

## **Mad Creek Habitat Enhancement Project**



- INTRODUCTIONS of FS staff
- Improving habitat
  - Importance of Georgetown herd – one of largest native (275 animals) and important in CO for viewing, hunting and as a source for other herds
  - Why Empire? – subherd of the Georgetown herd with about 75 animals: winter north of Hwy 40 and above Empire. Forest succession has decreased habitat quality. Migratory route between winter and summer ranges.
- Fuels Reduction
  - CWPP Clear Creek
  - CWPP Empire
- Aspen Enhancement – The Mad Creek burn is designed to enhance forage within the meadow and remove tree and shrub encroachment into the meadow. Burning will also help stimulate the aspen clone surrounding the meadow to benefit other wildlife species (e.g. elk)
- Other wildlife benefits – The fuels reduction projects around the meadow are designed to open up sight distances through forested habitat to benefit bighorn sheep, and to reduce tree density to stimulate the growth of understory forage species and aspen to benefit deer and elk.



## Georgetown Bighorn Sheep Herd



### Habitat requirements

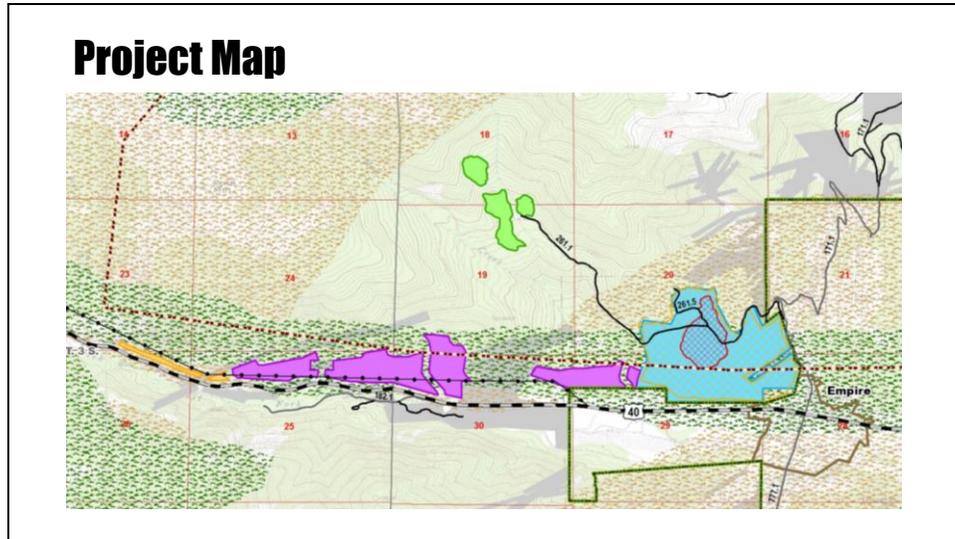
- Why is work needed – small diameter mixed conifer forests have encroached into formerly open south-facing slopes above Hwy 40 and above the town of Empire. Tree growth has diminished to amount and quality of grasses, herbaceous species and shrubs in the understory. Bighorn sheep use these slopes as winter range and as travel corridors between summer concentration areas up high near Cone Mountain and winter range near Empire.
- Why is it good for sheep – bighorn sheep, especially lambs, are vulnerable to predators that can ambush sheep from areas of vegetative cover. Reducing tree densities and improving sight distances allows bighorn sheep to detect and avoid predators and also improved the ability of sheep to visually communicate with each other within the herd. Bighorn sheep forage species (grasses, herbaceous species and some shrubs) also benefit from reduced tree densities.

Slide 3

## Project Location



3 projects near Empire working in concert: Mad Creek, Blue Creek, Xcel.  
In next 5 years there will be more work.



The blue, purple and yellow shapes show the areas that are part of the Mad Creek and Blue Creek projects that are designed to benefit bighorn sheep by opening up forested habitats that connect winter range at Empire to the cliff terrain west of Blue Creek. CPW telemetry data shows that sheep move east-west along this slope during migration.

## **Work completed**



### **What's happened?**

- 209 acres of hand cutting and piling in June 2015

A manual service contract completed the cutting and piling of 209 acres with a combo of thinning and patchcuts in June 2015.

Slide 6



As seen from the north (Bill Moore Road) (looking south), tree densities have been reduced, allowing aspen patches to expand and understory vegetation to increase.



The bare ground in the foreground is fireline constructed in 2015, to be used to control the prescribed burn perimeter when burned in 2016. Slash on the ground will help carry the burn through the 50 acres.

Slide 8



Looking north into the area planned for burning (area with red needles on the ground). Fire line surrounds the burn area. Why broadcast versus pile and burn everywhere? Broadcast allows for a more uniform lighter intensity burn that will favor quick recovery of grass species.

Slide 9



Looking south into the planned burn area with fuels on the ground to carry the burn. More open areas in the background were already cut to reduce tree densities to enhance the aspen patches and meadow edges.

## Prescribed Fire



### Slash pile burning

- Occurs first
- Requires snow cover
- Requires wind
- Cool temperatures
- Monitoring

The perimeter of the prescribed fire unit has been piled and will be burned with snow. This removes the fuels along the perimeter and creates a “black-line”, an area void of continuous fuels. This helps keep the main fire within the unit when burning the interior.

Been waiting for this meeting but our intent is to get the pile burning started as soon as we have the conditions ... Even tomorrow.

## **Prescribed Fire**



### **Controlled broadcast burning**

- Occurs in late spring/  
early summer
- Greener fuels
- Lower winds
- Containment lines  
pre-constructed
- Multi-agency  
monitoring

Burning will be an interagency effort between USFS and Clear Creek Fire Authority.

## Objectives



### What are target fuels?

- Cut slash in the meadows
- Areas outside of slash will not readily support fire under these conditions.

Target fuels are the slash that was cut primarily in the meadow. We expect that some trees may torch (catch on fire).

The object is to burn this slash during conditions that would not readily support fire spread outside of the slash.

## What to expect



**During the burn**

- Smoke
- Flames
- Embers
- Duration
- Monitoring

Smoke –what will happen? Predominant wind direction. Pollution Control Dept issues permit for compliance with EPA 24-hour standard.

Glowing embers – nothing spotting beyond 0.1 miles and no establishment of spot fires (per model). 2-4 foot flame lengths backing down the hill.

Water resources ... Will it effect water quality/sedimentation? (design criteria?)

Clear Creek Fire Authority will be on site to assist with holding operations and will be positioned in areas to take quick action should any complications arise.

Ideal conditions – entire fire in 1 day; could be 2 days with 3<sup>rd</sup> day mop-up.

USFS units will staff the fire until it is deemed secure and patrol the prescribed fire until it is declared out.

## What to expect



### After the burn

- What will it look like?
- How long will recovery take?

Black with some pockets of white ash; unburned areas for an overall mosaic supporting grass recovery and aspen suckering within a month.

Insert slide of 1 year post fire example to show green.

## **What to expect**



Recovery

## Communication



### How to get information

- Email updates: [CCRDvis@fs.fed.us](mailto:CCRDvis@fs.fed.us)
- Facebook: /usfsarp
- Twitter @usfsarp
- Inciweb
- [www.fs.usda.gov/goto/arp/MadCreek](http://www.fs.usda.gov/goto/arp/MadCreek)

What do if you're concerned – sign-up and contact cards

Reverse 911 available and CDOT sign boards

48-72 hour window for selecting burn day based on weather. Email notification to contact list.  
POC Wendy Cook (Mayor). Larger window is May 1 (staffing) through green-up (June 30).

## Questions?

