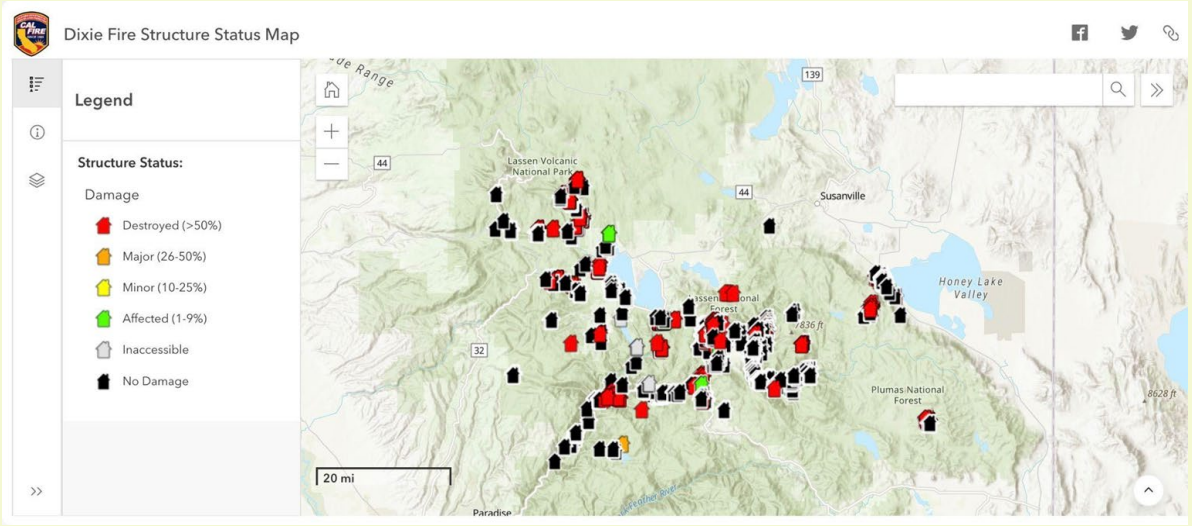
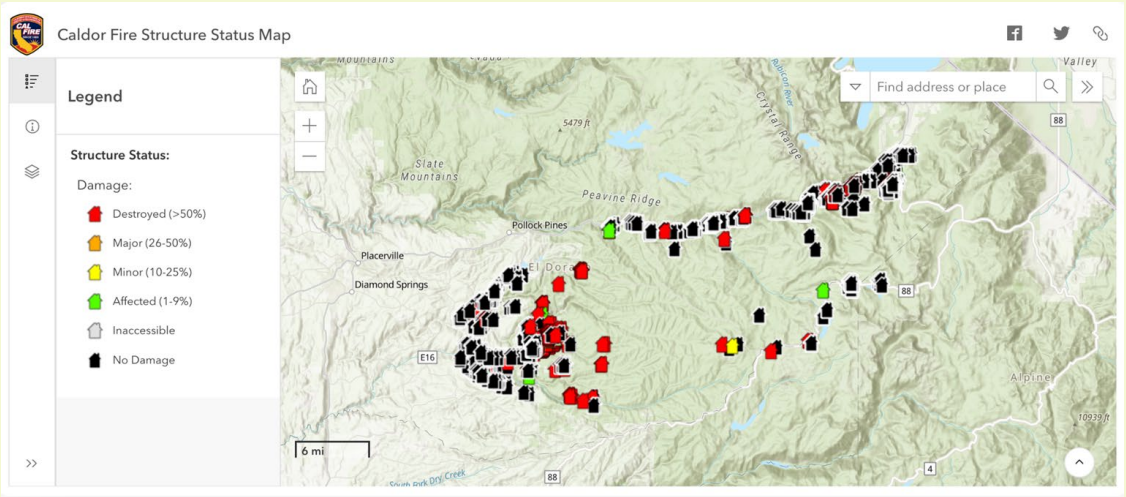
Team 9

Rooting for Upper Little Bear Mountain Club



Dixie Fire Structure

Caldor Fire Structure



Maps Sourced From *fire.ca.gov (CAL Fire)*

Fuel **Reduced**. . .
But Will Fire **Produce**?

Upper Little Bear Mountain Club History

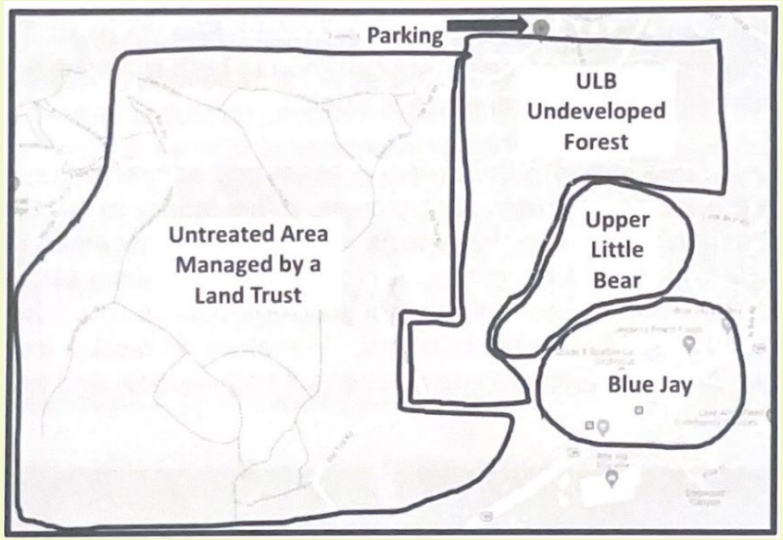
- Little bear lake project in 1890 was for irrigation
- 1913→ Water Commission Act
- 1920 Became Arrowhead
- Switched to a recreational area (Mostly Fishing)

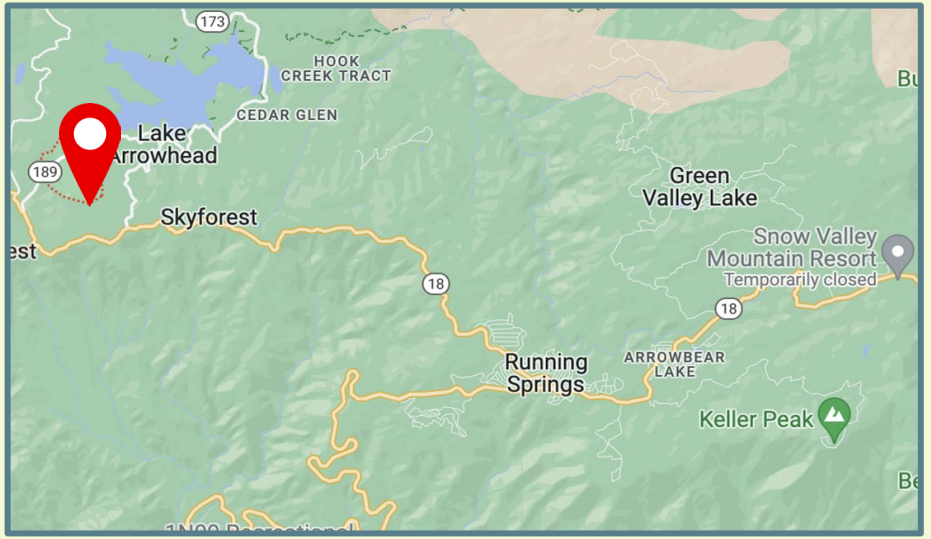
Upper Little Bear Mountain Club Size

- **“Approximately 40 acres of undeveloped forest”**
- Around 40 cabins
- 5,200 Feet in Elevation
- Diverse Species

- David Haas, RPF of San Bernardino Unit

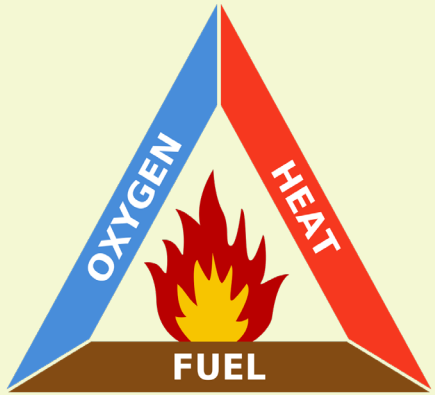
Upper Little Bear Mountain Club Location





Fire Behavior

- We can directly influence fuel
- Fuel ladders carry surface fire up into crowns



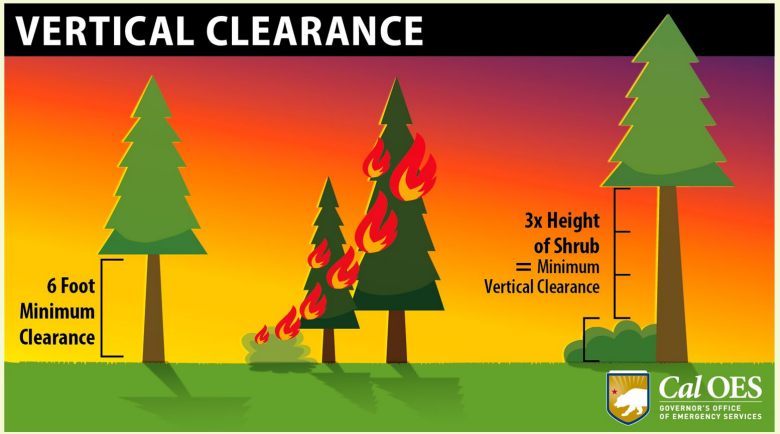
"When you look out the window, you see houses with vegetation…a fire is unstoppable…"

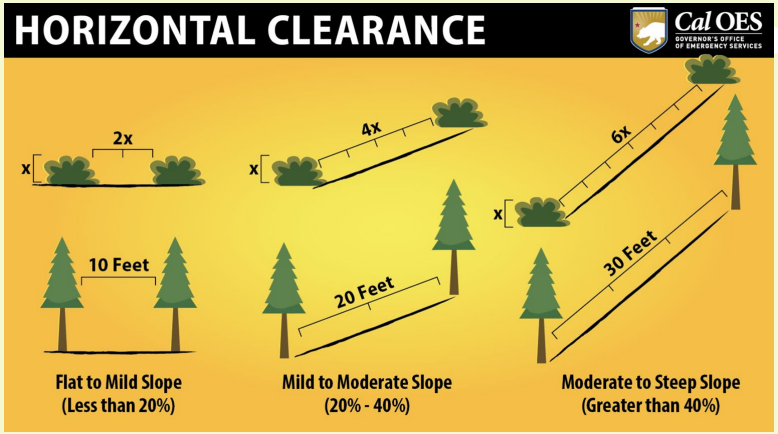
- *John Nicoles, Registered Forester since 1974*

Fuel Reduction

Infographics Sourced From *Cal Office of Emergency Services*

- Disconnect vertical and horizontal fuels
- Remove vegetation or fuel
- Thinning trees, removing underbrush, limbing trees





First Thought: **Beautiful**

Second Thought: **Uh Oh…**

Wildland Urban Interface (WUI)

- Between **unoccupied land & human development**
- Areas experiencing **wildfires**

North of Upper Little Bear Mountain Club

- John Nicoles, RPF since 1974

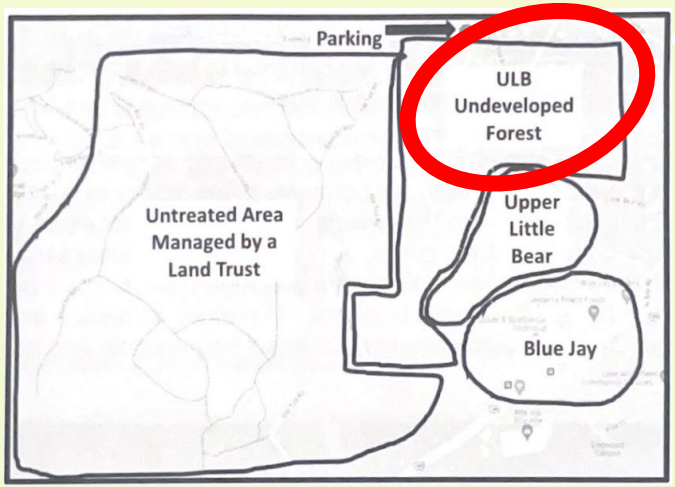
"What you do to 40 acres doesn't matter if you don't maintain it."

ULBMC Fuel Reduction Project

- Created through CAL Fire
- For communities falling within WUI
- 2019: project on 40 acres of undeveloped forest
- Maintenance re-entry since October 2021

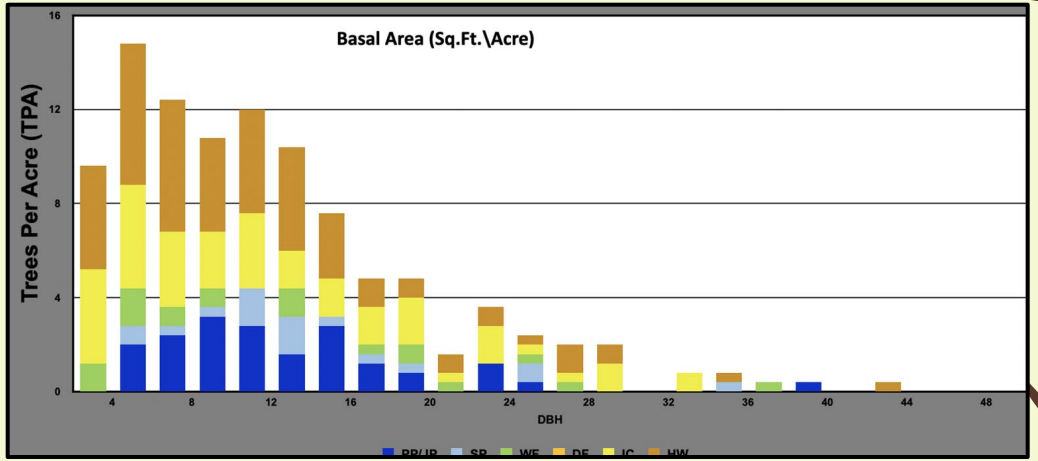
Treatment Specifications

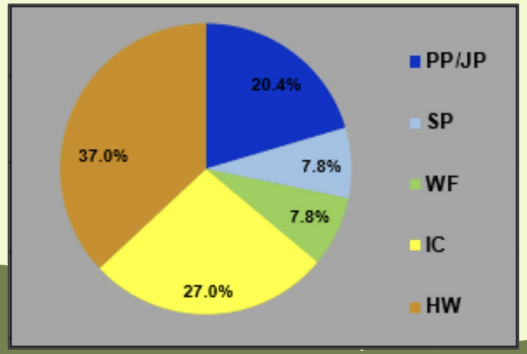
- ❑ Thin Trees
- ❑ Prune Trees
- ❑ Remove Vegetation
- ❑ Remove Snags
- ❑ Bark Beetles
- ❑ Remove 85% of Brush
- ❑ Spaced brush to 2.5x fuel height

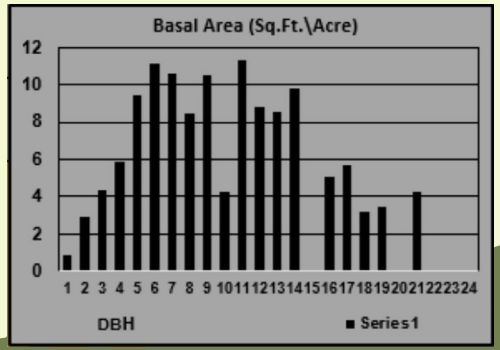


Data Collected

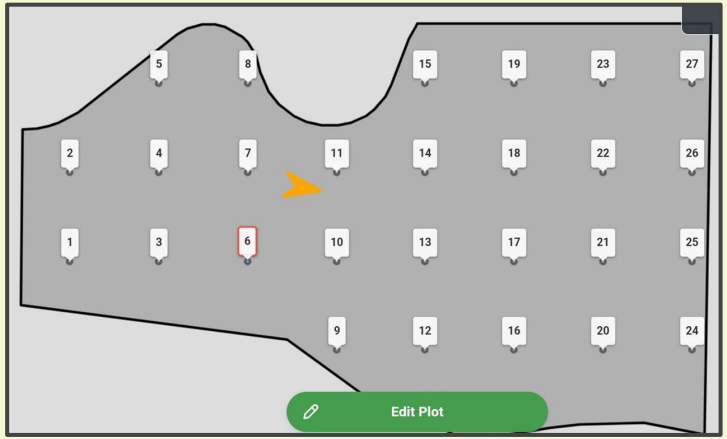
Trees 254
Snags 6
Acres 2.5
Basal Area 128
Average Brush Height 3
Brush Cover 30%
Pruned to 8’ 48% Yes
Canopies Touching 85% Yes
Vegetation Removed 54% Yes
Spacing 56% No
Canopy Cover 64%







So how did we get this data?



DATA COLLECTION TECHNIQUES

Angle Gauge

Densitometer

Increment Borer

Clinometer

Plot Analysis

Were Objectives Met?

Untreated Vs. Treated

Qualitatively, it appears that the project has met objectives of reducing fuel.

Comparison of Data to Project Objectives

Canopies Touching **85%**
Pruned to 8' **48% Yes**
Vegetation Removed **54% Yes**
Snags **2.4 per acre**
Bark Beetle trees **in 3 plots**
Brush Cover **30%**
Spacing **56% No**

Thin Trees **NO**
Prune Trees **NO**
Remove Vegetation **YES**
Remove Snags **1-2 Per Acre (NO)**
Bark Beetles **3 Plots ****
Remove 85% of Brush **NO (70% removed)**
Spaced brush to 2.5x fuel height **NO**

**David Haas (SB Unit Forester) stated that the bark beetle data is most likely incorrect due to student error. In his vast experience walking through the area, he has never seen a bark beetle infested tree.

Quantitatively, comparisons show that the project **DID NOT** meet the objectives
Must consider regrowth since that time (October 2021)

Tending the Timberland:
Future Tree-atments

Community Outreach!

Hold community meeting

Annual Treatment

Check min/max 4 times a year

Sustainable Plan

Provide incentives

Set standards of min/max

Present public proposal

Watch forests flourish!

Recommended Specifications

One year later

LONGTERM

Congressional Role

H.R .188 Proven Forest Management Act of 2022

- Educate on the lack of forest management
- Allowing more reasonable time to complete/ begin projects

One/two more rounds of pruning

- 85% of canopy touching adjacent
- Trees prune to 8ft or half their height is 50%

"That's a lasting treatment."

"The mortality rate was less..because he had thinned the forest."

- John Nicoles, Registered Forester since 1974

Remove drip line vegetation

FACT

54% removed
separated

45%

SOLUTION

1. Prescribed grazing

2. Prescribed fires

"Manipulate vegetation..reduce competition to protect trees..."

- David Haas, RPF of San Bernardino Unit

"Fatality rate was low under area beneath the trees"

(Untreated = 100% Mortality)
(Treated = 60%)

John Nicoles, Registered Forester since 1974 -

Thank you for this opportunity.