

Thepkaisone, Cesselea

From: Morrison, David
Sent: Wednesday, March 06, 2019 8:54 AM
To: Fuller, Lashun; Bledsoe, Teresa; Thepkaisone, Cesselea
Cc: Bordona, Brian; Anderson, Laura; Gallina, Charlene
Subject: FW: City of Calistoga Comments RE: Napa County Watershed Protection Ordinance
Attachments: Napa County Watershed Protection Ordinance 2nd 030619.pdf

From: Dylan Feik <dfeik@ci.calistoga.ca.us>
Sent: Wednesday, March 06, 2019 8:03 AM
To: Morrison, David <David.Morrison@countyofnapa.org>
Cc: Lynn Goldberg <lgoldberg@ci.calistoga.ca.us>; Tran, Minh <Minh.Tran@countyofnapa.org>; Dillon, Diane <Diane.DILLON@countyofnapa.org>; Chris Canning <ccanning@ci.calistoga.ca.us>
Subject: RE: City of Calistoga Comments RE: Napa County Watershed Protection Ordinance

Good morning David,

Again, please accept this letter from the City. I am aware that despite the City of Calistoga's request to increase the setback around Kimball Reservoir from 200' to 500', it remains staff recommendation to use a 200' setback.

Section 18.108.027 of your staff report addendum reads –

“Sensitive domestic water supply drainages Commissioner Gallagher requested an update regarding the response of the cities, town, and private water company to the County's request for recommendations on a municipal reservoir setback. To date, staff has heard from most of the jurisdictions. The City of American Canyon does not have a 7 reservoir and deferred to the other municipalities. The City of Napa indicated that it will be able to make an informed recommendation once it has monitoring data from the City-County joint watershed study. The Cities of St. Helena and Calistoga have requested a 500-foot setback. The Town of Yountville and Howell Mountain Mutual Water Company indicated that a 200-foot setback would be sufficient. At this time, absent further feedback from Napa, **staff continues to recommend a 200-foot setback from municipal reservoirs.**”

There is considerable documentation as part of your public record which provides reasonable decision-makers to lean one way or the other on this particular matter. The City of Calistoga respectfully requests that Napa County take a “more conservative, cautious” approach which protects our watershed resources. Therefore, a 500' setback as requested by the City of Calistoga AND St. Helena remains our request.

Thank you,
Dylan

Dylan Feik
City Manager
1232 Washington Street
Calistoga, CA 94515
Office: 707-942-2806
Cell: 801-821-1734

01-0-8 39
From: Dylan Feik

Sent: Wednesday, February 20, 2019 7:53 AM

To: 'Morrison, David' <David.Morrison@countyofnapa.org>

Cc: Lynn Goldberg <lgoldberg@ci.calistoga.ca.us>; Tran, Minh <Minh.Tran@countyofnapa.org>; Dillon, Diane <Diane.DILLON@countyofnapa.org>

Subject: City of Calistoga Comments RE: Napa County Watershed Protection Ordinance

Good morning David,

Attached, please see a letter of support and two different requests for revisions to the Watershed Protection Ordinance. These were discussed and provided by the City Council during its meeting on 2/19.

Thanks for all your hard work on this ordinance.

Dylan

Dylan Feik
City Manager
1232 Washington Street
Calistoga, CA 94515
Office: 707-942-2806
Cell: 801-821-1734

PC 3-6-19
7A

Thepkaisone, Cesselea

From: Morrison, David
Sent: Wednesday, March 06, 2019 8:55 AM
To: Fuller, Lashun; Bledsoe, Teresa; Thepkaisone, Cesselea
Cc: Anderson, Laura; Bordona, Brian; Gallina, Charlene
Subject: FW: Opposition to Tree Ordinance

From: don.gleason777@gmail.com <don.gleason777@gmail.com>
Sent: Wednesday, March 06, 2019 8:47 AM
To: Morrison, David <David.Morrison@countyofnapa.org>
Subject: Opposition to Tree Ordinance

Dear Director Morrison:

I write in opposition to the proposed ordinance currently before the Planning Commission. I will be brief. My concerns are twofold. First, Napa County's hillsides do not suffer from too few trees or too little groundcover, but quite the opposite. My property runs from the Silverado Trail into the eastern hills just south of Lommel Road. It is largely hilly, with slopes ranging from 30 to 100%. It is heavily treed. To the extent I am able, I spend much of my free time clearing brush and "understory" that is otherwise fuel for the next wildfire. I am at the south end of the canyon defined by Lommel Road (also home to the Calistoga Ranch) and Biter Creek. The canyon is highly susceptible to the "high wind warnings" we get every September and October. These winds were clocked over 80 mph during the 2017 Tubbs fire. I watched those flames go over the hill to Sonoma from my yard. I and my neighbors—including the Calistoga Ranch and Dutch Henry Camyon—are one careless cigarette, or one random spark, from a conflagration such as we experienced in 2017. I hate and live in fear of October.

This is very personalized, but the point is simple. Increasing brush and tree cover flies in the face of all expert forest management recommendations for fire control. It is suicidal. For more on this, see the attached recent article from yesterdays Napa Register.

My other problem is with the addition of setback requirements for "ephemeral streams". Enforcement of this provision will create situations where owners are denied the use of large areas of their properties with no compensation and no demonstrable public benefit. Enforcement will be subject to case-by-case interpretation, and therefore inconsistent and unfair. Expect plenty of lawsuits.

Ladies and Gentlemen, the voters made a decision on this subject one year ago. It is outrageous that a small group is trying to overturn that result in this manner.

Respectfully,

Don Gleason
Sent from my iPhone

Begin forwarded message:

From: Jeffrey Earl Warren <jeffearlwarren@gmail.com>
Date: March 6, 2019 at 1:52:26 PM GMT

To: Don Gleason <don.gleason777@gmail.com>

Subject: NAPA HAS TOO MANY TREES

Don,

Here it is in print form.

Cheerio,

J

Ask any forester; she will tell you Napa, like the rest of the west, has too many trees.

Tree density per acre varies from the Rockies, to, the Sierra to Napa Valley. Google "How many trees per acre a healthy forest should have?" You'll find that every area of the West has 5 to 10 times more trees per acre than there were when Lewis and Clark arrived.

According to forester Ralph Osterling, our western hills should have around 80 to 100 trees per acre. Currently, we have 500 to 800 trees per acre.

That's why this watershed fight is so wrong. Citizens defeated Measure C. To re-create "Measure C light" makes a mockery of democracy. It's unethical to favor partisan groups who lost at the ballot box.

Those advocating for increased "canopy cover" from 60 percent to 70 percent or even 90 percent don't realize how dangerous that concept is.

In an email, forester Ralph Osterling (Google him) wrote:

"1. The forest should be a mix of openings, brush and trees. Oak grassland forests types should have less than 50 percent crown cover which translates to per acre about 5 trees with 100' canopy and 62 trees with 30' canopy. Now, take those tree counts and cut them in half to meet 50 percent crown cover.

"2. Continuous tree and brush canopy equals continuous hot fuels and fires as we witnessed.

“3. The ordinance should require tree and fuel removal not the reverse.

“4. Eliminating trees and brush will increase ground water and springs will reemerge.”

What we need is a realization that in order to prevent another ecological disaster we need proper forest management—not additional canopy cover.

We don't need an ordinance which disincentivizes land owners from managing their over-dense forests.

We may need to eliminate 50 percent to 80 percent of the trees per acre. Not clear cut, mind you. Judicious thinning of excess growth is what is needed.

According to Lynn Webber's "History of the Napa Valley," in 1824, when Altimura, first laid eyes on the Napa Valley, he deemed it perfect for cattle. Why? No underbrush.

According to Henry T. Lewis in his seminal work, "Patterns of Indian Burning in California," Indians burned every year. They did it for myriad reasons; from crop management, to making it easier to find acorns.

When George Yount arrived in 1834, there was almost no "understory" to fuel fires.

The understory not only robs nutrients from normal healthy trees and blocks sunlight, this same understory provides a "step ladder" effect in the event of fire. Fire climbs up the little stuff and burns the bigger trees. This is why talk of 40 percent "shrub retention" is not only ludicrous it is dangerous—as we've recently experienced.

Cal Fire has recognized the importance of healthy forests to prevent catastrophic conflagrations.

According to the Mountain Area Safety Task force's website: *"The problem fire protection officials face is that not only does green vegetation burn, the forest is overstocked — 100 to 200 trees per acre, where a healthy forest has 40 to 60 trees per acre. Thinning green vegetation not only reduces the fire danger, it also frees up resources for the remaining plants and trees, making them more healthy, restoring their vigor and making them more resistant to fire as well as infestation by bark beetles and other parasites."*

A secondary benefit from healthy forests is more water for our rivers and streams.

An ancient Redwood can soak up from 1,000 to 2,000 gallons per day. A mature oak tree soaks up hundreds of gallons per day. Because our western hills have trees of all types and all ages, no one has been able to give me an accurate account of what an average acre of madrone, pine, oak, Douglas firs, Redwoods, et al soaks up daily. Yet, if we have 5 to 10 times too many trees per acre, that means 5 to 10 times as much water is being soaked up by trees and not going into our springs, creeks and rivers.

Lastly, let's stop all talk of "we have to do our part to fight climate change." Carbon sequestrations? Due to the Ag Preserve, we have done more to combat climate change, and enhance carbon sequestration than any county in the country.

When we came here in the 1950s, zoning was one home per acre. Now we have 45,000 acres of vines instead of 45,000 homes.

No development over 30 percent slope? The Register reported some 30 percent (170,000 acres) of the valley is over 30 percent. But by definition, that means 100 percent of the land in the hills

We all want a healthy watershed. Our current policies have produced that.

And the burden should not be just on rural folks. Rural lives matter.

Jeffrey Earl Warren

Broker Associate
Mobile 707.486.1025
License # 00981449

Email jeffearlwarren@gmail.com

Website www.jeffreyearlwarren.com

Golden Gate Sotheby's International Realty
780 Trancas St. Napa, Ca 94558

PC 3-6-19
7A

Thepkaisone, Cesselea

From: Morrison, David
Sent: Wednesday, March 06, 2019 9:03 AM
To: Fuller, Lashun; Bledsoe, Teresa; Thepkaisone, Cesselea
Cc: Bordona, Brian; Anderson, Laura; Gallina, Charlene
Subject: FW: Tree Canopy and Fuel Reduction

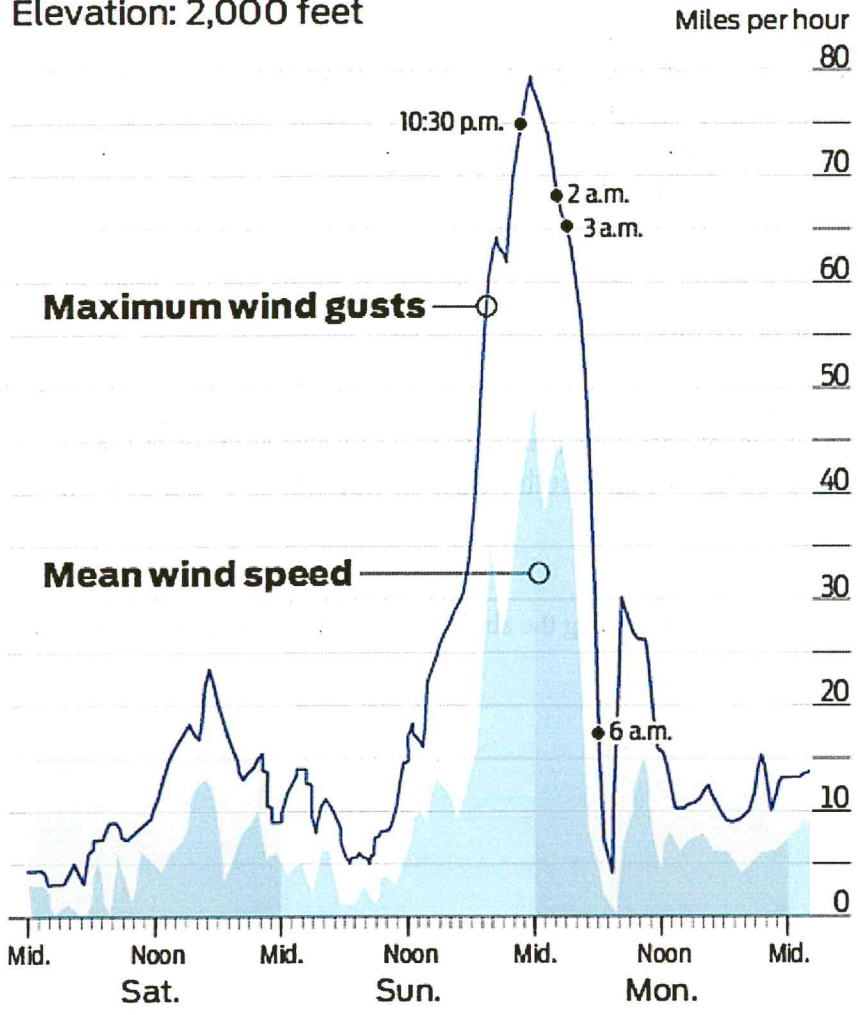
From: don.gleason777@gmail.com <don.gleason777@gmail.com>
Sent: Wednesday, March 06, 2019 9:01 AM
To: Morrison, David <David.Morrison@countyofnapa.org>; Dillon, Diane <Diane.DILLON@countyofnapa.org>
Cc: Jeff Warren <jeffearlwarren@gmail.com>; tcatlin@napanet.net; gbachich@sbcglobal.net; alkovines@gmail.com; Dan Higgins <dan.higgins@dentons.com>; miked@davisestates.com; jbareuther@gmail.com; mikemoone@aol.com; khangman@yahoo.com; Pam Silleman <pamsilleman@sbcglobal.net>
Subject: Tree Canopy and Fuel Reduction

Two charts from 2017 paint the picture. Too many dry trees, and restricting the ability to clear brush, is insane. And a recipe for disaster.

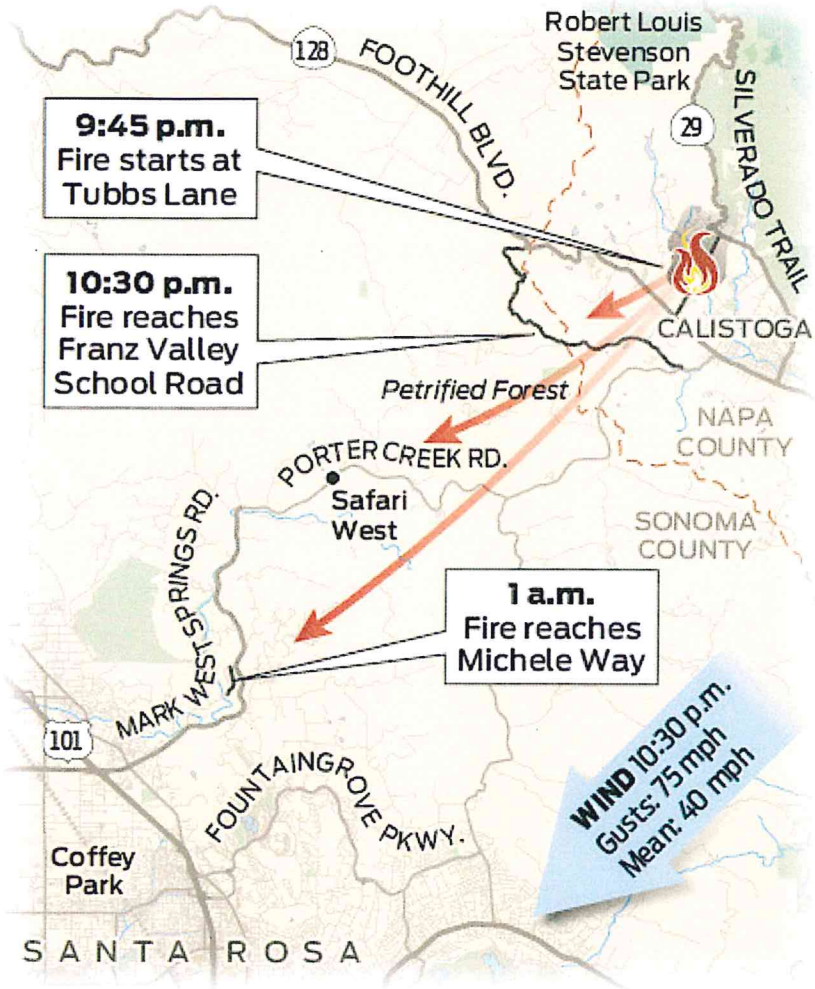
11-2-8 29

Wind conditions east of Santa Rosa

Elevation: 2,000 feet



Source: Western Regional Climate Center John Blanchard / The Chronicle



Don Gleason
 777 Lommel Rd
 Calistoga

Sent from my iPhone

Thepkaisone, Cesselea

Planning Commission Mtg.

From: Morrison, David
Sent: Wednesday, March 06, 2019 9:52 AM
To: Fuller, Lashun; Bledsoe, Teresa; Thepkaisone, Cesselea
Cc: Bordona, Brian; Anderson, Laura; Gallina, Charlene
Subject: FW: Water Quality and Tree Protection Ordinance: Dire Consequences

MAR 06 2019

Agenda Item #

7A

Sent with BlackBerry Work
(www.blackberry.com)

From: richard ehrenberger <zquat@aol.com>
Date: Wednesday, Mar 06, 2019, 9:48 AM
To: Morrison, David <David.Morrison@countyofnapa.org>
Subject: Water Quality and Tree Protection Ordinance: Dire Consequences

Please submit to the PC for this morning's meeting.

March 6th, 2019

Subject: Proposed Water Quality and Tree Protection Ordinance

Dear Mr. David Morrison, Director, Napa County Planning, Building and Environmental Services Department
Napa County Planning Commission (for the)
Napa County Board of Supervisors

Altho never a property owner, I have appreciated our wonderful County for nearly 1/2 Century and have supported the careful preservation of its natural and cultural attributes. Overall I have been impressed with how well our government has balanced this process. I am however aghast that the Board would propose such an overreaching and poorly founded ordinance as this before you now.

Did we not just defeat Measure C? Do you not believe that your public spoke?

In addition to absurdly and unnecessarily terms which would be confiscatory to many long time Napers its consequences threaten the safety of all residents and businesses and the ultimate environmental conditions we all appreciate.

It is this probability of inflicting greater wildfire risk and damage on us and on the environment that must be much more scrutinized before this ordinance is further advanced. I strongly suggest that happens though the CEQA Environmental Protection Process (which is required routinely for activity and proposals with relatively miniscule potential impact).

Thank you for your consideration,

Penny J. Kuykendall
707 252 3220

Thepkaisone, Cesselea

From: Morrison, David
Sent: Wednesday, March 06, 2019 10:05 AM
To: Fuller, Lashun; Bledsoe, Teresa; Thepkaisone, Cesselea
Cc: Bordona, Brian; Anderson, Laura; Gallina, Charlene
Subject: FW: Tree Canopy and Fuel Reduction

Planning Commission Mtg.

MAR 06 2019

Agenda Item # 7A

-----Original Message-----

From: Pam Silleman <pamsilleman@sbcglobal.net>

Sent: Wednesday, March 06, 2019 9:56 AM

To: don.gleason777@gmail.com

Cc: Morrison, David <David.Morrison@countyofnapa.org>; Dillon, Diane <Diane.DILLON@countyofnapa.org>; Jeff Warren <jeffearlwarren@gmail.com>; tcatlin@napanet.net; gbachich@sbcglobal.net; alkovines@gmail.com; Dan Higgins <dan.higgins@dentons.com>; miked@davisestates.com; jbareuther@gmail.com; mikemoone@aol.com; khangman@yahoo.com

Subject: Re: Tree Canopy and Fuel Reduction

Whatever happened to good old freaking common sense!

I think we lost that we let political correctness take over our lives! We have to fight back or California or maybe even America is lost as we know it

What exactly does fight back means? That is the question because we are surrounded by politicians in California that are so fat off the pork from this Congress that we sent there to cut spending that they pretend listen and then continue on their way.

The answer is not simple but awareness is the first step and please share with everybody you know influential folks politically connected folks anybody to do with fish and wildlife gaming department fourth Street apartment

Sheriffs, they're usually on the side of common sense! just talk to everybody because this affects all of us!

And thank you Don for always being the warrior for truth and freedom

Pam Silleman, Interior Designer

Pam Silleman Designs

PO Box 3199

Napa, CA

P: 707.326.4068

F: 707.257.8656

E: pamsilleman@sbcglobal.net

[https://urldefense.proofpoint.com/v2/url?u=http-](https://urldefense.proofpoint.com/v2/url?u=http-3A__www.pamsilleman.com&d=DwIFaQ&c=yU98RTqmkHZnyr3K3nExYR0AsYvCxdg1GRVYywwHmM0&r=GS60FARFBBJ5iQOf3IXrOF2QVS-RI6XpsBIO_792A4&m=LMhhGofCwD6rMnl-2Ji_iPLJgbVMv9j9FWaq9VO-8yI&s=A1W5SdQATcYcjtW9S4bKtI9tQj7-zyjX3EfKcv7pijw&e=)

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> On Mar 6, 2019, at 9:00 AM, don.gleason777@gmail.com wrote:

>

> Two charts from 2017 paint the picture. Too many dry trees, and restricting the ability to clear brush, is insane. And a recipe for disaster.

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>

> Don Gleason

> 777 Lommel Rd

> Calistoga

>

> Sent from my iPhone

Thepkaisone, Cesselea

From: Morrison, David
Sent: Wednesday, March 06, 2019 1:02 PM
To: Fuller, Lashun; Bledsoe, Teresa; Thepkaisone, Cesselea
Cc: Bordona, Brian; Anderson, Laura; Gallina, Charlene
Subject: FW: Housing & the Water/Tree Ordinance

From: Aida Morgan <amorgan@cbnapavalley.com>
Sent: Wednesday, March 06, 2019 1:01 PM
To: Wagenknecht, Brad <BRAD.WAGENKNECHT@countyofnapa.org>; joellegPC@gmail.com
Cc: Morrison, David <David.Morrison@countyofnapa.org>
Subject: Housing & the Water/Tree Ordinance

Commissioner Gallagher:

As a constituent and local real estate professional, I am writing to share my significant concerns about how the Water Quality & Tree Protection Ordinance will impact homeowners and housing in Napa County. Once again, we are caught in the crossfire in the battle over vineyard development – single family homes are not a threat, but would be included in this sweeping ordinance.

As written, this ordinance could strip value and property rights from homeowners, and render an untold number of parcels unbuildable for single-family homes, ADUs. The proposal exceeds common standards with very little justification or science to do so. Homeowners should continue to be allowed to build and improve single family homes in the unincorporated area by right. Please do not let homeowners become casualties when this ordinance comes before you. Local governments are working to eliminate barriers to housing and homeownership. Our housing shortage persists, and homeownership remains a cornerstone of our economy. Please support local homeowners and a strong housing industry for Napa County.

Thank you for considering my comments and for your leadership on this important issue.

Aida Morgan

MAR 06 2019

Agenda Item # 7A

**Napa County Planning Commission Meeting
Wednesday, March 6, 2019**

Comments by: Amber Manfree, PhD

Topic: Current policy conditions compared to proposed conditions

I am Amber Manfree, a Napa resident and Geographer, and I'm speaking today on behalf of Growers / Vintners for Responsible Agriculture.

Building on Elaine's talk, I'm going to walk us through policy outcomes for an area with mixed land cover. I'll be comparing existing 2:1 oak mitigation policy to the County's proposed 3:1 canopy mitigation and 40% shrub retention policy.

Let's say there's a stream, which requires a stream setback...here are some guide lines...

...and let's say there's an area with slopes over 30%, so that's effectively off limits for development. We'll keep these in a block to simplify the graphic.

Now I'm adding the existing 2:1 oak mitigation rule. For every acre of oaks removed, this rule requires that two acres of like kind and quality oaks be preserved, preferably on-site, so this area is also off-limits for development.

...but, if a landowner maximizes mitigation on undevelopable land...

... then the effective conservation covers a relatively small area. 2:1 is the most effective county-wide tree-preservation rule at this time, and you can see that it provides very little wildland protection overall when you look at the rest of the land cover types.

Here, if we overlay the additional area that would be set aside by a 3:1 canopy mitigation policy that allows mitigation on undevelopable land, we can see that it adds a little bit more protection to oaks, and it does protect other trees more. But it still allows quite a lot of deforestation when you think about this situation occurring again and again all over the county.

Here I've added 40% shrub retention. This rule doesn't actually conserve any shrublands in this case, and this is usually the outcome of the existing 40% rule in the watersheds. If this rule were applied to the whole county, it would have a tiny impact because of the loophole of allowing undevelopable areas to count toward mitigation. This highlights the importance of analyzing proposed policies to make sure they are effective.

So, the problem is that the two proposed rules, 3:1 canopy mitigation and 40% shrub retention, don't meaningfully increase conservation. It might look good on paper, but the proposed policy would leave too much wildland vulnerable.

As long as conservation credit is allowed on undevelopable land, increasing the area that policy sets aside won't amount to much. As we saw in Elaine's presentation, moving all mitigation to developable land would be an effective way to conserve resources. When you do that, you retain exactly what the policy says, and the outcome is much more straightforward.

The proposed 3:1 rule won't meaningfully slow the rate of deforestation and, when you look at how this scales up across the county, it leaves an enormous amount of trees unprotected. This is why I'm calling for a minimum of 85% canopy retention.

Stuart Smith, St. Helena.

1) Napa County has a moral obligation to notify property owners of proposed ordinances that affect them, along with ample time to respond.

A good example is the Board of Forestry notifies me of proposed regulations, and they send me a complete draft with time to review the documents.

2) President Obama said "Elections matter." But somehow that message didn't get to our Supervisors. Measure C proponents staked out the ground and defined the terms. Of the 37,500 voters, only 46.5% voted yes.

They lost by 7%.

3) This Ordinance is the largest land grab in Napa County's history and the most draconian. Given the Hobson's Choice between Measure C and the Ordinance – most of us would choose C.

4) The entire process is flawed: Measure C loses -- The Supervisors then create the Strategic Plan to placate the losers ---- There are meetings galore to express all the wants and desires of a small vocal minority. No science required nor provided. This leads to an emotionally based expectation of change. Napa County farmers now become the losers.

I'm now speaking directly to the supporters of Measure C and this ordinance.

5) The Land Trust is successful because it respects property rights and has crafted a strategy that finds a win - win for all. They create a quid pro quo. Property owners give something up, and then get something in return. 73,000 acres preserved is a great achievement.

6) You had a chance to craft a model example of how to move forward in a collaborative manner for the betterment of all. It would have taken creativity and hard work. It would have required respect of property rights and an understanding that both sides must have a win. Instead, you made enemies of the very people that you should be working with.

Do you really believe a you win – I lose strategy is how to successfully combat climate change?

I believe that leadership by example is the most effective. Tell me what you have donated to the cause that is equivalent in value to what you're trying to steal from us?

Let me remind you of what Martin Luther King, Jr. said:

“NOTHING IN ALL THE WORLD IS MORE DANGEROUS THAN SINCERE IGNORANCE AND CONSCIENTIOUS STUPIDITY.”

Napa County has gone so far off the rails that we have become the “Theater of the Absurd.”

Napa County is now fractured and broken and needs a complete reset. This ordinance is fatally flawed and needs to be rejected in total.

Stuart Smith
1517 Sylvaner Ave
St. Helena, Ca

MAR 06 2019

Agenda Item # 7A

Request the 30% slope map be displayed.

This ordinance is a huge fraud. You claim it is about the environment, but it's not about the environment at all. It's about robbing us of our property rights and our property value under the guise of protecting the environment, when in fact, the new restrictions are guaranteed to damage the environment. It is about seizing our property, not to protect the environment, but simply to prevent us from using and improving our property. As shown on your exhibit map of 30% slopes, this huge fraud seizes over half the land area of the county. Well over ¼ million acres are being confiscated under false pretenses, with no compensation to property owners. That is fraud.

Proponents fraudulently claim climate change as a compelling reason to protect every tree, but combatting climate change actually requires the opposite. The carbon footprint of this ordinance will be huge because it discourages fire hazard reduction. You know what happens to sequestered carbon during a fire. If the vegetation is dense enough, mature trees are destroyed, releasing their entire lifetime accumulation of carbon in a day.

Wildfires are increasing in frequency, size, and intensity. Those truly interested in sequestering carbon should be working to protect the forests from fire, rather than forbidding property owners from doing the necessary work. Major forest thinning, underbrush removal, chaparral removal, and creation of periodic clearings, firebreaks, and vineyards are the only way to protect our forests. Yet this ordinance is written specifically to prohibit the work that will be essential to maintaining the current sequestered carbon supply. That is fraud.

With no rights to improve our land, it will be worthless if not already improved, and if it is already improved, whatever plans and dreams we may have for further improving it will become bureaucratic and legal nightmares. Dozens of speakers informed you of these adverse impacts at the previous hearing, yet you have expressed no interest. Not one of you even asked staff if any of our objections might be legitimate, or how those adverse impacts might be quantified.

Most people are not tuned into this. They are busy having a life, a family, and a career. They don't read legal notices. They assume you would not steal their property while they are not looking, like some thief in the night. They assume that if you were going to seriously impact them that you would feel a moral obligation to notify them personally. Since you have not notified them, the vast silent majority have no idea what you are about to do to them. It is unconscionable for you to proceed under these circumstances. You must continue this hearing long enough for all impacted property owners to be notified. We will notify them, but we need time to print, address, and mail the notices, and time for property owners to arrange time off to come down here and speak up.

You have been fooled by a loud vocal minority into thinking this ordinance is what the majority of people in Napa County want. If you actually notify everyone of what you are planning to do, I'm quite sure you will quickly learn what they think about this giant fraudulent scheme to cheat them out of their property rights.

George Bachich
4221 Dry Creek Rd
Napa, CA

738-5276

CITY OF CALISTOGA

1232 Washington Street • Calistoga, CA • 94515
Telephone 707-942-2800
Fax 707-942-0732
www.ci.calistoga.ca.us



March 6, 2019

David Morrison,
Planning, Building and Environmental Services Director
County of Napa, California
1195 Third Street
Napa, CA 94559

RE: City of Calistoga, California Comments Related to the Napa County Watershed Protection Ordinance

Dear Mr. Morrison and Napa County Officials,

The City of Calistoga shares its appreciation for allowing us to participate in land use decisions related to preservation of Napa County's precious water resources. For the 2nd time, please accept this letter from the City of Calistoga which offers two (2) considerations as you refine and consider final ordinance language.

1. Kimball Reservoir, which is one of the City of Calistoga's water sources, is specifically identified in the conservation regulations as a "sensitive domestic water supply." The reservoir is located on a 278-acre parcel outside the city limits (Attachment 3). The Napa County Planning, Building & Environmental Services Director previously confirmed that any activities on the property for a municipal purpose are exempt from the County Code, including this ordinance.

However, portions of the Kimball Reservoir along its western boundary are separated from the adjoining property line by only 20 feet. Therefore, the City of Calistoga recommends the following language be added to Section 18.108.020 (G):

"... In the event the adjoining property line is closer than 200 feet to the municipal water supply reservoir, the 200-foot setback shall be measured from the adjoining property line."

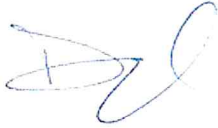
2. The City of Calistoga appreciates the thoughtful, science-based approach used to determine appropriate setback requirements from sensitive domestic water supplies. As proposed, the County ordinance would include a 200-foot setback.

The City of Calistoga respectfully requests consideration be given to increase the setback to 500-feet. Doing so would demonstrate a "more thoughtful, careful

approach” toward protecting precious water resources and supply used for public purposes.

Thank you for your consideration.

Sincerely,

A handwritten signature in blue ink, appearing to be 'Dylan Feik', written in a cursive style.

Dylan Feik
City Manager
dfeik@ci.calistoga.ca.us
707-942-2806

MAR 06 2019

Agenda Item # 7A

TO THE PLANNING COMMISSION:

I WANT TO BE SPECIFIC WITH RESPECT TO THIS PROPOSED ORDINANCE.

I BELIEVE THAT CLASS III STREAMS BE IDENTIFIED ON A PLAN SIMILAR TO "BLUE STREAM" CLASSES.

CLASS III STREAMS ARE MOST LIKELY THE LARGEST CLASS OF THE WATERCOURSES THAT THE ORDINANCE IS CONSIDERING NOTWITHSTANDING CLASS IV STREAMS.

DEVELOPMENT WITHIN A CLASS III STREAM WATERSHED WILL HAVE CONSEQUENCES JUST LIKE CLASS I + II. SETBACKS.

THE DEFINITION OF A CLASS III STREAM NEEDS TO BE UNIFORM BETWEEN THE COUNTY AND THE STATE WATERBOARD

A UNIFORM PLAN ILLUSTRATING CLASS III STREAMS NEEDS TO BE CREATED FOR THE ENTIRE COUNTY.

THANK YOU,

ROGER WOLFF

3008 CUTTING WOLF ROAD, NAPA.

Assets

Surface water value: Watersheds (HUC12s) were ranked based on surface drinking water value from the USDA Forest Service's Forests to Faucet data, https://www.fs.fed.us/ecosystemservices/FS_Efforts/forests2faucets.shtml

Carbon storage: Estimated amount of carbon in the forest that is in living trees above the ground was spatially imputed into a GIS layer from Forest Service FIA data by Wilson et al. (2013) using a gradient nearest neighbor (GNN) technique. See Wilson, B.T., C.W. Woodall, and D.M. Griffith, *Imputing forest carbon stock estimates from inventory plots to a nationally continuous coverage*. Carbon Balance and Management, 2013. 8(1): p. 15.

Standing timber: Shows the estimated commercial timber volume on lands available for harvesting. Standing Timber was primarily derived from LEMMA Structure Maps (<https://lemma.forestry.oregonstate.edu/data/structure-maps>) that also used Forest Service FIA data and a GNN methodology (2012 vintage). LEMMA commercial timber volume was reduced for areas of high fire severity burns through 2017 (from FRAP), BAER imagery for areas of high severity wildfires that have occurred in 2018 from:

<https://fsapps.nwccg.gov/afm/baer/download.php>), and Aerial Detection Survey data of areas of high tree mortality (also subsequent to 2012). Lands not available for timber harvest were removed, including southern California and South Central Coast counties with no viable timber processing facilities.

Site quality: This shows the productivity of timberland, based upon potential volume of wood (i.e. cubic feet) that can be produced per acre in a year. Site Class GIS data was produced by Wilson from Forest Service FIA data (using the same methods as for the Carbon storage layer), based upon FIA attribute SITECLCD – site productivity class code. It shows the potential timber volume produced at culmination of mean annual increment, in the standard classes used by the USFS.

Large trees: Derived from FRAP vegetation layer FVEG15 (WHRSIZE), which in turn (for this attribute) came from CALVEG data of the USFS. Tree size class scores were 1 = (6-11" DBH); 3 = (11-24" DBH); and 5 = (over 24" DBH).

Threats

Fire Threat: FRAP fire threat data (fthrt18_1) was derived from a combination of FRAP surface fuels data and large fire probability from the Fire Simulation (FSim) system developed by the US Forest Service Missoula, Montana Fire Sciences Laboratory.

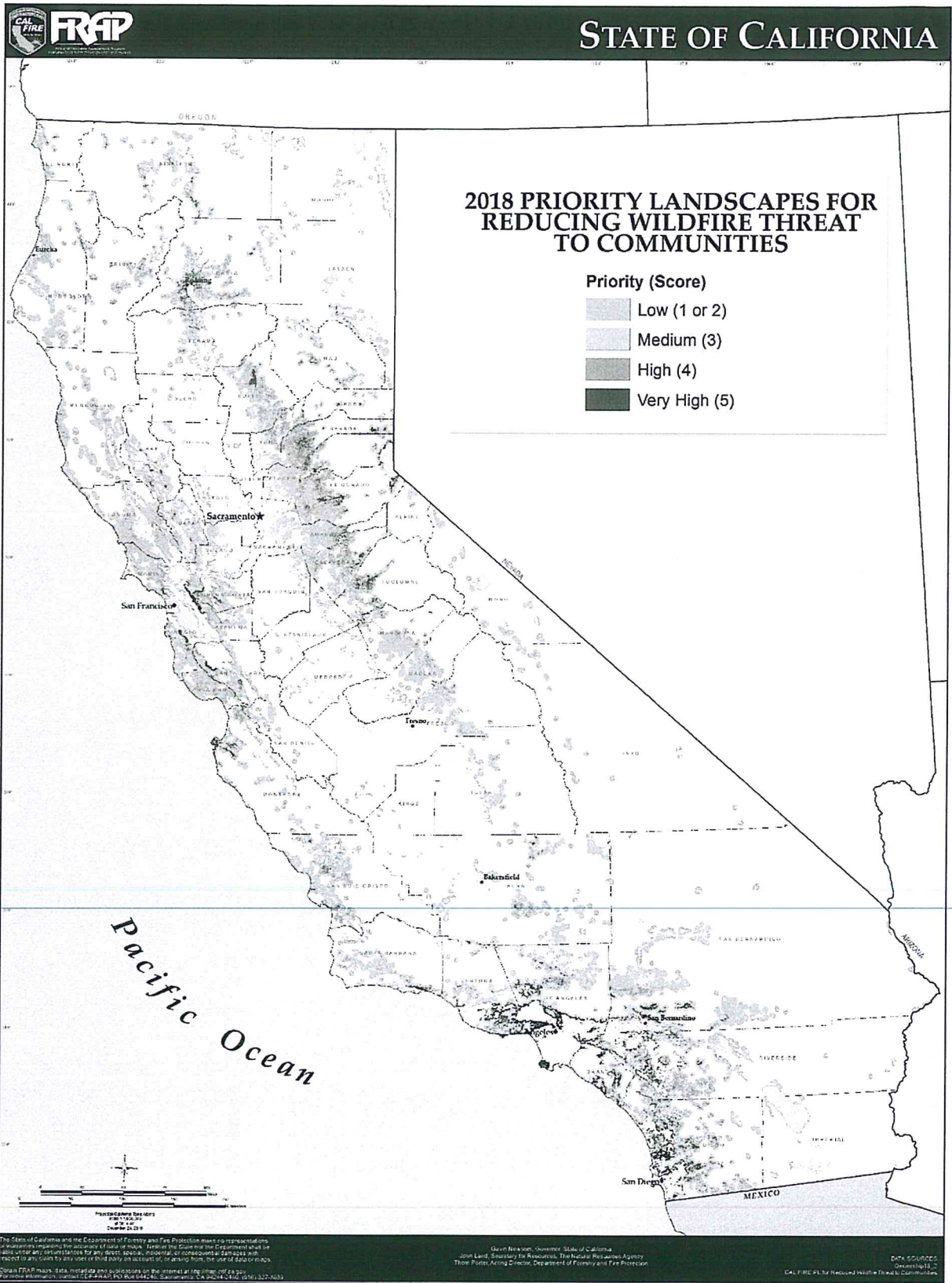


Figure 2: Priority Landscapes for Reducing Wildfire Threat to Communities.

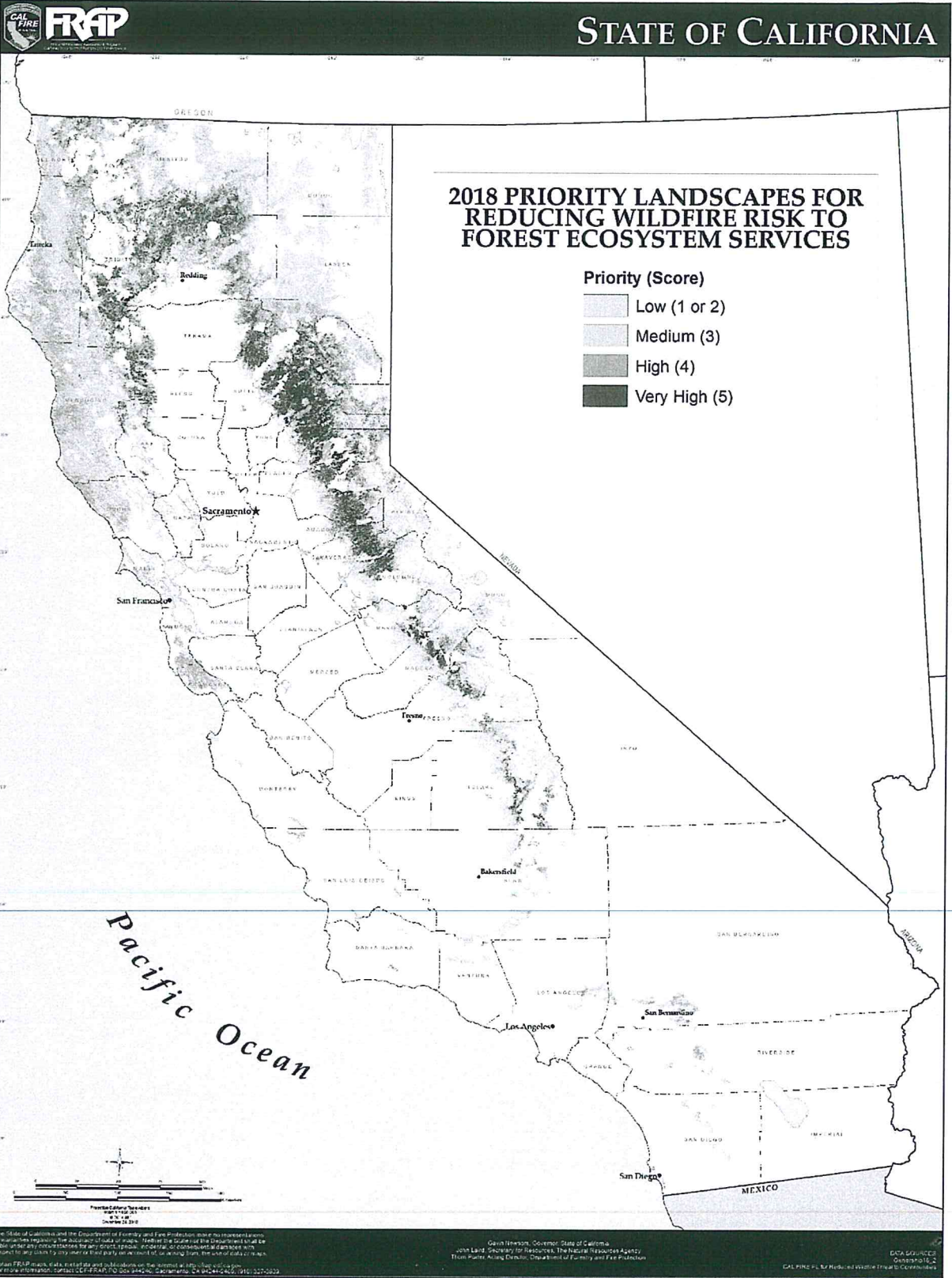


Figure 3: Priority Landscapes for Reducing Wildfire Threat to Communities.

Appendix C – CAL FIRE Priority Fuel Reduction Project List

#	Project Name	CAL FIRE UNIT	Acres	Number of Communities	Affected Population	Socio-economic Score (SES)	Fire Risk Score (FRS)	Final Summary Score
1	Hwy 44 Fuel Break	SHU	1,124	3	8,833	90	86	88
2	Kings Mountain Roadside	CZU	467	18	271,096	88	84	86
3	Rush Creek	FKU	181	1	2,973	71	99	85
4	San Juan Canyon Fuel Reduction	BEU	2,277	4	54,067	116	53	85
5	Martin Ranch Fuel Break	LMU	57	4	3,957	69	98	83
6	Santa Barbara Foothill Community Defensible Space	SBC	1,960	5	127,516	98	64	81
7	Musick Fuel Break	FKU	393	5	12,677	62	95	79
8	Bridgeville FR	HUU	18	1	4,143	66	87	76
9	North Orinda Fuel Break	SCU	1,760	30	561,223	96	56	76
10	West Redding Fuels Reduction	SHU	3,091	7	114,607	84	67	75
11	Guatay Community Fuel Break	MVU	128	15	221,282	85	66	75
12	China Gulch Fuel Break	SHU	530	8	88,610	84	66	75
13	Forbestown Ridge	BTU	1,673	8	14,950	92	58	75
14	North Fork American River Fuelbreak	NEU	4,373	13	77,319	65	84	74
15	Shaver Springs	FKU	78	4	12,677	62	86	74
16	El Granada Quarry Park Fuel Break	CZU	250	10	100,433	85	62	73
17	Blue Rush Fuel Break	FKU	82	1	2,973	71	75	73
18	State Route 17 Fuel Break	SCU	454	8	72,462	58	88	73

#	Project Name	UNIT	Acres	Number of Communities	Affected Population	Socio-economic Score (SES)	Fire Risk Score (FRS)	Final Summary Score
19	Painted Cave Community Defensible Space	SBC	1,742	7	84,232	79	66	73
20	Willits Fuels Reduction	MEU	11,965	3	13,120	88	55	72
21	San Marcos Pass	SBC	3,096	7	84,342	79	62	70
22	Grist Fuel Break	MMU	102	3	13,097	79	60	69
23	Crest Community Fuel Break	MVU	60	3	5,278	71	66	68
24	Beal Fuel Break	FKU	728	6	12,677	62	74	68
25	Aptos, Buzzard, Hinkley Ridgetop and Roadside	CZU	1,036	16	112,505	73	58	66
26	Ukiah Fuels Reduction	MEU	26,541	10	39,195	95	34	65
27	Lake Shastina Fuels Treatment	SKU	759	3	7,231	87	36	62
28	Ponderosa West Grass Valley Defense Zone	NEU	1,238	9	54,776	67	56	61
29	Big Rock Prescribed Burn	LAC	431	8	44,440	52	66	59
30	Metcalf Gap	MMU	44	4	10,131	79	37	58
31	Palo Colorado Fire Access Roads	BEU	6,843	4	9,556	77	37	57
32	Laurel Springs-Hennicksons Ridge	BEU	4,368	1	5,933	64	48	56
33	Elk Creek Fuel Break	TGU	953	2	4,868	98	3	50
34	Palo Corona Fuel Reduction	BEU	10,428	9	59,585	82	11	46
35	Highway 41 Vegetation Management Plan	MMU	4,621	7	28,737	84	4	44

Community Wildfire Prevention & Mitigation Report

3-6-19
7A

In response to
Executive Order
N-05-19

STEVE LEVINE

Levine Family Farm

Napa County Produce Grower Cert # 1052

California Nursery License # B2457.001

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Governor's Office of Emergency Services

California National Guard



California Government Operations Agency

Governor's Office of Planning and Research

Department of Finance



California Natural Resources Agency



February 22, 2019

Contributors

CAL FIRE would like to thank the following agencies, departments, regional and local government entities, and non-governmental partners for responding to CAL FIRE's request for input on recommendations and draft copies of this report in writing or through conversation.

Governor's Office of Emergency Services	Los Angeles Regional Water Quality Control Board
Governor's Office of Planning and Research	California Fire Chief's Association
California Natural Resources Agency	California Environmental Justice Alliance
Strategic Growth Council	Morongo Fire District
Office of State Fire Marshal	The Nature Conservancy
California Air Resources Board	Resources Legacy Fund
California Department of State Parks	Pacific Forest Trust
California Department of Fish and Wildlife	California League of Cities
California Department of Public Health	California Fire Safe Council
California Energy Commission	The Red Cross
California Public Utilities Commission	California Licensed Foresters Association
California Department of Transportation	Sierra Forest Legacy
California Department of Industrial Relations	Sierra Club California
Sierra Nevada Conservancy	Trinity County Fire Safe Council
University of California Berkeley	Lower Mattole Fire Safe Council and Mattole Restoration Council
University of California Cooperative Extension (UCANR)	Watershed Research and Training Center
Humboldt State University	ForEverGreen Forestry
California Forest Management Task Force	The Fire Restoration Group
US Forest Service PSW Research Station	Mendocino/Humboldt Redwood Company
Natural Resources Conservation Service	Green Diamond Resource Company
North Coast Regional Water Quality Control Board	Sierra Pacific Industries
Central Valley Regional Water Quality Control Board	California Cattlemen's Association
Lahontan Regional Water Quality Control Board	Town of Portola Valley

Executive Summary

California experienced the deadliest and most destructive wildfires in its history in 2017 and 2018. Fueled by drought, an unprecedented buildup of dry vegetation and extreme winds, the size and intensity of these wildfires caused the loss of more than 100 lives, destroyed thousands of homes and exposed millions of urban and rural Californians to unhealthy air.

Climate change, an epidemic of dead and dying trees, and the proliferation of new homes in the wildland urban interface (WUI) magnify the threat and place substantially more people and property at risk than in preceding decades. More than 25 million acres of California wildlands are classified as under very high or extreme fire threat, extending that risk over half the state.

Certain populations in our state are particularly vulnerable to wildfire threats. These Californians live in communities that face near-term public safety threats given their location. Certain residents are further vulnerable given factors such as age and lack of mobility. The tragic loss of life and property in the town of Paradise during the recent Camp Fire demonstrates such vulnerability.

Recognizing the need for urgent action, Governor Gavin Newsom issued Executive Order N-05-19 on January 9, 2019. The Executive Order directs the California Department of Forestry and Fire Protection (CAL FIRE), in consultation with other state agencies and departments, to recommend immediate, medium and long-term actions to help prevent destructive wildfires.

With an emphasis on taking necessary actions to protect vulnerable populations, and recognizing a backlog in fuels management work combined with finite resources, the Governor placed an emphasis on pursuing a strategic approach where necessary actions are focused on California's most vulnerable communities as a prescriptive and deliberative endeavor to realize the greatest returns on reducing risk to life and property.

Using locally developed and vetted fire plans prepared by CAL FIRE Units as a starting point, CAL FIRE identified priority fuel reduction projects that can be implemented almost immediately to protect communities vulnerable to wildfire. It then considered socioeconomic characteristics of the communities that would be protected, including data on poverty levels, residents with disabilities, language barriers, residents over 65 or under five years of age, and households without a car.

In total, CAL FIRE identified 35 priority projects that can be implemented immediately to help reduce public safety risk for over 200 communities. Project examples include removal of hazardous dead trees, vegetation clearing,

creation of fuel breaks and community defensible spaces, and creation of ingress and egress corridors. These projects can be implemented immediately if recommendations in this report are taken to enable the work. Details on the projects and CAL FIRE's analysis can be found online at http://calfire.ca.gov/fire_prevention/downloads/FuelReductionProjectList.pdf , which will remain updated in the coming months. The list of projects is attached to this report as Appendix C.

CAL FIRE has also worked with over 40 entities including government and non-government stakeholders to identify administrative, regulatory and policy actions that can be taken in the next 12 months to begin systematically addressing community vulnerability and wildfire fuel buildup through rapid deployment of resources. Implementing several of these recommended actions is necessary to execute the priority fuel reduction projects referenced above. Other recommendations are intended to put the state on a path toward long-term community protection, wildfire prevention, and forest health.

The recommendations in this report, while significant, are only part of the solution. Additional efforts around protecting lives and property through home hardening and other measures must be vigorously pursued by government and stakeholders at all levels concurrently with the pursuit of the recommendations in this report. California must adopt an “all of the above” approach to protecting public safety and maintaining the health of our forest ecosystems.

It is important to note that California faces a massive backlog of forest management work. Millions of acres are in need of treatment, and this work—once completed—must be repeated over the years. Also, while fuels treatment such as forest thinning and creation of fire breaks can help reduce fire severity, wind-driven wildfire events that destroy lives and property will very likely still occur.

This report's recommendations on priority fuel reduction projects and administrative, regulatory, and policy changes can protect our most vulnerable communities in the short term and place California on a trajectory away from increasingly destructive fires and toward more a moderate and manageable fire regime.

Current Setting

While wildfires are a natural part of California's landscape, the fire season in California and across the West is starting earlier and ending later each year. Climate change is considered a key driver of this trend¹. Warmer spring and summer temperatures, reduced snowpack, and earlier spring snowmelt create longer and more intense dry seasons that increase moisture stress on vegetation and make forests more susceptible to severe wildfire². The length of fire season is estimated to have increased by 75 days across the Sierras and seems to correspond with an increase in the extent of forest fires across the state³.

Climate change is acting as a force-multiplier that will increasingly exacerbate wildland fire issues over the coming decades⁴. The state can expect to experience longer fire seasons, increased frequency and severity of drought, greater acreage burned and related impacts such as widespread tree mortality and bark beetle infestation⁵. Decades of fire suppression have disrupted natural fire cycles and added to the problem.

California's forest management efforts have not kept pace with these growing threats. Despite good forest management work completed by the state and federal government and private landowners each year, our collective forest management work each year is currently inadequate to improve the health of millions of acres of forests and wildlands that require it. It is estimated that as many as 15 million acres of California forests need some form of restoration⁶.

As wildfire threats have worsened over the last two years, wildfire response, preemptive fire prevention, and vegetation management to reduce fire severity and contain erratic wildfire have been intensified. Further action is imperative. While restoring forest health and resilience will take decades to achieve, the immediate actions recommended in this report can immediately begin to protect our most vulnerable communities.

¹ (Flannigan et al 2000; Westerling, 2016)

² (Mote, 2005; Westerling, 2016)

³ (Westerling, 2016)

⁴ Simulations for California's Fourth Climate Change Assessment: Projecting Changes in Extreme Wildfire Events with a Warming Climate.

http://www.climateassessment.ca.gov/techreports/docs/20180827-Projections_CCCA4-CEC-2018-014.pdf

⁵ California Tree Mortality Task Force: Synthesis of Research into the Long-Term Outlook for Sierra Nevada Forests following the Current Bark Beetle Epidemic

http://www.fire.ca.gov/treetaskforce/downloads/WorkingGroup/White_paper_on_recovery_06-12-18.pdf

⁶ Forest Carbon Plan 2018

While it is not possible to eliminate wildfire risks in California, focused and deliberate action can protect communities and improve forest and fuels conditions to enable a more moderate and healthy wildfire cycle that can coexist with Californians.

Significant barriers to this work exist. Forest thinning and fuels reduction are expensive, and funding limitations constrain what can be achieved. Given this reality, it is critically important to focus funding and efforts on protecting vulnerable communities in high fire risk areas, utilizing no-cost and low-cost solutions where possible. For example, mobilizing the private sector by providing incentives to incorporate fuels reduction in commercial forest management on private lands can be an important part of this effort.

Recommendations

Most urgently, this report identifies priority projects that can be implemented immediately to help protect our state's most vulnerable communities. While some communities are vulnerable to fire due to their location next to forests and wildlands, that vulnerability can be magnified by socioeconomic factors such as population age, car ownership, and lack of ingress or egress corridors.

To identify these priority projects, CAL FIRE developed a methodology to characterize communities' relative vulnerability. This methodology incorporates physical wildfire risks around communities and socioeconomic characteristics of these communities to understand the relative vulnerability of each community. This methodology integrates three primary analyses:

1. Identification of vulnerable communities based on the socioeconomic characteristics of communities that indicate vulnerability to wildfire;
2. Identification of priority fuel reduction projects based on existing CAL FIRE Unit Plans. Each of these Unit Plans has identified priority projects based on the place-specific expertise of CAL FIRE Unit personnel working in each region of the state; and
3. Evaluation of wildfire risk within the proposed project area.

A detailed explanation of this methodology is found in Appendix A.

In addition to recommending priority projects for immediate implementation, this report recommends broader solutions for state government to consider in the immediate, near, and longer terms to ensure the work continues in a systematic way. Recommended short-term actions in this report encompass actions that can be taken immediately. Proposed mid-term actions are targeted for completion between July and December of this year. Long-term recommendations may be initiated quickly but will require more than a year to implement.

In developing these recommendations for action, CAL FIRE considered:

1. Actions needed to advance work before the peak of fire season later this year;
2. Work already underway in other venues; and
3. Actions that will prevent and mitigate wildfires to the greatest extent possible with an emphasis on environmental sustainability and protection of public health.

These efforts are meant to complement efforts already underway:

- a. The Governor's Forest Management Task Force was created in June 2018 to coordinate actions needed across government. It is anticipated the Forest Management Task Force will continue to be a centralized hub of organizing and coordinating actions recommended under this report.
- b. The Commission on Catastrophic Wildfire Cost and Recovery was established pursuant to SB 901 (Dodd, Chapter 626, Statutes of 2018). The Commission is tasked with making recommendations by July 2019 related to the costs of catastrophic wildfire, how these costs should be socialized in an equitable manner, and the potential to establish a fund to address the costs associated with catastrophic wildfires.
- c. The California Public Utilities Commission's (CPUC) Wildfire Proceeding was initiated in 2018. Among other things, in coordination with CAL FIRE the CPUC's process will formalize enhanced wildfire mitigation plans currently under development by the electrical utilities pursuant to SB 901.
- d. The 2018 Strategic Fire Plan is California's current plan for reducing community wildfire risk. The California Board of Forestry, the policy-setting body within CAL FIRE, recently updated California's Strategic Fire Plan⁷. That plan identifies priorities for CAL FIRE including evaluation of wildfire risk, working with property owners and local governments to plan for and mitigate those risks, and determining resource needs to response to fire outbreaks.
- e. The 2018 State Hazard Mitigation Plan was developed by the California Office of Emergency Services (OES). CAL FIRE contributed to the recent update to California's Hazard Mitigation Plan⁸, which contains specific information on hazard risk assessment, and tracks progress on various mitigation efforts developed in recent years.
- f. The California Forest Carbon Plan released in 2018 summarized current and projected forest conditions and directed actions to achieve healthy and resilient wildland and urban forests and maintain forests as a carbon sink.

⁷ State Board of Forestry and Fire Protection, 2018 Strategic Fire Plan (August 22, 2018), available online at <http://cdfdata.fire.ca.gov/pub/fireplan/fpupload/fpppdf1614.pdf>.

⁸ California State Hazard Mitigation Plan (September 2018), Chapter 8 "Fire Hazards: Risks and Mitigation," available online at https://www.caloes.ca.gov/HazardMitigationSite/Documents/011-2018%20SHMP_FINAL_Ch%208.pdf.

SUMMARY TABLE OF RECOMMENDATIONS

	Recommendation	Priority	Lead	Type
1	Direct CAL FIRE Units to complete priority fuel reduction projects.	I	CAL FIRE	Administrative
2	Authorize incident response to implement rapid treatment of fuels.	I	CAL FIRE	Administrative
3	Increase housing availability for fuel crew staff.	I	OES	Administrative
4	Suspend regulatory requirements as needed to complete fuels reduction projects in 2019.	I	All regulatory agencies	Regulations
5	Assess funding and personnel capacity within CAL FIRE and other departments and determine areas for additional investment and administrative actions to maximize effectiveness of current workforce.	I	CAL FIRE / CCC / DPR / CAL HR	Administrative
6	Align community education campaigns across all state and local entities.	I	Forest Management Task Force	Policy
7	Execute State Agency MOU for fuels reduction.	M	All relevant agencies	Policy
8	Identify options for retrofitting homes to new wildland urban interface standards.	M	CAL FIRE	Policy
9	Create incentives for fuels reduction on private lands.	M	All regulatory agencies	Regulations
10	Continue developing methodology to assess communities at risk.	M	CAL FIRE	Administrative
11	Jumpstart workforce development for forestry and fuels work.	M	CAL FIRE / CARB	Administrative
12	<u>Develop mobile data collection tool for project reporting.</u>	M	CAL FIRE	Administrative
13	Coordinate with air quality regulators to enable increased use of prescribed fire.	M	CAL FIRE / CARB	Administrative
14	Develop technology tools to enable real time prescribed fire information sharing.	M	Forest Management Task Force	Policy
15	Certify the California Vegetation Treatment Program Environmental Impact Report.	L	Board of Forestry and Fire Protection	Administrative
16	Develop scientific research plan regarding management and mitigation with funding recommendations.	L	Forest Management Task Force	Policy
17	Provide technical assistance to local governments to enhance or enable fire hazard planning.	L	Forest Management Task Force	Policy
18	Update codes governing defensible space and forest and rangeland protection.	L	CAL FIRE	Regulations
19	Request the Board of Forestry and Fire Protection review the Forest Practice Act and Rules and make recommendations on changes needed to restore forest health.	L	Board of Forestry and Fire Protection	Regulations

Key: Priorities are identified as follows: I = immediate term, M = medium term, L = long term

Immediate Actions: These recommended actions would begin immediately to protect vulnerable communities before the height of the coming fire season.

1. Direct CAL FIRE Units to complete priority fuel reduction projects to protect public safety.

CAL FIRE has identified priority fuels reduction projects that can be initiated almost immediately to protect the lives, health, property, and natural resources using the community vulnerability methodology described above and in Appendix A. CAL FIRE shall work, to the extent feasible, with other public agencies, landowners, and the communities themselves to implement these projects.

The list of priority projects impacting vulnerable communities will be maintained on CAL FIRE's website and updated regularly so the status of each project is reported publicly. The list is attached at Appendix C.

2. Authorize incident response to implement rapid treatment of fuels.

Deploy emergency responders to complete fuels reduction projects to protect vulnerable communities. CAL FIRE and the National Guard will establish incident bases in proximity to vulnerable community centers and coordinate fuels treatment operations from those bases utilizing the Incident Command System. The Incident Command System provides a complete, functional command organization that CAL FIRE and the National Guard will use to ensure the effectiveness of command and crew safety.

3. Increase housing availability for fuel crew staff.

Provide additional state housing for seasonal state employees working on forest management and fuels reduction. These entry level employees are not highly compensated, and often have challenges finding affordable housing in areas where they work. OES should coordinate identifying additional housing for staff both in the short-term for work in 2019 and then a long-term plan for temporary housing.

4. Suspend regulatory requirements as necessary to protect public safety through the priority fuels reduction projects identified by CAL FIRE in this report.

Numerous laws and regulations govern fuels reduction projects, and implementation often requires coordination with, and approval from,

various state and local agencies. Typical environmental compliance, permitting requirements, licensing requirements, and state contracting laws and regulations, should be streamlined where possible to facilitate project implementation.

5. Assess funding and personnel capacity within CAL FIRE and other departments and determine areas for additional investment and administrative actions to maximize effectiveness of current workforce.

Expanding the state's work to reduce public safety risks from wildfires and manage forests depends on adequately resourcing this work and providing the tools required to optimize state agency performance of this work.

CAL FIRE should identify whether staffing levels are sufficient, and current staffing locations remain appropriate to efficiently mitigate wildfires early, and effectively contribute to the state's goal of treating 500,000 acres annually, as set forth in the Forest Carbon Plan.

This task should also include:

- a. Recommendations on how the additional resources requested in the Governor's January Budget should be deployed if approved by the Legislature.
- b. Reviewing reimbursement rates and cost share agreements for CDCR and CCC project work. Identify where additional resources are needed.
- c. Reviewing classifications, work week and levels of administrative support for CAL FIRE staff.
- d. Identifying and working with other land management agencies who may need additional fuels management staff (for example, State Parks).
- e. Review of purchasing for items such as vehicles with associated changes to purchasing policies.
- f. Restarting work on CAL FIRE's firefighter classification consolidation proposal with California Department of Human Resources (CalHR).

6. Align community education campaigns across all state and local entities.

The Forest Management Task Force should work on coordinated messaging for all entities providing direct funding or grants for public education campaigns. This should include coordinated messaging for Cal Volunteer and OES grants pursuant to AB 72 (Committee on Budget,

Chapter 1, Statutes of 2019) as well as all other state agencies, including CAL FIRE. Education campaigns should be rolled out consistently throughout the state.

Mid-Term Actions: The recommended actions are designed to be completed by the end of this year.

7. Execute State Agency MOU for fuels reduction.

Direct all relevant state agencies and departments to develop and sign a memorandum of understanding (MOU) committing the capabilities of each agency towards the common goals of fuel reduction and protection of vulnerable populations, and environmental sustainability.

Direct the MOU agencies to utilize social media channels and other avenues to communicate the value of defensible space and other actions homeowners can take to protect against wildfire prior to the peak of wildfire season in 2019.

8. Identify options for retrofitting homes to new Wildland Urban Interface standards.

- a. CAL FIRE should identify options for incentivizing home hardening to create fire resistant structures within the WUI and with a focus on vulnerable communities.
- b. The Forest Management Task Force should immediately begin work to identify actions for retrofitting homes in the WUI with a focus on vulnerable communities. The Forest Management Task Force should also develop a comprehensive plan to bring existing housing stock up to new building code standards for the Wildland Urban Interface with a priority on vulnerable communities. The Forest Management Task Force should work with the Department of Insurance to seek input from the insurance industry on potential rebates or incentives for homeowners.
- c. Additionally, as provided in Assembly Bill 2911 (Friedman, Chapter 641, Statutes of 2018), CAL FIRE, and the Director of Housing and Community Development, should develop a list of low-cost retrofits that provide comprehensive fire risk reduction to protect structures from fires spreading from adjacent structures or vegetation and to prevent vegetation from spreading fires to adjacent structures.

9. Create incentives for fuels reduction on private lands.

Direct the Board of Forestry and Fire Protection to create or modify regulations to incentivize private landowners to engage in fuels reduction projects. This may include allowing removal of sufficient medium and large size trees or reducing after-harvest leave tree requirements sufficiently. These should be pursued through the emergency rule making process whenever possible.

Non-industrial private landowners often do not have the resources to actively manage their forests, and may often be the same vulnerable populations needing protection from wildfire. Small non-industrial private landowners make up approximately 25 percent of California's forest land owners and managers, almost twice as much as private industrial forest lands.

10. Continue developing methodology to assess communities at risk.

The methodology used to identify priority projects provides a robust assessment of near-term projects that can be implemented before the 2019 fire season. However, long-term planning and decision-making efforts to reduce wildfire risk require consideration of additional factors. Therefore, this methodology should serve as the basis for ongoing assessment methods to evaluate short and long-term wildfire risk reduction strategies across the state, with specific attention to identifying vulnerable communities.

The Forest Management Task Force should establish an interagency team with experience in spatial analysis, technology support, environmental management, public health, climate change, and social vulnerability to develop the methodology enhancements needed to inform the long-term planning needs of both state and local agencies.

11. Jumpstart workforce development for forestry and fuels work.

- a. Identify specific opportunities to develop and incentivize workforce training programs for implementation by the end of 2019. The goal is to increase the number of properly trained personnel available to do fuels reduction and forest management and restoration work in the private sector.

12. Develop mobile data collection tool for project reporting.

Procure a mobile fuel reduction data collection application to be used by all land management departments and agencies to increase accuracy and ease of data collection in the field.

13. Coordinate with air quality regulators to enable increased use of prescribed fire.

Uncontrolled wildfires can cause far more harmful air quality and public health impacts than prescribed burns because they often burn much more vegetation and last longer than prescribed burns. However, prescribed burns must still be managed to minimize emissions. To increase the scale of prescribed burns while protecting air quality:

- a. CAL FIRE should coordinate with the CARB to explore updates to state air quality regulations to facilitate prescribed burns. Examples could include changes in how prescribed burns are accounted for in air quality calculations and allocating burn permits on a project, rather than parcel or landowner, basis.
- b. In addition to examining state regulations, CAL FIRE and CARB should also coordinate with the U.S. Environmental Protection Agency to identify changes in federal air quality regulations that would facilitate prescribed burns.
- c. CAL FIRE should coordinate with local and regional air districts to develop multi-year smoke management plans and burn permits for public purpose burning to help reduce costs and complexity for burners.

14. Develop technology tools to enable real time prescribed fire information sharing.

The Prescribed Fire Information Reporting System (PFIRS) should be officially recognized as the state's reporting tool to underscore the need for a common reporting and permitting tool across all agencies and private burners involved with prescribed fire. PFIRS should be funded and developed as the tool to support, facilitate and track prescribed fire efforts statewide. All state agencies and departments should be directed to use prescribed fire to obtain permitting and report through PFIRS, and federal land managers should be encouraged to use it for reporting. The reporting system is currently used by CARB, CAL FIRE, and the U.S. Forest Service.

Longer-term Actions: These actions are designed to begin quickly, but likely require more than a year to complete.

15. Certify the California Vegetation Treatment Program Environmental Impact Report.

Beyond the priority fuels treatment projects that CAL FIRE will implement in 2019, CAL FIRE and other land managers must increase the pace and scale of vegetation treatment throughout California. To that end, CAL FIRE and the Board of Forestry are preparing the California Vegetation Treatment Program Environmental Impact Report (CalVTP EIR) to identify and minimize environmental impacts associated with vegetation treatment. Once completed, CAL FIRE and other agencies will be able to rely on that document to streamline the environmental review process for future treatment projects.

To maximize the streamlining value of the CalVTP EIR, other agencies with regulatory authority over vegetation treatment activities should be directed to engage in its development. CAL FIRE and the Board of Forestry should invite agencies within the California Natural Resources Agency and California Environmental Protection Agency to:

- a. In the immediate term, identify subsequent permitting processes that may apply to vegetation treatment projects.
- b. In the mid-term, develop streamlined permitting recommendations if it is determined that environmental compliance not covered by the CalVTP EIR will preclude projects from timely completion.

16. Develop a scientific research plan for wildfire management and mitigation, with funding recommendations.

The Forest Management Task Force should develop a research plan with funding prioritization. Topics that should be considered include:

- a. Leverage the Governor's Request for Innovative Ideas (RFI2).
- b. Best management practices in the face of a changing climate and our understanding of forest health and resilience.
- c. Use of LiDAR, satellite and other imagery and elevation data collection, processing and analysis for incorporation into state management plans and emergency response.
- d. Funding for collaborative research to address the full range of wildfire related topics. Important research investments could include both

basic and applied research as well as social science to better understand social vulnerability, human behavior, land use, and policies that support resilience in communities that coexist with fire and mitigate impacts on life and property.

- e. Research and development on new WUI building test standards in future research programs including the use of damage inspection reports from recent fires.

17. Provide technical assistance to local governments to enhance or enable fire hazard planning.

With the expansion of urban development into wildland areas, firefighting becomes more dangerous and costly, and the consequences of wildfires to lives and property become more severe. Local governments control land use decisions that can minimize those dangers. CAL FIRE and other state agencies have information and expertise that can support local governments in making safer choices. To enable land use planning that minimizes fire risks:

- a. Assist the Governor's Office of Planning and Research in identifying specific land use strategies to reduce fire risk to buildings, infrastructure, and communities and in updating the "Fire Hazard Planning, General Plan Technical Advice Series," as provided in Assembly Bill 2911 (Friedman, Chapter 641, Statutes of 2018).
- b. Work with Cal OES and the Standardized Emergency Management System Advisory Committee to develop robust local evacuation planning models for high or very high Fire Hazard Severity Zones based upon best practices from within California.
- c. Provide technical assistance to support land use planning efforts to limit development in high fire hazard areas, as well as technical assistance to support mitigation activities that minimize risk to existing communities, with specific attention to vulnerable communities.

18. CAL FIRE should update codes governing defensible space and forest and rangeland protection.

- a. Review the penalty for non-compliance with defensible space code, establishing a fixed compliance date in lieu of three-inspection process. Include vacant land provisions.
- b. Review enforcement the full 100 feet of defensible space around a structure when the structure is closer than 100 feet from the parcel line.

- c. Consider the home and the first 0-5 feet as the most critical and hardened aspect of home hardening and defensible space. Consider requiring ignition resistant building material, only allow bark and hardscape, not trees or shrubs in this area.
 - d. Consider science-based regulation of wood piles and wood fences.
19. Request the Board of Forestry and Fire Protection review the Forest Practice Act and Rules and make recommendations on changes needed to protect public safety and restore forest health.

The Forest Practice Act, and regulations that implement it, currently contain rules that limit fuel hazard reduction activities. The rules could be updated to facilitate non-commercial fuel reduction projects. The Board should consider where existing exemptions could be expanded further to prevent and mitigate wildfires with an emphasis on environmental sustainability and protection of public health.

Appendix A – Methodology to assess vulnerable communities

Summary

The 2018 Strategic Fire Plan for California⁹, and the National Cohesive Wildland Fire Management Strategy¹⁰ provide a set of goals and strategies that includes: fire adapted communities, safe and effective wildfire response, and resilient landscapes. Despite recent accelerated investment and resources, the vast amount of work and time required to achieve strategic goals necessitates an approach that best protects lives and property in the **near-term**, while simultaneously working over the **long-term** to create more resilient communities and landscapes that will allow Californians to live sustainably in the State's fire-prone landscapes. **Near-term needs include increasing the pace of fuel reduction in and near communities at risk, improving compliance with defensible space requirements, and improving fire resistance of both existing and new structures in the WUI.** In the longer term, a landscape-scale approach that marries forest health treatments with targeted community protection activities will be needed to fully address the scope of fire management issues in California.

Living sustainably in the fire-prone landscapes of California will require broad recognition of the inevitability of fire, which will in turn necessitate enhanced investment in and novel approaches to risk evaluation, fuel management, forest health, land use planning and community adaptation. As we move headlong through the 21st century, fire managers and landowners in California are challenged to effectively utilize available resources and tools to create resilient landscapes, reduce loss of life and property, and stem rising management costs, while enhancing our compatibility with the fire environment in which we live. Applying limited resources necessitates identification of the most vulnerable communities in which to begin this work.

Methods for assessing vulnerable communities

The following section provides a general description of the methods used to incorporate both wildfire risk and socioeconomic conditions of the communities that fuel reduction projects are designed to reduce

The overall goal of the analysis was to construct a framework that provides an assessment of wildfire risk and populations at risk from wildfire impacts. The

⁹ 2018 Strategic Fire Plan for California.

http://cdfdata.fire.ca.gov/fire_er/fpp_planning_cafireplan

¹⁰ National Cohesive Wildland Fire Management Strategy.

<https://www.forestsandangelands.gov/strategy/thestrategy.shtml>

methodology consists of three main steps: a) identification of priority fuel reduction projects; b) evaluation of wildfire risk within the proposed project area; and c) evaluation of the socioeconomic characteristics of communities that projects are intended to protect.

For the initial step, CAL FIRE Units were asked to identify priority fuel reduction projects for their Units that would reduce wildfire risk to nearby communities. Project boundaries were incorporated into a GIS database for analysis.

Socioeconomic Analysis

Socioeconomic factors were based on evaluating conditions that are associated with populations at risk to wildfire. Some populations may experience greater risk to wildfire based on socioeconomic factors that lead to adverse health outcomes and their ability to respond to a wildfire. The factors chosen for this analysis were previously identified in CAL FIRE's Forest and Range Assessment and through a study conducted by Headwater's Economics (Table 1). Data for each socioeconomic variable was from the U.S. Census Bureau's American Community Survey (ACS) and organized by census tract.

Table 1. Socioeconomic variables considered to represent populations at risk to wildfire impacts

Socioeconomic Variables	Description
Families in poverty	Percentage of families in the census tract living below the poverty line
People with disabilities	Percentage of people in census tract estimated to have a disability; based on self-reporting
People that have difficulty speaking English	Percentage of people in the census tract estimated to have difficulty speaking English
People over 65	Percentage of people in the census tract over the age of 65
People under 5	Percentage of people in the census tract under the age of 5
Households without a car	Percentage of families in the census tract without a car

Data Sources: American Community Survey (ACS); California Building Resilience Against Climate Effects (CalBRACE) Project (2016).

For each project, the number of nearby communities was identified, represented by communities that were within a 5-mile buffer of each project boundary. For each community within the buffer, census track data was averaged for each of the socioeconomic variables. This resulted in a table that

provides a description of the socioeconomic characteristics of each community that is associated each proposed project. In addition, a composite socioeconomic index was generated that represented the average across all socioeconomic variables. The socioeconomic index ranges from 0 to 100.

Wildfire Risk Analysis for Proposed Projects

Wildfire risk was then characterized by intersecting the Unit proposed fuel reduction projects with the following spatial data layers:

- SRA – State Responsibility Areas
- WUI – Wildland Urban Interface (WUI Interface, WUI Intermix, and WUI Influence Zone)
- CAL FIRE Priority Landscape for Reducing Wildfire Risk to Ecosystems
- CAL FIRE Priority Landscape for Reducing Wildfire Threat to Communities

Each of these data layers is described in greater detail below.

An overlay of project boundaries was done to determine the percentage of the project area in State Responsibility Area (SRA) and within WUI. WUI was represented by varying degrees of housing density that are associated with WUI Interface, WUI Intermix, and WUI Influence zones.

The proposed project boundaries were then intersected with CAL FIRE's Priority Landscape for Reducing Wildfire Risk to Ecosystems ("Ecosystems PL"). The Ecosystems PL combines resource assets (water supply, carbon storage, standing timber, site quality, and large trees) with a set of threats (fire threat – fuel hazard and fire probability and Fire Return Interval Departure). This PL prioritizes watersheds for potential treatment to reduce wildfire risk based on threats and assets to forested lands. The ranking varies from 1 (least risk) to 5 (greatest risk). Lands such as conifer woodlands (e.g. juniper and pinyon-juniper), oak woodlands (blue oak woodland, valley oak woodland, coastal oak woodland, etc.), shrublands, grasslands, were not included. In addition, only forested lands with a fire return interval departure (FRID) of class 2 or greater were included. This ensures that the areas most in need of treatment to restore natural fire regimes and improve ecological functions are prioritized. For this analysis, only ranks 3, 4, and 5 were used to designate high priority areas for reducing wildfire risk to ecosystems. Each proposed project was overlaid with the Ecosystems PL to determine the percent of each project area that was associated with high wildfire risk to ecosystem services.

Next the proposed projects were intersected with CAL FIRE's Priority Landscape for Reducing Wildfire Risk to Communities ("Communities PL"). The Communities PL identifies where communities (people and associated infrastructure) are at

greatest risk from wildfire. Housing density within the Wildland Urban Interface is used to represent community assets. Areas with lower housing density receive a lower value and areas of higher housing density receive a higher value. The threat to communities is derived from CAL FIRE's Fire Hazard Severity Zones. Combining asset and threat rankings produces a priority landscape where areas with higher housing density and higher fire hazard receive the highest score. For this analysis, only ranks 3, 4, and 5 were used to designate high priority areas for reducing wildfire risk to communities. Each proposed project was overlaid with the Communities PL to determine the percent of each project area that was associated with high wildfire threat to communities.

A composite Wildfire Risk Index was also generated that represented the average across all wildfire risk variables (WUI, Ecosystems PL, and Communities PL). The wildfire risk index ranges from 0 to 100. Results characterizing wildfire risk for each proposed project are described on the CAL FIRE website.

Detailed Data Layer Information for Methodology to Assess Communities at Risk

This appendix provides detailed information on the sources, selection and construction of each of the data layers used in this analysis.

State Responsibility Area

CAL FIRE has a legal responsibility to provide fire protection on all State Responsibility Area (SRA) lands, which are defined based on land ownership, population density and land use. For example, CAL FIRE does not have responsibility for densely populated areas, incorporated cities, agricultural lands, or lands administered by the federal government.

Wildland Urban Interface (WUI)

Wildland Urban Interface (WUI) –The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels¹¹.

CAL FIRE Priority Landscape for Reducing Wildfire Threat to Communities

This Priority Landscape (PL) prioritizes lands where communities (people and associated infrastructure) are at risk from wildfire to direct efforts at reducing wildfire risk in these areas.

¹¹ <http://www.nwccg.gov/pms/pubs/glossary>

Ranking

The ranking varies from 1 (least risk) to 5 (greatest risk). Housing density derived from FRAP's WUI layer is used to rank assets. Threat is determined using California Fire Hazard Severity Zones.

Assets

The asset to be protected in this PL is communities, which are defined by housing densities. Less dense areas receive lower value and higher densities receive higher value. The classes of density are:

- 0 = No houses
- 1 = 0 - 0.05 housing unit per acre
- 2 = 0.051 - 0.200 housing unit per acre
- 3 = 0.201 - 1 housing unit per acre
- 4 = greater than 1 housing unit per acres

Threats

The threat to the communities is Fire Hazard Severity, derived from CAL FIRE's Fire Hazard Severity Zones. The zone ranking is:

- 1 = moderate severity
- 3 = high severity
- 5 = very high severity

Final Ranking:

The ranked asset and ranked threat were combined to derive the final ranked priority landscape. The results were ranked from the lowest risk of 1 to the highest risk of 5.

CAL FIRE Priority Landscape for Reducing Wildfire Risk to Forest Ecosystem Services

This Priority Landscape (PL) prioritizes watersheds for potential treatment to reduce wildfire risk based on threats and assets to forested lands.

Ranking

The ranking varies from 1 (least risk) to 5 (greatest risk). Lands such as conifer woodlands (e.g. juniper and pinyon-juniper), oak woodlands (blue oak woodland, valley oak woodland, coastal oak woodland, etc.), shrublands, grasslands, were not included. In addition, only forested lands with a fire return interval departure (FRID) of class 2 or greater were included. This ensures that the areas most in need of treatment to restore natural fire regimes and improve ecological functions are prioritized.

Assets

Surface water value: Watersheds (HUC12s) were ranked based on surface drinking water value from the USDA Forest Service's Forests to Faucet data, https://www.fs.fed.us/ecosystemservices/FS_Efforts/forests2faucets.shtml

Carbon storage: Estimated amount of carbon in the forest that is in living trees above the ground was spatially imputed into a GIS layer from Forest Service FIA data by Wilson et al. (2013) using a gradient nearest neighbor (GNN) technique. See Wilson, B.T., C.W. Woodall, and D.M. Griffith, *Imputing forest carbon stock estimates from inventory plots to a nationally continuous coverage*. Carbon Balance and Management, 2013. 8(1): p. 15.

Standing timber: Shows the estimated commercial timber volume on lands available for harvesting. Standing Timber was primarily derived from LEMMA Structure Maps (<https://lemma.forestry.oregonstate.edu/data/structure-maps>) that also used Forest Service FIA data and a GNN methodology (2012 vintage). LEMMA commercial timber volume was reduced for areas of high fire severity burns through 2017 (from FRAP), BAER imagery for areas of high severity wildfires that have occurred in 2018 from:

<https://fsapps.nwcg.gov/afm/baer/download.php>), and Aerial Detection Survey data of areas of high tree mortality (also subsequent to 2012). Lands not available for timber harvest were removed, including southern California and South Central Coast counties with no viable timber processing facilities.

Site quality: This shows the productivity of timberland, based upon potential volume of wood (i.e. cubic feet) that can be produced per acre in a year. Site Class GIS data was produced by Wilson from Forest Service FIA data (using the same methods as for the Carbon storage layer), based upon FIA attribute SITECLCD – site productivity class code. It shows the potential timber volume produced at culmination of mean annual increment, in the standard classes used by the USFS.

Large trees: Derived from FRAP vegetation layer FVEG15 (WHRSIZE), which in turn (for this attribute) came from CALVEG data of the USFS. Tree size class scores were 1 = (6-11" DBH); 3 = (11-24" DBH); and 5 = (over 24" DBH).

Threats

Fire Threat: FRAP fire threat data (fthrt18_1) was derived from a combination of FRAP surface fuels data and large fire probability from the Fire Simulation (FSim) system developed by the US Forest Service Missoula, Montana Fire Sciences Laboratory.

Fire Return Interval Departure (FRID): FRID shows the deviation from historic averages of fire occurrence. FRID from USFS Region 5 was used to prioritize areas most in need of treatment. FRID scores of 2, 3, and 4 were assigned scores of 1, 3, and 5 respectively.

Composite Ranks

All assets were combined and the result ranked from 1 to 5 to derive a composite asset. Likewise, all threats were combined the results ranked from 1 to 5 to create a composite threat. The composite asset layer and composite threat ranks were then combined and classified to a final priority landscape rank for each 30m pixel.

Appendix B – Maps

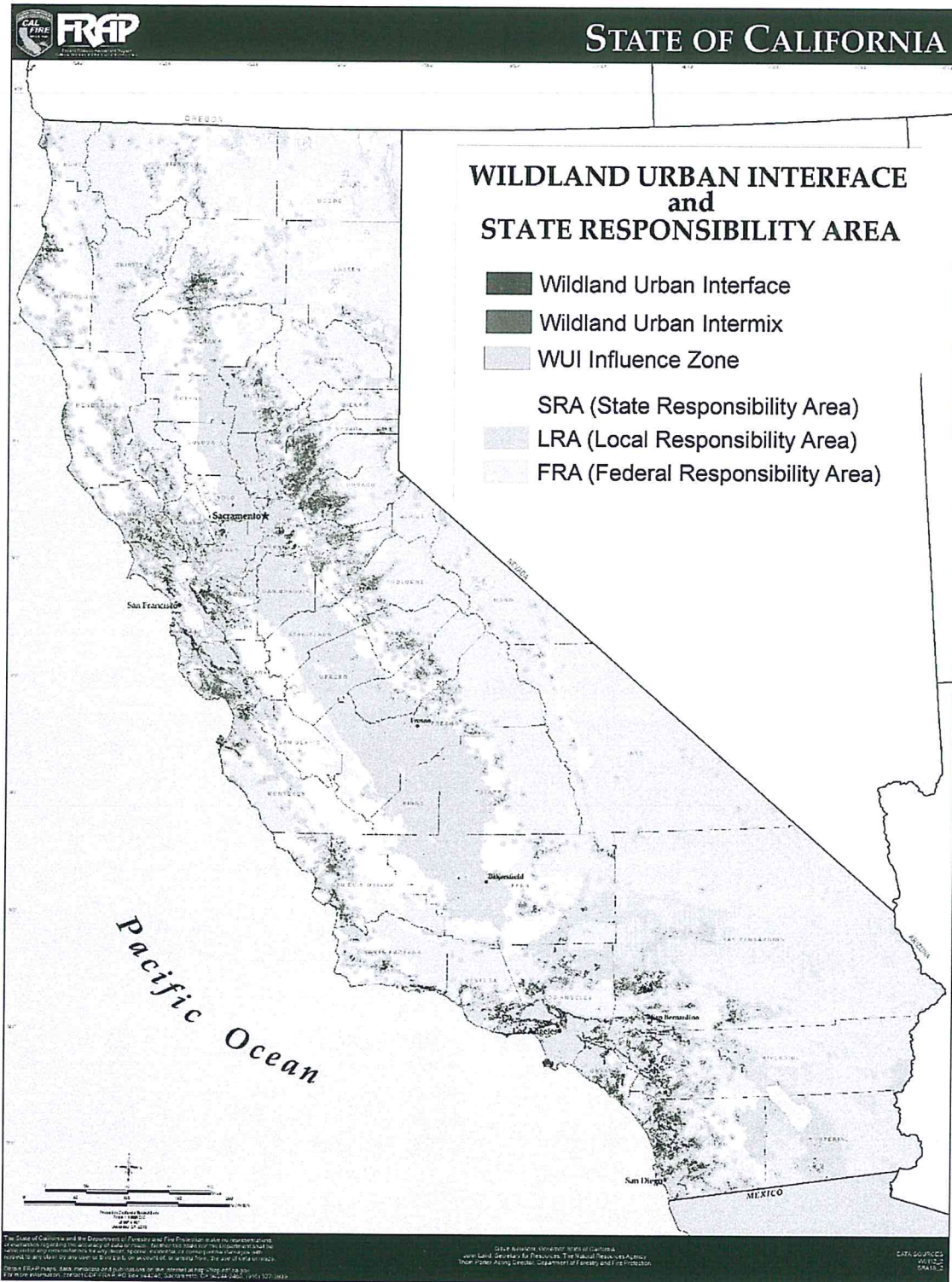


Figure 1: California's Wildland Urban Interface.

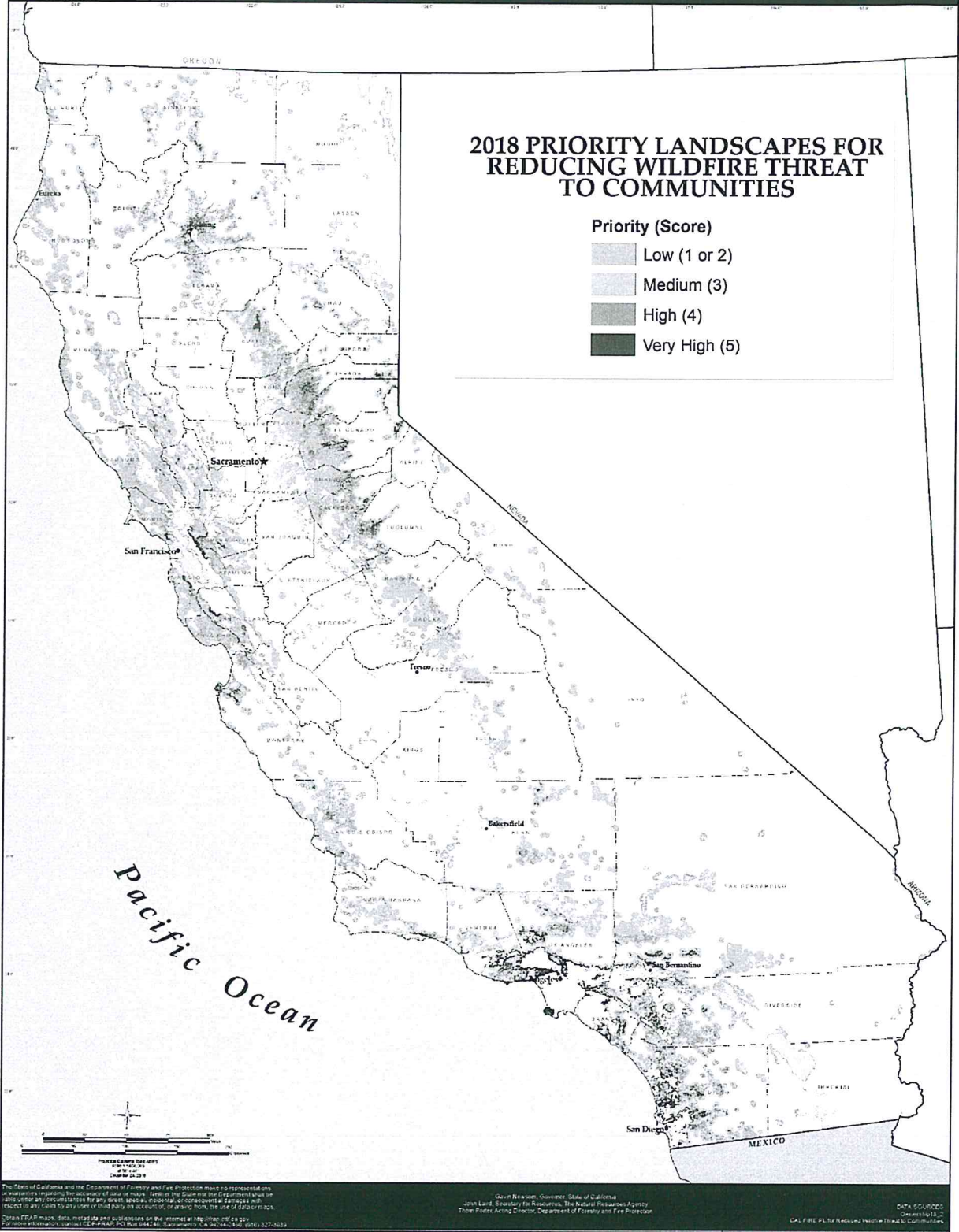


Figure 2: Priority Landscapes for Reducing Wildfire Threat to Communities.

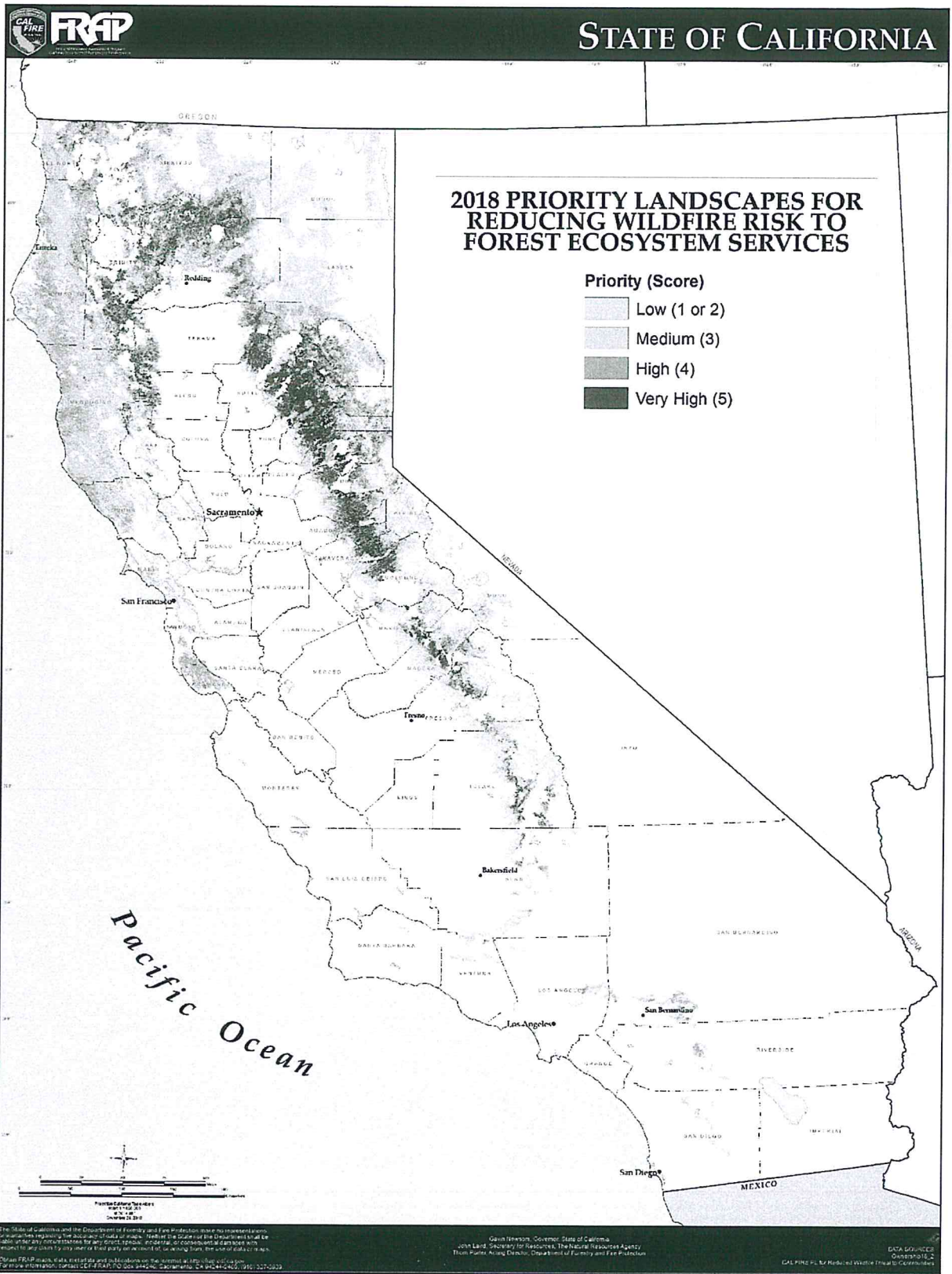


Figure 3: Priority Landscapes for Reducing Wildfire Threat to Communities.

Appendix C – CAL FIRE Priority Fuel Reduction Project List

#	Project Name	CAL FIRE UNIT	Acres	Number of Communities	Affected Population	Socio-economic Score (SES)	Fire Risk Score (FRS)	Final Summary Score
1	Hwy 44 Fuel Break	SHU	1,124	3	8,833	90	86	88
2	Kings Mountain Roadside	CZU	467	18	271,096	88	84	86
3	Rush Creek	FKU	181	1	2,973	71	99	85
4	San Juan Canyon Fuel Reduction	BEU	2,277	4	54,067	116	53	85
5	Martin Ranch Fuel Break	LMU	57	4	3,957	69	98	83
6	Santa Barbara Foothill Community Defensible Space	SBC	1,960	5	127,516	98	64	81
7	Musick Fuel Break	FKU	393	5	12,677	62	95	79
8	Bridgeville FR	HUU	18	1	4,143	66	87	76
9	North Orinda Fuel Break	SCU	1,760	30	561,223	96	56	76
10	West Redding Fuels Reduction	SHU	3,091	7	114,607	84	67	75
11	Guatay Community Fuel Break	MVU	128	15	221,282	85	66	75
12	China Gulch Fuel Break	SHU	530	8	88,610	84	66	75
13	Forbestown Ridge	BTU	1,673	8	14,950	92	58	75
14	North Fork American River Fuelbreak	NEU	4,373	13	77,319	65	84	74
15	Shaver Springs	FKU	78	4	12,677	62	86	74
16	El Granada Quarry Park Fuel Break	CZU	250	10	100,433	85	62	73
17	Blue Rush Fuel Break	FKU	82	1	2,973	71	75	73
18	State Route 17 Fuel Break	SCU	454	8	72,462	58	88	73

#	Project Name	UNIT	Acres	Number of Communities	Affected Population	Socio-economic Score (SES)	Fire Risk Score (FRS)	Final Summary Score
19	Painted Cave Community Defensible Space	SBC	1,742	7	84,232	79	66	73
20	Willits Fuels Reduction	MEU	11,965	3	13,120	88	55	72
21	San Marcos Pass	SBC	3,096	7	84,342	79	62	70
22	Grist Fuel Break	MMU	102	3	13,097	79	60	69
23	Crest Community Fuel Break	MVU	60	3	5,278	71	66	68
24	Beal Fuel Break	FKU	728	6	12,677	62	74	68
25	Aptos, Buzzard, Hinkley Ridgetop and Roadside	CZU	1,036	16	112,505	73	58	66
26	Ukiah Fuels Reduction	MEU	26,541	10	39,195	95	34	65
27	Lake Shastina Fuels Treatment	SKU	759	3	7,231	87	36	62
28	Ponderosa West Grass Valley Defense Zone	NEU	1,238	9	54,776	67	56	61
29	Big Rock Prescribed Burn	LAC	431	8	44,440	52	66	59
30	Metcalf Gap	MMU	44	4	10,131	79	37	58
31	Palo Colorado Fire Access Roads	BEU	6,843	4	9,556	77	37	57
32	Laurel Springs-Hennicksons Ridge	BEU	4,368	1	5,933	64	48	56
33	Elk Creek Fuel Break	TGU	953	2	4,868	98	3	50
34	Palo Corona Fuel Reduction	BEU	10,428	9	59,585	82	11	46
35	Highway 41 Vegetation Management Plan	MMU	4,621	7	28,737	84	4	44