



MODESTO IRRIGATION DISTRICT WILDFIRE MITIGATION PLAN

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I. OVERVIEW

A. POLICY STATEMENT

The Modesto Irrigation District's (MID) overarching goal is to provide safe, reliable, and economical electric service to its local community. In order to meet this goal, MID designs, constructs, maintains, and operates its electrical lines and equipment in a manner that minimizes the risk of catastrophic wildfires posed by its electrical lines and equipment.

MID's goal is compatible with Senate Bill (SB) 901, which amended Section 8387 of the Public Utilities Code and requires the local publicly owned electric utility or electrical cooperative to prepare and present a Wildfire Mitigation Plan (WMP) to its governing body.

B. PURPOSE OF THE WILDFIRE MITIGATION PLAN

MID's service territory is located in a region of California that has a very low wildfire risk. Based on a review of local conditions and historical fires, MID has determined that its electrical lines and equipment do not pose a significant risk of being the origin or contributing source for the ignition of a catastrophic wildfire. The California Public Utilities Commission (CPUC) adopted a High Fire-Threat District (HFTD) map (Exhibit A) on January 19, 2018. The map designates non-HFTD areas, elevated fire-threat (Tier 2) areas and extreme fire-threat (Tier 3) areas within California. The majority of MID's service territory falls under the non-HFTD areas as published on the map. A very small portion outside of the service territory has been determined to be in the Tier 2 HFTD area.

MID's service territory to the east and transmission lines to the west fall under the State Responsibility Area (SRA). In these areas, Cal Fire has jurisdiction and is responsible for the prevention and suppression of wildfires. MID follows guidelines as established by Cal Fire in these areas in regards to inspection and vegetation management around poles and power lines.

Despite low risk, this document outlines a range of activities that MID is undertaking to further minimize any risks of MID facilities causing or contributing to catastrophic wildfires. MID takes appropriate actions to help its region prevent and respond to the increasing risk of wildfires. As a public agency, MID closely coordinates with other local safety and emergency officials to help protect against fires and respond to emergencies. As a utility, MID follows all applicable design, construction, operation, and maintenance requirements that reduce safety risks associated with its system.

Public Utilities Code 8387 requires MID to prepare a Wildfire Mitigation Plan (WMP or Plan) and update it annually, with a comprehensive revision within three years. This Plan will serve as a guideline to establish and facilitate procedures to minimize risks related to wildfire hazards.

The budget process for mitigation expenses is integrated in the Electric Transmission and Distribution Division's yearly budget process for board approval. MID's budget documents are found on MID's website: <https://www.mid.org/about/budget/default.html>.

C. ORGANIZATION OF THE PLAN

This Plan includes 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

COMMUNITY OUTREACH AND PUBLIC AWARENESS

RESTORATION OF SERVICE

METRICS FOR EVALUATING THE PERFORMANCE OF THE PLAN AND IDENTIFYING AREAS FOR IMPROVEMENT

REVIEW AND VALIDATION OF THE PLAN

INDEPENDENT EVALUATOR

D. COMPLIANCE WITH PUC 8387 (b)

Requirement	Statutory Language	Location in WMP
Persons Responsible	PUC § 8387(b)(2)(A): An accounting of the responsibilities of persons responsible for executing the plan.	Section III Page 8-11
Objectives of the Plan	PUC § 8387(b)(2)(B): The objectives of the wildfire mitigation plan.	Section II Page 7
Preventive Strategies	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 IV Page 15-25
Evaluation Metrics	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 VIII Page 28-30
Impact of Metrics	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 VIII Page 29
Deenergization Protocols	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 V Page 25-26

Customer Notification Procedures	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.	Section III Page 13-15
Vegetation Management	PUC § 8387(b)(2)(H): Plans for vegetation management.	Section V Page 23-25
Inspections	PUC § 8387(b)(2)(I): Plans for inspections of the local publicly owned electric utility’s or electrical cooperative’s electrical infrastructure.	Section V Page 25
Prioritization of Wildfire Risks	<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:</p> <p>(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>(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>	Section IV Page 15-18
CPUC Fire Threat Map Adjustments	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.	Section V Page 19-20
Enterprisewide Risks	PUC § 8387(b)(2)(L): A methodology for identifying and presenting enterprisewide safety risk and wildfire-related risk.	Section IV Page 17
Restoration of Service	PUC § 8387(b)(2)(M): A statement of how the local publicly owned electric utility or electrical cooperative will restore service after a wildfire.	Section VII Page 28
Monitor and Audit	<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> <p>(i) Monitor and audit the implementation of the wildfire mitigation plan.</p> <p>(ii) Identify any deficiencies in the wildfire mitigation plan or its implementation, and correct those deficiencies.</p> <p>(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 VIII Page 29-30

<p>Qualified Independent Evaluator</p>	<p>PUC § 8387(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 Web site 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.</p>	<p>Section IX Page 31</p>
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II. OBJECTIVES OF THE PLAN

A. MINIMIZING SOURCES OF IGNITION

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

B. RESILIENCY OF THE ELECTRIC GRID

The secondary goal of this Plan is to improve the reliability and resiliency of the electric grid. As part of the ongoing development of this Plan, MID assesses new industry practices and technologies that will reduce the likelihood of an interruption in service and improve the restoration of service.

C. EVALUATE PLAN PERFORMANCE AND EFFECTIVENESS

The final goal for this WMP is to measure the effectiveness of all wildfire mitigation strategies. Where a particular action, program, or protocol is determined to be unnecessary or ineffective, MID will assess whether a modification or replacement is merited. This Plan will also help determine if more cost-effective measures could produce the same or better results.

III. ROLES AND RESPONSIBILITIES

A. MID'S SERVICE TERRITORY

MID is a California irrigation district organized in 1887 under the provisions of the California Water Code. MID has the powers under the California Water Code to, among other things, provide irrigation and electric service. In connection therewith, MID has the powers of eminent domain, to contract, to construct works, to fix rates and charges for commodities or services furnished, to lease its properties and to incur indebtedness.

MID is located in the San Joaquin Valley in Central California, approximately 90 miles east of San Francisco, California. MID began providing electric service in 1923. For the year ending December 31, 2021, MID served over 131,535 customers, had total retail sales of approximately 2.6 billion kWh and a peak demand of 702 megawatts.

Customer Class Makeup	Number of Accounts	Share of Total Load (MWh)
	77.4% Residential	38.3% Residential
	9.8 % Commercial	25.8 % Commercial
	0.1% Industrial	30.5% Industrial
	12.7% Other	5.3% Other
Service Territory Location/Topography ¹	86.45% Agriculture	
	7.60% Urban	
	3.03% Hardwood Woodland	
	2.27% Water	
	0.32% Barren/Other	
	0.25% Hardwood Forest	
Service Territory Wildland Urban Interface ² (based on total area)	0.54% Wildland Urban Interface	
	2.02% Wildland Urban Intermix	
Miles of Owned Lines Underground and/or Overhead	Overhead Distribution: 1,047.3 miles	
	Overhead Transmission: 384.5 miles	
	Underground Distribution: 1,853.2 miles	
	Underground Transmission: 0 miles	

¹ This data shall be based on the California Department of Forestry and Fire Protection, California Multi-Source Vegetation Layer Map, depicting WHR13 Types (Wildlife Habitat Relationship classes grouped into 13 major land cover types) available at: <https://www.arcgis.com/home/item.html?id=b7ec5d68d8114b1fb2bfbf4665989eb3>.

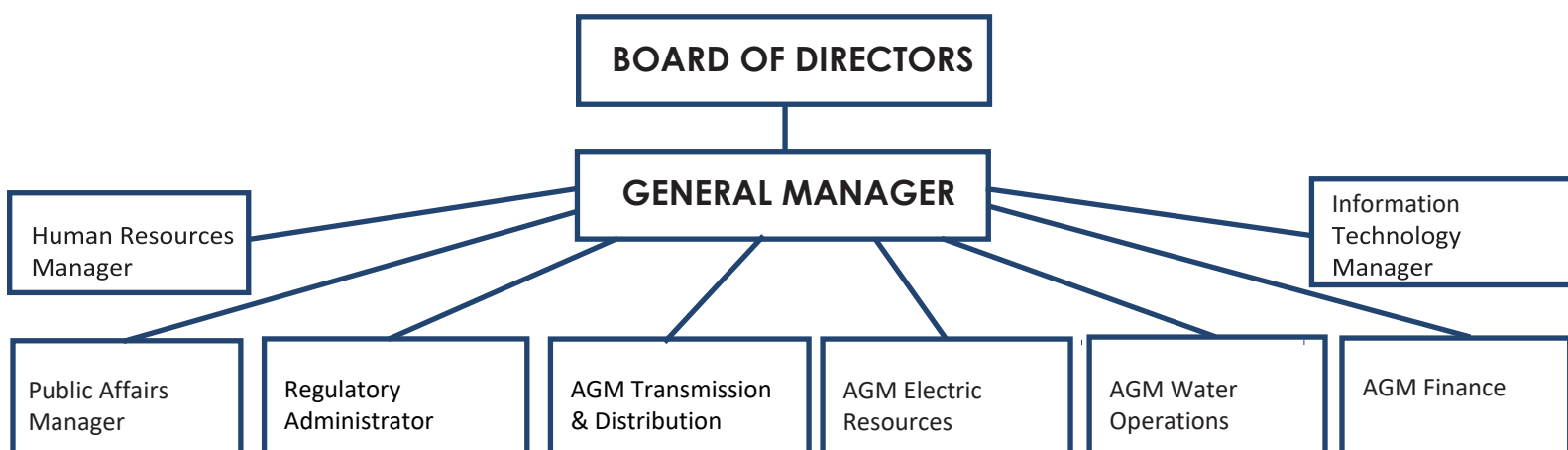
² This data shall be based on the definitions and maps maintained by the United States Department of Agriculture, as most recently assembled in *The 2010 Wildland-Urban Interface of the Conterminous United States*, available at https://www.fs.fed.us/nrs/pubs/rmap/rmap_nrs8.pdf.

B. MID'S GOVERNANCE STRUCTURE

The Board of Directors sets policies for MID. Registered voters within MID's service area elect the five directors to a four-year term. Each director represents a geographical division within MID.

The General Manager (GM) reports to the Board of Directors. The Assistant General Manager (AGM) of Transmission & Distribution (T&D), AGM of Electric Resources, AGM of Water Operations, AGM of Finance, Public Affairs Manager, Regulatory Administrator, Human Resource Manager, and Information Technology Manager report to the GM.

Within T&D, there are various departments (Electric Engineering, Line Construction, Trouble, Metering and Substation) which all have vital roles in the prevention and minimization of wildfire hazards.



Following is the summary of roles and responsibilities of key individuals associated with the Wildfire Mitigation Plan:

BOARD OF DIRECTORS

Reviews and approves the Wildfire Mitigation Plan.

GENERAL MANAGER

Directs the AGM of Transmission & Distribution in the development and implementation of the WMP.

Directs the Public Affairs Manager to conduct public outreach during eminent or active wildfire conditions.

ASSISTANT GENERAL MANAGER OF TRANSMISSION & DISTRIBUTION

Has primary responsibility for the development and implementation of the WMP.

Directs Electric Engineering for the development of the WMP in compliance with SB 901 and to present to the Board of Directors for review and approval.

Initiates interagency communication and coordination during active wildfire events in accordance with the California Office of Emergency Services' Standardized Emergency Management System (SEMS) regulations.

Directs Electric Engineering to coordinate with the Operations Manager for power shutoffs due to increased risk of fire weather conditions or other conditions that could jeopardize the integrity of the electric system.

Directs Electric Engineering in the development of standards pertaining to the HFTD, tracking incidents to monitor effectiveness of the WMP, and reviewing and updating the WMP.

Directs the Trouble Department to maintain records of the vegetation management program and conduct line patrols and inspect overhead lines per MID's standards.

Directs the Line Construction Department to maintain records of line maintenance work and implement the latest technology equipment, including Cal Fire-approved equipment in the HFTD.

Directs the Substation Department to conduct routine inspections of substations, perform vegetation control in and around the substations, and maintain records.

PUBLIC AFFAIRS MANAGER

Manages MID communications, public outreach and information, conducts media relations related to all emergency events in MID's service area, including wildfires or high fire-threat condition.

C. WILDFIRE PREVENTION

Electric Engineering, Line Construction, Trouble, and Substation Departments work closely to establish and execute procedures for the prevention of wildfires. MID's T&D Division follows an established set of guidelines on designing, constructing, maintaining, and inspecting its electrical facilities and lines in compliance with CPUC GO 95, 165 and 174.

The Electric Engineering Department develops standards and creates procedures for the safe and reliable operation of the electric grid. This department designs and specifies electrical equipment to be used in the HFTD. It researches solutions and looks for alternatives for equipment that could pose a future threat. Electric Engineering also supports other departments' day-to-day activities as needed.

The Line Construction Department builds and maintains distribution and transmission facilities. This department, in conjunction with Trouble Department, recommends replacement of wooden poles which are at the end of useful life or weakened due to voids or material decay. In coordination with Electric Engineering, this department consistently seeks implementation of new procedures and design changes in its facilities for efficient and safe delivery of electric power.

The Trouble Department personnel are the first responders for response to any system incidents on a 24/7 basis. This department also implements vegetation management programs for all energized lines within MID [See Section V (C)]. The vegetation management program currently implements the use of ground patrols including a combination of driving and walking. In addition, MID performs helicopter patrols on the 230kV lines. In the past, MID has used LiDAR technology to inspect power line clearance and is exploring using drone technology to inspect and monitor overhead power lines.

MID performs annual visual patrols on 100% of its electric circuits. In the Tier 2 area, consisting of 1.55 miles of 60kV line, MID performs 4 visual patrols per year to ensure that there are no vegetation encroachments or hazards in relation to MID facilities and to ensure that MID lines and equipment are not at risk of failure. If there are any vegetation or equipment concerns found during any of the patrols, a priority repair or maintenance tag is generated to address the concern as soon as possible. If there is an unforeseeable fire event that burns near an area where MID owns electric facilities, the Trouble Department will perform inspections of the line, equipment, and vegetation as it is safe to do so. Any issues or hazards found will be addressed immediately.

Those conducting visual inspections may use tools such as binoculars to determine clearances, pole deformation or degradation. The crews also inspect right-of-way encroachments, access road conditions and related safety hazards. This department inspects the lines and poles within MID service area and any identified issues are prioritized and addressed according to the severity level. These programs are performed on a yearly basis.

The Substation Department installs, inspects, and maintains substation electrical equipment in compliance with CPUC GO 174, Rules for Electric Utility Substations. This department also monitors electrical assets and takes necessary actions to prevent equipment failure that may lead to fire hazards and performs its own vegetation management in and around MID substations.

To minimize its risk of being the origin or contributing source for the ignition of wildfires as a result of its energized lines, MID takes the following proactive approaches:

- (1) Operates the system in a manner that will minimize potential wildfire risks by establishing policies and procedures.
- (2) Manages vegetation around energized overhead lines, maintains minimum clearing distances and conducts inspections at regular intervals in compliance with CPUC GO 165 and GO 95, Rule 35
- (3) Takes all reasonable and practicable actions to minimize the risk of a catastrophic wildfire caused by MID's electric facilities.
- (4) Coordinates with federal, state, and local fire and emergency management personnel as necessary or appropriate to implement MID's Plan.
- (5) Immediately reports fires, pursuant to existing MID practices and the requirements of this Plan.
- (6) Takes corrective action when staff witnesses or is notified that fire protection measures have not been properly installed or maintained.
- (7) Complies with relevant federal, state, and industry standard requirements, including the industry standards established by the CPUC.

D. WILDFIRE RESPONSE AND RECOVERY

When MID is notified of an ignition that is suspected to involve utility infrastructure in its service area, MID staff has an obligation to take all reasonable and practicable actions to prevent the spread of fire and assist firefighters in suppressing the fire. During such scenarios, MID employs emergency protocols to respond quickly and effectively. The fire is closely monitored to determine its direction and rate of spread. MID staff takes all practical actions to minimize fire threats. Based on the circumstances and reports from the field, MID's Power Operations Department staff may use their discretion to de-energize appropriate facilities for public and employee safety.

Authorized MID personnel communicate with the applicable fire departments, Stanislaus County's Office of Emergency Services, local hospitals, and other local government agencies. MID also conveys information to the public through communication lines such as the MID website, local media outlets and social media as appropriate to deliver critical information. Such information may be translated to other major languages spoken in the area.

MID's communication procedures detail MID's internal and external communication protocols so that emergencies such as wildfires and routine operations are communicated in a timely manner.

After the wildfire has been suppressed and no further threat is determined, MID will assist authorities on assessing the level of damage to MID electrical facilities caused by the wildfire and in investigating its cause. All findings will be documented. Any policies to be revised or implemented will be submitted for consideration to the MID Board of Directors.

E. STANDARDIZED EMERGENCY MANAGEMENT SYSTEM

As a local governmental agency,¹ MID has planning, communication, and coordination obligations pursuant to the California Office of Emergency Services' Standardized Emergency Management System (SEMS) Regulations,² 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, MID annually coordinates and communicates with the relevant safety agencies as well as other relevant local and state agencies.

Under the SEMS structure, a significant amount of preparation is done through advanced planning at the county level, including the coordination of public, private, and nonprofit organizations' efforts. Stanislaus County serves as the Operational Area Authority and is guided by the Stanislaus County Office of Emergency Services (OES) that is made up of representatives for each of the nine cities within the county. The Operational Area includes local and regional organizations that bring relevant expertise to the wildfire prevention and recovery planning process. These participants include cities, counties, state and federal agencies, special districts, volunteer agencies, and private agencies within the disaster area that may have responsibilities to ensure they are integrated into emergency operations. MID staff serves in management roles at the Stanislaus County OES.

Pursuant to the SEMS structure, MID staff participates in annual training exercises, including wildfire response. MID is also committed to developing its preparedness through training workshops at regular intervals.

¹As defined in Cal. Gov. Code § 8680.2.

²19 CCR § 2407.

³Cal. 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.

MID is a member of the California Utility Emergency Association (CUEA), which has a key role in ensuring communications between utilities and Cal OES during emergencies. MID also participates in the CUEA's Mutual Assistance Agreement, which is a mutual assistance agreement covering utilities across a number of western states. In addition, MID is a member of American Public Power Association (APPA) and participates in its mutual aid program. This also provides a mechanism to communicate with other utilities for mutual assistance during emergencies.

MID maintains close and interactive relationships with neighboring utilities. This provides a platform to discuss any identified potential threats, strategies for mitigation and sharing of resources during emergency situations.

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

Within MID's service territory and the surrounding areas, the primary risk drivers for wildfires are the following:

Climate Change

Climate change is a shift in average conditions due to "a buildup of greenhouse gases in the atmosphere and the warming of the planet due to the greenhouse effect." The shifts from a changing atmosphere affect different facets of climate. The Environmental Protection Agency describes climate change as involving serious changes in temperature, precipitation, wind patterns, and other atmospheric features.

These changes have a significant impact on the environment and ecosystems. Heat waves, increased humidity, changes in precipitation, and rising sea levels are expected to increase with climate change. In the next 10 years, the California Environmental Protection Agency postulates that climate change will further decrease water supply, increase wildfires, create more extreme weather events, melt glaciers, increase ocean temperatures, affect ocean acidity, and increase sea levels. By 2085, California's Northern and Eastern portions of the region will experience an increase in wildfire risk, more than 4 times the current levels in some areas.

National and Space Administration (NASA) mentions that the Earth's climate has warmed about one degree Fahrenheit in the last 100 years, and this has devastating effects on Earth. While MID has not experienced noticeable devastating effects from climate change in its service territory, it has noticed the historical fire season trends from lengthy dry conditions. Drought in combination with dryness and other factors can create an

ideal environment for the ignition and rapid spread of wildfires.

MID is vigilant in keeping track of high-risk areas that could be affected by climate change. East and West of MID's service territory encompasses dry wild grasses and low growing bushes that dwell underneath some of MID's lines and could potentially fuel a fire. Some of this region falls under SRA (State Responsibility Areas) the non-HFTD and Cal Fire makes regulations which lists exempts and non-exempt equipment in order to reduce the risk of ignition.

Sources:

- <https://www.epa.gov/climatechange-science/basics-climate-change>
- https://www.cdph.ca.gov/Programs/OHE/CDPH%20Document%20Library/CHPRs/CHPR099Stanislaus_County2-23-17.pdf
- <https://www.nasa.gov/audience/forstudents/k-4/stories/nasa-knows/what-is-climate-change-k4.html>

CHANGING WEATHER PATTERNS

Over the past several years California has seen an unpredictable change in its weather patterns. We've experienced record rainfall, high winds, drought, and heat waves. As a result, California has had many destructive fires which have claimed huge loss of property and human lives.

EXTENDED DROUGHT

MID's service territory has experience extended periods of drought over the years. A state of emergency was declared by the Governor of California in 2021. Drought in combination with dryness and other factors can create an ideal situation for the ignition and rapid spread of wildfires.

WEATHER

The following paragraph is taken from the Cal Fire 2020 Tuolumne-Calaveras-San Joaquin-Stanislaus Unit Fire Plan.

Typically fire season temperatures range from the lows in the upper 50's to highs in the 90's. Periods of temperatures in the triple digits are not uncommon and can last for several days. Relative humidity runs in the mid-teens to mid-twenties during the daylight hours, often with poor recovery in the overnight hours. Periods of extreme heat are occasionally accompanied by single digit humidity. Prevailing winds are out of the northwest in the lower elevations

below Highway 120 and are affected by topography in the upper elevations and are also greatly influenced by the Tuolumne River drainage. Above 3,000 feet the temperatures are often a few degrees cooler and lag the delta influence the lower elevations receive. During late August and September, the upper reaches of the battalion are subject to thunderstorm activity in the afternoons. This type of summer weather is ideal for wildland fire.

Source: <https://osfm.fire.ca.gov/media/bdppiaqj/2020-tcu-fire-plan.pdf>

HIGH WINDS

Average sustained wind speed varies throughout the year from 5.0 to 9.4 miles per hour. Heat and drought complemented by strong wind may contribute to rapid spread of wildfires. The average wind speed and direction collected from Modesto Airport is stated below.

Wind	Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
	Speed	5.0	6.2	7.0	7.8	8.9	9.4	8.6	8.1	6.9	6.0	5.0	5.6	7.0
	Direction	SE	SE	NW	NW	NW	NW	NNW	NNW	NW	NW	NW	SE	NW

Average Wind Speed 1996-2006

Source: Western Regional Climate Center at <https://wrcc.dri.edu/Climate/wind.php>

VEGETATION TYPE

The majority of the vegetation in MID's service area includes crops, primarily nuts and fruits. To the east of MID's service territory there is dry wild grass and low growth bushes underneath some MID lines which could act as fuel to a fire.

COMMUNITIES AT RISK

MID's evaluation has not determined any communities that are in direct threat of wildfires because of MID's equipment or power lines. MID continues to monitor its facilities to minimize the risk of fire threats to its communities.

EQUIPMENT FAILURES

MID collects data from equipment failures that could be an ignition source for a fire.

TERRAIN

The majority of MID's service area is essentially flat with an average elevation of less than 100 feet above sea level. MID's service territory to its east and west are at a slight elevation consisting of rolling hills with low and slow growth vegetation. There are three rivers traversing the county - Dry Creek, Tuolumne, and Stanislaus rivers.

TRANSPORTATION

Major highways leading to MID's service territory are Highway 99, Highway 120, Highway 132, and Interstate 5. Major roads leading to MID's Mountain House service territory are Interstate 205, Grant Line Road, and Mountain House Parkway. Traffic congestion and accidents on these roadways could add delays for emergency service providers.

B. ENTERPRISE SAFETY RISKS

MID evaluates the enterprise-wide safety risk associated with wildfires and will update this Plan as needed. The safety risks will be addressed based on:

EFFECTIVENESS OF THE PLAN

MID will evaluate the Plan and its impact. Changes will be made as deemed appropriate to maintain and enhance its effectiveness.

FEEDBACK AND LESSONS LEARNED FROM MID EMPLOYEES

Based on the experience of MID employees, risk factors will be evaluated and will be reflected in the Plan.

TRENDS AND CONSISTENCY ACROSS THE UTILITY INDUSTRY

Any new trends and events in the utility industry will continue to be closely watched. Considerations for change will be evaluated if such trends impact MID.

ONGOING LESSONS FROM PAST OR ACTIVE FIRES

The identified cause and possible proactive approaches that could have been taken for prevention of wildfires will be evaluated. Any applicable strategies will be recommended for implementation.

UNSEEN OPERATIONAL ISSUES

Any unpredicted and unexpected operational issues which may act as a deterrent for the minimization, prevention and control of wildfires will be addressed in the Plan when known.

ANY NEW RESEARCH PAPERS

Methodologies, design changes, pilot projects, new policies and procedures will be addressed in the Plan as applicable based on new findings.

V. WILDFIRE PREVENTATIVE STRATEGIES

A. HIGH FIRE-THREAT DISTRICT

MID participated in the development of the CPUC's Fire-Threat Map,⁴ which designates a High-Fire Threat District. In the map development process, MID reviewed the proposed boundaries of the High-Fire Threat areas and confirmed that, based on local conditions and historical fire data, all of MID's service territory was properly excluded. MID has incorporated the High-Fire Threat District into its construction, inspection, maintenance, repair, and clearance practices, where applicable.

MID'S OVERHEAD LINES IN HIGH FIRE-THREAT DISTRICT (*Line miles*)

- 12kV - 0 miles
- 60kV - 1.55 miles
- 69kV - 0 miles
- 115kV - 0 miles
- 230kV - 0 miles

None of MID's service territory area is located within the Tier 3 HFTD (extreme risk) or Tier 2 HFTD (elevated risk). A very small portion of MID's power lines outside of MID's service territory fall within the Tier 2 HFTD.

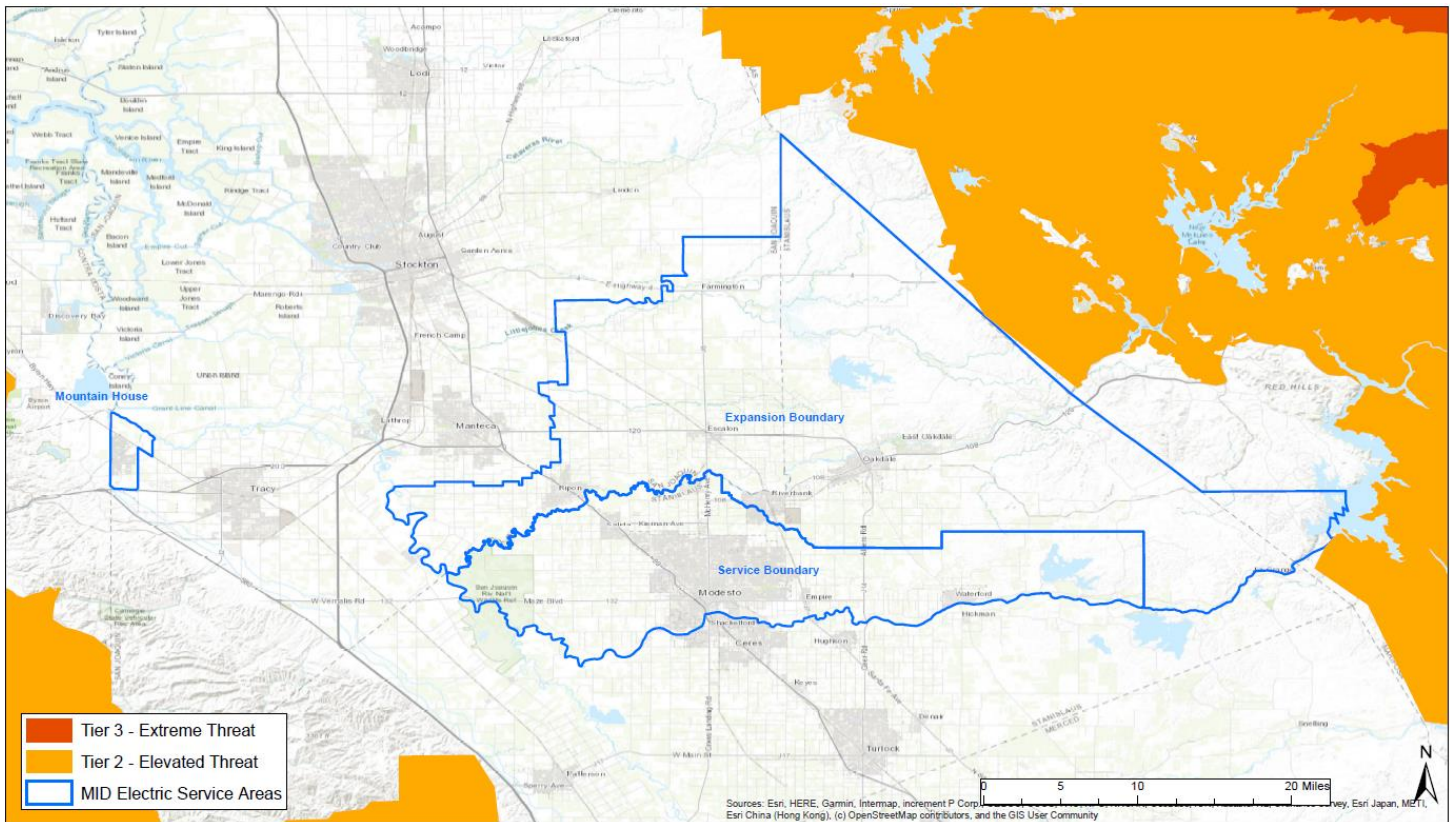


Figure 2: California Fire Threat Tier 2, Tier 3, and MID Service Areas

⁴Adopted by CPUC Decision 17-12-024.

NEW HOGAN LINE

A portion of 60kV overhead power line (1.55 miles) along Silver Rapids Road connects New Hogan Generation Station to Pacific Gas & Electric (PG&E) lines, to the north of Highway 26 at Valley Springs. This section of overhead lines falls within the Tier 2 HFTD on the CPUC Fire-Threat Map.

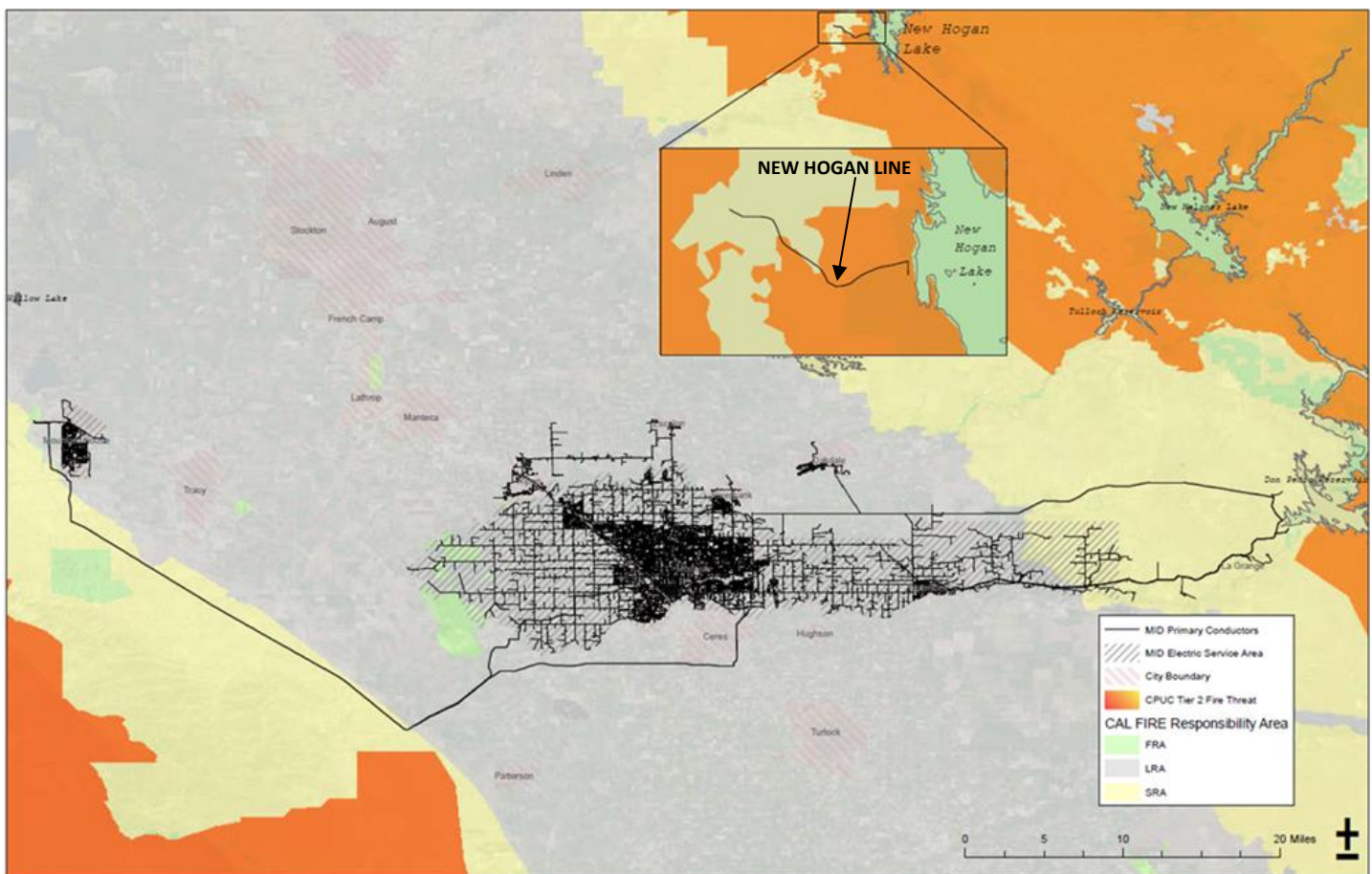


Figure 3 - MID Facilities on CPUC Fire-Threat map

STATE RESPONSIBILITY AREAS

These areas fall under the non-HFTD. Cal Fire makes regulations that apply in SRAs such as brush-covered, grass-covered, forest-covered or mountainous lands. Cal Fire lists and defines exempt and non-exempt equipment that can be used by electric utilities. Per the [Cal Fire Powerline Fire Prevention Field Guide 2021 edition](#), use of exempt equipment will reduce the risk of ignition. Use of non-exempt equipment requires maintaining clearance between the electric lines and vegetation in addition to the removal of vegetation around the poles. Cal Fire also requires the removal or trimming of trees, or portion of trees, that are dead, decadent, rotten, decayed or diseased and which could fall into or onto a line and trees leaning toward a line.

In these areas, MID maintains or exceeds the minimum clearance radius from its poles per Public Resource Code (PRC) Section 4292. Similarly, MID meets or exceeds the minimum clearance from its energized lines per PRC Section 4293.

A. 230kV LINES

MID's 230kV poles and lines from Westley to Tracy fall under SRA (non-HFTD areas). The

vegetation underneath these towers is dry grass. MID meets or exceeds requirements set by Cal Fire for these lines and towers located within the SRA. MID continues to prioritize and monitor

B. EAST OF HAZELDEAN ROAD

The service territory to the east of Hazeldean Road consists of farmland, dry grass, and bushes underneath MID power lines.

C. NEW HOGANLINE

A portion of 60kV overhead power lines (0.74 miles) along Silver Rapids Road connect New Hogan Generation Station to PG&E lines, to the north of Highway 26 at Valley Springs.

MID ensures that all applicable regulations have been met or exceeded in the areas listed above.

Apart from the above-mentioned areas, MID consistently monitors and takes necessary action to mitigate any evolving threats. MID also closely monitors the vegetation and clearances within its service territory. MID proactively looks for any areas that could potentially be a fire threat and takes necessary actions.

B. DESIGN AND CONSTRUCTION STANDARDS

MID's electric facilities are designed and constructed to meet or exceed the relevant federal, state, or industry standards. MID treats CPUC General Orders (GO) 95 as key set of industry standards for design and construction of overhead electrical facilities. MID meets or exceeds all standards in GO 95. Additionally, MID monitors and follows as appropriate the Institute of Electrical and Electronics Engineers (IEEE) standards and National Electric Safety Code.

MID designs and specifies materials to meet or exceed industry standards. MID continuously evaluates and makes modifications to existing designs to address any potential threats. In a continuous effort to enhance public safety, increase reliability and address wildfire risks, MID is currently implementing the following projects or design changes:

REPLACE WOODPOLES

MID evaluated replacement options for wooden poles to the east of Hazeldean Road due to damages caused by woodpeckers. Woodpeckers create cavities inside the poles to make their habitat which weakens the pole and could ultimately result in a wire down situation if the pole breaks due to loss of strength and could result in ignition of a wildfire. MID has completed a project to replace woodpecker damaged wood poles with composite poles at selected locations. Composite poles have significantly lower burning properties than wood poles and will also not be damaged by woodpeckers.

It was found that the composite poles were straightforward to install and perform field modifications, require low maintenance, and have resistance to brush fire. The damaged wooden poles have been replaced by these poles.

REPLACE OVERHEAD #6AWG CONDUCTOR

A portion of MID overhead distribution lines consists of #6AWG copper. Some segments of these conductors have experienced brittleness and have shown signs of metal fatigue. During fault and high wind conditions some of these lines have a tendency to break and fall on the ground. MID has assessed such locations and has prioritized the replacement of such portions of #6AWG copper with #4 ACSR conductors. This project will continue until all #6AWG copper is replaced at identified locations.

NEW FUSE INSTALLATION

MID has identified locations in its distribution lines where installation of a fuse cutout will isolate a portion of circuit reducing hazards and increase reliability to its system. Fuse cutouts are installed at radial tap lines of the distribution feeders, as determined. This project will continue until all identified key areas have Cal Fire-approved fuse cutouts installed.

AVIAN PROTECTION

System events caused by bird contact can cause a wildfire as they use utility structures for a variety of reasons. MID's Avian Protection Plan procedure details the protection of endangered species from energized lines. To address the issue of a wildfire, which may be initiated as a result of bird contact, MID has implemented several strategies. Strategies include – the use of perch deterrents, conductor insulators and jumper covers, avian diverters and installation of nesting platforms. At selected locations, phase spacing between conductors has been increased to provide additional clearances. By doing so, birds will be less likely to create a connection between two phase conductors.

FUSE REPLACEMENT

MID has determined that older style drop down (expulsion) fuses have a tendency to generate an arc when operated. The arc produced has the possibility of initiating a fire under the right circumstances. MID has completed a project to replace these fuses, located east of Hazeldean Road, with a Cal Fire-approved fuse which suppresses and contains the arc. These fuses substantially reduce the risk of initiating wildfires. Any new fuse added or replaced in the eastern portion of MID's service territory will be Cal Fire-approved fuses.

EQUIPMENT FAILURE

MID understands that equipment failure can lead to ignition of nearby vegetation or other flammable material. MID monitors and inspects its distribution equipment (switches, insulators, transformers, surge arrestors etc.) on a regular basis to minimize hazards related to equipment failure. When defective equipment is found, the equipment is removed from service until repairs or replacement is completed.

The Substation Department also has procedures to monitor and inspect substation equipment utilizing visual, mechanical, and electrical tests at specified intervals. Based on the inspection results, faulty equipment is repaired or considered for replacement.

OIL CIRCUIT BREAKER REPLACEMENT

Oil-filled equipment, such as transformers, failure can be a source of fire ignition. Some of MID's substations have 12kV oil circuit breakers. MID has a plan in progress to replace oil circuit breakers within its substations. MID continuously introduces new projects, makes changes to existing designs, implements new procedures to address current and future threats in vulnerable areas.

C. VEGETATION MANAGEMENT

MID meets or exceeds the minimum industry standard vegetation management practices. For transmission-level facilities, MID complies with North American Electric Reliability Corporation (NERC) FAC-003-4, where applicable. For both transmission and distribution level facilities, MID meets:

- (1) CALIFORNIA PUBLIC RESOURCES CODE SECTION 4292**
- (2) CALIFORNIA PUBLIC RESOURCES CODE SECTION 4293**
- (3) CALIFORNIA GO 95 RULE 35**
- (4) CALIFORNIA GO 95 APPENDIX E GUIDELINES TO RULE 35**
- (5) CAL FIRE'S POWER LINE FIRE PREVENTION FIELD GUIDE - 2021**

These standards require significantly increased clearances in the HFTD. The recommended time-of-trim guidelines do not establish a mandatory standard, but instead provide useful guidance to utilities. MID will use specific knowledge of tree growth rates and tree species to determine the appropriate time-of-trim clearance in each circumstance.

To comply with industry, state, and federal standards, MID maintains the following internal vegetation management procedures: T&D Vegetation Management Program (115kV and below) and 230kV Transmission Vegetation Management Program. These procedures provide the methodology in preventing encroachment into minimum vegetation clearance distance of energized overhead lines and on clearing vegetation from the energized lines by maintaining safe clearance.

MID's Vegetation Manager is a Journey Level Lineworker and a member of the International Arboriculture Association and Utilities Arborist Association. MID contracts with a tree trimming service to maintain clearance around its power lines and structures. The tree trimming services are performed by Qualified Line Clearance Tree Trimmers (QLCTT). The contractor adheres to the Minimum Approach Distances (MADs) set by Cal/OSHA. MID's Vegetation Manager makes periodic field visits to check trimming activities and worksite safety.

All contractors and MID personnel are required to use spark arrestors on their equipment to minimize sparks and maintain the clearances around the energized lines in a safe and reliable manner so that no safety issues - including fire hazards - arise.

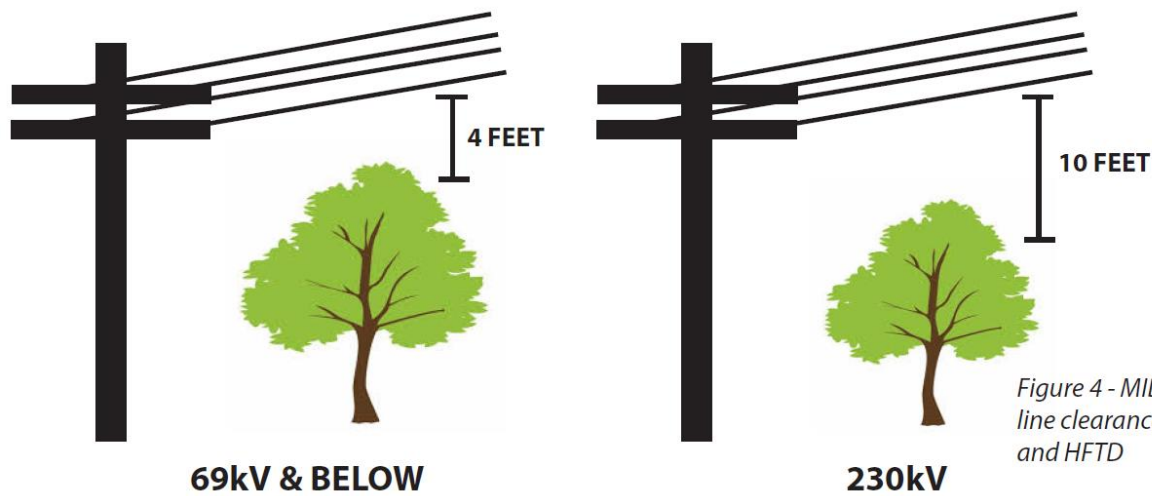
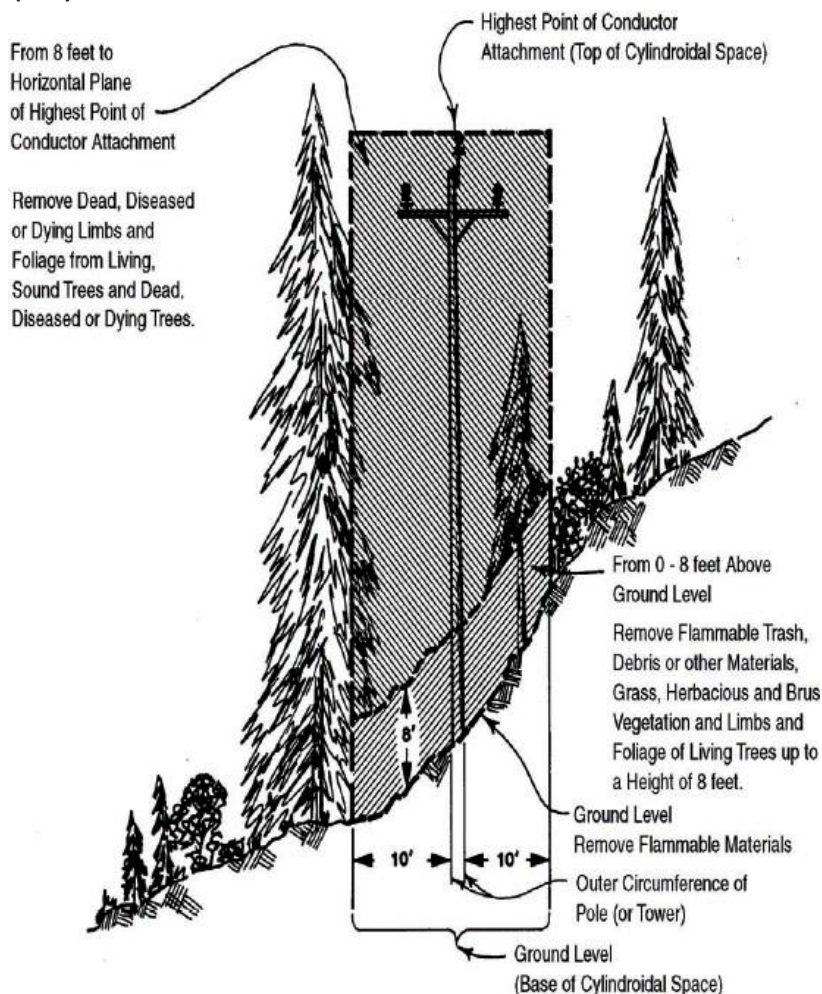


Figure 4 - MID power line clearances for SRA and HFTD

In MID's Fire Zones, MID meets these clearances with overhead power lines at all times.

Another goal of MID's Vegetation Management Program is fuel reduction. MID makes the best efforts in identifying and removing (where practical) the sources of fuels around its energized lines that could potentially contribute to the start and growth of wildfires. Examples of such fuels include brush, grass, dry leaves, dry branches, dead wood, etc.

Vegetation is also controlled in and around MID's substations. The Substation Supervisor takes the lead for the vegetation management in and around the substations. Any weeds inside the station are sprayed and trees outside of the fence trimmed as needed.



TO COMPLY WITH CALIFORNIA PRC-4292, MID MAINTAINS 10 FEET RADIAL CLEARANCES AROUND POLES AND STRUCTURES WHERE NON- CAL FIRE APPROVED EQUIPMENT ARE USED IN SRA'S AND TIER-2 AREAS.

Figure 5 - Radical clearances in SRA and Tier-2 where Cal Fire non-exempt equipment is used

Source: Power Line Fire Prevention Field Guide

D. INSPECTIONS

MID meets or exceeds the minimum inspection requirements provided in CPUC GO 165 and CPUC GO 95, Rule 18. Pursuant to these rules, MID inspects electric facilities as established in its guidelines. MID has operating procedures that detail the inspection methodologies and establishes the criteria for repair of the energized power lines.

As described in Section V (A), MID currently does not have any overhead power lines located within or near Tier 3 of the CPUC's HFTD. A small portion of 60kV lines fall within Tier 2 of the CPUC's HFTD and all other facilities are outside the HFTD. MID performs four inspections per year in Tier 2 area. MID staff use their knowledge of the specific environmental and geographical conditions of MID's service territory to determine if any particular areas require more frequent inspections.

MID's Trouble Department reviews the vegetation management program on a yearly basis and recommends updates or changes to the Plan as needed for effectiveness. Any changes made to the vegetation management program that coincide with the Plan will be reviewed by all departments involved and the changes will be recommended for implementation into the Plan as needed. Trouble Department also inspects overhead electric lines per established requirements on a yearly basis. The department maintains the records of such inspections. Any deficiencies found during inspections are prioritized and addressed according to the level of severity.

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

Any identified imminent risk to public or employee safety as identified during such inspection will be immediately addressed.

E. RECLOSING POLICY

Distribution reclosing is set to automatically operate after five seconds and after 20 seconds for all types of faults. The reclosing function is turned off on underground feeders. Power Operations crews manually close a circuit via remote command through SCADA for the feeders without automatic reclosing capability.

All MID's 230kV lines have high-speed automatic reclosing. These are set to re-close after 30 cycles (one shot) at all faults except three phase line faults (L-L-L). MID has the ability to remotely block the automatic reclosing function.

MID understands that in a high-fire threat area reclosing tendency may contribute to the ignition of a wildfire. MID has not installed reclosers on circuits within the HFTD.

For imminent threats during adverse weather conditions in high-risk fire areas, adjustments to relay settings may be considered; depending on the impact on safety and reliability.

F. DE-ENERGIZATION

MID has the authority and responsibility to preemptively shut off power due to high fire-threat conditions; however, this option will only be used in extraordinary circumstances. MID has standard operating procedures for transmission lines managing contingencies caused by events such as PSPS, forced outages or faulted circuits. These procedures conform to North American Electric Reliability Corporation (NERC) and Western Electricity Coordinating Council (WECC) policies, standards and criteria. MID is currently evaluating protocols for power shut off for distribution lines during high fire-threat conditions. The protocols will be outlined in the 2023 plan.

MID has several water treatment plants in its service territory. If in extraordinary circumstances MID has to shut off power, then MID will provide as much notice as possible to the water treatment facilities and will restore power as soon as it is safe to do so.

G. WORKFORCE TRAINING

Electrical workers are continuously exposed to hazards from energized power lines and equipment. If proper safety and work procedures are not followed, risks may include personnel injury or death, equipment failure leading to power outages, exposing safety risks to the public, or initiation of fire causing damage to private property.

Safety is a positive and integral part of the culture at MID. MID provides a variety of trainings for all levels of employees to perform their job in the safest and most efficient manner. MID crews strictly adhere to safe work practices at all times.

All electrical workers are provided with classroom and on-the-job training. Only trained electrical workers are authorized to work on specific jobs. All safety procedures are followed, and a job briefing is held before starting any job. MID requires all electrical workers to wear proper personal protective equipment while working on the lines and equipment.

MID provides employees the necessary and appropriate tools and equipment required to perform their work. These tools and equipment are also properly maintained. All MID vehicles are regularly serviced to reduce the likelihood of fire ignition (i.e. faulty brakes or metal in contact with the ground).

MID provides yearly training for the use of fire extinguishers to the crews and to new employees as part of the on-boarding process.

VI. COMMUNITY OUTREACH AND PUBLIC AWARENESS

Public awareness starts with educating employees within the organization. MID provides training

and conducts workshops while partnering with other organizations on important topics related to safety and fire hazards.

MID's Public Affairs Department is responsible for MID's public information management including public relations, media relations, advertising, social media, reputation management and crisis communications. The MID website, direct mail, e-mail, local media outlets, social media and paid advertising are all tools MID utilizes to educate and inform its customers.

Community members who are interested in learning more about what is happening at Modesto Irrigation District, such as with the Wildfire Mitigation Plans, are encouraged to attend the regularly scheduled Board meetings. The MID Board of Directors typically meets the second and fourth Tuesday of each month. MID's Board encourages public participation on the topics of discussion. Live streaming is also made available for those who cannot attend meetings and the meeting agendas and videos are archived on the MID Website.

MID presents the comprehensive Wildfire Mitigation Plan to the Board where the public has the opportunity to provide comment. Meeting agendas are provided ahead of the Board meetings. Members of the public will continue to have the opportunity to provide public input via webinar or phone. Members of the public may also email public comments by 3:00 p.m. on the day preceding the Board meeting to the Board Secretary at: angela.cartisano@mid.org or board@mid.org. If public comments are submitted in a timely manner via email, those comments will be addressed during the public input section of the agenda or during a specific agenda item. More information related to Board meetings is provided on the MID's website:

<https://www.mid.org/about/board/agenda/default.html>.

MID staff serves in management roles at Stanislaus County OES who activates and staffs the County's Emergency Operations Center. During disasters and emergency situations, including adverse weather conditions, MID often coordinates public information and outreach activities with OES.

MID's Energy Service Department is in regular communication with major customers. Communications include informing customers of any change in operating conditions within MID, load forecasting, coordinating scheduled outages, addressing situational awareness and other important topics that can have direct or indirect impact on MID's and/or the customer's operations.

MID plays an active role in the community and maintains a sound relationship with neighboring utilities, local government organizations and local law enforcement and fire agencies. MID representatives regularly interact with these agencies on pressing issues. MID provides assistance to neighboring utilities and local agencies as necessary.

MID has provided copies of the WMP to Cal Fire, Modesto Fire Department, Stanislaus County OES and Stanislaus Consolidated Fire Department.

VII. RESTORATION OF SERVICE

MID will follow an established set of procedures for the restoration of service after an outage. MID's operating procedure, System Restoration Plan, details the restoration of service following emergencies and disturbances.

For any outages due to a fault on the lines, the standard procedure is to:

- (1) **PATROL THE LINES**
- (2) **REPAIR ANY DAMAGES, OR IF NO DAMAGE IF FOUND**
- (3) **RESTORE SERVICE**

Trouble Department crews patrol the lines and any damages to the equipment identified during the patrol are repaired. The re-energization process is initiated only after a qualified lineworker confirms that all issues have been corrected and lines are safe to energize.

Some faults can be identified in a timely manner while others may require more time and resources to determine the cause of an outage. This may require a qualified lineworker to patrol the entire feeder to confirm that no safety issues exist. If the entire feeder is patrolled and no cause is determined, and a qualified lineworker confirms that the line is safe to energize, then power will be restored.

Restoration of service after a wildfire event may be delayed and outage duration will depend upon the extent of damage done to the electrical infrastructure and time required to repair the equipment.

Restoration of service involves the coordination between various departments within the T&D Division. Where possible, restoration is prioritized to critical facilities. Best attempts are made to restore service as soon as possible.

Public safety is always a priority. In a rare event that MID is forced to conduct wildfire issue-related power shutoffs, we will alert our customers accordingly.

VIII. EVALUATING THE PLAN

A. METRICS AND ASSUMPTIONS FOR MEASURING PLAN PERFORMANCE

Fire ignition can be the result of equipment failure, such as wire(s) down or vegetation contact. MID's Mapping Department will track three metrics to measure the performance of this Plan: (1) number of fire ignitions; (2) wires down within the service territory; and (3) vegetation management and inspections in HFTD.

METRIC 1: FIRE IGNITIONS

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

- (1) MID FACILITY WAS ASSOCIATED WITH THE IGNITION OF 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
- (4) MID HAS KNOWLEDGE THAT THE FIRE OCCURRED

MID will continue to record the number of fires that occurred that were less than 10 acres in size. Any fires greater than 10 acres will be individually described.

METRIC 2: WIRES DOWN

The second metric is the number of distribution and transmission wires downed within MID's service territory, including car-pole incidents. For purposes of this metric, a wire down event includes any instance where an electric transmission or primary distribution conductor falls to the ground or onto a foreign object. The Mapping Department will divide the wires down metric between wires down inside and outside of the HFTD.

METRIC 3: VEGETATION MANAGEMENT AND INSPECTIONS

Vegetation contacts are very high risks during high fire danger days with strong winds. To measure the effectiveness of the vegetation management program each year, MID will keep records of the following incidents in the HFTD.

- (1) PERCENTAGE OF VEGETATION INSPECTIONS COMPLETED IN THE HFTD. TARGET IS 100%.
- (2) VEGETATION CLEARING COMPLETED IN THE HFTD. TARGET IS >95%.
- (3) POLE CLEARING (BRUSHING) PROGRAM COMPLETED IN THE HFTD. TARGET IS >95%.

MID will not normalize this metric by excluding unusual events, such as severe storms. Instead, MID will supplement this metric with a qualitative description of any such unusual events.

B. IMPACTS OF METRICS ON PLAN

In the initial years, MID anticipates that there will be relatively limited data gathered through these metrics. However, as the data collection history becomes more robust, MID will be able to identify areas of its operations and service territory that are disproportionately impacted. MID will evaluate the data for potential improvements to the Plan and implement mitigations as needed.

C. MONITORING AND AUDITING THE PLAN

A successful implementation of this WMP requires a collective effort from various MID departments. Each department lead is responsible for the execution of the applicable tasks stated within the WMP. The department lead ensures that the applicable procedures have been completed in a timely manner, applicable standards are the most reliable and per the most current utility practices. A proactive approach will be taken in identifying and correcting fire hazard risks.

Any deficiencies noted during the execution of this Plan will be recorded and recommended for implementation by the department lead on a yearly basis. The Plan will be revised based on the provided recommendations and updates to the Plan will be submitted to the MID Board for review and consideration.

MID collaborates with other utility associations to create guidelines for future wildfire mitigation plans through its attendance in bi-weekly meetings with California Municipal Utilities Association (CMUA). MID follows recommendations put forth in the WSAB's Guidance Advisory Opinion to help with yearly revisions to the plan.

D. IDENTIFYING AND CORRECTING DEFICIENCIES IN THE PLAN

MID is committed to making this WMP as effective and robust as possible. MID is also aware that identifying gaps and deficiencies in the WMP is a continuous process which is learned through experience and specific record keeping. Once identified, any gaps or deficiencies will be corrected.

MID understands that changes to the WMP could occur due to new policies, changes in strategies, changes in technology or any overlooked areas. These may add gaps to the Plan.

MID will evaluate such gaps and will work on determining a solution. Any such changes will be incorporated into the Plan and material changes will be submitted to the Board for review and consideration as a part of the annual review.

E. MONITORING THE EFFECTIVENESS OF INSPECTIONS

MID's Trouble Department monitors and inspects overhead distribution and transmission lines on a yearly basis. This department also monitors and inspects vegetation around the overhead power lines as described in the vegetation management programs. The Substation Department inspects the condition of its equipment on a regular basis.

During the inspection process, MID crews take necessary actions to address any non-compliance (as a result of external sources) if determined. If any deviation from the standards is identified, corrective action will be taken. Any equipment that is not operating as designed or expected is subjected for further investigation.

MID crews make notes of any areas of concern that could result in a hazardous situation and could compromise safety and reliability. The crews create tags and notify their respective department supervisors of any such findings who then evaluate and provide direction for corrective action. Any repair work performed on or around the lines and poles, including the inspection process, will be recorded.

A data-driven approach will be implemented to determine the effectiveness of MID's WMP. Additionally, as MID develops a history of records on past MID facility caused wildfires and equipment failures, the monitoring process will progress, and the mitigation plan will mature.

IX. INDEPENDENT EVALUATOR

Public Utilities Code Section 8387(c) requires MID to contract with a qualified Independent Evaluator (IE) with experience in assessing the safe operation of electrical infrastructure to review and assess the comprehensiveness of this Plan. MID's WMP will continue to be updated annually. The plan will be evaluated by an IE every three years for comprehensive updates. MID may hire IEs for plan evaluation on an as-needed basis within the three-year period. The IE's report will be presented to the MID Board at a public meeting and the report will also be posted to MID's website.

MID has posted its most recent Independent Evaluator Report (2019) on its website under the Newsroom page in the navigation bar/menu tab. A link of MID's California Wildfire Public Safety information including the IE Report can be found at the link below.

<https://www.mid.org/about/newsroom/wildfiresafety/default.html>

MID will follow its standard purchasing procedures for contracting with a qualified IE. Selection of the successful IE will be made based on the IE's level of experience with wildfire mitigation plans, familiarity with similar type and size utilities, knowledge of utility's design and construction standards, and recommendations from references.

The evaluation report will be submitted to MID's Board of Directors. Based on any MID Board recommendations, revisions to the Plan will be made.

X. APPENDIX

EXHIBIT A - CPUC FIRE-THREAT MAP, ADOPTED ON JANUARY 18, 2018

EXHIBIT B - MID SERVICE TERRITORY MAP OVERLAID ON CPUC FIRE-THREAT MAP

EXHIBIT C - CALIFORNIA PUBLIC RESOURCES CODES - 4292 & 4293

EXHIBIT D - GO 165 DISTRIBUTION INSPECTION CYCLE

EXHIBIT E - GO 95, RULE 18 REPORTING AND RESOLUTION OF SAFETY HAZARDS DISCOVERED BY UTILITIES

EXHIBIT F - GO RULE 95, RULE 35

EXHIBIT G - GO 174, RULES FOR ELECTRIC UTILITY SUBSTATIONS (SECTION III)

EXHIBIT A - CPUC FIRE-THREAT MAP

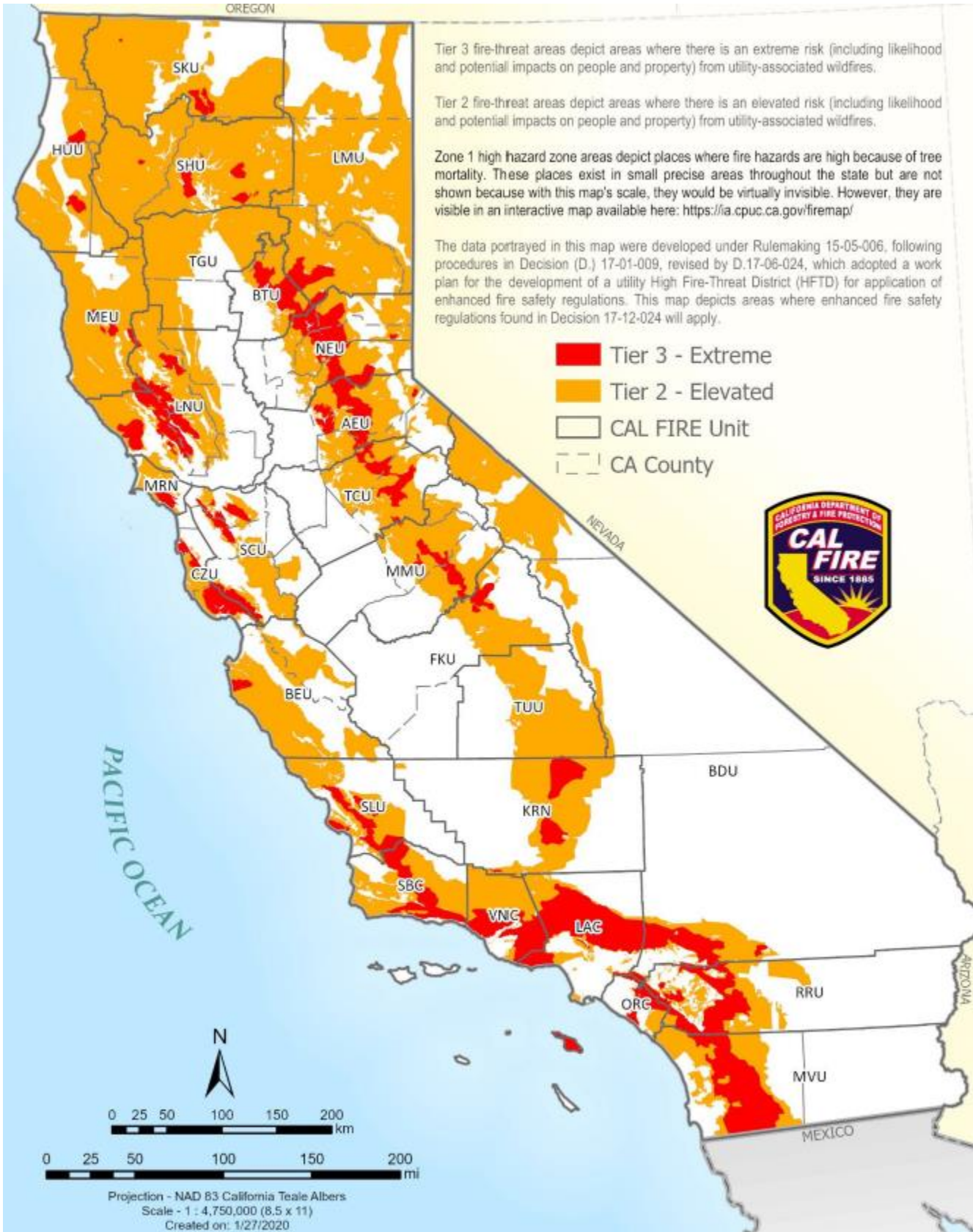


EXHIBIT B - MID SERVICE TERRITORY MAPPED IN CPUC FIRE-THREAT MAP

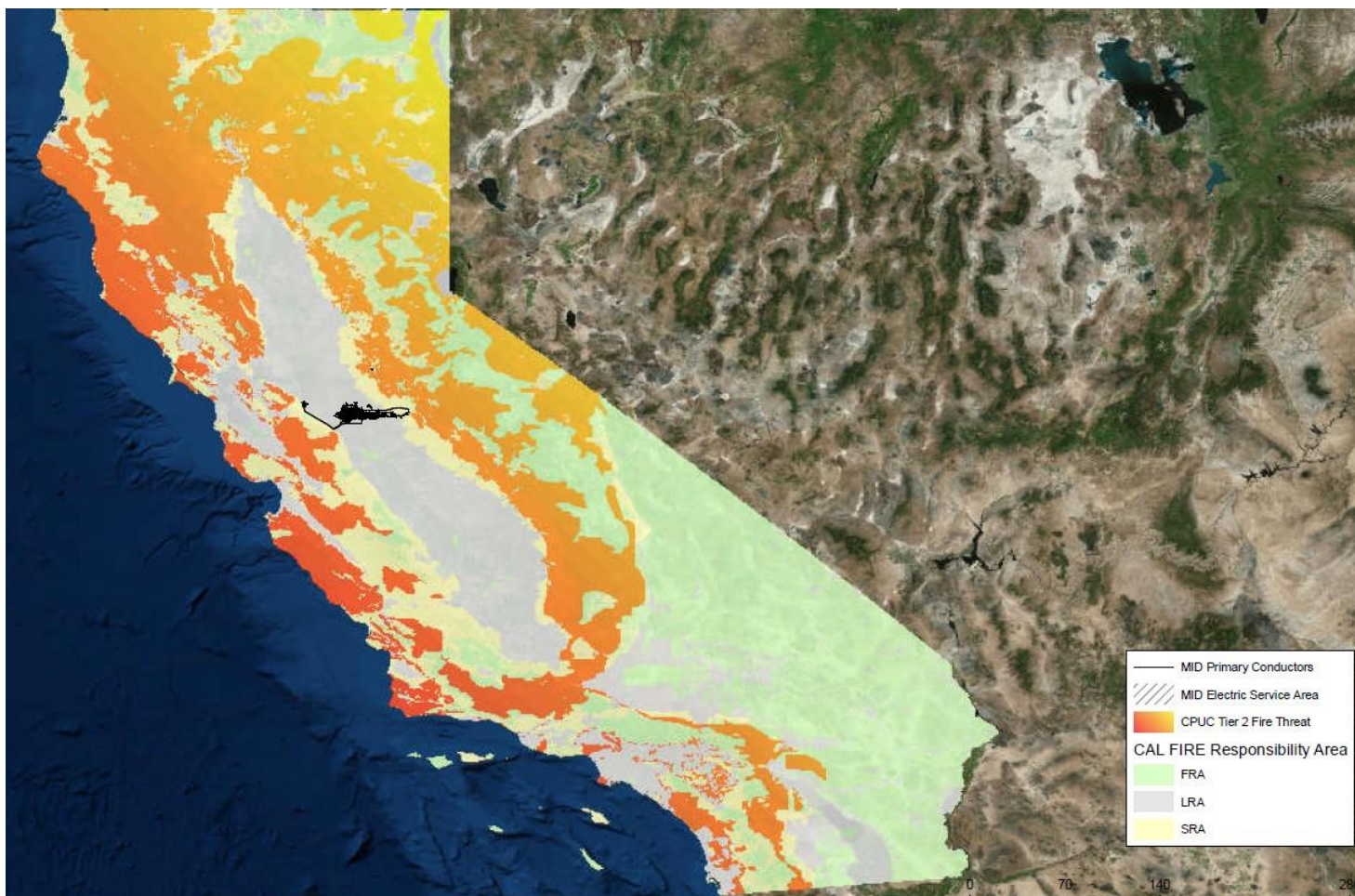


EXHIBIT C - CPUC PUBLIC RESOURCE CODES

Public Resource Code, Division 4, Chapter 3 outlines state laws related to *“Mountainous, Forest-, Brush- and Grass-Covered Lands.”*

PRC 4292 - POWER LINE HAZARD REDUCTION

Except as otherwise provided in Section 4296, any person that owns, controls, operates, or maintains any electrical transmission or distribution line upon any mountainous land, or forest-covered land, brush-covered land, or grass-covered land shall, during such times and in such areas as are determined to be necessary by the director or the agency which has primary responsibility for fire protection of such areas, maintain around and adjacent to any pole or tower which supports a switch, fuse, transformer, lightning arrester, line junction, or dead end or corner pole, a firebreak which consists of a clearing of not less than 10 feet in each direction from the outer circumference of such pole or tower. This section does not, however, apply to any line which is used exclusively as telephone, telegraph, telephone or telegraph messenger call, fire or alarm line, or other line which is classed as a communication circuit by the Public Utilities Commission. The director or the agency which has primary fire protection responsibility for the protection of such areas may permit exceptions from the requirements of this section which are based upon the specific circumstances involved.

PRC 4293 - POWER LINE CLEARANCE REQUIRED

Except as otherwise provided in Sections 4294 to 4296, inclusive, any person that owns, controls, operates, or maintains any electrical transmission or distribution line upon any mountainous land, or in forest-covered land, brush-covered land, or grass-covered land shall, during such times and in such areas as are determined to be necessary by the director or the agency which has primary responsibility for the fire protection of such areas, maintain a clearance of the respective distances which are specified in this section in all directions between all vegetation and all conductors which are carrying electric current:

- (a) For any line which is operating at 2,400 or more volts, but less than 72,000 V, four feet.
- (b) For any line which is operating at 72,000 or more volts, but less than 110,000 V, six feet.
- (c) For any line which is operating at 110,000 or more volts, ten feet.

In every case, such distance shall be sufficiently great to furnish the required clearance at any position of the wire, or conductor when the adjacent air temperature is 120 degrees Fahrenheit, or less. Dead trees, old decadent or rotten trees, trees weakened by decay or disease and trees or portions thereof that are leaning toward the line which may contact the line from the side or may fall on the line shall be felled, cut, or trimmed so as to remove such hazard. The director or the agency which has primary responsibility for the fire protection of such areas may permit exceptions from the requirements of this section which are based upon the specific circumstances involved

EXHIBIT D - GO 165 DISTRIBUTION INSPECTION CYCLES

Chapter III (Distribution Facilities), Section B (Standards for Inspection) Table-1 of GO 165 lists maximum inspection intervals of distribution equipment.

**Table 1
Distribution Inspection Cycles (Maximum Intervals in Years)**

	Patrol		Detailed		Intrusive	
	Urban	Rural	Urban	Rural	Urban	Rural
Transformers						
Overhead	1	2 ¹	5	5	---	---
Underground	1	2	3	3	---	---
Padmounted	1	2	5	5	---	---
Switching/Protective Devices						
Overhead	1	2	5	5	---	---
Underground	1	2	3	3	---	---
Padmounted	1	2	5	5	---	---
Regulators/Capacitors						
Overhead	1	2 ¹	5	5	---	---
Underground	1	2	3	3	---	---
Padmounted	1	2	5	5	---	---
Overhead Conductor and Cables	1	2 ¹	5	5	---	---
Streetlighting	1		x	x	---	---
Wood Poles under 15 years	1	2	x	x	---	---
Wood Poles over 15 years which have not been subject to intrusive inspection	1	2	x	x	10	10
Wood poles which passed intrusive inspection	---	---	---	---	20	20

(1) Patrol inspections in rural areas shall be increased to once per year in Extreme and Very High Fire Threat Zones in the following counties: Imperial, Los Angeles, Orange, Riverside, Santa Barbara, San Bernardino, San Diego, and Ventura. Extreme and Very High Fire Threat Zones are designated on the Fire and Resource Assessment Program (FRAP) Map prepared by the California Department of Forestry and Fire Protection or the modified FRAP Map prepared by San Diego Gas & Electric Company (SDG&E) and adopted by Decision 12-01-032 in Phase 2 of Rulemaking 08-11-005. The fire-threat map is to be used to establish approximate boundaries and Utilities should use their own expertise and judgment to determine if local conditions require them to adjust the boundaries of the map.

Note: This General Order does not apply to cathodic protection systems associated with natural gas facilities.

Note: For the purpose of implementing the patrol and detailed inspection intervals in Table 1 above, the term “year” is defined as 12 consecutive calendar months starting the first full calendar month after an inspection is performed, plus or minus two full calendar months, not to exceed the end of the calendar year in which the next inspection is due.

EXHIBIT E - GO 95 RULE 18

GENERAL ORDER 95 SECTION 1 - GENERAL PROVISIONS

18 REPORTING AND RESOLUTION OF SAFETY HAZARDS DISCOVERED BY UTILITIES

For purposes of this rule, “Safety Hazard” means a condition that poses a significant threat to human life or property.

A. RESOLUTION OF SAFETY HAZARDS AND GENERAL ORDER 95 NONCONFORMANCES

1a) Each company (including utilities and CIPs) is responsible for taking appropriate corrective action to remedy Safety Hazards and GO 95 nonconformances posed by its facilities.

b) Upon completion of the corrective action, the company’s records shall show, with sufficient detail, the nature of the work, the date, and the identity of persons performing the work. These records shall be preserved by the company for at least ten (10) years and shall be made available to Commission staff upon 30 days’ notice.

c) Where a communications company’s or an electric utility’s actions result in GO nonconformances for another entity, that entity’s remedial action will be to transmit a single documented notice of identified nonconformances to the communications company or electric utility for compliance.

2a) All companies shall establish an auditable maintenance program for their facilities and lines. All companies must include a timeline for corrective actions to be taken following the identification of a Safety Hazard or nonconformances with General Order 95 on the company’s facilities.

The auditable maintenance program shall prioritize corrective actions consistent with the priority levels set forth below and based on the following factors, as appropriate:

- Safety and reliability as specified in the priority levels below;
- Type of facility or equipment;
- Location, including whether the Safety Hazard or nonconformance is located in the High Fire-Threat District;
- Accessibility;
- Climate;
- Direct or potential impact on operations, customers, electrical company workers,

There shall be 3 priority levels.

(i) Level 1:

- Immediate safety and/or reliability risk with high probability for significant impact.
- Take action immediately, either by fully repairing the condition, or by temporarily repairing and reclassifying the condition to a lower priority.

(ii) Level 2:

- Variable (non-immediate high to low) safety and/or reliability risk.
- Take action to correct within specified time period (fully repair, or by temporarily repairing and reclassifying the condition to a lower priority).

Time period for correction to be determined at the time of identification by a qualified company representative, but not to exceed: (1) six months for nonconformances that create a fire risk located in Tier 3 of the High Fire-Threat District; (2) 12 months for nonconformances that create a fire risk located in Tier 2 of the High Fire-Threat District; (3) 12 months for nonconformances that compromise worker safety; and (4) 59 months for all other Level 2 nonconformances.

(iii) Level 3:

- Acceptable safety and/or reliability risk.
- Take action (re-inspect, re-evaluate, or repair) as appropriate.

b) Correction times may be extended under reasonable circumstances, such as:

- Third party refusal
- Customer issue
- No access
- Permits required
- System emergencies (e.g. fires, severe weather conditions)

(3) Companies that have existing General Order 165 auditable inspection and maintenance programs that are consistent with the purpose of Rule 18A shall continue to follow their General Order 165 programs.

B. NOTIFICATION OF SAFETY HAZARDS

If a company, while performing inspections of its facilities, discovers a safety hazard(s) on or near a communications facility or electric facility involving another company, the inspecting company shall notify the other company and/or facility owner of such safety hazard(s) no later than 10 business days after the discovery. To the extent the inspecting company cannot determine the facility owner/operator, it shall contact the pole owner(s), who shall be responsible for promptly notifying the company owning/operating the facility with the safety hazard(s), normally not to exceed five business days after being notified of the safety hazard. The notification shall be documented and such documentation must be preserved by all parties for at least ten years.

Note: Each pole owner must be able to determine all other pole owners on poles it owns. Each pole owner must be able to determine all authorized entities that attach equipment on its portion of a pole.

Note: Added August 20, 2009 by Decision No. 09-08-029 and revised January 12, 2012 by Decision No. 12-01-032, December 21, 2017 by Decision No. 17-12-024.

EXHIBIT F - GO 95 RULE 35

Portion of GO 95 Rule 35, Table 1 as applicable to this Plan:

GO 95 RULE 35, TABLE 1				
CASE NO.	TYPE OF CLEARANCE	TROLLEY CONTACT, FEEDER AND SPAN WIRES 0-5kV	SUPPLY CONDUCTORS AND SUPPLY CABLES 750V - 22.5kV	SUPPLY CONDUCTORS AND SUPPLY CABLES 22.5kV - 300kV
13	Radial clearance of bare line conductors from tree branches or foliage	18 inches	18 inches	1/4 pin spacing
14	Radial clearance of bare line conductors from vegetation in the Fire-Threat District	18 inches	48 inches	48 inches

GO 95 Rule 35, Appendix E

GO 95 RULE 35, APPENDIX E		
<p>The radial clearances show below are recommended minimum clearances that should be established, at time of trimming, between the vegetation and the energized conductors and associated live parts where practicable. Reasonable vegetation management practices may make it advantageous for the purposes of public safety or service reliability to obtain greater clearances than those listed below to ensure compliance until the next scheduled maintenance. Each utility may determine and apply additional appropriate clearances beyond clearances listed below, which take into consideration various factors, including: line operating voltage, length of span, line sag, planned maintenance cycles, location of vegetation within the span, species type, experience with particular species, vegetation growth rate and characteristics, vegetation management standards and best practices, local climate, elevation, fire risk, and vegetation trimming requirements that are applicable to State Responsibility Area lands pursuant to Public Resource Code Sections 4102 and 4293.</p>		
VOLTAGE OF LINES	CASE NO. 13	CASE NO. 14
Radial clearances for any conductor of a line operating at 2.4kV or more volts, but less than 72kV	4 feet	12 feet
Radial clearances for any conductor of a line operating at 72kV or more volts, but less than 110kV	6 feet	20 feet
Radial clearances for any conductor of a line operating at 110kV or more volts, but less than 300kV	10 feet	30 feet

EXHIBIT G - GO 174, RULES FOR ELECTRIC UTILITY SUBSTATIONS (SECTION III)

GENERAL ORDER 174 SECTION III - INSPECTION PROGRAMS

30 GENERAL

30.1 Each Operator shall establish, update as needed, and follow an Inspection Program. At a minimum, this Program shall specify for each piece of equipment and system listed in Rule 32.1:

**INSPECTION ACTIVITIES
FREQUENCY OF INSPECTIONS
RECORD KEEPING AND RETENTION**

30.2 Inspections shall be performed by persons who, by reason of training, experience and instruction, are qualified to perform the task.

31 FREQUENCY

31.1 Substations shall be inspected as frequently as necessary.
- Time intervals or other bases shall be specified in the Inspection Program.

32 FACILITIES

32.1 Facilities subject to inspection shall include but are not limited to:

**BATTERIES
BUSES
SUPPORT STRUCTURES
CAPACITOR BANKS
CIRCUIT BREAKERS
FIRE DETECTION AND SUPPRESSION SYSTEM (WHERE APPLICABLE)
GROUNDING SYSTEM
INSULATORS/BUSHING/ARRESTORS
PERIMETER FENCES AND GATES
TRANSFORMERS
REACTORS
VOLTAGE REGULATORS**