



WILDFIRE MITIGATION PLAN

November 19, 2019

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I. OVERVIEW

A. POLICY STATEMENT

Victorville Municipal Utility Services' (VMUS) overarching goal is to provide safe, reliable, and economic electric service to its service territories. In order to meet this goal, Victorville Municipal Utility Services constructs, maintains, and operates its electrical lines and equipment in a manner that minimizes the risk of catastrophic wildfire posed by its electrical lines and equipment.

B. PURPOSE OF THE WILDFIRE MITIGATION PLAN

Victorville Municipal Utility Services entire electric supply 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, VMUS has determined that its electrical lines and equipment do not pose a significant risk of catastrophic wildfire.

Despite this low risk, VMUS takes appropriate actions to help its region prevent and respond to the increasing risk of devastating wildfires. In its role as a public agency, VMUS closely coordinates with other local safety and emergency officials to help protect against fires and respond to emergencies. In its role as a utility, VMUS follows all applicable design, construction, operation, and maintenance requirements that reduce safety risks associated with its system. This Wildfire Mitigation Plan describes the safety-related measures that VMUS follows to reduce its risk of causing wildfires.

C. SERVICE TERRITORY

Victorville Municipal Utility Services is only a distributor and does not own or operate any generating plants. The service area for Victorville Municipal Utility Services only includes the Southern California Logistics Airport (SCLA) and the Foxborough Industrial Park, less than 60 customers combined. VMUS only serves commercial and industrial customers. Southern California Edison serves all of the residents of the City of Victorville and any commercial / industrial customer not located within the VMUS territory.

D. ORGANIZATION OF THE WILDFIRE MITIGATION PLAN

This Wildfire Mitigation Plan included the following elements:

- Objectives of the plan;
- Roles and responsibilities for carrying out the plan;
- Identification of key wildfire risks and risk drivers;
- Description of wildfire prevention, mitigation, and response strategies and programs;
- Metrics for evaluating the performance of the plan and identifying areas for improvement;
- Review and validation of the plan; and
- Timelines.

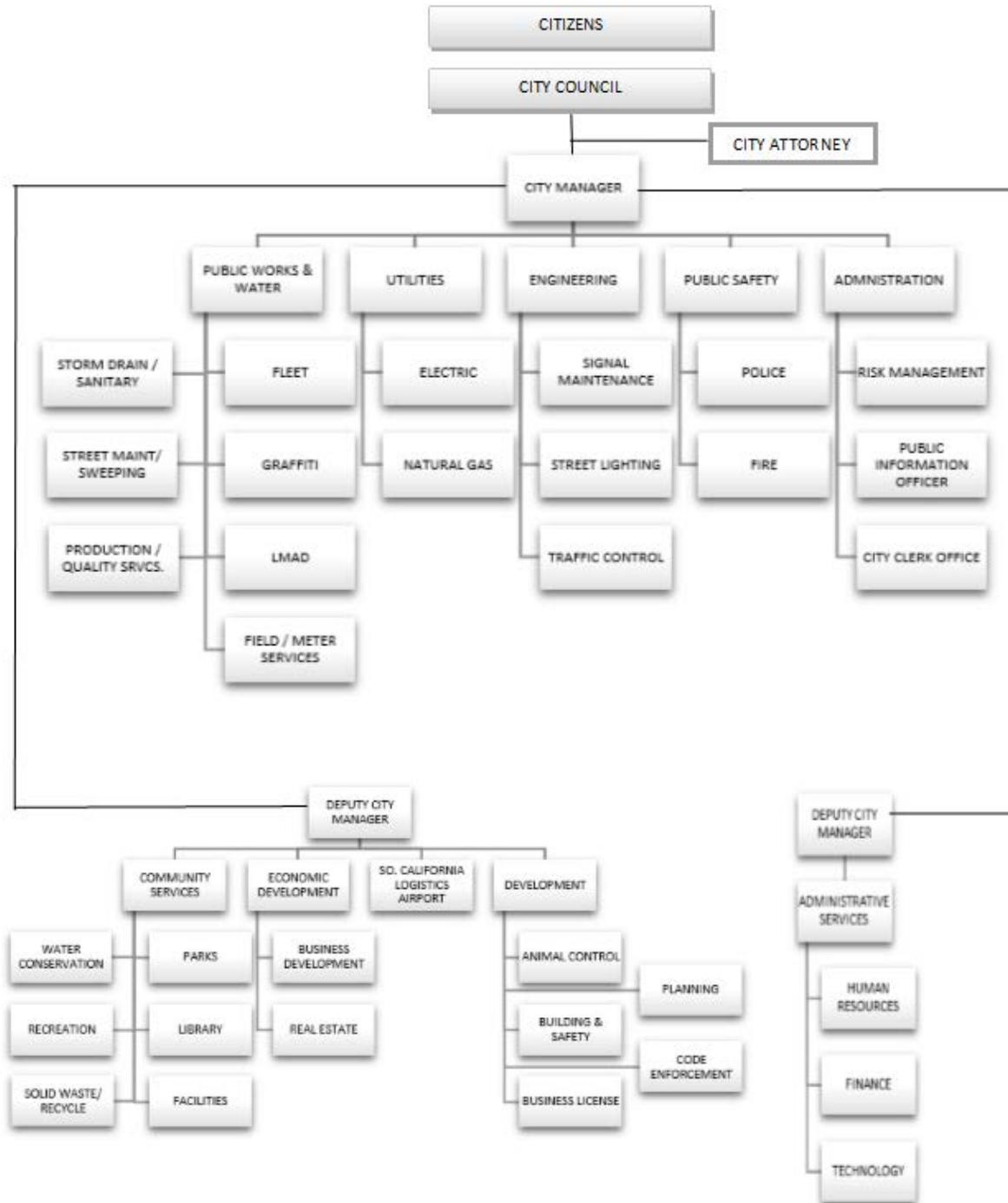
II. OBJECTIVES OF THE WILDFIRE MITIGATION PLAN

The primary goal of this Wildfire Mitigation Plan is to describe VMUS' existing programs, practices, and measures that effectively reduce the probability that VMUS' electric supply system could be the origin or contributing source for the ignition of a wildfire. To support this goal, VMUS regularly evaluates the prudent and cost-effective improvements to its physical assets, operations, and training that can help reduce the risk of equipment-related fires.

The secondary goal of this Wildfire Mitigation Plan is to improve the resiliency of the electric grid. As part of the development of this plan, VMUS assesses new industry practices and technologies that will reduce the likelihood of an interruption (frequency) in service and improve the restoration (duration) of service.

III. ROLES AND RESPONSIBILITIES

A. UTILITY GOVERNANCE STRUCTURE



The City of Victorville is a general law city that operates under a Council-Manager form of government. VMUS is governed by a five-member City Council. The council appoints the City Manager, who oversees the daily operations of the City.

B. WILDFIRE PREVENTION

VMUS staff is responsible for electric facility design, maintenance, and inspection, including vegetation management. Although VMUS' electrical distribution system is 100% underground, VMUS follows best practices to prevent ignition of wildfires from its equipment. These items include:

- VMUS performs routine maintenance of all distribution facilities.
- VMUS adheres to a seasonal weed abatement and vegetation management schedule to maintain at-risk sites.
- VMUS maintains GO95, GO165, and GO174 standard clearances as part of regular maintenance cycles.
- VMUS abides by the National Electric Safety Code (NESC) Rule 012 and Rule 218 standards to abate trees, shrubs, weeds, and grass at all VMUS facilities.
- Electric system operates in a manner that will minimize potential wildfire risks.
- Take all reasonable and practicable actions to minimize the risk of a catastrophic wildfire caused by VMUS electric facilities.
- Coordinate with federal, state, and local fire management personnel as necessary or appropriate to implement VMUS' Wildfire Mitigation Plan.
- Immediately report fires to local fire departments, VMUS administration, and other City Officials, pursuant to existing VMUS practices and the requirements of this Wildfire Mitigation Plan.
- Coordinate with City Emergency Operations Center to disseminate safety warnings, emergency public information, and evacuation notices to local businesses.
- VMUS adheres to City of Victorville personnel code 2.36 for Employee Disaster Notification and Reporting.
- Take corrective action when the staff witnesses or is notified that fire protection measures have not been properly installed or maintained.
- Comply with relevant federal, state, and industry standard requirements, including the industry standards established by the California Public Utilities Commission (CPUC).

C. WILDFIRE RESPONSE AND RECOVERY

VMUS field staff utilize hard line telephones, cellular telephones, and portable radios to communicate with internal and external stakeholders during an outage or emergency. VMUS' Outage Management System auto generates notifications to field and administrative staff. The City of Victorville maintains a two-way UHF band radios for communications enhanced by two DMR repeaters to extend the coverage area. The City radios can have up to 1,024 channels; of which twenty are currently programmed channels (eleven use repeaters and nine are simplex).

The City of Victorville owns one Iridium satellite phone that is issued to the City's Emergency Management Coordinator or his designee during an emergency. VMUS, along with other key City personnel, have access to a Government Emergency Telecommunications Services (GETS) card and PIN provided by Homeland Security to allow for the capability to respond to National Security and Emergency Preparedness (NS/EP) events. Using the Wireless Priority Services (WPS) with GETS can increase the probability of a call completion in both wireless and wireline networks.

In addition to the City of Victorville Fire Department, Mission Fire Rescue (Mission) services the Southern California Logistics Airport. VMUS and airport staff are able to communicate with Mission Fire Rescue through 400-megahertz radios or by calling their station directly. Additionally, the control tower has a direct line to Mission's fire station, which rings throughout the station and opens the bay doors alerting them of an emergency.

CONFIRE provides dispatch services for the City of Victorville Fire Department and Mission. They have the capability of patching in Apple Valley Fire Protection District, CAL FIRE, and contacting several other agencies such as Southwest Gas, Southern California Edison, AMR and other local agencies to assist in an emergency. CONFIRE also functions as the operational area dispatch for the County of San Bernardino, and can coordinate mutual aid as needed.

At the county level, a San Bernardino County Emergency Operations Center (EOC) talk group is programmed into an 800-megahertz frequency band radio and is used to communicate with EOCs within San Bernardino County during a disaster or emergency. The City of Victorville contracts with San Bernardino County Sheriffs. They too utilize 800-megahertz frequency band radios to communicate and have the capability to patch in California Highway Patrol, CAL FIRE, and other county resources to assist during emergencies.

City of Victorville also maintains a reporting hotline to notify the city for code violations, hazards, safety concerns, and overgrown landscaping and weeds. Additionally, the City allows its constituency to report any code violations on line via the City's website. VMUS adheres to California Public Utility Commission GO 95, 165, and 174 for all system infrastructure inspection, maintenance, and reporting.

D. STANDARDIZED EMERGENCY MANAGEMENT SYSTEM

As a local governmental agency¹, VMUS has planning, communication, and coordination obligations pursuant to the California Office of Emergency Services' Standardized Emergency Management System ("SEMS") Regulations², adopted in accordance with Government Code section 8607. The SEMS Regulations specify roles, responsibilities, and structures of communications at five different levels: field response, local government, operational area, regional, and state.³ Pursuant to this structure, VMUS annually coordinates and communicates with the relevant safety agencies as well as other relevant local and state agencies. When activated, VMUS serves as the Utilities Unit Leader under the Operations Section Chief as part of the City Victorville Emergency Operations Center. In the event that the incident centered on VMUS facilities, VMUS would serve as the Operations Section Chief.

¹ As defined in Cal. Gov. Code § 8680.2

² 19 CCR § 2407

³ Ca. Gov. Code § 2403(b):

[1] "Field response level" commands emergency response personnel and resources to carry out tactical decisions and activities in direct response to an incident or threat.

[2] "Local government level" manages and coordinates the overall emergency response and recovery activities within their jurisdiction.

[3] "Operational area level" manages and/or coordinates information, resources, and priorities among local governments within the operational area and serves as the coordination and communication link between the local government level and the regional level.

[4] "Regional level" manages and coordinates information and resources among operational areas within the mutual aid region designated pursuant to Government Code §8600 and between the operational areas and the state level. This level along with the state level coordinates overall state agency support for emergency response activities.

[5] "State level" manages state resources in response to the emergency needs of the other levels, manages and coordinates mutual aid among the mutual aid regions and between the regional level and state level, and serves as the coordination and communication link with the federal disaster response system.

Under the SEMS structure, a significant amount of preparation is done through advanced planning at the county level, including the coordination of effort of public, private, and nonprofit organizations. San Bernardino County serves as the Operational Area and is guided by the California Office of Emergency Services Southern Region. The Operational Area includes local and regional organizations that bring relevant expertise to the wildfire prevention and recovery planning process. These participants are listed below:

Agency	Address	Contact	Phone No.
AMR, American Medical Response	14828 7 th Street Victorville, CA 92392	Administration	760.952.7400
Kaiser Permanente High Desert Medical Offices	14011 Park Ave. Victorville, CA 92392	Administration	833.574.2273
St. Mary's Hospital Medical Center	18300 Highway 18 Apple Valley, CA 92307	Administration	760.242.2311
Desert Valley Hospital	16850 Bear Valley Rd. Victorville, CA 92395	Administration	760.947.5773
Victorville Municipal Utility Services	18374 Phantom West Victorville, CA 92394	Hotline	877.760.8687
Victorville Municipal Utility Services	18374 Phantom West Victorville, CA 92394	Administration	760.243.6340
Victorville Municipal Utility Services – Management	18374 Phantom West Victorville, CA 92394	Director of Utilities	760.243.6341
Victorville Fire Department	14343 Civic Drive Victorville, CA 92392	Fire Chief	760.955.5230
Victorville Fire Department	14343 Civic Drive Victorville, CA 92392	Division Chief	760.955.5231
Victorville Fire Department	14343 Civic Drive Victorville, CA 92392	Emergency Medical Services Coordinator	760.955.5237
Victorville Fire Department	14343 Civic Drive Victorville, CA 92392	Emergency Management Coordinator	760.243.6344
SCLA – Airport Operations	18374 Phantom West Victorville, CA 92394	Hotline	760.243.1915
SCLA Management	18374 Phantom West Victorville, CA 92394	Airport Director	760.243.1910
Victorville – Police Department	14176 Amargosa Rd. Victorville, CA 92392	Police Chief	760.241.1186
Victorville – Public Works	14177 Mc Art Rd. Victorville, CA 92392	Director	760.243.6332
Victorville – City Management	14343 Civic Drive Victorville, CA 92392	City Manager	760.955.5029
Victorville – City Management	14343 Civic Drive Victorville, CA 92392	PIO	760.955.5028
Victorville – Traffic & Transportation	14343 Civic Drive Victorville, CA 92392	Traffic Engineer	760.955.5156
San Bernardino County: Dept. of Environmental Health	385 N. Arrowhead Ave. #2 San Bernardino, CA 92415	Administration	800.442.2283
Mission Aviation Fire Rescue	1055 E. 3 rd Street Corona, CA 92879	Administration	844.321.2733
Mission Aviation Fire Rescue – Station 319	18550 Readiness St. Victorville, CA 92394	Fire Chief	760.246.6479

Pursuant to the SEMS structure, VMUS participates in annual training exercises. Training exercises include workshops and tabletop exercises. A sample of topics covered include earthquake safety, disaster response & management, and NIMS/SEMS/ICS compliance.

IV. WILDFIRE RISKS AND DRIVERS ASSOCIATED WITH DESIGN, CONSTRUCTION, OPERATION, AND MAINTENANCE

A. PARTICULAR RISKS AND RISK DRIVERS ASSOCIATED WITH TOPOGRAPHIC AND CLIMATOLOGICAL RISK FACTORS

Due to VMUS’s distribution system being 100% underground, the primary risk drivers for wildfire within VMUS’s service territory are the following:

- Earthquake
- Flooding

B. ENTERPRISEWIDE SAFETY RISKS

Earthquake profile - There are two major faults/fault zones that directly affect VMUS. They are the San Andreas Fault and the Helendale Fault zones. The City of Victorville sits in the middle of both faults. The San Andreas Fault is the longest fault in California and is known to cause powerful earthquakes, as big as a magnitude eight (8.0).⁴ This fault is located south-west of Victorville. The Helendale Fault creates smaller, yet more frequent earthquakes and is located northeast of the city. The most recent major earthquake to affect the City of Victorville was the Ridgecrest earthquake, approximately 82 miles north of the city. This earthquake struck July 5, 2019 and had a magnitude of 7.1.

Large earthquakes occurring in many parts of the Southern California region could affect the City of Victorville. However, the degree to which the earthquakes are felt, and the damages associated with them may vary. At risk from earthquake damage are critical facilities, buildings, bridges, highways and roads; hazardous materials facilities; sewer, water, natural gas pipelines; earth dams; petroleum pipelines; and private property located in the city. The relative or secondary earthquake hazards, which are liquefaction, ground shaking, amplification, and earthquake-induced landslides, can be just as devastating as the earthquake.

Flooding profile - There are four types flooding conditions that exist within the City of Victorville area; flooding in defined watercourses; ponding; sheet flow; and dam inundation. Flooding within defined watercourses occurs within drainage channels and immediately adjacent floodplains. Ponding occurs when water flow is obstructed due to manmade obstacles and other roadways, where they cross-defined watercourses. Sheet flow occurs when capacities of defined watercourses are exceeded and water flows over broad areas.

Known flood-prone areas noted in the General Plan as well as recorded in city maintenance files, include:

DIR	STREET	DISTANCE	DIRECTION	CROSS STREET	DIR
N/S	Rancho Rd			Manning St	W/B
S/S	Rancho Rd	100	E/O	EL Evado Rd	E/B
W/S	Enramada Rd	100	N/O	Cahuenga Rd	S/B
E/S	Enramada Rd	150	S/O	Cahuenga Rd	S/B
E/S	Cahuenga Rd	150	N/O	Hopland St	N/B

⁴ <https://www.earthquakeauthority.com/California-Earthquake-Risk/Faults-By-County>

W/S	El Evado			Figueroa Rd	S/B
E/S	El Evado	100	N/O	Tawney Ridge Ln	N/B
S/S	Clovis St	350	W/O	Orick Pl	E/B
N/S	Clovis St			Orick Pl	W/B
N/S	Eto Camino Rd	25	E/O	Barranca Way	W/B
S/S	Eto Camino Rd	25	E/O	Cazadero Rd	E/B
S/S	Tawney Ridge Ln	20	E/O	Sueno Ln	E/B
N/S	Tawney Ridge Ln			GreenHill Dr.	W/B
N/S	La Mesa Rd	40	W/O	Pacoima Rd	W/B
E/S	Amethyst Rd	100	S/O	Sierra Rd	N/B
S/S	Bear Valley Rd	300	E/O	Amethyst Rd	N/B
N/S	Bear Valley Rd	150	W/O	Dunia Rd	W/B
W/S	Avalon Rd	20	N/O	Molino Dr.	S/B
E/S	Avalon Rd	75	N/O	Hughes Rd	N/B
N/S	Hughes Rd	150	E/O	Avalon Rd	W/B
S/S	Hughes Rd	700	W/O	Avalon Rd	E/B
S/S	Pebble Beach Dr.	25	W/O	Arrowhead Dr.	E/B
N/S	Pebble Beach Dr.	300	E/O	Arrowhead Dr.	W/B
W/S	1st Ave			Talpa St	S/B
N/S	1st Ave	50	E/O	Dean Ave	W/B
W/S	2nd Ave	50	S/O	Talpa St	S/B
E/S	2nd Ave	25	N/O	Kayuga St	N/B
N/S	Kayuga St	50	W/O	2nd Ave	W/B
S/S	Kayuga St	50	E/O	3rd Ave	E/B
S/S	Ponca St	50	E/O	3rd Ave	E/B
N/S	Ponca St	25	W/O	2nd Ave	W/B
E/S	Dean Ave	100	S/O	Calcite Ave	N/B
W/S	Dean Ave	50	N/O	Grant St	S/B
W/S	Calcite Ave	25	N/O	Calcite Pl	S/B
E/S	Calcite Ave	300	S/O	Dean Ave	N/B
W/S	Cobalt Rd	25	S/O	Palmdale Rd	S/B
E/S	Cobalt Rd	25	N/O	Cameron St	N/B
N/S	Luna Rd	200	W/O	Topaz Rd	W/B
S/S	Luna Rd	200	E/O	HWY 395	E/B
W/S	Cantina Dr.	100	S/O	La Mesa Rd	S/B
E/S	Cantina Dr.	400	N/O	Bear Valley Rd	N/B
S/S	Bear Valley Rd	300	E/O	HWY 395	E/B

S/S	Bear Valley Rd	400	E/O	Topaz Rd	E/B
N/S	Bear Valley Rd	500	E/O	Topaz Rd	W/B
W/S	Cobalt Rd	500	N/O	Bear Valley Rd	S/B
W/S	Cobalt Rd	50	S/O	Bear Valley Rd	S/B
E/S	Cobalt Rd			Homestead Dr.	N/B
E/S	Cobalt Rd	200	N/O	Sycamore St	N/B
S/S	Sycamore St	200	E/O	Richmond Ave	E/B
N/S	Sycamore St	20	E/O	Chisholm Tr.	W/B
N/S	La Mesa Rd	50	W/O	Wrangler Ln	W/B
S/S	La Mesa Rd	200	W/O	Stanford Dr.	E/B
S/S	La Mesa Rd	100	E/O	Mesa Linda Ave	E/B
W/S	Monte Vista Rd	300	S/O	Palmdale Rd	S/B
N/S	Bear Valley Rd	350	W/O	HWY 395	W/B
S/S	Bear Valley Rd	200	E/O	Monte Vista Rd	E/B
E/S	Monte Vista Rd	300	S/O	Maricopa Rd	N/B

V. WILDFIRE PREVENTATIVE STRATEGIES

A. LOW FIRE THREAT DISTRICT

The CPUC's Fire Threat Map includes three Tiers/Levels of fire threat risk. Tier 1 consists of areas that have the lowest hazards and risks, tier 2 consists of areas where there is an elevated risk for destructive electric line-ignited wildfires, and tier 3 consists of areas where there is an extreme risk for destructive electric line-ignited wildfires. The City of Victorville is located in Tier 1. Despite the city's classification of Tier 1, VMUS is cognoscente of the potential dangers; and therefore, implements practices that go above the required industry standards as described below.

B. DESIGN AND CONSTRUCTION STANDARDS

VMUS' electric facilities are designed and constructed to meet or exceed the relevant federal, state, or industry standard. VMUS treats CPUC General Orders (GO) 95 and 128 as a key industry standard for design and construction standards for underground electrical facilities. VMUS meets or exceeds all standards in GO 95 and 128. Additionally, VMUS monitors and follows, as appropriate, the National Electric Safety Code.

C. VEGETATION MANAGEMENT

VMUS meets or exceeds the minimum industry standard vegetation management practices. For distribution level facilities, VMUS meets: (1) Public Resources Code section 4292; (2) Public Resources Code section 4293; (3) CPUC GO 95, 128, 165, and 174.

D. INSPECTIONS

VMUS meets or exceeds the minimum inspection requirements provided in CPUC GO 165 and 174. As described above, VMUS currently does not have any overhead power lines located within or near a Tier 2 or Tier 3 Fire Threat District; however, VMUS staff uses their knowledge of the specific environmental and geographical conditions of VMUS' service territory to determine if any particular areas require more frequent inspections.

If VMUS staff discovers a facility in need of repair that is owned by an entity other than VMUS, VMUS will issue a notice to repair to the facility owner and work to ensure that necessary repairs are completed promptly.

E. RECLOSING POLICY

VMUS' electrical system is primarily underground and has no automatic re-closures in service. In a relayed event, re-closures will be handled on a case-by-case basis after circuit and equipment inspections have been performed. VMUS does not change substation relay settings.

F. DE-ENERGIZATION

VMUS has the authority to preemptively shut off power due to fire-threat conditions; however, this option will only be used in extraordinary circumstances. Due to the minimal risk of VMUS' electrical supply facilities causing a power-line ignited wildfire, VMUS is not adopting specific protocols for de-energizing any portions of its electric distribution system. VMUS will re-evaluate this determination in future updates to this Wildfire Mitigation Plan.

VI. RESTORATION OF SERVICE

VMUS' electric distribution system is completely underground. However, we are interconnected with SCE's transmission and distribution systems, much of which is overhead and exposed to wind, rain and lightning. This is our primary source of vulnerability to potential electrical service interruptions during rain and windstorms such as the ones that can be precipitated by El Niño.

Our underground electric distribution system is designed, and has been constructed, with redundant sources of feed. These do not guarantee the elimination of outages but can facilitate service restoration and reduce the duration of such outages.

Preparation in advance of predicted storms: Since, as discussed in the introduction, our primary trouble source during storms is outages on SCE's transmission and distribution lines, many of which are overhead, we will patrol, to the extent practical, SCE's primary interconnect lines for any potential trouble spots or vulnerabilities. We will also double check the loading conditions of our underground lines to satisfy ourselves that alternate sources have the capacity to serve the electric load (customers) in the event that it is necessary.

Our underground system will be patrolled in advance of storms for any open trenches or excavations at construction sites to minimize water intrusion into the underground system. Although the underground system is designed to operate under such conditions, small pinholes in splices or cable can cause problems, including possible electrical shorts/faults that can interrupt service to customers. Likewise, after the storm, each underground vault, manhole or other structure will be inspected for water intrusion and pumped, when necessary, in accordance proper utility practice and environmental guidelines.

All vehicular equipment, tools, and appurtenances will be thoroughly inspected for proper operation. All operating personnel will be placed on standby in the event of weather related problems. The VMUS operations and admin staff will be prepared for handling of trouble calls from customers and dispatching to field personnel.

Call Center support includes:

- Outage Management System (OMS)
- Field Dispatching
- Coordinating with VMUS' Qualified Emergency Electrical contractors
- Customer Callbacks

Response Prioritization:

- First Priority: Response to imminent threats to life and/or public property
- Second Priority: Removals of immediate hazards (fallen trees, power poles, etc.)
- Third Priority: Clearing of arterial roadways
- Fourth Priority: Maintenance of traffic control/closures to prevent potential accidents
- Fifth Priority (Post Storm Activity): Follow-up work such as addressing storm-related potholes and residual clean-up of all streets that have remained in a "passable and drivable" state

Referral Protocol:

- Flooding of structures on private property- Businesses will be advised to call 911 for Fire Department assistance
- Facilities associated with private utilities will be referred to appropriate company
- All storm related issues involving streets, curbs and gutters, sidewalks, trees in the right of way, catch basins, and miscellaneous drainage facilities will be referred to the City's Maintenance and Operations Division.

During EOC activation period, all routine maintenance programs and requests will be suspended and deferred.

VII. PLAN EVALUATION

A. METRICS AND ASSUMPTIONS FOR MEASURING PLAN PERFORMANCE

VMUS will track the following metric to measure the performance of this Wildfire Mitigation Plan:

- (1) Number of fire ignitions caused by utility equipment.

1. Metric 1: FIRE IGNITIONS

For purposes of this metric, a fire ignition is defined as follows:

- VMUS facility was associated with the fire;
- The fire was self-propagating and of a material other than electrical and/or communication facilities;
- The resulting fire traveled greater than one linear meter from the ignition point; and
- VMUS has knowledge that the fire occurred.

In future Wildfire Mitigation Plans, VMUS will provide the number of fires that occurred that were less than one (1) acre in size within VMUS' service territory. Any fires greater than one acre will be individually described.

B. IMPACT OF METRICS ON PLAN

In the initial years, VMUS anticipates that there will be relatively limited data gathered through the metric. However, as the data collection history becomes more robust, VMUS will be able to identify areas of its operations and service territory that are disproportionately impacted. VMUS will then evaluate potential improvements to the plan.

C. MONITORING AND AUDITING THE PLAN

This Wildfire Mitigation Plan will be presented to the Victorville City Council. VMUS will present updates to this plan on an annual basis.

D. IDENTIFYING AND CORRECTING DEFICIENCIES IN THE PLAN

Based on the recommendations of the Victorville Fire Department and the Victorville City Council, VMUS will correct any identified deficiencies.

E. MONITORING THE EFFECTIVENESS OF INSPECTIONS

VMUS' Utility Maintenance Management System (UMMS) is used to collect all data subject to GO165. Quarterly inspection and maintenance reports are generated for all electric distribution facilities. Maintenance history for each piece of equipment is archived in the UMMS. Additionally, VMUS' substation inspection and maintenance program complies with GO174 guidelines as well as manufacturer specifications, standards, and recommendations. VMUS performs regular inspections of all substation components including recording and analysis of all alarms, fluid levels, meters, and Load Tap Changer settings.

Although VMUS does not fall under the jurisdiction of the California Public Utilities Commission (CPUC), VMUS would cooperate with the CPUC's Utilities Safety and Reliability Branch and their requests for periodic audits.



CITY OF VICTORVILLE FIRE DEPARTMENT

INDEPENDENT EVALUATION OF THE VICTORVILLE MUNICIPAL UTILITY SERVICES (VMUS) WILDFIRE MITIGATION PLAN

March 30, 2020

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I. WILDFIRE MITIGATION PLAN REQUIREMENTS

A. Senate Bill 901

Senate Bill (SB) 901 (2018) requires all publicly owned electric utilities (POUs), including Victorville Municipal Utility Services (VMUS), 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. POU's must also have their plan reviewed by a qualified independent evaluator to assess the comprehensiveness of the plan.

This report serves as VMUS' 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 the Victorville Fire Department (VFD) 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))
 - 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))

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 VMUS prepared its WMP and because this new language is not yet effective, VMUS' WMP reflects the prior statutory language. VFD has determined that because [POU] is not adopting deenergization protocols, this statutory change does not impact VFD's review.

- **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 POU

Victorville Municipal Utility Services is only a distributor and does not own or operate any generating plants. The service area for Victorville Municipal Utility Services only includes the Southern California Logistics Airport (SCLA) and the Foxborough Industrial Park, less than 60 customers combined. VMUS only serves commercial and industrial customers. Southern California Edison serves all of the residents of the City of Victorville and any commercial / industrial customer not located within the VMUS territory.

Victorville Municipal Utility Services entire electric supply 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, VMUS has determined that its electrical lines and equipment do not pose a significant risk of catastrophic wildfire.

Despite this low risk, VMUS takes appropriate actions to help its region prevent and respond to the increasing risk of devastating wildfires. In its role as a public agency, VMUS closely coordinates with other local safety and emergency officials to help protect against fires and respond to emergencies. In its role as a utility, VMUS follows all applicable design, construction, operation, and maintenance requirements that reduce safety risks associated with its system. This Wildfire Mitigation Plan describes the safety-related measures that VMUS follows to reduce its risk of causing wildfires.

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. VICTORVILLE FIRE DEPARTMENT QUALIFICATIONS

SB 901 requires that the qualified independent evaluator that performs the assessment of VMUS’ WMP must have experience in assessing the safe operation of electrical infrastructure. The Victorville Fire Department (VFD) is the primary response agency for fires and other

² Cal. Pub. Util. Code § 8387(c).

emergency services within the Victorville city limits. VFD is staffed with 60 personnel. The department is led by a Fire Chief, a Division Chief and three Battalion Chiefs. Together, the command staff possesses more than 100 years of experience.

In addition to the VFD, Mission Fire Rescue (Mission) services the Southern California Logistics Airport (SCLA) and coordinates with VFD for all fire emergencies within VMUS' proximities. VMUS and airport staff are able to communicate with Mission Fire Rescue through 400-megahertz radios or by calling their station directly. Additionally, the control tower has a direct line to Mission's fire station, which rings throughout the station and opens the bay doors alerting them of an emergency.

CONFIRE provides dispatch services for the VFD and Mission. CONFIRE is a regional dispatch agency that also provides services for Apple Valley Fire Protection District, and San Bernardino County Fire Protection District. CAL FIRE has a separate dispatch agency. CONFIRE coordinates incident command requests to several other agencies such as Southwest Gas, Southern California Edison, AMR, and other local agencies to assist in an emergency. CONFIRE also functions as the Operational Area (OA) dispatch for the County of San Bernardino, and can coordinate mutual aid on request of VFD as needed.

At the county level, a San Bernardino County Emergency Operations Center (EOC) talk group is programmed into an 800-megahertz frequency band radio and is used to communicate with EOCs within San Bernardino County during a disaster or emergency. The City of Victorville contracts with San Bernardino County Sheriffs. They too utilize 800-megahertz frequency band radios to communicate and have the capability to patch in California Highway Patrol, CAL FIRE, and other county resources to assist during emergencies.

C. EVALUATION METHODOLOGY

The Victorville Fire Department will evaluate the comprehensiveness of the VMUS' WMP on the following measures:

- **Statutory Compliance:** VFD will ensure that each required element specified in SB 901 (as listed in Section II.C. above) is either addressed in VMUS' WMP or VMUS has sufficiently described why that element is not applicable due to VMUS' size, geography, system, or other relevant factor.
- **Industry Comparison:** VFD 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 The VFD has compared VMUS' WMP against existing practices and any comparable actions planned by the IOUs.

- **Physical Inspections:** Because of the VFDs role in the City of Victorville along with great collaboration with Mission Fire Rescue, the VFD has access to and regularly inspects the City of Victorville's facilities, including electrical infrastructure. Therefore, the VFD has access to prior data on the fire mitigation decisions and performance of VMUS. The VFDs evaluation of VMUS' WMP draws upon this data and experience.

D. METRICS

VMUS' 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 . The VFD 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 VMUS' 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) VMUS 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) VMUS 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 VMUS' 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.

The Victorville Fire Department has determined that VMUS complies with this standard due to the construction of VMUS's equipment and resources not being located in an area that is considered an elevated or extreme risk of electric line wildfire. Also, with VMUS's electrical lines being entirely underground, this significantly decreases the opportunity for wildfires to occur above ground during high fire danger conditions.

B. EVALUATION OF WMP ELEMENTS

The following table lists each required element for POU WMPs and provides [POU Fire Department]'s assessment of the comprehensiveness of that element within [POU]'s WMP.

Required Element of WMP	Location in WMP	Summary of VMUS 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, VMUS staff, City Council and the Victorville Fire Department	<i>VMUS WMP meets this requirement.</i>
PUC § 8387(b)(2)(B): The objectives of the wildfire mitigation plan.	Section II	Description of current VMUS policy, practices, and procedures that reduce its wildfire risk. Goal to improve electric grid resiliency.	<i>VMUS WMP meets this requirement.</i>

Required Element of WMP	Location in WMP	Summary of VMUS WMP	Independent Evaluator's Assessment
<p>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.</p>	<p>Section V</p>	<p>VMUS' distribution system 100% underground. VMUS adheres to all state and federal design, construction, and inspection standards.</p>	<p><i>VMUS WMP meets this requirement.</i></p>
<p>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.</p>	<p>Section VII.A</p>	<p>VMUS will track fire ignitions attributed to VMUS facilities and equipment.</p>	<p><i>VMUS WMP meets this requirement.</i></p>
<p>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.</p>	<p>Section VII.B</p>	<p>As data collection history becomes more robust, VMUS will build and continue to analyze the data set to identify areas of its operations and service territory that are impacted.</p>	<p><i>VMUS WMP meets this requirement.</i></p>
<p>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.</p>	<p>Section V.E-F</p>	<p>VMUS electrical system is 100% underground and has no automatic reclosures in service.</p>	<p><i>VMUS WMP meets this requirement.</i></p>

Required Element of WMP	Location in WMP	Summary of VMUS 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 V.E-F</p>	<p>Due to minimal risk of underground system, VMUS is not adopting specific protocols for deenergizing any portions of its electrical distribution system.</p>	<p><i>VMUS WMP meets this requirement.</i></p>
<p>PUC § 8387(b)(2)(H): Plans for vegetation management.</p>	<p>Section V.C</p>	<p>VMUS meets or exceeds industry standards; CPUC GO95, GO128, GO165, GO174, Public resources Code 4292-4293.</p>	<p><i>VMUS WMP meets this requirement.</i></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>VMUS meets or exceeds the inspection requirements set forth in CPUC GO 165 and 174.</p>	<p><i>VMUS WMP meets this requirement.</i></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. (ii) Particular risks and risk drivers</p>	<p>Section IV.A</p>	<p>Primary risk drivers for Wildfire within VMUS service territory are Earthquakes and Flooding.</p>	<p><i>VMUS WMP meets this requirement.</i></p>

Required Element of WMP	Location in WMP	Summary of VMUS WMP	Independent Evaluator's Assessment
<p>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>	<p>Section IV</p>	<p>No part of VMUS service territory is a higher wildfire threat than identified on the CPUC Fire Threat Map.</p>	<p><i>VMUS WMP meets this requirement.</i></p>
<p>PUC § 8387(b)(2)(L): A methodology for identifying and presenting enterprisewide safety risk and wildfire-related risk.</p>	<p>Section IV.B</p>	<p>VMUS has compiled and assessed historical data for local and regional earthquake and flooding events.</p>	<p><i>VMUS WMP meets this requirement.</i></p>
<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>	<p>Section VI</p>	<p>VMUS has listed a detailed safety plan of the actions to be taken in order to restore services after a wildfire.</p>	<p><i>VMUS WMP meets this requirement.</i></p>

Required Element of WMP	Location in WMP	Summary of VMUS WMP	Independent Evaluator's Assessment
<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. 	<p>Section VII.C-E</p>	<p>VMUS will submit their Wildfire Mitigation Plan to the Utility Commission, City Council, and the Victorville Fire Department for review and comment on an annual basis. VMUS will continue to monitor and reported reliability statistics to analyze the effectiveness of the Wildfire Mitigation Plan.</p>	<p><i>VMUS WMP meets this requirement.</i></p>

V. RESULTS AND CONCLUSION

The Victorville Fire Department concludes that VMUS' WMP comprehensively addresses all of the statutorily required elements for a POU WMP specified in California Public Utilities Code section 8387. The Victorville Fire Department further finds that Victorville Municipal Utility Services has taken reasonable actions to minimize the risk that its lines or equipment will cause a wildfire.



Reviewed by Battalion Chief, Andrew Roach
(Wildfire Subject Matter Expert)

4-16-2020

Date



Approved by Greg Benson, Fire Chief

4/16/20

Date