



# Colorado State Forest Service

## Insect and Diseases and Tree Spraying

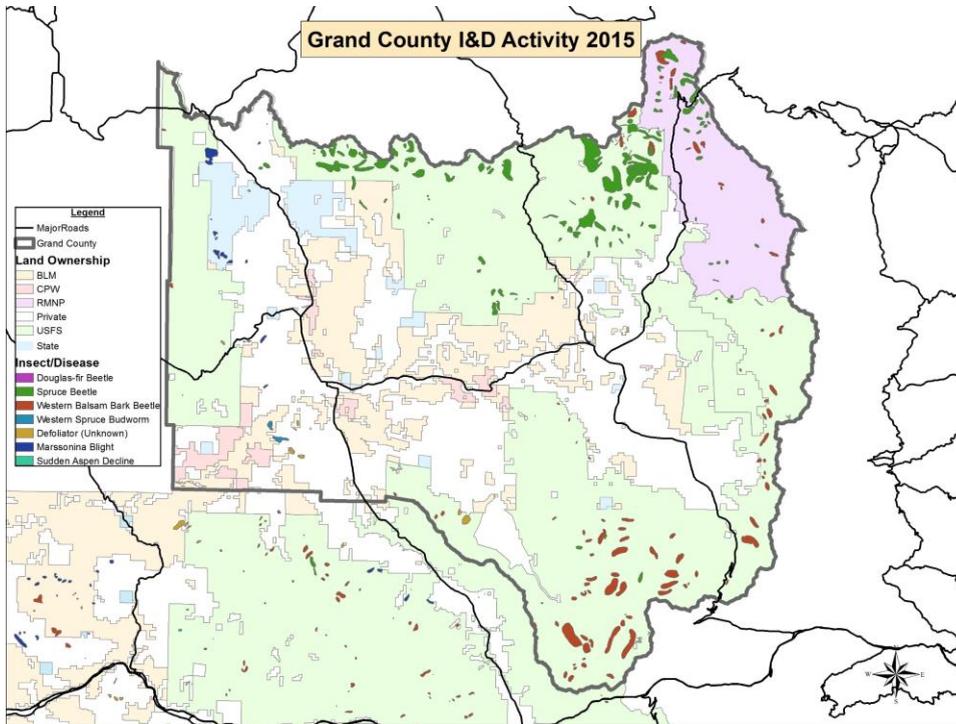


## Insects and Diseases



- Mountain Pine Beetle
- Spruce Beetle
- Douglas-fir Beetle/Western Spruce Budworm
- Western Balsam Bark Beetle
- Dwarf Mistletoe
- Pine Needle Scale
- Aspen I&D





## Mountain Pine Beetle

- The Epidemic is Over!
- MPB populations no longer active and below endemic levels
- No need to spray for MPB or other bark beetles
- Now is a great time to remove dead trees from your property
- Dead trees are falling at an increasing rate increasing fire risks and threatening infrastructure and human safety





## Spruce Beetle

- Bark beetle that attacks spruce trees
- Promptly remove infested trees
- Look for yellowing crowns, candle wax like pitch, and woodpecker feeding
- Activity increasing at higher elevations



## Douglas-Fir Beetle

- Bark beetle that attacks Douglas-fir trees
- Promptly remove infested trees
- Look for fading crowns, and woodpecker feeding
- Endemic in isolated pockets





## Western Spruce Budworm

- Feeds on the buds of Spruce, Fir and Douglas-fir
- Reduces tree growth and vigor
- Increases susceptibility to Douglas-fir beetle
- Thinning and clearing of understory may be recommended



## Western Balsam Bark Beetle

- Bark beetle that attacks subalpine fir
- Promptly remove infested trees
- Promote tree vigor and health
- Look for reddening crowns and frass
- Activity increasing at higher elevations





## Dwarf Mistletoe

- Parasitic plant that extracts nutrients from pines
- Look for pale green fruiting bodies and “witches brooms”
- Very prevalent in many areas
- Remove or prune infested trees



## Pine Needle Scale

- Small white flecks on the underside of needles
- Sucks the sap from needles
- Gives trees a “dingy” look
- Controlled by severe cold and predatory insects
- Monitor and maintain





# Aspen



- Defoliators (Large Aspen Tortrix)
- Leaf Blights (Marssonina Blight)
- Cankers and Fungus
- Aspen is relatively tolerant of defoliation
- Rake leaves for landscape trees
- Select for genetic resistance
- Disturbance effects

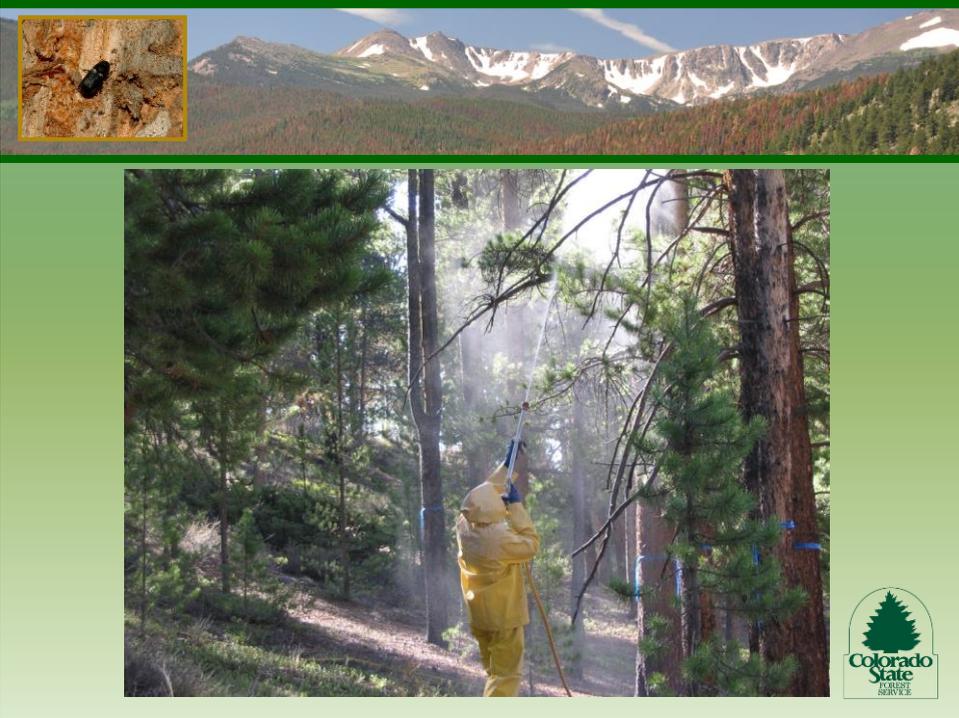


## What Can You Do?



- Manage for overall forest health
  - Age, Species and Genetic Diversity
  - Individual tree health and vigor (younger trees, thinning, pruning, water, prevent damage)
- Promptly dispose of any infested material
- Get specific advice from your local forester
  - CSFS Granby District: 970-887-3121





## What About Spraying?

- Spraying is not a substitute for proper forest management and tree care
- There can be unintended consequences
- Spraying for forest insects can be a part of an overall forest management strategy and integrated pest management strategy if done responsibly
- CSFS does not recommend, but if you choose to do so, here is some advice





## Responsible Spraying

- Is there an immediate or perceived threat?
- What is the value of the tree?
- What chemical and in what concentration?
- What type of application?
- Timing of spraying (Time of year, weather)
- Are there any sensitive receptors near by?
- Licensed pesticide applicator (CDA)
- Do I have other options?



## Additional Resources

- <https://www.colorado.gov/agplants/pesticides>
- <http://www.cepep.colostate.edu/index.htm>

