

Information and Critique of the LaVA Draft EIS

(Medicine Bow Vegetative Landscape Analysis project)

Critique completed July 6, 2018

What opponents to LaVA and others should know

Duane Keown

GENERAL

The US Healthy Forest Act and an alternative to the NEPA allow the Forest Service to have only two alternatives when citizens choose alternatives with the Draft LaVA Environmental Impact Statement. Therefore, the Forest Service in the draft EIS only shows the No Action alternative (by law it must be a choice) and the Modified Proposed Action alternative. One of these actions may be chosen with the comments to the Medicine Bow National Forest to Melissa Martin at the address below. If you are choosing the “No Action” alternative you must state so in the comment, preferably at the beginning so the alternative gets counted.

For an informative view, before commenting on the Medicine Bow Draft EIS LaVA (Landscape Vegetation Analysis project), which is about the forest after the widespread pine beetle kill, view a series of 10 very short videos. They are about the beetle kill and the future of the forest. The series is a collaboration of the Medicine Bow and Routt National Forests and the University of Wyoming Ruckelshaus Institute of Environment and Natural Resources. It was produced in 2014. Before venturing into the 282-page Draft Environmental Impact Statement, view these short videos. They are mainly narrated by scientists, including Dr. Dan Tinker, UW Forest Ecologist. To see them Google: Beyond Bark Beetles, Ruckelshaus Institute, University of Wyoming or go to: www.beyondbarkbeetles.org

The submission of timely and specific Draft EIS comments can affect a reviewer’s ability to participate in subsequent administrative review or judicial reviews. Comments received in response to this solicitation, including names and addresses of those who comment, will be part of the public record for this proposed action. Comments submitted anonymously will be accepted and considered; however, anonymous comments will not provide the respondent with standing to participate in subsequent administrative or judicial reviews.

Send Comments to: Melissa Martin, Planning and Information Program Manager, US Forest Service, 2468 Jackson St., Laramie, WY 82070

Date_____.

The comments must be received is by August 20, 2018

Comments by Duane Keown about the DEIS begin here.

A bit of history first.

Section 602(b) of the Healthy Forest Restoration Act (1) requires the Secretary of Agriculture to designate treatment areas if requested by the governor of a State. On May 20, 2014, Secretary of Ag, Tom Vilsack announced the designation of approximately 45.6 million acres of National Forest System lands across 94 national forests in 35 states to address insect and disease threats that weaken forests and increase the risk of forest fires.

On March 22, 2017, the Chief of the Forest Service designated an additional 84 watersheds (751,283 acres) on the Medicine Bow National Forest to address insect and disease threats. This designation includes the majority of the Medicine Bow National Forest and the entirety of the LaVA project area. As such, analysis and documentation of the LaVA Project is being carried out in accordance with Section 602(d). Projects within the designated areas must “reduce the risk of, or increase the resilience to, insect or disease infestation” (Section 602(d)(1)). One of the many purposes of the LaVA Project is to increase resilience to insect infestation and other natural disturbances, as described on page 15 (referring to the DEIS).

Note: Only the Medicine Bow National Forest in Wyoming is getting a LaVA scale treatment at this time. There are eight National Forests within the borders of Wyoming

The following are in the Preface to the EIS (pages with Roman numerals)

1. The Forest Service does not give significance to the fact that the beetle kill itself improved the resistance to future beetle kill epidemics since it was so severe it took out all of the susceptible pine trees. Because of their youth (depth of bark) and resistance to the beetles, the remaining live trees are mostly of the same age.
2. In the Preface Summary of the EIS, page iv, the EIS says under Soils: “In the short-term, effects to soils from harvest operations and prescribed burning would include erosion; compaction; woody debris; and spread of invasive weeds.”
3. With the Medicine Bow Forest (MBF) With Decision of 2008, the forest was to be made safe from hazardous trees by 2018 in urban-wildland

interface areas where there was high risk of human injury. That operation was completed in 2018, yet it remains listed a main reason for LaVA. Of course it is the responsibility of the Medicine Bow leadership and staff to keep the forest safe, with or without LaVA. The MBF should reexamine LaVA in relation to **SEC. 101**. Of the Healthy Forests Restoration Act (HFRA) of 2003 (Definitions). What was the purpose and accomplishment of the 2008 hazards project that went on for ten years? Compare this and LaVA with the management of Rocky Mountain National Park where more than 4 million visitors roam the forest yearly. The Park has an equal density of beetle kill trees. Only the treacherous trees are removed in areas of frequent human traffic. The beetle kill was a natural phenomenon by a native species that occurred in pine coniferous forests from deep into Canada into southern New Mexico and into Arizona. Existing conditions were a perfect storm for the wide spread infestation. Is a LaVA type operation underway throughout the infected area that is in some places a thousand miles wide and three thousand miles in length, north to south? Of course not. For LaVA the MBNF was in conjunction with the Health Forest Restoration Act and Governor Matt Mead's Task Force on Forests. With the HFRA each governor, with determined unhealthy forests, was eligible to select one forest for health improvement. With the Governor's Task Force the Medicine Bow National Forest got LaVA. Not all members of the Task Force favored LaVA.

4. Roadless Characteristics, page vii in the Summary Quote, "Mechanical treatment, prescribed burning, or both could cause short-term soil compaction and displacement, loss of some individual plants and their localized habitat (including Rocky Mountain Region sensitive species), introduction of weeds, short-term effects on water and air quality, and increases in unauthorized off-highway vehicle use." This last factor is important. The Forest Service does not successfully patrol traffic on unauthorized roads now. Add 600 miles of closed roads that are wide enough for logging trucks to maneuver!

5. Adaptive Management NEPA The LaVA calls for 600 miles of temporary roads to be constructed in 10 to 15 years, or maybe 20 years, as it says periodically in the EIS. Who is to tell us that it is 600 miles or 700 miles 20 years from now? Who is to tell us that it is 360,000 acres or 460,000 acres that were treated 20 years from now and is there an outside source to monitor the project or only those who implement it? The outside force is us, with the NEPA that was enacted in 1970, not an Adaptive Management NEPA. Adaptive Management sounds good for long-term

management of our natural resources like is expected of the Forest Service (page 41 of the DEIS). But it is subject to the will of politics, as is happening now. Donald Trump's Secretary of Agriculture, Sonny Perdue, who heads the Forest Service, was asked in Boise in 2016 what the mission of the FS should be. He said, "Regarding the U.S. Forest Service and our public lands, I think it's time we started looking at forests as crops, as agriculture..." This is the problem with a Forest Service NEPA Adaptive Management agreement. From the DEIS, page 138: "Up to 260,000 acres (of the 360,000 acres) of the forested areas could be commercially harvested over the life of the project." Adaptive Management NEPA agreements were approved by the Council of Environmental Quality in 1997 but in many instances they defeat the purpose of NEPAs, which is to give the citizens some control over unpopular projects or programs that adversely affect the values they hold for their natural resources. The area to be treated in the LaVA is 150,000 to 360,00 acres but the total treatment area is defined as 612,000 acres, half of the forest. This undefined operation is why we have a National Environmental Policy Act and the ability of the people to oppose a government project with EIS hearings and comments. LaVA, if carried out, will be a blank check signed by the people of 2018 for citizens who come of age in 2036. What will they know of the natural forest we knew before it became "managed"?

Chapter 1

Page 7 of the DEIS shows that in Carbon and Albany counties 136,743 acres of hazardous fuel types surround communities. To reduce the risk of wild fires, where is the need for 600 miles of temporary road? First, protect the communities and structures from wildfires. The entire forest was affected by the beetle blight. Where will these roads be? They don't tell us.

Page 7 describes the sedimentation of Rob Roy, Hog Park and Lake Owen reservoirs with large fires in hazardous fuel conditions. What about digging the roads for "fire prevention" and sedimentation they will cause? The forests, with the dead trees and regeneration are less likely to cause sedimentation of these reservoirs than when the watershed is opened with the "temporary" roads.

Page 7 Restoration of Wildlife Species Habitat To quote the Draft EIS, "Guidelines within the forest plan state that wildlife hiding cover areas should be greater than 250 acres and over 1/2 mile from roads or motorized trails (USDA Forest Service 2003a, page 1-40). To conserve or promote

wildlife security and hiding cover and move toward this guideline, there is a need to improve habitat conditions by restoring conifer stands with vegetation treatments that provide resilience to future epidemics.” What does building 600 miles of road do for wildlife security? The beetle epidemic is over. The vulnerable trees are dead and survivors will/are replacing them. Can the FS rush the maturity of the survivors to make mature forests for wildlife species whose habitat is mature forest? Of course not. The FS knows well that the 600 miles of road are not “temporary” for ATVs and snowmobiles. They are access roads that will violate USDA Forest Service Plan of 2003a, pages 1-40.

Page 9 To quote the DEIS, “To conform to desired conditions prescribed in allotment management plans for forage availability, there is a need to provide vegetation treatments and fuel reductions which allow for livestock to access forage within the Medicine Bow National Forest.” Is it the responsibility of the FS and taxpayers to clear the jackstraw forest of dead trees for grazing of livestock allotted forest? Livestock allotments are currently a great bargain for stock growers. Do the cattle and sheep graze deep in the forest? That is not in my experience. They graze where the forage is.

Page 11 The photos show managed lodgepole pine forests. Studies of our own (Joy and Duane Keown), and provided to the FS, show that in a natural mature lodgepole forest, over time, the trees have spaced themselves in the competition for light. Whereas, in a recently clear-cut lodgepole forest the new naturally germinating trees are so densely spaced to cause a “porcupine forest”. The FS can rush maturing by periodically thinning the once clear-cut forests, as in the photos. Is this the future of our forest and at what expense?

And in the FS DEIS plan, ultimately, how much of the jackstraw forest is to be cleared of the dead trees? The beetle epidemic caused nearly the entire forest to be jackstraw. Is LaVA the beginning of the end of natural forests? By law the FS can change the goals for the desired forest in the 2003 FS PLAN. LaVA throughout discusses reaching the goals of the desired forest. Change the goals of the plan. Throughout the LaVA, and in expressing the need for an Adaptive Management NEPA, it is about the need for an adaptation approach. How about changing the goals and adapting the LaVA for a different forest, the one after the beetle kill. The beetle kill forest is unusual but it is natural.

Page 14 Human Safety FS Decision Notice of 2008 says it was a, “Forest-wide Hazardous Tree Removal and Fuels Reduction Project”, dated August 2008 and extending to 2018. It was to take care of human safety. It lasted ten years. On page 19 we read about the “need” for LaVA, “Treat hazard trees in areas not covered by the forest-wide hazard tree decision notice (August 12, 2008).” Isn’t this a standard FS procedure to remove hazardous and impeding dead fallen trees from trails and roads? It has been in my lifetime and when I worked for the FS.

Decision 2008 went out of bounds on Highway 130, until citizens brought attention to the error, when the FS was removing Engelmann Spruce in violation of the 2008 Decision and making a clear-cut path much wider than the Decision called for. Why cannot the FS continue to take care of human safety in the areas of human risk of injury as they have in the past and the management does in Rocky Mountain National Park? This would greatly spare the size and expense of LaVA. Of course there is not commercial logging in the National Park. We are not asking to cease commercial logging in the MBF.

Page 22 Scoping, under Effects There is a deliberate error and cover-up in line 8 and 9 down. This was pointed out to Frank Romero and Melissa Martin numerous times. It says, “A news release was also prepared and an article was published in the *Laramie Boomerang* on August 1, 2017. “ A news release may have been prepared for the *Boomerang* but it was not published on August 1. There was not a notice in the *Boomerang* prior to the scoping meeting. Call the editor, Peter Bauman, to substantiate this. With this omission the Medicine Bow Forest personnel violated the Code of Federal Regulations (CFR) when they did not notify any of the environmental organizations, or the wildlife organizations in Wyoming about the scoping meeting. “**40 CFR §1501.7 Scoping says:** a) As part of the scoping process the lead agency **shall:** (1) **Invite the participation of** affected federal, state, and local agencies, any affected Indian tribe, the proponent of the action, and other interested persons **(including those who might not be in accord with the action on environmental grounds).**” This was probably the reason that fewer than twenty of Albany county’s 36,000 residents showed up at the August 8 Scoping Meeting in Laramie. The deadline for comments was August 21, 2017 and there were only 58 comments, most of which were critical, and thus the cause for four more FS information meeting in January of 2018. This was also at the direction of the lead Forester of Region 4.

Page 24 From the DEIS, “Information about individual treatments will be shared with the public on an annual basis to demonstrate responsiveness to public concerns as well as to demonstrate compliance with applicable laws, regulations, and policies, as described in Appendix A, Adaptive Implementation and Monitoring Framework.” Is this pre or post to the treatment and what could the public do in opposition? That is the problem with the Adaptive NEPA. It is unresponsive to the public will when the action is about to take place. The agreement was made and the check was signed years before.

Page 25 Proposed road estimates should be reduced. This is perhaps with LaVa the most unregulated and unreliable feature of the plan. We do not know where the roads will be. The plan with the FS has specific guidelines for the building of the temporary roads but the public does not know where they will be. This is what we get with an Adaptive NEPA. The public knows the design of roads and precautions but accepting 600 miles of roads and not knowing where they will be is a delusional belief. Why must we buy 600 miles of roads, or any roads at all, if we do not know where they will be? Six hundred miles of roads in 360,000 acres? Is this what we are getting? Or do the miles stretch throughout the forest to get to regions of the most dead trees, the jackstraw forest? The Medicine Bow Forest is a relatively small national forest, 1.2 million acres. Keep in mind that 600 miles stretches from Laramie to 60 miles into Iowa! Why must we make this settlement in 2018 for those who will be the residents and visitors in this corner of Wyoming in fifteen years, or is it twenty years? Temporary roads wide enough for logging trucks are really not temporary, especially not for those who will not obey the “closed” signs. The natural forest is ours and it will be theirs in 2036 if we keep it for them. Will the Bow be a U.S. National Forest or more like a European managed forest? In some of those, the trees are in rows.

Chapter 2

Page 29 From the DEIS: “Implementation activities would be completed within approximately 15 to 20 years of the project decision. “ Is it 15 years or 20 years?

Page 29 From the DEIS, “During adaptive implementation, Medicine Bow National Forest staff would cooperate with other agencies, local governments, interested stakeholders, and organizations to identify specific treatment units.” What are the organizations? Not one organization,

environmental or wildlife, was a cooperating organization in the LaVA development prior to the scoping meeting. They were not even informed of the scoping meetings, in violation of **40 CFR §1501.7 Scoping**. They represent thousands of concerned members.

The 15 to 20 year program is broken into treatment units. What public input is realistically expected into each unit decision? There will likely be hundreds of these decisions of action in 20 years.

Page 30 Roads will need to be at least 16 feet wide, wide enough for logging trucks to maneuver. What will the cost be to construct 600 miles of road and looking at the restoration methods to be used, what will be the cost to restore a temporary road? With modern use of ATVs, motorbikes and snowmobiles is there really a temporary road that is closed?

Page 34 Beware of some of the jargon. It is not public reading for most. For example: Stand-initiation and Even-aged Treatment Options (up to 95,000 acres). This is clear-cutting. The plan is to remove all vegetation in the treatment unit and let natural growth begin anew or replant the area with mechanical tools or by hand. If regeneration is natural in a lodgepole forest the regenerated forest will become a “porcupine” forest with trees so close together that one cannot move between the trees. When the treetops become continuous, unless maturation occurs in perhaps 100 years, the trees will require thinning. This is manual at great expense unless it is by voluntary workers. 95,000 clear-cut acres is about one tenth of the Medicine Bow.

Page 35 This part of page 35 should be the extent of the LaVA project: “Within identified wildland-urban interface areas, fuels treatments are the highest priority. Vegetation treatments in wildland-urban interface areas would be implemented to achieve fuels objectives, regardless of percentages of mortality or insect and disease presence. Any of the vegetation treatment options in table 14, table 15, and table 16 could be used.” An exception should be the forest of fuels described on page 99. This is the forest most prone to a crown fire, timber understory fuel type model 5 (TU5).

Page 51 This statement in the comparison of the No Action alternative and the Modified Alternative should be noted: “Exact location of temporary roads is currently unknown but there would be potential for direct effects to aquatic habitats and fish and amphibian populations. Roads constructed through, or parallel to, wetlands would impact amphibians and their habitats.” Road construction impacts could be mitigated through proper road planning, design, and location. In addition, best management practices

and forest plan standards would help mitigate the effects of construction.” At this stage of LaVA, this is what we get for 600 miles of roads. According to local hydrologist Bern Hinckley, the effect of 600 miles of temporary roads could be significant on the hydrology of Medicine Bow. Especially the sedimentation effect.

Page 54 Recreation The FS acknowledges that with LaVA: “Both types (hikers and motorized recreationists) of trail users would encounter effects of logging operations and vegetation treatment types including slash piles; technically created openings; and noise, dust, and traffic from heavy machinery and log trucks. Other short-term effects to recreationists would vary depending on the proximity of treatment units to the recreation activity and time of year. Recreational road and trail use may be temporarily affected by timber hauling, equipment access, and harvest activities. “

Page 58 On this page, this is what the public gets. “Temporary road construction will be tracked over the life of the project through pre-implementation and project implementation checklists (see appendix A, attachments 1 and 5, respectively). Below is what the public gets for information about the temporary road building. There is no information in the DEIS about where roads will be. There is only a high mileage estimate, 600 miles. The chart/record with categories is below with the statement: “*All temporary road mileage is estimated. Actual road miles would be tracked and recorded during administration of sales/projects.*” Is this what the record is? What the public gets?

Attachment 5, Page 251

Temporary Road Mileage Available	Project Temporary Road Mileage	Balance of Temp Roads
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Chapter 3

Page 69 Owen Sheep Accounting Unit The unit contains Sheep Mountain, and is a game reserve established in 1924 by President Woodrow Wilson. The whole mountain is scheduled for full-scale treatment. Is this a mistake? According to the DEIS, about the Owen Sheep Accounting Unit: “It is made up of 22,535 acres of National Forest System lands in Albany County. The accounting unit is located on the Laramie Ranger District and contains 22,535 acres of full-suite treatment opportunity areas “. This is most of Sheep Mountain that is an Inventoried Roadless Area and has been a federal game reserve for 94 years!

Page 76 Houston Park Wilderness (with a big W) and the shore of Hog Park Reservoir is open to full-scale treatment according to the DEIS. In violation of LaVA, and other laws, Wilderness is not to be treated. The Wilderness south border is at the north shore of Hog Park Reservoir and is part of the watershed into the reservoir. The water off the shore of Hog Park Reservoir is perhaps the best fishing in the Medicine Bow and home for Osprey and Bald Eagles. The temporary road construction in this area will adversely affect the sedimentation rate of the reservoir and the lakes recreation value without preserving the water body from sedimentation, even after wildfires. Don't let this full-scale treatment happen.

Page 99 Why cut down the forest? This page categorizes the fuel base with the most risk of causing crown fires. The DEIS says: 'Timber understory fuel type model 5 (TU5) can best be described as forest types with down material present. The primary carrier of fire in TU5 is heavy forest litter with a shrub or small tree understory. Spread rate is moderate and flame length high. Within the analysis area, TU5 represents the likely dominant fuel model for 5 to 15 years after the beetle epidemic. Fire behavior can be intense when spreading on the surface and will likely transition to the canopy producing passive crown fire (single tree or clumps of trees torching) if an overstory is present. Significant fire control problems can be associated with this complex due to the heavy surface fuel load and the dense shrub or small tree understory. There are 59,886 acres in the TU5 fuel model type within the LaVA project area. These combined fuel models cover the following acres by accounting unit: Battle Pass (8,020 acres), Big Blackhall (2,290 acres), Bow Kettle (4,158 acres), Cedar Brush (4,100 acres), Fox Wood (2,406 acres), French Douglas (2,640 acres), Green Hog (4,037 acres), Jack Savery (11,616 acres), North Corner (6,778 acres), Owen Sheep (409 acres), Pelton Platte (193 acres), Rock Morgan (6,483 acres), Sandy Battle (4,898 acres), and West French (1,859 acres).'

To cut the LaVA project in half, or eliminate it entirely, clear these areas to reduce likely crown fires. Use the High Risk fire data to begin the clearing and reduction of crown fires. This operation would not need the LaVA project. It is only 59,886 acres. This should move toward the Forest Plan desired condition to reduce fuel loadings and modify fire behavior. The FS is first to acknowledge there have been forest changes since the FS plan was established in 2003 and they should want to change the possible desired forest in the plan. By law this can happen. The changed forest is the rationale for LaVA in the first place.

Page 110 There are 123,000 acres of wildlife security areas in the LaVA project area and 51,700 acres of security areas in LaVA mechanical or prescribed fire treatment opportunity areas. The Forest Service 2008 Plan has guidelines to: cluster disturbance in time and space to maintain security areas (Management Area 3.5, page 2-43). It says, “Close nonessential roads to enhance or develop large areas for wildlife security and non motorized recreation opportunities (Management Area 5.15, page 2-62); and identify and manage areas greater than 250 acres in size as needed to provide adequate wildlife security areas. (Management Area 5.15, page 2-64).” LaVA does not meet two of the four guidelines for increasing security areas for wildlife. They are:

- cluster disturbance in time and space to maintain security areas (Management Area 3.5, page 2-43), Close nonessential roads to enhance or develop large areas for wildlife security and non motorized recreation opportunities (Management Area 5.15, page 2-62); and
- identify and manage areas greater than 250 acres in size as needed to provide adequate wildlife security areas. (Management Area 5.15, page 2-64).

Page 132 LaVA acknowledges, “Implementation is not likely to meet forest plan wildlife security guidelines in all cases. There are 51,700 acres of security areas in LaVA mechanical or prescribed fire treatment opportunity areas that could be removed temporarily by vegetation management. If vegetation is removed from the security area with stand initiation treatments, then security areas would not exist at the site again until there is sufficient regeneration to hide 90 percent of an adult elk at 200 feet or less (hiding cover) across 250 acres. Hiding cover can be restored within 15 to 25 years. Intermediate treatments might not retain sufficient cover to retain function as security areas.” The key words are “sufficient regeneration”. The FS clears the security area, and then it regenerates to hide an elk? When is that, 15-25 years? Is that for our great grand kids? How does this affect the overall elk population?

Page 138 Timber Harvest

Quoting the LaVA, “Up to 260,000 acres of forested areas could be commercially harvested over the life of the project. (Underlining is provided) Timber harvest along stream channels and riparian areas can directly affect aquatic habitat by reducing large woody debris recruitment, and increase water temperature variations (Cross 2002). Heavy equipment operations around wetlands could destroy amphibian habitat or through

direct mortality. Log deck landings that are situated on, or directly adjacent to, perennial or ephemeral ponds could inundate these habitats or pose obstacles to toads traveling among ponds (USDA Forest Service 2003b). “

This is what opponents of the LaVA suspected. Two hundred and sixty thousand of commercial acres of logging is two thirds of the proposed LaVA action on 360,000 acres. This is a very large logging operation, the largest ever on the Bow.

Here is the title and excerpts in an article from the *Wyoming Tribune* by Matt Murphy that quotes Medicine Bow foresters. It needs to be read when analyzing the LaVA value and writing comments about the draft EIS. It was dated May 8, 2016.

Mountain pine beetle outbreak subsides, but dead trees remain

- CHEYENNE – The mountain pine beetle outbreak that spanned almost two decades is all but over locally, but dead and dying trees remain.
- Since the outbreak’s beginning in 1996, the pine beetle has killed thousands of mature lodgepole pine trees across Wyoming, Colorado and other Rocky Mountain states.
- But as the beetle has run into fewer trees to attack, the outbreak has subsided.
- “The mountain pine beetle epidemic for Medicine Bow-Routt National Forests has basically run its course,” said Mark Westfahl, a timber program manager for the national forests and Thunder Basin National Grassland.
- Westfahl said evidence from aerial surveys shows the number of acres affected by pine beetles has decreased.
- On Medicine Bow National Forest land, which covers the Laramie, Snowy and Sierra Madre ranges, Westfahl said 1,700 new acres of timber were affected by the beetle outbreak in 2015.
- That compares to a total of 681,000 acres affected from 1996 through 2015.

- On Routt National Forest land, which is in northern Colorado around Steamboat Springs, no new land was affected by the pine beetle in 2015, and a total of 613,000 acres have been affected since 1996.
- Medicine Bow National Forest totals about 1.1 million acres, and Routt National Forest totals about 1.125 million acres.
- The mountain pine beetle is native to the region and was able to have a population outbreak due to mild winters and low precipitation.
- But after feasting on trees for 20 years, the insects are running out of food.
- “They’ve probably eaten up the trees they’re going to attack,” Westfahl said.
- The Forest Service has been tackling the issue of dead trees for several years, and has been clearing dead trees from roads, campgrounds and other recreation areas.
- The Forest Service has also made use of stewardship contracts to clear dead trees from areas people use, Westfahl said.
- “We now have a landscape that has hundreds of thousands of trees on it, and those trees are beginning to fall down,” he said.
- Another beetle responsible for tree deaths, the spruce beetle, has subsided in Wyoming, though Colorado is still being markedly affected.
- Westfahl said 750 new acres affected by spruce beetle were found on Medicine Bow National Forest land in 2015, bringing the total to 118,000 acres affected since 1996.
- Meanwhile, 8,000 new acres affected by spruce beetle were found on Routt National Forest Land, bringing the total to 176,000 acres affected since 1996.
- The dead trees also contribute somewhat to the potential for forest fires, though to varying degrees as they pass through the stages of death.

- “The fire danger goes up and down through that whole cycle,” Medicine Bow-Routt National Forests spokesman Aaron Voos said.
- When the trees initially die, their needles dry out and turn red, known as the “red phase,” making the tree very flammable.
- The needles then begin to fall and the tree enters a “gray phase,” and fire danger is reduced.
- Eventually the tree will fall, increasing fire danger once more.
- “It’s not that it’s more flammable, it’s that it would burn hot” on the forest floor, Voos said.
- Finally, the tree will rot, and the fire danger drops again.
- Of course, fires are also strongly influenced by other factors, like dry weather and wind, and living trees can burn quickly under the right conditions.
- Research as to if and how the mountain pine beetle contributes to the threat of forest fires is ongoing.
- The pine beetle didn’t hit the entire forest at once, creating different levels of tree death throughout the region.
- Voos said that in general, the worst of the beetle outbreak chronologically moved north into Wyoming from Colorado, and the Pole Mountain Unit of the Medicine Bow National Forest was one of the last areas to get hit hard by the beetle.
- Regardless, forest users need to be mindful of their surroundings when visiting the forest, Westfahl said.
- Don’t camp or park a car near dead trees, and be aware of their location when engaging in other activities.
- “Just be aware of your surroundings,” Westfahl said.
- The Medicine Bow-Routt National Forests and the University of Wyoming have collaborated to create a website, www.beyondbarkbeetles.org, for more information about the effects of the outbreak.
- Biological Cumulative Effect

- Climate change is expected to increase average temperatures across the units as well as changing precipitation patterns and amounts. This may result in more precipitation as rain vs. snow, earlier snowmelt, drier, hotter summers, and other changes. Vegetation communities may change over time as certain species are unable to survive, other changes may be more subtle such as altered phenology that mismatches plant life cycles with important seasonal patterns such as pollinator activity or seasonal rains. **(good to see climate change is acknowledged by foresters)**

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And what is the cost of LaVA. The DEIS says it will take place with the regular FS crews. Certainly the logging will not pay for the cost. Logging does not pay for the Forest Service, not even in the Northwest. We taxpayers will pay millions for LaVA, and with the DEIS we have at this time no estimate of how many millions.