

Forsythe II Multiparty Monitoring Group (MMG)
July 15, 5:00 PM to 8:00 PM
Virtual Meeting
Meeting Summary – FINAL

ATTENDANCE

Participants: Paul Alaback, Chad Buser, Karen Blakemore, Teagen Blakey, Marin Chambers, Tania Corvalan, Aurelia DeNasha, Angie Gee, Alex Markevich, and Kevin Zimlinghaus

Facilitation: Heather Bergman and Samuel Wallace

ACTION ITEMS

Angie Gee	<ul style="list-style-type: none">• Keep the MMG updated as they gain more information about the impact of suspended work visas on the Phase 3 contractor.• Develop a tool to clarify the differences between old-growth development, inventoried, and retention forests, how those different old-growth forests can be managed according to the DN and Forest Plan, and where there is flexibility for treatments.
Aurelia DeNasha	Send the score sheet and decision trees that the USFS uses to classify old-growth forests to Samuel Wallace to distribute to the MMG.
Samuel Wallace	Send a Doodle to the MMG based on the proposed schedule for summer MMG meetings to schedule the upcoming Zoom meetings and field trips.

FORSYTHE II UPDATES

Meeting participants provided updates on projects related to Forsythe II. Their comments are summarized below.

Boulder Ranger District Updates

- The Boulder Ranger District has a confirmed positive case of COVID-19 and some presumptive positive cases among its staff. Due to the COVID-19 cases in the Boulder Ranger District Office and several incidents of casual exposure (defined as face-to-face contact for less than 15 fifteen minutes or being in an enclosed space for two hours or more), the field trip on July 11 was canceled.
- The Boulder Ranger District is reaching the 14-day threshold since the incidents of casual exposure occurred. The July 18 field trip is expected to continue, considering that the field trip will occur after the 14-day threshold. Boulder Ranger District staff members have also been testing negative, which is an encouraging sign.
- The USFS staff is appreciative of the flexibility of the MMG as schedules have been changing. They will continue to make scheduling adjustments for the MMG due to the delays caused by canceled field trips.

US Forest Service (USFS)-Denver Water Agreement

There are no new updates on the USFS-Denver Water agreement negotiations. The plan is to meet with Denver Water in September to talk about the new agreement. Because it is a multi-National Forest effort, the Regional Office is coordinating the USFS side of the discussions.

Phase 3, Blue Dot, and Manchester Contracts

- The Phase 3 contract has been awarded. However, the new federal order that temporarily suspends work visas will impact the contractor. It is unknown how and to what extent this

order impacts the contractor. It is a safe assumption that the Phase 3 contractor will not begin work in July, but they may begin to work starting in August, depending on if they can find the workforce to implement treatments.

- Angie Gee will keep the MMG updated as they gain more information about the impact of suspended work visas on the Phase 3 contractor.
- The Blue Dot and Manchester contractors are being evaluated on Friday, July 17. The expectation is that the contracts will be awarded this fiscal year.
- The USFS claims acreage accomplishments in the year that contracts are awarded. So, even though the work of the Blue Dot and Manchester contracts will be completed in fiscal year 2021, the accomplishments will be counted in fiscal year 2020.

Clarifying Questions

Meeting participants asked several clarifying questions about the Forsythe II updates. Questions are indicated in italics with corresponding answers in plain text.

How many acres were burned in Unit 74 during the previous winter?

The USFS burned piles on 37 acres in Unit 74. Unit 74 is being burned in two phases, and the burns last winter were part of the initial phase. The USFS did conduct some broadcast burns but not a lot. They want to burn more this year if the opportunity presents itself.

Some piles were left behind in Unit 74. Were those piles unsafe to burn, or were they intentionally left to serve as wildlife piles?

Those piles were unsafe to burn due to minimal snow cover. Since the burn crews knew they were going to return to the Unit, they knew they would have another opportunity to burn those piles. Additionally, the burn crews decided not to wait for another snowstorm to burn those piles due to concerns around COVID-19.

As the USFS completes treatments on units that do not have any adjacent units, can the community members clean up the tape from the trees, or does the USFS burn crews need the tape to help them manage broadcast burns?

The tape that is being put up for mechanical and manual treatments are independent of the tape used for managing prescribed burns. The burn crews normally use differently colored flagging for prescribed burns.

MMG SCHEDULE UPDATE

Angie Gee gave an update on the summer MMG meeting schedule. Her comments are summarized below.

- On July 18, there will be a field trip to the northeast corner units (Units 52, 53, 54, 55, 80) for a limited number of MMG participants. After the field trip, the MMG could have a Zoom meeting on Wednesday, July 22, from 5pm to 8pm to make final decisions for the northeast corner units.
- For Units 29, 30, 31, and 61, the community has already shared their proposal. The USFS will provide written feedback on that proposal by August 1. There are then two options for a field trip to those units (August 8 or August 15) and for a Zoom meeting to make final decisions on the units (August 12 or August 19).
- Units 23, 24, 49, 73, and 74 follow a similar pattern. The community will share their proposal on August 12 or 19, the USFS will respond by August 18 or August 25, and there will be a field trip on either August 22 or 29. There will then be a Zoom meeting to make final decisions for that set of units on August 26 or September 2.

- The proposed dates are flexible and can be changed based on how smoothly the process goes; although, the dates cannot be pushed out too much farther because the marking crews will need time to mark the units, especially the last set of units.
- MMG participants have not yet been able to confirm for which of the multiple dates they are available for field trips and Zoom meetings. Samuel Wallace will send a Doodle to the MMG based on the proposed schedule for summer MMG meetings to schedule the upcoming Zoom meetings and field trips.
- The USFS has removed Units 77 and 81 from the fiscal year 2020 program of work due to the delays in the schedule. These units will be moved to Phases 7 and 8.
- By not planning Units 77 and 81 in fiscal year 2020, they are decreasing the number of acreage accomplishments for fiscal year 2021 from approximately 1,000 acres to 600 acres. The estimate of 6000 acres is based only on mechanical and manual treatments. The estimate does not include any acres from prescribed and pile burning at this time because it is uncertain whether the USFS will be able to conduct burns due to COVID-19.

UNITS 29 and 61 PRESENTATION

Teagen Blakey presented on the community prescription proposal for Units 29 and 61. Her presentation is summarized below.

Unit 61

- On the southern boundary of Unit 61, there is a wetland. The community prescription proposal includes a boundary line to delineate the wetland. According to the Decision Notice (DN), there cannot be treatments in proximity to wetlands, and so, no trees should be marked for removal within the identified boundary.
- On the northern boundary of Unit 61, the community prescription proposal includes a boundary line that delineates an area where the conifer trees are more than 30 feet away from the aspen stands. The conifer treatments within this boundary should not be marked for cutting. This area also is very rocky.
- On the edge of the aspen unit, there are conifer trees with a diameter at breast height (DBH) of 14 inches. MMG participants would like to flag any trees with a DBH of 14 inches or greater for retention to ensure that they are not taken out.

Unit 29

- Unit 29 is a lodgepole pine unit. Approximately one-third of it is old-growth lodgepole pine, and another third is interior forest. The existence of the old-growth and interior forests reduces the number of treatment options available for this unit.
- The interior forest and effective habitat map that was overlaid over the prescription proposal maps was from an MMG meeting in September 2019 and is the most up to date map from the USFS.
- On the western boundary of Unit 29, the prescription proposal includes two boundary lines that demarcate one continuous area for a patchcut. This area is flat and accessible by road and is appropriate for mechanical treatment. This patchcut can help reach timber targets, reduce wildfire risks, and diversify the age of the lodgepole pine stands across the landscape. There is also a large number of surface fuels in this proposed patchcut area, as well as an armchair that the USFS should remove if possible. This patchcut will provide opportunities for ponderosa pine and aspen expansion because the patchcut is adjacent to aspen stands in Unit 61 and contains a ponderosa pine stand on its eastern side.
- There is a second patchcut identified in the western half of Unit 29. The area within this proposed patchcut is flat, which makes it an appropriate place for mechanical treatment.

The proposed patchcut area contains aspen, regenerating dog-hair lodgepole pines, and larger lodgepole pines. The patchcut contains the edge of the larger lodgepole pine stand to make the contract feasible for implementation. The old lodgepole pine trees are well-spaced, so there is good cover for erosion and wildlife.

- Between the two patchcuts on the western half of Unit 29, there is an area where the proposed prescription designates a surface fuels treatment. In this area, there are surface fuels from previous forest treatments that should be cleaned up. Since this area is within the vicinity of the patchcuts, it could potentially be packaged in the contract with the two patchcuts.
- The proposed prescription identifies three areas in the northwest corner of Unit 29 for surface fuels treatment. In these areas, there are small-diameter surface fuels that could be piled and burned. It is acceptable to cut some individual trees in this area if it is necessary to create space to pile the surface fuels.
- In the southeast corner of Unit 29, there is a series of three proposed patchcuts that are all connected.
 - The southern section of the patchcut is next to Emory Road, which makes it easily accessible for mechanical equipment. The patchcut would widen the road corridor for firefighting purposes.
 - The northwest section of the patchcut is flat but approaches a steeper area and rocky knoll. The upper west section of the patchcut would create clearings on both sides of the rocky knoll as well as provide access from Emory Road for firefighting. The trees in the area have an average 6-inch DBH, which is understood to be the minimum DBH needed for mechanical treatments.
 - The eastern section of the patchcut could be treated mechanically or manually because it is steeper. The eastern section of the patchcut is easily accessible by Emory Road. This section has heavy surface fuel loading and a lot of downed lodgepole pine trees. Treating surface fuels would reduce fire risk. In the bottom part of this section, there are adjacent ponderosa pine and aspen stands that could potentially expand as a result of the patchcut. On the north edge of this section, the forest is characterized by a Douglas fir mixed conifer cover type; a patchcut could provide opportunities for the Douglas fir to expand.
- There are several areas proposed for mixed conifer thinning treatments. One area is directly adjacent to the northwest section of the southeast corner patchcuts. This mixed conifer thin treatment could go up to the saddle between the rocky knolls and potentially serve as a defensible area for firefighters depending on the direction of the fire. In the middle of the eastern half of Unit 29, there is another proposed area for a mixed conifer thin treatment. The proposal identifies that mixed conifer treatments should be implemented manually.
- In the northeastern corner of Unit 29, there is an aspen aggregation with Douglas fir regeneration and large Douglas fir trees. The proposal includes directions to remove the Douglas fir regeneration up to the DBH limit specified in the DN. This treatment will create opportunities for the aspen stands to expand while leaving the older Douglas fir trees on the landscape.
- Adjacent to the aspen treatment in the northeastern corner of Unit 29, there is a proposed lodgepole pine patchcut. This patchcut could be manually treated because it is a small area with small-sized trees. This patchcut would create space for the nearby aspen to expand.
- In the upper-middle section of the eastern half of Unit 29, there is a proposed aspen treatment adjacent to a mixed conifer thin treatment. The mixed conifer thin treatment is in the interior forest, so there may be limitations on the treatment based on the DN's requirement that at least 40% canopy cover must be retained in an interior forest. The

mixed conifer thinning would remove lodgepole pine trees and provide opportunities for ponderosa pine to expand.

- On the eastern boundary of Unit 29, there is an access road. It does not appear as though vehicles are currently using that road. However, because the interior forest classification depends on there not being roads, there should be a gate installed at the entrance of this access road to prevent unauthorized vehicle use. The private property owner that uses this access road should be given a key to the gate.
- The USFS should cut the conifer trees underneath the power lines in Unit 29. The trees underneath the power lines have been previously treated, so there are no old-growth trees underneath the power lines, despite the power lines running through an old-growth stand.

Clarifying Questions

Meeting participants asked several clarifying questions about the proposed prescriptions for Units 61 and 29. Questions are indicated in italics with corresponding answers in plain text.

Is it possible to take out the armchair from Unit 29 as the USFS implements a patchcut?

The task of taking out an armchair is not something that is added into contracts. The USFS would like to have the armchair taken out, but it is uncertain when they could do it.

In the patchcut on the western boundary of Unit 29, does the prescription proposal recommend patchcutting ponderosa pine trees?

No. When there is a ponderosa pine component in the patchcut, the recommendation is to leave the ponderosa pine trees and remove lodgepole pine trees.

How large are the proposed surface fuel treatment areas in Unit 29?

There is not an exact area calculated for the proposed surface fuel treatments. The MMG could walk around the area to gauge the size.

How many acres of treatment are proposed between Units 29 and 61?

The exact number of acres of the proposed treatment is unknown.

What criteria did the community use as they were developing these prescriptions to determine the location and size of the treatment areas?

The MMG participants from the community that put together these prescriptions walked the landscape to see what existed. They identified where there were ladder and surface fuels they wanted to treat as well as where there were characteristics they wanted to promote (e.g., an aspen stand). Their design is based on what the landscape looks like and where there are opportunities for treatments, given species composition, cover type, accessibility, etc. rather than on reaching a certain number of treatment acres. Paul Alaback, Teagen Blakey, Susan Wagner, and a fourth person from the Nederland community put together this prescription.

Group Discussion

Meeting participants discussed the proposed prescriptions for Units 29 and 61. Their comments are summarized below.

- The prescription proposal for Units 29 and 61 is better aligned with what the USFS would have proposed.
- There are some differences in the terminology being used in the proposed prescription. Some meeting participants interpret that “a patchcut with ponderosa pines” is not a patchcut unless the stand is primarily composed of lodgepole pine trees with a few ponderosa pine trees. Additionally, some meeting participants identify treatments in an

aspen stand as an “aspen restoration treatment,” while others identify the treatment as an “aspen patchcut.” Although terminologies may be different, the proposed treatments are the same when implemented on the ground.

- Manual treatments would likely be required to remove trees to create space to pile and burn surface fuels in the proposed surface fuel treatment areas. Considering that there are other manual treatments in Units 29 and 61, it may be possible for a manual treatment contractor to incorporate the surface fuel treatment area into their contract as needed.
- In the patchcut that contains regenerating and larger lodgepole pine trees in the western half of Unit 29, both mechanical and manual treatment methods would be needed. Implementing a mechanical and manual treatment would require two different contracts as a mechanical contractor would not be responsible for removing the smaller regenerating lodgepole pine.
- In the southeast corner of Unit 29, the areas around the rocky knoll are pretty rocky, particularly in the proposed mixed conifer treatment located in the area. It is going to be difficult to treat in that area due to the rockiness.
- According to the DN, the USFS can treat up to 49 acres in these units. The treatment area of the proposed prescription seems to roughly add up to 20 acres. This gap in acreage is something the USFS would like to fill.
- A neighbor on the southeast corner of Unit 29 recently gave permission to the USFS to treat up to their boundary in the defensible space zone. This person’s property extends westward from the southeast corner of Unit 29 and may have some old-growth forest. The USFS still needs to identify this private landowner’s boundary and forest cover type on their property. The MMG should add these acres being treated in the defensible space zone to the prescription. This private landowner is reaching out to other landowners on the southern side of Unit 29 to see if they are interested in giving the USFS permission to treat up to their boundaries. The USFS is waiting to hear back from them.
- The lodgepole pine forest along the road is inventoried lodgepole pine old-growth. According to the DN, the USFS can treat inventoried lodgepole pine old-growth if it is not acting as old-growth. The USFS needs to evaluate the inventoried old-growth further to determine if it is acting as old-growth.
- The USFS would potentially like to treat a larger area along the road than in the prescription proposal to fortify the road further for firefighting purposes. There may also be opportunities to expand some of the proposed treatment areas and identify other aspen stands for treatments.
- It is possible to treat underneath the powerlines. There are some limitations related to how the area underneath the power lines is treated to avoid trees falling into power lines. The power line treatments will also reduce fuels and create fire breaks.
- Some of the discussions around treatment design may be better suited for the field trip than over Zoom.

INTERIOR FOREST DISCUSSION

Meeting participants discussed the classification of interior forests and how that classification impacts potential prescriptions. Their comments are summarized below.

- The DN directs that a 40% canopy cover must be retained in interior forests. However, the 40% canopy cover requirement is applied across the entire interior forest area, so it does not mean that a 40% canopy cover has to be retained evenly in every part of an identified interior forest.
- An essential aspect of interior forests is that they do not have roads or trails. There are certain limitations on how close a road and trail can be to an interior forest for it to be

classified as an interior forest. Any skid roads or trails used for forestry equipment have to be closed at the end of treatment to make sure an area maintains interior forest characteristics.

- There are questions on whether the classification of interior forests should be removed or added to parts of the forest in Unit 29 based on the roads and other forms of human activities, like hiking, occurring in the area.
- Instead of focusing on 40% canopy cover as a goal in and of itself, the MMG should focus on the reasoning for treatment (e.g., firefighting, wildlife, etc.).

OLD-GROWTH FOREST CHARACTERISTICS DISCUSSION

Meeting participants discussed the different types of old-growth forests. Their comments are summarized below.

- There are three types of old-growth forests: inventoried, development, and retention.
- Inventoried old-growth forests are the old-growth forests that the USFS has previously identified as old-growth forests and are classified as such in their geospatial data.
- Development old-growth forests have some characteristics of an old-growth forest but do not have enough characteristics to be defined as an old-growth forest. Development old-growth forests have the potential to become old-growth forests in the future.
- There is a way to promote old-growth conditions in development old-growth forests through treatment. The Arapaho and Roosevelt National Forests and Pawnee National Grassland (ARP) Forest Plan wants to promote old-growth conditions to facilitate the development of old-growth forests through mechanical and prescribed fire treatments. Generally, thinning from below and not impacting the overstory helps to maintain the key characteristics of an old-growth forest while reducing hazardous fuels.
- Retention old-growth forests are old-growth forests that have been identified in the ARP Forest Plan. Some of the retention old-growth forests have not been verified in Forsythe II.
- There are high elevation and low elevation old-growth forests. Lodgepole pines or spruce firs characterize high elevation old-growth forests, and ponderosa pines or Douglas firs often characterize low elevation old-growth forests. Lodgepole pine old-growth forests are managed differently than ponderosa pine and Douglas fir old-growth forests according to the DN.
- Examples of different old-growth forests include Unit 29, which has areas that are classified as inventoried old-growth, and Unit 54, which has areas that are classified as retention old-growth. Unit 54 is eligible for treatments because it is a mixed conifer old-growth forest, which can be treated for hazardous fuels up to 30% basal area. The areas in Unit 54 that are not classified as old-growth forests are also eligible for treatment.
- The USFS maps do not necessarily reflect the reality of the forest on the ground. The USFS maps were based on geographic information system (GIS) exercises and the interpretation of aerial imagery. The old-growth forests in the plan were not verified when the plan was written.
- There are areas in Forsythe II that have old-growth characteristics but are not classified as old-growth, and there are areas that are classified as old-growth but are no longer functioning as old-growth. The USFS wants to evaluate old-growth areas, so they can update their mapping to better ensure that future planning is representative of the reality on the ground. They can then add and remove old-growth forest classifications based on the condition of the forest on the ground.
- The USFS uses a score sheet and decision tree to determine whether a stand classifies as old-growth. The score sheet has clear descriptions of the characteristics of an old-growth forest, such as coarse woody debris, that are added up to a final score to determine whether

a stand is old-growth. The score sheet and decision trees help create an objective standard to determine whether an area is an old-growth forest. Aurelia DeNasha will send the score sheet and decision trees that the USFS uses to classify old-growth forests to Samuel Wallace to distribute to the MMG.

- When there is the potential that a previously unidentified old-growth forest could be an old-growth forest, the area should be considered as an old-growth forest and be treated to improve and enhance old-growth characteristics.

OLD-GROWTH TREATMENT RULES AND REGULATIONS DISCUSSION

Meeting participants discussed the different rules and regulations for treating in old-growth forests and their perspectives on how to treat in old-growth forests. Their comments are summarized below.

- The rules and regulations for treating old-growth forests are complicated. There are qualifiers for the various types of old-growth forests on what treatments are allowed. Which treatments are possible in old-growth forests are depicted in the ARP Forest Plan, Forsythe II final environmental assessment, and the DN. Page 37 of the DN contains specific information on how to treat in old-growth and interior forests.
- In ponderosa pine and Douglas fir inventoried and retention old-growth forests, the treatment can reduce the basal area of the forest up to 30% to remove hazardous fuels. This 30% maximum only applies to mixed conifer old-growth forests.
- Lodgepole pine old-growth forests have a different set of rules. If there is a lodgepole pine stand that is identified as inventoried or retention old-growth and is in a 3.5 management area, that area is excluded from treatment unless the old-growth forest is no longer functioning as old-growth. A non-functioning old-growth forest means that the key characteristics that define an old-growth forest are no longer present. The USFS verifies whether or not the old-growth characteristics are still present in an inventoried old-growth forest using the old-growth score sheet and decision trees. If the area is no longer functioning as an old-growth forest, that area is removed from the old-growth classification and is open for treatment.
- In the planning of Forsythe II, the USFS used satellite imagery to identify vegetation and cover types across the landscape. Although there is confidence in the cover type classifications, there is still a need to ground-truth the classifications made during the planning process and adjust accordingly. The USFS has adjusted boundaries and cover types in the past in Forsythe II. Because the aerial imagery exercise was not conducted for old-growth forests, the USFS is going to evaluate whether some inventoried and retention old-growth forests continue to function as old-growth forests.
- The concept of aggregations was included the DN to allow for variations in treatments to accommodate varying cover types within a single unit. The cover type of each unit is based on the majority cover type in that unit.
- Treatments in an old-growth forest must maintain the character of the old-growth forest. There are multiple ways to treat an area while still maintaining the character of the forest (e.g., remove mid-sized trees and leave regenerating and old trees in a stand).
- It is not possible to design a single prescription for an entire old-growth forest because there will be different conditions within an old-growth forest based on other characteristics, like whether the old-growth forest is on a north- or south-facing aspect.
- Some of the old-growth forests in Unit 29 are unique because they have many mid- and large-diameter snags that are hollowing out, which normally does not happen in lodgepole pine stands. There was also a lot of loose bark on live trees and snags. These snags create opportunities for cavity nesters, like bats. The majority of the old-growth lodgepole pine

forests that have these unique characteristics are located in Management Area 3.5. The part of this unique old-growth forest that is not in Management Area 3.5 can still be treated for firefighting purposes so long as the treatment does not change the character of the old-growth forest. A potential treatment could include removing a range of mid-sized trees (e.g., trees with a DBH between five and seven inches).

- In nature, there is a naturally chaotic mix of tree sizes, and there is value in this chaotic mix of trees. Removing a certain size of tree, like mid-sized trees between a five- and seven-inch DBH, leaves a gap within the tree DBH distribution.
- The natural cycle for forests in the upper montane is to grow and then be managed by stand-replacing wildfires. Humans have impacted the forest and increased the risk of wildfire by excluding wildfire from the landscape. The upper montane area has a lower frequency of wildfires overall, so the impact that humans have had on the natural wildfire cycle is less than in lower montane zones.
- There are two ways to compensate for wildfire risks through treatments. The first way is by intentionally altering the mosaic of the forest. The second way is by implementing more drastic measures around barriers, like roads and powerlines, and leaving alone the complex systems of the interior forests.
- Wildfire is not the only type of disturbance of concern in upper montane old-growth forests as these forests are vulnerable to insects and windthrow too. Treatments can help make the upper montane forests more resilient to a variety of disturbances besides wildfire.
- The USFS is interested in proposing a new definition for old-growth ponderosa pine forests in savannah type environments. There is a process to refine the definition that the USFS needs to work it out.
- Angie Gee will develop a tool to clarify the differences between development, inventoried, and retention old-growth forests, how those different old-growth forests can be managed according to the DN and Forest Plan, and where there is flexibility for treatments.

Clarifying Questions

Meeting participants asked several clarifying questions about treatments in old-growth forests. Questions are indicated in *italics* with corresponding answers in plain text.

Two of the areas proposed for surface fuel treatments in the center of Unit 29 are located within old-growth lodgepole pine forests. Is it possible to conduct surface fuel treatments in old-growth lodgepole pine stands?

Those proposed surface fuel treatments are located in old-growth retention forests. Kevin Zimlinghaus and Aurelia DeNasha will be going on the ground to determine whether an area is old-growth and what potential treatments could be. If the old-growth retention forests are verified as old-growth forests, the USFS will have to conduct more research on whether surface fuels treatment are possible, especially if the old-growth forest is in a 3.5 Management Area.

Is there a goal to increase not only the quantity of old-growth forests but also the quality?

The goal is to increase the quantity and quality of old-growth forests over time. Many lodgepole pine old-growth forests are at higher elevations and located in wilderness areas, which makes it more difficult to treat them to improve quality and quantity. Because Douglas fir and ponderosa pine old-growth forests are in areas open to management, they are easier to treat.

Are the lodgepole pine old-growth forests in Unit 29 functioning?

Parts of the lodgepole pine old-growth forests in Unit 29 are functioning as old-growth forests and parts are not. The USFS has not had a chance to evaluate the old-growth forests in Unit 29 before this meeting.

Are the only potential treatments for mixed conifer old-growth forests mechanical or prescribed fire?

No. Manually treating ladder fuels in mixed conifer old-growth forests is an option. Treating ladder fuels can make the larger trees more resilient.

There are old-growth retention forests in Unit 48. How did the USFS adjust their prescription accordingly?

Because the unit was being treated manually, they were not treating the overstory. The treatments involved thinning from below and reducing ladder fuels, which maintained the old-growth character of the forest.

Do the mapping layers that the USFS shared with the MMG represent the most up to date locations of old-growth forests?

The old-growth forest layers are from the ARP's Spatial Data Engine (SDE), the ARP's forest-wide database, and represent the most recent data. The last old-growth layers were developed in 2015.

What characteristics are Unit 52 lacking for it not to be considered inventoried old-growth instead of development old-growth?

Unit 52 has a high number of large trees, which puts it into the development old-growth classification. However, the lack of fallen trees, snags, and multi-storied canopy are some key old-growth characteristics that the stands in Unit 52 are missing. The stands in Unit 52 lack an understory for the forest to perpetuate itself over time. The high density of the canopy also prevents ponderosa pine from regenerating. Intermediate treatments that remove trees to allow ponderosa pine trees to regenerate would allow the forest to become an old-growth forest in the future.

Is the overstory of an old-growth forest based on the DBH and cover type?

If there is a forest with large sized trees but not a multi-storied canopy, that forest will not have opportunities for tree regeneration. Removing trees with a DBH between 12 inches and 16 inches can help facilitate the establishment of a multi-storied canopy. Provided that there is an adequate number of large trees left to meet the old-growth classification criteria, then removing large trees can create old-growth conditions.

CLARIFICATION OF TERMINOLOGY DISCUSSION

Meeting participants discussed different terminologies to clarify how MMG participants interpret and use different terms. Their comments are summarized below.

- The first prescription proposal from the community contained terminology that differed from the way the USFS uses these terms.
- One term that needs to be clarified is "restoration."
- From one perspective, restoration means creating a landscape that is resilient to disturbances.
- One perspective on the term "restoration" is that restoration means returning a currently existing stand to a condition that existed at a different point in time. For example, if there is a mixed conifer stand that is thinned and aspen begins to grow in the stand, restoration would mean not turning the stand into an aspen stand because it was a mixed conifer stand.

- The term “restoration” is complicated by the fact that forests are complex and living. For example, there is a question on if prioritizing aspen stands over mixed conifer stands is an overall restorative effort or if it is a tradeoff between two different forest dynamics. The overall health of the forest is the outcome of different factors, tradeoffs, and concerns, including ecological and social values. The concrete recommendations for treatments should be evaluated through the framework of tradeoffs. It will be easier to understand these tradeoffs during the field trip when MMG participants can clarify what treatment actions they are proposing.
- GTR-373 is a technical report on the principles of restoring ponderosa pine and dry mixed-conifer forests. The report uses the Society of Ecological Restoration’s definition of restoration, which is “the process of assisting the recovery of an ecosystem that has been damaged, degraded, or destroyed.”
- The term restoration can be a misnomer. Many managers are using the word restoration to focus on concepts like resiliency. Five to ten years ago, the forest ecology community was looking at a historical range of variability when they were developing treatments to restore forests; now, they are thinking about resilience in their prescriptions. Land managers are more frequently invoking resiliency when they use the term “restoration” in light of climate change and insect and disease outbreaks. Land manager are using the term less and less to refer to the idea of returning to past conditions.
- The USFS uses the term “restoration” in final documents when they should probably be using a term like resiliency instead.
- It might make more sense to return to historical conditions as it relates to wildlife habitat and function. There is a desire for the forest to be resilient to future conditions while also providing habitat for the species that have lived in the area historically. For example, bringing back old-growth features in the forest is beneficial because it provides characteristics that people care about: species composition, diverse structures, etc. It is important to have resiliency while also keeping key species and structures in the forest.
- The objectives in the Forsythe II EA and DN refer to both restoration and resiliency. It is important to have old-growth characteristics as historical conditions, but it is also important for the forest to be resilient to climate change and future disturbances. The prescription for the forest should meet multiple objectives as outlined in the DN to respond to values, such as social and ecological values.
- The Winiger project treatment was not a restoration treatment. The Winiger project treatment did not meet fuel objectives and was not treated intensely enough. The goal of Forsythe II should not be to return to the post-Winiger conditions but to take out larger trees to make the forest resilient.
- When it comes to complex systems, like the forest, having diversity and variety helps create resiliency. Treatments that lead to monocultures in ponderosa pine and aspen stands should not be considered the most resilient forest condition, even though there are sometimes other reasons for those treatments. In some places, heterogeneity may create more resiliency.
- The scientific community has been discussing and debating the relationship between diversity, resiliency, and function for a long time. Natural systems are diverse, but it is difficult to assign a cause-and-effect relationship between diversity and resiliency.
- Resiliency depends on the geographic scale. Whether resiliency is achieved in a particular stand versus across a landscape are two different questions.
- Historically, disturbances created heterogeneity on the landscape and promoted age and species diversity. Not all natural wildfires were catastrophic; some natural wildfires were historically patchy and created a heterogeneous patchwork of forest stands across the

landscape. Plants and animals adapted to this patchwork. These systems are complex, and there is not a lot of available information to make sense of these complexities.

- One goal of the Forsythe II project is to make unique features on the landscape to promote landscape resiliency. For example, there is a lack of conifer-free aspen stands on the landscape because of the exclusion of fire. The purpose of removing conifer trees in aspen stands is because of this lack of existing, conifer-free aspen stands on the landscape. Having a diversity of features on the landscape will promote landscape resiliency.
- Part of the work of the MMG is identifying what is important on the landscape and then identifying solutions to promote the conditions and characteristics that the MMG values.
- Treating and managing noxious weeds is an important aspect of a resilient forest. Sometimes treatment equipment can bring in noxious weeds that then require their own treatment efforts. The USFS is working on improving its efforts to address noxious weeds. In untreated parts of the forest, some noxious weeds have an already existing seed bank that will be spurred by disturbances, whether that is from natural wildfires or mechanical equipment.
- The MMG will not come up with a shared definition for “restoration.” Instead, they should be mindful of how each MMG participant uses the term and ask for clarification when needed.
- The MMG should consider the criteria and critical components of a resilient forest at different scales for future discussions.

NEXT STEPS

- A subset of the MMG is going on a field trip on Saturday, July 18. Masks and social distancing are mandatory.
- Other topics for future meetings include:
 - Perspectives on the criteria and critical components of a resilient forest at different scales
 - Phase 3 contractor update
 - Wildlife pile contract specifications
 - 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
 - Boulder Ranger District’s FY20 and FY21 program of work
 - 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