

Fire Origin Story

Prometheus—the God of Fire



A Miwok Legend of how Tol-le-loo stole fire and brought it to the Sierra Nevada

https://www.firstpeople.us/FP-Html-Legends/How_Tol-le-loo_Stole_Fire-Miwok.html

The Mountain People lived in darkness in the Sierra Nevada until Tol-le-loo (the white-tailed mouse) was sent by Coyote Man (O-la-choo) to steal fire from the Valley People . . .

Dig deep enough and you find that most cultures have a fire origin story of how they received fire and its importance to their culture.

Today our story is about living with fire and re-learning its incredible value to the landscapes where we live.

Fire Policy and our declaration of war on a key natural process—what could go wrong?

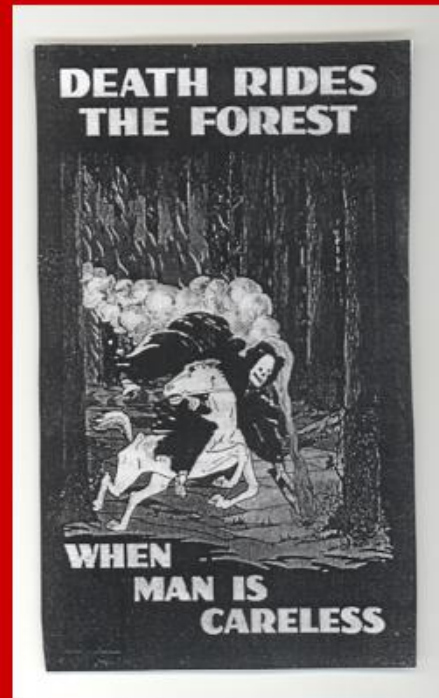
Welcome to Groveland

Yet the real catastrophes are not the fires themselves but those land uses, in concert with fire suppression policies that have resulted in dramatic alterations to ecosystem structure and composition.

Restoration includes much more than simple structural modifications achieved through mechanical means.

Restoration must allow for dominant ecosystem processes, such as natural fire regimes achieved through natural and/or prescribed fires at the appropriate temporal and spatial scales.

*J. Boone Kauffman, Dept. of Fisheries and wildlife, OSU Corvallis. (Cons. Bio, Vol. 18, No.4)



Diane Smith USDA, Forest Service-RMRS FS 1085 May 2017

Sustainability and Wildland Fire-The Origins of Forest Service Wildland Fire Research

In early 1900s the Forest Service had a new metaphor for communicating its drive to eliminate fire: it was war. Much like those in charge of any battlefield, the Forest Service needed to turn its management and research attention to those fighting the battles on the ground . . .

The Heroes of the “light burning” movement:

Joseph Kitts 1919 touted Native American burning and forest resilience

B.A. McAllaster also 1919

Harold Biswell UC Berkeley School of Forestry 1950s-1970’s

V.

Forest Service anti-fire warriors **S.B. Show** and his brother-in-law **E.I. Kotok** conducted “research” at Snake Lake on the Plumas NF northwest of Quincy, CA in 1919. They were so desperate to show light burning was a damaging practice and “the stakes were so high that the two men actually sabotaged their own research by placing pine limbs alongside a few large fire-scared pines to ensure they would burn and demonstrate the danger of the technique to marketable timber. He later boasted that his research achieved the gratifying result that the trees burned down and became damage statistics”

Prescribed Burns in California: A Historical Case Study of the Integration of Scientific Research and Policy

by Rebecca Miller

Abstract: Over the past century, scientific understanding of prescribed burns in California's forests transitioned from being interpreted as ecologically harmful to highly beneficial. The state's prescribed burn policies mirrored this evolution. **Harold Biswell**, a University of California at Berkeley ecologist, studied prescribed burns and **became a major advocate for their use during the 1950s and 1960s**. Drawing primarily on archival materials from Biswell and the state government, this historical case study presents an example of how a scientist successfully contributed to integrating research into policy and practice through consistent and targeted science communication to gain allies among environmental organizations, local stakeholders, and governments. **Though at first isolated by his academic peers for proposing that fire could provide environmental benefits in forests, Biswell continued conducting and sharing his research and findings with academic and non-academic audiences.** Over several decades, Biswell engaged in conversations which ultimately advanced policy changes at the state level to expand the use of prescribed burns. Despite lacking a formal role in government, Biswell used his academic platform to promote the policy implications of his research. Current and future researchers can draw on these lessons to advocate effectively for other science-informed policies.

Pyrosilviculture—Building a Partnership and Practice for Advancing Fire Management and Forestry in California



Caples Ecological Restoration Project 8,800 ac Rx Fire, meadow restoration

Spring 2019



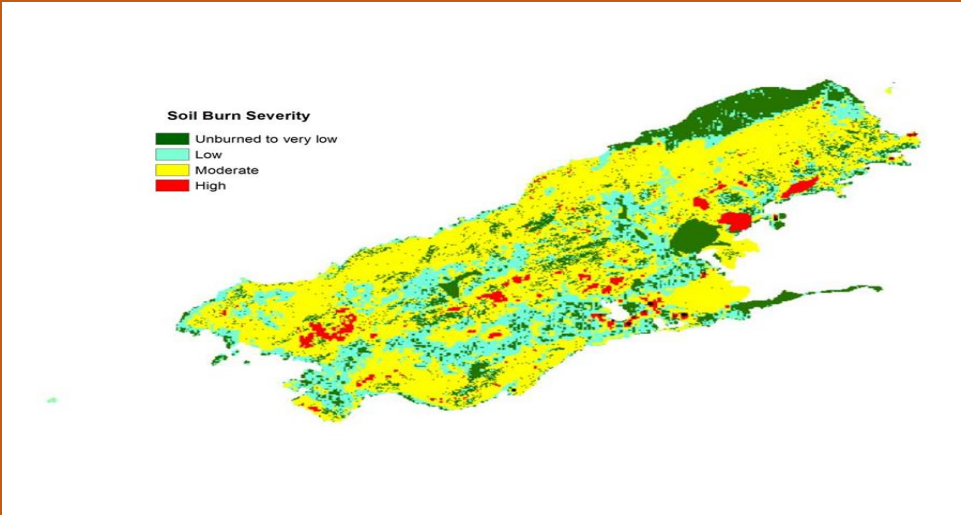
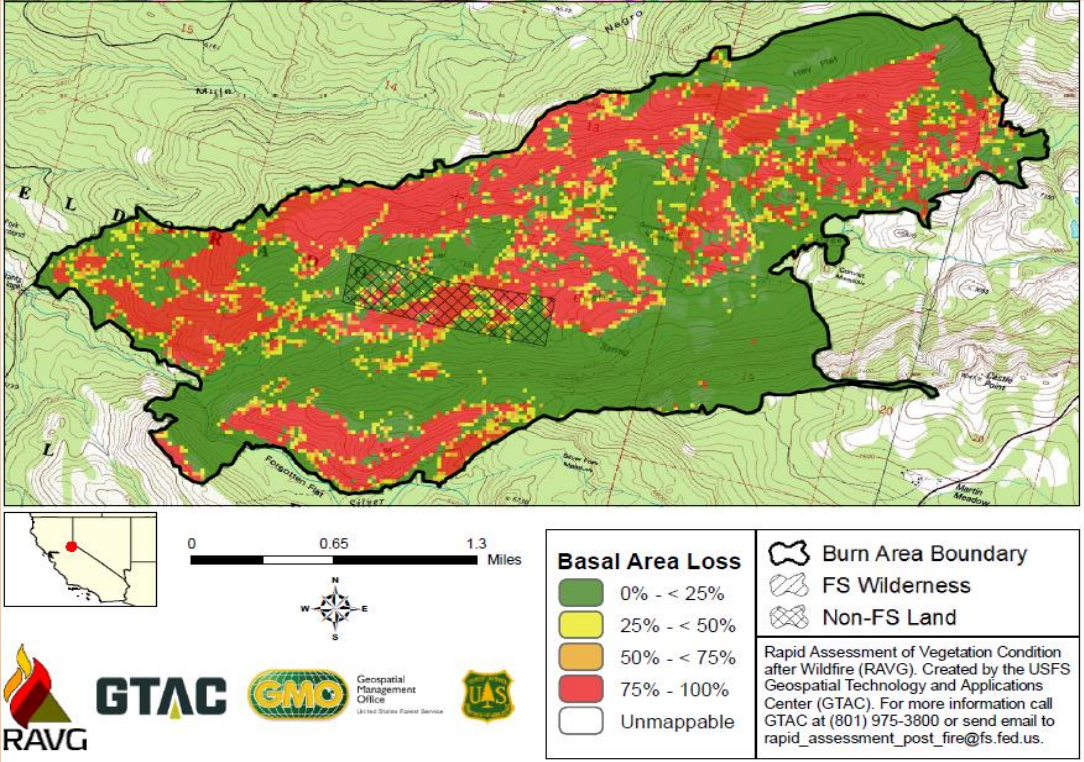
Early October 2019







If we are going to burn longer duration, larger landscapes (like we say we need to do) we will need a management system that supports burning in remote areas, on steep ground and operating outside the predictive capacity of our meteorology resources.



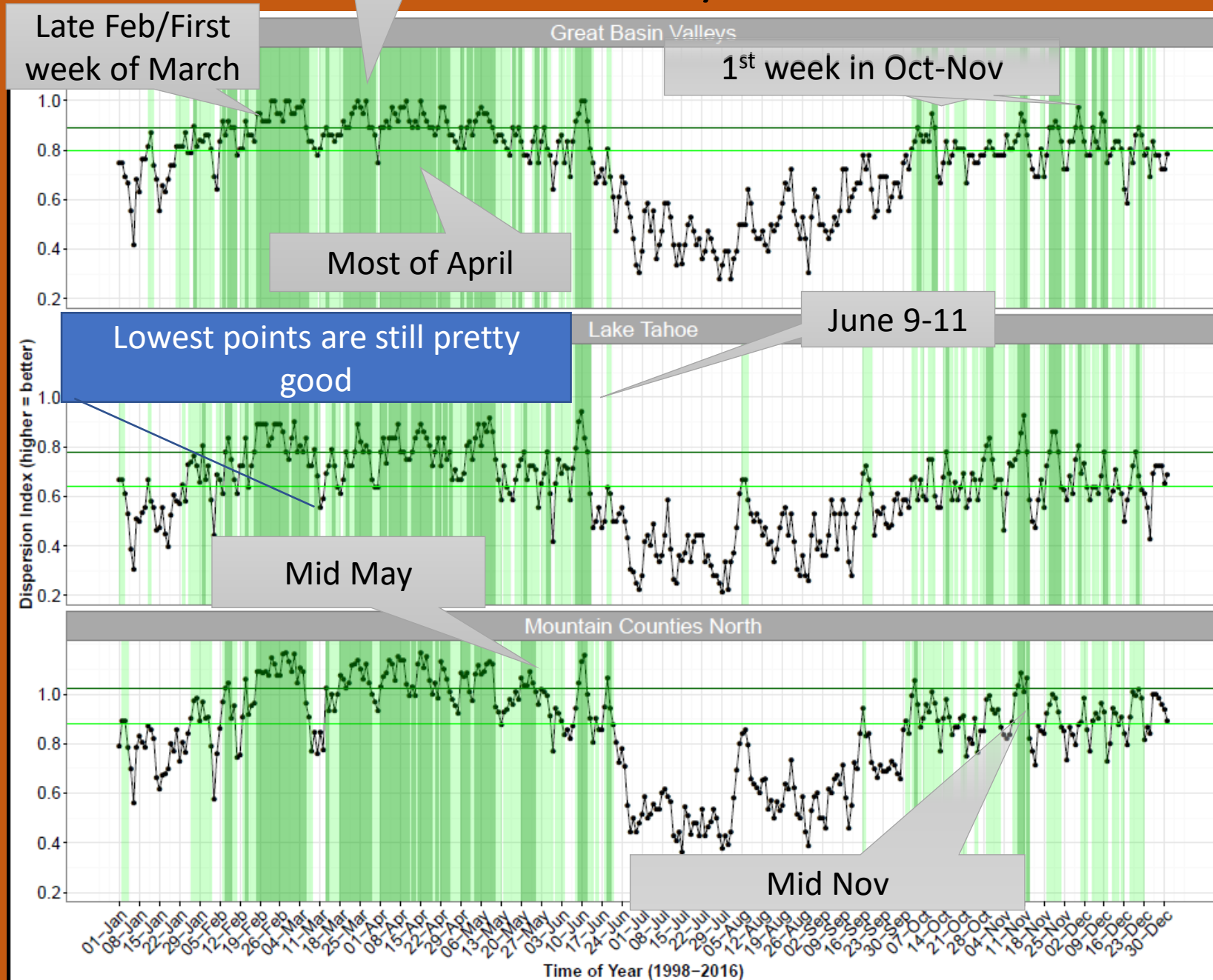
The Fire MOU Partnership



FIRE MOU Partners have a Steering Committee and 3 primary work groups

- **Capacity Work Group**---increasing training and staff capacity to do more fire work; cross jurisdictional work that gets to larger acreage resilience.
- **Policy Work Group**---defining the barriers to increased fire use; remove or limit impact of barriers (and keep support of stakeholders)
 - air quality issues such as limits on burn duration
 - burn day availability and staff/logistical capacity to use those days
 - public understanding of the need for fire in the ecosystem
 - risks of burning and not burning
 - public health and emissions trade-offs
 - Overcoming a century plus of fire exclusion
- **Communication and Outreach Work Group**—media framing of fire and fire effects, using language that builds understanding and support v. fear and insecurity.

Tahoe/Central Sierra Rx “best bets”



LEGEND

More likely than not

Pretty good bet

Credit:
Lee Tarnay,
USFS
Dar Mims,
CARB

Burn Day Utilization Tracking

Factors other than weather and fuel moistures

- Staffing and hiring policies
- Budgets supporting an ecologically significant level of burning
- Training schedules in Winter and Spring (during burn seasons)
- Use-or-lose employee annual leave requirements
- Flexible, mobile fire crews to take advantage of opportunities
- Larger strategic burns
- Fatigue - fire fighter health concerns (fighting wildfire all summer)
- Separating prescribed fire crews from wildland fire fighters
- Meeting targets v. recognizing the fire regime sets the targets
- Collaborative burning with multiple partners

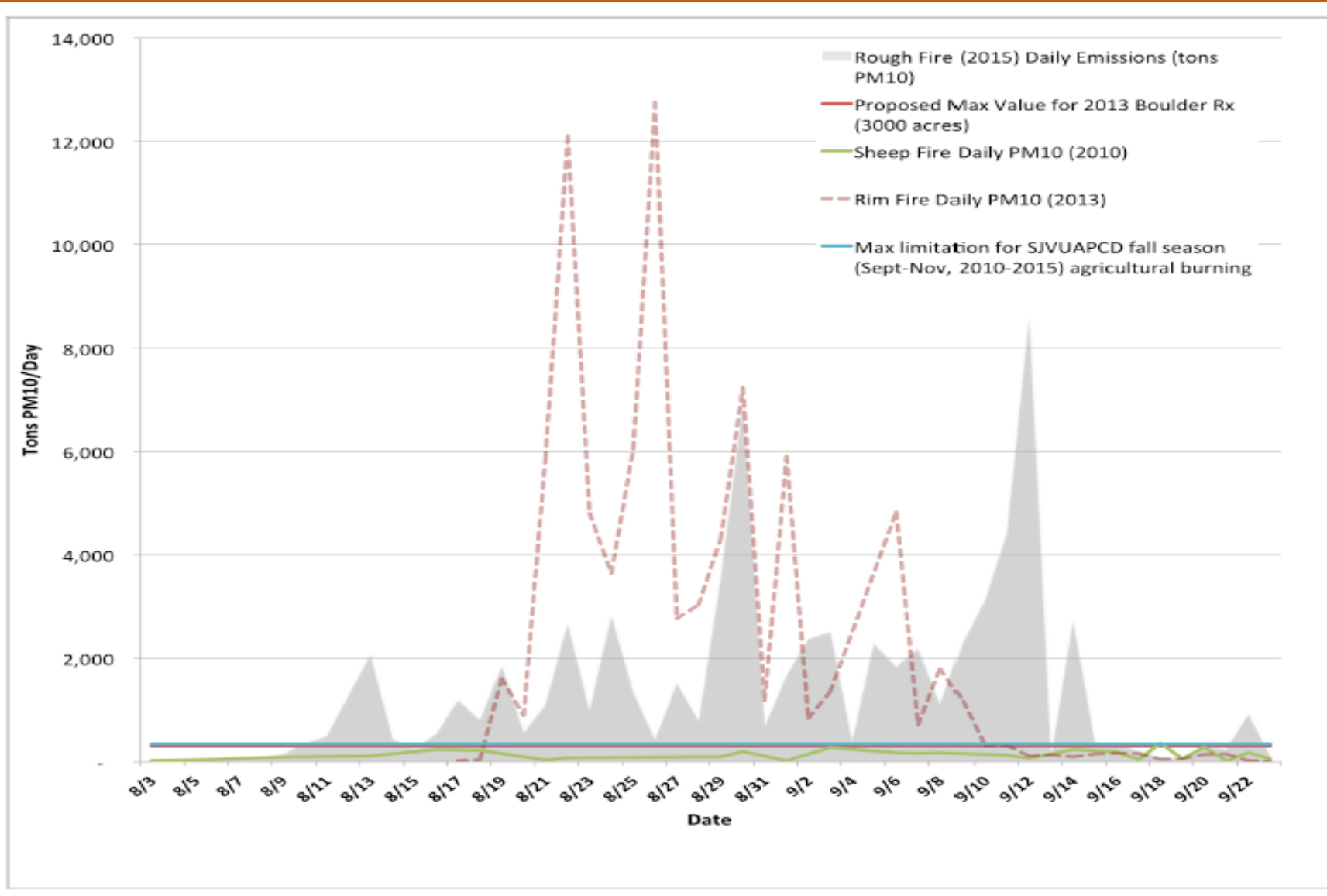
In the likely available (80%) burn windows of April 6th and 7th 2017, the area of El Dorado County at 2500 feet elevation was experiencing a major spring storm with 2” plus rainfall and at higher elevations in the Sierra Nevada snow levels dropped to 4000’ elevation. Several April 2017 weather events placed the available burn window in the **not utilized** category and outside of the fire manager’s control for broadcast burning for much, though not all, of California.

Friday, April 7, 2017
West Slope: Burn Day
Lake Tahoe: Burn Day
Thursday, April 6, 2017
West Slope: Burn Day
Lake Tahoe: Burn Day
Burn day information is also available by telephone and updated daily. Western El Dorado County (530) 621-5897 or (866) 621-5897 Lake Tahoe (888) 332-2876

Schweizer and Cisneros 2017 -- Change conventional thinking on smoke management to prioritize long term air quality and public health.

decisions. It is likely that long term air quality is inextricably linked to ecosystem health in the Sierra Nevada. We contend that landscape use of ecological fire is essential to forest and human health. Radical change is needed where beneficial wild-land fire smoke is treated as natural background and exempted from much of the regulation applied to anthropogenic sources. Tolerance of the measured release of routine smoke emissions from beneficial fire is needed. Using present air quality standards in the more remote areas will provide an opportunity to increase burning in many forests while protecting public health.

Rim Fire MEGA Emissions



PSW-GTR-183 The Kings River Administrative Study 2002

https://www.fs.fed.us/psw/publications/documents/psw_gtr183/psw_gtr183_005_mccand.pdf



Can't do first
entry burns?

Patterson Mountain—Dinkey
Creek Watershed in January
1998

Same location January 1999 – Second Entry Burn Patterson Mountain



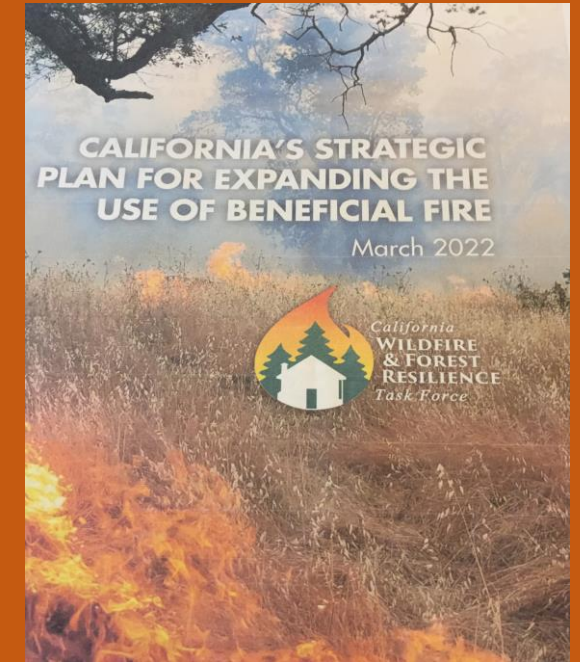
Costs per acre over 4 years?

Our burns have cost about \$70 per acre. The few burns that escaped cost twice that amount. One project in January, involving a helicopter equipped with a chemical ignition device (CID) and five personnel, underburned 1,400 acres in 2 days and cost \$6.50 per acre. Ignition occurred 2 days before a predicted storm, which arrived on time. By burning during the moist seasons, little to no mop up is needed, resulting in a significant cost savings.

The California Strategic Plan for Expanding Beneficial Fire

California Wildfire and Forest Resilience Task Force—March 2022

- **Collaboratively Developed with State, Federal and multiple NGO Partners**
- **Land Managers commit to 400,000 ac./yr. 2025**
- **State investment \$1.5 billion in 2021 including Rx fire and Cultural burning**
- **9 Key Goals: Develop a robust beneficial workforce; Empower the private sector; Expand cultural burning and Tribal engagement; Improve regulatory efficiency; Protect public health; Build public support; Facilitate larger and strategically located burns; Use fire managed for resource benefit where and when appropriate; Improve data collection and utilization.**





**When it comes to wildfires,
California is “not on the
side of nature”**

“We’re fighting nature”

Governor Jerry Brown

McClatchy New Service 8/7/18



Ernest Coe Visitor Center –Everglades NP
2017

Thank You!

CALIFORNIA FOREST STEWARDSHIP PROGRAM

Forestland Steward

SPRING 2013

Fire making a comeback for forest management

**ONLY YOU CAN
PRESCRIBED
BURNING
TODAY
PREVENT
FOREST FIRES**

Inside

- 2** CA Forests Need Fire
- 4** Nuts & Bolts of a Prescribed Burn
- 6** Cost Share Assistance
- 7** Fire in Oak Woodlands
- 8** Prescribed Fire on the State Forests

Smokey with drop and quarter, North, 2012, 2013, page design by Alex Connor, Tabasco Graphics

Only you can help Smokey burn more acres!

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