

**Forsythe II Multiparty Monitoring Group (MMG)
August 14, 2019, 4:00 PM to 7:00 PM
Lodgepole Pine Units Field Trip
Meeting Summary – FINAL**

ATTENDANCE

Group Members: Karen Blakemore, Teagen Blakey, Chad Buser, Marin Chambers, Tania Corvalan, Aurelia DeNasha, Lynne Deibel, Mark Foreman, Angela Gee, Serene Karplus, Alex Markevich, Paul McCarthy, Mark Mendonca, Susan Wagner, and Kevin Zimlinghaus

Facilitation: Heather Bergman and Samuel Wallace

ACTION ITEMS

Teagen Blakey, Aurelia DeNasha, Susan Wagner, and Kevin Zimlinghaus	Identify a route, time, and necessary supplies for the September wildlife field trip.
Peak Facilitation Group	Prepare and distribute the meeting summary.

OVERVIEW

Note: The field trip was broken into two major meeting points. The first major meeting point was at an XCEL transfer station, approximately ½ mile east of the Peak to Peak Highway. The field trip participants met there at 4:00 pm. The group proceeded on foot down a bike trail to several stops that Teagan Blakey, Tania Corvalan, Susan Wagner, and Kevin Zimlinghaus had selected in advance. The next major meeting point was at mile marker ten on Magnolia Road. The field trip participants met there and proceeded on foot to several locations in Unit 3. This summary is organized by the stops that the group made by various locations (in chronological order).

XCEL TRANSFER STATION ON MAGNOLIA ROAD

Transfer Station

- The field trip began with the history of the treatments in the area. The area was the site of the 1999 Winiger project, which was a collaborative effort between the U.S. Forest Service and the City of Nederland among others. Between 2001 and 2003, the Winiger project partners implemented treatments, which consisted primarily of patchcuts and clearcuts.
- In 2014, under the Lump Gulch and Lumpy Tung work order, the USFS implemented additional clearcuts and tree cutting around Aspen stands. The Lump Gulch and Lumpy Tung projects created a clearing along the bike trail which was the first stop of the field trip. Under the Forsythe II decision notice, there are plans to thin the regeneration from the Winiger and Lump Gulch projects.
- The group discussed the plans for marking trees in Unit 9. Some participants expressed that they would like to talk about the marking of trees in Unit 9 before it occurs.
- The process of marking trees in the Lazy Z units is taking longer than expected. This delay leaves more time for the group to discuss Unit 9 before the USFS crews begin marking trees.
- In the lodgepole units, the USFS does not want to set the boundaries until there is a conversation with the MMG about mechanical versus manual treatments as well.
- Participants pointed out that across the street from the XCEL transfer station, Boulder County completed a forestry project in which they clear cut the area but left a strip of trees along the side of the road. The strip of trees acts as a visual buffer so the residents do not have to see the clear cut.
- USFS tries to reduce as many potential obstacles to road access in all of the treatment areas. By bringing treatments to the road and not leaving a buffer, it allows better access for firefighting crews. It also provides a safer transportation corridor in the case of a fire.

- There were two articles for MMG members to take home and read. The articles were *The ecological value of lodgepole forests* by Dave Hallock and *The West's worst fires aren't burning in forests* by Nick Bowlin.

Stop 1

- Stop 1 was in a clearing that the USFS and collaborative partners thinned in 2002 and then clear cut in 2014. On the walk along the bike trail, the field trip participants passed through an open, untreated lodgepole stand. Across the clearing to the west, the group could see an untreated lodgepole pine stand that was very dense. There was another tree stand of intermediate-sized trees that were originally cut to act as a fuel break.
- Because no one thinned the regeneration, those mid-sized trees in the fuel break potentially act as ladder fuels to the existing, mature lodgepole stands.
- Much of the regeneration in the clearing is lodgepole regeneration. The USFS also planted ponderosa pines in the clearing in 2015. Some participants expressed that the lodgepole saplings were growing in too thick. The forest before the treatment was not as dense as the lodgepole regeneration.
- The field trip group discussed differences in the fire risk between the clearing, the less dense lodgepole stands, and the denser lodgepole stands. They discussed fire risk through the perspective of fire suppression and fire initiation.
- For fire suppression, firefighting crews would be comfortable locating firefighters in the clearing. They also would consider placing fire crews in the less dense lodgepole pine forest because there are fewer surface fuels and the forest is north-facing. The choice to anchor firefighting crews in the less dense lodgepole forest would be dependent on the fire's behavior and the time of the year.
- The patchcuts can assist firefighting as they can serve as a place for hotspot crews to establish themselves. If the patchcut is close to the road, it also allows firefighting crews to bring in equipment to mechanically remove intermediate-sized trees.
- The presence of the clearing may be crucial during a fire. Its importance depends on the size of the fire, the character of the fire, and the time of year. Fire behavior is variable, and any given day is not going to be the same for any particular fire on any particular environment.
- A surface fuel fire could transition first to the intermediate-sized trees and then to the crowns of the more mature lodgepole.
- Firefighting crews could use aerial resources to suppress fire here because the treatment area is on a spur ridge.
- In the clearing, there could be an opportunity to use prescribed fire to thin the regenerating trees. In the dense lodgepole forest stand, it would not be possible to use prescribed fire as a management tool. In the stand of intermediate-sized trees, it would be possible to use prescribed fire if it was in a reasonable containment area. However, because the intermediate-sized trees are next to a mature lodgepole stand, the fire crew would be less comfortable using prescribed fire.
- Some participants asked what the USFS's plan is for managing the regeneration. Participants said that they have observed the USFS move onto new projects instead of returning to post-treatment areas to thin regeneration.
- Most thinning occurs 10 to 12 years after the original treatment. In most cases, NEPA does not extend for ten years into the future because the conditions of the landscape will likely change in that time. When NEPA does not extend ten years down the line, the USFS must make a new decision to address the regeneration. In the case of Forsythe II, the decision allows the USFS to return and thin the regeneration.
- Under the Forsythe II decision, the USFS is returning to thin 100 acres of the Winiger project. The group is currently on the boundary of Unit 2, and the USFS could thin regeneration in Unit 2 as well.
- In Unit 2, there is an opportunity to thin the regeneration and patch cut the denser forest. The USFS has an upper limit of 30% of the total unit area that they can patch cut and clear cut according to the decision notice. The treatment for Unit 2 is still under the 30% threshold, so the USFS can add acres of treatment and still be under the acre threshold. The USFS has not set the boundary for Unit 2 yet.

- Some participants stated that prescribed burning seems to have a window of three to four years after the treatment and there appears to be an opportunity for prescribed burning in the clearing area at the current time. The USFS is starting to plan for prescribed fire management at the beginning of Forest Service projects. In the clearing, USFS did not plan for using prescribed fire so they cannot use it here. In the future, the USFS will continue to look for opportunities to use prescribed fire when possible.
- Some participants stated that the western edge of Unit 2 is important for wildlife, which the USFS should consider in their prescription design.

Stop 2

- Stop 2 was at the edge of the forest, where there were blown down trees. The group discussed the effect of blowdown on wildfires and the USFS's plan for managing those trees.
- Blowdown seems to be a side effect of the treatments as the patchcut clearings increase wind speed, which knocks down standing trees. Participants said that they were concerned about blowdown both for the risk of wildfires and its damage on the aesthetics. The blowdown trees can potentially act as ladder fuels for a fire.
- From a silvicultural perspective, it is better to place patchcuts in a north-south orientation instead of an east-west orientation for these reasons. The degree of blowdown is also dependent on the slope of the treatment and the proximity to drainages.
- There are tradeoffs in all of the treatment options. For this treatment area, the USFS designed the treatment around the ridge for fires and fuels management rather than to reduce blowdown.
- The blowdown trees at Stop 2 are not within any of the units, so the USFS cannot manage that blowdown. With the USFS moving towards broadcast burns, that is a management tool that could potentially cover the whole area. Some pretreatment may need to occur, but a NEPA for prescribed burning could eventually address these types of areas.
- After the treatments, it takes three to four years for the surrounding trees to become more wind firm.
- If there is nearby road access, people can remove the blown down trees and use it for fuelwood. This strategy has served as a way to remove blowdown in the past.
- Some participants said that the USFS should make it a part of their post-treatment plan to remove the blowdown.
- The field trip participants discussed how the USFS incorporates fires and fuels objectives into their prescription design.
- The USFS has many factors when selecting a location for lodgepole patchcuts for prescribed burning or fire suppression. The USFS is looking for places where a treatment for reducing fire and fuels will be most effective and where there is road access. They are also restricted by the limit that the USFS can patch cut or clear cut up to 30% of a given unit.
- The USFS fire and fuels team has engaged in the conversation for planning the design criteria of the project. The fires and fuels team looks at maps and imagery and visits sites in-person to determine what are the appropriate treatments.
- Under the Lump Gulch decision, the USFS could not cut anything under 5 to 6 inches. The Lump Gulch project had multiple objectives besides fires and fuels. One objective was to stop the expansion of the beetle kill. For a project where the objective was primarily fires and fuels, the treatment would be more focused on the ridge rather than the side of the slope. From a silvicultural perspective, there is a variety of structures and age classes that are good for forest health.
- The USFS can remove surface fuels as they patch cut. Under a mechanical treatment, the USFS can pile and burn surface fuels and blowdown with a diameter larger than eight inches. Under a manual treatment, they can pile and burn surface fuels and blowdown trees with a diameter in between six and eight inches. The USFS could intentionally patch cut an area to remove blowdown, but there are multiple different factors the USFS must consider when making that decision.

Stop 3

- Stop 3 was on a landing where the USFS piled chipped trees during the 2014 Lumpy Gulch/Lumpy Tung project. At this stop, invasive weeds were growing, including Canada thistle, cheatgrass, woody mullein, and invasive mustards, which was the main point of the discussion.
- In the landing, there are more surface fuels and nitrogen, which allows the invasive weeds to grow more prolifically.
- Invasive weeds affect the biology of the area, and removing invasive weeds can be difficult. The land's recoverability depends more on how long the weeds have been present rather than how much area the weeds cover. The invasive weeds at this landing have been growing for about five years.
- Participants asked how the USFS approaches managing invasive weeds in a post-treatment site, particularly when they are short-handed and underfunded.
- The USFS washes the tires of the equipment to ensure they do not spread weeds. Some participants asked why there were still many invasive weeds in the landing area if washing tires is an effective way of managing the spread of invasive weeds. The invasive weeds that grow in a post-treatment landscape are often a function of what was already in the area.
- The USFS uses herbicides to treat invasive weeds in post-treatment areas.
- In some cases, the invasive weeds are short-lived. For example, if the weeds are shade-intolerant, they will die once the trees grow back and shade them out.
- Some participants said that from the ecosystem perspective, the invasive weed treatment should not be postponed 50 to 100 years while the trees grow. More active management seems to be necessary.
- Internally, the USFS is having conversations about invasive weeds and follow-up treatments as they further discuss prescribed burning and other treatments.
- The USFS is trying to treat more areas for invasive weeds, but they have to prioritize by targeting certain weeds and certain areas. The weeds that the USFS is prioritizing are Orange Hawkeye, Oxeye Daisy, and Leafy Spurge because these weeds require multiple treatments to manage them. As the USFS is treating these priority weeds, if there are other invasive weeds in the area, it will kill them too.
- The USFS is using three types of herbicide for invasive weed treatment: Milestone, Telar, and one other.
- The group discussed how the herbicides that the USFS is using could affect wildlife and humans.
- Participants in the meeting did not know if the herbicides were carcinogenic. In the past, participants had conversations with Boulder County weed specialists who suggested the use of herbicides which average residents could not use due to their toxicity levels.
- From a wildlife standpoint, invasive weeds outcompete native vegetation, which reduces the food source for native wildlife.
- The effects of the specific herbicides on wildlife were uncertain. Participants said that they would like a more detailed discussion on how herbicides affect wildlife.
- When writing treatment plans for invasive weeds, the effect of herbicides on wildlife is a big component of the decision. The wildlife biologists must research and incorporate the effects of herbicide on wildlife into the treatment plan.
- The amount of surface fuels left at this landing is more than the USFS should leave at the landing of the Forsythe II project.

Stop 4

- Stop 4 was in a burn scar in which the USFS piled manually-cut lodgepole and burned them. This fire burned slowly and over a long period.
- There was another nearby landing from the Winiger project. At the time, the USFS burned the landing when the winds were at 60mph. When burning the landing areas, one participant said it is better to burn them hotter and faster.
- One of the results of a slower and longer burn was that it created hydrophobic soils. For ten years after the burn, nothing grew in the burn scar, which is why the vegetation is less tall than the

vegetation in surrounding areas. In other areas where the USFS burned piles, they burned more quickly, and the vegetation was able to establish itself much faster.

- The difference between burning mechanical and manual piles is that there are more manual piles to burn. With more manual piles, there may be more sterile patches across the landscape if the piles burn too hot and create hydrophobic soils.

MILE 10 MARKER ON MAGNOLIA ROAD

Stop 1

- Stop 1 on the Mile 10 marker on Magnolia Road was in a well-spaced lodgepole forest in Unit 3. The group discussion occurred on a ridge adjacent to a drainage area. The drainage, which leads to the Barker Reservoir, is one of the few drainages that does not pass through neighborhoods. Participants said that in this area, it stays cool and moist.
- Field trip participants had questions related to wildfire and wildlife and treatments in Unit 3.
- There are concerns for wildlife species, like the American Marten, in the drainage. The wildlife biologists are currently looking at data on the American Marten in the area.
- During the Winiger project, the USFS thinned the lodgepole trees and applied small patchcuts to reach the result of removing 30% of the existing basal area. As a result, the canopy has opened somewhat, but it is not completely open. The shading restricts the growth of trees that could potentially become ladder fuels. In previous trips, there were more ladder fuels in different units.
- Some participants said that treatments should consider that there needs to be a mosaic across the landscape that provides for many different uses. The USFS should treat some areas for improving safety conditions and increasing the capacity of firefighters to fight wildfires. Some areas should serve ecological and social values, and other areas may not need any treatments at all. By treating different areas for different purposes, this creates a diverse mosaic across the landscape.
- Another component of the Winiger project was removing conifer trees from around the aspen trees. As a result, the aspen trees are now flourishing.
- The USFS uses a classification system to categorize different forests. The classification system uses a number to indicate the size of the diameters of the trees in a given stand and a letter to indicate the percentage of canopy cover for a tree stand.
- Between the Forsythe I and Forsythe II project, the USFS found that the characteristics of the forest (type, species composition, mix, age classes) in their database were not completely accurate. They completed a combination of GIS analysis and stand exams to recategorize the areas. In the GIS analysis, the USFS is looking at a macro scale with aerial imagery. The scale the USFS uses in the GIS analysis is 1:10,000.
- The forest on the ridge is a 3A or 4A forest type. In the drainage, the forest is either a 3C or 4C forest type. The classification system allows the USFS to make decisions about what habitat structural stages they want to promote to increase structural diversity. It also helps the USFS decide what the appropriate type of treatment is for each tree stand. For example, the USFS would like to treat a 4A forest with mechanical treatment.
- The discussion about whether to implement patchcuts along the ridge or in the drainage area is ongoing. The ridge is a good place to treat for the purpose of fire and fuels management.
- If the USFS completes patchcuts on the ridge, the preferred treatment type would be mechanical. A mechanical treatment would allow the USFS to create a landing site instead of creating many, smaller hand piles.
- Some participants said that the treatment decision should not be that the USFS either patch cuts in the drainage area or the ridgeline. The USFS should look at the age distribution across an area and make decisions that diversify the forest structure across the total area rather than considering two different stands for treatment.

Stop 2

- Stop 2 was in the forest of the drainage area. Because the slope was steep, not all participants were able to make it to this stop. The drainage area is either a 3C or 4C forest type.
- 3C forests are the most common forest type in the Forsythe II project area. There is a tradeoff at the landscape scale of reducing 3C forests and enhancing 2T forests, which are composed of seedlings and saplings.
- Some participants stated that there may be many 3C forests, but there are not many 4C forests, which are older, more mature forests. Some participants said that maintaining some 3C forests will allow for those forests to become 4C forests. By cutting down 3C forests, it will, in turn, reduce the potential for 4C forests in the area.
- The classification system uses broad categories. For example, a “3” classification represents trees with a diameter from 1 inch to 9 inches. Some participants said that this seems like a large range and would like to see the USFS more finely categorize the diameter of the trees in the “3” classification.
- For fire suppression, it would be better for the USFS to treat the ridge rather than the drainage. The highest point requires fewer resources to put in a fire line.
- From a wildlife perspective, the drainage is a northern-facing slope, which provides cover from heat for wildlife. The ridge probably serves more of a travel corridor. This area could potentially be a 3.5 management area.
- There are times when wildlife interests do not overlap with other interests. For example, downed wood can be beneficial for wildlife even though it can be an issue for fire risk.
- Some wildlife may also prefer forests that have multiple stories. For wildlife, it is not about a single stand, but it is about promoting a diversity of age classes across the landscape.

Stop 3

- Stop 3 was further down the doe trail and adjacent to a stand of regenerating trees.
- In this area, the USFS used patchcuts to promote aspen growth, which worked effectively.
- During the Cold Spring fire, there was worry that the fire was going to cross the road and travel up the north aspect into the Town of Nederland. The firefighters were able to stop the fire on the north slope and prevent it from entering into Boulder Canyon.
- Those in the Big Spring neighborhood would be interested in building fire breaks for fires coming from the west. Placing a treatment on the ridge would be the most effective way of developing a fire break.
- One proposal would be to move the treatments closer to Nederland and apply more of the treatments along the ridge.
- Treating in the area also requires involving Boulder County and private property owners. Boulder County Open Space has land nearby. Their property has a wetland at the bottom and a hill that leads up to Magnolia Road.
- The regenerating trees are composed of ponderosa pine and lodgepole pine. The goal of a patchcut would be to promote the ponderosa pine while tying the ponderosa pine forest into the aspen grove. There is also an opportunity to remove some of the larger trees around the regenerating stand. By removing the larger trees, it would expose the smaller, regenerating trees to the wind and allow them to become more wind firm over time, reducing blowdown.
- The USFS is planning on thinning some of the patchcut regeneration in this area during the Forsythe II project. When regenerating stands are too small, the USFS cannot dedicate the resources to thinning those stands. There is an opportunity to thin or remove small patches of regenerating trees if the USFS is also treating the overstory at the same time.
- Some participants said that they would like to see structural diversity considered across the entire landscape and not only on USFS land. They said that by patch cutting 30% of a unit, it would ultimately lead to less structural diversity.
- Some participants said that they would like to see a commitment from the USFS to keep thinning regeneration, particularly in treatment areas designed for fire breaks.

- MMG discussed how long patchcuts are valuable for fire suppression before the regrowth is too large.
- Firefighters can deploy ground resources when the flame length is 4 feet, and they can use mechanized strategies to fight fire when the flame length is 8 feet. The flame length is roughly 1.5 to 2 times the height of a tree.
- The ability to use retardant from the air depends on the density of the canopy and the tree height. When the trees are too tall, it is difficult to angle the distribution of the retardant from the airplanes to reach the ground. While retardant in the tree crowns can delay the spread of the fire, the goal of using retardants is to reach the ground. Retardant on the ground allows firefighters to deploy ground resources to create fire lines. Outside of aerial uses, there are no other known ways to the group of applying the retardant on the ground level.

NEXT STEPS

- Before the next MMG meeting, there will be an additional hour and a half blocked to discuss lodgepole pine units. The lodgepole pine discussion will begin at 4:30 pm at the Nederland Presbyterian Church.
- There will be an additional field trip for those interested to inspect the markings the USFS completed in Unit 39 at the Lazy Z Road. Contact Kevin Zimlinghaus for more information.
- The next MMG meeting will be on Wednesday, September 11 from 6:00 pm to 8:30 pm at the Nederland Presbyterian Church. Wildlife will be the primary topic of discussion.
- The wildlife field trip will occur on Saturday, September 14. Teagan Blakey, Aurelia DeNasha, Susan Wagner, and Kevin Zimlinghaus will plan the field trip.