WILDFIRE MITIGATION PLAN

Anza Electric Cooperative, Inc

A Touchstone Energy® Cooperative

June ~~22, 2023~~ 27, 2024

California Wildfire Safety Advisory Board

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II. Policy Statement

Anza Electric Cooperative, Inc. (AEC or the Cooperative) exists to provide safe, affordable, and reliable utility service. AEC takes the safety of staff and the membership seriously. The Cooperative has developed this wildfire mitigation plan (WMP) in compliance with State law, to identify potential risks within its system, prevention methods, and to ensure the safety of staff and members.

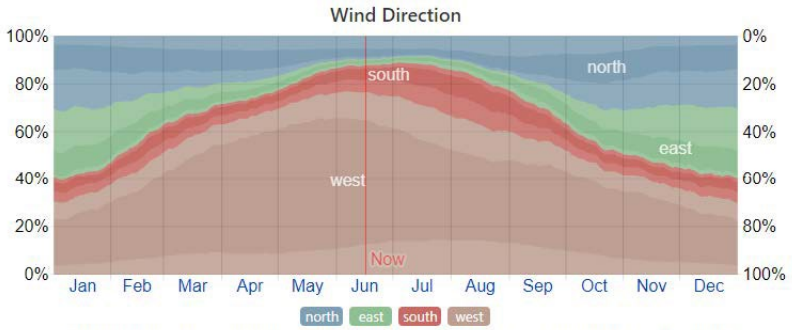
III. Utility Overview and Context

A. Utility Description and Context Setting Table

Anza Electric Cooperative, Inc. (AEC or the Cooperative) began operations in 1955. AEC's service area is nearly 700 square miles of high desert with an elevation of roughly 4,000 feet, where winter weather can sometimes be a challenge. AEC is located at an almost equal distance from Palm Desert, Hemet, and Temecula in Riverside County in Southern California.

Table 1. AEC Context Summary

AEC		
Service Territory Size	550 square miles	
Owned Assets	x Transmission x Distribution x Generation (solar)	
Number of Customers Served	4,898 member accounts	
Population Within Service Territory	10,000 residents (estimate)	
Customer Class Makeup	**Number of Accounts**	**Share of Total Load (MWh)**
	93.2% Residential 0% Government .28% Agricultural 6.3% Small/Medium Business .10% Commercial/Industrial	83% Residential 0% Government .07% Agricultural 12% Small/Medium Business 4.8% Commercial/Industrial

<table>
<tr><th colspan="3">AEC</th></tr>
<tr><td>Service Territory Location/Topography[1]</td><td colspan="2">5% Agriculture
30% Barren/Other (Indian Reservation)
0% Conifer Forest
0% Conifer Woodland
10% Desert
0% Hardwood Forest
0% Hardwood Woodland
80% Herbaceous
75% Shrub
2% Urban
1% Water</td></tr>
<tr><td>Service Territory Wildland Urban Interface (based on total area)</td><td colspan="2">30% Wildland Urban Interface[2]
70% Wildland Urban Intermix</td></tr>
<tr><td>Prevailing Wind Directions & Speeds by Season</td><td colspan="2">Annual Wind Direction Summary[3]
The predominant average hourly wind direction in Anza is from the west throughout the year.
 

The percentage of hours in which the mean wind direction is from each of the four cardinal wind directions, excluding hours in which the mean wind speed is less than 1.0 mph. The lightly tinted areas at the boundaries are the percentage of hours spent in the implied intermediate directions (northeast, southeast, southwest, and northwest).
Prevailing winds are typically westerly – SW to NW year-round with the exception of Santa Ana wind events</td></tr>
<tr><td>Miles of Owned Lines Underground and/or Overhead</td><td>In Service Territory
Overhead Dist.: ~~498~~ 502 miles
Overhead Trans. 25 miles
Underground: ~~228~~ 233 miles</td><td>Outside Service Territory
Overhead Dist.: 0 miles Overhead Trans.: 0 miles
Underground: 0 miles</td></tr>
<tr><td>Percent of Owned Lines in CPUC High Fire-Threat Districts</td><td colspan="2">Map included in the wildfire mitigation plan
Tier 2: 70%
Tier 3: 30%</td></tr>
<tr><td colspan="2">Customers have ever lost service due to an IOU PSPS event?</td><td>No</td></tr>
</table>

AEC	
Customers have ever been notified of a potential loss of service due to a forecasted IOU PSPS event?	Yes
Has developed protocols to pre-emptively shut off electricity in response to elevated wildfire risks?	Yes
Has previously pre-emptively shut off electricity in response to elevated wildfire risk?	No

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.
3 This data was provided by weather spark available at https://weatherspark.com/y/2096/Average-Weather-in-Anza-California-United-States-Year-Round.

B. Statutory Cross-Reference Table

Table 2: Compliance with Public Utilities Code Section 8387(b)

Requirement	Statutory Language	Plan Section
Persons Responsible	**PUC § 8387(b)(2)(A):** An accounting of the responsibilities of persons responsible for executing the plan.	Sec. IV. A.
Objectives of the Plan	**PUC § 8387(b)(2)(B):** The objectives of the wildfire mitigation plan.	Sec. III. A.B.C.
Preventative 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.	Sec. VI.A.-G.
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.	IX. A.
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.	IX.B.-F.

Requirement	Statutory Language	Plan Section
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.	Sec. VI. G.
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.	Sec. VI. G.
Vegetation Management	**PUC § 8387(b)(2)(H):** Plans for vegetation management.	Sec. VI. G.
Inspections	**PUC § 8387(b)(2)(I):** Plans for inspections of the local publicly owned electric utility's or electrical cooperative's electrical infrastructure.	Sec. VI. D.
Prioritization of Wildfire Risks	**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 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.	Sec. V.A.
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.	Sec. V.C.

Requirement	Statutory Language	Plan Section
Enterprise-wide Risks	**PUC § 8387(b)(2)(L):** A methodology for identifying and presenting enterprise-wide safety risk and wildfire-related risk.	Sec. V.B.
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.	Sec. VIII.
Monitor and Audit	**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 1. Monitor and audit the implementation of the wildfire mitigation plan. 2. Identify any deficiencies in the wildfire mitigation plan or its implementation and correct those deficiencies. 3. 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.	Sec. IX.C.
Qualified Independent Evaluator	**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.	Sec. X.

C. Process for Utility Adoption and Submittal of Annual WMP and Opportunities for Public Comment

~~AEC presents its wildfire mitigation plan annually to its governing Board of Directors (Board~~). As part of the publishing process, the public has 12 days to review all materials as well as comment at the public meeting. Updates to the Board are presented annually for review and approval. The approved WMP will be submitted to the Wildfire Safety Advisory Board (WSAB) by July 1 of each

year, in accordance with AB 1054. AB 1054 allows annual updates but requires comprehensive submissions every three years.

D. Description of Where WMP Information Can Be Found on Utility Website

~~The 2023 Plan, prior year's plans,~~ AEC's WMP and reference materials can be found on ~~AEC's~~ the cooperative's website at https://www.anzaelectric.org/aec-wildfire-mitigation-plan.

E. Purpose of the Wildfire Mitigation Plan

AEC developed this WMP to meet the requirements of the California Public Utilities Code, Chapter 6, §8387. (a), which requires each local publicly owned electric utility and electrical cooperative to develop a wildfire mitigation plan. AEC's Plan provides a comprehensive overview of the organizational and operational activities AEC undertakes in addressing wildfire risk within the Cooperative's service territory.

Following several years of drought conditions and strong Santa Ana wind events, the risk of wildfire caused by utility assets has increased significantly.

As evidenced in this wildfire mitigation plan, AEC has a company-wide focus on addressing and minimizing wildfire-related risks to the health, safety, and welfare of its membership. AEC is committed to fire prevention, safety, mitigation, control, and recovery and has taken a leadership role in addressing the threat of fire ignited with utility assets and facilities within AEC's service territory. To enhance the capabilities of its membership and local communities' defense against a wildfire event, AEC will share personnel, resources, and information to effectively communicate all relative material.

AEC's Plan reflects a broad range of activities performed throughout the company. The WMP is subject to the direct supervision of the General Manager and delegated to senior management. All Cooperative employees are responsible for contributing to and performing the activities described in the wildfire mitigation plan.

AEC's WMP begins with system design, construction, operation, maintenance, inspection, and repair activities aimed at significantly reducing the potential for AEC facilities to become a fire ignition source. Nevertheless, the presence of AEC facilities and the range of climate and fuel (vegetation) conditions faced in

the AEC service territory present some risk that Cooperative facilities, no matter how diligent or conservative its practices, might become the original or contributing source of ignition for a fire.

To address this risk, AEC has implemented extensive operational programs designed to monitor the system closely whenever the threat of fire is elevated so that, in the event of ignition, the threats to public safety from a fire are quickly abated or mitigated as fully and quickly as possible. Such programs include gathering and analyzing data from AEC's extensive real-time weather monitoring system; National Oceanic and Atmospheric Administration (NOAA); data received from Southern California Gas and Electric (SDG&E) and Southern California Edison (SCE); and the use of the USDA Forest Service's National Fire Danger Rating System for monitoring operational practices. These combined resources will be used to determine where and when the threat of a wildfire will present itself, which in turn facilitates the immediate organization and implementation of AEC's appropriate response to such threats.

AEC monitors and responds to all known fires within the Cooperative's service territory and pays particular attention to wildland fires. These fires burn vegetation, are capable of quickly spreading, and have the potential to threaten AEC facilities and assets.

In the event fire conditions threaten public safety or AEC facilities or assets, AEC will mobilize an appropriate range of resources as provided in the AEC Emergency Response Plan (ERP).

~~The AEC Wildfire Mitigation Plan is a "living document," subject to modification as regulations are updated, advances in technology occur, and operational circumstances change.~~

Additionally, AEC will coordinate with the County of Riverside Supervisor's Office; all local elected representative's offices at the State and Federal levels; Riverside County Emergency Management Department (EMD); the Governor's Office of Emergency Services (Cal OES); Tribal entities; CAL Fire; SCE; SDG&E; and AEC's membership; and will review its wildfire mitigation plan to ensure continuous improvement and maximum effectiveness. Furthermore, as part of the Cooperative's Community Outreach Program, AEC has coordinated with the County of Riverside's Emergency Management Department to provide ~~its membership~~ **the community** with a variety of resources and information for disaster preparedness and self-reliance. Last, AEC recognizes the important

aspects of communicating fire prevention, mitigation, and recovery activities with its members and is committed to utilizing every form of communication method available as outlined (but not limited to) in the AEC Wildfire Mitigation Plan.

The goals and activities included in the AEC Wildfire Mitigation Plan focus on a comprehensive and integrated assessment of the risks posed by AEC's distribution system. This involves an assessment of AEC's equipment and facilities, weather conditions, the density and condition of potential vegetation fuels, and the potential threat to public safety. AEC's commitment to fire safety, prevention, mitigation, response, and recovery is a crucial element of AEC's mission. With this overarching view of fire risk assessment in mind, AEC presents the activities comprising its wildfire mitigation plan.

The AEC Wildfire Mitigation Plan is a "living document," subject to modification as regulations are updated, advances in technology occur, and operational circumstances change.

F. Organization of the Wildfire Mitigation Plan

This wildfire mitigation plan includes the following elements:

- Utility overview and context
- Plan objectives
- Roles and responsibilities for carrying out the plan
- Identification of key wildfire risks and risk drivers
- Description of wildfire mitigation strategies
- Metrics for measuring the performance of the plan and identifying areas for improvement
- Annual and historical results for metrics
- Description of community outreach and education, covering as appropriate communication about wildfire prevention, utility wildfire mitigation efforts and strategies, and potential de-energization and reenergization practices

IV. Objectives of the Wildfire Mitigation Plan

The primary objective of AEC's WMP is to protect public safety. The Plan includes actionable, measurable, and adaptive elements to reduce the risk of potential wildfire-causing ignitions associated with AEC's electrical infrastructure in High Fire-Threat Districts (HFTD) through enhanced system hardening, situational awareness, and operational practices. ~~Specific objectives include the following:~~

A. Minimizing Sources of Ignition

The AEC Wildfire Mitigation Plan is founded upon the goal of minimizing the probability that the various components of AEC's distribution systems might become the original or contributing source of ignition for a fire. AEC gathers and analyzes data from the National Weather Service and weather stations (provided by Davis Instruments, supplied by Western Weather) **strategically placed** throughout its system to determine where and when the threat of a wildfire will present itself, which in turn facilitates the immediate organization and implementation of AEC's response appropriate to the threat. ~~Additionally~~, AEC continues to evaluate prudent, cost-effective changes and improvements to its physical assets that could and should be made to meet this objective and is implementing preventative operations, construction, and maintenance plans consistent with these evaluations.

B. Resiliency of the Electric Grid

The secondary goal of this wildfire mitigation plan is to improve the resiliency of the electric grid. AEC continues to evaluate and incorporate new technologies and equipment into its electric system. AEC's Operations Department is responsible for evaluating new equipment and implementing standards for emerging and pre-commercial technologies. Using equipment failure data, the department determines which technologies should be incorporated into AEC's system and which could be improved prior to application. This department continually evaluates the many new types of technologies that may improve electric reliability and public safety while giving special attention to technologies that may contribute to AEC's fire-safety goals and objectives.

As an example, AEC is collaborating with Elintrix, a company funded by a Department of Energy (DOE) grant to detect downed lines on remote sections of circuits in **high fire threat** districts 2 and 3 by sending carrier signals over the power lines back to receiving units at the sub-station. If successfully developed and deployed, AEC would have rapid notification of downed power lines and be able to act accordingly. This grant has entered the second phase DOE funding, and progress is continuing.

~~Additionally,~~ AEC is leveraging its assets to address fire threats. In 2015, AEC began building the first phase of its fiber optic network known as ConnectAnza. The second phase was completed during 2021. ConnectAnza is designed to connect residences and businesses within AEC's service territory to fiber optic

internet. ConnectAnza provides wireless service to hard-to-reach areas in remote environments and provides interactive remote capabilities via high-speed fiber data connected to AEC's SCADA, weather monitoring network, and field-deployed system equipment.

AEC began research into pathways to build looping capabilities to provide more resilient broadband service and initiated an agreement with SCE for pole attachments to connect the Cooperative's fiber to a second endpoint outside of its electric service territory. AEC anticipates construction to be completed by Q4 2024.

In AEC's previous WMP updates, the Cooperative had two three-phase solid dielectric reclosers connected to its fiber network. The Cooperative now has 12 fiber-connected real-time three-phase solid dielectric reclosers connected to its fiber network.

The weather monitoring network provides weather data in ten-minute increments that include a variety of parameters such as humidity levels, wind speed, wind gust speed, wind direction, temperature, and dew point. This state-of-the-art weather monitoring system provides AEC with fire-weather detection, a fire-warning weather system, thus supporting fire-mitigation activities. Three of the five weather stations have fiber connected 360-degree high resolution cameras, making it possible to view conditions in the high wind-prone areas. Last, AEC is continuing to develop a partnership with both SCE and SDG&E to share weather data as it relates to shared service territory borders. A link to SCE's weather systems is provided on AEC's website. AEC continues to research multiple vendors specializing in early fire detection systems to develop new and improved ways of spotting fires before they become uncontrolled wildfires.

C. Minimizing Unnecessary or Ineffective Actions

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

V. Roles and Responsibilities

A. AEC Roles and Responsibilities

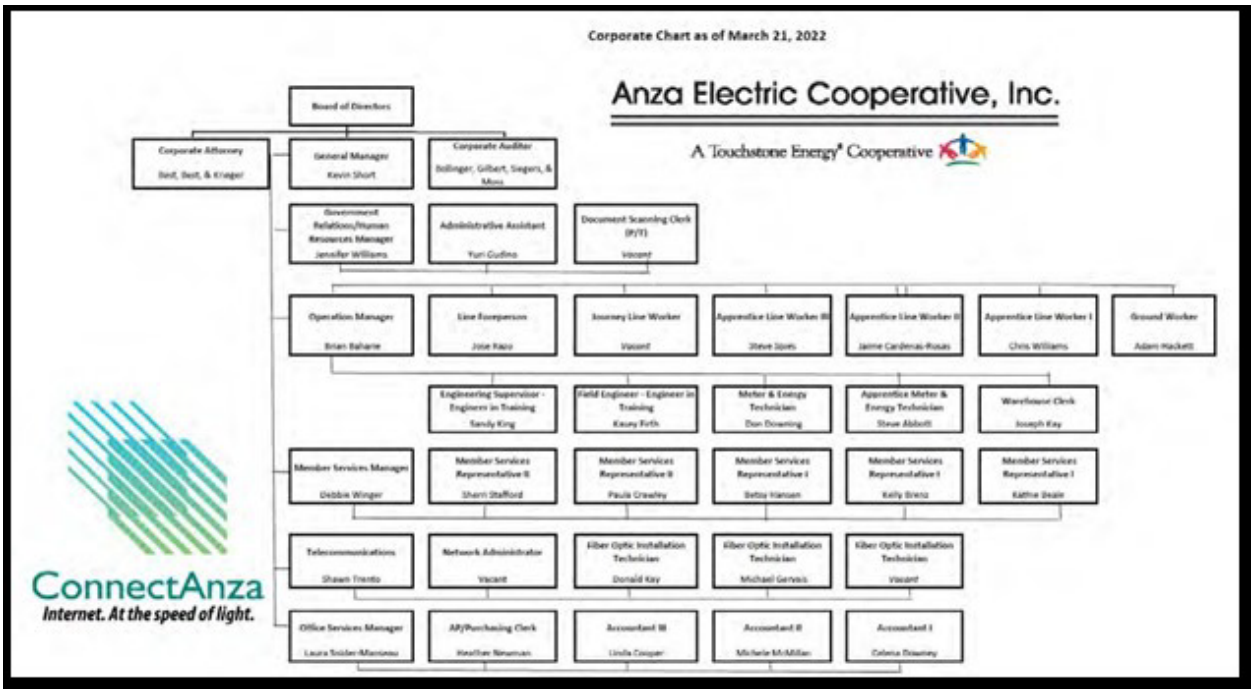


Figure 1. Anza Electric Cooperative Organization Chart, updated as of ~~December 2022.~~ Will Update as of May 2024

The AEC Wildfire Mitigation Plan is subject to the direct supervision of the General Manager and delegated to senior management as follows:

Operations Manager is responsible for the evaluation of the High Fire-Threat District boundaries; inspections of overhead distribution facilities and remediation of deficiencies in the HFTD; quality oversight and control; system hardening, vegetation management, developing Public Safety Power Shutoff (PSPS) protocols; and engineering research of alternative technologies.

Government Relations Liaison is responsible for providing PSPS notifications and the potential for these events to the appropriate government agencies, including the Riverside County Emergency Management Department (EMD), all local, State, and Federal elected representative's offices, and local Tribes. Emergency preparedness education and engagement with AEC members takes place in coordination with EMD and other appropriate resources.

~~Office Services Manager~~ Accounting Manager is responsible for complete and accurate accounting practices for all Cooperative operations, including

financial risk analysis pertaining to wildfire mitigation efforts, equipment purchasing, and setting budgets.

Member Services Manager is responsible for providing communications to AEC's membership via social media and member messaging pertaining to current or forecasted weather warnings provided by the National Weather Service, the potential risk of wildfire as it is related to weather conditions, Public Safety Power Shut-off potential and planned events, outage information and updates, and emergencies.

Telecommunications Manager is responsible for ensuring that all internal methods of communication always remain functional and operational and ConnectAnza broadband and Voice Over Internet Protocol (VoIP) services are functioning and operational for all connected members.

B. Wildfire Prevention Responsibilities

All Cooperative employees are responsible for contributing to and performing the activities described in this wildfire mitigation plan, including the following:

- Conduct work in a manner that will minimize potential fire dangers.
- Take all reasonable and practicable actions to prevent and suppress fires resulting from AEC electric facilities.
- Coordinate with federal, state, and local fire management personnel to ensure that appropriate preventative measures are in place.
- Immediately report fires, pursuant to specified procedures.
- Take corrective action when observing or having been notified that fire protection measures have not been properly installed or maintained.
- Ensure compliance with relevant federal, state, and industry-standard requirements.
- Ensure that wildfire data is appropriately collected.
- Maintain adequate training programs for all relevant employees.

C. Coordination with Communication Infrastructure Providers

In advance of PSPS events or other disasters that may lead to an extended outage, AEC will contact all local government agencies, including all elected representative offices and the Riverside County EMD, to inform them about **the potential** PSPS **event** protocol, including the location of circuits that may be shut off during a PSPS event.

When a PSPS event is a possibility, the AEC management team will manage both the operational and communication tasks associated with an event, ~~which includes~~ i**ncluding** interfacing with local governments' emergency operations first responders such as police and fire agencies, other government agencies, and essential members, such as schools, telecommunications companies, the local prison labor camp, and American Indian tribes.

When feasible, the timeline for notifications to local government and other agencies (as noted above) is as follows:

- 72 hours prior to a possible PSPS:
    - Monitor conditions.
    - Notify Riverside County EMD.
- 48 Hours prior, notify members of PSPS monitoring event:
    - Fire Stations
    - First Responders
    - Schools
    - Medical Facilities
    - Local Tribes
    - Local Telecommunications
    - Local Elected Offices
    - Contact members on the life support list directly.
    - Businesses as appropriate
    - Update EMD and provide circuit information for any imminent threats.

24 Hours prior, provide update notification

- Update EMD and provide circuit information for any imminent PSPS.
- Update members of current threat conditions and any imminent PSPS.
- Update Tribes of current threat conditions and any imminent PSPS.
- Update businesses of current conditions and any imminent PSPS.

  - Update local fire stations, first responders, law enforcement, and medical facilities of current conditions and any imminent PSPS,
  - Update schools of current conditions and any imminent PSPS,
  - Update local telecommunications of current conditions and any imminent PSPS,
- If PSPS is initiated:
  - Notify EMD, first responders, law enforcement, and local fire stations.
  - Notify impacted Tribes, schools, medical facilities, and local businesses.
  - Notify members and provide areas that are under a PSPS.
  - Provide updates during the PSPS for conditions and possible power restoration.
- Following a PSPS after power has been restored:
  - Notify EMD, first responders, law enforcement, and local fire stations.
  - Impacted Tribes, schools, medical facilities, and local businesses.
  - Notify members and provide notification of areas that were under a PSPS.
  - Notify local elected offices.
  - Notify local telecommunications.

PSPS and/or emergency notifications are delegated to the following departments:

- Member Services will contact the following:
  - Life Support List
  - Businesses
  - Fire Stations
  - First Responders
  - Schools
  - Medical Facilities
  - Telecommunications
- Government Relations will contact the following:
  - EMD
  - Tribes
  - Local Elected Offices

Per GO 166 guidelines, AEC shall maintain lists of contacts at each agency that shall be readily accessible to employees responsible for coordinating emergency communications.

AEC is a member of the California Utility Emergency Association, which plays a role in ensuring communications between utilities during emergencies. AEC also participates in the Western Energy Institute's Western Region Mutual Assistance Agreement, which is a mutual assistance agreement covering utilities across several states.

D. Standardized Emergency Management System

AEC is a cooperative and not publicly owned. In the event of an emergency within its service territory, AEC works with Riverside County EMD and provides updates as they emerge. AEC coordinates with EMD for resources and assistance for its members, especially those on the Life Support List.

VI. Wildfire Risks and Drivers Associated with Design, Construction, Operations, and Maintenance

A. Risks and Risk Drivers Associated with Topographic and Climatological Risk Factors

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

- Weather
    - Extended drought
    - High winds
    - Lightning
    - Low humidity
    - Lack of early fall rains
    - Vegetation
    - Vegetation type
    - Fuel moisture
    - Tree mortality
    - Steep terrain
- Contact from Object(s)
    - Mylar balloons
    - Trampolines

  - Vehicle
  - Animal
  - Tarps
  - Green house remnants
  - Vegetation contact with conductors
  - Unknown object
  - Wire-to-wire
- Climate Change and Changing Weather Patterns

Climate change presents a significant long-term challenge and is considered a threat multiplier. As current trends continue, climate change is causing the following:

  - Increased average and peak temperatures
  - Shorter rainy seasons
  - Extended fire season
  - Extended time range for the Santa Ana winds that fan wildfires
  - Longer duration and more frequent drought conditions

These conditions result in the high growth of weed vegetation during the rainy or wet years that dry out in the drought years. Perennial plants and trees are stressed due to the extended dry periods and increasing temperatures during the summer and autumn seasons. The result is increasingly dry vegetation that provides fuel for wildfires.

- Other

  - Unknown human activity (examples: local transient population on private property, power theft, misuse of generators, increased volume of traffic, smoking, etc.)
  - Vandalism
  - Third party acts (telecommunication providers, construction, etc.)
  - Equipment/facility failure
  - Earthquake
  - Cyber security attacks

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

- Extended drought
- Vegetation type
- High winds

- Steep terrain
- Lack of early fall rains

B. Enterprise-Wide Safety Risks

AEC utilizes a five-step process to determine enterprise-wide safety risks that use both quantitative and qualitative analysis to determine risk factors and evaluate mitigation and protocol strategies appropriate to each risk factor. The five-step process includes the following:

- Identification of Risks
  - Find, recognize, and describe risks
  - Identify potential hazards, threats, and opportunities
- Analyze
  - Understand the nature of the risk and determine the level of risk
- Plan and Evaluate
  - Analyze and prioritize risk criteria
- Respond
  - Develop risk control methods and implement plans
- Monitor and Review
  - Continue to monitor risks and potential new risks
  - Review and analyze the effectiveness of risk mitigation measures

After careful consideration and analysis, wildfire has been identified as one of the greatest weather-related risks to AEC due to the region's complex topography, lack of summer and early fall rains, and susceptibility to dry Santa Ana winds that can accelerate fire growth. It was this combination of factors that led to the Cedar Fire of 2003 and the Witch Fire of 2007—both of which rank among the top 10 largest wildfires in California history—that spread across San Diego County in terrain like that of AEC's service territory and had large impacts to SDG&E.

Because of the known wildfire risk and the potential impacts on utility operations, AEC will take a multitude of steps to adapt to changing climate conditions across its service territory. These steps have been described in depth in this plan and include the identification of locations at greatest risk for fire growth within the service territory and instituting a process to make the electric system more

resilient to wildfires that includes replacing wooden poles with ductile- iron poles, installing new technologies to make the electric grid more resilient to fire, and building upon a robust vegetation management program to keep trees and brush clear of power lines.

Table 1 below provides an overview of AEC's preventative strategies and programs.

Table 1 AEC Preventative Strategies and Programs.

DESIGN AND CONSTRUCTION
Wildlife/Bird Protection
Conductor Spacers
High Impedance Fault Detection
Spida-Calc Software
Wood-to-Ductile Iron Pole Changes
Composite Arms
Rebuild/Reconductor of Circuits
Rebuild of Substations
INSPECTION AND MANTENANCE
Distribution Wood Pole Inspections – Visual, Detailed, and Intrusive
Distribution Vegetation Right-of-Way Maintenance
Distribution Annual Pole Clearing Program
Distribution Detailed Line Inspections
Distribution Line Patrols
Visual Inspections of Distribution Substations
Inspection and Maintenance Programs for Distribution Facilities
Drive by of Overhead Distribution Facilities and Equipment
Detailed Inspections of Distribution Facilities and Equipment
Supplemental Inspections of High Fire Risk Areas
On-ground Routine Inspections
OPERATIONAL PRACTICES
Disabling Reclosing During Fire Season
Distribution Vegetation Management
Special Work Procedure for Red Flag Warning Events
Deenergization Notifications
Emergency Operating Planning
Work Procedures and Training for Persons Working in Locations and Conditions of Elevated Fire Risks
Provide Liaison to County Emergency Management Department (EMD)
Leverage Existing Relationship with Local Government and Fire Departments

Targeted Communications Plan
Active Environmental Safety Monitoring
OPERATIONAL PRACTICES
Partnership with Local Emergency Responders for Coordination Prior to and During an Emergency
High Fire Threat District Vegetation Management Inspection Strategy
Inspecting Trees with Potential Strike Path to Power Lines
Expanded Pole Clearing
Patrol and Pruning, Quality Assurance
Increased Vegetation Clearance
SITUATIONAL AWARENESS
Weather Monitoring Stations in Targeted Areas
Installation of Cameras in Key Locations
Coordinate with the County Emergency Management Department (EMD) Throughout the Year to Prepare for Red Flag Warnings and High Fire Risk Events
Monitor the Riverside County Fire Incidents Website and Active Fires in the Local Area
RESPONSE AND RECOVERY
Planned Deenergization During Fire Season
Critical Event Communications Process and Procedures
Strategy for Minimizing Public Safety Risk
Emergency Response Plan
Field Operations Recovery Procedures

Despite the proactive approach to mitigating fire risk, increases in temperature and prolonged periods of drought in the decades to come will likely lead to high-risk fire areas expanding from the foothills and mountains into the lower elevation. Should any of the identified risk factors result in a wildland fire event, potential impact could include the following:

- Personal injury and or fatalities to staff, members, contractors, and first responders
- Damage to AEC facilities and assets
- Damage to public/member property
- Impacts to reliability and operations
- Possible fines and litigation over damages, injury, or loss of life
- Ability for AEC to purchase wildfire insurance
- Environmental damage
- AEC's reputation
- Member and community impacts – loss of water and communications
- Bankruptcy

AEC recognizes the impacts that a wildfire will have on the local community, members, and the Cooperative and continues to evaluate and determine best practices for monitoring and mitigating wildfire related threats.

C. Changes to CPUC Fire-Threat Map

AEC developed its High Fire-Threat Districts maps according to the Commission's rules and regulations governing the development and maintenance of fire-threat maps as part of Phase 3 of Rulemaking 08-11-005. However, this rulemaking is now closed and the task of developing fire-threat maps and regulations for new High Fire-Threat Districts was carried over to a new Rulemaking, R. 15-05-006. AEC is actively participating in both proceedings and will update its fire-threat map pursuant to the Commission's further direction.

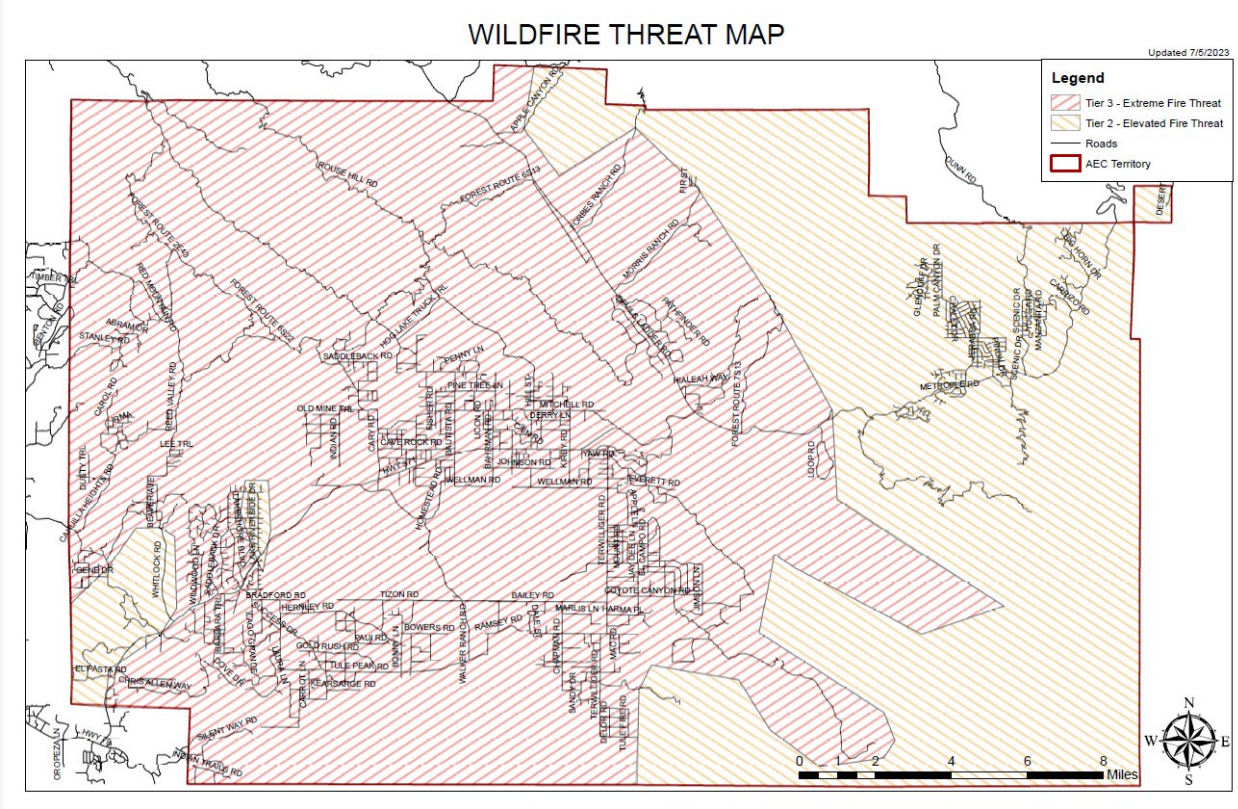
VII. Wildfire Preventative Strategies

A. High Fire-Threat District

AEC has completed participation in modifications to the CPUC Fire Map within its service territory and identified those areas at greatest risk for a wildland fire occurrence. In the map development process, AEC served as a territory lead and worked with utility staff and local fire officials to identify the areas of AEC's service territory that are at an elevated or extreme risk of power line-ignited wildfire. The completion of these efforts identified two sets of geographic areas based on the potential risk for an area fire and the threat to public safety posed by such fire. The first area designation is known as District 2, or the general geographic area most prone to wildfire due to the local environmental conditions and features. The second area designation is known as District 3, or areas within District 2 where the risk is significantly greater.

AEC has incorporated the High Fire-Threat Districts into its construction, inspection, maintenance, repair, and clearance practices.

As part of its response to Commission Rulemaking R. 15-05-006, AEC obtained a copy of the CPUC Fire Map of its service territory to identify those areas where, due to local environmental conditions and features, the potential for wildfire is relatively high (Figure 2). The District 2 designation is used to identify the areas where enhancements to rules, regulations and standards could reduce the potential for electric systems and facilities to ignite fires and hereby increase public safety and system reliability.



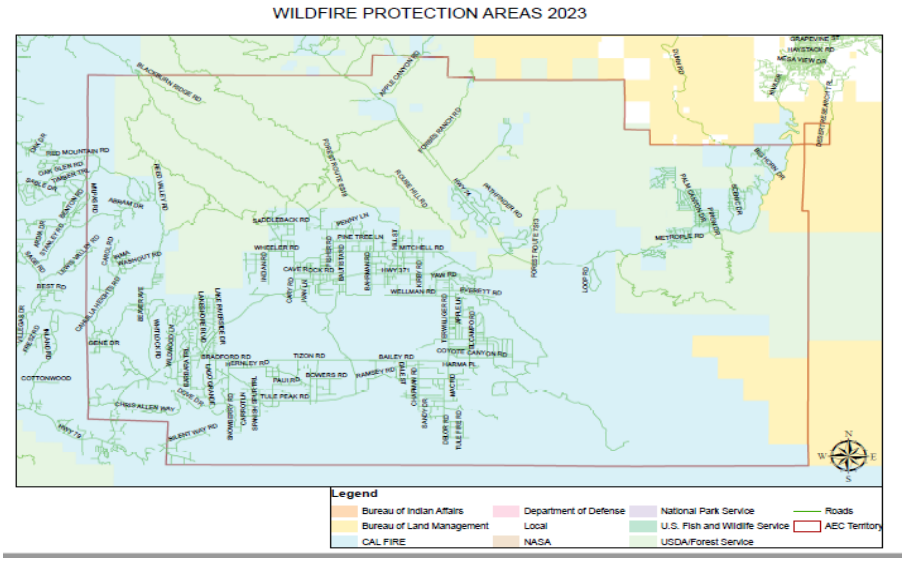
The District 2 mapping effort followed several key objective principles. First, District 2 was defined using parameters that would result in relatively constant boundaries not subject to continuous change and revision. This resulted in the use of criteria that tended to be conservative, i.e., more inclusive than exclusive, so that District 2 would describe the complete domain where the potential for wildfire was relatively high. Additionally, the District 2 map would need to be easily understood by key personnel and users, whether utility or other public officials, who might rely upon it in performing their job responsibilities.

In performing the mapping task, AEC began with the vegetation data developed and maintained by the California Department of Forestry and Fire Protection ("CAL FIRE") (Figure 3). These data were available on the CAL FIRE and Resource Assessment Program ("FRAP") website. Using this data, AEC mapped the fire threat District 2 in its service territory. This encompasses most of the vegetated areas of the Cooperative's service territory. Compared to District 3 described below, District 2 includes areas where the density of vegetation is relatively low. The CPUC Fire Threat Maps describe the fire risks in certain areas as "little or no threat," "moderate," "high," "very high," and "extreme." Generally, District 2 includes all the areas described in the CPUC Fire Threat Maps as

"extreme" and "very high" risk along with some portion of the areas described as "high" risk.

District 3 represents those areas within District 2 where local environmental conditions and features combine to create the highest risk of fire in the AEC service territory. Using data from the CAL Fire Threat Map, AEC staff identified areas where the combination of relatively dense vegetation, relatively high winds, and development (e.g., homes, schools, and other community assets) presented the highest risks of fire and ensuing property losses and injury from fire. Thus, the District 3 map identifies the areas marked by an overlap of (1) the "highest risk vegetation," i.e., where the vegetation was relatively dense and near housing, business and/or community development, and (2) locations prone to high winds. As with the District 2 map, areas prone to high winds will be identified using data from weather stations located throughout the AEC service territory. The data will be used to identify locations where there exists a reasonable probability that wind speeds would exceed fifty miles-per-hour (50 mph) under the "Santa Ana" wind conditions usually experienced during the late summer and fall in Southern California.

District 3 maps will be reviewed periodically and adjusted to reflect environmental conditions expected to be present during the coming year's fire season, typically the late summer and fall seasons of each year. As noted above, AEC will continue to use its District 2 map until such time as the Commission issues its final rules and regulations governing the development and maintenance of fire-threat maps as part of Phase 3 of Rulemaking 08-11-005, which is now included in rulemaking R.15-05-006. AEC continues to participate in that proceeding and will update its High-Risk Fire Map pursuant to the Commission's further direction.



B. Weather Monitoring

Although the risk of fire is a year-round reality, there are certain recurring environmental and weather conditions, particularly during the late summer and early fall, when the risks of and from fire, particularly from uncontrolled wildfires, in the AEC service territory are abnormally high and the dangers most severe. AEC's fire-prevention and risk-mitigation activities begin with intensive data gathering and data analysis so that, when these abnormal and dangerous conditions are anticipated or occur, AEC is prepared to mobilize personnel and resources to abate, mitigate, and respond to these conditions and any potential fire threats.

AEC's utilizes weather databases that are constantly updated using weather data provided by several sources, including the United States National Weather Service (NWS) and AEC's weather monitoring stations. To date, AEC has installed weather monitoring stations at five strategic locations in the High-Fire Threat District 2 and District 3 and will actively deploy more as the need arises. To further improve AEC's situational awareness, AEC has strategically installed five high visibility, high resolution cameras that are controlled remotely and can rotate a full 360 degrees. AEC is researching adding more.

AEC's weather monitoring stations provide over 3,000 data points per day. Additionally, AEC has developed a partnership with SCE and SDG&E to share weather-related data on the borders in which the SCE, SDG&E, and AEC's service territories meet. Last, AEC pays close attention to the USDA Forest

Service's National Fire Danger Rating System and has incorporated this rating system into AEC's operating conditions assessment.

The combined resources will provide a detailed daily forecast of weather conditions relevant to AEC's operations. The forecasts, a combination of heat, humidity, wind, and other conditions, are combined into an "Operating Condition" assessment, which tracks the potential for fires occurring in any region of the AEC service territory. There are four (4) Operating Conditions used for these purposes:

- **Normal Condition:** This condition is declared when it has been determined that weather conditions are not conducive for wildfires within the AEC service territory:
    - Fire Danger Level: Low:
      When the fire danger is "low" it means that fuels do not ignite easily from small embers, but a more intense heat source, such as lightning, may start fires in duff or dry rotten wood. Fires in open, dry grasslands may easily burn a few hours after a rain, but most wood fires will spread slowly, creeping or smoldering. Control of fires is generally easy.
- **Elevated Condition**: This condition is declared when it has been determined that weather conditions have become conducive for wildfires within the AEC service territory:
    - Fire Danger Level: Moderate
      When the fire danger is "moderate" it means that fires can start from most accidental causes, but the number of fire starts is usually pretty low. If a fire does start in an open, dry grassland, it will burn and spread quickly on windy days. Most wood fires will spread slowly to moderately. Average fire intensity will be moderate except in heavy concentrations of fuel, which may burn hot. Fires are still not likely to become serious and are often easy to control.
- **Extreme Condition:** This condition is declared when it has been determined that a combination of high winds, low relative humidity, and the burn environment will create critical fire weather conditions:
    - Fire Danger Level: High
    - When the fire danger is "high", fires can start easily from most causes and small fuels (such as grasses and needles) will ignite readily. Unattended campfires and brush fires are likely to escape. Fires will spread easily, with some areas of high intensity burning on slopes or

concentrated fuels. Fires can become serious and difficult to control unless they are put out while they are still small.

- **Red Flag Warning (RFW) Condition:** Red Flag Warning Condition is declared by the National Weather Service when high winds and low relative humidity are forecasted to occur for an extended period of time. Depending on the condition reported, various operational changes and rules appropriate to each condition will be triggered and implemented.

    - Fire Danger Level: Very High
      When the fire danger is "very high," fires will start easily from most causes. The fires will spread rapidly and have a quick increase in intensity, right after ignition. Small fires can quickly become large fires and exhibit extreme fire intensity, such as long-distance spotting and fire whirls. These fires can be difficult to control and will often become much larger and longer-lasting fires.
    - Fire Danger Level: Extreme
      When the fire danger is "extreme," fires of all types start quickly and burn intensely. All fires are potentially serious and can spread very quickly with intense burning. Small fires become big fires much faster than at the "very high" level. Spot fires are probable, with long-distance spotting likely. These fires are very difficult to fight and may become very dangerous and often last for several days.

Each day, AEC assigns one of four operating conditions based on the relevant weather data and knowledge of local conditions:

- **Normal:** During normal conditions, no changes are made to operations or work policy.
- **Elevated:** During elevated fire-risk conditions:

    - Fire District 2: reclosures are set to non-reclose, patrols are conducted on any section that has been deenergized – beginning with the load side of segment to sectionalized device. If distribution outage is caused by sub-station outage, the line may be energized without patrolling.
    - Fire District 3: reclosures are set to non-reclose, patrols are conducted on any section that has been deenergized – beginning with the load side of segment to sectionalized device. If distribution outage is caused by sub-station outage, the line may be energized without patrolling.

- **Extreme/Red Flag:** During extreme fire-risk conditions and if the National Weather Service declares a Red Flag Warning for any portion of AEC's service territory:

- Fire District 2: reclosures are set to non-reclose. Patrols are conducted in areas that present greatest risk within this District, and patrols of an entire line of any deenergized section are conducted before energizing. If distribution outage is caused by a sub- station outage, a segment can be reenergized after a complete patrol of all line segments.
- Fire District 3: reclosures are set to non-reclose, and patrols of entire line segment are conducted before energizing. If >56 mph wind gusts occur at the weather station closest to the line segment, observers are placed close to the affected area. A crew deployment plan is activated.

The daily weather forecast, and Operating Conditions are broadcast by electronic media to personnel whose activities are affected by the declaration of the Operating Condition. The forecast, particularly when the threat of fire is high or rising, will be updated and rebroadcast as conditions warrant and as determination is appropriate. The forecast is broadcast in real-time to all AEC employees. Personnel receiving these weather forecasts are trained to adjust their activities, duties, and priorities based upon the Operating Condition reported.

Generally, as actual or forecasted wind speeds, measured in terms of both sustained winds (the average wind speed across ten-minute intervals) and wind gusts (the highest wind speed occurring during a three-second period within a ten-minute interval), increase, the Operating Condition will change ~~(or "be elevated")~~ from "Normal" to "Elevated Condition," "Extreme Condition" or "Red Flag Condition," depending on environmental and weather conditions and the strength of the winds being experienced or forecasted. With each step-change in the Operating Condition, personnel are placed on appropriate levels of alert. In addition, the level of system monitoring and, ultimately, system operations and activities, are elevated according to the prevailing Operating Condition. Most importantly, as wind speeds increase, AEC deploys field crews and the entire distribution system will be placed on what is referred to as "One Shot," or non-reclose to mitigate the increased probability that a wildfire will be ignited.

C. Design and Construction Standards

To reflect the more stringent design and construction standards adopted by the Commission and to improve the performance of the AEC system in terms of meeting fire-prevention goals, the AEC Facilities Design Manual, originally designed to meet the requirements of the Rural Utility Service, is being modified to include an entirely new section aimed at providing guidance for hardening circuits against the risk of fire. These modifications include both proactive measures designed to reduce the incidence of ignitions and include a high impedance fault detection model and reactive measures by which AEC can respond to and mitigate the threat of fires.

AEC is also an aggressive advocate for modernizing those portions of the Commission's General Order 95 that provide the rules and regulations governing the design and construction of overhead electric and communications facilities. AEC continues to participate in the discussions regarding fire safety regulations for a new "High Fire Risk District" with stakeholders in rulemaking R.15-05-006 with the objective of improving General Order 95's focus on fire-safety and system reliability objectives. Fire safety begins with the design and construction standards pursuant to which utility facilities are designed, built, and operated, so improving these regulations will provide the foundation for assuring that facilities built in the future will be stronger and safer than those built under prior versions of the rules.

AEC is continuing to assess strategies and new technologies including the replacement of expulsion fuses, potential for upgrading additional circuits with higher strength conductor, increased use of wildlife cover, increasing the use of conductor spacers, and adding fuel moisture sensors to the Cooperative's weather monitoring system.

Substation Rebuild

During 2021, AEC initiated a contract for a complete rebuild of the substation located at the Cooperative's headquarters, which up to this point had the wooden structures that were part of the original build in 1951. The rebuild was completed in the first quarter of 2022 and included an upgraded substation capacity, underground relocation of lines at the Cooperative's headquarters, and replacement of the original wood structure with industry standard steel structures.

AEC is now designing a complete rebuild of the Mountain Center Switch Station where the Cooperative receives its main feed from SCE.

Solar Battery Energy Storage System

To meet regulatory obligations, Anza Electric began building its first phase of the Cooperative's solar project, SunAnza, in 2017 with the second phase completed in 2020 for a combined total of 3.5 MW of a carbon free resource. To provide system resiliency, in 2021 the Cooperative completed the installation of the second of two phases for a total of 4.5 MW/9.5 MWh of battery energy storage system. The battery energy storage system combined with the two solar projects provides islanded microgrid capabilities able of keeping a significant portion of AEC's service territory energized in the event of a natural disaster, wildfire event, PSPS event, or other systemwide outage event.

During 2023 AEC purchased 156 acres of land and are in the engineering stage for construction and design for additional solar and battery energy storage systems. During the same year, AEC applied for and was awarded a five-million-dollar grant from the Investment Reduction Act for system hardening and design and construction of the first phase of the new solar and battery energy storage system.

Wood-to-Ductile Iron Pole Replacement Program

AEC has implemented a program to undertake replacement of wood poles used in those portions of AEC's distribution system located in fire threat District 2 and District 3, substituting ductile iron poles in their place. Wood poles are constructed to withstand working loads under stress of fifty-six miles-per- hour (56 mph) wind speeds. These new ductile iron poles are designed to withstand working loads under the stress of eighty-five mile-per-hour (85 mph) wind speeds and in some specific cases up to one hundred and ten miles-per-hour (110 mph).

AEC has hired professional pole inspection contractors to inspect AEC's existing wood poles, perform pole brushing (clearing all vegetation within a ten-foot radius of the pole in accordance with General Order 95, rule 35 and California Public Resources Code (PRC) 4292 with a goal of 95-100% completion annually), apply fire protection, and recommend poles that need repair or replacement. Following inspection results, AEC ~~has begun~~ installation of new ductile iron poles to replace any wood poles that have become unserviceable in the high fire-

threat zones. ~~During 2020, 3,060 AEC poles were inspected, resulting in 54 poles~~ determined to be unserviceable and replaced with new ductile iron poles. ~~AEC uses Vibration Dampers with insulated spacers for longer spans of overhead conductor installation and when replacing poles.~~

AEC completed the rebuilding and reconductoring of a circuit prone to significant wind gusts as part of the Cooperative's system hardening efforts and increased resiliency. The rebuild of this circuit included the replacement of 120 wood poles to new ductile iron poles, added wildlife cover, new insulators, composite cross arms, insulator spacers, and increased spacing between lines beyond the requirements of Commission General Order 95, resulting in a decrease in the likelihood of energized lines encountering one another or arcing after being struck by flying debris.

AEC's facilities include over 12,000 poles within the ~~CAL Fire and~~ CAL Fire/Riverside County Fire jurisdictional areas **and the U.S. Forest Service** that have been designated as "subject poles." For poles within the CAL FIRE jurisdiction that bear "non-exempt" attachments, such as a transformer or hot line clamp, AEC is required to perform pole brushing. To further reduce potential ignition sources, AEC's Operations Department stays vigilant and seeks to reduce the number of non-exempt power line components by replacing such equipment, where feasible, with exempt equipment, which should also reduce the potential for pole attachments to become an ignition source.

AEC has completed the replacement of wood poles on a critical portion of one circuit and has recently completed the upgrade design of another circuit located in a high-risk fire area.

Concerning new design standards to prevent fire, AEC uses grounded capacitor banks, lightning arrestors, and new transformers with FR3 (natural ester dielectric fluid) oil. AEC is installing animal guards on wires and bird guards on transformers' busing to prevent sparks on all new poles and those visited.

D. Vegetation Management

AEC maintains records for all areas of concern located near its power lines. All ~~the~~ inventoried areas in AEC's database are monitored using known species and specimen growth rates as provided by AEC's vegetation maintenance contractor, with additional consideration given to the amount of rainfall occurring during periods affecting overall tree growth, and past pruning

practices. Each tree within AEC's distribution right of way (ROW) is visited by a contracted trimmer on an annual cycle. The annual inspections are routine maintenance and hazard tree assessments to ensure that every tree remains fully compliant for the duration of the cycle and/or is trimmed according to accepted standards and clearances.

The tree evaluation includes 360-degree assessment of every tree within the 'strike zone' of the conductors and maximize time-of-trim clearances. All tree trimming is conducted in accordance with General Order 95., Rule 35. This rule requires a minimum of 18" (inches) of clearance between vegetation and energized conductors (wires) carrying more than 750 volts.

Additionally, AEC adheres to California Public Resources Code (PRC) 4293, which requires a 4-foot radial clearance ~~be~~ always maintained for conductors between 2,400 and 72,000 volts. To the extent unsafe clearances may exist a service order to clear vegetation is issued and trimming is completed ~~annually. Table 4 below reflects the area, type of work performed, and the number of trees in which worked was performed.~~

AEC has ~~also~~ embarked on a fuel reduction campaign under and adjacent to circuit right-of-way easements in critically high fire-threat zones a**nd has been awarded a grant from the County of Riverside's District Three Supervisor's Office specifically for fuels reduction. This one hundred sixty-thousand-dollar grant has been awarded on an annual basis for three years.** This effort is ongoing and assessed annually on an as-needed basis.

Because of the fuel reduction grant, to date AEC has cleared 22.92 miles in fuels reduction and 50 trees removed and 872 trees trimmed.

~~Vegetation management for the calendar years 2020 through December 2022 resulted in 2,696 tree species trimmed, removed, and cleared around Cooperative-owned facilities. In addition, weed and herbicide treatment has been applied at two substations and one switch station.~~

Special Case – The San Bernardino National Forest Master Special Use Permit (MSUP) and Permit to Construct (PTC) for Power Line Replacement Projects

AEC currently operates and maintains a network of electric facilities located within the San Bernardino National Forest (SBNF). AEC has applied for a renewal of its permit to operate and maintain facilities within SBNF and is operating under

an approved provisional permit. The construction and maintenance permit allows AEC to develop a series of projects and activities aimed at increasing safety and reliability of existing electric facilities within and near the SBNF. Final approval of the permit is currently under review by the US Fish and Wildlife Service.

The current provisional permit has a section on wildfire protection and includes best management practices (BMP's) 56 through 58 that addresses this. They state as follows:

#56; Working in collaboration with the United States Forest Service (USFS), the applicant will assist USFS in identifying a fire prevention and suppression plan, which shall be reviewed, modified, and approved, as appropriate, by the authorized officer (of the USFS). The applicant shall consider such measures for prevention and suppression of fire on the right-of-way and other public land used or traversed by the applicant in connection with operations of the right-of-way. Project personnel shall be instructed as to individual responsibility in the implementation of the plan.

#57; During construction, operation, maintenance, and termination of the right-of-way, during the period of July 1 to Sept. 15, vehicles, gas powered equipment, and fuels shall be equipped with spark arresters approved by the authorized officer.

#58; The applicant shall maintain a fire watch with fire-fighting equipment during construction as required by the authorized officer. When requested by the authorized officer, the applicant shall make his equipment already at the site of the operators, temporarily available for fighting fires in the vicinity of the project. Payment for such services will be made at rates determined by the authorized officer.

On February 11, 2022, the USFS issued an updated ruling for Land Uses; Special Uses: Procedures for Operating Plans and Agreements for Powerline Facility Maintenance and Vegetation Management Within and Abutting the Linear Right-of-Way for a Powerline Facility. Future WMP updates will include any applicable changes.

E. Inspections

AEC meets or exceeds the minimum inspection requirements provided in CPUC GO 165 and CPUC GO 95, Rule 18. Pursuant to these rules, AEC inspects electric facilities as follows:

- "Patrol inspections" - a simple visual inspection of applicable utility equipment and structures, which is designed to identify obvious structural problems and hazards. Patrol inspections are to be carried out during other AEC business. All poles are visually inspected at minimum, annually.
- "Detailed" - one where individual pieces of equipment and structures are carefully examined, visually and through use of routine diagnostic test, as appropriate, and (if practical and if useful information can be so gathered) opened, and the condition of each rated and recorded. Detailed inspections are performed throughout the system on a rotating cycle every three years. In areas that are in the fire threat District 3 and certain areas of District 2 that are deemed to be of greater fire risk threat, detailed inspections may occur more frequently.
- "Intrusive" - involving movement of soil, taking samples for analysis, and/or using more sophisticated diagnostic tools beyond visual inspections or instrument reading are conducted every 5 years. In areas of the system in fire threat District 3 and higher fire risk areas of District 2, intrusive inspections may occur more frequently depending on the age of the facilities.

AEC staff uses its knowledge of the specific environmental and geographical conditions to determine when areas outside of the High Fire Threat District require more frequent inspections.

AEC has implemented more stringent monitoring and inspection programs in high fire District 2 and District 3, which will intensify efforts to identify potential substandard system facilities and elements. As an example of these efforts, AEC has executed the use of pole-loading algorithms with computer software programs that more accurately calculate working loads and stresses. AEC ~~will~~ **has** coordinate**d** these activities with communications infrastructure providers which jointly use AEC's poles and facilities once the software has been implemented system wide and personnel are fully trained on its usage.

AEC ~~is in the process of~~ **has** develop**ed** an outage database which will be used for reliability measurement and reporting purposes. The outage database development is approximately 50% completed using Field Pro software and

Automated Meter Infrastructure (AMI). Once complete, correlations between outages and locations will be analyzed to determine whether certain equipment is prone to outage or has the potential to be an ignition source. This analysis will then be matched to weather and other environmental conditions. Where it is determined that certain types of hardware have higher incidents of failure and potentially a higher incidence rate for ignition, they will be replaced or prioritized for replacement. Outages related to trees and or vegetation are currently investigated, documented, and results are analyzed to determine if additional pruning or removal measures are warranted to prevent any reoccurrence.

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

AEC works to ensure that all inspections to be performed within the High Fire-Threat Districts are completed before the beginning of the historic fire season, typically September 1. AEC monitors drought conditions and other relevant factors throughout the year to determine if inspections should be completed in a shorter timeframe.

AEC maintains a database of vegetation and other obstacles or trouble spots near AEC's facilities which is updated on an annual basis.

F. Workforce Training

AEC believes that an important line of defense against the ignition of fires is a well-trained and alert workforce. Internally, AEC has created a culture of fire prevention. To that end, AEC is developing an extensive set of work rules and complementary training programs designed to minimize the likelihood that AEC's facilities or fieldwork be the source of ignition for a fire.

Management has taken a proactive role in ensuring that all employees are aware of fire-threat weather conditions and requires that all employees immediately report and document any suspicious activities witnessed in the field; immediately report and document the knowledge of any fires within AEC's service territory; and document all known information related to any fire within the AEC service territory regardless of the cause. AEC's training program for employees incorporates regulatory changes, weather updates, situational awareness, and partnerships with cooperating agencies. In 2022, AEC offered a

paid internship program for college students enrolled in a forestry management program, with the potential to lead to regular full-time work once participants have completed their degree program.

G. Recloser Policy

As part of its commitment to providing safe and reliable utility services to AEC's membership, AEC continues to replace older oil circuit reclosers (OCRs) with single-phase solid dielectric vacuum reclosers, focusing heavily on fire threat District 2 and District 3. This equipment will allow AEC quicker reaction times during reclosing operations and be able to sectionalize various elements of AEC's distribution system to better manage system operations and reliability. These reclosers and other Supervisory Control and Data Acquisition (SCADA) controlled reclosers are managed remotely by AEC's Distribution System Operators. In addition, AEC will implement more sensitive relay settings to all SCADA reclosers in fire threat District 3. These sensitive relay settings will provide very fast clearing of faults on distribution circuits and are capable of being remotely operated via SCADA, allowing for real-time adjustments triggered by adverse weather conditions.

H. Deenergization

AEC has the authority to preemptively shut off power due to fire-threat conditions; however, this option will only be used in extraordinary circumstances as a last resort to mitigate the potential of AEC facilities becoming the ignition source of a wildfire event. AEC will make a case-by-case decision to shut off power based on the following considerations:

- Red Flag Warnings issued by the National Weather Service for fire weather zones that contain AEC circuits
- AEC staff assessments of local conditions, including wind speed (sustained and gust), humidity and temperature, fuel moisture, fuel loading, and data from weather stations
- Real-time information from staff located in areas identified as at risk of being subject to extreme weather conditions
- Input from local fire experts and vegetation experts
- Input from local and state fire authorities regarding the potential consequences of wildfires in select locations
- Alternative ways to reroute power to affected areas
- Awareness of mandatory or voluntary evacuation orders in place
- Expected impact of deenergizing circuits on essential services

- Other operational considerations to minimize potential wildfire ignitions, including the blocking of reclosers on the identified circuit(s)
- On-going fire activity throughout AEC territory and California
- Ability to notify customers
- Notifications to local governments and public officials
- Potential impacts to communities and customers

Impacts to Public Safety

AEC recognizes the impacts associated with system outages, therefore, before deenergizing, AEC also looks at other operational restrictions and considerations that can be put in place to minimize potential wildfire ignitions. Deenergization only occurs when it is deemed necessary, based on the above factors, to protect public safety.

Public safety impacts resulting from a deenergizing event include the following:

- Loss of water – all residential and commercial services rely on wells for water
- Disruption in communications from local cellular carriers and telecommunications
- Loss of power can lead to medical emergencies for members of the community requiring powered medical equipment or refrigerated medication. Additionally, a lack of air conditioning can negatively impact medically vulnerable populations.
- Traffic congestion resulting from the public evacuating deenergized areas can lengthen response times for first responders.
- Negative impacts from local businesses forced to close during the shutdown.
- Inability to open garage doors and electric gates during a wildfire event can lead to injuries and fatalities.

Customer Notification Protocols

AEC plans to begin notifying members approximately 48 hours in advance of a potential PSPS event and will attempt to notify members approximately 24 hours before power is shut off. Additional notifications will be made once the power has been deenergized, throughout the outage, and when power has been restored. There may be situations that prevent AEC from providing advance notice. The actual onset of extreme weather conditions and other circumstances beyond AEC's control may impact coordination and notification efforts.

Notification may occur via a combination of phone calls, member messaging, anzaelectric.org, and social media platforms.

VIII. Community Outreach and Public Awareness

AEC has created a multi-level approach to community education and outreach as AEC's contribution to public awareness of fire threats, fire prevention, and emergency preparedness. The key elements of this approach are described below.

A. Fire Safety Communication

AEC provides regular communications to residents and businesses located within AEC's service territory. These fire-safety and emergency communications include, but are not limited to the following:

- Member education events, emergency preparedness symposiums for businesses, public participation meetings, and backup generator safety workshops
- Informational and emergency preparedness mailings
- Educational advertising campaigns focusing on AEC preparations for the fire season and the preparations AEC's members should make for emergencies
- Educational information disseminated through the *Currents* magazine
- Distribution of informational pamphlets, which provides formatted emergency information that easily folds and fits in an automobile glove box or emergency kit
- Distribution of "refrigerator magnets" bearing important emergency information
- The provision of weather information and system-outage status via the AEC Facebook page, website, and member messaging system
- Dissemination of information regarding emergency-preparedness events via social media
- Website campaign offering members access to safety checklists and fire-safety videos

In addition to routine outreach and communications, AEC intensifies its effort to communicate with members when fire-threat conditions are elevated or extreme. AEC has instituted an early warning system advising members that a Red Flag Warning has been declared by the National Weather Service and dangerously high winds are expected. This early warning system consists of AEC's member messaging system, website and Facebook updates, and public

service announcements on KOYT 97.1. When the conditions are present in which AEC is likely to deenergize lines, AEC will consider the need as a priority to notify critical first responders, health care facilities, and operators of telecommunications infrastructure.

As alert conditions are elevated, AEC also directly contacts life support members. Under emergency situations in which AEC is experiencing a system wide outage and cannot contact these members, AEC will send field personnel or other available resources to make personal contact.

Additionally, as part of this wildfire mitigation plan, AEC is currently assessing the risks to the health and welfare of members who may lose power, including the impact on the water supply resulting from deenergizing power lines, and will update this plan accordingly.

B. Partnering with Firefighting Agencies

AEC is developing a partnership with the local fire stations, CAL Flire, and other organizations to address a range of fire prevention and emergency activities. ~~The outcome of these partnerships will be reported in future revisions of the AEC WMP, and suggestions from these agencies will also be incorporated.~~ To ensure that these local agencies can receive emergency communications during the event of a systemwide outage, AEC has donated free fiber internet service with an eight-hour battery backup.

To further assist firefighting agencies concerned with reducing the spread of a wildfire, in 2021, AEC purchased a water trailer capable of putting out any fires involving Cooperative facilities and has trained appropriate staff on proper use in coordination with applicable firefighting agencies to allow the focus to remain on the safety of the public and saving public structures.

C. Community Partnerships

In 2018, AEC began discussions with the Riverside County Emergency Management Department to develop a program that will prepare members for the threat of wildfire and other natural disasters, and community leaders were invited to participate in a fire safety collaboration process. This program includes public meetings in which information related to fire safety, disaster preparedness, and county resources is presented. AEC will also reach out to its other stakeholders representing local schools, water districts, Tribal authorities, and fire departments to develop a joint fire communication plan. In May 2019,

staff met with the Ramona Tribe to discuss wildfire mitigation plans and exchange information. As a result, AEC obtained a copy of the Ramona Band of Cahuilla Indian's Multi-Hazard Mitigation Plan. As the joint communication plan is developed, AEC's WMP will be updated accordingly.

IX. Restoration of Service

Once the extreme fire threat conditions subside and it is safe to do so, AEC crews will begin patrolling power lines, repairing any damaged equipment, and restoring power to impacted members. AEC will provide condition updates and reasonable notice for power restoration.

AEC's critical infrastructure facilities are prioritized during this process by providing messaging to all services in the AEC's service territory, including the local fire stations, water districts, and Tribes.

X. Evaluating of the Plan

A. Metrics and Assumptions for Measuring Plan Performance

AEC's data collection requirements specify responsibilities and accountability for compliance with this plan:

- Compliance Management: As part of their annual calendar, the Operations Manager and Government Relations Liaison will track and ensure that this reporting requirement to the SED is met in the required timeframe if/when it becomes required.
- Claims. Legal. & Regulatory: Will continue their role and responsibilities for fires related to AEC facilities as well as review the annual report prior to submission as required.
- Electric Operations and System Construction Maintenance: Operations Management and line personnel will understand what denotes a reportable fire and assist in ensuring qualifying fires are reported to the General Manager and Government Relations Liaison.
- Training: An initial training and annual refresher training will be developed by the Operations Manager and will be provided to all field personnel to ensure compliance with these requirements.
- Root Cause Analysis: The data collected will continue to be shared internally for further root cause analysis to help determine fire mitigation measures that make sense to implement in the future.
- AEC will track two metrics to measure the performance of this wildfire mitigation plan: (1) the number of fire ignitions, and (2) wires down within the service territory.

- Lessons Learned: Following any wildfire event, regardless of the cause, management will review and discuss what worked and what could have been done differently with staff in a roundtable discussion to improve best practices moving forward.

Metric 1: Fire Ignitions

At the end of emergency events, AEC conducts a debrief and prepares an after-action report that identifies action items to correct or improve future responses. AEC will invoke the actions in its ERP as outlined above.

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

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

~~In future wildfire mitigation plans, AEC will provide the number of fires that occurred that were less than 10 acres in size. Any fires greater than 10 acres will be individually described.~~

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

- ~~Was AEC associated with the fire.~~
- ~~Was the fire self-propagating and of material other than electrical and/or communication facilities.~~
- ~~Did the resulting fire travel greater than one linear meter from the ignition point.~~

Metric 2: Wires Down

The second metric is the number of distribution and transmission wires downed within AEC's service territory. 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 on to a foreign object. AEC will divide the wires down metric between wires down inside and outside of the High Fire Threat District.

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

B. Impact of Metrics on Plan

For both metrics AEC proposes to use its District 2 and District 3 zones as the area of applicability.

AEC assumes that the primary purpose of the theses metrics is to provide longer term feedback on the efficacy of AEC's fire preventative strategies and programs focused on electric facilities. AEC notes that similar metrics are used for other purposes, e.g., wires down is used in monitoring electric reliability. In other cases, this metric is monitored with "exclusions" to normalize unusual events such as extreme weather. However, for fire purposes, AEC assumes that such metrics should include (rather than exclude) such events and intends to monitor all wires down for fire prevention purposes, rather than only wires down during normal weather.

AEC also assumes that the metrics noted here should focus on the highest risk fire areas (i.e., District 2 and District 3), rather than including the entire service territory unless otherwise required.

C. Monitoring and Auditing the Plan

This wildfire mitigation plan is subject to review by AEC's Governing Board. AEC will present this plan to its Governing Board on an annual basis. Additionally, **every three years a comprehensive revision is required, and** a qualified independent evaluator will present a report on this plan to the AEC Governing Board.

D. Identifying and Correcting Deficiencies in the Plan

Following the recent wildfires of 2017, AEC has been reviewing, developing, expanding, and refining the wildfire mitigation plan and Emergency Response Plan (ERP). The goal of these plans is to provide mature and comprehensive programs that improve power line safety, increase reliability, and help to keep AEC's membership prepared in the event of an overall emergency. As part of the wildfire mitigation plan, AEC has made significant enhancements in system design; weather analysis and prediction; operational changes and outage prediction; supplemental inspection and maintenance practices; active vegetation management; and created fire models to allow AEC to move where the risk is the greatest and be able to predict where fire may travel in the event

of an active fire situation. These programs and best practices are all described in this WMP.

Despite all the efforts AEC might take in designing, redesigning, improving, replacing, and fire- hardening various elements of its overhead electric system, there will be some remaining potential risk that AEC's facilities might be the source of ignition for a fire. To address these risks, AEC has designed and implemented several operations, maintenance, and inspection programs directly addressing fire prevention and mitigating fire effects.

E. System Management: Quality Assurance and Quality Control

AEC is in the process of enhancing its system-management programs to assure that, to the extent possible, AEC's overhead system, facilities, and equipment are unlikely to become a fire ignition source. These programs generally encompass inspection and maintenance functions and have been modified to focus on minimizing the probability that damaged or aging facilities will provide the ignition source for a fire. Inspection and repair of the AEC distribution systems have particularly intensified in District 2 and District 3.

In addition, AEC has implemented Quality Assurance and Quality Control standards and programs throughout its service territory, with a special focus in District 3 during fire season. These proactive programs are designed to identify potential structural and mechanical problems before they fail. Distribution facilities within both Districts are currently inspected intrusively on a five-year cycle and corrections are attempted in the same year before fire season begins. Where the facility in need of repair is owned by a party other than AEC, e.g., by a communication infrastructure provider, AEC will issue a notice to repair to the facility owner and work with the facility owner to ensure necessary repairs are completed promptly. AEC's operational goal, subject to permitting requirements and other exigencies and conditions, is to complete all facility and equipment repairs on an annual basis.

Annual adjustments to the High Fire-Threat map, if any, will be reflected in the scope of the Quality Assurance and Quality Control program.

Last, AEC closely monitors cost-effective emerging technologies, legislative and regulatory changes, and evaluates the effectiveness of the plan following each PSPS or wildfire event to ensure best practices are utilized for the safety of staff, facilities, members, and the community.

F. Monitoring the Effectiveness of Inspections

AEC routinely coordinates and monitors the effectiveness of inspections with Operations staff, its vegetation and tree trimming contractors, and any company with whom AEC has contracted for pole inspections to ensure that all system inspections are completed in a timely manner and meet or exceed the requirements established by law. Any deficiencies identified through this process are addressed prior to the start of the fire season for the next year.

XI. Independent Auditor

AEC will seek a minimum of three proposal bids from highly recommended organizations to perform an independent evaluation of AEC's WMP. Based on the proposal bids received, AEC will contract with the organization that best meets the Cooperative's needs.

A qualified independent evaluator report will be presented to the Board when comprehensive updates are made, at least once every three years.