

MEMORANDUM

To: Tenmile South Helena Forest Restoration Collaborative Committee, the City of Helena, resources, stakeholders, member of the public, and media

From: Sarah Elkins

Date: September 16, 2015

Re: Summary of the September 16, 2015 field trip

SUMMARY OF TENMILE SOUTH HELENA FOREST RESTORATION COLLABORATIVE COMMITTEE SEPTEMBER 16, 2015 FIELD TRIP

Attendance

1. Collaborative Committee members – Chairman Joe Cohenour, conservation organization representative, Vice Co-chair Jordan Alexander (attended the MacDonald Pass section), fire community representative; Angie Grove, recreation use representative; Gary Marks, commercial use representative; Eleanor Morris, conservation organization representative; and Doug Powell, citizen at large representative
2. Resources and stakeholders–Heather DeGeest, Forest Service POC; Marshal Thompson, Forest Service; Sarah Elkins, City of Helena administrative POC
3. Members of the Public - None in attendance
4. Media – None in attendance

Summary of Field Trip

1st Stop – MacDonald Pass, burned on September 25, 2009, human-caused

- a) Visited for the purpose of viewing unusual fire behavior area, showed mid- to high intensity damage from fire, not severe intensity.
- b) Fire burned at higher intensity at the front end, toward the top of the forested area on the east slope.
- c) Very high wind conditions, gusts of more than 60mph, created a circulating effect with the high winds pulling the fire back down toward the surface. That's the explanation for the fire not ripping over the hills and down into the next gulch.
- d) There are very green areas with aspen and other non-evergreen varieties to the east of where the fire started, creating a stop zone for the fire.
- e) Small sections in the area showed severe soil effects with very little regrowth. Regrowth in those pieces was spotty and mostly non-native weeds, especially compared to the regrowth in lower intensity fire areas.
- f) Timbers were still standing, ghost-like, completely blackened. The fire occurred when trees had dropped needles but the area was not yet jack-strawed, which is why only patches saw high heat on the surface, changing the soil hydrology.
- g) Blackened timbers will take much longer to decompose than raw wood.



Figure 1: Wildfire 2009 on Mac Pass, mid- to high-intensity fire, not a large area of severe fire damage.



Figure 2: Wildfire 2009 on Mac Pass, standing, blackened timbers.



Figure 3: Wildfire 2009 on Mac Pass, small areas of severe fire damage with little regrowth of native plant species. Some areas of washout following rain events.



Figure 4: Wildfire 2009 on Mac Pass, standing, blackened timbers.

2nd Stop – Wakina Sky Burn Area, Clancy/Unionville projects

- a) Intention for this project was to restore forest to more natural conditions, following many years of fire suppression. The intention was NOT fire mitigation treatment.
- b) This unit was hand-treated prior to burning. Forest Service piled and removed some fuels in the area the season prior to the prescribed burn in 2013, created fire line up the slope and across the ridge.
- c) As can be seen at this site, understory trees regenerate fairly quickly. The openness of this site would be maintained by frequent (approximately 25 years), low intensity fire in a pre-settlement environment. To maintain this stand structure today requires multiple entries that mimic that historic frequency and intensity.
- d) In sites like this that have not burned at regular intervals in the last 100 years, needle litter or duff buildup can cause unintended tree mortality when fire is introduced back into the ecosystem.
- e) Normally ponderosa pines are well adapted to frequent low intensity fire, but fire can burn more persistently in thick duff, leading to higher tree mortality.
- f) Removing duff buildup to reduce unintended tree mortality is an objective when planning and executing prescribed fire treatments in these conditions.*
- g) Lessons were learned from this prescribed burn, future burns will include more removal of duff buildup around trees the FS intends to keep in order to lower mortality rates.



Figure 5: Prescribed, low- to mid-intensity fire at Wakina Sky unit.



Figure 6: Prescribed, low- to mid- intensity type 1 burn at Wakina Sky unit.

Overall questions, answers, and highlights

- a) The project areas are expected to be treated over a long period of time, perhaps 15 years.
- b) Project areas will be reassessed as units are treated, as was discussed at the Wakina Sky* stop. As treatments in units occur, conditions will change and methodology will be assessed.
- c) **The Draft EIS is a DRAFT.**
- d) **The recreation assessment of the project area is still in draft form and cannot be released – but will be part of the DEIS.**
- e) **Q:** Particularly in IRAs, can larger project areas be treated so equipment & workers can make fewer trips inside? (To avoid even temporary road creation and disturbance in the areas.)
A: As discussed at the Wakina Sky stop, sometimes it's better to go in to the unit in one year to pull duff and small fuels away from trees we want to keep, and possibly do an area burn during a wetter time, and then go back the following year to do a broadcast burn.
- f) Priorities in different areas will need to be ranked, e.g. recreation vs. wildlife, human safety vs. recreation, etc.
- g) Types 1 & 2 prescribed fires refer to level of risk & complexity. The Clancy/Unionville projects are type 1 not because of complexity, but because of the proximity to the city of Helena
- h) Plant & tree diversity is a big concern for Doug Powell.
Weeds are a constant concern in the forest, whether you are doing treatments or not. The best practice is to treat weeds before and after treating the fuels. The disadvantage to that is when killing weeds before treatment poisons the ground for native plant species as well. Seeding with sterile annuals can give the existing vegetation a chance to bounce back and outcompete the weeds.
- i) **Native seed packs are very expensive. FS is hesitant to use them because weed treatments kill the native seeds as well.**
- j) Mechanical treatment can refer to the fact that machines are used to cut and pile the fuels. Mechanical treatment *with removal* refers to the fact that machines cut and haul off the fuels. Hand treatment means that the fuels are cut and piled by hand (most likely using chainsaws).
- k) Mechanical treatment, if done using best management practices, can have low levels of impact on the understory and soils, even when compared to hand treatments, and is often much safer and much more time efficient.
- l) The safety advantage of mechanical treatment is especially important when dealing with high volumes of beetle-killed trees, where there is greater potential for dead limbs and tops to break off when the tree is being cut.
- m) Unlike hand treatment, mechanical treatment can haul whole trees in bunches to the pile, with the butts hauled off the ground and the tops dragged like a broom across the forest floor. In this way, mechanical treatment, when soil conditions are right to minimize damage from the movement of machines, can have less impact on the understory vegetation and soils than hand treatments.
- n) Mechanical removal of trees requires that the whole trees be yarded off, there are many methods for yarding timber, each one having advantages and disadvantages depending on the specifics of the site and the timber, but because removal adds more movement of the whole tree, it likely creates more impact to the understory and the soil. Again, this additional impact may be acceptable in certain conditions and unacceptable in others.
- o) If you can sell the timber, you can subsidize the treatments and should be able to treat that many more acres.
- p) Each tree species has its own prescription for fuels reduction and forest health. And each site has its own set of qualities that are best served by a certain prescription for fuels reduction and forest health. The goal here it to get those prescriptions right.
- q) One of the objectives for treatments in this beetle affected landscape is to keep the fuels vertical, which will hopefully reduce the impacts from fire on the soils and as a result, reduce sedimentation of the water supply.
- r) Another objective for treatments is to get the forest to a place where wildfire intensity is lower and fire suppression efforts can be effective enough to prevent catastrophic damage to Helena's drinking water watershed.

s) And still yet another objective is to protect elk hiding cover through treatments and to protect all of the other values this landscape produces for the Helena community.

***Copied from previous field trip notes; these concepts were discussed during second field trip as well.**