Paonia Meeting Questions

NEED FOR TREATMENT

What is the difference between now and before? – justify why we are doing it NOW.

After the catastrophic 2000 fire season, Congress directed that a large amount of money be spent on mitigation of fire risk to reduce the potential losses to communities from wildfire and to reduce the costs of suppression by the federal agencies. The concept was that it is much cheaper for the federal government and much less disastrous to communities if they mitigate hazards before a catastrophic event rather than paying to respond to disaster.

Under a policy called the National Fire Plan, and associated legislation, Congress directed the federal agencies to manage fire and resources together with the state and county agencies to protect people, natural resources and property, and to restore forest wildlife and rangeland health. They provided funding to the BLM and other agencies, which is passed on at the state and local level in the form of grants, to help reduce wildfire hazards to communities and subdivisions The 10-year comprehensive strategy called " A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10 Year Comprehensive Strategy: Implementation Plan" spelled out the second goal, which is to reduce hazardous fuels on federal lands, and as a guiding principal to take direction from the counties to prioritize hazardous fuels reduction where the potential negative impacts of wildfire are the greatest.

Under the direction of the National Fire Plan, the Bureau of Land Management (BLM), U.S. Forest Service (USFS), and Colorado State Forest Service (CSFS) have been working with Delta County over the last 3 years to complete a county fire plan and prioritize treatment areas. Based on factors such as density of fuels, slope, aspect, fire history, and density of structures, Delta County identified the south face of the Grand Mesa as one of the highest priority areas for fire mitigation. Within each of their respective districts, the fire chiefs then identified areas called "communities at risk" (CAR) that were in need of treatments to reduce the risk to the community from wildfire. We have been working throughout the Uncompahgre Field Office area over the last 4 years, and have done treatments near other communities such as Norwood and Montrose. This proposed treatment is part of an ongoing effort.

Do we really have a fire risk problem?

As Chief Rowell stated in the meeting, he believes this is one of the places with the highest potential for catastrophic loss from wildfire in Delta County. As he described, under the right conditions, a fire in that area could quickly spread and trap the homeowners and/or the fire fighters.

We completely agree with Chief Rowell's assessment. In our professional opinion the fuels, topography, and weather conditions on this slope of the Grand Mesa create a situation with a high degree of risk of catastrophic fire. There have already been several

large wildfires in the vicinity of the treatment area. For example, despite aggressive suppression efforts, the Wake Fire in 1994 burned 3,848 acres and resulted in the loss of 3 liveable structures, and the McGruder Fire in 2004 burned 2,807 acres. Similar fire and fuel conditions exist in this area, and there is a very high probability of another catastrophic wildfire. Fuels on this slope consist of abundant cheatgrass in the understory, low growing crowns of pinyon/juniper mixed with shrubs, and a continuous, nearly closed canopy of pinyon/juniper. Topography is a south-facing aspect, exposed to sun in both summer and winter, which creates a very dry fuel bed during large portions of each year. Our typical southwest winds during the fire season directly impact this slope.

The BLM fire staff strongly believes that this location is at high risk of a wildfire which could impact the private lands, improvements, and safety of people living in the area. Two or three comments received both during and after the public meeting from people living in close proximity to this area also indicated local concern with the fire risk.

What evidence do you have that the proposed treatments would reduce risk? (will they work?)

We have evidence where fuel treatments changed fire behavior and gave fire fighters a chance to stop the fire. The Naturita Ridge Fire in 2005 burned into a previously burned area (fire use), which slowed the fire and gave the fire fighters an opportunity to safely control the fire. The San Juan Public Lands (southwest Colorado) also had a treatment similar to the ones we are proposing north of Paonia, which changed wildfire behavior and slowed fire growth, allowing fire fighters to put out the fire.

However, at this time most of the "evidence" is from computer modeling in similar stands where the fire models can predict the probability of wildfire moving into and between individual tree crowns. There is good example in the *Journal of Forestry*, Oct 2004 titled "Assessing the Effectiveness of Landscape Fuel Treatments".

A basic principle behind firefighting is that by modifying (reducing or changing) surface fuels, ladder fuels, and canopy fuels, we can change fire behavior, making fire more predictable and controllable. Since fire fighter and public safety is our number one priority, if there are no safe locations (such as openings) to deploy fire fighters, they will have to back off and fight fire from a safer location.

What is the trade-off between destroying (wildlife) habitat versus reducing fire risk in areas with no private property? How will treatments impact wildlife?

We can design varied fuel reduction treatments to be compatible with habitat needs for all species while protecting private property, which is our intent. Well-designed treatments can enhance habitat for certain species while still accommodating the needs of the diversity of the wildlife that occurs on the site. We already have experience in effectively meeting both primary objectives of fuels reduction and secondary objectives of enhancing wildlife habitat on several projects in similar vegetation types.

In our experience, species such as mule deer, blue birds, and Brewer's sparrows benefit from these types of treatments. Some species, such as the juniper titmouse, could

decrease in numbers within the treatment units as the amount of densely wooded habitat declines. Because of the small amount of acreage to be treated, no substantial population changes to any species would be expected within the Paonia area.

We work closely with our wildlife biologists, as well as other staff members and agencies, to develop projects that are beneficial as fuels reduction projects while also enhancing/maintaining habitat, watershed condition, ecological health, etc.

Why are you locating treatments in areas with no homes?

The proposed treatment locations are flexible at this point. Given the limitations due to the slope, the locations were designed based on predicted fire behavior to provide the best risk reduction from upslope and downslope winds for the values identified – in this case, homes and utility lines.

Some treatments are located under and adjacent to the major power transmission lines to protect them from fire and smoke impacts. The western power grid is now operating at full capacity, and the loss of any portion could result in a large-scale blackout.

Given the possible scale of a catastrophic fire in this area - such as Wake and McGruder Fires, which burned thousands of acres - we are considering a scale that exceeds the immediate areas around individual homes or subdivisions.

Is an EIS (Environmental Impact Statement) required for this project?

No. An EIS is required if an EA (Environmental Assessment) shows that there are significant impacts that cannot be mitigated.

What is the historical, ecological density of these forests?

Pinyon-juniper woodlands range in density over time as they go through various "seral stages" or ecological stages after a disturbance. The research suggests that there were wide ranges in how often fire disturbances occurred in pinyon-juniper woodlands. Based on fire research from this area, fires seemed to have occurred every 150 – 350 years within a stand and were generally high-intensity, stand-replacing fires. Small fires (1 tree to a few acres) occurred frequently and created small openings in the overall stand.

In the book "When the Grass Stood Stirrup-high," there is a pair of pictures of Paonia showing these slopes barely forested 110 years ago (@1890) and fully covered now. This suggests that there was a large-scale disturbance, such as a large, stand-replacing fire in this area about 15 to 20 years prior to 1890. **(See pictures here)**

In summary, the current density does not seem outside of historic ranges but only represents one stage in a continuing process of change. It is important to note, though, that small openings within the overall stand are not outside historic ranges of the vegetation, and they are an important component in maintaining some diversity in stand structure. The cheatgrass poses a threat because it is not a natural part of the succession and can radically change fire frequency and intensity.

Is the density increasing?

Stand density has certainly increased over the last 110 years or so, but it is difficult to assess if that will continue. It may be at a stage where other disturbances, such as drought, disease, and insects, will start to take out individual trees and create more diversity in stand structure. This could be a very slow process and cannot be easily predicted or modeled.

If density has not and is not increasing, how can you defend the ecological impacts?

See last two questions. Active management can simulate and speed up natural ecological processes. Further, active management is the only way to address exotic species and unnatural processes that result from them – such as increased fire occurrence and intensity.

Why don't you take all the dollars you are spending on this project and spend it on another piece of aerial equipment to fight fires (like may happen here)?

It is much cheaper and more effective to mitigate before a catastrophic fire than to suppress the fire and rebuild communities and restore ecosystems after the event. For example, the suppression costs for the McGruder Fire in 2004 totaled roughly $746,600 and the total rehabilitation costs were roughly $221,000. This 2,807-acre fire was relatively inexpensive compared to the total costs of suppressing and rehabilitating other large fires because it burned out of the pinyon-juniper and into the wetter oak brush and went out. Aerial suppression equipment is not always available or effective. It is used in a last ditch effort to save valuable resources, lives, and property. Suppression is often unsuccessful on the first attempt and may require multiple attempts until success is obtained. We are much wiser and have more opportunities to control wildfires when we use collaborative, community-based approaches to develop ecologically sound projects while considering community needs. We believe this project has potential to reduce risk of wildfire, restore some ecological health to an ecosystem dominated by cheatgrass, and also enhance wildlife and watershed conditions.

WHO IS RESPONSIBLE

Whose responsibility is it to reduce risks?

Everyone's. Individuals on their private property can reduce their risk and the risks to their neighbors by building in safe locations, using fire-resistant building materials, and doing fuel mitigation work around their homes; counties and communities can reduce the threat to their communities and firefighters by developing multiple ingress/egress routes, designating evacuation routes, identifying water sources, and developing planning, zoning, and building regulations as well as providing guidance and information on building materials; and state and federal governments can reduce the risk to communities both by doing fuel mitigation work on agency lands and by providing information and expertise to communities to help them develop wildfire plans (see question 1).

Comprehensive, community-wide plans are more effective at reducing wildfire risk because they address ways in which mitigation actions; such as fuels treatments, building locations and construction materials, evacuation plans, and prevention efforts; can all

work together to cumulatively be more effective than individual efforts. Therefore, everyone plays a part in reducing wildfire risk.

Fire is a property and life issue – it is only a problem because of the way humans alter the environment. Otherwise, fire is a perfectly normal part of an ecosystem. Therefore, the focus needs to be on defensible space and human practices. One-on-one outreach and materials need to be accessible.

No doubt! Defensible space and other human practices are an important part of this equation, and one-on-one outreach and materials are important. Unfortunately, in our experience, it is difficult to engage homeowners and provide incentives for communities to work together until there is a large fire that gets the public's attention.

In addition, fire is not only an *individual* property and life issue, it is a *community* property and life issue. Individual homeowners can make a big difference, but Fire wise is most effective at a community level. Community plans that outline coordinated efforts provide much better protection and foster more creative, collaborative approaches. For example, taking a community approach allows all the partners to plan and implement coordinated fuels treatments in and around the community to stop an advancing wildfire.

Defensible space around homes alone is not effective, though. Defensible space around an individual home is a last resort for fire fighters to save a single house with no 'offensive' effort taken to control the fire. In other words, the fire continues on past the 'saved' house and will threaten another and another house. At some point the fire needs to be controlled so that it does not continue threatening or burning houses. It is illogical to reduce fuels and control a fire *after* it burns houses. It is much wiser to take the initiative and reduce fuels and control the fire *before* it burns houses. The only location to do that in this instance is on public lands administered by the BLM near the subdivisions. Again, defensible space around your home is an important key to this equation because the risk of fire coming off of public lands will never be eliminated, only reduced, so your defensible space may save *your* home.

TREATMENT DESIGN

What is the proposed reduction in tree density?

There are approximately 600 trees per acre with nearly complete crown closure in the stand immediately west of the Fire Mountain subdivision. To achieve an average of 20 to 25 feet spacing between crowns we would need to thin to about 80 trees per acre. Within the identified units, the amount of treated area could vary, ranging from several small openings/thinnings to the entire unit with small islands. The treatment will not result in uniform "plantation" type stands. The trees that would be removed would primarily be smaller trees, leaving the larger, older, and more historic trees in place to the greatest extent possible.

Where is the line between mitigation and elimination?

This is a tough question to answer because the line between mitigation and elimination is really a question of what level of risk reduction you are willing to accept. If the

community wants to reduce their fire risk to zero, then all the fuels would need to be cut (elimination) and replaced with a non-burnable material – i.e. a pond or parking lot. Most people can accept the risk reduction associated with mitigation of an average of 20 to 25 feet between crowns, which seems to be very effective in computer modeling for keeping the fire on the ground and allowing the fire fighters a chance to control it. But, it is absolutely true that "beauty is in the eye of the beholder." Silviculturists believe that at 80 trees per acre, the stands will still look like open woodlands as opposed to a savanna or a clearing. This community might see 80 trees per acre and believe it looks unsightly, particularly if they see if right after the treatment is completed. In independent research on public perception of fuels treatments, however, non-professionals generally evaluated areas with 80 trees per acre higher than they did heavily wooded areas because they felt these untreated areas looked too dense and "overgrown."

How will we deal with slope (i.e. erosion)?

To avoid erosion, equipment and work would stay on slopes less than 20% and usually on slopes less than 15%. Additionally, as the thinning could be mechanical, they would provide a "mulch" to hold moisture on site. As seeded and residual grasses and forbs typically increase in response to the additional water and nutrients no longer used by the trees, they improve ground cover and soil stability, further enhancing the watershed. We have found on similar projects that the post-treatment watershed (3-4 years post-treatment) has greater plant basal cover than the pre-treatment watershed, which had a limited understory, or in this case, an exotic species as the primary understory species.

How is pre-selection done for the thinning?

"Pre-selection" is done on a case-by-case basis. Generally, we tend to use one of two methods: either "individual tree selection" or "selection by prescription." In individual tree selection, trees are marked with paint or flagging to identify them for retention or removal. Individual trees would be selected based on species, size, form, and spacing. In selection by prescription, the contractor is required to follow a contractual stipulation that identifies which trees to remove or not remove. The contractual stipulation may be as simple as requiring a tree left every 25 feet or a series of selection processes including (as indicted above) spacing, species, size, and form.

Are there selective thinning tools for treatments (i.e. chainsaw)?

Absolutely! Hand treatments are a possibility. However, our experience with hand treatments is that they have cost five times or more the cost of mechanical treatments on the same site.

What herbicides are you considering using?

The two possibilities for cheatgrass treatment include Plateau, if approved by the EPA(???), and Round-up. Both could be ground applied. The herbicides considered for oakbrush along the power line include Arsenal and Garlon 4. These would be applied directly to the stumps after they are cut.

How many consecutive years would you need to (chemically) treat cheatgrass?