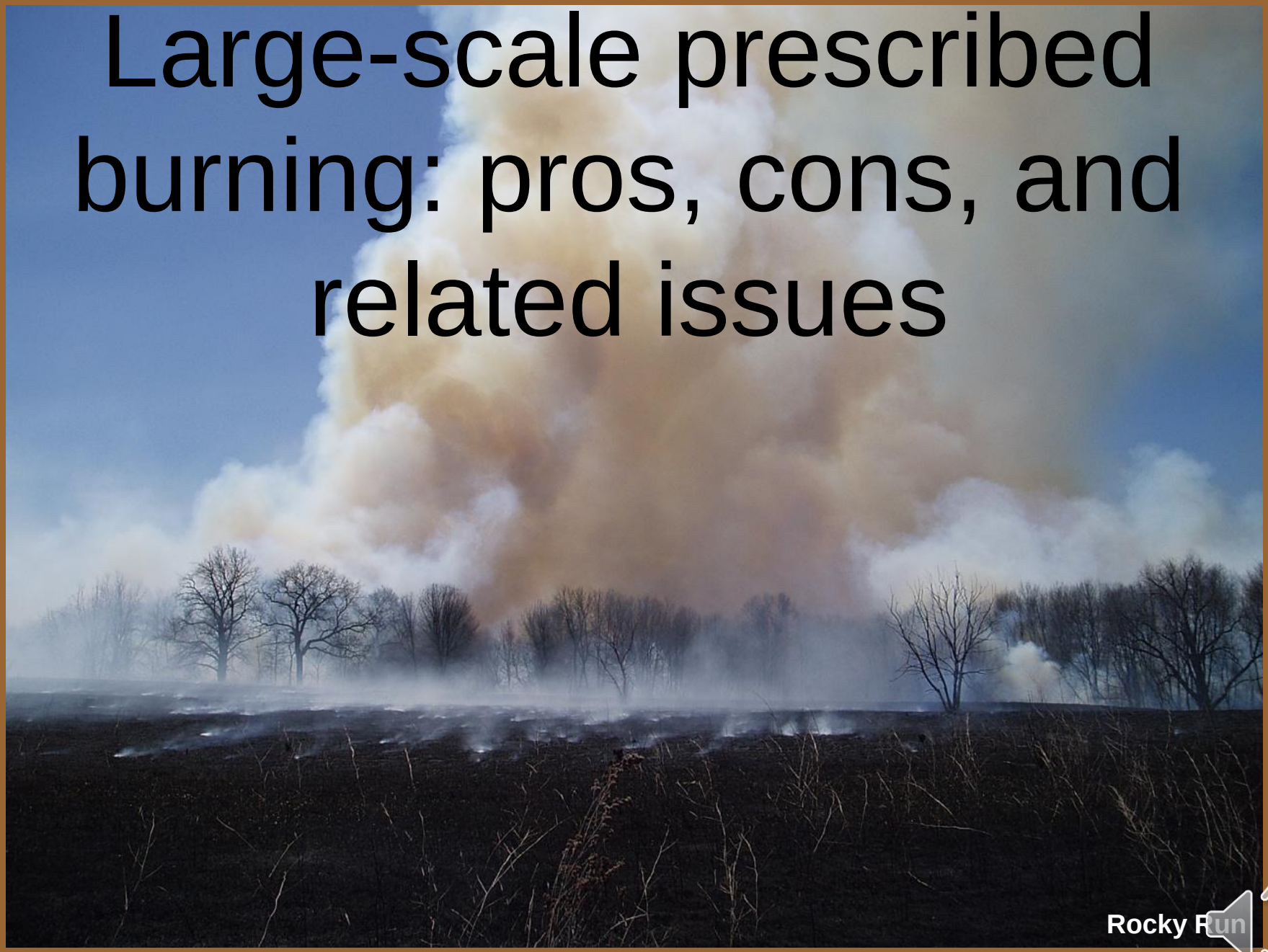
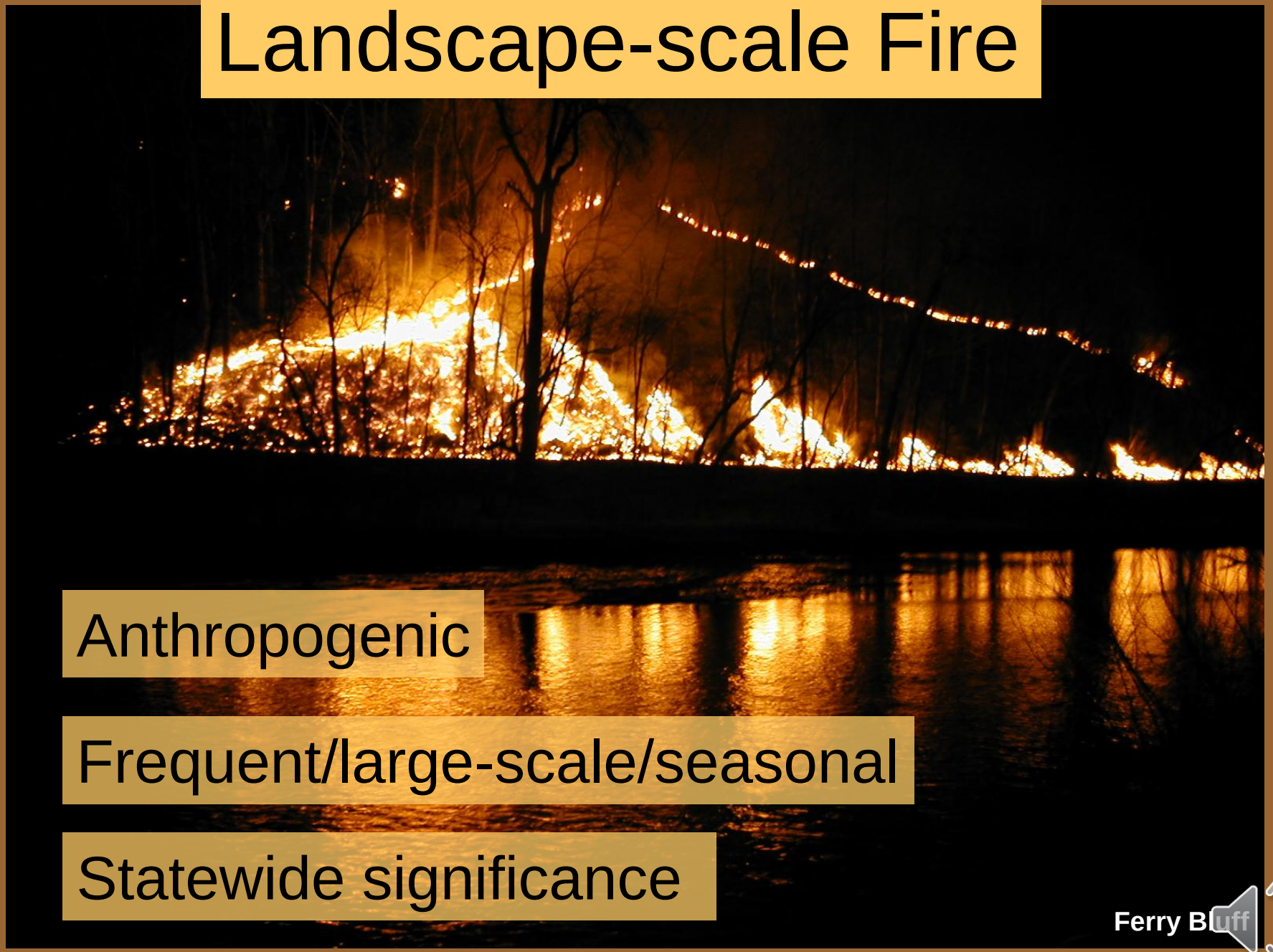
Large-scale prescribed burning: pros, cons, and related issues



Our Natural Heritage

Landscape-scale Fire



Anthropogenic

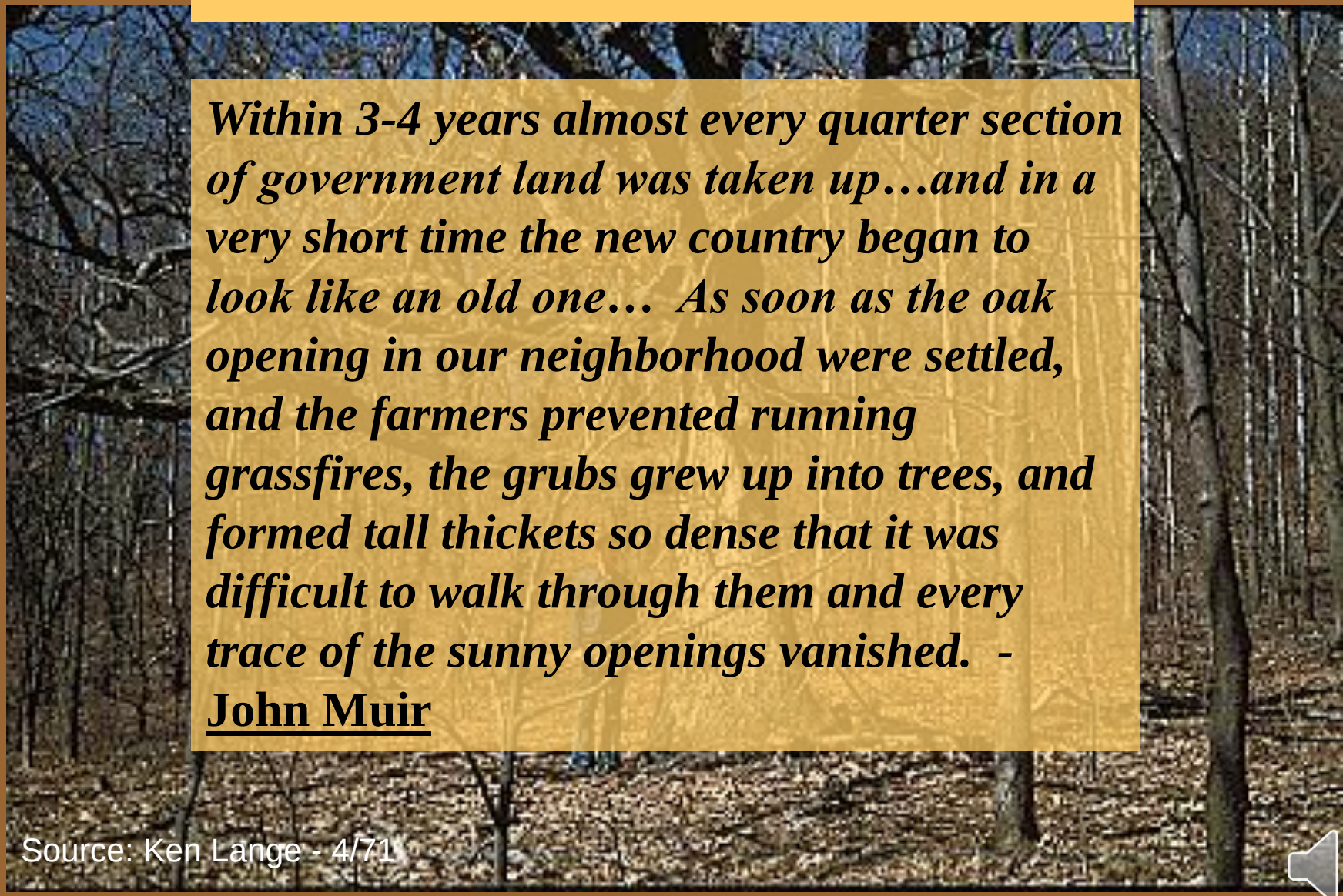
Frequent/large-scale/seasonal

Statewide significance

Ferry Bluff

Active Fire Suppression

Phase 1: Oak Release

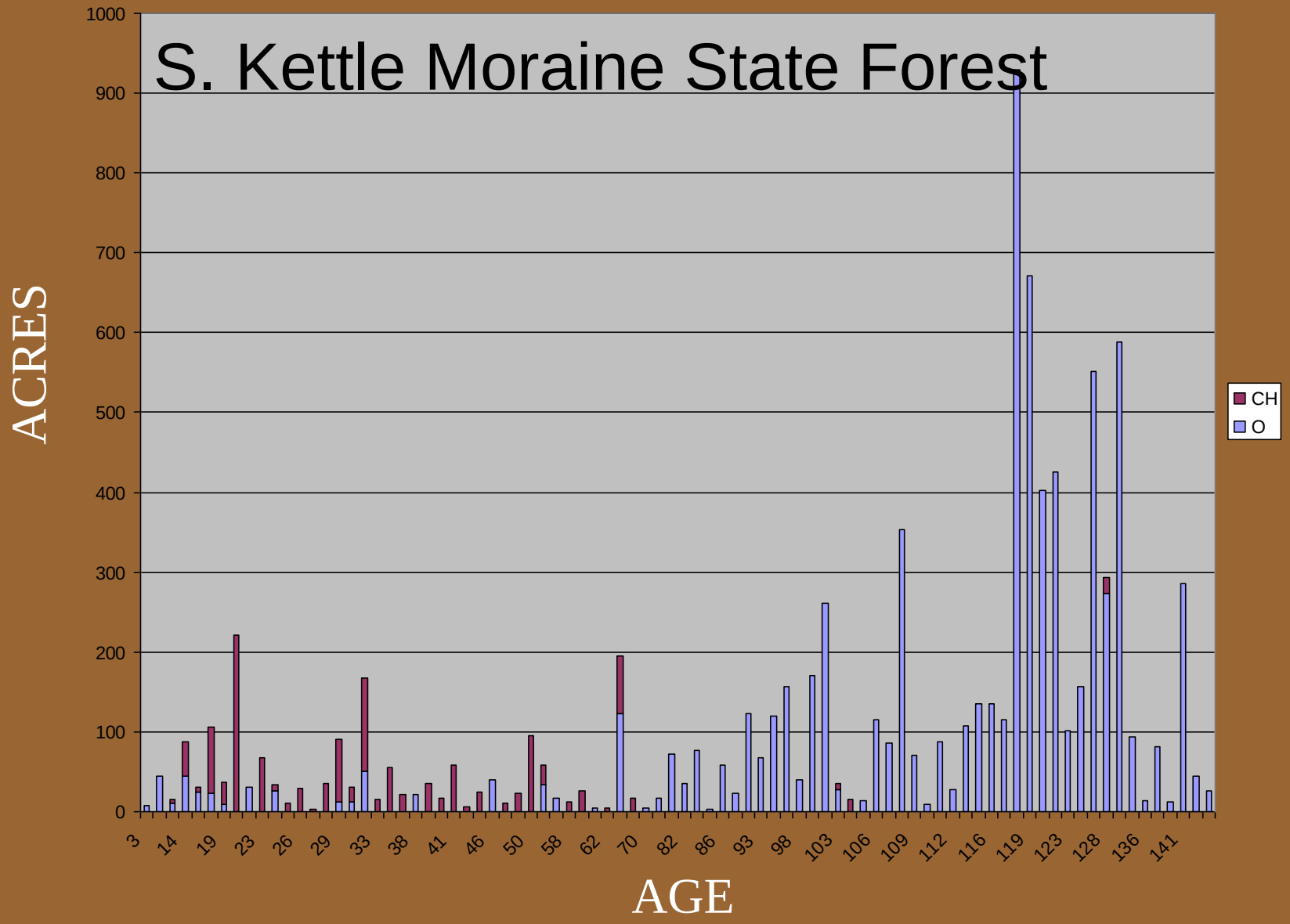


Within 3-4 years almost every quarter section of government land was taken up…and in a very short time the new country began to look like an old one… As soon as the oak opening in our neighborhood were settled, and the farmers prevented running grassfires, the grubs grew up into trees, and formed tall thickets so dense that it was difficult to walk through them and every trace of the sunny openings vanished. -

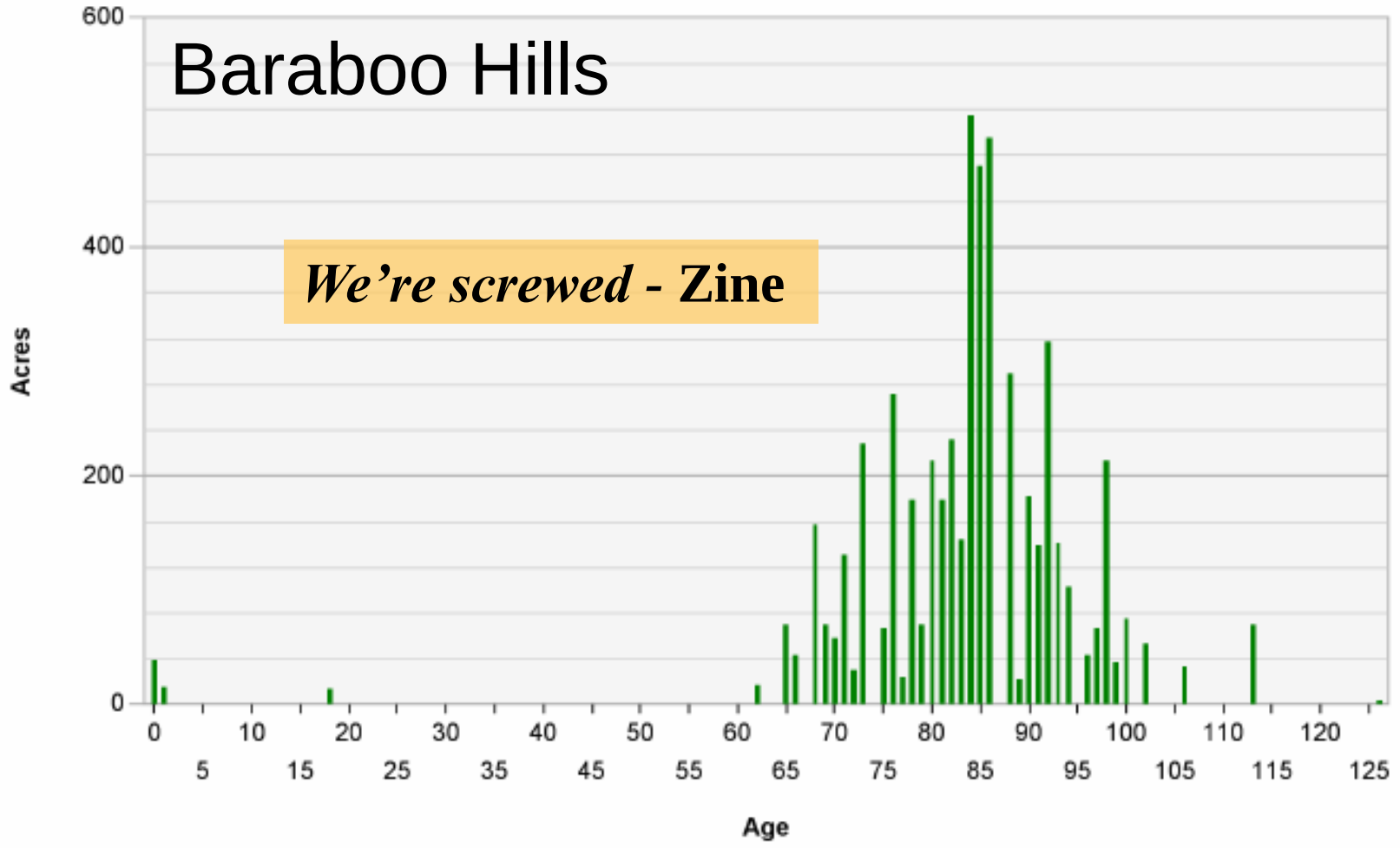
<u>John Muir</u>

Source: Ken Lange - 4/71

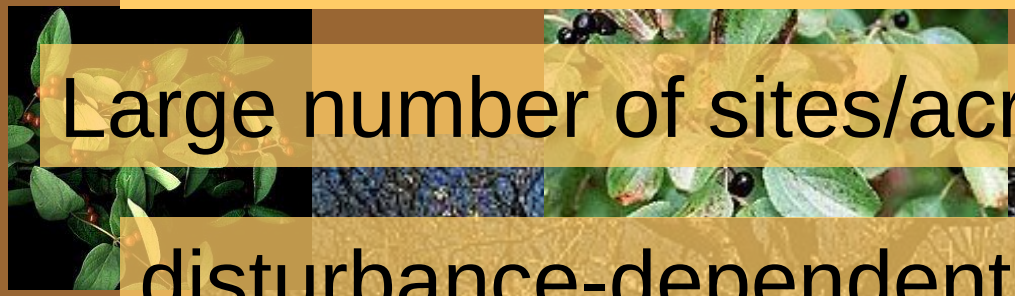
Phase 2: Conversion



Phase 2: Conversion

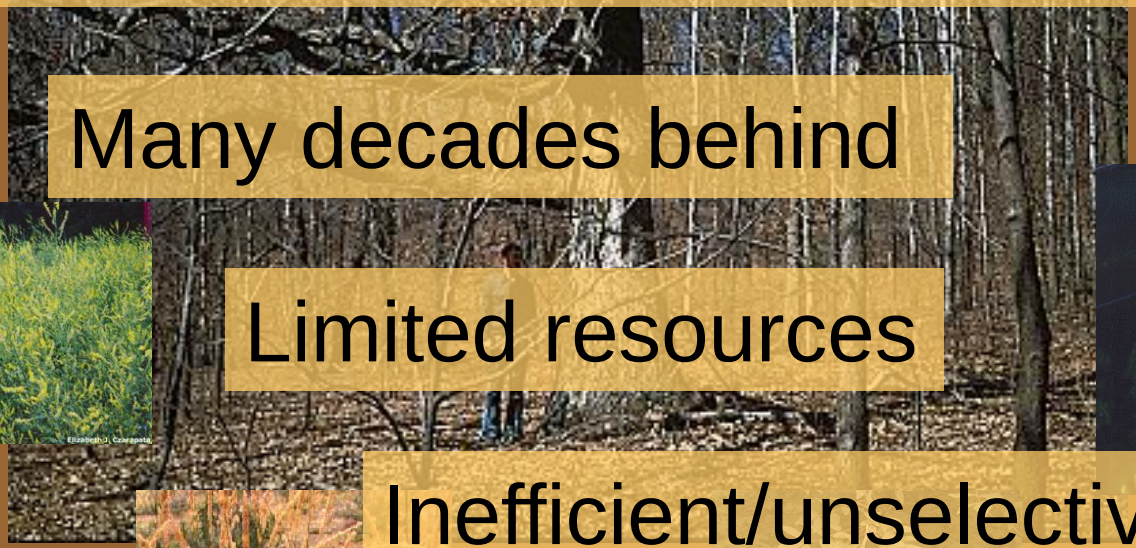


Landscape-scale Invasives



Large number of sites/acres

disturbance-dependent communities



Many decades behind

Limited resources

Inefficient/unselective tools

PB w/o the grazing

Source: Michael Clayton, Stephen L. Solheim, Kenneth J. Sytsma, Paul Berry & UW Herbarium, Ken Lange - 4/71

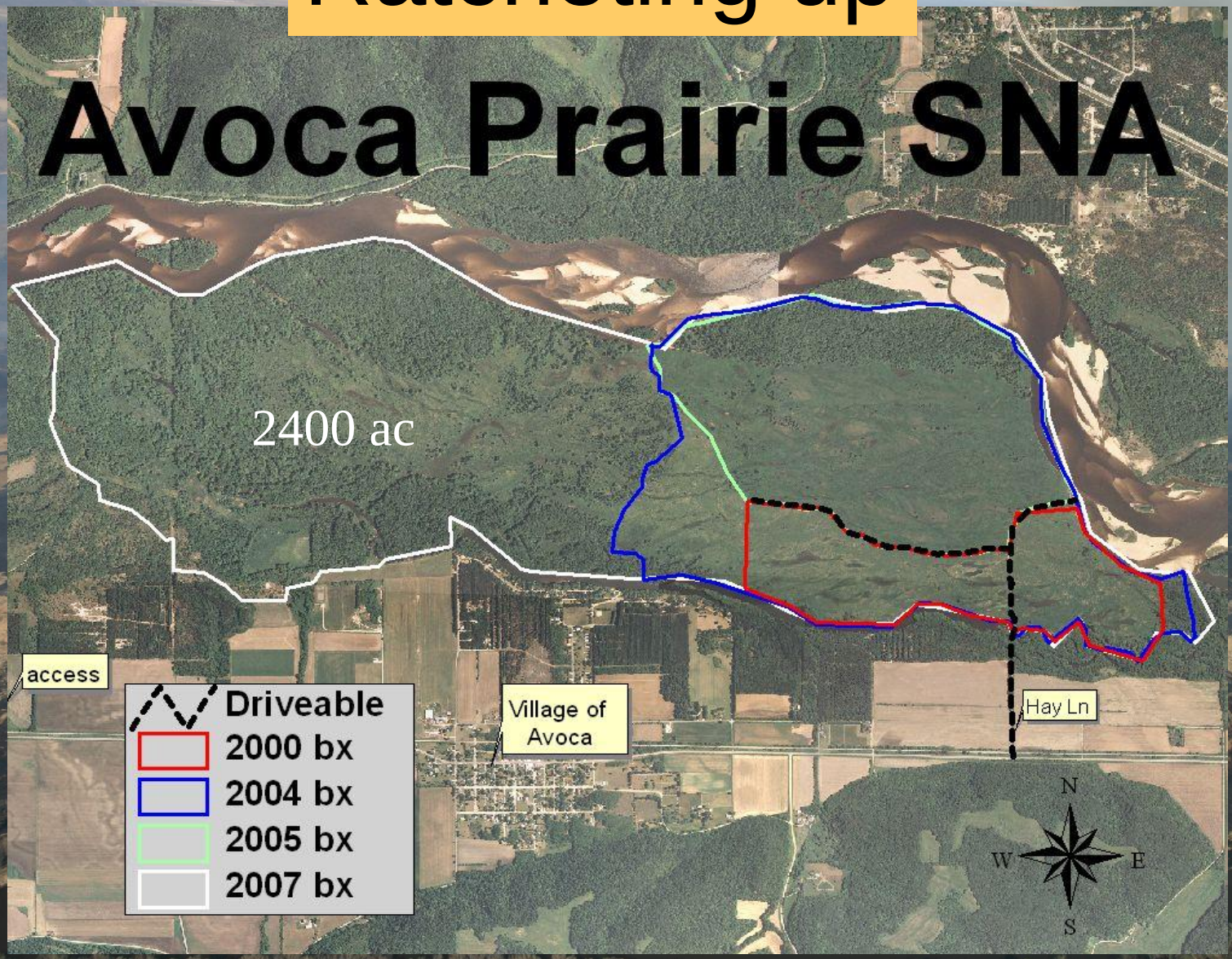
Ticking clock

Not burning nearly enough acres

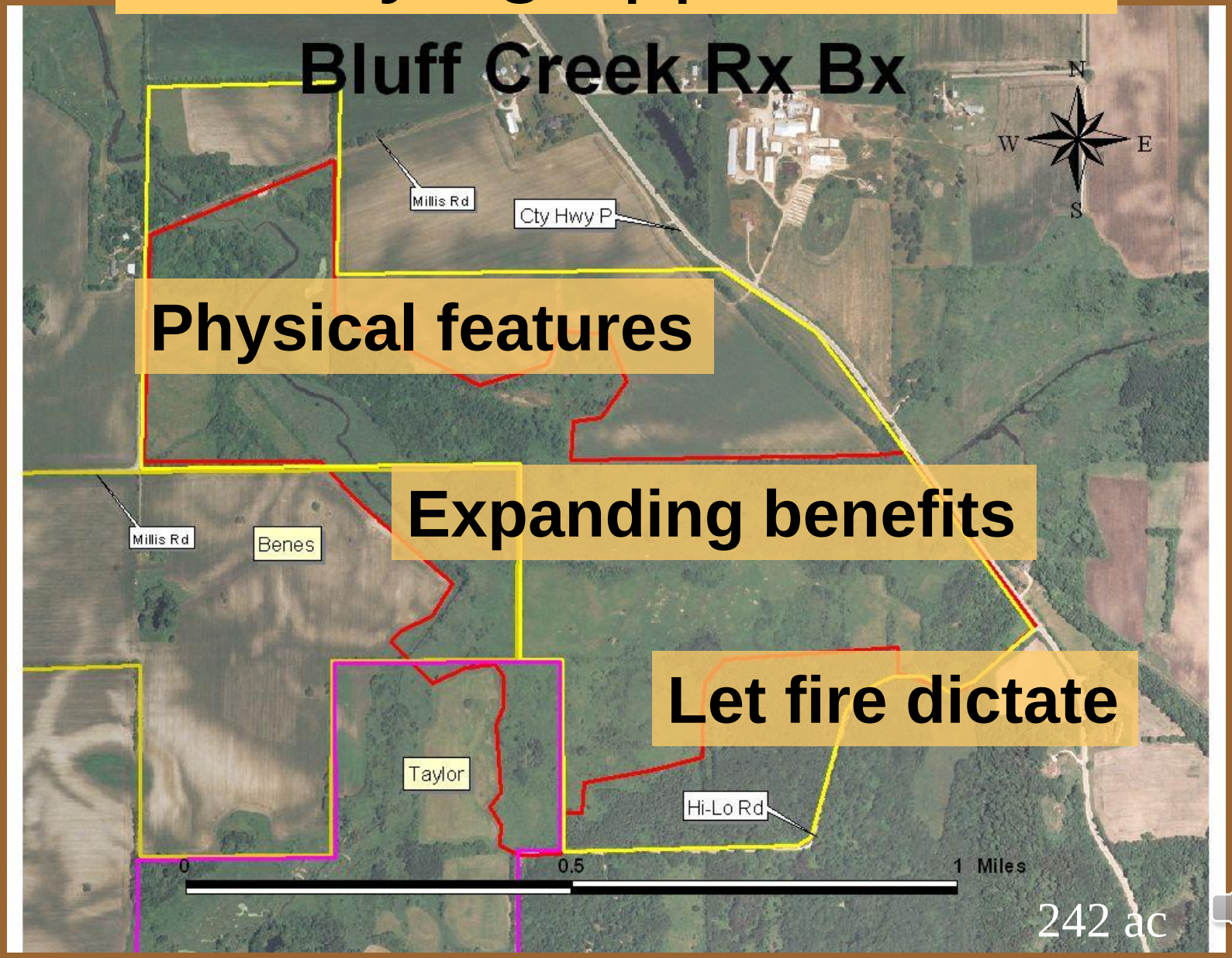
Not likely to get any more burn days

Not likely to get any more resources

Ratcheting up

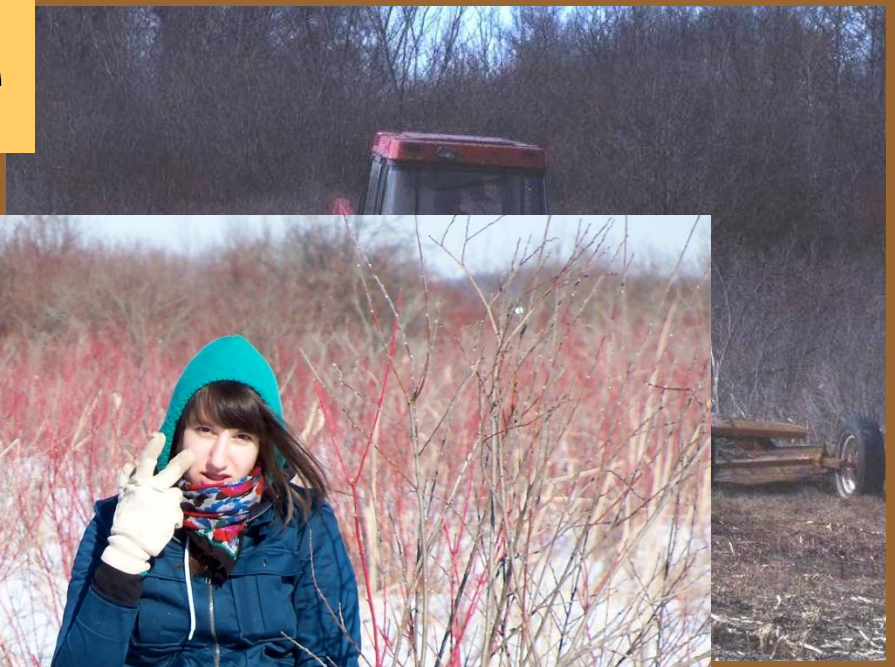


Identifying opportunities



Economics: scale

Economics: time

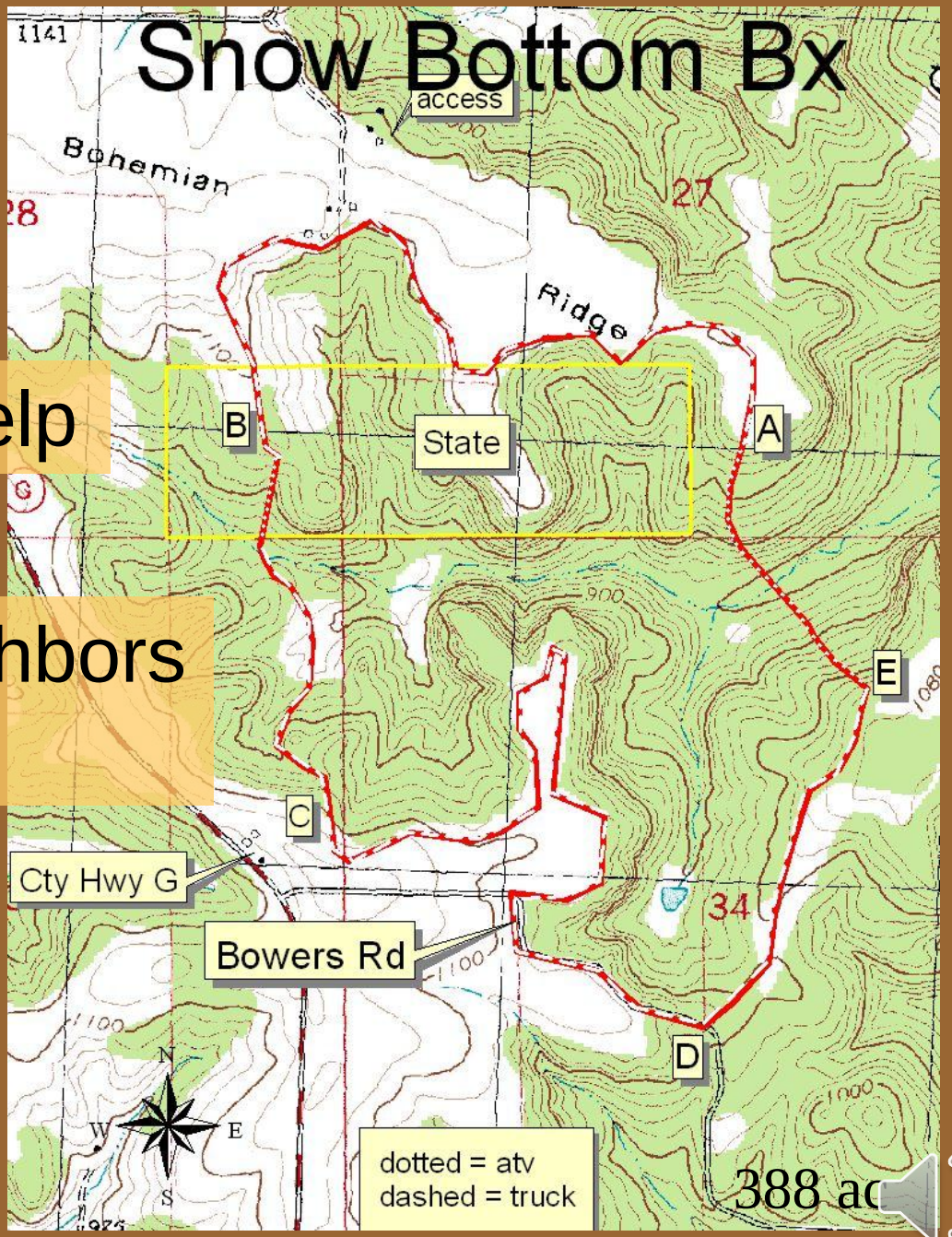


Economics: good breaks

Cooperative burns

Need additional help

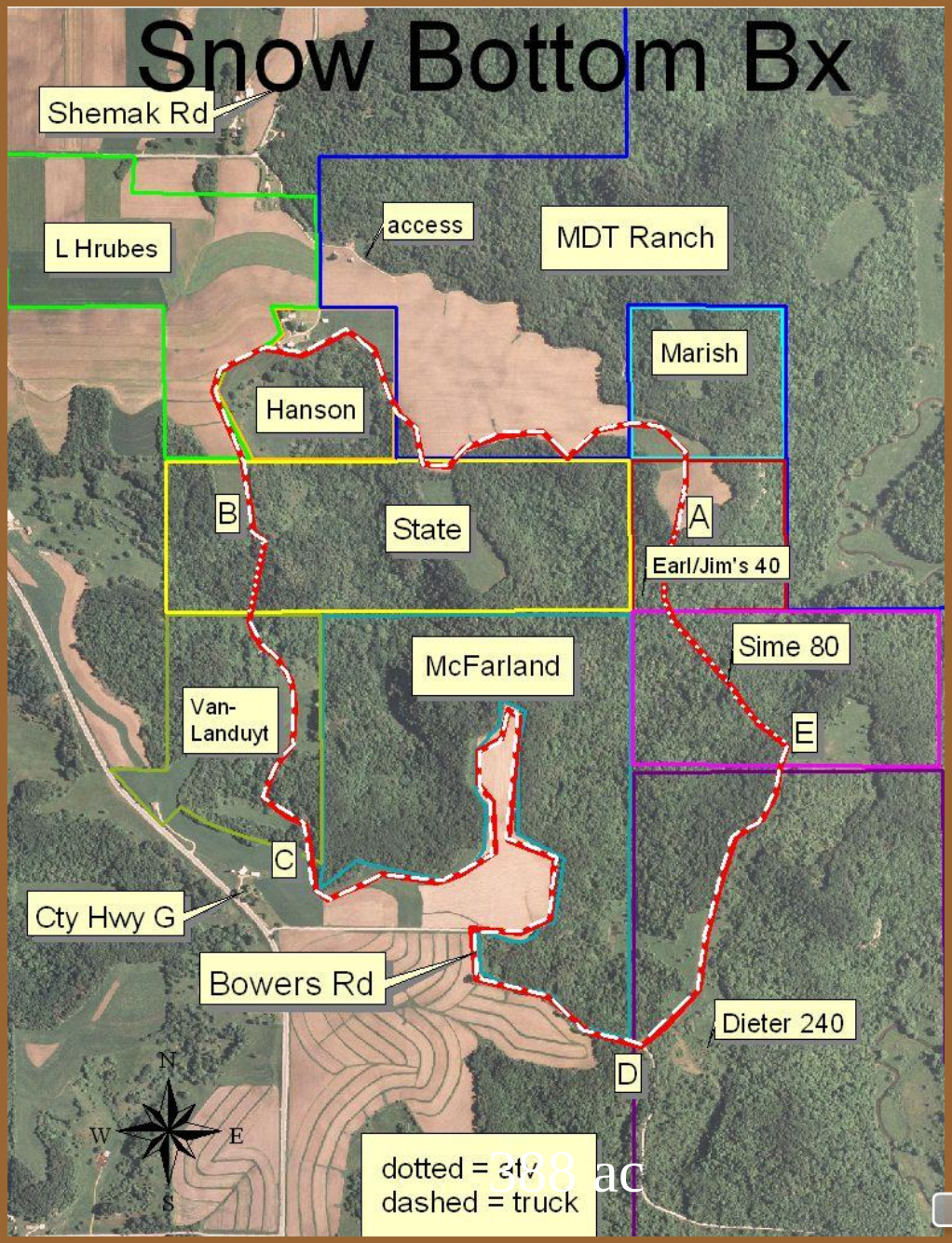
Incorporating neighbors property



Cooperative burns: the upside

Productive

MFL



Cooperative Burns: the downside

Good relations

277 ac

Dane Co Airport

Smoke production/Air quality

Larger burns = more smoke

Ozone action days

Sensitive receptors

Good conditions

Ignition patterns

Roads

Get it lit

Planning

Avoca Prairie - Spring 08 Prescribed burn needs

More up front work

Fire Control

Line bosses

L				notes
			d	proceed to light 2A; need compass; extra clothes
				proceed to 3A once 2A and 1C are clear
1C	2	2 drip torches; fusees	Degen, Fayram	join 4A; extra clothes
1D	2	3 drip torches; fusees	Wallace, Werner	proceed to S end of 2D by boat to anchor line between rivers channels
2A	0			same as 1A crew; end up joing 4A
2B	2	2 drip to	, Roth	proceed E until meet w/2C; then proceed to 4B via boat
2C	1	2 drip to		light E to W (begin at hay Ln); then proceed to 4B via boat
2D	2	3 drip to		4 total: 2 lighting, 2 from 1D tying in SE corner
3A	0			same as 1B crew; end up joining 4A; extra clothes
3B	0	3 drip torches; fusees		2 people from 2D crew
4A	1	Bosco pumper; Tower pumper, ATV	Flansburgh	1 atv/pumper, 1 hose, 1 lighter on line, 1 to light interior; rest monitor line/mop-up
4B	1	1 torch plus refill; 2 WM pumpers and atv's	Cornell	1 light; 1 truck, 1 atv/pumper; 1 hose (1 atv, 1 pumper on W side of creek)
Bx boss	1	radios		d near power lines
N side	2	Lone Rock FD Pumper un		d on N side of river; location to be determined; hand crew as backup?
boats	2	boats, torch fuel?		, 1 for Avoca Lk (cabin patrol); see Zine for details
TOTAL	**20**			

Possibly staffing:

#	program
8	SNA
3	WM - Tower Hill (Ziegler, Cornell, Roth)
2	WM - Boscobel (fletch, golds)
1	FC - Brad Hutnik
1	boats - Brad Simms, Bill Ishmael
3	Dave Lowe, Greg Kidd, Dan Wallace
2	Degen, Anderson
2	Lone Rock FD - positioned on N side of river
22	**TOTAL**

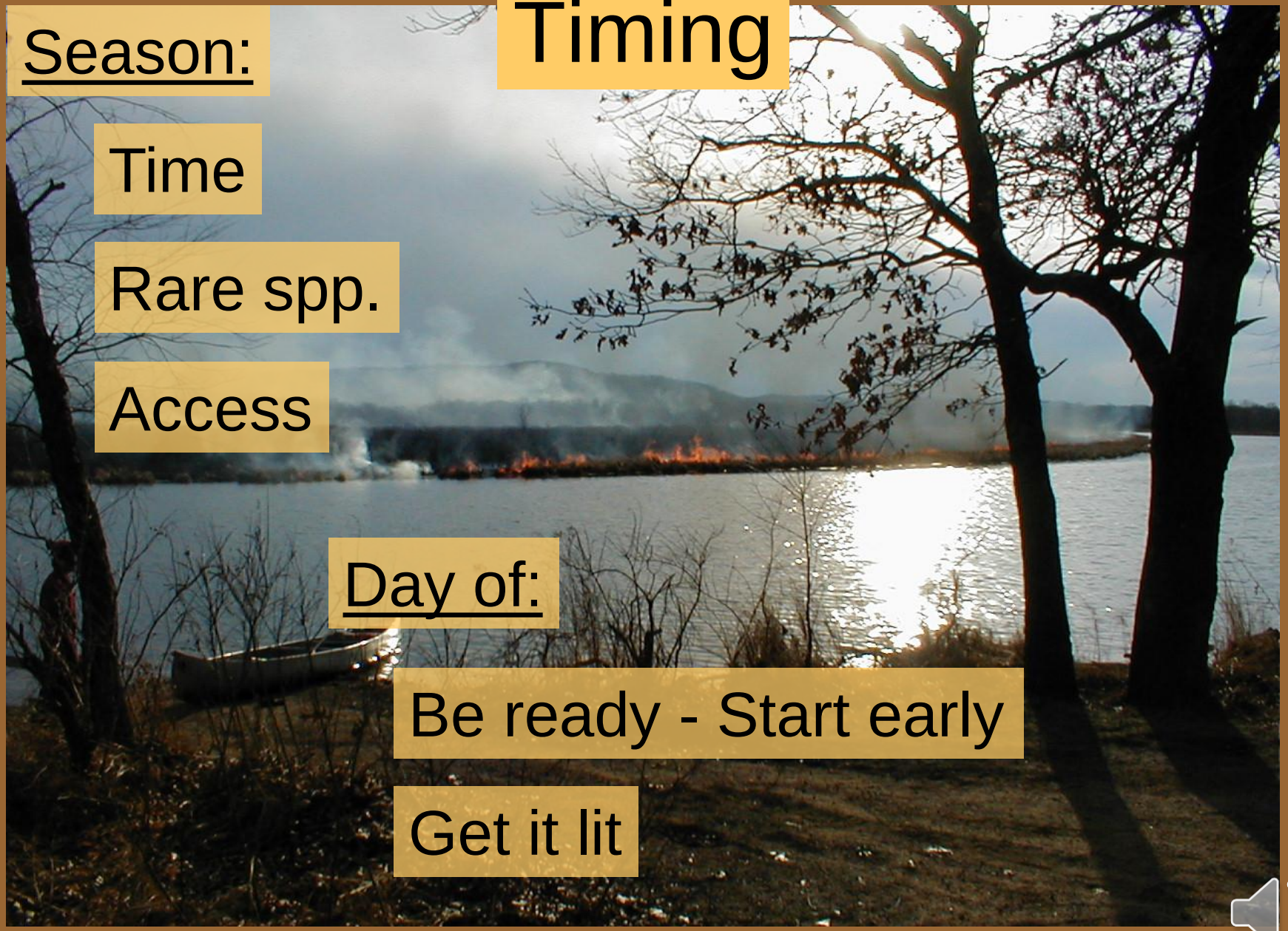
possible back up crew: DNR hand crew (7); Richland Co Foresters (

Be ready

Major Escape Contingency

Public Safety

Timing



Season:

Time

Rare spp.

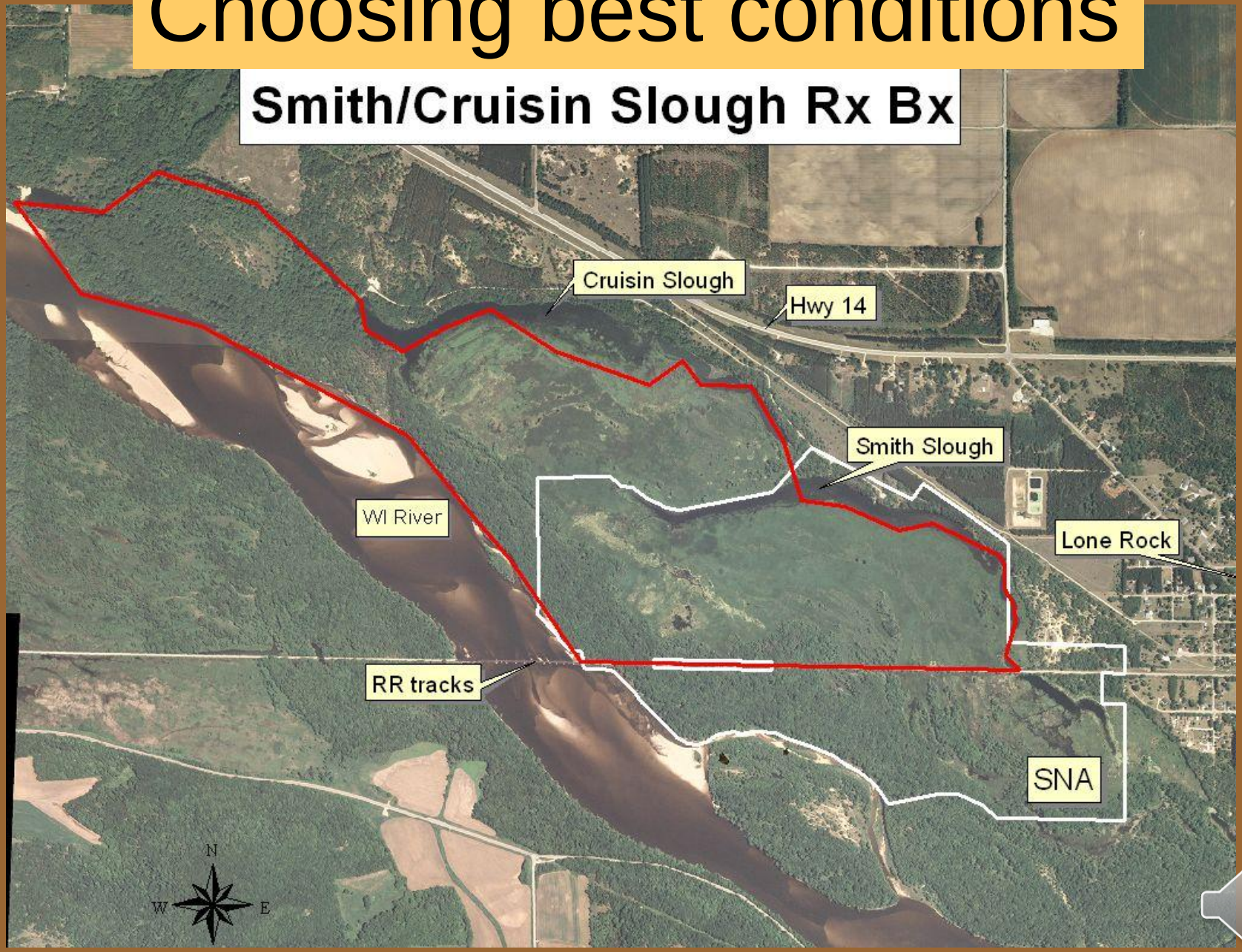
Access

Day of:

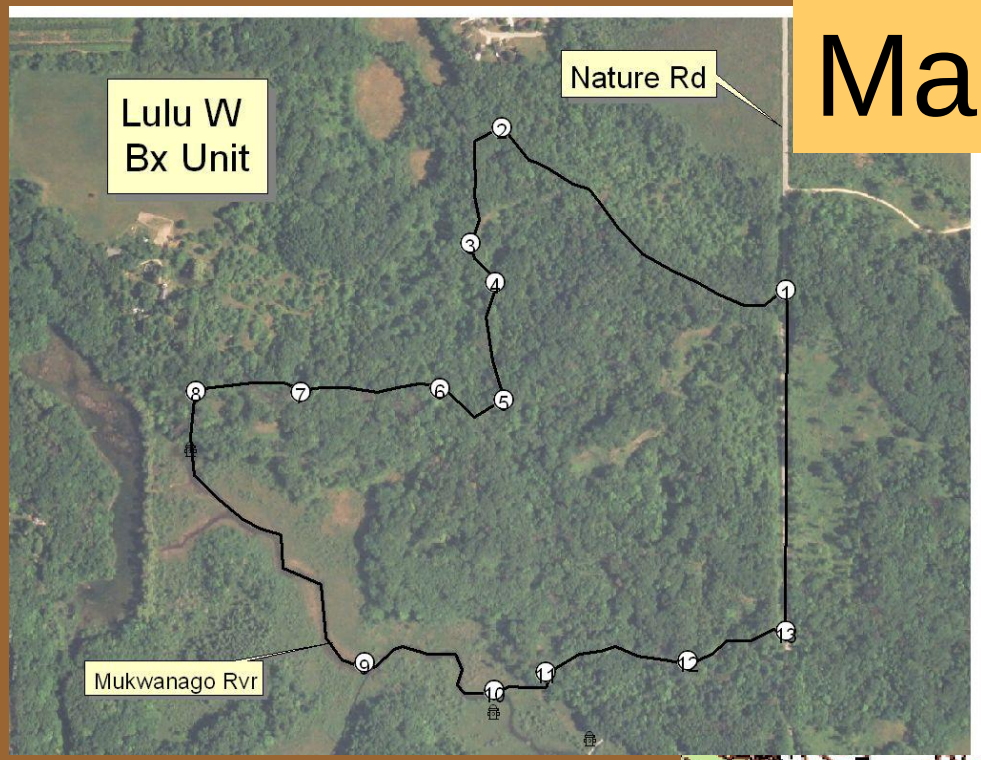
Be ready - Start early

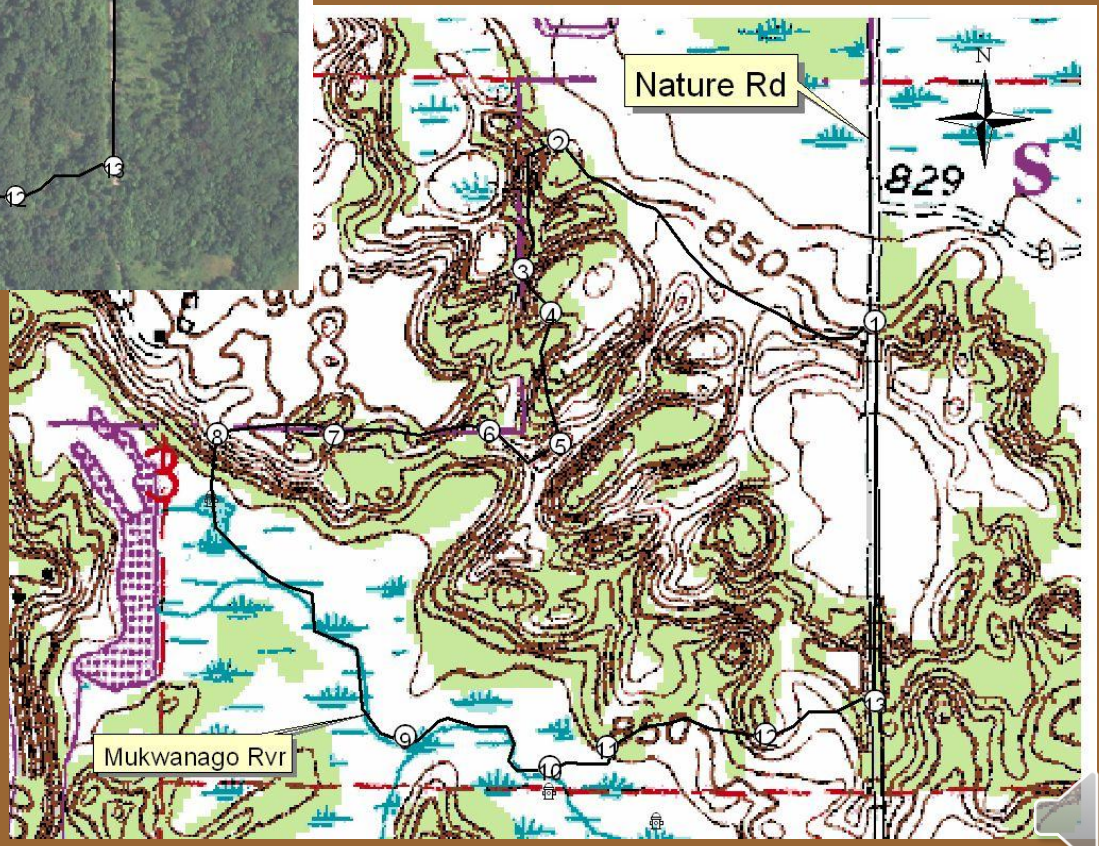
Get it lit

Choosing best conditions



Maps



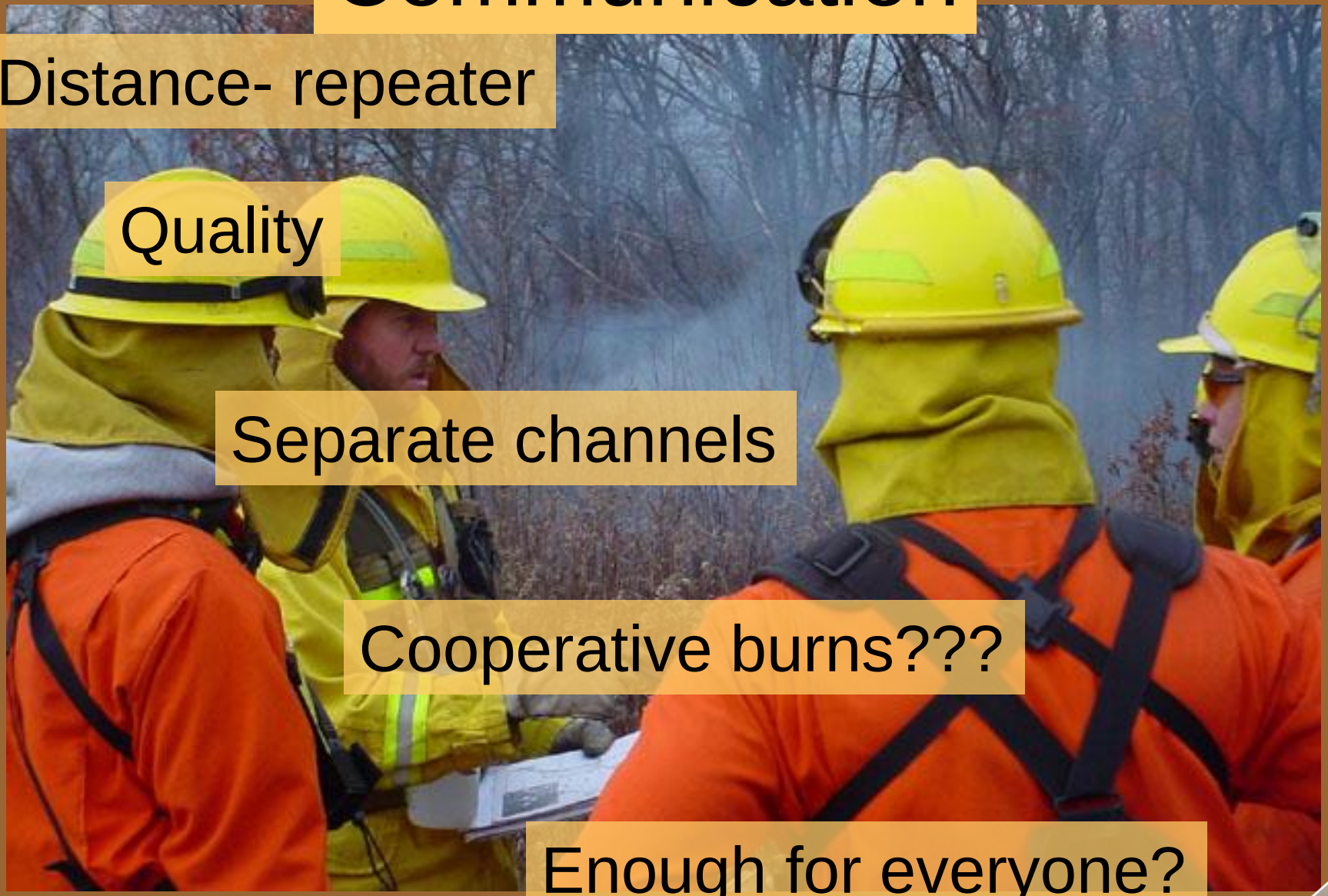


Aerial and topo

Line Markers

Hazards

Communication



Distance- repeater

Quality

Separate channels

Cooperative burns???

Enough for everyone?

Monitoring line

Adjacent fuels

A lot of fire

Monitoring Line

Smoke impairment

Topography

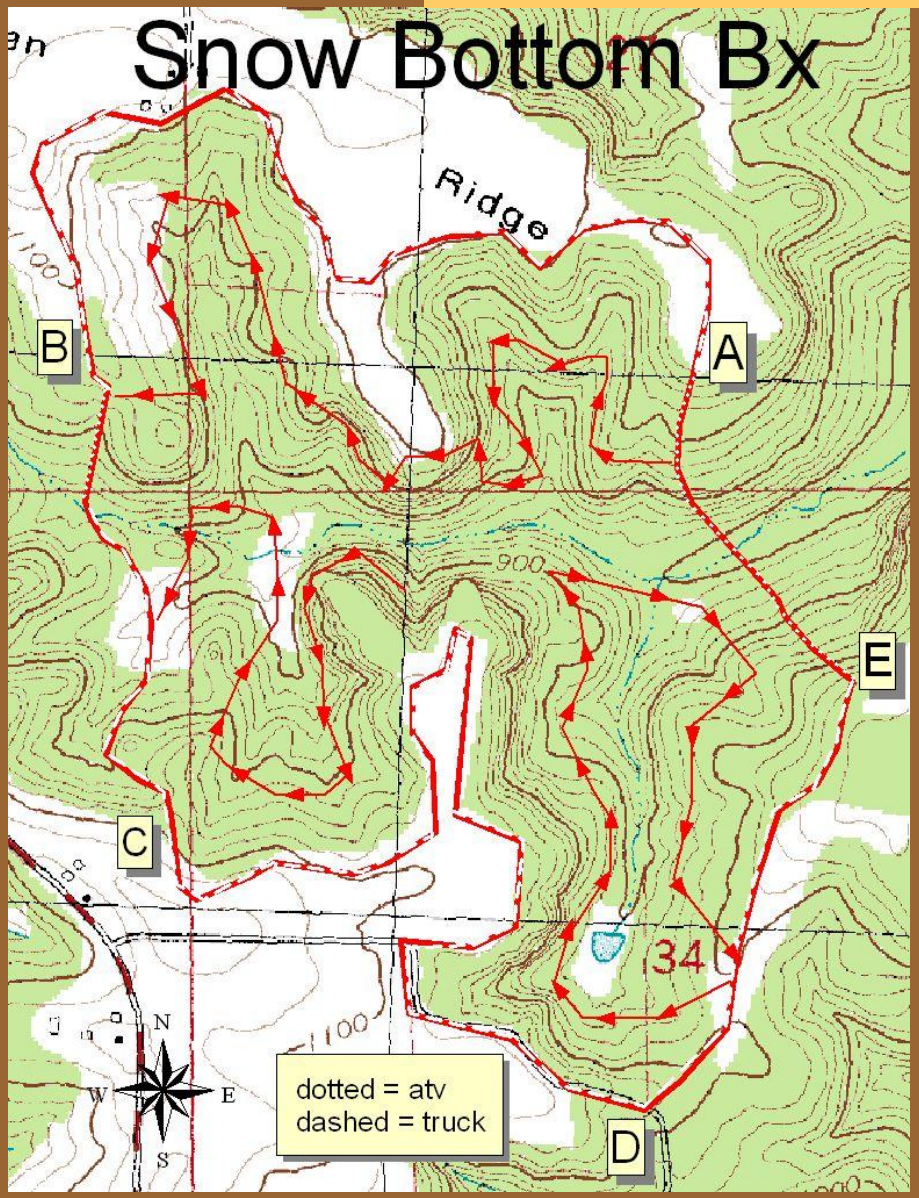
Monitoring Line

Ignition Patterns

Shotgun starts

Plan ahead

Ignition Patterns



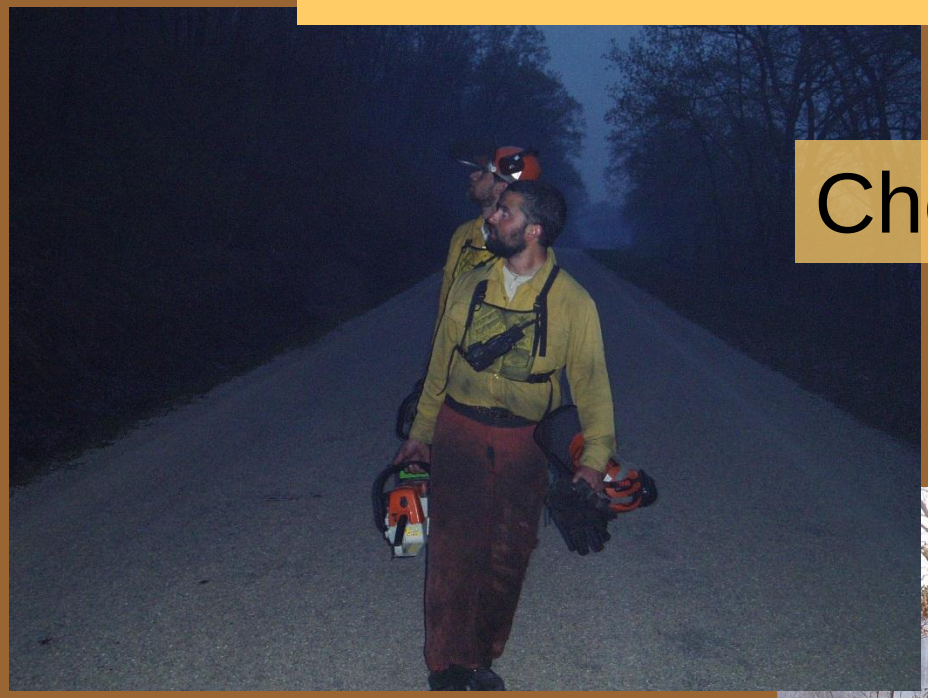
Spot

Strip

Backfiring

Internal Ignition Safety (LCES)

Post-burn monitoring



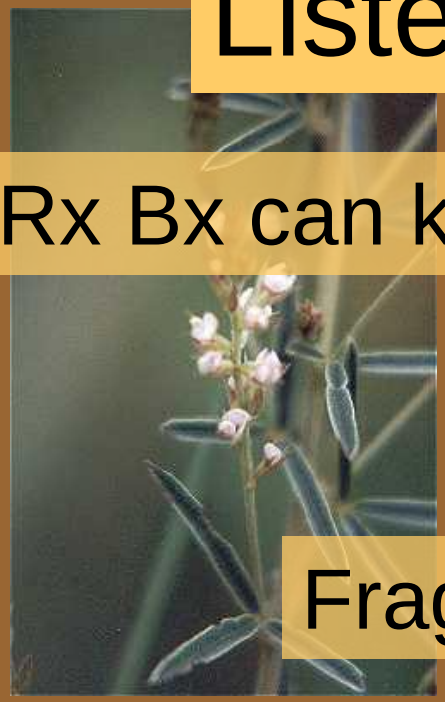
Choose breaks wisely

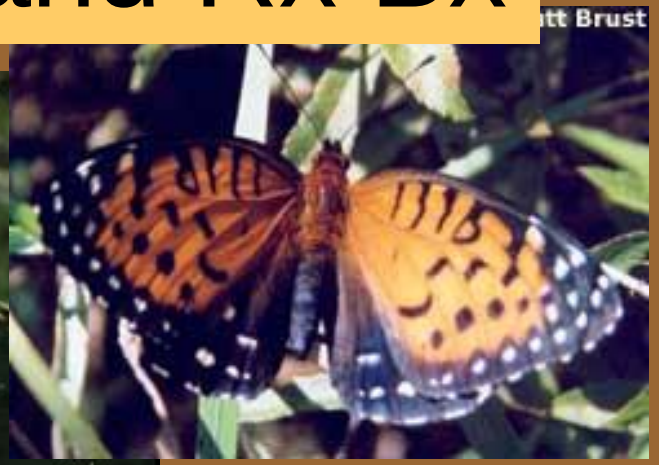
Know expectations

Mop-up

Listed Species and Rx Bx

Rx Bx can kill





Fragmented landscape

Need more fire

Incidental Take Protocol

Protocol for Incidental Take Authorization
Regal Fritillary (*Speyeria idalia)*

II. Management Protocol For Authorized Incidental Take

If the management activity is for the purpose of recovering, maintaining or improving the grassland, prairie or savanna ecosystem that includes habitat for regal fritillaries, then incidental take is allowed under the following conditions:

A. Burning

Only burning that occurs between September 15 and June 15 is allowed.

1. With violet surveys prior to management and every subsequent five years so that the location of violet patches can be i
(Note: surveys following unit burns within the 5-year period can be used to update overall burn-unit planning.)

i.e., it's complicated

AND

a. Monitoring of butterflies1 is occurring each year,

AND

i) All violets are managed with fire, then an area may be burned annually that includes up to 20% of the entire violet population on the site, but, based on the previous year's butterfly counts, no more than 20% of the adult activity area (see definitions).

ii) If 25% or more of the entire violet population on the site is managed with other than fire, and that same area is not burned for at least 5 years, then an area may be burned annually that includes up to 30% of the remaining violets, but, based on the previous year's butterfly counts, no more than 20% of the adult activity area.

b. If no monitoring of butterflies is occurring each year,

AND

i) All violets are managed with fire, then up to 10% of the entire violet population on the site may be burned annually at a 5-7 year return interval.
ii) If 25% or more of the entire violet population on the site is managed with other than fire, and that same area is not burned for at least 5 years, then 25% of the remaining violets may be burned annually at a 5-7 year return interval.

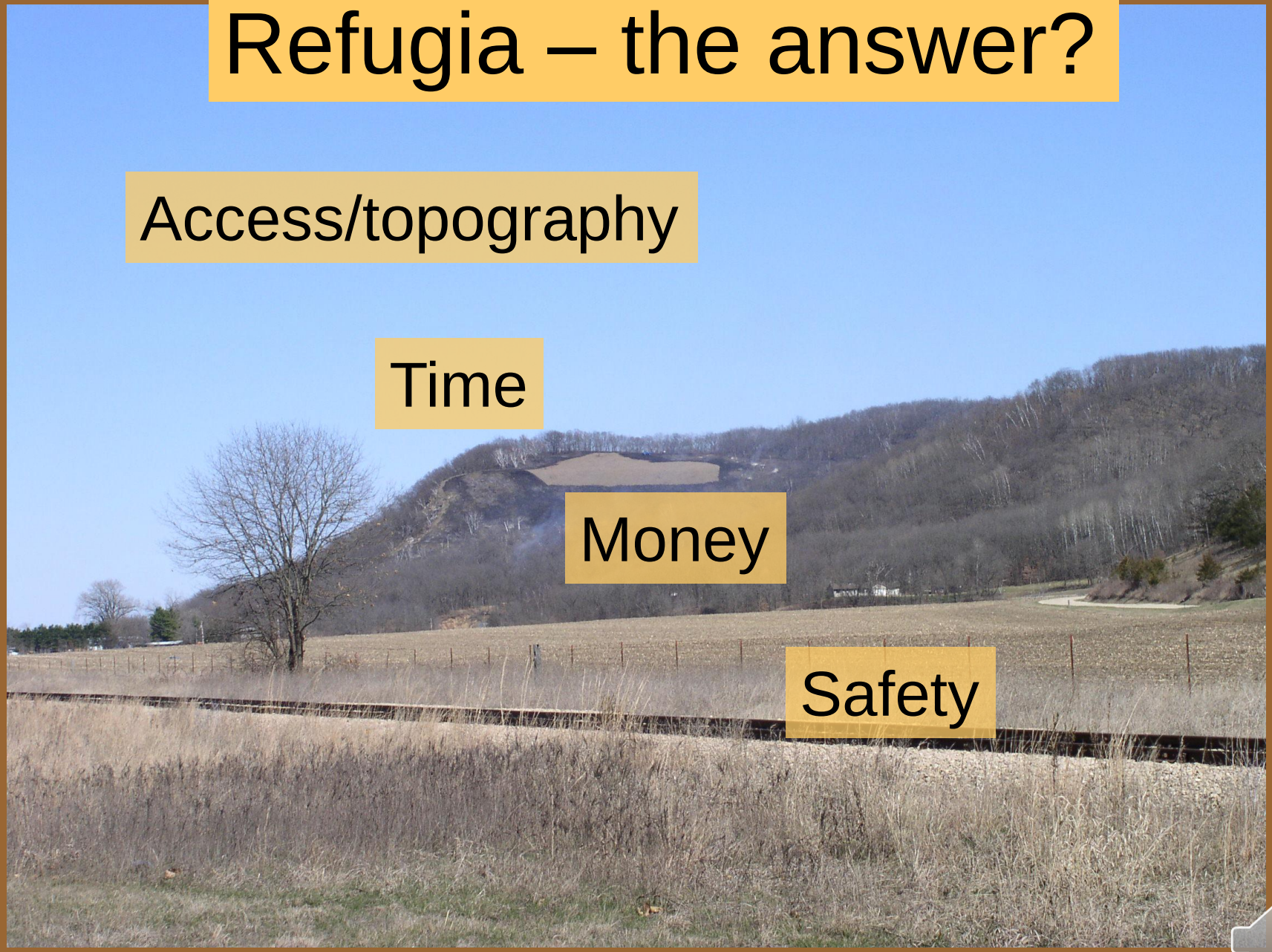
2. With no violet surveys prior to management and at least every subsequent 5 years, **t**hen 5% of the violet population may be burned annually.

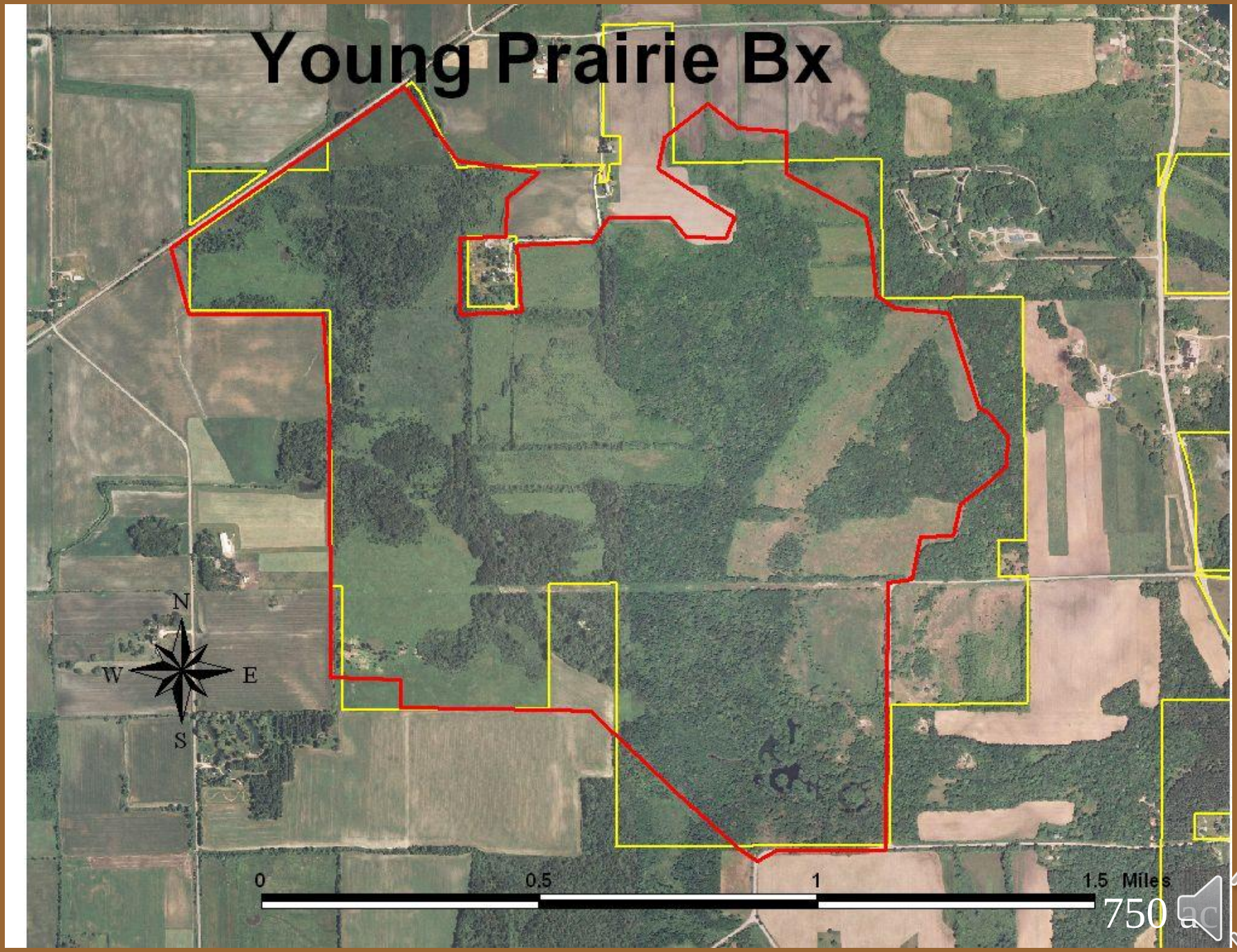
1 *At least 2 years of baseline monitoring must occur before burning begins, and the monitoring must follow protocol acceptable to the DNR Bureaus of Endangered Resources and Integrated Science Services.*

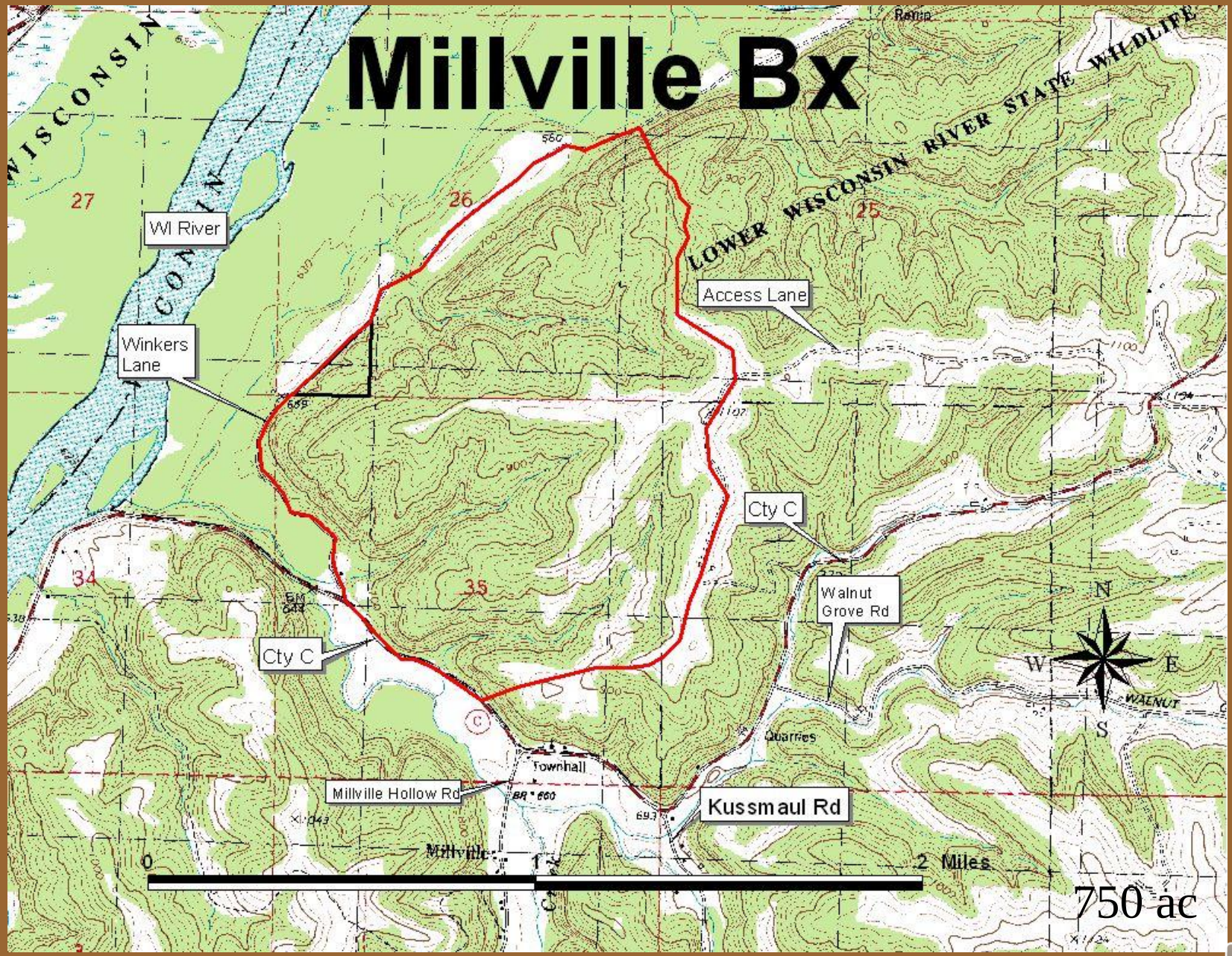
Multiple burn units

Infrequent return intervals

Refugia – the answer?

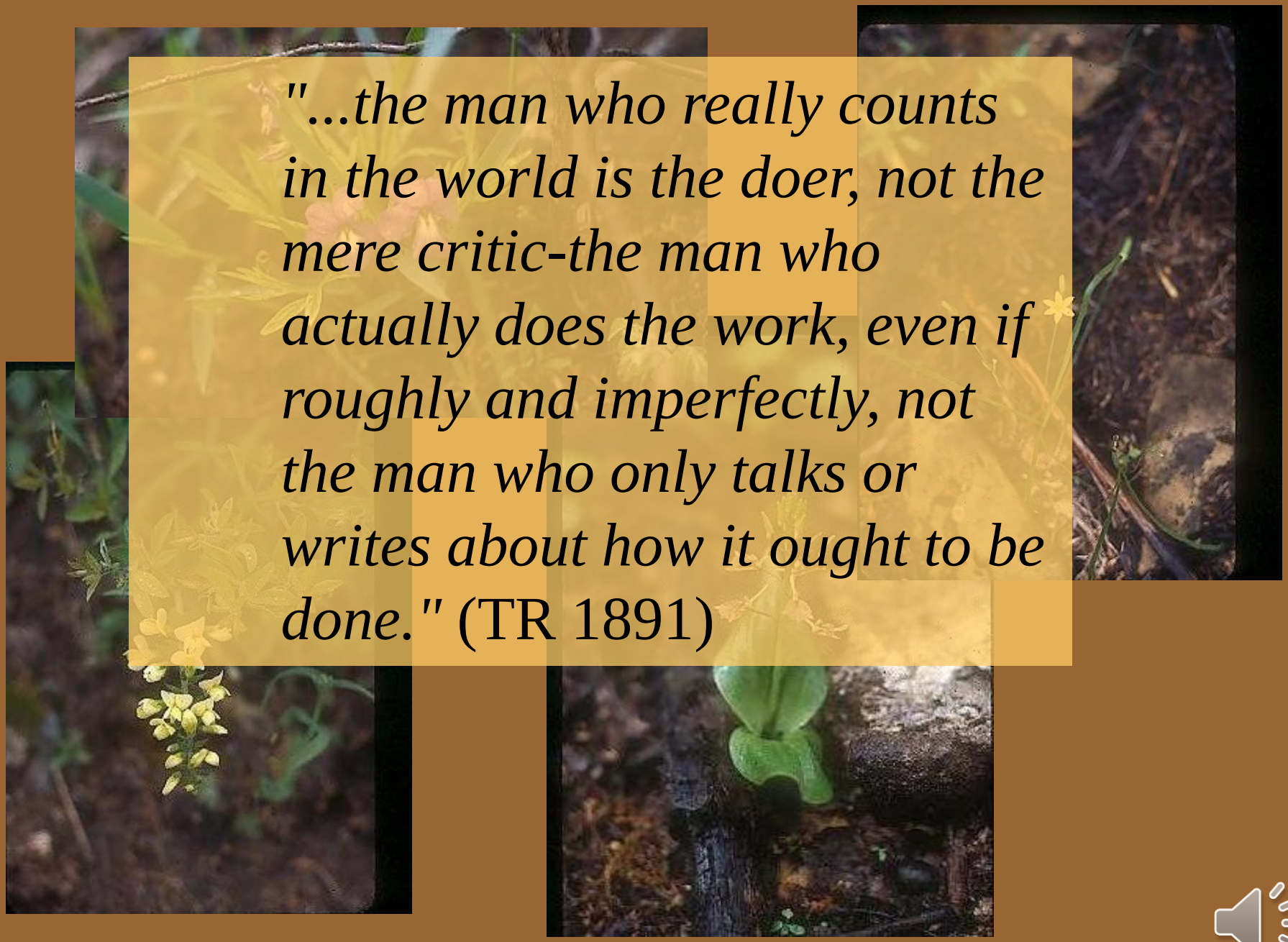



Young Prairie Bx
N
W
E
S
0
0.5
1
1.5 Miles
750 ac


Millville Bx
WISCONSIN
RIVER
LOWER WISCONSIN RIVER STATE WILDLIFE
WI River
Winkers Lane
Access Lane
Cty C
Cty C
Walnut Grove Rd
Millville Hollow Rd
Kussmaul Rd
Townhall
Quarries
Millville
27
26
25
34
35
N
S
E
W
0
1
2 Miles
750 ac

Avoca Prairie – E end

Avoca Prairie – E end



"...the man who really counts in the world is the doer, not the mere critic-the man who actually does the work, even if roughly and imperfectly, not the man who only talks or writes about how it ought to be done." (TR 1891)