

**Forsythe II Multiparty Monitoring Group (MMG)  
 September 14, 2019, 9:30 AM to 12:00 PM  
 Wildlife Field Trip  
 Meeting Summary – FINAL**

**ATTENDANCE**

*Group Members:* Paul Alaback, Karen Blakemore, Teagen Blakey, David Buchanan, Chad Buser, Marin Chambers, Aurelia DeNasha, Lynne Deibel, Jim Disinger, Angela Gee, Alex Markevich, Mark Mendonca, Susan Wagner, and Kevin Zimlinghaus

*Facilitation:* Heather Bergman and Samuel Wallace

**ACTION ITEMS**

<b>Marin Chambers</b>	Create a overlay of a map of previous treatment areas (Winiger, Lump Gulch, Lumpy Tung, and Forsythe I) on top of a topographical map.
<b>Jim Disinger</b>	Send points on mountain lion dens and elk paths in Unit 9 to Aurelia DeNasha.
<b>Kevin Zimlinghaus</b>	Send a map on where there will be a pathcut in Unit 11 and where there may be areas to implement mixed conifer treatments.
<b>Peak Facilitation Group</b>	<ul style="list-style-type: none"> <li>• Prepare and distribute the meeting summary.</li> <li>• Find a location for the indoor portion of the MMG meeting on October 18.</li> </ul>

**OVERVIEW**

*Note: The field trip was broken into two major meeting points. The first major meeting point was at the Boy Scout Trailhead gate, south of Unit 4. The field trip participants met there at 9:30 am. The group proceeded on foot down to several stops in Unit 4 that Teagan Blakey, Susan Wagner, and Kevin Zimlinghaus had selected in advance. The next major meeting point was at the north end of Unit 45. The field trip participants met there and proceeded on foot to a location within the goshawk buffer treatment area in Unit 45. This summary is organized by the stops that the group made by various locations (in chronological order).*

**UNIT 4**

***Boy Scout Trailhead Gate***

- Several participants on the field trip gave an overview of what the group will see as they walk through Unit 4. One destination on Unit 4 is an old-growth forest where they will discuss how the US Forest Service (USFS) evaluates old-growth forest.
- Some participants said that the community is attached to the landscape and that it is important to maintain wildlife habitat so that wildlife can move across the landscape. They stated that past projects already have removed trees, and it is important to keep that general context in mind when designing treatments.
- The walk through Unit 4 will take the group through previously thinned areas and areas without previous treatments. The group should compare the differences between the treated areas and the non-treated areas.
- Boulder County may implement a Christmas tree thin in areas of dense lodgepole on county land in the area. Some participants said that Christmas tree thinning strategies produce short-term results. Normally, there will have to be a follow-up treatment after a Christmas tree thinning to achieve the desired results.

### ***Stop 1***

- Stop 1 was along the trail in Unit 4. It was in an area which the USFS designated for one of three patchcuts. The stand was originally treated in the 1980s and 1990s. The original prescription in the 1980s or 1990s was probably aiming for a 30% basal area reduction. When the USFS treated the area 30 years ago, the patchcuts were small, and the treatment primarily consisted of thinning. Back then, the USFS was trying to thin the tree stands in rotating stages, treating 30% of the stand only to come back later and treat another 30% and so on.
- Some participants said that they did not have serious issues with patchcutting in this location because this area is along a heavily used trail. Due to the human traffic, wildlife would not use this stand of trees. Other participants said that they prefer the USFS to treat in areas where there has already been a treatment instead of in untreated areas. There was a suggestion that there should be a buffer of trees along the trail to keep hikers on the trail.
- In terms of habitat, the USFS wildlife biologists are looking for forage and snag trees, which are dead standing trees. Snag trees provide habitat for cavity nesters and insect eaters. Downed woody debris creates habitat for species that live in the subnivean zone. The snags and downed woody debris serve as critical habitat, so it is important to have guidelines for minimum levels of both snags and downed woody debris. The forest plan requires the USFS to leave a certain amount of snag trees and downed woody debris on the landscape.
- The size of the snag is important too. Different bird species have a specific snag size that they use for habitat. Some participants said that a treatment plan should create an opportunity for different sizes of snags in the future. Part of the USFS's plan is to leave trees that will become snags in the future. The target size for snags is 8 inches diameter at breast height (DBH). The USFS also accounts for snags with a DBH of 8 inches or less because bats use those snags for habitat.
- The hardness of the wood also matters for cavity nesters that use snags. It is more difficult for wildlife biologists to measure the hardness of snags to determine which are appropriate for different species.
- Even-aged forests tend not to have coarse woody debris on the ground. In even aged-forests, there is a need to create the coarse woody debris purposefully.
- The area represents a good intermediate between an open area and a potential old-growth forest. Elk would move through this area as it provides good cover for them. It is less certain if this stand of trees would provide good thermal cover for elk in the winter. This stand would also be good for bird species that need more of an open understory. The stand has diverse canopy layers too, which is good for birds as there is a diversity of insects when there are diverse canopy layers.
- Some participants compared this stand to previous treatments in Unit 9. They said that in this stand, there is some canopy openness and only a small amount of regrowth. In Unit 9, the thinning was more intensive, and there was more regrowth as a result. The USFS then has to come and treat the regrowth, so it does not become ladder fuels. They stated that the approach of the USFS should be to thin tree stands in a way that does not destroy the ability of the forest to suppress regrowth naturally.
- One reason that there is not much regeneration in this stand is because it is too dense. The size of trees also may make the stand susceptible to the next beetle infestation.
- This stand is composed of a mix of species, which one should expect because it is a west-facing slope. Some of the ponderosa pine in the stand are struggling to grow because they need more light. The height and density of the surrounding trees make it difficult for light to penetrate to the smaller ponderosa pine trees.
- There was a question about if one goal of a treatment would be to provide more light to ponderosa pine to facilitate their growth. A treatment in the area would remove the lodgepole pine to encourage a mixed conifer forest to grow. However, there would still be lodgepole left in the area, which would help the USFS prepare for a variety of climate scenarios.
- Studies in the science of dendrochronology reveal a complex history in which lodgepole pine forests at certain elevations historically encroached into ponderosa pine forests. This information on the history of the forest's ecology gives insight into how to treat a forest to better to prepare it for future changes in temperature, precipitation, and disturbances.

- From a fire perspective, there are a moderate amount of ladder fuels in the stand. There is the potential for a fire to start under the right conditions in this stand. The wind and slope also align in the stand, so if a fire were to move through this stand, it would be a higher level of fire danger. There is also a risk of spotting if the fire were to reach the top of the hill.
- Based on access to the road and the fuels type, it is questionable whether fire crews could get into this stand. Fire crews may have to use aerial resources to allow hand crews to enter in the area. However, it is uncertain whether aerial resources would be effective here. The aspen in the area could serve as patches to break up the continuity of fuel if the aspen patches had the opportunity to expand.
- There was a question about where the key staging spots would be for a fire in the stand. There would be an opportunity for access from the hill crest or a nearby meadow depending on the time of day. Fire crews tend to fight fires at night instead of at times of peak burning.
- There was a question about if there is a tradeoff for wildlife by transitioning the forest from lodgepole pine to mixed conifer/ponderosa pine. Different animals use different forest types, so it depends on the species. The elk would continue to use the forest if it moved to mixed conifer. In general, a more diverse stand provides for a higher diversity of species.
- There was a discussion about obligate species. Obligate species are a species that can only live in one habitat type. For example, deep forest obligate species need a dense forest habitat and would not be able to live in a forest that is too open. Some participants said that it is important to think at the landscape level when accounting for obligate species. A completely old-growth forest would be bad for species that do not use old-growth forests. Other participants said that an obligate species needs larger areas of their preferred habitat to survive. Some participants said that they value old-growth forests over other cover types.
- Some participants observed that bears used to be in a certain part of the forest until there was a thinning project, after which there were no more bear sightings. One possible reason that there are fewer bear sightings is because of the nearby housing and trail development. As more humans encroach to an area, bears have been known change their crepuscular behavior to nocturnal behavior. This change in activity makes it less likely that people will see bears regularly.

## ***Stop 2***

- Stop 2 was in an untreated area of the forest. There were decayed trees and rotten stumps with lichen on them. There was a question about how the USFS evaluates the forest to determine if it is an old-growth forest.
- The USFS uses an old-growth forest score sheet to determine if an area is an old-growth forest. The score sheet has different characteristics of old-growth forests. An evaluator will check off whatever characteristics match an area and will determine if it is an old-growth forest depending on the final score. For example, some of the characteristics include the number of snag trees per acre, the number of trees with a diameter greater than 10 inches, the amount of coarse woody debris on the forest floor, the diameter diversity of the snag trees, percent overhead canopy closure, evidence of previous treatments, etc. If an area has enough of the characteristics outlined on the score sheet, then the USFS will determine that the area is an old-growth forest. An area does not need every characteristic on the score sheet to be an old-growth forest.
- There are areas the USFS can consider old-growth forest too even if it does not meet the characteristics of an old-growth forest. USFS staff can evaluate a forest on the ground to make that determination. For example, an open ponderosa pine forest could be considered an old-growth forest under the right conditions. A treatment plan for an old-growth forest may mean not treating.
- Some participants said that forests with old-growth characteristics are rare in the Nederland area.
- Some participants said that it could be helpful to focus on certain species when discussing wildlife instead of discussing wildlife more generically. For example, there are specific forage requirements and overwintering habitats for bear and elk. Old-growth forests can be useful for denning sites and forage for bears.

- Other sensitive species like the Olive-sided flycatcher need more open areas and forest edges to hunt insects. When there is suitable habitat for a sensitive species, like the Olive-sided flycatcher, the USFS puts protections into place to mitigate the negative effects of a treatment on the habitat.
- It would not be an easy task to fight fire in the area. One participant said that the goal of a treatment should be to minimize the damage to the ecology while maximizing the capacity for fire crews to fight fires. There are certain areas near the ridgetops on the north and northwest side of the area that could be strategic locations for patchcuts to provide access for fire crews.
- Some participants stated that an overlay of a map of previous treatment areas (Winiger, Lump Gulch, Lumpy Tung, and Forsythe I) on top of a topographical map would be helpful when identifying strategic areas for firefighting. Marin Chambers can create this map for the October meeting.
- There was a discussion about wildlife migration corridors and the importance of habitat connectivity. In the northeastern parts of the United States, there was an outbreak of lyme disease because fragmented habitat reduced the population of predators that hunted tick-carrying mice. With all the developments occurring around Nederland (Bobcat Ridge development, mountain bike trails, ski resorts, etc.), there is worry that all the development is disrupting wildlife corridors.
- The USFS considers habitat connectivity as one of many priorities across the landscape. Habitat cannot function without wildlife, and wildlife cannot function without habitat. One role of the wildlife biologist is to make sure that wildlife can still move across the landscape whenever the USFS implements treatments. The clearcuts are not huge in this project, which allows for the opportunity to place patchcuts in a way that keeps wildlife corridors intact. The wildlife biologist also considers what the future landscape is going to look like when incorporating habitat connectivity values into the treatment design.
- When accounting for habitat connectivity, the USFS wildlife biologist is looking at the entire project area and migration corridor as mapped by Colorado Parks & Wildlife (CPW). They also work with other organizations, such as Boulder County Parks and Open Space (BCPOS), to connect wildlife habitat beyond the geographic area of the project.
- Designing wildlife islands, pockets of untreated areas, into a treatment plan is a way to facilitate wildlife movement across the landscape. The wildlife islands provide wildlife thermal or hiding cover while the open spaces from the patchcuts provide forage. The combination of accessible cover and forage allows wildlife to move from wildlife island to wildlife island.
- Factors that determine whether an area could serve as a wildlife island include the presence of old-growth forest, density, slope, etc. For example, an area that is more open might not serve as a good wildlife island if the goal of the island is to provide thermal cover.
- The USFS also places wildlife islands in thinning treatments. This strategy is known as variable density thinning.
- There is the need to place wildlife islands away from skid trails so that wildlife are not disturbed by nearby human activity.
- Some participants said that they would not consider the Stop 2 area as an island. The Stop 2 area is a north-facing slope which receives good moisture. There is also no human development in the area. They stated that the USFS should consider placing islands in already treated areas, like the Winiger Ridge project, where there is already a mosaic of patchcuts and thinning projects instead of in intact habitat areas.
- One goal of the islands is to connect places of high-quality habitat. Placing islands throughout previously treated areas can create the steppingstones that connect high-quality habitat areas, like that of Stop 2, to other high-quality habitat areas.
- Some participants said that the wildlife islands concept does not accommodate for obligate forest species. There are management indicator species for specific environments that the USFS monitors. For example, the golden-crowned kinglet is a management indicator species for dense, wetter forests in drainages. Some participants said that there are better management indicator species than the golden-crowned kinglet, such as the American pine marten, goshawks, and amphibian, reptile, plant, and fungal species. The USFS considers American pine marten in the treatment plan.

- There are USFS staff members that specialize in botany. The botanists do not evaluate the landscape at the unit level in the same way that the wildlife biologist does. The botanists look through the planning area to determine if there are any sensitive species in the area. If there is nothing of concern, then they use general design criteria and do not go on the ground to examine specific units. The botanists also look at weeds in the area too.
- Some participants expressed concerns about the role that noxious weeds could have on wildlife. If the treatments open up the forest, there will be a lot of vegetation and regrowth, including noxious weeds. If the noxious weeds outcompete the natural vegetation, the wildlife could suffer from a lack of forage.
- Some participants said that they do not foresee that level of heavy growth happening in patchcuts that are three to five acres in size. Disturbance does create opportunities for noxious weeds, but once trees begin to grow back in an area, they kill the shade-intolerant noxious weeds. The USFS is working on building up their noxious weed management capacity. They currently prioritize different noxious weed species for treatments.
- Some participants said that other organizations, like Boulder County Parks and Open Space (BCPOS), are more worried about invasive species. BCPOS sprays noxious weeds immediately after a treatment to prevent them from becoming established.
- There was also a concern that allowing noxious weeds to establish even for a short period could eradicate some native vegetation species. By the time the trees grew and killed the noxious weeds, the noxious weeds would have already killed other native species from the area.
- A factor that might have a role in promoting native species over noxious weeds is woody debris. Woody debris in the right place retains moisture and cover, which benefits the native species. Some participants stated that they had observed Lump Gulch patchcuts where there was woody debris left on the ground that now contain native vegetation. The USFS considers the microclimate that coarse woody debris produces. They will even bring in material if there are high winds that blow away woody debris. The USFS does balance the benefits of coarse woody debris for native plant regrowth with the consequences of leaving too many surface fuels for fire.
- Plants and animals do not have to be threatened, endangered, or sensitive for the USFS to consider them in their treatments. There may be small areas where a treatment impacts a species, but one goal of the USFS is to implement treatments so that it does not affect the population of a species as a whole.

## **UNIT 45**

### ***Stop 1***

- Stop 1 was on the north end of Unit 45. Stop 1 was immediately off the side of the USFS service road.
- In Unit 45, as the USFS crew was marking trees in the previous year, the wildlife crew identified a goshawk nest in the area. In response, the USFS put in a 30-acre buffer. The USFS staff then came together to discuss how to incorporate a modified treatment in Unit 45 to maintain the integrity of the area for goshawk habitat in the 30-acre buffer.
- In the rest of Unit 45 outside the goshawk buffer, the USFS lopped and scattered the slash from the treatment. In the goshawk buffer, they piled the slash, which they will later come back to burn.
- The USFS treated Unit 45 to reduce the basal area by 30%. In the goshawk buffer, they reduced the basal area by less than 30%. There will be more specific post-treatment monitoring data in the future.
- In the goshawk buffer, the USFS set the goal of maintaining a minimum of 50% crown closure in the overstory where it exists. If there were stands in the goshawk buffer that did not have 50% crown closure, the USFS did not cut in those areas. The only exception is the removal of mistletoe-infested trees.
- Throughout the goshawk buffer, the USFS left all trees with a diameter greater than 8 inches standing.
- During the internal discussion at the USFS, there was a proposal that USFS cut all understory trees with 1-inch to 8-inch DBH in the goshawk buffer to remove the majority of the ladder fuels. The wildlife team did not agree with this part of the prescription. As a result, they removed this proposal from the prescription.

- The level of detail in this prescription is not common as there is normally not enough time to be this detailed in every prescription.
- Marking crews use the cutting guides to inform what trees they mark. There is some level of interpretation required to mark trees using the cutting guide. The USFS monitors how the crews are marking to ensure to some level that they are achieving their objectives and desired conditions.

### ***Stop 2***

- The field trip participants walked off the road to a place within the goshawk buffer.
- In the goshawk buffer, the contractors have already completed the tree cutting. The next step in the treatment is to broadcast burn. The USFS will not be able to broadcast burn until they have burned all the slash piles first. The window to burn the slash piles is smaller because the piles are on a south-facing slope.
- The treatments that the contractors have already implemented tended to be on the lighter side. The contractors cut Douglas fir trees up to 4-inch DBH and all other conifers except for limber pine up to 8-inch DBH with some exceptions for ponderosa pine trees.
- There was a question about why goshawks would choose to nest in this area specifically. Goshawks generally like canopy closure to hunt prey, which includes red squirrel, rabbits, grouse, and other ground species. They also prefer open to moderately open understories. They do not prefer forests that are very dense or very open.
- If there is an area that biologists have identified as goshawk habitat, there will be a wildlife crew calling for goshawks in that area every single year. The wildlife crew also will identify areas that could serve as potential habitat and call there as well.
- They generally will call for goshawks in March or April. At later times in the summer, female goshawks will be incubating their eggs, so there are less likely to call back.
- Treatment operations can continue in August because, by this time, goshawk chicks can fly away, and females are less aggressive.
- Other species that benefit from maintaining goshawk habitat include American pine marten and flammulated owls. Species that would do better in this habitat are open space species that prefer canopy closure and open areas for forage. Interior species would not prefer this habitat.
- There was a question about if American pine martens are an obligate species. The American pine marten is not an obligate species. It generally prefers interior forests but will also use forest edges and openings. The USFS does also not use the term “obligate species.” Instead, they use the term “sensitive species” for different habitat types.
- Wildlife crews did not find goshawks in the area this year, but they could still be here. It is common for goshawks to have multiple options for nests between which they will alternate.

### ***Stop 3***

- Stop 3 occurred at the USFS gate at the end of the Lazy Z Road. The field trip participants met at Stop 3 to discuss the treatment in Unit 9. The USFS brought a map which displayed Units 7, 8, 9, 10, 11, 12, 20, 99, 102, and 103.
- The USFS crew went to the Unit 9 area and confirmed that the suggestions from the last MMG meeting on September 11 align with treatment objectives.
- The USFS identified areas on the west side of Unit 9 to be treated mechanically while the center of Unit 9 will be treated manually. There is also a patchcut that the USFS identified on the west side of Unit 11. The USFS also placed wildlife islands in Unit 9 immediately north of Unit 8, in Unit 9 immediately south of Unit 8, in Unit 9 just west of Unit 103, and on the east side of Unit 103.
- Units 10, 11, and 103 are lodgepole units. Unit 102 is an aspen unit, and Unit 9 is a Douglas fir mixed conifer unit. The plan is to patchcut eight acres in Unit 10, six acres in Unit 11, and eight acres in Unit 103.
- Some participants said that the USFS should consider mixed conifer thinning on the east side of Unit 11 instead of a patchcut on the west side of Unit 11.

- Unit 102 is potentially going to be manually treated. There is a lodgepole portion on the east side of Unit 102 that the USFS may patchcut.
- In Unit 10, there is a ridgeline that the USFS identified to treat to create access for fire crews. The USFS is still planning the treatment in Unit 10, and they can hold off marking Unit 10. They will put flags in the area, so others can see the plans for treatment in the unit. However, the USFS has not made any final decisions on the treatment design yet.
- One of the potential goals for treating Unit 10 is to connect the ridgeline treatment in Unit 10 to the mechanical treatment in Unit 9.
- Unit 10 is on a north-facing slope, and some participants said they want the USFS to consider wildlife values in that unit when designing a treatment.
- There is a barbed-wire fence in Unit 10 that is in the unit itself and not along the boundary of Unit 10. The USFS accounted for this barbed-wire fence when creating a preliminary treatment plan.
- There was a proposal that the USFS cut Unit 10 manually, place a patchcut in the northwest corner of the unit, and place a mixed conifer thinning in the northeast corner of the unit.
- Some participants stated that there is a large area of connected forest that extends from Unit 14 to Unit 3 and 4. Unit 10 is located in this large area of connected forest. They suggested that the USFS stage treatments in Units 9, 11, and 102 to prevent placing treatments in Unit 10 in order to preserve the large area of connected forest.
- Some participants said that the USFS is obligated at minimum to meet the purpose and need for the area as outlined in the Decision Notice. When the USFS signs a National Environmental Policy Act (NEPA) decision, it represents an agreement with the public. There is the decision space for the USFS to decide not to treat in Unit 10, but the USFS agreed with the public through the NEPA process that they would treat in that unit. Additionally, some participants said that the USFS should treat in Unit 10 to meet the purpose, objectives, and goals of the project.
- The October meeting will include a field trip to Unit 10 for MMG participants to discuss the treatment design and preliminary flagging. Teagan Blakey and Kevin Zimlinghaus will plan the field trip for Friday, October 18.
- Some participants said that the USFS could move forward with their plans to include Unit 20 in Phase 3 assuming that the unit is an aspen unit and the treatments are manual. Unit 20 is an aspen unit, and the treatments will be manual.
- In aspen restoration units, the USFS will only treat up to 30 feet away from aspen clones. If there is an aggregation of mixed conifer that meets the criteria outlined in the Decision Notice, the USFS will treat those aggregations. The USFS will also enhance meadows as they are enhancing aspen stands.
- There was a question if there are areas that the USFS can treat as mixed conifer thin rather than as a lodgepole patchcut. There are some areas where that might be possible, particularly now that the USFS has changed from mechanical treatments to manual treatments in Unit 11. The USFS will need to reevaluate where that may be possible.
- In the area around the Blue Dot Trail, some participants said that they do not want to cut the forest heavily around the trail. The recreation manager is willing to come to an MMG meeting to make sure the group addresses these types of conflicts and concerns.
- Some participants expressed concerns about wildlife populations in Unit 9. Other participants said that MMG participants discussed these concerns at the meeting on September 11, and they have been incorporated wildlife concerns into the treatments in Unit 9. Jim Disinger will send points on elk paths and mountain lion dens in Unit 9 to Aurelia DeNasha to review.
- The USFS plans on doing a combination of thinning and patchcut on the middle, south section of Unit 9. On the south aspect of the area, it will be more beneficial to maintain the meadows and aspen than maintain lodgepole stands.
- The USFS has already flagged the areas in Unit 9 for mechanical and manual treatment and the areas with aspen stands. Their next step is to flag the retention islands in Unit 9.

- At this time, the USFS will not permanently mark Units 10, 11, and 103. Some participants said that they want to have a more in-depth discussion about Units 10 and 11. There are still concerns about those two units as a whole.

#### **NEXT STEPS**

- The next MMG meeting will *not* be on Wednesday, October 9. Instead, it *will be* on Friday, October 18. The meeting will consist of a field trip to Unit 10. The second half of the day will include an indoor meeting with a map to finish the conversation around Unit 10.
- Other potential future meeting topics include a discussion about the recreation trails and wildlife.