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:**

Project Title: Dry Creek Pinyon-Juniper Removal

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.* Pinyon-juniper encroachment and establishment is occurring in the Radium Valley area, degrading the sagebrush and mountain shrub communities that elk depend on for winter survival. The aim of this project is to contribute to a landscape level approach concurrenlty being applied by Colorado Parks and Wildlife and BLM to remove pinyon-juniper trees in an effort to secure and restore quality elk winter range.

Geographic Information

Location: *(National Forest & Ranger District, BLM District & BLM Resource Area, or local name)* BLM Kremmling Field Office

State: CO **County(s):** *List predominant county first* Grand and Eagle

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 36.38580 **N** **Long** -50.19982 **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* **100%** *State* % *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: Darren Long *(Lead Agency Project Coordinator)* **Submitter's Title:** Wildlife Biologist

Submitter's Email: dlong@blm.gov

Agency: Bureau of Land Management **Telephone:** 970-724-3028 **Ext:**

Address: 2103 E. Park Ave. **City:** Kremmling, **State:** CO **Zip:** 80459

Coordinated With *(Other Than Lead Agency)*: Kirk Oldham

Position/Title: Terrestrial Biologist **Signature:**

Agency: Colorado Parks and Wildlife **Telephone:** 970-725-6207 **Ext:**

Address: 346 County Road 362 **City:** Hot Sulphur Springs **State:** CO **Zip:** 80451

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: Hand Thin	Type 1: 323	Type 1: 4/1/16	Type 1: 5/14/16
Type 2: Hydro-Ax	Type 2: 160	Type 2: 7/16/15	Type 2: 9/30/15
Type 3:	Type 3:	Type 3:	Type 3:
Type 4:	Type 4:	Type 4:	Type 4:
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. ** 483

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:	$2,500	Type 1:	$17,500	Type 1:	$20,000	
Type 2:	$2,500	Type 2:	$22,500	Type 2:	$25,000	
Type 3:		Type 3:		Type 3:		
Type 4:		Type 4:		Type 4:		
Type 5:		Type 5:		Type 5:		
*	$5,000		$40,000		$45,000	

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)
Muley Fanatics	$7,500 (pending)
BLM	$32,500

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

Number of elk that will benefit from this project: 450 (3 year average)

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

List Elk Management/Herd Unit Number: DAU-E-12 **List Hunt Area Number:** GMU-361

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 range

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? N/A

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

What type of volunteer work/participation? Handthinning activites and swamping trees for sawyers

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 condition and size of elk populations and other big game populations are directly correlated to the quantity and quality of their habitat. Pinyon-juniper woodlands encroachment is a leading cause of winter range degradation and is directly affecting elk in the project area. Colorado Parks and Wildlife has identified this as an area that has started to lose value as severe winter habitat to elk primarily due to this transition of vegetative communities. Pinyon-juniper woodland invasion into native shrub communities is thought to be caused by a combination of drying climatic conditions, historic overgrazing and lack of fire.

A treatment is needed to interrupt the current pinyon-juniper encroachment and safeguard the existing sage, bitterbrush and other mountain shrub communities in the project site that would otherwise be displaced. This treatment would eliminate most invading saplings and control the seed bank in the project area. This process would reduce vegetative competition by eliminating the trees ability to intercept water and other nutrients allowing for understory and co-dominant shrubs to thrive in the Dry Creek area. The increased productivity in vegetation of this winter range is expected to increase forage availabilty during that critical part of the year for elk. In severe winters, GMU 361 is believed to support 8-10 times the amount of elk use as opposed to the other GMU's in the herd unit (Kirk Oldham CPW, pers. comm.). Additionally, this area has recently been identified as an elk calving area (Doug Gillham CPW, pers. comm.) and improved grass and forbs would definitely benefit cows ability to carry their fetus to full term and compensate for nutrient deficits accrued from lactation as well as improving recruitment of calves post partum.
For many of the same reasons, mule deer would also benefit from this project as these animals in D-8 are at herd objective with strong buck to doe ratios and heavily depend on the Radium Valley for winter survival. This project is also part of a larger landscape level effort to augement bighorn sheep connectivity along this poriton of the Colorado River corridor. Although infrequent, CPW has identified GPS tracked Greater Sage-Grouse occupying areas within the project boundaries in recent years and may represent an important relic habitat that would benefit the North Eagle/South Routte population of birds.

Project Objectives: *List specific objectives of project.*
The purpose of this project is to protect 483 acres of existing vegetation communities associated with elk winter habitat and prevent the continued spread of pinyon-juniper trees by using mechanical and hand thinning tactics. This project is part of a larger 1,000 acre approved project to use prescribed fire as a tool to reset vegetative succession on more established adjacent pinyon-juniper woodlands which would effectively double the project size and improve this habitat for multiple species including elk. Concurrent mechanical treatements of 150 acres will also take place by CPW on the neighboring Radium State Wildlife Area. The objective is to create a landscape mosiac pattern in this important wildlife area to provide vegetative age class distribution and maximize habitat capability for increased biodiversity, health and resiliency to anthropogenic influences and natural variations. These objectives are particularly important to elk by providing increased grass and forb production when and where elk need it the most.

Project Strategies: *List specific actions which will be taken to achieve objectives.*
A general 30 foot canopy spacing to remove up to 90% of the pinyon and juniper trees in the project area while largely leaving other vegetation communities in tact. 323 acres would be hand thinned by a Green Corp. vetran chainsaw crew (organization of vetrens gaining skill sets for future employment) or fire seasonal sawyers in 2015 in areas that would be impractical for machinery. Breeding Migratory bird timing limitations outlined in the completed NEPA would also preclude this work being done during sensitive calving periods for elk. A hydro-ax or equivalent machinery would be contracted for the fall of 2016 to masticate 160 acres of pinyon-juniper trees to the same specifications. Treatments would be conducted in a mosaic fashion to emulate historic aerial photography of the project site to set back pinyon-juniper encroachment as far back as 130 years. Indiscriminate tree diameters would be targeted to allow for proper spacing and overall age class diversity. This would also promote the health of sagebrush/bitterbrush and mountain shrub understory that currently exist within the project area. Although not part of this proposal, these treatments would act as a prescribed burn preparation, also included in the completed NEPA for future treatments, augmenting the effective area of this proposal. Leftover slash and mulch would be dispersed in a way that would compliment holding lines or increase ground fuels to promote favorable burning conditions. Local Habitat Partnership Program or Mule Deer Foundation funding may also be sought-after to suppliment any unanticipated cost overages for project completion. Trained BLM personnel will also offer in-kind contributions to complete a portion of the mastication required on milder terrain using a BLM owned fecon head.

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.*
The BLM-owned project area is a large sage and mountain shrub terrace high above the Colorado river and the entire project extends down to the Colorado River with the prescribed fire component. The closest town is the very small town of Radium, just over 1 mile Northwest of the project area. The project is bordered on the north and east by private land (where several hundred elk feed in late winter and early spring) and the Trough Road (Grand County Road 1 and Eagle County Road 111), but anthopogenic influences are minimal especially during the winter timeframe. The entire area is mapped as elk winter range and the specific project area has recently been identified as an elk production area although it has not yet been mapped to represent this habitat classification.

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.*
This area is designed to compliment other approved projects of varying strategies to improve habitat along the Colorado River corridor by BLM and CPW. It is also within the boundaries of a much larger scale landscape effort (approximately 27,000 acres) by the BLM that is currently be analyzed for approval. Similar treatments in the project area and surrounding landscape have previously been performed and are expected to support greater habitat diversity.

Is project on an active Livestock Allotment? Yes ☐ No ☒ **Allotment Name**
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. N/A

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.*
Requested RMEF funds would help fund both contract work for a vetren green corp. saw crew or non-permanent fire seasonal sawyer crews for handthinning and contribute to help cover the hydro-ax operation cost that would be contracted.

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 base photo point and species composition ocular vegetation monitoring will be performed pre and post treatment on an annual basis. Part of the monitoring includes base photo points that visually demonstrate the efficacy of the treatment. Base photo points will be taken along with species composition data and could be furnished to the Rocky Mountain Elk Foundation. Wildlife scat grids will be performed pre and post treatment and will continue as long as necessary to record project efficacy.

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).* A 32:100 bull to cow ratio for this GMU provides for an excellent over-the-counter bull hunting opportunity for many hunters wanting to have this experience. Pinyon-juniper woodlands have a significantly higher fuel loading and are much more susceptible to spot and crown fires. The breaking up of these contiguous fuel sources would decreased the chances of a high intensity catastophic wildfire.

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? 10 years, and up to 60 years once prescribed fire phase is implemented
Select the habitat/cover type most representative of project site. Pinyon-Juniper List other. sagebrush

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? 483
What equipment will be used to thin? Hydro-axe *Explain other equipment* **chainsaws**
What is the estimated number of trees per acre prior to treatment? 250-300
What is the estimated number of trees per acre after treatment (Residual basal)? 25-30
Describe the trees to be cleared (species, estimated diameter, single stem, multi-stem). Pinyon-juniper of all diameters (averaging 8"), many of these trees spread from a single root collar
Describe terrain (slope, soil type, rocks, etc.). 5-35 degree slopes, sandy loam with minor rock outcrops

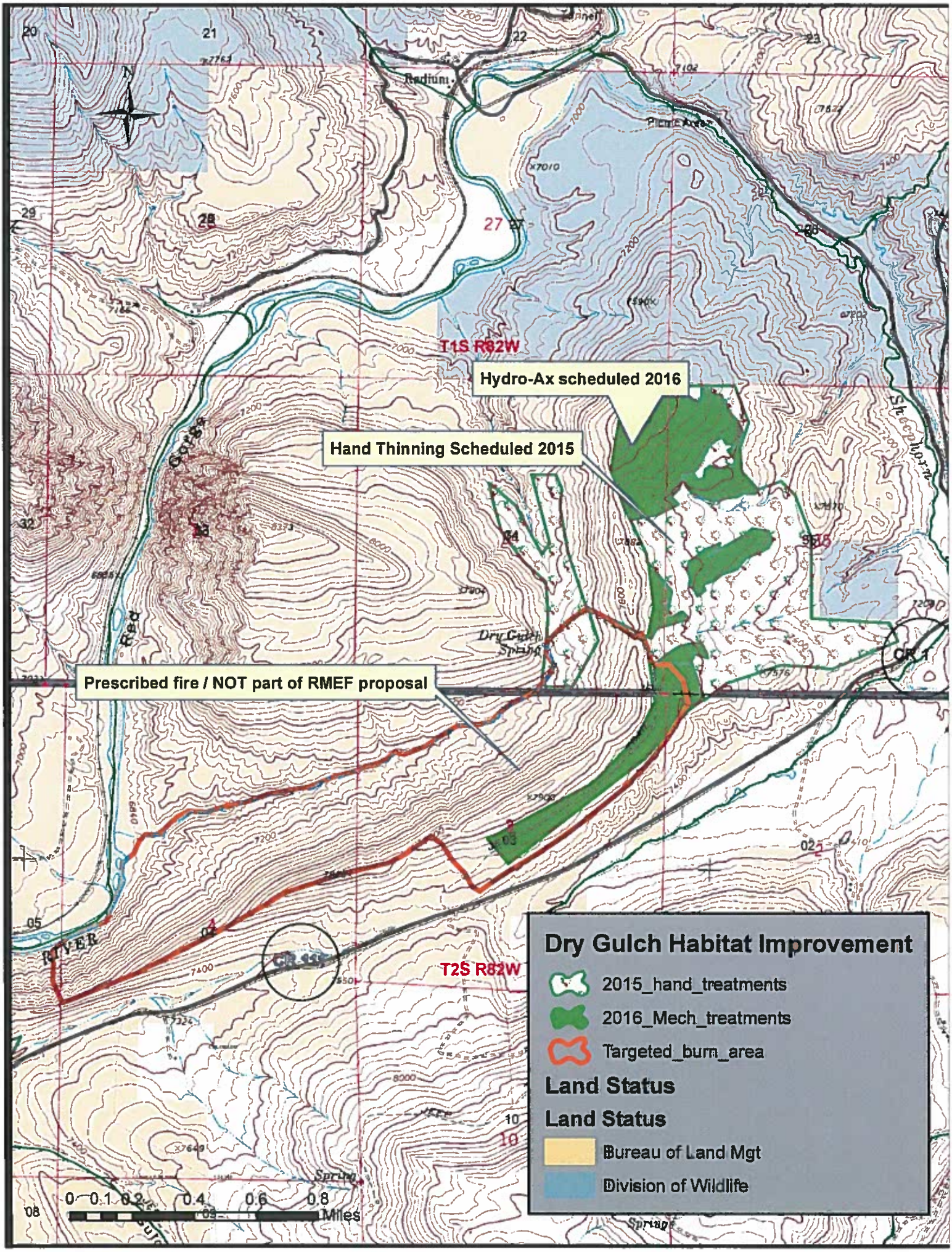
Noxious Weed – Herbicide
How many acres will be treated (not affected)?
How many acres could be affected by this invasive in 10 years if not treated?
What are the weeds to be treated?
What toxicant will be used?
What surfactant will be used?
What deposition agent will be used?
What is the application 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.
What percentage of the area will be blackened?

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? *Number of drinker sites?* *How far to nearest perennial water source?*
Is water dedicated solely to wildlife? ☐ *Is water available to livestock?* ☐
Acres influenced by the water development?
Permanent? ☐ *Temporary?* ☐
Access to the site? Can emergency water be easily delivered to this site? Yes ☐ No ☐


T1S R82W
Hydro-Ax scheduled 2016
Hand Thinning Scheduled 2015
Prescribed fire / NOT part of RMEF proposal
T2S R82W
Dry Gulch Habitat Improvement
2015_hand_treatments
2016_Mech_treatments
Targeted_burn_area
Land Status
Land Status
Bureau of Land Mgt
Division of Wildlife
0 0.1 0.2 0.4 0.6 0.8
Miles