

# Whitebark Pine Planting in the USFS Northern Region



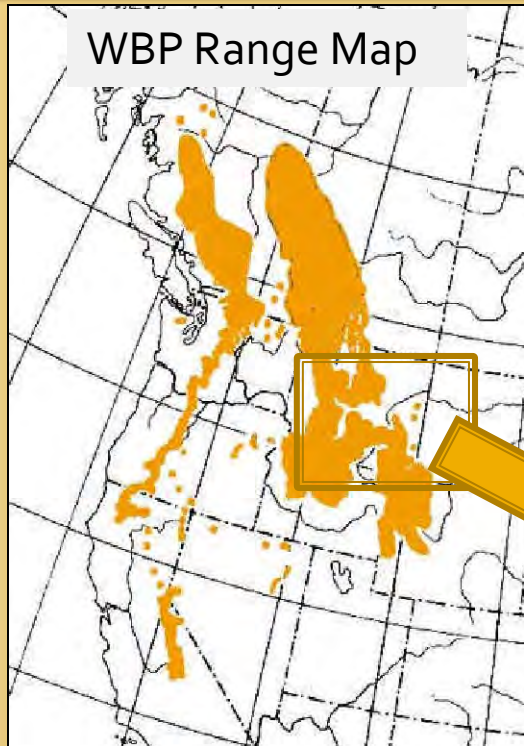
2013 WPEF Science Meeting  
Bozeman, Montana

Glenda Scott, USFS

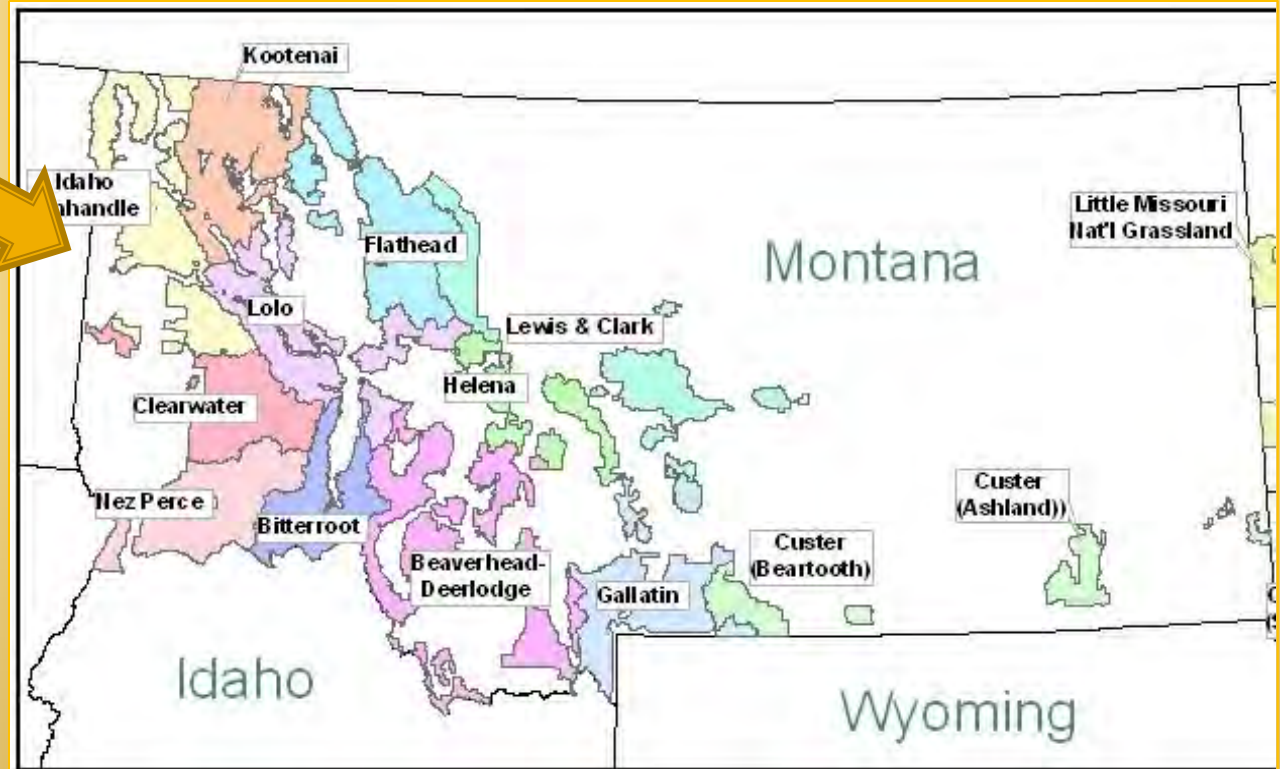




# Northern Region



Extensive WBP habitat





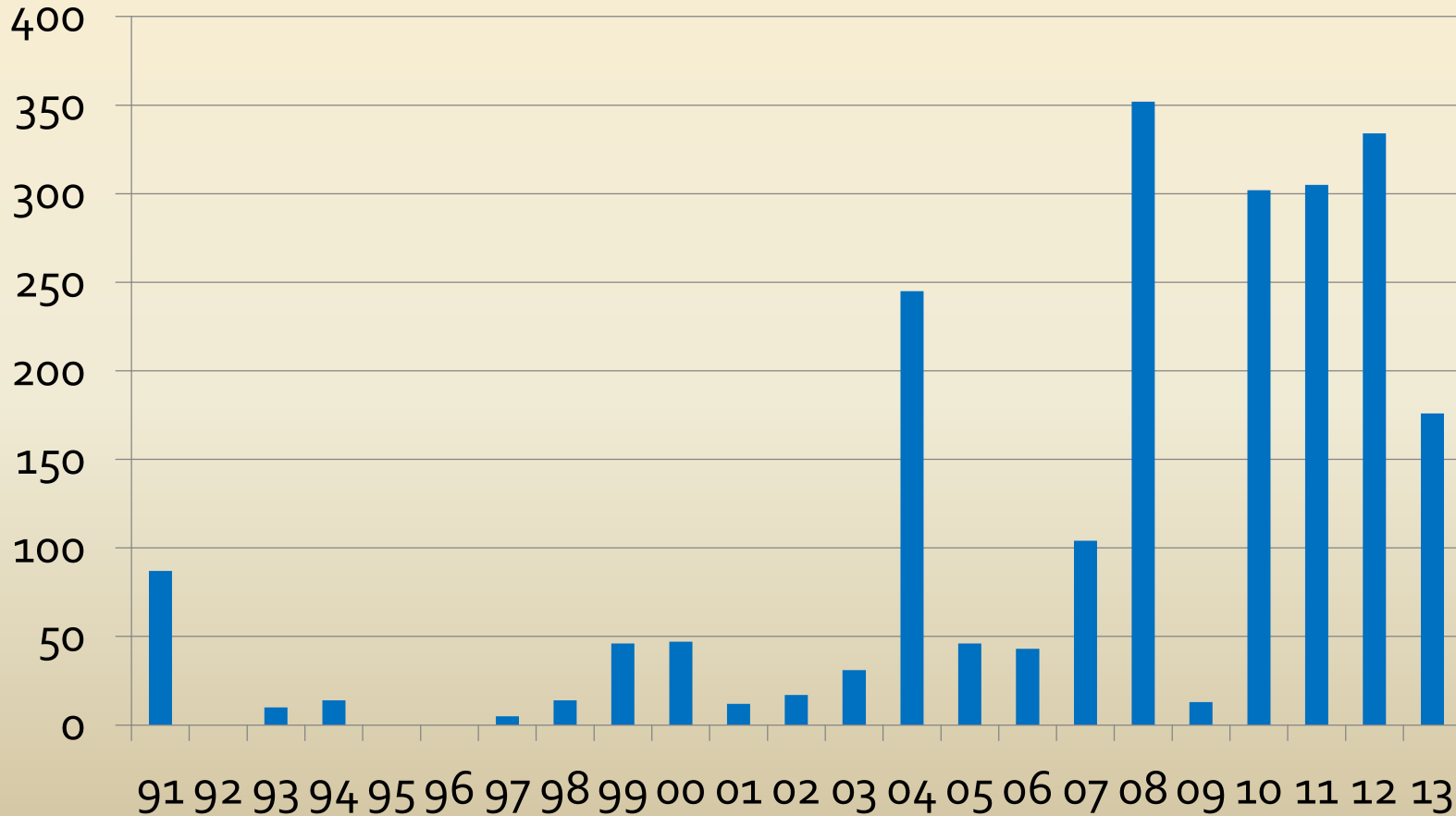
# Planting





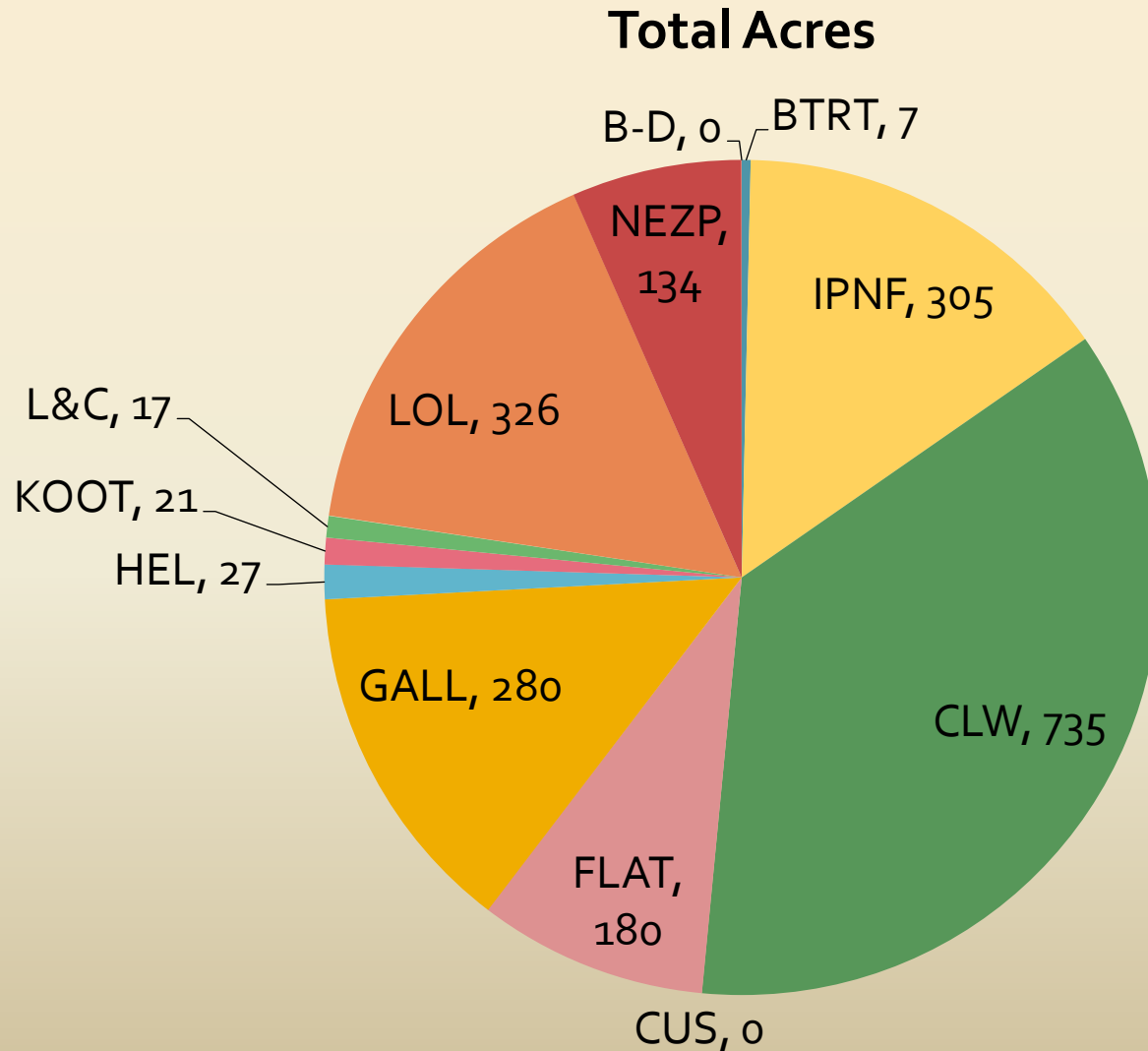
# Planting for 20+ years

■ Acres Planted by Year



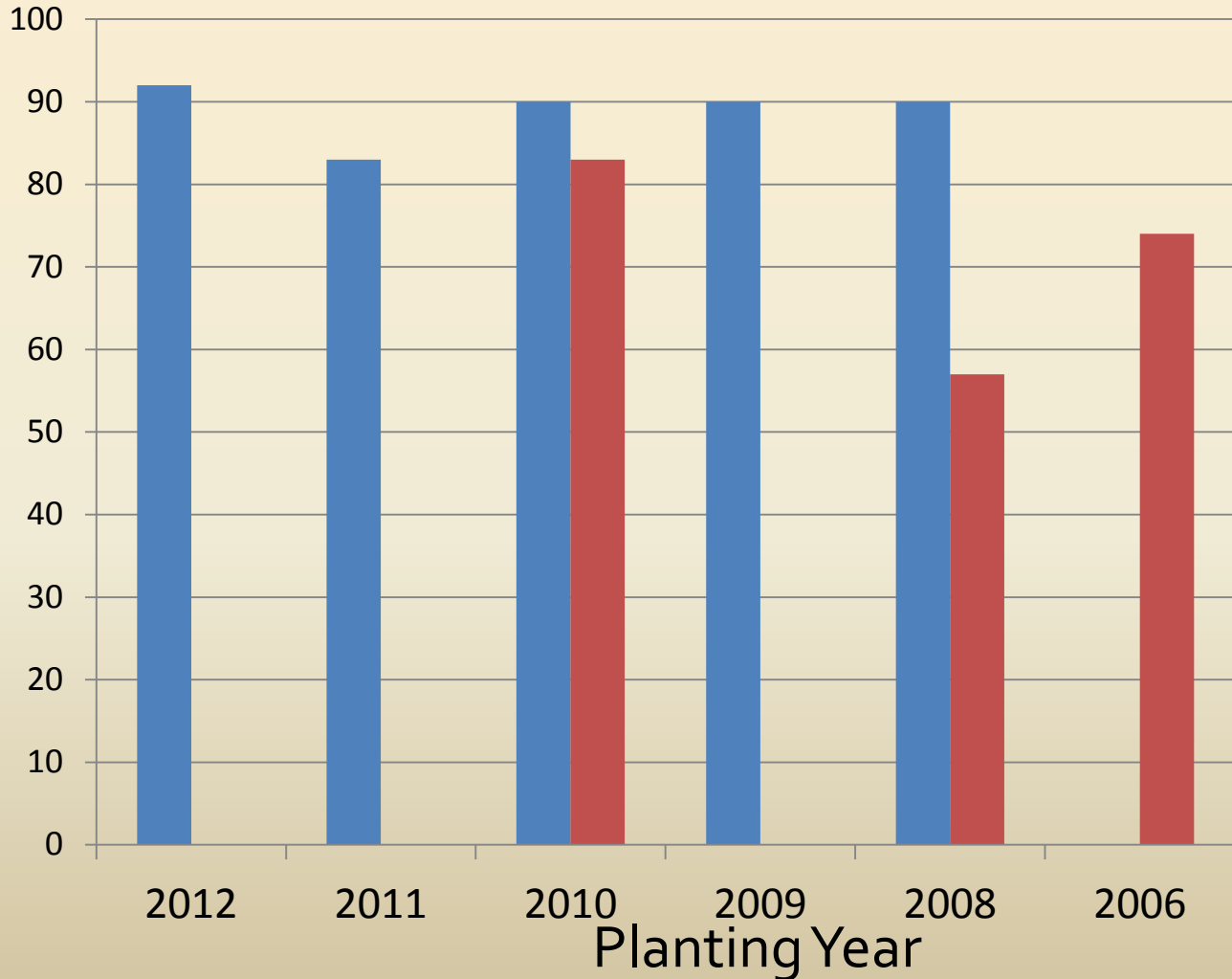


# Planting by Forest





# Survival



■ 1st year  
■ 3rd year



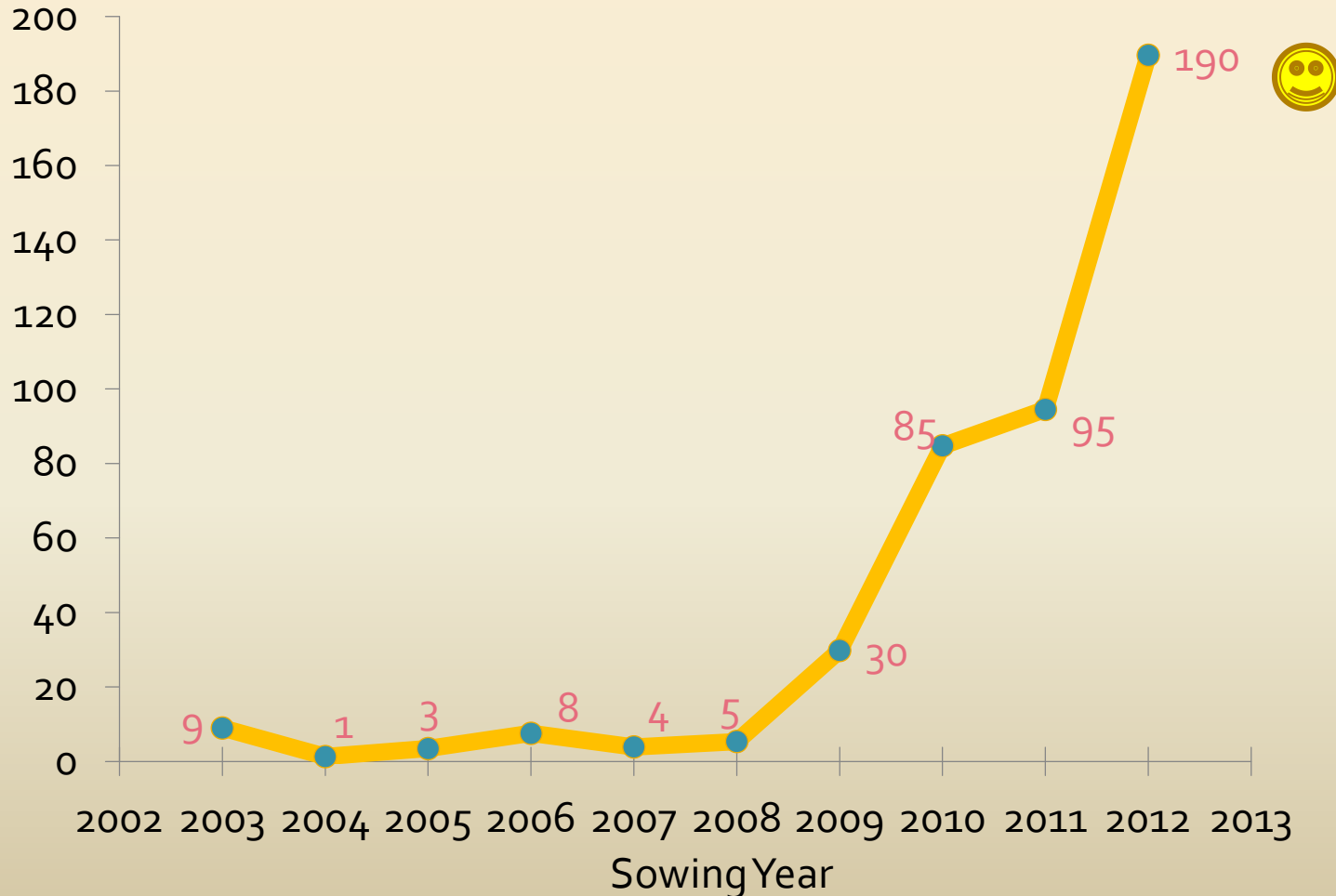
# Growing





# CDA Nursery Production

## WBP Seedlings Produced (M)







# Cone Collection





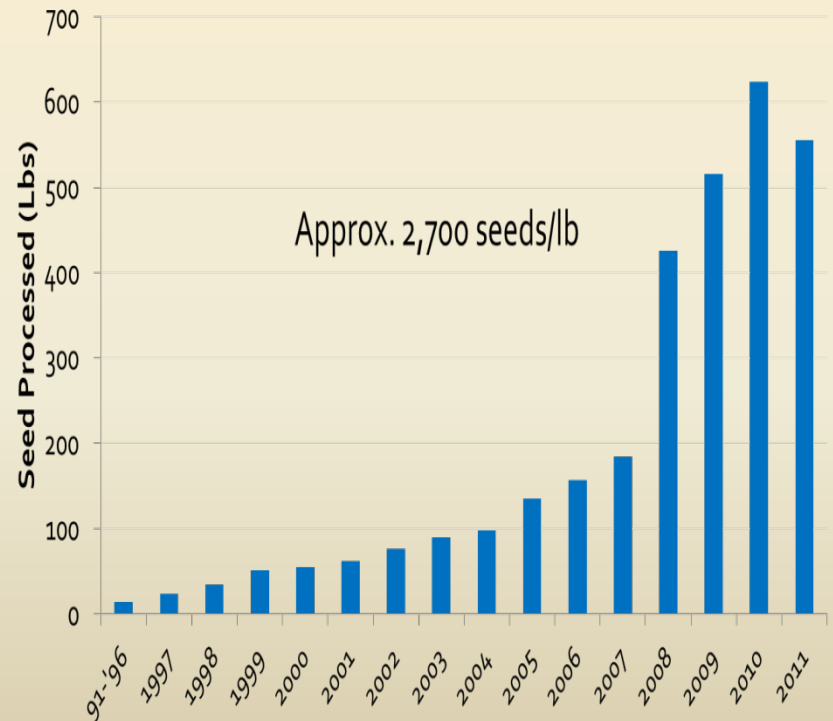
# WBP Seed Inventory

## REGION 1 SEED IN INVENTORY

- 772 lbs of clean seed
- Over 1 million seedlings
- 5000+ acres



## CDA NURSERY- ALL CLIENTS SEED PROCESSED





# Planting Guides



- Achieve greatest survival and growth
- Best use limited funds
- Consider cost per surviving seedling
- Recognize ecological niche of WBP compared to traditional conifers



## Planting guides (cont)

- Plant wide and do not plant with other trees which will compete with the WBP. Open grown trees have most cones and largest crowns.
  - Adjust spacing based on expected survival.

Target 100 tpa (20x 20 ft avg)

50% survival

Plant 200 tpa (15x15 ft)





# Planting Guides

- Reduce overhead competition
- Reduce understory vegetation, especially grasses
- Consider burned sites- favorable conditions
- Plant when there is good soil moisture





# Planting guides (cont)

- Protection for newly planted trees:
  - Plant in shade -logs, stumps (high solarization and surface temperatures)
  - Protect from heavy snow loads and soil movement
  - Avoid frost pockets and swales (not frost hardy)





# Future Reforestation

- Invest where we can be most successful; rely on natural regeneration for the rest
- High priority planting- accessible wildfire burned sites
- Use seeding to expand logistically feasible sites
- Use range of restoration tools for restoration





# Thanks



- Thanks to Partners who increase our capability: USFS Forest Health Protection, American Forests, Arbor Day, National Forest Foundation, Batesville Casket Company, WPEF, private donors.
- Photos by Mark Klinke, Rudy Geber, Corinne Anderson, Melissa Jenkins, Karl Anderson, Keith Konen, Glenda Scott