

**ASHLAND CITY COUNCIL  
STUDY SESSION MINUTES  
Monday, March 18, 2024**

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Mayor Graham called the meeting to order at 5:31 p.m.

Mayor Graham and Councilors Hyatt, Dahle, and Kaplan were present.  
Councilors Hansen, Bloom and DuQuenne were absent.

**1. Public Input - None**

**2. Fire Code Update**

Ashland Fire Marshall Mark Shay gave a presentation on the planned fire code updates (see attached)

- Code Modification (Section 3. 15.28.030 Definition)
- Code Modification (Section 6 15.28.070 now at 2022 edition)
- Code Modification (Section 13. 15.28.160 Code Compliance Inspection / Fees)
- Fire Marshall Accomplishments
- Fire Marshall Vision

Dahle asked for examples of critical infrastructure as mentioned in the presentation. Shay responded that critical infrastructure were locations such as the water treatment plant, the sewage treatment plant and power related facilities. Dahle asked what the frequency of inspection would be for those types of facilities. Shay noted that they would be inspected annually.

Hyatt asked how Shay and Ashland Fire felt about their preparations for the ISO review in May of 2024. Shay felt that work was going well, and that any areas of concern would be addressed before the May inspection. Kaplan asked if Shay was expecting the rate of signups for Community Connect to increase or stay the same moving forward. He also asked if the rates of building reviews, plan use reviews and fire inspections would stay at the same or would increase. Shay felt that the current signup rate was at a good place, predicting it to slowly increase over the next few months. Shay also mentioned that Ashland Fire would continue to push for people to sign-up moving forward and that he foresaw both the plan use and fire inspection to increase. Kaplan suggested utilizing the school system to possibly increase signups for Community Connect. Dahle asked if there was anything that either Council or the community could do to help continue progress. Shay responded that the best way for the community and for Council to help was to continue their support and for the community to understand that his role was to help make the community safer. Graham thanked Shay for his work and his proactive approach to dealing with fire concerns. She asked what was needed to ensure a consistent message and how to best coordinate that message. Shay noted that coordination was going well with Emergency Manager Kelly Burns and his team in the areas of both wildfire safety and updates to the fire safety code. Graham asked about how best to enforce weed and hazardous fuel ordinances for lands that are

inside Ashland's urban growth boundary but not inside city limits. Shay noted that he wasn't fully up to date with the specifics regarding certain properties but noted that problems will continue to occur with those properties because of regulation issues.

### **3. City Forestlands Climate Adaption Project**

Ashland Fire Division Chief Chris Chambers gave a presentation (see attached)

- Tree die off rates
- Insect die off rates
- The danger of embers
- Predicted Climate Water Deficits
- Public Input and Engagement to Date
- Observer Bias and Recreational Ecology
- Infrastructure at Risk.
- Results from Tree Marking
- Wildlife Work
- Snag and Downed Wood Targets
- Balancing Habitat and Severe Fire
- Projects Operation and Budgets Options
- Next Steps

Former City Forester Marty Main joined Chambers and spoke to his experience documenting the changes to City forestlands and the effects climate change has had on them. He also spoke about his approach to dealing with land objectives within a particular area and brought attention to the issue of elevated "stress" within the forest. Dahle thanked Main for his insights and asked for clarification with section C (Carbon Sequestering) of the project addendum. Main responded that the issue was about balancing the desire carbon sequestering and dealing with the natural cycles of forests. Graham noted the value and benefits of standing dead trees and asked how many were being marked and left alone for soil and wildfire health. Chambers highlighted the solutions that Lomakatsi had implemented within the presentation, with Main adding that information had been collected as far back as 2000 regarding standing dead trees and woody debris within various City lands. Kaplan asked how Chambers planned to let people know about the timeline for the planned forestry work. Chambers responded that he was hoping that the Citizen Alert message would help with that. Graham asked if the public would see the trees marked for removal, which Chambers confirmed. Hyatt asked if the greener trees were susceptible to bark beetles. Chambers confirmed that all Douglas Fir trees were susceptible to the bark beetles, as there was a huge wave of die offs within the past year. He also noted that if Lomakatsi were to preemptively remove all the Douglas Fir trees that are considered high risk, it would remove all the trees. The risk of bark beetles was everywhere within the forest unless the drought improved. Graham asked for the rationale behind marking green trees even though all of them were susceptible to the bark beetle. Main responded that the issue came down to the finite number of resources, such as water and good soil. Fewer vegetation would allow for more water and soil nutrients to be used by the surviving trees. The increase in drought has

caused issues with choosing when and where to remove vegetation to allow for the surviving trees to be more robust. The long-term goal is maintaining a green and healthy forest. Main noted the City was in a challenging place because of its circumstances. Lomakatsi Ecological Monitoring Associate Jordan Anderson and Lomakatsi Executive Director Marko Bey provided an update on the tree marking project and on securing inter-tribal funding. Anderson also highlighted the outreach methods utilized by the company for this project. Chambers explained each of the options for the next phase of the project and provided financial breakdowns for each. (SEE ATTACHED) Hyatt provided some clarification on the differences between options one and two. Kaplan asked about the difference in value for log hauling. Chambers responded that the old number was an estimate, with the new number being a proper quote from the organization selected to work on this part of the project. Kaplan wanted to know about routes for trucks to take to haul logs out, and how they would impact travel through Ashland. Chambers foresaw that only one route would run through the center of town.

Mayor Graham highlighted the complexity of the issue before opening Public Testimony

#### **Public Testimony**

**Eric Navickas/Ashland** – Talked about the history of flooding and land sliding within the municipal watershed. Raised concerns that logging would cause the environmental concerns to take a back seat to financial incentives. He wanted Chambers to post his financial breakdown spreadsheets to the City website. Raised concerns about the increase in cost. Brought up how fuel loads are not as significant in fire danger as temperature, time of day and wind conditions are. Felt that leaving the trees and working to stabilize the soil would be both environmentally strong and a decrease in cost. Wanted the Council to focus on soil stability in the long run.

**John Maurer/Ashland** – Expressed support for the project. Highlighted work that had been done by residents of help protect the watershed. Expressed his fears regarding fire safety around Siskiyou Mountain Park and how a potential fire could damage Reeder Reservoir and soil safety. Praised Main and his work. Wanted the City to do what's right for the forest.

Mayor Graham asked about the issue of soil stability within the work area. She wanted to know how the project would relate to ongoing soil stability efforts. Chambers responded that it would be difficult to stabilize the soil because of its natural composition. He also noted that previous landslides were because of road systems as opposed to overall stability. He suggested a road analysis throughout the watershed at a future date. He also noted that the City was already following recommendations from the State regarding stability, although it had to be balanced with fuel concerns. Main added historical context for soil stability that had occurred in the 1990s and that the City had already taken steps to monitor stability starting during that time period.

Kaplan asked when replanting would happen. Chambers responded that Phase two of the project would be the replanting phase, adding that future work would initially focus on what

species would be best to replant to increase both biodiversity and to ensure the future survival of the area. He estimated that work would begin either in the Spring of 2025 or during the next biennium.

**4. Adjournment of Study Session**

The meeting was adjourned at 7:36 p.m.

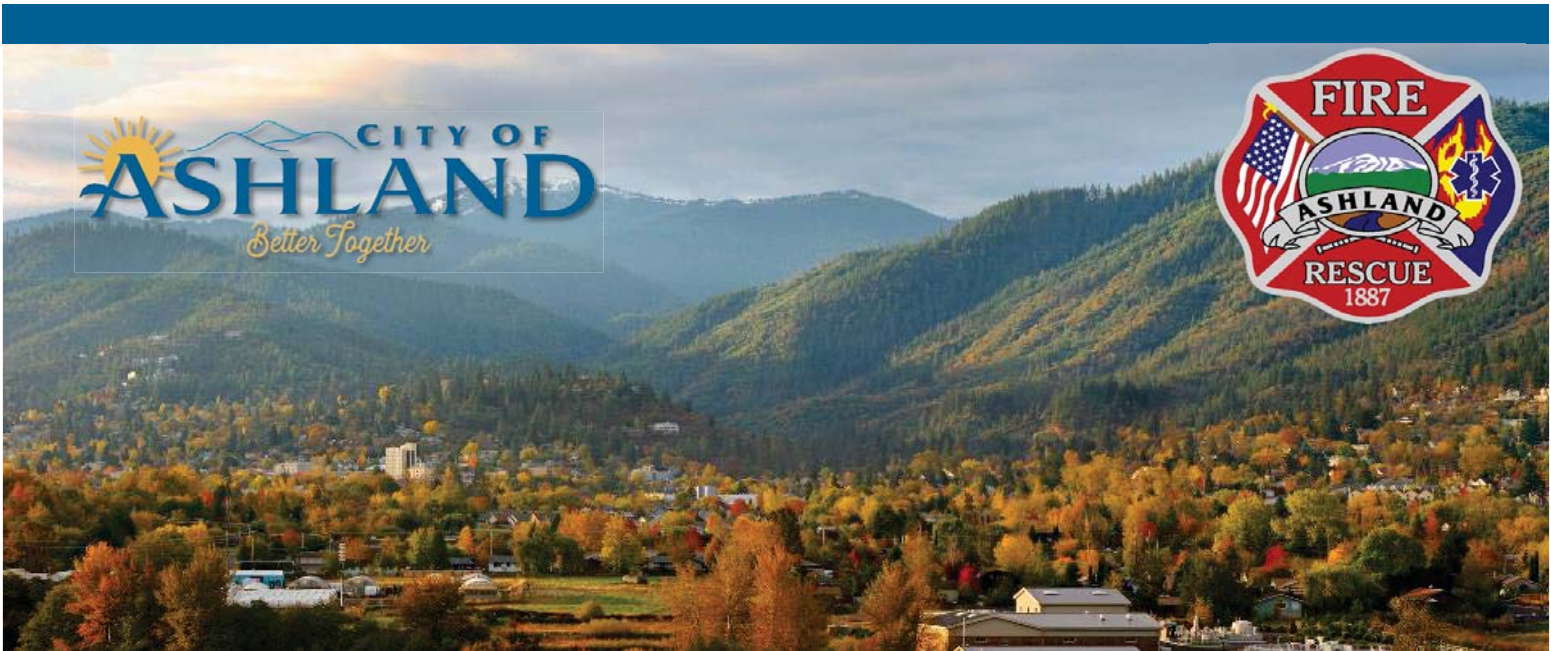
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City Recorder Alissa Kolodzinski

Attest:

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Mayor Tonya Graham



# Fire Code Update

Ordinance Bill No. 3233  
March 18, 2024

## Code Modifications

### Section 3. 15.28.030 Definitions

11: "Fire prevention organization" (FPO) means the organization or the individual, within the City of Ashland or otherwise delegated, that has the authority to provide fire prevention, inspection and code enforcement, plan review, investigation, and fire and life safety education.



## Code Modifications

### Section 6. 15.28.070 City of Ashland Modifications to the Oregon Fire Code ~~2019~~ 2022 Edition

#### ~~S. Mobile and Temporary Cooking Operations~~

~~The City of Ashland will follow nationally referenced standards of inspection and maintenance provided by the National Fire Protection Agency (NFPA 1 National Fire Code section 50.7) for Mobile and Temporary Cooking Operations.~~



## Code Modifications

### Section 13. 15.28.160 Code Compliance Inspection / Fees

A–The City of Ashland will follow nationally referenced standards on fire prevention inspection and code enforcement as provided by the National Fire Protection Agency (NFPA 1730). This standard contains minimum requirements relating to the organization and deployment of fire prevention inspection and code enforcement, plan review, investigation, and public education operations. This standard also addresses the strategic and policy issues involving the organization and deployment of fire prevention programs and does not address methods for carrying out specific fire prevention services, activities, and programs.



## Code Modifications

### Section 13. 15.28.160 Code Compliance Inspection / Fees

B. The City of Ashland shall maintain a written statement or policy that establishes the following:

- (1) Existence of the FPO
- (2) Services that the FPO will provide
- (3) Basic organizational structure
- (4) Expected number of FPO members
- (5) Functions that FPO members are expected to perform



## Code Modifications

### Section 13. 15.28.160 Code Compliance Inspection / Fees

C. General Requirements: Fire prevention inspection and code enforcement services, including department personnel, equipment, and all support and resources, shall be structured to meet the organizational objectives. Fire prevention inspection and code enforcement shall be conducted to ensure compliance with adopted codes and standards. Personnel responsible for fire prevention and code enforcement activities shall meet the job performance requirements in NFPA 1031 and the certification and training requirements for conducting fire code enforcement found in OAR 837-039-0016 for the inspection duties they perform.





# Code Modifications

## Section 13. 15.28.160 Code Compliance Inspection / Fees

D. Minimum Inspection Frequency: Existing occupancy fire prevention inspection and code enforcement inspection frequencies shall not be less than:

<u>Occupancy Classification</u>	<u>Frequency of Inspections</u>
<u>High:</u>	<u>Annually</u>
<u>Moderate:</u>	<u>Biennially</u>
<u>Low:</u>	<u>Triennially</u>



# Fire Marshal Accomplishments

## Accomplishments over the last Four Months

- Began reviewing building plans for fire code related requirements
- Began reviewing land development pre-applications for access & water supply
- Worked cooperatively with Community Development and Finance to institute a Business License review process by AF&R
- Conducted fire & life safety inspections as well as fire code consultations by request





# Fire Marshal Accomplishments

## Accomplishments over the last Four Months

- Implemented First Due and Community Connect software
- Instructing OSFM Company Inspector curriculum to AF&R and JCFD #5 staff
- Building the Wildfire /Community Risk Reduction division
- Management oversight of large projects including; CWPP and Ashland Wildfire Mitigation Project.
- Building relationships



# Fire Marshal Vision

## Looking ahead for Wildfire/CRR

- Implement proactive fire safety inspections by division staff
- Implement engine company level fire safety inspections
- Gather relevant data to assist with reducing community risk
- Provide continued leadership to the Wildfire / CRR Division staff
- Ensure efficiency and effectiveness with related programs and processes.





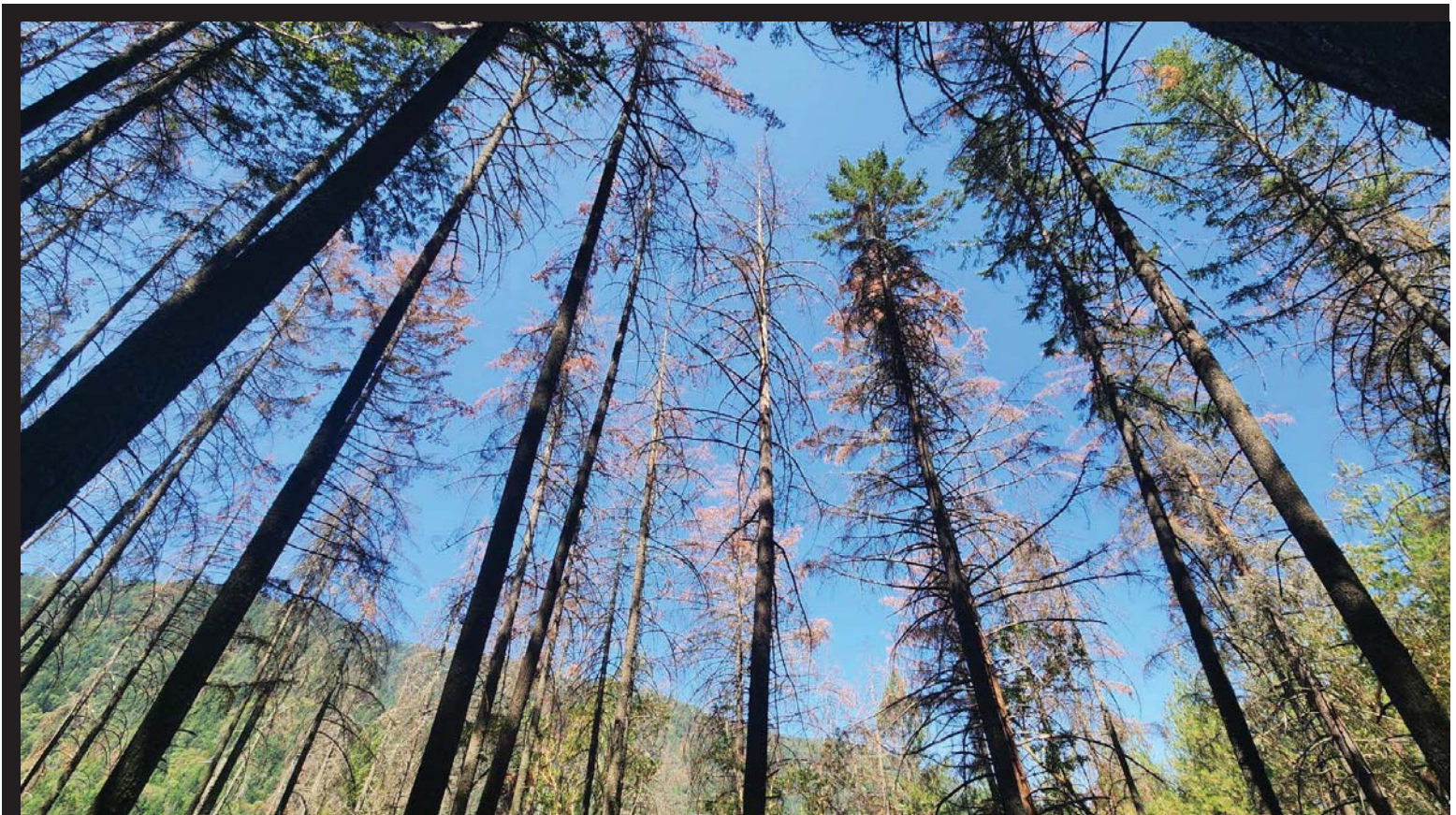
QUESTIONS?







**Ashland Forest Climate Change Adaptation:  
Phase I Project Update  
March 18<sup>th</sup>, 2024 Study Session**

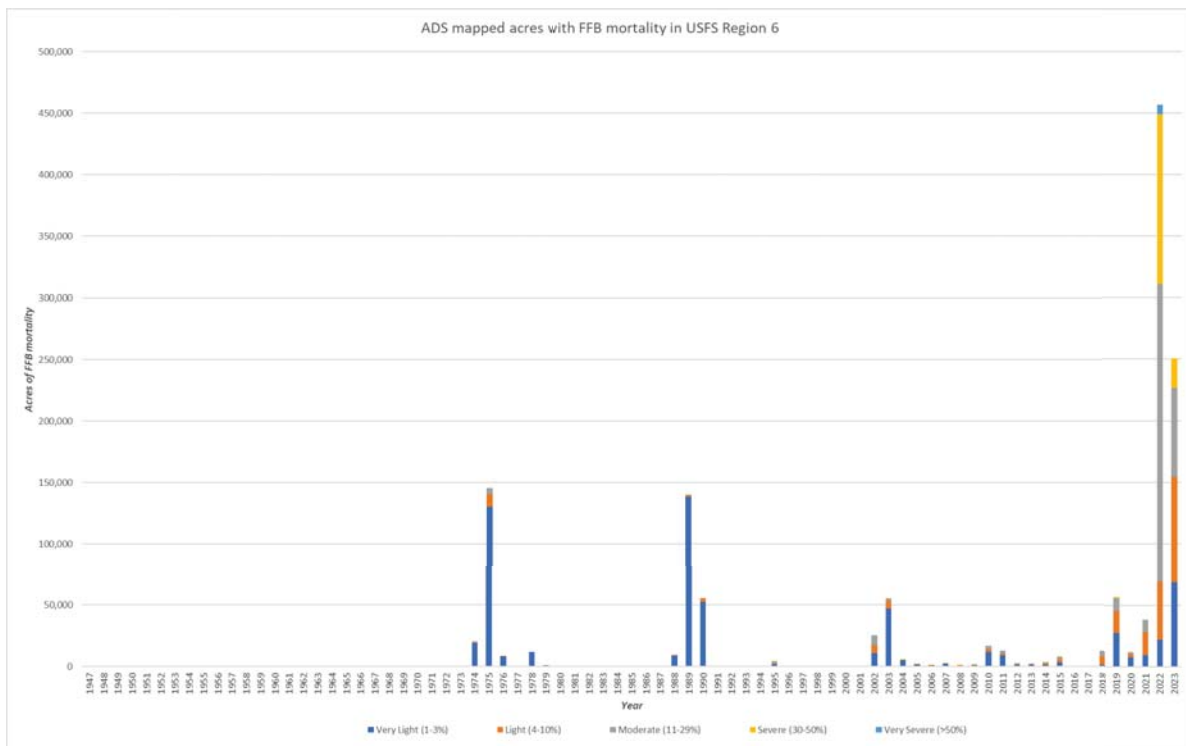




*"But the clock is ticking; it's urgent that we implement these treatments in our forests now, lest we lose them altogether."*

– Marcos Robles, lead scientist, The Nature Conservancy in Arizona

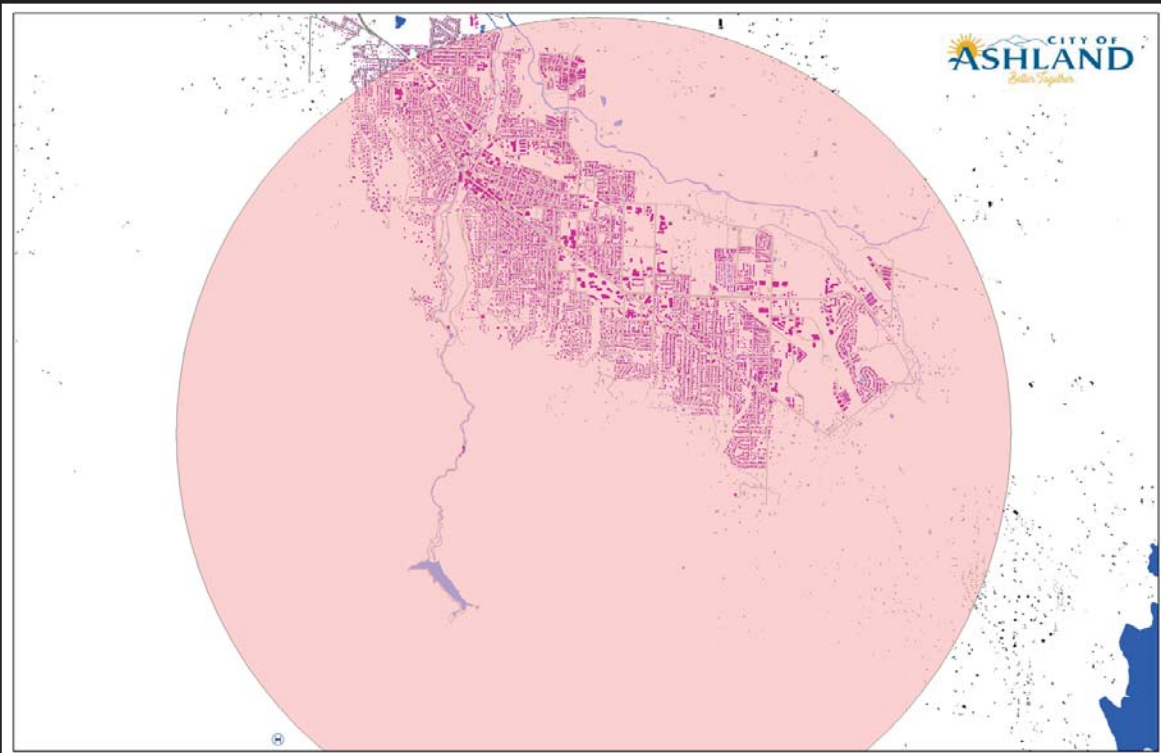
We're not in Kansas Anymore.....



**Reducing wildfire risk is the #1 priority of City Government according to our citizens  
(City 2023 online and public meeting polling)**



**Ashland's Three Mile Island...Three Mile Ember Travel from Proposed Project Areas**



*“The fuel impacts of large-scale forest mortality suggest this could lead to a greater incidence of mass fire behavior. Mass fires strongly contrast with historical fire regimes in frequent fire forests, are not predictable by fire models, and risks are poorly understood. Thus, fire departments, communities, and forest managers likely will underestimate the wildfire threat posed to people, homes, and natural resources following severe tree mortality in forests adapted to frequent fire.”*

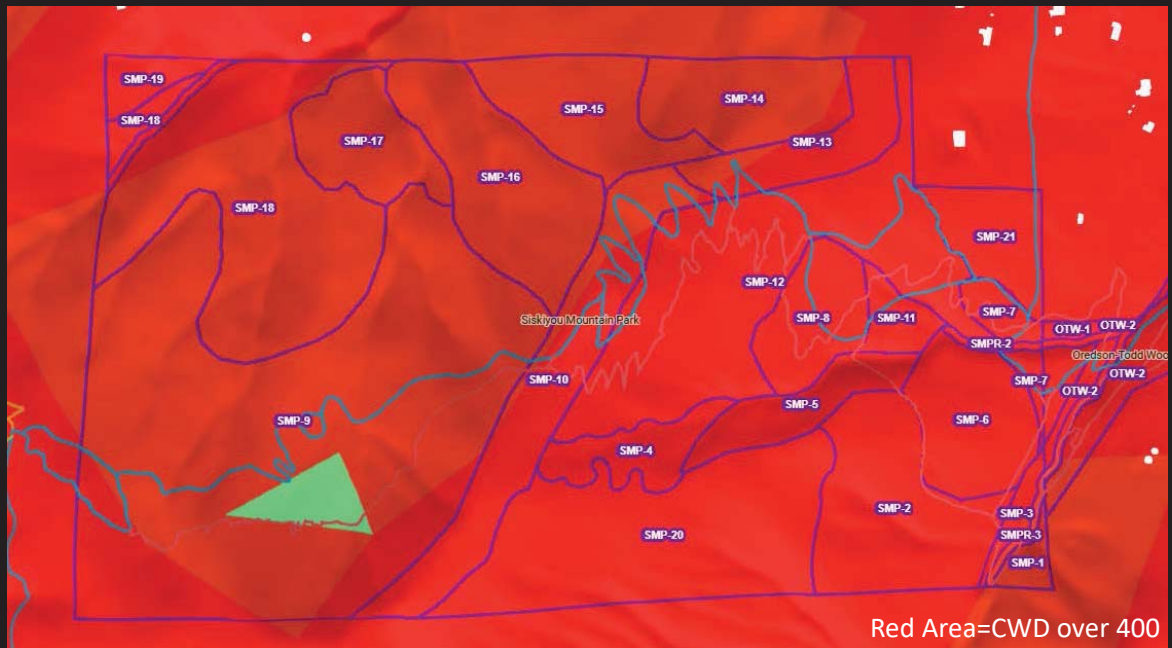
*-Dr. Scott Stephens, U.C. Berkeley (2018 publication)*





## Predicted Climatic Water Deficit 2055

Projected CWD is based on a conservative Representative Concentration Pathway 8.5 scenario. Data suggest that Douglas-fir mortality risk is significantly elevated above a CWD of 350 and few DF are found above a CWD of 400. Under the projected CWD most lower elevation sites in interior SW Oregon would be inhospitable for Douglas-fir. (Bennett et al 2023, Journal of Forestry)



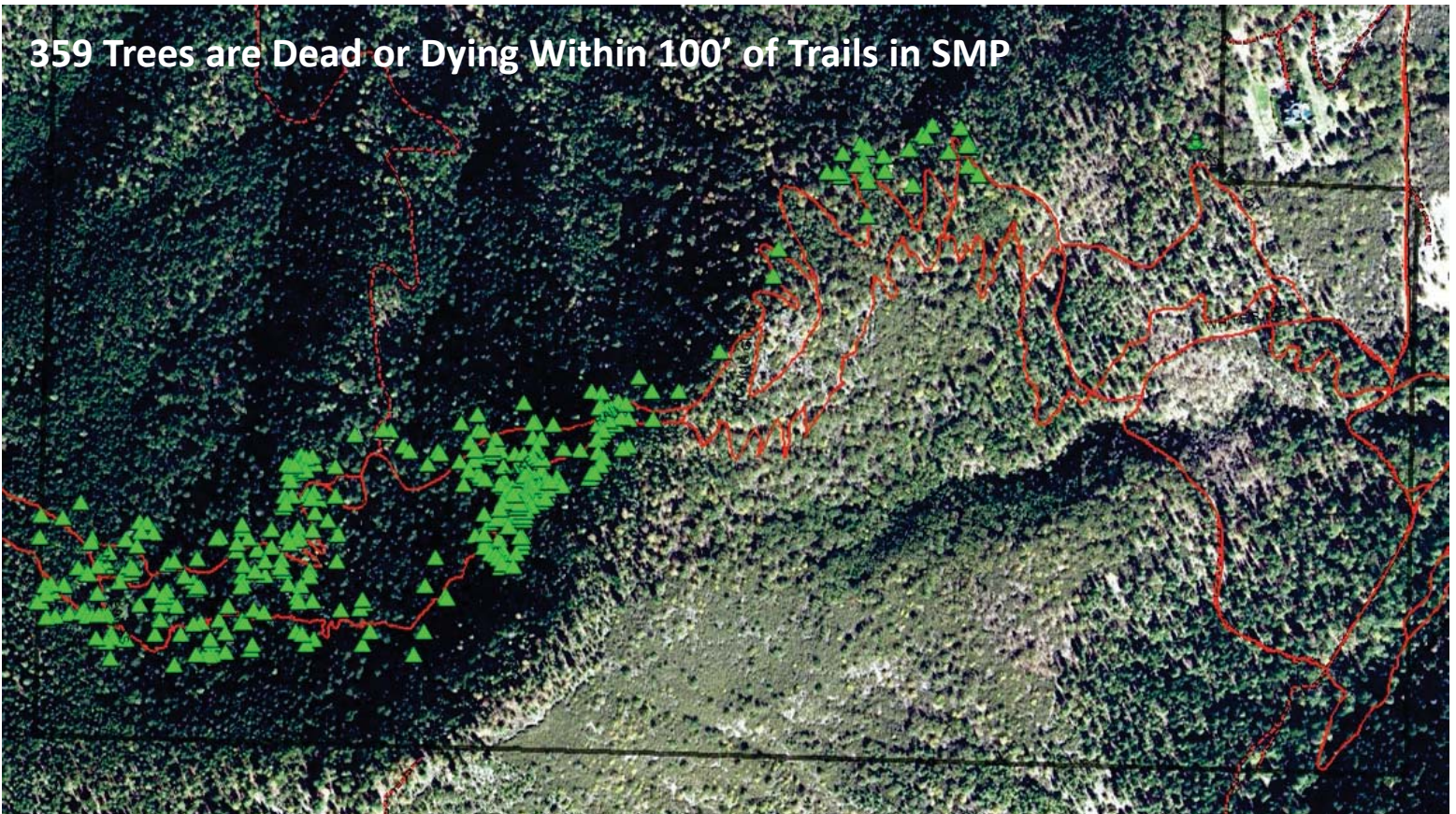
## Public Input and Engagement To Date

- Forestlands MAC monthly meetings posted on City Website over past two years of Climate Adaptation Planning
- Two Public Tours took place for 2023 Climate Change Addendum to Ashland Forest Plan
- One tour with volunteers on the Forestlands Management Advisory Committee
- Council meeting and decision with public input on Climate Change Addendum
- Chris and OSU Extension Forester on Jefferson Exchange in 2023 about Douglas-fir mortality and the need for action
- Article in Ashland.news about extensive tree mortality and specifically talking about helicopter logging
- Article in the City Utility Newsletter in September 2023 on trees dying and the need to intervene with helicopter work
- Two public tours were given of proposed Phase I project implementation in October 2023
- Four field tours with APRC staff and Southern Oregon Land Conservancy in Siskiyou Mountain Park
- Two public presentations to the Ashland Parks and Recreation Commission, including one last week
- Created a recreation organization email group to update regularly composed of local groups and businesses
- USFS will put out our information on their media regarding trail/road closures
- Forestlands MAC members staffed a booth at the Farmer's Market during October and November
- A public online GIS map of open and closed areas/roads/trails will be released this week in City News blast
- [Two articles](#) in Ashland.news today as a result of discussion with Morgan Rothborne last week
- Follow up feature this week in Ashland.news is planned after the Council Meetings
- Planning has been done with the DEVO youth biking group to schedule races around work dates
- Article in City Utility Newsletter this month is circulating now to all residents
- Dedicated project website went live in early March
- Signage has been posted at trailheads since December, updated signage went out in early March with project website and QR codes.
- Will use Citizen Alert when project is imminent to push alerts to all citizens about closures and helicopter work
- City News blast will come on the heels of Council meetings this week
- Do



## Observer Bias and Recreational Ecology

359 Trees are Dead or Dying Within 100' of Trails in SMP





**Infrastructure at Risk**









# Ashland Forestlands Climate Change Adaptation Project (AFCCAP)

## Tree Marking and Project Funding Summary

Presentation for the City of Ashland

Lomakatsi Restoration Project

March 18, 2024



## DOI Office of Wildland Fire Investment

- Spring '23: USFWS received \$23 million from DOI Office of Wildland Fire for Partners Program in support of fuels reduction projects on ~94,000 acres of private land adjacent to federal lands
- Lomakatsi has leveraged federal investment totaling \$1 million through a cooperative agreement with USFWS for ecologically based fuels reduction work on private lands in the wildland-urban interface of Ashland
- \$150K dedicated to ecological fuels treatments on COA municipal lands as part of AFCCAP





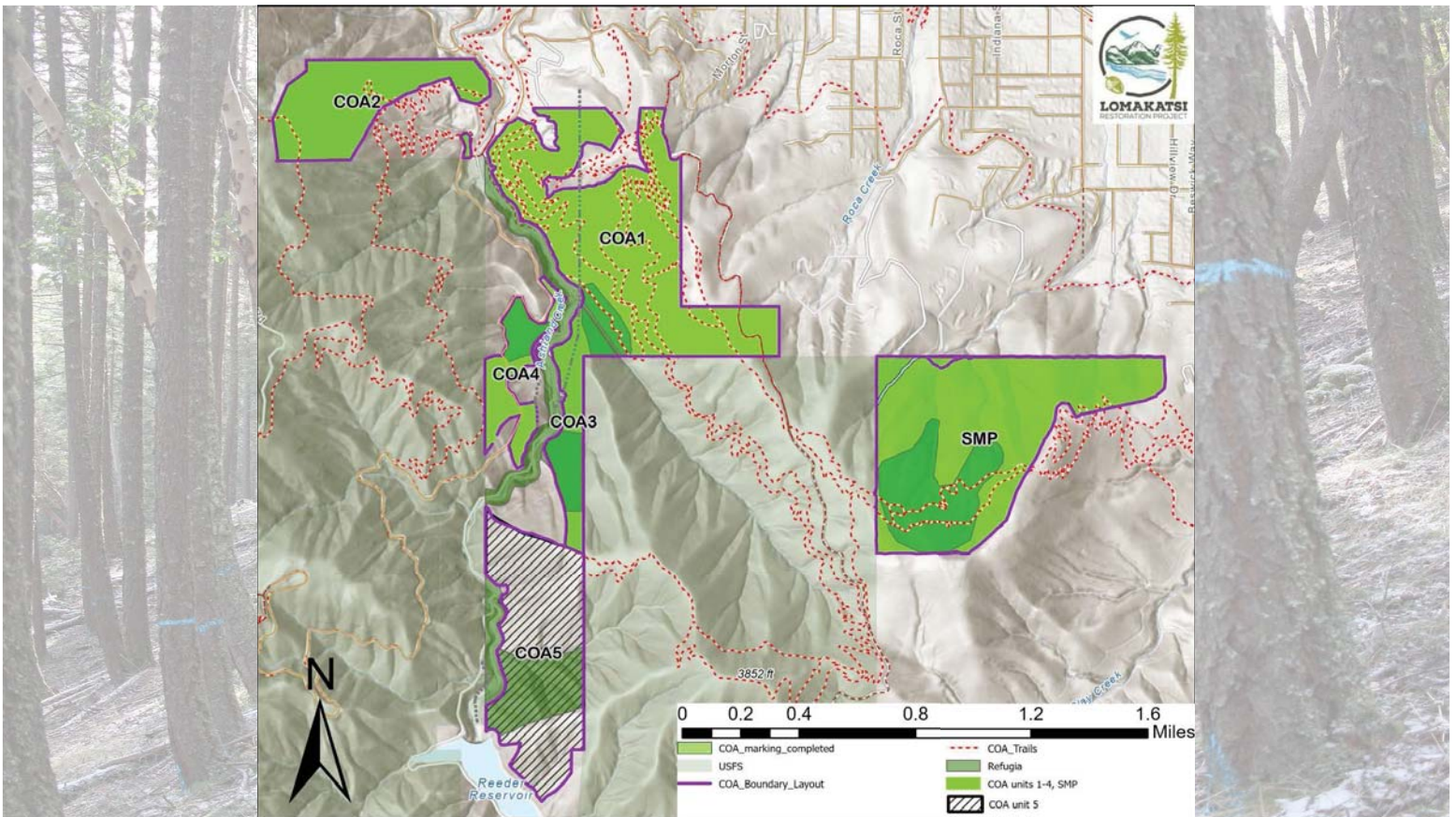
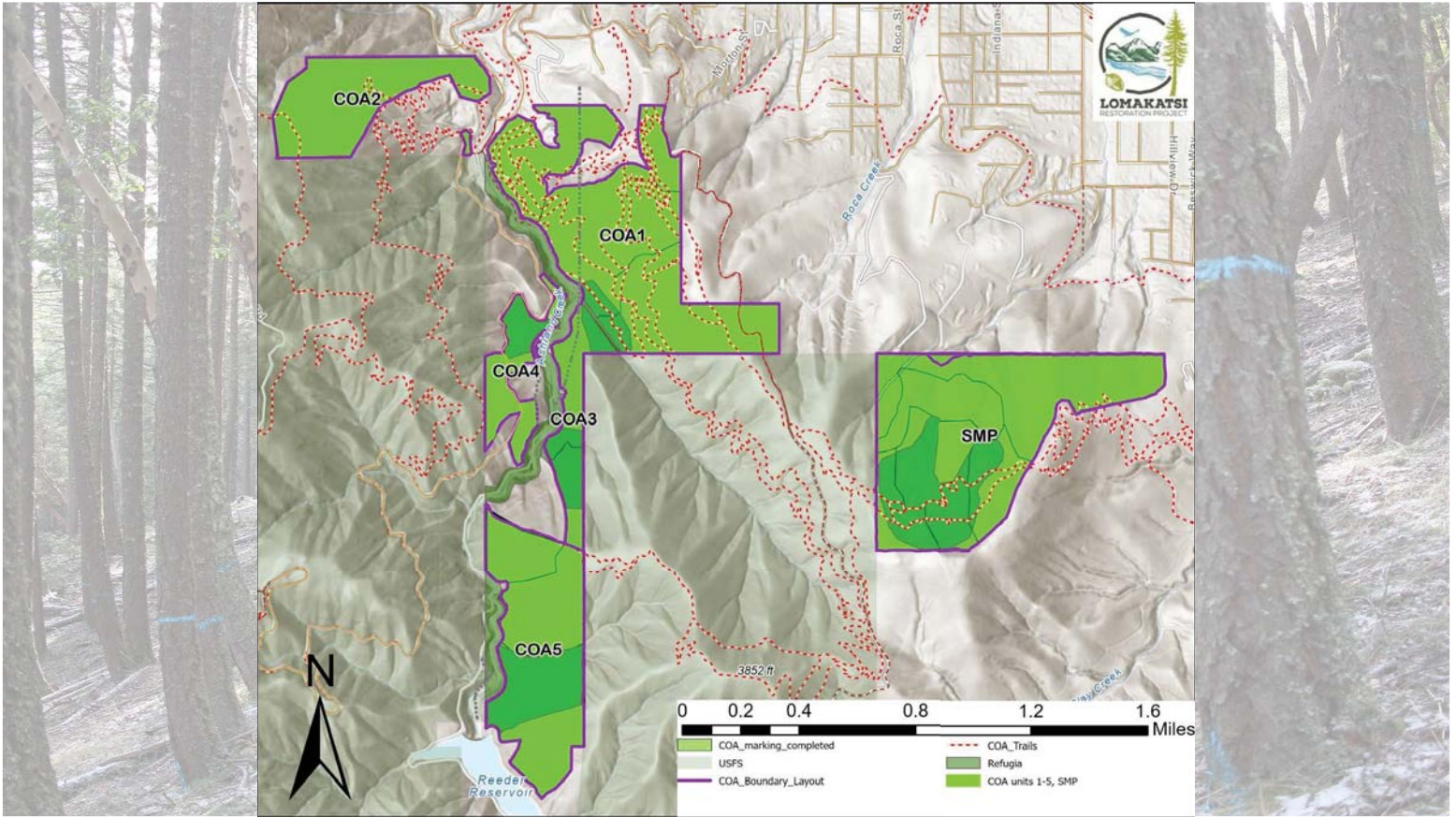
# Inter-Tribal Ecological Forestry Training Program 2023-24



## Outreach Methods

- Informational website developed by COA and Lomakatsi accessible by QR code on business cards handed out by crew members
- Face-to-face interactions with the public along trails in the Ashland Watershed - Lomakatsi crew members answered ecological and project-related questions







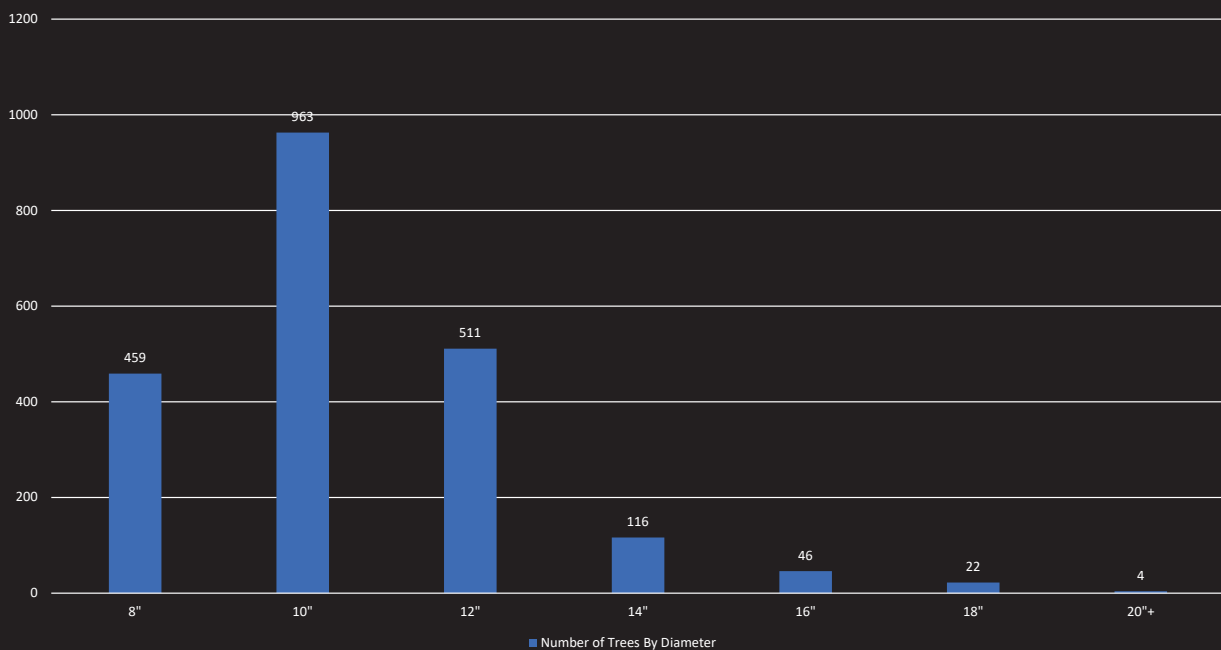
# AFCCAP Marking Update

- Project set-up, coordination, and layout accomplished 12/15/23 - 2/2/24
- Tree marking and cruise accomplished 2/5/24 - 3/29/24
- Total project area and total treatment acres = 478 ac spread between Siskiyou Mountain Park and COA watershed forestlands encompassing commonly used trail systems including White Rabbit and forestlands leading up to Reeder Reservoir

## Results from Tree Marking...live trees only.

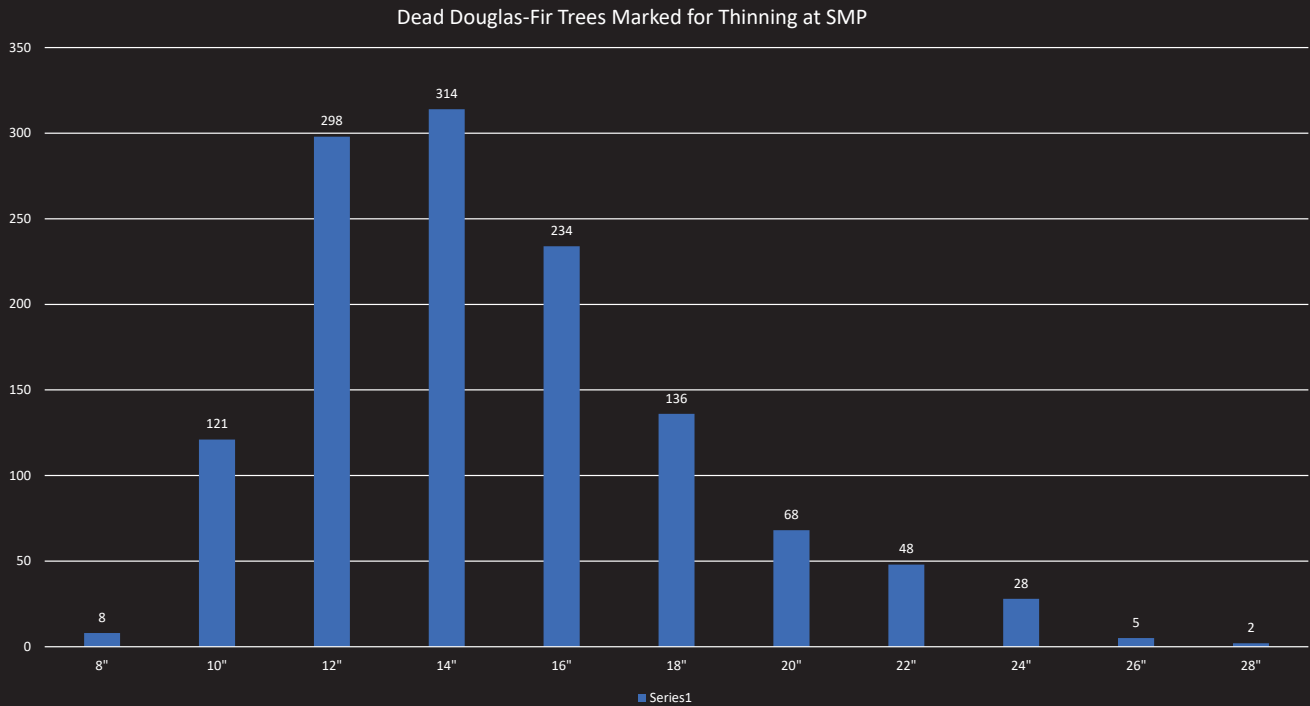
Mean diameter of all live trees marked is 10.5" on 2,121 trees

Live Douglas-Fir Trees Marked for Thinning at SMP



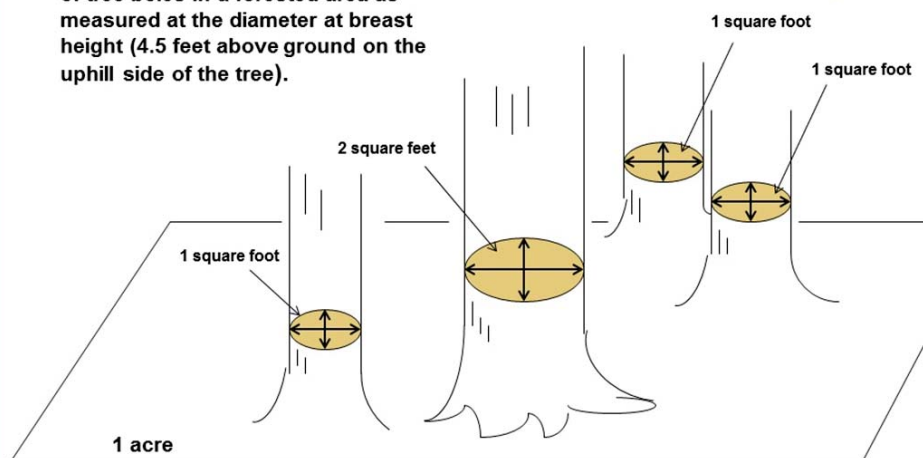


# Results from Tree Marking...dead trees only (1262 trees)



## How much will be cut vs how much will be left?

**Basal area:** The cross-sectional area of tree boles in a forested area as measured at the diameter at breast height (4.5 feet above ground on the uphill side of the tree).



5 square feet of basal area per acre

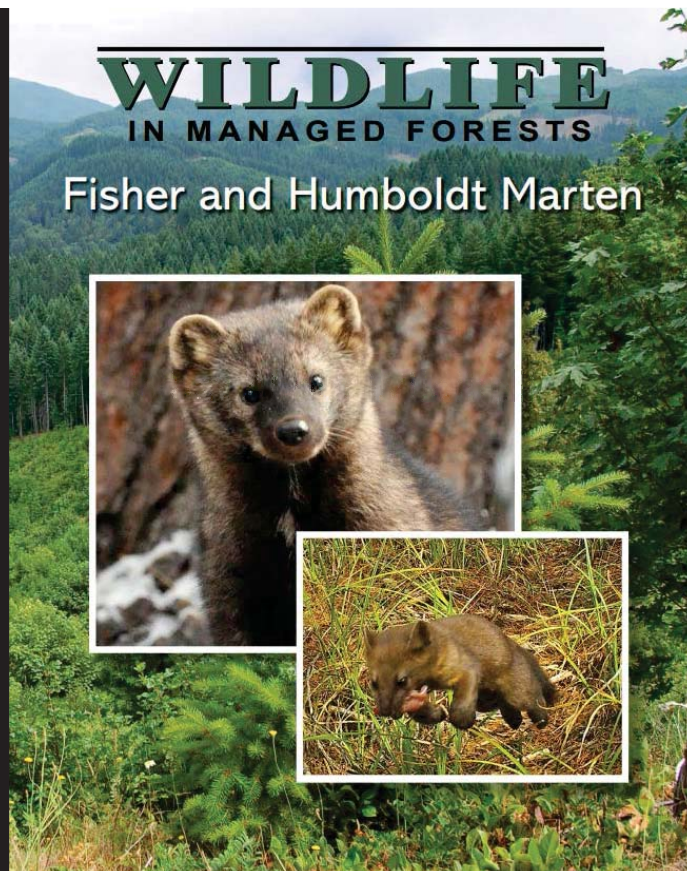
## Results from Tree Marking: How much will be cut vs how much will be left?

Average Leave Basal Area (ft <sup>2</sup> )	Mean Cut Basal Area	% Basal Area Cut	% Tree BA Left
<b>139 ft<sup>2</sup></b>	<b>41 ft<sup>2</sup></b>	<b>23%</b>	<b>77%</b>

## Results from Tree Marking, How Much is Being Removed?

<i>City of Ashland AFCCAP Log Volume by Unit</i>					
<i>Unit</i>	<i>Acres</i>	<i>Net BF DF Live</i>	<i>Net BF DF Dead</i>	<i>Net BF PP</i>	<i>Net BF/Acre</i>
<i>SMP</i>	147.7	115,639	138,992	413	1,726
<i>COA1</i>	141.5	132,087	144,442	1,920	1,968
<i>COA2</i>	52.4	33,230	18,964	494	1,006
<i>COA3</i>	26.5	21,396	13,300	0	1,309
<i>COA4</i>	23.1	19,038	26,713	85	1,987
<i>COA5</i>	86.2	177,501	18,594	1,156	2,288
<b>Totals</b>	<b>477.4</b>	<b>498,891</b>	<b>361,005</b>	<b>4,068</b>	<b>1,810</b>

# What About Wildlife?





## 4.0 Current management recommendations for fisher and Humboldt marten

Despite an incomplete understanding of the effects of forest management on fisher and marten populations in Oregon, there are many opportunities for forest land managers to help develop and maintain suitable habitat for these species. We recommend the following options for a land manager interested in fisher and marten conservation:

- Maintain existing snags, logs and live legacy trees across the landscape. Large-diameter trees with complex structure (broken or dead tops, large limbs, complex branching, basal hollows and multiple cavities) are especially important to consider as leave trees.
- Strategically leave or create large slash piles near mature stands of timber, for rest sites and dens.
- Grow wildlife leave trees to maturity, to recruit the next generation of legacy trees and logs.
- Maintain mast and fruit-bearing trees and shrubs across the landscape, to help grow the prey base and provide food sources.
- Implement fuel-reduction projects with caution and strive to retain a mixture of conditions across the landscape, since fisher are often found resting and denning in mature stands that have dense understory vegetation and abundant ladder fuels.
- Consider installing game cameras, and report findings to current carnivore researchers if fisher or marten are detected. Also report if dead or injured fisher or marten are found on your property.
- Protect known populations by implementing voluntary timing restrictions during the denning season, and/or habitat buffers around known dens.
- Focus habitat improvements (retention of slash piles, legacy structures and large-diameter live trees) near or adjacent to known population sites, to encourage range expansion of the species.
- Limit rodenticide use.
- Restrict animal-control activities near occupied den sites.
- Consider enrolling in a Candidate Conservation Agreement with Assurances (CCAA) for fisher (See section 5 for more information).
- Consider cooperating with research organizations by allowing research and monitoring activities on your property, and stay informed on carnivore research.

# Retaining Green Forests is Paramount!

## How does fire impact forests and wildlife?

Wildfires are inevitable, but not all fire is harmful to forests. Low-intensity fires can naturally "clean" and thin the forest by removing flammable and thick vegetation on the forest floor. The result is improved habitat for wildlife, healthier soil and new growth of native plants.

It also helps reduce the risk of large-scale high-severity fires that burn through the forest—from the floor to the canopy—with intense heat. High-severity fires across large landscapes can be devastating for wildlife, habitat and surrounding communities.

### High-Severity Fire

### Low-Intensity Fire

**High-Severity Fire Impacts:**

- With little regrowth, rodents can't find seeds to eat, and grazers have no leafy meals. Carnivores no longer have prey to hunt.
- Wildlife corridors are disconnected due to loss of vegetation that provides cover to small species. Roaming species, like fishers, become isolated in smaller areas where they may not find mates or adequate food.
- Runoff containing ash and debris flows into lakes and streams, damaging water sources and disrupting the lifecycles of aquatic species like fish and frogs.
- Scorched soil is no longer suitable for pine forests to regrow, and forests may be replaced with invasive grasses or low scrub.
- Nearby communities may be destroyed causing loss of life and property.

**Low-Intensity Fire Impacts:**

- Green tree leaves and plants continue to absorb carbon dioxide and produce oxygen, reducing the effects of climate change.
- Brush, grasses and small trees are burned, removing vegetation ladders that enable wildfires to reach and spread through the tree canopy. The newly opened area allows sunlight and precipitation to reach the forest floor.
- Ashes of burnt plants, leaves, pine needles and woody debris enrich the soil.
- Tree trunks and roots stay intact, keeping forests alive and minimizing soil erosion into streams and lakes.
- Native vegetation sprouts from the ground providing food and habitat for wildlife.

Low-intensity fire can benefit wildlife and forest health. Alongside partners, the U.S. Fish and Wildlife Service is working under the authority of the Endangered Species Act to support activities that improve the overall health of the nation's forests, reduce the risk of large-scale high-severity fires and protect important habitat for forest-dwelling plants and animals. Learn more at [fws.gov/sacramento](https://fws.gov/sacramento).

# Snags and Downed Wood Targets (Coarse Woody Debris, CWD)\*

## FIRE MANAGEMENT ZONES

Snag Target: 1-3 snags per acre emphasizing largest diameter trees as preferred snags. Clump snags to limit firefighter exposure. Leave fewer snags where there is already sufficient downed wood. Leave more snags if downed wood is sparse, small diameter, and/or in advanced decay classes.

Downed Wood: 5-8 tons emphasizing largest logs possible, where excess non-merchantable dead/dying trees exist.

## REFUGIA ZONES

Snag Target: 10-15 snags per acre emphasizing largest diameters on site first.

Downed Wood: 20-30 tons per acre. Assume snag recruitment will fill downed wood quota over time.

## GENERAL FOREST ZONE

Snag Targets: 2-4 snags per acre on southerly slopes, 4-8 snags per acre on northerly slopes. A diversity of snag density can be left on westerly and easterly slopes, but not exceeding 8 snags per acre. The largest snags on site should be prioritized for retention.

Downed Wood: 5-10 tons on southerly slopes, 10-20 tons on northerly slopes. A diversity of tonnage can be left between 5-20 tons on easterly and westerly facing slopes.

**\*THESE TARGETS WERE COMPROMISED BY TRAIL HAZARD TREES IN MANY CASES**

## Balancing Competing Objectives: Habitat and Severe Fire

“High densities of both snags and logs were associated with high reburn severity in a subsequent fire, while shrub cover had a marginally insignificant ( $P = 0.0515$ ) effect on subsequent fire severity. Our results demonstrate that high levels of large dead wood, which is often not considered in fire behavior modeling, corresponded with repeated high-severity fire effects.”

Lyderson et al 2019. Fuel dynamics and reburn severity following high-severity fire in a Sierra Nevada, USA, mixed-conifer forest.

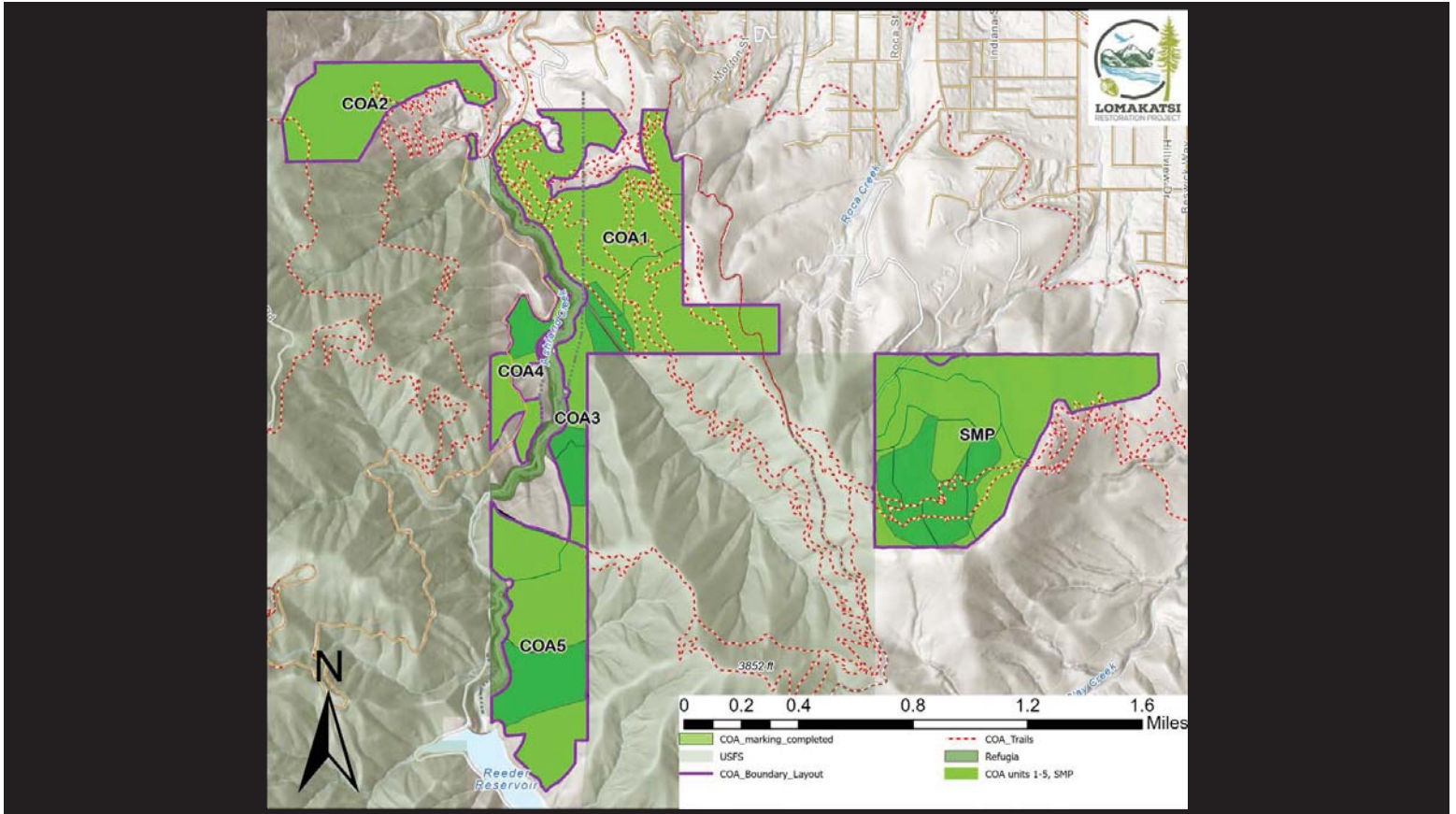
# Project Options and Budget

## Option #1: Full Footprint, Best Outcome

Spending Plan for Wildfire Division Account 072900.604160

Revenue			
2023-2025 Approved Budget:		\$	406,374.00
	Lomakatsi Grant	\$	150,000.00
	Potential Log Revenue	\$	686,127.00 per bid
<b>Total Revenue:</b>		\$	<b>1,242,501.00</b>
Projected Costs			
City Forestlands Climate Change Adaptation Project (est 400 acres)			
Planning, Layout, Marking, and Cruise	\$	75,000.00	Boundaries, units, prescriptions, data collection, monitoring, tree marking, tally, cruise, and sale admin
Helicopter Logging Cost	\$	1,295,946.00	per bid and marked tree volume
Log Haul	\$	190,080.00	4 hrs/trip @ 165/hr * 3500bf/load
Activity Fuels Pile and Burn	\$	150,000.00	Rate of \$1000/acre for moderate density pile and burn assuming some snag falling included
Timber Harvest Tax	\$	4,802.00	Per ODF 2022 tax rate per MBF
Post Project Monitoring	\$	20,000.00	Lomakatsi post-project data collection and summary
ODF Fire Protection	\$	10,000.00	Fixed cost for ODF fire protection assessed on forestlands
Fire Patrol	\$	15,000.00	Ongoing cost for UAS based summer fire detection
Rx Burn Maintenance	\$	100,000.00	Grayback Contract--Decreased by \$250,000 to put more money toward the Climate Adaptation project
<b>Total Expense</b>		\$	<b>1,860,828.00</b>
	UNMET	\$	618,327.00
5% Contingency	\$	649,243.35	
for rot and defect in wood			





# Option #2: Reduced Footprint, Minimum Needed

## Spending Plan for Wildfire Division Account 072900.604160

### Revenue

2023-2025 Approved Budget:	\$	406,374.00	
Lomakatsi Grant	\$	150,000.00	
Potential Log Revenue	\$	524,806.60	per mill pricing, no unit COA 5
<b>Total Revenue:</b>	<b>\$</b>	<b>1,081,180.60</b>	

### Projected Costs

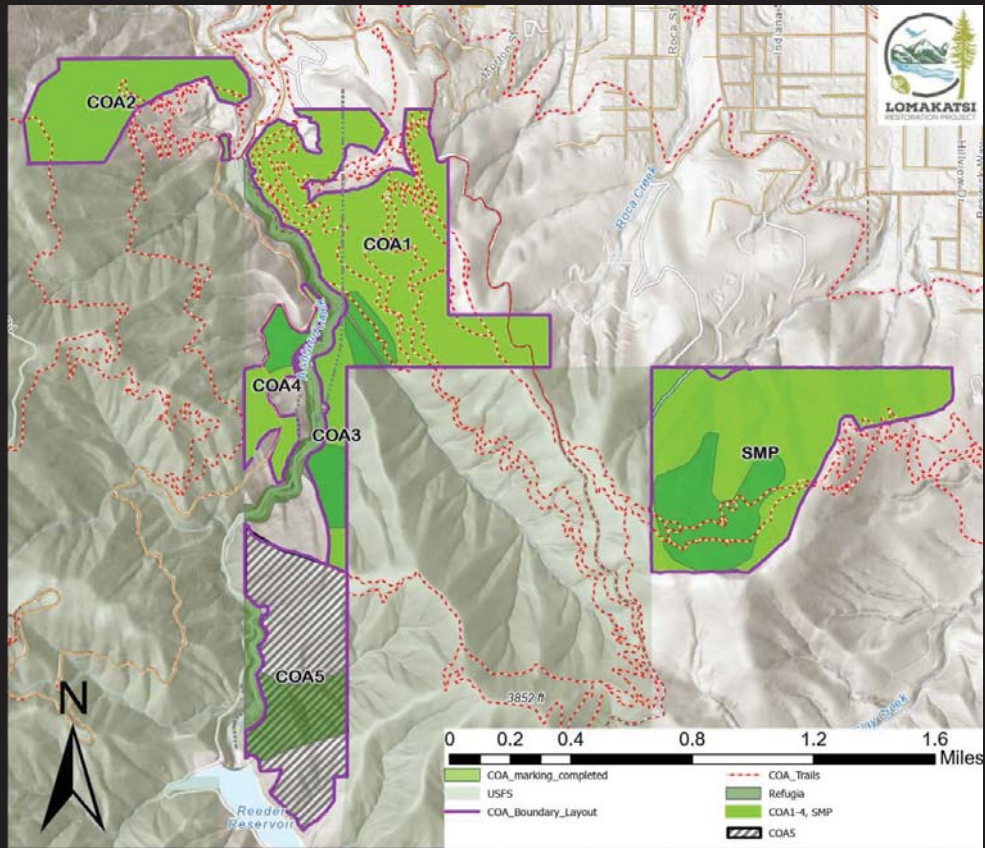
City Forestlands Climate Change Adaptation Project (est 400 acres)

ing, Layout, Marking, and Cruise	\$	75,000.00	Boundaries, units, prescriptions, data collection, monitoring, tree marking, tally, and cruise report
Helicopter Logging Cost	\$	1,000,069.50	per bid
Log Haul	\$	146,520.00	\$150 per thousand BF
Fuels Pile and Burn	\$	150,000.00	Rate of \$1000/acre for moderate density pile and burn assuming some snag falling included
Timber Harvest Tax	\$	4,802.00	Per ODF 2022 tax rate per MBF
Post Project Monitoring	\$	20,000.00	Lomakatsi post thinning data collection and summary
ODF Fire Protection	\$	10,000.00	Fixed cost for ODF fire protection assessed on forestlands
Fire Detection	\$	15,000.00	Ongoing fire season UAS detection program
Rx Burning	\$	100,000.00	Decreased by \$250,000 to put more money toward the Climate Adaptation project

### Total Expense

	\$	1,521,391.50
UNMET	\$	440,210.90
5% Contingency	\$	462,221.45
for rot and defect in wood		





*“Although dealing with dead trees has become a focus of forest management on many lands in the western US (and a priority where human safety is compromised), for long-term resilience and adaptation to climate change, we need to move beyond triage (e.g., removal of dead and dying trees) to making “green” (live) FF (Frequent Fire) forests more resilient to disturbances. Unfortunately, proactively treating forests to reduce density prior to wildfires, droughts, and bark beetle outbreaks is increasingly constrained.”*

*--Stephens et al 2018*

# Option #3: No Helicopter, Least Desirable

Spending Plan for Wildfire Division Account 072900.604160				
<b>Revenue</b>				
2023-2025 Approved Budget:		\$	406,374.00	
LRP Grant		\$	100,000.00	
<b>Total Revenue:</b>		\$	506,374.00	
<b>Projected Costs</b>				
City Forestlands Climate Change Adaptation Project				
Tree Marking		\$	50,000.00	Layout, Marking, and Admin help
Fuels Pile and Burn		\$	990,000.00	All falling, piling, burning
Post Project Monitoring		\$	20,000.00	Repeat assessment of the whole project area via drone
ODF Fire Protection		\$	10,000.00	Fixed cost for ODF fire protection assessed on forestlands
Fire Detection		\$	15,000.00	Ongoing Cost for fire season detection via UAS
Prescribed Burning		\$	100,000.00	Grayback Contract for overall maintenance outside project area
<b>Total Expense</b>		\$	1,185,000.00	
	UNMET NEED	\$	678,626.00	

## Why not?

1. Leaving excessive larger diameter logs will contribute to fire suppression difficulty.
2. Standing dead is a serious hazard to firefighter safety.
3. Prescribed burning becomes next to impossible due to smoke impacts on the community and logistical difficulty.
3. All future work, including replanting, is hampered by the preponderance of logs to navigate.
5. Wildfire impact to soils and vegetation would be very undesirable when large wood with significant heat and duration burn can't be extinguished until consumed.

## Next Steps...

1. Cutting to start March 26<sup>th</sup>, helicopter projected start by mid-April. Once cutting starts near trails, area will be closed until helicopter is done. Work is 7 days/week from 7AM to 6PM to minimize closure duration and disruption (follows City noise ordinance).
2. Cutting will avoid trails as long as possible to minimize closure time.
3. Prioritize busiest trails (BTI, Jabberwocky, Bandersnatch area) to get open as quickly as possible.
5. Clean-up starts as the helicopter wraps up.

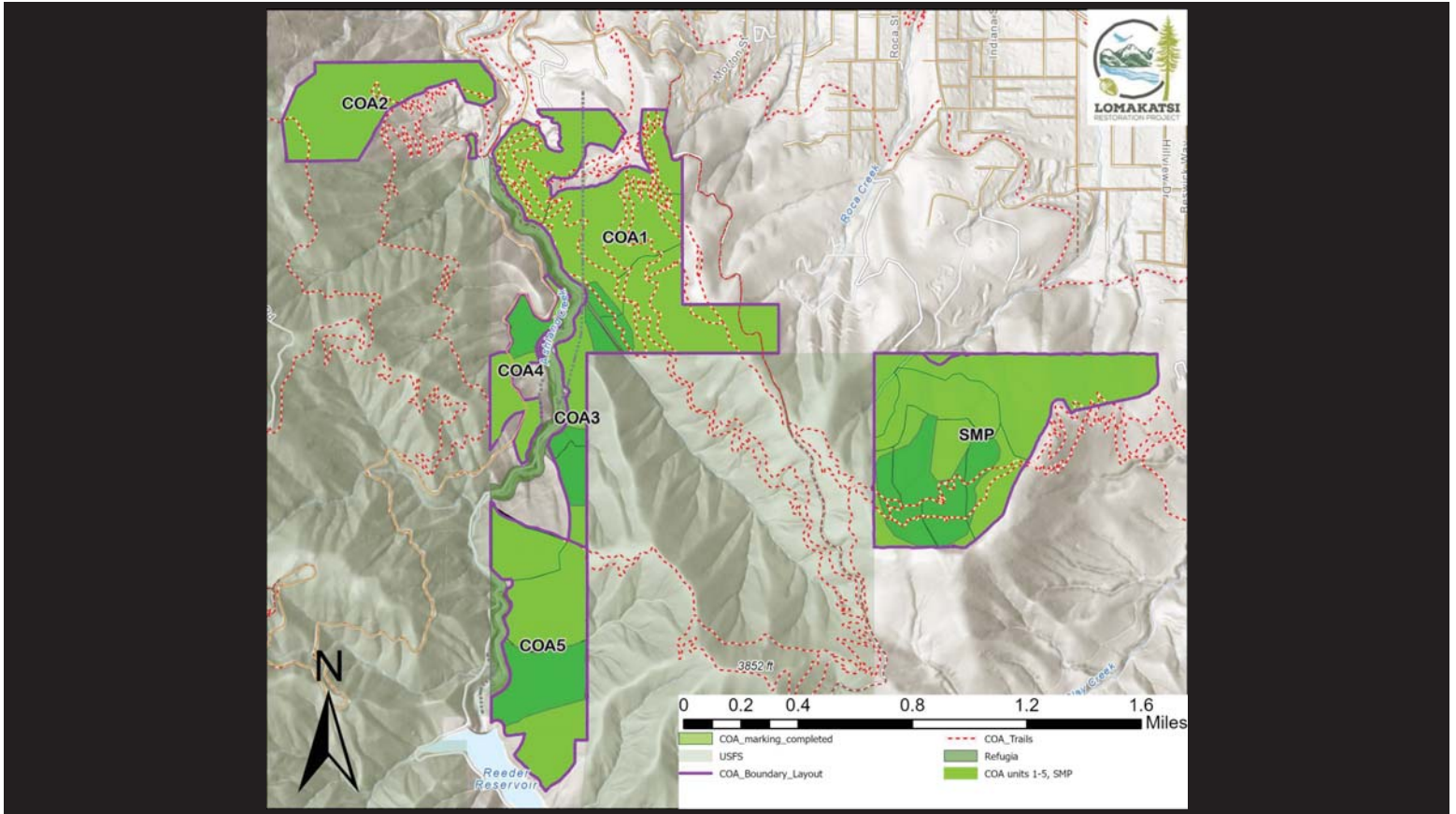
## Questions and Discussion

# Project Options and Budget

## Option #1: Full Footprint, Best Outcome

Spending Plan for Wildfire Division Account 072900.604160

Revenue			
2023-2025 Approved Budget:		\$	406,374.00
	Lomakatsi Grant	\$	150,000.00
	Potential Log Revenue	\$	686,127.00 per bid
<b>Total Revenue:</b>		\$	<b>1,242,501.00</b>
Projected Costs			
City Forestlands Climate Change Adaptation Project (est 400 acres)			
Planning, Layout, Marking, and Cruise	\$	75,000.00	Boundaries, units, prescriptions, data collection, monitoring, tree marking, tally, cruise, and sale admin
Helicopter Logging Cost	\$	1,295,946.00	per bid and marked tree volume
Log Haul	\$	190,080.00	4 hrs/trip @ 165/hr * 3500bf/load
Activity Fuels Pile and Burn	\$	150,000.00	Rate of \$1000/acre for moderate density pile and burn assuming some snag falling included
Timber Harvest Tax	\$	4,802.00	Per ODF 2022 tax rate per MBF
Post Project Monitoring	\$	20,000.00	Lomakatsi post-project data collection and summary
ODF Fire Protection	\$	10,000.00	Fixed cost for ODF fire protection assessed on forestlands
Fire Patrol	\$	15,000.00	Ongoing cost for UAS based summer fire detection
Rx Burn Maintenance	\$	100,000.00	Grayback Contract--Decreased by \$250,000 to put more money toward the Climate Adaptation project
<b>Total Expense</b>		\$	<b>1,860,828.00</b>
	UNMET	\$	618,327.00
5% Contingency	\$	649,243.35	
for rot and defect in wood			



# Option #2: Reduced Footprint, Minimum Needed

## Spending Plan for Wildfire Division Account 072900.604160

### Revenue

2023-2025 Approved Budget:	\$	406,374.00	
Lomakatsi Grant	\$	150,000.00	
Potential Log Revenue	\$	524,806.60	per mill pricing, no unit COA 5
<b>Total Revenue:</b>	<b>\$</b>	<b>1,081,180.60</b>	

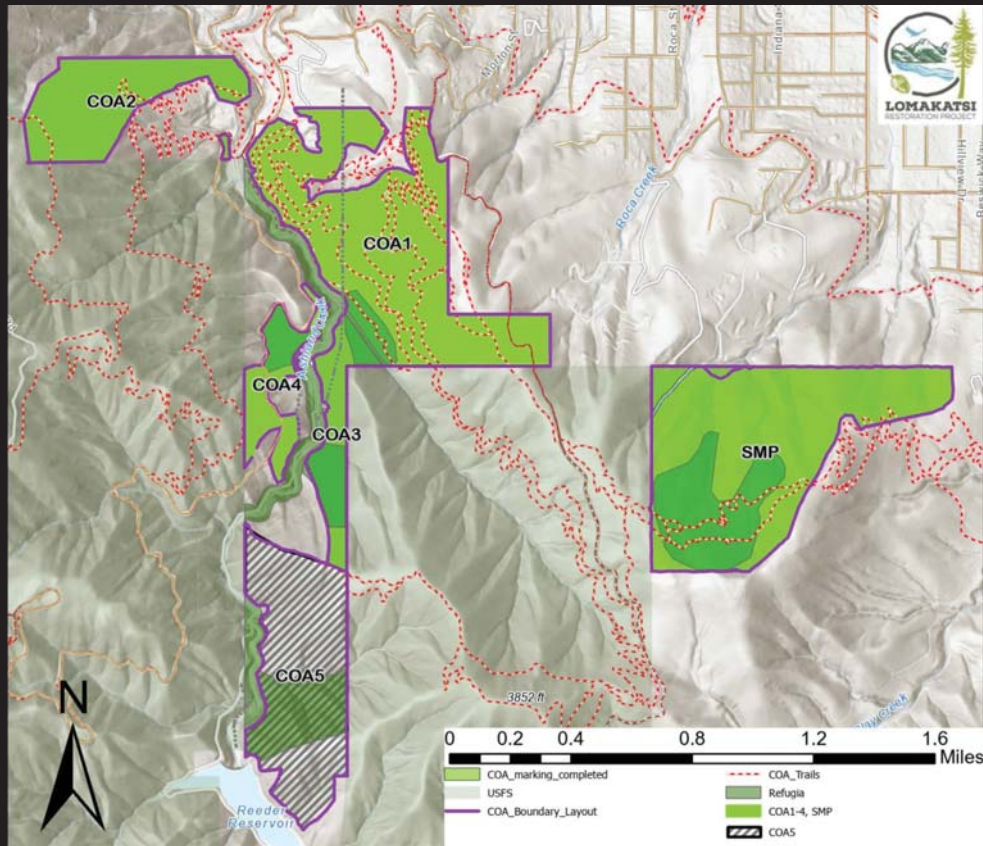
### Projected Costs

City Forestlands Climate Change Adaptation Project (est 400 acres)

ing, Layout, Marking, and Cruise	\$	75,000.00	Boundaries, units, prescriptions, data collection, monitoring, tree marking, tally, and cruise report
Helicopter Logging Cost	\$	1,000,069.50	per bid
Log Haul	\$	146,520.00	\$150 per thousand BF
Fuels Pile and Burn	\$	150,000.00	Rate of \$1000/acre for moderate density pile and burn assuming some snag falling included
Timber Harvest Tax	\$	4,802.00	Per ODF 2022 tax rate per MBF
Post Project Monitoring	\$	20,000.00	Lomakatsi post thinning data collection and summary
ODF Fire Protection	\$	10,000.00	Fixed cost for ODF fire protection assessed on forestlands
Fire Detection	\$	15,000.00	Ongoing fire season UAS detection program
Rx Burning	\$	100,000.00	Decreased by \$250,000 to put more money toward the Climate Adaptation project

<b>Total Expense</b>	<b>\$</b>	<b>1,521,391.50</b>
	UNMET	\$ 440,210.90
5% Contingency	\$	462,221.45
for rot and defect in wood		





*“Although dealing with dead trees has become a focus of forest management on many lands in the western US (and a priority where human safety is compromised), for long-term resilience and adaptation to climate change, we need to move beyond triage (e.g., removal of dead and dying trees) to making “green” (live) FF (Frequent Fire) forests more resilient to disturbances. Unfortunately, proactively treating forests to reduce density prior to wildfires, droughts, and bark beetle outbreaks is increasingly constrained.”*

*--Stephens et al 2018*

# Option #3: No Helicopter, Least Desirable

Spending Plan for Wildfire Division Account 072900.604160				
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LRP Grant		\$	100,000.00	
<b>Total Revenue:</b>		\$	506,374.00	
<b>Projected Costs</b>				
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Fuels Pile and Burn		\$	990,000.00	All falling, piling, burning
Post Project Monitoring		\$	20,000.00	Repeat assessment of the whole project area via drone
ODF Fire Protection		\$	10,000.00	Fixed cost for ODF fire protection assessed on forestlands
Fire Detection		\$	15,000.00	Ongoing Cost for fire season detection via UAS
Prescribed Burning		\$	100,000.00	Grayback Contract for overall maintenance outside project area
<b>Total Expense</b>		\$	1,185,000.00	
	UNMET NEED	\$	678,626.00	

## Why not?

1. Leaving excessive larger diameter logs will contribute to fire suppression difficulty.
2. Standing dead is a serious hazard to firefighter safety.
3. Prescribed burning becomes next to impossible due to smoke impacts on the community and logistical difficulty.
3. All future work, including replanting, is hampered by the preponderance of logs to navigate.
5. Wildfire impact to soils and vegetation would be very undesirable when large wood with significant heat and duration burning can't be extinguished until consumed.