



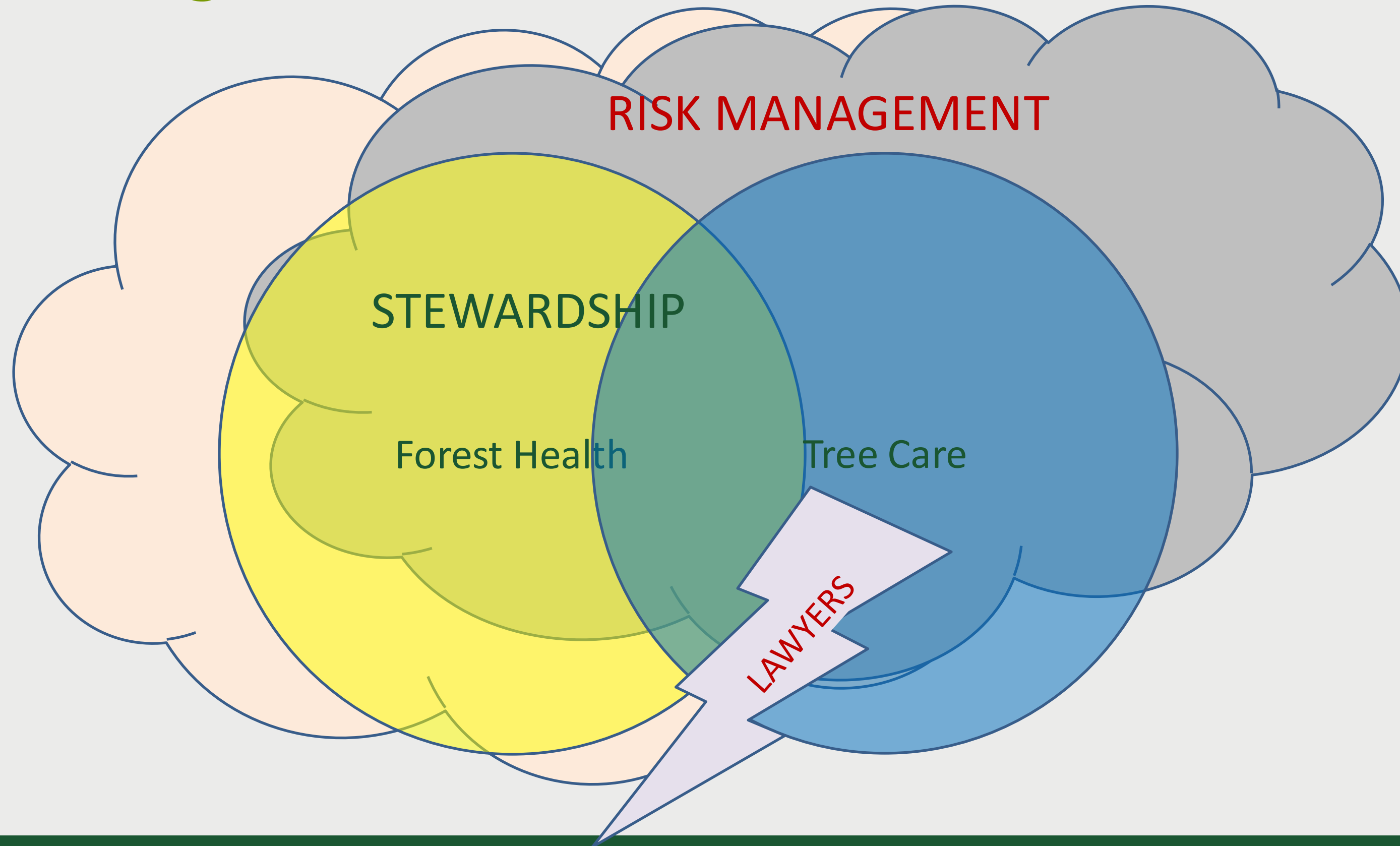
# Forest Health and Arboriculture Annual Update

David Cass

Agency Forester



# Forestry vs Arboriculture



# Forest Health Program Updates



# What is forest health?

## **DNR DEFINITION - RCW 76.06.020 (6)**

“Forest health” means, for the purposes of this chapter, the condition of a forest being sound in ecological function, sustainable, resilient, and resistant to insects, diseases, fire and other disturbance, and having the capacity to meet landowner objectives”

## **STATE PARKS DEFINITION - Commission Natural Resources Policy 73-04-1**

Forest health: A concept of forest management for the purpose of building resilience to natural and human-caused disturbance by reducing risks and improving the structure and function of forest ecosystems. In State Parks, forest health encompasses recreation, natural, and cultural preservation considerations.



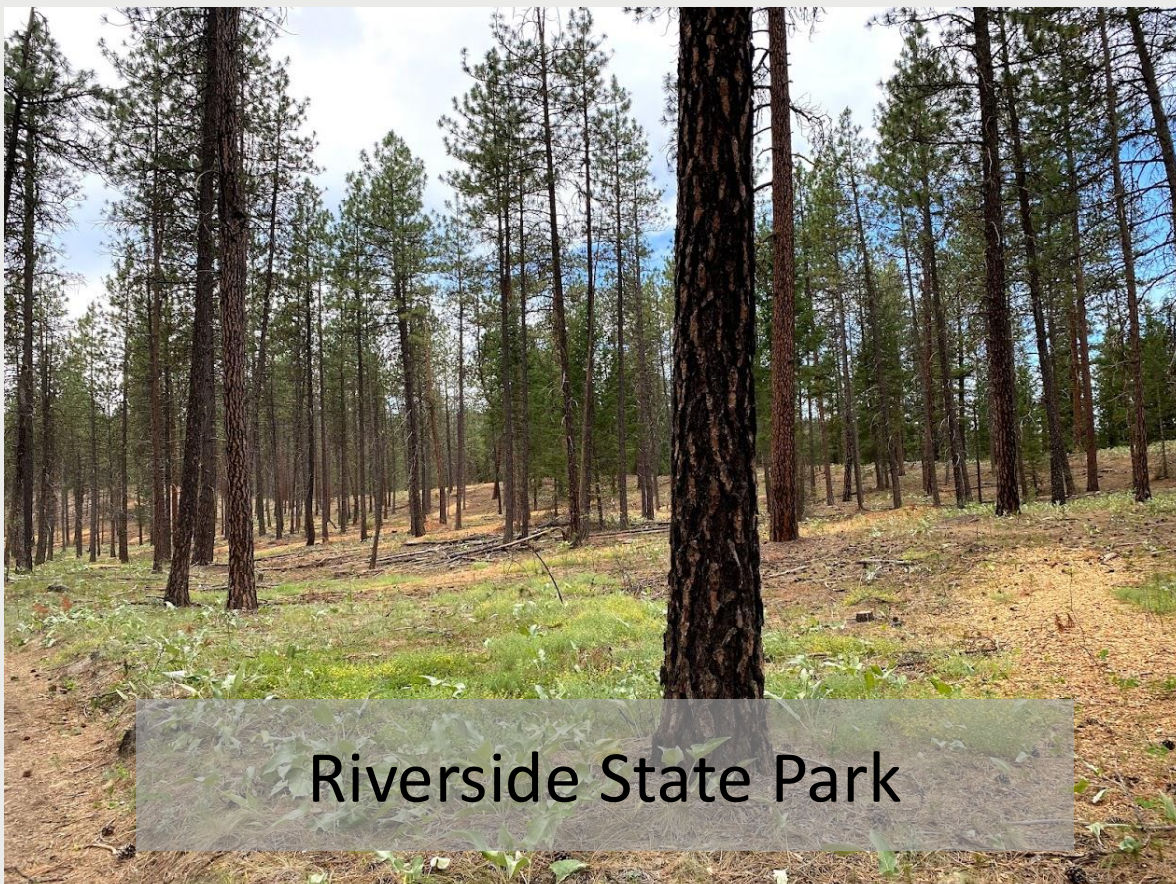
# State Park Forests

85,000 acres of forest land

>10% of our ecosystems provide habitat for rare plants or animals or both

>40% support ecosystems that are at moderate to severe risk of extirpation at the state or global level

Most of the remaining low-elevation old-growth forests



# State Park Forests

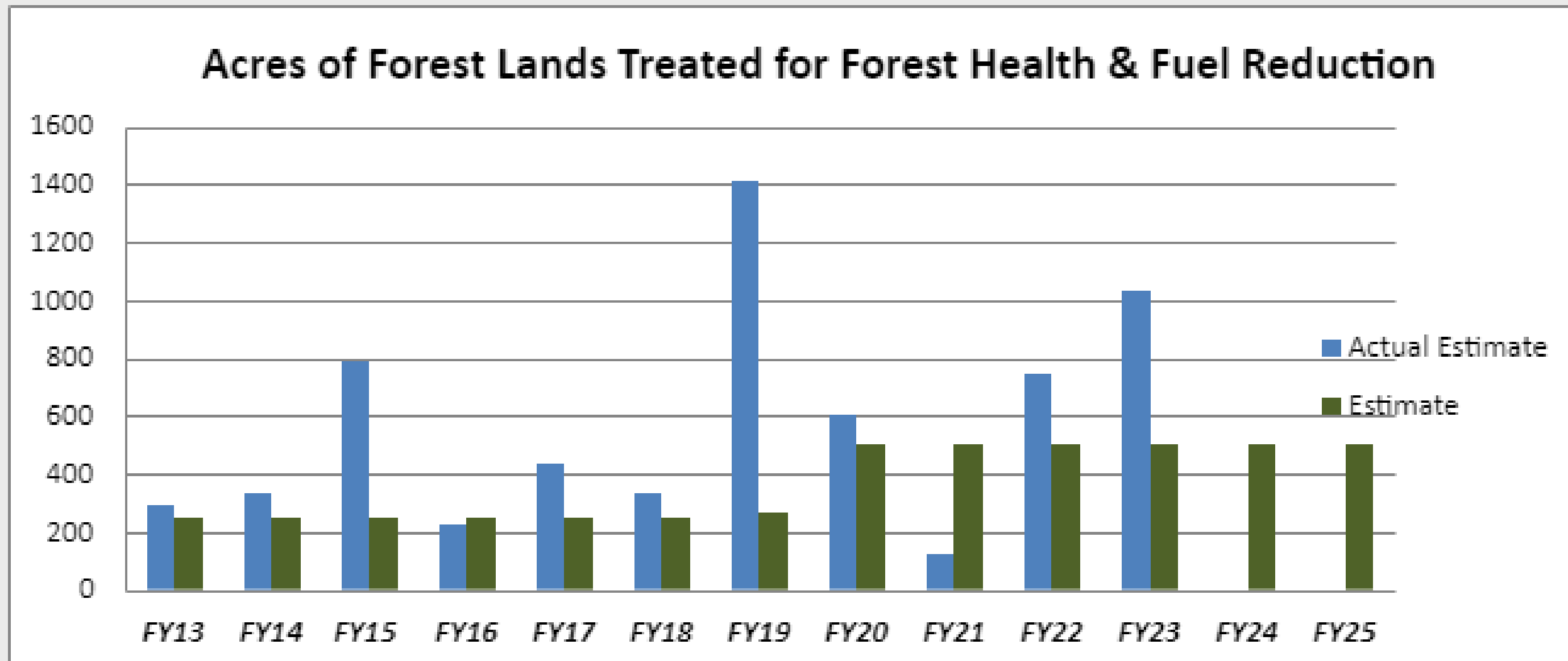
## Forest Health Needs

Needs and Risks	Approaches and strategies	Treatment Types
<p>Wildfire                      Insect and disease                      Stagnation                      Drought                      Climate change                      Noxious weeds                      Degraded habitat                      Tree risk</p>	<p>Density Management                      Fuels Management                      Species Composition                      Change                      Insect or disease                      management                      Increased diversity                      Understory restoration                      Accelerated old growth</p>	<p>Noncommercial                      Thinning                      Commercial Thinning                      Shaded Fuel Break                      Defensible Space                      Slash Abatement                      Pile burning                      Prescribed burning                      Weed control                      Reseeding/Replanting</p>



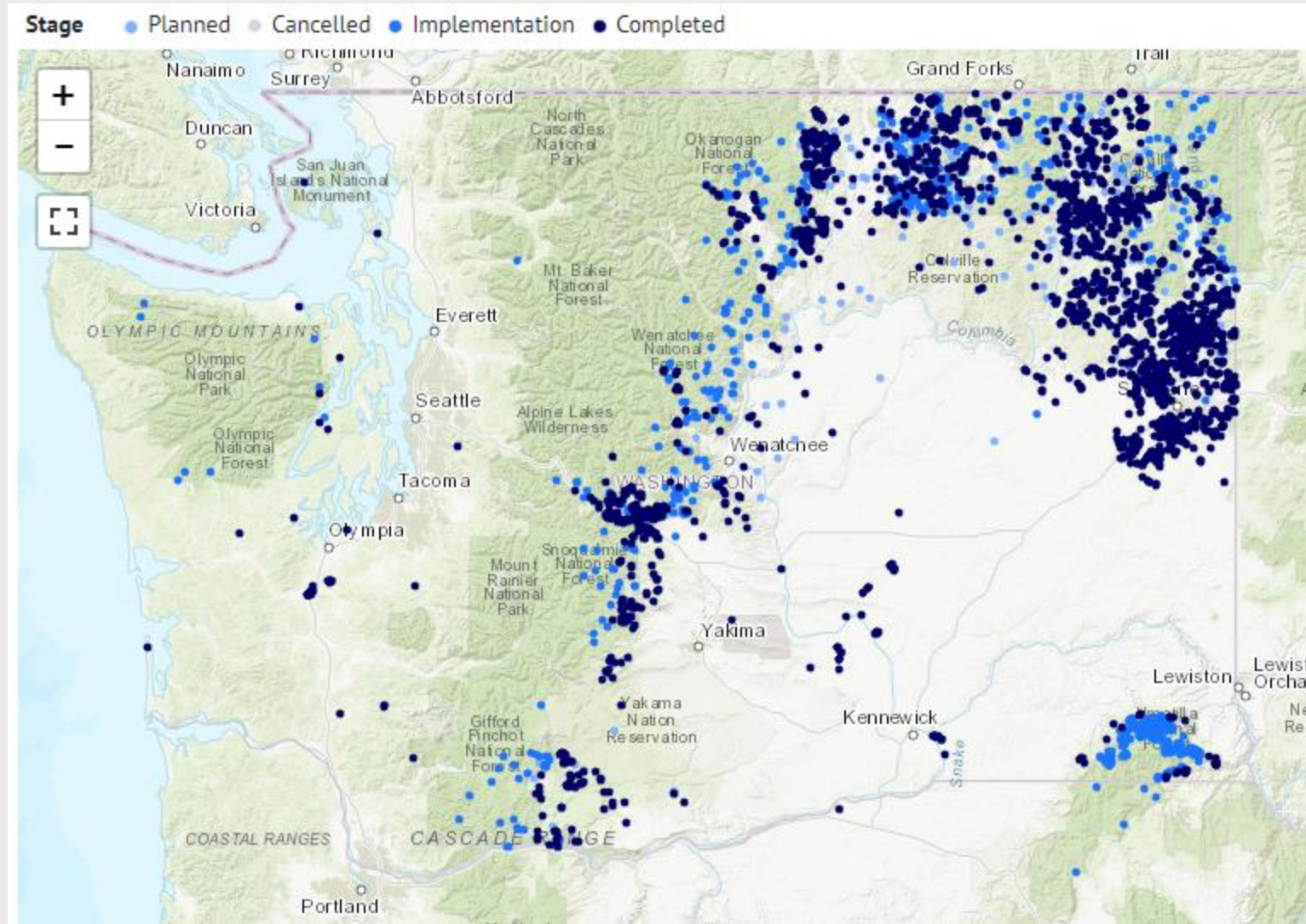
# The Big Picture

## Current Strategy and Performance



# The Big Picture

Where do we fit in?



<https://foresthealthtracker.dnr.wa.gov/>

A collage of four images illustrating forest management activities. The top-left image shows a person in an orange safety vest inspecting a tree trunk. The top-right image shows a group of four people in a forest, with one person holding a blue tablet. The bottom-left image shows a person in a yellow safety vest working near a fire. The bottom-right image shows a person in a blue safety vest working with logs.

## 20-YEAR FOREST HEALTH STRATEGIC PLAN

### EASTERN WASHINGTON

WASHINGTON STATE DEPT OF  
**NATURAL RESOURCES**  
HILARY S. FRANZ  
COMMISSIONER OF PUBLIC LANDS





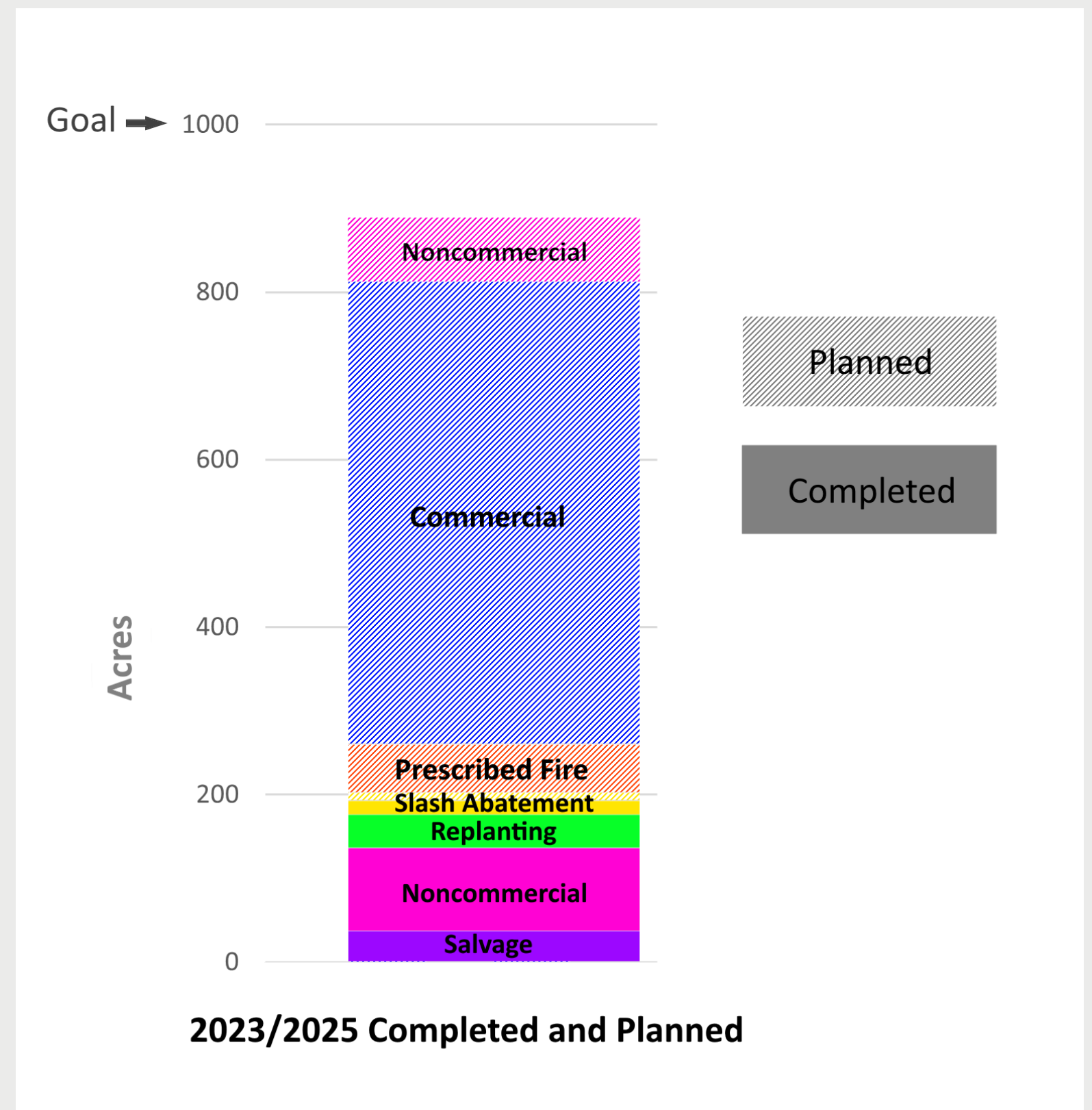
# Accomplishments

## 2023/2025 Biennium

- 191 Acres treated to date.
- 661 Acres planned by July 2025.
- Two commercial thinning projects.
- One commercial salvage project.
- Four noncommercial projects.
- One prescribed burn.

### Six State Parks:

- Riverside State Park
- Fisk State Park Property
- Moran State Park
- Mount Spokane State Park
- Nisqually State Park
- Lake Chelan State Park



# Commercial Project Accounting

Completed since last commission update (Nov 2022)

	Fisk Forest Health Thinning	Squilchuck SE Forest Health Thinning	Nelson Salvage Sale
Year Completed:	2023	2023	2024
Acres:	287	59.7	39
Volume Harvested: (thousand board-feet)	675	405	157
Direct Project Costs:	\$321,202	\$435,422	\$11,045
Log Sale Revenue:	\$221,042	\$245,200	\$1,490
Net Cost/Revenue:	-\$100,160	-\$190,222	-\$9,555



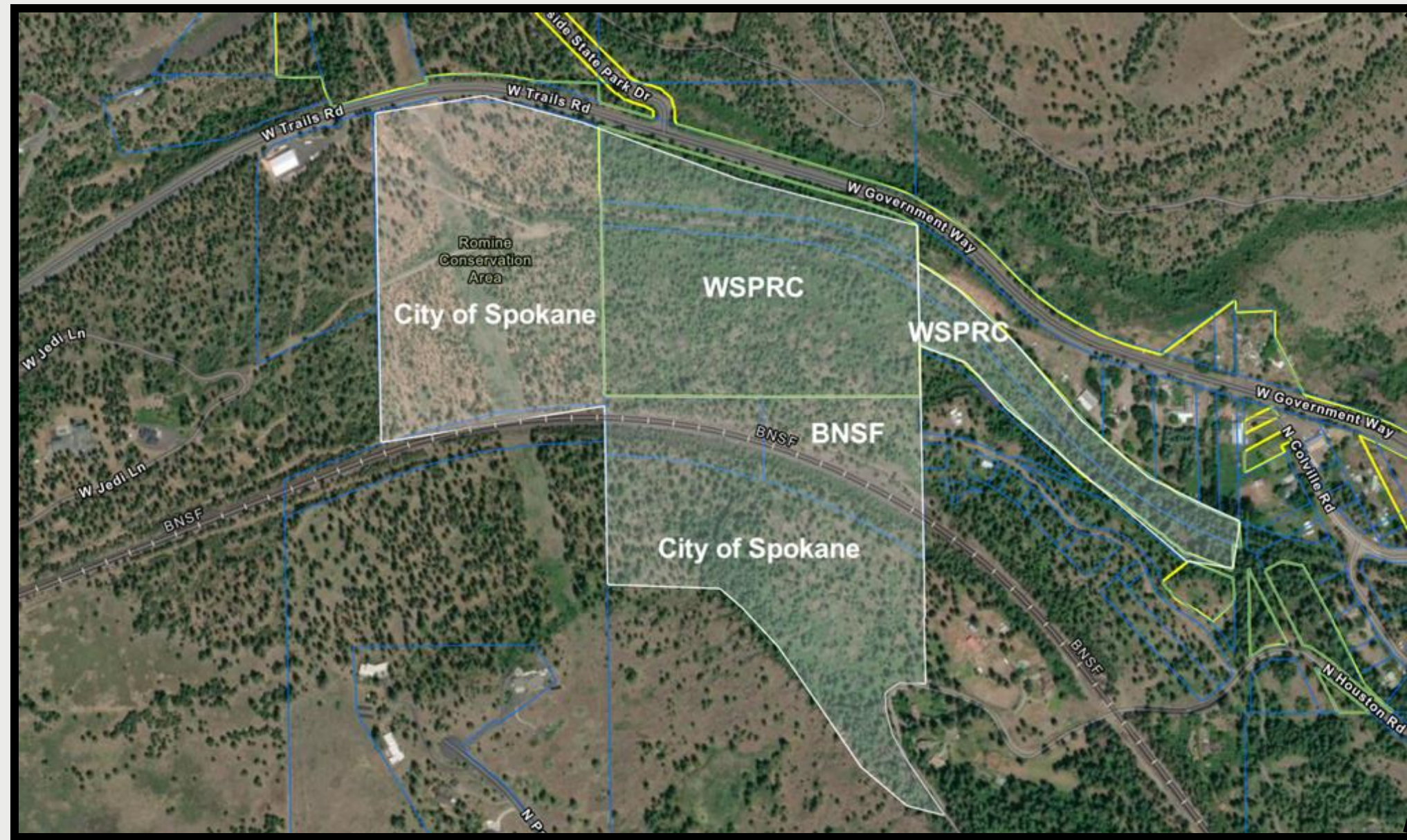
# Highlight Project

Sontag North Noncommercial Fuels Thinning – Riverside State Park



# Highlight Project

## Palisades Cross-boundary Fuel Reduction Project– Riverside State Park



# On the Horizon

- Nisqually Forest Health Thinning – 209 acres
- 7-Mile Forest Health Thinning – 342 acres
- Pine Bluff Prescribed Fire – 55 acres
- Miller Peninsula Forest Health Inventory and Assessment – 2,883 acres
- **Riverside Community Wildfire Defense Grant - \$750,000**





# Arboriculture Program Overview



# Program Overview

## Past to Present



- **1984**
  - First arbor crew is formed. Two or occasionally one arborist.
- **Pre-2000**
  - Horticulture Section in Ops managed “Hazard Trees”.
- **2006**
  - Eastside arbor crew formed.
  - Two 2-person crews.
- **2010**
  - Began interagency work for WSDOT.
- **2017**
  - Two 3-person crews.
- **2022**
  - Three 2-person crews and 1 program supervisor

# Arboriculture Program Makeup

## Arbor Crew Northwest

Matt Kilgore-Brown (5 yrs)  
JJ Rice (1 yrs)



## Arbor Crew East

James Gouldin (18 yrs)  
Edwin Torres (1 yr)

## Arbor Crew Southwest

Mik Miazio (7 yrs)  
Beowulf Brower (2 yrs)

## Statewide

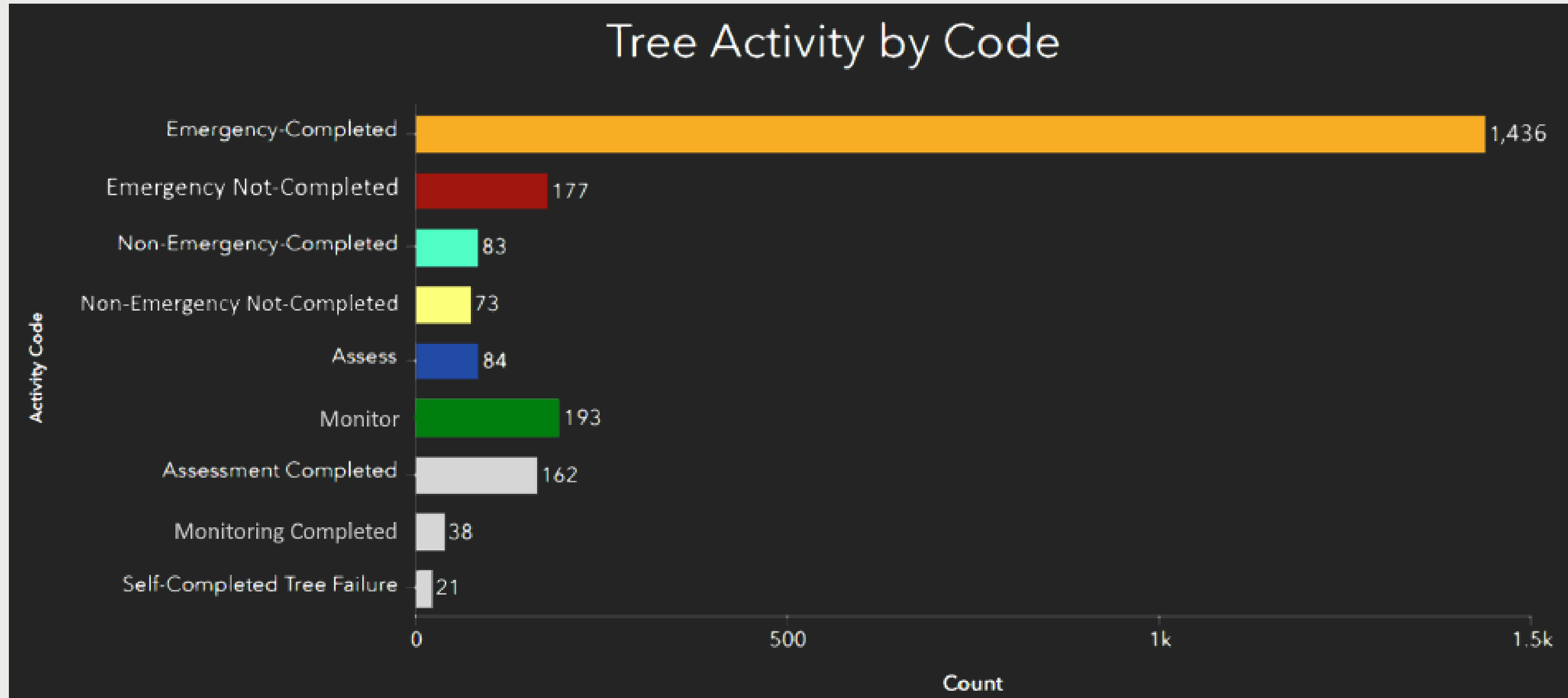
David Cass (8 yrs)  
Adam Airolidi (2 yrs)





# Accomplishments

Tree Activity July 1, 2023 to June 30, 2024



# Accomplishments

## Tree School



### TREE SCHOOL 2024 – CLASS SCHEDULE

<b>Day 1</b>	<p><b>Chainsaws and Chippers: Safety, Operation, and Maintenance.</b></p> <p><i>Description: Basic class for permanent staff that operate chainsaws and chippers in State Parks. This class is appropriate for any experience level and will be taught by state parks arborists. Emphasis will be on safe operations and basic maintenance. Fundamentals of bucking and felling techniques will be discussed and practiced. Safe chipper operations and maintenance will be discussed and practiced. This class satisfies Employee Health &amp; Safety requirements to be an approved chainsaw operator in our parks. **This is not a tree-felling training.**</i></p>	<p><u>Time:</u> 9:00 AM to 4:30 PM <u>Class size:</u> 18 <u>Audience:</u> Rangers, C&amp;Ms, &amp; Park Aides</p>
<b>Day 2</b>	<p><b>Tree Risk Assessment Training</b></p> <p><i>Description: Baseline tree risk assessment class recommended for all permanent field staff working in our parks. This one-day class will provide information on how to identify and address tree risk issues. After completing the class, participants should have:</i></p> <ul style="list-style-type: none"> <li>• Basic understanding of tree physiology.</li> <li>• Ability to identify common tree defects and conditions that elevate tree risk.</li> <li>• Ability to complete a Tree Risk Assessment.</li> <li>• Ability to fill out and process both an Emergency and Non-Emergency Tree Activity Worksheet (TAW).</li> <li>• Understanding of what to expect when an Arbor Crew visits their park.</li> </ul>	<p><u>Time:</u> 9:00 AM to 4:30 PM <u>Class size:</u> 26 participants <u>Audience:</u> Rangers, C&amp;Ms, &amp; Park Aides</p>
<b>Day 3 - Morning</b>	<p><b>Tree Care in State Parks</b></p> <p><i>Description: Learn how to identify common trees in your park region, what role they play in our parks, and how to care for them. Review the policies that help protect and promote stewardship of trees in our parks. Learn how to prevent tree damage by lawn mowers, clotheslines, and hatchet man; and cultural care of trees through proper pruning, mulching, tree protection strategies, and safe herbicide use. Learn about tree selection, siting, and proper planting techniques.</i></p>	<p><u>Time:</u> 9:00 AM to 12:30 PM <u>Class size:</u> 26 <u>Audience:</u> Rangers, C&amp;Ms, &amp; Park Aides</p>
<b>Day 3 - Afternoon</b>	<p><b>Managing Trees in Construction Projects</b></p> <p><i>Description: Learn the steps to better protect and manage existing trees during construction projects. State Parks policies and procedures around tree removal will be covered as well as contracting tools and best management practices to be applied during construction. Field exercises and case examples will take participants outside to see some of these principles put into practice.</i></p>	<p><u>Time:</u> 1:00 PM to 4:30 PM <u>Class size:</u> 26 <u>Audience:</u> Construction project coordinators, planners, engineers, and C&amp;Ms.</p>

\*\*\*All classes involve indoor and outdoor learning regardless of inclement weather. Please plan accordingly.\*\*\*



Tree Activity Dashboard - Overview | Tree Activity Dashboard

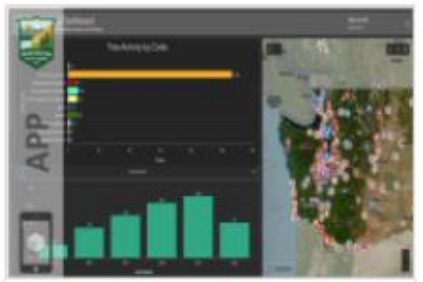
Home Gallery Map Scene Groups Content Organization

Cass, David (PARKS) David.Cass@parks.wa.g...

## Tree Activity Dashboard

Overview

[Open Dashboard](#)



A tree activity dashboard that visually tracks, graphs, displays key performance indicators and data points for tree activity points recorded by the Washington State Parks arbor crews in the Natural Resource program.

Dashboard by Neil.Lasley@parks.wa.gov\_wa\_stateparks

Item created: Oct 16, 2019 Item updated: Dec 21, 2023 View count: 1,482

Remove from Favorites

Authoritative

### Description

A tree activity dashboard that visually tracks, analyzes, displays key performance indicators and data points recorded by the Washington State Parks arbor crews.

Tree activity points are recorded by Washington State Park arborists (collected using ArcGIS Field Maps). Arborists use this layer to map, monitor, and treat/remove Emergency trees. Emergency tree refers to any tree that has already failed (cracked, tipped, diseased, or standing dead) or that poses an imminent threat, based on the judgment of a professional forester, certified arborist, or staff member trained in tree risk rating and abatement techniques approved by the agency, and which due to its location, poses an imminent threat to a target.

### Terms of Use

The Washington State Parks and Recreation Commission (WSPRC) provides these geographic data "as is"; WSPRC makes no guarantee or warranty concerning the accuracy of information contained in the geographic data. WSPRC further makes no warranties, either expressed or implied as to any other matter whatsoever, including, without limitation, the condition of the product, or its fitness for any particular purpose. The burden for determining fitness for use lies entirely with the user. Although these data have been processed successfully on computers of WSPRC, no warranty, expressed or implied, is made by WSPRC regarding the use of these data on any other system, nor does the fact of distribution constitute or imply any such warranty. In no event shall the WSPRC have any liability whatsoever for payment

### Details

Dashboard views: Desktop  
 Size: 134.319 KB  
 ID: 3e6ee1154d5e4f7b8a8aea58e702b76d

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### Owner

Neil.Lasley@parks.wa.gov\_wa\_stateparks

# “Take 5” Job Safety Briefings

Using  ArcGIS Survey123

12:08

Arbor Crew "Take 5" Job Safety

Washington State Parks & Recreation Commission

Park Name/Jobsite:  
Alta Lake


Jobsite Representative/Point of Contact:  
Sharon Soelter

POC Contact Info:  
509-555-5555

Crew:  
 ES- Eastside  NW- Northwest  
 SW- Southwest

Onsite Supervisor/Competent Person:  
James Gouldin

Location  
48°2'N 119°56'W



12:09

Arbor Crew "Take 5" Job Safety

Tools/Equipment in use:

<input type="checkbox"/> Aerial lift	<input checked="" type="checkbox"/> Chipper
<input checked="" type="checkbox"/> Chainsaw	<input type="checkbox"/> Climbing gear
<input type="checkbox"/> Rigging gear	<input type="checkbox"/> Winch
<input checked="" type="checkbox"/> Tractor	<input type="checkbox"/> Dump truck
<input type="checkbox"/> Crane	<input type="checkbox"/> Skidsteer
<input type="checkbox"/> Skidder	<input type="checkbox"/> Other

PPE  
Is everyone wearing appropriate PPE for the job? The essential PPE today are:

<input checked="" type="checkbox"/> Hardhat	<input checked="" type="checkbox"/> Chainsaw pants
<input checked="" type="checkbox"/> Eye protection	<input checked="" type="checkbox"/> Hearing protection
<input checked="" type="checkbox"/> Boots	<input checked="" type="checkbox"/> Gloves
<input checked="" type="checkbox"/> High-vis clothing	

Training  
Some of the identified tasks require advanced training. Staff on site today have training in:

<input checked="" type="checkbox"/> Chainsaw	<input checked="" type="checkbox"/> Chipper	<input type="checkbox"/> Aerial lift
<input type="checkbox"/> Climbing	<input type="checkbox"/> Rigging	<input type="checkbox"/> Equipment operation
<input type="checkbox"/> Other		

12:09

Arbor Crew "Take 5" Job Safety

Potential Hazards:  
Hazards are things that can kill or injure workers & bystanders on this worksite. Please proactively identify all potential hazards.

<input type="checkbox"/> Power Lines	<input checked="" type="checkbox"/> Public	<input checked="" type="checkbox"/> Traffic
<input checked="" type="checkbox"/> Cyclists	<input checked="" type="checkbox"/> Tripping	<input checked="" type="checkbox"/> Falling
<input type="checkbox"/> Heat/cold	<input type="checkbox"/> Wind	<input checked="" type="checkbox"/> Insects
<input type="checkbox"/> Illicit activity	<input checked="" type="checkbox"/> Other	

Any other hazards:  
Having too much fun.

Control Measures:  
Today we are controlling for identified hazards by using the following control measures:

<input checked="" type="checkbox"/> Pre-start equipment inspection	<input checked="" type="checkbox"/> PUD	<input checked="" type="checkbox"/> Cones
<input checked="" type="checkbox"/> Signs	<input type="checkbox"/> Danger tape	<input checked="" type="checkbox"/> Spotters
<input checked="" type="checkbox"/> Flaggers	<input type="checkbox"/> Traffic control	<input type="checkbox"/> Other


If you see something, say something. Anyone has the ability to stop work on this jobsite if they notice something unsafe.  
Safety is everyone's responsibility and your constant eyes and ears on the tasks will help us all go home safely tonight.


12:09


Arbor Crew "Take 5" Job Safety


If you see something, say something. Anyone has the ability to stop work on this jobsite if they notice something unsafe.  
Safety is everyone's responsibility and your constant eyes and ears on the tasks will help us all go home safely tonight.

Additional Information:

  
**Survey Completed**  
Your device is online.

 Send now

 Continue this survey

 Save in Outbox

Employee's Name and Job Title  
David Cass, Agency Forester

1 of 1



# Accomplishments

## Interagency Work Agreements

- Agreements with WSDOT, WDFW, and WDNR.
- Funds two arborist positions at \$350,000 per biennium.
- Pays 20% of program budget while using 8% of our crews' total time.

Bottom Line:

These agreements represents an efficient use of public resources to help make Washington's public lands and roadways safer.



# Highlight Project

## Emel Maple – Scenic Beach State Park



### Legacy Tree Preservation

#### Issue:

- Iconic bigleaf maple suffering from soil compaction and stem decay.
- Contributes to Emel House historic landscape and poses risk to historic building.

#### Solution:

- Root zone invigoration by airspade tilling, biochar amendments, fertilizer, and mulch.
- Reduction pruning over house.
- Log barriers and natural landscaping to reduce foot and vehicle traffic in root zone.

**PROJECT COST: \$6,000 staff labor and materials**



# Looking Ahead

What does the future hold for State Parks' trees and forests?





ENJOYMENT OF ALL PEOPLE • OUR PARKS ARE FOR THE ENJOYMENT OF ALL PEOPLE



# Get in touch

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Agency Forester

[david.cass@parks.wa.gov](mailto:david.cass@parks.wa.gov)  
(360) 902-8606

