



Wildfire Mitigation Plan Independent Evaluation

Prepared for:

Pasadena Water and Power



Submitted by:

Anthony James

Anthony James
Deputy Fire Chief/Fire Marshal
Pasadena Fire Department
215 N. Marengo Ave, Suite 195
Pasadena, California, 91101

Table of Contents

- Disclaimer..... 3
- Executive Summary..... 4
- 1. Background 5
 - 1.1 SB 901 – Wildfire Mitigation Plans..... 5
 - 1.2 PWP’s Wildfire Plan Preparation 5
- 2. PUC Section 8387 6
- 3. Mitigation Strategies Assessment..... 8
 - 3.1 Industry Practice Strategy Matrix 8

Disclaimer

This report was prepared by Pasadena Fire Department (“PFD”) for the Pasadena Water and Power Department (“PWP”). The opinions and judgements presented in this report are based on the information available at the time of this report. PFD is not responsible for the reader’s use of, or reliance upon the report. Readers of the report are advised that they assume all liabilities incurred by them, or third parties, as a result of their reliance on the report, or the data, information, findings and opinions contained in the report.

Executive Summary

Pasadena Water and Power (“PWP”) has asked the Pasadena Fire department to engage in and independent evaluation of its Wildfire Mitigation Plan (“WMP”). This report describes the technical review and evaluation provided by PFD. PFD performed this evaluation between February and April of 2022 and completed the report on April 14th, 2022. PFD reviewed the information related to the WMP and assessed PWP’s procedures related to its wildfire mitigation efforts.

This report is required pursuant to PUC section 8387 as it relates to Publicly Owned Utilities (“POUs”). This section was amended in July of 2019 as a result of the passing of California Assembly Bill (“AB”) 1054. AB 1054 requires that POU’s “submit the plan to the California Wildfire Safety Advisory Board on or before July 1 of each year.” And conduct mandatory cyclical revisions.

Under PUC section 8387(c), POU’s are mandated to provide an independent evaluation of its plans as part of the submittal process. This report was developed to satisfy the requirement for independent review. This report will:

- Evaluate the effectiveness of the PWP Wildfire Mitigation Plan, using area specific knowledge unique to the PFD
- Document feedback provided to improve PWP’s Wildfire Mitigation Efforts
- Evaluate the approach and methodology of the plan for its comprehensiveness
- Provide guidance for areas of the city that should receive special consideration for Wildfire prevention

Based on PFD’s reviews and experience in the mitigation of fires, natural disaster response, and knowledge of local fire conditions PFD has concluded that PWP’s WMP is comprehensive and meets the requirements in accordance with PUC section 8387.

1. Background

The state of California has seen a marked increase in the number and scope of catastrophic wildfires over the last 20 years. Fire Professionals in the state have made an effort to identify the sources of these fires, through that process one of the sources identified to be electric utilities within the state. The wildfire threat is a well-known and shared priority among electric utilities in California. The impact of recent utility caused fires have led to more formalized efforts to ensure safe operations of electric utility equipment and greater investment in wildfire mitigation efforts. The state has approved legislation that strengthens governmental and regulatory oversight of wildfire prevention activities. Senate Bill (“SB”) 901 was passed in 2018 which required select utilities to adopt a wildfire mitigation plan before January 1 2020. POUs were later included in the requirement through the passing of AB 1054 in mid-2019.

1.1 SB 901 – Wildfire Mitigation Plans

On September 21, 2018, Governor Jerry Brown signed SB 901 into law. The bill directs electrical utilities to annually prepare wildfire mitigation plans that include several mitigation and response elements in each utility’s strategies, protocols, and programs. Each electric utility is to prepare and adopt a comprehensive wildfire mitigation plan before January 1, 2020. The requirements for publicly owned utilities (POUs) are presented in Public Utilities Code (PUC) Section 8387. Details relating to POU requirements are discussed in Section 2 of this Report.

1.2 PWP’s Wildfire Plan Preparation

PWP collaborated with neighboring utilities through guidance provided by Southern California Public Power Association (“SCPPA”) and its members. Through that collaboration, PWP was able to get an understanding of what its neighboring utilities are doing to prevent wildfires. After collaborating with neighboring utilities to determine best practices and methods, PWP evaluated its service territory based on the risk levels indicated in the CPUC’s Fire-Threat Map of California. Through this evaluation and collaboration with the PFD, PWP developed its WMP to properly address risks within its service territory.

2. PUC Section 8387

(a) Each local publicly owned electric utility and electrical cooperative shall construct, maintain, and operate its electrical lines and equipment in a manner that will minimize the risk of wildfire posed by those electrical lines and equipment.

(b) (1) The local publicly owned electric utility or electrical cooperative shall, before January 1, 2020, prepare a wildfire mitigation plan. After January 1, 2020, a local publicly owned electric utility or electrical cooperative shall prepare a wildfire mitigation plan annually and shall submit the plan to the California Wildfire Safety Advisory Board on or before July 1 of that calendar year. Each local publicly owned electric utility and electrical cooperative shall update its plan annually and submit the update to the California Wildfire Safety Advisory Board by July 1 of each year. At least once every three years, the submission shall be a comprehensive revision of the plan.

(2) The wildfire mitigation plan shall consider as necessary, at minimum, all of the following:

(A) An accounting of the responsibilities of persons responsible for executing the plan.

(B) The objectives of the wildfire mitigation plan.

(C) A description of the preventive strategies and programs to be adopted by the local publicly owned electric utility or electrical cooperative to minimize the risk of its electrical lines and equipment causing catastrophic wildfires, including consideration of dynamic climate change risks.

(D) A description of the metrics the local publicly owned electric utility or electrical cooperative plans to use to evaluate the wildfire mitigation plan's performance and the assumptions that underlie the use of those metrics.

(E) A discussion of how the application of previously identified metrics to previous wildfire mitigation plan performances has informed the wildfire mitigation plan.

(F) Protocols for disabling reclosers and deenergizing portions of the electrical distribution system that consider the associated impacts on public safety, as well as protocols related to mitigating the public safety impacts of those protocols, including impacts on critical first responders and on health and communication infrastructure.

(G) Appropriate and feasible procedures for notifying a customer who may be impacted by the deenergizing of electrical lines. The procedures shall direct notification to all public safety offices, critical first responders, health care facilities, and operators of telecommunications infrastructure with premises within the footprint of potential deenergization for a given event.

(H) Plans for vegetation management.

(I) Plans for inspections of the local publicly owned electric utility's or electrical cooperative's electrical infrastructure.

(J) A list that identifies, describes, and prioritizes all wildfire risks, and drivers for those risks, throughout the local publicly owned electric utility's or electrical cooperative's service territory. The list shall include, but not be limited to, both of the following:

(i) Risks and risk drivers associated with design, construction, operation, and maintenance of the local publicly owned electric utility's or electrical cooperative's equipment and facilities.

(ii) Particular risks and risk drivers associated with topographic and climatological risk factors throughout the different parts of the local publicly owned electric utility's or electrical cooperative's service territory.

(K) Identification of any geographic area in the local publicly owned electric utility's or electrical cooperative's service territory that is a higher wildfire threat than is identified in a commission fire threat map, and identification of where the commission should expand a high fire-threat district based on new information or changes to the environment.

(L) A methodology for identifying and presenting enterprisewide safety risk and wildfire-related risk.

(M) A statement of how the local publicly owned electric utility or electrical cooperative will restore service after a wildfire.

(N) A description of the processes and procedures the local publicly owned electric utility or electrical cooperative shall use to do all of the following:

(i) Monitor and audit the implementation of the wildfire mitigation plan.

(ii) Identify any deficiencies in the wildfire mitigation plan or its implementation, and correct those deficiencies.

(iii) Monitor and audit the effectiveness of electrical line and equipment inspections, including inspections performed by contractors, that are carried out under the plan, other applicable statutes, or commission rules.

(3) The local publicly owned electric utility or electrical cooperative shall, on or before January 1, 2020, and not less than annually thereafter, present its wildfire mitigation plan in an appropriately noticed public meeting. The local publicly owned electric utility or electrical cooperative shall accept comments on its wildfire mitigation plan from the public, other local and state agencies, and interested parties, and shall verify that the wildfire mitigation plan complies with all applicable rules, regulations, and standards, as appropriate.

(c) The local publicly owned electric utility or electrical cooperative shall 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 independent evaluator shall issue a report that shall be made available on the internet website of the local publicly owned electric utility or electrical cooperative, and shall present the report at a public meeting of the local publicly owned electric utility's or electrical cooperative's governing board.

(Amended (as amended by Stats. 2019, Ch. 79) by Stats. 2019, Ch. 410, Sec. 3. (SB 560) Effective January 1, 2020.)

3. Mitigation Strategies Assessment

Pasadena Fire Department’s plan for mitigating wildfire emergencies resulting from electrical infrastructure includes robust fire prevention operations combined with planned maintenance provided by Pasadena Water and Power. PFD and PWP extend mitigation strategies to the planning, design, and construction of new infrastructure to decrease the likelihood of vegetation fires. PFD and PWP have outlined numerous mitigation strategies detailed in Section 3.1.

3.1 Industry Practice Strategy Matrix

Mitigation Strategy	Applicability to PWP	PFD Determination and Recommendations
Routine vegetation management and inspections in accordance with G.O. 95	Inspect and maintain infrastructure in accordance with G.O. 95.	General Order 95 establishes detailed Inspections and Maintenance Programs/Procedures. It is recommended that the reports be shared with the Fire Marshal when appropriate (corrective actions, safety hazards, immediate risk of high potential impact, etc.).
Off-Cycle vegetation removal or corrective work	Clear and maintain hazardous vegetation within the High Hazard Severity Zones within the City.	It is recommended that PWP maintain 12’ time of trim standards required by G.O. 95 or increase inspection frequencies to maintain minimum clearance of 4’ from power lines.
Real time situational awareness system and staff to monitor changes in weather in conjunction with changes in the electrical system	Monitor weather changes as well as changes in the City’s electrical infrastructure.	Monitor and maintain Situational Awareness to changing weather conditions in conjunction with the electrical system. During Red Flag Days, turn off automatic re-closing of devices to reduce ignition potential if electrical systems are compromised. This is vital to preparing for and anticipating response requirements when hazardous fire conditions exist.
Undergrounding of high fire risk distribution facilities	Move electrical infrastructure underground when feasible.	Undergrounding of high fire risk distribution facilities is ideal in the High Fire Hazard Severity Zones. It is recommended that electrical infrastructure move underground or is hardened when feasible within the High Fire Threat District.
Installation of covered conductor in the overhead system	Install covered conductor in the overhead systems.	Pasadena Fire Department recommends the continued installation of covered conductors in the overhead systems.

Increased or enhanced construction standards in the overhead distribution system within high fire threat areas	Monitor and implement enhanced construction standards.	Pasadena Fire Department recommends the enhanced construction standards in the overhead distribution system within High Fire Hazard Severity Zones.
Enhanced pole inspection criteria for existing assets within the high fire threat district	Monitor and implement enhanced pole inspection criteria.	Pasadena Fire Department recommends more thorough and/or increased pole inspection frequency of existing assets within High Fire Threat District.
Elimination of expulsion fuse type protection devices within the high fire threat district	Eliminate expulsion fuse type protection devices when feasible.	Pasadena Fire Department recommends the elimination of expulsion fuse-type protection devices within High Fire Threat District.
Disabling of protection devices during red flag warnings	Disable protection devices during red flag warnings.	Pasadena Fire Department recommends any disabling of protection devices during Red Flag warnings be communicated with the Pasadena Fire Department and potential ramifications explained.
Public notification systems to keep key personnel informed during an electrical related event	Utilize public notification systems to keep personnel informed.	Pasadena Fire Department recommends utilizing public notification systems to keep key personnel informed during an electrical related event. In the event of an electrical related event, Pasadena Fire Department recommends the key personnel respond to the Command Post to assist Commanders with response and recovery needs. Communication should be coordinated through the city PIO office when an EOC is established during large-scale emergencies.
Coordinates with stakeholder agencies to discuss emergency management	Coordinate with stakeholders on emergency management procedures, expectations and response.	Pasadena Fire Department recommends PWP coordinate this plan with the city's Emergency Operation Plan and Local Hazard Mitigation Plan. In addition, coordinate with neighboring cities/stakeholders. Further communication with the city's PIO will also streamline information to public stakeholders when appropriate.
Coordinate with City's Emergency Operation Plan and Local Hazard Mitigation Plan.	Work with City's Emergency Manager to be included in the EOP and Mitigation Plan	Pasadena Fire Department recommends PWP coordinate with the City Emergency Manager to include mitigation and preparation strategies within the Emergency Operation Plan and Local Hazard Mitigation Plan.