

MORENO VALLEY FIRE DEPARTMENT

INDEPENDENT EVALUATION OF THE MORENO VALLEY UTILITY WILDFIRE MITIGATION PLAN

November 5, 2019

TABLE OF CONTENTS

I.	Wildfire Mitigation Plan Requirements	1
A.	Senate Bill 901	1
B.	AB 1054 & AB 111	1
C.	POU WMP Requirements	1
II.	Description of POU	4
III.	Independent Evaluation	4
A.	Independent Evaluator Requirement	4
B.	Moreno Valley Fire Department Qualifications	4
C.	Evaluation Methodology	5
D.	Metrics.....	6
IV.	Evaluation of Moreno Valley Utility Wildfire Mitigation Plan	7
A.	Minimizing Wildfire risks.....	7
B.	Evaluation of WMP elements	7
V.	Results and Conclusion.....	12

I. WILDFIRE MITIGATION PLAN REQUIREMENTS

A. SENATE BILL 901

Senate Bill (SB) 901 (2018) requires all publicly owned electric utilities (POUs), including Moreno Valley Utility (MVU), to prepare and present a wildfire mitigation plan (WMP) to its governing board prior to January 1, 2020, and annually thereafter. SB 901 identifies specific topics that must be addressed in each POU's WMP, including describing the POU's wildfire mitigation preventative strategies and programs. POUs must also have their plan reviewed by a qualified independent evaluator to assess the comprehensiveness of the plan.

This report serves as MVU's independent evaluation in compliance with SB 901.

B. AB 1054 & AB 111

Assembly Bill (AB) 1054 (2019) and AB 111 (2019) created a new state agency called the California Wildfire Safety Advisory Board ("Board"), which will be made up of seven members, five appointed by the Governor, one appointed by the Speaker of the Assembly, and one appointed by the Senate Rules Committee. SB 1054 requires that every POU must submit its WMP to the Board by July 1 of each year, starting in 2020. The Board will then review the POU WMP and provide comments and advisory opinions on the content and sufficiency of the WMP.

C. POU WMP REQUIREMENTS

California Public Utilities Code (PUC) § 8387(b)(2) lists the statutory requirements for POU WMPs. These are the specific elements that Moreno Valley Fire Department must review in order to make its determination for this report. The following list provides the specific elements that must be addressed in a POU WMP:

- **Responsibilities:** An accounting of the responsibilities of persons responsible for executing the plan. (PUC § 8387(b)(2)(A))
- **Objectives:** The objectives of the wildfire mitigation plan. (PUC § 8387(b)(2)(B))
- **Preventive Strategies:** 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. (PUC § 8387(b)(2)(C))
- **Evaluation Metrics:** 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. (PUC § 8387(b)(2)(D))

- **Impact of Metrics:** A discussion of how the application of previously identified metrics to previous wildfire mitigation plan performances has informed the wildfire mitigation plan. (PUC § 8387(b)(2)(E))
- **Recloser and/or De-energization Protocols:** 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. (PUC § 8387(b)(2)(F))
- **Customer Notification Procedures:** Appropriate and feasible procedures for notifying a customer who may be impacted by the deenergizing of electrical lines. The procedures shall consider the need to notify, as a priority, critical first responders, health care facilities, and operators of telecommunications infrastructure.¹ (PUC § 8387(b)(2)(G))
- **Vegetation Management:** Plans for vegetation management. (PUC § 8387(b)(2)(H))
- **Inspections:** Plans for inspections of the local publicly owned electric utility's or electrical cooperative's electrical infrastructure. (PUC § 8387(b)(2)(I))
- **Prioritization of Wildfire Risks:** 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:
 - 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. (PUC § 8387(b)(2)(J)(i))

¹ On October 2, 2019, the Governor signed into law SB 560 (stats. 2019, ch. 410), which amends the language of this provision. As amended, this language states:

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.

Because the statute was amended after MVU prepared its WMP and because this new language is not yet effective, MVU's WMP reflects the prior statutory language. Moreno Valley Fire Department has determined that because MVU is not adopting deenergization protocols, this statutory change does not impact Moreno Valley Fire Department's review.

- 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. (PUC § 8387(b)(2)(J)(ii))
- **CPUC Fire Threat Map Adjustments:** 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. (PUC § 8387(b)(2)(K))
- **Enterprisewide Risks:** A methodology for identifying and presenting enterprisewide safety risk and wildfire-related risk. (PUC § 8387(b)(2)(L))
- **Restoration of Service:** A statement of how the local publicly owned electric utility or electrical cooperative will restore service after a wildfire. (PUC § 8387(b)(2)(M))
- **Monitor and Audit:** A description of the processes and procedures the local publicly owned electric utility or electrical cooperative shall use to do all of the following:
 - Monitor and audit the implementation of the wildfire mitigation plan. (PUC § 8387(b)(2)(N)(i))
 - Identify any deficiencies in the wildfire mitigation plan or its implementation, and correct those deficiencies. (PUC § 8387(b)(2)(N)(ii))
 - 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. (PUC § 8387(b)(2)(N)(iii))

II. DESCRIPTION OF MORENO VALLEY UTILITY

In 2001, the Moreno Valley City Council established the Moreno Valley Utility. MVU served its first customers on February 6, 2004. Currently, MVU serves over 6,800 customers within its service territory that spans approximately 33.5 square miles. MVU is a “Greenfield Utility” that provides electrical service to new development only. MVU’s entire electrical distribution system is located underground in conduit and vaults. Historically, undergrounded electric lines have not been associated with catastrophic wildfires. The undergrounding of electric lines serves as an effective mitigation measure to reduce the potential of power-line ignited wildfires. Based on a review of local conditions and historical fires, MVU has determined that its electrical lines and equipment do not pose a significant risk of catastrophic wildfire

Despite this low risk, MVU takes appropriate actions to help its region prevent and respond to the increasing risk of devastating wildfires. In its role as a public agency, MVU closely coordinates with other local safety and emergency officials to help protect against fires and respond to emergencies. In its role as a utility, MVU follows all applicable design, construction, operation, and maintenance requirements that reduce safety risks associated with its system. MVU’s WMP was submitted and approved by Moreno Valley City Council on October 16, 2019.

III. INDEPENDENT EVALUATION

A. INDEPENDENT EVALUATOR REQUIREMENT

SB 901 requires each POU 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.”² Additionally, the independent evaluator’s assessment of the comprehensiveness of the POU WMP must be issued in a report that is both posted to the POU’s website and presented at a public meeting of the POU’s governing board.

B. MORENO VALLEY FIRE DEPARTMENT QUALIFICATIONS

SB 901 requires that the qualified independent evaluator that performs the assessment of MVU’s WMP must have experience in assessing the safe operation of electrical infrastructure. The Moreno Valley Fire Department (MVFD) is the primary response agency for fires, emergency medical service, hazardous materials incidents, traffic accidents, terrorist acts, catastrophic weather events, and technical rescues for the City of Moreno Valley. The Fire Department also provides a full range of fire prevention services including public education, code enforcement,

² Cal. Pub. Util. Code § 8387(c).

plan check and inspection services for new and existing construction, and fire investigation. Additionally, the City's Office of Emergency Management is located within the Fire Department allowing for a well-coordinated response to both natural and man-made disasters. The Moreno Valley Fire Department is part of the CALFIRE / Riverside County Fire Department's regional, integrated, cooperative fire protection organization. Through this contract relationship with CAL FIRE, and the Riverside County Fire Department, the Moreno Valley Fire Department has direct access to: Hazardous materials response team, Fire arson investigation, Fire hand crews, bulldozers, and aircraft, Consolidated dispatch center for emergency medical and fire dispatch, Assistance from the Riverside County Fire Office of Emergency Services.

The Fire Department's Office of Emergency Management and Volunteer Services is responsible for minimizing the impact of natural and man-made disasters by establishing readiness through city-wide prevention, preparedness, response, recovery and mitigation. This includes coordinating and conducting drills for the City's Emergency Operations Center (EOC) as well as providing a wide variety of training to both employees including Community Emergency Response Team (CERT) training, Terrorism Awareness training, and emergency preparedness training. The City of Moreno Valley's Local Hazard Mitigation Plan (LHMP) is designed to identify the city's hazards, estimate the probability of future occurrences, and set goals to mitigate potential risks to reduce or eliminate long-term natural or man-made hazard risks to human life and property for the City of Moreno Valley and its residents. The mitigation plan is divided into 3 parts:

- Part 1 provides a profile of the City of Moreno Valley and describes the local planning process, as well as, public participation. It also provides a process for monitoring, evaluating and updating the plan.
- Part 2 provides a detailed assessment of the risks associated with each hazard and historical information on past occurrence. Part 2 also discusses vulnerabilities from each hazard, the impact to Moreno Valley and its citizens and when data is available, it provides information on the potential loss.
- Part 3 provides information about the city's mitigation goals to reduce or avoid long-term vulnerabilities to the hazards that may affect the City of Moreno Valley and an action plan for those goals, with an emphasis on prioritization and implementation.

C. EVALUATION METHODOLOGY

MVFD will evaluate the comprehensiveness the MVU WMP on the following measures:

- **Statutory Compliance:** MVFD will ensure that each required element specified in SB 901 (as listed in Section II.C. above) is either addressed in MVU’s WMP or MVU has sufficiently described why that element is not applicable due to MVU’s size, geography, system, or other relevant factor.
- **Industry Comparison:** MVFD is familiar with existing industry practices and has reviewed the Investor Owned Utility (IOU) WMPs previously filed with the California Public Utilities Commission (CPUC).³ MVFD has compared MVU’s WMP against existing practices and any comparable actions planned by the IOUs.
- **Physical Inspections:** Because of MVFD’s role in the City of Moreno Valley, MVFD has access to and regularly inspects City of Moreno Valley facilities, including electrical infrastructure. Therefore, MVFD has access to a long history of data on the fire mitigation decisions and performance of MVU. MVFD’s evaluation of the MVU WMP draws upon this historical data and experience.

D. METRICS

The MVU WMP proposes the following metrics to measure performance of its wildfire mitigation measures: (1) number of fire ignitions,⁴ and (2) wires down events.⁵ MVFD has determined that these are appropriate metrics for this initial WMP. MVFD will evaluate the metrics selected in Phase 2 of the CPUC’s current Wildfire Mitigation Plan rulemaking for the IOUs (R.18-10-007) and determine if any additional metrics should be incorporated into future MVU WMPs.

³ IOU WMPs are available at: <https://www.cpuc.ca.gov/SB901/>.

⁴ For purposes of this metric, a fire ignition is defined as follows: (i) [MVU facility was associated with the fire; (ii) the fire was self-propagating and of a material other than electrical and/or communication facilities; (iii) the resulting fire traveled greater than one linear meter from the ignition point; and (iv) MVU has knowledge that the fire occurred.

⁵ For purposes of this metric, a wires down event includes any instance where an electric transmission or primary distribution conductor falls to the ground or on to a foreign object.

IV. EVALUATION OF MVU WILDFIRE MITIGATION PLAN

A. MINIMIZING WILDFIRE RISKS

California Public Utilities Code section 8387(a) requires the following:

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.

MVFD has determined that MVU complies with this standard because in addition to utilizing a distribution system that is 100% underground, MVU continues to follow industry best practices while operating and maintaining all MVU equipment and facilities. MVU complies with GO95, GO165, and GO174 standards for vegetation clearances in addition to Municipal Code 6.40 for the abatement of trees, shrubs, weeds, and grass at all MVU facilities. MVU also complies with all relevant federal, state, and industry equipment standard requirements, including those established by the California Public Utilities Commission.

B. EVALUATION OF WMP ELEMENTS

The following table lists each required element for POU WMPs and provides MVFD's assessment of the comprehensiveness of that element within MVU's WMP.

Required Element of WMP	Location in WMP	Summary of MVU WMP	Independent Evaluator's Assessment
PUC § 8387(b)(2)(A): An accounting of the responsibilities of persons responsible for executing the plan.	Section III	Utilities Commission, MVU staff, MVU maintenance & operations provider, and City of Moreno Valley Fire Department.	<i>MVU WMP meets this requirement.</i> Wildfire prevention, response and recovery responsibilities are identified and assigned/assumed by known stakeholders.
PUC § 8387(b)(2)(B): The objectives of the wildfire mitigation plan.	Section II	Description of current MVU policy, practices, and procedures that reduce its wildfire risk. Goal to improve electric grid resiliency.	<i>MVU WMP meets this requirement.</i> MVU currently employs numerous measures to mitigate wildfire risks. Regular examination of policy and procedures to stay current with Utility best practices.

Required Element of WMP	Location in WMP	Summary of MVU WMP	Independent Evaluator's Assessment
PUC § 8387(b)(2)(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.	Section V	MVU distribution system 100% underground. MVU adheres to all state and federal design, construction, and inspection standards.	<i>MVU WMP meets this requirement.</i> MVU inspection, repair, and replacement regiments keep the electrical distribution system in top form. Any expansion of the MVU system is also required to be undergrounded and will follow the same construction and inspection standards.
PUC § 8387(b)(2)(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.	Section VII.A	MVU will track fire ignitions attributed to MVU facilities and equipment.	<i>MVU WMP meets this requirement.</i> MVU monitors all fire events within its service territory and actively assists with emergency response is deenergization is required.
PUC § 8387(b)(2)(E): A discussion of how the application of previously identified metrics to previous wildfire mitigation plan performances has informed the wildfire mitigation plan.	Section VII.B	As a relatively young utility MVU is building this data set and will continue to analyze as it becomes more robust to identify locations and equipment that are prone to fire events and mitigate accordingly.	<i>MVU WMP meets this requirement.</i> No historic fire events are attributed to MVU equipment or facilities. MVU will assess and mitigate any such occurrences accordingly.
PUC § 8387(b)(2)(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.	Section IV.H	MVU distribution system is 100% underground. Reclosers are not installed on underground circuits.	<i>MVU WMP meets this requirement.</i> Reclosers are not part of the MVU underground distribution system. MVU closely monitors SoCal Edison's notices for Public Safety Power Shutoff and advises City staff of potential impacts to critical infrastructure and first responders within the City boundaries.

Required Element of WMP	Location in WMP	Summary of MVU WMP	Independent Evaluator's Assessment
<p>PUC § 8387(b)(2)(G): Appropriate and feasible procedures for notifying a customer who may be impacted by the deenergizing of electrical lines. The procedures shall consider the need to notify, as a priority, critical first responders, health care facilities, and operators of telecommunications infrastructure.</p>	<p>Section IV.H.2</p>	<p>Due to undergrounding MVU does not have a policy in place for deenergizing electrical lines.</p>	<p><i>MVU WMP meets this requirement.</i> MVU does not currently have a Public Safety Power Shutoff policy as it's system is underground. MVU closely monitors SoCal Edison's notices for Public Safety Power Shutoff and advises City staff of potential impacts to critical infrastructure and first responders within the City boundaries.</p>
<p>PUC § 8387(b)(2)(H): Plans for vegetation management.</p>	<p>Section V.C</p>	<p>MVU meets or exceeds industry standards; NERC FAC-00304, GO95, GO128, GO165, GO174, Public resources Code 4292-4293.</p>	<p><i>MVU WMP meets this requirement.</i> Electrical equipment clearances, weed abatement, and landscape management programs maintain active compliance with local, state and federal standards.</p>
<p>PUC § 8387(b)(2)(I): Plans for inspections of the local publicly owned electric utility's or electrical cooperative's electrical infrastructure.</p>	<p>Section V.D</p>	<p>MVU meets or exceeds the inspection requirements set forth in CPUC GO 165 and 174.</p>	<p><i>MVU WMP meets this requirement.</i> MVU does not have any electrical lines in a High Fire Thread District. MVU actively reports needed repairs to other utility facilities within the MVU service territory.</p>
<p>PUC § 8387(b)(2)(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.</p>	<p>Section IV.A</p>	<p>Primary risk drivers for Wildfire within MVU service territory are Earthquakes and Flooding.</p>	<p><i>MVU WMP meets this requirement.</i> MVU has identified and assessed its service territory earthquake and flooding profiles.</p>

Required Element of WMP	Location in WMP	Summary of MVU WMP	Independent Evaluator's Assessment
<p>(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.</p>			
<p>PUC § 8387(b)(2)(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.</p>	Section IV.	No part of MVU service territory is a higher wildfire threat than identified on the CPUC Fire Threat Map.	<i>MVU WMP meets this requirement.</i> N/A
<p>PUC § 8387(b)(2)(L): A methodology for identifying and presenting enterprisewide safety risk and wildfire-related risk.</p>	Section IV.B	MVU has compiled and assessed historical data for local and regional earthquake and flooding events.	<i>MVU WMP meets this requirement.</i> Flood prone areas within MVU service territory have been identified and prioritized for disaster response and mitigation.
<p>PUC § 8387(b)(2)(M): A statement of how the local publicly owned electric utility or electrical cooperative will restore service after a wildfire.</p>	Section VI	MVU has a Disaster and Storm Response Plan in place as well as detailed switching procedures to restore electrical service. MVU's distribution system has been designed and constructed with redundant source	<i>MVU WMP meets this requirement.</i> MVU has restoration procedures in place and trains/exercises these procedures in conjunction with the City's Emergency Operation Center to insure cohesive emergency response and communication with other community stakeholders.

Required Element of WMP	Location in WMP	Summary of MVU WMP	Independent Evaluator's Assessment
		feeds to reduce the duration of outages and accelerate the restoration of electrical service.	
<p>PUC § 8387(b)(2)(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:</p> <ul style="list-style-type: none"> (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. 	Section VII.C-E	<p>MVU will submit their Wildfire Mitigation Plan to the Utility Commission, City Council, and the Moreno Valley Fire Department for review and comment on an annual basis. MVU will continue to monitor and reported reliability statistics to analyze the effectiveness of the Wildfire Mitigation Plan.</p>	<p><i>MVU WMP meets this requirement.</i> The MVU Wildfire Mitigation Plan have been submitted and approved by the Utility Commission and City Council. This report serves as Moreno Valley Fire Department's independent evaluation of said plan.</p>

V. RESULTS AND CONCLUSION

MVFD concludes that MVU's WMP comprehensively addresses all of the statutorily required elements for a POU WMP specified in California Public Utilities Code section 8387. MVFD further finds that MVU has taken reasonable actions to minimize the risk that its lines or equipment will cause a wildfire.