A Review of CalFire's 20 Million Acre Vegetation Treatment Program And What You Can Do Locally on the Wildland Interface to Reduce Wildfire Risk

Part 1: Vegetation Treatment Summary and Current Plan

Please see HANDOUT for outline of CalFire's budget, plans and the recommendations from wildfire scientists with a different view.

Part 2: Chaparral Restoration and Wildfire Risk Reduction



LOCATION: Santa Monica Mountains near Tuna Canyon Park. Chaparral, coastal sage scrub. Soil: Los Osos, clay/loam Quadrangular area. 12,000 sq ft steep (20% - brief 90% grade), south-east facing slope (150° SE). Three sides abut developed property with irrigated vegetation. One side abuts wildland with some large shrubs

CONDITION: Indiscriminate vegetation clearance by weed trimming for decades resulted in invasive overgrowth. Remaining natives: scattered clumps of laurel sumac, mostly around the perimeter, and some ashy leaf buckwheat.

Selective Brush Trimming to Benefit Native Plants

TREATMENT: 2019. Mid-April: Indiscriminate weed

trimming, excluding sumac and buckwheat. 2019, July: New growth: yucca, deerweed, lupine, encelia.

2020. July. Weed trimmed around natives. Native plant area doubled to about 15% of total area with many new species, mainly around the perimeter.

Early spring removal of invasives permits native plant growth, Stephen Davis, PhD



Effect of Clearance: Type Conversion



SUPPOSITION: Perimeter growth may be due to:

1. Proximity of irrigation on 3 sides.

2. Adjacent wildland seed bank and protective area under large shrubs on 1 side.

CONCLUSION: Removal of invasive plants in early spring permits growth of natives adjacent to a wildland. A protect ed native plant area adjacent to wildland may also preserve seed bank for the wild. As a result, habitat value is restored, wildfire risk is decreased as invasives are replaced with natives and annual costs of clearance are eliminated.

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> Sandra Glover naturalist

Vegetation Treatment Program And Current Plan

Whose friend is it?

Forestry/CalFire have proposed vast clearance of wildland to reduce fire threat to homes.

But will it?

Community wildfire risk should be defined as a home ignition problem, <u>not</u> a wildfire control problem – Jack Cohen, PhD Wildfire Scientist

Funding

Don't mistake activity for achievement – John Wooden			
California lacks a strategic wildfire plan – LAO			
<u>CalFire Budget 2020-21</u> \$2.5 billion (\$1.8 for wildland "treatment")	<u>Funding</u> General Fund, Cap & Trade		
<u>Home hardening</u> : 0, Unknown	Homeowners, AB 38 future pilot grants		

The VTP Program (Iteration 5 since 2005) and Current Plan

VTP - for control of:	Non-wind-driven fires, which generally cause <u>minimal</u> loss of structures and lives Part of \$7 billion bond funding – withdrawn from ballot, for now		
Current Plan:	<u>Same</u> wildland clearance program with General Fund and Cap & Trade monies		
<u>Plan for clearance</u> : 20+ million acres of wildland At the rate of 250,000 acres/year of state and private land Plus another 250,000 acres/year – Governor's demand			
Treatment:			
Prescribed burns	Mastication	Logging	
Chemical herbicides	Weed trimming	Soil disturbance	
CEQA change:			
Program EIR: One size fits all. No more individual projects. North, south, east, west, all will be subject to the same checklist of predetermined and ineffective mitigation measures, amounting to a rubberstamp.			

Winners and Losers!

Whose policy? California Board of Forestry/CalFire

<u>Who benefits</u>? Timber, agriculture, pesticide companies, CalFire

Who pays? Taxpayers

<u>Who suffers</u>? Those at risk of wind-driven wildfires, wildlife habitat, chaparral. Climate change

<u>What's the problem</u>? Chaparral naturally burns every 30 – 150+ years. Human-caused fires have increased the frequency to < 10 years in some areas. What replaces chaparral? **Invasive grasses and mustard**, which are **fire** <u>accelerants</u>. Clearing chaparral by <u>any</u> "treatment" permits growth of invasives, resulting in increased fire risk. Native plants are more resistant to and protective against fire.

What to do!

Harden Homes

Eliminate Ignition Points

Underground wires No mechanical, sparking tools on red flag days DMV eliminates sparking vehicles Camping and hiking restrictions on Red Flag Days Roadside barriers

<u>Recommendations</u>: Scientists recommend **policy**. Botanists certified by California Native Plant Society **manage**. Trained **native plant gardeners execute**.

Remove invasives, <u>not</u> natives. Restore native habitat

<u>Save your house and community</u>: Harden the house. Space, tidy up and irrigate plants. Remove invasives. How to do this:

"From the House Outward," Rick Halsey, <u>https://www.californiachaparral.org/</u> <u>https://www.californiachaparral.org/_static/b69921e9868e8d87be914a31af4c4b90/from-the-house-outward-v4(3).pdf?dl=1</u> <u>http://www.californiachaparral.org/bprotectingyourhome.html_https://www.reddit.com/r/chaparral/</u>

Demand that Governor Newsom and legislators change the destructive Current Plan and proposed VTP to a protective and restorative program based on <u>science</u>, <u>not</u> special interests!

The Science

Who opposes VTP in its current form?

Center for Biological Diversity California Native Plant Society Chaparral Institute Endangered Habitats League The Chaparral Lands Conservancy

Sierra Club Los Angeles Audubon Society Sequoia Forest Keeper Santa Barbara Urban Creeks Los Padres Forest Watch Leonardo DiCaprio Foundation Malibu Monarch Project Las Virgenes Homeowners Federation John Muir Project + others

Wildfire scientists and advocates:

Stephen Davis, PhDstephen.davis@pepperdine.eduCJ Fotheringham, PhDca.fire.ecology@gmail.comRick Halsey, MArwh@californiachaparral.orgAnna Jacobsen, PhDajacobsen@csub.eduGeorgia Goldfarb, MDgeorgia.goldfarb@healthequality.net

Where prescribed burns may be appropriate:

Prescribed burns are an important management strategy in mixed conifer forests in the sierras and in northern California where there are lightening-ignited fires where fire has been suppressed and where heavy fuel loads exist.

Links

After the Woolsey Fire

http://www.californiachaparral.com/images/Gov_Newsom_Wildfires_2019.pdf Problem, explained Jan 2019

http://lvhf.org/2019/08/fire-fact-forum-success/

https://www.latimes.com/opinion/story/2019-10-14/newsom-clear-cutting-rim-fire-california

https://wildfiretoday.com/tag/jack-cohen/ 9.20.20

Before the Woolsey Fire, a sampling

https://www.nytimes.com/2007/11/03/opinion/03fotheringham.html By C. J. Fotheringham, Jon E. Keeley, Philip W. Rundel

https://www.publish.csiro.au/wf/WF14024 International Journal of Wildland Fire, Syphard and Keeley 2014

https://www.latimes.com/opinion/editorials/la-xpm-2013-mar-11-la-ed-wildfire-report-cal-fire-20130311-story.html

Jon Keeley, PhD Wayne Spencer, PhD Alexandra Syphard, PhD Marti Witter, PhD Dan Silver, MD, EHL

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Drs. Keeley, Davis, Riley

Jack Cohen, PhD, David Strohmaier

Blazed and Confused Nov 3 2007

Anna Jacobsen, PhD, CSUB, explains the relationship between too frequent burns and chaparral destruction. However, any habitat destruction will have a similar effect:

Many studies have described the negative impact of too frequent burning on chaparral within the Santa Monica Mountains. Too frequent fire can exacerbate changes that are already happening due to drought and short fire return intervals, which deplete seedbanks, are a major impediment to recovery of sites. These factors and their association with vegetation type conversion were recently reviewed in a study using examples and photos from the Santa Monica Mountains (Jacobsen and Pratt 2018).

We have known since 2004 that fires that were less than 10 years apart caused local extinction of some species (such as the bigpod Ceanothus that Dr. Davis discussed in his presentation) and there were large losses with fires less than 12 years apart. When the shrubs are lost, invasive annuals increase in their abundance (Jacobsen et al. 2004).

Over many years, studies on this have increased and the impacts of too frequency fire have been quantified. The losses to the chaparral have been extensive (Syphard et al. 2019) and linked to too much fire on the landscape. *"The primary mechanism behind shrubland decline and replacement was short intervals between fires (<=10 years), and type conversion was most likely to occur in arid parts of the landscape with low topographic heterogeneity and close proximity to trails and roads" (Syphard et al. 2019).*

The latest Forest Service General Technical Report on management of chaparral in the face of recent and future drought is a policy of minimal disturbance and vegetative removal or fuels reduction, because the costs of such activities are degraded chaparral and increased future fire risk (Fettig et a. 2019).

Fettig CJ, Wuenschel A, Balachowski J, Butz RJ, **Jacobsen AL**, North MP, Ostoja SM, Pratt RB, Standiford RB. **2019**. Managing effects of drought in California. (Pp. 71-93 in Effects of drought on forests and rangelands in the United States. Vose, James M.; Peterson, David L.; Luce, Charles H.; Patel-Weynand, Toral., eds. Gen. Tech. Rep. WO-98. Washington, DC: U.S. Department of Agriculture Forest Service, Washington Office. 227 pages).

https://www.csub.edu/~ajacobsen/Fettig%20et%20al%202019%20Managing%20drought%20in%20California.pdf

Jacobsen, A.L., Davis, S.D. and Fabritius, S.L., 2004. Fire frequency impacts non-sprouting chaparral shrubs in the Santa Monica Mountains of southern California. *Ecology, conservation and management of mediterranean climate ecosystems. Millpress, Rotterdam, Netherlands*. <u>http://www.csub.edu/~ajacobsen/Jacobsen%20et%20al%202004%20Fire%20return%20interval%20impacts.pdf</u>

Jacobsen, A.L. and Pratt, R.B., 2018. Extensive drought-associated plant mortality as an agent of type-conversion in chaparral shrublands. *New Phytologist*, *219*(2), pp.498-504.

http://www.csub.edu/~ajacobsen/Jacobsen%20&%20Pratt%202018%20NP%20Tansley%20Insight%20Chaparral%20mortality.pdf

Syphard, A.D., Brennan, T.J. and Keeley, J.E., 2019. Drivers of chaparral type conversion to herbaceous vegetation in coastal Southern California. *Diversity and Distributions*, *25*(1), pp.90-101. <u>https://onlinelibrary.wiley.com/doi/pdf/10.1111/ddi.12827</u>

Rick Halsey has clearly described the important issues in several of his papers. Here is a nicely summarized description of some of the issues.

Halsey, R.W. and Syphard, A.D., 2015. High-severity fire in chaparral: Cognitive dissonance in the shrublands. In *The Ecological Importance of Mixed-Severity Fires* (pp. 177-209). Elsevier.

"Prescribed burning...has been shown to seriously compromise chaparral plant communities... One of the problems with prescribed burning in chaparral is that there is a narrow window when such burns can occur: in the cool season (late spring). Plants have too much moisture in their tissues in the winter and early spring months to carry a fire. In the summer and fall, the risk of wildfire is too high because of low moisture levels and weather conditions. As a consequence, prescribed burns are conducted when the chaparral ecosystem is most vulnerable. The plants are growing, the soil is still moist, many animal species are breeding, and some birds are occupying the chaparral during their annual migrations. Thus significant ecological damage can occur as a result of a prescribed burn (Knapp et al., 2009).

"The exact mechanisms are not clearly understood, but cool-season burns likely cause significant damage to plant growth tissues and destroy seeds in the soil as soil moisture turns into steam. A prescribed burn conducted in the 1990s in Pinnacles National Park, California, led to immediate type conversion of chaparral to nonnative grassland (Keeley, 2006). An escaped prescribed burn in 2013 consumed more than 1090 ha of fragile desert habitat in San Felipe Valley, California, much of which was chaparral that was recovering from a fire 11 years before. The fire seriously compromised one of the last old-growth desert chaparral stands in the region (CCl, 2013)(Figure 7.9)."

https://lpfw.org/wp-content/uploads/2018/01/2015_Halsey-and-Syphard_High-Severity-Fire-in-Chaparral.pdf