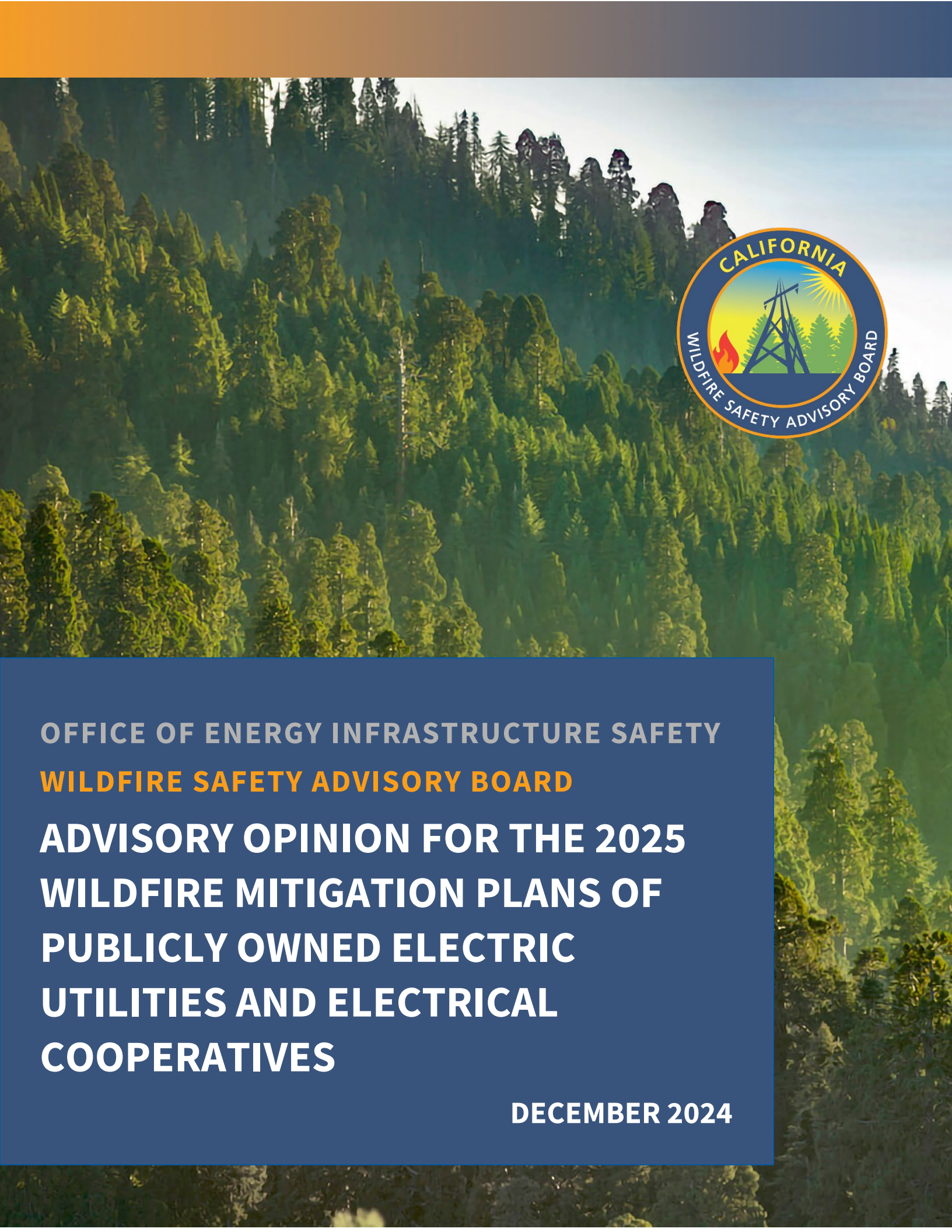


OFFICE OF ENERGY INFRASTRUCTURE SAFETY

WILDFIRE SAFETY ADVISORY BOARD

ADVISORY OPINION FOR THE 2025 WILDFIRE MITIGATION PLANS OF PUBLICLY OWNED ELECTRIC UTILITIES AND ELECTRICAL COOPERATIVES

DECEMBER 2024

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BACKGROUND

Under Public Utilities Code (PUC) section 8387(b)(1), local publicly owned electric utilities and electrical cooperatives are required to prepare a wildfire mitigation plan (WMP) and submit it to the Wildfire Safety Advisory Board (WSAB). WSAB advises the Office of Energy Infrastructure Safety (Energy Safety) within the California Natural Resources Agency and provides comments and advisory opinions to the local publicly owned electric utilities or electrical cooperatives regarding the content and sufficiency of their WMPs and recommendations regarding how to mitigate wildfire risk. WSAB consists of up to seven members appointed by the Governor, Speaker of the Assembly, and Senate Committee on Rules. Each member of the WSAB brings a unique perspective and expertise to their review of WMP requirements and performance metrics. Additional information about the WSAB and its members can be found on its website: https://energysafety.ca.gov/what-we-do/wildfire-safety-advisory-board/.[1]

The current WSAB members are:

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

[1] The WSAB approves the recommendations found here but individual recommendations may not reflect the views of individual WSAB members.

INTRODUCTION

To minimize future devastating occurrences through risk-driven wildfire prevention, PUC section 8387(b)(1) requires each of the state's publicly owned electric utilities and electrical cooperatives (together, POUs) to annually prepare and submit a WMP to the WSAB. The WMPs must include several mitigation and response elements in each utility's strategies, protocols, and programs. Table 1 below lists the expected elements for the POU WMPs per PUC section 8387(b)(2).

Table 1: List of Statutorily Required Contents for the WMPs Pursuant to Public Utilities Code Section 8387(b)(2)

A	Staff responsibilities	G	Community notification	L	Identify enterprise-wide risk
B	General objectives	H	Vegetation management	M	Restoration of service
C	Program descriptions	I	Infrastructure inspections	N(i)	Monitoring & auditing of WMPs
D	Evaluation metrics	J(i)	Grid design, construction & operation risks	N(ii)	Identifying and correcting deficiencies
E	Lessons learned, metrics application	J(ii)	Vegetation, topographic, & climate risks	N(iii)	Monitoring asset inspections
F	Protocols for reclosers, de-energization, and PSPS mitigation	K	Identification and expansion of higher wildfire threat areas		

PUC section 8387(b)(1) requires each POUs to submit its WMP to WSAB by July 1 of each year and comprehensively update its WMP at least every three years. PUC section 326.2(c) states that WSAB shall "… review and provide comments and advisory opinions to each local publicly owned electric utility and electrical cooperative regarding the content and sufficiency of its wildfire mitigation plan and recommendations on how to mitigate wildfire risk." WSAB reviews WMPs in the context of these elements in Table 1 to identify exemplary practices and to recommend additional information requested for future POU WMP submissions.

WSAB acknowledges the progress that many of the POUs have made in developing their WMPs and associated programs since 2019.

WSAB adopted its latest Advisory Opinion for the 2024 WMPs of POUs on December 4, 2023.[2] WSAB recommended that POUs and their representative bodies including the California Municipal Utilities Association (CMUA), the Northern California Power Agency (NCPA), the Southern California Public Power Authority (SCPPA) and the Golden State Power Cooperative (GSPC) (collectively "Joint Associations") participate in meetings or workshops as requested by the WSAB. The purpose of these meetings and workshops was for the POUs and Joint Associations to engage with the WSAB and to exchange information and ideas through discussions on topics including:

- POU progress and achievements
- Performance metrics
- Quality assurance/quality control (QA/QC) program
- Independent Evaluator (IE) reports
- Executive summaries
- Late WMP submissions
- Revision log
- Digital accessibility
- Other items that come up during discussions.

WSAB organized six meetings with the POUs and the Joint Associations from January 19, 2024 to April 5, 2024 to discuss these topics. Staff presented the preliminary recommendations from the WSAB–POU Working Group[3] to WSAB at its meeting on June 5, 2024.[4] WSAB expresses its appreciation for the contribution and cooperation from the POUs and the Joint Associations to form its recommendations.

WSAB received the 2024 WMPs submitted by 48 POUs as listed in Table 2 below, along with supplemental information that some, but not all, POUs filed. The supplemental information provided WMP adoption information, Independent Evaluation reports, and responses to previous WSAB recommendations.

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[2] California Wildfire Safety Advisory Board, "*Advisory Opinion for the 2024 Wildfire Mitigation Plans of Electric Publicly Owned Utilities and Rural Electric Cooperatives*." https://energysafety.ca.gov/wp-content/uploads/2023/12//wsab-2024-wmp-pou-advisory-opinion.pdf.

[3] The Working Group includes representatives of the POUs, the Joint Associations, and the WSAB. The regular attendees were: WSAB (Vice Chair Porter, Member Tim Haines, and the advisors Jonathan Frost and Sang Soble), CMUA, GSPC, NCPA, SCPPA, Sacramento Municipal Utilities District (SMUD), Los Angeles Department of Water and Power (LADWP).

[4] Wildfire Safety Advisory Board, "*Final WSAB–POU WG Summary Report*." https://energysafety.ca.gov/wp-content/uploads/2024/06/wsab-pou-wmp-wg-summary-report-final.pdf.

Table 2: List of Publicly Owned Utilities That Have Submitted 2024 WMPs

Alameda Municipal Power	Lassen Municipal Utility District	Redding Electric Utility
Anaheim Public Utilities	Lathrop Irrigation District	Riverside Public Utilities
Anza Electric Cooperative	Lodi Electric Utility	Roseville Electric Utility
Azusa Light and Water	City of Lompoc	Sacramento Municipal Utility District
City of Banning	Los Angeles Department of Water and Power	San Francisco Public Utilities Commission
Burbank Water and Power	Merced Irrigation District	City of Shasta Lake
Cerritos Electric Utility	Modesto Irrigation District	Silicon Valley Power (Santa Clara)
City of Colton Electric Department	Moreno Valley Utility	Port of Stockton Utility
City of Corona	Northern California Power Agency	Surprise Valley Electrification Corporation
Eastside Power Authority	Port of Oakland	Transmission Agency of Northern California
Glendale Water and Power	Palo Alto Utilities	Trinity Public Utility District
City of Gridley	Pasadena Water and Power Department	Truckee Donner Public Utility District
Healdsburg Electric Department	Pittsburg Power Company	Turlock Irrigation District
Imperial Irrigation District	Plumas-Sierra Rural Electric Cooperative	City of Ukiah
City of Industry Public Utilities	Power and Water Resource Pooling Authority	City of Vernon
Kirkwood Meadows Public Utility District	Rancho Cucamonga Municipal Utility	City of Victorville

RECOMMENDATIONS

WSAB reviewed the POUs' 2024 WMPs and WSAB–POU Working Group's preliminary recommendations. WSAB provides the following recommendations for the development of the POUs' 2025 WMP updates or future comprehensive WMPs.

1. Summary of Projects and Programs

The WMPs describe the preventative strategies and programs adopted by each POU to minimize the risk that its electrical lines and equipment will cause a catastrophic wildfire. Central to understanding utility risk mitigation are the projects and programs that utilities have completed and currently have underway.

WSAB reviewed the POUs' 2024 WMPs and found that it is challenging to track all completed, ongoing, and future wildfire mitigation projects. While some POUs present completed, ongoing, and future projects in the wildfire mitigation strategies section, others choose to include information about programs in the appendices or throughout the WMPs. Additionally, some POUs only include a few current projects in the WMPs.

The WSAB–POU Working Group discussed the option of including a program summary table. WSAB finds that a summary of in-process and completed projects would provide better insight into the status of POU wildfire risk reduction.

Recommendation

WSAB recommends that the POUs include a standalone summary of key wildfire mitigation initiatives in their WMPs. This summary should include completion targets, year, and cost estimates for the reporting period, categorized by program (e.g., grid design and system hardening, community outreach and engagement), along with accomplishments from the prior reporting period. WSAB has developed a Summary of Projects and Programs template (Appendix 1) for reference. The POUs would have the option to include this information in a table or in another format. This information could be presented in combination with other informational items, such as highlights of the POU's progress and achievements (see Recommendation 8 below).

2. Late WMP Submissions

Each POU is required by PUC section 8387(b)(1) to submit its WMP to the WSAB by July 1 each year. A majority of POUs have submitted WMPs on or before July 1 each year, according to WSAB staff review of annual submissions from 2021–2024. However, some submissions have come after the deadline or not at all. For example, in 2024, 82% of POUs submitted WMPs by

the deadline, meaning 18% did not. Timely WMP submission is important for public transparency, as well as for WSAB review.

Recommendation

If a POU determines it is likely to submit its WMP after the July 1 deadline, the POU should submit a letter to the docket or the WSAB email (wsab@energysafety.ca.gov) by the July 1 deadline, notifying the public and WSAB of the delay, explaining the cause of the delay, and the estimated time when it will be able to submit its WMP.

3. Tracking Changes to WMPs

As noted in the Working Group Report, many of the sections in the POU WMPs do not change significantly on a year-to-year basis or between triennial WMP revisions. WSAB reviewed the POUs' 2024 WMPs and noticed that a few POUs excel at highlighting the changes in their 2024 WMP compared to the 2023 version. These POUs either include a redline version or provide a Revision Log or a Summary of Key Changes in their WMPs. For example, Anza Electric Cooperative included a redline version and the City of Rancho Cucamonga added a Summary of Key Changes in its 2024 WMP. WSAB also shared an excellent and concise example of the City of Lodi's revision log during the WSAB–POU Working Group discussion. Summaries of changes help the reader understand the revisions that have occurred from year-to-year and how the WMPs overall have evolved. However, this practice is not universally adopted by the POUs.

Recommendation

The POUs should include a redline version or a summary of changes to indicate the year-to-year updates made on their WMPs, which could take the form of a redline, narrative description, or revision log.

4. Digital Accessibility

WMPs are, among other things, communication tools. WMPs have multiple audiences, including governing boards, members of the public, and WSAB members. Those audiences will have a diverse range of abilities and disabilities. Making WMPs accessible broadens their reach and benefit the POUs and individual ratepayers. Furthermore, hyperlinks in the table of contents allow readers to navigate more quickly through a WMP document.

The public is paying growing attention to accessibility of digital documents and websites. For example, California Assembly Bill 434 (Baker, 2017) created a requirement that the chief information officer for each state agency post a signed certification that the content of the agency's website meets accessibility standards. In support of this objective, State entities, including Energy Safety and the WSAB, are encouraging stakeholders to review the accessibility requirements that the State adheres to and adopt these requirements if feasible.

The World Wide Web Consortium (W3C) develops and publishes Web Content Accessibility Guidelines (WCAG).[5] The Guidelines are organized under four principles: Perceivable, Operable, Understandable, and Robust. W3C also provides tutorials and other introductory material.[6] Common techniques to make material more accessible include ensuring that the document has machine readable text instead of being a scan, providing alternative text for graphics and figures, using higher-contrast color choices for figures, and organizing tables to be read clearly by screen readers, all of which can improve accessibility for the visually impaired. Common document-creation software such as Microsoft Word[7] and Adobe Acrobat[8] include accessibility checkers and tools.

WSAB staff used the Adobe Acrobat accessibility checker on the POUs' WMPs as submitted to the docket. The WSAB staff members usually found accessibility issues. For example, one WMP was a scanned document. Most did not have alt text for images, and where alt text existed, it was sometimes automatically generated and inaccurate. One WMP image from a wildfire surveillance camera was described in the alt text as "a screenshot of a video game."

Recommendation

- The POUs should follow accessible content guidelines such as those offered by W3C and conduct digital accessibility checks of their WMPs prior to submittal.
- The POUs should include internal hyperlinks in the tables of contents of their WMPs.

5. Areas That Exceed Minimum Standards in General Orders

The California Public Utilities Commission's (CPUC's) General Orders (GOs) cover a wide range of topics including the design, construction, and maintenance of electric grids and specify the technical standards and intervals for inspections of those grids. Electric grids that are designed, constructed and maintained per the requirements set forth in the CPUC GOs are generally considered safe and reliable. However, the WSAB has identified areas where the

[5] World Wide Web Consortium, "*WCAG 2 at a Glance.*" https://www.w3.org/WAI/standards-guidelines/wcag/glance/.

[6] World Wide Web Consortium, "*Tutorials*." https://www.w3.org/WAI/tutorials/.

[7] Microsoft, "*Make Your Word Documents Accessible to People with Disabilities*." https://support.microsoft.com/en-us/office/make-your-word-documents-accessible-to-people-with-disabilities-d9bf3683-87ac-47ea-b91a-78dcacb3c66d#bkmk_whileyouwork_win.

[8] Adobe Acrobat Team, "*The Complete Checklist to PDF Accessibility*." https://blog.adobe.com/en/publish/2022/11/29/the-complete-checklist-to-pdf-accessibility#top-ways-to-make-your-pdfs-accessible.

current GOs can be improved and has issued two policy papers with recommendations for improving safety, especially in high wildfire risk areas.[9]

POUs typically follow the specific requirements established in GO 95, "Overhead Electric Line Construction."[10] GO 95 states that "if an intended use or known local conditions require a higher standard than the particulars specified in General Order 95 to enable the furnishing of safe, proper, and adequate service, the company shall follow the higher standard." Some POUs include information on where and how they go beyond the specific requirements identified in GO 95. For instance, Anaheim Public Utilities exceeds the GO 95 requirements for wind parameters by calculating pole loading at 12 pounds per square foot of projected area, above the GO 95 Section IV minimum of 8 pounds per square foot.[11] Glendale Water & Power's vegetation management practices also "exceed minimum clearance requirements (as described in GO 95) by trimming trees down to the telecommunications layer and clearing hazardous vegetation in both Tier 2 and Tier 3 zones."[12] While many POUs state in their 2024 WMPs that they meet or exceed the requirements, the WMPs often lack detailed information on how their practices surpass these GO 95 standards. Depending on the situation (e.g., if more-flammable grasses replace less-flammable vegetation) exceeding requirements may not always be beneficial.[13] By sharing insights into their decision-making process for exceeding minimum standards, including consideration of trade-offs, POUs can contribute valuable information to industry practices that influence utility wildfire risk management.

Recommendation

- The POUs should include information in their WMPs about their decision-making process for how they assess if the known local conditions require the utility to exceed any of the applicable minimum design, construction, or maintenance standards for a particular facility.
- POUs should describe their experience utilizing this decision-making process, including observations to date (e.g. cost impacts, maintenance impacts, safety impacts, etc.) and any lessons learned.

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[9] Wildfire Safety Advisory Board, "*WSAB Adopts Policy Paper Recommendations.*" https://energysafety.ca.gov/news/2024/02/07/wsab-adopts-policy-paper-recommendations/.

[10] California Public Utilities Commission, "*Rules for Overhead Electric Line Construction.*" https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M338/K730/338730245.pdf.

[11] Anaheim Public Utilities, "*2024 Wildfire Mitigation Plan,*" 43. https://efiling.energysafety.ca.gov/Search.aspx?docket=2024-WSAB-POU-WMP.

[12] Glendale Water & Power, "*Wildfire Mitigation Plan, Updated June 2024,*" 22. https://efiling.energysafety.ca.gov/Search.aspx?docket=2024-WSAB-POU-WMP.

[13] Wildfire Safety Advisory Board, "*Policy Paper on Updating Vegetation Management Regulations and Industry Practices.*" https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56302&shareable=true.

The WSAB–POU Working Group Summary Report included a preliminary recommendation to WSAB that it engage with the GO 95/128 Rules Committee. While WSAB does not adopt this recommendation, WSAB staff is in conversation with the POU representatives about engagement with the Rules Committee.

6. Independent Evaluator Reports

PUC section 8387(c) requires POUs to "contract with a qualified independent evaluator with experience in assessing the safe operation of electrical infrastructure to review and assess the comprehensiveness of its wildfire mitigation plan." The content and level of detail in the independent evaluator's (IE's) reports varied. IE reports most likely to contribute to wildfire risk mitigation will include evaluation of, and recommendations to improve, WMP strategy and specific projects. For example, the IE report submitted by Truckee Donner Public Utility District included detailed recommendations for future actions. The report stated, "As part of its pole replacement program, TDPUD should consider the use of steel or composite poles." The IE reports submitted by the Lassen Municipal Utility District and Redding Electric Utility also contained tables showing that the IE made recommendations in its initial review that were addressed in an updated version. However, some IE recommendations within the reports were less specific and appeared to be more directed at format rather than substance.

Recommendation

Where appropriate, considering additional costs, the POUs should include in the project scopes for IE reports an evaluation of the WMP strategy and projects, to provide recommendations for improvements for the WMP overall and for specific initiatives/projects. Specifically, WSAB encourages the POUs to each engage an IE to provide comprehensive review and recommendations in years when the POU conducts a comprehensive review of its WMP. Additionally, POUs should consider including a table or summary in a future or updated WMP showing where IE recommendations were addressed.

7. Alternative Reporting for POUs Without Overhead Electric Supply Facilities in the High Fire Threat District

POUs' exposure in the high fire threat district (HFTD) delineated by the CPUC varies widely. Some POUs' transmission and distribution assets in the HFTD are completely underground. Other POUs' service territories cover urban and agricultural land, and/or territory that is not in the HFTD. These POUs submit their WMPs annually to comply with the PUC section 8387(b)(1) requirements. WSAB staff observed that these POUs face relatively low wildfire risks and have made minimal updates to previous WMPs in 2024.

The WSAB–POU Working Group discussed an alternative WMP submission approach for POUs without overhead electric supply facilities in the HFTD. Instead of submitting a new WMP every year, each of these POUs may submit a supplemental letter with its base WMP,

describing its status and any updates. Under this alternative approach, each of these POUs would still seek public input on its WMPs and submit them to their governing boards. However, the supplemental letter would detail the unchanged status of its WMP and update the POU's performance metrics. As part of the WSAB–POU Working Group discussion, CMUA developed a template supplemental letter for POUs without overhead electric facilities in the HFTD (see Appendix 2). This approach will allow stakeholders to quickly review the POU status and updates without having to review the entire WMP. This will also reduce the administrative burden on the POU by eliminating the need to update and submit the entire WMP.

Recommendation

- A POU that does not own or control any overhead electric supply facilities in the HFTD, and has no or minimal updates to its WMP, should submit its most recent WMP together with a letter stating that the POU does not own or control any overhead electric supply facilities in the HFTD, does not anticipate any changes to wildfire risks in its service territory in coming years, and has no update (or has a few simple updates) since its last WMP. POUs may use the CMUA supplemental letter template.
- POUs without overhead electric supply facilities in the HFTD should still evaluate their wildfire risk at least annually and update their WMPs at least every three years.

8. Progress and Achievements

WSAB staff reviewed the 2024 POU WMPs and found that some POUs provided detailed and helpful information about their wildfire mitigation programs. For example, the Sacramento Municipal Utility District (SMUD) included the target, start date, expected completion, and detailed description for each project in the enhancement and mitigation projects section of its 2023 WMP.[14] A year later, in the 2024 update to its WMP, SMUD reported the progress and achievement of these projects by including status, start date, expected completion, and a description of the work it completed.[15] Burbank Water and Power (BWP) also updated the progress of its program in the Wildfire Prevention Strategies and Programs section by describing what it completed in past years and the plan for upcoming years.[16] Additionally, BWP included a table summarizing its mitigation activity accomplishments in 2023, which is

[14] Sacramento Municipal Utility District, "*2023–2025 Wildfire Mitigation Plan,*" 34. https://efiling.energysafety.ca.gov/Search.aspx?docket=2024-WSAB-POU-WMP.

[15] Sacramento Municipal Utility District, "*2023–2025 Wildfire Mitigation Plan, 2024 Update,*" 6. https://efiling.energysafety.ca.gov/Search.aspx?docket=2024-WSAB-POU-WMP.

[16] Burbank Water and Power, "*Wildfire Mitigation Plan 2024,"* 32. https://efiling.energysafety.ca.gov/Search.aspx?docket=2024-WSAB-POU-WMP.

included in Appendix 3.[17] These are great ways to inform readers of the mitigation efforts made by the utilities year after year. However, WSAB staff also observed that in many WMPs, mitigation projects were described at a very high level, making it difficult for the reader to understand the progress made to date, the risk reduction achieved, the POU's targets for the end of the reporting period, or the overall goal of individual programs. Providing specific information about the targets, timelines, progress, and milestones of the WMP projects can help the reader better understand how projects are progressing each year, enhance transparency and accountability, and put projects into the perspective of the POU's evolving risk landscape.

Recommendation

WSAB recommends that POUs highlight their recent progress and achievements in their WMP programs by including more detailed information in the WMP regarding project targets and timelines. WSAB recommends POUs include progress updates for each project in each subsequent WMP. This information can be combined with other informational items, such as the summary of projects and programs (see Recommendation item 1), and could be in a narrative, table, or other format.

9. Quality Assurance/Quality Control Programs

PUC section 8387(b)(2)(N) requires the POUs to describe the processes and procedures to monitor and audit the implementation of the WMP and the effectiveness of inspections, including work performed by third-party contractors. The POUs must also describe how they identify deficiencies and correct them. Work such as utility vegetation management (UVM) and asset inspections are frequently performed by a mix of utility employees and contractors, often with the contractors performing the majority of the work. Utilities develop quality assurance/quality control (QA/QC) programs to ensure that the quality of UVM and asset inspections meets their standards. These QA/QC programs describe the steps utilities take to systematically sample and audit their work, and to identify and correct issues. WSAB staff's review of the POUs' 2024 WMPs indicate that some POUs do not have, or report having, a robust QA/QC process in place for UVM program. By providing more detail regarding on their QA/QC programs, the POUs can help WMP readers better understand the processes they use.

Recommendation

WSAB recommends that the POUs provide descriptions of their QA/QC programs and the implementation of any resulting improvements in their inspection and maintenance programs in their WMPs.

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[17] Burbank Water and Power, "*Wildfire Mitigation Plan 2024,*" 51. https://efiling.energysafety.ca.gov/Search.aspx?docket=2024-WSAB-POU-WMP.

10. Performance Metrics

PUC sections 8387(b)(2)(D) and 8387(b)(2)(E) require the POUs to include a "description of the metrics the [POU] plans to use to evaluate the wildfire mitigation plan's performance and the assumptions that underlie the use of those metrics," and a "discussion of how the application of previously identified metrics to previous wildfire mitigation plan performances has informed the wildfire mitigation plan."

The statute does not specify the exact metrics to use, so the CMUA in its 2020 POU WMP template suggested that the POUs include ignition and wire down events. Some POUs have expanded on those two metrics to track and report on a variety of metrics. For example, Anaheim Public Utilities (APU) provides a Summary of Performance Metrics, which includes several metrics for annual events, cumulative installed assets, and metrics related to training, inspection, and annual testing. APU also includes figures for its wildfire mitigation performance in 2023 in its 2024 WMP.[18] Furthermore, WSAB acknowledges Trinity Public Utilities District's (TPUD) transparency in presenting performance metric data. In TPUD's 2024 WMP programmatic metrics table, TPUD outlines both the goals/targets and the actual figures.[19] However, many POUs have opted only to focus on those two metrics and even include them in their reports under circumstances where they would not make sense, such as including wires down events in the WMP when the utility is completely underground. Additionally, some POUs listed the metrics they use but did not include any metric data in their 2024 WMPs.

The WSAB–POU Working Group discussion on performance metrics earlier this year led to CMUA's developing a new metric template. This new template provides a thorough baseline of information on external risk factors, and the actions that the utility has taken to identify and address exogenous and endogenous risk factors. It also allows the POUs to expand on the template to report on additional metrics that they use to track and provide context for certain events that have occurred.

In the WSAB 2021 and 2022 WMP POU Advisory Opinions,[20,21] WSAB developed a Context Setting Information Template and recommended POUs use the template to report key

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[18] Anaheim Public Utilities, "*2024 Wildfire Mitigation Plan,*" 62. https://efiling.energysafety.ca.gov/Search.aspx?docket=2024-WSAB-POU-WMP.

[19] Trinity Public Utilities District, "*Wildfire Mitigation Plan, 2024 Update,*" 37. https://efiling.energysafety.ca.gov/Search.aspx?docket=2024-WSAB-POU-WMP.

[20] Wildfire Safety Advisory Board, "*Guidance Advisory Opinion for the 2021 Wildfire Mitigation Plans of Electric Publicly Owned Utilities and Cooperatives.*" https://energysafety.ca.gov/wp-content/uploads/docs/misc/wsd/wsab-pou-guidance-advisory-opinion-approved-12.9.2020.pdf.

[21] Wildfire Safety Advisory Board, "*Guidance Advisory Opinion for the 2022 Wildfire Mitigation Plans of Electric Publicly Owned Utilities and Rural Electric Cooperatives.*" https://energysafety.ca.gov/wp-content/uploads/docs/misc/wsab/pou-and-coop-wmps/wsab-2022-wmp-pou-guidance-advisory-opinion.pdf.

information about a POU's service area, including size, number of customers, type of customers, basic topography and weather data, asset mix, and interaction with HFTD and Public Safety Power Shutoff (PSPS). During the WSAB–POU Working Group Discussion, WSAB staff proposed to modify the Context Setting Information Template to include additional metrics for assessing the impacts of PSPS events caused by third parties. The updated template aims to clarify the magnitude of impacts that POUs face when they experience power loss due to a third-party PSPS event.

Recommendation

- WSAB recommends that POUs use the CMUA's 2024 metrics template (see Appendix 4) as the starting point for developing their own metrics table. It is expected that POUs will tailor the metrics to their unique circumstances.
- The WSAB recommends that POUs utilize the latest version of the Context Setting Template. (See Appendix 5.)

11. Other Topics

During the WSAB–POU Working Group meetings, WSAB and POU representatives raised other topics for future discussions. The Board's POU Committee has agreed with POU and Joint Association representatives to continue working group meetings. Potential topics include:

- Communication company risks
- Issues with US Federal Agencies such as the US Forest Service
- Inclusion of wildfire maps and the sharing of mapping data
- Reporting guidelines and template(s) for WMP updates for POUs other than POUs without overhead electric supply facilities in the HFTD
- Engagement with the GO 95/128 Rules Committee
- Identification and sharing of wildfire management practices at the local, state, regional and federal levels through utility-led meetings
- Vegetation management
- Undergrounding
- Other grid hardening
- Risk modeling and management

Recommendation

WSAB recommends that POUs and the Joint Associations work with the WSAB POU Committee to refine the list of future topics and develop an action plan of activities that could include WSAB recommendations.

CONCLUSION

WSAB thanks the POUs for developing and filing their 2024 WMPs pursuant to the direction provided by PUC section 8387. The WSAB looks forward to reviewing the 2025 WMP updates. WSAB also greatly appreciates the engagement from the POUs and Joint Associations in the working group meetings and looks forward to continuing collaboration to further understand POUs' challenges and perspectives and to develop future recommendations.

APPROVAL

The California Wildfire Safety Advisory Board's Advisory Opinion for the 2025 Wildfire Mitigation Plans of Electric Publicly Owned Utilities and Rural Electrical Cooperatives was approved on December 4, 2024, and is hereby executed.

Jessica Block, Chair

Christopher Porter, Vice Chair

Ralph M. Armstrong Jr., Board Member

Marybel Batjer, Board Member

Timothy Haines, Board Member

John Mader, Board Member

Alexandra Syphard, Board Member

APPENDIX

Appendix 1 – Sample Summary Table

Sample Summary Table	
Grid Design, Operations and Maintenance	Current Reporting Period Goals: • 5 miles of undergrounding - $XX million • 30 wood-to-steel pole replacement - $X million • 80 miles of covered conductor - $X million Prior Reporting Period Accomplishments: • 35 miles of undergrounding - $XX million • 100 miles of covered conductor - $X million Totals projected by end of reporting period: • 100 underground circuit miles (700 pre-WMP efforts ($XXX million, if known), 250 undergrounded since 2019 - $XXX million, 50 forecasted 2026-2028 - $XX million) • 200 miles of covered conductor (1920 installed 2019-2022 - $XX million, 100 miles forecasted 2026-2028 - $XX million)
Vegetation Management and Inspections	Current Reporting Period Goals: • 200 circuit miles of patrol inspections - $X million • 20 intrusive pole inspections - $X thousand • 200 miles of vegetation management - $X million Prior Reporting Period Accomplishments: • 35 miles of undergrounding - $XX million • 100 miles of covered conductor - $X million
Situational Awareness and Forecasting	Current Reporting Period Goals: • 10 weather stations - $XXXXX • 10 cameras - $XXXXX • 5 new inspection drones - $XXXXX Prior Reporting Period Accomplishments: • 5 weather stations added - $XXXXX

	• 3 cameras installed - $XXXXX Totals projected by end of reporting period: • 30 weather stations (5 pre-WMP efforts ($XXXXX, if known), 17 added since 2019 - $XXXXX, 8 forecasted 2026-2028 - $XXXXX) • 20 cameras (10 2019-2022 - $XXXXX, 10 forecast 2026-2028 - $XXXXX)
Emergency Preparedness	Current Reporting Period Goals: • 1 table top exercise Prior Reporting Period Accomplishments: • 1 table top exercise
Community Outreach and Engagement	Current Reporting Period Goals: • 3 customer emergency alert tests • 4 community wildfire safety meetings Prior Reporting Period Accomplishments: • 3 customer emergency alert tests • 4 community wildfire safety meetings

Appendix 2 – CMUA Template Supplemental Letter for POUs Without Overhead Electric Facilities in the HFTD

[POU Letterhead]

XXXXXX XX, 2025

Re: Notice of Public Meeting on [POU] Wildfire Mitigation Plan

Dear Wildfire Safety Advisory Board:

This letter notifies the Wildfire Safety Advisory Board ("WSAB") that on _____, 2025, [POU] ("[POU]") presented its existing Wildfire Mitigation Plan ("WMP") to its [Governing Board/City Council] at a publicly noticed meeting, in accordance with Public Utilities Code section 8387(b). [POU]'s WMP was most recently adopted on _____, 2024. At the _____, 2025 meeting, [POU] provided an opportunity for public comment on its existing WMP and [POU]'s Governing Board/City Council] verified that [POU]'s existing WMP complies with all applicable rules, regulations, and standards, as appropriate.

[POU] does not have any overhead electric supply facilities located in or near an area of the state that is designed as "extreme" or "elevated" in the California Public Utilities Commission's High Fire Threat District Map. In consideration of this historical wildfire risk, [POU] has determined that its existing WMP adequately addresses the risk of a utility-caused, catastrophic wildfire occurring in [POU]'s service territory and that no substantive changes are merited for this reporting year. [POU] will continue to evaluate its existing WMP in relation to the wildfire risk posed by [POU]'s system on an annual basis.

In order to provide the WSAB with information on [POU]'s system and WMP performance, please find as Attachment A, an updated Informational Table, and Attachment B, an updated Metrics Table.

[POU] thanks the WSAB for their review and support in helping to mitigate wildfire risks in California.

Sincerely,

[Signature]

Attachment A

[POU] 2025 Informational Table

[POU to Insert Informational Table]

Attachment B

[POU] 2025 Metrics Table

WMP Metrics

Performance Metrics

Metric type	Progress metric name	(Actual) 2021	(Actual) 2022	(Actual) 2023	(Actual) 2024	(Forecast) 2025	Unit(s)	Comments
1. Above-Ground, Utility-Owned Distribution System Components	Routine Inspections						#inspections	
2. Distribution Inspections	Patrol Inspections						# circuit miles	
[Delete for fully undergrounded POU]	Detailed Inspections						# circuit miles	
	Routine Vegetation Management						# circuit miles	
3. Transmission Inspections	Patrol Inspections						# circuit miles	
[Delete for fully undergrounded POU]	Detailed Inspections						# circuit miles	
	Routine Vegetation Management						# circuit miles	

Outcome Metrics

Event Category	Cause category	(Actual) 2010	(Actual) 2021	(Actual) 2022	(Actual) 2023	(To Date) 2024	Unit(s)	Comments
Outage Event	Distribution						# outages	
	Transmission						# outages	
Ignitions*	Distribution						# ignitions	
	Transmission						# ignitions	
[Level 1] Safety Hazards**	Distribution						# hazards discovered	
[Note: rename based in highest level tracked]	Transmission						# hazards discovered	

Notes:

* An "ignition" is deemed to occur if each of the following conditions is met: (1) a utility owned or controlled facility was associated with the fire; (2) the fire was self-propagating and of a material other than electrical and/or communication facilities; (3) the resulting fire traveled greater than one linear meter from the ignition point; and (4) the utility has knowledge that the fire occurred.

** A [Level 1] Safety Hazard is defined as _____.

Appendix 3 – Burbank Water and Power's 2024 WMP, Summary of Mitigation Activity Accomplishments in 2023

Table 15 - Summary of Mitigation Activity Accomplishments in 2023

Mitigation activities		Description	Accomplishments
Design and construction			
1	Deteriorated pole replacements	Replacement of poles that do not pass condition-based assessments to prevent pole failure.	Replaced 3 poles in Tier 2 HFTD.
2	Pole loading assessments & remediation	Structural assessment of poles to identify potential loading issues during high wind events. Replacement of poles that do not pass GO 95 wind loading design criteria to minimize the risk of pole failure.	All pre-emptive pole loading assessments in the Priority 2.1 area of the Tier 2 HFTD were completed in 2020, and all pole loading issues have been mitigated. All poles that have been replaced since the initial assessment also had new pole loading performed. All future replacements will also require pole loading per GO 95.
3	Overloaded transformer replacements	Replacement of overhead transformers that do not meet loading criteria to prevent transformer failure.	Replaced 4 transformers in Tier 2 HFTD
4	Distribution construction standards improvements	Engineering study of distribution construction standard improvements, which could provide additional risk reduction in the Tier 2 HFTD.	Completed: • An engineering study of conventional fuse replacements (2020). A program was created to replace all conventional fuses with CALFIRE "Exempt" fuses, as discussed in Section 5.1.5. • Field reclosers study is complete, but implementation is

Mitigation activities		Description	Accomplishments
			on hold pending the completion of the remaining engineering studies. This will help BWP determine the most cost-effective risk reduction method. • Composite pole pilot completed, composite poles will be implemented as a mitigation method in the HFTD for future pole replacements. • Replacement of bare overhead wire with covered conductor or reinforcement of pole lines by replacing aging copper with ACSR, study is completed and this will be implemented as a mitigation strategy as budget, supply, and resources allow. • Infrared inspection technology study is completed, implementation is pending vendor selection through the standard procurement processes The following pilot projects are either planned or on track to be completed: • Pole mounted sensor devices for real time monitoring, pilot implemented in 2022. With grant funding support it is expected to deploy these sensors to all poles in the HFTD. • Replacement of oil filled transformers with non-oil filled pole mounted transformers pilot installation completed, ongoing monitoring before final determination by July 2025. • Falling conductor technology (estimated completion by June 2025/2026)
Inspection and maintenance			
5	Annual patrol inspection (GO 165)	Annual system patrol to inspect the condition of electrical assets to avoid faults, which could cause ignitions.	Completed 100% of annual patrol inspections in the Tier 2 HFTD
6	Vegetation management program	Annual vegetation maintenance and clearance from electrical lines to avoid vegetation contact in Tier 2 HFTD	Completed 100% of annual maintenance and clearance in the Tier 2 HFTD. See Table 13 for details.

Mitigation activities		Description	Accomplishments
7	Intrusive pole inspections	Condition-based assessment of remaining pole strength to identify poles at risk of failure	BWP is up to date with all intrusive pole inspections in the Tier 2 HFTD
Operational practices			
8	Block reclosing and increase relay sensitivity during RFW	Block reclosing and increase relay sensitivity on all feeder lines in the Tier 2 HFTD during RFW events	Blocked reclosing and increased relay sensitivity during all RFW alert days
9	Line patrol after outage event during RFW	Patrol with a physical inspection of tripped feeder lines in Tier 2 HFTD during RFW before re-energizing the circuit	Patrolled lines after an outage event during RFW
10	Ignition potential work practices during RFW	Except during an emergency, disallow work that may potentially produce an ignition source on all feeder lines in the Tier 2 HFTD during RFW events	No ignition potential work was performed in the Tier 2 HFTD during RFW events
Situational/Conditional Awareness			
11	Weather/fire monitoring	Conduct weather monitoring via publicly available weather resources to monitor weather forecasts and any potential extreme fire conditions	Monitored weather and alerted staff on each of the days with a RFW condition. In 2021, the ECC began using the SCE owned fire-monitoring camera in the Verdugo Mountains to enhance situational awareness on an as-needed basis.
12	Geographic information system (GIS) applications	Implementation of Outage Management System (OMS), which uses GIS data and meter information to help BWP locate outages and decrease response time	Updated GIS and OMS data, which helped BWP locate outages and decrease response time

Appendix 4 – CMUA Performance Metrics Template



This document was developed by the CMUA Wildfire Preparedness Recovery and Response Working Group and is intended is for general information only and is not offered or intended as legal advice. This document does not reflect minimum or mandatory elements for a wildfire mitigation plan, nor does this document reflect industry standards or best practices. Readers should seek the advice of an attorney when confronted with legal issues and attorneys should perform an independent evaluation of the issues raised in this document.

Wildfire Working Group

Potential Metrics for Consideration in POU WMPs

April 16, 2024

NOTE: this is a discussion draft and is subject to change

Introduction

This document is intended to provide a useful example for publicly owned electric utilities (POUs) and Electric Cooperatives (Co-ops) to consider when updating the metrics tracked in their WMPs. Each POU and Co-op is encouraged to adapt these tables as appropriate for their unique circumstances. Tables 1-4 are intended to be considered together, with each table covering a different category of metric. Tables 2 and 3 have alternate versions that remove the High Fire Threat District (HFTD) columns. Table 5 is intended for use by a POU or Co-op with no overhead facilities in or near the HFTD.

Description of Tables

Table 1: External Risk Metrics - This table includes metrics that track the relative risks that impact the utility that are outside the control of the utility, such as red flag days, high wind events.

Table 2: Performance Metrics - Leading metrics that describe actions that are intended to reduce the risk of utility caused wildfires, such as inspections and routine vegetation management.

Table 3: Outcome Metrics - Lagging metrics that measure outcomes that may be associated with an increased risk of utility-caused wildfires, such as ignitions and outages.

Table 4: Planned Upgrade Metrics - This is an optional table for POUs or Co-ops that are implementing a new wildfire mitigation measure. This table will provide information on the planned rollout of the new measure.

Table 1: External Risk Metrics						
Metric type	External Risk Event	2021	2022	2023	Unit(s)	Comments
1. Red Flag Warnings	Red Flags Warning Days* for Weather Zone that includes Utility Service Territory				#Days	
2. Wind Conditions	High Wind Warning Days* in Weather Zone that includes Utility Service Territory				#Days	
3. [Other Relevant Weather Metric]	[Other relevant weather pattern metrics tracked]				[unit]	
Notes: * Red Flag Warnings and High Wind Warnings are declared by the National Weather Service.						

Table 2: Performance Metrics						
Metric type	Progress metric name	2021 In HFTD	2022 In HFTD	2023 In HFTD	Unit(s)	Comments
1. Distribution Inspections	Patrol Inspections Performed				# circuit miles	
	Detailed Inspections Performed				# circuit miles	
	Routine Vegetation Management Performed				# circuit miles	
2. Transmission Inspections	Patrol Inspections Performed				# circuit miles	
	Detailed Inspections Performed				# circuit miles	
	Routine Vegetation Management Performed				# circuit miles	
Notes:						

Table 3: Outcome Metrics

Event Category		2021	2022	2023		
		In HFTD during Fire Season*	In HFTD during Fire Season*	In HFTD during Fire Season*	Unit(s)	Comments
Outage Event - Distribution	Vegetation caused - Distribution				# outages	
	Other- Distribution				# outages	
	Unknown- Distribution				# outages	
Outage Event - Transmission	Vegetation caused - Transmission				# outages	
	Other- Transmission				# outages	
	Unknown- Transmission				# outages	
Ignitions** Distribution	Vegetation caused - Distribution				# ignitions	
	Other- Distribution				# ignitions	
	Unknown- Distribution				# ignitions	
Ignitions** Transmission	Vegetation caused - Transmission				# ignitions	
	Other- Transmission				# ignitions	
	Unknown- Transmission				# ignitions	
Safety Hazards - Distribution***	Level 1				# hazards discovered	
Safety Hazards - Transmission***	Level 1				# hazards discovered	
Vegetation Management	Offcycle Treatment - Distribution				# poles	
(No Outage/Ignition)	Offcycle Treatment - Transmission				# poles	

Notes:

* "Fire Season" is defined as the period from [May 1] until the later of [October 1] or the date on which [utility staff determines that the applicable region has received sufficient rainfall or winter storm weather to mitigate the likelihood of a catastrophic wildfire occurring].

** An "ignition" is deemed to occur if each of the following conditions is met: (1) a utility owned or controlled facility was associated with the fire; (2) the fire was self-propagating and of a material other than electrical and/or communication facilities; (3) the resulting fire traveled greater than one linear meter from the ignition point; and (4) the utility has knowledge that the fire occurred.

*** A Level 1 Safety Hazard is defined as _____. [Note: Rename or add categories to align with existing utility practices]

Table 4: Planned Mitigation Measures								
Mitigation Measure	Measure Description	2024	2025	2026	2027	2028	Unit(s)	Comments
1. [Planned Mitigation Measure]	[Description of measure, including targeted location]						[unit]	
Notes:								

Appendix 5 – Updated Context Setting Template PSPS Section

(See redline for new recommended addition)

Customers have ever lost service due to an IOU PSPS event?	☐ Yes ☐ No If yes, then provide the following data for the calendar year [____]: *Number of shut-off events:* [____] *Customer Accounts that lost service for >10 minutes:* [____] *For prior response, average duration before service restored:* [____]
Customers have ever been notified of a potential loss of service to due to a forecasted IOU PSPS event?	☐ Yes ☐ No
Has developed protocols to pre-emptively shut off electricity in response to elevated wildfire risks?	☐ Yes ☐ No
Has previously pre-emptively shut off electricity in response to elevated wildfire risk?	☐ Yes ☐ No If yes, then provide the following data for the calendar year [____]: *Number of shut-off events*: [____] *Customer Accounts that lost service for >10 minutes:* [____] *For prior response, average duration before service restored:* [____]

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