AGENDA ITEM or FINAL CONTRACT REVIEW SUBMITTAL FORM

Agenda Item: Taylor Park Vegetation Treatment Environmental Ass

Action Requested:

Parties to the Agreement:

Term Begins: **Term Ends:** **Grant Contract #:**

Summary:

Please see the attached documentation submitted by Deputy County Attorney Matt Hoyt

Fiscal Impact:

Submitted by: Josh Ost **Submitter's Email Address:** jost@gunnisoncounty.org

Finance Review: ○ Required ◉ Not Required

Comments:

Reviewed by: Discharge Date:

County Attorney Review: ○ Required ◉ Not Required

Comments:

Reveiwed by: Discharge Date: Certificate of Insurance Required

Yes ○ No ○

County Manager Review:

Comments:

Reveiwed by: GUNCOUNTY1\mbirnie Discharge Date: 7/5/2018

○ Consent Agenda ○ Regular Agenda ○ Worksession Time Allotted: 30

Agenda Date: 7/10/2018

Revised April 2015

USDA United States Department of Agriculture | Forest Service | Gunnison Ranger District | 216 North Colorado Street
Gunnison, CO 81230
970-641-0471
Fax: 970-642-4425

File Code: 2400; 1950
Date: April 13, 2018

Dear Interested Party:

The Grand Mesa, Uncompahgre and Gunnison National Forests (GMUG), Gunnison Ranger District, is inviting you to comment on a proposal concerning treatment of areas of lodgepole pine and Engelmann spruce forest in the Upper Taylor River and Spring Creek drainages. The intent is to actively and adaptively manage vegetation to improve forest health and resiliency while also reducing the buildup of fuel decreasing the potential for catastrophic wildfire. The proposal implements the goals and objectives of the 1991 Grand Mesa, Uncompahgre and Gunnison National Forests Land and Resources Management Plan, as amended, and the 2016 Forest Service Ecological Restoration Policy, incorporating best available science related to lodgepole pine dwarf mistletoe control. Treatments would be carried out on National Forest System (NFS) Lands.

Background

The Gunnison Ranger District has approximately 285,000 acres of lodgepole pine-dominated forest with an additional 162,000 acres of lodgepole pine mixed with other dominant tree species. Extensive surveying estimates that 52 percent of those lodgepole forests, or approximately 232,000 acres, have some level of dwarf mistletoe infestation.

Dwarf mistletoe is a parasitic plant exclusively hosted by conifers primarily impacting trees by disrupting nutrient cycling that can strongly influence forest structure and dynamics. Lodgepole pine dwarf mistletoe (*Arceuthobium americanum*) is considered especially lethal. It spreads primarily through explosive ejection of its seeds from hydrostatic pressure in the fruits allowing a spread distance of 50 to 75 feet, although most seeds fall within 33 feet of the host tree or on other parts of the same tree. Dwarf mistletoe weakens host trees, making them more susceptible to mountain pine beetle and pine engraver (Ips) mortality, increases risk of wildfire mortality, increases surface fuel loadings, and mistletoe brooms act as fuel ladders which can carry surface fire higher up into the tree canopy. Heavily infested stands lose approximately eight percent of their trees each decade. In stands that have been impacted for more than 80 years, up to 15 percent of the trees may die each decade.

Since the early 1960s, the GMUG has made progress on regenerating diseased lodgepole pine stands and ensuring that those regenerating stands are free of dwarf mistletoe, or "sanitized." In the Taylor Park EA analysis area, 6,363 acres of lodgepole pine has been previously regenerated and sanitized on suited lands. There is a need to expand upon that progress and continue to increase the size and extent of commercial lodgepole pine forest that is relatively free of dwarf mistletoe infestations. The key tool for achieving the primary project purpose of sanitizing dwarf mistletoe infested tree stands is to identify then remove infected trees stands within a 150 feet of healthy tree stands. The best tool for removing the infected trees is through commercial timber

harvest. The desired outcome from proposed harvest activities is regenerated healthy stands of lodgepole pine free from dwarf mistletoe while reducing fuel loads concurrently.

Areas of spruce-fir and quaking aspen forest across the National Forest have been the focus of commercial and noncommercial mechanical treatments, prescribed fire and other treatments to restore ecosystem resiliency under the Spruce Beetle Epidemic and Aspen Decline Management Response (SBEADMR) project since 2016. The proposed Taylor Park EA would complement the SBEADMR project by adopting an adaptive management approach in the Taylor Park area by treating dwarf mistletoe infestations, improving spruce resiliency, and managing wildland/urban interface fuel loading in forest types outside of, but adjacent to, those addressed by SBEADMR.

This project will be developed under the authority of the Healthy Forest Restoration Act (HFRA) (P.L. 108-148). It is eligible as an authorized project under this law because all treatments are in areas designated in accordance with section 602 of HFRA.

Purpose and Need for Action

The primary purpose of the treatments proposed in this area (*Taylor Park Vegetation Management Environmental Assessment* or *Taylor Park EA*) is to increase the forest's ability to respond to multiple and interactive stressors including climate change, drought, insect attack, or disease while promoting safety and reducing fuel loading in the Wildland-Urban Interface (WUI) and surrounding areas. Based on the described conditions above and Forest Plan direction, the need for this project is to manage forest vegetation to bring current and foreseeable conditions closer to desired conditions on landscapes where commercial harvest can be implemented appropriately and effectively.

This will be accomplished by:

- harvesting and subsequently regenerating through natural and artificial regeneration dwarf mistletoe infested stands using clearcutting, overstory removal, and thinning treatments;
- pre-commercial thinning young lodgepole pine stands to improve tree growth and vigor while controlling dwarf mistletoe;
- promoting regeneration and multiple age classes of trees in spruce-fir or spruce-fir-lodgepole stands through group selection;
- removal of hazard trees along Taylor Canyon and Spring Creek Roads (CR 742 and FR 744);
- using commercial harvest, non-commercial felling, thinning, and pile burning to reduce fuels and fire hazard in the WUI; and
- salvaging trees recently killed by spruce beetle, mountain pine beetle, and Douglas fir bark beetle for commercial wood products.

The secondary purpose of these treatments is to provide wood products for the local economy which relies on wood fiber harvested sustainably off of public lands.

The project implements management direction identified in the amended Grand Mesa Uncompahgre and Gunnison National Forests Land and Resource Management Plan (Forest Plan) (1983, amended 1991, 1993, 2008 and 2012). This proposed action responds to goals and objectives described in the Forest Plan and moves the project area towards desired conditions (Forest Plan, 1991, pages III-1 through III-5). Specifically, the Forest Plan goal for vegetation is to "manage vegetation in a manner to provide and maintain a healthy and vigorous ecosystem resistant to insects, diseases and other natural and human causes."

Proposed Action (see attached map)

Proposed treatments are on lands within the Wildland-Urban Interface (WUI) or contain/are adjacent to lands that contain an insect or disease that poses a significant threat to the ecosystem. All lands proposed for treatment are outside of wilderness areas, wilderness study areas, Colorado Roadless Areas, and designated recreation management areas.

Of the 15,165 acres of proposed treatment, approximately 1,000 acres are in the spruce-fir or spruce-fir-lodgepole forest type where group selection, overstory removal, or spruce bark beetle salvage clearcut is proposed. Most of the remaining 14,165 acres are lodgepole pine-dominated forest. Approximately 4.9% (11,354 acres) of the infested portion of the district is proposed to be treated for dwarf mistletoe or approximately 2.5% of the lodgepole communities on the Gunnison Ranger District.

In the proposed fuel treatment areas (2,811 acres), the primary objective of the treatments is wildfire severity reduction along with dwarf mistletoe sanitation.

Proposed treatments preliminarily identified for suitable sites within the project area are listed in the following table, along with their acreages and which of the project purposes each would support. Ultimate acreage of each treatment is likely to change over the course of the project. Treatments will be refined during implementation as additional inventory is completed.

Treatment	Acres
Dwarf Mistletoe Edge Strip Cuts or Clearcut	3,609
Overstory Removal	734
Shelterwood Seed Cut (or Group Selection in Spruce or Clearcut if Mistletoe is Present)	714
Group Selection in Spruce	741
Prescription To Be Determined, Mixed-species	193
Young Stand -- Precommercial Thinning, Sanitation, or No Immediate Treatment	6,363
Fuel Treatment	2,811
TOTAL	15,165

Wood products proposed to be removed in all operations would be used to meet the needs of local industry and to provide economic benefits to regional communities. These activities would be planned where existing strategic plans, laws and policy indicate they are appropriate and where forest system roads are adequate to meet the needs of access and product removal. Wood products may include sawlogs, firewood, fence stays, posts, poles, pilings, and other specialty wood products.

Some temporary road construction would likely be needed. Temporary roads will be obliterated at the end of use. Any new permanent administrative-use roads (Level 1) constructed for this project would be closed to public motorized and mechanized use after operations are completed. Existing administrative use roads maybe reopened for operational use, then closed afterwards. The intention is to maintain the open road and trail system as defined by the 2010 Gunnison Travel Management Plan Decision as displayed on the current Motor Vehicle Use Map for the Gunnison Ranger District.

More information on specific treatments can be found in the "TaylorPark_ProposedVegetationTreatmentDetails_Scoping" document available here: https://www.fs.usda.gov/project/?project=53662.

Project Design Features

Each treatment would include design features to protect the environment or mitigate undesirable effects to other natural resources. Design criteria to be used under specific on-the-ground conditions have been drafted (Taylor Park_DesignFeatures_Scoping) and are available here: https://www.fs.usda.gov/project/?project=53662.

Since the decision will be implemented using an adaptive management process, the use of monitoring results to advise Forest Service managers is critical to the success of the project. Basic steps used in the adaptive management process are:

- An Interdisciplinary Team (IDT) will be used to complete all required surveys for a particular project area, complete required layout and marking of the stand, decide the appropriate design features to be applied based on surveys and determine how best to implement required monitoring to ensure mitigations used are effective. A project "checklist" documenting compliance with requirements of the EA will be completed. Members of the IDT and the District Ranger will sign the checklist documenting compliance prior to implementation of the final proposal;
- Projects will be implemented through timber sale contracts, service contracts, or other appropriate mechanisms. Forest Service employees (e.g. sale administrators) will oversee provision of the contract to ensure compliance;
- During and following implementation of vegetation treatment projects, monitoring required by the EA will be completed. Findings will be summarized in an annual monitoring report that will be posted on the Forest website and used to inform future management decisions;

Nature of Decision to Be Made

I, as the Gunnison District Ranger, am the Responsible Official for the Taylor Park EA project. After considering the proposed action and any alternatives, the environmental analysis and public comments, I will decide whether to authorize treatments to remove infested trees, treat fuels, thin stands, and remove hazard trees. If an action alternative is selected, I will decide where treatments may occur and what actions are appropriate and may be taken. Finally, the

decision will include the scope of monitoring that should occur. No Forest Plan amendment is proposed.

This environmental analysis will be documented in an Environmental Assessment. A "No Action" alternative and other alternatives that may be developed during the public comment period will be considered. No cooperating agencies have been identified.

Scoping Process

This letter initiates the scoping process, which guides the development of the environmental assessment. It is important that reviewers provide their comments at such times and in such manner that they are useful to the agency's preparation of the environmental assessment. Therefore, comments should be provided prior to the close of the comment period and should clearly articulate the reviewer's support from the proposal, concerns or desires to see the scope of the project broadened or narrowed.

This opportunity to comment serves two purposes: 1) as scoping for this project under the requirements of the National Environmental Policy Act (40 CFR 1501.7); and 2) as a comment period described at 36 CFR 218.5 (a) for establishing eligibility to object to a future USFS decision. 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 commenters will not be eligible to object.

Opportunity to comment on the scope of the Proposed Action ends 30 days following the publication date of the Legal Notice of request for public comments in the *Gunnison Country Times*, the newspaper of record for the Gunnison Ranger District. Comments submitted in the following formats will be accepted: written, facsimile, hand-delivered and electronic. In order to be eligible to object to the USFS's decision on this project, individuals must comment during this 30 day comment period per 36 CFR 218.32(a). Specific written comments are defined in 36 CFR 218.2. Also, for objection eligibility, each individual or representative from each organization submitting comments must either sign the comments or verify their identity upon request.

Mail comments regarding the Taylor Park EA Project to:

Matthew M. McCombs
Gunnison District Ranger
216 N. Colorado
Gunnison, CO 81230
Fax comments to: 970-642-4425.

Please submit Electronic Comments on the following website: https://www.fs.usda.gov/project/?project=53662, through the "Comment/Object on Project" link found on the right hand side of the page. Electronic attachments to comments (e.g. .doc, .txt, .rtf or pdf) may also be submitted.

Hand delivered written comments will be accepted at the GMUG National Forests, Gunnison Ranger District, 216 North Colorado Street, Gunnison, Colorado, between the hours of 7:30 a.m. and 4:30 p.m., Monday through Friday, except for Federal holidays.

It is important that reviewers understand that only those individuals and entities that submit timely and specific written comments during the official comment period will be allowed to file objections during the objection period which follows publication of the environmental assessment and draft decision notice. Objections filed according to the conditions in 36 CFR 218 will be reviewed by a Reviewing Officer, who will submit a written response to objections. The final notice of decision will be issued only after all the concerns and instructions identified by the reviewing officer have been addressed.

Other Information

In addition to this opportunity to submit written comments, as required under HFRA, the public will be invited to collaborate on the development of the final proposed action. As part of the SBEADMR EIS project development process the GMUG established the Science Team of academic and scientific researchers; additionally, local interested parties developed the Adaptive Management Group comprised of a diverse group of science and industry professionals, local elected leaders and advocacy organizations. I intend to utilize these existing entities to meet the collaborative intent of HFRA. However, interested entities or members of the public are encouraged to engage collaboratively as desired and I will facilitate a means to involve them. Additionally, I will be hosting a meeting for interested members of the public and representatives of the Gunnison Ranger District during the development of the Taylor Park EA project. This meeting will be held in Tincup, Colorado, during the summer of 2018. More detailed information about the meeting location and schedule will be available closer to the meeting date.

Additional project details and supporting documentation can be found here: https://www.fs.usda.gov/project/?project=53662.

For additional questions, please contact John Slown, Project Environmental Coordinator at 406-239-3749; email jslown@fs.fed.us.

Sincerely,

MATTHEW M. MCCOMBS
District Ranger

cc: Clay Speas, Drew Stroberg

Taylor Park Vegetation Treatment EA
Public Meeting Agenda

Thursday, June 21, 2018
5:30 to 8:00 PM

Agenda

5:30 Set up

6:00 Meeting Start:

- Welcome and Introductions (Drew Stroberg) (5 mins)
- Purpose and Need for the Project (Drew Stroberg) (3 mins)
    - Forest Ecology and Forest Health: Dwarf Mistletoe/Bark Beatle (Jim Worral) (15 mins)
    - Q&A
- Proposed Action—
    - Timber/Forest Health Treatments (Drew Stroberg/Art Haines) (5 mins)
    - Fuels/WUI Treatments (Pat Medina) (5 mins)
    - Q&A
- Adaptive Management Approach (Clay Speas) (10 mins)

7:00 Q&A

8:00 End

Lodgepole Pine Dwarf Mistletoe and the Taylor Park Environmental Assessment

Lodgepole pine dwarf mistletoe (*Arceuthobium americanum*) is a flowering plant that parasitizes lodgepole pine. It causes witches' brooms, reduced growth, increased mortality, and increased severe fire behavior.

286,616 acres

Approximate area of lodgepole pine forest type on the Gunnison Ranger District (GRD).

52%

Portion of the lodgepole pine type on the GRD that is infested with dwarf mistletoe.

7.7%

Portion of infested lodgepole pine type on the GRD to receive proposed dwarf mistletoe treatments, including:

- 2.4% dwarf mistletoe strip or clearcut
- 1.0% overstory removal or shelterwood, which could be clearcut where DM is severe
- 4.3% young stands that could be thinned/sanitized

4.0%

Portion of all lodgepole pine type on the GRD to receive proposed dwarf mistletoe treatments.

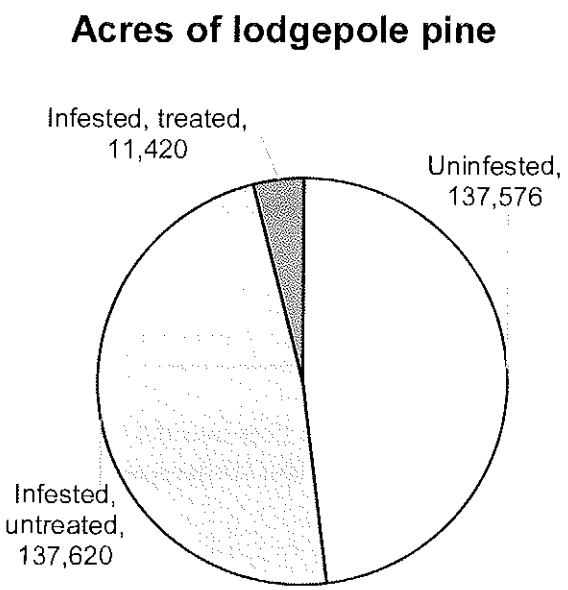


Figure 1. Acres of lodgepole pine type on GRD divided into uninfested and infested with dwarf mistletoe. The infested area is divided into untreated and treated where a primary goal is dwarf mistletoe reduction. Based on Johnson *et al.* 1981.

What are the impacts of dwarf mistletoe in lodgepole pine?

Fire: Because of low, resinous witches' brooms and increased mortality, fire in infested stands is more likely to exhibit torching, crown fire, and other severe fire behavior than in healthy stands.

Growth: When infection is severe, dwarf mistletoe causes substantial growth reduction, resulting in much smaller trees. After 70 years, heavily infected trees that survive are 23% of the size of healthy trees (as cubic-foot volume). Based on plots on the Gunnison Ranger District, total loss in the commercial lodgepole pine forest (147,769 acres) was estimated at 459,000 ft^3 of merchantable wood volume per year (Johnson *et al.* 1981).

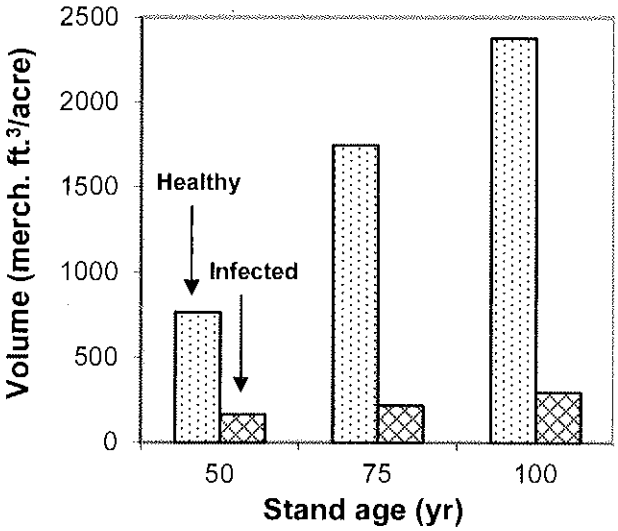


Figure 2. Effect of infection of lodgepole pine by dwarf mistle~toe at an early age on volume (which integrates effects on height growth, diameter growth, and mortality). Data from Hawksworth & Hinds (1964).

Mortality: Heavily infested stands lose 8% of stems to mortality every decade, above and beyond mortality due to competition.

Wildlife: Trees tend to die earlier and when smaller in infested stands compared to healthy stands. Small dead trees have much less value to wildlife than large dead trees.

Why do we need to treat dwarf mistletoe?

Timber resource: In lands designated for timber management, we have a responsibility to manage the timber resource. Dwarf mistletoe substantially reduces the productivity of infested stands, in some cases making them unmerchantable.

Fire: Increased likelihood of severe fire behavior in infested lodgepole pine poses increased risk to firefighters and communities.

Increased prevalence: There is evidence in the literature suggesting that, throughout the West, dwarf mistletoe is more severe and widespread than in pre-settlement times due to fire exclusion and past management practices.

Resilience: In the absence of recent, extensive wildfire, there is a side-benefit to regenerating stands: it promotes a diversity of age classes on the landscape and thus resilience to other agents, such as mountain pine beetle.

Hawksworth FG, Hinds TE. 1964. Effects of dwarf mistletoe on immature lodgepole pine stands in Colorado. Journal of Forestry 62: 27-32.

Johnson DW, Hawksworth FG, Drummond DB. 1981. Yield loss of lodgepole pine stands to dwarf mistletoe in Colorado and Wyoming National Forests. Plant Disease 65: 437-438.

Taylor Park Vegetation Management EA: Public Meeting Comment Form

The Grand Mesa, Uncompahgre and Gunnison National Forests (GMUG) is preparing an Environmental Assessment for the Taylor Park Vegetation Management EA (Taylor Park EA). The official comment period (April 19-May 21, 2018) to obtain objection standing has past; however, we will still consider your input in the analysis.

Project Details are located on the project webpage at:
https://www.fs.usda.gov/project/?project=53662

How to provide input:
Mail comments regarding Taylor Park EA to:

Gunnison Ranger District
ATTN: Taylor Park EA
216 N. Colorado St.
Gunnison, CO 81230

Fax comments to: **970-642-4425**

Email comments to: **jslown@fs.fed.us**

PLEASE PROVIDE

Name/Organization:

Address:

Email:

Specific Area(s):

Resource Topic(S):

Please provide specific facts, concerns or issues, and supporting reasons for the Responsible Official to consider:

_____

_____

_____

_____

_____

_____

_____

_____

Taylor Park Vegetation Treatment EA
Public Meeting Q&A Notes

Thursday, June 21, 2018

Question: What is the ratio of lodgepole to other tree species in Taylor Park? How much of that is infested with Dwarf Mistletoe?

> **Answer:** ~41% of the planning area (shown on page 4 of the power point presentation) is lodgepole pine. On the Gunnison Ranger District, 52% of the lodgepole pine forest type area is infected with dwarf mistletoe; however, the infestation is higher in the Taylor Park Area. District Silvicuturist estimates the infestation is somewhere around 66%.

Question: Why are 20 acre clear cuts needed for treatment if the dwarf mistletoe seeds, at most, only shoot 60ft from the host tree?

> **Answer:** 60ft is only the initial invasion of the cut area. The infestation then continues to leapfrog into the area. For this reason, assuming the treatment area edges are infested and you are not going to do the donut treatment 10 years later, cut patches should be a minimum of 20 acres. The basis for this if found in various management guides.

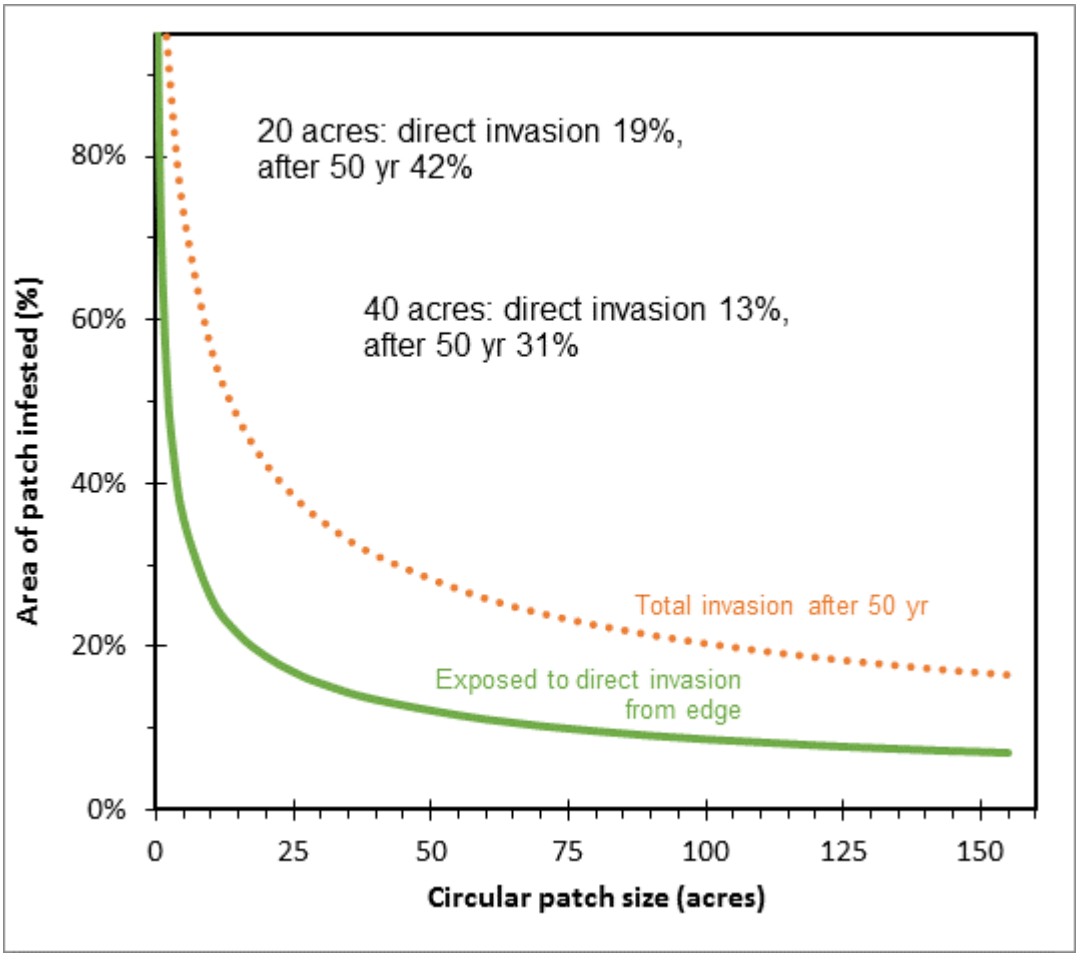
Additional information contributed post meeting: Management Guide

Hawksworth FG, Johnson DW. 1989. **Biology and management of dwarf mistletoe in lodgepole pine in the Rocky Mountains**. General Technical Report RM-169. April, 1989. Fort Collins, CO: USDA Forest Service, Rocky Mountain Forest and Range Experiment Station. 38 p.

On page 27 is the statement,

"Clearcuts in infested stands should have as large an area/perimeter ratio as allowable to minimize reinvasion from infected trees along bordering stands. Narrow strips should be avoided. Cutting units should be no less than 20 acres (8 ha) to minimize the edge effect (fig. 24)."

Below is a graph that shows more detail than fig. 24 referenced above. It shows the proportion of a circular, treated area exposed to direct inoculum of dwarf mistletoe from the edge at the maximum dispersal distance (16 m or 52 ft), used because plants in tall trees are showering seed on regeneration. Also shown is the additional effect of lateral spread for 50 years, assuming lateral spread rate for a single-storied stand of 0.5 m (1.5 ft) per year. This spread rate is the average estimated for lodgepole pine dwarf mistletoe (Hawksworth & Dooling 1984). Note that any shape other than a circle would lead to more rapid invasion.



Question: Studies have shown that dwarf mistletoe is important for avian species. How will the project affect this?

> **Answer:** The studies cited on birds and dwarf mistletoe were analyzed for ponderosa pine mistletoe stands. That is a different host, different dwarf mistletoe, and very different habitat. The results may not apply to lodgepole pine dwarf mistletoe. Additionally, when you look at the data in the Bennetts study there are some discrepancies between the data and the conclusions in the abstract.
>
> **Additional information contributed post meeting:**
>
> To the extent there is any benefit to birds from lodgepole pine dwarf mistletoe, we are only treating 7.7% of the infested stands on the District, leaving 92% to provide any possible benefit.

Question: Does dwarf mistletoe kill the tree?

> **Answer:** It does, however not that quickly. The tree has to be heavily infected. In heavily infested stands, mortality increases by 8% per decade.

Question: Are there any other treatment options for dwarf mistletoe? Chemicals?

Answer: The only known chemical treatment is ethylene. This only kills the fruiting shoots. It does not kill the mistletoe organism within the tree. Essentially it disrupts seed production temporarily.

Question: What is the standard for determining infestation?

Answer: The FS uses a 0-6 crown rating system. We then target treatments in stands with ratings greater than 1.

Question: Can general public be involved in the Adaptive Management Group (AMG)?

Answer: The Gunnison Ranger District is presenting this as something that locals could form to guide Taylor Park EA. The FS can guide this formation of a local AMG if there is interest.

Question: What authority does the AMG have to hold the FS accountable?

Answer: The AMG group is there to hold use accountable. If we don't do what we said we would they would call us out and we would look bad. We don't want that. Additionally, we try to be as responsive as possible within the purpose and need, but we do not rehash the NEPA decision.

Statement: Putting emphasis on an AMG seems pre-decisional and assumes that the populace accepts the project.

Response: We are still in the NEPA process. People are welcome to provide input about the size and scope of the project, but it needs to meet the purpose and need.

Question: What is the quota for timber production?

Answer: We are a multi-use agency. We get targets each year for production. This is high right now due to salvage from beetle kill. However, we can only do commercial logging in our suitable forest base areas, which is about 7%. Of that 7% only half is allowable for commercial logging.

Question: Are the temp roads closed at the end of the sale/within five years? This has not been done in the past in this area. Will the temp roads be open to the public to utilize will the sale is going on and/or during the five years after the sale?

Answer: Yes, the temp roads will be effectively closed. No, the temp roads will not be open to public motorized use at any time.

Statement: It looks like emphasis is on areas that have been treated before. This represents only a fraction of the forest in Taylor Park. This lead to intense treatments in limited areas.

Response: We do place emphasis in continuing treatment in these areas treated in the past.

Statement: This leaves vast areas untreated.

Response: Much of the untreated areas are within Colorado Roadless area, Wilderness, on steep slopes, etc. This limits what areas can be treated.

Statement: Concern that the proposed treatments won't help much with a catastrophic fire.

Response: Fire breaks are proposed in an effort to address this.

Questions: What about cleanup of logging actions? Standards leave too much slash on the ground for areas to be passable by hikers or wildlife.

Answer: Current practices use whole tree skidding to landing sites which moves more slash to the landing areas. The requirement is that slash is within 24" of the ground prior to close of sale (and return of deposit).

Statement: I'm staggered that the FS vision is so different from mine…what is proposed is way too big.

Response: We need to build in natural processes. Fire has been a driver of disturbance, but has not been allowed now as in the past.

Follow up statement: I would prefer the risk of fire to large clearcuts.

Question: Who do I talk to about specific concerns regard fuel treatments?

Answer: Pat Medina, Assistant Fire Management Officer

Statement: There was no one on the Science Team that represents cultural resources.

Response: Every project/treatment will have to be surveyed by an archeologist and State Historic Preservation Office will have to be consulted.

Question: Who makes the decision and when?

Answer: The District Ranger (Matt McCombs). We are aiming to have a decision by March 2019.

Question: Will there be an opportunity for public input?

Answer: A draft decision will go out with a 30 day Objection Period. Additionally, we will take comments at any time that will inform our project; however, comments received outside the official scoping period will not give standing to object.

Statement: The Healthy Forest Restoration Act hamstrings opportunity for public input. Folks who didn't comment during scoping would benefit from an additional comment period.

Response: We welcome comments at any time, but we do not plan to have another formal comment period.

Statement: SBEADMR worked because the forest slowed down and did more public involvement. This would help here too.

Response: The District Ranger will be consulted about this. Ultimately this is up to him.

Statement: There is a public perception that the FS has made up its mind and will not listen. Is there still room for the proposed action to change?

Response: We do not plan to add an alternative to the analysis, but some changes to the proposed action could change in response to input as long as we continue to meet the purpose and need.

Question: I sent in a forest plan comment and got a response back that it was received. I sent in a comment on Taylor Park EA and didn't get a response. How do I know if you received my comment?

> **Answer:** On the project webpage is a Comment Public Reading Room where you can see all the comment letters received during the official scoping period.

Statement: I never received a notice of the project or process, but I am a landowner. So I won't have standing if I comment, but I was never contacted.

> **Response:** We do our best to reach out to everyone, but ultimately we do miss some people. We sent roughly 600 letters to inform people of the project.
>
> **Additional information contributed post meeting:**
>
> Scoping Effort Details…
>
> - Approximately 209 postal letters were mailed out on April 17th, 2018
> - Approximately 319 emails were sent to unique email addresses on April 18th, 2018
> - News Release was posted on the GMUG website, Facebook and Twitter accounts on April 17th, 2018
> - News Release and Legal Notice was published in the Gunnison Times on April 19th, 2018

Questions: What percentage of activities will be commercial versus non-commercial?

> **Answer:** The pre-commercial thinning is all non-commercial. And about ½ of the fuels treatments area expected to be noncommercial too.
>
> > **Follow up question:** But isn't the pre-commercial stuff for future commercial use?
> >
> > > **Follow up answer:** The intent is to achieve better growth. We may have a commercial cut in the future in these areas, but this is not being approved under this decision. That would require a new decision.

Statement: I was recently in the Breckenridge area where I saw a crown fire. The crown fire was stopped by fuel breaks that had been previously implemented.

> **Response:** We are trying to do similar fuel breaks here.

Question: The emphasis has been on mistletoe, but have you considered fuel breaks around Tincup and other private property?

> **Answer:** Yes we have. Fuel breaks are part of the proposed project. Please see the project maps for more details.

Question: Would there be clear cuts in the fuel breaks prescriptions around Rainbow Subdivision?

> **Answer:** Lodgepole pine infested with mistletoes would be removed. Any spruce would be left.

Question: I am not convinced that mistletoe is so horrible. Is the science team receptive to not believing that mistletoes is bad?

Answer: The Science Team is diverse. We have a landscape ecologist on the team that is concerned about the landscape and not so much on tree health. Other team members are concerned about timber production. However it should be noted that the Science Team is advisory, we listen to them, but are not bound to do everything they request.

Question: What is the process for creating an AMG for this project (not SBEADMR)?

Answer: We could use Public Lands Partnership (like we did for SBEADMR) or maybe Western State Colorado University to help facilitate bringing an AMG together for this project.

Follow up statement: You need to get this started now and not post decision.

Follow up response: If anyone is interested in being on an AMG for this project, either add that information to the sign-in sheet or let Pamela King (prking@fs.fed.us) know.

Question: Will alternative proposed be added?

Answer: No new action alternative are planned; however the proposed action may have some changes to include comments. Alternatives presented in scoping have been considered, but preliminarily have been determined to not meet the purpose and need.

Statement: I would like to see this done under the "normal NEPA process" not the Healthy Forest Restoration Act. We want a second opportunity to comment.

Response: We welcome comments at any time, but we do not plan to have another formal comment period. But we will discuss this further with the District Ranger.

Question: Can you put the slides from this meeting on the webpage?

Answer: Yes. We will also get more information about AMGs on the website too.

Taylor Park Vegetation Management EA

Outline

- Welcome & Introductions
- *Purpose & Need for Project*
  - Dwarf Mistletoe: What is it and potential management
- *Proposed Action*
  - Timber & Forest Health Treatments
  - Fuels & WUI Treatments
- *Question and Answer Session*

Purpose and Need for Project

Primary

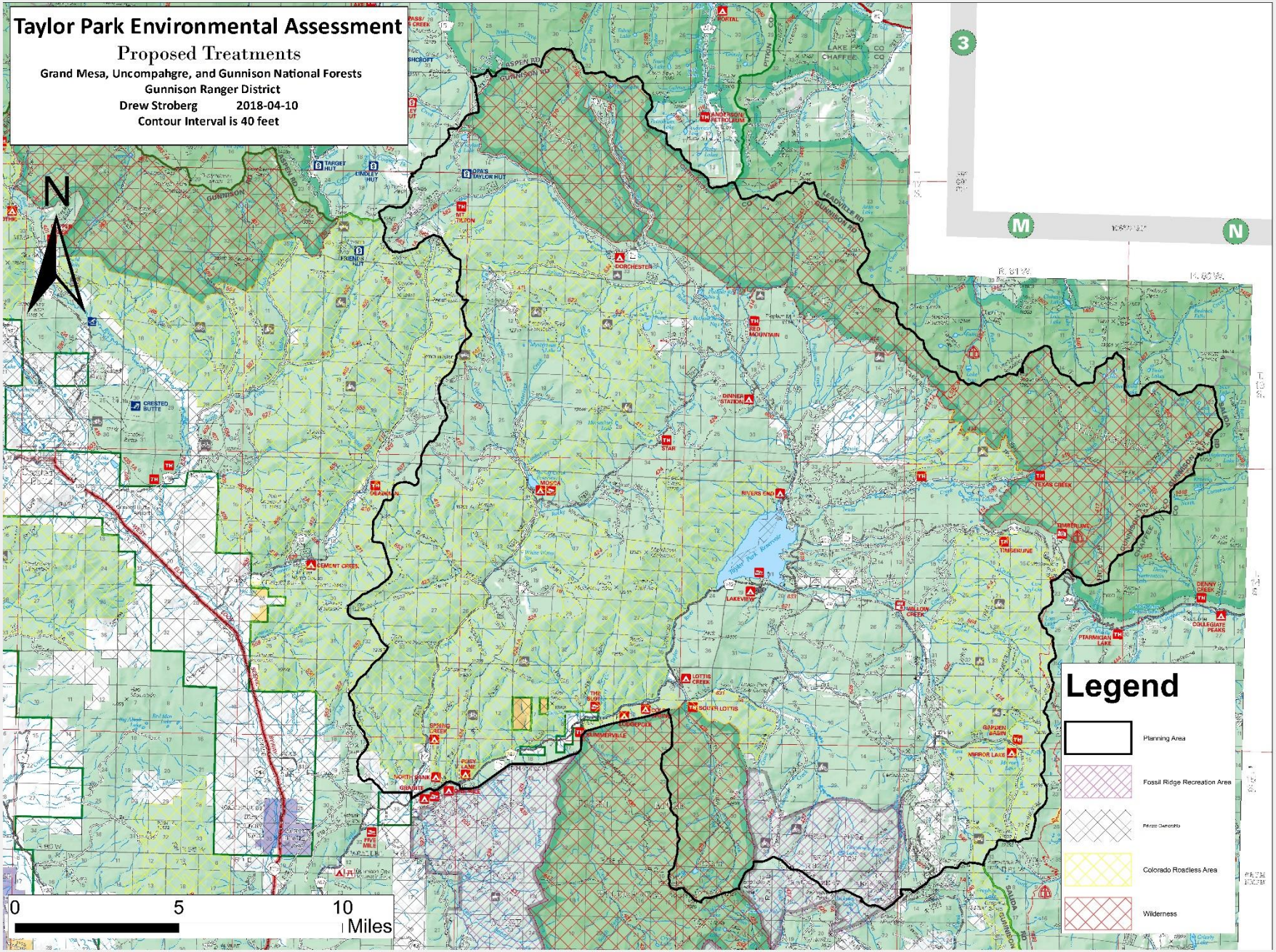
- **Goal: Help the forest become more resilient to:**
- Climate Change
- Drought
- Insect Attack
  - Mountain Pine Beetle
- Disease
  - Dwarf Mistletoe

While also promoting safety and reducing fuel loading

Secondary

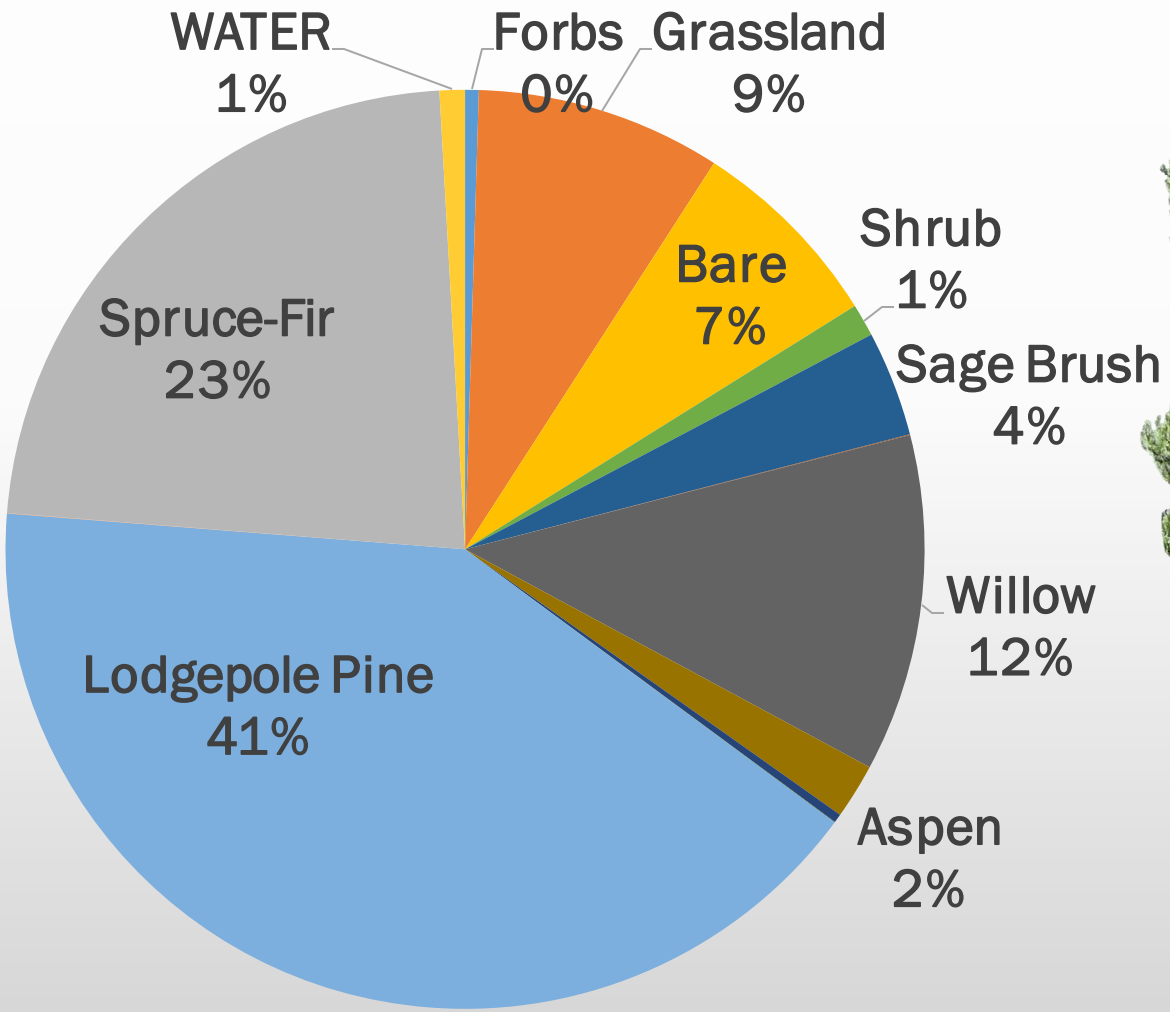
Goal: Provide wood products for the local and regional economy

Planning Area

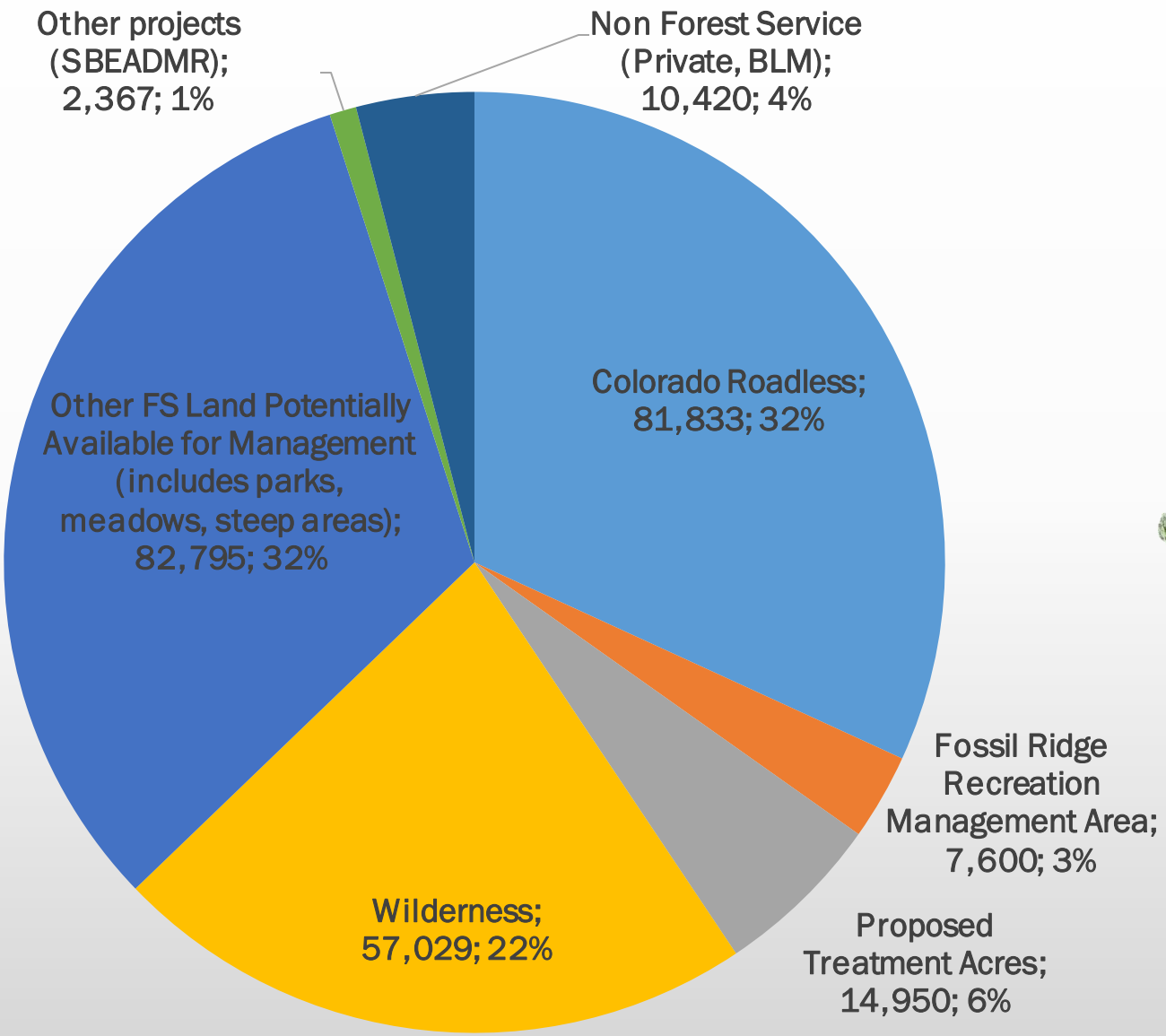


Planning Area

- 256,000 Acres



Planning Area



Lodgepole Pine and Dwarf Mistletoe

in Taylor Park EA

Lodgepole Pine 101

- *Pinus contorta* subsp. *latifolia*
- Tolerant of dry sites, short growing seasons, frost
- Intolerant of shade, grows quickly in the open
- Sexually mature at young age
- Prolific seed producer

Lodgepole Pine 101

- Cone serotiny – fire adaptation
  - Large quantity of seed released by heating, after fire or cutting
  - Slash heats on the ground, many years of seed crops are released
  - Regenerates after cutting or fire
  - Problem is often too many seedlings (precommercial thinning)

Natural disturbance regime

- LPP thrives under influence of fire:
  - Fires vary in frequency and intensity
    - Taylor Pk. return intervals 8 – 140+ yr
  - Mostly a fire-maintained seral type
    - Stand-replacing fire, LPP regenerates
    - Results in extensive pure stands
- Mountain pine beetle
  - Extensive, severe epidemics in landscapes with mature stands
  - Younger trees and stands not attacked

Red Hand of Death

2006 northern CO

Red: unmanaged, mature stands killed by mountain pine beetle.

Green: healthy, young, vigorous stands clearcut in experiments in the 1960s.

Regenerated stands the only green forest.

Dwarf Mistletoe 101

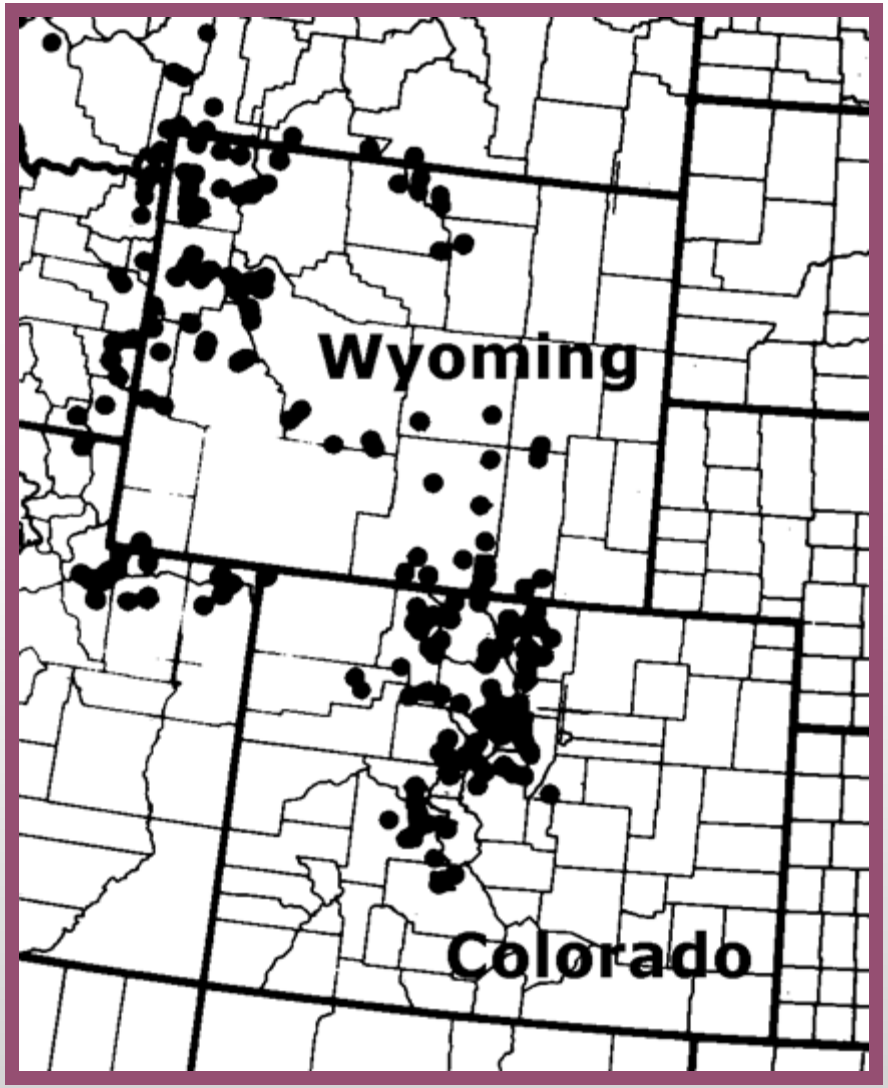
Slow but steady parasite

Lodgepole pine dwarf mistletoe

- Flowering plant, *Arceuthobium americanum*
- Life cycle takes ~ 6 years
- Ballistic seeds → up to 60 feet (60 mph!)
- Host specific

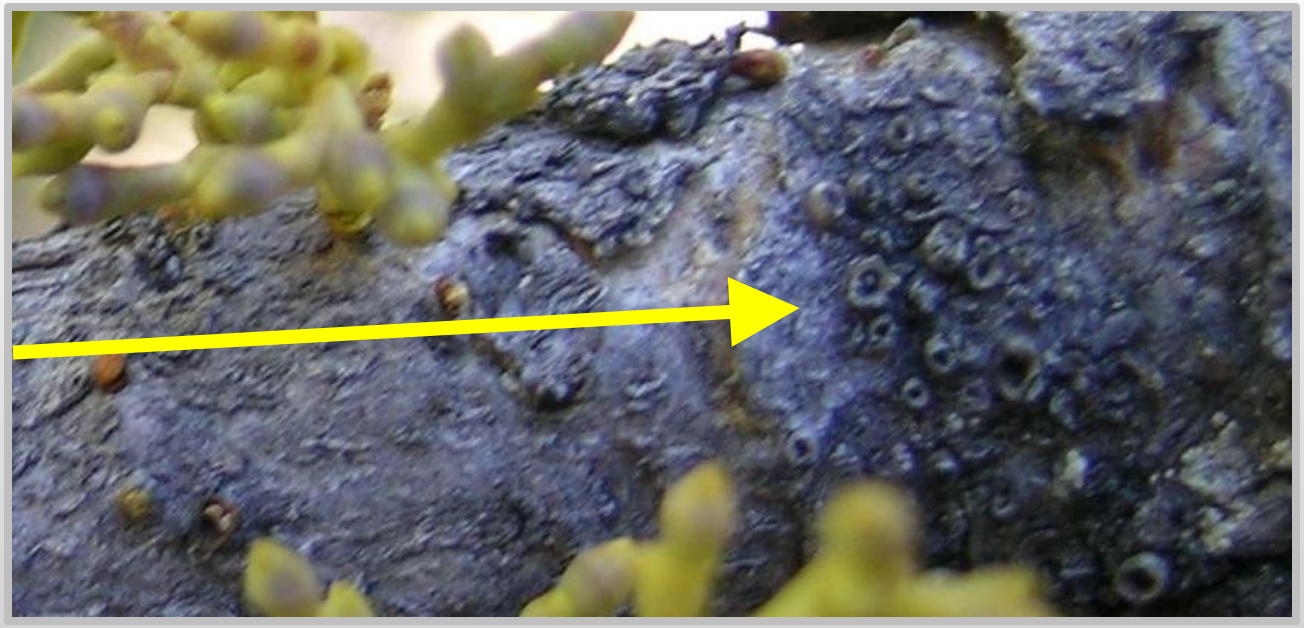
Lodgepole Pine DM

- Generally follows distribution of host



Symptoms and signs

- Swelling
- Witches' brooms
- Thinning, dieback, topkill, mortality
- Mistletoe shoots
- Basal cups

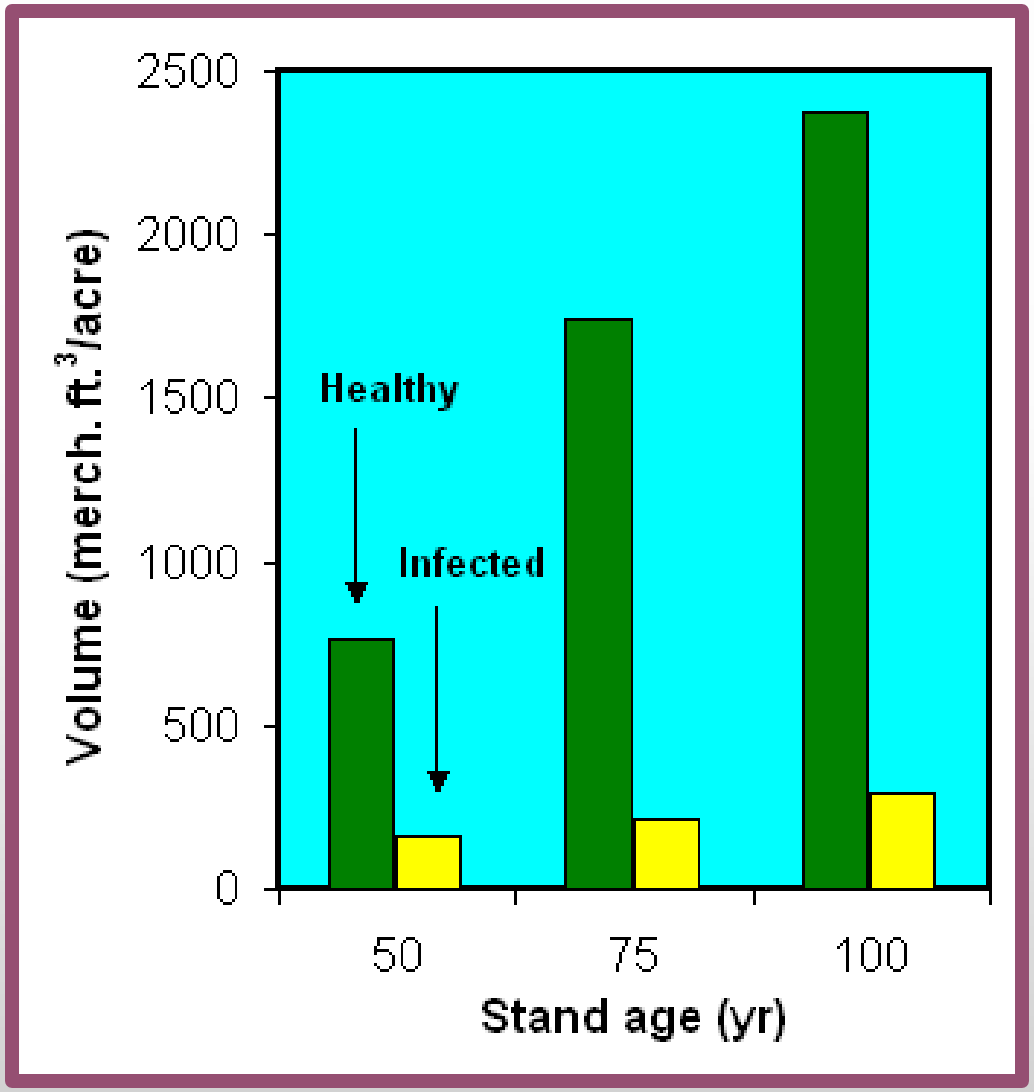


Impacts

- Trees and stands – Reduced:
  - Growth
  - Seed production and viability
  - Longevity
- Ecological
  - Fire regime and behavior
  - Forest disturbance and succession

Tree growth and longevity

- Lodgepole pine infected when young
- Trees in heavily infested, 100-year stand 13% of healthy



Fire

- Fire is the most important natural regulator of dwarf mistletoes
- Dwarf mistletoes increase surface and ladder fuels
  - Large brooms, resin, dead needles, snags

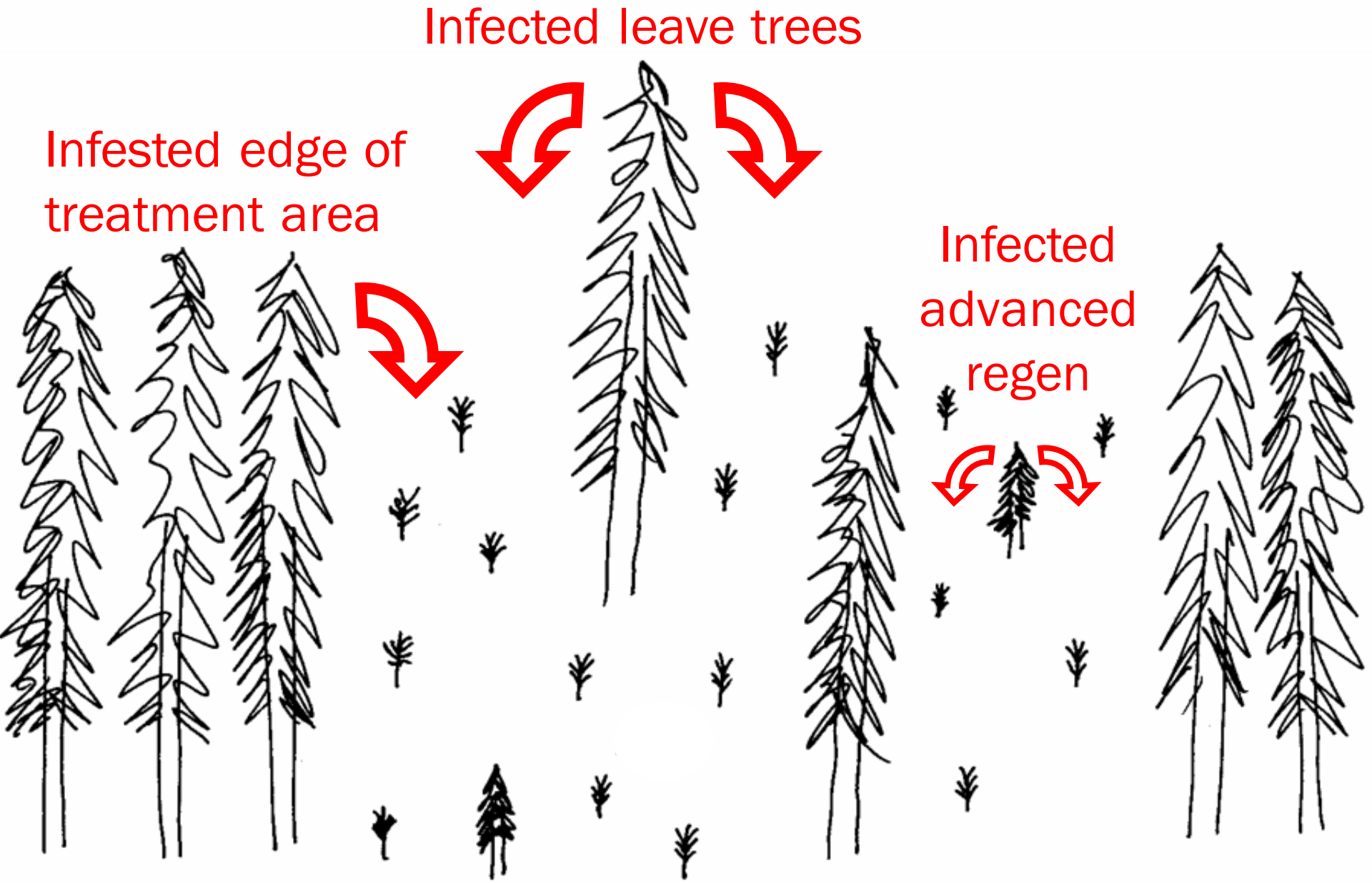
Fire – DM – LPP cycle

- Stand matures, dwarf mistletoe intensifies
- Fuels, especially ladder fuels, increase
- Stand-replacing fire
- New stand establishes, (largely) free of dwarf mistletoe

Clearcut instead of fire

- Clearcuts can mimic this ecological function, esp. where large, stand-replacing fire is undesired.
- In a large clearcut or replacement fire, most trees will mature before DM can reach them.
- Shelterwood can also work if done carefully and followed through.
- Partial cuts stimulate DM development, don’t mimic natural disturbance regime.

Uneven structure favors mistletoe



Successful Treatment

Why manage dwarf mistletoe?

- In timber management areas, we have responsibility to manage the resource
- DM substantially reduces productivity
- Increased severe fire behavior, risk to firefighters, communities
- DM westwide more severe and widespread than presettlement
- More age diversity → resilience to MPB

Management of dwarf misletoe – tips from the ‘toe doctor

- In concept, dwarf mistletoes are easily managed because:
  - Obligate parasites
  - Life cycle is long, spread is slow and distance is limited
  - Host specificity
  - Relatively easy to detect

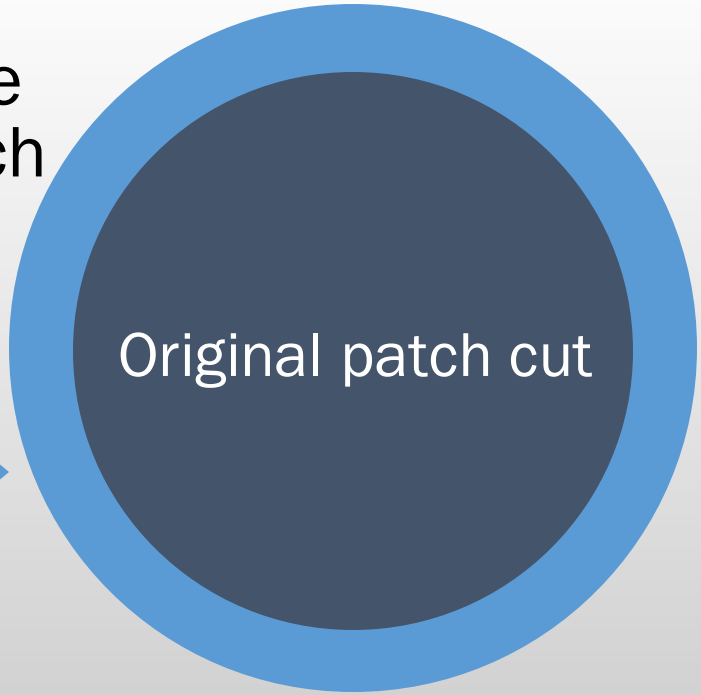
Management

- Place treatment edges in uninfested areas
- Clearcut patches at least 20 acres
- Favor nonhosts
- Sanitation
- Seedlings under infected trees safe until 10 years or 3 feet (shelterwood)

Make a Donut

- Smaller patch cut (e.g. for wildlife) initiates young stand in infested matrix.
- In 10 yr, cut a clean strip, ≥ 60 ft wide, around young stand to protect it from surrounding infested stands
- Trees regenerating in strip may be infected, but trees in original patch will be too big by then to be impacted.

Donut cut ≤ 10 yr later



Fresh donuts

LPP DM and Taylor Park EA

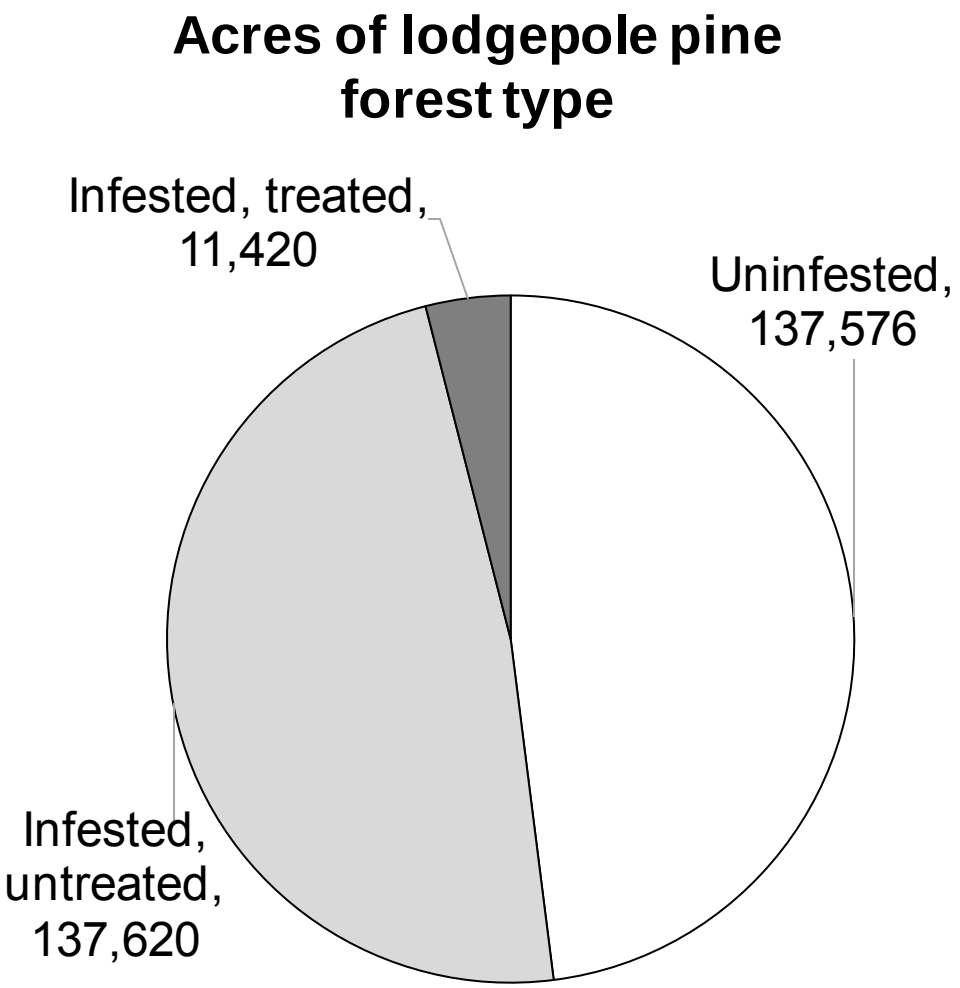
- 286,616 acres of lodgepole pine forest type on the Gunnison Ranger District
- 52% of it is infested
  - likely higher in Taylor Park

LPP DM and Taylor Park EA

- 7.7% of infested LPP type proposed for DM treatment, including:
  - 2.4% DM strip or clearcut
  - 1.0% overstory removal/shelterwood
  - 4.3% young stands could be thinned/sanitized

LPP DM and Taylor Park EA

- 4.0% of all LPP type proposed for DM treatment



Proposed Action

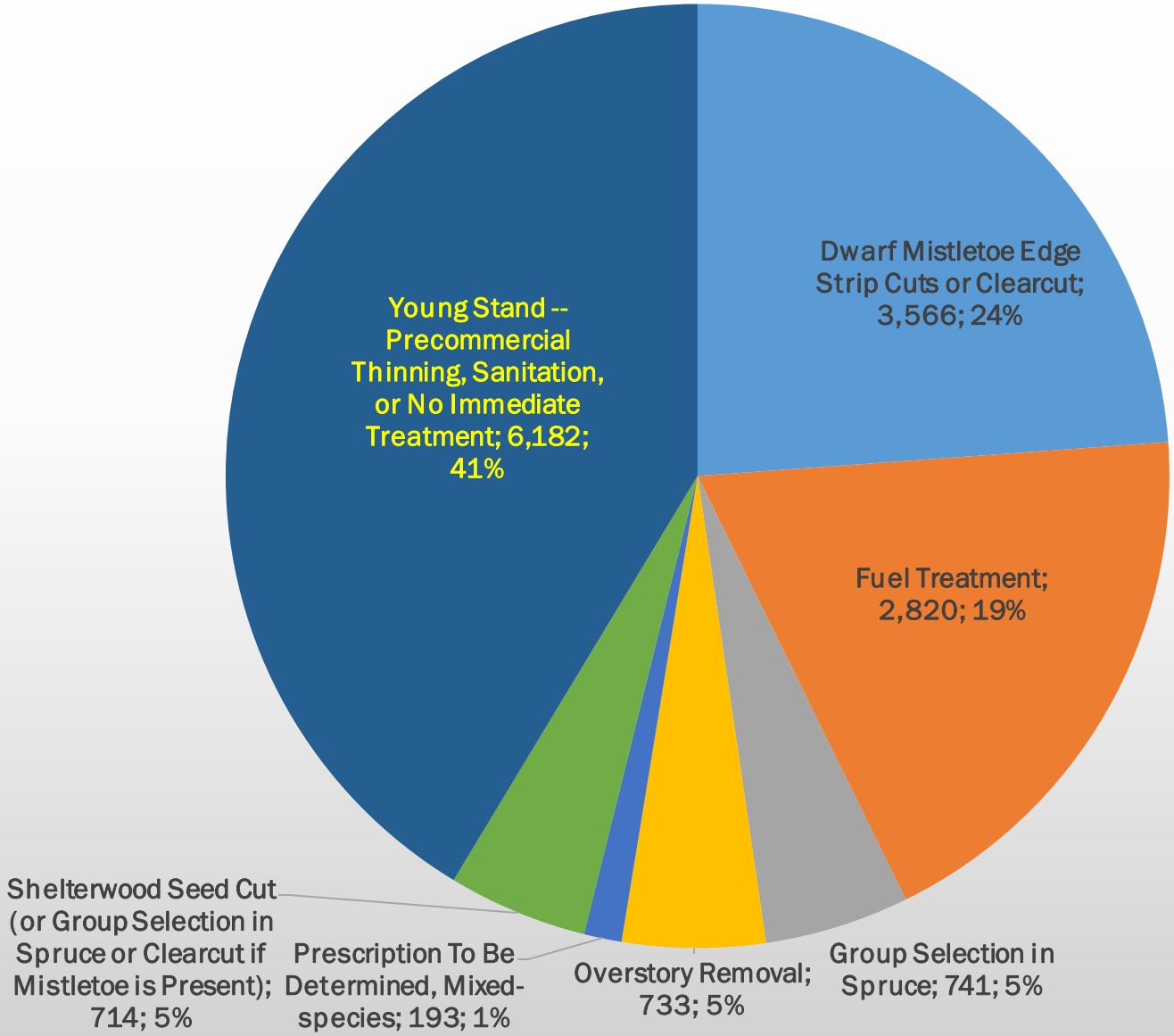
<u>Treatment Prescriptions</u>

- Dwarf Mistletoe Edge Strip Cuts
- Group Selection
- Shelterwood Seed Cut
- Overstory Removal
- Fuels Reduction
- Young-Stand: Pre-commercial Thinning

<u>There will be no new permanent roads constructed under this project.</u>

- Existing roads may be re-constructed to handle logging traffic
- Up to 106 miles of temporary roads
  - Existing road beds will be used to the maximum extent practicable
  - Some temporary roads will be retained for up to 5 years after sale closure for post-sale activities (weed spraying, site preparation, planting, etc.). *<u>These roads will be barricaded closed.</u>*
  - All temporary roads will be closed and obliterated within 5 years of sale closure

Proposed Action



Dwarf Mistletoe Strip Cut or Clearcut

Up to 3,566 acres or 24% of the proposed acreage

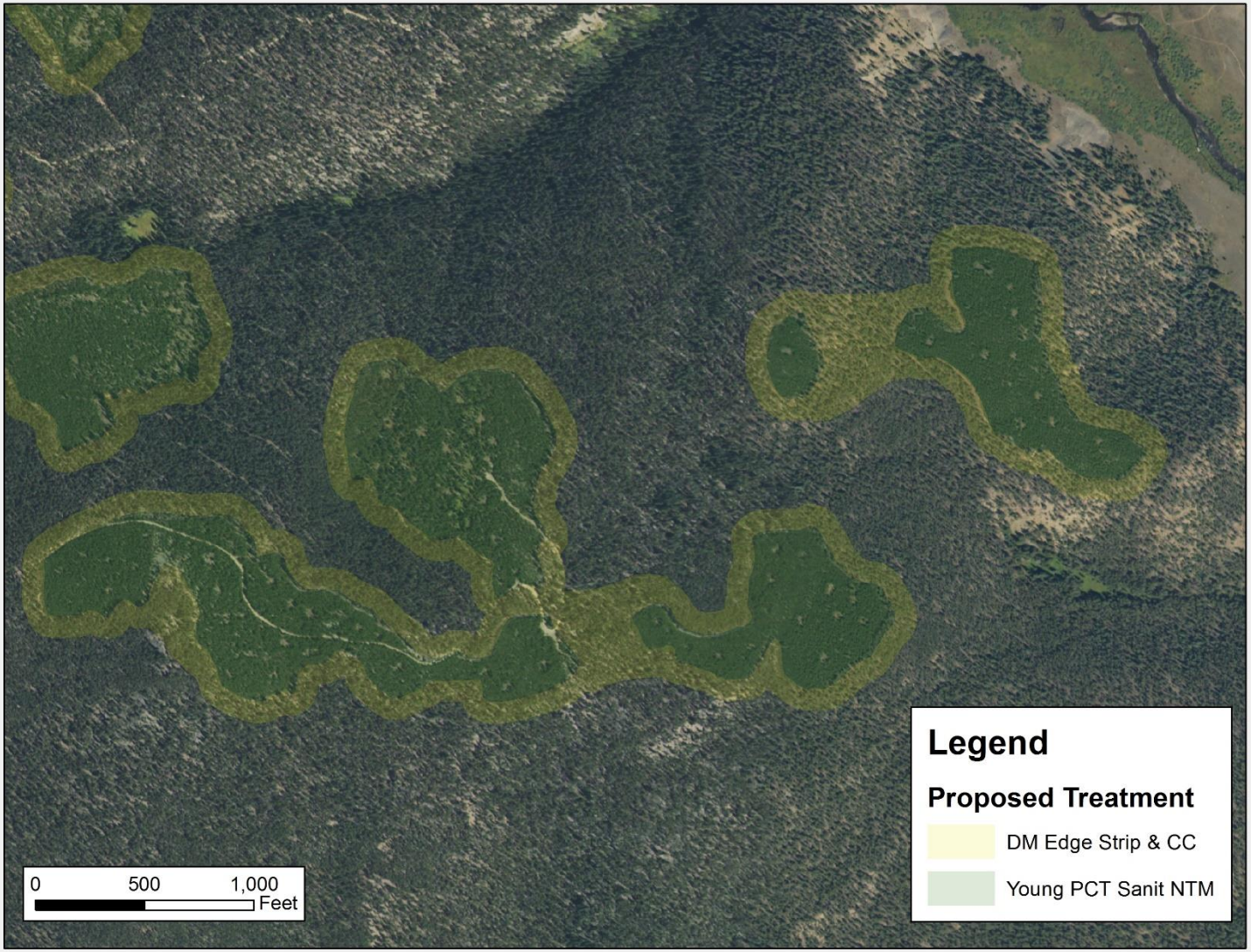
Current Stand Condition

- Mostly single-storied mature Lodgepole Pine
  - Very few other species present
  - Dwarf mistletoe

Objectives

- Create forest age class and species diversity across the landscape
- Protect forests from disease
- Prevent dwarf mistletoe spread
- Regenerate a fully stocked stand after harvest

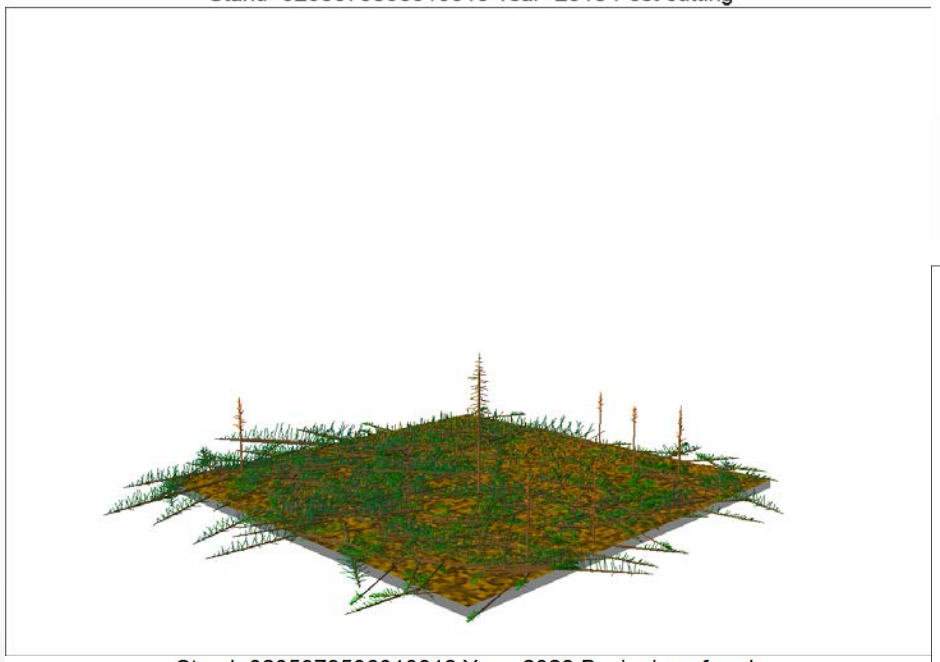
Dwarf Mistletoe Strip Cut or Clearcut



Dwarf Mistletoe Strip Cut or Clearcut

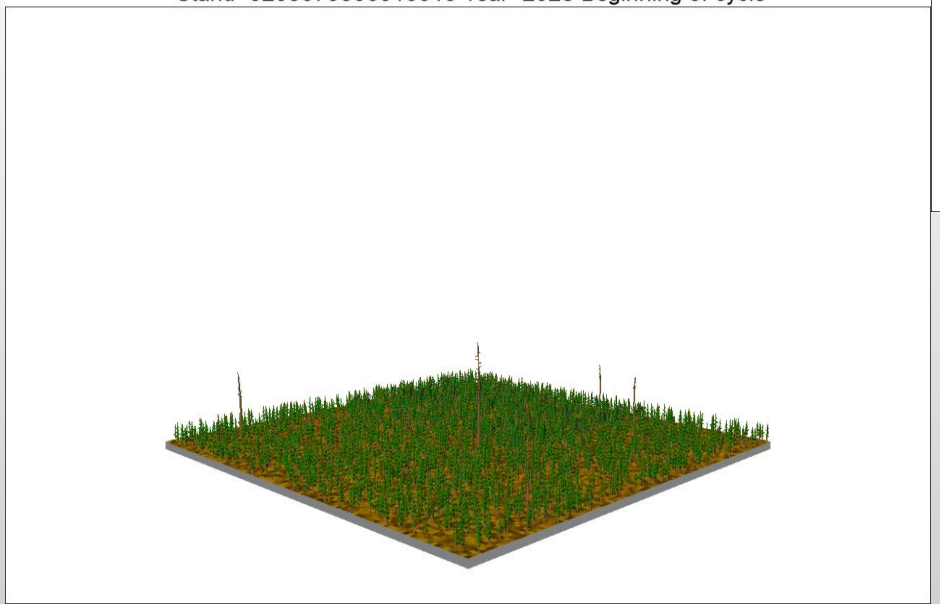
Dwarf Mistletoe Strip Cut or Clearcut

Stand=0205079506010019 Year=2018 Post cutting



Stand=0205079506010019 Year=2068 End of projection

Stand=0205079506010019 Year=2028 Beginning of cycle



Group Selection (spruce)

Up to 741 acres or 5% of the proposed acreage

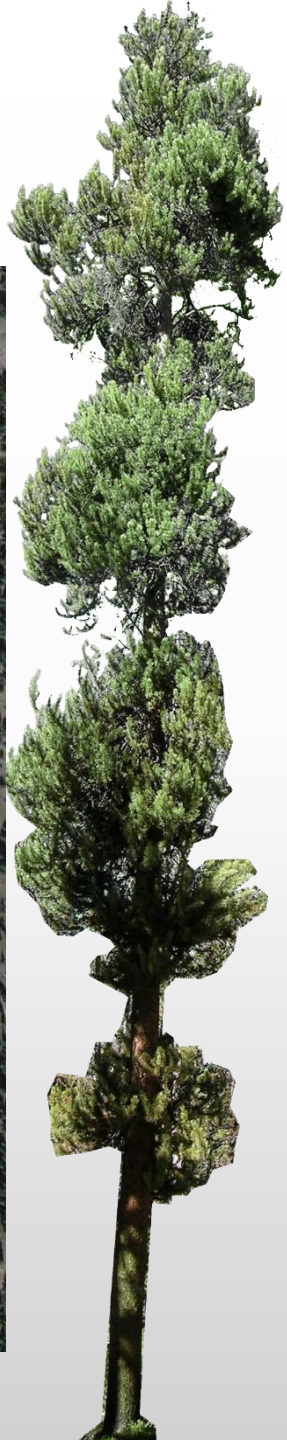
Current Stand Condition

- Mostly single-storied mature mid-age Engelmann Spruce, with a few other species present
  - Advanced regen will be protected to the maximum extent possible

Objectives

- Generate and maintain multiple age classes across the landscape
  - Treat approximately 25% of a stand in a given entry
  - 40 year rotation interval
- Maintain shade-tolerant species

Group Selection (spruce)



Group Selection (spruce)

Shelterwood Seed Cut

Up to 714 acres or 5% of the proposed acreage

Current Stand Condition

- Lodgepole pine stands that with no previous treatment;
  - Little to no dwarf mistletoe present

Objectives

- Create forest age class and species diversity across the landscape
- Reduce understory competition and promote understory growth
- Regenerate a fully stocked stand after harvest

Shelterwood Seed Cut

Overstory Removal

Up to 733 acres or 5% of the proposed acreage

Current Stand Condition

- Lodgepole pine stands that were previously treated with a shelterwood prescription
  - Minimum of 600 seedlings or saplings present

Objectives

- Create forest age class and species diversity across the landscape
- Reduce understory competition and promote understory growth
- Regenerate a fully stocked stand after harvest

Overstory Removal

Young Stand: Pre-Commercial Thinning

Up to 6,182 acres or 41% of the proposed acreage

Objectives

- Ensure replacement of the stand with adequate regeneration
- Control stocking and species composition
- Control the spread of disease (dwarf mistletoe)

Young Stand: Pre-Commercial Thinning

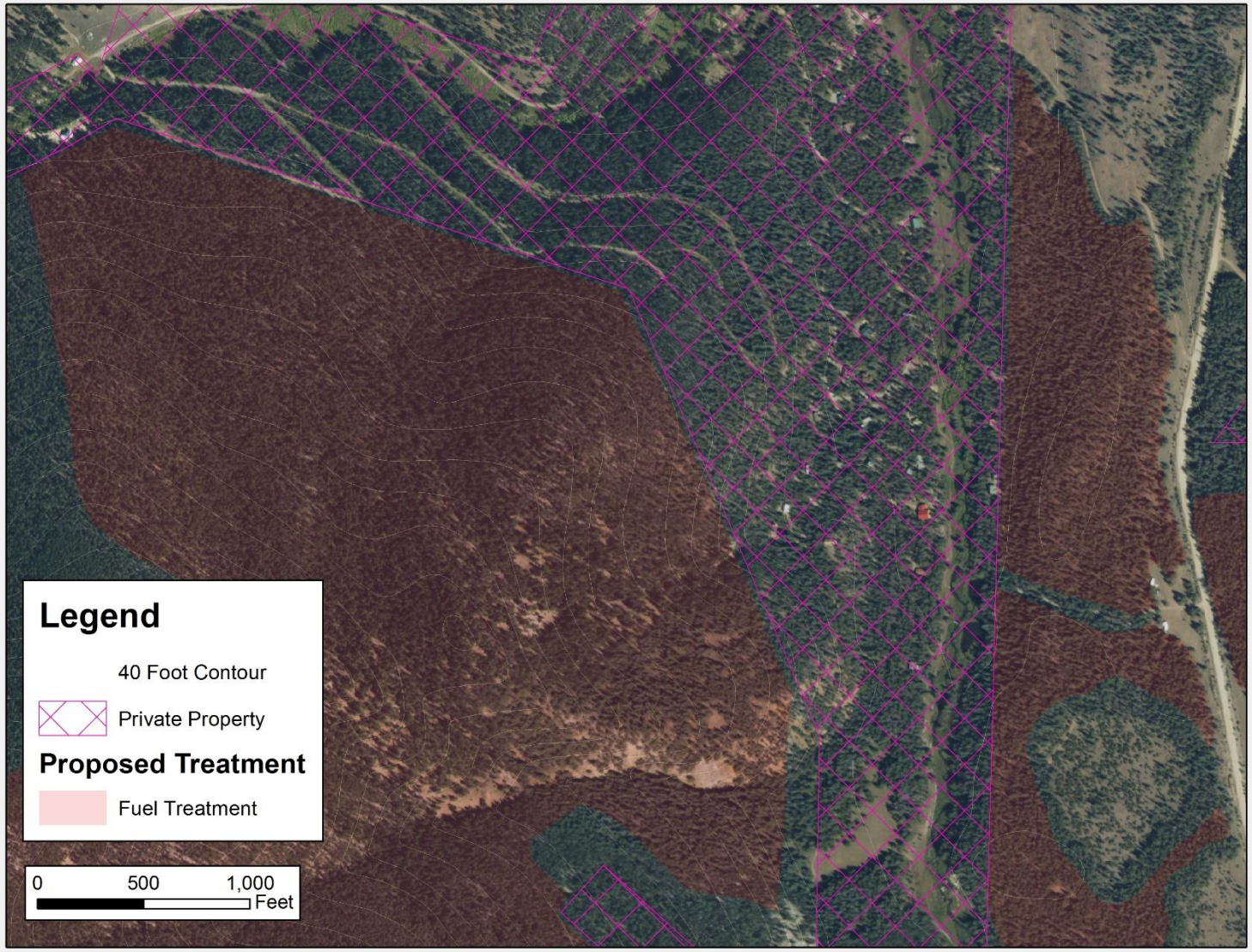
Fuels Treatment

Up to 2,820 acres or 19% of the proposed acreage

Objectives

- Reduce potential for crown fire by reducing canopy continuity
- Decrease potential surface fire intensity via reduced surface fuels
- Improve tree health and vigor by reducing competition

Fuels Treatment



Condition Based NEPA – An Adaptive Management Approach

Adaptive Implementation

- Adaptive Implementation involves an action being framed on a conditional "if/then" basis (e.g. presence of mistletoe versus no mistletoe).
- Application of appropriate design features to minimize effects or achieve a desired outcome.
- Checking to determine if the action worked Implementation and effectiveness monitoring).
- Apply what is learned to future management.

La Garita Project

- Initial Planning occurred in 2012/13 – stand green
- Spruce Beetle trees 1-2 years later – Change Condition
- New prescription – salvage and sanitation
- Effects analysis updated

Concerns About Adaptive Implementation

- Level of site specific data not adequate to inform decision.
- If a disturbance results in the desired condition, no further action is needed. Focus on critical areas of public safety.
- Continuation of implementation without a check on the initial decision is a red flag. Confidence building measures are needed to reduce fear amongst the public about the rolling implementation concept.
- Use of Best Available Science – how do you keep pace with changing science if the project takes multiple years to implement.
- View that the Forest Service simply wants a “blank check” to do what they want without on-going public involvement. Lack of trust!

Spruce Beetle Epidemic and Sudden Aspen Decline Management Response (SBEADMR) Project

- Decision signed in 2016
- Authorizes Commercial and non-commercial treatment on 120,000 acres from a pool of priority treatment areas totaling 207,000 acres.
- Objectives:
  - Mortality of Engelmann spruce from beetles – public safety and economic value of the wood.
  - Improved resiliency of spruce stands not currently affected by spruce beetle.
  - Aspen decline and the need to regenerate where possible.

Resource Issues

- Canada Lynx and wildlife in general
- Impacts to soils and advanced regeneration
- New road construction
- Impacts to Recreation

SBEADMR Components

- Landscape-level triggers
- Prescription Matrix
- Design Features
- Treatment Design Checklist
- On-going Public Involvement – at-large and AMG
- Implementation Monitoring
- Effectiveness Monitoring
- Forest Leadership Team Involvement – Annual Management Review

SBEADMR Adaptive Process

Plan

- SBEADMR FEIS
- Treatment Planning

- Mid-winter Meeting
- Annual Public Field Trip
- 30-day Public Comment Period

Do

- Implement Treatment
- Applicable Design Features applied

- Adaptive Management Group
- Science Team

Check

- Treatment Inspection
- Implementation Monitoring
- Effectiveness Monitoring
- Annual Report of Findings

Act

- Forest Leadership Reviews Recommendations from Findings Report
- Actions to Improve Environmental Outcome or Administrative Processes

Science Team Members

- Science Team
  - Dr. Jason Sibold - Landscape Ecologist, Colorado State University
  - Dr. Mike Battaglia – Research Silviculturist, Rocky Mountain Research Station
  - Dr. Tony Chen, Colorado Forest Restoration Institute, CSU
  - Dr. Jim Worrall, Forest Health, USDA Forest Service
  - Dr. Jake Ivan, Mammal Research Biologist, Colorado Parks and Wildlife

Adaptive Management Group

- County Commissioners
- Environmental/Conservation Groups
- Forest Processors
- Forest Loggers
- Community at large
- Water Users
- Recreation User Groups
- Wildlife and Fish
- Education
- Colorado State Forest Service

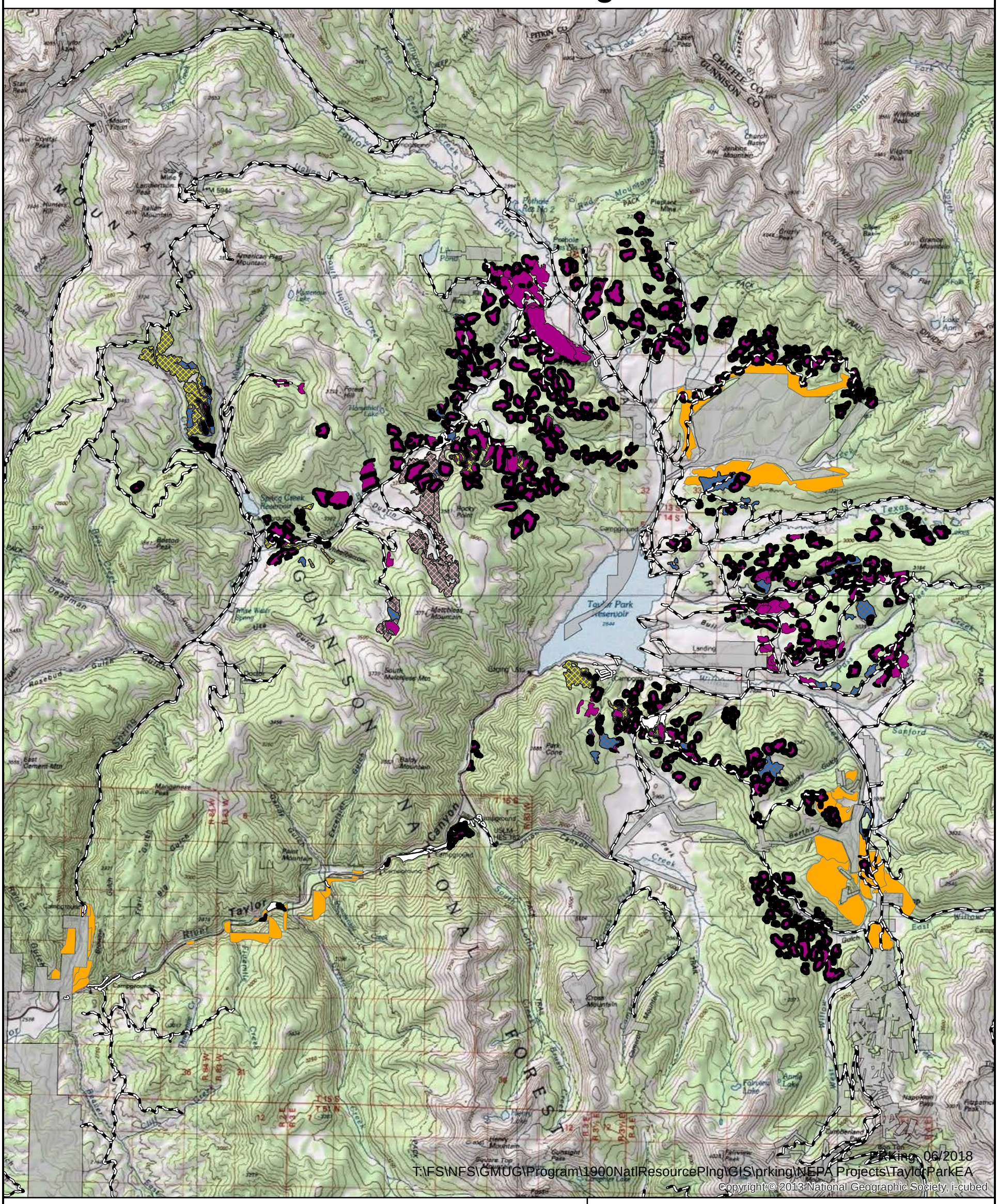
Benefits

- More time in the woods planning and executing treatments.
- On-going involvement of scientists providing information in “real time”
- Feedback to Forest Managers to create a culture of learning and true adaptive management.
- On-going engagement with

  the public.
- Accountability to the public.

Questions??

Taylor Park Vegetation Management EA
Public Meeting



Proposed Treatments and Legend

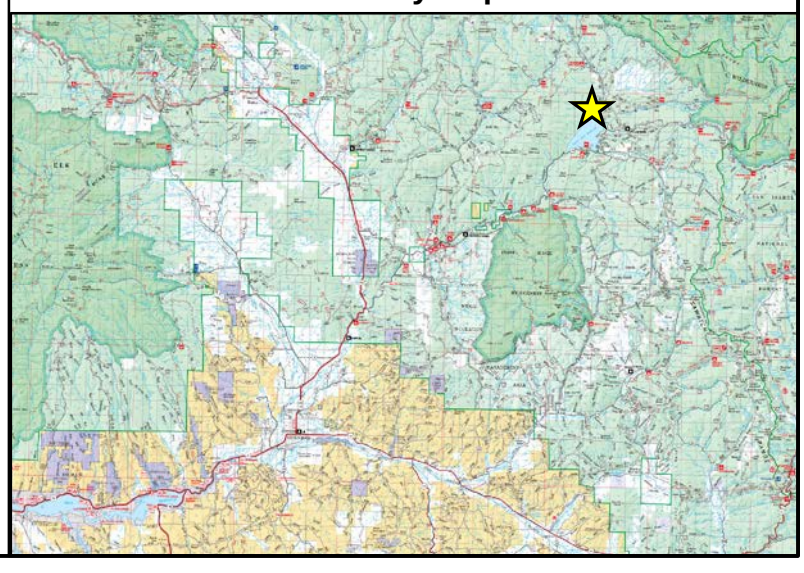
- Young Stand Pre-Commercial Treatment, Sanitation, or No Immediate Treatment: 6,182 Acres
- Dwarf Mistletoe Edge Strip or Clearcut: 3,566 Acres
- Fuel Treatment: 2,820 Acres
- Engelmann Spruce Group Selection: 741 Acres
- Overstory Removal: 733 Acres
- ShelterwoodSeed Cut (or Group Selection in Spruce or Clearcut if Mistletoe is Present): 714 Acres
- Prescritpion TBD, Mixed Species: 193 Acres

- Roads Open To Highway Legal Vehicles Only
- Roads Open To All Vehicles
- NON-FS Lands

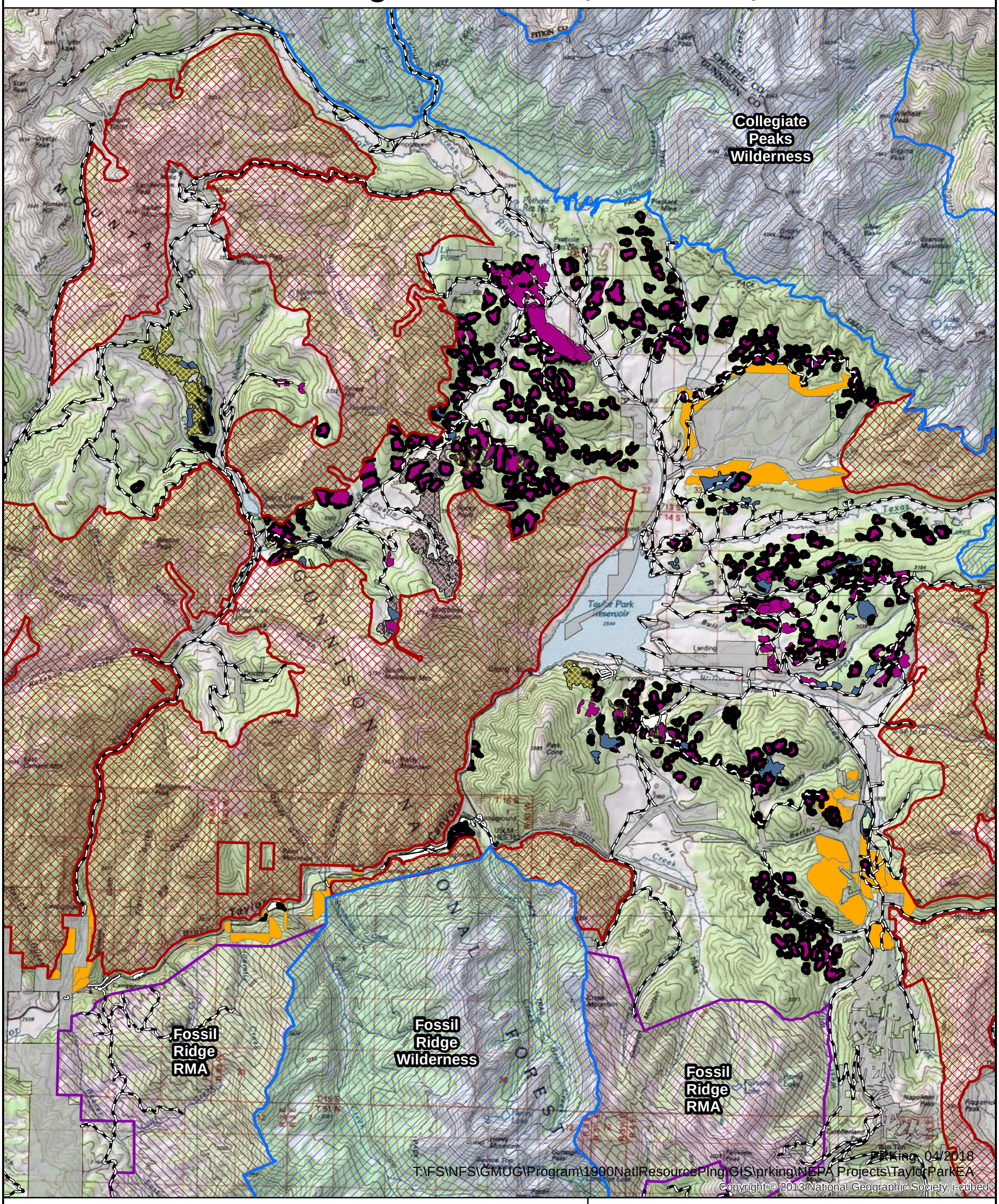
N

0 2.5 5 10 Miles

Vicinity Map



Taylor Park Vegetation Management EA
Public Meeting: Wilderness, Roadless, RMA

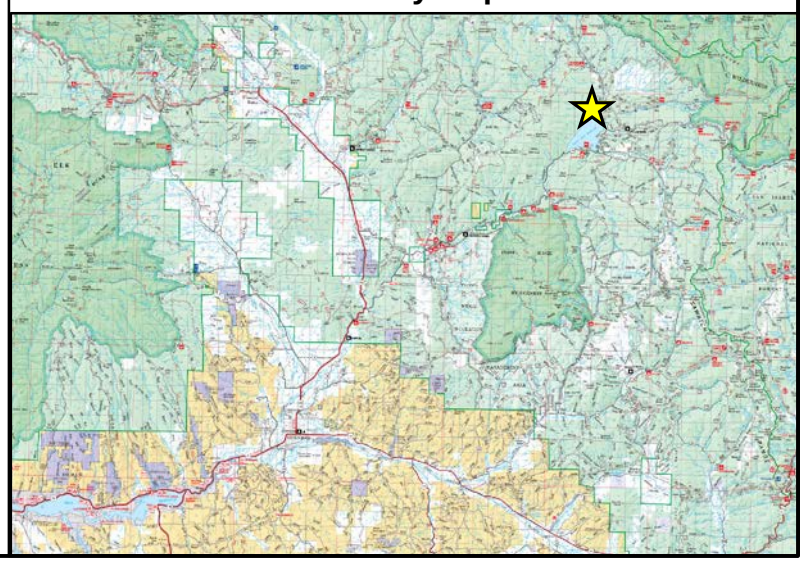


Proposed Treatments and Legend

- Young Stand Pre-Commercial Treatment, Sanitation, or No Immediate Treatment: 6,182 Acres
- Dwarf Mistletoe Edge Strip or Clearcut: 3,566 Acres
- Fuel Treatment: 2,820 Acres
- Engelmann Spruce Group Selection: 741 Acres
- Overstory Removal: 733 Acres
- ShelterwoodSeed Cut (or Group Selection in Spruce or Clearcut if Mistletoe is Present): 714 Acres
- Prescritpion TBD, Mixed Species: 193 Acres

- Roads Open To Highway Legal Vehicles Only
- Roads Open To All Vehicles
- NON-FS Lands
- Wilderness
- FossilRidgeRMA
- CO_RoadlessAreas

N

0 2.5 5 10 Miles

Vicinity Map