

Presentation to the Board of Forestry



January 22, 2025

Presentation Outline:

- What is the Forestry Challenge?
- 2024 Statistics
- Emphasis on College and Career
- Student Presentations
- Q & A





What is the Forestry Challenge?



The Forestry Challenge is an academic competition for high school students in technical forestry and current forestry topics. Participants spend four days in the forest for an intensive field introduction to forest management. Focus topics are tailored to each event, and include silviculture, vegetation and fuels, and forest inventory.



Goal #1: Teach students the basic principles of forestry, connecting classroom math and science to hands-on experiences with real-world applications, enabling them to make recommendations about natural resource management.



Determining Basal Area



Measuring Tree Diameter



Determining Tree Species



Measuring Tree Height



Assessing Growth



Goal #2: Give students the opportunity to explore careers by interacting with natural resource professionals including foresters from public agencies, private industry, and other organizations.



**Justin Barker
Sierra Pacific
Industries
RPF #TBD**



**Rich Wade
Board of Forestry
RPF #2016**



**David Haas
CAL FIRE San Bernardino Unit
RPF #2950**



**DaShayne Sewart
Forestry Challenge Alum
W.M. Beaty & Associates
RPF #TBD**



Goal #3: Provide an opportunity for a diverse student population to experience outdoor recreation and develop an appreciation of the forest and its benefits to all.



**Volleyball
at Shasta**



**Go Carts at
El Dorado**



**Banana Slugs
at Santa Cruz**



**Ziplining at
San Bernardino**



2024 Fall Event Statistics:

- 576 Students (56% female)
- 71 Schools
- 116 Teachers and Chaperones
- 200 Volunteers donated over 2,700 hours
- \$133,426 total volunteer in-kind value
- 3 grants – Wildfire Prevention, Workforce Development, and USFS Forest Stewardship
- 40 Sponsors
- 35 of the 141 teams scored at least a 200/250 and are invited to the Championship event, April 23 to 25 in Pinecrest

Event	Students
Shasta	118*
Santa Cruz	80
El Dorado	139*
San Bern 1	135*
San Bern 2	104
Fall Total	576
Champs	120*
2024 Total	696

* record breaking
for that event

Championship



Shasta



Santa Cruz



**FORESTRY
CHALLENGE**

2024

El Dorado



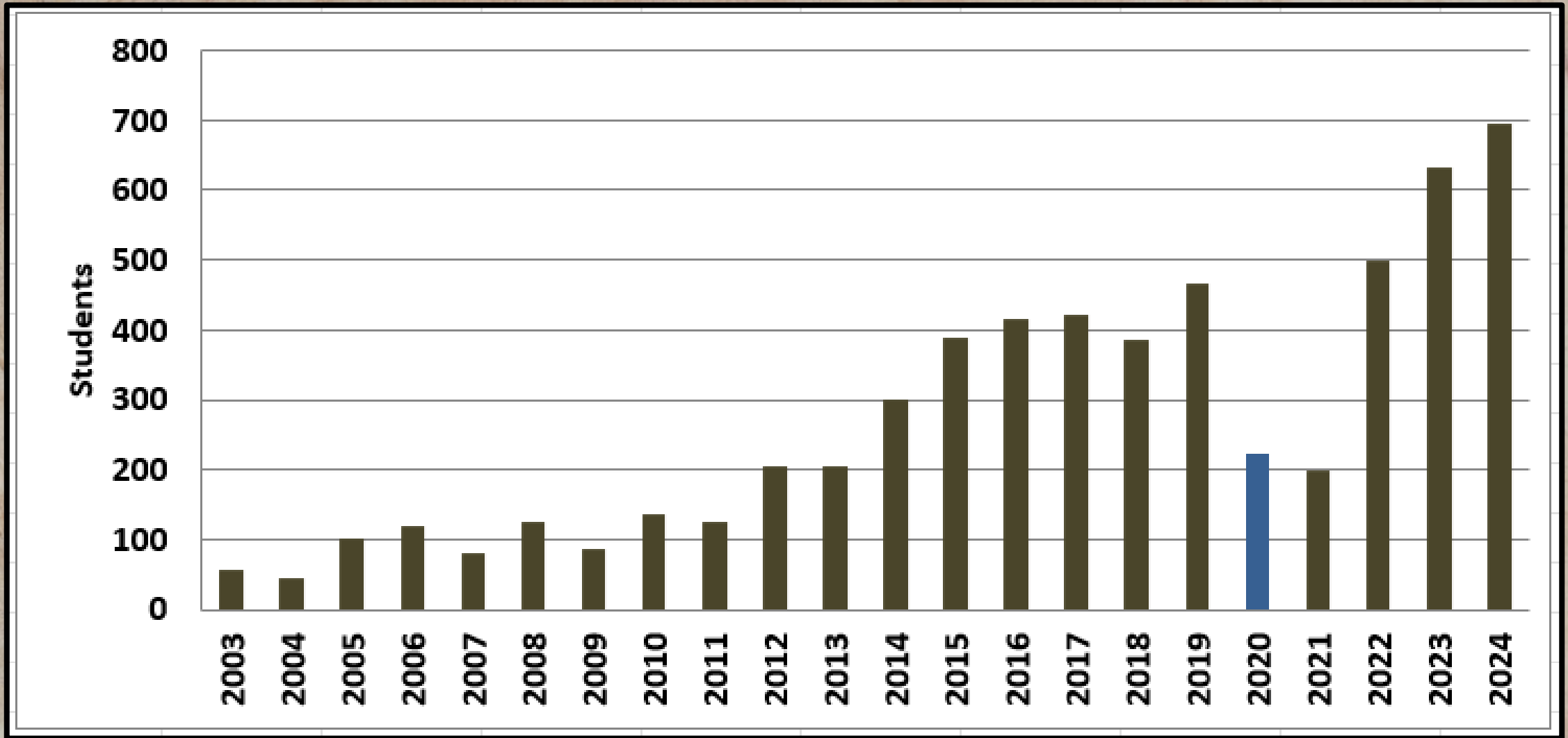
San Bernardino Session 1



San Bernardino Session 2



Growth Since 2003



Emphasis on College and Career

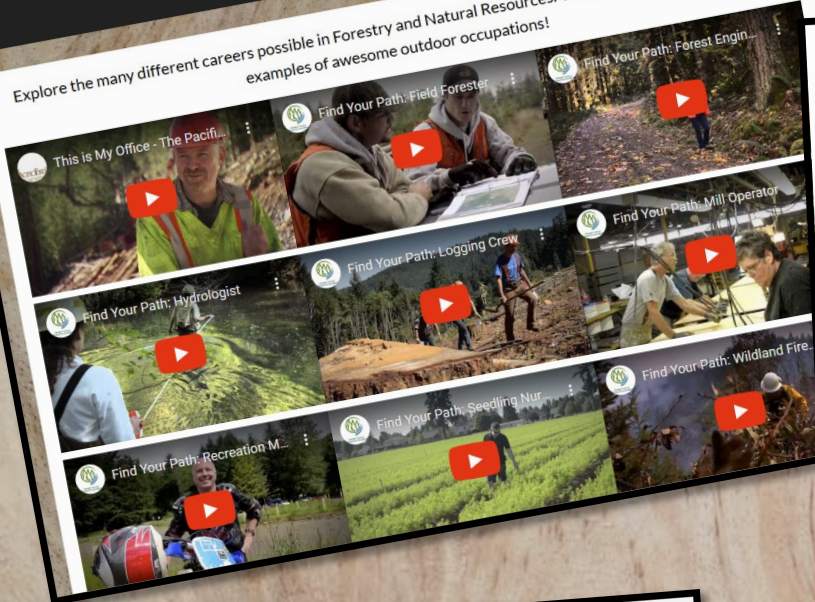
- Info Packets for Guidance Counselors
- Visit to Shasta College HELO Program
- University Student Volunteers
- Raffles with College Swag
- Forestry Challenge Scholarship Program
- Lake Tahoe Community College Course



Go to forestrychallenge.org for college and career resources

EDUCATION AND CAREERS IN FORESTRY

Explore the many different careers possible in Forestry and Natural Resources. Check out the videos below for examples of awesome outdoor occupations!



Check out these job boards

Have you already picked out what you want to do and now just need to find someone willing to pay you for it? Or are you just curious to see what's out there? Either way, we have something for you! These job boards represent the largest forest industry employers within California and more! See what kind of jobs are available, the companies looking to hire, and what's in it for you!

A bit of everything:

- California Licensed Foresters Association (California centric)
- Forest Jobs
- Forestry USA
- Society of American Foresters (Nationwide)

Government Jobs:

- USAJOBS (Forest Service, BLM and others)
- UC ANR (Univ of CA)
- CalCareers (CalFire and other state agencies)

Industry Jobs:

- Sierra Pacific Industries
- Mason, Bruce & Girard
- Mountain Enterprises

Conservation Jobs:

- American Conservation Experience
- Sierra Nevada Alliance
- California Climate Action Corps

Urban Forestry Jobs:

- California ReLeaf
- Tree People

Forest Management Education a...

A directory of various forestry training programs across the state.

2,043 views
Last edit was on June 26, 2023

Map showing forestry training programs across California and Oregon. Locations marked include Lincoln City, Newport, Salem, Eugene, Medford, Grants Pass, Shasta-Trinity National Forest, Humboldt-Toiyabe National Forest, and others.

- Ca Conservation Corps Forestry C...
- Apprenticeship - Forestry and Nat...
- University with forestry program

FORESTRY CHALLENGE

January 2025 College and Career Newsletter

COLLEGE APPLICATION PROCESS

BRAD HORTON
INDEPENDENT EDUCATIONAL CONSULTANT

Selecting and Applying for College

Forestry Challenge
49 subscribers

Presenting Schools



SHASTA FORESTRY CHALLENGE



Simmon B, Jose M, Melany N, Brandon C



FOCUS TOPIC: GARRISON RANCH HARVEST EVALUATION

We assessed timber available for harvest on an active Modified Timber Harvest Plan and, operating within the prescription outlined in the plan and using current information on lumber prices and logging/hauling costs, projected the landowner net income (or loss) based on our recommended harvest volume.

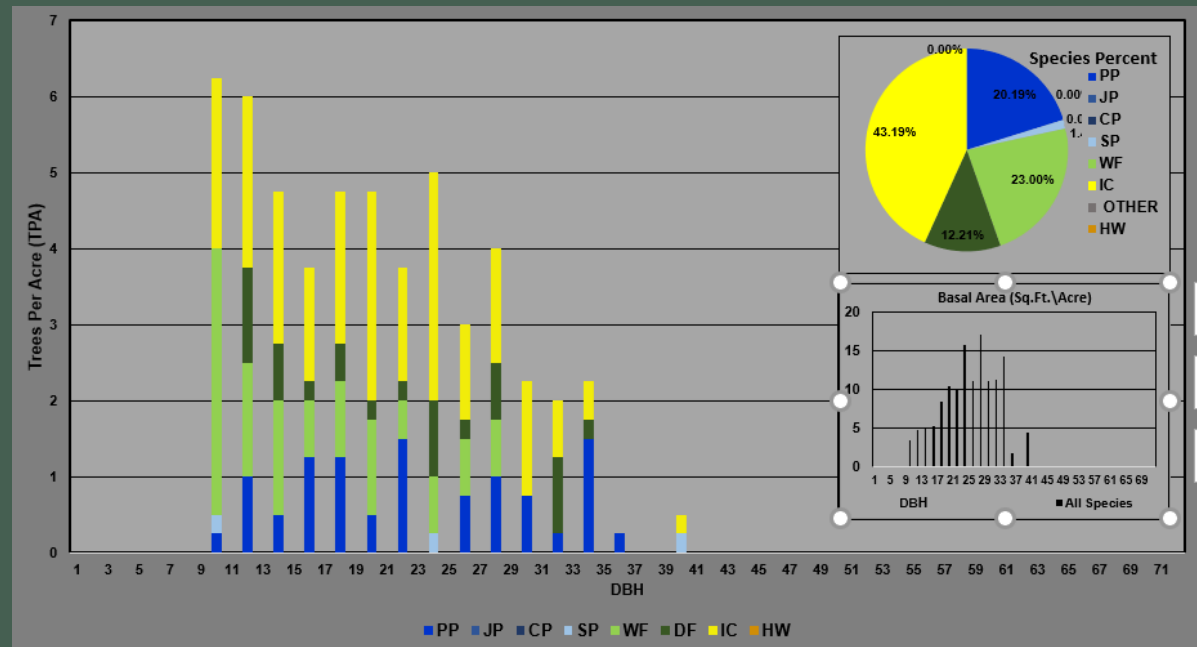
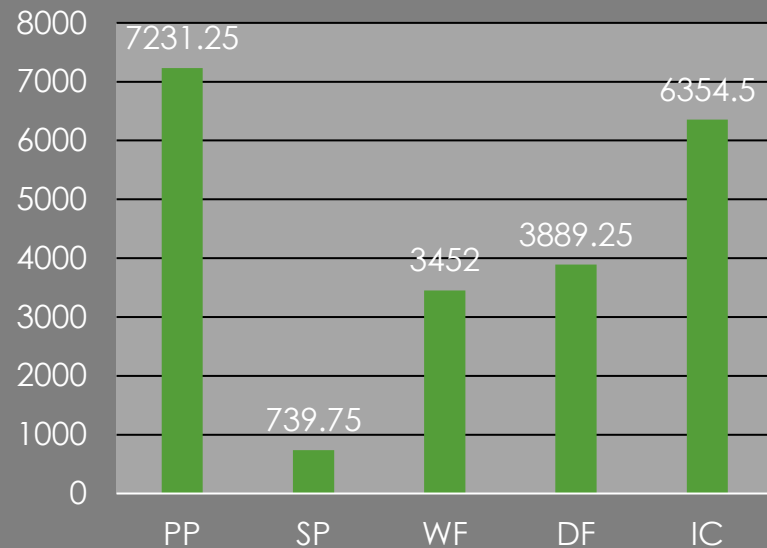
Data Summary

- Incense Cedar and Ponderosa Pine dominant stand
- Minor slowdown in growth rates
- Adequately stocked but not evenly dispersed
- Significant defect, especially in Sugar Pine

Trees Per Acre	53
Basal Area using tree diameters	133 ft²/ac
Basal Area using Angle Gauge	156 ft²/ac
Growth over last 10 years	1.35 inches
Growth over previous 10 years	1.61 inches
Scribner Bd Ft/Acre	21,667

Percent Defect	PP	SP	WF	DF	IC
	19%	67%	34%	12%	13%

Volume Per Acre by Species



Profit/Loss Analysis for Harvested Acreage

	PP	IC	DF	WF	SP
Log Value	\$14,173.25	\$17,792.00	\$13,067.88	\$8,215.76	\$478.46
Logging	-\$10,123.25	-\$8,896.30	-\$2,372.00	-\$4,832.80	-\$1,035.72
Yield Tax	-\$202.48	-\$195.71	-\$272.25	-\$135.32	-\$20.72
Hauling	-\$4,596.18	-\$8,077.00	-\$5,444.95	-\$2,194.09	-\$420.00
Net	-\$748.66	+ \$623.00	+ \$4,977.90	+ \$1,053.55	-\$997.94

NET PROFIT VIA GROUP SELECTION PRESCRIPTION \$4,907.75

70 acres x (.20) = up to 14 acres available for harvest

Hauling costs calculated by destination, based on species and size

Profit will be used as cost share with the CA Forest Improvement Program for mastication work to meet landowner objectives:

- Ownership stability for this family forest

- Reducing wildfire danger

- Improving soil and other ecosystem services



THANK YOU FOR
LISTENING

Habitat Resiliency at Pescadero Creek County Park

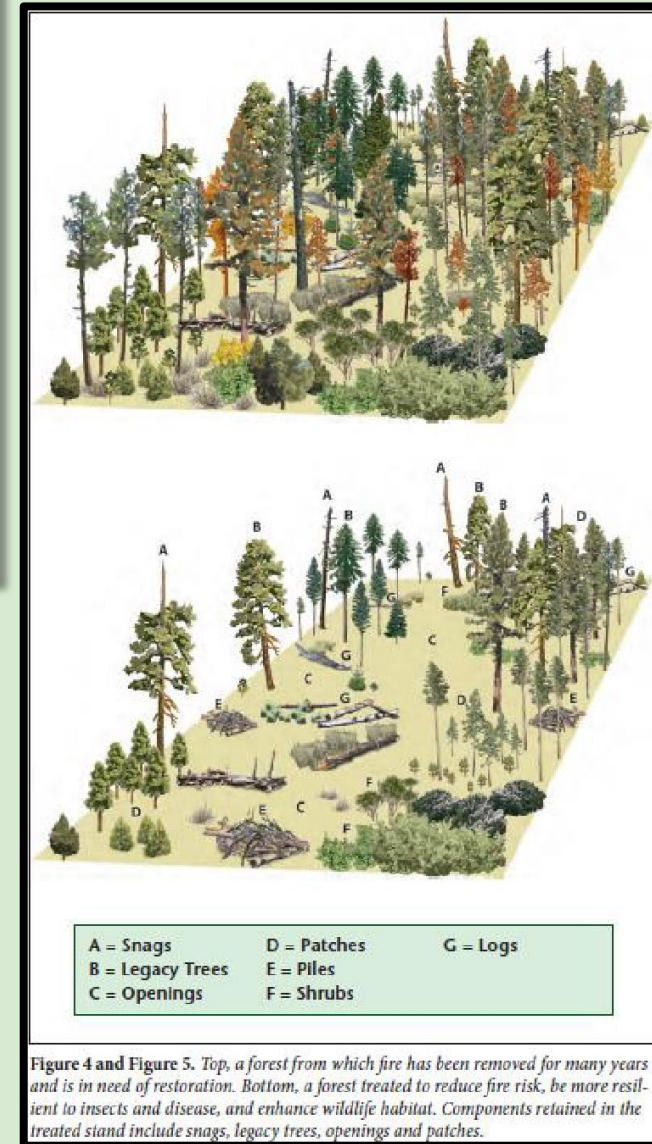
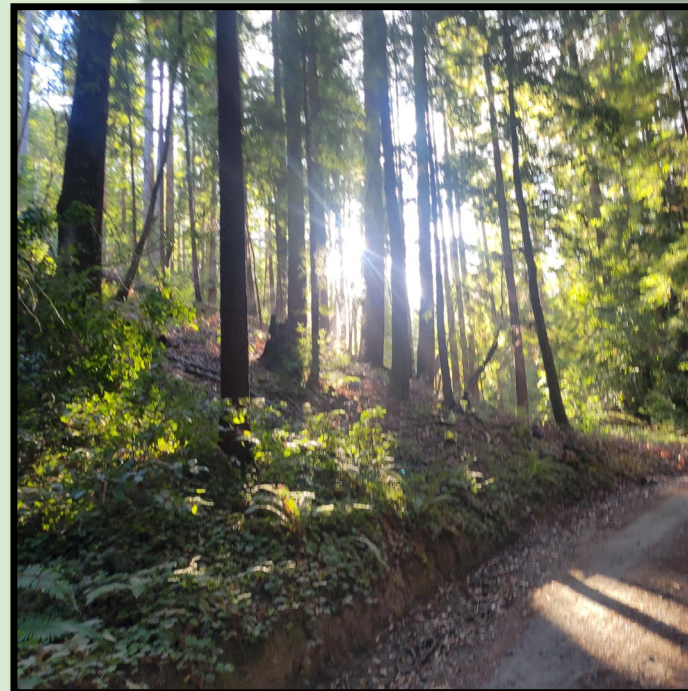


Woodside High School Team 9: Evan, Sujatha,
Jenny, Hannah, and Ty

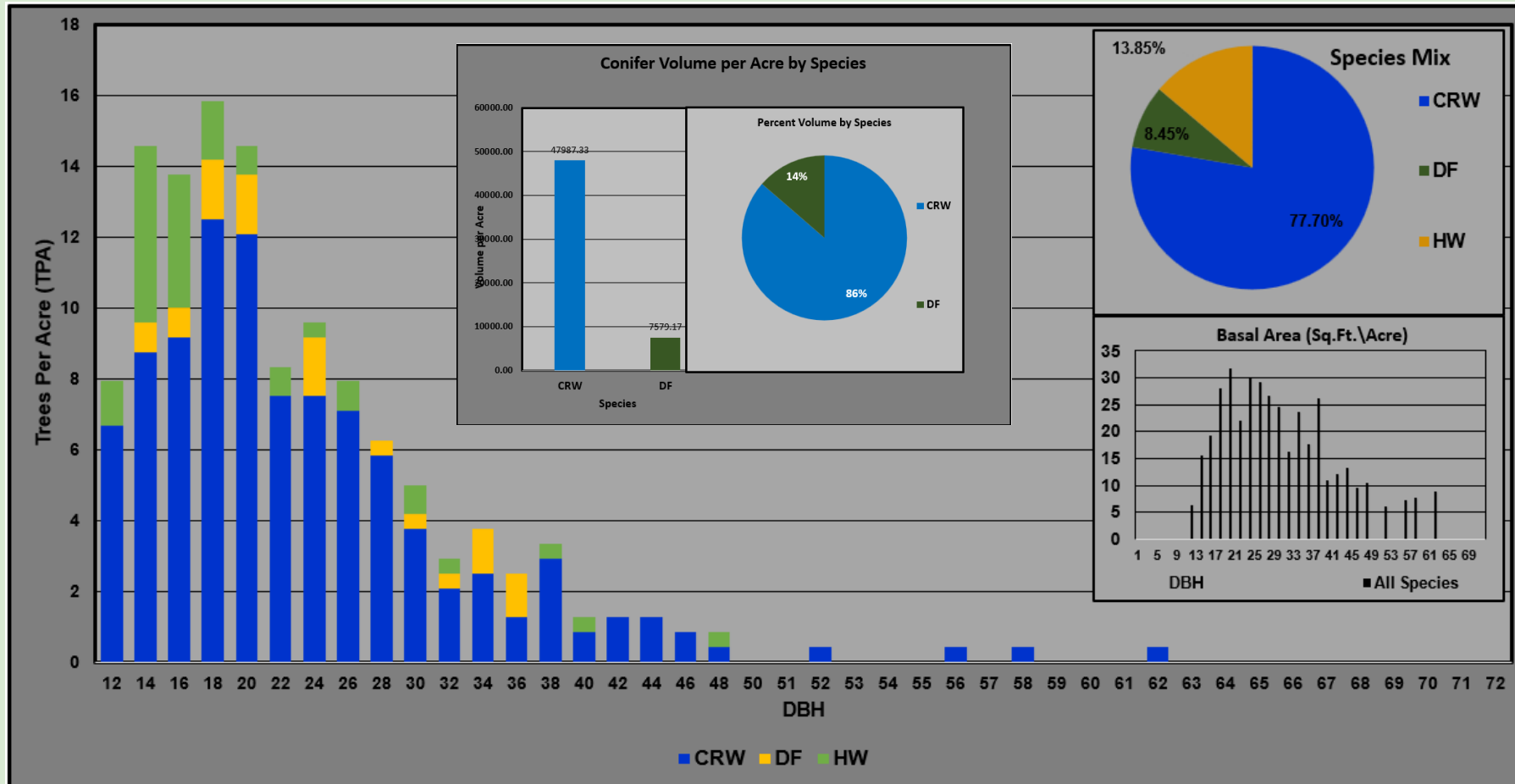


Focus Topic: Habitat Resiliency at Pescadero Creek County Park

We determined the forest type in a portion of the Park intended for treatment and, using restoration goals as outlined in the Park's Climate and Habitat Resilience Plan (CHRP), recommended a treatment to promote the development of functional old-growth habitat characteristics observed in late-successional stands.



Data Summary



- TPA = 123
- Volume per acre = 55,567
- Basal Area using DBH = 403 ft²/acre
- Basal Area using angle gauge = 393 ft²/acre
- Coastal Redwood dominant
- Young Douglas-fir component
- Primary hardwood species - Tanoak
- Volume calculations for conifers only

Proposed Solution

1. Use a Forest Fire Prevention Exemption (1038.3)
 - Cut 20% of Redwoods with DBH of 12" to 24"
2. Monitor
 - Recollect data every 3 to 5 years
3. Long Term – Use a Timber Harvest Plan
 - THP will be developed based on monitoring feedback
4. Public Perception
 - Help people understand the importance of managing forests





Thank you for your time!



Wells Preserve Restoration Project

Cayden Deal, Peyton Koulos,
Zoe Ordway, and Olivia Larson





Focus Topic: Wells Preserve Restoration

We collected data at the American River Conservancy's Wells Preserve near Somerset to assess its health and recommend actions to restore its ecological function to contribute to the health of the Cosumnes River watershed.

Data Summary

75 Trees per acre 10" DBH and over

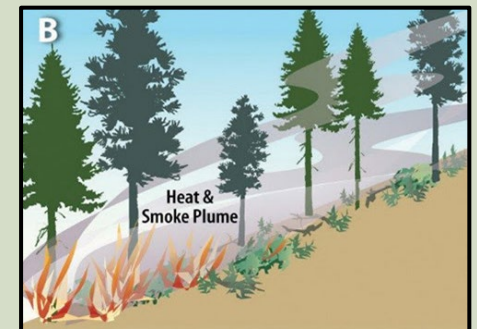
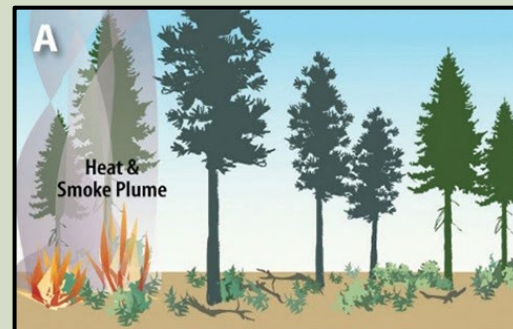
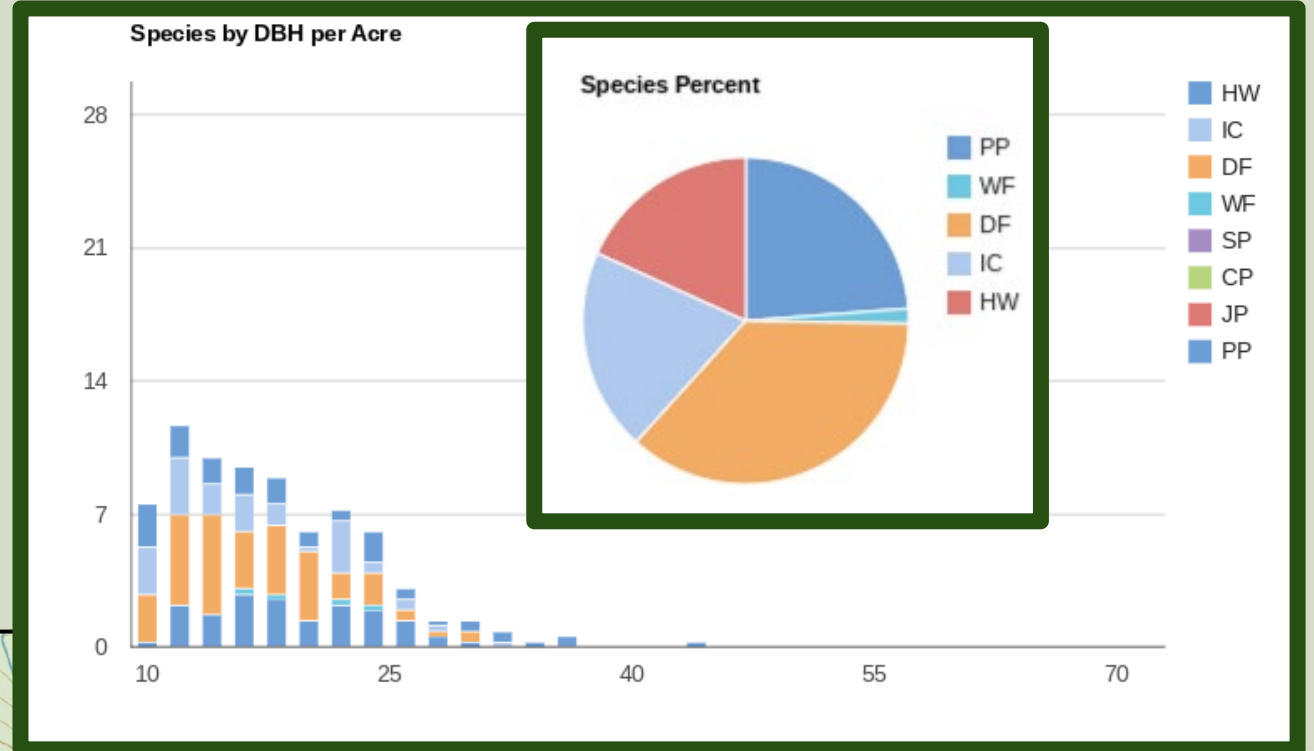
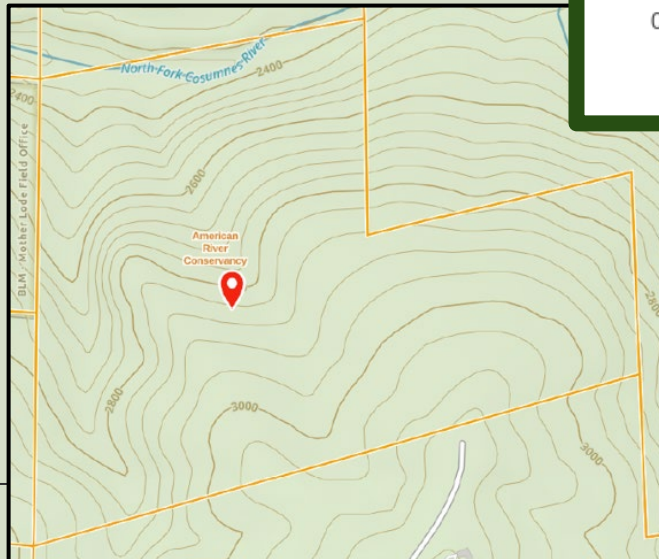
Basal Area = 142 ft²/ac

Average height of ground vegetation = 4.35 ft.

Average height to canopy = 18 feet

Ground cover presence = 60%

8 Dead TPA 10" to 30" DBH





Conclusions

- The Wells Preserve is in desperate need of restoration
- Recommend seeking grants and other funding to treat ladder fuels using multiple methods
- The Forest Fire Prevention Exemption (1038.3) is the best option to remove larger trees to decrease the risk of fire



HARVESTING DEAD, DYING, DISEASED TREES (14 CCR § 1038(b))	DROUGHT MORTALITY / SUBSTANTIALLY DAMAGED TIMBERLAND (14 CCR § 1038(d))	FOREST FIRE PREVENTION EXEMPTION (14 CCR § 1038.3)
---	---	--

A lush green forest scene with tall, thin trees in the background and a prominent evergreen branch in the foreground. The lighting is bright and natural, suggesting a sunny day. A semi-transparent light green rectangular box is centered over the image, containing the text "Thank you!".

Thank you!

The Terrific Two Team 11 Presentation



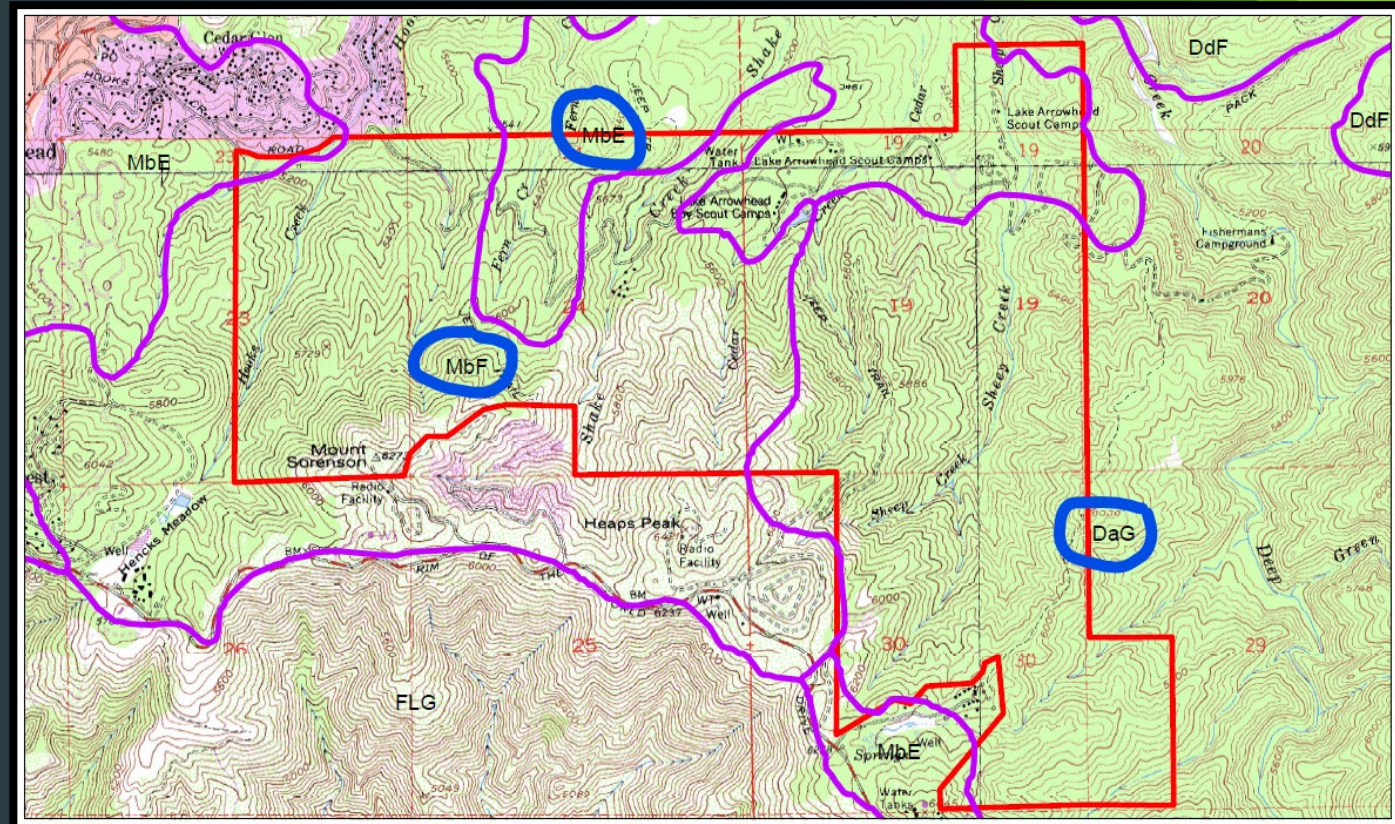
By Ty Linger and Aaron Flores

Focus Topic

Mixed Conifer-Oak Woodland Forest Restoration at the Hubert Eaton Scout Reservation

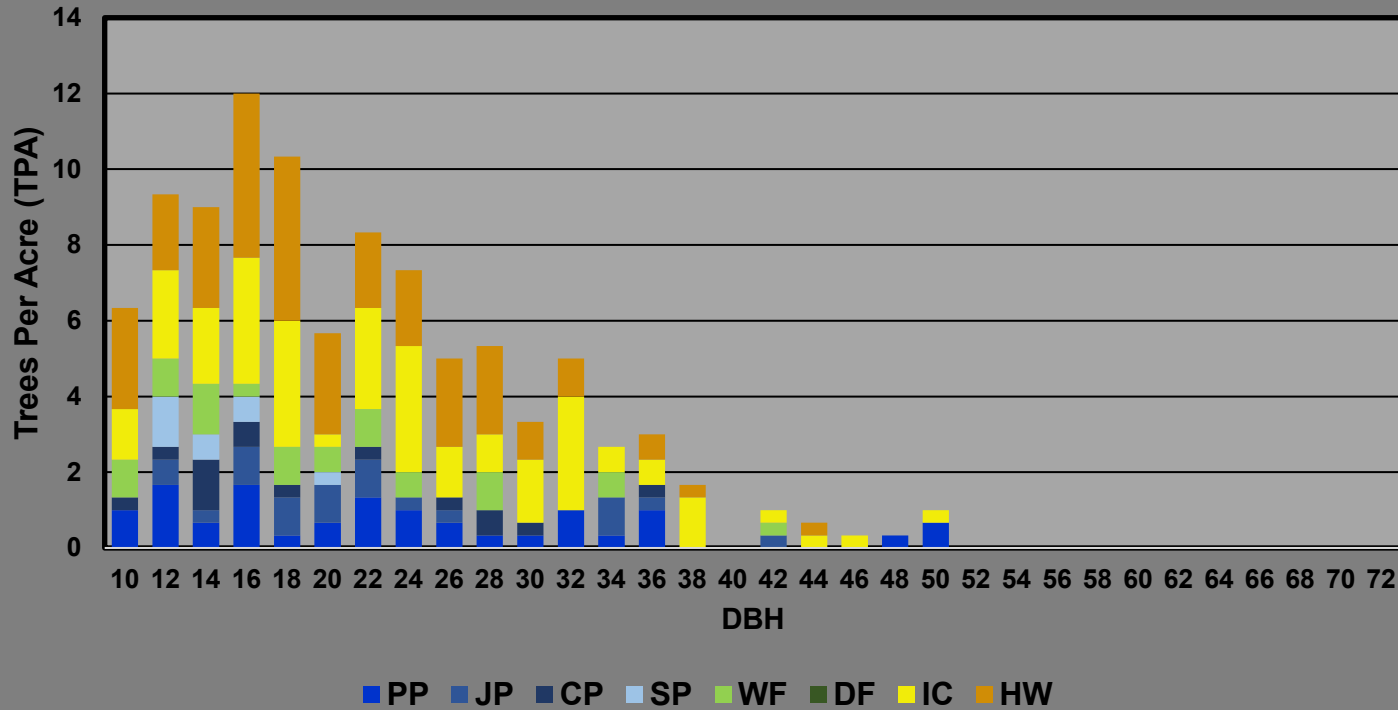


We collected data at the Big Horn Camp area of HESR to determine species composition and recommend areas of the property to replicate this forest community.

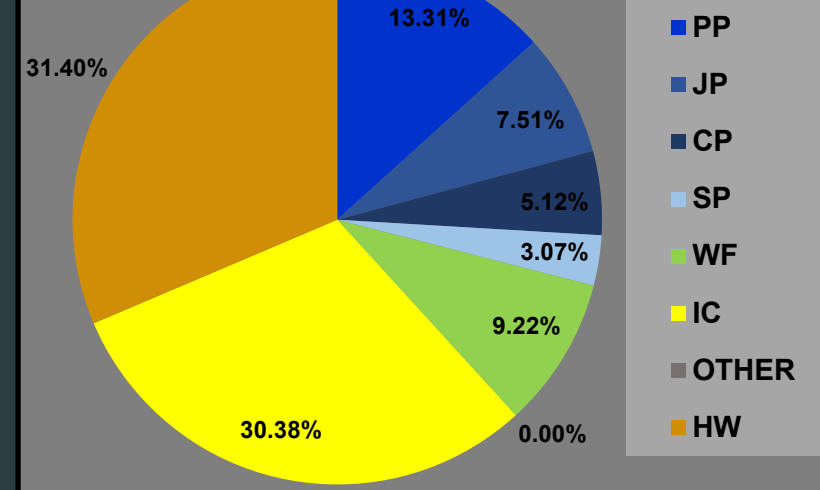


Data Summary

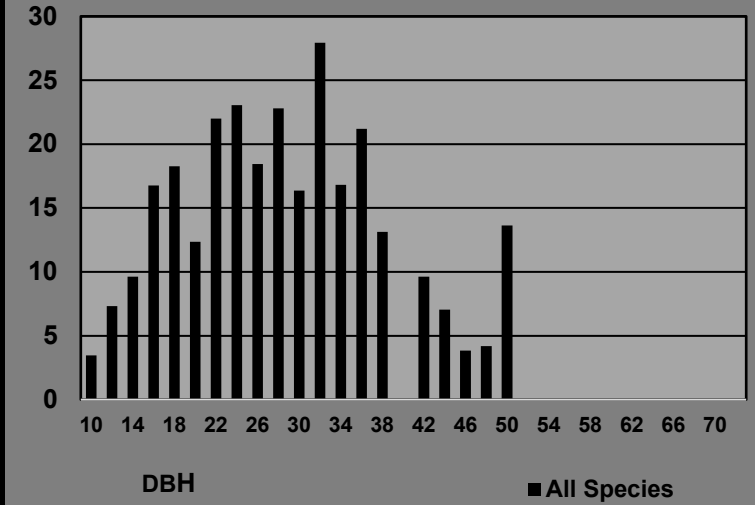
Species by DBH per Acre



Species Percent



Basal Area (Sq.Ft. \Acre)



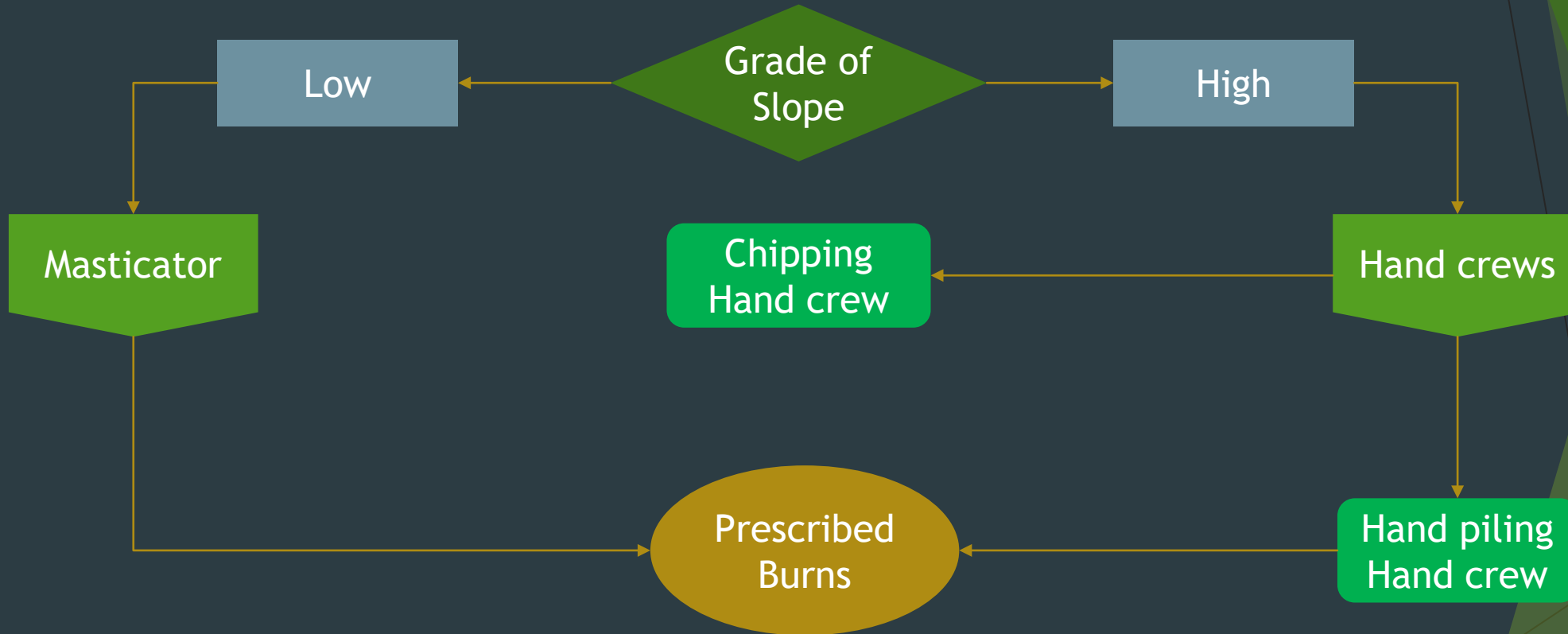
- ▶ Trees Per Acre: 98
- ▶ Basal Area Per Acre: 288
- ▶ Hardwood BA: 35%
- ▶ Conifer BA: 65%

Factors to Consider for Replication:

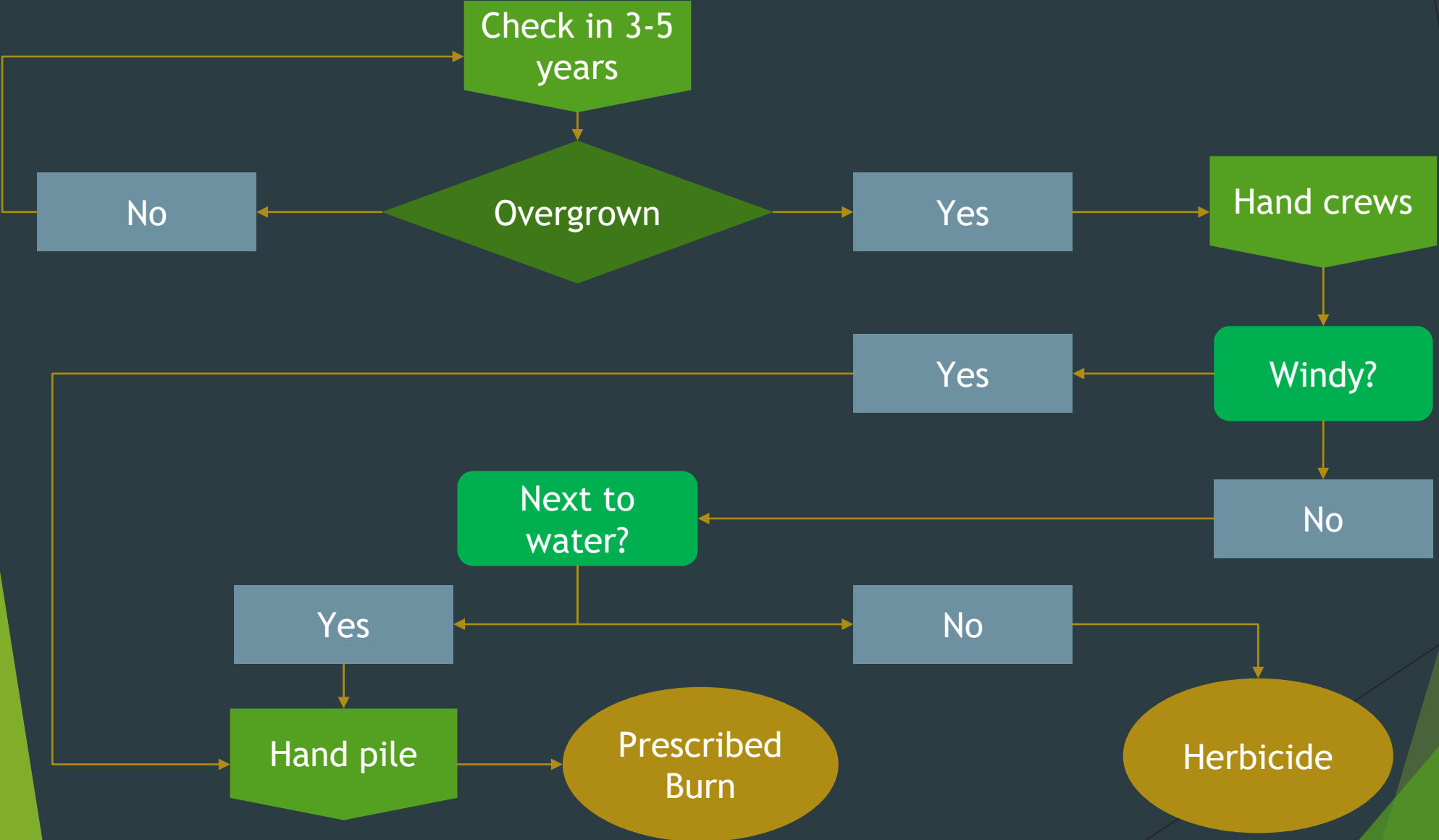
- ▶ Soils
- ▶ Topography
- ▶ Planting composition and spacing

Site Preparation Flowchart

“Without fire mimic fire” – Henry Herrera



Follow Up Flowchart: Mitigation of Brush



Thank you!

