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### Reasons for Burning

- Reduce fuels
- Improve wildlife habitat
- Control competing vegetation
- Improve forage for grazing
- Improve accessibility
- Control disease
- Enhance appearance

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### Reasons for Burning...contd

- Perpetuate fire dependent species
- Dispose of logging debris
- Prepare site for seeding
- Prepare site for planting
- Cycle nutrients
- Manage red cockaded woodpeckers

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## Environmental Effects of Burning

- Vegetation
- Soil
- Water
- Air
- Human health
- Wildlife
- Aesthetics

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## Important Weather Considerations

- Wind
- Relative humidity
- Temperature
- Rainfall
- Airmass stability

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- KNOWLEDGE OF WEATHER IS KEY  
TO SUCCESSFUL PRESCRIBED  
BURNING AND CRITICAL FOR SMOKE  
MANAGEMENT

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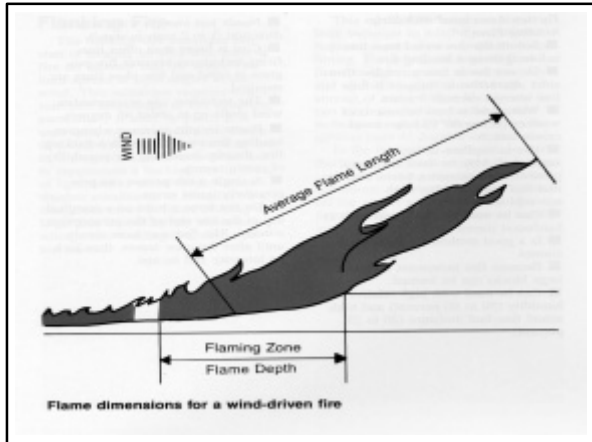
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### Backing Fire

- Started along a safe zone
- Burn 1-3 feet/minute
- Easiest
- Safest
- Produces minimum scorch
- Lends itself to use in heavy fuels and young stands (3" at ground line)
- When air temperature @ < 45° F

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### Backing Fire...contd

- Costs are high
  - additional lines
  - extended burning period
- Not flexible once interior lines plowed
- Requires steady in stand winds
- Needs low fine fuel moisture
- Requires good fuel continuity

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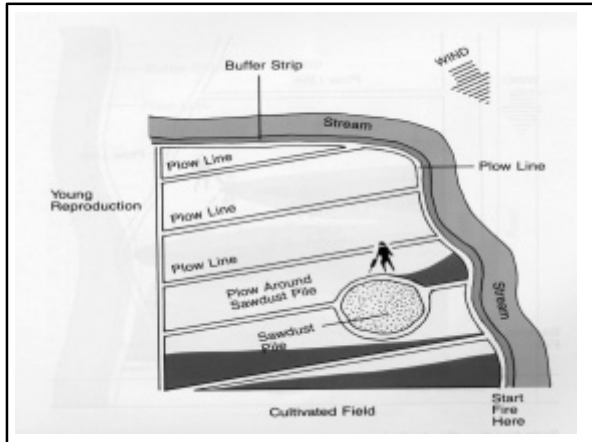
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### Strip-Head Fire

- Used with initial backfire to secure area
- Distance between strips may be as little as 10". Can be up to 200" apart
- Easy to adjust to changing winds
- Intensity of fire increases as fires burn together
- Not useable in heavy roughes

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### Strip-Head Fire...contd

- Use in medium to large timber
- Excellent for brown spot control
- Allows burning of large blocks
- Cost is lower
- Can accommodate wind shifts up to 45°

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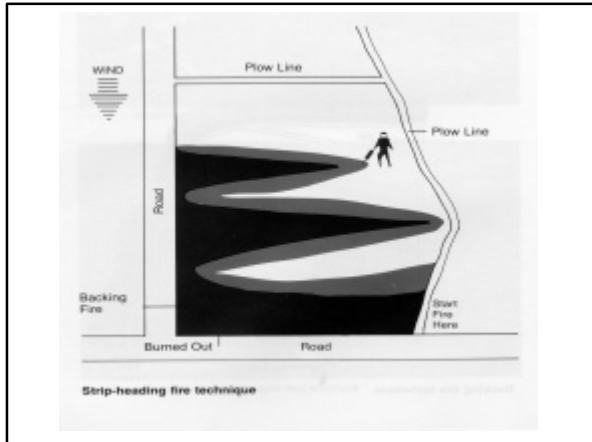
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## Flanking Fire

- Always secure downwind base line
- Setting lines of fire directly into wind
- Can stand little variations in wind
- Ideal for light to medium fuels
- Medium to large saw timber

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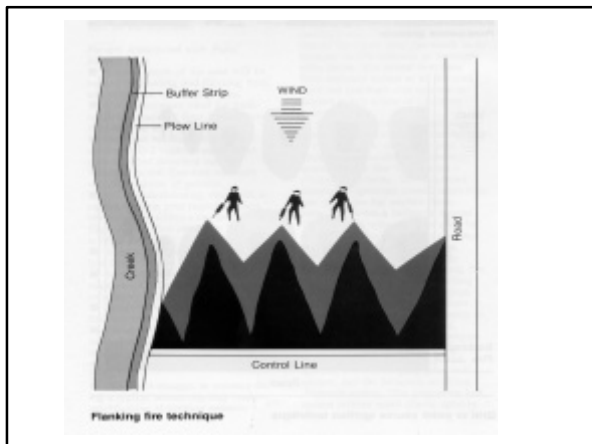
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## Spot Fires

- Always secure downwind base line first
- Each spot develops into 1 head fire, 2 flank fires and 1 back fire
- Assume much of area will be burned with flank and strip head fires
- Low in-stand winds (1-3 Mph) necessary

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## Spot Fires...contd

- Regulate spot pattern to match topography and under story fuel levels
- Start with spots close and watch behavior, then adjust
- Intensity decreases by widening interval between spot fires

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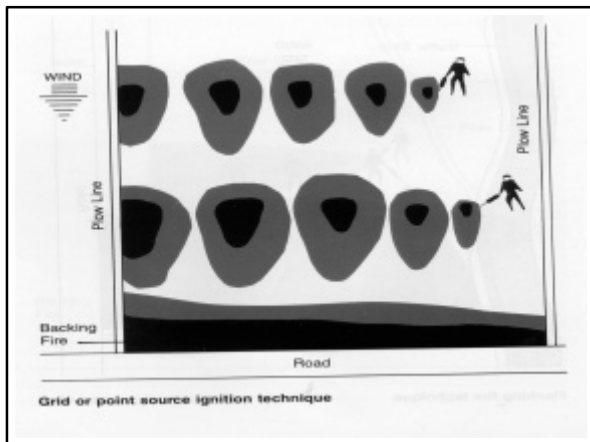
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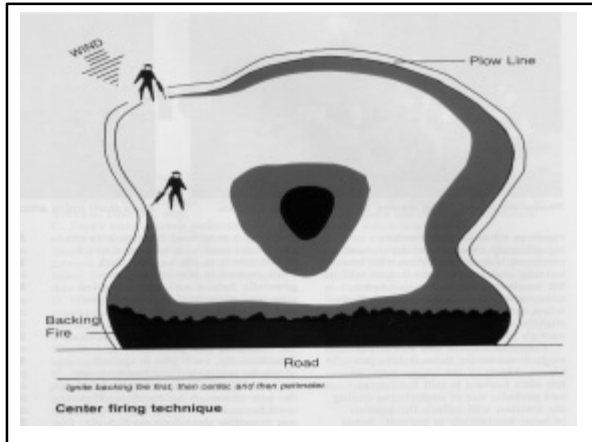
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### Planning the Burn

- Written plan
- Purpose and objectives
- Map of unit
- Equipment and personnel
- Sensitive areas
- Prescription
- Weather factors

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### Planning the Burn...contd

- Firing plan
- Smoke management
- Legal requirements
- Escape plan
- Control and mopup
- Evaluation

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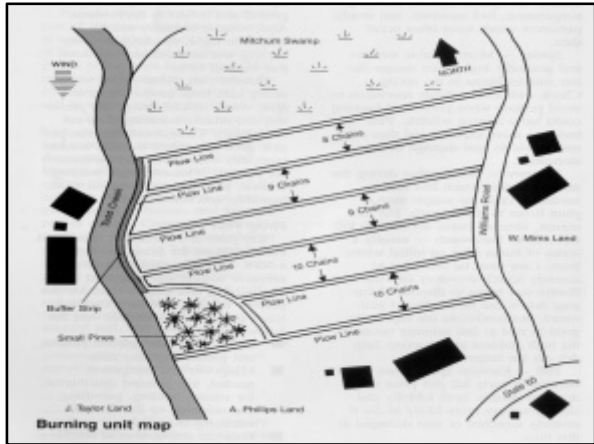
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