Broadcast Burning in Western Oregon:

Operational and Cost Considerations

Broadcast Burning in Western Oregon

- Brian Schrag – Senior Forester
  - 20 years burning experience in Western Oregon
  - Roseburg Resources primary burn boss
- Dave Cramsey – Oregon Forestry Manager
  - 25 years burning experience in Western Oregon
  - Current Industrial Landowner Rep on ODF's Smoke Management Advisory Committee

WHO WE ARE

- Privately held company with manufacturing facilities located throughout North America.
- Founded in 1936 by Kenneth Ford in Roseburg, OR
- Timberlands in Oregon, Virginia, and North Carolina
- Today our company employs over 3,200 people

Intensive Silviculture Regime

- Pre-Harvest Hack and Squirt
- Site Prep Spray
- Slash Treatment (As-Is, Scarify, Burn)
- Trap Mountain Beaver
- Plant Large Seedlings (7mm min)
- 2 Years Herb Spraying
- 2 Years Stocking Surveys
- Manual Release (Year 3-5)
- Aerial Fertilization (year 20+)

Intensive Silviculture Regime

Broadcast Burning in Western Oregon

Roseburg Resources Burn Program

- 1500 burn acres on average planned annually
- 700 to 1400 burn acres accomplished annually
- Condition Burners – we will take advantage of appropriate conditions to accomplish burns

- Fall, Winter, Spring, early Summer

WHY BURN?

1. Prepares the site for planting
2. Better Tree Distribution & Increased Volume
3. Hardwood & Brush Control
4. Animal Control
5. Fire Protection

PREPARES THE SITE FOR PLANTING

- Burned Site Advantages
  - Reduced Planting Labor – approx. $35/ac
  - Options for varied stock types and sizes
  - Increased access to planting spots
    - More uniform tree distribution
    - Increased planting quality

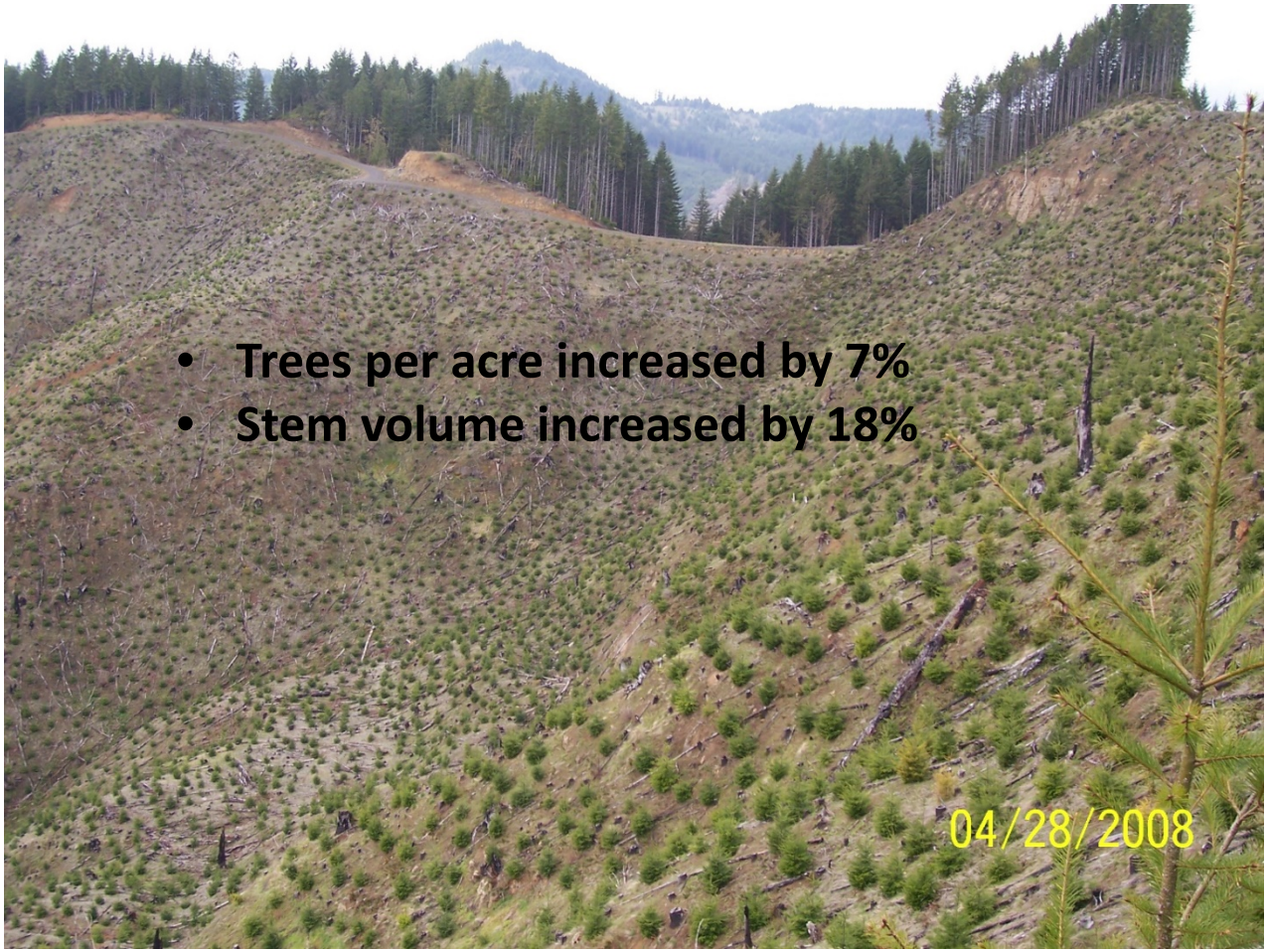
PREPARES THE SITE FOR PLANTING

BEFORE

PREPARES THE SITE FOR PLANTING

AFTER

BETTER DISTRIBUTION & VOLUME



HARDWOOD CONTROL

- Fire does prevent Red Alder from resprouting
- Burned sites are typically lower cost for hand applied clump treatments – approx. $15/ac
- Burning does knock back existing clumps providing an opportunity to delay treatment

HARDWOOD CONTROL

Red Alder Resprout

Red Alder Resprout

ANIMAL CONTROL
MOUNTAIN BEAVER

Burning:

- Reduces Population
- Exposes Tunnels for Trappers & Predators
- Reduces Acres to Trap
- Reduces cost/ac approx. $50/trapped acre (2x)

ANIMAL CONTROL
RODENTS

Burning:

- Reduces Population
- Modifies Habitat
- Exposes to Predators

ANIMAL CONTROL

"OR LACK OF"

Big Game - Remember not all sites are equal

FIRE PROTECTION

Broadcast Burning

- Reduces Fuel Loading
- Makes Defensible Space
- Reduces Ignition Areas

FIRE PROTECTION

FIRE PROTECTION

SO YOU WANT TO BE A BURNER?

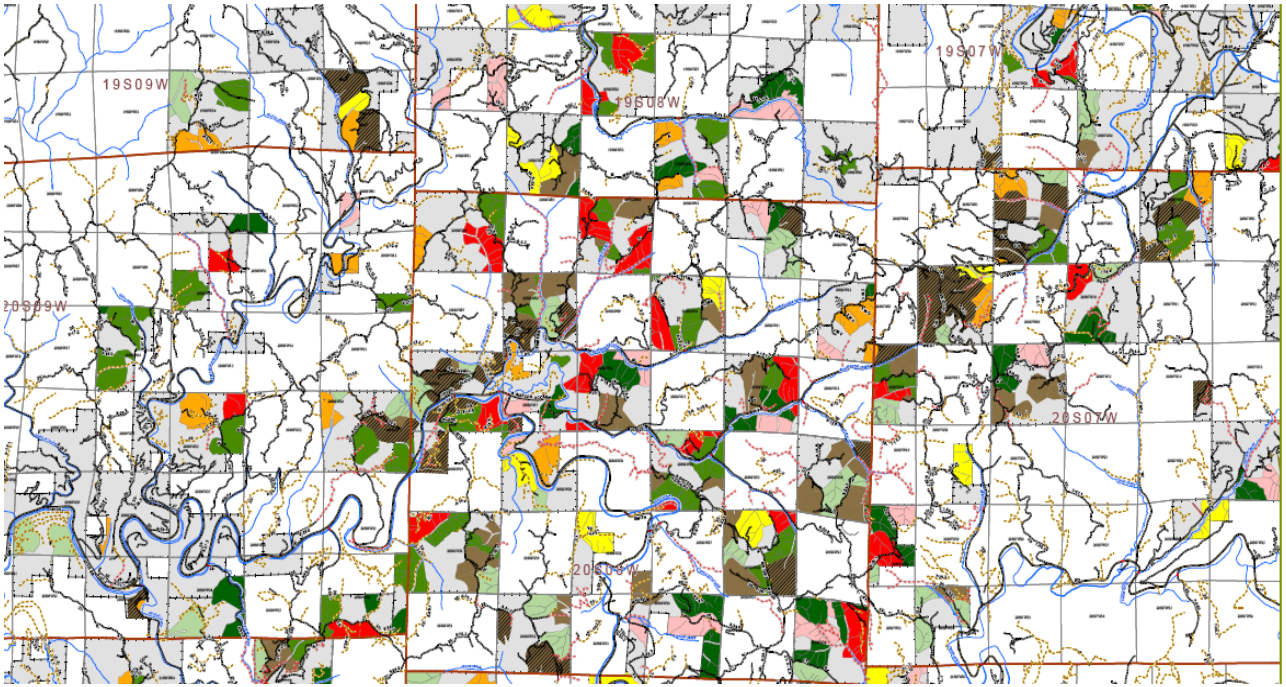
MAKE A PLAN

1. WHERE
2. WHEN
3. HOW

MAKE A PLAN

WHERE

- Starts with tract planning
- Coastal sites
- Public Access



MAKE A PLAN

- Surrounding Fuel Types
  - Closed Canopy Forest or Unburned Reprod?
- Property Lines
  - Neighbors? Property Line Locations?
- Topography
  - Gentle or Steep
  - Broad Aspects or Narrow Canyons
- Aspect

MAKE A PLAN

TIMING

- Fall
- Winter
- Spring

Be ready to burn when the conditions warrant

MAKE A PLAN

HOW

- PRE-BURN SPRAY
- FIRE TRAILS (HAND VS DOZER)
- IGNITION (HAND VS AERIAL)
- Mopup

MAKE A PLAN

Pre-Burn Spray

MAKE A PLAN

Fire Trails

HAND

DOZER

MAKE A PLAN
Ignition

MAKE A PLAN

Ignition

HAND

AERIAL

MAKE A PLAN

Be Prepared

IMPLEMENT YOUR PLAN ON THE GROUND

IMPLEMENT YOUR PLAN ON THE GROUND

IMPLEMENT YOUR PLAN ON THE GROUND

ASPECT BURNING

COSTS

- Average Broadcast Burn Costs = $150/ac
  - Trailing = $40/ac
  - Ignition = $40/ac
  - Mop up = $65/ac
  - Loss = $5/ac

Costs – Average Unit Example

	BURN UNIT $/AC	AS-IS UNIT $/AC
Pre-Burn	$55	$0
Burn	$150	$0
Site Prep	$45	$55
Plant & Trees	$395	$430
Trapping (2X)	$25	$75
Herbs (2X)	$110	$110
RP, Rel Sprays	$95	$130
Total Invested	$875	$800

COSTS – Average Unit Example

	BURN UNIT $/AC	AS-IS UNIT $/AC
Total Invested	$875	$800
Increased Yield Needed for Breakeven:		
NPV at 5%	2.7 mbf/ac	
NPV at 6%	3.5 mbf/ac	
Fire Protection Value	??	
Training Value	??	

CHALLENGES

- Adverse mid slopes
- Neighbors, Nearby Operations
- Plastic pipes
- Technical Knowledge
- Competent Crews
- Smoke Management
- Public Perception

CHALLENGES

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Smoke Management - Oregon

- Understand the Oregon Smoke Mgmt Plan
- Accurately Rate Unit Acres and Tons
- Know Air shed Limitations

CHALLENGES

Smoke Management - Oregon

- Work Closely with Local Protection Districts

- Proposed Changes to ODF Smoke Plan
  - New Definition of Intrusion
  - Increased use of pile covers

CHALLENGES

Public Perceptions

- Western Oregon Fire History
- Balance of RX Smoke vs Wildfire Smoke
- Use of RX Burns to Minimize Wildfires
- Broad Outreach & Education Needed

SUMMARY

- Burning is a practice that can:
  - Increase plantation performance
  - Be done cost effectively
  - Reduce Future Fires
- Take Commitment & Coordination
  - Internally within your Company
  - Externally with Agencies
  - Public Education
- Management needs to be on board
- Technology may improve results

Broadcast Burning in Western Oregon: Questions?