

# Wildfire Risk Governance Committee

June 6<sup>th</sup>, 2022

**Executive Sponsor(s):** Sumeet Singh (EVP, Chief Risk Officer & Chief Safety Officer)

**Author(s) & Affiliation:** Andrew Abranches (Sr Director, Wildfire Risk Management)

# 6/6 WRGSC Decision Outcomes

## Decision(s) and Result(s)

Workstream	Decision	Description	Vote Results	Result	Date of Approval
EPSS	Approve recommended Multi-Model Trawling Method	<b>Decision A:</b> Recommend to approve change to Multi-Model Trawling Method for EPSS Enablement for Criteria approved in decision B.	<b>Yea:</b> Sumeet Singh, Mark Esguerra as delegate for Joe Bentley, Christopher Pezzola as delegate for Stephen Cairns, Jason Regan as delegate for Peter Kenny, Mark Quinlan  <b>Abstain (absent):</b> Wad Smith, Ronald Richardson	Approved	6/6/2022
EPSS	Approve recommended Option 2	<b>Decision B:</b> Recommend to approve Option 2 from the three presented options of selection of EPSS Enablement Criteria  <u>Option 2:</u> Enable EPSS for all circuits unless Disable Criteria met: R1 and damp or calm (Year-Round). EPSS can only be disabled when the FPI is R1 (low) and WS <19mph or RH>75% or DFM>9%	<b>Yea:</b> Sumeet Singh, Mark Esguerra as delegate for Joe Bentley, Christopher Pezzola as delegate for Stephen Cairns, Jason Regan as delegate for Peter Kenny, Mark Quinlan  <b>Abstain (absent):</b> Wad Smith, Ronald Richardson	Approved	6/6/2022

# Safety



## Earthquake

*Duck, Cover, & Hold*



## Emergency Plan & Exit Strategy

*Have a plan for yourself and your household*



## 24/7 Nurse Care Line

*If you experience a work-related discomfort or injury, call 1-888-449-7787 and notify your supervisor.*



Wash your hands!



Wear a Mask



Practice social  
Distancing

### Get vaccinated—it's safe, effective, and free

Appointments are available for people with a high chance of exposure, and those 65 or older. Sign up at [myturn.ca.gov](https://myturn.ca.gov) or call (833) 422-4255 to find out if it's your turn. If you're eligible, you can schedule an appointment, or register to be notified when one is available.



[Sign up for the vaccine](#)

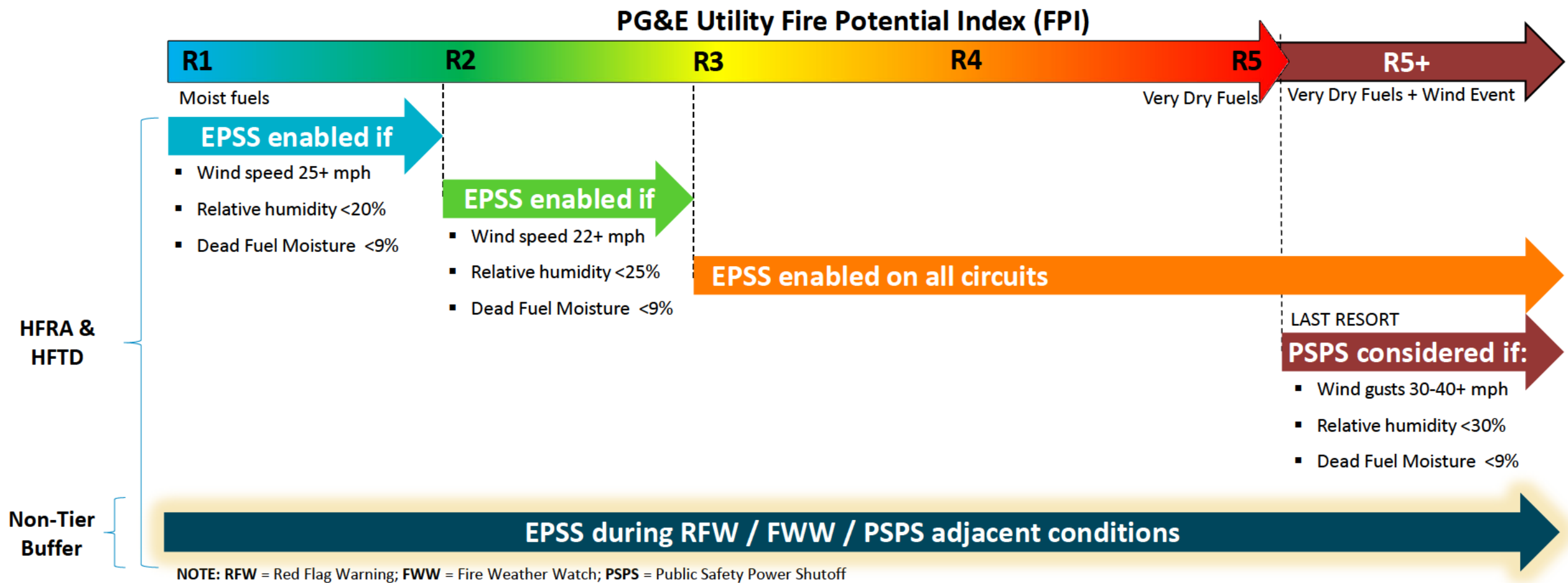
# Meeting Agenda

Date	6/06/2022	
Desired Outcomes	<ul style="list-style-type: none"><li>Decision: EPSS Criteria</li></ul>	
<b>Meeting Agenda</b>		
What – Content	Who - Facilitator(s)	Slides
Agenda and Safety Moment	[REDACTED]	1-3
EPSS Criteria	Scott Strenfel	4-13
Open Action Items	-	14-25
Appendix	-	26-35

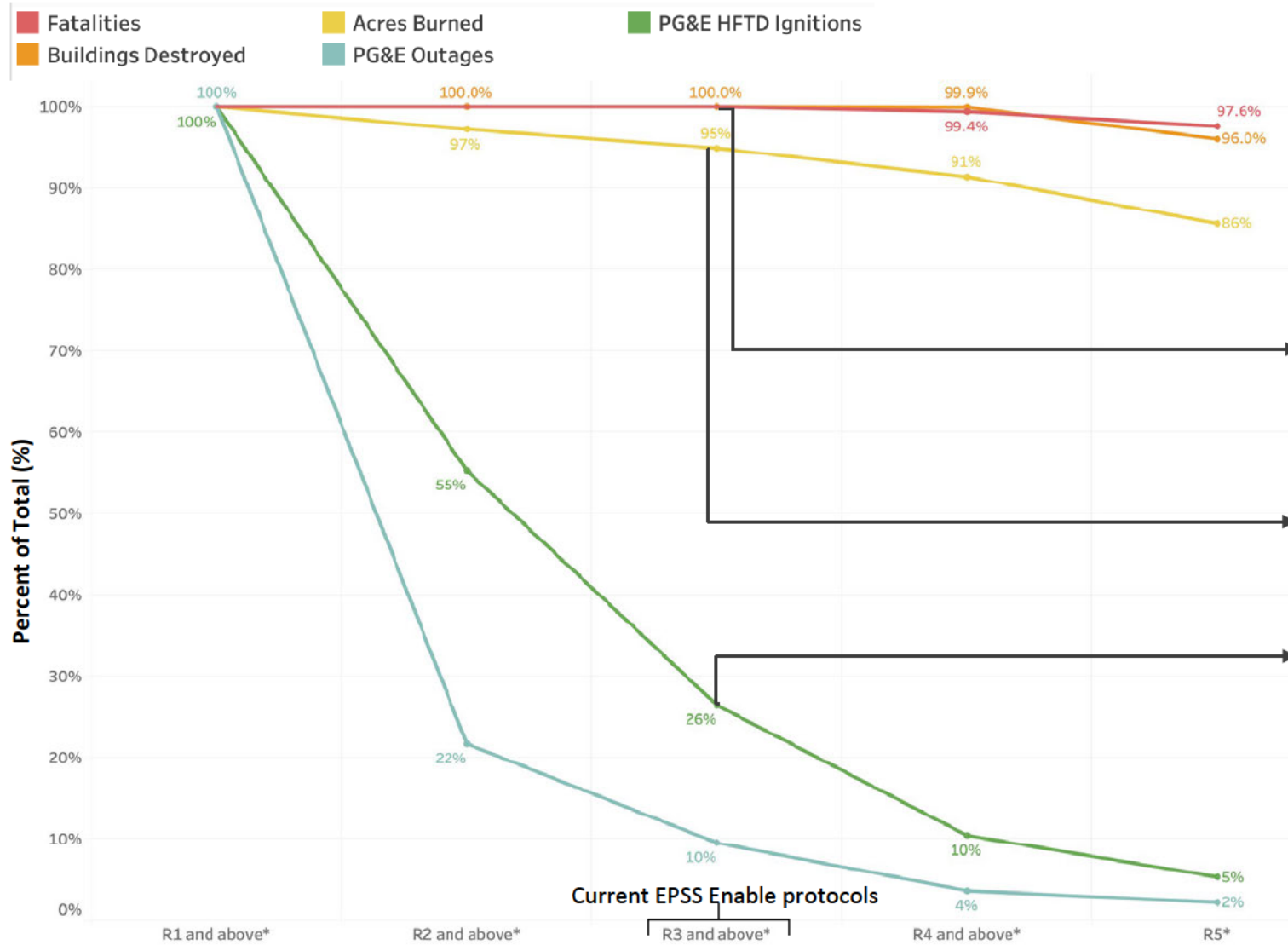
**DECISION:  
EPSS CRITERIA**

# Background: Current EPSS Enable Protocols

EPSS is enabled per circuit if the day-of-forecast meets the following criteria



# Background: Outages, Ignitions and Consequences by FPI Ratings\*



EPSS criteria were analyzed for historical fire consequences<sup>1</sup>, ignitions<sup>2</sup> & outages<sup>3</sup>. This sensitivity analysis informed our current EPSS criteria. EPSS criteria were designed to capture fires of consequence.

Examining historical fires, the current EPSS criteria would have been in effect for fires resulting in 100% of fatalities and buildings destroyed<sup>1</sup>.

Examining historical acres burned, we expect 5% of acres burned (from any cause) to not meet current EPSS criteria<sup>1</sup>.

74% of historical PG&E HFTD ignitions occurred below current EPSS criteria<sup>2</sup>.

EPSS criteria would need to be adjusted to address the remaining 5% of acres burned<sup>1</sup> and 74% of HFTD ignitions<sup>2</sup>.

\*or minimum Fire Potential Conditions (mFPC) or (R1 & R2) windy and dry criteria

1. Fatalities, Structures Destroyed, Acres burned based on 2,437 historical fires >100 acres from 2012-2020 of **Any Cause**
2. PG&E HFTD CPUC Reportable Ignitions 2015-2020
3. PG&E HFTD Distribution Sustained & Momentary Outages 2015-2020

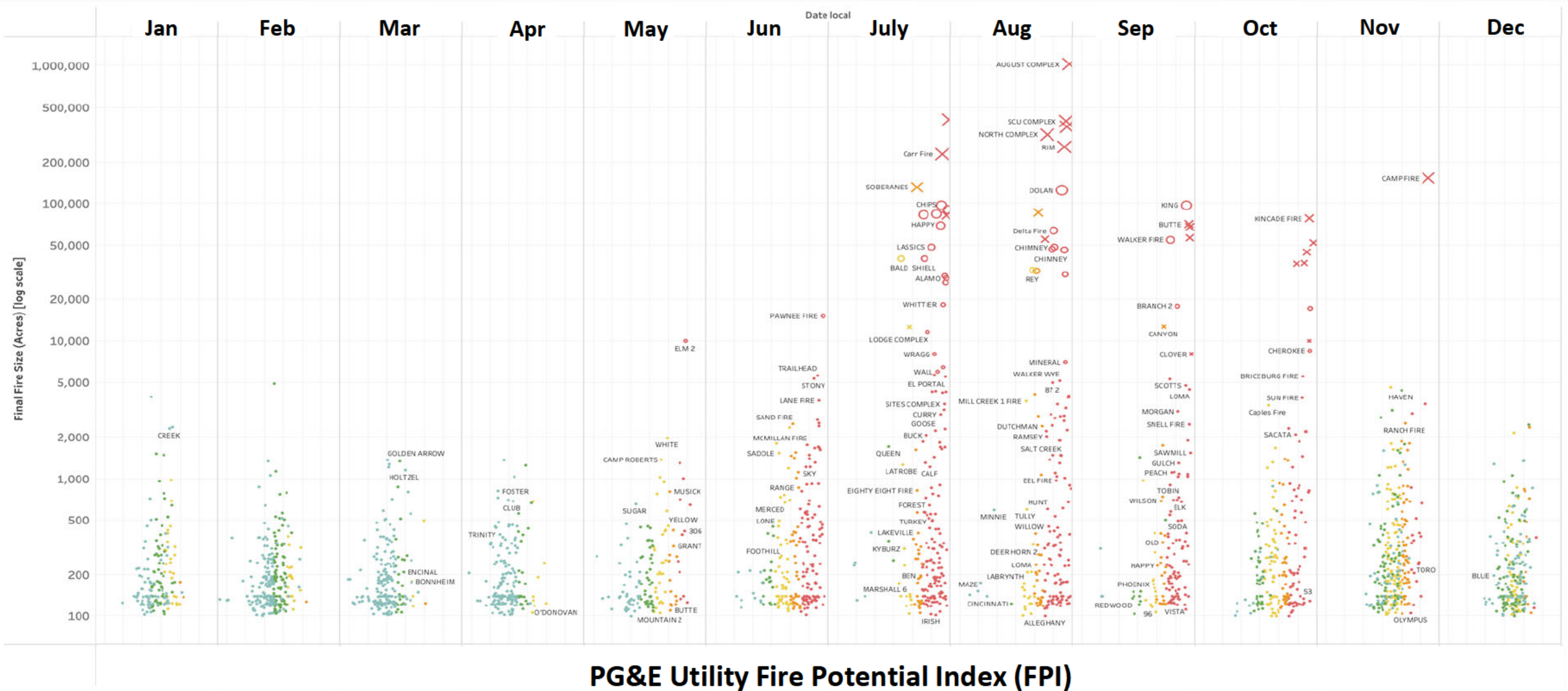
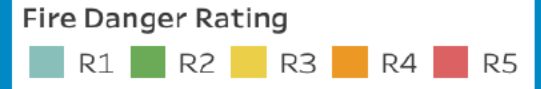
# Summary of Recent 2022 Spring Fires in California

Fire (County)	Date Started	Acres	Fatalities	Buildings Destroyed (Damaged)	FPI Rating – Daily Rating (R1 – R5 / low - high)	LFM Woody	LFM Herb	DFM 10hr	Forecast Wind Speed [mph] – Daily Max.	Forecast RH – Value at Wind Speed Daily Max.	Nearest Obs. Wind Speed (Gust) [mph] – Start hour	Nearest Obs. Relative Humidity – Start hour	NWS Red Flag Warning	Federal GACC Fire Potential Forecast	NOAA SPC Fire Weather
<b>Coastal</b> (Orange)	5/11/2022 2:51 PM	200	0	20 (11)	<b>R3</b>	85%	40%	4%	13	55%	13 (24)	55%	No	Yellow	No
<b>Golden</b> (Yuba)	5/20/2022 5:18 AM	20	0	0 (1)*	<b>R3</b>	135%	69%	7%	24	27%	2(6)	45%	No	Brown	No
<b>Owens</b> (Mendocino)	5/20/2022 2:49 PM	36	0	0	<b>R1</b>	137%	179%	8%	23	23%	20 (29)	67%	No	Brown	No
<b>Old Fire</b> (Napa)	5/31/2022 3:35 PM	570	0	0	<b>R2</b>	116%	57%	8%	17	28%	5 (11)	20%	No	Yellow	No

Between 2012 and 2020 an average of one fire from any source occurs per day during **R1** or **R2** conditions in California. Historically<sup>1</sup>, none of these **R1** or **R2** fires have resulted in buildings destroyed or fatalities.

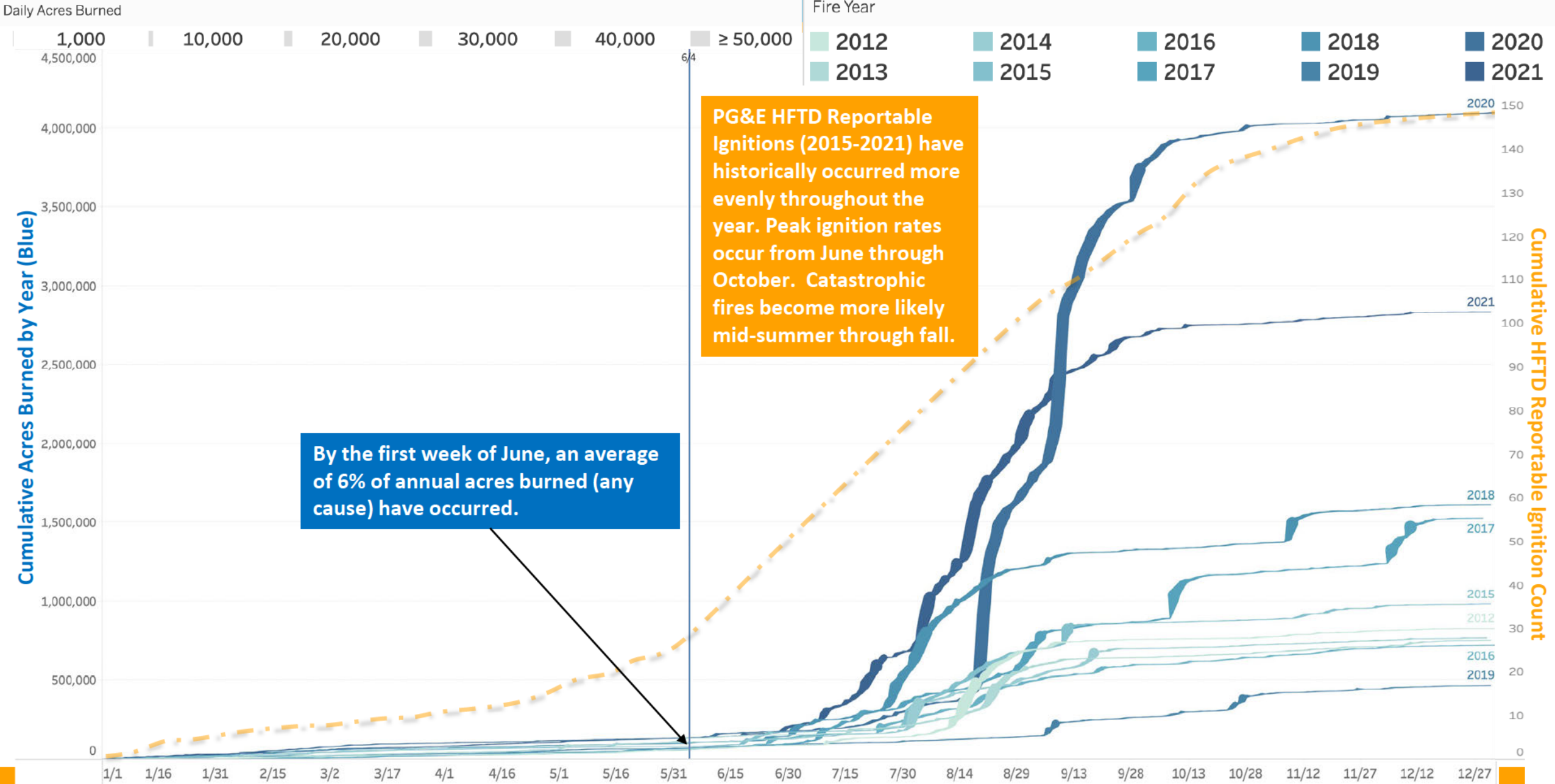
# Acres Burned vs FPI for Fires >100 Acres from 2012-2020

## Split by Month. Colored by Fire Danger Rating.





# Cumulative Acres Burned for Fires of Any Cause by Year (2012-2021) and Avg. Cumulative PG&E HFTD Reportable Ignitions (2015-2021)



## A. Support to change to Multi-Model Trawling Method for EPSS Enablement for Criteria approved in B.

*Expands the number of forecasts referenced to make EPSS enable/disable decisions and anchors on the most conservative forecast. Results in more circuits EPSS enabled. Applied to each option in B.*

## B. Selection of EPSS Enablement Criteria from Three Options

*Changes the EPSS protocols. Could result in significantly more circuits being EPSS enabled.*

# EPSS Criteria: Expected Outcomes

Results based on Historical Fires, Ignitions & Outage Occurrence combined with EPSS Ignition Mitigation Effectiveness & Customer Reliability Impacts

EPSS Criteria	Expected Acres Burned Mitigated	Expected Buildings Destroyed Mitigated	Expected Fatalities Mitigated	Expected PG&E HFTD Ignitions Mitigated	Expected PG&E HFTD Sustained Outage Increase	Expected PG&E HFTD Customer Minutes Interrupted Increase
Option 1	70.2%	74%	74%	20%	5%	42%
Option 2	72.0%	74%	74%	41%	11%	98%
Option 3	72.3%	74%	74%	66%	22%	200%

## Important Considerations

**Customer Safety:** Increases in Customer Minutes Interrupted increases public and community safety & financial risks due to loss of power.

**Operational Considerations:** Increases in Sustained Outages will challenge field and control center resources to support both response to EPSS outages, while ensuring other critical work is not interrupted. Current targets of 60 minutes response and CAIDI of 240 will be at risk.

**PG&E Ignitions:** Increases in PG&E HFTD Reportable Ignitions Mitigated reduces risks from slow initial attack and resource draw down.

**EPSS Execution:** Option 2 and 3 reduce risk of fires occurring due to changing conditions or work performance errors due to less daily enable/disable and lower thresholds.

**Historical Fires:** Increases in Acres Burned Mitigated reduces risks from small fires. While those small fires below current EPSS criteria historically have not resulted in loss of structures or fatalities, absence of evidence is not evidence of absence.

**Increasing EPSS ignition mitigation effectiveness above 74% through advanced fault detection and isolation is key to mitigating further wildfire risk through EPSS.**

### Option 1\*: Use current EPSS criteria but change to conservative multi-model trawling method (Year-Round)

Multi-Model Trawling Method change if supported would also apply to Options 2 and 3.

### Option 2\*: Enable EPSS for all circuits unless Disable Criteria met: R1 and damp or calm (Year-Round)

EPSS can only be disabled when the FPI is R1 (low) and WS <19mph or RH>75% or DFM>9%

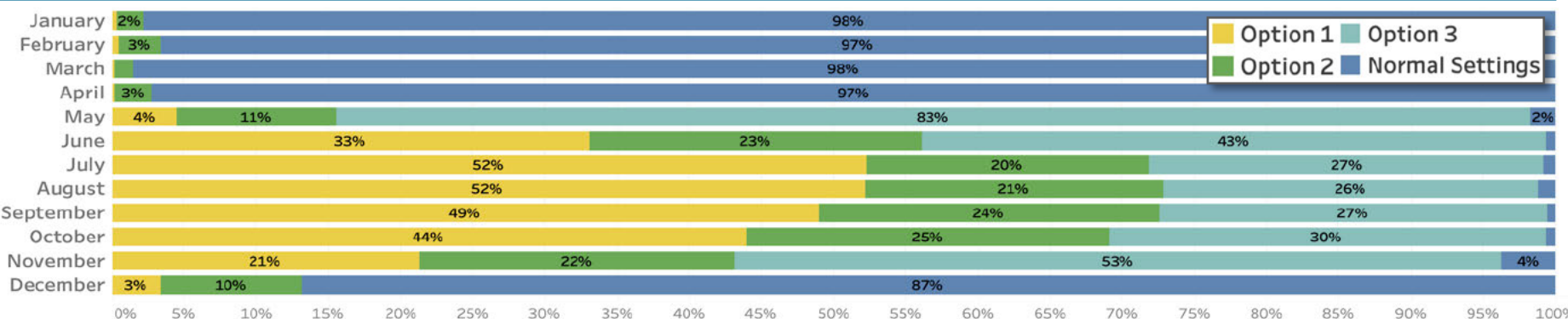
### Option 3\*: Enable EPSS for all circuits unless Disable Criteria met: R1 and damp for Summer and Fall

EPSS can only be disabled when the FPI is R1 (low) and RH>75%. Use Option 2 during Winter/Spring.

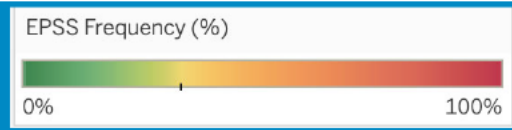
#### \*Other Notes:

- Change to Multi-Model Method Trawling to Enable EPSS based on any previous forecast.
- Maintain EPSS Enablement Criteria for FWW/RFW & Adjacent to PSPS for EPSS Enablement in HFRA-HFTD + Buffer.
- Once approved these options would be operationalized by June 13<sup>th</sup>.

The chart below shows average % circuit-days by month colored and stacked by EPSS Criteria Options based on 2017-2020 HFRA/HFTD circuits.



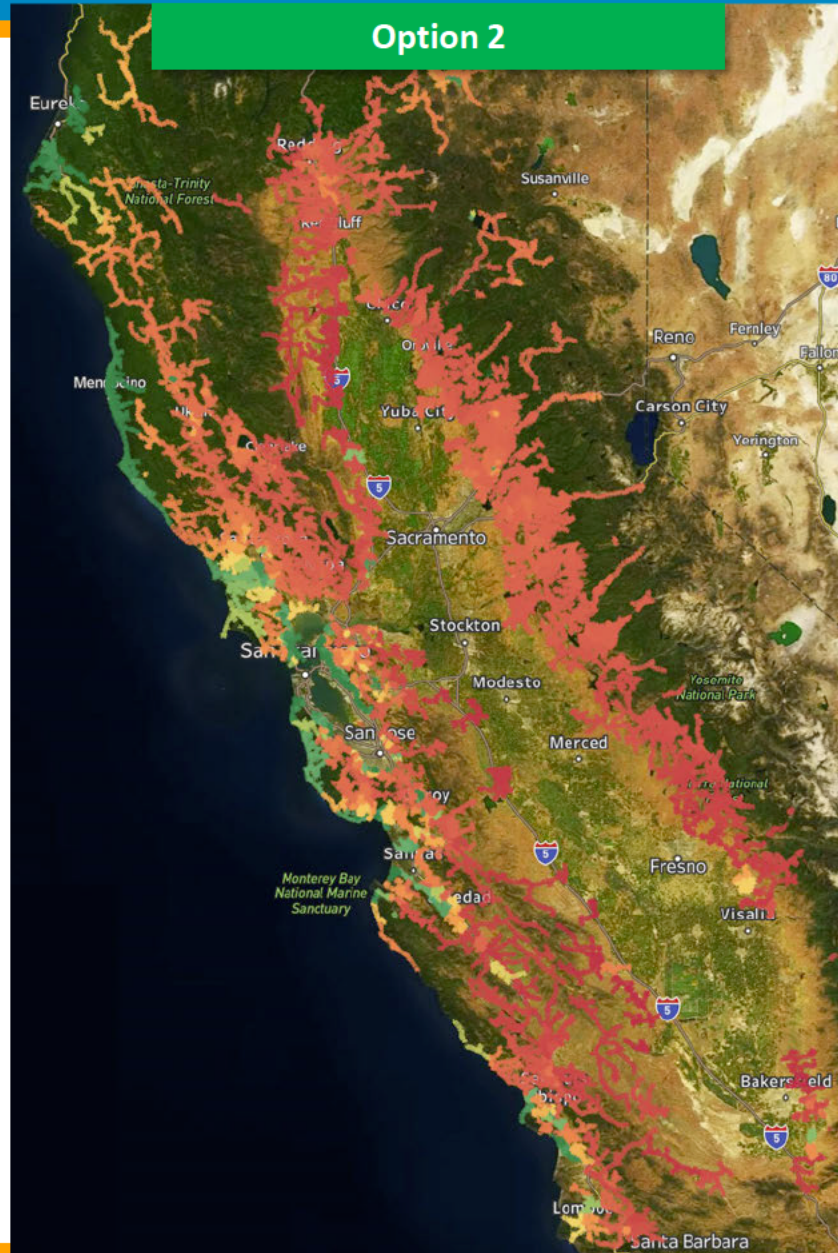
# EPSS Circuit Frequency of Options May – November, 2017-2020



Option 1



Option 2



Option 3



# Key Decision – EPSS Criteria

Approval Status	Approved
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Decision Detail
<p><b>Decision A:</b> Recommend to approve change to Multi-Model Trawling Method for EPSS Enablement for Criteria approved in decision B.</p> <p><b>Decision B:</b> Recommend to approve Option 2 from the three presented options of selection of EPSS Enablement Criteria</p> <p><u>Option 2:</u> Enable EPSS for all circuits unless Disable Criteria met: R1 and damp or calm (Year-Round). EPSS can only be disabled when the FPI is R1 (low) and WS &lt;19mph or RH&gt;75% or DFM&gt;9%</p>

Concerns and Mitigations

Approvals	Decision A	Decision B
Sumeet Singh	Approved	Approved
Joe Bentley	Approved – Mark Esguerra as delegate	Approved – Mark Esguerra as delegate
Stephen Cairns	Approved – Christopher Pezzola as delegate	Approved – Christopher Pezzola as delegate
Peter Kenny	Approve – Jason Regan as delegate	Approve – Jason Regan as delegate
Mark Quinlan	Approved	Approved
Wade Smith	Abstain- not present	Abstain- not present
Ronald Richardson	Abstain- not present	Abstain- not present

Action Items and Validations	