



Greater Tenmile Watershed



City of Helena



JULY 9, 2014, HELENA MONTANA



City of Helena Resolution



Tenmile Watershed Collaborative Committee

- Welcoming the past to the present
- Representation
 - ✦ Conservation
 - ✦ Motorized and Non-motorized recreationalists
 - ✦ Timber/biofuels/mining/recreation/livestock industries
 - ✦ City of Helena Government
 - ✦ Lewis and Clark County Government
 - ✦ Fire community
 - ✦ Local citizens
- State and Federal Agencies will act as technical advisors

Lessons Learned

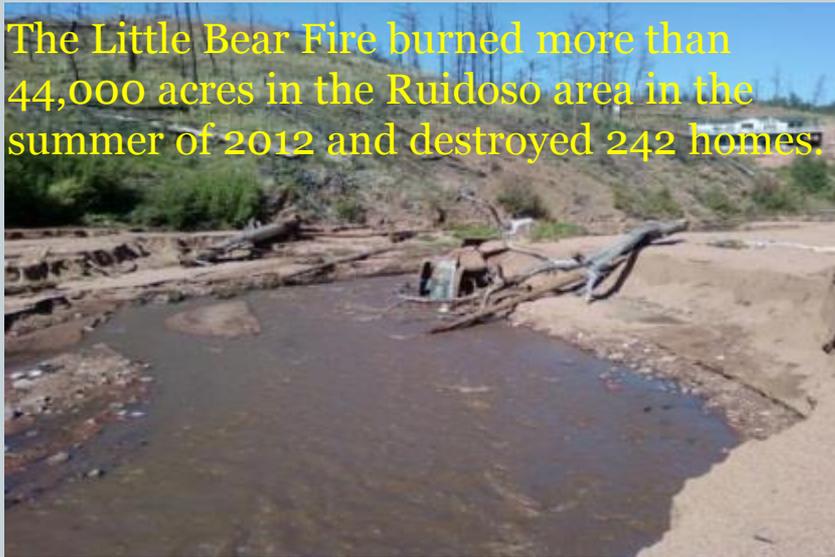
June 26, 2012 - Waldo Canyon Fire burned through the Mountain Shadows subdivision on Colorado Springs' west side, *burning 346 homes and killing two people.*



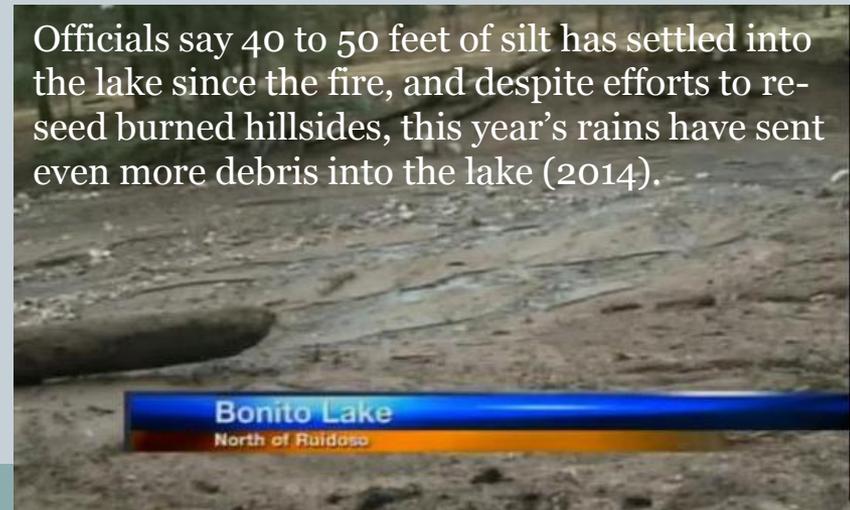
Lessons Learned

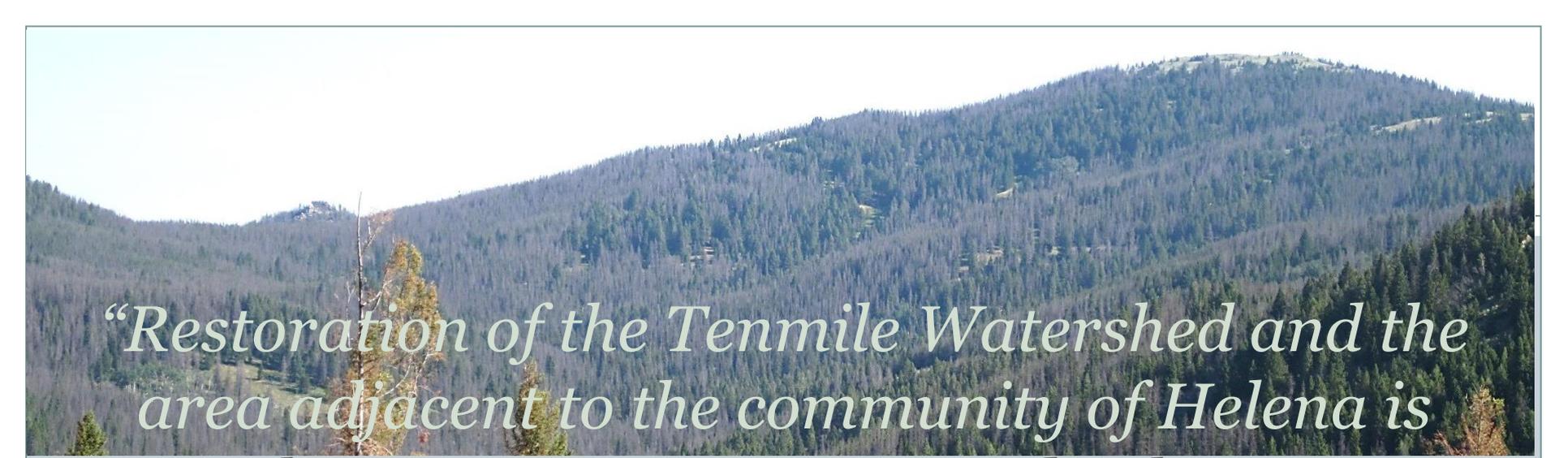
March 12, 2014 - ALAMOGORDO, N.M. (KRQE) – Bonito Lake, hit hard by the Little Bear Fire in 2012, is still struggling to recover.

The Little Bear Fire burned more than 44,000 acres in the Ruidoso area in the summer of 2012 and destroyed 242 homes.



Officials say 40 to 50 feet of silt has settled into the lake since the fire, and despite efforts to re-seed burned hillsides, this year's rains have sent even more debris into the lake (2014).





“Restoration of the Tenmile Watershed and the area adjacent to the community of Helena is critical to sustain communities, drinking water, and watershed resilience.”

Problem Statements & Existing Condition

Challenges

Solutions



Problem Statement & Existing Condition



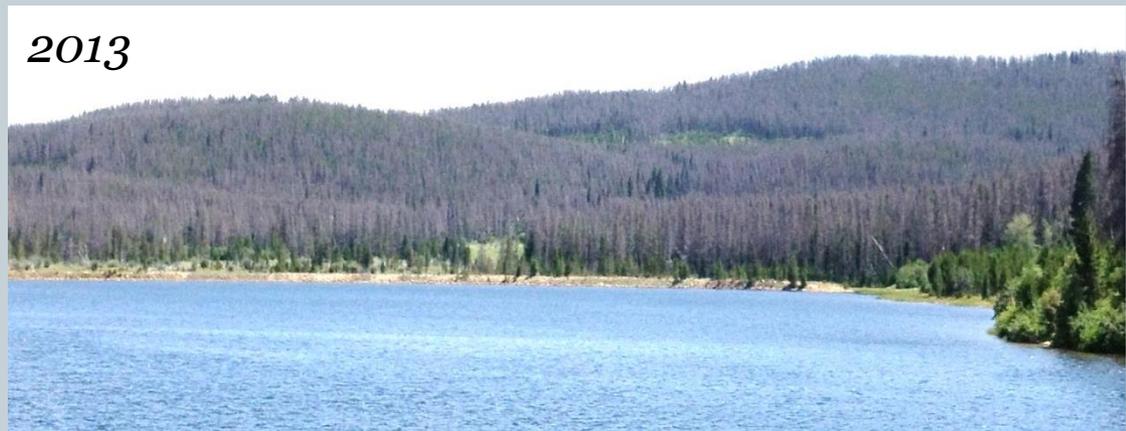
Vegetation Condition



2009



2013





Problem Statement & Existing Condition



- Municipal Watershed
- Population & Wildland Urban Interface (WUI)



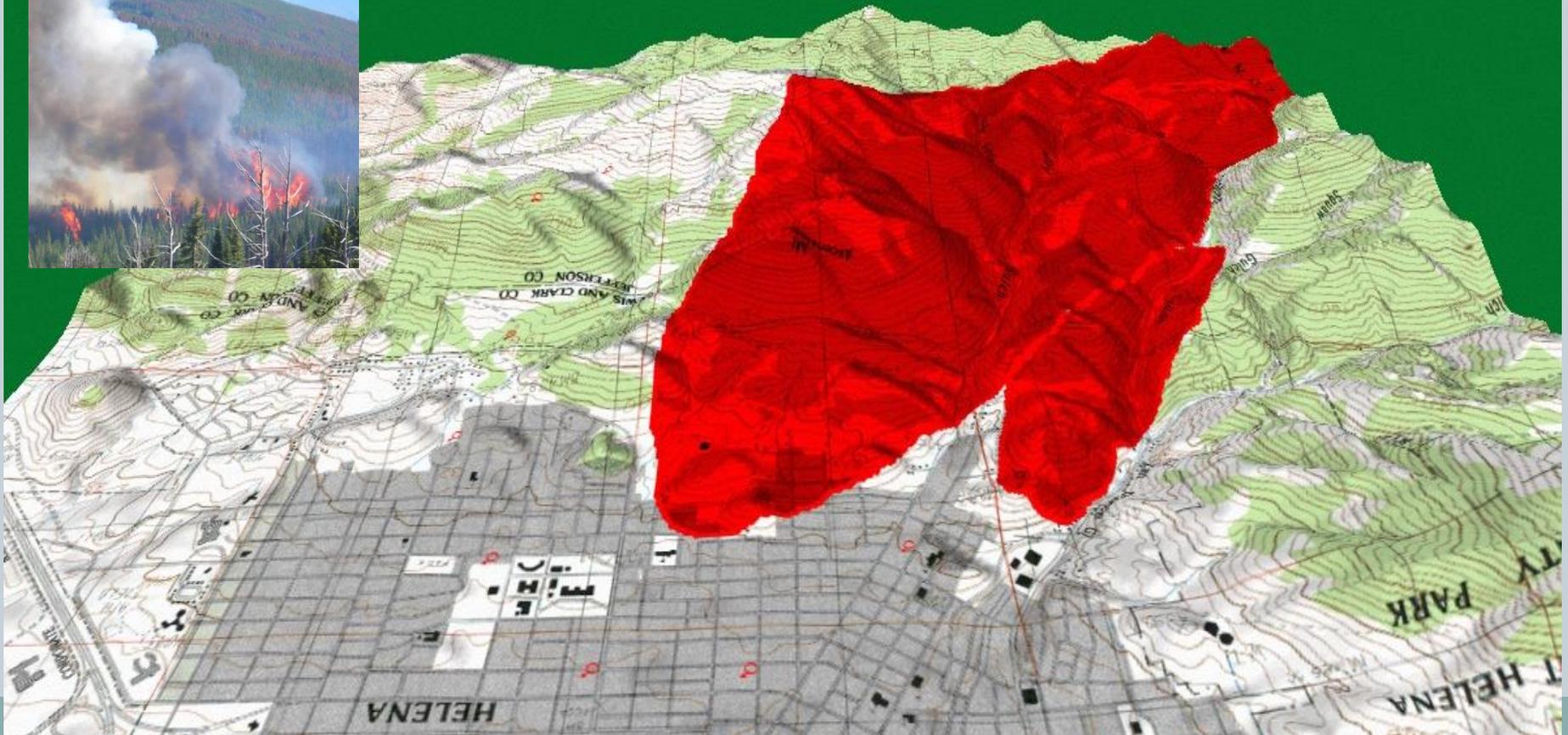


Problem Statement & Existing Condition



Fire Probability

Fire simulation images courtesy Sonny Stiger, Fire and Fuels Management Consultant





Problem Statement & Existing Condition

Black Mountain Fire - Lightning start on August 13, 2012 with predicted weather of temperatures in low 90s with relative humidity levels at 10-17% and southwest winds at 20-25 mph, gusting up to 35 mph.

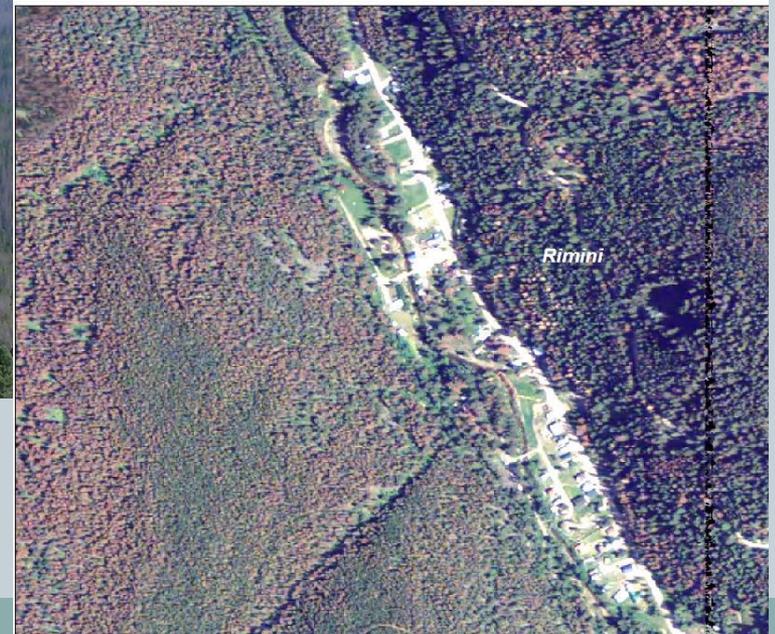


Existing Condition

Prescribed Fire

Complexity

- Communities & Inholdings
- Treatment methods



Problem Statement



Economics

- Balance of mitigation cost and potential post-fire rehabilitation costs



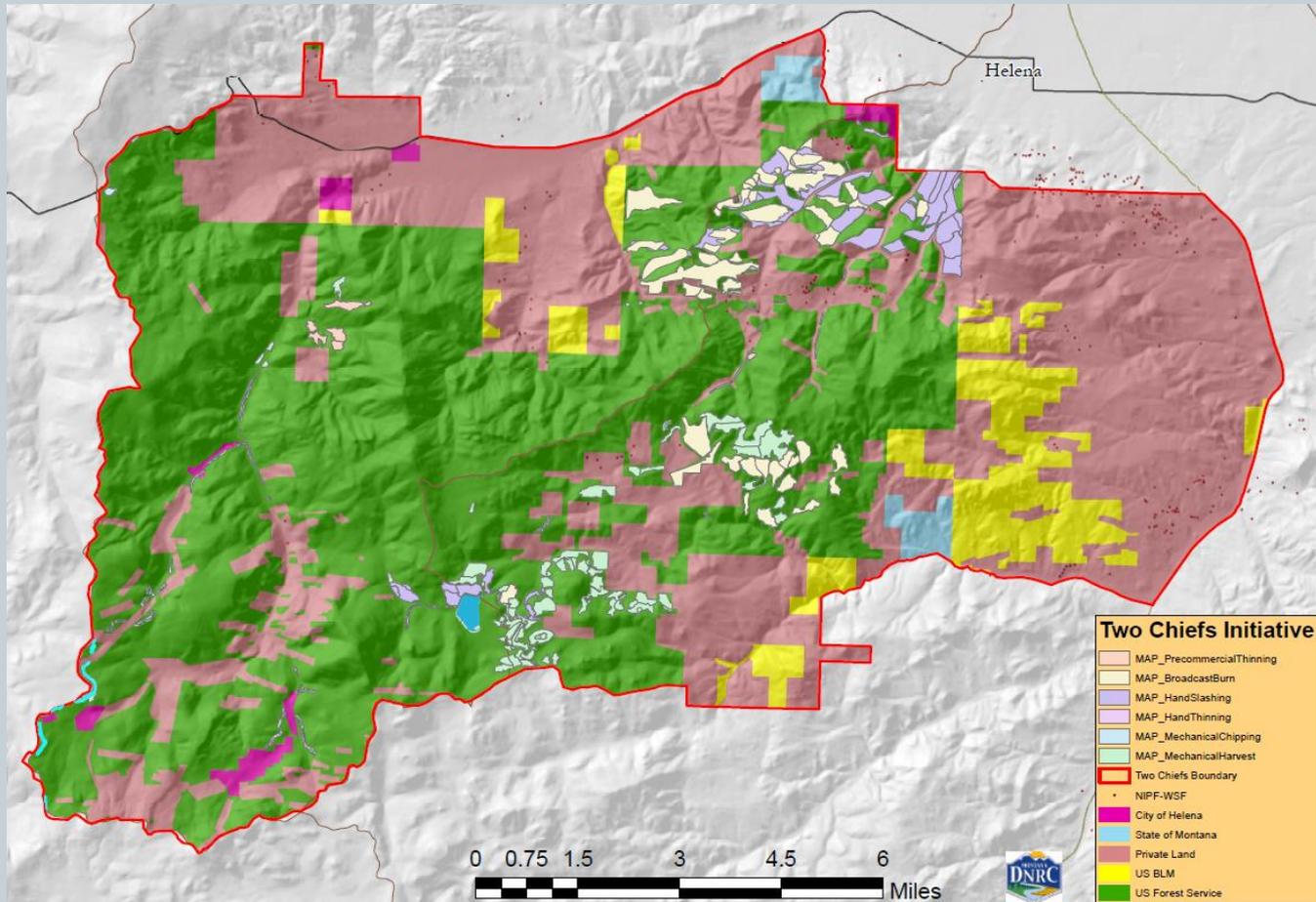
Solutions



Desired Outcomes

- **Health and Human Safety**
- **Ecosystem & Watershed Resiliency**
- **Jobs and Partnerships**
- **Continued Supply of Clean Water**

Solutions



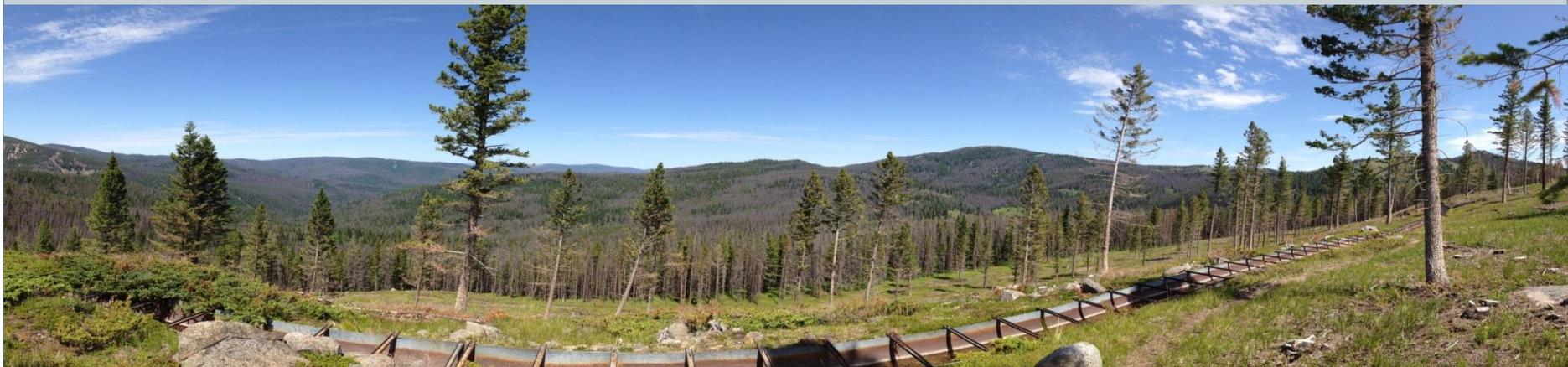


USFS Projects



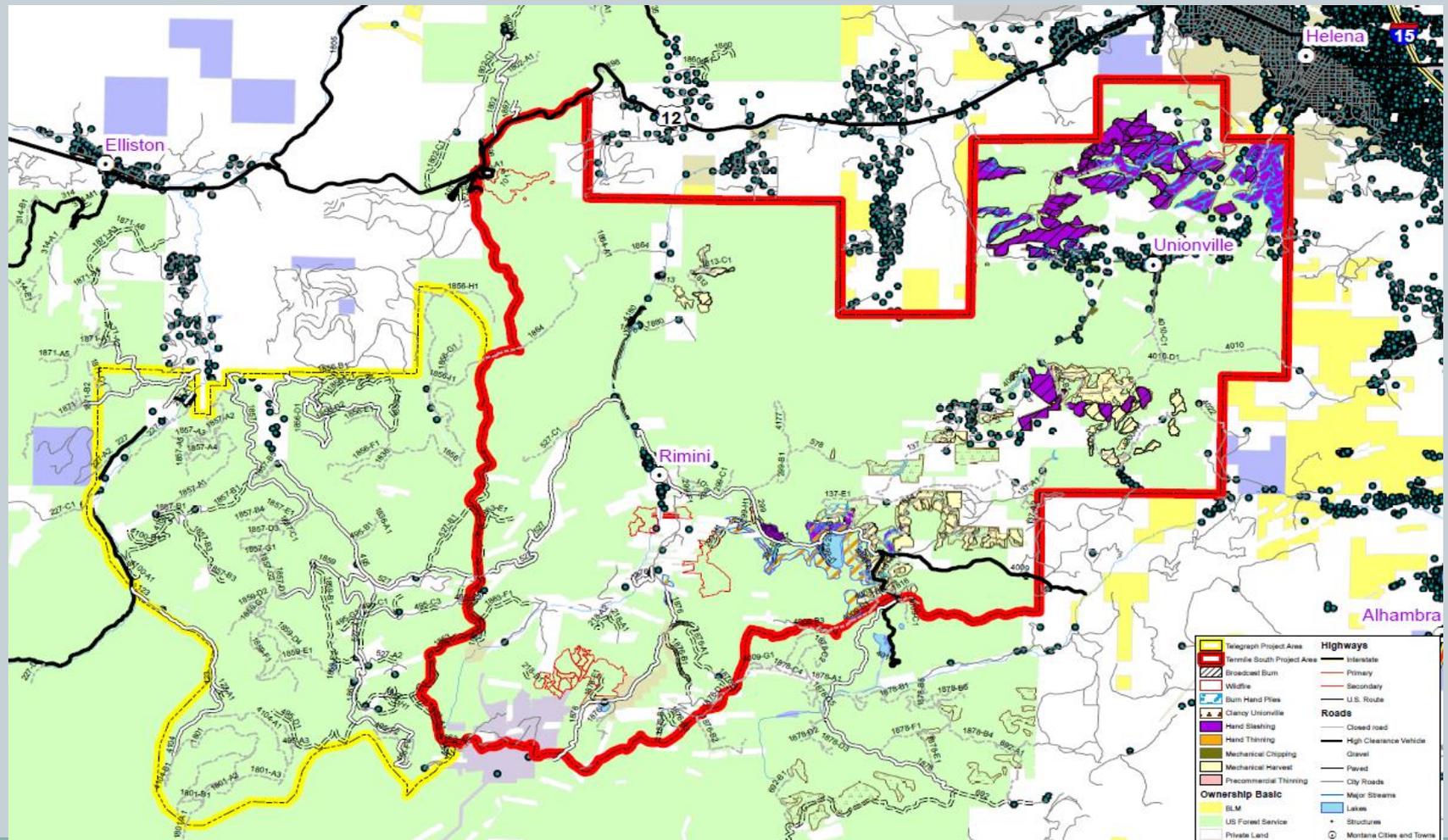
Comprehensive Restoration Planning

- Forest-wide Hazardous Tree Removal and Fuel Reduction HFRA Project
- Clancy Unionville
- Telegraph Vegetation Project
- Tenmile-South Helena Project





USFS Projects

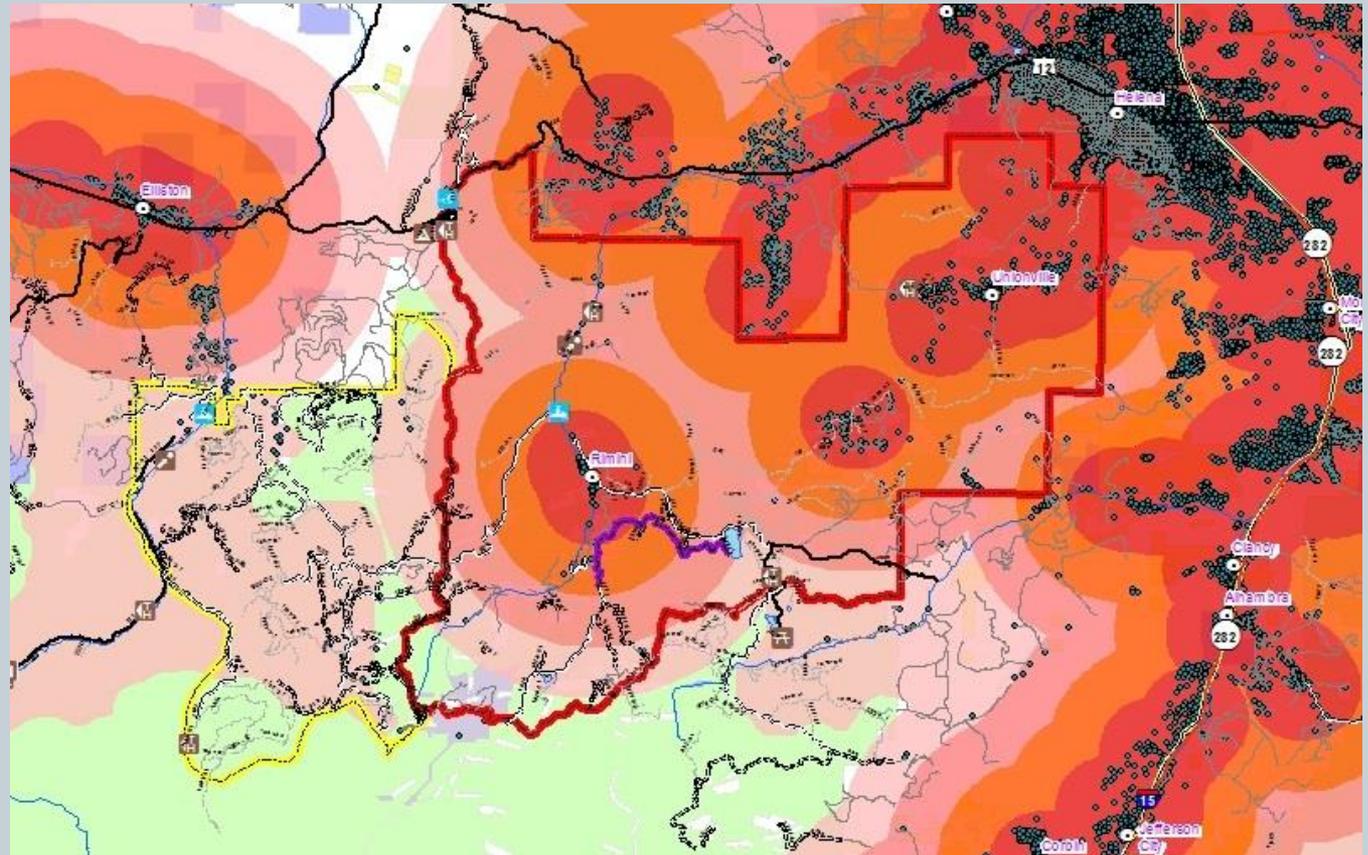




USFS Projects



Fireshed Assesment



Tri-County Firesafe Working Group





Conservation Programs

- Voluntary
- Competitive
- Must result in natural resource benefits

Resource Concerns

- Soil Erosion
- Soil Quality
- Water Quality
- Animal Management
- Plant Suitability



Basic Program Eligibility

- Agricultural Producer
- Highly Erodible Land and Wetland Conservation Compliant (HEL/WC)
- Adjusted Gross Income Compliant (AGI)
- Control of Land



Environmental Quality Incentives Program (EQIP)

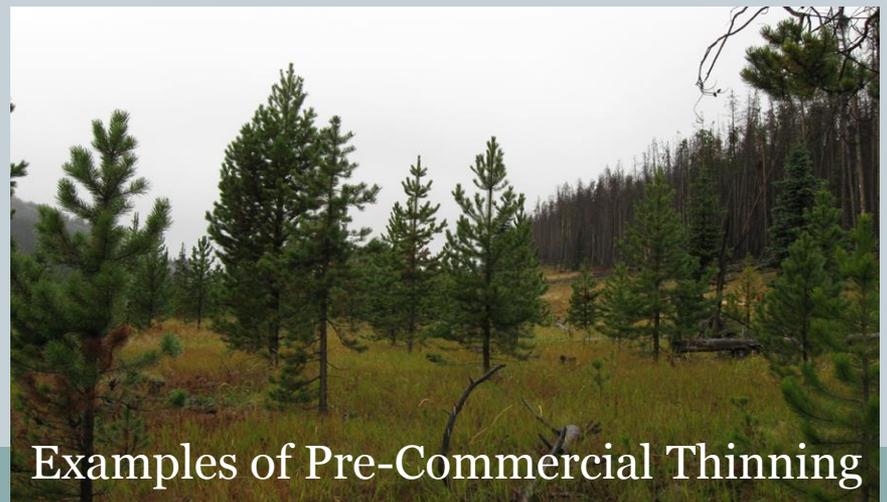
- Land in Agricultural Production and Non-Industrial Private Forest Lands
- 1-10 year contracts
- Payment rate for practices
- Not a grant program
- Cost share is considered income

Forest Management Practices

- ✓ Pre-commercial Thinning
- ✓ Woody Residue (Slash) Treatment
- ✓ Fuel Break (Structure and Forested areas)
- ✓ Weed Control associated with Forest Practices



Fuel Break Treatment in Forested Areas



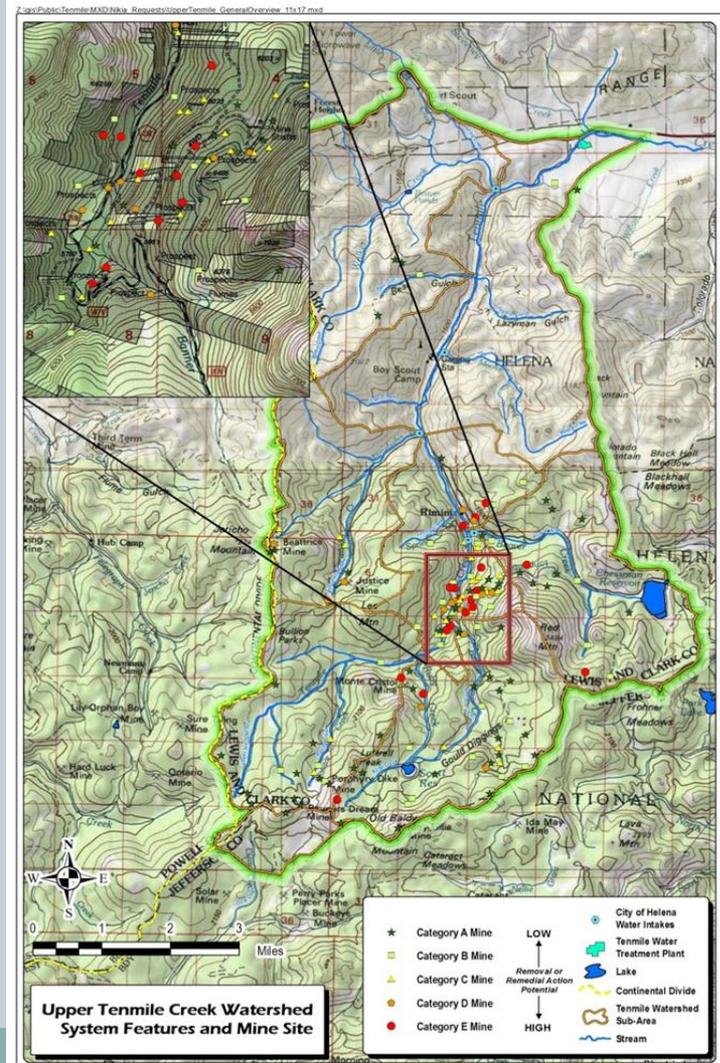
Examples of Pre-Commercial Thinning



EPA 2014/2015 Remedial Action Upper Tenmile Creek Mining Area Site

Upper Tenmile Creek Mining Area Site

- 53 square mile area
- 150 abandoned mine sites, with 70 risk-based priority sites (80 no action sites)
- Watershed provides drinking water to local residents and greater than 60% of water for the City of Helena
- Residences in Rimini, Landmark Subdivision area, and in rural locations
- 70% of land managed by USFS
- 2013 Little Lily – Lee Mtn & former Community WWTP





EPA 2014/2015 Remedial Action Upper Tenmile Creek Mining Area Site

Remedial Action 2014/2015

High Priority Mine Site Targets:

- National Extension Mine Site (5% of site impact) & 11 Bunker Hill Group Mine.
- Mine waste sites of the Bunker Hill Group were specifically chosen based on the magnitude of their impacts within the watershed and their close proximity to one another.
- *Residential Remediation & Reclamation in Landmark Subdivision



National Extension Mine Sites

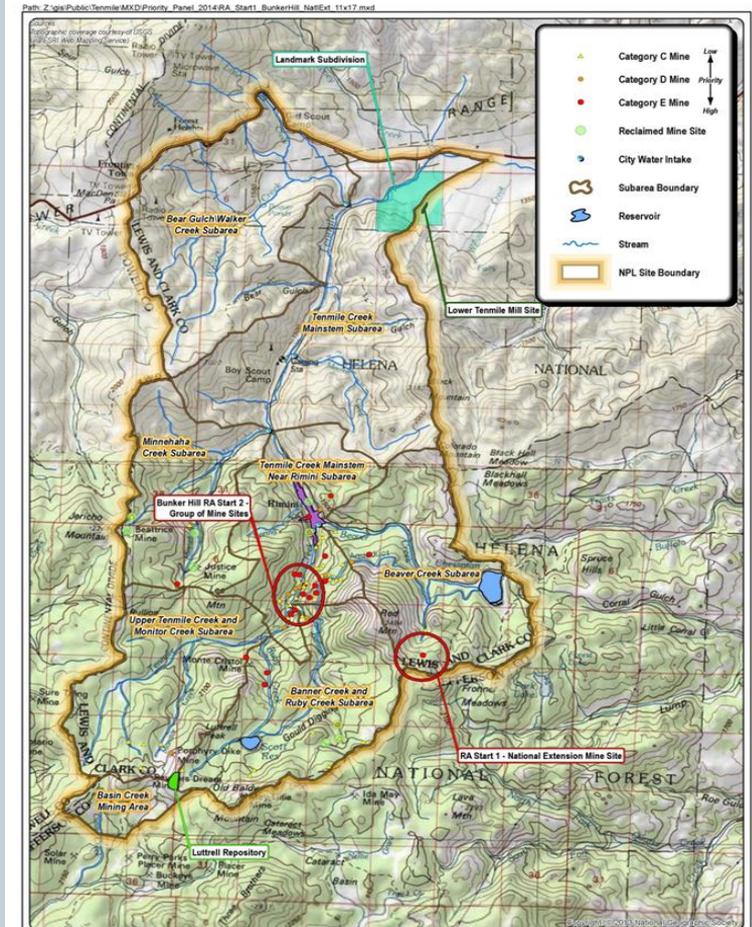
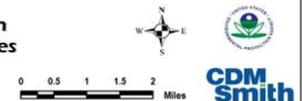


Figure 2
Remedial Action Start 1 - National Extension
Mine Site and Bunker Hill Group of Mine Sites

Upper Tenmile Creek Mining Area Site
Lewis and Clark County, Montana





EPA 2014/2015 Remedial Action Upper Tenmile Creek Mining Area Site

Future RA

- **Source Adit Control - AMD remediation.** Adits that contribute the most metals loading to streams.
- **Minnehaha, Monitor Creek & Banner/Ruby:** High priority mine waste sites to be remediated and reclamation to be conducted. (High Zinc Conc. - Tenmile Water Subarea)
- **Red Mountain Group:** High priority mine waste sites to be remediated and reclamation to be conducted.
- **ROD required permanent clean drinking water:** Residents of Rimini and the Landmark Subdivision area.
- **Risk/benefit assessment, Institutional Controls, and O&M**

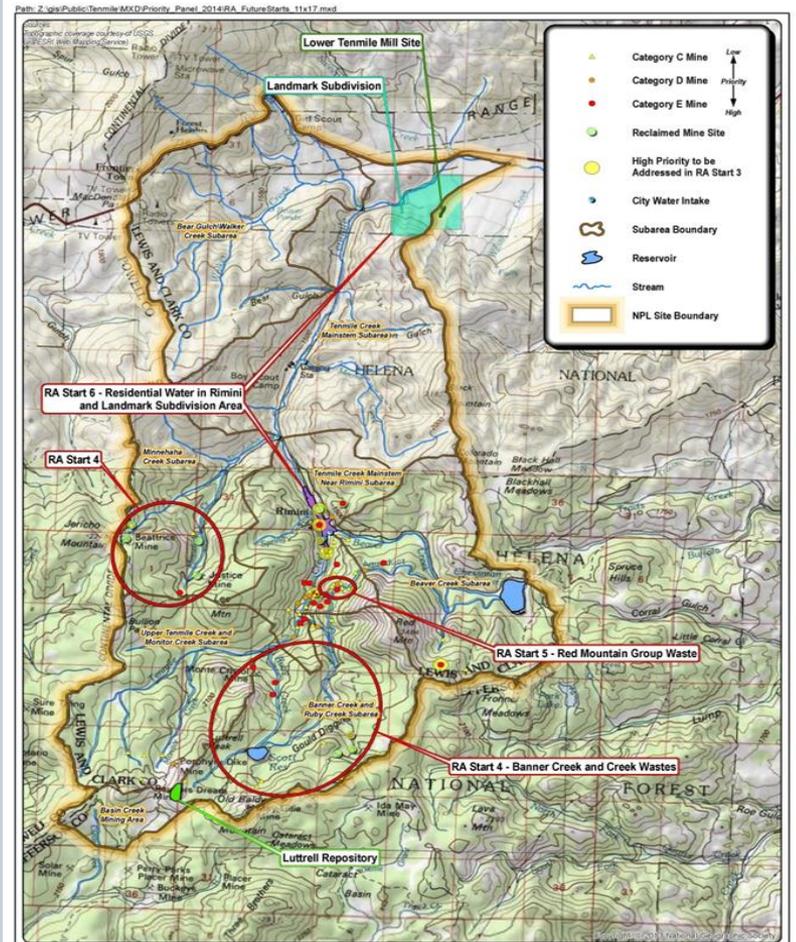
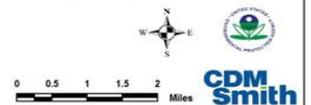


Figure 3
Future Remedial Action Starts

Upper Tenmile Creek Mining Area Site
Lewis and Clark County, Montana





EPA 2014/2015 Remedial Action Upper Tenmile Creek Mining Area Site

Anticipated Impacts of RA

- Reduced contaminant loading to tributaries and Tenmile Creek.
- Reduced potential risks to human health and environmental receptors.



Lake Helena Watershed Restoration Plan

Lake Helena Watershed Group
and the
Lewis & Clark County
Water Quality Protection District



Restoration Work

Examples of some stream restoration work. Keeping culverts clear, reduce sediment, create new flood plains, and stabilize streambanks.



Continued Outreach and Education

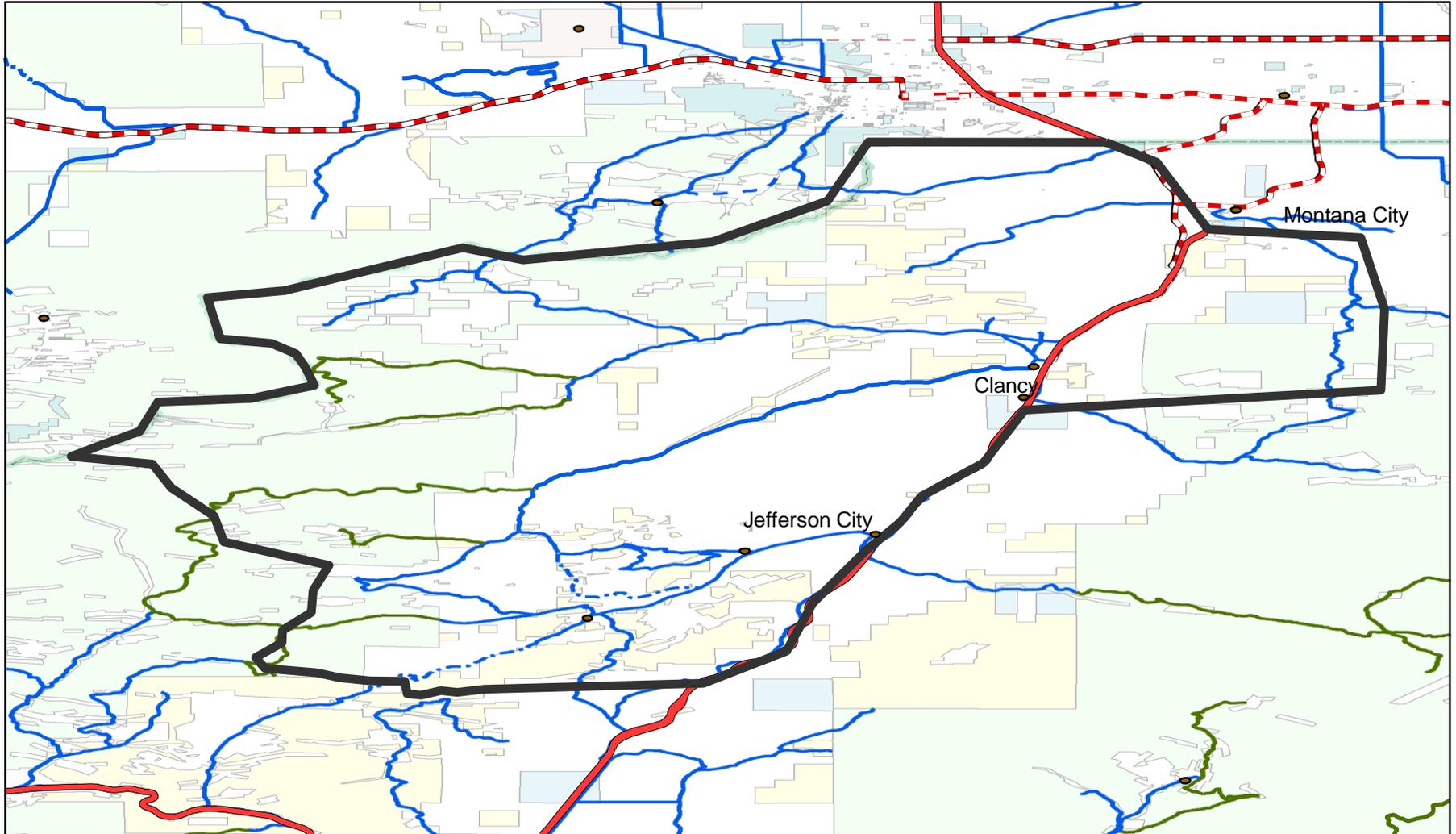
- ❖ Collaborate with other agencies on projects
- ❖ Participate in Upper Tenmile watershed and other committees
- ❖ Conduct workshops & festivals highlighting work in the Upper Tenmile



BLM Clancy Area WUI Fuels Reduction Project



Clancy Area WUI Fuels Reduction Project



2

0 2 4 8 Miles



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Legend	access_routes arc	OWN
Project Boundary	County Access Route	BLM
highways arc	Forest Service Access Route Gas	BOR
TYPE	Tax Road	Local Gov
Interstate Highway	Abandoned County Road Non-dedicated County Road	NPS
Interstate Ramp US / State Highway		Private
		State US
		Gov
	BFO Ownership	

Objective and Treatment

- Decision Record Signed June 26 2012
- Protect life and property by treating hazardous fuels on BLM administered lands
- Fuels treatment will be completed to minimize the adverse effects of wildland fire on up to 3,300 acres within the WUI areas of the Clancy Area WUI Fuels Reduction Project Boundary

2012 Pre-Treatment



2012 Post Treatment



Montana DNRC



Red Mountain Flume Chessman Reservoir Project

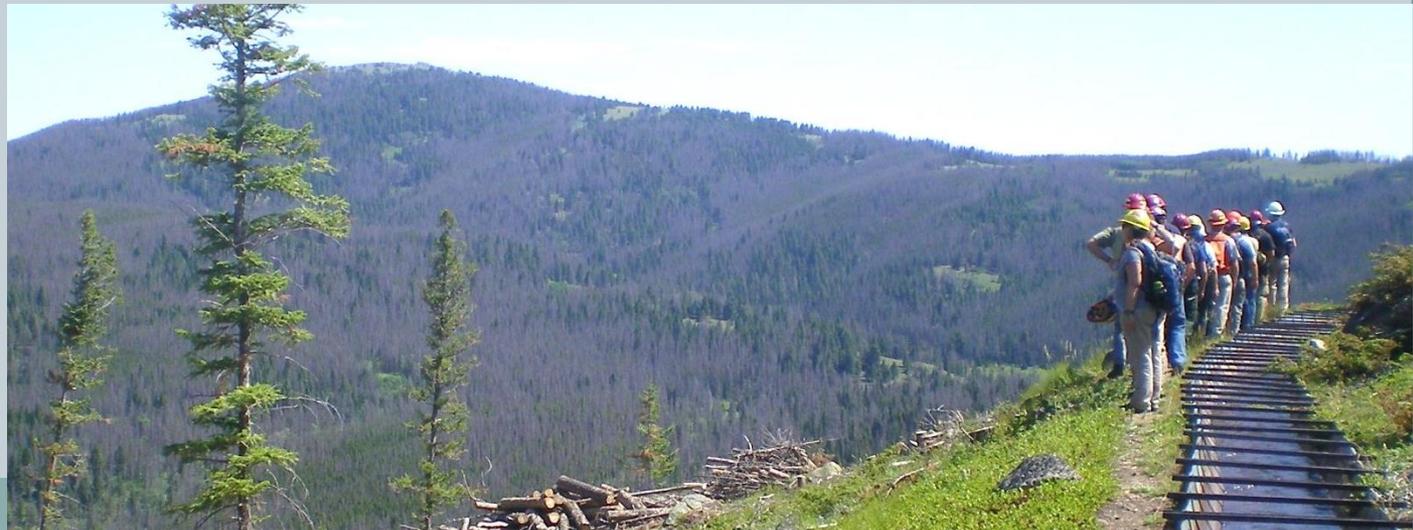
- Supplemental Project Agreement with the USFS
- Request for Proposal
- Timeline

Solutions



Partnerships

- Collaborative groups
- City of Helena
- County
- State
- NRCS
- EPA



Public Involvement



Tenmile Watershed Collaborative Committee

- Public Involvement
- Timeline
- Contact

Questions & Discussion

