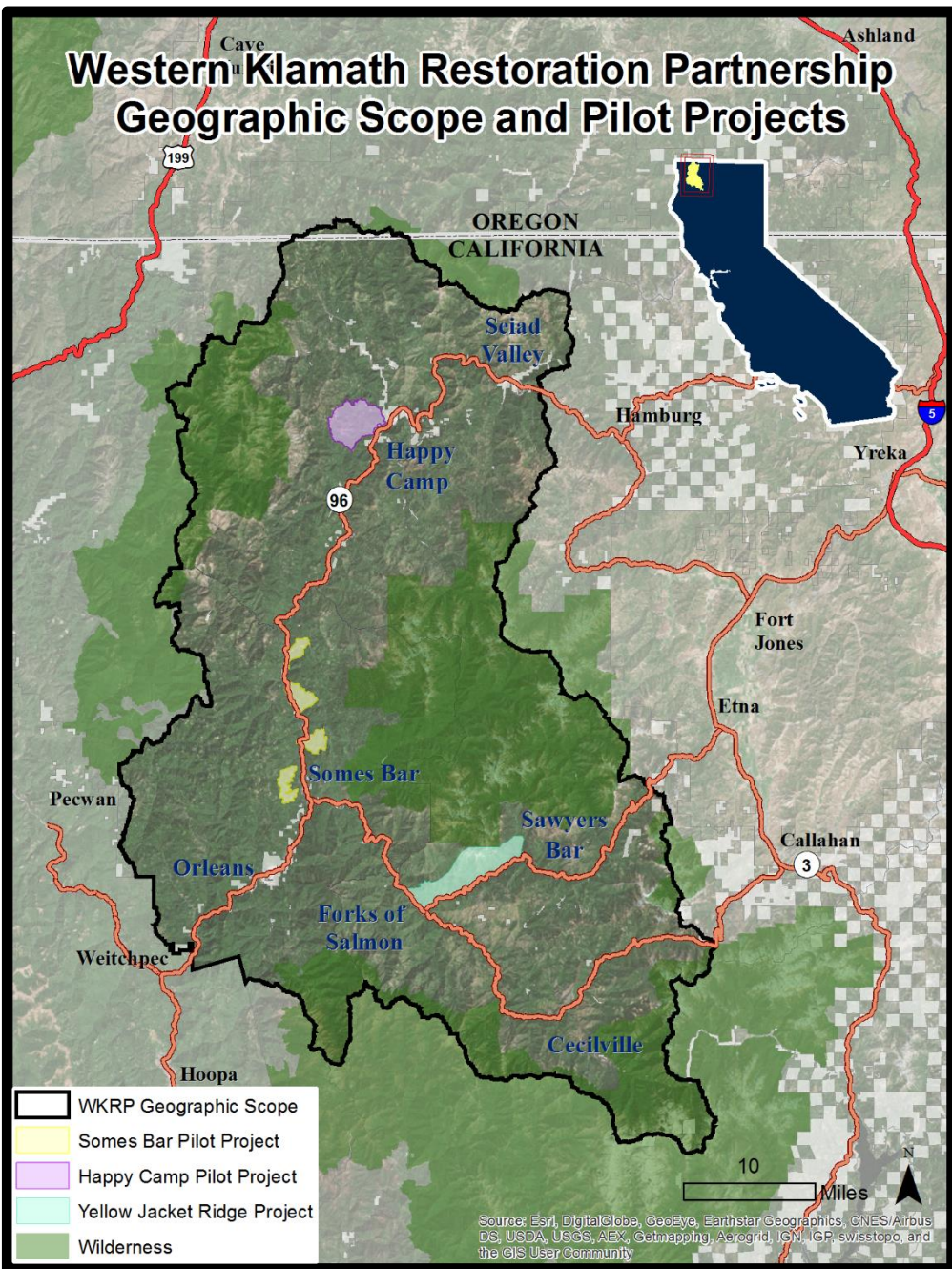




Manufacturing the Components of the Cohesive Strategy to Achieve it's Vision and Goals:
How Communities in the Western Klamath Mountains are Working Together to Create a Better Fire Future

Bill Tripp, Deputy Director of Eco-Cultural Revitalization, Karuk Tribe Dept: Natural Resources
Will Harling, Director, Mid Klamath Watershed Council





1,197,719 Total Acres

<2% Percent Non-Forest Service

68.5% KNF

29.1% SRF

86.7% Siskiyou

11.2% Humboldt

1.9% Del Norte

84% Karuk Aboriginal Territory

29.4% Wilderness

20.9% Roadless

5.6% HC FSC WUI acres

8.7% Seiad FSC WUI acres

5.9% OSB FSC WUI acres

11.2% Salmon R FSC WUI acres

10.9% Identified as Moderate to High
priority for treatment.

Somes Bar Integrated Wildland Fire Management and Capacity Development Project

- Bring us from agreement in principal to agreement in practice
- Build multi-organizational capacities

Happy Camp Integrated Community Protection and Workforce Development Project

- Learn from our Somes Project Progress
- Invest in well trained local workforce (lot's of shelf NEPA)

Salmon River Integrated Large Fire Management Project

- Build off recent fire footprints, fill in the gaps.
- Restore frequent fire regime

All Hands, All Lands Planning and Implementation

3 Pilot Project Areas
7 Communities at Risk
Many Partners Engaged

Strategic Alignment
Collaborative Engagement
Program Alignment

Resilient Landscapes
Fire Adapted Communities
Safe Effective Response



Link to “Every Fire Tells a Story”
<https://youtu.be/kpglLhmwPMc>

2014 Whites Fire



Manufacturing the Components of the Cohesive Strategy to Achieve it's Vision and Goals:
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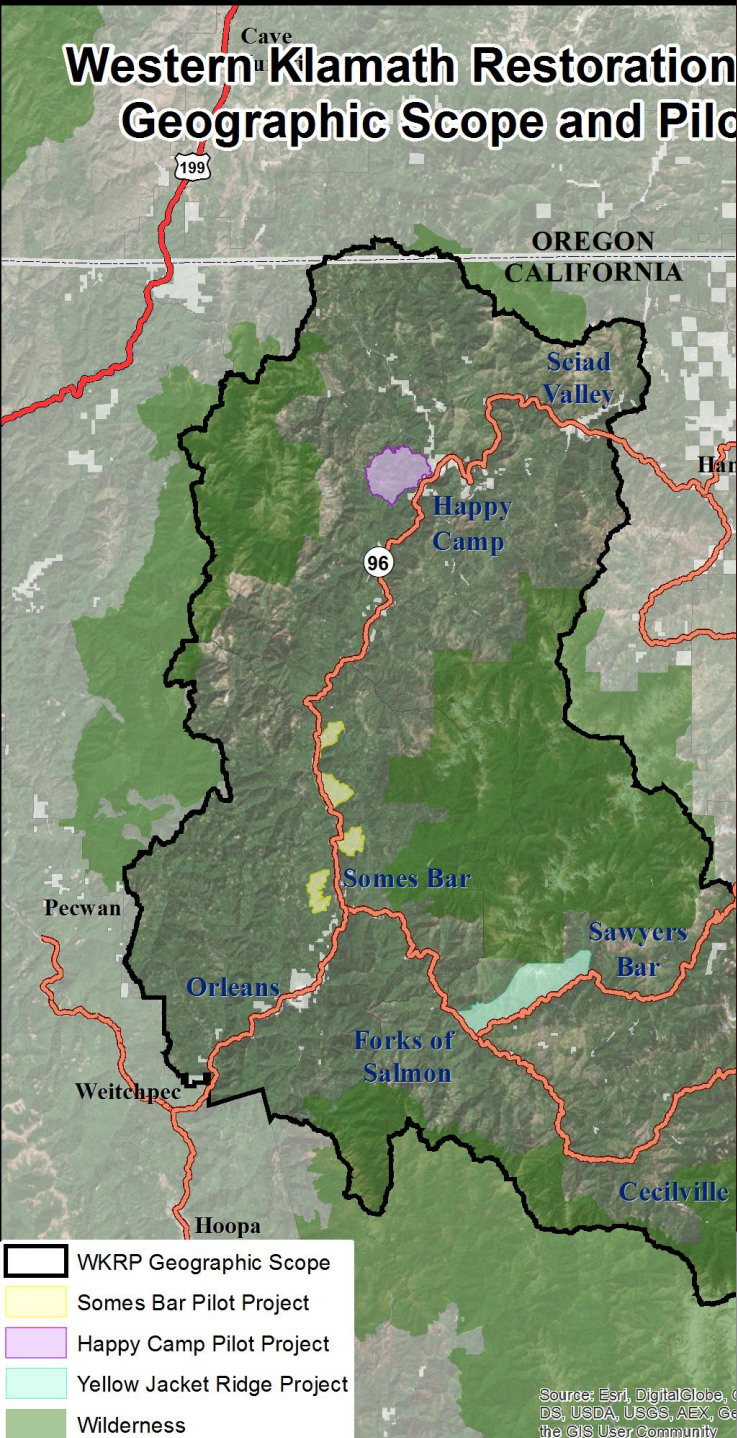
Bill Tripp, Deputy Director of Eco-Cultural Revitalization, Karuk Tribe Dept: Natural Resources
Will Harling, Director, Mid Klamath Watershed Council



Creating a Social and Cultural Movement to Change How We Manage Fire

- Restoring tribal fire management practices and incorporating traditional knowledge: Indigenous Peoples Burning Network.
- Forming Fire Safe Councils, Fire Adapted Communities, Fire Learning Network, Firewise Communities, Prescribed Fire Council.
- Implementing annual prescribed burning through Prescribe Fire Training Exchanges and cooperative burn agreements. Developing capacity to deploy a local Type III Incident Management Team.
- Forming and maintaining a landscape scale forest collaborative: Western Klamath Restoration Partnership.
- Engaging with fire management agencies during wildfire events through the Community Liaison Program and Govt-to-Govt (tribal to federal) consultation and coordination.
- Creating social forums to facilitate community discussions and learning, and telling our story in many forms of media: Salmon River & Orleans Complexities FB page, "Catching Fire" video and Klamath/Salmon Media Collaborative YouTube channel.
- Hosting Klamath Fire Ecology Symposium every three years to bring scientists, managers, practitioners, students and residents up to date with the latest in fire science and management.
- Establishing Karuk/UC Berkeley collaborative, expanding to additional academic partnerships, and launching the Pikyav (to fix it) Field Institute.

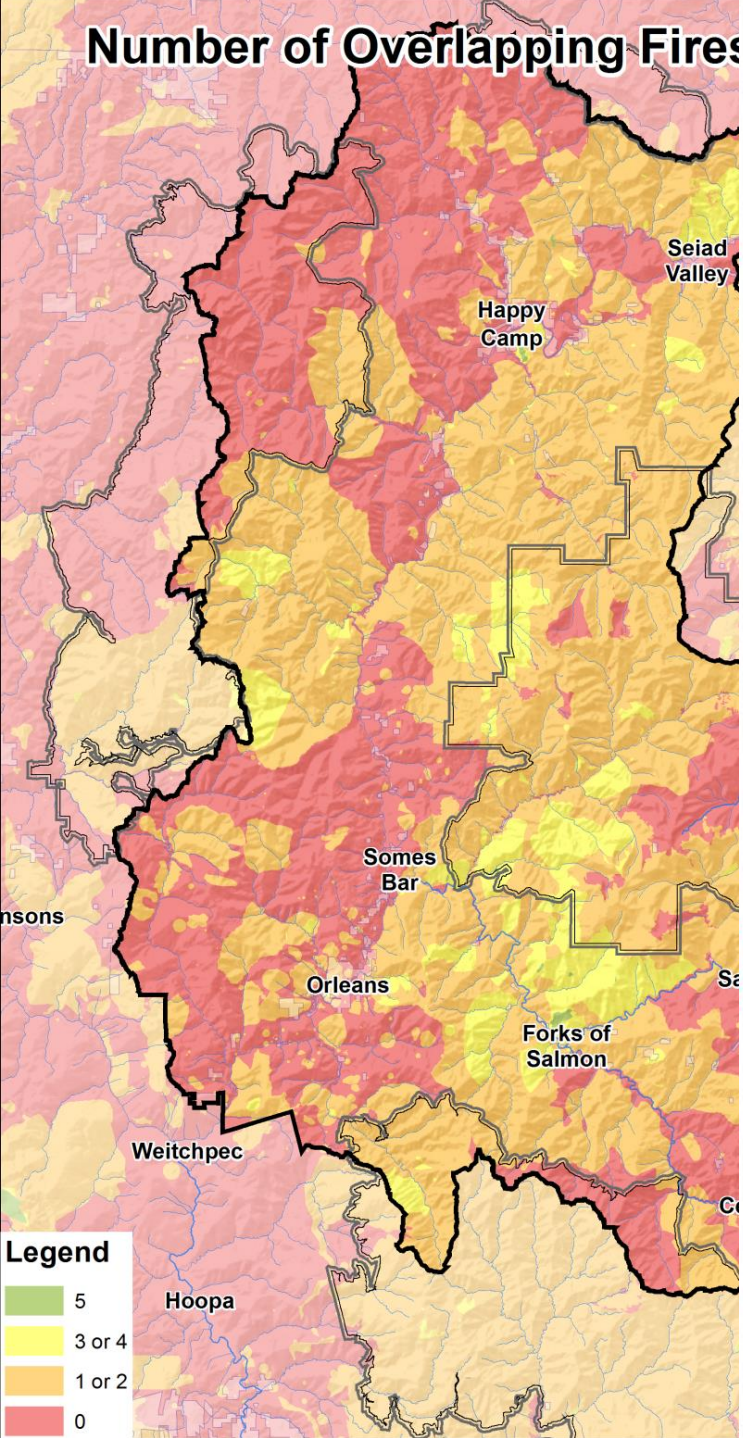
Western Klamath Restoration Geographic Scope and Pilot



- WKRP Geographic Scope
- Some Bar Pilot Project
- Happy Camp Pilot Project
- Yellow Jacket Ridge Project
- Wilderness

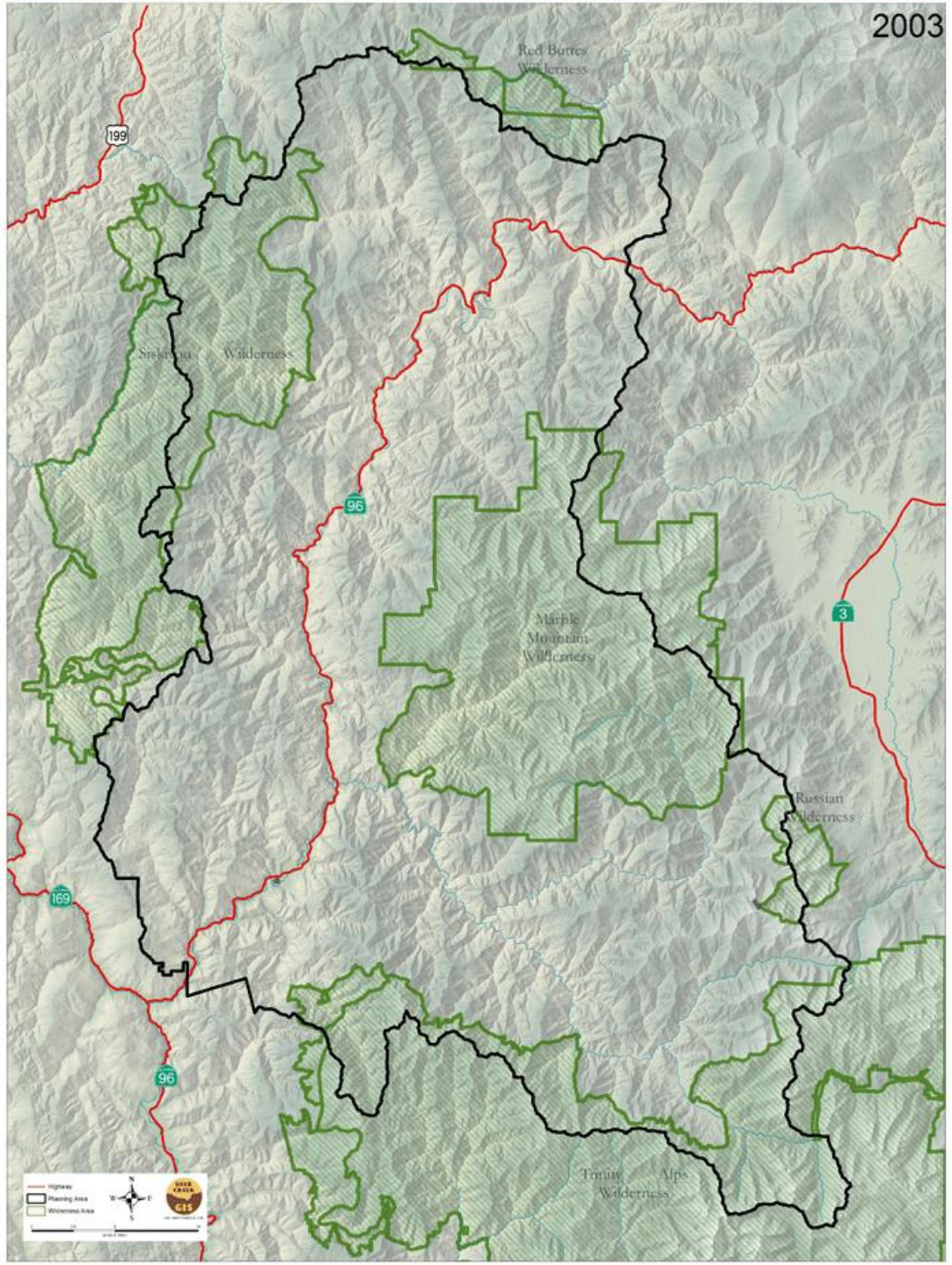
Source: Esri, DigitalGlobe, GeoEye, IGN, GeoEye, USGS, USDA, USGS, AEX, Geoplace, and the GIS User Community

Number of Overlapping Fires



- Legend**
- 5
 - 3 or 4
 - 1 or 2
 - 0

2003



Planning Area
 Wilderness Area
 Wilderness

0 1 2 Miles

Orleans/Somes Bar Fire Safe Council

Formed April 2001



The purpose of the Orleans / Somes Bar FSC is to help **plan, implement, and monitor the reinstatement of historic fire regimes** primarily through the use of strategic fuels reduction in a manner that protects life and property, improves forest health, and enhances the resources valued by its stakeholders.

Orleans Some's Bar FSC Brushing Crew



Fuels Reduction Program (2001-2018): 2,300 acres treated on over 150 properties

Community Liaison Program



Firewise Workdays



Salmon River Fire Safe Council Community Liaison Program Trial By Fire

“Communication used to be adversarial, but has improved much in last 10 years (i.e. the last couple fires). This fire was night and day compared to 2008, we did not feel talked down to, and felt informed... Patty’s humanness of being able to communicate with the community was astounding and appreciated.” Creek Hanauer

“There was a feeling of true mutual respect. We felt informed and listened to!... Division supervisors assigned near our property on the Butler Fire would meet with homeowners informally every night, which was much appreciated.” Sue Terence

“Folks living in the Salmon River have seen as much firefighting in their lives as seasonal Incident Commanders. Residents know the winds and microclimates, and have done a lot to fire safe their homes and property. They are true partners when it comes to community protection from fire.” KNF Supervisor, Patty Grantham

“They listened and did what they said they would do.” Duffy

*“This was the best communication during fire ever, from public meetings to Barry Snyder at the lookout, Patty’s emails, liaisons and public information officers out and about...”
Lori Connelly*

A man with a beard and glasses, wearing a dark long-sleeved shirt, khaki pants, a brown belt, and yellow gloves, stands in a forest with his arms raised in a celebratory gesture. He is positioned in front of a large tree trunk. The background shows a prescribed fire burning through the forest floor, with flames and smoke visible. The overall scene is illuminated by the warm, golden light of the fire.

Collaborative Prescribed Burning (2003-2017)

Klamath River Prescribed Fire Training Exchange (2014-2017)

Overcame obstacles including:

- Liability/Insurance
- Air Quality
- Burn Permitting
- Trained Workforce
- Community Acceptance

International

Tribal

NPS

Tribal

Private

VFD/
NGO

Local

NGO

Building More Local Capacity To Accomplish Fuel Reduction at the Timing and Scale It's Needed





Photo: Frank Lake

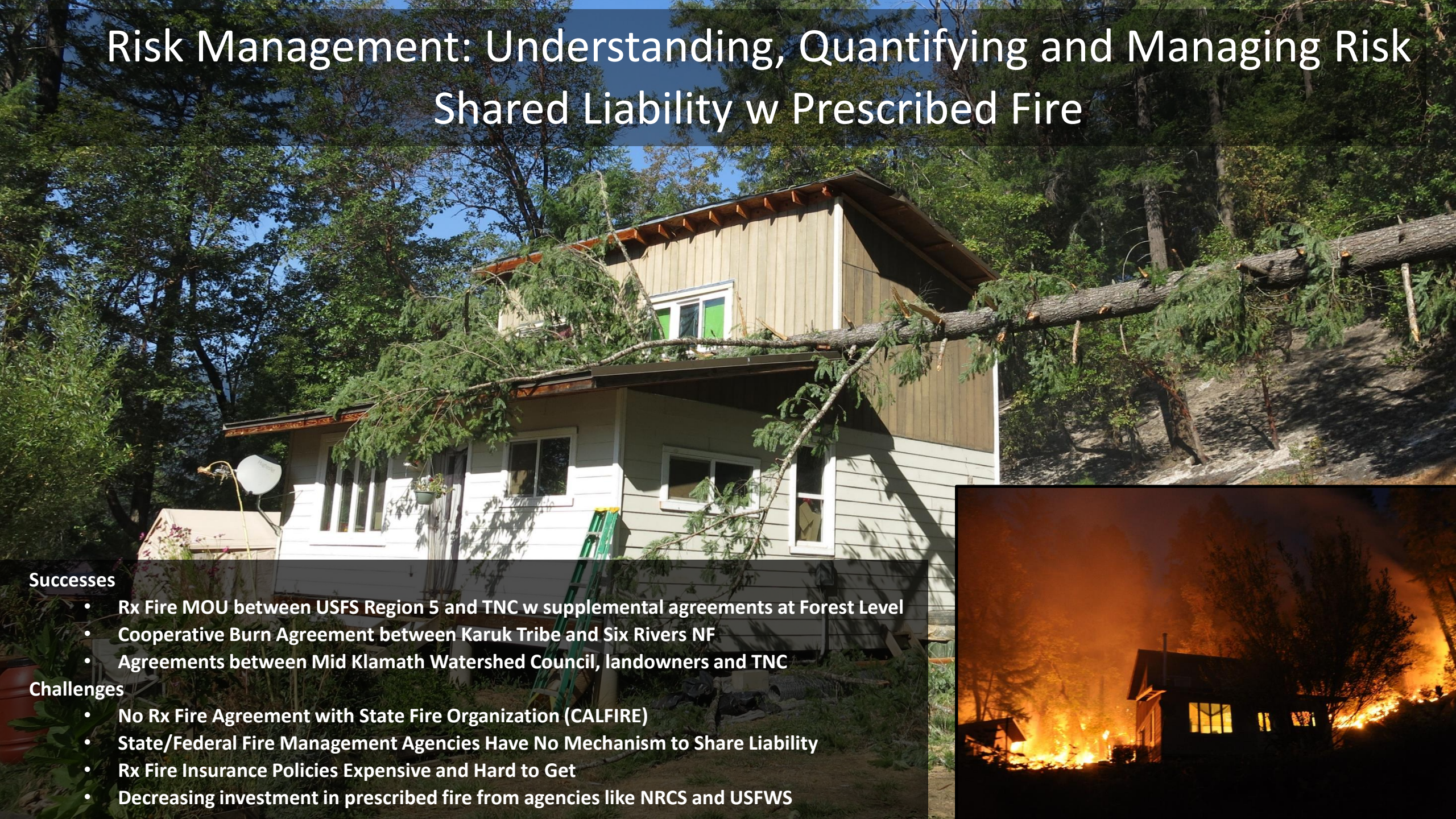


Photo: Stormy Staats



Risk Management: Understanding, Quantifying and Managing Risk

Shared Liability w Prescribed Fire



Successes

- Rx Fire MOU between USFS Region 5 and TNC w supplemental agreements at Forest Level
- Cooperative Burn Agreement between Karuk Tribe and Six Rivers NF
- Agreements between Mid Klamath Watershed Council, landowners and TNC

Challenges

- No Rx Fire Agreement with State Fire Organization (CALFIRE)
- State/Federal Fire Management Agencies Have No Mechanism to Share Liability
- Rx Fire Insurance Policies Expensive and Hard to Get
- Decreasing investment in prescribed fire from agencies like NRCS and USFWS

The Smoke Issue...



Smoke From Wildfires – 2008



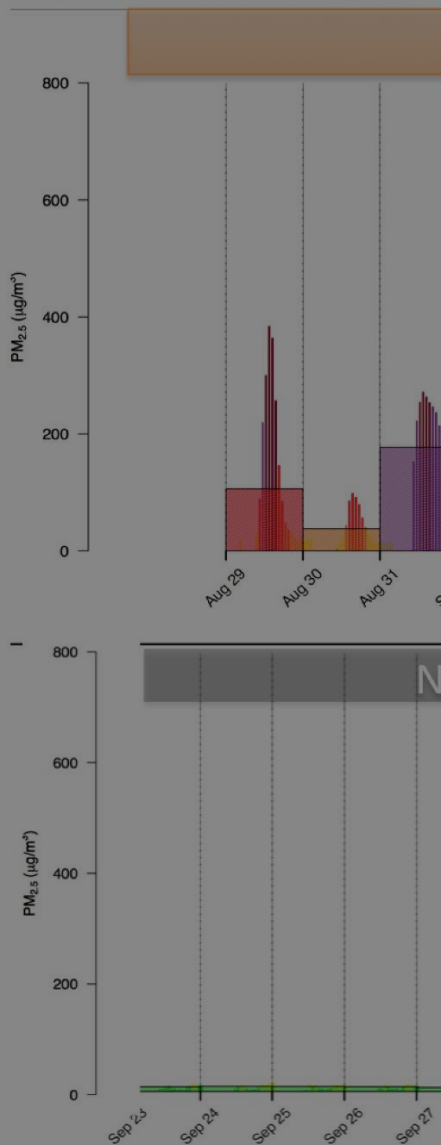
Smoke From Prescribed Fires – 2005

2017 Klamath TRES Rx Burn in Orleans, CA



2017 Orleans S

(Wider, transparent bars are
<https://www.airnow.gov/>)



Credit: Lee Tarnay,

Outlook for NW California Fires

Smoke: Although not a lot of fire activity is expected today, smoke from these and other nearby fires continues to linger in local valleys and communities. The worst air quality will be in Happy Camp, especially as the Oak Fire continues to back down to 96, Seiad Valley, the Scott Valley, Yreka, and Sawyers Bar, where unhealthy to hazardous conditions will be present. Air quality in locations to the south and west of the fires will be in the USG and unhealthy categories. This includes Orleans, Weitchpec, and the Hoopa Valley.

Fire: Orleans Complex: <https://inciweb.nwcg.gov/incident/5430/> Eclipse Complex: <https://inciweb.nwcg.gov/incident/5511/> Salmon/August Complex: <https://inciweb.nwcg.gov/incident/5501/>

Other: Cooler temperatures, light winds, and some gusts are expected today.

Daily AQI Forecast for Aug 24, 2017



Station	Yesterday hourly	Wed 8/23	Forecast Comment for Today -- Thu, Aug 24	Thu 8/24	Fri 8/25
Yreka			Unhealthy conditions		
Weed			USG conditions		
Scott Valley	No hourly data		Very unhealthy conditions with periods of unhealthy		
Callahan			USG conditions		
Seiad Valley			Hazardous conditions		
Happy Camp			Hazardous conditions		
Sawyers Bar			Unhealthy conditions with periods of very unhealthy		
Orleans			USG conditions		
Weitchpec			USG conditions		
Hoopa			USG conditions		
Willow Creek			USG conditions		
Weaverville	No hourly data		USG conditions with periods of unhealthy		

Issued Aug 24, 2017 by Carolyn Kelly, Air Resource Advisor

Air Quality Index (AQI)	Actions to Protect Yourself
Good	None
Moderate	Unusually sensitive individuals should consider limiting prolonged or heavy exertion.
USG	People within Sensitive Groups* should reduce prolonged or heavy outdoor exertion.
Unhealthy	People within Sensitive Groups* should avoid all physical outdoor activity.
Very Unhealthy	Everyone should avoid prolonged or heavy exertion.
Hazardous	Everyone should avoid any outdoor activity.

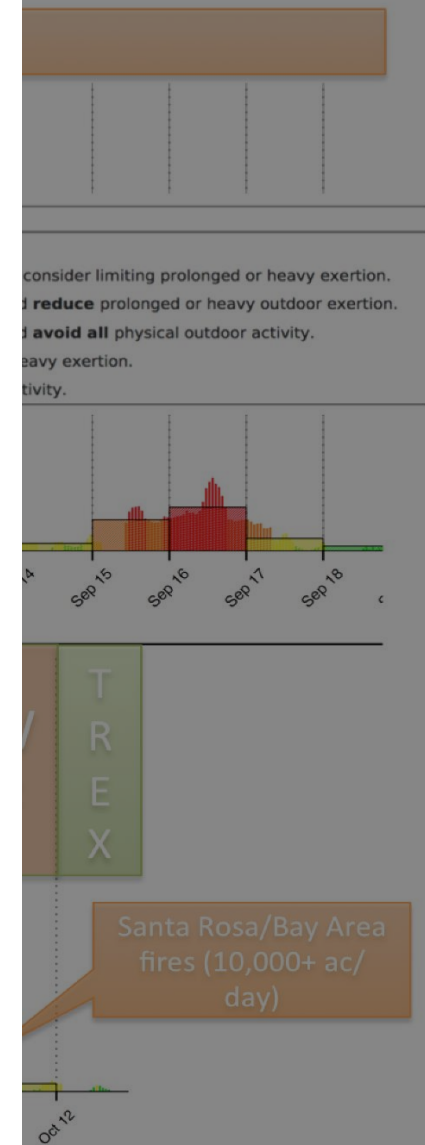
Disclaimer: Forecasters may be wrong and the forecast may change. The forecast is not a guarantee of what will happen. The forecast is only a guide to what is expected. The forecast is not a guarantee of what will happen. The forecast is only a guide to what is expected.

Additional Links
 Real-time Monitoring Data (<https://www.wildlandfiresmoke.net/monitoring/>)
 California Smoke Blog (<http://californiasmokeinfo.blogspot.com>)

<http://wildlandfiresmoke.net/outlooks/2017/NWCaliforniaFires#Overview>

s. TRENX Rx Fire

hourly NOWCAST values. See
 qualitative illustration* only)



*Graphics built using package PWFESISmoke_0.99.27 <https://github.com/MazamaScience/PWFESISmoke>

<https://tools.airfire.org/>)



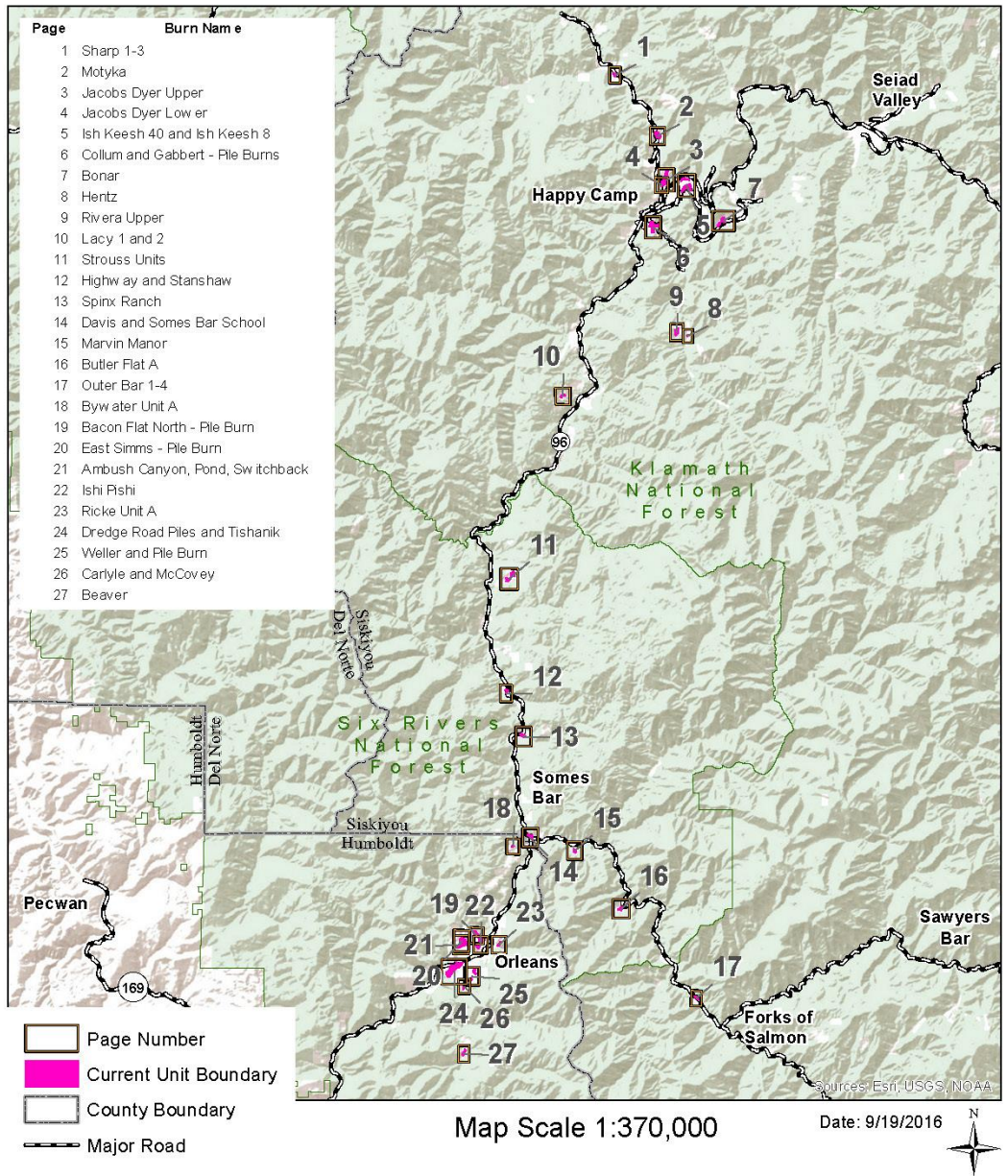
Pack Test – 2015 Klamath TREX



2015/10/04



2016 Klamath River TREC Possible Burn Units

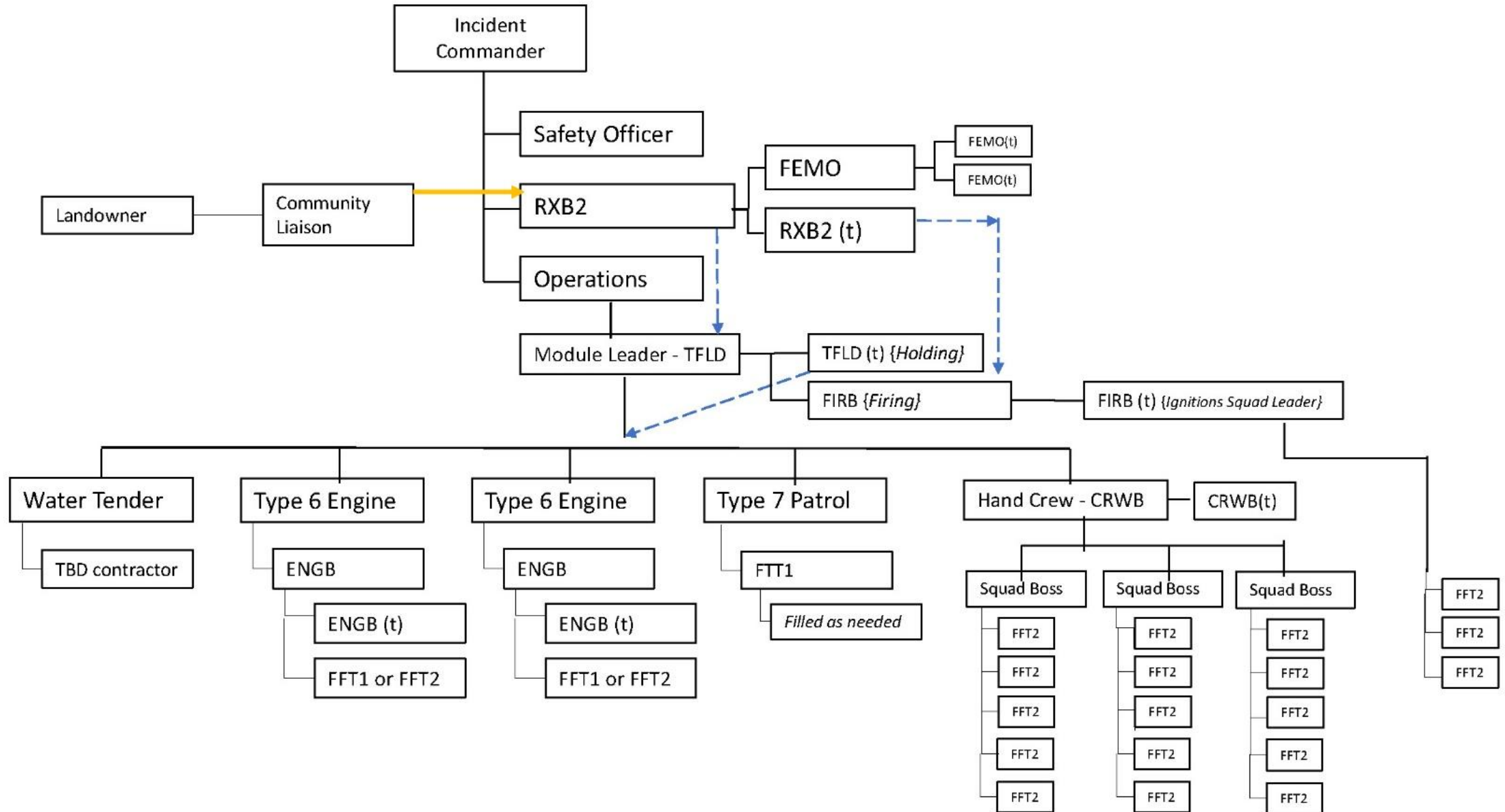


Klamath TRENCH Type III Incident Management Team

- TNC, Karuk Tribe, MKWC, SRRC, USFS, Municipal FD's, Contractual Resources (Firestorm, Deer Creek Resources, Prometheus Fire Consulting, Wildland Restoration International)
- Works closely with CAL FIRE, AQMDs, local VFDs
- Org Chart, Daily Incident Action Plans, After Action Reviews
- Future resource for managed wildfires and fire suppression when needed?



2017 Klamath TREN – Happy Camp Org Chart



Getting Good Black Around Orleans

- Working off footprint of 2013 Orleans Fire
- Tying in to existing roads, ridges and defensible features
- Treating on public and private lands (2016 Red Cap Hazel Rx Burn)
- Preparing for managing wildfires for resource objectives
- Where is the line that we manage wildfires from and prescribed to the community?



Wildfire and Prescribed Fire in the Orleans Valley

Date: 5/5/2017

- TREX Units 2016
- TREX Units 2015
- TREX Units 2014



- Orleans Fire 2013
- TREX Units 2013
- Ownership Private

0 0.25 0.5 0.75 1 Miles

WKRP Zones of Agreement



- Restoration of fire processes at the landscape scale is essential for social, cultural, ecological and economic resilience in the Western Klamath Mountains.
- Strategic, linear manual and mechanical treatments along existing roads and fuelbreaks in preparation for large scale prescribed burning and better wildfire response.
- Treat on and around private properties in preparation for large prescribed burns.
- Prioritize treatment areas based on overlaying agreed upon spatial layers that represent our social, ecological, cultural and economic values.

Somes Bar Integrated Fire Management Project

Draft Environmental Assessment



- Model for Collaborative Planning and Implementation
- WKRP partners engaged through entire process (ID team, Rx development, stand exams, botany, arch, wildlife, research/monitoring)
- Will be implemented through Master Stewardship Agreement/Suppl. Project Agreement with Karuk Tribe
- Restoring fire process after a century of fire exclusion
- Guided by traditional ecological knowledge and Western Science (food grove assessments).

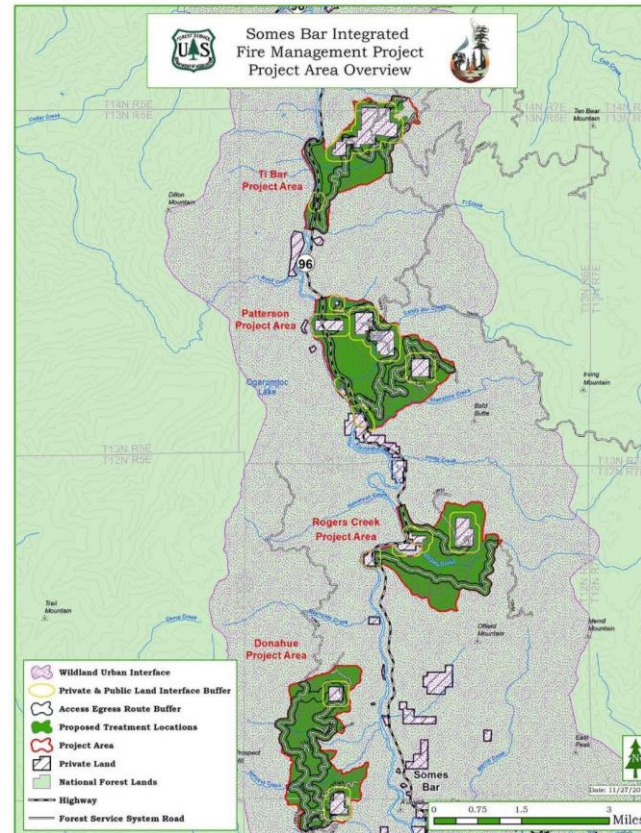


Figure 1-3. Wildland-urban interface and the project area.

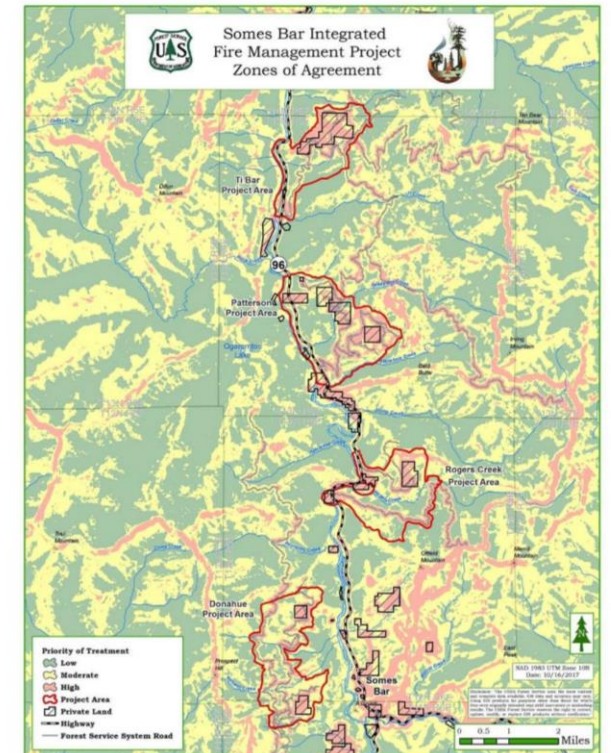


Figure 2-3. The WKRP plan for restoring fire-adapted landscapes identified strategic features (roads, mechanical and manual treatments around private property and burn treatments between roads and mountain ridgetops) to protect neighborhoods.



Somes Bar Integrated Fire Management Project

Draft Environmental Assessment

- Holistic management based on traditional knowledge aligns with the need for diversified habitat restoration, yet can conflict with T&E single species regulations.
- Linear manual and mechanical treatments compartmentalizing prescribed fire treatments are better planned at larger scales for cost effectiveness.
- Collaboratively developed projects cost more and take longer on the front end, but in setting priorities together, better outcomes are anticipated. Embrace it!

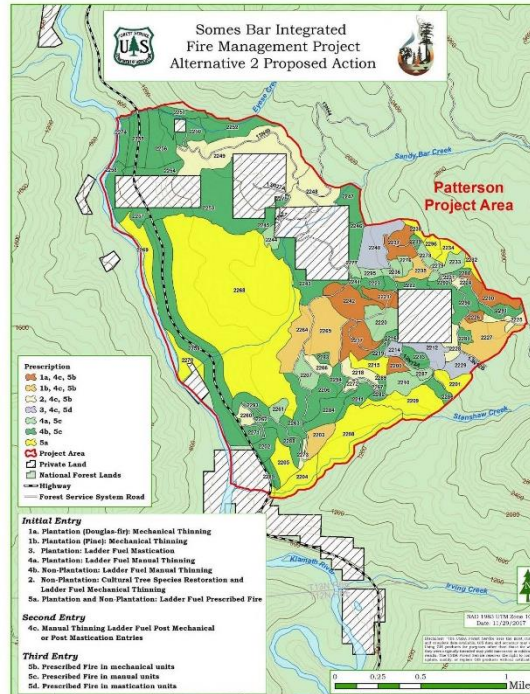


Figure 2-17. Patterson project area proposed action.

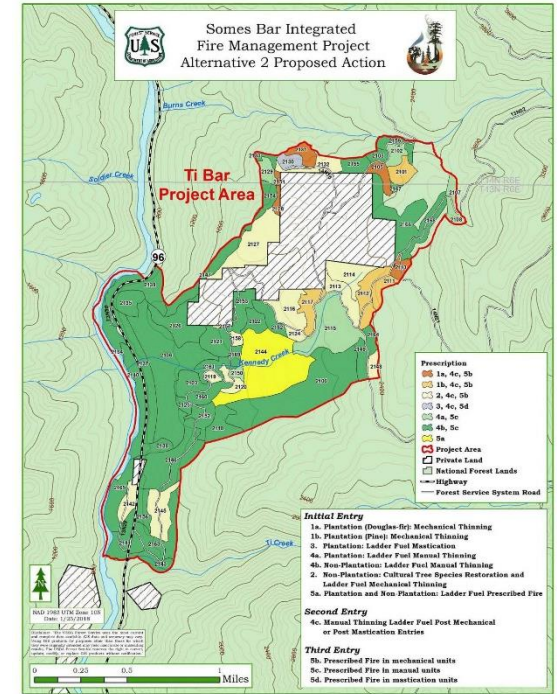
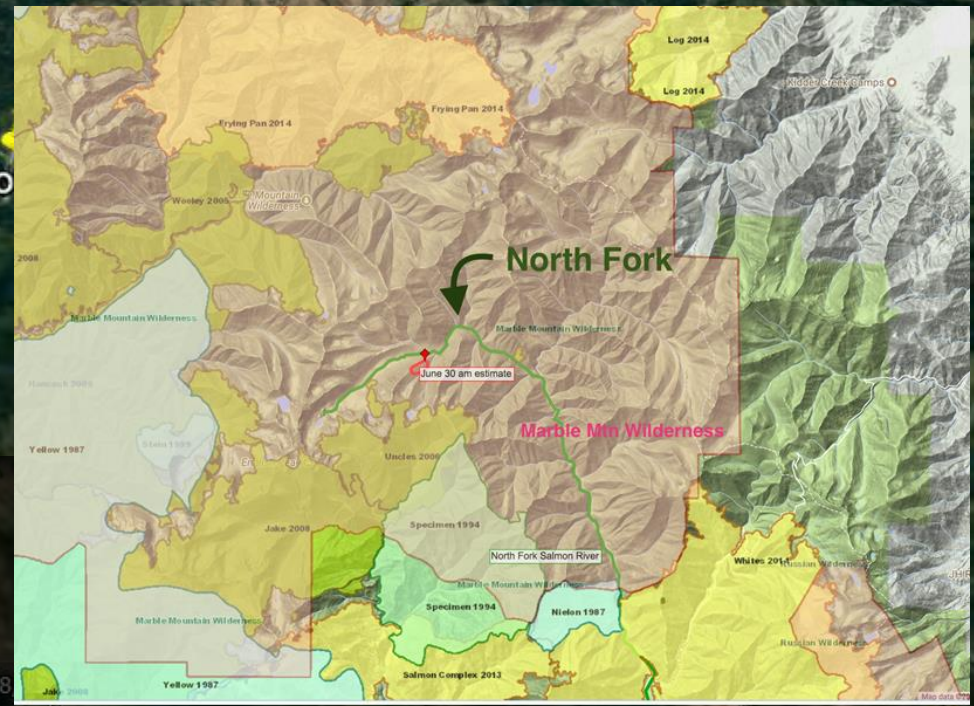
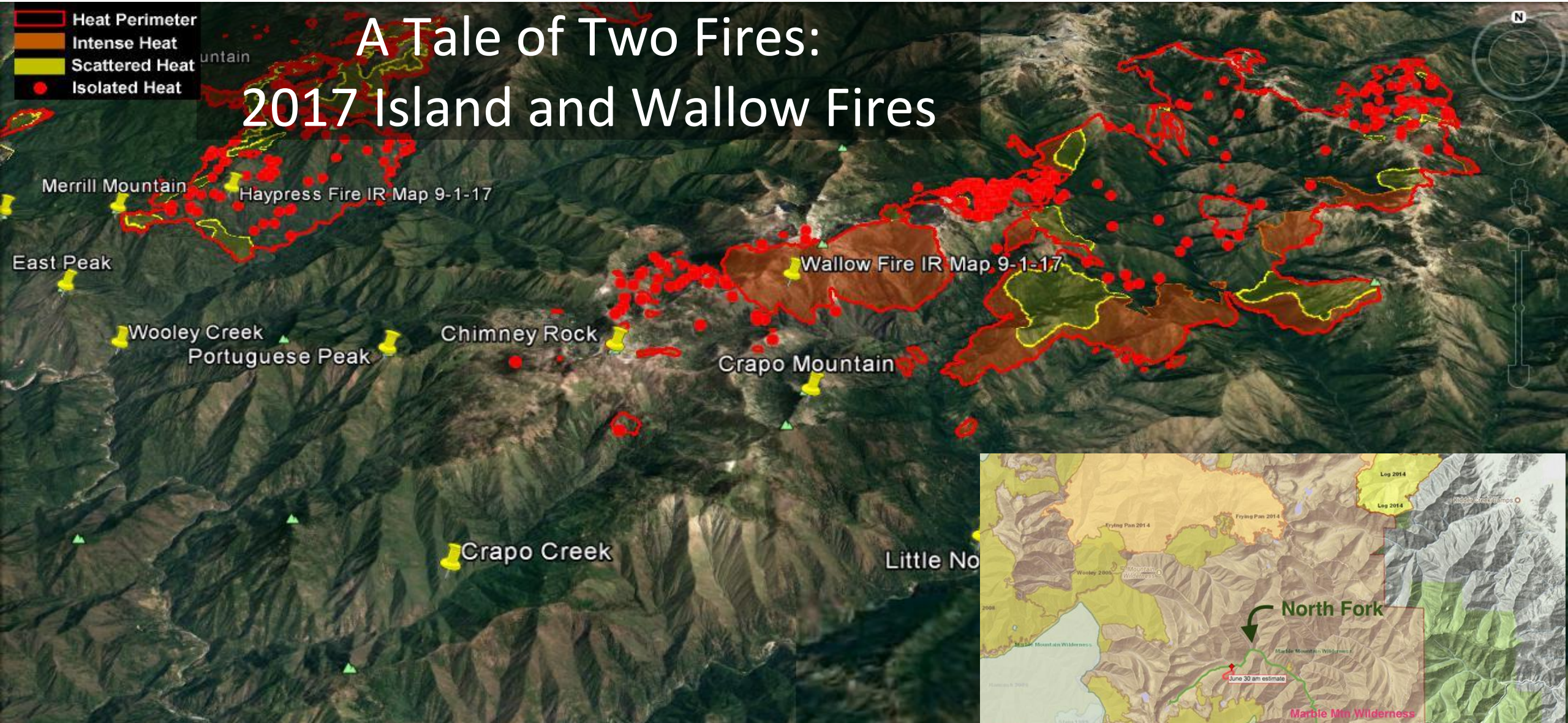


Figure 2-21. Ti Bar project area proposed action.

A Tale of Two Fires: 2017 Island and Wallow Fires



- Klamath NF managed Island Fire for almost two months as managed wildfire.
- WKRP pre-season meetings created social license.
- Spatial Fire Planning helped explain reasoning to stakeholders.
- Island Fire buffered Wallow Fire during eight mile run overnight w East winds.



Salmon Forks of Salmon

Image Landsat / Copernicus

© 2017 Google

Imagery Date: 8

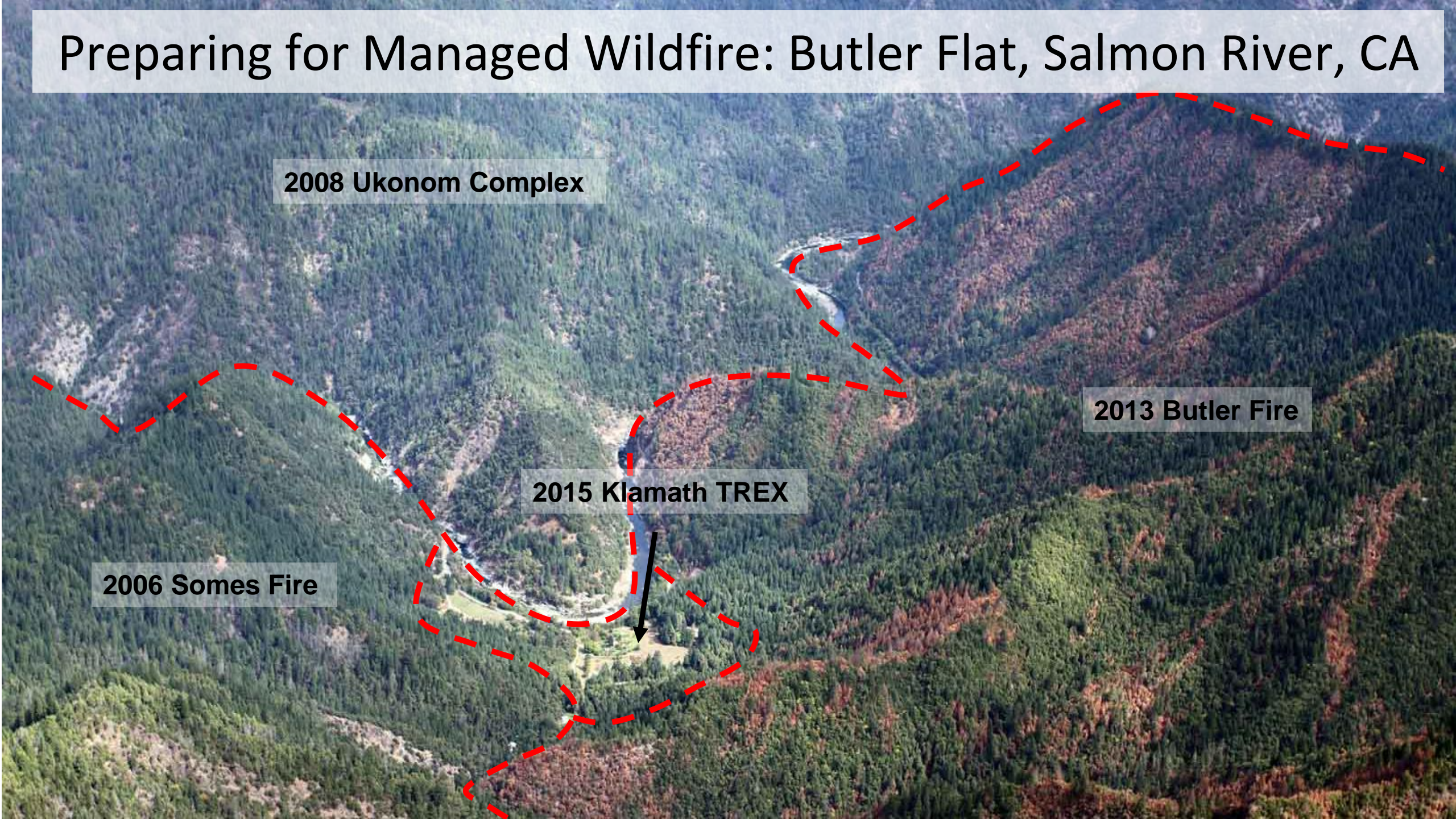
Preparing for Managed Wildfire: Butler Flat, Salmon River, CA

2008 Ukonom Complex

2013 Butler Fire

2015 Klamath TREX

2006 Somes Fire





Management in the post high-severity fire landscape: Balancing wildlife habitat and future fuels

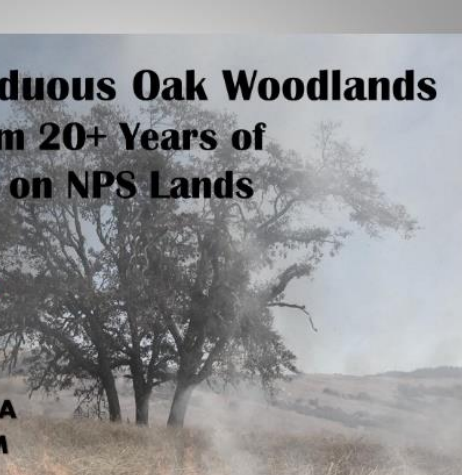
Eric Knapp
U.S. Forest Service
Pacific Southwest Research Station
Redding, CA



NW CA Deciduous Oak Woodlands Learning from 20+ Years of Management on NPS Lands

Eamon Engber
Fire Ecologist

- Redwood NP
- Whiskeytown NRA
- Oregon Caves NM
- Six Rivers NF



Trends in Fire Size & Severity in the Klamath Mts and Implications for Management

Carl N. Skinner
Research Geographer
USDA Forest Service
Pacific Southwest Research Station
Redding, CA



2017 Klamath Fire Ecology Symposium May 10-12, 2017

Plenary Talks:

1997 USFS R5 Deputy Forester **Barnie Gyant**, CAL FIRE Director **Ken Pimlott**

Keynote Talks:

PNW Researcher **Paul Hessburg**, PSW (Retired) **Carl Skinner**

org

Council Community Liaison Program

- History and Inception
- Purpose and Need
- Nuts and Bolts
- Successes
- Improvements
- Success Factors



"They listened and did what they said they would do," a formula for success in any relationship; building trust with communication and follow-up action.
-- Cohesive Strategy Success Story on the SR FSC CLP

Photo: Scott Hardin

The Social Impacts of Fire Ex



Paper is forthcoming in *Humboldt Journal of Social Relations*, 36, 2014

Ronald Reed, Karuk Tribe Department of Natural Resources
Dr. Kari Norgaard, University of Oregon



Fire science and management: Bridging the gap in northern California

Lenya Quinn-Davidson
UC Cooperative Extension/Northern California Prescribed Fire Council

- Will Harling
- Edit Profile
- Your Posts

FAVORITES

- News Feed
- Messages
- Events 5
- Sale Groups

PAGES

- Western Klamath R... 1
- Mid Klamath Wate... 20+
- Pages Feed 20+
- Like Pages 20+
- Create Ad
- Create Page

APPS

- Live Video
- Games 9
- On This Day
- SCRABBLE
- Photos
- Games Feed 20+

FRIENDS

- Close Friends 9
- Family
- Orleans, California ...
- Mid Klamath Wate...
- Humboldt State Un...
- Etna Union High S...
- Humboldt State Un...



Salmon River & Orleans Complex...
Public Group

Discussion Members Events Photos F

Write Post Add Photo / Video Create Poll

Write something...

RECENT ACTIVITY

Max Creasy
16 hrs

Women in Fire Training opportunity



Will

LEARNING TO BURNING TOGETHER
A COMMUNITY COME TOGETHER TO BRING ANCIENT FIRE BACK TO THE LAND TODAY



Catching Fire

Prescribed Burning in Northern California

Produced by Will Harling and Jenny Staats ~ Narration by Peter Coyote ~ Music by Rex Richardson

This documentary tells a compelling story of how a small but committed group of local, tribal, state and federal land managers are bringing back the use of prescribed fire as a tool to protect communities and ecosystems across Northern California. It examines the use of fire by the Karuk Tribe, and the connection between the rise of megafires across the West and the last century of fire suppression. Drawing on interviews with fire scientists, tribal and federal land managers, and fire savvy residents from across the North State, this film provides insight on how our relationship to fire can be restored through strategic use of fire as a powerful management tool.

TRIBAL FIRE MANAGEMENT



USING FIRE TO MANAGE FIRE



BURNING TOGETHER



EFFECTS OF FIRE SUPPRESSION

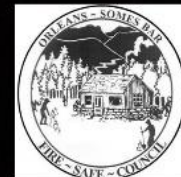


IMPEDIMENTS:



KLAMATH
SALMON
MEDIA
COLLABORATIVE

GOOGLE:
Catching Fire
Prescribed
Burning



Diversified Funding to Maintain Momentum and Increase Scale

- US Forest Service
 - State and Private Forestry – direct and via US FLN
 - CA Fire Safe Council
 - Wyden Amendment – in 2018 budget?
 - Region funds
- US Fire Learning Network
 - FAC, FLN, TREX, IPBN,
- FWS Partners Program – Region 8 taking fire hiatus
- NPS Tribal Heritage Preservation Program
- BIA Reserve Treaty Rights and Lands (RTRL)
- NFWF Strategic Partnership Investments
- CALFIRE CCI Forest Health (\$200M in 2018)
- NRCS EQIP
- CA Dept Fish and Wildlife – Big Game Enhancement
- PG&E Communities Working Better Together
- Endowment for Eco-Cultural Revitalization





Klamath TREX Accomplishments

- 2,000 acres burned in 100+ properties in the WUI of seven communities
- 300+ participants from local, tribal, state, national and federal organizations
- No escaped fires

Questions/Discussion

Klamath Fire Peeps At This Conference

- Frank K Lake – *PSW Researcher and Karuk Descendent*
- Zack Taylor – *Six Rivers NF Fuels Planner – Orleans/Ukonom RD*
- Aja Conrad - *Environmental Workforce Development & Internships Division Coordinator*
- Andrew Spain - *Fire Management Specialist, Shasta Lake RD, Shasta Trinity NF*

2016 Gap Fire – Horse Creek