

Wildfire Safety Advisory Board

September 2, 2026, 1:00 p.m.



*Hybrid Meeting
Lahontan Regional Water Board
971 Silver Dollar Avenue, South Lake Tahoe, CA*

PARTICIPATION INFORMATION



Using more than one participation option may create feedback

Please begin your comment by stating your name and organization

- **Microsoft Teams:** <https://www.microsoft.com/en-us/microsoft-teams/join-a-meeting>

Meeting ID: 251 804 384 969 367 | Passcode: 76tc7RY3

- **Phone:** +1 (469) 998-6045 | Conference ID: 283 400 792#
Participants will be placed on mute in “listen-only” mode until the public comment portion of the meeting. Once the public comment portions of the meeting begin, participants may dial *5 (star five) when they wish to speak to be placed in a queue. The hosting team will unmute callers in order of request.
- **Email:** Written comments may be emailed to WSAB@energysafety.ca.gov.
- **Technical Issues:** e-mail WSAB@energysafety.ca.gov or call Unique Coleman at 916-709-3079





Meeting Materials Are Available at:

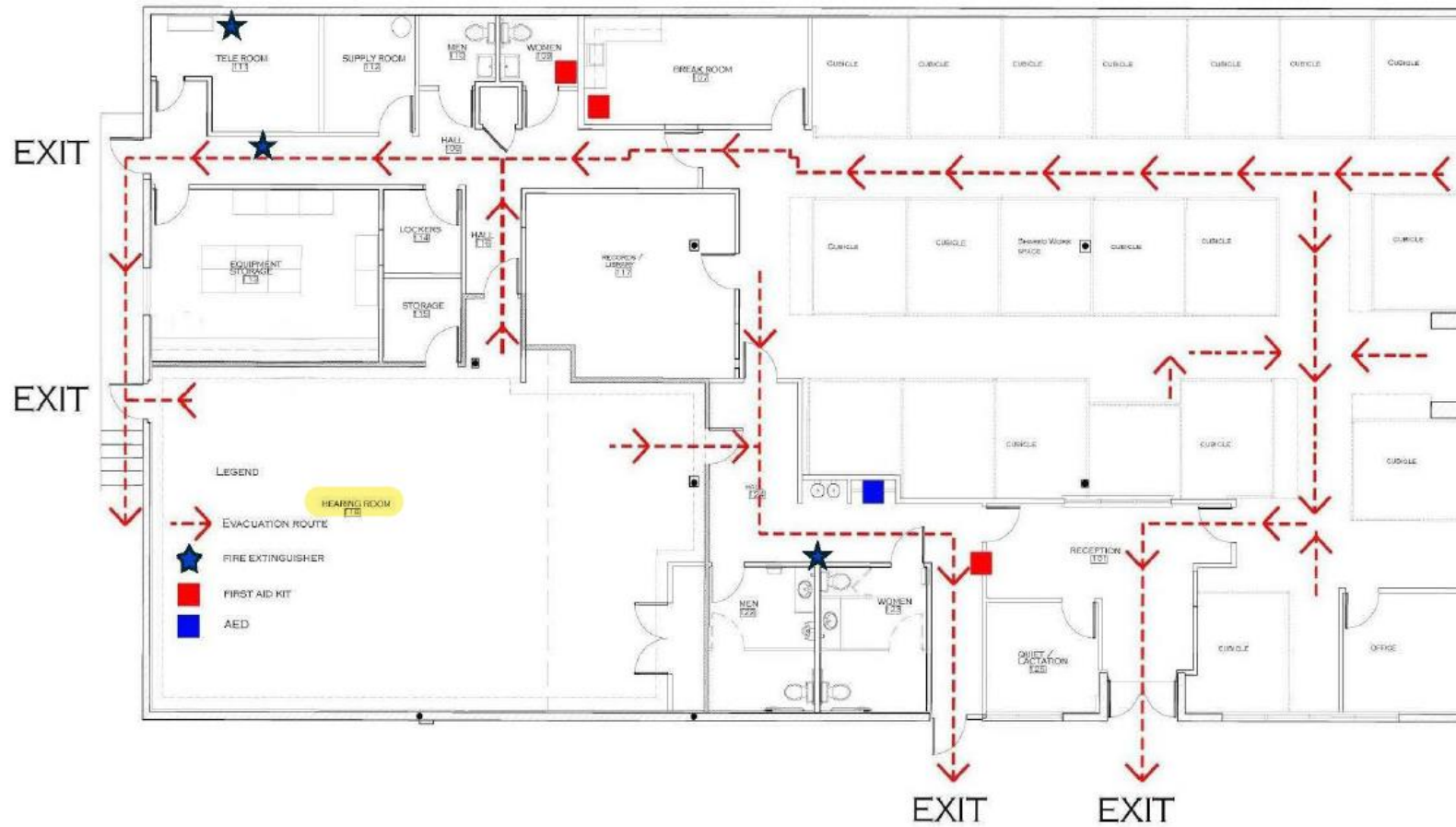
<https://energysafety.ca.gov/what-we-do/wildfire-safety-advisory-board/wsab-events-and-meetings/>

Written Public Comments Are Available at:

<https://efiling.energysafety.ca.gov/EFiling/DocketInformation.aspx?docketnumber=2026-WSAB-WSAB>



SAFETY BRIEFING



1 – CALL TO ORDER AND ROLL CALL



- **Ralph Armstrong Jr.**
- **Jessica Block, Chair**
- **Marybel Batjer**
- **Tim Haines**
- **John Mader**
- **Chris Porter, Vice Chair**
- **Dr. Alexandra Syphard**



2— Introduction of Forest Kaser, Director, Office of Energy Infrastructure Safety (Energy Safety)



3 – MEETING MINUTES



- **June 3, 2026**



4 – Board Member Reports on Site Visits



5 – ENERGY SAFETY UPDATE



Andie Biggs, Utilities Engineer

Ethan Campos, Utilities Engineer

Francis Solis, Senior Utilities Engineer

Alex Weissman, Environmental Scientist

*Office of Energy Infrastructure Safety
California Natural Resources Agency*



**PROACTIVELY
SHUNTING SPLICES
BASED ON X-RAY
INSPECTION
FINDINGS**

WHAT ARE SPLICES AND WHY SHOULD YOU CARE?

What are Splices?

- Splices are method or device used to join two segments of an electrical conductor together.
- Splices can be used to:
 - Join lengths of conductor during installation
 - Repair cuts, breaks, or defects in damaged conductors.
 - Transition between old and new conductors.

Why are they important?

- Conductor splices allow for uninterrupted current flow while maintaining the structural integrity of the line and consistent, reliable service.

How do they fail?

- Splices and conductors can fail and lead to wire down events due to:
 - Weather
 - Age
 - Foreign Contact



Adbraded Conductor



Gunshot Damage

WHAT DO TRANSMISSION SPLICES LOOK LIKE?

Automatic Splice



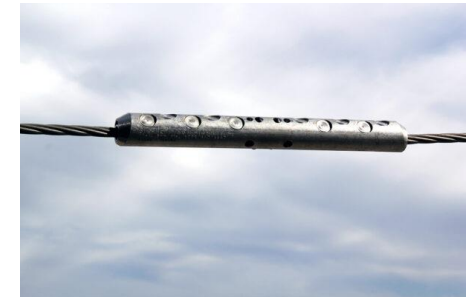
Preformed Splice



Compression Splice



Mechanical Splice



SOLUTIONS TO FAILING SPLICES = SHUNTS

- Shunts repair failing splices
 - Restores connectivity and mechanical strength
 - Can install directly over damaged/failed splices
- What's the difference between a splice and a shunt?
 - Splices connect conductor ends
 - Shunts are installed directly over existing connections



Transmission shunt installation

SCE MOVED TO A PROACTIVE SPLICE SHUNTING PROGRAM

- SCE's Activities:
 - SCE introduced the *Transmission Conductor & Splice Assessment: X-Ray* activity in its 2022 WMP.
 - From 2022-2024, this X-ray inspection program demonstrated a 55% find rate.
 - 55% is a high find rate!
 - In its Decision on SCE's 2025 WMP Update, Energy Safety required SCE to discuss its plan to mitigate the risk associated with its transmission splices in its 2026-2028 Base WMP.
- SCE's Response: proactive splice shunting program.
 - SCE discontinued its assessment program and transitioned to a proactive splice shunting program.
 - SCE is piloting this activity in 2026 and will set targets for 2027-2028 based on learnings from 2026.
 - Initial target is shunting 500 splices in 2026.



COMPREHENSIVE TRANSMISSION & DISTRIBUTION INSPECTIONS PROGRAMS

ASSET INSPECTION PRACTICES AND TECHNOLOGIES

- **Aerial Inspections**

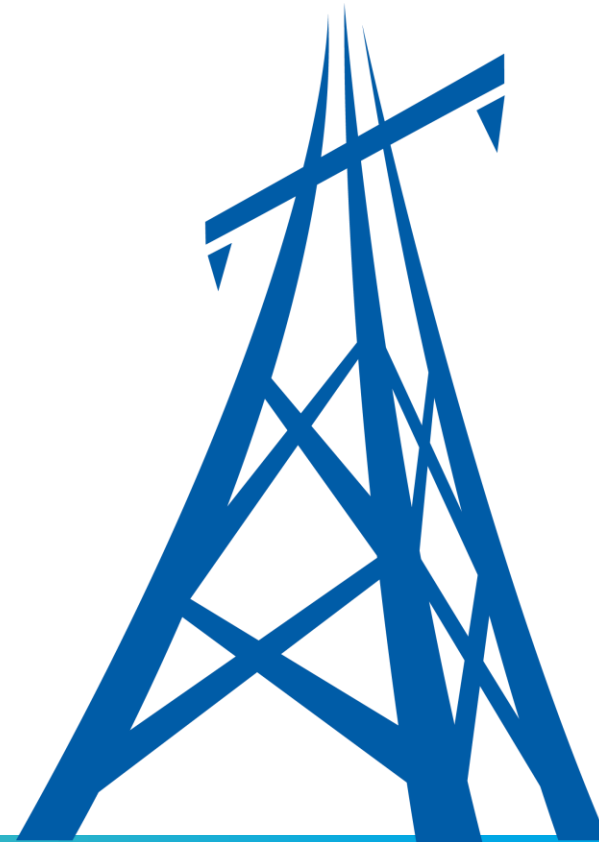
- All California investor-owned utilities (IOUs) have incorporated aerial drone technology into inspection programs.
- Aerial inspections demonstrate higher find rates than any other inspection type.

- **Inspection Frequency**

- The IOUs' inspection frequency of more thorough inspections (detailed and aerial drone) exceed GO 165 requirements.

- **Routine Infrared Inspections**

- The IOUs have widely adopted routine IR inspections for transmission, but not distribution.

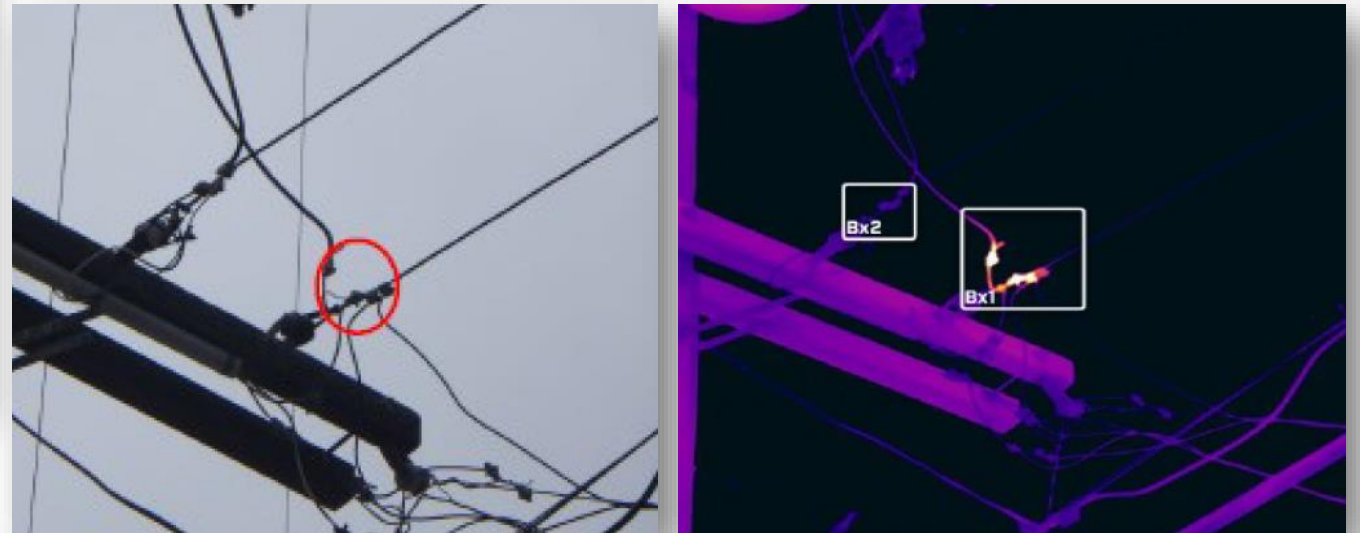


INFRARED AND AERIAL INSPECTION EXAMPLES

Example Ground vs Drone Inspection from
PG&E's 2026-2028 WMP

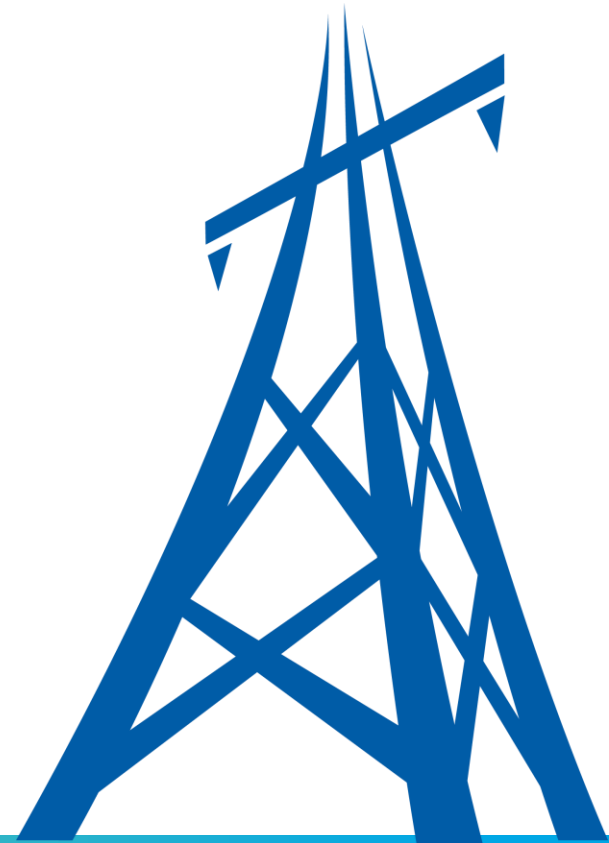


Example Ground vs IR Inspections from SCE's 2026-2028 WMP



EQUIPMENT MAINTENANCE

- California IOUs monitor equipment condition through human visual inspection and equipment is replaced upon failing an inspection, with few exceptions.
- All IOUs collect different granularity of equipment failure data, most SMJUs do not collect any.
- Connection devices are the only equipment that demonstrate both a top 5 failure rate and top 5 ignition rate across IOUs.



EXAMPLE CONNECTION DEVICES



COMPRESSION CONNECTORS



GROUNDING/EARTHING CONNECTORS



IN-LINE DISCONNECT SWITCHES



INSULATING CONNECTORS



INSULATION PIERCING CONNECTORS



MECHANICAL CONNECTORS



POWER CONNECTOR TOOLS



POWER SYSTEMS CLAMPS



POWER SYSTEMS FUSE HOLDERS



RING CONNECTORS



WEDGE CONNECTORS



COVERED CONDUCTOR AND UNDERGROUNDING

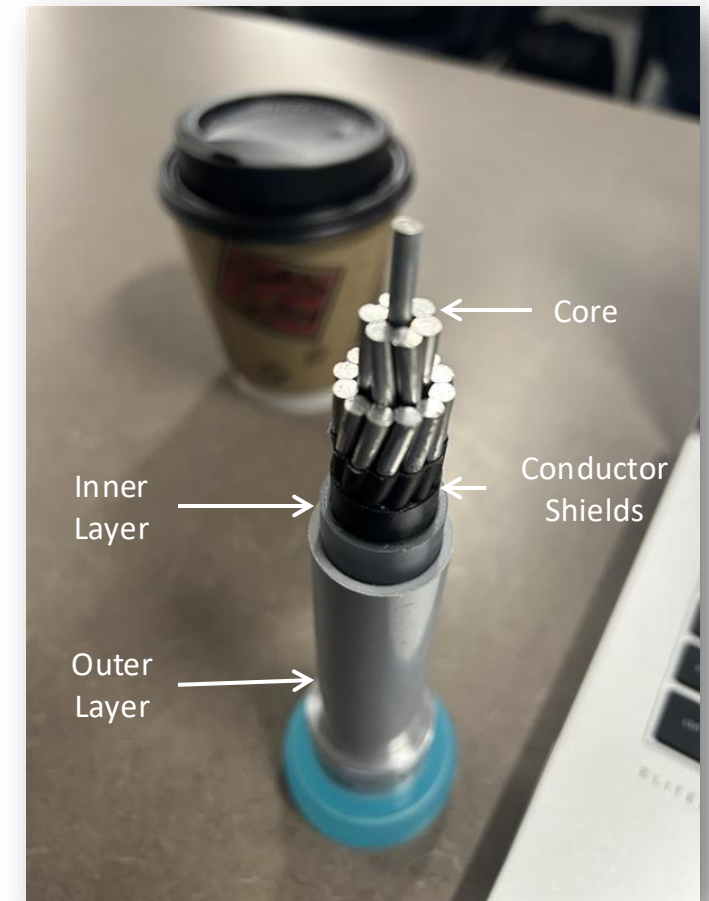
COVERED CONDUCTOR

Current State

- Covered conductor remains a core mitigation.
 - SCE: \$0.9M per mile
 - SDG&E: \$2.2M per mile
- IOUs can model effectiveness as standalone or combined with PEDS.

Challenges

- Cross-IOU: Reported CC+ effectiveness values vary meaningfully without a consistent driver-by-driver basis.
 - SDG&E 57%, SCE 60%, PG&E 79%
- Maturity: Modeling may miss key dependencies
 - non-mitigated risk drivers or upstream/downstream reliability exposure.



Aluminum Conductor Steel Reinforced

UNDERGROUNDING

Current State

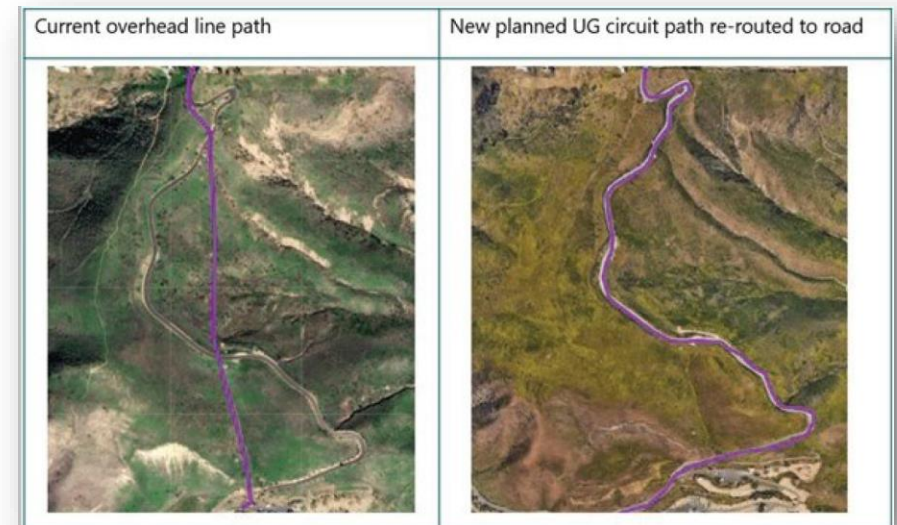
- IOUs continue to scale undergrounding in high-risk areas.
 - SCE: \$1.9M-5.2M per mile
 - PG&E: \$3.4M-6.1M per mile
 - SDG&E: \$2.6M-3.7M per mile
- Effectiveness is modeled as near-elimination of ignition drivers on converted overhead segments.

Challenges

- Scaling has outpaced clarity on cost-effectiveness when upstream segments remain overhead (outage/PSPS vulnerable)
- Planning/implementation gaps persist.
 - OH to UG conversion factors at a planning level unreliable.
 - Some utilities reduced/paused UG relative to authorized targets.

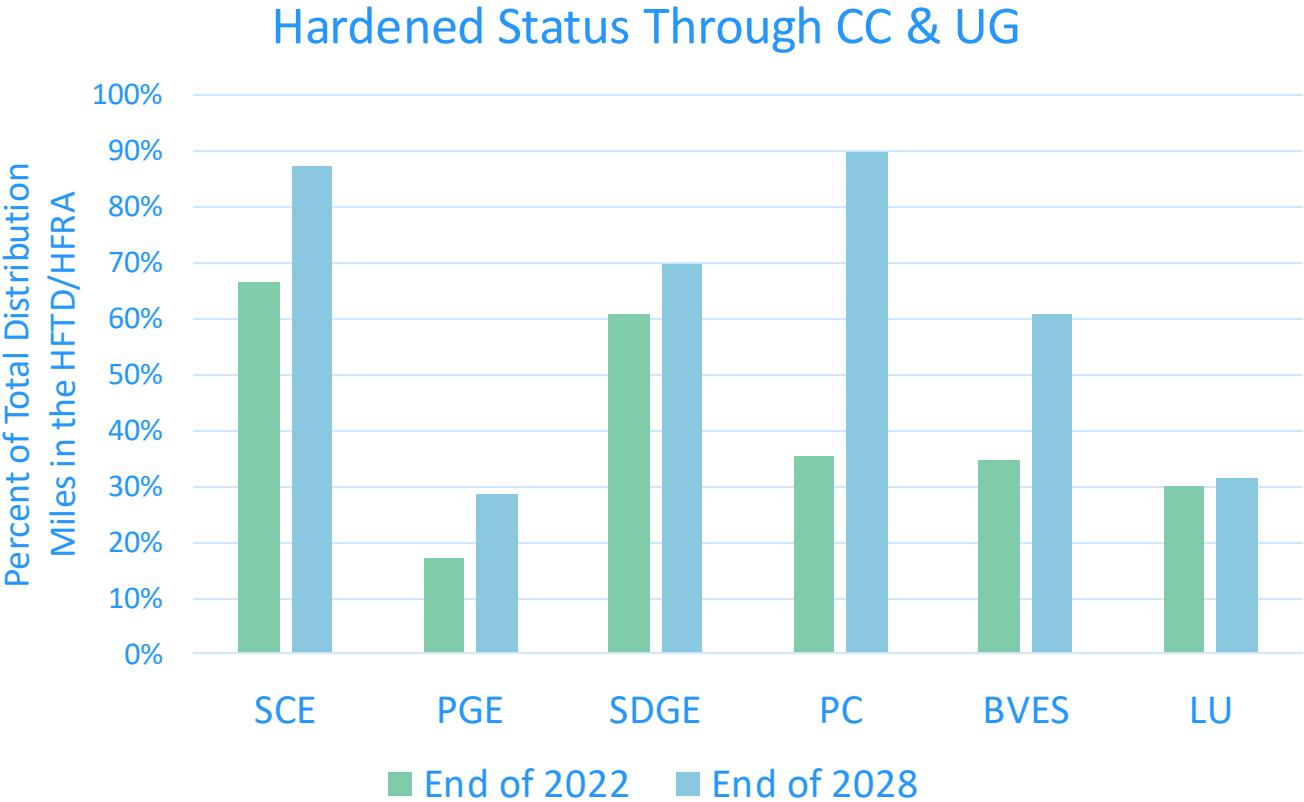


Undergrounding Conduits



Re-Routing: Overhead Lines to Undergrounding

HFTD/HFRA PRIMARY DISTRIBUTION HARDENED STATUS



	SCE	PGE	SDGE	PC	BVES	LU
End of 2022 ¹	67%	17%	61%	36%	35%	30%
Delta	20%	11%	9%	54%	26%	1%
End of 2028 ²	87%	28%	70%	90%	61%	31%

- Notes:
- 1. 2022 Status: Based on actuals.
 - 2. 2028 Status: Combination of actuals (2023–2025) and targets (2026–2028).



SITUATIONAL AWARENESS

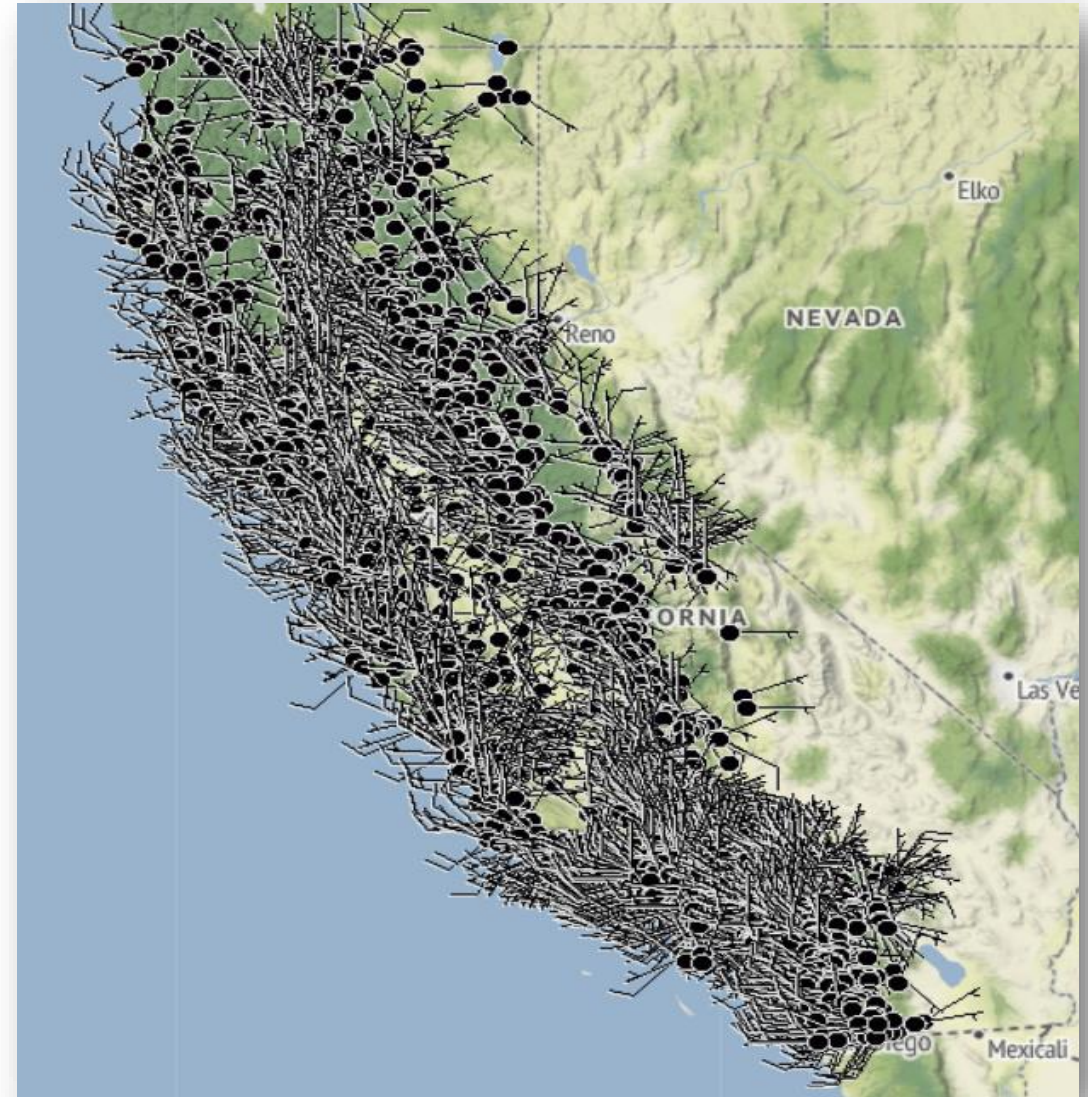
WEATHER STATIONS

- Utilities are reporting almost 100% annual maintenance for all of their weather stations.
- SDG&E and Liberty reported they will not be adding any additional stations since they feel they are at saturation levels for their territories.
- Densities now roughly 1 weather station for every 33.9 square miles across the entire state, for a total of 4,592 stations state wide.
 - 3,965 utility weather stations
 - 482 RAWS stations (Remote Automatic Weather Stations)
 - 145 NWS ASOS stations (National Weather Service Automated Surface Observing System)

WEATHER STATIONS



Pole mounted weather station

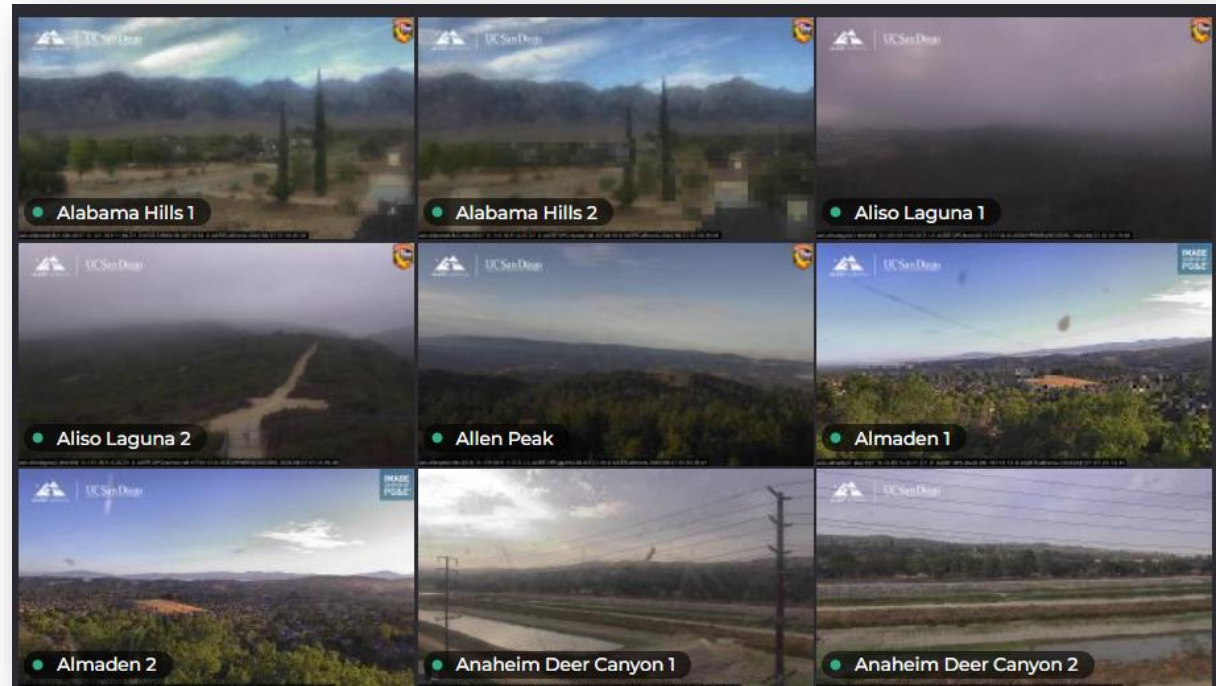
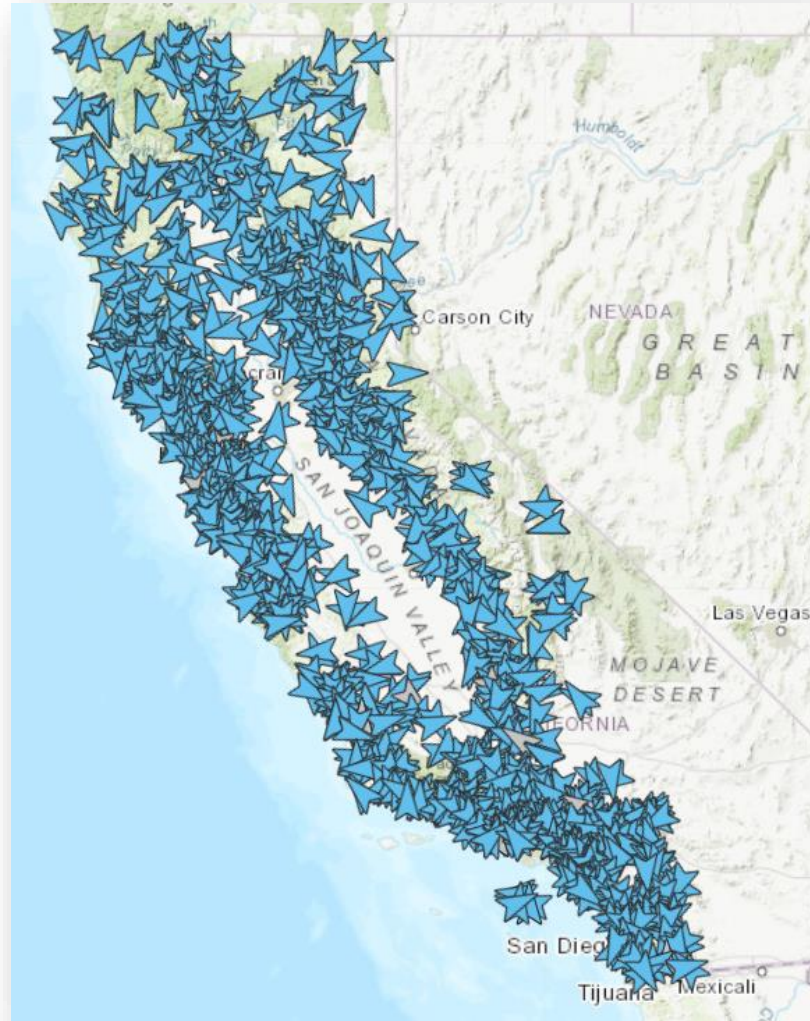


Weather stations across California

IGNITION DETECTION SYSTEMS

- ALERTCalifornia cameras
 - UC San Diego program that manages real-time monitoring through live cameras across the state.
 - Currently 1,246 ALERT cameras across the state.
 - Roughly 1 camera for every 125 square miles.
- Most IOUs only projecting to adopt 1-5 stations over the next 3 years.
 - SDG&E has already declared to be at saturation levels for their service area.
- Within 3 years, IOUs will be reaching saturation levels for camera within their territories.

IGNITION DETECTION SYSTEMS



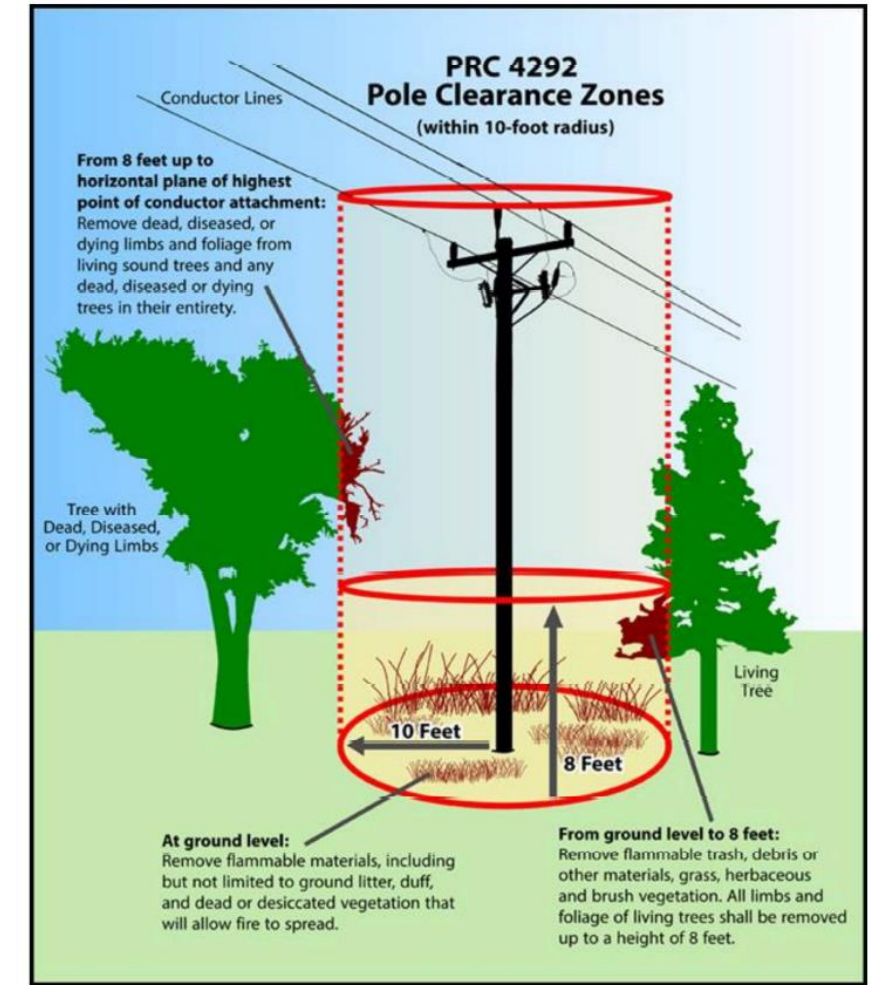
ALERTCamera locations and examples of camera feeds



VEGETATION MANAGEMENT

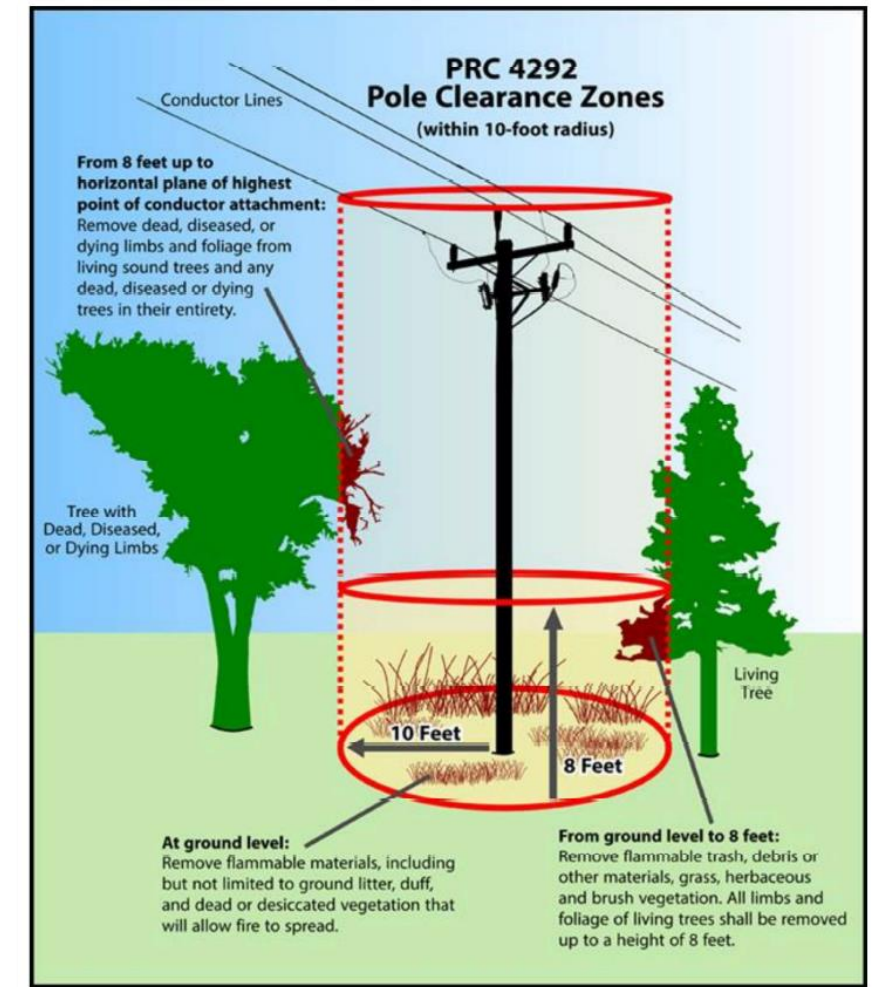
VEGETATION MANAGEMENT – POLE AND TOWER CLEARING

- Required in State Resource Areas pursuant to Public Resources Code section 4292
- SCE clears $\approx 200,000$ structures ($\approx 13\%$ of territory)
- PG&E clears $\approx 70,000$ structures ($\approx 2.5\%$)
- SDG&E clears $\approx 22,000$ structures ($\approx 4\%$)



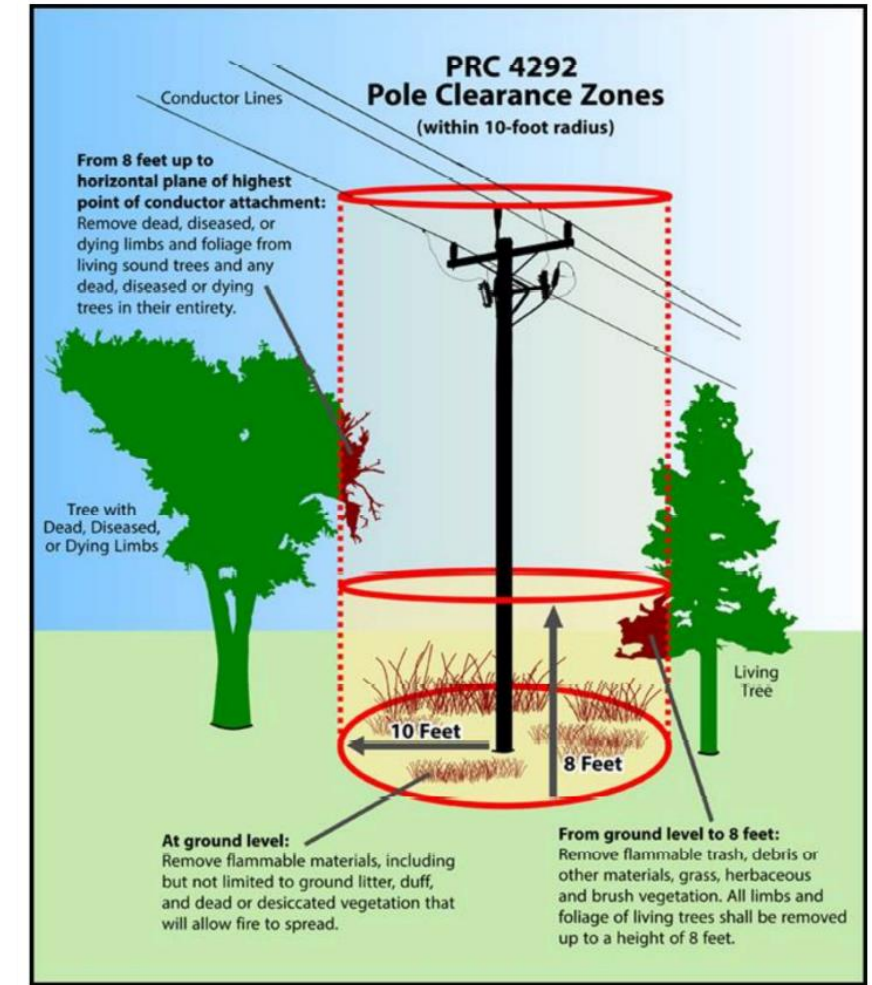
VEGETATION MANAGEMENT – POLE AND TOWER CLEARING

- ESD inspectors found 15-20% of SCE and 23-40% of SDG&E structures brushed had no electrified equipment
- ESD Policy Branch sent DR to IOUs asking about non-PRC 4292 structure clearing policies and costs
- SCE and PG&E found ignitions caused by exempt structures often occur within 10 feet of pole
- SCE and PG&E increased 2026-2028 targets
- SDG&E decreased 2026-2028 targets and ceased clearing around exempt structures



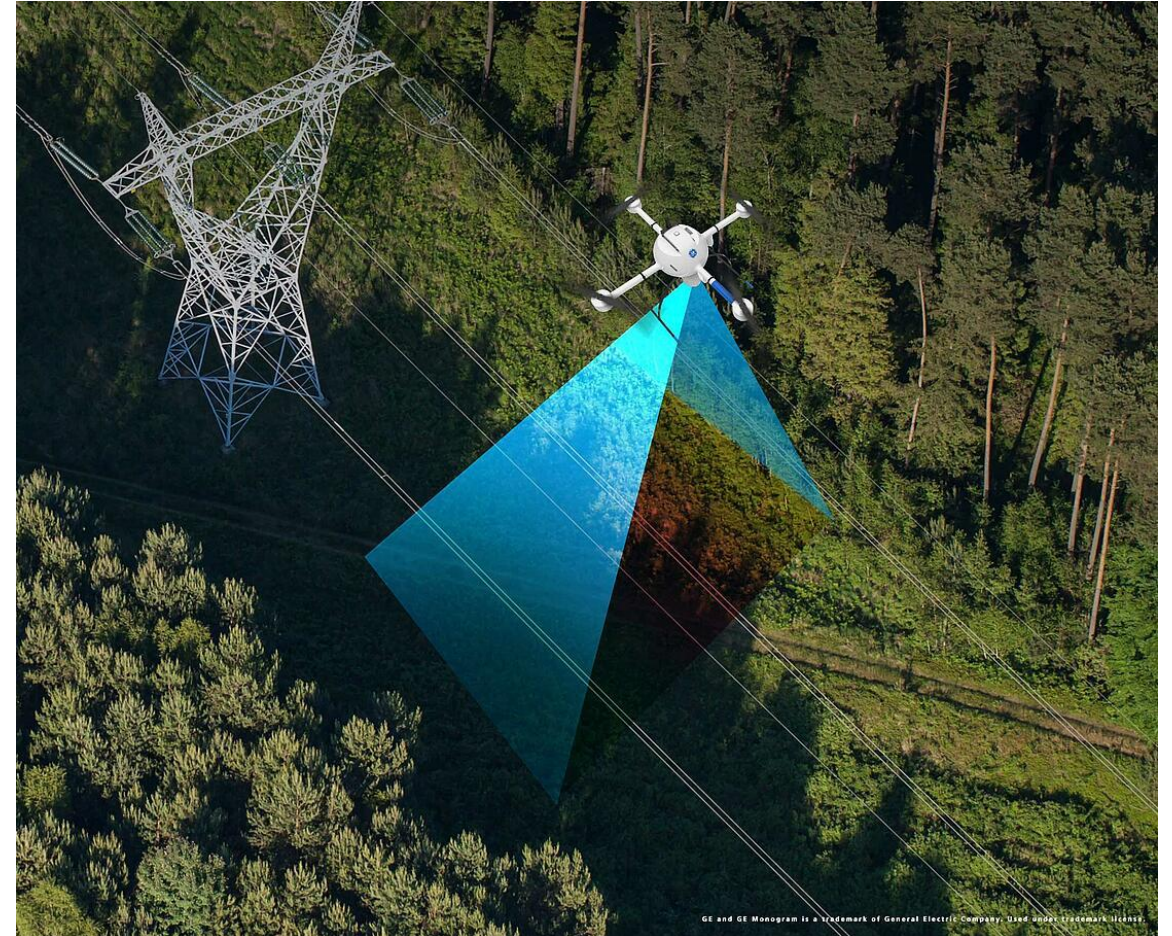
VEGETATION MANAGEMENT – POLE AND TOWER CLEARING

- Reported costs vary per structure from $\approx$ \$30 (PacifiCorp) to $\approx$ \$300 (SDG&E and PG&E)
- Recordkeeping of exempt and non-exempt structures incomplete and may require improvement



SCE IS PILOTING A REMOTE-SENSING FIRST STRATEGY

- Through 2026, SCE will use traditional and LiDAR inspections on 100% of territory.
- Starting 2027, SCE will continue with 100% LiDAR coverage while limiting traditional inspections to areas with inconclusive LiDAR results.
 - SCE foresees a small percentage of territory as LiDAR-only in 2027, with increasing LiDAR-only use in the following years.
- SCE's 2026-2028 WMP is the first plan to rely solely on remote sensing for some circuits.
 - Other ECs are likely to follow.



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6 – Process for Wildfire Mitigation Plan Review



FOCUS AREAS



- Risk Identification
- Preemptive De-energization
- Situational Awareness
- Protective Equipment and Device Settings
- Inspections
- Grid Design and Hardening
- Asset Management and Data
- Emergency Preparedness and Community Outreach
- Plan Metrics and Monitoring
- Vegetation management
- Wildfire response/consequence reduction
- Decision making



EXPECTED TIMELINE



Date	Milestone
October 2, 2026	19 Wildfire Mitigation Plans Due
November 2026	First staff draft to Board Members for comments
January 2027	Staff draft for public comments
March 2027	Board consideration of final staff draft



7 – Situational Awareness and Protective Equipment and Device Settings Report



FOCUS AREAS



- Risk Identification
- Preemptive De-energization
- Situational Awareness
- Protective Equipment and Device Settings
- Inspections
- Grid Design and Hardening
- Asset Management and Data
- Emergency Preparedness and Community Outreach
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- Vegetation management
- Wildfire response/consequence reduction
- Decision making



Situational Awareness

Shaun Richards, Senior Policy Advisor





What conditions
exist



What conditions
mean for ignition
likelihood and fire
behavior



How conditions
are likely to
develop



SITUATIONAL AWARENESS



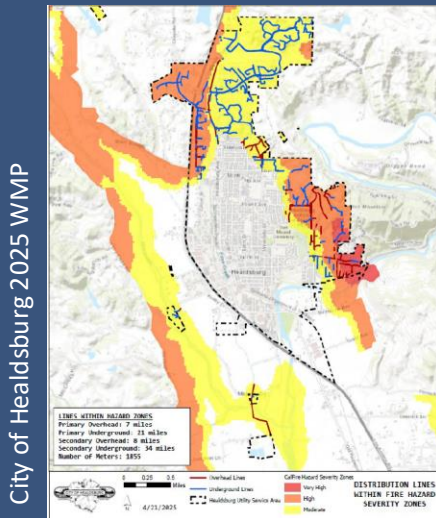
- System Knowledge
- Grid Monitoring
- Environmental & Weather Monitoring
- Fire Indices & Modeling
- Wildfire Detection
- Maintenance & Calibration



SYSTEM KNOWLEDGE

Documented knowledge:

- Accurate maps
- Asset management platforms
- Asset information and maintenance history



Experiential (or local) knowledge:

- Terrain effects on wind and fire behavior?
- Problematic lines or circuits?
- Equipment behavior under various conditions?



GRID MONITORING



Physical Conditions:

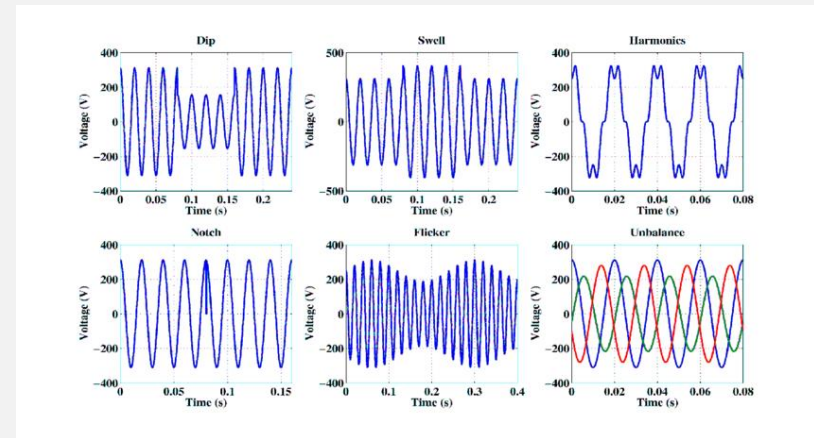
- Vegetation growing into lines
- Damaged equipment
- Stress on poles and conductors



<https://www.latimes.com/environment/story/2024-08-16/extreme-weather-touches-most-of-america-this-danger-season>

Electrical Anomalies:

- Abnormal current or voltage patterns
- Equipment stress signals in SCADA data
- Continuous monitoring tools



https://www.researchgate.net/figure/Typical-disturbances-in-electrical-grids_fig1_228661695

GRID MONITORING



<https://www.sie.coop/pole-inspections>



Field Crew
Observation
and
Reporting

<https://www.scopetnm.com/protection-solutions/phasor-measurement-unit/11-protection>



PMUs

SCADA



<https://electricalline.com/ruselectric-siemens-business-offers-customized-scada-systems>

<https://www.gridware.io/gridscope>

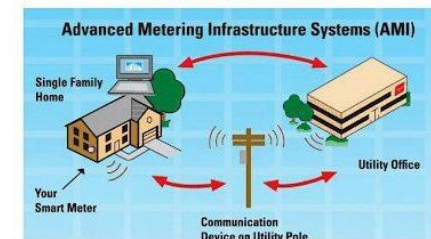


AMI and RF
Sensors

Pole
Mounted
Sensors

Integrated
Dashboard

Advanced Metering
Infrastructure



<https://envocore.com/blog/amr-vs-ami-and-when-to-utilize-each/>



<https://www.california-electrical.com/services-power-monitoring.html>

ENVIRONMENTAL & WEATHER MONITORING

Public Resources:

- Red Flag Warnings
- Fire Environment Mapping System
- Wildfire Forecast & Threat Intelligence Integration Center
- Sharing Partnerships



Building from there:

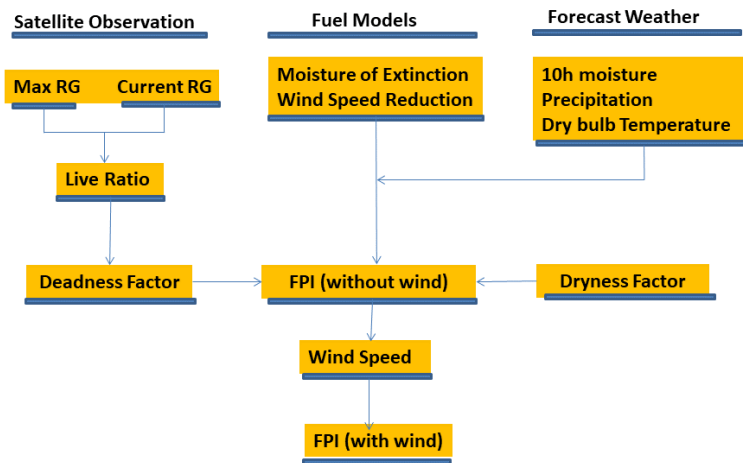
- Weather stations
- Fuel moisture sampling
- Risk forecasting tools
- Dedicated meteorological support



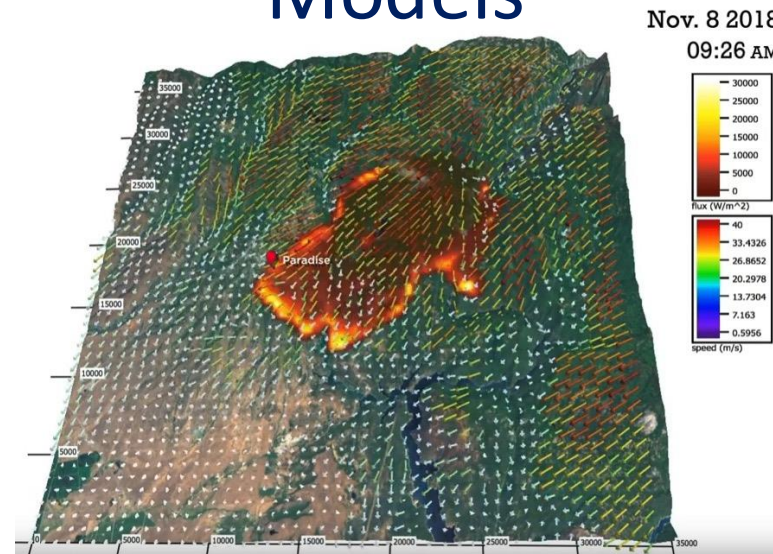


Fire Potential Indices

Fire Potential Index Data Flow



Wildfire Spread Models



Wildfire Detection



<https://www.usgs.gov/fire-danger-forecast/wildland-fire-potential-index-wfpi>

<https://wildfiretoday.com/modeling-the-spread-of-the-camp-fire/>

<https://www.mdpi.com/2071-1050/14/23/15690>



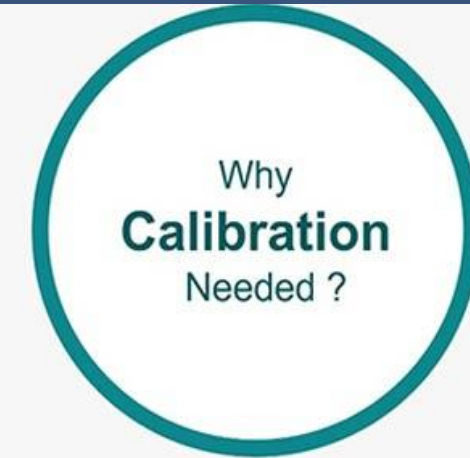
MAINTENANCE AND CALIBRATION



Considerations:

- Equipment-specific needs
- Documentation and protocols
- Communication infrastructure
- Backup procedures

<https://qbic.com.sa/blog/do-you-know-why-calibration-is-essential/>



MAINTAIN
Proper accuracy
of equipment



PREVENT
Accidents &
Incidents



INCREASE
Useful life of
equipment



ENSURE
Quality & Accurate
analysis



AVOID
Wastage &
Rework

Protective Equipment and Device Settings

Gifford Wong, Senior Policy Advisor

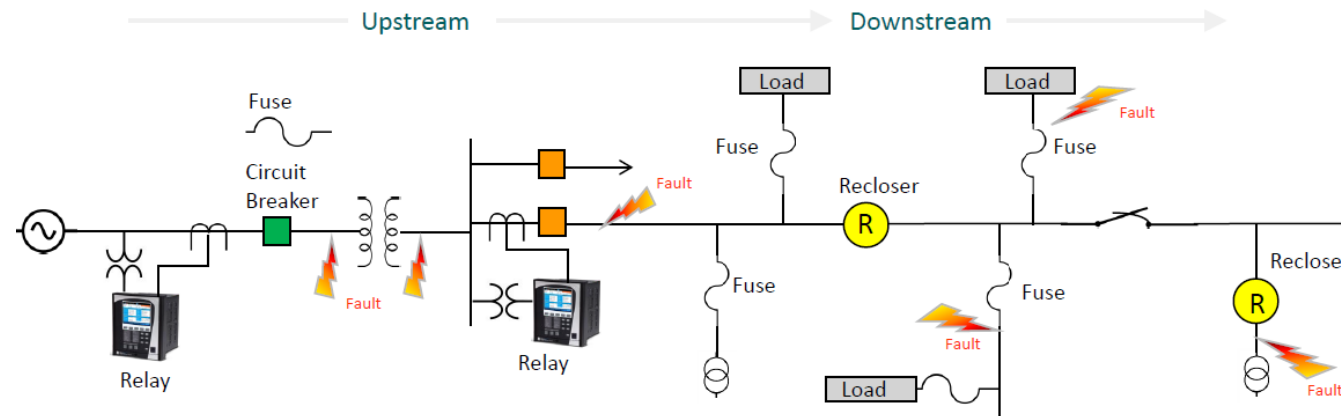


Utilities Already Have Protective Equipment



Equipment:

- Circuit breakers
- Sectionalizers and switches
- Control relays and sensing equipment



Representative equipment (ABB Eagle, Eaton NOVA, and Arcteq AQ-50)

Representative protection coordination (2023 Western Protective Relay Conf.)

Using PEDS can reduce
wildfire ignition risk



Using PEDS to Reduce Wildfire Risk



Most POUs have specific activation criteria:¹

- Twenty-four disable reclosing under certain criteria
- Four report work upgrading reclosers
- Three report adjusting recloser settings
- One is assessing PEDS implementation
- One has already implemented PEDS



[1]: data from 2025 WMPs

PEDS Can Be an Effective Mitigation



2026 YEAR BASELINE
(WITH AND WITHOUT OPERATIONAL MITIGATION)

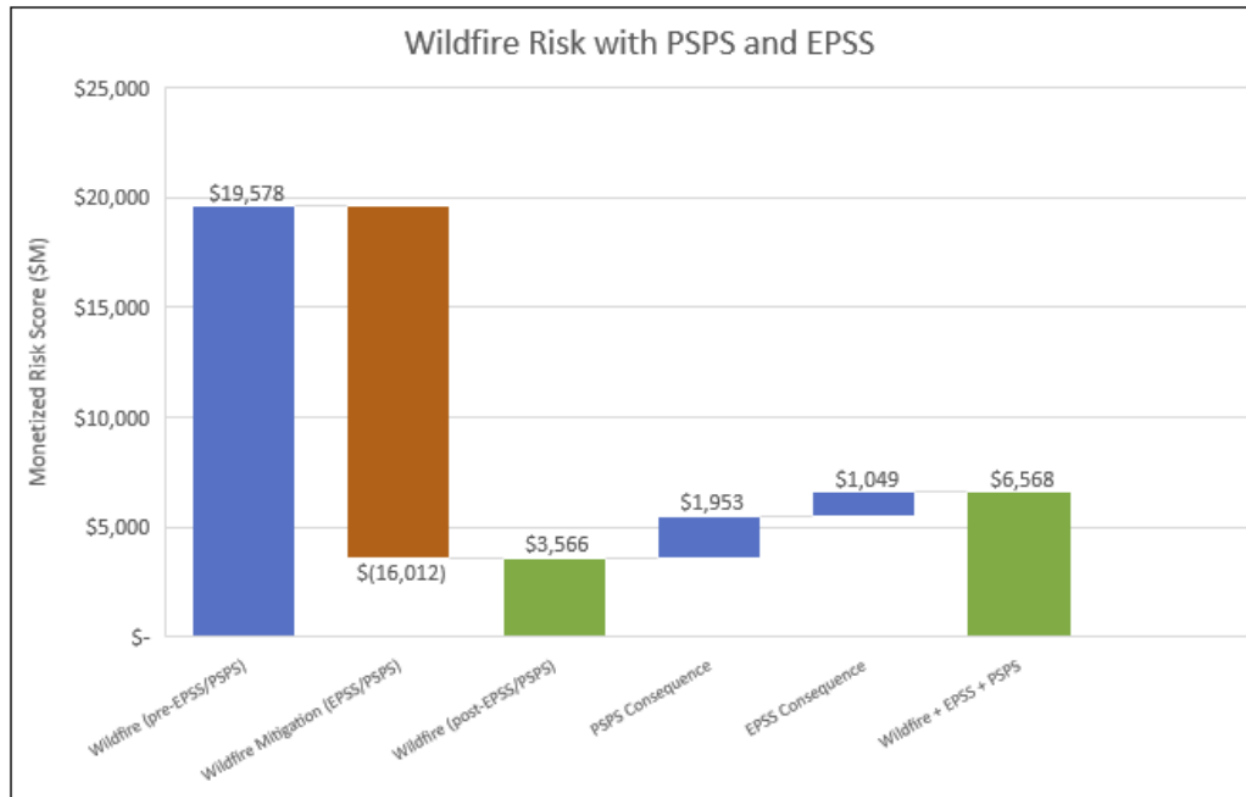


Figure from PG&E Wildfire Mitigation Plan (R3), 2026-2028

PEDS Can Be a Cost-Effective Mitigation

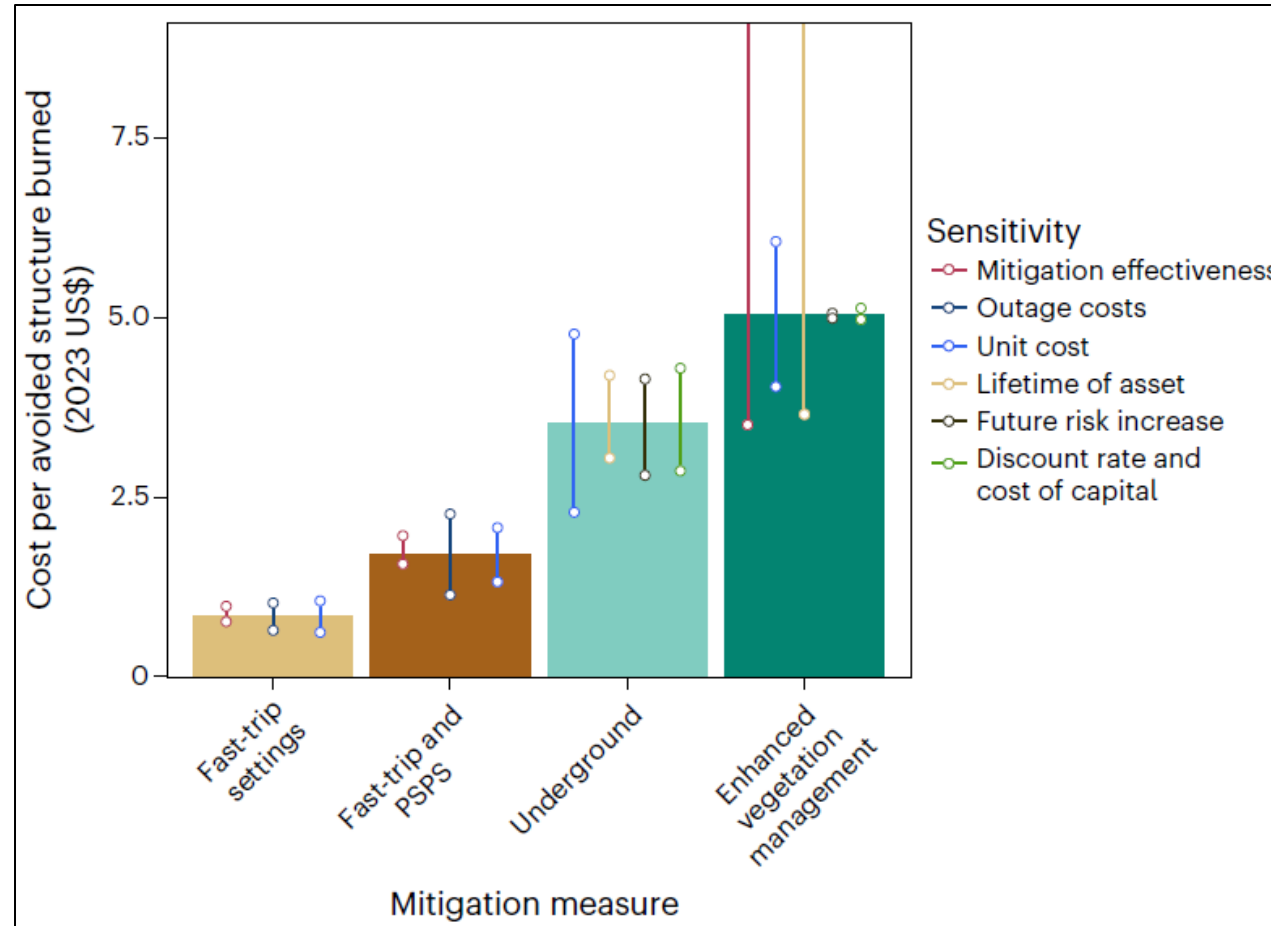


Figure from Warner et al. (2025)

Implementing PEDS — Basic



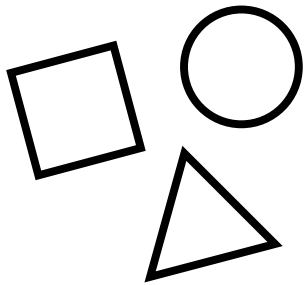
Basic PEDS:

- Hot line settings
- Automatic reclosing disabled

Activation criteria:

- Times of the year
- Local fire season or burn bans
- Weather conditions

Staffing and outreach

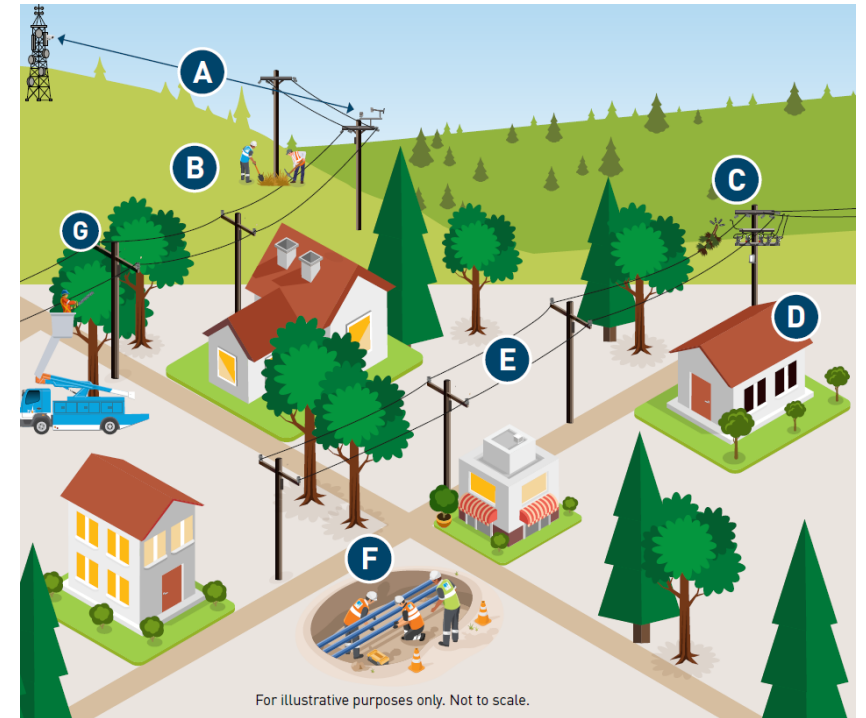
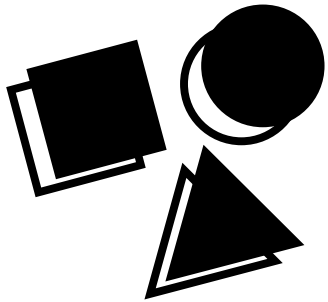


Implementing PEDS — Refine Procedures



Advancing PEDS:

- Refining activation criteria
- Refining where to use or install PEDS



Representative graphic from PG&E's *Guidebook for Utilities* (2026)

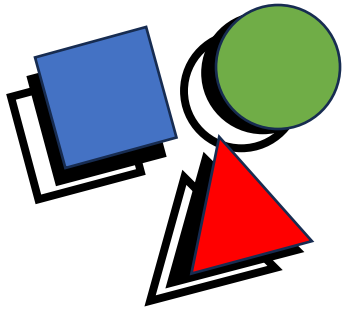


Implementing PEDS — Refine Procedures

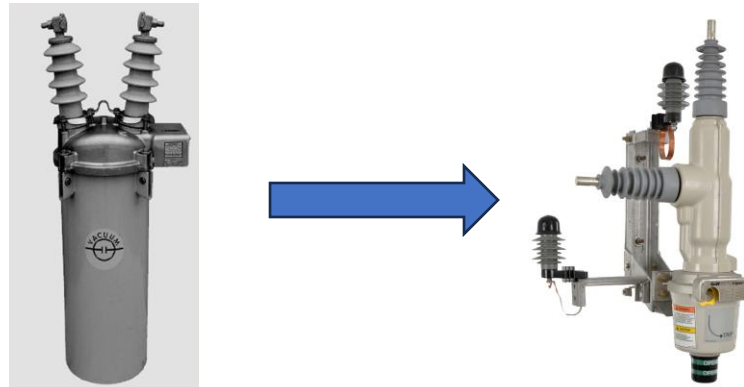


Advancing PEDS:

- Refining activation criteria
- Refining where to use or install PEDS



Utilities can upgrade equipment and devices

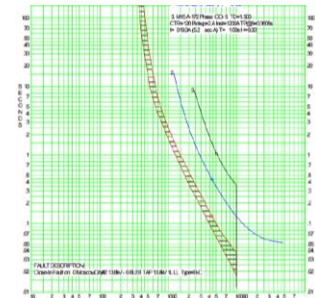
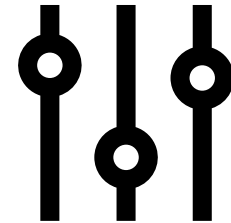
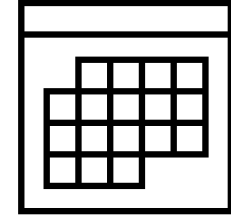


Representative reclosers (old electromechanical and newer G&W Viper)

Considerations When Using PEDS



- Upgrading equipment takes time
- Changing energy demands require new settings
- Hard-to-detect faults remain challenging



Example time-current characteristic curve from Damron (2023)

Addressing Potential Reliability Impacts



Operational impacts:

- Staffing levels and outage response
- Customer outreach and communications

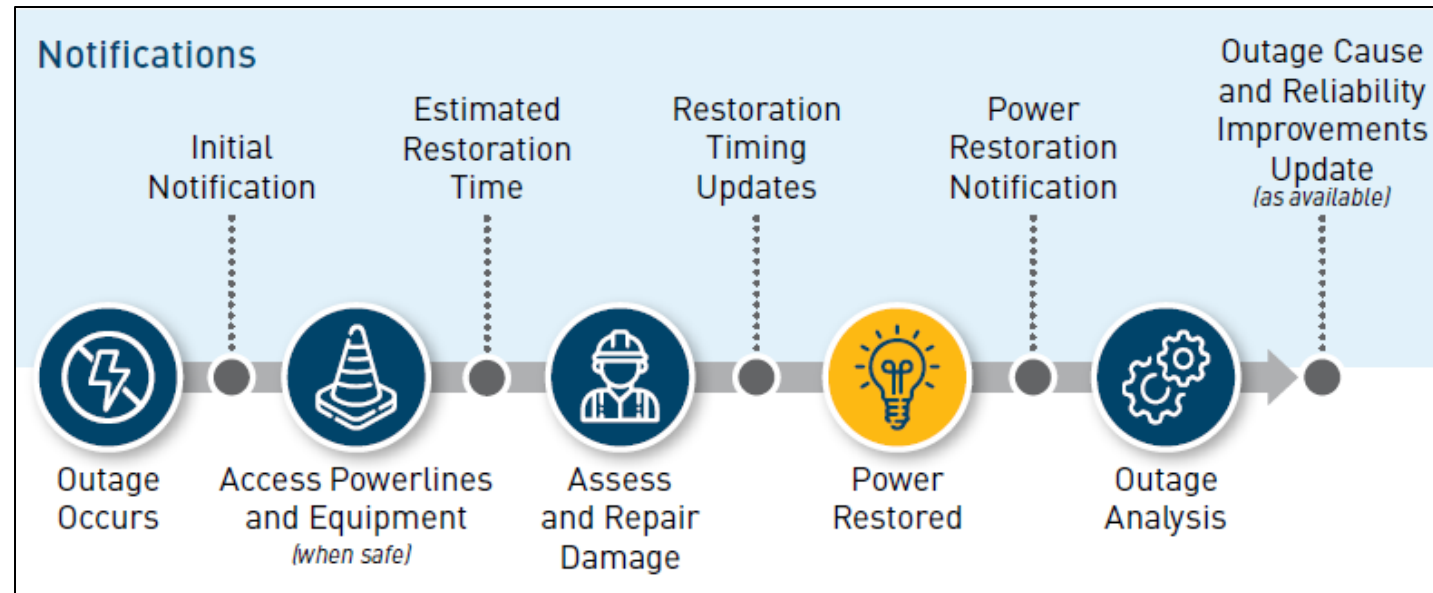


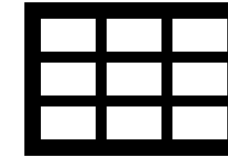
Figure from PG&E's Guidebook for Utilities, Version 2 (2025)

Addressing Potential Reliability Impacts



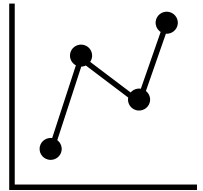
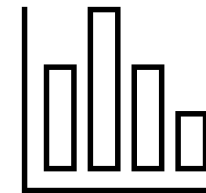
Operational impacts:

- Staffing levels and outage response
- Customer outreach and communications



Outage information can inform next steps:

- Vegetation management
- Protection of conductors
- Fault detection



Power outage map from CBS news article on PG&E outages on February 9, 2020



California Wildfire Safety Advisory Board





California Wildfire Safety Advisory Board



8 – Presentation on Risk Modeling



8 – Overview of WSAB Risk Modeling Committee Work

Jessica Block

Alexandra Syphard



Historical Context

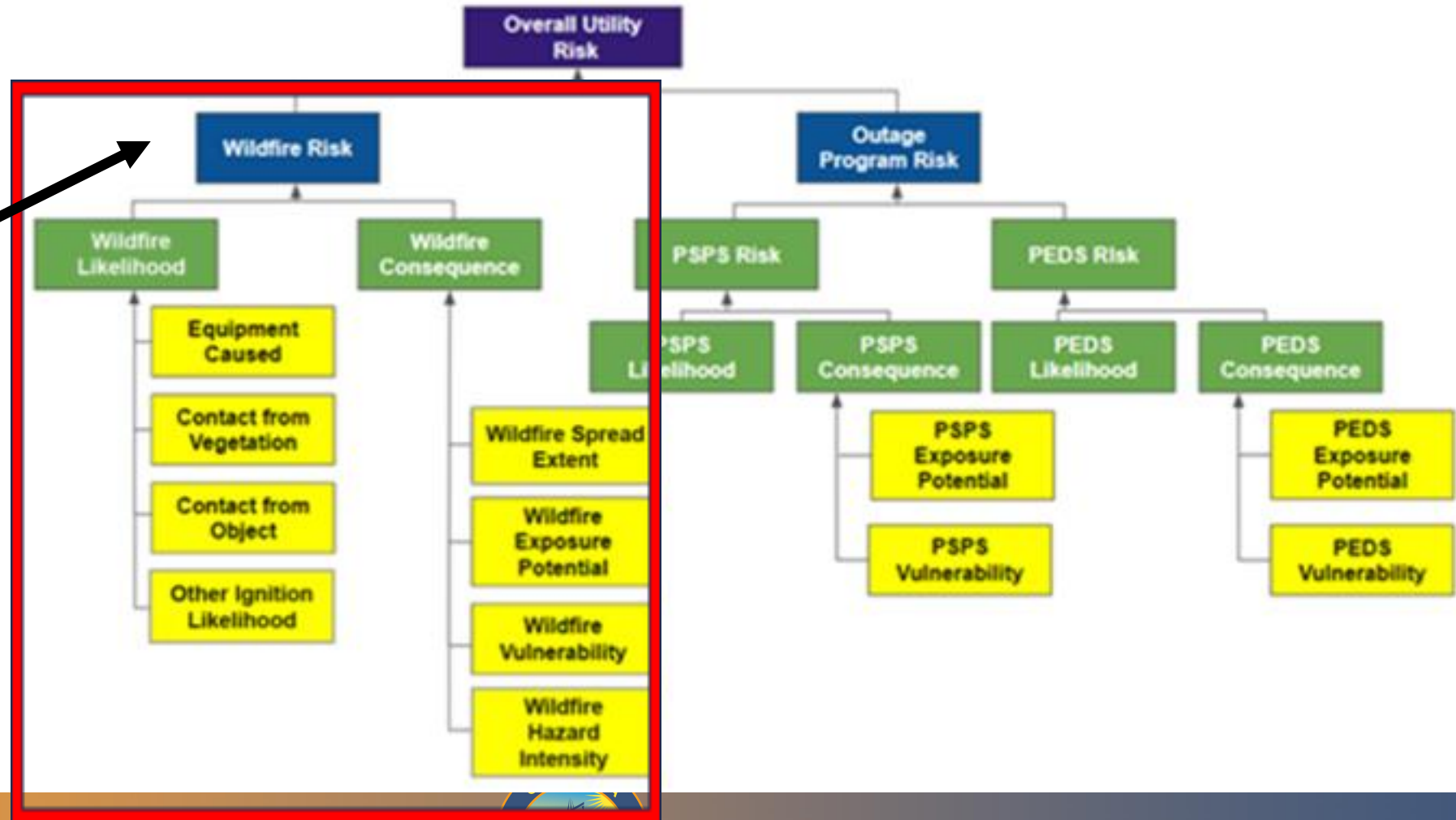
- What has RM done in the past
- Why do we care about wildfire risk models
- What are risk models, how do they show up in the WMP's
- Most recent /last 8389 recommendations (June 2025)
- ESPD's request about LA fires
- Met with policy division to review needs to date



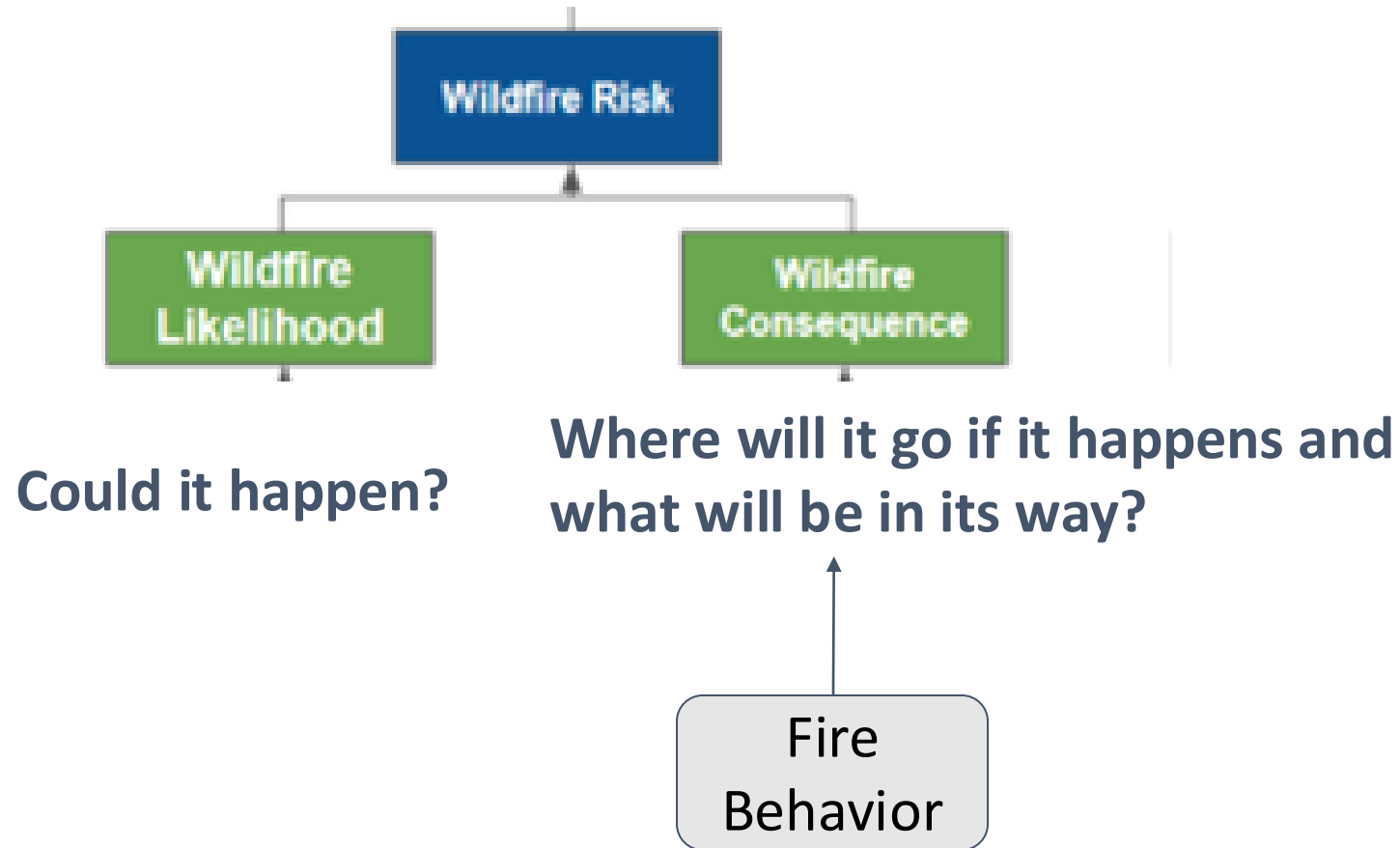
What is a Risk model: Requirement in WMP's



This Committee
has focused on
Utility Wildfire
Risk



Where does fire behavior fit in



WILDFIRE CONSEQUENCE

“The total anticipated monetized adverse effects of a wildfire on each community it reaches. This considers the wildfire’s spread extent, hazard intensity, exposure potential, and inherent vulnerabilities, including those affecting communities at risk.”

If an ignition were to occur at a given location, what would the expected consequences be, including:

- The potential amount that the wildfire could spread at a given location
- How quickly and intensely a wildfire could spread at a given location
- How much would be impacted based on the amount and intensity of wildfire spread
- How community demographics impact the amount of potential consequence



Generic Consequence Model Components (example from SCE)

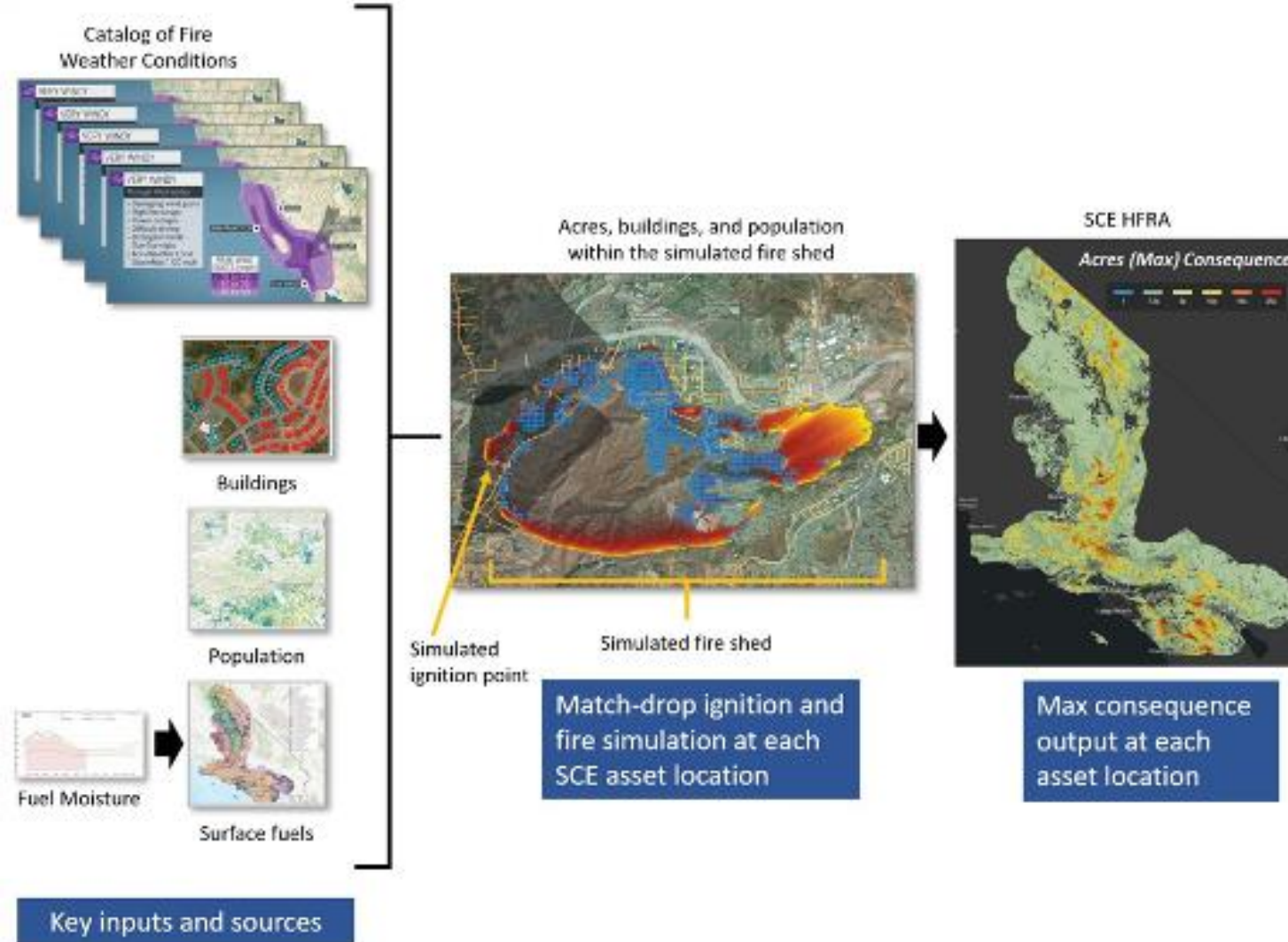


Weather

Assets

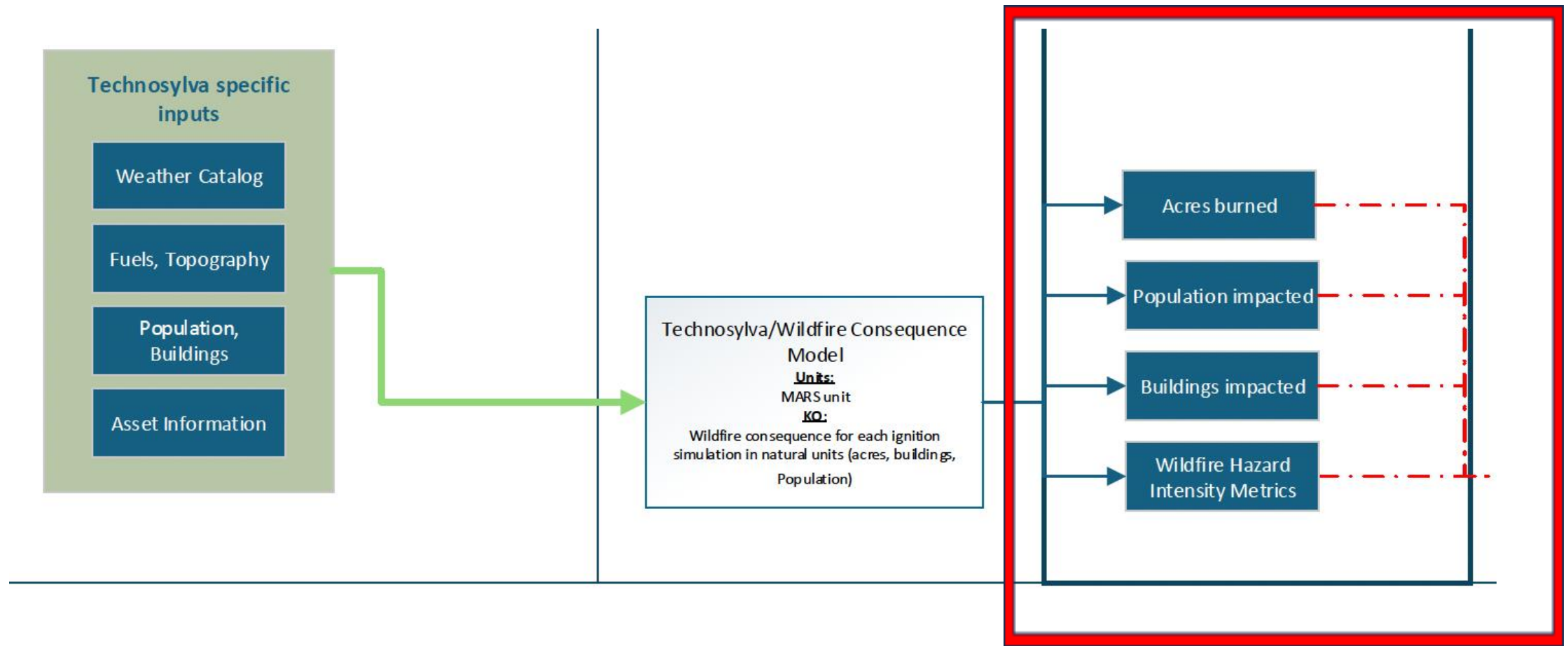
Fuels

Topography



Fire Behavior components of risk models

Edison: fire Consequence Workflow



WSAB's
Historical
Recommendations

Since 2020
We have submitted
26 recommendations
That suggest various forms of
transparency be reported on the
models used to understand if they
are accurate representations of
what could happen

Past recs included:



Have a more robust and scientifically proven process for quantifying wildfire risk

Increased transparency

Expanded reporting on model details

The FINAL 8389 Recommendations, June 2025



- *All six IOUs use a single wildfire spread model in their consequence calculations provided by Technosylva.*
- *Multiple wildfire spread models are available, including some that are open source.*
- *Every model includes simplifications that produce uncertainty.*
- *Comparing the results of multiple models, applied to similar inputs, would give a fuller representation of the range of uncertainties inherent in contemporary wildfire spread models.*

The FINAL 8389 Recommendations, June 2025



“[A]n ensemble model combines multiple models to create a stronger, more accurate prediction than any single model could achieve on its own.”

*International Business Machines Corporation, “What Is Ensemble Learning?” Last modified March 18, 2024,
<https://www.ibm.com/think/topics/ensemble-learning>.*

“[i]f everyone in the industry bets on the same model then everyone runs the risk of being wrong at the same time, creating high levels of systemic fragility.”

*44 Artemis, “Multi-risk model approach can build stronger catastrophe insurance industry,” Last modified March 12, 2021,
<https://www.artemis.bm/news/multi-risk-model-approach-can-build-stronger-catastrophe-insurance-industry/>.*

2025 Recommendations to Energy Safety

Energy Safety should require each IOU in its 2029–2031 WMP to test and compare multiple wildfire spread models when calculating wildfire consequence.

**15 – 20 families for fire (not including urban growth, economic, climate, etc.)
2-4k individual models**

Fire danger indices — NFDRS; CFWI

Ignition occurrence/probability —
BehavePlus P(IG). machine learning

**Empirical/quasi-empirical surface fire
behavior** — Rothermel; McArthur

**Crown-fire initiation & spotting sub-
models** — Van Wagner; Albini

Quasi-physical spread — Balbi; Grishin

Physics-based— FIRETEC; WFDS

Coupled atmosphere-fire—
WRF-Fire / SFIRE; MesoNH-
ForeFire

**Operational fire-growth
simulators**
— FARSITE; PHOENIX RapidFire

Cellular automata/percolation/
— Karafyllidis–Thanailakis CA;
NetLogo P

**Probabilistic risk & burn-
probability engines** — FSim;
Burn-P3

Exposure/impact & loss/damage models —
FlamMap Exposure Analysis (EVA); AI;ML

**Suppression/containment & resource-
allocation simulators** — WARSITE (Contain
algorithm

Smoke dispersion & emissions chains —
BlueSky; HYSPLIT

Landscape & fire-regime simulators —
LANDIS-II (SCRPPLE); FireBGCv2

Earth-system & DGVM fire modules —
SPITFIRE (LPJ); LPJ-LMfire



2025 Recommendations to Energy Safety

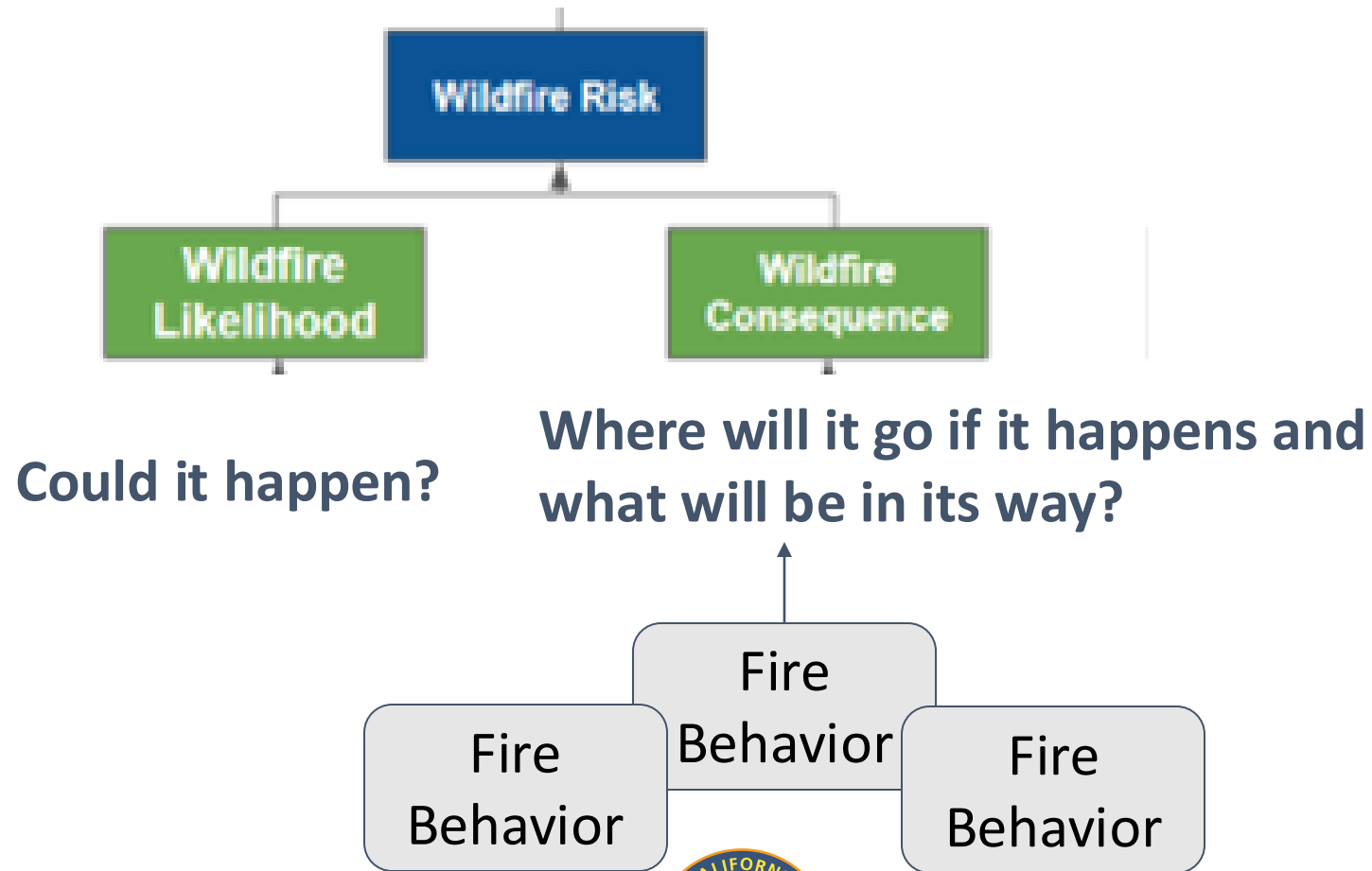
Energy Safety should require each IOU in its 2029–2031 WMP to test and compare multiple wildfire spread models when calculating wildfire consequence.

Each IOU should test and compare **at least three models**, at least one of which should be **open-source and peer-reviewed**, across a representative sample of its territory.

Energy Safety should require comparison of model outputs, along with a justification of why the model or ensemble of models to be used in decision-making is the most appropriate.



The FINAL 8389 Recommendations, June 2025



2025 Recommendations to Energy Safety

Energy Safety should establish clear standards for WMP reporting of wildfire spread model verification, validation, and sensitivity analysis.



To Make it Easier this Led to a Contract with Fire Researchers at UC Berkeley



UC Berkeley
Contract: 25-0012
Exhibit A
Page 1 of 17

Exhibit A – Scope of Work

Project Summary & Scope of Work

☒ Contract

☐ Grant

Does this project include Research (as defined in the UTC)? ☒ Yes ☐ No

PI Name: Michael Gollner

Project Title: Verification and Validation of Wildfire Spread Models

Project Summary/Abstract

The purpose of this agreement is to advance the understanding of wildland fire spread modeling and its interpretation and evaluation, by developing a method to validate, compare, and assess the sensitivity of wildland fire spread models, with specific application to utility wildfire risk models. Utility wildfire risk models are central to utilities' operational and investment decisions and regulators' oversight. Utility wildfire risk models generally rely upon ignition algorithms or probabilities to initiate fires, and mechanistic wildland fire spread models to propagate them, based on extensive data sets consisting of fuels, weather, and topography to initialize simulations. The wildland fire spread models are critical parts of the calculations of event consequence. However, the scientific understanding of the sensitivity of these models to their inputs, and the comparison of their outputs to real-world fires, is incomplete.

Here we propose to develop methods to verify, validate, and analyze the sensitivity of the mechanistic wildfire spread



UC Berkeley Project Goal



Advance standardized procedures to validate, compare, and assess sensitivity in utility wildfire models.

Approaches:

- **Verification:** Ensuring code matches mathematical specifications.
- **Sensitivity Analysis:** Quantifying how input variability affects outputs.
- **Validation:** Comparing model performance against historical fire data.

Project motivated by WSAB Recommendations on model validation, significant figures, need for uncertainty analysis, model comparison, etc

Defining Verification and Validation



- **Verification (The Math):** Ensuring the model is implemented correctly and is numerically reliable.
 - "Is the software producing the correct solution to the underlying equations/concepts?"
- **Validation (The Physics):** Ensuring the model performs as intended against real-world scenarios, such as past fire incidents.
 - "Does the model accurately represent the real world for its intended use?"
- **The Gap:** Unlike mature engineering, wildfire V&V is challenged by diverse model structures and limited validation data.

Public Comment on these Recommendations

Comments from Pyrologix (Founder is a world leader in fire behavior and fuels classification) **support** the first three recommendations.

Electric Power Research Institute's (EPRI) comments **strongly support** the recommendation to require wildfire spread model comparisons, but suggested “an even more structured approach, such as a modeling intercomparison project.” EPRI also proposes “guidance on the types of uncertainty to quantify.” For example, EPRI stated that “aleatoric uncertainty is irreducible due to inherent uncertainties in wildfire processes vs. epistemic uncertainty from the data and models being deployed.” Energy Safety may wish to include these proposals in its consideration of the recommendations.

Takeaways for the POU and Co-ops

There are solutions out there

Increased collaboration

Targeted mitigations

Trusted science is the way!



Energy Safety Request on LA Fires

- Leveraging the expertise of the Board



“We request your expertise to advise us as to whether the risk models used by electric utilities adequately consider the circumstances Southern California faced in January and other realistic extreme scenarios. If the risk models do not adequately consider these realistic extreme scenarios, we request your recommendations on how electrical utilities should modify their risk models to provide more useful outputs for informing electric utility planning and operations”



Energy Safety Request on LA Fires

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Weather History: were they *adequately considering extremes*.



Climate models go back to mid 1800's from climate models: LA was at 99th percentile for all of time

Real weather stations measuring actual values in CA have existed since 1980

Utilities use a subset of the measured weather station data.

Therefore, the measured Historical Data Used by IOU's Do Not Include All Realistic Extremes

SCE noted that “recent events in California, including the [Los Angeles Fires], highlight that relying solely on historical wildfire data may not fully capture the range and severity of the potential tail risk events.”

The Details We Know



The three large IOUs derive planning model weather and fuel inputs from MEASURED historical conditions. Then Utility subject matter experts select specific days from historical records to represent high-fire-likelihood days. They report:

- PG&E uses 571 “worst weather days” drawn from 2003–2022 historical data.
- SDG&E uses data from 2013–2021 that includes 125 “worst fire weather days.”
- SCE uses data from 1980–2021 to draw “fire weather days,” specific to each fire climate zone in their territory, from 29 in the Central Sierras to 464 in Tehachapi.

YET Utilities don’t submit the specific data of their fire weather days – so in the end Energy Safety has no idea if their choices are good or how they are making their customized decisions.

THEN they simulate consequences from each worst weather day and use these outcomes to create an estimate of damage

The more important question



WMP's were designed to require IOU's to plan for fire weather. They also ask for:

- Black Swan

- Low likelihood high consequence

We don't know the quantified extreme weather. This must be better specified

The question in this request was: Are they accounting for extreme conditions like the LA fires?

- Avg fire weather vs catastrophic fire weather

This changes the requirement for the WMP's

- The Risk model committee thinks accounting for catastrophic extremes is important AND

- This should be a mitigation priority

The historic extremes for the last 100 years should be specified in the WMP's

9 – Publicly Owned Utilities and Electrical Cooperatives Committee Update



10 – Strategic Planning Committee Update



2024 – 2027 STRATEGIC PLAN



The **vision** of the Wildfire Safety Advisory Board is a fire resilient California free of utility caused wildfires.

The **mission** of the Wildfire Safety Advisory Board is to advise and make recommendations to reduce the risk of utility related wildfires.



2024 – 2027 STRATEGIC PLAN



Priority #1: Actualizing Our Mission in Collaboration with Energy Safety

Priority #2: Building Collaborative Relationships with External Partners

Priority #3: Retaining and Developing Staff

Priority #4: Creating the Structures and Practices for Successful Implementation



2028 – 2030 STRATEGIC PLAN



September 2026	Kickoff presentation to Board
December 2026	Board discussion and input
March 2027	Board discussion and input
Q2 2027	Committee guides staff in development of first draft
June 2027	Board discussion of first draft
Q3 2027	Committee guides staff in development of second draft
September 2027	Board considers second draft for adoption



NEXT BOARD MEETING



Looking back (2024–2026):

1. What did we accomplish? What are we proud of?
2. What didn't work, or didn't go as far as we hoped? Why?
3. What did we learn about how the Board works best?

Looking outward:

1. What has changed in the wildfire safety environment, state policy, or utility landscape since 2024?
2. What do our key partners need from us in the next period?

Looking forward:

1. What should WSAB prioritize in 2028–2030?
2. What do we need to get better at as a Board?
3. What should we stop doing, or do less of, to make room for what matters most?



11 – STAFF UPDATE



WORKSTREAMS



- Board meetings
December 2, 2026, San José
- Wildfire Mitigation Plan review
- Committee support
- Focus Area research



FOCUS AREAS



- Risk Identification
- Preemptive De-energization
- Protective Equipment and Device Settings
- Situational Awareness
- Inspections
- Grid Design and Hardening

- Asset Management and Data
- Emergency Preparedness and Community Outreach
- Plan Metrics and Monitoring
- Vegetation management
- Wildfire response/consequence reduction
- Decision making



12 – AGENDA ITEMS FOR FUTURE MEETINGS



Wildfire Safety Advisory Board Meeting

Agenda and Notice
September 2, 2026
1 p.m. – 4 p.m. PST

Physical Location:
Lahontan Regional Water Board
971 Silver Dollar Avenue, South Lake Tahoe, CA

Remote Access via Microsoft Teams
<https://www.microsoft.com/en-us/microsoft-teams/join-a-meeting>,
Meeting ID: 251 804 384 969 367 and passcode: 76tc7RY3

OR by Telephone
Phone +1 (469) 998-6045 and passcode: 283 400 792#

Wildfire Safety Advisory Board (WSAB) Meeting Agenda

All times indicated are approximate and subject to change. Any agenda items other than public comments may include a WSAB vote and may be taken out of order for scheduling convenience. Items designated for information are appropriate for WSAB action if WSAB chooses to take action.



13 – PUBLIC COMMENT FOR MATTERS NOT ON AGENDA



Please begin your comments by stating your name and organization (if applicable).

- a. In the room**
- b. On Teams or the phone**
- c. Via email**



14 – ADJOURNMENT



- For more information:
 - Website:
<https://energysafety.ca.gov/what-we-do/wildfire-safety-advisory-board/>
 - Email: WSAB@energysafety.ca.gov

