

MT. JUMBO FOREST MANAGEMENT PLAN ON CRITICAL ELK WINTER RANGE



Presented by:

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Photo by: Eric Edlund

Figure 1: Photo of Mt. Jumbo taken in the early 1900's by Virginia foster



Christian Church



Methodist Church



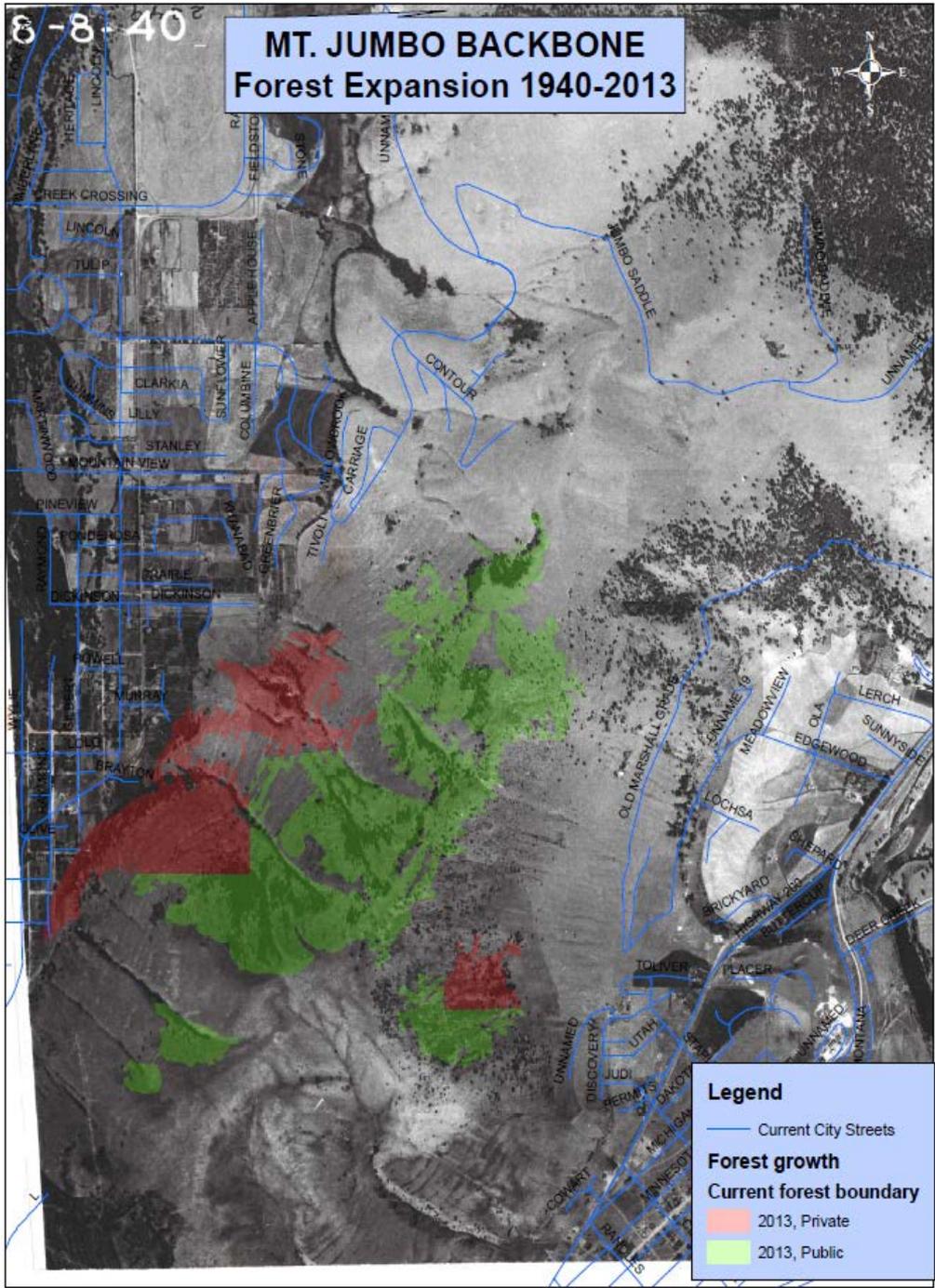
Episcopal



Central

6-8-40

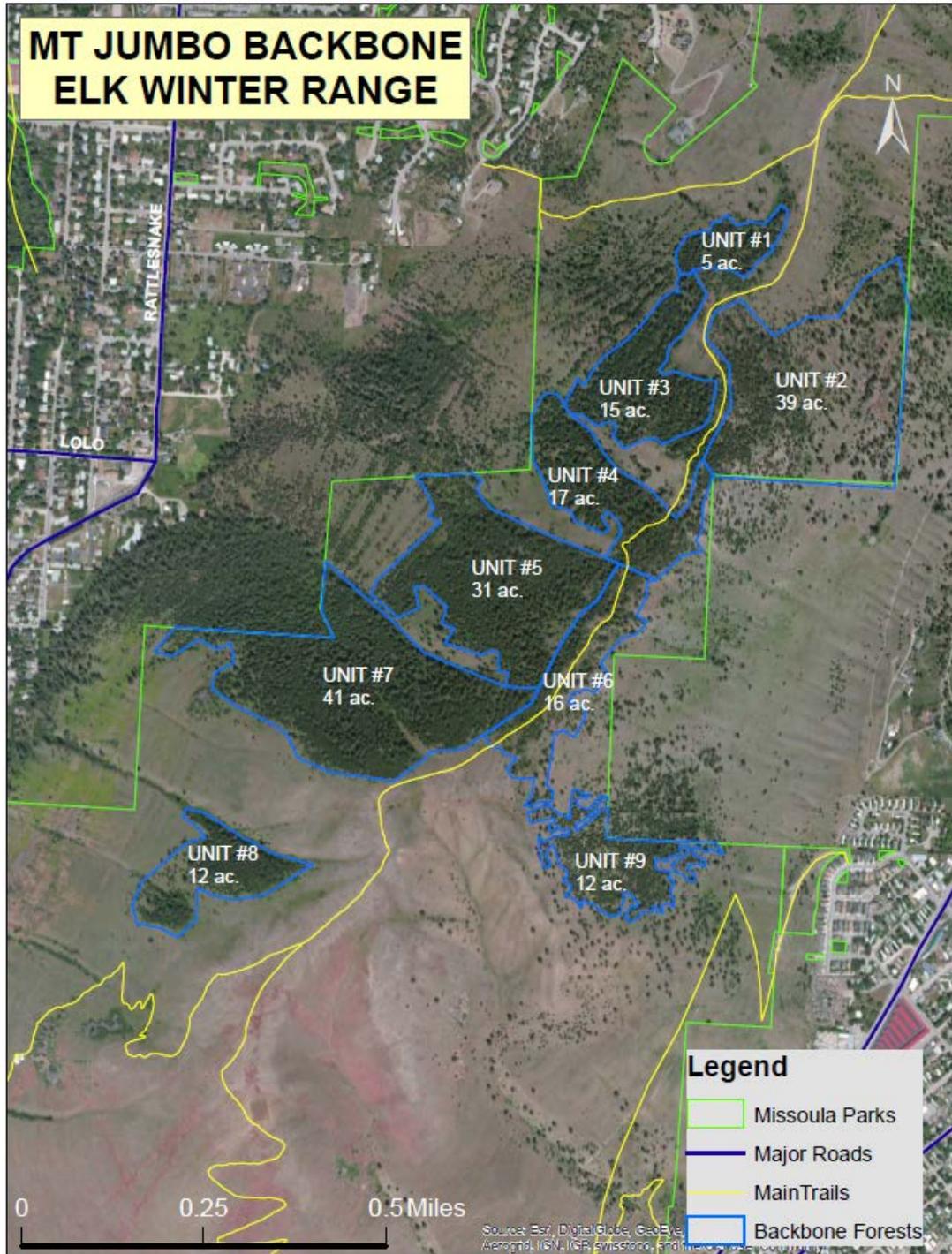
MT. JUMBO BACKBONE Forest Expansion 1940-2013



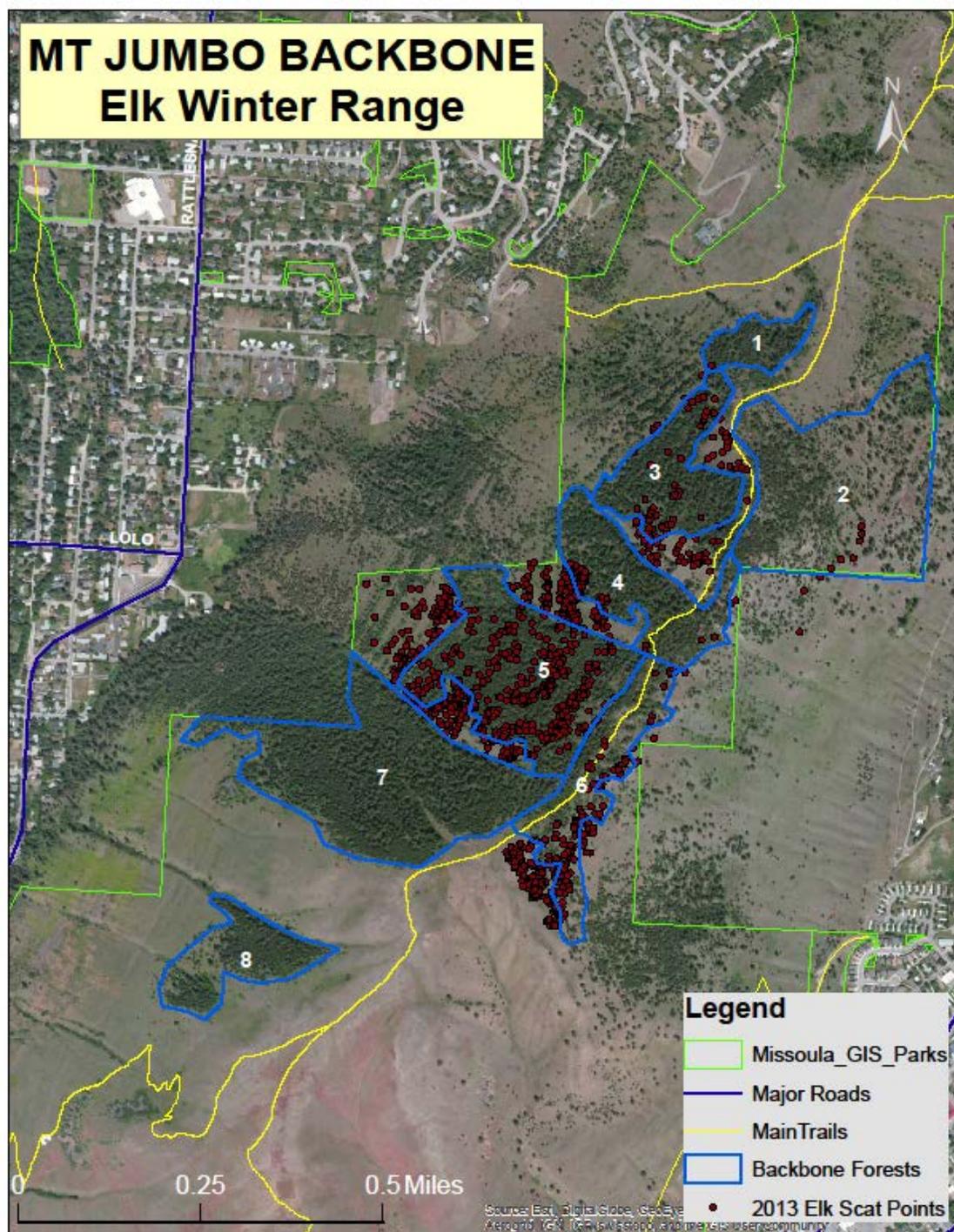
Legend

- Current City Streets
- Forest growth**
- Current forest boundary**
- 2013, Private
- 2013, Public

MT JUMBO BACKBONE ELK WINTER RANGE



MT JUMBO BACKBONE Elk Winter Range



Management Goals

Goal #1: Increase forest resistance and resilience to disease, fire and climate change

Goal #2: Increase species diversity in areas where diversity is low

- promote and/or actively establish an understory of native shrubs
- actively manage invasive species to prevent colonization of site following management activities.
- Promote ponderosa pines and where applicable quaking aspen and Western larch in areas dominated by Douglas-fir

Goal #3: Maintain and Improve wildlife habitat

- Maintain appropriate visual cover between forested areas and trails
- Maintain appropriate visual and snow intercept cover in elk bedding areas

Goal #4: Promote public safety

Goal #5: Manage public recreation to minimize impacts on habitat

- Remove and restore user created trails which infiltrate critical winter habitat for elk.
- Monitor public trespass into seasonally closed areas to gauge effectiveness of signage, outreach and enforcement on public compliance w/ the closure.
- Utilize data on elk use of the mountain to direct the future reroute of the Backbone trail.
- Periodic evaluations of Mt. Jumbo's seasonal closure may be necessary to ensure closure is addressing wildlife management priorities.

Goal #6: Remain cognizant of and mitigate negative visual aspects for forest management

Goal #7: Ensure forest management prescriptions do not negatively affect the Mt. Jumbo elk herd

- Establish an adaptive forest management strategy based upon analysis of elk distribution, habitat use, and response to previous forest management.

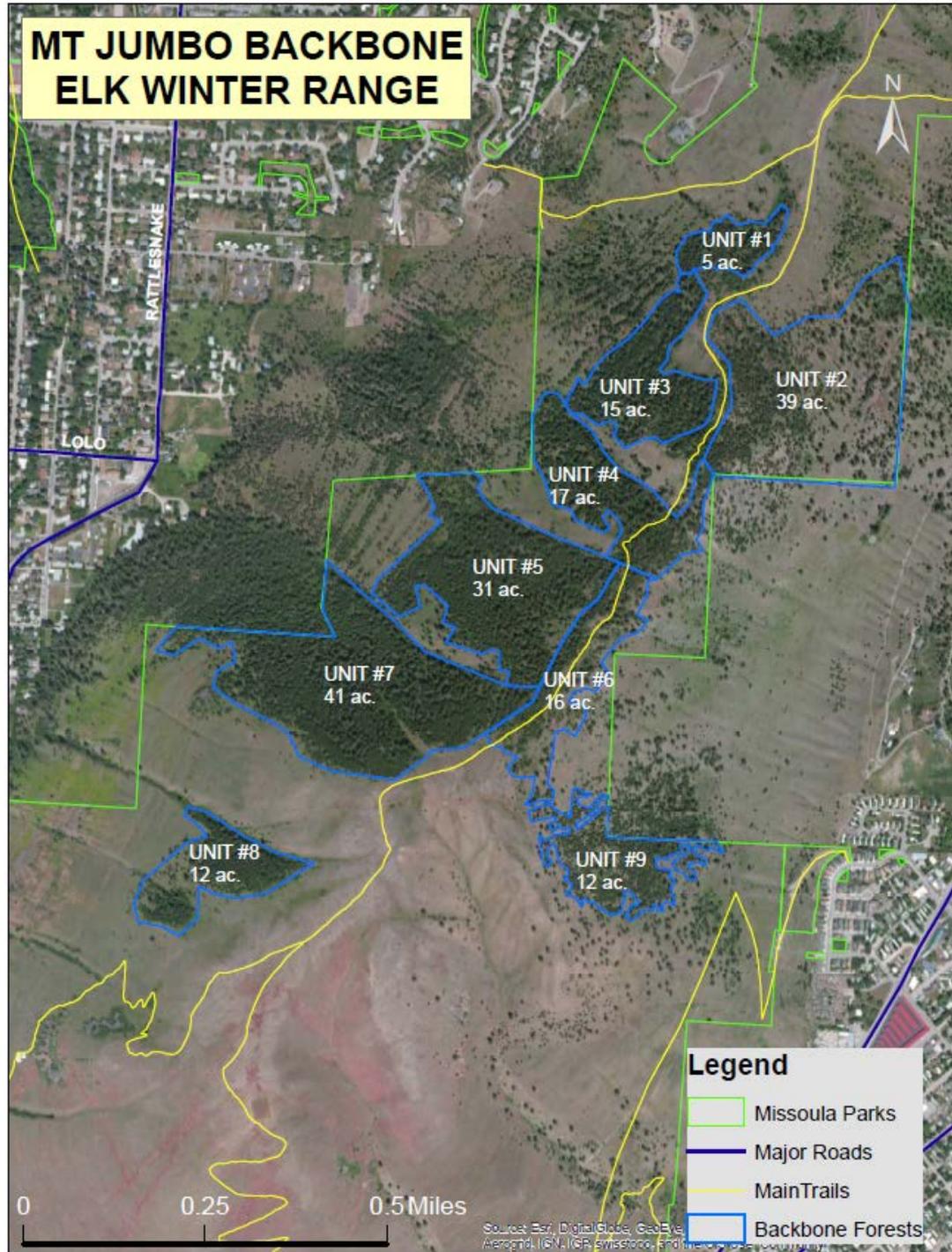
Treatment levels

- **Class A)** Low-intensity landscape-level treatments may occur annually but implementation should be spread across the entire Backbone area and be limited to approximately 1 ac./year (implementation strategy outlined below)
- **CLASS B)** More intensive, stand-level thinning prescriptions affect more than 10 acres at time and should be implemented across multiple years to reduce both visual impacts and potentially negative effects on wintering elk Implementation outlined in “phases” which do not exceed treating more than 1/3 of backbone forests.

Class A Treatments: *Landscape Level Thinning Prescriptions, Annual implementations (limited to a total of 1 ac./year)*

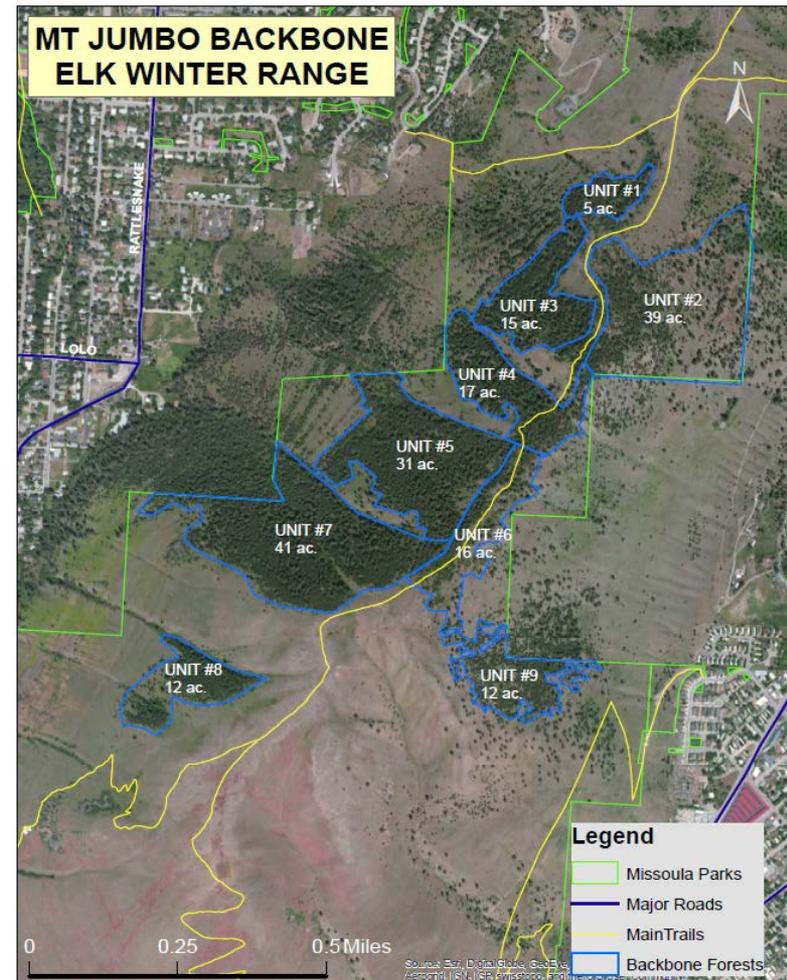
- In areas which were forested in 1940 remove small diameter ladder fuels under mature trees greater than 18" DBH.
 - Daylighting increase their vigor, competition and improve their ability to withstand natural disturbances.
 - Cautious implementation will ensure that changes in stand densities are negligible across years but cumulative changes across decades will be recognizable.
- Selectively cut suppressed trees within Units #6 & 8 to improve stand structure and reduce competition. Long-term goal for Units #6 & 8 is to facilitate forest expansion

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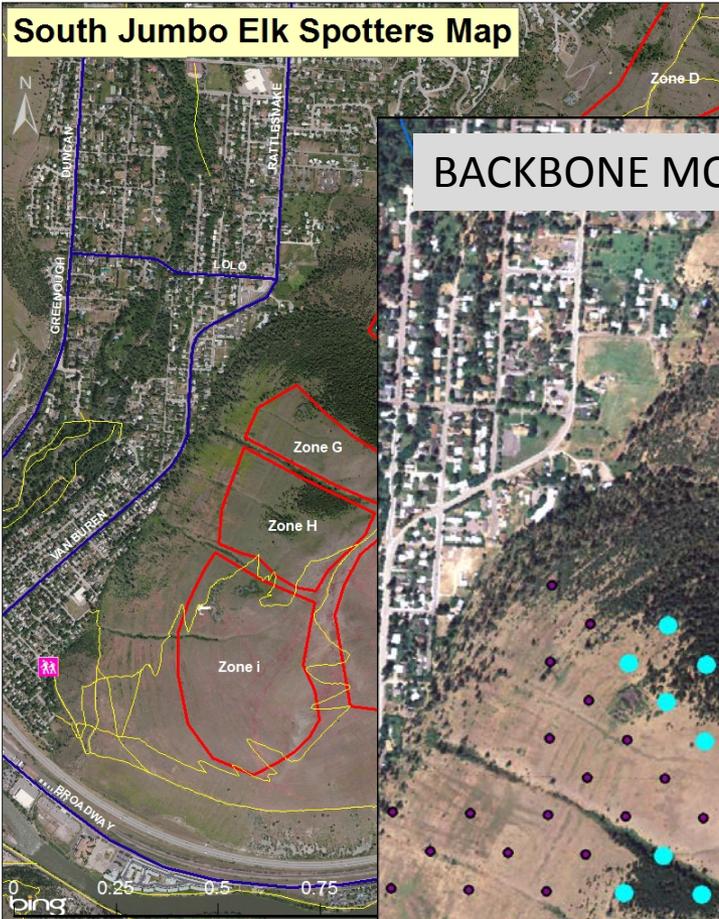
CLASS B: Phase 2, Stand-Level Thinning Prescriptions, approximate implementation between years 10-15 (2024-2029):

- Thin forests in Units #5 & 7
 - 8 acres of Unit #5 was treated in Phase 1. complete cutting 23ac. of Unit #5
 - Treat up to 10 ac. In Unit #7.
 - Data collected on elk use of Unit #7 will direct which 10 ac.
- Reentry into Unit #2
 - Thinned in 2010; reduce density in West ½ restore grasslands East ½
 - Maintain open grasslands and open forests; remove ladder fuels
- Reenter stands designated as fuel breaks in Phase 1 to remove build-up of surface fuels.

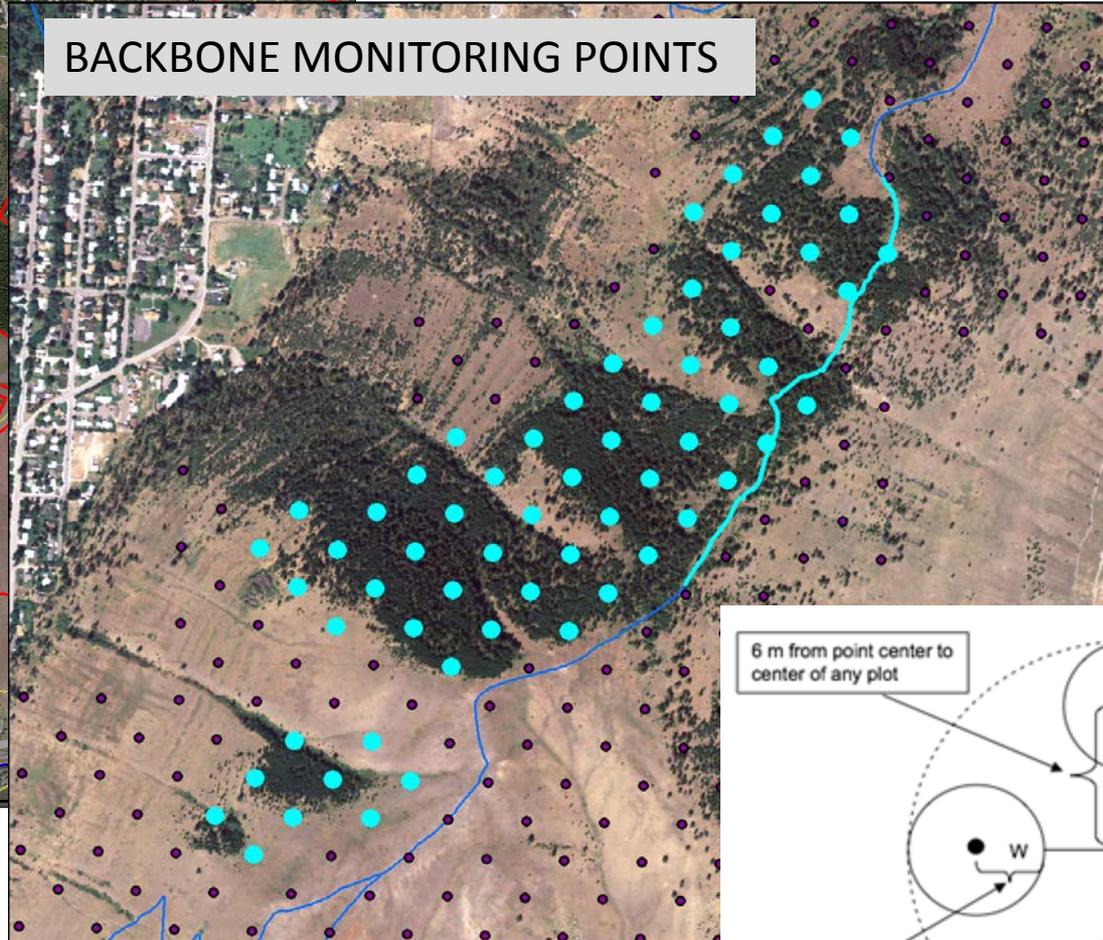


Research

South Jumbo Elk Spotters Map



BACKBONE MONITORING POINTS



6 m from point center to center of any plot

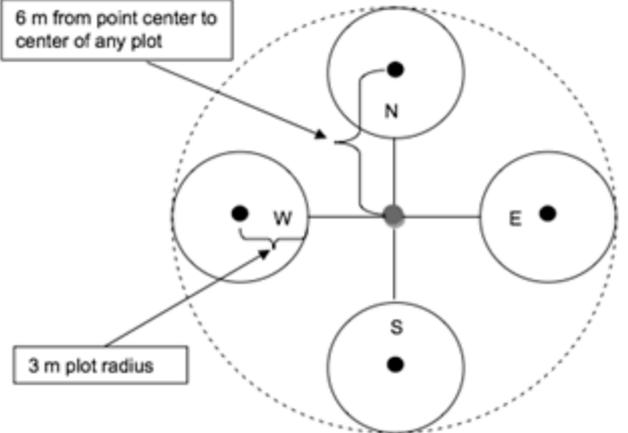


Table #1 Cost of Phased Thinning: Includes Contracted services and Conservation Lands employee labor only

PHASE 1	ACRES	COST/AC.	TOTAL COST	FUNDING SOURCE
Units # 3 & 4	32	\$555	\$17,760	Paid at 100% by DNRC grant
Fire breaks	20	\$900	\$18,000	Funding not determined
PHASE 2				
Units # 5 & 7	33	\$800	\$26,400	Funding not determined
Reentry Unit #2 west	20	\$350	\$7,000	Funding not determined
Reentry Unit #2 east	19	\$200	\$3,800	CL employee labor
PHASE 3				
Unit # 7	31	\$800	\$24,800	Funding not determined
SMALL-SCALE ACTIVITIES				
Unit # 8	12	\$450	\$5,400	CL employee labor
Unit# 6	16	\$450	\$7,200	CL employee labor
TOTAL PROJECT COST IN 2014 DOLLARS:			\$106,360	

Table #2 Cost of Rehabilitation: Includes supplies/materials and contracted services only

PHASE 1	QUANTITY	UNIT	COST	TOTAL COST	FUNDING SOURCE
Seed for disturbed areas	400	lbs.	\$14	\$5,600	CLM budget
Weed control	2	weeks	\$5,000	\$10,000	CLM budget
PHASE 2					
Seed for disturbed areas	300	lbs.	\$14	\$4,200	CLM budget
Weed control	3	weeks	\$5,000	\$15,000	CLM budget
Native shrubs (if required)	3000		\$3	\$9,000	CLM budget
PHASE 3					
Seed for disturbed areas	600	lbs.	\$14	\$8,400	CLM budget
Weed control	4	weeks	\$5,000	\$20,000	CLM budget
Native shrubs (if required)	3000		\$3	\$9,000	CLM budget
SMALL-SCALE ACTIVITIES					
Seed for disturbed areas	200	lbs.	\$14	\$2,800	CLM budget
Weed control	3	weeks	\$3,000	\$9,000	CLM budget
TOTAL PROJECT COST IN 2014 DOLLARS:				\$93,000	

THANK YOU

