

Determining Tree Mortality: Did it Survive?

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Types of Fire

Survival probability depends on **severity of damage** to the tree

Burn damage is driven by:

- Temperature
- Duration



Burn Characteristics

Flashy Fuels

- Needles, leaves, twigs
- Short Duration



Woody Fuels

- Logs, Stumps
- Long Duration



Mortality Indicators

The probability of survival is dependent on **extent of damage** to the tree

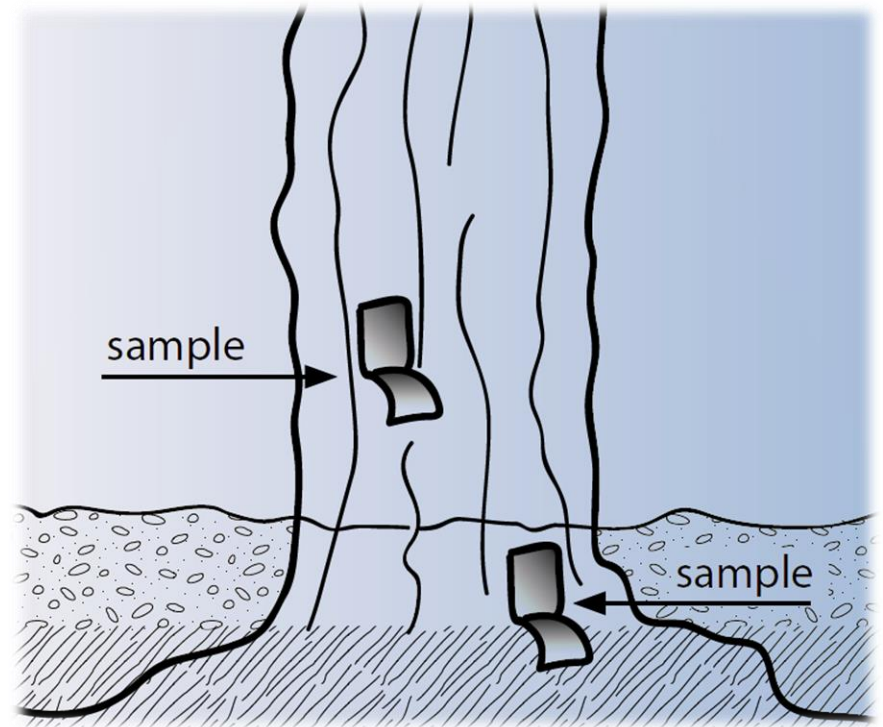
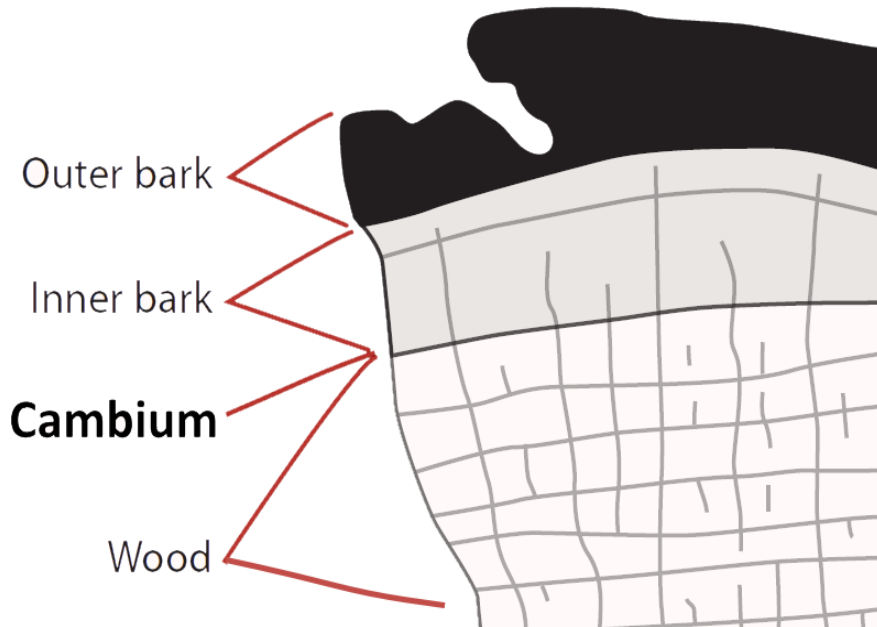
- Bark Injury

- Leaf Injury

Native trees have adaptations which help them **resist** and **recover** from damage.

Assessing Bark Damage

Cambium Damage



Assessing Leaf Damage

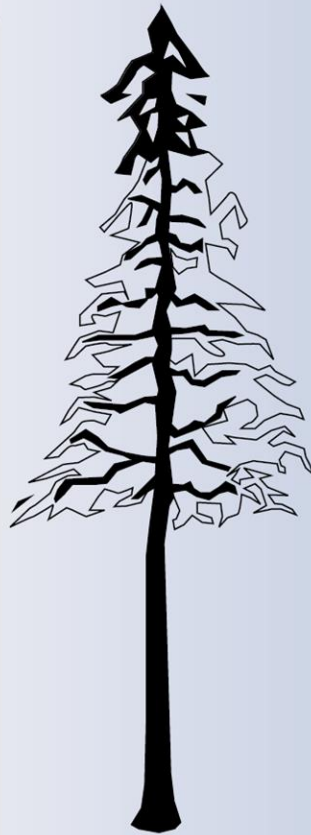
Crown Damage



zero scorch



50% scorch



90% scorch



100% scorch



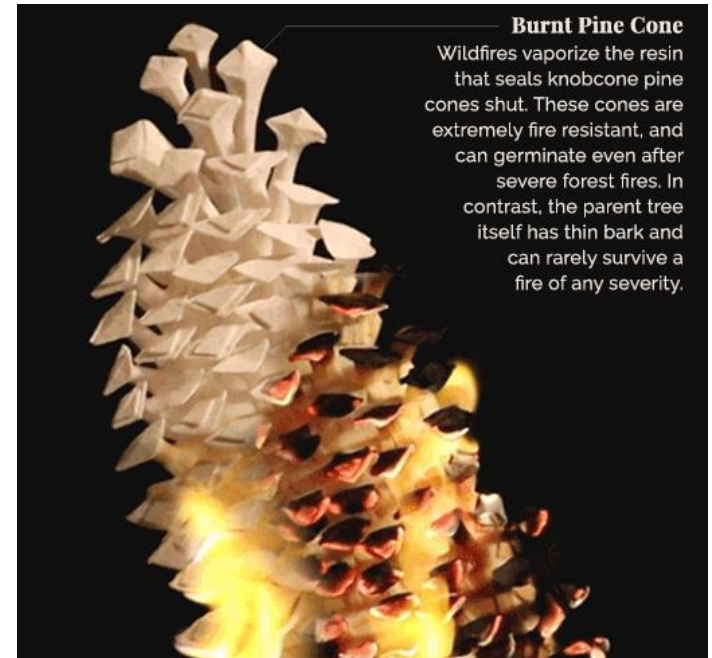
crown consumed



Conifers

Conifer Characteristics

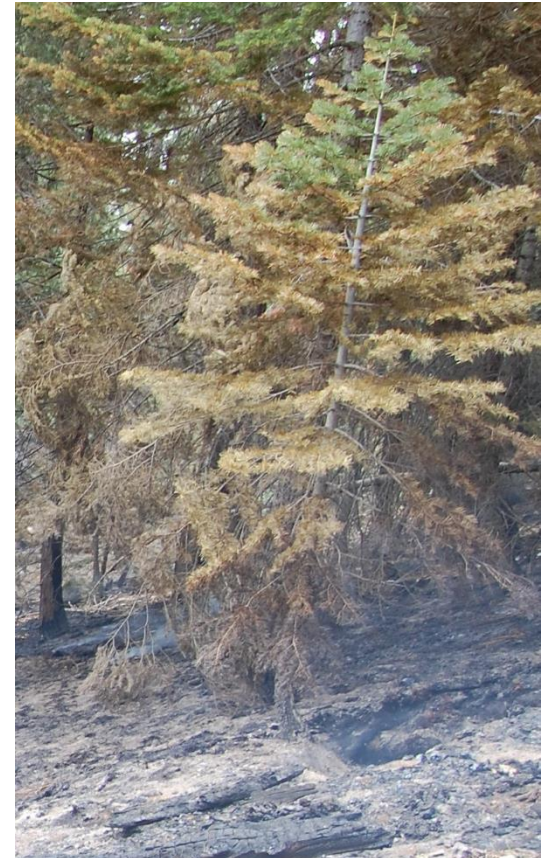
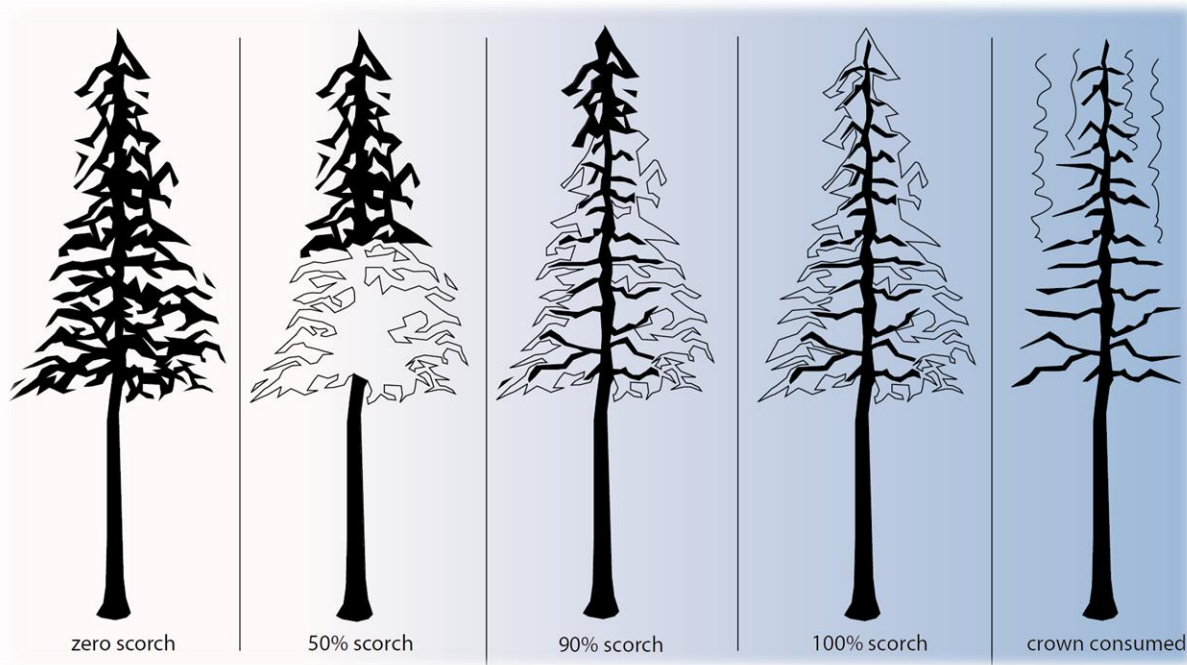
➤ Evergreen Foliage



➤ Some recover with **mass seeding**

Check Conifers

➤ Use **Crown Damage** assessment



* Use Cambium Damage assessment if uncertain



Live Oak



Blue Oak



Black Oak



Valley Oak

Hardwoods

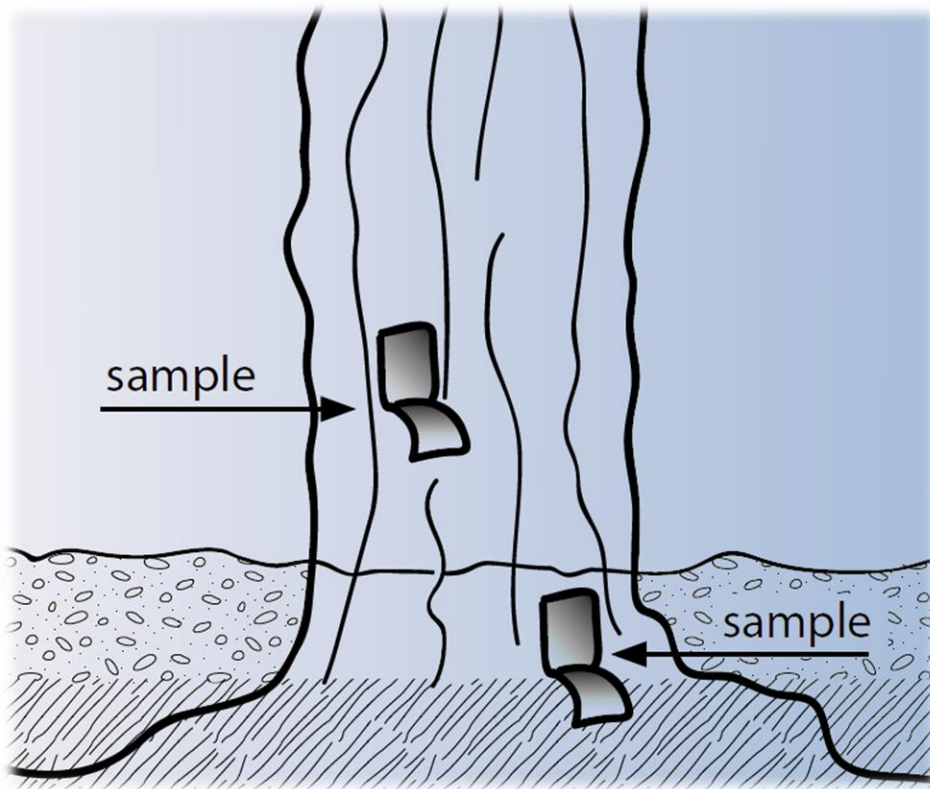
Hardwood Characteristics

- Deciduous Foliage
- Leaves fall off annually
- Surviving trees will **Leaf Out** the following year
- Stumps may **Sprout** new stems



Check Hardwoods

- Use **Cambium Damage** assessment



Next Steps

Triage – **prioritize**
restoration efforts

- Remove Hazards
- Determine **what remains**
- Plan revegetation



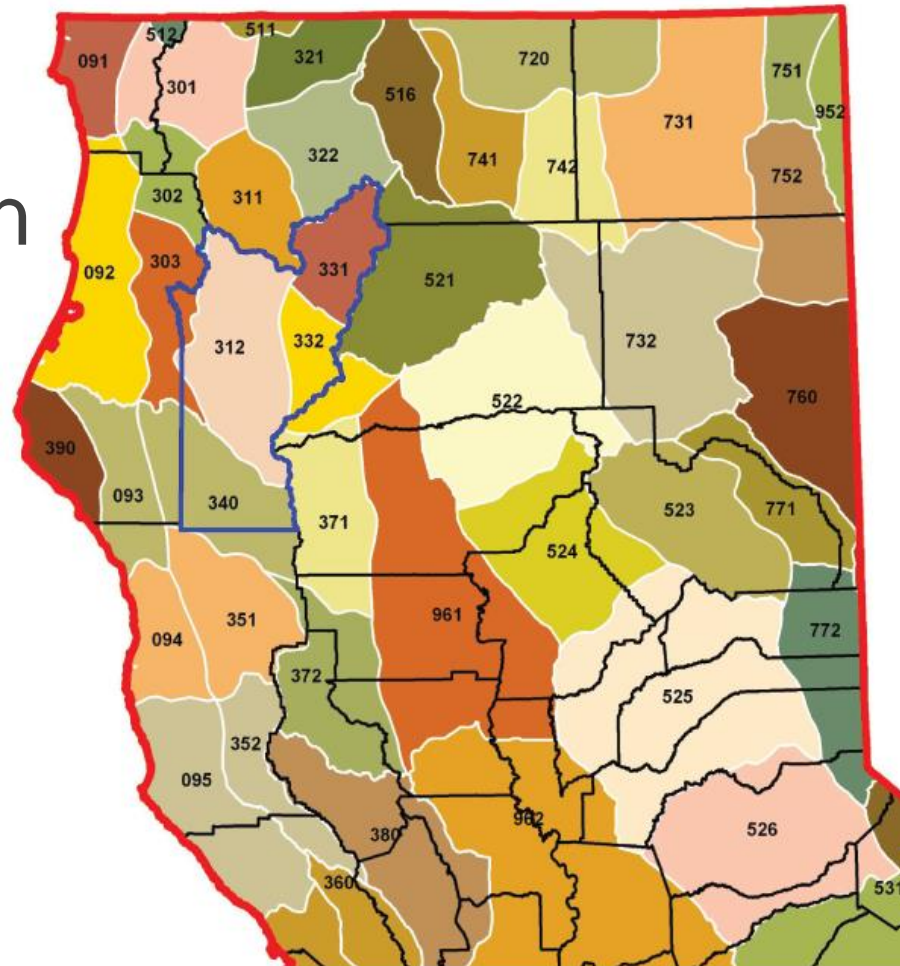
Plan Ahead

- Oaks resprout with multiple stems
- Shrubs will quickly reaccumulate fuels
- Develop **maintenance plan**, a little pruning goes a long way



Replanting Seedlings

- Use **Local Seed**
- COR Acorn Collection
- DIY



Collection Guidelines

Collection

- Acorns are best when **harvested directly** from tree
- Ripe acorns twist easily out of the acorn cap
- **ONLY collect from Shasta County**



Storage and Drop-off

- Store acorns in a vented ziploc type bag
- **Include the location**, a leaf sample, and acorn cup from the tree
- Do not mix acorns from different trees

<https://www.reddingtrees.org/re-oak-redding>



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