REDDING ELECTRIC UTILITY

WILDFIRE MITIGATION PLAN

REVISED MAY 1, 2025

CITY OF REDDING CALIFORNIA

REU City of Redding Electric Utility

REDDING EST. 1909 CALIFORNIA FIRE DEPT.

REDDING POLICE SINCE 1887

REDDING PARKS

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1. OVERVIEW

A. POLICY STATEMENT

REU has been operating its electric system for over one hundred years. System protection for both public and asset safety has been paramount. Given the recent increase in catastrophic wildfires in California, the state passed Senate Bill (SB) 901 in September 2018. The law requires utilities to prepare wildfire mitigation measures if the utility's overhead electrical lines and equipment are located in an area that has a significant risk of wildfire resulting from those electrical lines and equipment. The law requires the wildfire mitigation measures to incorporate specified information and procedures and requires the local publicly owned electric utility, before January 1, 2020, and annually thereafter, to prepare a wildfire mitigation plan. Portions of Redding Electric Utility's

(REU) electrical infrastructure are located in and adjacent to both California Public Utilities Commission (CPUC) designated Tier 2 and 3 wildfire threat areas.

REU's overarching goal is to provide safe, reliable, and economical electric service to its local community. To meet this goal, REU constructs, maintains, and operates its electrical lines and equipment in a manner that minimizes the risk of catastrophic wildfires.

B. PURPOSE OF THE WILDFIRE MITIGATION PLAN

This Wildfire Mitigation Plan (Plan) describes the range of activities that REU is taking or considering to mitigate the threat of power-line ignited wildfires, including its various programs, policies, and procedures. This plan complies with the requirements of Public Utilities Code section 8387. The Plan is iterative, promotes continuous improvement year-over-year, and represents our best efforts to implement industry best practices in a prudent and reasonable manner in conjunction with various industry associations. Table 1 below summarizes the plan compliance with the corresponding sections referenced.

Table 1: Cross References to Statutory Requirements

Requirement	Statutory Language	Location in REU's WMP
Persons Responsible	**PUC § 8387(b)(2)(A):** An accounting of the **responsibilities of persons** responsible for executing the plan.	Section: 3 Pages: 11-12
Objectives of the Plan	**PUC § 8387(b)(2)(B):** The **objectives** of the wildfire mitigation plan.	Section: 2 Page: 8
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: 2 Pages: 9-10
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: 8 Pages: 29
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: 8 Pages: 29
De-energization Protocols	**PUC § 8387(b)(2)(F): Protocols for disabling reclosers and de-energizing 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: 5 Page: 23-24

Customer Notification Procedures	**PUC § 8387(b)(2)(G):** Appropriate and feasible **procedures for notifying a customer** who may be impacted by the de-energizing 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: 5 Pages: 23
Vegetation Management	**PUC § 8387(b)(2)(H):** Plans for vegetation management.	Section: 5 Pages: 18-20
Inspections	**PUC § 8387(b)(2)(I): Plans for inspections** of the local publicly owned electric utility's or electrical cooperative's electrical infrastructure.	Section: 5 Page: 21
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.	Section: 4 Pages: 14-18
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: 4 Page: 14-18
Enterprise-wide Risks	**PUC § 8387(b)(2)(L):** A methodology for identifying and presenting **enterprise-wide** safety risk and wildfire-related risk.	Section: 4 Page: 15
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:7 Pages: 27-29
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 (i) **Monitor and audit** the implementation of the wildfire mitigation plan.	Section: 8 Pages: 30-31

	(ii) **Identify any deficiencies** in the wildfire mitigation plan or its implementation, and correct those deficiencies. (iii) Monitor and audit the effectiveness of electrical line and equipment inspections, including inspections performed by contractors, that are carried out under the plan, other applicable statutes, or commission rules.	
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 Website of the local publicly owned electric utility or electrical cooperative and shall present the report at a public meeting of the local publicly owned electric utility's or electrical cooperative's governing board.	Section: 9 Page: 31

As further required by Public Utilities Code 8387 local publicly owned electric utilities or electrical cooperatives shall prepare a wildfire mitigation plan annually and shall submit the plan to the California Wildfire Safety Advisory Board (WSAB) on or before July 1 of that calendar year. At least once every three years, the submission shall be a comprehensive revision of the plan.

Table 2: Wildfire Safety Advisory Board Recommendations

WSAB Recommendation	Description	Section Number
#1 – Context Setting Information	Provide context-setting information about the POU and provide a simple guide to where the statutory requirements are addressed within the WMP.	1
#2 – WMP Public Review and Approval Process	Provide a short description of the POU's public review and approval (if required) for the WMP. This description may also include a brief explanation of the funding mechanisms for wildfire mitigation efforts.	3 - A
#3 – Independent Evaluation (IE) Reporting and Posting	Identify where the POU has posted the most recent Independent Evaluator (IE) Report and if your POU plans to enhance future IE reports, please summarize in what ways.	9
#4 – Develop Guidelines for Future WMPs	Develop, in collaboration with POU industry associations, WMP guidelines for future WMPs, understanding that it may take multiple cycles for POUs to integrate these recommendations into the WMPs.	1

#5 – Customer Impact from IOU PSPS Events	Describe the potential impact investor-owned utilities (IOU) public safety power shutoff (PSPS) events could have on POU customers and how the POU manages these impacts. Responses shall only provide aggregated information that does not provide customer-specific information or other potentially sensitive data.	5-G
#6 – Customer Communication Plans for Wildfire and PSPS Events	Describe the utility customer communication plans with respect to wildfires and PSPS, and in particular describe the methods, content, and timing used to communicate with the most vulnerable customers, such as Access and Functional Needs (AFN) customers, medical baseline customers, non-English speakers, and those at risk of losing water or telecommunications service.	6
#7 – System Hardening and Grid Design Programs	Provide details on each POU's system hardening and grid design programs, including: (1) the goals of the programs and the risk any particular program is designed to mitigate; (2) approach to PSPS mitigation and prevention; and (3) identify any resource shortages.	5-E, F-K Appendix D
#8 – System Patrols and Inspections	Describe annual visual patrols on potentially impacted circuits and the risks the POU is inspecting for. Describe whether and how system inspections lead to system improvements. Describe line patrols before, during, and/or after a critical fire weather event, such as a Red Flag Warning with strong winds, or following a fire that burned in areas where electric facilities are or could have been impacted.	5-B, 5-D
#9 – Identifying Risks	Describe options considered by the POU (including through the joint efforts of the POU associations) to identify previously unidentified risks that could lead to catastrophic wildfires.	3-D, 3-E
#10 - Wildfire Risks Associated with System Design and Construction	Describe the particular wildfire risks associated with system design and construction, such as topography and location near the HFTD areas of another utility's service territory. Describe any G.O. 95 exempt assets and possible updates to G.O. 95 that could facilitate more resilient utility transmission and distribution assets.	4, 5-A, 5-E
#11 – Use of Situational Awareness Technology	Provide context-setting information about the prevailing wind directions and speeds, differentiated by season, along with average weather conditions by season. Describe how and why situational awareness technology is installed, and where on the system. Describe the decision-making process regarding the	4-D, 5-C, 5-J, Appendix E

	installation of situational awareness technology, including constraints such as budgets, availability of equipment, knowledge to effectively deploy, or qualified personnel to install and monitor effectively. Identify any other agencies, utilities, or fire professionals that the data from these devices is shared with.	
#12 – Vegetation Management Requirements	Describe treatment plans for all types of vegetation associated with utility infrastructure, from the ground to the sky, which includes vegetation above and below electrical lines.	5-A
#13 – Qualifications of Vegetation Management Personnel	List the qualifications of any experts relied upon, such as scientific experts in ecology, fire ecology, fire behavior, geology, and meteorology. Specify the level of expertise of the POU staff that manages the contractors performing vegetation management. Describe measures each POU takes to ensure that POU staff and contractors comply with or verify compliance with Cal/OSHA standards on Minimum Approach Distances (MAD).	5-A, 5-H, 5-I
#14 - Innovative Approaches to Vegetation Management	Describe whether REU has considered innovative and alternative approaches to vegetation management.	5-I of Appendix B

REU is a department within the City of Redding(COR). For wildfire prevention and response, REU is subordinate to the COR Fire Department and COR Police Department.

The City of Redding adopted a Local Hazard Mitigation Plan in 2015. The REU Wildfire Mitigation Plan supports the aspirational goals of that plan in the area of Wildland Fire, especially in the wildland urban interface (WUI) described in Section 7.4. The objectives of the Local Hazard Mitigation Plan specifically supported by this REU Wildfire Mitigation Plan are as follows:

1. **City Objective 5.B:** Educate the public about wildland fire dangers and the steps that can be taken to prevent or minimize their effects.

2. **City Objective 5.C:** Reduce the probability of fire ignitions.

3. **City Objective 5.D:** Maintain Emergency Operations Center for coordination of information and resources.

4. **City Objective 5.E:** Reduce the potential for destructive actions of the fire once ignition occurs, utilizing fire pre-plans, ensuring a properly trained, staffed, and equipped emergency response capability, and timely response to prevent the spread of the fire, minimizing risks to humans and property.
    a. **Action 5.E.1:** Ensure that adequate resources are available to pre-plan for incidents that may occur in the very high fire hazard severity zones within the City of Redding.
    b. **Action 5.E.4:** Increase staffing of current two-person companies to three-person companies to improve capabilities and initial actions at fire incidences within the community as additional funding becomes available.

The City of Redding has been working with the non-profit organization, Community Planning Assistance for Wildfire (CPAW) on a land use planning solution to better manage the City's wildland-urban interface (WUI) and enhance the City of Redding's resiliency to wildfire. The Redding Electric Utility Wildfire Mitigation Plan will assist in linking the recommendations from CPAW and reducing the impacts of wildfires to our community.

2. OBJECTIVES OF THE WILDFIRE MITIGATION PLAN

A. MINIMIZING SOURCES OF IGNITION

The primary goal of this Wildfire Mitigation Plan is to minimize the probability that REU's transmission and distribution system may be the origin or contributing source for the ignition of a fire as well as to protect the system from wildfire damage.

REU is in the process of evaluating prudent and cost-effective improvements to its physical assets, operations, and training to help meet this objective. REU will implement those changes consistent with this Plan as staffing and budget allows.

B. RESILIENCY OF THE ELECTRIC GRID

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

Other resiliency efforts include mitigating fire fuels located in the WUI and greenbelts likely to be a threat to our facilities and equipment. Additionally, improved fire response will improve resiliency and help avoid the need for public safety power shut off protocols during high fire threat weather. Fire fuels reduction and improved fire response are addressed in the *REU Wildfire Prevention Response Program* described in Section 5.

C. WILDFIRE PREVENTION STRATEGIES AND PROGRAMS

The third goal for the Wildfire Mitigation Plan is to minimize the spread of wildfire within and near REU assets.

1. Strategies

The following strategies are part of this Plan and are described in more detail in Section 5.

- VEGETATION MANAGEMENT
  These strategies help to control vegetation near REU overhead transmission and distribution lines so they better adhere to clearance specifications. They also include fire fuels mitigation and other work in order to prevent our system from causing a fire and to protect our system from fire.

- ENHANCED INSPECTIONS
  These strategies consist of assessment and diagnostic activities as well as associated corrective actions. The practices in this category aim to ensure all infrastructure is in working condition and vegetation adheres to defined minimum distance specifications.

- SITUATIONAL AWARENESS
  These strategies consist of methods to improve system visualization and awareness of environmental conditions. The practices in this category aim to provide tools to improve the other components of the plan.

- OPERATIONAL PRACTICES
  These strategies consist of proactive, day-to-day actions taken to mitigate wildfire risks. The practices in this category aim to ensure REU is prepared in high-risk situations, such as dry, windy environmental conditions.

- SYSTEM HARDENING
  These strategies consist of system, equipment, and structure design and technical upgrades. The practices in this category aim to improve system hardening to prevent contact between infrastructure and fuel sources, such as vegetation and animals. It also includes making the system more resilient to wildfire and other disasters.

- PUBLIC SAFETY AND NOTIFICATION
  These strategies will focus on ways to engage the community as partners in preventing and identifying wildfire risk. They include improving outage notification and other items in the interest of public safety.

- RECLOSING AND DE-ENERGIZATION
  These strategies include a discussion of de-energization, disabling automatic circuit reclosing, and fast-trip protection.

- WILDFIRE RESPONSE AND RECOVERY
  These strategies consist of procedures to react to wildfire or other related emergency conditions. The practices aim to formalize protocols for these situations, so REU can provide an adequate response and recovery.

2. Programs

The strategies above will, as budgetary constraints and staffing permit, be developed and implemented through the following programs as part of this Plan and are described in more detail in Section 5.

- REU Wildfire Prevention and Improved Response Program
- REU Technology Solutions Program
- REU Distribution 10-year Capital Improvement Program
- REU Emergency Operations Program

REU Wildfire Prevention Strategies and Program Matrix

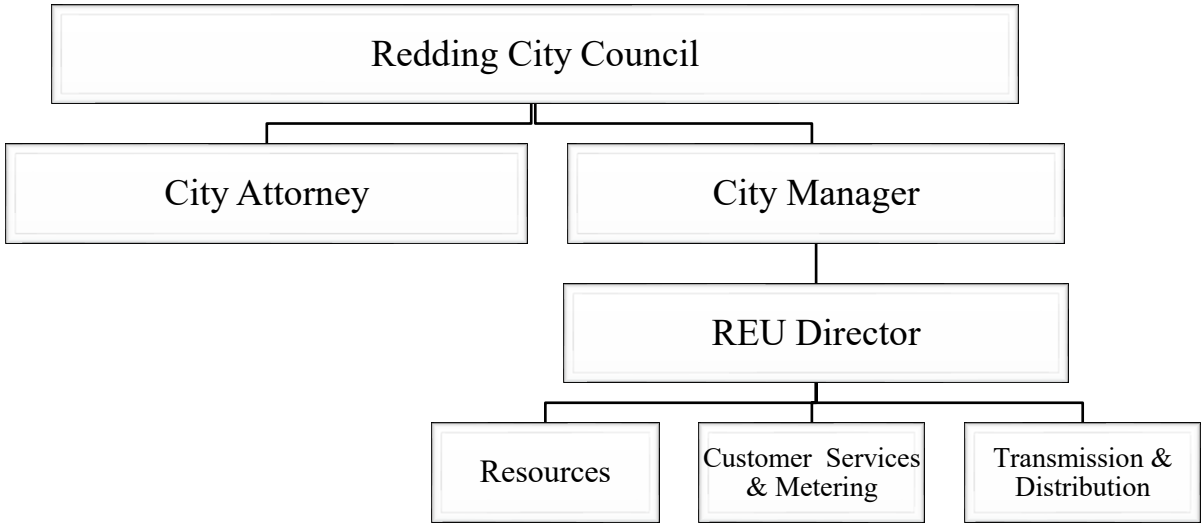
	Wildfire Prevention & Improved Response	Technology Solutions	Distribution 10-year Capital Improvements	REU Emergency Operations
Vegetation Management	x	x		
Enhanced Inspections	x	x	x	
Situational Awareness		x	x	x
Operational Practices	x	x	x	x
System Hardening	x	x	x	x
Public Safety & Notification	x	x		x
Protection Settings & De-energization	x	x	x	x
Wildfire Response & Recovery	x	x		x

D. IDENTIFYING UNNECESSARY OR INEFFECTIVE ACTIONS

The final goal for this Wildfire Mitigation Plan is to measure the effectiveness of specific wildfire mitigation strategies. REU will assess the merits of modifications. This plan will also help determine if more cost-effective measures would produce the same or improved results.

3. ROLES AND RESPONSIBILITIES

A. REU GOVERNANCE STRUCTURE



This plan is subject to direct supervision by the Redding City Council (Council) and will be implemented by the REU Director ("Director"). The City of Redding is operated by a council-manager form of governance. The City Council is the Utility Commission for REU. The Redding Electric Utility Wildfire Mitigation Plan is presented and adopted annually by the elected Redding City Council during regularly scheduled meetings open to the public. All citizens are allowed, by law, to engage in public comment during the open council meeting.

B. ROLES AND RESPONSIBILITIES FOR PLAN EXECUTION

Executive Level Responsibility: The Director will oversee implementation, ensure that staff follow procedures and protocols, and designate staff to manage the performance monitoring. This includes providing guidance to staff and leading the development of reports. The staff responsible for each metric area will aggregate relevant metrics at the direction of the Assistant Director – Transmission and Distribution.

1. **Program Owners:** The table below outlines the current assignments, which are subject to change.

Program	Owner
REU Wildfire Prevention and Improved Response Program	COR Fire Marshal's Office and REU Director
REU Technology Solutions Program	REU OTE Manager – Information Technology
REU Distribution 10-year Capital Improvement Program	REU Assistant Director – Transmission and Distribution
REU Emergency Operations Program	REU Assistant Director – Transmission and Distribution

2. **Strategy Leads:** The table below outlines the proposed assignments, which are subject to change.

Strategy	Lead Personnel	Key Technical Personnel
Vegetation Management	Electric Manager - Line	Program Supervisor - Arborist
Enhanced Inspections	Assistant Director – Transmission and Distribution	Program Supervisor – Line
Situational Awareness	Director	Program Supervisor - Admin
Operational Practices	Assistant Director – Transmission and Distribution	Electric Manager - Operations
System Hardening	Assistant Director – Transmission and Distribution	Electric Manager - Engineering
Public Safety & Notification	Electric Manager - Customer Service	Program Supervisor - Admin
Protection Settings & Deenergization	Assistant Director – Transmission and Distribution	Senior System Operator-Distribution COR Fire Chief
Wildfire Response & Recovery	Assistant Director – Transmission and Distribution	COR Fire Chief Electric Manager - Line Senior System Operator - Distribution

C. COORDINATION WITH JOINT POLE INFRASTRUCTURE PROVIDERS

For joint pole fire prevention, REU takes the lead role and informs the subordinate providers when REU identifies any compromised poles due to third-party attachments. REU coordinates with communication and electric infrastructure providers throughout the year when work on our system affects their equipment and identifies safety issues. If REU staff discovers a facility in need of

repair owned by an entity, REU may issue a notice to repair to the facility owner and work to ensure that necessary repairs are promptly completed. During emergencies, REU assumes the primary role and informs providers when there is damage or risk to their equipment.

D. COORDINATION WITH CITY OF REDDING DEPARTMENTS

Redding Fire Department
The COR Fire Department is the lead agency in cooperation with REU for implementation of the REU Wildfire Prevention and Improved Response Program. RFD, as the City's lead for emergency operations, directs REU regarding public safety priorities.

Redding Police Department
REU coordinates with RPD and is subordinate for emergency and public safety issues. REU will work closely with the RPD for situational awareness and other public safety issues related to this Plan.

Redding Public Works Department
REU is investigating opportunities to harden the electrical system and increase survivability for critical water and wastewater infrastructure. During wildfires and other public safety events, REU works with Public Works to ensure power to water-pumping stations, wastewater plants, and other critical infrastructure. These facilities are not only critical for defending the City from wildfire but are essential for safe repopulation following any disaster. Additionally, the Redding Area Bus Authority (RABA) is a critical operation for evacuations during emergencies and will be part of the infrastructure considered for reliability improvements.

Redding Community Services Department
REU is partnered with the COR Community Services Department as part of the REU Wildfire Prevention and Improved Response Program for fire fuels mitigation as well as other programs and projects.

Other COR Departments and Administration
REU, as a member of the City of Redding Team, will work to ensure information regarding warnings, alerts, and widespread outages is shared with other departments. The City Communications Team will be an integral part of getting information out to the media and public and will coordinate with either or both the City's EOC or REU's DOC as well as any Incident Command in place.

E. CAL OES STANDARDIZED EMERGENCY MANAGEMENT SYSTEM

As a utility department of the COR located in Shasta County, REU may participate in various emergency operation centers depending on the situation and lead agency. As a local governmental agency, COR has planning, communication, and coordination obligations pursuant to the California Office of Emergency Services' Standardized Emergency Management System ("SEMS") Regulations, 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. The COR (via Redding Fire Department) maintains an All Hazards Emergency Operations Plan that includes REU. The COR works closely with Shasta County to coordinate emergency operations, including the Shasta County Sherriff's Office of Emergency Services (OES).

The Shasta County Sheriff's Office of Emergency Services (OES) coordinates with Federal, State, and local agencies to prepare for, respond to, and recover from emergencies and natural disasters.

- OES is responsible for maintaining and updating the County Emergency Operation Plan (EOP), which is an all-hazards plan for Shasta County.

- OES also coordinates and maintains the county Emergency Operation Center (EOC). The EOC can be used during a major incident to carry out the principles of emergency preparedness and emergency management between multiple agencies.

- The Office of Emergency Services provides technical advice to the Sheriff on local emergency declarations and his direct link to the California Governor's Office of Emergency Services during disasters or any other critical incidents. In the event of a major incident, OES can work with CAL OES to obtain a Presidential proclamation.

- OES works closely with other local agencies, assisting them in preparing emergency plans and disaster training. OES also serves as a point of contact for local agencies with the California Governor's Office of Emergency Services.

Pursuant to this structure, REU coordinates and communicates with the relevant local, state, and Federal agencies. This includes participating in City and County EOC exercises as well as providing annual safety meetings. Pursuant to the Emergency Operations Program, an REU EOC Liaison will participate in the City or County EOC using the standardized Incident Command System (ICS).

4. WILDFIRE RISK AND RISK DRIVERS

A. BACKGROUND

Within REU's service territory and the surrounding areas, the primary risk drivers associated with geography and climate for wildfire are the following:

a) Extended drought
b) Vegetation type
c) Vegetation density (especially the West side and greenbelts)
d) Weather
e) High winds
f) Terrain

g) Low humidity
h) Changing weather patterns
i) Communities at risk
j) Fire history

B. ENTERPRISE SAFETY AND WILDFIRE RISK METHODOLOGY

To ascertain the level of risk to our system, REU assessed wildfire risk by looking at our historic outages caused by animals, birds, vegetation, car-pole accidents, and overhead equipment failures. Additionally, REU will review historical fire records to see if there are other areas of risk that should be addressed.

REU has conducted multiple operational risk inventories to determine the appropriate methodology when assessing risk. The following criteria were identified when assessing risk: severity, probability of occurrence, mitigation to be done, and speed of onset. This includes identifying, analyzing, and prioritizing risks associated with catastrophic events, such as wildfires. Key REU assets can be found in the 10-year Capital Improvement Program. SYSTEM AND OPERATIONAL RISK

REU designs and constructs its electric facilities to meet or exceed the relevant federal, state, or industry standards. REU treats CPUC General Order (GO) 95 as a key industry standard for design and construction standards for overhead electrical facilities and, as such, closely follows applicable standards in GO 95. Additionally, REU monitors and follows the National Electric Safety Code as appropriate.

Risk drivers associated with design, construction, operations, and maintenance within our 60-square-mile service territory include approximately 50% of territory that is CPUC Tier 2 and 3 high fire threat areas; including 18,000 acres adjacent to REU equipment and facilities, and 120 miles of overhead power lines.

C. GEOGRAPHICAL AND CLIMATE RISK

Redding typically experiences cool, wet winters and hot, dry summers, creating extreme fire weather conditions, especially from May through September. Daily temperatures during fire seasons (June-October) are usually above 90° Fahrenheit with a relative humidity of less than 30%. Typical vegetation within wildland-urban interface areas includes blue oak, valley oak, gray pine, and annual grasses. Areas of dense brush and annual grasses are common and result in high fire danger and significant fires, especially during north wind events. These conditions combine to create extreme fire danger, with the city facing one of the highest wildfire threats in the state. The risk of catastrophic wildfire in the area rises as the recent trend of drought conditions increases.

Table 3: Attributes of Redding Electric Utility

Utility Name	Redding Electric Utility	
Service Territory Size	61 square miles	
Owned Assets	X Transmission X Distribution X Generation	
Number of Customers Served	46,758 customer accounts	
Population Within Service Territory	92,465 people	
Customer Class Makeup	*Number of Accounts*	*Share of Total Load (MWh)*
	86 % Residential; 2 % Government; - % Agricultural; - % Small/Medium Business; 12 % Commercial/Industrial	52 % Residential; 8.4 % Government; - % Agricultural; - % Small/Medium Business; 39.6 % Commercial/Industrial
Service Territory Location/Topography	- % Agriculture 9.43 % Barren/Other - % Conifer Forest - % Conifer Woodland - % Desert - % Hardwood Forest - % Hardwood Woodland - % Herbaceous - % Shrub 75.4% Urban 2.6% Water	
Service Territory Wildland Urban Interface[1] (based on total area)	38% Wildland Urban Interface; 24% Wildland Urban Intermix	
Percent of Service Territory in CPUC High Fire Threat Districts (based on total area)	Tier 2: 33.5% Tier 3: 12.5% The CPUC High Fire Threat Map is included in Appendix A of REU's Wildfire Mitigation Plan.	
Prevailing Wind Directions & Speeds by Season	Prevailing winds were taken from the Shasta Trinity Strategic Fire Plan Battalion 4 Map. The City of Redding is located within this Fire Plan area.	

[1] 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*.

	The Plan states the following: gradient winds are generally out of the south/southwest at 5 to 12 mph. Occasional light east winds occur in the morning, then shift to more south/southwest flow in the afternoon and can reach speeds of 15 to 20 mph, generally upslope and upcanyon. North wind events occur periodically throughout the fire season and can reach in the 10 to 30 mph range with associated higher gusts. These winds frequently switch to the northeast and strengthen after dark, maintaining low relative humidity, often in the single digits throughout a 24-hour period.
Miles of Owned Lines Underground and/or Overhead	Overhead Dist.: 527.1 miles within service territory/ 27.6 miles outside of service territory Overhead Trans.: 50.9 miles within service territory/ 20.7 miles outside of territory Underground Dist.: 1,051.21 miles Underground Trans.: N/A * Miles of owned lines reported above are lines miles.
Percent of Owned Lines in CPUC High Fire Threat Districts	*Overhead Distribution Lines as % of Total Distribution System (Inside and Outside Service Territory)*
	Tier 2: 24.55% Tier 3: 7.25%
	Overhead Transmission Lines as % of Total Transmission System (Inside and Outside Service Territory)
	Tier 2: 44.8% Tier 3: 10.95%
Customers have ever lost service due to an IOU PSPS event?	☐ Yes ☒ No
Customers have ever been notified of a potential loss of service to due to a forecasted IOU PSPS event?	☐ Yes ☒ No
Has developed protocols to pre-emptively shut off electricity in response to elevated wildfire risks?	☒ Yes ☐ No
Has previously pre-emptively shut off electricity in response to elevated wildfire risk?	☐ Yes ☒ No If yes, then provide the following data for calendar the reporting period. *Number of shut-off events*: N/A *Customer Accounts that lost service for >10 minutes:* N/A *For prior response, average duration before service restored:* N/A

While Redding experiences more than 100 fires annually, the summer of 2018 was historically damaging when California's seventh most destructive fire moved into city limits. The Carr Fire of July 2018 resulted in the deaths of eight people and destroyed over 2,000 structures in Shasta County, including 270 homes within Redding.

Redding Electric Utility recognizes the impacts to our forestry and the increased wildfires due to climate change throughout California and the Northwest. As such, REU reviews the data portraying climate change in California and specifically in Redding through the Cal-Adapt.org collaboration of state funding programs along with university and private peer-reviewed researchers. REU understands that temperatures are projected to rise in California during the 21st century, which will potentially increase fire seasons due to the extended extreme heat. One of our key programs within the WMP is our Wildfire Prevention and Response, which takes into consideration these external climate factors. By partnering with key stakeholders within the City of Redding, such as the Parks, and Fire Department, we are focusing on reducing vegetation near distribution lines and substations, as well as decreasing response time by first responders for fires caused by or near REU infrastructure.

D. CPUC HIGH FIRE THREAT DISTRICTS

REU directly participated in the development of the California Public Utilities Commission' s (CPUC) Fire-Threat Map, which designates a High-Fire Threat District. REU will incorporate the High Fire Threat District into its construction, inspection, maintenance, repair, and clearance practices, where applicable.

REU reviews CPUC Fire Threat Map annually to identify needed adjustments to hazard threat levels due to changes in urban development and/or vegetation conditions. When adjustments are identified, REU collaborates with Redding Fire Department and CAL FIRE to update the CPUC Fire Threat Map data and REU's Fire Threat Map accordingly. There have not been any additional recommended areas to be added to the Tier 2 or 3 areas since December 2020.

5. WILDFIRE PREVENTION STRATEGIES AND PROGRAMS

A. STRATEGY – VEGETATION MANAGEMENT

REU meets or exceeds the minimum industry standard vegetation management practices for transmission-level facilities. For both transmission and distribution level facilities, REU meets: (1) Public Resources Code section 4292; (2) Public Resources Code section 4293; (3) GO 95 Rule 35; and (4) the GO 95 Appendix E Guidelines to Rule 35. These standards require significantly increased clearances in the High Fire Threat District. The recommended time-of-trim guidelines do not establish a mandatory standard, but instead provide useful guidance to utilities. REU will use specific knowledge of growing conditions and tree species to determine the appropriate time of trim clearance in each circumstance. REU treats both native and non-native trees in our service area. The following trees are vigorous in growth and are treated regularly: oak, ailanthus altissima,

and poison oak. REU performs this work with nine arborists supplemented with contracted inspectors and Line Clearance Arborists.

GO 95, RULE 35, TABLE 1					
Case	Type of Clearance	Trolley Contact, Feeder and Span Wires, 0-5kv	Supply Conductors and Supply Cables, 750 - 22,500 Volts	Supply Conductors and Supply Cables, 22.5 - 300 kV	
13	Radial clearance of bare line conductors from tree branches or foliage	18 inches	18 inches	¼ Pin Spacing	
14	Radial clearance of bare line conductors from vegetation in the Fire-Threat District	18 inches	48 inches	48 inches	

GO 95 APPENDIX E GUIDELINES TO RULE 35		
The radial clearances shown below are recommended minimum clearances that should be established, at the 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.		
Voltage of Lines	Case 13	Case 14
Radial clearances for any conductor of a line operating at 2,400 or more volts, but less than 72,000 volts	4 feet	12 feet
Radial clearances for any conductor of a line operating at 72,000 or more volts, but less than 110,000 volts	6 feet	20 feet
Radial clearances for any conductor of a line operating at 110,000 or more volts, but less than 300,000 volts	10 feet	30 feet

Radial clearances for any conductor of a line operating at 300,000 or more volts	15 feet	30 feet

REU funds staff and equipment for vegetation management at the Redding Fire Department and Redding Parks Department to clear brush and trees away from poles, substations, REU's powerplant, and various high fire threat areas in the Redding community. Additionally, the Parks staff conducts weed abatement around power poles in high threat areas. Power poles in high-risk areas were treated with fire retardant material during the 2021 fire season. New technology was developed and REU started wrapping power poles in high-risk areas with a fire-retardant webbing, allowing for longer protection of the poles. Over 500 poles were wrapped in 2022 and 230 power poles were wrapped during calendar year 2023. As of the end of 2024 861 poles have been wrapped with fire retardant wire mesh. An additional 700 poles have been targeted within high-risk areas for pole wrapping starting in 2025. REU utilizes goats in areas near power lines that are often difficult for personnel to reach. REU works directly with private property owners on vegetation management in high fire threat zones to lower fire risks. For a comprehensive list of prevention efforts conducted during the 2024 calendar year see Appendix G-2024 Wildfire Mitigation Plan Monitoring and Auditing Report.

The City of Redding Parks Department and REU Arborists perform the work listed below annually prior to the north state fire season each year. In addition to adopting the *REU Wildfire Mitigation and Improved Response Program* described below, enhancements to our traditional vegetation management described above include:

- No vertical coverage allowed above REU 115kV transmission lines;
- Provide vegetation control in a 30-foot perimeter around the Power Plant and substations as property lines and easements allow. All vegetation within the designated perimeter have been removed within four inches of earth and vegetation maintenance is performed annually at each location.
- Public land and greenbelts throughout the City of Redding are located in all three Tier levels and REU clears required poles from ground to sky adjacent to REU facilities.
- REU prioritizes vegetation management around all utility infrastructure in these areas. In conjunction with various City Departments, REU focuses on mitigating potential fire threats associated with illegal outdoor camps in greenbelt areas.
- Customers not allowing clearing (refusing treatment) are documented. Their refusal information becomes part of the customer's file in the GIS information system database.
- Work with adjacent customers to get approval for wider clearance on their land. This could include tall, diseased, leaning trees that appear to be at risk of falling into our lines. Coordinate with police and fire if necessary clearing is refused (forced trim);
- Perform additional vegetation removal for fuels reduction in the easement on an annual rotation to ensure CPUC recommended clearances are maintained based on the fire hazard zone where each transmission and distribution line is located.

B. STRATEGY - ENHANCED INSPECTIONS

Inspection plays an important role in wildfire prevention. REU patrols its system regularly and has taken steps to optimize its inspections. REU's current inspection activities include several components in accordance with GO-95, 128, and 165, which include annual patrols, detailed inspections, and intrusive inspections of wood poles. Furthermore, REU utilizes contracted arborists to conduct line clearance inspections of the entire transmission and distribution system annually.

For a comprehensive list of enhanced inspection efforts conducted during the 2024 calendar year see Appendix G -2024 Wildfire Mitigation Plan Monitoring and Auditing Report.

C. STRATEGY - SITUATIONAL AWARENESS

REU installed an automated outage management system that has the ability to track customers affected by circuit outages (not individual customers until Automated Meter Infrastructure is approved in the future) and provide customer notification through outage mapping and interactive voice response (IVR).

Other efforts include the following technology in collaboration with RFD, RPD, and the City's Information Technology (IT) Department:

- Utilize strategically located surveillance cameras for early detection of fires or suspicious activity; This is also part of REU's SB699 Physical Security Plan;
- Expanded use of Automatic Vehicle Locators (AVL) for response and recovery for REU, RFD, and RPD;
- Implemented a common Motorola radio communication system for REU, RFD, and RPD for wildfire and disaster response and recovery;
- Provided human resources for implementation, operation, and maintenance of technologies: Customer reporting tools for safety issues;
- Completed a state-of-the-art Department Operations Center to integrate and disseminate situational data.

Other enhancement to public notification during high fire threat, actual fire, or other disaster events can be found in Appendix G-2024 Wildfire Mitigation Plan Monitoring and Auditing Report.

D. STRATEGY - OPERATIONAL PRACTICES

REU will operate the system in a manner that will minimize potential wildfire risks, including taking all reasonable and practicable actions to minimize the risk of a catastrophic wildfire caused by REU electric facilities. REU will take corrective action for deficiencies when the staff discovers or is notified of improperly installed or maintained fire protection measures. In addition to those

general principles, several new operational practices will help reduce the risk of wildfire and improve the response time in the event of a fire, including:

- During high wildfire threat periods (red flag warnings) perform work as described in SOP-35. All personnel in contact with RFD and RPD reporting anything hazardous. REU Emergency Operations Program (EOP) on Level 1 status;
- REU performs bi-annual system drills for the REU EOP in conjunction with summer and winter preparation meetings. Summer drills are performed no later than May 31 of each year; winter drills are performed no later than December 15 of each year. If an actual alert level is experienced due to a Red Flag warning or other activity, the drill may not be necessary;
- Collect and maintain wildfire data necessary for the implementation and evaluation of this Wildfire Mitigation Plan.

E. STRATEGY - SYSTEM HARDENING

REU's electric facilities are designed, constructed, and maintained to meet or exceed the relevant federal, state, or industry standard. REU treats CPUC General Order (GO) 95 as a key industry standard for design and construction standards for overhead electrical facilities. REU meets or exceeds all standards in GO 95. Additionally, REU monitors and follows as appropriate the National Electric Safety Code. In addition to standards, REU will consider some or all of the following as described in the 10-year Capital Improvement Program:

- Non-exempt poles with operating devices are cleared of all vegetation around them with a minimum radius of 10'. Perform this for every applicable wood pole in the system for resiliency;
- Provide additional access roads along power line easements and maintain to appropriate standards;
- Critical power poles located within high-risk areas are wrapped with fire retardant material for added protection;
- Increase stock of air filters for power plant before each summer;
- Engineering – Revise construction standards to implement arc suppression components, raptor framing, squirrel guards, tree wire, lightning arrestors, and arc suppression fusing.
- Convert overhead lines to underground as feasible and economical; Install covered conductor and tree wire.
- Alternative Technologies- REU will consider the feasibility of implementing alternative technologies, such as wire-break sensing and arc detection technology, as they become available and cost-effective.

For a comprehensive list of system hardening projects conducted by REU in 2024, see Appendix G-2024 Wildfire Mitigation Plan Monitoring and Auditing Report.

F. STRATEGY - PUBLIC SAFETY AND NOTIFICATION

The following is part of this Plan to communicate with the community during high-fire threat periods and disasters.

- Coordinate with Redding Fire Department (RFD) and Redding Police Department (RPD) through REU's 24/7 Power Control Center (PCC);
- Coordinate with RFD and RPD through the REU EOP during emergencies or large-scale outages;
- Coordinate with RFD and RPD in conjunction with the joint dispatch agency, Shasta Area Communication Agency (SHASCOM), for notification to areas that require power shutoffs as directed by public safety during emergencies;
- Developed communications protocol with Shasta County Health and Human Services for notifications to vulnerable groups;
- REU utilizes social media such as Facebook, Twitter, and Instagram along with the COR Communications Team to proactively communicate with the customers in the City of Redding during Red Flag Warnings, fires, and other utility-related emergencies;
- A publicly facing map provides information for the public to view current outages and estimated restoration times;
- Use public service messages on local radio and television media related to wildfire safety.

G. STRATEGY – RECLOSING, DE-ENERGIZATION

REU disables automatic reclosing on circuits that traverse Tier 2 and enables high-speed tripping for Tier 3 areas during periods in which the National Weather Service (NWS) and National Oceanic and Atmospheric Administration (NOAA) issues a Red Flag Warning or at REU Management discretion for safety purposes. **REU will continue to shut off power when requested by Redding Fire, Police, Cal Fire, or other emergency responding agencies.** In addition to temporary shutoff requests from the above entities, the use of a Public Safety Power Shutoff (PSPS) may be utilized to prevent igniting a fire during extreme fire weather events and other events with additional high-fire threat conditions. The Reclosing and De-Energization program is documented in SOP-35.

REU will limit preemptively shutting off power (PSPS) during high fire threat periods for the following reasons:

- Our service territory is only 60 square miles and relatively compact and visible with proper technology;

- Approximately fifty percent (50%) of the City's eight hundred (800) miles of distribution lines are located below ground;
- The City has eight (8) Redding Fire Stations positioned strategically throughout the City and with the additional fifteen (15) Firefighters hired through the Wildfire Mitigation Plan, the response time by fire personnel, should a fire occur, will be reduced significantly;

- All identified law enforcement, fire, and hospital facilities are within the Non-High Fire Threat Zone boundaries;
- Five (5) of the REU substations are located within the Tier 2/3 boundaries;
- CalFire Northern Operations Division and CalFire Shasta Trinity Unit headquarters are located within the City of Redding limits along with CalFire's Air Attack Unit, and multiple CalFire Substations are located in and around the City limits, ensuring timely mutual aid response;
- The City hired fifteen (15) Firefighters, and eight (8) Public Works Maintenance employees and is proactively mitigating Tier 2 and Tier 3 fire zone areas by removing brush and trees near Redding Electric equipment and lines;
- Turning off the power could put the community at higher risk of wildfire as it could impact water pumping and also create abnormal human activity that could increase the opportunity for fire. REU will respond to direct requests to de-energize from the Redding Fire Department;
- REU is investing in our Wildfire Mitigation and Improved Response Program as one way to mitigate power shut-offs;
- REU plans to have real-time information from staff located in areas identified as at risk of being subject to extreme weather conditions;
- REU makes use of social media and the REU website to communicate relevant and timely notifications, as well as a public outage portal map.
- REU plans to use system hardening, situational awareness, vegetation management, and other strategies to avoid shutting off power.
- As part of this Wildfire Mitigation Plan, REU may disable automatic reclosing, enable fast-trip protection, or both, on circuits that traverse tier 2 or 3 areas or are considered a fire risk during periods in which the National Weather Service issues a Red Flag Warning or at REU Management discretion for safety purposes.

H. STRATEGY - WILDFIRE RESPONSE AND RECOVERY

- During a high fire threat event (specifically Red Flag Warning periods issued by the National Weather Service), RFD will attempt to up staff and stage fire protection equipment in a ready status and the REU EOP will go to a Level 1 (SOP-35);
- First Responders shall provide access to the Redding Power Plant staff for necessary shift changes during fire events;
- Wildfire Response: Execute the REU Emergency Operations Program (SOP-200);
- Recovery/re-energization will follow priorities set by SOP-28, System Restoration.

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

I. PROGRAM – REU WILDFIRE PREVENTION AND IMPROVED RESPONSE

On May 7, 2019, the Council approved the REU Wildfire Prevention and Improved Response Program (Appendix B). The Program provides funding to the Redding Fire Department and the Community Services Department for services rendered to prevent the start of wildfires through fire fuels reduction as well as provide faster response in the event of a wildfire either caused by or threatening the electric utility assets located in and around the City of Redding. The Redding Fire Department provides coordination between REU and other local fire agencies as well as oversight of the Program.

Specifically, this program provides fifteen Firefighters to increase staffing from two-person to three-person crews. This improves initial fire response. Finally, eight Public Works vegetation crew workers perform fire fuels mitigation. In total twenty-three personnel continue to augment REU's existing nine arborists. Additional outside arborist crews and vendors will continue to be utilized as needed to reduce vegetation and high-risk fire areas.

J. PROGRAM – REU TECHNOLOGY SOLUTIONS

Through the application of technology, REU will be able to more effectively protect and reduce threats to the electric utility infrastructure and the customers who rely upon it. The following technologies will greatly enhance REU's ability to minimize sources of ignition, manage vegetation within the City's electric grid, enhance the productivity of utility staff, harden systems, more effectively protect and notify the public if an issue arises, as well as shorten the response and recovery time in the event REU equipment contributes to starting a wildfire.

Technology also helps to heighten situational awareness and enhances public safety response time, allowing first responders to react in an appropriate and effective manner before, during, and after a wildfire. The Program provides funding to the Redding Police Department (RPD) and the City Information Technology (IT) Department for services rendered to help prevent REU caused wildfires. video monitoring of facilities, a common communication platform, and a GPS-based vehicle tracking platform. The memorandums of understanding (MOUs) are attached in Appendix E.

Specifically, this program provides a common radio platform, including base stations, handhelds, and vehicle-mounted radios for REU personnel, as well as radio equipment for Redding Police personnel, Redding Fire personnel, and Automatic Vehicle Location (AVL) tracking devices on

all Electric Utility vehicles and necessary upgrades for first responder vehicles. The common communication and GPS vehicle tracking platforms will be expandable and be designed to allow easy adoption by other City Departments at a small incremental cost. The Program also funds the Department Operations Center, where all of the technology is integrated, which enhances situational awareness during high fire threat days, system outages, and emergencies.

K. PROGRAM – REU DISTRIBUTION 10-YEAR CAPITAL IMPROVEMENT

The objective of the 10-Year Capital Improvement Program (Appendix D) is to enhance the distribution system to replace specific components used on the electrical distribution system to reduce the probability that the system itself will initiate a fire as well as harden the electrical distribution system to better survive a fire initiated by other sources. The specific program objectives are being designed and were completed mid-2021. These objectives will be achieved using the following five strategies:

- Enhanced inspections and tracking of assets;
- System hardening of key subsystems;
- Improved situational awareness;
- System improvements providing better operational practices;
- The addition of switching to provide precision de-energization.

L. PROGRAM – REU EMERGENCY OPERATIONS

The Redding Electric Utility Emergency Operations Program (REU-EOP) (Appendix C) is an all-hazards EOP that uses a system operating procedure format to ensure compatibility with current practices as well as a utility-wide application. The REU-EOP was designed using the same format as the City of Redding Emergency Operations Plan (City EOP) and includes the use of the Incident Command System (ICS). The main REU-EOP elements include Standard Operating Procedure (SOP) 200, an Incident Communication Guide, and Emergency Operations Contact Information.

Upon review of the City's EOP (adopted in 2014), the utility is responsible for several restoration and incident management objectives during an emergency. The REU-EOP recognizes this responsibility and connects the existing City-wide emergency operations responsibilities to the responsibilities dictated by the REU-EOP in order to support an efficient and effective emergency response to any hazard.

REU maintains multiple electric system operating procedures designed to mitigate, communicate, and restore abnormal system conditions to normal status. As evident from the 2018 Carr Fire and the February 2019 snowstorm event, the utility could greatly benefit from the implementation of a utility-wide EOP that utilizes the Incident Command System (ICS) structure along with the established electric system operating procedures. Fortunately, REU is organizationally structured to easily fit into the ICS unit system with appropriate roles and responsibilities between incident

command (Executive Team) and section chiefs (Leadership Team). Therefore, the implementation of SOP-200 fits well within the roles and responsibilities segmented appropriately.

As required, the REU-EOP establishes a Department Operations Center (DOC) at the REU Headquarters Building at Avtech Parkway during emergency conditions. This DOC will work in collaboration with the PCC (Redding Power Plant) where both facilities will have video conferencing capability to ensure ease of communication during events. Having the DOC remote from the PCC will allow it to be used as an EOC for the City.

The Incident Communication Guide was drafted to support the REU Public Information Officer (PIO) and staff with both internal and external communications during an emergency.
As required in the City's EOP, an Emergency Operations Contact Information document has been created with a listing of key REU emergency response personnel, a conference bridge, and emergency contact email and phone information.

The REU-EOP has been transferred to Utility Operations as of August 31, 2019 for ongoing administration, training, and upkeep.

6. COMMUNITY OUTREACH AND EDUCATION

REU will maintain a proactive outreach and education strategy to create public awareness of fire threats, fire prevention, and available support during a wildfire or large power outage. Prior to an emergency, communication will include regular messages related to wildfire prevention, such as right-of-way management, tree trimming, line inspection, or other relevant topics. Methods of communication will include newsletters, website updates (including City Hub), social media posts, and public service announcements.

During an emergency, the REU Emergency Operations Program includes an REU Incident Communication Guide that will be utilized to manage both internal and external communication throughout the incident from that initial notification to termination of the incident. Use of these established notification and communication plans will allow REU to coordinate with applicable emergency service personnel (Redding Fire Dept., Cal Fire, Cal OES, Redding Police Dept., etc.) along with maintaining open lines of communication with customers, media, and internal City staff.

Communications will be coordinated as appropriate with the City Communications Team.

7. RESTORATION OF SERVICE

In the event of a wildfire or other emergency event, REU will staff up its DOC to coordinate activities to restore service. REU will restore power following an event in cooperation with the City of Redding Fire, Police, and Public Works Departments and in coordination with Cal Fire, Shasta County, or another named Incident Commander.

REU management will oversee restoration and response activities. In the event that additional staff is needed, REU may leverage mutual aid agencies, other City of Redding staff, and local aid organizations. The utility may also engage contractors on an as-needed basis.

The following describes the steps typically taken to begin the restoration process:

Declaration of Emergency. The City of Redding may declare an emergency depending on the scope of the disaster.

Assessment. REU crews must patrol each line segment to determine the extent of damage that has occurred. The patrol involves assessing equipment access issues, any cleanup/debris removal issues and determining personal protective equipment requirements for the crews. REU works with the local agency in charge of the fire to access impacted areas as soon as the area is deemed safe by fire officials.

Planning. After initial assessment, REU supervisors, managers and engineers meet to plan the needed work. The team will work with system operations to prioritize the restoration efforts, targeting the circuits that serve the most critical infrastructure needs.

Mobilize. Based on the size and complexity of the rebuild/restoration efforts, REU will coordinate the crews and material needs internally if possible. Mutual aid and contractors may be used on an "as needed" basis to provide additional support. REU maintains a critical material vendor list and has contracts it can draw on for labor and material needs. In an instance of widespread catastrophic damage, necessary materials and labor could experience shortages that may delay work.

Rebuild. The rebuild effort lead by REU will commence as soon as areas become safe and accessible. The initial efforts will be to get the lines up and restore the damaged circuits. Depending on the extent of damage, demolition may be performed concurrently or after crews start installing new facilities. REU will incorporate new materials and technologies as indicated and available.

Restore. REU, mutual aid, or contract crews will restore electric services to homes and businesses as soon as possible after the wildfire. Depending on the extent of damages, residential and business customers may have to perform repairs on their facilities and pass inspections by local agencies prior to having full electric service restored.

In most cases, the following restoration priorities will be followed depending on the specific incident and available resources:

- Public safety in the affected areas;
- Worker safety in performing the restoration work;
- Life-support or critical customers;
- Critical infrastructure (Key City and County facilities and accounts; Sheriff's Department and jail, City Police and Fire Departments, other key utility facilities (e.g., water, sewage,

gas, citywide communications), Incident Command Site or Base Camp, Incident Evacuation Centers, local broadcast and radio Stations, etc.);
- Major commercial activities/accounts critical to continuity of community services (e.g., gas stations, food stores, home supply stores, repair shops, eateries and lodging facilities, financial institutions, etc);
- To reduce the total number of customers affected;
- To reduce the length of time customers have been without power.

In directing restoration efforts to best achieve the above priorities, REU Operations Group personnel will generally find it most efficient to dedicate restoration resources to the following types of facilities in the following order of priority to optimally restore electric services:

- Redding Power Plant facilities (RPP);
- Other energy supply resources (to ensure power can be delivered/received via Western Area Power Administration, the COTP, from within BANC, the CAISO, etc.);
- Transmission circuits (115 kV) subject to NERC requirements;
- Substations;
- Distribution circuits (12 kV);
- Distribution feeders;
- Distribution transformers;
- Service lines.

8. EVALUATION OF THE PLAN

A. METRICS FOR MEASURING PLAN PERFORMANCE

REU tracks two metrics to measure the performance of this Wildfire Mitigation Plan: (1) number of fire ignitions caused by REU facilities or operations; and (2) wires down within the service territory.

Metric 1: Fire Ignitions

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

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

For information related to the number of fires caused by REU facilities see Appendix G-WMP Annual Monitoring and Auditing Report.

Metric 2: Wires Down

The second metric is the number of distribution and transmission wires downed within REU'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 onto a foreign object.

REU divides the wires down metric between wires down inside and outside of the High Fire Threat District. REU does not normalize this metric by excluding unusual events, such as severe storms. Instead, REU supplements this metric with a qualitative description of any such unusual events (including car vs. pole incidents).

B. IMPACT OF METRICS ON PLAN

Appendix G – Wildfire Monitoring and Auditing Report provides the impact on the metrics of the plan. REU will continue to identify areas of its operations and service territory that are disproportionately impacted and evaluate potential improvements to the plan. REU staff will continue to collected data update the WMP annually.

Notable changes include the implementation of a workforce management program, contracting with vendors for vegetation and equipment inspection, and upgrades to the internal inspection process improving the overall auditing and reporting of utility caused fires. REU has improved the collection process along with monitoring and reporting of events.

C. MONITORING AND AUDITING THE PLAN

Review of this Plan will occur annually and any lessons learned will have the highest priority for improving steps in the plan, any reference programs, and the process for implementation. REU will present this plan to the Redding City Council on an annual basis at a regularly scheduled City of Redding Council Meeting on the Regular Calendar allowing public comment on the elements of the plan.

D. IDENTIFYING AND CORRECTING DEFICIENCIES IN THE PLAN

REU staff and qualified external stakeholders are encouraged to identify Wildfire Mitigation Plan deficiencies or potential deficiencies to the Assistant Director of Utility Operations as soon as possible when observed. The Assistant Director of Utility Operations shall evaluate each reported deficiency and if the deficiency is determined to be a valid plan deficiency, it shall be entered into a log with the following information:

- Date the deficiency was discovered;
- Description of the deficiency;
- Source identifying the deficiency (e.g., Internal Audit);
- Priority based on deficiency severity;
- Assigned corrective action, including the date when it must be completed by;
- Assigned staff responsible for completing the corrective action;

- Date corrective action completed.

The Assistant Director of Utility Operations will go over the log at regularly scheduled Leadership and Supervisor Meetings.

E. MONITORING THE EFFECTIVENESS OF INSPECTIONS

REU will perform inspections on either a 5-year, 15 year, or annual cycle, based on GO 165 or fire mitigation recommendations. Any areas or equipment found that need improvement or appear hazardous will be documented with a work order, given a priority, and the work order will be tracked. When completed the work order will have a close date.

The Assistant Director of Transmission and Distribution Assets will assign qualified internal staff or engage a third party to review and audit the equipment and line inspection programs called out in the Wildfire Mitigation Plan after the completion of the first six months of the plan. The assigned auditor will:

- Review records for the inspection programs;
- Interview staff performing inspections to assess their knowledge of the inspection programs;
- Monitor staff performing inspection activities;
- Review deficiencies noted in the programs;
- Identify systemic issues or problems;
- Note the timeliness of corrective actions; and
- Pick a random sample of some completed corrective actions and verify the effectiveness of the corrective actions; and
- Issue a written report of findings.

The Assistant Director of Transmission and Distribution Assets will review the audit findings and assign corrective action as applicable. A copy of the audit report will be routed to the Director.

9. WILDFIRE MITIGATION PLAN ADOPTION

A. CITY COUNCIL MEETINGS

Meetings of the Redding City Council are held on the first and third Tuesday of each month at 6:00 p.m. City Council meetings are open to the public, with the exception of closed sessions, as allowed by law. Members of the public can attend Council Meetings in person or live stream the meeting. Online videos of the Council meetings are posted on the City's website the same week following the meeting

City Council agendas are available online, at the City Clerk's Office, or may be viewed in the display case in front of the Council Chambers, beginning at 4:00 p.m. on the Thursday preceding the Council meeting.

B. PRESENTATION

The Wildfire Mitigation Plan is presented to the City Council during the general session and is open for public comment during that time period. Changes to the Plan and acceptance of the annual report are contingent on approval from the City Council. In addition, a copy of the approved Wildfire Mitigation Plan is publicly available on the REU website.

C. INDEPENDENT EVALUATION

Public Utilities Code section 8387(c) requires REU to contract with a qualified independent evaluator with experience in assessing the safe operation of electrical infrastructure to review and assess the comprehensiveness of REU's Wildfire Mitigation Plan.

REU's first Plan was reviewed by Navigant Consulting and they presented their report and findings to the Redding City Council on December 3, 2019.

REU's three-year review was conducted by Dudek in January of 2023.

The Redding Electric Utility Wildfire Mitigation Plan and the report from the independent evaluator can be located on the City of Redding website at: https://www.cityofredding.gov/government/departments/redding_electric_utility/in_our_community/electric_safety/wildfire_mitigation_plan.php

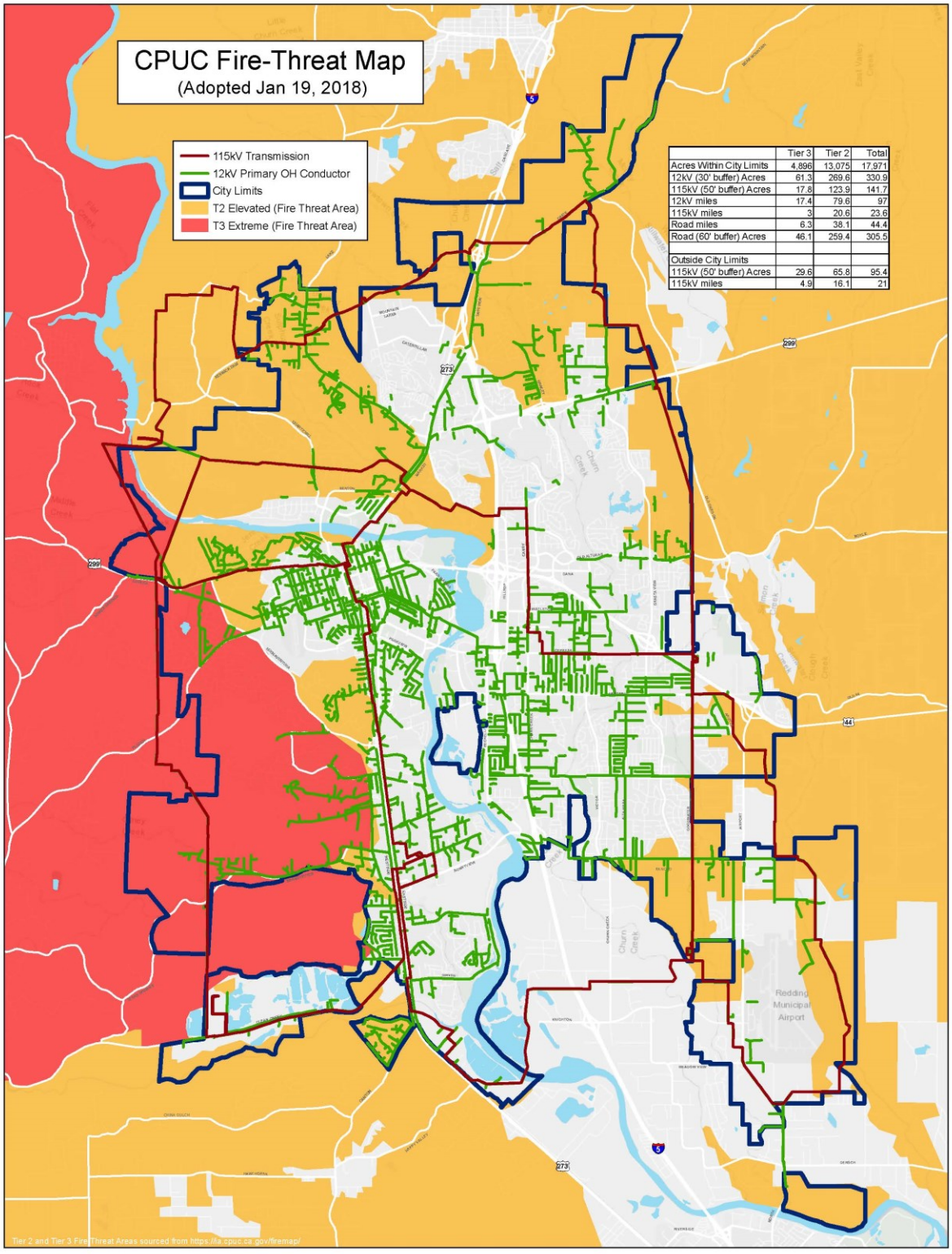
10. REVISION HISTORY

Version Number	Revision Date	Summary of Changes
1.0	6/18/19	Initial
2.0	12/3/19	Added the following: REU Emergency Operations Program, REU 10-Year Capital Improvement Program, and REU Technology Solutions Program. Updated all sections with administrative changes to reflect new programs and current practices.
3.0	12/1/2020	Made minor changes to reflect current status of programs. Updated Appendix C. Detailed information regarding steps taken during the 2020 calendar year are described in a separate annual report.
4.0	5/18/2021	Added Appendix G: REU's Response to the Wildfire Safety Advisory Board's 2021 Guidance Advisory Opinion.
5.0	12/7/2021	Minor changes to reflect current status of programs and updated Appendices. Detailed information regarding steps taken during the 2021 calendar year are described in a separate annual report.
6.0	1/06/2023	Updated the WMP to meet the recommendations of the Wildfire Safety Advisory Board reflected from the 2022 Plan and 3-year audit review by independent auditor.

7.0	1/05/2024	Noted elements of the WMP that have been completed, removed or course of action changed due to modifications of the plan. Minor updates only.
8.0	1/05/2025	Annual review and updates have been provided to the 2025 WMP including public safety power shutoff language.

APPENDIX A

CPUC FIRE THREAT MAP


CPUC Fire-Threat Map
(Adopted Jan 19, 2018)
115kV Transmission
12kV Primary OH Conductor
City Limits
T2 Elevated (Fire Threat Area)
T3 Extreme (Fire Threat Area)
Tier 3 Tier 2 Total
Acres Within City Limits 4,896 13,075 17,971
12kV (30' buffer) Acres 61.3 269.6 330.9
115kV (50' buffer) Acres 17.8 123.9 141.7
12kV miles 17.4 79.6 97
115kV miles 3 20.6 23.6
Road miles 6.3 38.1 44.4
Road (60' buffer) Acres 46.1 259.4 305.5
Outside City Limits
115kV (50' buffer) Acres 29.6 65.8 95.4
115kV miles 4.9 16.1 21
Tier 2 and Tier 3 Fire Threat Areas sourced from https://ia.cpuc.ca.gov/firemap/

APPENDIX B

REU WILDFIRE PREVENTION AND IMPROVED RESPONSE PROGRAM

REU Wildfire Prevention and Improved Response Program

1. Introduction

A. Purpose

The purpose of the REU Wildfire Prevention and Improved Response Program is to establish a framework for the electric utility to conduct an effective, coordinated program to prevent catastrophic impacts to its infrastructure from wildfire. This program is a significant component of the Redding Electric Utility Wildfire Mitigation Plan required by SB901. The Program aims to prevent the start of wildfires from utility operations as well as provide faster response in the event of a wildfire either caused by or threatening its electric utility assets located in and around the City of Redding.

B. Goals

- Prevent electric utility-caused wildfire.
- Reduce the time for the Redding Fire Department to respond to, and engage in fires that threaten grid infrastructure and the other REU facilities.
- Increase staffing to respond to emergencies reasonably likely to impact REU facilities.
- Increase available personnel for debris removal after extreme weather events.
- Create community awareness for utility wildfire prevention.

C. Objectives

The Program's primary objectives are to:

- Identify hazards that pose a potential threat of damaging wildfires that may reasonably be likely to affect REU facilities.
- Prioritize prevention efforts.
- Implement measures targeting fuel reduction to minimize the probability of utility-caused fires or wildfire impacts to REU facilities.
- Coordinate with fuel reduction efforts of other department and agencies.
- Increase community education, outreach, and dialog.

2. Strategy/Scope of Work

A. Redding Fire Department Initial Hazard Identification and Risk Assessment REU personnel will coordinate with Redding Fire and other City departments to identify and prioritize areas for risk reduction activities using the following resources:

- REU - CPUC Fire Threat Map
- CALFIRE Shasta Trinity Unit 2018 Strategic Fire Plan
- Redding Area Community Wildfire Protection Plans
- Shasta County Fire Safe Council – A collaborative composed of Western Shasta Resource Conservation District (WSRCD), federal and state land management agencies, and others and having a mission of being a framework for coordination, communication, and support to decrease catastrophic wildfire throughout Shasta County.
- Community Planning Assistance for Wildfire (CPAW) recommendations as approved by the Redding City Council
- City of Redding Hazard Mitigation Plan
- Redding Police Department

B. Redding Fire Department Personnel Assistance

Redding Fire Department will provide staff, equipment, and materials for the fire response within the City of Redding, protecting REU infrastructure and mitigating potential fires caused by REU equipment.

1. Wildfire Response – Firefighter, 15 personnel
    a. Wildfire incident response
    b. Provide a third person for rapid-fire engagement upon arrival
    c. Two Engine Companies, three shifts

C. Redding Community Services Personnel Assistance

Redding Community Services to provide staff, equipment, and materials for on-the-ground vegetation fuels reduction.

1. Wildfire Prevention – Public Works Maintenance Worker, 8 personnel
    a. Vegetation Management within easements as prioritized
    b. Soil sterilization
    c. Fuel mitigation
    d. Fuel breaks
    e. Roadway breaks

f. On-going Adaptive Management
g. Update Hazard and Risk Assessment
h. Revise Work Plans as Appropriate

Redding Community Services to provide staff, equipment, and materials for on-the-ground vegetation fuels reduction.

2. Wildfire Prevention – Public Works Maintenance Worker, 8 personnel
    a. Vegetation Management within easements as prioritized
    b. Soil sterilization
    c. Fuel mitigation
    d. Fuel breaks
    e. Roadway breaks
    f. On-going Adaptive Management
        - Update Hazard and Risk Assessment
        - Revise Work Plans as Appropriate

A. C. Project Tracking and Reporting

Ref #	Program Element	Actions	Performance Measure
1	Hazard identification, Risk assessment and Project Prioritization – Assistant Fire Marshal and Fire Chief	• Collaborate w/ REU • Collaborate with RPD/Parks/PW • Other duties per the REU Wildfire Mitigation Plan	• Produce detailed work plan in collaboration with REU • Attend public workshops or other stakeholder meetings
2	Prevention – Public Works Maintenance Workers	• Fuels reduction • Soil sterilization • Emergency debris removal • Other duties per the REU Wildfire Mitigation Plan	• Acres mitigated • Circuit miles mitigated • Poles mitigated • Fuel volume mitigated
3	Rapid Incident Response and Engagement – Firefighters	• Provide priority response to wildfire or utility fires • Maintain heightened alert/availability during high threat periods • Other duties per the REU Wildfire Mitigation Plan	• Wildfire and utility fire incidents are prioritized and responded to quickly

REU Wildfire Prevention and Improved Response Program Cost Estimates

	Exp Amt FY19	Exp Amt FY20	Exp Amt FY21	Exp Amt FY22	Exp Amt FY23	Exp Amt FY24
WILDFIRE MIT LABOR/EQUIPMENT	13,274.53	472,361.64	39,577.56	(819.66)	0.00	30,923.70
WF MIT FIREFIGHTER LABOR	0.00	928,438.66	1,346,642.02	1,744,670.00	1,893,310.00	1,243,339.15
WF MIT PARKS LABOR	0.00	116,302.87	273,491.92	719,966.53	737,861.88	397,565.23
WF MIT FIREFIGHTER MATERIALS	0.00	115,839.31	35,512.70	30,192.35	16,359.93	0.00
WF MIT PARKS MAT/SUPPLIES	0.00	63,031.51	89,357.99	115,490.20	65,753.55	25,334.29
WF MIT ONGOING MAINTENANCE	0.00	0.00	12,019.08	44,632.03	35,792.71	37,136.00
	13,274.53	**1,695,973.99**	**1,796,601.27**	**2,654,131.45**	**2,749,078.07**	**1,734,298.37**

APPENDIX C

REU 10-YEAR CAPITAL IMPROVEMENT PROGRAM

REU Distribution 10-Year Capital Improvement Plan

Objective

The objective of the 10-Year Capital Improvement Program is to enhance the distribution system in two ways:

- Selectively replace the components used on the electrical distribution system to reduce the probability that the system itself will initiate a fire.
- Harden the electrical distribution system to better survive a fire.

These objectives will be achieved using the following five strategies:

- Enhanced inspections and tracking of assets;
- System hardening of key subsystems;
- Improved situational awareness;
- System improvements providing better operational practices;
- The addition of switching to provide precision de-energization.

System Improvements Description

The suggested system improvements are proposed to be as described below:

1) Field Verify / T2 / T3 Boundary: The present CPUC maps defining the Tier 1, 2, and 3 boundaries were created as statewide maps that lack the detail necessary to accurately define the operation of the utility assets within the City of Redding (COR). An assessment will be performed to provide clarity of what the actual fire hazards are at critical locations on the REU distribution system. Mitigation shall be performed for certain circuits to allow the recloser operation to be reinstated and removed from the list shown in Attachment 2.
2) Perform necessary tree trimming and removal in priority areas.
3) Reconfigure specific Circuits to feed only Tier 1.
4) Install non-arcing arrestors, fuses, and squirrel guards and add covered wire jumpers.
5) Create 30-foot sterilized perimeter for T2 and T3 substations.
6) Apply fire retardant to poles for T2 and T3.
7) Install fault indicators in order to locate issues faster.
8) Install Mesh Network to retrieve fault and outage data.
9) Connect Line Fault Indicator data to SCADA.
10) Provide secondary water source to Power Plant.
11) Install additional 12KV switches at T1 boundary.
12) Install fast reclosers/sectionalizers at T1 boundary.
13) Convert overhead to underground for critical COR water plants.
14) Improve existing and add additional access roads to critical sections of the distribution system.
15) Replace existing 115KV poles with steel pole in T2 and T3 areas.
16) Convert overhead to underground where it is deemed cost effective.
17) Convert Keswick River Crossing from wood to steel.

System Improvements Timeline

Priority will be given to the improvements that can be deployed the earliest, with the largest estimated return in meeting the Program objectives. Improvements which require larger efforts such as city-wide studies and design consultant efforts will be implemented as they are completed.

APPENDIX D

REU TECHNOLOGY SOLUTIONS PROGRAM

Overview

Through the application of technology, REU will be able to more effectively protect and reduce threats to the electric utility infrastructure and the customers who rely upon it. The following technologies will greatly enhance REU's ability to minimize sources of ignition, manage vegetation within the City's electric grid, enhance productivity of utility staff, harden systems, more effectively protect and notify the public if an issue arises, as well as shorten the response and recovery time in the event REU equipment contributes to starting a wildfire.

Technology also helps to heighten situational awareness and enhances public safety response time, allowing first responders to react in an appropriate and effective manner before, during and after a wildfire. The Program provides funding to the Redding Police Department (RPD) and the City Information Technology (IT) Department for services rendered to help prevent REU caused wildfires and protect REU facilities from the threat of wildfires through aerial surveys of REU's overhead electric lines, video monitoring of facilities, a common communication platform, and a GPS based vehicle tracking platform. The memorandums of understanding (MOUs) are attached.

Specifically, this program provides for an estimated total of forty (40) cameras; a common radio platform, including base stations, handhelds and vehicle mounted radios for REU personnel as well as radio equipment for Redding Police and Fire command Staff; and Automatic Vehicle Location (AVL) tracking devices on all Electric Utility vehicles and necessary upgrades for first responder vehicles. The common communication and GPS vehicle tracking platforms will be expandable and be designed to allow easy adoption by other City Departments at a small incremental cost.

Cameras for Utility Operations, Fire Detection and Mitigation

Situational awareness is instrumental in combating fires in and around our community. Camera technology is a vital element in the early detection and intrusion of wildland fires into the City of Redding. In addition, cameras provide critical information related to any REU equipment that may be a contributory cause to a fire. The installation of cameras in areas surrounding REU's critical infrastructure will greatly enhance first responder's ability to identify, locate, and mitigate fire threats.

Live feed cameras mounted throughout REU's service territory will assist with the early detection of fires caused by the electric system. Strategically placed cameras in the proximity of REU's transmission lines, especially in the Tier 2 and Tier 3 fire areas, will also aid in risk assessments during designated Red Flag warning days or a fire weather event in which an Emergency Operations Center is activated. Early assessment and detection allows REU to quickly react and prevent the system from inflicting harm on the surrounding areas.

Mobile cameras will also be used in a variety of preventative ways through the use of Unmanned Aerial Vehicles (UAVs). This includes the identification of potential right-of-way hazards as well

as the location and isolation of hot spots in REU distribution lines using Forward Looking Infrared Radar (FLIR) technologies.

In the event a fire is seen or reported, fixed cameras and UAVs can quickly discover and identify hot spots in the area, help determine the potential for the fire to spread, and give first responders specific intelligence related to scaling fire resources up or down appropriately. In addition, strategically placed fixed cameras assist first responders in determining the best evacuation routes through enhanced situational awareness. Fixed and UAV cameras allow firefighters and first responders to more effectively manage firefighting operations. Speakers mounted on UAVs greatly enhance the ability to communicate with first responders in the danger area and with citizen evacuations.

HD video streaming from the UAVs to the Department Operation Center (DOC) or command staff on computers/cell phones will allow those in control of fire operations to see a live, real- time video feed of the fire. This will streamline firefighting capabilities and enable command center personnel to make quick decisions based on real-time information, rather than using information that has been relayed through multiple parties or having to wait until first responders are in place. Command center personnel will be able to see the direction a fire is spreading, providing the ability to move resources to the most effective positions.

Implementation of an artificial intelligence overwatch camera and software system will assist in the early detection of fires. Fire watch systems are specifically manufactured for early wildfire detection and can be calibrated for any region, vegetation, and type of weather. This technology includes a triple optical sensing unit, control and detection software that performs self- diagnostics, and smoke detection. While this technology is recommended to be used with a detection radius of ten (10) miles, it has proven itself capable of locating smoke plumes up to forty (40) miles away during clear weather days. When smoke is detected by the system it alerts users so that first responders can react quickly and efficiently before flames reach the tree tops. Early detection of fire arising proximate to REU facilities using the system allows first responders to launch a direct attack using minimal resources and results in both physical and monetary savings to REU.

Fire caused by REU facilities or threatening REU facilities can rapidly becoming a city-wide threat to the inhabitants of the City. City-wide issues and concern can begin long before the cause of a fire is known due to lack of certainty. By determining the cause, or origin, of a fire quickly, we can not only save life and properties, we can mitigate the risk of uncertainty. In this regard, early detection of fire caused by REU facilities or threatening REU facilities protects the City as a whole.

Aerial Imagery

The city-wide aerial orthophotography is a core data set for the GIS Division. Aerial imagery or orthophotography provides the picture from which many GIS data layers are created and maintained. For example, our parcels, roads, water system, wastewater system, and storm drain system GIS layers are all created and maintained using high-resolution orthophotography. Also, high-resolution imagery is a powerful visual tool when represented on maps and exhibits. It is

important that the imagery be kept up-to-date. The most recent aerial imagery was flown prior to the Carr fire, and is therefore not a true representation of our community's current landscape.

New imagery would allow fire crews to be able to identify current overgrown areas proximate to REU facilities, as well as those areas at a higher risk of fires. Ensuring the imagery is kept up to date on a more frequent basis will play a critical role in ensuring fire crews are able to maintain a clearer/safer landscape around REU facilities as vegetation regrows. Newer imagery would allow for accurate GIS data, which in turn, would further enhance the City's Fire Department in their fire mitigation efforts to enhance wildfire buffers around REU facilities. This imagery will be performed every two years.

City-Wide Communications Platform

Immediate and reliable communication is vital during an emergency such as a wildfire, or major storm event. The current City of Redding radio systems have reached their end of useful life and are requiring replacement. RPD is currently in the process of upgrading their existing radio system and REU is proposing to expand upon this project to include additional features that will meet Redding Electric Utility's need to monitor and react to wildfire threat to REU facilities or to protect the City from wildfire threat posed by REU facilities while also creating a unified platform across City Departments. By implementing a unified stationary and mobile communication platform, City of Redding personnel will have the ability to communicate across Departments during emergency situations quickly and efficiently. This platform will provide immediate connection to all parties, free of cross-channel interference, allowing each Department to work simultaneously and in support of one another. In addition to purchasing the communications platform, REU will provide radios for Electric Utility employees and Redding Police and Fire command staff to ensure reliable communication between first responders and REU to ensure the preservation of life and property. *Initial costs associated with the communications platform will be paid by REU. The Redding Police Department will be responsible for a partial repayment for handheld and vehicle radios through an interdepartmental lease process.

This radio system will allow first responders to immediately report downed electric lines to REU or report a fire that has been started due to a downed line. This will lead to faster response times and better fire management. Direct radio communication between Redding Fire Department personnel to Police personnel will provide safe direction to high risk areas during evacuations as well as allow first responders to request specific power shutoffs from REU's DOC during an emergency.

Automatic Vehicle Location (AVL)

AVL will assist each Department with the identification and tracking of first responder and emergency vehicles. During a wildfire event, it is critical for the Department Operations Center (DOC) to be able to determine the location of each vehicle so that resources can be dispatched and/or redirected to REU facilities in the most effective manner, and to identify where a vehicle is located so assistance may be provided if an employee is in danger. AVL aids in the identification

of employee location during emergencies and allows dispatchers to warn personnel who are in the vicinity of an at-risk area.

AVL will allow REU to track the progress of employees while patrolling equipment during a Red Flag outage. By doing so, REU can ensure that outages are handled quickly and efficiently, and that employees are not at risk. If an emergency situation is identified, AVL will provide REU with the ability to quickly report a vehicle's location and allow dispatchers to send first responders directly to the vehicle and employee(s).

REU Wildfire Technology Matrix

	Cameras for Detection & Mitigation	Aerial Imagery	Citywide Communications Platform	Automatic Vehicle Location (AVL)
Vegetation Management	x	x		
Enhanced Inspections	x	x		x
Situational Awareness	x	x	x	x
Operational Practices	x		x	x
System Hardening	x	x	x	x
Public Safety & Notification	x		x	x
Reclosing & Deenergization	x		x	x
Wildfire Response & Recovery	x		x	x

REU Technology Strategies Matrix

	Cameras for Detection & Mitigation	Aerial Imagery	Citywide Communications Platform	Automatic Vehicle Location (AVL)
Wildfire Prevention & Improved Response	x	x	x	x
Technology Solutions	x	x	x	x
Distribution 10- year Capital Improvements	x		x	x
REU Emergency Operations	x	x	x	x

APPENDIX E

REU MONITORING AND AUDITING REPORT FOR CALENDAR YEAR 2024

1. Scope

In conjunction with California Senate Bill (SB) 901, the City Council approved the Redding Electric Utility (REU) Wildfire Mitigation Plan (Plan) on December 3, 2019. The goals and objectives of the Plan included close monitoring and internal audits to reduce potential wildfire risks caused by or encroaching on Redding's electric equipment and infrastructure. These goals directly relate to REU's overarching objective of providing safe, reliable, and economical electric service to the Redding community. The Wildfire Mitigation Plan states, "Review of this Plan will occur annually, and any lessons learned will have the highest priority for improving steps in the plan, any reference programs, and the process for implementation." Subject Matter experts within REU are responsible for the monitoring and auditing, which consists of reviewing key elements within the Plan to document progress, identify deficiencies, improve both internal and external communications, and ensure REU continues to operate its electrical lines and equipment in a manner that minimizes the risk of catastrophic wildfire posed by its infrastructure.

11. Key Contributors

Implementing the Wildfire Mitigation Plan is a collaborative effort with numerous City of Redding Departments working together in prevention and response, technology solutions, emergency operations, and the 10-year capital improvement plan. Information and data have been tracked throughout the 2022 calendar year to measure performance and deficiencies, and to make improvements to the Plan for upcoming years. Key City of Redding partners in the Plan include: Redding Electric Utility, Redding Police Department (RPD), Redding Fire Department (RFD), Information Technology, Parks, and Geographic Information Systems.

3. Participants in Monitoring and Auditing Plan

Contributors:	Subject Matter Experts:	Compliance:
Staffing includes Engineering, Line, T & D Asset Management, Administration personnel	Josh Scott, *Electric Manager, T & D Asset Management* Paul Johnson, *Electric Manager Line* *Dan Baker, Electric Manager Line*	Holly Johnson, *Compliance Officer*

- **Process**

As designated within the approved REU Wildfire Mitigation Plan, the monitoring and audit process focuses on the four key programs and eight strategies listed below to measure the effectiveness of the implementation as well as identify areas to improve upon within the Plan. Numerous tracking and reporting tools have been put into place to accurately measure the results of the Plan within the listed areas.

Programs

1. REU Wildfire Prevention & Improved Response Program
2. REU Technology Solutions Program
3. REU Emergency Operations Program
4. REU Distribution 10-Year Capital Improvement Program

Strategies

1. Vegetation Management
2. Enhanced Inspections
3. Situational Awareness
4. Operational Practices
5. System Hardening
6. Public Safety and Notification
7. Reclosing and De-energization
8. Wildfire Response

A. REU Wildfire Prevention & Improved Response Program

The Wildfire Prevention & Improved Response Program aims to establish a framework for the electric utility to conduct an effective, coordinated program to prevent catastrophic impact on REU's infrastructure from wildfire. During the 2024 calendar year, a number of goals and objectives were met as outlined within the Plan.

1. Goals
    - Prevent electric utility-caused wildfire.
    - Reduce the time for the Redding Fire Department to respond to and engage fires that threaten grid infrastructure and other REU facilities.
    - Increase staffing to respond to emergencies reasonably likely to impact REU facilities.
    - Increase available personnel for debris removal after extreme weather events.
    - Create community awareness for utility wildfire prevention.

B. REU Technology Solutions Program

The purpose of the REU Technology Solutions Program is to protect and reduce threats to the electric utility infrastructure and the customers who rely upon it through the application of technology. The following technologies have been identified to minimize sources of ignition, manage vegetation within the City's electric grid, harden systems, and enhance the productivity of utility staff. In addition, the listed technologies are intended to aid in the response and recovery time in the event of a wildfire, and more effectively protect the public as well as notify if an issue arises.

1. Goals
    - Prevent electric utility-caused wildfires.
    - Harden the system against the effects of fires.

- Increase technology use and reliability to promote interdepartmental coordination in the event of a wildfire caused by or impacting the Redding community.
- Decrease response time for emergency responders to engage in emergencies that threaten grid infrastructure and other REU facilities.

C. REU Emergency Operation Program

The purpose of the REU Emergency Operations Program (EOP) is to provide structured guidance for REU staff to manage emergencies effectively from an all-hazards approach. It is modeled after the ICS structure followed by the City of Redding's Emergency Operations Plan.

1. Goals
    - Operational readiness for staff to effectively and efficiently manage all aspects of a large emergency such as a wildfire.
    - Communicate timely information to all stakeholders, including staff, customers, City Management, the City Council, and the media.
    - Establish clear roles and tasks for REU staff within the Emergency Operations structure under Incident Command.

D. REU Distribution 10-Year Capital Improvement Program

The purpose of the Distribution 10-Year Capital Improvement Program is to enhance the distribution system by replacing specific components to reduce the probability that the system will initiate a fire and harden the electrical distribution system to better survive a fire initiated by other sources. In order to complete the necessary system hardening efforts within the required timeline, including fuse and arrestor replacement and additional circuit reclosers, contract line workers will need to be utilized to supplement REU's workforce. REU Line personnel are currently unable to take on these significant improvement projects due to the required routine maintenance of the existing infrastructure and multiple vacant positions.

For a timeline of present and future improvement work items, see the chart on page 11. Listed below are specific actions taken to date to work towards the stated goals.

1. Goals
    - Enhanced inspections and tracking of assets.
    - System hardening of key subsystems.
    - Improved situational awareness.
    - System improvements providing better operational practices.

Initiative-Program	Description	Achievements During 2024	Goals for 2025/2026
Wildfire Prevention and Improved Response	Vegetation Prevention & Response Redding Fire and Parks Division Personnel	REU continued to fund a total of 15 Firefighters for improved response to wildfires One (1) Parks Superintendent, two (2) Arborist Lead Workers, and four (4) Public Works Maintenance Workers are also funded under the Wildfire Mitigation Plan. Continued to purchase all necessary tools and equipment for prevention and response during the calendar year 2024.	Continue funding Fire and Parks staffing to ensure vegetation goals are met and responses to fires by fire personnel continue to be expeditious.
Wildfire Prevention and Improved Response	High Risk Zones Identify and clear vegetation near REU Infrastructure	Identified all high-risk vegetation clearance zones surrounding REU infrastructure, including the Redding Power Plant, substations, and transmission and distribution lines throughout REU's service territory.	The Parks Department and REU Arborists conduct annual inspections and clearances.
Wildfire Prevention and Improved Response	Annual 115kV Line Inspections in high-risk Tier 2 and Tier 3	All areas inspected by April 1, 2024.	Annually
Wildfire Prevention and Improved Response	Vendor Line Inspections of overhead lines	Vendor, EDM completed the annual patrol and visual inspection for vegetation impacting all overhead lines by December 31, 2024.	Annually
Wildfire Prevention and Improved Response	Vegetation clearances in and around REU infrastructure-Parks and REU Arborists	Parks: 402 acres cleared under OH lines; 70 acres of 30' perimeter cleared around substations and power plant Arborists: Inspected, patrolled, cleared 315 acres of 115kV lines, 401 acres of 12kV, trimmed 6246 tees, removed 133 trees.	Annually
Wildfire Prevention and Improved Response	Pole Wrapping High-Risk areas	Parks staff wrapped 234 poles with fire retardant material and cleared 10' radius around each pole in 2024. A total of 861 poles have been wrapped.	Targeting 700 additional poles in 2025
Wildfire Prevention and Improved Response	Goat Vegetation Annual grazing in high-risk areas	167 acres of goat vegetation management were cleared by outside vendor.	Identify appropriate targets and secure contract
Wildfire Prevention and Improved Response	Secured CalFIRE grant	$1.5 million-dollar grant secured for targeted high-risk areas in Redding	Vegetation clearing to begin in 2025
Technology Solutions Program	Emergency Operation Center	Equipment updated to ensure operational readiness	Replacement of one monitor for display
Technology Solutions Program	Interdepartmental Radio System	Continual updates as needed by the City of Redding IT Department to ensure the citywide Motorola radio system is optimized for all emergencies.	Monitored as needed

Emergency Operation Program	Activation of the REU EOPS program	The REU Emergency Operations Standard Operating Procedure (SOP) was activated five (5) times for a total of 15 days during the 2024 calendar year as a result of the NWS issuing Red Flag Warnings and Winter Storm Alerts for the Redding area.	Monitor annually
Emergency Operation Program	EOPS Drills Conduct 2 drills annually	Summer and winter tabletop drills conducted in calendar year 2024.	Annually
Emergency Operation Program	Interagency Communication	Updated key contact lists for emergency operations with internal and external stakeholders.	Annually
10-Year Capital Improvement Program	GIS Software	Expanding the use of tablet-based inspection for overhead lines and vegetation management.	Target completion 2025
10-Year Capital Improvement Program	Fire Hardening Work Order	Required materials purchased and 90% completion in 2024.	To be completed prior to 2025 fire season.
10-Year Capital Improvement Program	Enable high-speed tripping (Hotline mode)	REU proactively enabled high-speed tripping (Hotline mode) for 15 circuits during all Red Flag Warnings in Tier 3 high-risk areas.	Completed in 2024- Evaluating additional recloser steps associated with PSPS
10-Year Capital Improvement Program	Install fire mitigation equipment	Continue to install non-arcing arrestors, fuses, and bird/squirrel guards, covered jumpers in T2/T3.	This project will be complete by June of 2025
10-Year Capital Improvement Program	Infrastucture access improvement	Improve existing access roads and add additional to critical sections of the system.	Survey to be conducted in 2025 contract
Notes:			

E. 2024 Audit Findings

1. Audit Findings Related to CPUC Fire Threat Map
    - The CPUC Fire Threat map was reviewed for changes. No boundary changes were noted for the 2025 calendar year.
    - Previously modified 12kV circuits were evaluated for compliance with the mitigation recommendations to keep these circuits on the Circuit Recloser Enabled list.

2. Audit Findings Related to Fire Ignitions.
    - Number of fires caused by REU facilities:

Fires Started by Calendar Year and Fire Threat Zone			
Calendar Year	**NHFTZ**	**Tier 2**	**Tier 3**
2021	7	2	0
2022	4	1	0
2023	4	1	0
2024	4	1	0

The Plan requires REU to describe any fires greater than one acre. No fires related to REU infrastructure were greater than one acre in 2024.

Audit Finding Related to Wires Down

- A wire-down event includes any instance where an electric transmission or primary distribution conductor falls to the ground or on a foreign object:

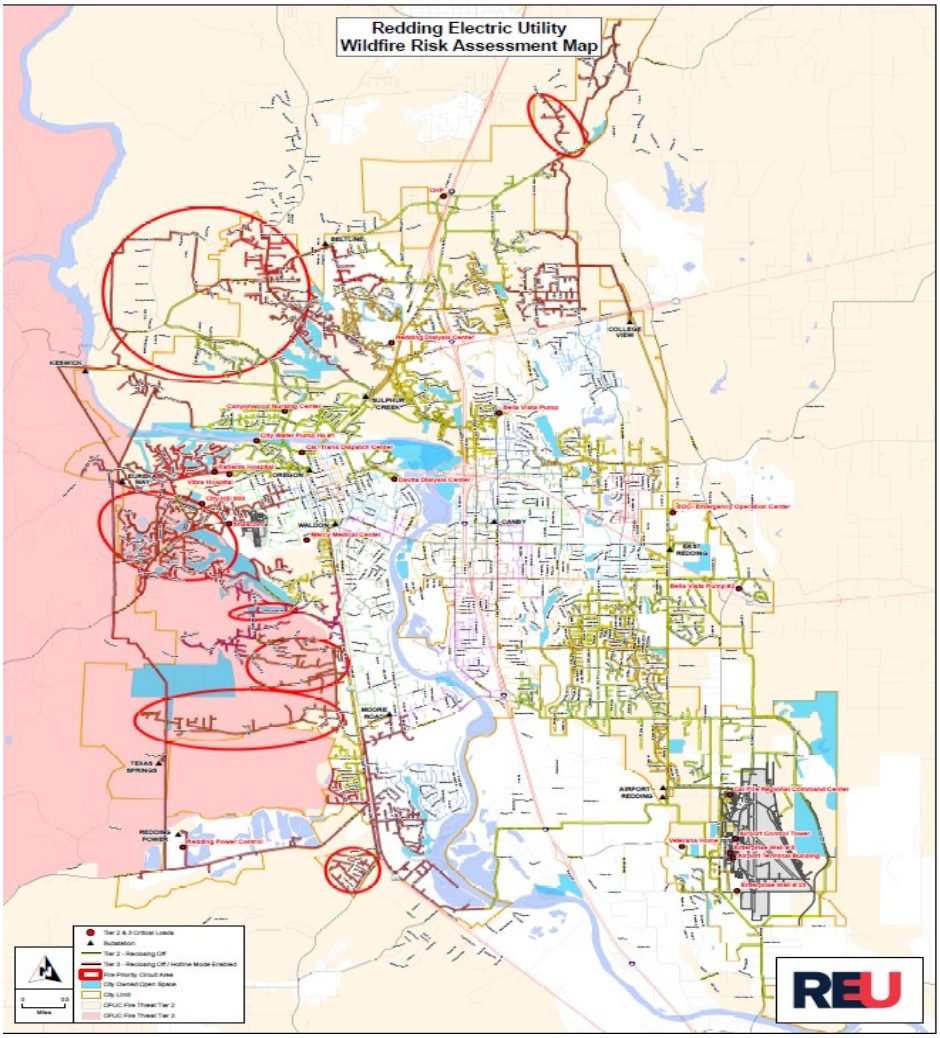
Wires Down per Calendar Year and Fire Threat Zone			
Calendar Year	**NHFTZ**	**Tier 2**	**Tier 3**
2021	2	3	
2022	6	1	
2023	8		
2024	6	1	1

2. Identifying Corrective Deficiencies in the Plan:
    - REU has not received any notice of deficiencies or potential deficiencies in the 2024 calendar year, and there are no logged deficiencies to report.

3. Monitoring the Effectiveness of the Inspections:
    - Inspection reports and progress have been reviewed quarterly for overhead lines. After creating dedicated Electrical Inspector positions, completion of critical inspections has significantly improved for both overhead & underground inspections. Additionally, REU is implementing an improved software-based Workforce Management System and GIS-based inspection program, to ensure that the inspections/repair process is being performed to industry best practices.
    - In 2024, REU's inspection program was audited by the CPUC. REU is taking steps to integrate the recommendations from the CPUC report into REU's inspection program.

Lessons Learned to Incorporate into Future Plans

- In 2024 REU contracted with an outside vegetation vendor, Arbor Pro Tree Service, to complete vegetation work throughout the calendar year. In January of 2025 a new vendor has been contracted to conduct vegetation work near REU infrastructure.
- In 2024 REU worked with the Redding Fire Department to determine the highest wildfire threats to the City of Redding Electric Utility's infrastructure. An additional high-fire threat map was created addressing the greatest fire threats. Specific circuits were identified and placed into a heightened relay setting to reduce the risk of wildfires. (See map below)



- GIS analyzed all the City-owned open space properties to determine if vegetation clearances under REU 12kv & 115kv powerlines might be expanded in the high fire-threat areas. By doubling our ROW in these high-fire threat areas, our goal of additional vegetation reduction for 2025 by the Parks Department includes:
    i. An additional 19 acres of clearance 12kv Primary OH Conductor
    ii. An additional 69 acres of clearance for 115kv Transmission Lines

5. Revision History

Revision:	Revision Description:	Date:
1.0	Original document	12/1/2020
2.0	2021 Monitoring & Auditing Annual Report	12/7/21
3.0	2022 Monitoring & Auditing Annual Report	12/30/22
4.0	2023 Monitoring & Auditing Annual Report	12/5/23
5.0	2024 Monitoring & Auditing Annual Report	12/15/24