

Forsythe II Multiparty Monitoring Group (MMG)
April 22, 5:00 PM to 8:00 PM
Virtual Meeting
Meeting Summary – FINAL

ATTENDANCE

Participants: Karen Blakemore, Teagen Blakey, Chad Buser, Tania Corvalan, Marin Chambers, Eric David Coombs, Aurelia DeNasha, Mark Foreman, Angie Gee, Alex Markevich, Paul McCarthy, Mark Mendonca, Susan Wagner, Kevin Zimlinghaus

Facilitation: Heather Bergman and Samuel Wallace

ACTION ITEMS

Angie Gee	Share any new information on adjustments to the Forsythe II implementation plan at the next MMG meeting on May 13.
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COVID-19 UPDATE

Angie Gee, US Forest Service (USFS), gave an update on how the USFS is responding to the COVID-19 situation. Her comments are summarized below.

- The USFS has had to rethink how and when they will continue to provide public services and what their responsibilities are. The USFS is deferring to public health officials from the Center for Disease Control (CDC) and from state and local governments to determine their policies. For example, they are developing rules on how many people can be in USFS vehicles and how wildfire crews will stay in camps when fighting fires. The work of the USFS will be different as a result of COVID-19, but there are still many unknowns
- The number one priority for the USFS is the safety of their employees and the public. The USFS will continue all work related to protecting high-value resources (e.g., life and property), all-hazard emergency response, fighting fires, and law enforcement. The USFS is working with sheriffs to help respond to emergencies. All other USFS work will only continue when appropriate mitigation measures can be applied and when work can be done safely. The CDC and local and state public health officials will inform the USFS when there are adequate mitigation measures to engage in other activities.
- There are fire restrictions in Colorado that will continue into May to minimize the risk of new fire starts. All developed facilities, including campgrounds and bathrooms at trailheads, are closed through the end of May because USFS staff cannot regularly clean those facilities. USFS offices are mostly closed, and USFS staff is teleworking and providing virtual services to the best of their abilities. It is not certain when USFS staff will return to their offices or resume in-person meetings even with the change in the stay-at-home order in Colorado.
- There have been more people than usual engaging in recreational activities on the forest. Some counties, like Clear Creek County, have shut down county roads for non-residents.
- Some form of timber sales and timber sale preparation and layout will occur this year when mitigation measures are in place. It is not certain how much and where timber sales will occur.
- Concerning Forsythe II, some treatment work will go forward, but it might not be possible to complete all the units as originally planned. It will be more difficult for MMG participants to go into the field together as well, which may alter the MMG's schedule in terms of designing and treating units. Regarding previous commitments made for MMG participants to have an opportunity to accompany timber sales administrators into the field, Angie Gee will look for opportunities to follow through on this commitment. Still, it may be the case

that these opportunities will not occur or will occur with limitations on the number of participants who can attend.

Clarifying Questions

Meeting participants asked clarifying questions regarding the USFS's response to COVID-19. Questions are indicated in italics with corresponding answers in plain text.

How will the COVID-19 situation affect the schedule for marking crews coming at the end of April?

The USFS has pushed the start date for seasonal workers until May 10, but the USFS could push that date out further. USFS staff will decide if and when seasonal workers will begin their work during an upcoming meeting.

Will immigration restrictions and changes to the visa application process affect the USFS's ability to complete manual work?

As far as USFS staff are aware, it will not. They have not received any direction to change contracting procedures.

Are there going to be any restrictions on backcountry access, backpacking, and dispersed camping?

The forest has remained open, and there have not been discussions on closing the forest. If people are following public health guidelines regarding small groups and social distancing, people can backpack safely.

COVID-19 Update Comments

MMG participants provided comments on the USFS's response to COVID-19.

- Community members will be able to work on the terrain because it does not require being together, but field trips and group discussions will be much more difficult.
- MMG participants will look to the USFS staff to provide guidance on how the MMG should change their schedule regarding their work on designing treatments.

SURFACE FUEL EXERCISE DISCUSSION

Meeting participants discussed the surface fuel exercise and presentation that MMG participants began during their meeting on February 19. Their comments are summarized below.

- All the photos in the surface fuel presentation were either taken by MMG participants, the USFS, or Colorado Forest Restoration Institute (CFRI) staff, and all pictures are in the Forsythe II treatment area. All the photos from the February 19 meeting presentation are the same in this presentation
- Since the February 19 MMG meeting, there have been several updates to the surface fuel presentation based on the feedback from MMG participants that there should be more context on the surface fuel loading for each of the photos. Marin Chambers, CFRI, and Chad Buser, USFS, used the photoload sampling technique identified in the report *The Photoload Sampling Technique: Estimating Surface Fuel Loadings from Downward-Looking Photographs of Synthetic Fuelbeds* to guesstimate the surface fuel loading in each picture. Marin Chambers and Chad Buser provided their guesstimates independently and displayed them on each of the photos.
- There are limitations to guesstimating surface fuel loads through a photo. First, the guesstimates do not incorporate surface fuel loading for material with diameters that are less than six inches. The guesstimates do not include this material because the photoload sampling technique does not provide a photo series to estimate coarse fuels between three and six inches in diameter and because materials less than 3 inches in diameter would be difficult to measure through a photo. The exclusion of surface fuels with diameters less than

six inches does impact the total surface fuel loads estimate. MMG participants should still consider those surface fuels during the surface fuel exercise even though they are not reflected in the total surface fuel loads estimate. The photos also only represent a specific area and do not provide a larger landscape context, so it is difficult to say whether the photo represents the landscape as a whole. Despite these limitations, discussing the surface fuel photos can continue to help the MMG understand different perspectives on coarse surface fuels and how that impacts different values.

- One goal of the surface fuels conversation should be to identify a quantity in tons per acre that represents a maximum and minimum amount of surface fuels that is acceptable on the landscape to balance fire risk, nutrient cycling, wildlife, and other values. Identifying these quantities would help the MMG determine whether a certain amount of surface fuels on the landscape is acceptable once they are in the field. Another approach could be for MMG members to describe in more general terms what is acceptable to MMG participants (e.g., too much, too little, etc.).
- It may be difficult to assign a specific quantity of acceptable surface fuels in tons per acre in a contract because a contractor and crew may have different perspectives on what that quantity looks like. The contracts currently set what is an acceptable amount of surface fuels in depth and not tons per acre. There may be an opportunity to describe the acceptable surface fuel amount in depth and percent of an acre covered (i.e., 18-inch depth on 25% of an acre) instead of tons per acre.
- The amount of acceptable surface fuels depends on the context of a specific site (e.g., cover type, aspect, etc.) and on the values that the MMG is trying to balance in that specific site, which may make it difficult to set a specific quantity of acceptable surface fuels across the entire project landscape. The MMG should also consider how prescriptions may affect surface fuels in a specific site over time. The strategy and approach for how to manage surface fuels will then change based on the context of the site and the underlying values, and the MMG should remain flexible as they develop prescriptions to account for the site-specific context. The strategy and approach could then be written into contracts to give contractors direction on how to manage surface fuels in a way that is aligned with the values and desired outcomes of the MMG.
- Surface fuels are related to other treatment considerations, like mechanical versus manual treatments, prescribed fire, etc.

SURFACE FUEL EXERCISE

MMG participants discussed surface fuels by looking at pictures of different forest stands and identifying their perspectives on the surface fuels in the picture. The pictures are included in the summary, and the MMG comments are summarized below.

Picture 1: Lodgepole Pine – Unit 2



Background

- The surface fuels in this picture are primarily coarse wood that is three to four inches in diameter, so it is difficult to estimate the total surface fuel loading in this photo.
- The surface fuels in this photo are from a half-acre patchcut treatment conducted in 2002. The regrowth in this stand from the 2002 treatment was treated as a regeneration thin unit in Forsythe II. The piles in this picture are from the Forsythe II regeneration thin treatment.

Wildfire Perspectives

- The amount of surface fuels in this photo looks like a fire hazard. Layers of surface fuel material have been built up from repeated treatments; however, the surface fuels look like they are in an isolated patch. If this photo represents the amount of surface fuel on a broader scale, it would be more concerning, but it is difficult to assess the fire hazard from this photo alone.
- It may be beneficial to distribute the surface fuel material to a greater extent.
- The surface fuels look close to the ground, which means there is less space underneath the material to help facilitate a fire.

Forest Health Perspectives

- Due to the dry climate, the slash does not degrade quickly, which is why much of the material is still on the ground 18 years after the original treatment.
- The piles in the picture are a result of the contractor piling the material instead of scattering it during the most recent regeneration thin treatments. The amount of surface fuel material that was scattered from 28 years ago looks comparable to the amount of material that was piled during the Forsythe II regeneration thin treatments.

Wildlife Perspectives

- There are not many wildlife species that can use this stand as habitat. However, small mammals may use the litter on the ground to move to the edge of the forest.
- There are bushes on the edge of the photo that could provide forage for animals

Picture 2: Lodgepole Pine – Unit 2



Background

A contractor cut this stand 18 years ago, and the surface fuels have not decomposed as a result of the local climatic conditions. The surface fuels are composed of the material that the contractor scattered and from blown down trees due to the adjacent opening.

Wildfire Perspectives

- It looks like there is air underneath the surface fuels, which can help facilitate a fire.
- There is a fire hazard in this photo as a result of fine surface fuel material being next to larger surface fuel material.

Picture 3: Lodgepole Pine – Unit 2



Background

- A contractor conducted this treatment. The surface fuels in pictures 1, 2, and 3 are the result of patchcuts that were conducted in the early 2000s. Many of the surface fuels from these patchcuts look like they were either purposefully scattered or they were made into loose burn piles or berms that eventually collapsed.
- There were piles left on the periphery of patchcuts from the Winiger treatment, and it resulted in a continuous circle of surface fuels around the edges of the patchcuts.
- The contractor was likely following guidelines set at the time; however, the treatment guidelines that this past contractor used are different than the ones the USFS sets in the present.

Wildfire Perspectives

If these surface fuels represent an isolated pile and there are one or two of these per acre, then there would not be wildfire concerns. If this picture was representative of the larger landscape, then there would be wildfire concerns.

Wildlife Perspectives

- These surface fuels represent an ideal wildlife pile because there are tunnels for small mammals to travel across the landscape. This pile may be what it would look like if burn piles are allowed to flatten over time and become a wildlife pile.
- Wildlife biologists can determine whether animals are using wildlife piles by either trapping or looking for signs of animal activity, like scat or bite marks. It is time consuming to look for these signs, so assumptions are being made about whether small mammals will use a wildlife pile based on knowledge on how animals move across the landscape.
- It would be better to strategically spread wildlife piles across the landscape to create a wildlife corridor for small mammals. Having wildlife piles in a continuous circle around a patchcut would be a barrier for the movement of larger animals.

Other Perspectives

There is an opportunity to conduct surface fuel treatments. Any surface fuel treatments under Forsythe II must occur within the boundaries of Forsythe II because that is the geographic area for

which there are completed environmental analyses. Beyond Forsythe II, there may be opportunities to conduct surface fuels treatment in other areas on USFS land in the Boulder Ranger District in the future. MMG participants should let Angie Gee know if they are interested in surface fuel management in other parts of the forest.

Picture 4: Lodgepole Pine – Unit 5



Background

The surface fuels in this photo are the result of a lop-and-scatter treatment in an aspen unit. The piles in this treatment area are not near other piles on the landscape.

Wildfire Perspectives

- The surface fuels are a jackpot of fuel and a wildfire concern. The slash on the ground could cause the boles of the tree to ignite, and the surface fire could transition to the crowns of the nearby trees. These surface fuels would also increase the residence time of any fires.
- These surface fuels could be piled to reduce the surface fuel loading. Another option could be to pile and burn the finer material while leaving the boles on the ground to reduce the opportunity for finer material to set the boles on fire.

Forest Health Perspectives

- The intent of this treatment was to cut down conifer trees so that they would not continue to drop seeds and propagate more conifer trees in the aspen stand in the absence of fire.
- In a year or two, all the needles will fall off the logs, which will allow sunlight to reach the surface and stimulate aspen regrowth.

Wildlife Perspectives

- These surface fuels look like a wildlife pile. The bigger logs could provide habitat to weasels, and the finer surface fuel material may provide cover to small animals.
- This pile would be more beneficial if it was located near other similar piles. If there are pockets of conifer stands in aspen units, the treatment could be designed to create a transportation corridor to assist the movement of wildlife species through an aspen unit.

Other Perspectives

- The current practice to manage slash in aspen stands is to lop-and-scatter instead of piling and burning. There could be an option to modify the piling method in aspen stands. It would require a supplement to the Decision Notice (DN).
- The surface fuels in this photo are the result of manual treatments. If the treatment was done mechanically, they could have removed the bigger logs and left some of the finer material.

Picture 5: Lodgepole Pine – Unit 1



Background

- Unit 1 is the only unit that is entirely within the Town of Nederland boundary but is still located on USFS land. The Town of Nederland requested that the USFS treat this area. The original plan for Unit 1 in Forsythe I was to clear cut half of the 40 acres.
- This picture is representative of other areas in Unit 1.

Wildfire Perspectives

- This lodgepole pine forest is on a north-facing slope, which means that the stand has a lower risk of fire. Although north-facing slopes have a lower risk of wildfire, there are still opportunities for the forest to burn, which can then spread to the surrounding areas. Part of the natural progression of a lodgepole pine stand is for a fire to ultimately thin the stand, so a fire on a north-facing slope would remove the entire stand.
- The proximity of this stand to the Town of Nederland may change how much fire risk is acceptable. Having lodgepole pine stands in that stage of maturity close to Nederland may present an unacceptable risk, even if it is on a north-facing slope. There are also other potential ignition sources from human activity because the stand is close to Nederland.
- Firefighters may be able to access this area during a wildfire depending on the severity of the fire. On a moderate day, it would burn slowly, and hand crews could use chainsaws to make hand lines. During more severe conditions, hand crews could not access the area, and they would have to use bulldozers or aerial resources to make it safe for hand crews to access.

Forest Health Perspectives

This lodgepole pine stand is reaching maturity. Many of the lodgepole pine trees in this stand are older, and the weaker and diseased trees are beginning to die. There are very few lodgepoles in the

understory because sunlight has not been able to get through to the understory. The surface fuels in this picture are a result of blowdown and the self-thinning process.

Wildlife Perspectives

- Depending on the surrounding forest type, elk and other large mammals would avoid moving through this stand.
- In the winter, the layers of trees would create pockets of snow through which subnivean species would move.
- In the summertime, some mid-size species, like martens and bobcat, would use this area as habitat, but there is little forage overall for animals.
- When deciding how to design a treatment for wildlife, a wildlife biologist would look at the habitat in the surrounding area using Geographic Information Systems (GIS) and aerial photos. If the habitat is similar across the landscape, the preference of the wildlife biologist would be to design a treatment that creates a diversity of habitats; if the habitat is unique in the context of the landscape, then the preference of the wildlife biologist would be to not treat it.

Picture 6: Lodgepole Pine – Unit 1



Background

The stand in this photo may be adjacent to a road, so these surface fuels may be the result of windthrown trees being pushed to the side of the road following a wind event.

Wildfire Perspectives

- The surface fuels in this photo would burn easily, and there are many opportunities for a surface fire to transition to the overstory in this stand. The surface fuels in this photo should be piled and burned or made into wildlife piles.
- It is difficult to assess the fire hazard of this stand because the context of the surrounding forest is unknown. If the surrounding forest is dense, then having jackpot fuels and ladder fuels close to a dense stand would represent a high fire risk.

Forest Health Perspectives

This lodgepole pine stand appears to be naturally thinning.

Wildlife Perspectives

These surface fuels would be great denning habitat.

Other Perspectives

This photo represents an area where there should be a surface fuels treatment.

Picture 7: Lodgepole Pine – Unit 10



Background

Unit 10 has many of these downed trees in areas that are a quarter- or half-acre in size.

Wildfire Perspectives

- Dead and downed trees are receptive to embers and are at a higher risk of burning and starting a fire. The surface fuels in this photo could be treated to reduce fire risk.
- Surface fuel treatments and thinning trees where necessary may be a better solution to reduce fire risk than clearcutting or patchcutting because patchcuts and clearcuts lead to windthrown trees. If surface fuels were removed and the sunlight could reach the ground, there would need to be a way to prevent regrowth from later becoming a fire hazard.

Forest Health Perspectives

- There were several potential explanations as to why the tree fell. The tree could have fallen as a result of natural self-thinning. The downed tree could be the result of a nearby pathcut or clearcut increasing wind speeds. The tree could have also been infected by insects or disease.
- The degradation of the log in the foreground indicates that it has been in the area for a while. The tree is breaking down and beginning to incorporate into the soil, which is a part of the nutrient cycle. The degradation of this log indicates that fire has not been in this stand for some time. The stand could use a fire in the understory.

Wildlife Perspectives

- Animals would use these surface fuels less as denning habitat and more as cover. Raptors would then use the mid-story branches for hunting hares and squirrels.
- The scattered surface fuels are beneficial to wildlife. Animals may move between the denser habitat in the background of this photo to this area using the scattered surface fuels.

- Because this stand is farther from Nederland, it may be more appropriate to leave more surface fuels in this area for wildlife.

Other Perspectives

There is a tradeoff between the amount of surface fuels left to nourish the soil and create habitat and the amount of surface fuels that pose a fire risk. Determining how much surface fuel is appropriate depends on who is asked, the amount of surface fuel in the surrounding landscape, and the proximity of the stand to Nederland.

Picture 8: Lodgepole Pine – Unit 10



No comments.

Picture 9: Lodgepole Pine Clearcuts – Unit 1



Background

- This picture is of a lodgepole pine clearcut one year after the clearcut was conducted. The picture itself is from about six years ago. This patchcut is adjacent to the ski slope above Nederland and is next to a road.
- The contractor mechanically treated this unit and had to bring felled trees back to the unit to improve nutrient cycling.
- This clearcut is probably around 15 acres in size.

Wildfire Perspectives

- These surface fuels are at risk of burning quickly across the landscape when conditions are hot and dry and wind speeds are high. A fire may or may not be able to transition to the tree crowns depending on what materials are on the periphery of the clearcut.
- Overall, these clearcuts have resulted in a small increase in fire size but not an increase in fire frequency when compared to an untreated stand in the same location. There have been several small fires in these clearcuts, but the openness of the area allows firefighters to suppress the fires quickly and easily. This accessibility for firefighters can make a large difference when compared to the inaccessibility of untreated stands with dead and downed surface fuels. The latest fire was about three-quarters of an acre.
- The proximity of the clearcut to the road is beneficial for firefighters who can then access the area quickly. The road can also act as a barrier to stop the fire, which is particularly beneficial during the COVID-19 situation when firefighting resources are more limited.
- Timing is an important aspect of determining fire risk. As the fuel decomposes, it turns into duff and will not be as conducive to spreading fire. At that time, grasses and ten- and hundred-hour fuels will be the material left on the landscape. Although there might not be a high fire risk in the long-term, these treatments leave surface fuels on the ground with needles and other combustible material that would make it difficult to fight a fire in high-wind conditions in the near-term. The timing aspect of fire risk involves determining whether long-term benefits outweigh near-term risks.
- On a big wildfire day, this treated area may be the difference between using aerial support to fight a fire or reinforcing this treated area with hand crews to suppress the wildfire. Wind conditions limit when firefighters can use aerial resources to fight fires. The upper limit of wind speeds for which it is acceptable to use aerial resources is 35 miles per hour.

Forest Health Perspectives

- In a clearcut, there should be surface fuels left on the ground to help the soil retain moisture and nutrients and to prevent weed species from growing on the landscape. Leaving surface fuels on the ground for nutrient cycling is a long-term consideration to benefit the health of the forest.
- The amount of surface fuels in this picture is representative of the amount of surface fuels left following a mechanical treatment.
- The USFS staff in this picture are planting trees. They are doing this to reinput nutrients back into the system.
- In the clearcuts, many of the seedlings are being sunburned and scorched and are not surviving due to an increase exposure to the sun and heat.

Wildlife Perspectives

- Wildlife could use this area once vegetation begins to grow. Many large mammals would stick to the periphery of this clearcut not because there is any barrier to movement, but because there is no cover.
- The downed material does provide some cover, but having another pile or two could be beneficial to create some extra stopping places for small mammals.

LOGEPOLE PINE TREATMENT PERSPECTIVES – CLEARCUTS AND PATCHCUTS DESIGN

Meeting participants discussed their perspectives on clear cuts and patchcuts in lodgepole pine stands. Their comments are summarized below.

- Patchcuts and clearcuts in lodgepole pine forests continue to be an important point of discussion for the MMG. There are remaining questions about how to not keep the ground too hot, prevent the introduction of invasive species, and address windthrow.
- Patchcuts and clearcuts impact the aesthetic and recreational uses of the forest.
- Patchcuts and clearcuts have value in reducing wildfire risk in the near-term, but there are differing perspectives in the MMG on how that risk changes as trees regenerate. The natural cycle of a lodgepole pine stand is to grow for over a hundred years and then burn in a big wildfire. Although there is a desire to not have a big wildfire near communities, clearcuts and patchcuts should be a tool that is used judiciously to target specific areas to reduce wildfire risk.
- Researchers in a study on fires in Yellowstone National Park coined the term “crown fire plus” to describe how hot some young lodgepole pine trees burn. The severity of the fires in the Yellowstone study may be a result of an unmanaged forest and changing climatic conditions. The heat of a wildfire is a concern as a wildfire that burns too hot will scorch seed sources and create a large open area where there will not be any regeneration.
- Patchcuts heat up the exposed ground by letting in more sunlight, and the heat is killing any new conifer seedlings that are not ponderosa pine. It may be the wind that is killing ponderosa pine seedlings and not the heat because ponderosa pines prefer direct sunlight.
- Efforts to thin the regeneration are limited by the space available to pile slash from the treatments.
- Patchcuts lead to higher wind speeds that have led to a substantial number of windthrown trees. If an objective of patchcuts and clearcuts is to decrease fire risks, an increase in the number of windthrown trees may be counterproductive to that objective. Wind patterns should be a factor when designing treatments on a unit-by-unit basis.
- There are differing perspectives on how patchcuts impact generational succession and the number of patchcuts that is sufficient to address generational diversity issues. These different perspectives lead to different views on what percentage of a unit should be designated as a clearcut or patchcut.
- There are multiple Colorado State Forest Service (CSFS) references with differing perspectives on what is the appropriate treatment in lodgepole pine stands. There are guidelines that recommend thinning and guidelines that recommend patchcuts with follow-up thinning.
- Thinning lodgepole pine forests should be an option for lodgepole pine treatments. Patchcuts and clearcuts are the only options for treating lodgepole pine stands according to the DN, and any other treatment method would require additional environmental analyses.
- The DN says that the maximum percentage of a lodgepole pine unit that can be clearcut or patchcut is 30%, but it does not set a minimum. The 30% maximum represents a ceiling and not a target. Instead of focusing on the treatment percentages as a target in and of itself, the MMG could focus instead on where patchcuts could be placed to help maximize values (e.g., wildlife, wildfire risk reduction), like they did when designing the treatment in Unit 10.
- There may be flexibility to re-designate a lodgepole pine stand if there is enough mixed conifer cover in that stand. Because there are no units with a single cover type, the USFS uses the majority cover type to designate a unit. They have adjusted designations and unit boundaries and identified aggregations within units in the past to be flexible with treatments.

- Surface fuel treatments may create flexibility for treatment design. There were differing perspectives on whether the surface fuel treatments should be counted towards the 30% maximum set by the DN. The surface fuel treatments should count towards the 30% maximum because surface fuel treatments help reach the objective of reducing wildfire risk. If the 30% maximum is not a goal, then it does not matter whether they are counting surface fuel treatments towards that goal or not. Surface fuel treatments should be conducted in areas where they are appropriate to achieve objectives and align with values. The most important counting is making sure surface fuel treatments count towards the treatment acreage targets for the Boulder Ranger District.
- Part of the purpose of patchcutting and clearcutting lodgepole pine stands is to create opportunities for mixed conifer species to grow, which may be an important strategy to create forests that are resilient to changing climatic conditions. This purpose means that some of these lodgepole pine stands may come back as mixed conifer stands and give options to the USFS in several decades to decide on how to manage the forest depending on different climate scenarios. The point about treating the forest for species diversity is different than the point about treating the forest for generational diversity.

LOGEPOLE PINE PERSPECTIVES – LOCATION OF CLEARCUTS AND PATCHCUTS

Meeting participants discussed their perspectives on where to place patchcuts and clearcuts. Their comments are summarized below.

- Patchcuts and clearcuts should be placed strategically in areas to create munching trails for wildlife, especially elk. It will require identifying the location of aspen stands, meadows, and areas where the forest is denser and where browse is heavier to strategically place patchcuts and clearcuts.
- From the wildfire perspective, patchcuts and clearcuts should be placed where there are changes in topography or fuel type. Patchcuts and clearcuts can be particularly advantageous for firefighting when they are placed off of a ridgeline into the south-facing aspect and partially into the north-facing aspect. It is also important to look at the location of any valuable assets worth protecting from wildfire and where a patchcut and clearcut will increase the success of suppression efforts in a given area. Having a patchcut near a road, for example, would allow firefighters to access the area with a backhoe to create safe conditions for firefighting.
- Patchcuts and clearcuts should be on south-facing aspects because ponderosa pine and other conifer trees may do better on south-facing aspects rather than on north-facing aspects. North-facing slopes tend to be cooler and wetter, so there is less wildfire danger. Wildlife also prefers to move through the north-facing aspects just below the ridge, so patchcuts made on north-facing aspects off a ridgeline should not go too far down the slope and impact wildlife corridors.
- Patchcuts and clearcuts should be located near aspen or mixed conifer stands to leave some trees in or around the patchcut.
- Patchcuts and clearcuts should be placed in an area where the lodgepole pine stand is unhealthy or is dying.
- Patchcuts and clearcuts should be placed in areas with heavy surface fuel loading to facilitate the cutting, piling, and burning of surface fuels.
- Patchcuts and clearcuts should be minimized except for good reasons.
- The location of patchcuts and clearcuts should be considered in the context of temporal changes. This consideration means having a plan to know when and how to maintain a patchcut over time to address generational diversity issues and reduce wildfire risk. The

purpose of regeneration cuts is to create multiple openings over time that will serve as safety zones during a wildfire.

- It is important to factor in recreational use when deciding where to place patchcuts and clearcuts; if there are patchcuts near socially important areas, people may use those patchcuts as a way to veer into parts of the forest where they would normally not go. They could then be a risk to ignite a fire.
- Patchcuts and clearcuts should be treated mechanically. There are factors, like steepness and rockiness, that limit where mechanical equipment can go, which ultimately limits where patchcuts and clearcuts can be placed.
- Patchcuts should be smaller in size or strategically placed to reduce wind speeds and the number of windthrown trees. Smaller patchcuts, an acre or half-acre in size, may not be enough to establish a mixed conifer stand.

NEXT STEPS

- The MMG had a field trip scheduled for May 16. The USFS staff is not sure of what policies they will have in place at that time and will have to determine whether a field trip is possible at a later time.
- There is uncertainty about what units, if any, will be delayed under Forsythe II. Angie Gee will share any new information on adjustments to the Forsythe II implementation plan at the next MMG meeting on May 13.
- Other topics for future meetings include:
 - Mixed conifer treatment perspectives
 - Implementation of community-led design (timeline, unit identification, prioritization, data management, and deliverable)
 - Updates on opportunities to join sales administrator to inspect during and after treatments
 - Evaluation of USFS internal procedures related to communications during the pre-work meeting
 - Wildlife pile contract specifications
 - Ongoing contract discussions between Denver Water and USFS
 - Treatment of existing surface fuels
 - Process for jointly flagging units/flagging aspen units
 - Shared stewardship day for re-shaping piles for wildlife (how, when, and who)
 - Big Springs egress road
 - Elk collaring study
 - Updates to the master list