

Using Prescribed Fire to Manage Fuels in the Southern Great Plains



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Balancing Act

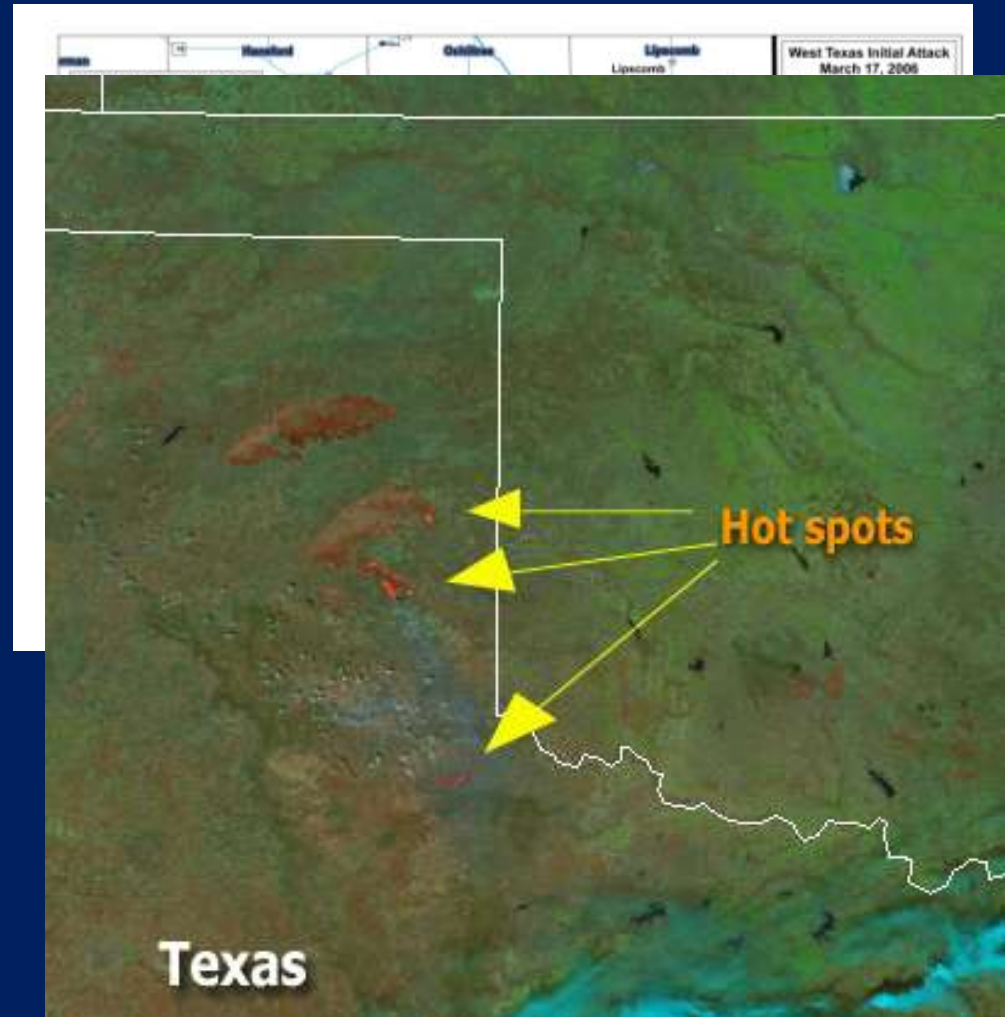
- The Rancher's Balancing Act: Managing for Forage, Prescribed Burning and Mitigating Wildfire (Rideout-Hanzak, Britton, Villalobos, 2012)
 - To promote a successful Rx fire you need a continuous stand of fine fuel
 - While you're resting this area (on areas being lightly to moderately grazed as well) you're growing fuel that will sustain a wildfire

A modified Merrill grazing system using 5 pastures and incorporating Rx burning in each pasture rotating every 5th year.

		PASTURES					
		1	2	3	4	5	
YEAR 1	MAR - JUN		G	G	U	B-G	<p>Pastures with green shading are rested for one entire year</p> <p>G = Grazed</p> <p>U = Ungrazed</p> <p>B-G = Burn and Grazed</p>
	JUL - OCT		G	G	G	U	
	NOV - FEB		U	G	G	G	
YEAR 2	MAR - JUN	B-G		G	G	U	
	JUL - OCT	U		G	G	G	
	NOV - FEB	G		U	G	G	
YEAR 3	MAR - JUN	U	B-G		G	G	
	JUL - OCT	G	U		G	G	
	NOV - FEB	G	G		U	G	
YEAR 4	MAR - JUN	G	U	B-G		G	
	JUL - OCT	G	G	U		G	
	NOV - FEB	G	G	G		U	
YEAR 5	MAR - JUN	G	G	U	B-G		
	JUL - OCT	G	G	G	U		
	NOV - FEB	U	G	G	G		
YEAR 6	MAR - JUN		G	G	U	B-G	
	JUL - OCT		G	G	G	U	
	NOV - FEB		U	G	G	G	

Wildfires in rangelands are weather phenomena

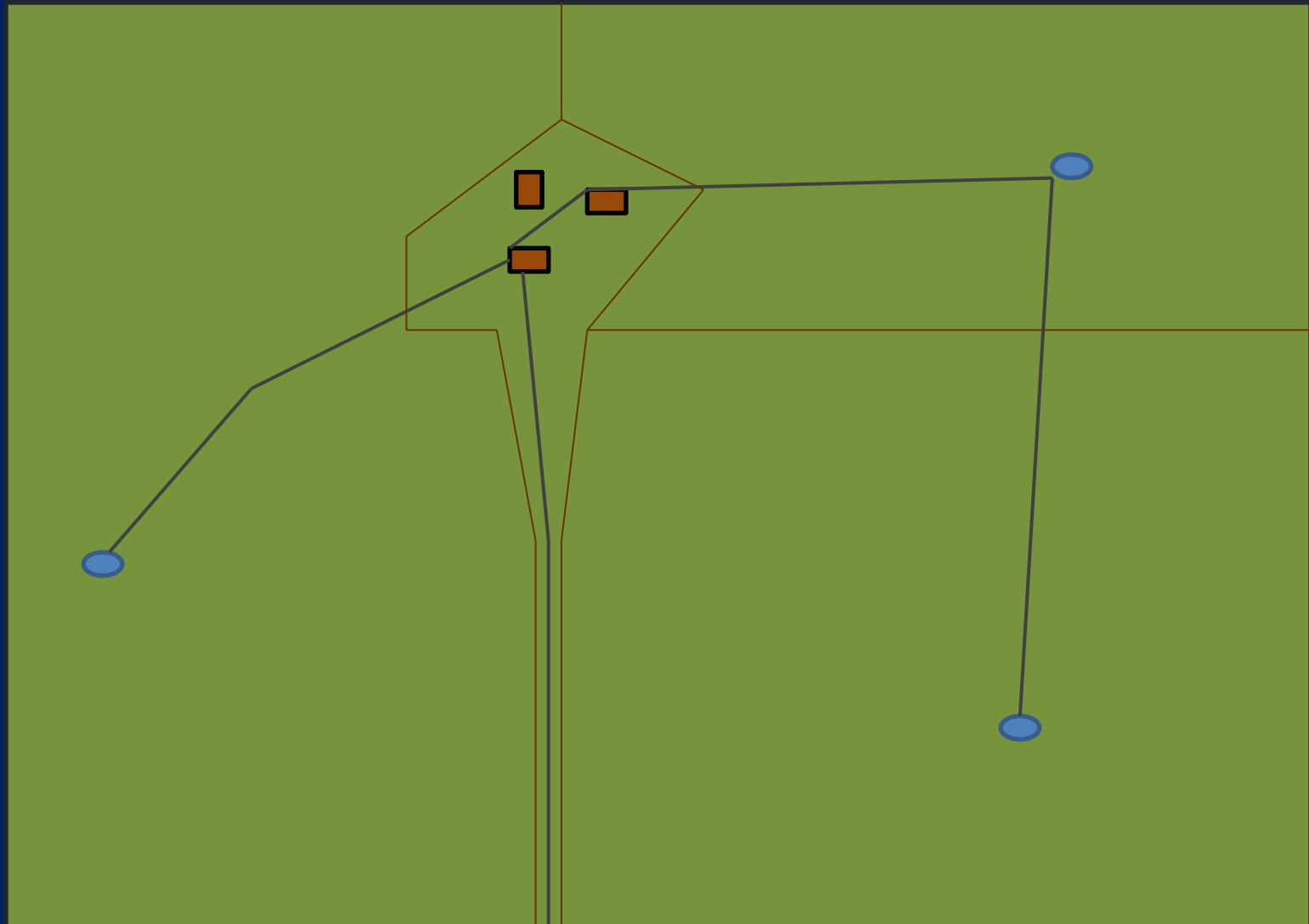
- East Amarillo Complex
- March 12-16, 2006
- Drought year following a wet year
- High RH around 10%
- “Perfect Storm”
- SW winds sustained in the mid to upper 30’s, gusts to 69 mph
- >907,000 acres
- Unprecedented ROS
- Classic, cigar-shaped, wind-driven fires



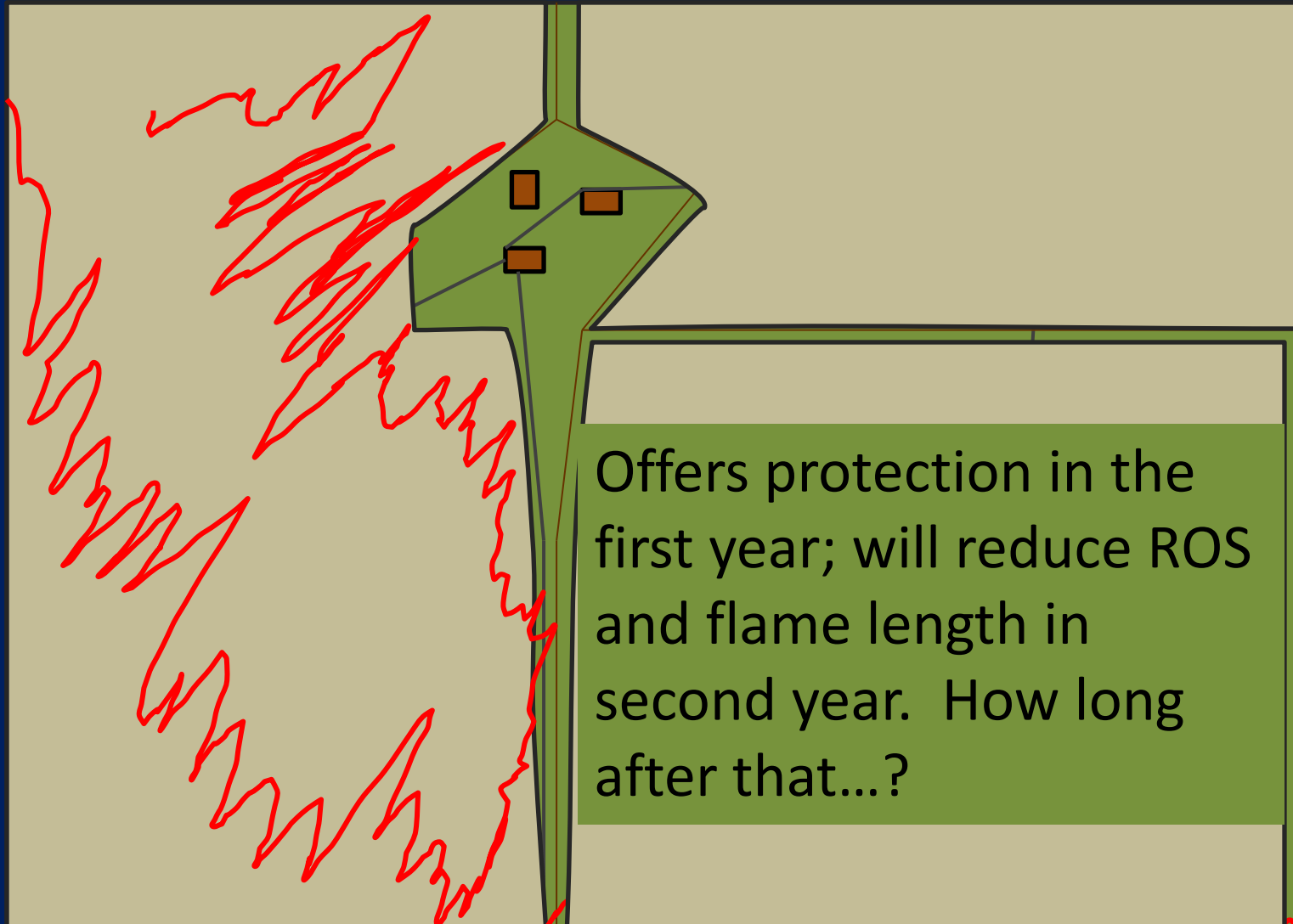
Use Rx burning with wildfire in mind

- From what direction do the prevailing winds blow?
- Where are the fuels around your property?
- Burn pastures so that the burned areas provide protection for the unburned areas.
- May require a completely different layout of pastures...

Traditional Ranch Layout



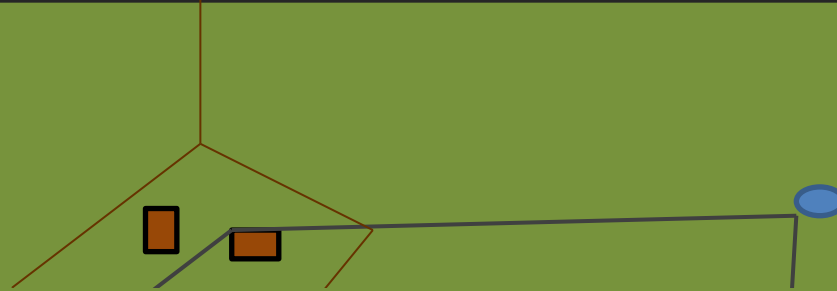
If we were burning on a rotation



Offers protection in the first year; will reduce ROS and flame length in second year. How long after that...?

More protection

300 to 500'



Burn during dormant season every year that it will carry a fire

Wider than a blackline for Rx Fire because the spotting distance will be much greater

Not a 'sacrificed' area—it can still be grazed—just needs to be rested and burned more frequently than other areas

wind



— Perimeter and pasture fence

Wildlife 65

P5: Rangeland 126 acres

P3: Rangeland 191 acres

P6: Nursing 37 acres

P2: Rangeland 281 acres

P7: Rangeland 192 acres

P1: Wildlife 157

Can Rx fire be used successfully in range to prevent wildfire damage?

- On a local scale, yes.
 - With prior planning and specific design
 - With ambitious use
- At the landscape scale, no.
 - Because wildfire on rangelands is weather phenomenon

Lessons from EAC

- For human safety we must have Community Action Plans in place
 - Austin, TX will be developing a CWPP—
Community Wildfire Protection Plan
- Neighborhoods need to have a plan that accounts for each person, and practice that plan

James Cornelius



More Lessons from EAC

- Rangelands are unique, i.e. the wildfire situations are different than those in forested situations
 - To really prepare to mitigate wildfire damage, and prevent deaths and property loss to wildfire we have to plan for the unique situations that arise in rangelands
- US Forest Service has Firewise program for homes, but rangelands aren't forests
 - We need to design recommendations for making homes more fire safe that are specific to rangelands

Adcock Family Ranch, Roberts County



Flaming cow patties
What is the recommendation for how close
cow chips should be to the house?

Conclusions

- Prescribed fire can mitigate wildfire effects at a local level when used ambitiously and **specifically for mitigating wildfire**
- But fuel reduction is temporary and wildfire is a weather event, so... it will take a lot more than this to be prepared
 - Community Wildfire Protection Plans
 - Neighborhood Plans
 - **Range** managers and scientists need to be involved in the plans because **range wildfires and forest wildfires are different**

