Fire
Fire History

• Fire present since the beginning of the earth
• Found in carbon deposits in fossil records
• Native Americans used it as a tool
Fire History

• By the 1800’s fire was as commonplace as a hoe
• Peshtigo Fire of 1871
• Great Fire of 1910
• Wildfire suppression became the policy of the USDA Forest Service
• VA Department of Forestry was founded in 1914
Fire History

– CCC built fire trails and lookout towers
– After WWII surplus machinery available to fight wild fires
– Aircraft used to spot fires
– Volunteer fire departments were organized
– Smokey the Bear 1944
Consequences of Fire Suppression

• Reduction of economic and personal losses:
  • Annual acres burned in VA:
    • 250,000 (early 1900’s)
    • 11,000 (today)

• Reduction of ecological benefits:
  • Fuel build-up
  • Loss of early successional habitat
  • Reduction in fire-dependant ecosystems
  • Extreme fires
Consequences of Fire Suppression

- Fire frequency ↓
- Fuel loads ↑
- Fire intensity ↑
- Yellowstone example
Benefits of Fire

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Benefits of Fire

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Benefits of Fire

• Fire-assisted animals
  - Red-cockaded woodpecker
  - Bachman’s sparrow
  - Northern bobwhite quail
  - American kestrel
  - Fox squirrel

• Fire-assisted plants
  - Longleaf pine
  - Table Mountain pine
  - Atlantic white-cedar
  - Pitcher plant
  - Smooth coneflower
  - Wiregrass
  - Chaffseed
Benefits of Fire

Field borders and edges burned every 3 years to maintain early succession and cover for wildlife

Understory burning reduces fuel loads and fosters many species of forbs and lush new growth for browse

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Prescribed Fire defined

• A fire intentionally ignited by a forest manager to meet specific objectives

• Must consider:
  – Weather conditions
    – Temperature
    – Relative humidity
  – Wind
    – Speed
    – Direction
  – Time of day
How to Burn

• Have a burn plan
• Understand the biology of your forest
• Know your fuels
• Determine when to burn