



Rocky Mountain Elk Foundation

PAC Project Proposal

Habitat Enhancement, Wildlife Management, Research

Use your tab key to move between fields
Use shift/Tab or arrow keys to go back

Instruction sheet available as a separate file

Form #: HEWMRE - 2015

Date Submitted: 2/2/2015

Project Title: 2015 Likely Gulch Habitat Enhancement and Fuels Reduction Project

Project Synopsis: *Briefly describe your project and what you hope to accomplish in one to five sentences, using popular writing style that may be used in our Bugle magazine.*

The proposed project is a collaborative effort involving several BLM programs including fuels, fire, range, forestry, and wildlife. Other cooperators will contribute to the completion of the project. These include Colorado Parks and Wildlife, Habitat Partnership Program, and other groups and organizations that have contributed funding in the form of grants to the project. This project will improve habitat and forage conditions for livestock and wildlife. The improved forage conditions will reduce the wildlife utilization on adjacent private land agriculture/hay fields. These thinning will help with distribution and will pull elk off of the private and onto public and state lands. This would improve hunting opportunities and would help to reach herd management objectives with increased harvests. Other benefits of this project include improved forest health, and hazardous fuels to reduce the risk of catastrophic wildfire in the area. This project will be completed in phases as funding becomes available. The proposed project areas consist of 502 acres of mastication treatment and 97 acres of handthinning/piling/pile burning. In addition to the thinning treatments, water guzzlers will also be installed to provide alternate drinking locations for wildlife. This will also help with improving distribution.

Geographic Information

Location: *(National Forest & Ranger District, BLM District & BLM Resource Area, or local name)* BLM Front Range District, Royal Gorge Field Office

State: CO **County(s):** *List predominant county first* Fremont

Mapping Point:

Please provide the latitude and longitude of the geographic center in decimal degrees for the project site; use 6 decimals places for accuracy. If the project consists of more than one treatment site (i.e. weed and water projects with scattered spot treatments), please select the largest treatment site and list its geographic center. This point should lie in the predominant county listed above.

Lat 38 21 13 **N** **Long** -105 34 53 **W** *(example: Lat 46.919042 N Long -114.032922 W)*

Try this website to convert your coordinates: <http://transition.fcc.gov/mb/audio/bickel/DDDMMSS-decimal.html>

Project Site Land Ownership: Federal 52% State 48% Local gvt % Private % Tribal %

If private land, list landowner name:

Ranch name:

If private land, list any adjacent federal, state or other wildlife areas:

Has RMEF funded a project on/near this project site? Yes No **Habitat Enhancement** **Study**

Submitted By: Glenda Torres
Fuels Reductio Project

(Lead Agency Project Coordinator)

Submitter's Title: 2015 Likely Gulch Habitat Enhancement and

Submitter's Email: g1torres@blm.gov

Agency: Bureau of Land Management

Telephone: 719-269-8500 **Ext:** 8582

Address: 3028 East Main Street

City: Canon City

State: CO **Zip:** 81212

Coordinated With *(Other Than Lead Agency):* Zach Holder

Position/Title: District Wildlife Manager Canon City South

Signature: 

Agency: Colorado Parks and Wildlife

Telephone: 719-269-656 **Ext:**

Address: 3028 East Main Street

City: Canon City

State: CO **Zip:** 81212

Project Type (Burn, thin, water, seeding, noxious weed, fencing {aspen}, study {telemetry}, etc.) (List each type as a separate line item)	Size of Treatment Area (Acres, miles of road, etc.)	Anticipated Field Work Start Date (mm/dd/yy)	Field Work Completion Date (mm/dd/yy)
Type 1: Mechanical Thinning	Type 1: 506	Type 1: 7/15/15	Type 1: 9/1/16
Type 2: Hand Thinning	Type 2: 97	Type 2: 7/15/15	Type 2: 9/1/16
Type 3: Pile Burning	Type 3: 97	Type 3: 7/15/15	Type 3: 9/1/16
Type 4: Guzzlers	Type 4: na	Type 4: 7/15/15	Type 4: 9/1/16
Type 5:	Type 5:	Type 5:	Type 5:

Give Total acres treated without duplicating acres that had more than one type treatment during this project period. ** 603

RMEF Policy requires at least a 1:1 match ratio!

Proposed RMEF Funds (List each type from above as separate line item)		Matching/Contributor Funds (List each type from above as separate line item)		Total Project Cost (List each type from above as separate line item)		For RMEF Use Only PAC Recommended Amount
Type 1:	\$10,000	Type 1:	\$60,000	Type 1:	\$177,000	_____
Type 2:		Type 2:	\$10,000	Type 2:	\$40,000	_____
Type 3:		Type 3:	\$10,000	Type 3:	\$10,000	_____
Type 4:	\$1,000	Type 4:		Type 4:	\$1000	_____
Type 5:		Type 5:		Type 5:		_____
*	\$1,000		\$80,000		\$228,000	_____

***To total columns, place cursor on zero at bottom of column, right click, select "update field." If you change any number, update the fields again.**

Matching/Contributors Funds (Agency/Org, etc.) List each on a separate line Do not include RMEF \$ in this section Only include Matching Funds specific to this proposed project	Contribution (\$ Amount)
Bureau of Land Management-Fuels Program	\$40,000
Habitat Partnership Program (Sangre de Cristo Chapter)	\$10,000 (pending)
Mule Deer Federation	\$10,000 (pending)
State Land Board	\$10,000 (pending)
Colorado State Auction and Raffle funding	\$10,000 (pending)

May have to move cursor with mouse to next field, instead of Tab key.

Number of elk that will benefit from this project: 2,600

Subspecies of elk in project area: Rocky Mountain Roosevelt Manitoban Tule

List Elk Management/Herd Unit Number: E-27 **List Hunt Area Number:** GMU 691

Elk Population Status: At state objective Below state objective Above state objective

Habitat Classification: Winter range Crucial winter range Summer range Yearlong habitat
Parturition area Migration corridor Transition range

If more than one Habitat Classification type, which is the primary? Winter

Is NEPA complete and signed by appropriate authority? Yes No Does Not Apply

If NEPA is not complete, what is the expected date of completion and sign-off? May 2015

Any opportunity for RMEF volunteer participation? Yes No **Weekend participation?** Yes No

What type of volunteer work/participation?

RMEF Habitat Enhancement & Wildlife Management
Project Proposal

Is elk hunting allowed on this project site? Yes No **If yes how is permission granted: Public land**
Project Analysis: *What resource challenges will be addressed by this project? List anticipated benefits to elk and to other wildlife?*

The population objective for the Sangre de Cristo herd is 1,450-1,650. The current population is approximately 2,600. Although the population is currently over objective, there has been a decline in the recent years due to cow harvest. Vegetation monitoring data that has been collected in the previous treatment areas near Likely Gulch has shown that the grass, forb, and shrub component has increased in percent cover and plant species diversity has also increased. By creating a mosaic of openings and leave islands, habitat conditions for wildlife including elk, mule deer, and turkey are greatly improved. The improved forage conditions are also improving distribution of wildlife by providing alternative foraging areas in the uplands, away from the irrigated hay meadows on private lands. The improved distribution is also providing additional improved hunting opportunity and increased potential of harvest on public lands.

Project Objectives: *List specific objectives of project.*

The objectives of this project are to:

Reduce the number of stems/acre of pinon, juniper, and Ponderosa.

Create breaks in the continuous canopy by creating a mosaic of openings and leave islands/movement corridors for wildlife while maintaining age and size class diversity.

Increase percent cover of grass, forb and shrub species to improve forage conditions for wildlife and livestock.

Improve distribution by providing alternate watering locations for wildlife.

Improve habitat to enhance hunting opportunities and harvest on public lands. This will help managers to reach elk harvest and herd management objectives.

Project Strategies: *List specific actions which will be taken to achieve objectives.* This project is designed to thin understory and mid-story trees from dense stands of piñon pine, juniper and ponderosa pine. Thinning methods include mastication, and hand thinning and pile burning to remove activity slash. In an effort to return the area to a more Ponderosa pine-dominated stand, a majority of the piñon pine and juniper trees would be removed from the understory in areas where Ponderosa Pine is the dominant species. Approximate spacing in ponderosa pine stands treatment units would be thinned in a manner that would maintain a diverse age and size class stand. Total live stems per acre will be reduced by at least 40-50%. The areas that are dominated by piñon pine and juniper will be thinned in a manner to create a mosaic of openings and clumps of live trees. Existing openings or meadows will be maintained or enhanced during these treatments. Older, larger trees would be retained while smaller trees and trees infected with mistletoe or showing signs of other insect and disease infestation would be the main target of removal. The fuels treatments proposed in this project are designed specifically to attempt to reduce fuel quantity, depth and continuity (vertical and horizontal). Treated areas will result in larger trees and stands that are more fire resistant. These treatments will also increase survival and vigor of the older, larger trees, raise crown base heights, and improve forage conditions for wildlife and cattle. Post treatment conditions provide fire managers more options when deploying suppression tactics, and in some case can be an important part of managed fire if weather and other conditions are right.

Guzzlers will be installed in strategic locations after the mechanical treatments (mastication/hand thinning) have been completed.

We currently do not have the funding to complete the entire project. We are actively seeking additional grant money from other sources and cooperators. Mastication and handthinning treatment areas have been prioritized, and those areas that would provide the most benefit to the multiple objectives will be treated first. Guzzlers would be installed as funding becomes available. We would continue to complete priority tasks as additional funding becomes available.

Area Description: *Attach required map with project site clearly marked. Discuss value or potential value of the area to the elk resource and elk use of the area.* This project is located approximately 6 miles south of Texas Creek in Fremont County, CO. This treatment area encompasses a variety of vegetation types which include dense pinon/juniper,

Ponderosa Pine, Gamble's Oak, mountain mahogany, currant, and snowberry. BLM range, wildlife, and fuels programs have completed several projects near the project area since 2005 (See attached Overview Map). Monitoring data from the past treatments has shown an overall improvement in forage with an increase in grass, forb, and shrub cover and species diversity. Creating a more open landscape has created better foraging habitat for elk and has improved their distribution throughout the landscape.

Existing Project Area Land Management Activities: *Is this project part of a larger project or a series of projects? Identify related activities/programs that exist in support of this project. Include associated past RMEF project numbers and titles if applicable.* The Likely Gulch project is part of an on-going project that has been occurring in the Road Gulch/Turkey Gulch area consisting of several phases that started in 2005. Approximately 530 acres have been treated with hydroaxe or other mechanical equipment, 470 acres have been hand thinned and piled, and approximately 400 acres have been treated by prescribed fire (pile burning). In addition, BLM Range staff along with Colorado Parks and Wildlife (Kim Woodruff) have completed additional hydroaxe treatments near the proposed treatment area in the Racepath Gulch and McCoy Gulch areas west of Texas Creek. The Racepath Gulch project was an RMEF funded project (CO120130 - \$20,000, and CO110130-\$10,000) and McCoy Gulch (CO100539-\$10,000)

Is project on an active Livestock Allotment? Yes No **Allotment Name** Texas Creek

Will there be an adjustment in grazing after treatment? Yes No

Describe adjustment

If no adjustment is planned, please explain why this is not necessary to meet wildlife needs. The timing of the treatment will not coincide with the grazing period.

Use of RMEF Funds: *Describe specifically how the grant funds will be used. List individual items and/or activities along with unit costs, i.e. supplies, equipment rental, contractors, etc.* RMEF funds will be used to supplement existing BLM and other cooperator funding for the completion of a hydroaxe project. If enough funding is available, an additional hand-thinning project will be implemented. This funding will also be used for the purchase and install of guzzlers.

Project Monitoring Plan: *Describe the monitoring techniques that will be used to assess and quantify the effectiveness of the project as related to the objectives. What criteria will you use to evaluate the project's success? Include both short term and long term monitoring. What monitoring feedback will you provide to RMEF?* Permanent vegetation monitoring plots are established on projects that have been treated and areas that are planned for treatment. One plot is established for every 150 acres of treatment. Several monitoring methods are used to collect data including tree data (diameter, tree height, stems per acre), fuel loading (in tons/acre), herbaceous cover(% cover of grass and forb species), shrub cover (%cover). Photo points associated with these plots will also be taken. The plots will be read at pre-treatment, and at 1, 3, 5 and 10-year post treatment. Colorado Parks and Wildlife also actively participates in monitoring wildlife usage in areas that have been treated in the past, as well as areas that are planned for treatment. (See Preliminary Monitoring Results and Photos). This is data that has been collected from plots that have been established in the treatment units that were completed in 2005-2010)

Additional Project Benefits: *Describe any additional benefits of the project from an ecological, educational and or socio/economic perspective (i.e. reduction of threat of catastrophic wildfire, preserving ranching traditions, increasing public awareness, conserving cultural resources).* This project will enhance forage conditions, and in turn, will improve distribution of elk and mule deer by moving them onto public lands and away from the irrigated hay meadows on private lands. This distribution will provide improved hunting opportunity and increased potential for harvest on public lands. In addition, this project will help to improve forest health by reducing the number of stems per acre. This reduction in tree density will reduce competition for nutrients and water, making the forest less susceptible to insect and disease outbreaks. This project will reduce hazardous fuels to help protect private land and wildlife habitat from wildfire. Thinning and removing the ladder fuels, and creating breaks in the continuous canopy reduces the chance of a fire getting into the crowns of the trees. Running crown fires are difficult, and in most cases impossible to control. These thinnings give fire fighters a better chance to safely employ suppression tactics, or to manage a wildfire if conditions are conducive.

Dept. of Treasury - Internal Revenue Service requires RMEF to have an IRS Form W-9 on file for any grant recipient or vendor, in the case of vendor direct payments (whoever we write the check to). Please wait to

submit this form until the grant is approved and invoices are being submitted. We have these forms on file for U.S. Forest Service, Bureau of Land Management and most state wildlife management agencies. Funds cannot be forwarded without this documentation on file!

Project Worksheet

Is this project improving an area already used by elk but in need of improvement? Yes No

Is this project designed to attract elk from another area? Yes No

What is the life expectancy of the project results? Based on monitoring data, mastication and hand thinning projects are effective for many years following the treatment. Typically, a maintenance project is implemented 4-5 years following the treatments to remove small trees that have re-sprouted from the stem (this is very common in juniper) or new growth that is present. These maintenance treatments in the past have been completed by contractors at a minimal cost/acre (\$20-\$40) and are completed in a short amount of time (depending on the size of the treatment).

Select the habitat/cover type most representative of project site. Ponderosa Pine/Pinon/Juniper List other.

Project Type Details: Complete where applicable

Access Management (Road closures)

Is the closure part of a new travel management plan? or an existing plan?

Is the closure permanent? List number of miles

Is the closure seasonal? List number of miles

Will the roadbed be ripped? Yes No and/or seeded? Yes No

How many acres of elk habitat behind the closure will be affected?

Is there public support for this project? Yes No

Fencing Permanent Temporary Excludes livestock Excludes wildlife

Mechanical Thinning/Manipulation Forest/Woodland type Shrub steppe type Meadow type

What is estimated acreage of the project? 506 Hydroaxe 97 hand thinning

What equipment will be used to thin? Hydro-axe Explain other equipment Chainsaws/hand crews

What is the estimated number of trees per acre prior to treatment? 610

What is the estimated number of trees per acre after treatment (Residual basal)? 300

Describe the trees to be cleared (species, estimated diameter, single stem, multi-stem). Reserve trees are Pinon, and Juniper trees that are 8 inches in diameter or greater. Ponderosa pine trees will be reserved in areas where pinon and juniper are the dominant species. In areas where ponderosa pine is abundant, smaller diameter trees will be removed; however we will strive to maintain age and size class diversity throughout the unit. Snags that are greater than 8 inches in diameter will be reserved. Trees that have signs cavity nesting, and trees that serve as turkey roosts will also be reserved. Pinon and Juniper trees 8 inches in dbh within 25-30 feet of a reserve tree will be removed. The desired outcome of the treatment is to create a landscape with mosaic of openings, and clumps of trees that would provide both foraging areas and cover for wildlife.

Describe terrain (slope, soil type, rocks, etc.). The proposed treatment area has a mix of terrain and levels of difficulty. The hydroaxe equipment will not work on slopes greater than 30%. Part of the project design is to leave clumps or reserve islands in areas where the terrain gets too steep or rocky for operators to work. Operators will be encouraged to make bigger openings in areas that have a gentle slope and less rock.

Noxious Weed – Herbicide

How many acres will be treated (not affected)?

How many acres could be affected by this invasive in 10 years if not treated?

What are the weeds to be treated?

What toxicant will be used?

What surfactant will be used?

What deposition agent will be used?

What is the application rate (per acre)?

Noxious Weed – Biological Controls

How many acres will be treated (not associated or adjacent acres)?

How many release sites?

List Genus and species of bio-controls.

Prescribed Burn - Is this proposal part of a burn block project? Yes No

List the acreage within the black-line perimeter. Pile burning for slash removal following hand thinning

What percentage of the area will be blackened? 10

Seeding Native Non-native Mix

What is the seeding rate (lbs per acre)?

Please list the seed mix by common name and percentages in mix.

How will the seed be distributed? Explain other

Water Development Spring development Well Guzzler Dirt tank Pond Other

Is this a new construction? or repair of existing structure?

Storage capacity? 750 gallons Number of drinker sites? 2 How far to nearest perennial water source? 2 miles

Is water dedicated solely to wildlife? Is water available to livestock?

Acres influenced by the water development? 3,000

Permanent? Temporary?

Access to the site? 4 wheel drive Can emergency water be easily delivered to this site? Yes No



COLORADO

Parks and Wildlife

Department of Natural Resources

Unit Name (optional)
555 Street Address, Room 555
Denver, CO 55555-5555
P 111.222.2222 | F 111.222.2222

February 2, 2015

**Rocky Mountain Elk Foundation
PAC Project Proposal Committee**

Re: Likely Gulch

Dear PAC Project Review Committee,

I, Zachary Holder, District Wildlife Manager, in the Canon City South District am writing this letter in support of the Bureau of Land Management's interagency cooperative habitat project in the Likely Gulch portion of Game Management Unit (GMU) 691.

The project is a continuation of projects designed to reduce pinion and juniper encroachment in the area due to years of fire suppression. Implementation of this project will have a positive impact on a variety of wildlife species including, mule deer, elk, turkey, black bear, mountain lion, and numerous other small game and non-game animals and birds.

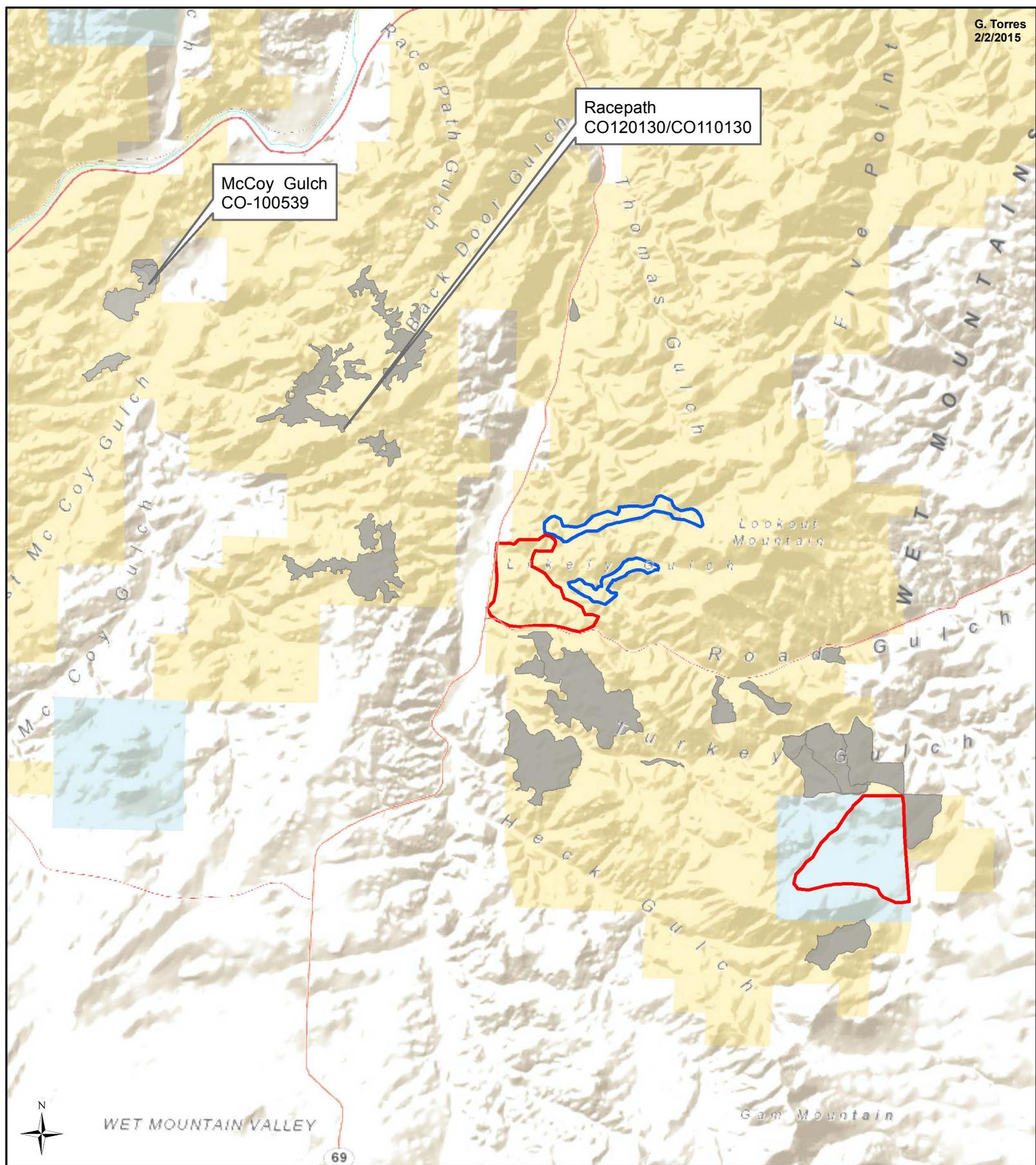
Likely Gulch is an area that is classified as winter range, and also serves as transitional range for deer and elk populations. Likely Gulch is located in an area where there have been documented conflicts between big game animals and adjoining private lands. The project will address these conflicts. The proactive management the project demonstrates will reduce tree densities and will increase the amount of sunlight that will reach the forest floor resulting in an increased forage base. The increase in forage will draw more animals into the treatment area making them more available for harvest by hunters. This will address the forage conflict between big game animals and the adjoining private lands including irrigated hay meadows.

On behalf of the CPW, I support this project and believe that it is in line with the Rocky Mountain Elk Foundation's Mission to ensure the conservation of Elk and their habitat. Thank You for your continued support of Colorado's wildlife and your consideration of this project.

Sincerely,

**Zachary Holder #045
District Wildlife Manager
Canon City South
(719) 269-0656**



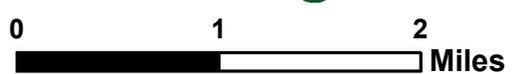


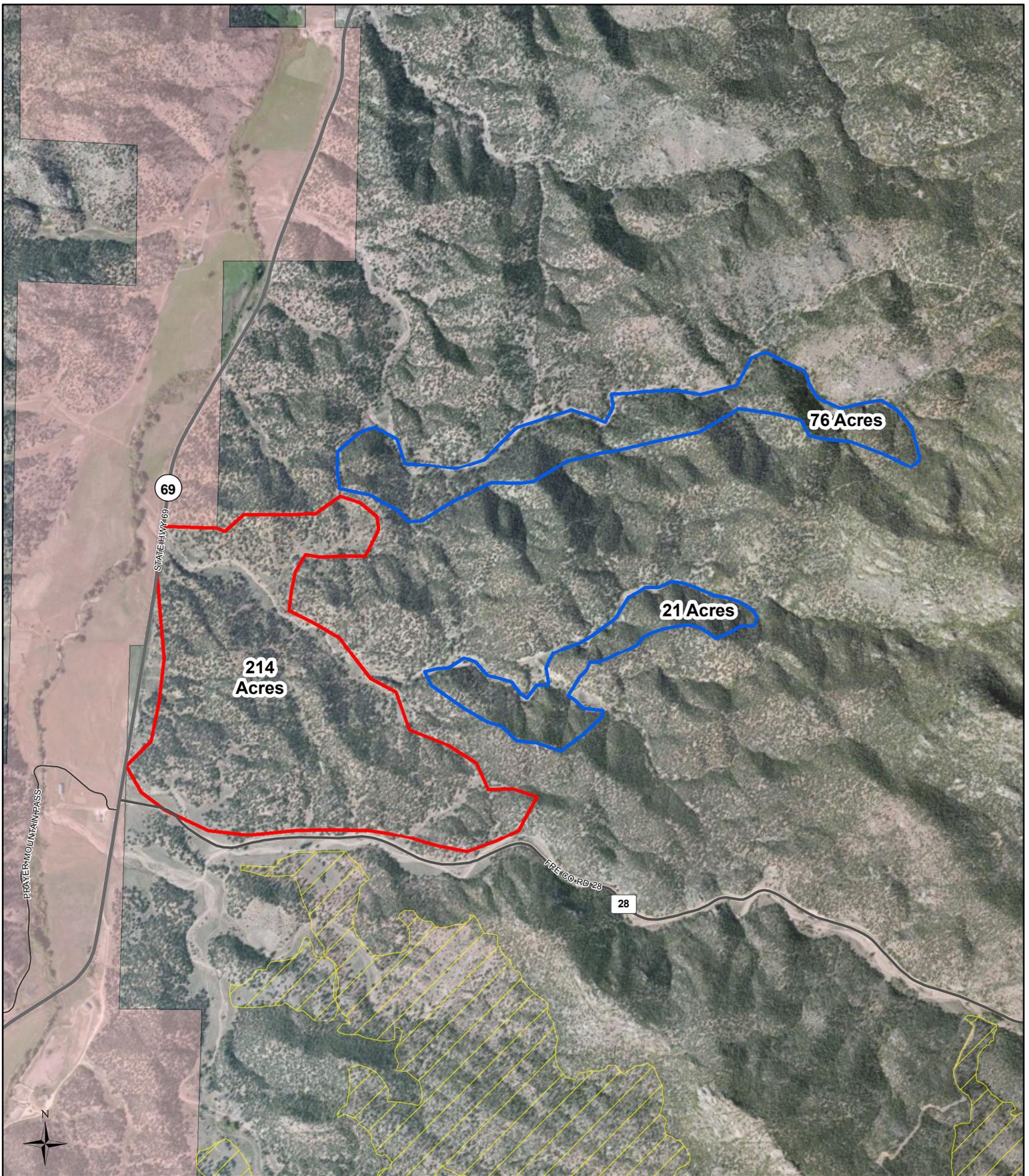
- | | |
|----------------------------|-----------------|
| Proposed Treatments | Past Treatments |
| Mastication | BLM |
| Hand Thin/Pile | Private |
| | State |

**Likely Gulch Habitat Enhancement
and Fuels Reduction Project**
 T 19S R 73W sec 31, 32, &33
 T 47N R 12E sec 1&12
 T 20S R 73W sec 5, 6, & 16



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- Proposed Treatments**
- Mastication
 - Hand Thin/Pile
 - Past Treatments
 - Private
 - State
 - BLM

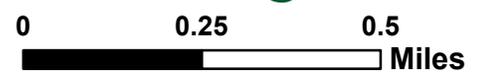
Likely Gulch Habitat Enhancement and Fuels Reduction Project

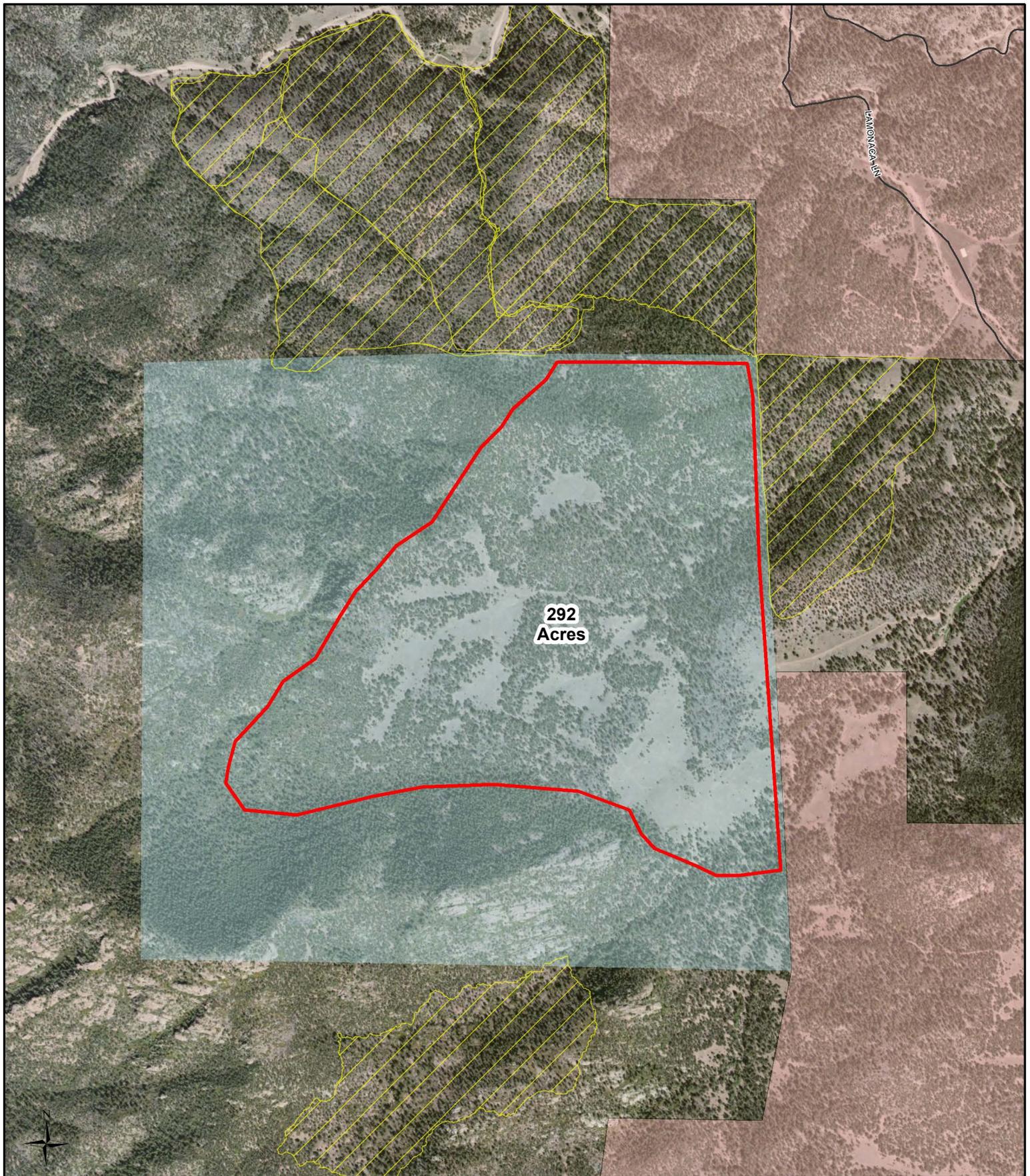
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G. Torres
 2/2/2015

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- Proposed Treatments**
- Mastication
 - Hand Thin/Pile
- Past Treatments**
- BLM
 - Private
 - State

Likely Gulch Habitat Enhancement and Fuels Reduction Project

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Preliminary Monitoring Results and Photos

Permanent vegetation monitoring plots are established on projects that have been treated and areas that are planned for treatment. One plot is established for every 150 acres of treatment. Several monitoring methods are used to collect data relating to tree data (diameter, tree height, stems per acre), fuel loading (in tons/acre), herbaceous cover(% cover of grass and forb species), shrub cover (%cover). Photo points associated with these plots will also be taken. The plots will be read at pre-treatment, and at 1, 3, 5 and 10-year post treatment. Colorado Parks and Wildlife also actively participates in monitoring wildlife usage in areas that have been treated in the past, as well as areas that are planned for treatment.

Included below are some of the results and photos of monitoring activities that have occurred on the projects that have been completed in the vicinity of the new proposed units for 2015. These plots are from the first mastication treatments that occurred in 2005 in the Road Gulch Area. The photo points display the post treatment understory response, and they provide an idea of what the thinning will look like in the future. Because of the close proximity to the proposed project area (same soil type, forest conditions, terrain, etc.) similar results are anticipated for the Likely Gulch area.

Road Gulch Plot 1:

- Increased Avg.% Cover of grass and forb species from 19% to 26%
- Increased grass/forb species diversity from 2 species on plot to 10 species on plot
- Avg% Cover of shrubs: from 3.4% to 2.1%
- Number of Trees/Acre: 600 to 45



Road Gulch Plot 1 East: Pre treatment 2004



Road Gulch Plot 1 East: Post Treatment Year 1



Road Gulch Plot 1 East: Post Treatment Year 2



Road Gulch Plot 1 East: Post Treatment Year 5



Road Gulch Plot 1 North: Pre Treatment



Road Gulch Plot 1 North: Post Treatment Year 1



Road Gulch Plot 1 North: Post Treatment Year 2



Road Gulch Plot 1 North: Post Treatment Year 5