

## COPWRR Project-Level Ecosystem Monitoring Report Form

Project: <b>Rocky II Unit 17</b>	
Date: 10/11/07	
Interdisciplinary Team Members Participating: Barbara Fontaine, Sale Admin: Mary Operman, Fuels: Bryan Schulz, Scientists: Kevin Cohen, Forest Sup: Art Currier	
Other Participants in Field Evaluation: : Robin Snyder COIC; Mike Billman – Malheur Lumber; Andy Eglitis – DES NF/SO; Chad Davis SNW; Kevin Keown Och – LOM; Cindy Glick – OCH-DES NF; Robin Vora – OCH=DES NF; Tim Lilibo – Oregon Wild; Jennifer Reilly USFWS, John Morgan Ochoco Lumber	
Unit #: 17	Acres in Unit: 42
Other Units from Project Being Monitored: 20, 21, 30, Benefield	

### Background

Purpose and Need for Treatment of Project from the Mill Creek EIS:
<ol style="list-style-type: none"> <li>1. Improve forest vegetation and move existing conditions towards conditions that are sustainable (Viable Ecosystems seral/structural stage balance)</li> <li>2. Increase the extent and distribution of stands dominated by large trees (late and Old Structure stands)</li> <li>3. Decrease the amount of area susceptible to stand replacement fires and large scale insect and disease mortality (Ecosystem disturbance balance processes)</li> <li>4. Restore Wildlife habitat and visual character (Ecosystem function)</li> <li>5. Contribute to meeting riparian Management objectives (Stream channel condition and water quality and riparian function)</li> </ol>

Management Objectives for Unit: Basal Area will range from 70 to 110 sq. ft. Stand will appear much more open but more dominated by large trees. Species composition will approach 60% ponderosa pine, western larch and 40% grand fir and Douglas-fir. Open stand conditions will stimulate natural regeneration of all species. Existing large trees will persist at lowered risk. Developing LOS would be dominated by early seral species due to sufficient mid canopy western larch and ponderosa pine. .
1. Maintain and increase numbers of large trees. The criterion for LOS on moist grand fir sites is 20 trees per acre greater than 21 inches dbh.
2. Increase early and mid seral species composition.
3. Increase proportion of ponderosa pine and western larch to 60 percent.
4. Return to park-like conditions.
5. Reduce disease and damaged trees.

**Treatment Summary for Unit:** Individual tree selection, uneven-aged management (HSL). Do not cut live trees 21 inches dbh or larger. Minimum harvest diameter is 7 inches dbh.

- Remove Douglas-fir with dwarf mistletoe rating of 2 or greater (Hawksworth). Remove western larch with any mistletoe. Remove defoliation damaged trees with more than 10% top kill. Disregard stem rot as a factor for removal. Remove larger damaged and diseased trees if smaller more vigorous individuals are located within spacing guidelines. Choose leave trees with better crowns.
- Thin from below to 70 sq. ft. basal area but much of unit will have higher basal area because of the large trees.
- No treatment in RHCA.
- Unit will need pre-commercial thinning and whipfalling to maintain early seral species composition. Coordinate with fuel treatment plans.
- High continuous fuel loadings in unit. Yard top attached. Allow woodcutting. Good hand piling project for inexpensive work crews.
- Stand provides habitat for lady slipper orchid which may be sensitive to fire and fire effects. Coordinate fuel treatment plans with botanist.
- Snag requirements: 107 trees > 21" and 259 trees 12" to 21" (1.9 tpa >20", 4.6 tpa < 20").
- Down wood: Maintain at least 6.2 pieces per acres (Minimum 6 feet long and 12 inches diameter at small end).

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

**Air Quality:** Prescribed fire operations will be signed during high public use of area and will be in accordance with Oregon State Smoke Management Guidelines

**Cultural Resources:** known cultural resource sites would be avoided and if new site discovered during harvest operations, disturbance would be avoided and if unavoidable, site specific mitigation would be implemented

**Noxious weeds:** Avoid or minimize disturbance within or adjacent to existing noxious weed infestations; require cleaning of ground disturbing equipment before and after work in project area, revegetate with certified weed free seeding, skid roads, landings, fire lines and other disturbed areas. Conduct pre and post project surveys

**Sensitive plants** - District botanist consulted prior to any temporary road construction, stream restoration or use of ground based equipment in RHCA's. For lady slipper orchid: log over snow to minimize soil disturbance, maintain high down wood levels to provide

orchid substrate. Road restriction is waived to allow over snow logging for orchid habitat protection.

**Soils:** Tractor Yarding - Soil monitoring would occur. Log ends must be suspended to reduce soil displacement. On slopes over 35% end lining would be required to minimize detrimental soil impacts. To achieve 20% or less impacts to soils, skid trail would be approved before logging operations and located on existing disturbed areas. Soil tilling need evaluated after logging operations to achieve the 20% or less impact to soils. Skid equipment may be allowed off designated trails when ground is sufficiently frozen (depth of 6"), or when there is sufficient snow cover (20") to prevent ground disturbance or with frozen ground of 4" and snow depth of 12".

Prescribed fire – soil scorching minimized by limiting burn intensity and residence time.

Aerial: Minimized by location and extent of tractor, skid and landing operations

**Visual /Scenic Resources:** borrow from existing natural openings in unit for shape and size; adjust boundaries to avoid straight line effect.

### **Water Quality/Fisheries**

RHCA's- No ground based activity allowed in RHCA. If temporary roads cannot be avoided in RHCA, road would not parallel streams and would be decommissioned after use with effective ground cover established on them. Skyline cables may pass through RHCA with no reduction of shading on perennial streams. Logs would not be yarded through Class I, II, and III RHCA. Hazard trees if felled would be left in place for instream large wood recruitment.

Other - Ground based equipment allowed for temporary road construction, road maintenance, road decommission or closure and /or stream restoration. Logs yarded across intermittent Class IV streams would be suspended over stream channel. Streams would be classified by Hydrologist or Fisheries Biologist prior to marking. When yarding complete, slash can be placed on skid trails, temp. Roads decommissioned/ inactivated roads when consistent with other management actions.

Adequate drainage would be established with filtering structures installed to prevent sedimentation before entering streams. All new roads would be in-activated after harvest operations complete. Dust abatement on roads complies with 1996 Water Conservation Plan. No new skid roads within 100 feet of scab-conifer interface. All existing skid roads proposed for use within 50 feet of scab-conifer interface would be upgraded to allow water flow off without concentrating flows (rounded crown, French drains and/or pipes for natural drainage

All skid trails, roads and landings would be treated (ripped, re-contoured, water barred and seeded) to restore soil function and reduce erosion potential. Directional fall pre-commercial thinning onto inactivated and temporary roads and skid trails

General - Stream temperature monitoring in 5 creeks with in Mill Creek Watershed would continue. Stream reaches within Units or adjacent to thinning will have pre and

post treatment shade monitoring to verify no shade reduction. Three Water quality monitoring stations are established and will be maintained to verify the expected effects on water quality.

Erosion Control Plan included in the Timber Sale Contract

**Wildlife:** Elk - Winter Closure dates in Dry Creek permanently changed to December 1 May 1; Seasonal Restrictions for Elk Calving and Elk Wallows in May 15- June 30.

Raptors - Goshawk restrictions March 1 – August 30; 30 acre restrictions for nest stands and 400 acre post fledgling area restrictions March 1-August 30. Harvest Activity recommends Sept. 1-Feb 28. Other raptor nest sites have primary and secondary zones with restrictions March 1-August 1. (Not in any COPWRR monitoring units).

Wolverine and Winter Range – Harvest restrictions Dec. 1- May 1 working in only one drainage at a time, no public access to plowed roads.

**Monitoring:** Pre - 10 % of the units and roads at end of first season  
Fuel Treatment Calculations for PM10 Emissions

Post - 10 % of the units and roads  
For noxious weeds  
Fuel treatment sampled for residue profiles  
Effective ground cover  
Fuel Treatment Calculations for PM10 Emissions  
Road Closures  
Regeneration in HIM and HSG units  
Fuel Treatment Calculations for PM10 Emissions

During - soil and water impacts and effectiveness  
Timber Sale contract administration

Intermittent and Event Based -  
Road and drainage after storm events

**Current Conditions and Observations:** An uneven-aged, mixed conifer stand on hummocky, paleo-landslide debris. There is Deep ash soil accumulations and moist, productive site. Very dense stand in places. Overstory contains large, old ponderosa pine with some large grand fir and Douglas-fir. Mid canopy is predominantly grand fir with fewer Douglas-fir and occasional western larch. 44% PP, WL, 56% GF, DF by basal area. Reproduction in openings (root rot or past disturbance) is mix of all species but under conifer canopy it is dominated by grand fir. Previous harvest very light and scattered. Historically was park-like and open under the canopy. Most recent fire disturbance was probably confined to the ground. Columbia brome, twinflower, lupine and pinegrass. High fuel loadings and down logs from recent mortality are nearly continuous. Stand received a large pulse of mortality following spruce budworm epidemic. In 1993, 66 sq. ft. of basal area dead. Large trees appear able to persist if stocking is reduced. Most young western

larch is in good condition but some has dwarf mistletoe. Douglas-fir dwarf mistletoe noted throughout stand, has killed many DF and more are in serious decline. Most firs have dead tops due to past defoliation. Grand fir has stem rot.

### **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.

Status: The unit has not been treated or harvested. The restriction for Sensitive Species (Yellow Lady Slipper Orchid) is holding the project up. This is a rare species though no actual plants have been found there is an “anecdotal sighting” in general vicinity and terrain is a likely habitat for the species. Species is saprophytic and needs rotting wood layer harvesting restriction is that has to be “over snow” logging with specific snow depth requirements. No handpiling or thinning was initiated. Loss of large trees possible

There has not been enough snow for logging operation in that area when the contractor could get to the site under EIS restriction and allowances (Group discussed issue of climate change and consideration of changing specifications for sensitive species activity protections?). How do we take this into account when planning sales? Jackstraw piles of lodgepole, fir and small PIPO also require deeper snow conditions to allow for machinery to work in unit. Logging over snow use to be an easy answer to these sorts of problems but not anymore. The steep ground and conditions make it difficult and more expense to harvest (more \$\$ for road improvements?)

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 group felt that most of the management objectives were not achieved except for non disturbance to habitat for yellow lady slipper orchid. No treatments have been started at this time. No underburning has been started. One of the barriers to logging over snow were change in historic climate conditions that meant acceptable snow conditions to meet requirements were not met. Sensitive plant survey not completed due to perception of high cost, lack of budgetary funding, time and staffing at the district. No alternative to in house survey was implemented - just used anecdotal information of a sighting and elements of habitat present to support species. The unhealthy forest conditions (dead standing, unhealthy DF, PIPO and GF, dwarf mistletoe incursions continue and conditions which might precipitate stand replacing fire continue to exist. However the

conditions allowing for potential habitat for potential orchids does continue to be unchanged. The district may have to consider some sort of volunteer or contractual survey work when presented with this road block in the future. Again the larger question was discussed with the group: Should potential habitat for sensitive species preclude all work from being completed to achieve the larger management objectives? Most of the monitoring team felt that volunteers or contracts with native plant community would be a good option to consider.

One side of the unit was bordering Benefield Creek (Class IV stream) but that was not part of the unit the group observed to confirm treatment adjacent to riparian areas.

### **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?

No treatment was completed here. The Purpose and Need for unit not addresses. The intention was to have forest health improvements and to establish logging/harvest methods that would not threaten potential sensitive plants species. However, weather, logistics and lack of funding for survey's held up all actions and nothing has been implemented. The group discussion revolved around the need to protect sensitive species but when you can't be sure if species is on site (actual documentation) how to you weigh the value of the loss of the overall forest health and management.

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.

Plant survey holding the harvest up!

Query: Isn't it cheaper to survey for Orchids than to lose opportunity for harvest and healthy forest and wait for the right snow conditions? Fire will be catastrophic in this unit.

Pressure: external, upper level > agencies tired of appeals so the better solution (for agency) is "no risk don't harvest". But then they are not managing the forest. Does logging hurt Orchid? What is fire impact on Orchid? There is fire history, but last time may be 1870's. Lots of event in area: root rot, beetle kill, dwarf mistletoe and dense stocking.

Solution: If survey is in the EIS then you have to do it. TS are expensive for botanical surveys, but can we look for habitat? Confirm species? Perhaps it is better to key on locations. Evaluate the cost of survey. Can we contract survey to Native Plant society/what are acceptable alternatives to FS doing it themselves. There is a contract

with the public to do what they say (EIS). How to improve? Evaluate the cost of surveys compared to loss of economics.

Query: Is it worth looking at court cases to say site specific soil information was cited but FS did have it just not included in the doc.? This site has a 100-150 yr fire regime. We look at landscape patters and treatment to protect Wilderness and Steins Pillar. What new prescription could be included to leave pockets of vegetation best suited to orchids?

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

<b>Project: Rocky II Unit 20</b>	
Date: 10/11/07	
Interdisciplinary Team Members Participating: Silviculture, Barbara Fontaine, Fuels: Bryan Schulz, Scientists: Kevin Kowen, District Ranger: Art Currier	
Other Participants in Field Evaluation: Robin Snyder COIC; Mike Billman – Malheur Lumber; Andy Eglitis – DES NF/SO; Chad Davis SNW; Kevin Kowen Och – LOM; Cindy Glick – OCH-DES NF; Robin Vora – OCH=DES NF; Tim Lilibo – Oregon Wild; Jennifer Reilly USFWS, John Morgan Ochoco Lumber	
Unit #: 20	Acres in Unit: 117 ac.
Other Units from Project Being Monitored: 17, 21, 30, Benefield	

### **Background**

Purpose and Need for Treatment of Project from the Mill Creek EIS:

1. Improve forest vegetation and move existing conditions towards conditions that are sustainable (Viable Ecosystems seral/structural stage balance)
2. Increase the extent and distribution of stands dominated by large trees (late and Old Structure stands)
3. Decrease the amount of area susceptible to stand replacement fires and large scale insect and disease mortality (Ecosystem disturbance balance processes)
4. Restore Wildlife habitat and visual character (Ecosystem function)
5. Contribute to meeting riparian Management objectives (Stream channel condition and water quality and riparian function)

Management Objectives for Unit:

1. Maintain and increase numbers of large trees (20 TPA for LOS on moist grand fir sites 15 TPA on dry grand fir sites trees per acre greater than 21 inches dbh).
2. Increase early and mid seral species composition. Increase proportion of ponderosa pine and western larch to 75 percent. Return to park-like conditions.
3. Reduce disease and damaged trees.
4. Prescribed fire Protect residual large trees, maintain snags and down wood.

**Treatment Summary for Unit:** Stand contains most attributes of LOS (multi-strata, numerous snags and down wood, gaps) as well as patches meeting the number of large trees. Individual tree selection, uneven-aged management (HSL). Do not cut live trees 21 inches dbh or larger. Minimum harvest diameter is 7 inches dbh.

- Remove Douglas-fir with dwarf mistletoe rating of 2 or greater (Hawksworth). Remove western larch with any mistletoe. Remove defoliation damaged trees with more than 10% top kill. Disregard stem rot as a factor for removal. Remove larger damaged and diseased trees if smaller more vigorous individuals are located within spacing guidelines. Choose leave trees with better crowns. Follow guidelines in general marking guide for pine groups.
- Thin from below to 70 sq. ft. basal area.
- Precommercial thin and whipfall to maintain early seral species composition. Remove grand fir with less than 6 inches annual height growth. Remove dwarf mistletoe infected trees. Thin to dripline plus 10 feet of ponderosa pine greater than 21 inches. Remaining areas thin 18 by 18 feet. Coordinate with fuel treatment plans.
- High, continuous fuel loadings in unit. Yard top attached. Allow woodcutting. Grapple pile. Underburn to reduce fuels.

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

**Cultural Resources:** known cultural resource sites would be avoided and if new site discovered during harvest operations, disturbance would be avoided and if unavoidable, site specific mitigation would be implemented

**Noxious weeds:** Avoid or minimize disturbance within or adjacent to existing noxious weed infestations; require cleaning of ground disturbing equipment before and after work in project area, revegetate with certified weed free seeding, skid roads, landings, fire lines and other disturbed areas. Conduct pre and post project surveys

**Range:** No livestock issues

**Recreation:** No recreational Trails in unit

**Soils:** Tractor Yarding - Soil monitoring would occur. Log ends must be suspended to reduce soil displacement. On slopes over 35% end lining would be required to minimize detrimental soil impacts. To achieve 20% or less impacts to soils, skid trail would be approved before logging operations and located on existing disturbed areas. Soil tilling need evaluated after logging operations to achieve the 20% or less impact to soils. Skid equipment may be allowed off designated trails when ground is sufficiently frozen (depth of 6”), or when there is sufficient snow cover (20”) to prevent ground disturbance or with frozen ground of 4” and snow depth of 12”.

Prescribed fire – soil scorching minimized by limiting burn intensity and residence time.  
Aerial: Minimized by location and extent of tractor, skid and landing operations

**Visual /Scenic Resources:** borrow from existing natural openings in unit for shape and size; adjust boundaries to avoid straight line effect.

Adequate drainage would be established with filtering structures installed to prevent sedimentation before entering streams. All new roads would be in-activated after harvest operations complete. Dust abatement on roads complies with 1996 Water Conservation Plan. No new skid roads within 100 feet of scab-conifer interface. All existing skid roads proposed for use within 50 feet of scab-conifer interface would be upgraded to allow water flow off without concentrating flows (rounded crown, French drains and/or pipes for natural drainage)

All skid trails, roads and landings would be treated (ripped, re-contoured, water barred and seeded) to restore soil function and reduce erosion potential. Directional fall pre-commercial thinning onto inactivated and temporary roads and skid trails. Erosion Control Plan included in the Timber Sale Contract

**Wildlife:** Raptors - Located in Pileated Woodpecker foraging area. Located in Goshawk PFA. Goshawk restrictions March 1 – August 30; 30 acre restrictions for nest stands and 400 acre post fledgling area restrictions March 1-September 30. Harvest Activity recommends Sept. 1-Feb 28. Other raptor nest sites have primary and secondary zones with restrictions March 1-August 1. Wolverine and Winter Range – Harvest restrictions Dec. 1- May 1 working only in one drainage at a time, no public access to plowed roads. Seasonal restriction for winter range (road restriction): December 1 to May 1.

**Monitoring:** Pre - 10 % of the units and roads at end of first season

Post - 10 % of the units and roads

For noxious weeds

Road Closures

During - soil and water impacts and effectiveness

Timber Sale contract administration

Intermittent and Event Based -

Road and drainage after storm events

Current Conditions: The stand/unit had significantly reduced stocking from the preharvest condition and density though group discussed that the stand would not show evidence of release for 4-10 years. An uneven-aged, mixed conifer stand on paleo-landslide debris. Deep ash soil accumulations and moist, productive sites mixed with drier grand fir sites. Retained large, old ponderosa pine with some large grand fir and Douglas-fir with some large groups. Canopy opened with harvest and smaller stems removed to grapple piles. Historically, the unit was park-like and open under the canopy. Most recent fire disturbance was probably confined to the ground. Columbia brome,

twinflower and lupine in draws and on north slopes. Pinegrass, pinemat manzanita, snowberry, manzanita and snowbrush on drier sites. High fuel loadings and down logs from recent mortality, but less so than adjacent stands.

### **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 has been implemented with the final Underburn slated to occur in 2008. The unit had been commercially harvested (3 years ago) and pre commercially thinned (6 mos. ago) with the grapple piles created (6 mos. ago) and waiting to burn and Underburn throughout. The group felt that additional thinning could have been accomplished with trees 21" DBH, but observable spacing and density met objectives and reduction of diseased trees. Observations after treatment: trees dying (old dead bark beetle kill), seems very dense, overall acres still too dense which creates competition. It has only been 3 years and the site does not yet show response to reduced density of trees. Discussion that Hash Rock fire contribution to pine mortality was undervalued.

Group discussed underburning and protection of large ponderosa and fir with raking. There are new findings in research about critical duff moisture to aid in survivability of LOS with Rx burning. The duff moisture below 50% is detrimental to trees. Thus raking duff from around older trees prior to Underburn may further injure trees. Duff moisture >50% helps protect root system in LOS. Not everyone was agreed on how to protect LOS during underburning, the common technique was to rake duff away from trunks.

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 observable diseased and damaged trees were removed though FS staff noted that after harvest additional die off occurred which prompted discussion that if additional harvest trips allowable under the EIS, could contractor economically return? The unit was returning to park-like historic density but almost all in group agreed that more large trees could be taken. Skid trails were obvious. Some un-diseased larch remaining after thinning though mostly later seral for uneven age structure as desired.

### **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?

Yes, the Purpose and Need criteria were met in this unit though no riparian areas included.

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.

Everyone felt thinning on site could have been increased in trees under 21". Under thinning allows for return trip over thinning is permanent. Can contractor come back? Historically 15-18 10-12 LOS trees per acre, current unit is roughly 10-12 trees per acre. Unit is early seral in Pine and is being pushed in that direction where late seral meets old structure. Density – variability.

Gates: locked to prevent public driving through (gates replaced quite often but precludes additional thinning by public. Commercial woodcutting is a possibility, commercial sale from log decks. Group discussed if OCH-NF would consider a controlled public wood cutting with assistance by volunteers who would be monitoring and overseeing wood cutting sale. The commercial take from this unit was good. It was economical but had to be repackaged without the helicopter logging (originally). Grapple piling was just finished at Unit. Piles on skid trails and would be burned on snow.

No surprises at this unit, Wildlife impacts due to roads but gates locked and roads closed to public. Good Pileated foraging due to location of old growth “set aside” and die-back from beetle kill. Group Query: Does it meet foraging area criteria? Yes look at down logs as well as large snags. There is no requirement for Pileated, but they need tight canopies. The treated unit provided good foraging for Goshawks

- 1) Check criteria for Pileated and see if Unit meets it.
- 2) Unit better habitat and foraging for White-headed Woodpecker and after the Underburn it will be even better when predators (chipmunks) will be less prevalent.

## COPWRR Project-Level Ecosystem Monitoring Report Form

Project: <b>Rocky II Unit 30</b>	
Date: 10/11/07	
Interdisciplinary Team Members Participating: Silvaculture: Barbara Fontaine, Sale Admin: Mary Operman, Fuels: Bryan Schulz, Scientists: Kevin Cohen, Forest Sup: Art Carrier	
Other Participants in Field Evaluation: COPWRR, Mike Lund/Crook County Natural Resource Committee.; Chad Davis SNW; Tim Lillabo, Oregon Natural Resource ; Marilyn Miller, Sierra Club; Jennifer Reilly, USFWS; Robin Vora USFS; Cindy Glick, USFS;	
Unit #: 30	Acres in Unit: 112
Other Units from Project Being Monitored: 17, 21, 20, Benefield	

### Background

Purpose and Need for Treatment of Project from the Mill Creek EIS:
<ol style="list-style-type: none"><li>1. Improve forest vegetation and move existing conditions towards conditions that are sustainable (Viable Ecosystems seral/structural stage balance)</li><li>2. Increase the extent and distribution of stands dominated by large trees (late and Old Structure stands)</li><li>3. Decrease the amount of area susceptible to stand replacement fires and large scale insect and disease mortality (Ecosystem disturbance balance processes)</li><li>4. Restore Wildlife habitat and visual character (Ecosystem function)</li><li>5. Contribute to meeting riparian Management objectives (Stream channel condition and water quality and riparian function)</li></ol>

Management Objectives for Unit:
<p>The silvaculture Prescription and guide for the Rocky II project identifies the following objectives for Unit #30:</p> <ol style="list-style-type: none"><li>1. Reduce the stand susceptibility to insect, disease and lethal fire events to within Historic range of variability levels by adjusting stand densities and composition and adding prescribed fire.</li><li>2. Timber harvest will only occur on lands suitable for timber production and to provide timber to the economy. No even aged practices are proposed</li></ol>

3. Special attention given to riparian areas to promote development of large trees, increase recruitment of large woody debris, improves riparian conditions and reduces stream bank erosion. Increase vertical and lateral channel stability in low gradient stream systems
4. Maintain and increase number of large trees (>21" dbh on Grand Fir sites). Maintain a mosaic of early and mid-seral species composition. Increase western larch and ponderosa pine % to 75%. Reduce stocking to below upper management level to increase growth and development of large trees. Maintain open under-canopy for goshawk foraging
5. Restore the historic visual character of forest vegetation within the Mill Creek Watershed by adjusting stand density and species composition

**Treatment Summary for Unit:** BA will range from 70 to 110 sq. ft. Stand will appear much more open but more dominated by large trees. Species composition will approach 75% ponderosa pine, western larch and 25% grand fir and Douglas-fir. Open stand conditions will stimulate natural regeneration of all species. Existing large trees will persist at lowered risk. Developing LOS would be dominated by early seral species due to sufficient mid canopy western larch and ponderosa pine. The amount of LOS should double within 20 years. Overtime, multiple canopies will redevelop.

- Individual tree selection, uneven aged management (HSL). No cut trees 21 in. dbh or larger. Minimum harvest is 7 in dbh.
- Remove Doug Fir with dwarf mistletoe rating 2 >.
- Remove Western larch w/any mistletoe
- Remove defoliation damaged trees with more than 10% topkill
- Thin around healthy Western larch and large trees to insure release
- Thin from below to 70 sq ft. basal area
- Use spacing guide for small trees
- Areas with large trees will have higher stocking levels
- Do not mark dead trees unless number succeed snag levels
- Reduce slash by yarding tops. Prescribed burns may need to be repeated (2 or more) to reduce fuels susceptibility. Protect residual large trees, maintain snags and down wood. High, continuous fuel loadings in unit. Yard top attached. Allow woodcutting. Grapple pile. Under burn to reduce fuels.

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

**Cultural Resources:** known cultural resource sites would be avoided and if new site discovered during harvest operations, disturbance would be avoided and if unavoidable, site specific mitigation would be implemented

**Noxious weeds:** Avoid or minimize disturbance within or adjacent to existing noxious weed infestations; require cleaning of ground disturbing equipment before and after work in project area, re-vegetate with certified weed free seeding, skid roads, landings, fire lines and other disturbed areas. Conduct pre and post project surveys

**Range:** no livestock interface in unit.

**Recreation:** no designated recreation trails in unit

**Sensitive plants** - Habitat protections (avoidance, over snow, non site prep and rehab) for various sensitive plants would be implemented and district botanist consulted prior to any temporary road construction, stream restoration or use of ground based equipment in RHCA's

**Soils:** Tractor Yarding - Soil monitoring would occur. Log ends must be suspended to reduce soil displacement. On slopes over 35% end lining would be required to minimize detrimental soil impacts. To achieve 20% or less impacts to soils, skid trail would be approved before logging operations and located on existing disturbed areas. Soil tilling need evaluated after logging operations to achieve the 20% or less impact to soils. Skid equipment may be allowed off designated trails when ground is sufficiently frozen (depth of 6"), or when there is sufficient snow cover (20") to prevent ground disturbance or with frozen ground of 4" and snow depth of 12".

Prescribed fire – soil scorching minimized by limiting burn intensity and residence time.

Aerial: Minimized by location and extent of tractor, skid and landing operations

**Visual /Scenic Resources:** Stand highly visible from distance due to location on one of highest peaks in Ochoco. Borrow from existing natural openings in unit for shape and size; adjust boundaries to avoid straight line effect. Adjacent to Mill Creek Wilderness. Old road to top of Wildcat Mountain goes through unit. Located in unroaded area. Access from 3350-300 road.

### **Water Quality/Fisheries**

Class IV stream on south west corner of unit, dry at end of June. RHCA's- No ground based activity allowed in RHCA. If temporary roads cannot be avoided in RHCA, road would not parallel streams and would be decommissioned after use with effective ground cover established on them. Skyline cables may pass through RHCA with no reduction of shading on perennial streams. Logs would not be yarded through Class I, II, and III RHCA. Hazard trees if felled would be left in place for instream large wood recruitment.

Other - Ground based equipment allowed for temporary road construction, road maintenance, road decommission or closure and /or stream restoration. Logs yarded across intermittent Class IV streams would be suspended over stream channel. Streams would be classified by Hydrologist or Fisheries Biologist prior to marking. When

yarding complete, slash can be placed on skid trails, temp. Roads decommissioned/inactivated roads when consistent with other management actions.

All new roads would be in-activated after harvest operations complete. Dust abatement on roads complies with 1996 Water Conservation Plan. No new skid roads within 100 feet of scab-conifer interface. All existing skid roads proposed for use within 50 feet of scab-conifer interface would be upgraded to allow water flow off without concentrating flows (rounded crown, French drains and/or pipes for natural drainage)

All skid trails, roads and landings would be treated (ripped, re-contoured, water barred and seeded) to restore soil function and reduce erosion potential. Directional fall pre-commercial thinning onto inactivated and temporary roads and skid trails. Erosion Control Plan included in the Timber Sale Contract

**Wildlife:** Raptors - Unit included in goshawk post fledging area and sits just above nest stand. Goshawk pair noted at about 5100 feet elevation at end of July. Goshawk restrictions March 1 – August 30; 30 acre restrictions for nest stands and 400 acre post fledging area PFA restrictions March 1-September 30. Harvest Activity recommends Sept. 1-Feb 28. Other raptor nest sites have primary and secondary zones with restrictions March 1-August 1. (Not in any COPWRR monitoring units. Seasonal restriction for winter range (road restriction): December 1 to May Excellent characteristics of LOS. Probable white headed woodpecker habitat.

**Monitoring:** Pre - 10 % of the units and roads at end of first season  
Post - For noxious weeds  
Road Closures  
During - soil and water impacts and effectiveness  
Timber Sale contract administration

### **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.

No, the treatments were deferred/cancelled. The commercial harvest was deferred due to litigation relating to roadless area, scenic viewshed and wilderness impacts and accessibility as well as cost of original prescription for tractor and helicopter harvest. Pre Commercial thinning was cancelled after agency decision about cost effectiveness. ONRC appealed unit, tried to negotiate changes. Result was no commercial logging only pre commercial thinning.

Cost effectiveness of helicopter/cable or other logging was reevaluated and considered non economical due to transportation costs and fuel increases. Group discussion centered on the reluctance of the FS to take additional risks with controversial harvests. As a result the unit was completely untreated mortality of large trees would continue due to stocking density, disease. Stand productivity will decline. There will be a succession to mid seral stage rather than the historic structure

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.

No improvements to health of the forest since no diseased trees removed from the stand. No decrease in stocking densities to allow for any species to flourish and return to historic LOS stand structure and probability of stand replacing fire increasing with density of ladder fuels, jack pots of dead and down, and unhealthy trees with topkill and reduced crown structure. Impacts to riparian areas minimized because no action took place however, no improvements made to enhance stream productivity. Goshawks not impacted with harvest activity however the foraging habitat for goshawks was not improved by opening the canopy with harvest operations and thinning. PFA established which further protected the Goshawk nest sites.

### **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?

It was not anticipated that no action would be taken and thus none of the management objectives could be met.

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.

Due to the lack of treatment the entire unit is at risk due to jack pots of fuel, ladder fuels and extreme fuel loading. If fire comes to the unit it will be stand replacing and all resources will be lost.

Goshawks sighted in/near this unit. Ochoco has no shortage of Goshawks, healthy populations. Discussion about whether you can review existing stands and nests and

monitor impacts of logging on healthy population, pairs and nests. – do they just move to the next area???

Discussion: With wildlife there are always winners and losers. Changes and thinning would /could create habitat for other species. Group was not advocating a rule change for Goshawks but discussing that we should consider that some species move or change with treatments. In a healthy populations area perhaps that is acceptable? Could guidelines be established to assist with decisions? Goshawks have a full hotel with seasonal working restrictions. Why are we worried about adverse impacts in Goshawks???? Because ONF appeals all bird issues and agencies wish to stay out of litigation which delay's projects.

Result: the decisions made for this unit did not support the objective of the treatment. Trade-off resulting from the ONRC appeal was not benefiting the forest. Further decisions by FS for no pre commercial treatment also is not benefiting forest despite realistic economic concerns. No treatment in Unit #30. Chances of stand replacing fire and loss of historic LOS increasing. Even though the tradeoff/compromise between NF and ONRC allowed the larger project to proceed. Compromises and Tradeoffs don't always benefit the resource in the end. Could the District revisit this unit under the existing EIS? The benefit is the discussion forged better relationships with private/non-profit groups.

\$\$ Thinning not well used here, Roadless issue kept unit out but ONR would like to see some work done – at least thinning or underburning. Helicopters would work though they are not economical. Should Helicopters be reconsidered??? Group discussed that roadless character could have been achieved with skyline logging. There is still a viable portion. Roadless objectives reached for this unit, but not the others.

We are still working with old forest plans. There is interim policy that creates restrictions that impede forestry/logging work. How could this be changed?

## COPWRR Project-Level Ecosystem Monitoring Report Form

Project: <b>Rocky II Unit Benefield</b>			
Date: 10/11/07			
Interdisciplinary Team Members Participating: Barbara Fontaine, Fuels: Bryan Schulz, Scientists: Kevin Cohen, District Ranger: Art Currier			
Other Participants in Field Evaluation: Robin Snyder COIC; Mike Billman – Malheur Lumber; Andy Eglitis – DES NF/SO; Chad Davis SNW; Kevin Keown Och – LOM; Cindy Glick – OCH-DES NF; Robin Vora – OCH=DES NF; Tim Lilibo – Oregon Wild; Jennifer Reilly USFWS, John Morgan Ochoco Lumber			
Unit #:	Benefield	Acres in Unit:	161 ac
Other Units from Project Being Monitored: 17, 20, 21, 30			

### Background

<b>Purpose and Need for Treatment</b> of Project from the Mill Creek EIS:
<ol style="list-style-type: none"><li>1. Improve forest vegetation and move existing conditions towards conditions that are sustainable (Viable Ecosystems seral/structural stage balance)</li><li>2. Increase the extent and distribution of stands dominated by large trees (late and Old Structure stands)</li><li>3. Decrease the amount of area susceptible to stand replacement fires and large scale insect and disease mortality (Ecosystem disturbance balance processes)</li><li>4. Restore Wildlife habitat and visual character (Ecosystem function)</li><li>5. Contribute to meeting riparian Management objectives (Stream channel condition and water quality and riparian function)</li></ol>
Existing physical conditions are: Ashy clay soil on landslide debris. Over story removal occurred in the late 1970s. As a result of logging disturbance, 17 acres was planted in 1981. Current conditions: Mixed stand with diverse structure and species composition. Scattered ponderosa pine overstory, mid canopy ponderosa pine, Douglas-fir. More grand fir on upper slope. Understory is variable with thick patches. Dwarf mistletoe is found in both Douglas-fir and ponderosa pine. Snowberry, rose common, and pinegrass.
<b>Management Objectives for Unit:</b> Restore historic structure (large trees with open understory).
<ol style="list-style-type: none"><li>1. Maintain early seral species compositions where they exist.</li><li>2. Manage for mid seral mixes otherwise.</li><li>3. Reduce ladder fuels and reduce crown closure.</li><li>4. Reduce dwarf mistletoe infection.</li></ol>

**Treatment Summary for Unit:** Thin to dripline plus ten feet around large pines. Remaining area thin trees on 18 x 18-foot spacing up to 9 inches dbh. Species preference is PP, WL, and DF. Cut all western junipers up to 9 inches dbh. Pull back from fences and road 3350. Residual trees per acre will be 110 to 135. Cut all conifers within 50 feet of aspen including aspen sprouts.

Fuel treatment – Initial fuel treatment is lop-and-scatter to 24 inches height. Allow 2 to 3 years for thinning slash to settle and compress before underburning. Scorch of mistletoe infected brooms would benefit stand health but otherwise keep scorch levels low. All seedlings are excess to stocking needs and may be burned.

SPECIAL HABITATS: (Riparian, aspen, rock formations, snags etc.):

Small aspen stand associated with sag pond. Conifers were commercially thinned in area around aspen in Rocky TS.

SPECIAL MANAGEMENT EMPHASIS (Dispersed camps, cultural resources, road access etc.):

Dispersed camp near aspen stand.

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

**Cultural Resources:** known cultural resource sites would be avoided and if new site discovered during harvest operations, disturbance would be avoided and if unavoidable, site specific mitigation would be implemented

**Noxious weeds:** Avoid or minimize disturbance within or adjacent to existing noxious weed infestations; require cleaning of ground disturbing equipment before and after work in project area, revegetate with certified weed free seeding, skid roads, landings, fire lines and other disturbed areas. Conduct pre and post project surveys

**Recreation:** All Trails – Schedule logging so that trails would remain open during regular use seasons, if not feasible, schedule logging operations to minimize impact on trail use. To the extent practicable trail tread and corridors would be protected from damage and skid trails within 100 feet would be rehabilitated or camouflaged. Skidding would not be allowed to cross trails except at designated crossings and damage reconstructed to pre logging conditions. Feathered edges of logging areas and/or layout irregular shaped boundaries around trails and trail corridors to allow activity to appear as a natural occurrence in foreground and middle ground. Fire line would be black lined to protect trail reduce visual impacts of tree scorch. Logging activity information and use restrictions or closures would be posted at trailheads.

**Soils:** Tractor Yarding - Soil monitoring would occur. Log ends must be suspended to reduce soil displacement. On slopes over 35% end lining would be required to minimize detrimental soil impacts. To achieve 20% or less impacts to soils, skid trail would be approved before logging operations and located on existing disturbed areas. Soil tilling need evaluated after logging operations to achieve the 20% or less impact to soils. Skid equipment may be allowed off designated trails when ground is sufficiently frozen (depth of 6”), or when there is sufficient snow cover (20”) to prevent ground disturbance or with frozen ground of 4” and snow depth of 12”.

Prescribed fire – soil scorching minimized by limiting burn intensity and residence time.

Aerial: Minimized by location and extent of tractor, skid and landing operations

**Visual /Scenic Resources:** borrow from existing natural openings in unit for shape and size; adjust boundaries to avoid straight line effect.

### **Water Quality/Fisheries**

RHCA's- No ground based activity allowed in RHCA. If temporary roads cannot be avoided in RHCA, road would not parallel streams and would be decommissioned after use with effective ground cover established on them. Skyline cables may pass through RHCA with no reduction of shading on perennial streams. Logs would not be yarded through Class I, II, and III RHCA. Hazard trees if felled would be left in place for instream large wood recruitment.

Other - Ground based equipment allowed for temporary road construction, road maintenance, road decommission or closure and /or stream restoration. Logs yarded across intermittent Class IV streams would be suspended over stream channel. Streams would be classified by Hydrologist or Fisheries Biologist prior to marking. When yarding complete, slash can be placed on skid trails, temp. Roads decommissioned/ inactivated roads when consistent with other management actions.

Adequate drainage would be established with filtering structures installed to prevent sedimentation before entering streams. All new roads would be in-activated after harvest operations complete. Dust abatement on roads complies with 1996 Water Conservation Plan. No new skid roads within 100 feet of scab-conifer interface. All existing skid roads proposed for use within 50 feet of scab-conifer interface would be upgraded to allow water flow off without concentrating flows (rounded crown, French drains and/or pipes for natural drainage

All skid trails, roads and landings would be treated (ripped, re-contoured, water barred and seeded) to restore soil function and reduce erosion potential. Directional fall pre-commercial thinning onto inactivated and temporary roads and skid trails

General - Stream temperature monitoring in 5 creeks with in Mill Creek Watershed would continue. Stream reaches within Units or adjacent to thinning will have pre and post treatment shade monitoring to verify no shade reduction. Three Water quality monitoring stations are established and will be maintained to verify the expected effects on water quality.

Erosion Control Plan included in the Timber Sale Contract

**Wildlife:** Elk - Winter Closure dates in Dry Creek permanently changed to December 1 May 1; Seasonal Restrictions for Elk Calving and Elk Wallows in May 15- June 30. Raptors - Goshawk restrictions March 1 – August 30; 30 acre restrictions for nest stands and 400 acre post fledgling area restrictions March 1-August 30. Harvest Activity recommends Sept. 1-Feb 28. Other raptor nest sites have primary and secondary zones with restrictions March 1-August 1. (Not in any COPWRR monitoring units). Wolverine and Winter Range – Harvest restrictions Dec. 1- May 1 work authorized only in one drainage at a time, no public access to plowed roads.

**Monitoring:** Pre - 10 % of the units and roads at end of first season  
Fuel Treatment Calculations for PM10 Emissions

Post - 10 % of the units and roads

For noxious weeds

Road Closures

Regeneration in HIM and HSG units

During - soil and water impacts and effectiveness

Timber Sale contract administration  
Intermittent and Event Based -  
Road and drainage after storm events

**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.

**Unit # Benefield – Treated, to be burned**

Current conditions: PCT only heavy harvest 1980, new growth treated. In 1980 work completed with D24 cats. Much of PCT work completed by hand. Aspen grove, on old landslide slag pond to be maintained - was thinned to remove conifers and pine encroachment. Burning still has to be completed. Species diversity on site with vegetation and trees also good habitat. Aspen snags in over story valuable to wildlife. No seeding of Aspen – only one sex. Under story healthy, heavily browsed.

The group acknowledged that on site is a dispersed recreation site –Good campsite, but not hammered due to fact that roads in area are closed to public. Steins pillar view is close by with an open understory. There was discussion about the value of protecting the visual resources in this area both to protect the rare aspen stand within the conifer dominated forest and for protection of the Steins Pillar viewshed.

Group agreed that Aspen Management objectives met, open up over and understory for large trees accomplished, thinning of conifers and aspen sprouts accomplished, visual resource management accomplished with Steins pillar view.

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 group agreed that the Aspens looked good however there were not strong Aspen Management objectives in the prescription – just a mention of the conifer and sapling thinning. This was not included in the major objectives for the unit.

The group also noted that the unit in the segment which was toured looked like management objectives in general had been achieved where it was to thin to drip-line plus ten feet around large pines. Spacing specs were met. In the remaining area, trees would be thinned on 18 x 18-foot spacing up to 9 inches dbh. Species preference is PP, WL, and DF. Cut all western junipers up to 9 inches dbh. Pull back from fences and road 3350. Residual trees per acre will be 110 to 135

FS feels site is a success and set up for next 25 years. Good representative across landscape. The group agreed that the unit looked to have achieved the prescription and that it had recovered from earlier harvest operations in the 1980's with heavy equipment, that the dispersed group camp site

There was not clear evidence of skid trails being rehabbed, however FS staff discussed that in previous logging/harvest operations in this area in the 1980's a D-4 cat had worked the area and now much of that heavy soil scarring was less obvious. It was not clear if there was any restoration that had to be accomplished in the recent work since the Aspen grove was hand thinned as were the other PCT work in the unit.

### **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?

Group agreed that Aspen Management objectives met, open up over and understory for large trees accomplished, thinning of conifers and aspen sprouts accomplished, visual resource management accomplished with Steins pillar view.

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.

During the field visit much was made of the Aspen stand's importance in the larger ecosystem, how the treatment took this into account. However the treatment prescription write up did not reflect this emphasis – just that conifers were to be thinned in Aspen during Rocky II Timber sale.

There was some group discussion that we might have better used the monitoring time to look at other units more indicative of the other objectives in the EIS such as wilderness Area boundaries, controversial sites with recreation trails or more importantly riparian areas. There was some discussion amongst the group about whether the choice of units to review should be made 50% by COPWRR and 50% by Agency Staff of the project.