

POLALLIE COOPER COLLABORATIVE GROUP MEETING AND FIELD TRIP
JULY 25, 2013

Attendees:

Rick Ragan	Janeen Tervo, FS District Ranger
Bruce Holmson	Leo Segovia, FS AFMO
Peter Mackwell, Hood River Fire Dept.	Whitney Olsker, FS Silviculturist
John Gehrig, Hood River Fire Dept.	John Dodd, FS Soil Scientist
Mike Moore, ODFW	Beth Kennedy, FS Recreation
Erik Fernandez, Oregon Wild	Jim Thornton, FS Recreation
Leann Hogie	Stephanie Powers, FS Wildlife Biologist
Megan Saunders, Hood River Watershed Group	Christina Wessler, FS Botanist (Notes)
Cindy Thieman, Hood River Hood River Watershed Group	
Gradey Proctor, BARK	
Sarah Wald, BARK	
Meredith Cocks, BARK	

Discussion of Fire Behavior Modeling

Leo: This model was completed with plot data from a stand Whitney has surveyed and which we will see today. The model predicts the potential fire behavior for that particular site along Surveyor's Ridge. BehavePlus5.0 is the program I used. I input the same characteristics and weather patterns as the Dollar Fire, since these two areas are in a similar band. The site has a high level of downed wood, and would have high flame lengths and mortality.

In the event of a wildfire, any firefighting in this area would have to be hand work. The fire would likely be moving quickly up the slope, and it is too steep to get machinery in there safely. I then modeled the stand following treatment. If this were a more open stand the fire would move more slowly, with less fuel on the ground, and there would be lower mortality.

Rick: How much treatment are you proposing in this unit?

Leo: We are proposing a 25% reduction in the canopy. In the model, that reduction took the tree mortality for fire adapted species, such as ponderosa pine, to zero.

Rick: This is also after a fuels reduction treatment?

Leo: Yes.

Peter: The ground and ladder fuels in that area right now are very heavy and would lead to high mortality.

Grady: What is the historic fire return interval for this area?

Leo: It is a fire regime 3, with a return interval of 35-200 years. I ran this model for both ponderosa pine and grand fir, and the results were similar.

Erik: Is there no difference in the model based on the size (diameter) of the trees in the stand?

Leo: No, it is more dependent on the fire weather. The mortality of true firs in the stand would be 100% until after a fuels treatment.

Bruce: A 25% canopy reduction results in what kind of canopy cover?

Whitney: I have those numbers, and we will see it out in the field today.

Cindy: What is the timeframe for recommendations?

Whitney: We would like recommendations by this winter, when we will be writing a proposed action for this project.

Cindy: Can we look at other fuels/fire scenarios during our next meetings?

Whitney: Yes, we would be interested in doing that.

Rick: We could have an indoor meeting in the early fall, and do another field trip as needed.

Jim Thornton will also be providing more community members' names to Whitney to add to the mailing list for future meetings.

Leo: The last thing I wanted to show you was a video I took of a fire in the Eagle Creek Wilderness last year. It was in the same band of fuel types as in the Dollar Fire. This was a more open stand, on a 40% slope. We had east winds and it flared up during the night, but the openness of the stand kept the fire from moving into the canopy. The stocking was 40 trees/acre (30 ft spacing between trees). The fuel loading was 20-25 tons/acre. The stand was mostly grand fir and it still survived because it did not burn very hot and moved quickly.

We will be posting definitions of fire regimes and terminology on the website.

Cindy: How much of a role do you think the moister forest type of the Eagle Creek Wilderness played in the fire you just showed us?

Erik: Some of the areas in Eagle Creek do have a dryer condition and fall into a higher fire regime because of the topology of the landscape.

The Fire Behavior Modeling slides will be available on the website, along with a map of the Wildland Urban Interface boundaries, provided by John Gehrig.

Field trip to Surveyor's Ridge, Proposed Unit 15

Whitney: Stand Summary

Leo: This stand has a fuels model of 10 to 8 because it is a dense stand. This is the same stand we modeled for the prediction of fire behavior shown earlier.

Whitney: This stand has a greater than 300 square foot basal area. The flagging I have left marks hypothetical leave trees. In this stand we would remove all the grand fir and we would maintain the ponderosa pine and Douglas-fir. These are the dominant overstory. Western larch is another fire-adapted species present which we would favor. Some of the trees in this stand are infested with mistletoe and there are also root disease pockets in other areas. We would still maintain some component of grand fir at other sites, depending on the conditions. This area is part of the old proposed Tartan sale from the original Polallie-Cooper project.

Erik: What canopy closure would you have after treatment?

Whitney: It would be 30-40% canopy closure afterwards.

Leanne: What is the treatment area?

Whitney: We have the project area grouped within burn blocks. This particular area extends all along the ridge down to the East Fork of Hood River and contains approximately 80 acres.

Grady: Why are you looking at treating here?

Whitney: This is a corridor for fire which was predicted following the Bluegrass Fire. There is also a high risk of a wildfire moving into The Dalles Municipal Watershed.

Grady: What is the objective of the treatment?

Whitney: Fuels reduction and forest health.

Erik: There was more consensus of treatment benefits on the bench further up toward the road than on this slope.

Whitney: We can look at that old shelterwood on our way up.

Rick: Have you done a slope profile for this area?

Whitney: We are working on the logging systems.

Erik: Are we within the ¼ mile buffer of the Wild Scenic River?

Whitney: I'm not sure. We are probably within a ½ mile of the large rock slide you can see from the highway.

Cindy: Have you looked at historic stand densities?

Whitney: Not for this area specifically, but we know a great deal about historic pine stands in general.

Meredith: What was the historic management?

Whitney: This site was historically burned. There was also a spruce budworm outbreak about 10 years ago. There was natural disturbance on the slope and logging was done above.

Cindy: Have you treated in here previously?

Whitney: No, not on this slope. You can see old toe holds further up near the bench which mark historic logging, but the treatments never came this far down.

Cindy: Are we looking at old growth here?

Whitney: This stand is moving toward its climax species, which in the absence of disturbance is grand fir. But the stand does not have the functioning condition of old growth.

Cindy: Is that due to fire suppression?

Whitney: Yes.

Erik: This does not seem like a traditional ponderosa pine stand.

Whitney: There are 10-12 legacy pines/acre. You can see from the core of one of these older trees that stand suppression began between 90 and 100 years ago, which fits in with when we know fire suppression efforts began.

Jim: What will happen to the mistletoe in this stand?

Whitney: We are not trying to get rid of it. We will let it function naturally to create snags.

- Gradey: There is always the question of allowing a stand to function naturally versus maintaining it mechanically. How often would this stand need maintenance?
- Leo: We would return every 20-30 years to thin it with fire.
- Cindy: What is the cost viability of this project? Is this a break even scenario?
- Whitney: If helicopter logging is the only viable treatment, than more than likely the treatments will not be economically viable. True firs are not a valuable species. We will be working on the logging system plans to work out those details. Economics work best on the flat ground. Less than half of the Polallie-Cooper planning area is ground based. Most will be cable or skyline. At this point we are proposing a fuels reduction, not a commercial sale. We are starting with a large area first and working it down.
- Cindy: Is there any recreation input about this project?
- Jim: The ones I've talked with are supportive. There is interest in still maintaining more canopy cover around the trail because it keeps it cooler.
- Whitney: We would buffer around the trail.
- Leo: If a wildfire burned in here with these conditions it would run pretty hot all the way to the old treatments above. It would scarify the soils and would probably destroy the trail. Following treatment the trail would survive. Soil moisture is also an issue which we can plot out with another modeling program.
- Leann: In the Dollar fire did the legacy trees survive?
- Leo: The classic, open stands with minimal surface fuels did.
- Janeen: A rule of thumb for crown fires is to allow for 20 ft spacing between crowns to lower the risk of a surface fire jumping into the crown and then travelling.
- Cindy: So, that would be about 50 ft spacing between the trunks of mature trees.
- Bruce: Pre-European settlement there would have been few trees per acre. Managing an area like this you will have problems if you just leave it alone and prevent natural disturbance. Not treating enough area will result in a higher risk from fire and disease. There is laminated root rot near this stand, and you would lose some large trees to disease for sure.

John D. This is a good point to discuss soil evolution following fire suppression. This area has a high level of organic matter in the duff. The tree cover has reduced the vegetative cover which would protect the soil. Historically there would be more loss of organic matter. The Forest Standard is <15% detrimental activity to the soil.

Gradey: What would the vegetative community be?

Christina: Currently the vegetation is sparse due to crown density and the thick duff layer. You can see some shrub species in open pockets which would likely move in following treatment, such as oceanspray, wild rose, snowberry, vine maple and chinquapin. A controlled underburn would reduce the thick duff layer and would expose a seed bank of forb and grass species which we saw further upslope such as lupine, brome, sedge, starflower, wild strawberry and twinflower. This site would definitely return with greater diversity.

Whitney: If a wildfire came through this seed bank probably would not survive.

Rick: What logging systems are you considering?

Leo: We would prefer whole tree yarding.

Cindy: My experience has been that that limits soil disturbance.

Leo: What would Bruce do?

Bruce: I would discriminate against the grand fir and favor the ponderosa/Douglas fir/larch.

Erik: This is a complicated area with the popular trail and old growth. If it were a different area I would support the fuels treatment. I would be more generous with the leave trees. If you take out too many trees it is hard to grow out the next generation.

John G: This entire west aspect has historically been more open and piney.

Whitney: The majority of the grand fir are 80 years old, which fits with fire suppression beginning in the 1910s-1920s.

Cindy: How much of this area hasn't been logged?

Whitney: From the bench to the river (about 70% of the area) has never been logged east of Highway 35.

Bruce: There were logistical issues with logging equipment on the slopes back when the upper areas were harvested.

Sarah: Would you feel differently about the area if the unit had more vegetation? Some of the units from the previous Polallie-Cooper project had dense vegetation like starflower.

Whitney: 90% of those previous units are being included in this planning project.

John D: I couldn't give you an answer on specific units without seeing them first.

Rick: There was talk at one time of about using a helicopter to fly cut trees down to the E. Fork for in-stream restoration.

Stephanie: Gary Asbridge was looking into that, but we have not started analyzing for it yet. It is still an option.

Gradey: I would be comfortable with the fuels treatment, but not cutting all the grand fir. I would suggest cutting 50% of the true fir and leaving them on the ground. Historically we suppressed fires and then found out that was bad. Maybe we thin out all the suppressed trees and we find out that was wrong too. Ecological communities are complex.

Cindy: From what I can tell, this is not going to be a commercial thin. This project is focused on restoration, not economics.

Rick: We learned from mistakes we made in the past and are using current science.

Gradey: My frustration is that we are mostly talking about fire, which has immediate effects, but not so much about the effects of logging. It seems like dragging trees on this slope would have a huge impact on soils.

John D: I don't think it would have a terrible impact.

Cindy: What would the lightest touch be?

Erik: Could you burn fuels on site?

Leo: We could handpile and burn, then do a spring underburn.

John G: What would the effects of fire on soils be?

John D: It depends on the time of year and the intensity of the burn.

Cindy: How much downed material is desirable?

Leo: 12-15 tons/acre (according to our standards and guides). Right now we have 45-50 tons/acre at this site.

Sarah: When are these standards from?

Leo: The 80s or 90s.

John D: The science has been revalidated to keep them current.

Erik: Isn't there more bang for your buck on the upper benches?

John G: You can't evaluate those sites versus these without first looking at the other sites.

Upper bench, old shelterwood (Unit 15)

Whitney: At this site we would propose thinning the smaller diameter trees to release the larger ones and protect the legacy trees.

Leo: We would leave the big snags and clear the brush. Handpile and burn the unit.

John G: We had talked about mechanical piles, handpile, and chipping. There is a company in The Dalles which has said they will take an unlimited amount of chips. That is an option to consider.

Leo: In this area we are trying to create ideal wildlife habitat while meeting silviculture needs.

Erik: What is your goal for diversity?

Whitney: We will always try to leave the big and old trees, but I will also favor species not susceptible to mistletoe and those more productive. It is a fine balance.

Stephanie: We try to leave a mixed component for wildlife species. It would be nice to leave shrubs on the ground, and most will resprout after a burn. Decayed modeling has a snag and woody down value that is required to be left after treatment.

Leo: These fuels will burn pretty past. We can pile the existing 10-100 hour fuels and burn.

Cindy: What is the fire hazard at this site?

Leo: The canopy has less risk here because there is a wider spacing. There are some dense pockets, so there would be intermittent torching.

Leanne: What is the canopy cover here?

Whitney: 20% cover. Downslope the cover was 70-80%. We would plan on removing the torching hazards and the regen. We want to protect the pine regen. We would thin, then pile and underburn.

Gradey: So this is close to the target you have for the last site?

Whitney: Yes, but downslope we would keep the canopy at 40%

Cindy: Would you leave big logs on the ground?

Leo: Yes, we need to meet standards and guides for downed material.

Erik: There were bigger legacy trees downslope and smaller grand fir, but going uphill it seems to have changed to a different forest type.

John D: On the Barlow district, as you move upslope the vegetation changes drastically. I would imagine a similar effect here. The vegetation changes due to differences in aspect, elevation, exposure, and slope.

Cindy: Could we see some historic photos of treatments to get a better visual of this area?

Whitney recommends that interested members visit the Buckskin sale in the North Fork of Mill Creek to see how a similar area which has been treated.

Discussion of Lava recommendations

Cindy: I have a question about upland storage. Are there treatments which would increase the upland storage in streams? There are transpiration factors to consider here.

Rick: When you have more canopy cover there is a less snow stored on the ground during the winter, but the shade will keep it cool for longer. This results in more base flow later in the season. A more open stand will store more snow, but it will melt quicker. It is all about manipulating the snow pack. We want to avoid having rain on snow events which cause rapid melting and flooding. Introducing fire will change the current hydrograph. I would consult further with John Dodd on this.

Stephanie: What is the soil moisture retention?

John D: The ash cap is 3-6 ft deep. The loamy soil holds water well (sand stores the least water, and loam stores the most). Here there is a good variety of soil. 1 inch of rain would wet 1 foot. It will store water throughout the winter and it will enter the ground water system.

Mike : 1 acre gaps would assist with wildlife needs, especially in flatter areas. Gaps on slopes also have benefits.

The next meeting will be held in August, and will visit another site in the field, if needed.

The new Forest/eastside veg leader will be starting work at the end of August.