest operations).

__ Use sale area maps for designating soil and water protection needs.

__ Maintain spacings of 100 to 150 feet for all primary (main) skid trail routes, except where converging at landings. Closer spacings due to complex terrain must be approved in advance by the Timber Sale Administrator.

__ Restrict skidders and tractors to designated areas and limit the amount of traffic from other specialized equipment off designated areas. Harvester shears will be authorized to operate off designated skid trails at 30 foot intervals and make no more than two equipment passes on any site-specific area to accumulate materials.

__ Use of directional felling techniques from pre-approved skid trails, and suspending the leading end of logs during skidding operations.

__ Avoid equipment operations during periods of high soil moisture, as evidenced by equipment tracks that sink deeper than during dry or frozen conditions.

__ Operate equipment over frozen ground or a sufficient amount of compacted snow to protect mineral soil. Equipment operations should be discontinued when frozen ground thaws or when there is too little compacted snow and equipment begins to cause soil puddling damage (rutting).

__ Reclaim specific segments of local system roads, all temporary roads, log landings, and main skid trails by applying appropriate rehabilitation treatments in activity areas where detrimental soil conditions are expected to exceed Regional Policy guidelines. Decommission (obliterate) logging facilities that will not be needed for future management. (Subsoiling, redistributing topsoil, and pulling available slash and woody materials over the treated surface).

Hydrology/Fisheries Mitigation and Management:

__ Decommissioning of 26.5 miles of system road and 5.8 miles of temporary road to occur during periods of dry weather to prevent overland flow of water. Termini of road decommissioning would be located outside of RHCAs on gentle slopes by the district fisheries biologist there the potential for overland flow to affect water quality is nonexistent.

Noxious Weeds Management:

__ Machinery involved in vegetation management and fuels reduction activities, road building, and road closures must be washed prior to entry into the project area and prior to going to the next work site.

__ Known weed sites would be mapped and, in some cases, flagged out, to avoid spreading noxious weeds to other locations.

Wildlife Management:

__ Restrictions of motorized and OHV recreation would be retained from December 1 to March 31 under the Tumalo Cooperative Winter Range Closure Area. Harvest and other activities may be waived at the discretion of the District Wildlife Biologist or District Ranger in order to mitigate the effects on other resources (e.g. logging on snow/frozen ground to reduce soil compaction). In general, avoid logging when the area is being heavily used or crossed by migrating deer.

__ Cover in MA 7 would comprise 40 percent of the land area. Approximately three quarters of cover areas should be thermal cover (i.e. 30 percent) with the remainder in hiding areas. Design to provide a mosaic of forested conditions which incorporates the concepts of escape, hiding, and thermal cover, travel corridors, visual screens, and harassment potential.

__ Forage conditions would be maintained or improved with emphasis on increasing the variety of plants available for forage and a mixture of age classes and shrubs.

__ Target open road densities would average 1.0 to 2.5 miles per square mile in MA 7. IN KEHA road densities should not exceed and overall average of .5 to 1.5 miles/ square mile.

___ Active raptor nest sites would be protected from disturbing activities within ¼ mile of the nest by restricting site disturbing operations during the species specific period of concern.

___ Within the Ryan Ranch KEHA provide 30 percent of the project area in screening clumps that have not been thinned for at least 20 years.

___ Public use in the Ryan Ranch KEHA will be encouraged on travel routes which will minimize conflict with elk.

___ Retain 10% of the prescribed fire EA units unburned and 25 percent of the moving EA units unmowed. This is in addition to maintaining 30 percent of the thin less than 21 inches dbh EA units and 20 percent of the thin less than 12 inches dbh EA units in no treatment wildlife clumps from 2 to 30 acres in size to meet desired cover mosaic levels.

___ The Eastside Screens specify that 100% of cavity nesting potential will be provided with snags and green tree retention . Fallen trees and other woody debris will be retained in sufficient quantity, distribution, and physical characteristics to provide habitat for viable populations of dependent wildlife species over time. (Current Eastside Screen recommendations are 1.4 % of CWD coverage per acre and 2.7 snags per acre.)

___ Eastside Screens require wildlife connectivity corridors between late and old structural state stands and designated Old Growth Management Areas and to manipulate vegetation to encourage the development of large diameter, open canopy structure, park-like stands in ponderosa pine where this condition occurred historically.

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.

Working within the treatment descriptions from the NEPA and Decision documents, the Bend-Ft. Rock staff tried a species-focused prescription for this unit. The contractor was instructed to remove all lodgepole up to 21” diameter from this mixed lodgepole, ponderosa pine unit. This prescription was implemented by the contractor.

The implementation work adhered to the management measures identified above for the 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 initial entry into the unit did not produce a particularly scenic forest view. But implementation was also not yet complete on the unit so there will be opportunities to “clean the unit up.” The next step will be for Fuels crews to remove remaining small and hard to reach

(with mechanized equipment) lodgepole and ponderosa pine under 4". Then the unit will be whip felled, grapple piled and burned.

When implementation is completed, the group anticipates that the visual aesthetics will improve and fuel loading will be reduced.

This Unit lies within MA – 8 (General Forest) which emphasizes timber production, while providing for other values. While the treatment did produce some wood fiber for use, the utilization could have probably been increased, without any additional environmental impacts, with an alternative design/prescription.

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?
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The Bend-Ft. Rock staff felt that the species-focused prescription was not a cost effective or efficient way to get to the desired end state forest stand. The initial dense stand made it hard to predict what the stand would look like after this treatment. Mechanized treatment of this unit using the "lodgepole be gone" prescription left a large amount of material that could have been removed still on site (both on the ground and standing). This left a lot of fuel for the Fuels crews to come through and eliminate through expensive manual treatments.

An alternative approach could have been to mark leave trees and then send the contractors in to thin the stand and utilize all the thinned material they could, including some of the lodgepole that was down on the ground. This would have resulted in more work being accomplished through cost-effective mechanized means, less work being done with costly manual labor, and more material being removed for utilization (with less to be burned).

Jim Schlaich offered these post-implementation insights on the unit:

"In trying to achieve the clumpy residual leave stand we should have taken some of the ponderosa pine out. Of course, this is easy to see after removing all of the lodgepole but it wasn't so evident before hand (remember across the road was a thicket similar to what the area looked like before the lodgepole was removed). The other point is that we would have liked support from outside groups before hand to remove some of the down, dead lodgepole. Down logs in general are lacking across this project area but there are heavy concentrations in certain areas such as this unit. Leaving the down ponderosa pine and cull lodgepole would have still met our down wood needs (supplemented by additional existing dead standing snags that will soon transition to down logs) in this unit while potentially eliminating expensive piling."

When the treatment is completed the field review participants anticipate that the fuels reduction achieved through the treatment will reduce wildland fire risk to communities and present and future forest values and will provide more defensible space access and more secure escape routes.

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.

The “lodgepole be gone” treatment should in many ways be viewed as an experiment that has provided some interesting lessons for the Bend-Ft. Rock RD.