WATER | ENERGY | LIFE

CITY OF RIVERSIDE

PUBLIC UTILITIES

WILDFIRE MITIGATION PLAN

2025

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I. Executive Summary

Riverside Public Utilities (RPU) 2025 Wildfire Mitigation Plan (WMP or Plan) is a structured protocol to mitigate the risk of RPU's electric utility infrastructure causing a wildfire. Included are the steps, programs, policies, and procedures implemented by RPU to reduce these risks and minimize impacts to customers. It complies with the requirements of Public Utilities Code Section 8387 for publicly owned electric utilities to prepare a WMP by January 1st, 2020, and update/review the plan annually thereafter.

II. Utility Overview and Context

A. Utility Description and Context Setting Table

RPU is an award-winning municipal, consumer-owned water and electric utility that has provided efficient, reliable services to the City of Riverside (City) since 1895. The electric utility serves the entire City with a service territory of about 81.5 square miles. As of the most recent US Census data, Riverside is the largest city in the County with about 320,000 residents. It is also home to the largest employment base of any city in the Inland Empire region, with about 24,000 businesses (some of which are home based) and an estimated 134,000 primary jobs. Riverside is the largest city in Riverside County, is the county seat, and, as such, serves the entire Inland Empire region.

Table 1: RPU Context Summary

RPU		
Service Territory Size	81.5 square miles	
Owned Assets	• Transmission • Distribution • Generation	
Number of Customers Served	113,083 electric customer accounts (as of 1/31/2025)	
Population Within Service Territory	320,000 residents, 24,000 businesses with about 134,000 employees	
Customer Class Makeup	**Number of Accounts**	**Share of Total Load (MWh)**
	89% Residential <1% Government <1% Agricultural 10% Small/Medium Business 1% Commercial/Industrial	36% Residential 3% Government <1% Agricultural 18% Small/Medium Business 42% Commercial/Industrial
Service Territory Location/Topography	5.3% Agriculture 1.9% Hardwood Woodland 5.7% Herbaceous 8.1% Shrub	78.5% Urban 0.2% Water 0.3% Wetland
Service Territory Wildland Urban Interface (based on total area)	13.7% Wildland Urban Interface 8.2% Wildland Urban Intermix	

Percent of Service Territory in CPUC High Fire Threat Districts (based on total area)	• Includes maps Tier 2: 15.6% Tier 3: 0.5%	
Prevailing Wind Directions & Speeds by Season	Wind direction in Riverside is most often from the West between March and September, with an average wind speed of 9 mph and gusts of 22 mph. Between October and February, wind direction varies from WNW to NNE, with an average wind speed of 7 mph and gusts of 24 mph.	
Miles of Owned Lines Underground and/or Overhead	Overhead Distribution: 512.6 miles Overhead Transmission: 99.3 miles Underground Distribution: 842.2 miles Underground Transmission: 5.6 miles	
	• Explanatory Note 1 - The methodology for measuring miles is circuit miles. The total length in miles of separate circuits regardless of the number of conductors used per circuit.	
	• Explanatory Note 2 – The Transmission lines serving the service territory have joint ownership between Southern California Edison and the City of Riverside. The lines outside of the service territory are owned and maintained by SCE.	
	• Explanatory Note 3 – The 7 Transmission lines outside of Riverside service territory totals 22 circuit miles. It is not included in the overhead transmission total for Riverside.	
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: 7.5% Tier 3: 0.7%
	Overhead Transmission Lines as % of Total Transmission System (Inside and Outside Service Territory)	Tier 2: 11.2% Tier 3: 0.4%
Customers have ever lost service due to an IOU PSPS event?		No
Customers have ever been notified of a potential loss of service due to a forecasted IOU PSPS event?		No
Has developed protocols to pre-emptively shut off electricity in response to elevated wildfire risks?		Yes
Has previously pre-emptively shut off electricity in response to elevated wildfire risk?		No

B. Statutory Cross-Reference Table

Table 2 below summarizes the elements required in PUC Section 8387 and their location within this WMP.

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

Requirement	Statutory Language	Plan Section
Persons Responsible	**PUC § 8387(b)(2)(A):** An accounting of the responsibilities of persons responsible for executing the plan.	Sec. IV.B. Page 11

Requirement	Statutory Language	Plan Section
Objectives of the Plan	**PUC § 8387(b)(2)(B):** The objectives of the wildfire mitigation plan.	Sec. III. Page 9
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.	Sec. VIII Page 31
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.	Sec. VIII.C. Page 32
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.	Sec. VIII.B. Pages 31
Deenergization Protocols	**PUC § 8387(b)(2)(F):** Protocols for disabling reclosers and deenergizing portions of the electrical distribution system that consider the associated impacts on public safety, as well as protocols related to mitigating the public safety impacts of those protocols, including impacts on critical first responders and on health and communication infrastructure.	Sec. VI.H. Page 25
Customer Notification Procedures	**PUC § 8387(b)(2)(G):** Appropriate and feasible procedures for notifying a customer who may be impacted by the deenergizing of electrical lines. The procedures shall consider the need to notify, as a priority, critical first responders, health care facilities, and operators of telecommunications infrastructure.	Sec. VII. Pages 26-29
Vegetation Management	**PUC § 8387(b)(2)(H):** Plans for vegetation management.	Sec. VI.C. Pages 21-22
Inspections	**PUC § 8387(b)(2)(I):** Plans for inspections of the local publicly owned electric utility's or electrical cooperative's electrical infrastructure.	Sec. VI.E. Pages 23-24
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	Sec. V.B. Pages 16-17

Requirement	Statutory Language	Plan Section
	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.	
CPUC Fire Threat Map Adjustments	**PUC § 8387(b)(2)(K):** Identification of any geographic area in the local publicly owned electric utility's or electrical cooperative's service territory that is a higher wildfire threat than is identified in a commission fire threat map, and identification of where the commission should expand a high fire threat district based on new information or changes to the environment.	Sec. VI.A. Page 18
Enterprise-wide Risks	**PUC § 8387(b)(2)(L):** A methodology for identifying and presenting enterprise-wide safety risk and wildfire-related risk.	Sec. V.B. Pages 16-17
Restoration of Service	**PUC § 8387(b)(2)(M):** A statement of how the local publicly owned electric utility or electrical cooperative will restore service after a wildfire.	Sec. VI.I. Page 26
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. 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.	Sec. VIII.C. Page 32

Requirement	Statutory Language	Plan Section
Qualified Independent Evaluator	**PUC § 8387(c):** The local publicly owned electric utility or electrical cooperative shall contract with a qualified independent evaluator with experience in assessing the safe operation of electrical infrastructure to review and assess the comprehensiveness of its wildfire mitigation plan. The independent evaluator shall issue a report that shall be made available on the Internet Web site of the local publicly owned electric utility or electrical cooperative and shall present the report at a public meeting of the local publicly owned electric utility's or electrical cooperative's governing board.	Sec. VIII.F. Page 33

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

On an annual basis, RPU presents the WMP to the Board of Public Utilities (Board) who makes a recommendation to City Council (Council) to approve the Plan. As part of the Board and Council agenda publishing processes, the public has 12 days to review all materials, as well as comment at the public meetings. When comprehensive updates are made to the Plan, at least once every three years, a qualified independent evaluator report is presented with the Plan (beginning in 2023). The WMP is submitted to the Wildfire Safety Advisory Board by July 1st of each year, in accordance with AB 1054. AB 1054 allows annual updates but requires comprehensive submissions every 3 years.

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

The 2024 Plan, prior year's plans, and reference materials can be found on RPU's website at https://riversideca.gov/utilities/wmp.

E. Purpose of the Wildfire Mitigation Plan

The WMP describes in detail the range of activities that RPU is taking to mitigate the threat of powerline ignited wildfires, including its various programs, policies, and procedures. The plan is subject to direct supervision by the Board of Public Utilities and Riverside City Council and implemented by the RPU General Manager and Assistant General Manager of Energy Delivery (AGM). This plan complies with the requirements of Public Utilities Code section 8387 for publicly owned electric utilities to prepare a WMP by January 1, 2020, and annually thereafter.

F. Organization of the Wildfire Mitigation Plan

This Plan includes the following elements:

- Executive Summary
- Utility Overview and Context
- Objectives of the plan
- Roles and responsibilities for carrying out the plan
- Identification of key wildfire risks and risk drivers
- Description of wildfire mitigation strategies
- Metrics for measuring the performance of the plan and identifying areas for improvement
- Annual and historical results for metrics
- Description of community outreach and education

III. Objectives of the Wildfire Mitigation Plan

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

A. Minimizing Sources of Ignition

The primary objective of this Plan is to minimize the probability that RPU's transmission and distribution system may be an original or contributing source for the ignition of a fire. RPU has evaluated prudent and cost-effective improvements to its physical assets, operations, and training that can help to meet this objective.

B. Resiliency of the Electric Grid

The secondary objective of this Plan is to improve the resiliency of the electric grid. As part of the development of this plan, RPU assesses new industry practices and technologies that will reduce the likelihood of a disruption in service and improve the restoration of service.

C. Minimizing Unnecessary or Ineffective Actions

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

D. Ensure Effective Communication to Impacted Stakeholders

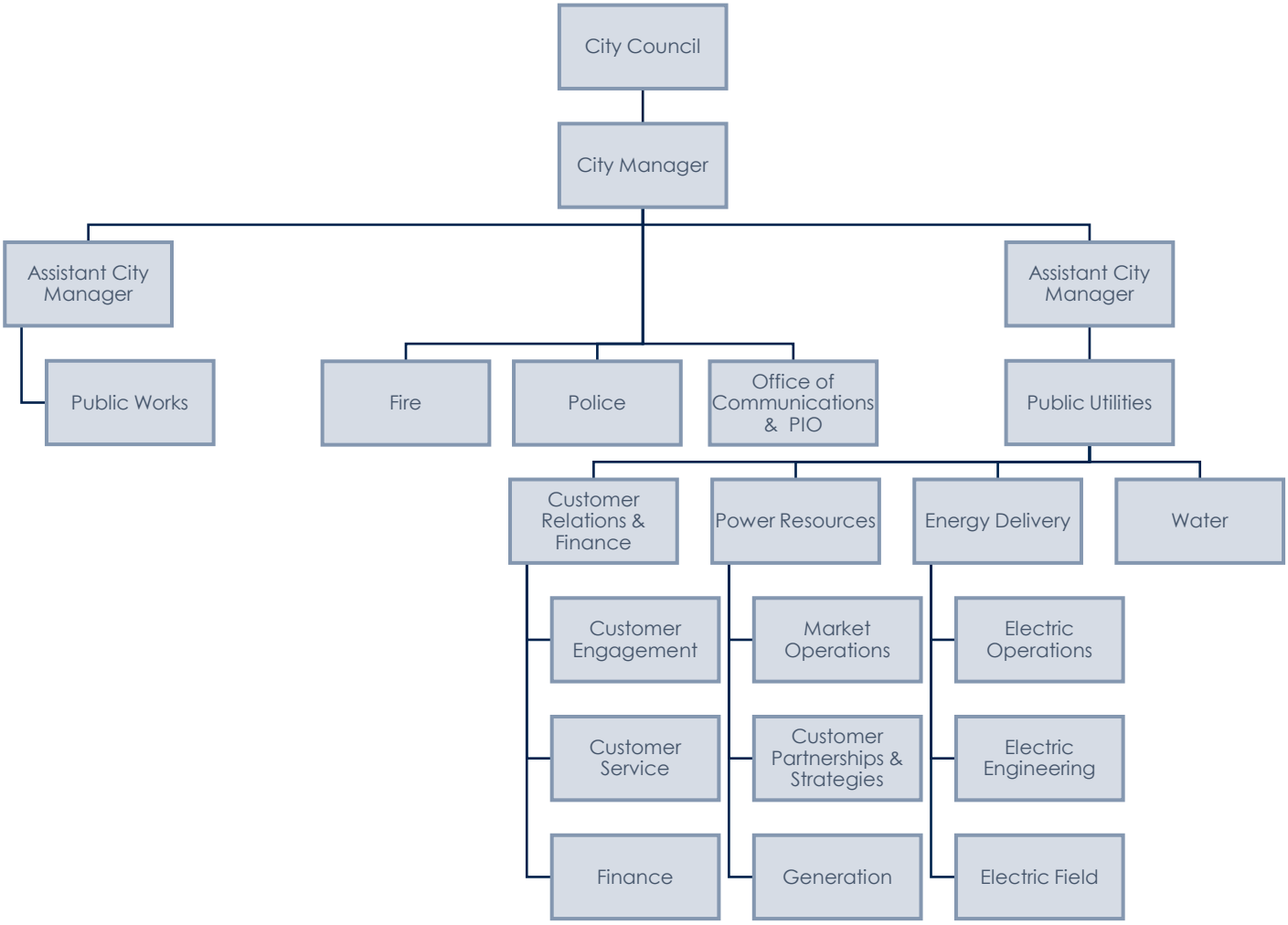
The fourth objective of the plan is to effectively communicate with impacted stakeholders. RPU strives to proactively communicate with customers and key stakeholders through a range of channels about preparing for potential power outages, and the power restoration process in the event of an outage.

IV. Roles and Responsibilities

A. Riverside Public Utilities Roles and Responsibilities

Riverside Public Utilities is a municipally owned utility. It is a department of the City of Riverside, California, and is governed by the Riverside City Council. The Council appoints a Board of nine citizen volunteers who serve as an advisory body. The Board of Public Utilities provides recommendations and reviews RPU's budget and finances, rates, operations, and may conduct associated public hearings.

Figure 1: City and Utility Governance Structure (Relevant Divisions Shown)



B. Wildfire Mitigation Plan Responsibilities

The Assistant General Manager of Energy Delivery has overall responsibility for the WMP and oversees and approves all activities executed under the Plan. The AGM reports to the RPU General Manager. The AGM appoints a Wildfire Mitigation Working Group (Working Group) that is responsible for overseeing the WMP and regularly updating and maintaining the Plan. The Working Group is made up of subject matter experts and key stakeholders from across the utility. The Working Group is responsible for communicating with and obtaining input from other City Departments, including the Riverside Fire Department, Public Works, Riverside Police Department, and the Emergency Operations Center, as needed. The AGM also appoints Project Manager (PM) to oversee the activities of the Working Group, establish schedules, coordinate meetings, gather data from stakeholders, and ensure the Plan is updated and maintained on a regular basis. The PM is also responsible for ensuring that the WMP is submitted to the City's approving bodies, as needed, as well as submitted to the Wildfire Safety Advisory Board by July 1st of each year.

The Working Group and designated utility staff have the following responsibilities regarding fire prevention, response, and investigation:

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

Table 3: Roles and Responsibilities of Citywide Emergency Response

Role	Responsibilities
RPU Executive Staff	Manages and directs RPU staff in routine and emergency operations and is responsible for executing various components of the WMP
Energy Delivery	Design, install, operate, inspect, and maintain electrical facilities. Takes a supporting role when combatting fires. Vegetation management in and around electric distribution facilities.

Water	Takes on a supporting role when combatting fires.
Fire Department	Takes a lead role when suppressing fires.
Public Works	Vegetation management, streets, and trees.
Emergency Operations Center (EOC)	Takes a lead role in directing and coordinating emergency efforts in a large-scale disaster event at the City, County or State levels
Department Operations Center (DOC)	Takes a lead role in directing and coordinating emergency efforts within all RPU's sections. The RPU DOC supports the EOC when activated.

C. Wildfire Response and Recovery

The City of Riverside and RPU have multiple levels of emergency and disaster oversight, including wildfires. If the magnitude of a wildfire passes the threshold of a small structure fire to that of a city-wide emergency, RPU activates the Department Operations Center (DOC). The RPU DOC is responsible for all emergency response efforts and actions within internal RPU organizations. The DOC directs and coordinates emergency and disaster relief efforts within all internal RPU sections, including Energy Delivery and Water. The RPU DOC is staffed with qualified and knowledgeable RPU utilities and support personnel with the authority to make emergency response decisions. The DOC coordinates all activities in an emergency event within RPU and with external agencies. The DOC effectively maintains a span of control over RPU equipment and personnel during an event.

Further escalation in magnitude of a wildfire or an emergency may necessitate the activation of the City of Riverside Emergency Operations Center (EOC). Depending on the magnitude of the wildfire, the activation of the EOC can occur at the County or State level. The activities of the EOC are outlined in the City of Riverside's Emergency Operations Plan 2020 (City EOP). The City EOP distinguishes between an incident and disaster. Incidents are usually a single event, small or large, with a defined geographical area and can be handled with the activation of the RPU DOC, with local resources, and with one or a few agencies. Disasters can be single or multiple events (can have many separate incidents associated with them), demand resources beyond local capabilities, and affect a widespread population and geographic area. In the event of a disaster, the EOC and City EOP will be activated, and the City EOP command structure will be followed.

The City EOP is implemented:

- On order of the City Manager as Director of Emergency Services, or Assistant City Manager as the Alternate Director of Emergency Services
- At the declaration of a local emergency or upon the existence of circumstances where a declaration is likely to occur in accordance with the City's Emergency Management Ordinance
- When the Governor has proclaimed a State of Emergency in an area that encompasses Riverside
- At the declaration of a State of War Emergency
- At the triggering of an event identified in the City EOP, which includes events such as wildfires

During a fire emergency, the chain of command starts with the person who discovered the fire, then to public safety dispatch (911 call center), who then notifies fire dispatch. If the fire is in proximity to any RPU assets, the fire dispatcher will notify and possibly request assistance from an RPU representative. The Fire Department may request RPU to de-energize power lines to help combat the fire.

According to the City EOP, RPU is responsible for coordinating the provisions of emergency power to support emergency response and recovery efforts and to normalize community functions. RPU coordinates electric power, power distribution systems, fuel, emergency generators, and water systems. RPU staff have the following responsibilities associated with fire prevention, response, and investigation:

- Follow protocol set by RPU and this WMP during Red Flag Warnings; and
- Take actions necessary to prevent and suppress fires resulting from electrical facilities operated by RPU, in accordance with RPU protocol and practices.

D. Standardized Emergency Management System

Per the City EOP, RPU is the City's lead agency in coordinating electric power, power distribution systems, and water systems. Pursuant to the California Office of Emergency Services' Standardize Emergency Management System (SEMS) Regulations, adopted in accordance with Government Code Section 8607, RPU responds to emergencies using a SEMS and Incident Command System (ICS) Model.

When responding to emergency events beyond routine operations, RPU activates the DOC. The RPU DOC coordinates all efforts and responses with the EOC if the level of emergency requires it. During the activation of the EOC, RPU is committed to providing staff to coordinate emergency response actions from the organization and provide resources as needed.

E. Coordination with Water Utilities Division

All requests for assistance and/or resources in the event of an emergency are coordinated through the DOC or the EOC. The DOC and/or EOC disseminate all necessary information to all impacted groups, such as RPU Energy Delivery, RPU Water, the Riverside Fire Department, the Riverside Police Department, as well as impacted outside agencies, such as Western Municipal Water District and Elsinore Valley Municipal Water District.

RPU's Energy Delivery and Water divisions both report to the RPU General Manager, therefore, are closely aligned and accessible to one another in the event of an emergency. RPU's Water Division is also an active member of the Emergency Response Network of the Inland Empire (ERNIE), which provides support and coordination in case of an emergency event. ERNIE is composed of 27 Local Water Agencies within the Inland Empire.

F. Coordination with communication infrastructure partners

Per RPU's Standard Practice COMM-10 *Fiber Optic Outages*, RPU regularly coordinates with infrastructure providers, such as AT&T and Comcast. Part owners and those who lease space on RPU facilities are notified directly in the event of an energy interruption or an emergency event like a wildfire.

Planned or emergency work on RPU infrastructure may take several days to complete. In some instances, services could be impacted for several weeks. RPU crews will make every effort to minimize the impact any outages have on its customers and partners by rerouting services when feasible. Any work performed on RPU communications infrastructure will be documented and coordinated by RPU's Grid Control Center and RPU's Electric Test Department. In citywide emergencies that impact multiple departments or agencies, RPU's DOC will be included in this process.

V. Wildfire Risks and Drivers (associate with design, construction, operations, and maintenance)

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

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

Extended Drought

Extended droughts, coupled with changing weather patterns, present a continual threat, and exacerbate wildfire impact. Drought in combination with dryness and other factors can create an ideal situation for the ignition and rapid spread of wildfires.

Weather
Summers in Riverside tend to be hot and arid. Monthly averages for July, August, and September have average highs of above 90°F. In autumn, humidity may drop into the single digits. Winters are mild, cool, with partial cloud coverage, and are relatively wet with an average of 10.33 inches of precipitation annually. Additionally, as temperatures increase, night-time cooling is also decreasing in some years. Extreme heat and low humidity aid in the ignition of wildfires.

Vegetation
A significant factor contributing to large wildfires is having readily available dry/dead vegetation, a highly combustible fuel source. RPU has most of its assets in urban zones, and the few that lie in HFTDs are maintained and receive extra scrutiny. Vegetation management also includes monitoring trees and tree-limb growth near RPU assets.

High Winds
A feature of the Inland Empire is a wind pattern known as the Santa Ana winds. The Santa Ana winds are accompanied by hot and dry weather and generally occur in autumn. Autumn in Southern California tends to be some of the hottest and driest times of the year. Southern California also typically has its lowest relative levels of humidity during this part of the year. When winds are marginal, upon ignition, fires may proliferate. When winds are extreme, fires will have extreme growth upon ignition, will burn very intensely, and be uncontrollable. Coupled with dry weather or drought conditions, high winds or Santa Ana winds can lead to a disastrous situation where extensive, fast-moving wildfires can occur.

Terrain
The City occupies a diverse range of terrain. Although most of Riverside is urban, there are intermittent sections of rural and undeveloped land in hilly terrain. These areas have steep terrain that is hard to access and could add delays for emergency service providers.

Additionally, a State Responsibility Area borders the City, known as Box Springs Mountain Reserve and Box Springs Park. The State Responsibility Area within Riverside borders very urban zones, and any ignition from Box Springs can potentially impact the urban zones of the City, including the University of California, Riverside.

Climate Change and Changing Weather Patterns

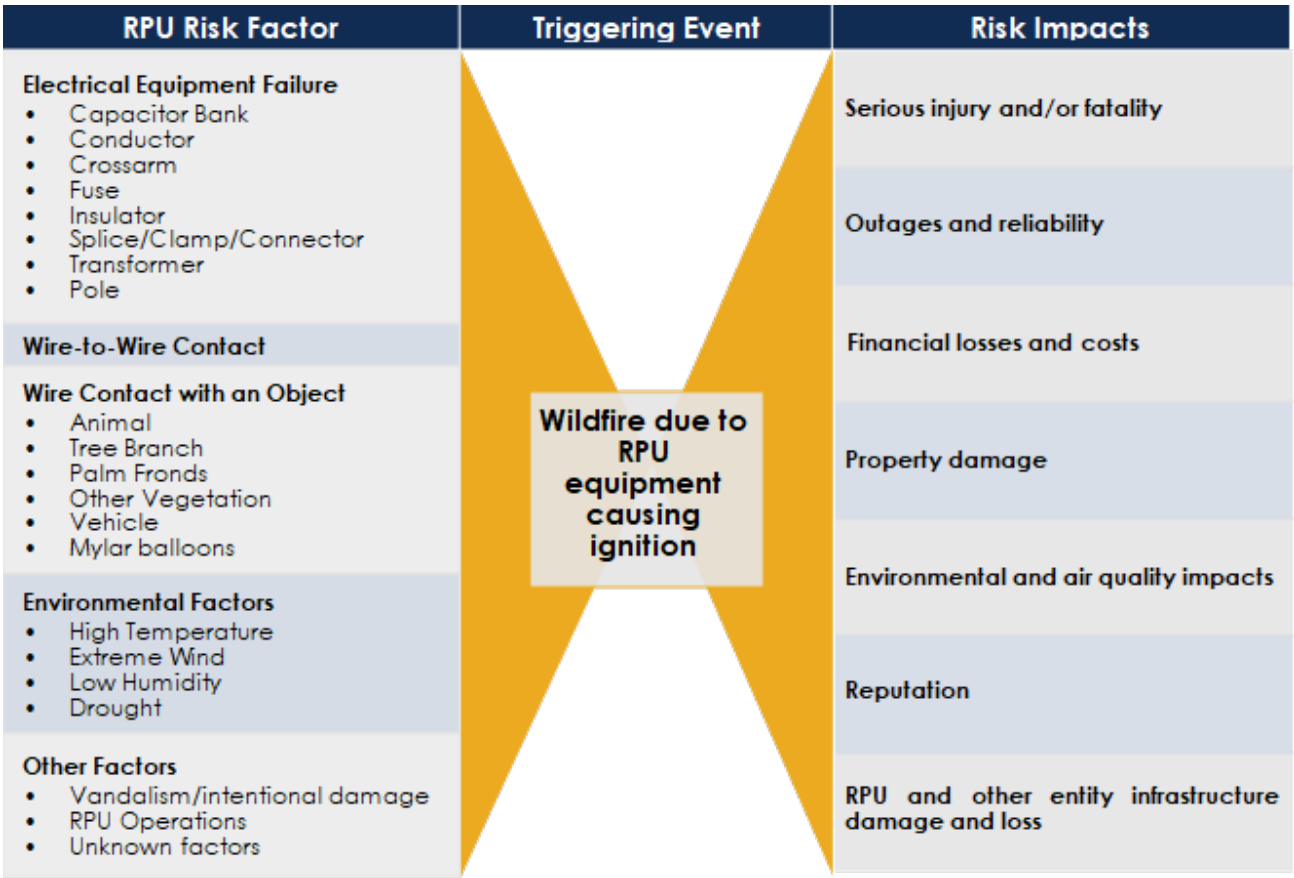
Climate change presents a significant long-term challenge and is considered a threat multiplier. As current trends continue, climate change is causing:

- Increased average and peak temperatures
- Shorter rainy seasons
- Extended fire season
- Extended time range for the Santa Ana winds that fan wildfires
- Longer duration and more frequent drought conditions
- These conditions result in the high growth of weed vegetation during the rainy or wet years that dried out in the drought years. Perennial plants and trees are stressed due to the extended dry periods and increasing temperatures during the summer and autumn seasons. The result is increasingly dry vegetation that provides fuel for wildfires.

B. Enterprise-wide Safety Risks

RPU utilizes the bowtie method for assessing risk of wildfires. The left side of the bowtie identifies most if not all the identified RPU risk factors that could trigger a wildfire. The right side identifies the possible impacts of these risks.

Figure 2: RPU Risk Factor Bowtie Analysis



C. Changes to California Public Utilities Commission Fire Threat Map

A component of this WMP is to evaluate the HFTD to determine whether it is accurately classified. Based on wildfire threat analysis conducted, there was no justification for increasing the tier fire threat level beyond its current Tier 2 and Tier 3 designation. RPU will continue to evaluate changes to the HFTD maps in future WMPs.

California Department of Forestry and Fire Protection's (CAL FIRE) updated the Fire Hazard Severity Zone Map in March 2025. RPU reviewed the updates and determined there were no impacts RPU's service territory.

VI. Wildfire Prevention Strategies

A. High Fire Threat District

A statewide fire threat map was developed to delineate the boundaries to identify, evaluate, and potentially adopt stricter fire-safety regulations that apply only to overhead power lines, electric equipment, and communications lines located within those boundaries. The map was developed by a peer group of utility personnel and fire safety professionals known as the Peer Development Panel with oversight by an independent review team appointed by CAL FIRE and the California Public Utilities Commission (CPUC). RPU has incorporated the High Fire Threat District (HFTD) into its construction, inspection, maintenance, repair, and clearance practices, as well as RPU's Standard Practice OPS-2 *Fire Prevention and Mitigation Plan*.

Figure 3: High Fire Threat District Riverside Map

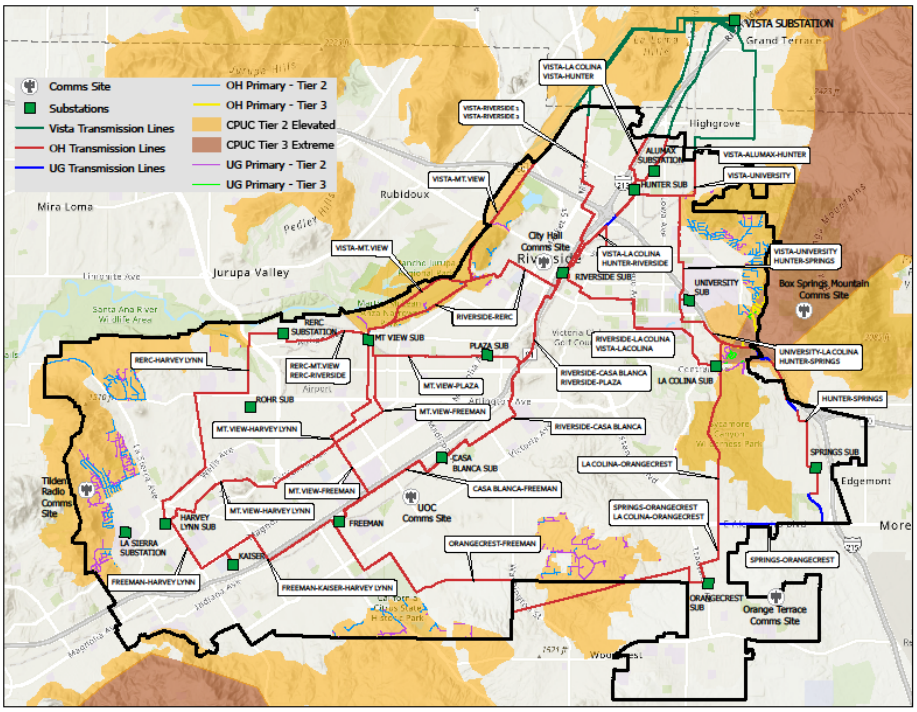


Table 4: Summary of RPU Assets in HFTD

	Total	Tier 2 Overhead		Tier 3 Overhead	
	Circuit-Miles	**Circuit-Miles**	**%**	**Circuit-Miles**	**%**
Overhead Distribution	512.6	38.3	7.5%	3.5	0.7%
Overhead Sub-Transmission*	99.3	11.1	11.2%	0.4	0.4%
Total Overhead Circuit-Miles	**611.9**	**49.4**	**8.1%**	**3.9**	**0.6%**

**Note: Southern California Edison owns and operates seven Sub-Transmission lines extending from SCE's Vista Substation. These lines comprise 22 miles of overhead transmission that feed into RPU and are not included in the table. RPU takes ownership of these lines at the boundary of its service territory. Lines in RPU territory are included in the overhead Sub-Transmission of the table.*

B. Weather Monitoring

Per Section 3.1 of RPU's Standard Practice OPS-2 *Fire Prevention and Mitigation Plan*, RPU System Operators regularly monitor current and forecasted weather data from a variety of sources, including:

- United States National Weather Service (NWS)
- United States Forest Service Wildland Fire Assessment System
- National Fire Danger Rating System
- National Interagency Fire Center – Predictive Services for Northern and Southern California
- The Weather Channel
- Substations equipped with weather monitoring, specifically observe wind speeds and temperature.

The National Weather Service (NWS) issues Red Flag Warnings anytime there is critical weather and or dry conditions that could cause a rapid or dramatic increase in wildfire activity. RPU System Operations monitor NWS or other sources to determine when Red Flag Warnings are issued that include RPU's service area.

RPU System Operators take the following actions when a Red Flag Warning is issued:

- Grid Control Center issues a Red Flag Warning alert using the "PU-Red Flag Notification".
- Grid Control Center reviews the circuit maps on the attached list of circuits to determine if the circuits are in normal configuration or if the overhead portions in the elevated or extreme fire threat districts have been transferred to other circuits.
- On-duty Electric Troubleshooters are notified and assigned to conduct patrols of overhead facilities in elevated or extreme fire threat areas.

- An electric service crew are notified and assigned to clear any palm frond or debris from overhead lines in elevated or extreme fire threat districts.
- Electric crews are assigned to correct any deficiencies on overhead facilities in elevated or extreme fire threat districts identified by the troubleshooter during patrol.

C. Design and Construction Standards

RPU's electric facilities are designed and constructed to meet or exceed the relevant federal, state, or industry standard. CPUC General Order (GO) 95 is a key industry standard for design and construction standards for overhead electrical facilities. RPU meets or exceeds all standards in GO 95. Additionally, RPU monitors and follows the Institute of Electrical and Electronics Engineers (IEEE) standards and National Electric Safety Code, as appropriate. RPU designs and specifies materials to meet or exceed industry standards. RPU continuously evaluates and makes modifications to existing designs to address any potential threats.

Overhead Electric Distribution Lines

General Order (GO) 166 Standards for Operation, Reliability and Safety During Emergencies and Disasters specifics requirements for 3 second wind gusts during red flag warnings. RPU complies with these requirements as they are under the GO 95 umbrella. 3-second wind gusts that exceed the maximum structural or mechanical design are specified in RPU's construction standards for overhead electric distribution lines. Weather stations aid in detecting peak wind gusts to verify compliance.

Lightning Arresters

RPU uses lightning arresters at every location where there is an overhead to underground tap and at the end of an overhead line. This is to prevent the reflective lightning strike wave from damaging the UG cable.

Protective Arrester Covers

RPU uses protective arrester covers for avian and critter protection. The covers prevent birds or critters from storing food on the equipment and protect their limbs from contact with the arrester.

Transformer Insulating Oil

RPU has used a natural ester dielectric transformer insulating oil for all transformers since 2010. This oil has a higher flashpoint than mineral oil and is less likely to ignite during a transformer failure.

Animal Abatement Program

An assessment was conducted to evaluate the need for additional animal abatement measures at RPU substations. Following careful consideration, RPU concluded that, given the absence of substations within the HFTD, no further measures are deemed necessary.

In a continuous effort to enhance public safety, increase reliability and address wildfire risks, RPU will implement the following protocols:

Fuse Replacement
Older style drop-down (expulsion) fuses generate an arc when operated, which has the potential to ignite a fire. RPU will be replacing these fuses with CAL FIRE-approved fuses which suppresses and contains the arc. These fuses substantially reduce the risk of initiating wildfires. Any new fuse added or replaced in the HFTD will be CAL FIRE-approved fuses.

Fuse Installation
RPU identified additional fuse locations on radial tap lines of its distribution feeders that are within the HFTD where CAL FIRE-approved fuses will be installed.

Other Equipment Replacements
RPU will convert all capacitors, hot line clamps, splices, and lightning arresters with CAL FIRE-approved equipment or other fire safe standards in the HFTD.

Equipment Failure
Equipment failure can lead to ignition of nearby vegetation or other flammable material. RPU will monitor and inspect its distribution equipment (switches, insulators, transformers, surge arresters etc.) on a regular basis to minimize hazards related to equipment failure. When defective equipment is found, the equipment is removed from service with the ongoing replacement program to minimize the risk of fire.

D. Vegetation Management

RPU meets or exceeds the minimum industry standard vegetation management practices. For all electrical facilities, RPU meets:

- Public Resources Code section 4292
- Public Resources Code section 4293
- GO 95 Rule 35
- 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. RPU will use specific knowledge of growing conditions and tree species to determine the appropriate time of trim clearance in each circumstance.

RPU's existing vegetation management program is on a one-year cycle, ensuring that all trees under power lines have been trimmed and/or assessed at least annually. This program has historically focused on maximizing safety and reliability for its customers and employees and will be enhanced to include intended mitigation of wildfire risk. Vegetation

management practices were expanded to exceed minimum clearance requirements (as described in GO 95) and to clear hazardous vegetation in both Tier 2 and Tier 3 zones.

Riverside has minimal areas of invasive annual grasses. RPU reviewed specific areas where invasive grasses may exist and initiated patrols to identify potential conflicts with utility assets and to clear all accessible rights-of-ways.

Table 5: GO 95, Rule 35

Case	Type of Clearance	Trolley Contract, Feeder and Span Wires: 0 to 5kV	Supply Conductors and Supply Cables: 12.47kV	Supply Conductors and Supply Cables: 34.5kV	Supply Conductors and Supply Cables: 69kV
13	Radial clearance of bare line conductors from tree branches or foliage	18 inches	18 inches	18 inches	18 inches
14	Radial clearance of bare line conductors from vegetation in the High Fire-Threat District	18 inches	48 inches	48 inches	48 inches

RPU contracts with line clearance tree trimming companies to trim vegetation near its electrical lines to a minimum of a 12-foot clearance. RPU's tree trimming contractors are specialists, supervised by a certified arborist. The tree crews are knowledgeable about working near energized electric lines and about trees, growth rates, and pruning methods that maintain tree health.

Table 6: GO 95, Rule 35, Appendix E Guidelines – Radial Clearance at Time of Trimming

Voltage of Lines	Table 3 Case 13 (non-HFTD)	Table 3 Case 14 (HFTD)
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

Clearances are increased around overhead power lines in the HFTD where the combination of high wind potential and dry vegetation may increase the risk of fire ignition. Trees within the HFTD are prioritized for trimming to be completed prior to summer before extreme temperatures begin to elevate wildfire risk.

Vegetation around the base of power poles where switching equipment are located are trimmed annually.

E. Inspections

In January 2024, RPU implemented a more robust inspection program to meet the minimum inspection requirements provided in CPUC GO 165 and CPUC GO 95, Rule 18. Following these rules, RPU will inspect electric facilities in the HFTD more frequently than the other areas of its service territory. Furthermore, RPU staff will leverage their knowledge of specific environmental and geographical conditions to determine when areas outside the HFTDs may require more frequent or more thorough inspections. If RPU staff discovers a facility in need of repair that is owned by an entity other than RPU, they issue a notice to repair to the facility owner and work to ensure that necessary repairs are completed promptly.

The RPU Inspection Program includes annual patrol inspections of overhead facilities and a detailed inspection every five years. Sub-transmission lines are patrolled by helicopter annually using an infrared camera, in addition to the patrol and detailed inspections. The patrol inspection is sufficient to identify gross defects. A detailed inspection involves a close visual inspection of the facility that is intended to identify minor defects. Defects that are identified are scheduled for repair in priority order, per GO 95 Rule 18B. The timeline requirements for corrective actions range from immediately to 60 months, depending on the level of potential impact to safety or reliability.

Line Patrol Inspections

RPU Troubleshooters conduct Line Patrol Inspections of the distribution system annually. The line patrol inspection is defined as a visual inspection of applicable utility equipment and structures that is designed to identify obvious structural problems and hazards.

Overhead Detailed Line Inspections

Overhead Detailed Line Inspections are performed by RPU through an area-based approach every five years. Detailed inspections examine equipment and structures visually and through diagnostic testing. The inspections capture deficiencies and corrective maintenance notifications are created. The priority for corrective maintenance is to remove safety hazards immediately, and repair minor deficiencies based on GO 95 Rule 18.

Intrusive Wood Pole Inspections

Intrusive Wood Pole Inspections identify deteriorated wood poles with insufficient remaining structural strength to meet design loading. If deficiencies are identified, poles are replaced or reinforced to meet design loads and accommodate future improvements.

Substation Inspections

RPU performs monthly inspections of its electric substations and related apparatus in compliance with GO 174. The primary purpose of this program is to maintain system reliability. Although there are no electric substations located in the HTFD, the overall reliability of the electric grid impacts RPU's ability to mitigate fires in the entire service territory. When issues are identified during an inspection, they are documented and corrected in a timely manner.

F. Workforce Training

RPU conducts workforce training to help reduce the likelihood of the ignition of wildfires. Following the SEMS structure, RPU participates in annual training exercises. RPU conducts annual review and refresher training as well as new-hire on-boarding training of its fire prevention and mitigation plan standard practice. RPU new inspection program includes additional training, emphasizing its commitment to further enhancement of fire hazard awareness. RPU also conducts regular safety meetings that include wildfire safety and protocol training.

Prior to the wildfire season, RPU executive staff meets with the City's designated fire and emergency response personnel to review potential areas of concern within RPU's service territory. Specific areas, such as river-bottoms and elevated/extreme fire districts, are evaluated to determine if additional resources or actions are needed.

G. Reclosing Policy

Per Section 3.2 of RPU's Standard Practice OPS-2 *Fire Prevention and Mitigation Plan*, reclosing takes place on RPU's 4kV and 12kV distribution systems. RPU does not reclose 66kV sub-transmission lines. Distribution circuits that are predominantly overhead are configured to provide three automatic recloses after clearing a fault. Circuits that are less than 50% overhead are configured to provide two automatic recloses. Circuits that are more than 50% underground are configured to provide a single shot of reclosing. Reclosing can be enabled/disabled locally or via SCADA.

Protective relays are configured with a "Hot Line Tag" mode, which is used to provide more sensitive protection and block reclosing when field crews need to work on or in the vicinity of an energized distribution circuit or anytime there are high-fire threat conditions identified in the area served by a given distribution circuit. The "Hot Line Tag" mode can also be enabled/disabled locally or via the Supervisory Control and Data Acquisition (SCADA) systems.

When wind speeds wind speeds meet or exceed 49.5 mph a SCADA Level 1 Alarm is triggered at Riverside and Freeman Substations. When this occurs, the RPU System Operator shall:

- Block automatic reclosing on circuits serving overhead facilities in high fire-threat areas; and
- Notify Public Safety Dispatch that the Public Utilities Fire Prevention Plan has been implemented; and
- Notify the RPU Red Flag Notification distribution list, including the Fire Department Battalion Chiefs, by using the Outlook email distribution list "RPU Electric Ops/Field - RFD Fire Coordination" that the Public Utilities Fire Prevention Plan has been established.

If an outage occurs on one of these circuits:

- Overhead facilities in high fire-threat areas must be patrolled and found to be clear of trouble before RPU Grid Control Center restores service to those facilities.
- Normal service restoration procedures may be used once the overhead facilities in the elevated or extreme fire-threat areas have been isolated.

Once the Red Flag Warning expires and wind speeds drop below trigger levels, RPU Grid Control Center will return to normal operations.

H. De-energization

Per Section 3.3 of RPU's Standard Practice OPS-2 *Fire Prevention and Mitigation Plan*, RPU has the authority to preemptively shut off power due to fire-threat conditions at their discretion, especially when City's Police, Fire, or RPU field personnel identify an immediate threat to life or property that presents a risk to public safety. The System Operator will, as necessary, de-energize electric facilities only until the public safety issue is resolved or the Fire Threat or Red Flag warning is concluded, and normal operations restored. To ensure service to critical circuits, the RPU System Operator may need to initiate rolling blackouts, feeder rotation, or de-energize specific areas of the distribution system to balance generation to load.

The RPU System Operator will maintain continuous communications with Southern California Edison (SCE) when public safety related outages impact the 66kV sub-transmission lines fed from Vista Substation. If SCE de-energizes sub-transmission lines from the Vista Substation, the RPU System Operator will evaluate whether internal generation will be sufficient to serve customer load.

I. Restoration of Service

Per Section 3.5 of RPU's Standard Practice OPS-2 *Fire Prevention and Mitigation Plan*, if electric service is de-energized due to an active fire or public safety issue, the RPU System Operator will NOT restore service until:

- There is no threat to life or property; and
- Any areas of trouble have been fully isolated; and
- The involved circuit(s) have been fully patrolled; and
- Field crews and emergency personnel have given the all-clear.

The RPU System Operator will prioritize critical infrastructure facilities energization to include hospitals, emergency responders, waters systems, sewage systems, and telecommunication. The RPU System Operator will notify the proper channels to communicate the restoration of electrical services and periodically update statuses prior to full restoration.

VII. Community Impacts and Support During and Emergency

A. Impacts to Public Safety

Per the Outage Customer Notification Plan 2022, the shutting off or an outage of power have a direct public safety impact to four primary groups or entities:

- Impact to customers, specifically customers who rely on medical support devices requiring electricity (Utilicare customers).
- Impact to public safety infrastructure, to include hospitals and other medical facilities.
- Impacts to emergency response facilities to include emergency responders at an emergency event.
- Impacts to critical support infrastructure such as water systems, sewage systems, telecommunications facilities or equipment, traffic signals, and streetlights.

In all four cases, RPU initiates the Outage Customer Notification Plan. This process includes the monitoring of the developments, public notification, and specific customer or entity notification. In each case, RPU's objective is to provide as much advance notice for the potential of an outage event as possible.

In the event of an outage while in response to an emergency event, RPU's DOC maintains constant communication and coordination with the City EOP and the County of Riverside Emergency Operations Plan 2019 (County EOP).

B. Customer Notification Protocols

RPU recognizes that shutting off power to the electrical grid may be the safest response to wildfire hazard events. In response to a hazard event, RPU follows the City EOP and the County EOP. For communications specific to wildfire or hazard events, RPU will follow the notification processes as

required under the EOPs. RPU's Outage Customer Notification Plan 2022 leverages the use of the Everbridge program for instant and urgent communication to all those in the need to know.

For communications specifically related to wildfire and outage hazard events, RPU will use a range of communications channels to provide information to customers, partner agencies, and emergency response organizations. The City of Riverside's 311 call center, the RPU customer service center, customer program and services representatives, and City and RPU communications teams will all play a role in providing information during an event. Where possible, RPU will begin general notifications as early as 72 hours in advance of the hazard event. In addition, regular communications updates will continue throughout an event until power is restored.

A variety of communications channels will be used to contact customers during a wildfire hazard event, these include:

- RPU's website, social media, and traditional media
- Phone messages, texts, and e-mail
- Door hangers if there is sufficient time and the event is localized on a single circuit
- Telephone contact to customers on RPU's Utilicare rate that may be impacted

C. Communications Channels

Media

RPU will use a comprehensive range of media channels to ensure details about the event are shared across the whole community. Information about the event, including links to red flag warnings issued by the National Weather Service and the potential for a power shutoff will be provided on the RPU website and via social media. Public notices will be posted prior to and during the event to ensure that customers have access to the most current information.

The website will include details of how customers can prepare for potential power shutoffs and what to expect. Social media posts will provide updates on the status of the event and offer helpful tips on how to prepare for power outages. The same messages will be posted on RPU's Facebook, Instagram, and Twitter feeds. Public information staff will coordinate traditional news media communications (such as local newspapers), to provide customers with up-to-date information.

Phone Messages, Texts, and E-mail

When a power outage is expected or occurs, RPU will provide specific messaging to customers via phone messages, texts, and e-mail. Customers can choose to provide their information and allow RPU to contact them

when they establish or update their utility accounts. Additionally, customers and residents can sign up for the City of Riverside's RiversideAlert to receive notifications about potential outages. A recorded message will be sent to users signed up to RiversideAlert to keep them informed on the status of an event.

Direct Contact with Customers

If specific circuits are targeted for potential power shut-off, affected customers will be notified by RPU's Customer Service or Customer Engagement staff by phone, text, or e-mail. Where time allows, door hangers will be left on customer's homes or businesses.

Special Consideration for At-Risk Communities

RPU service territory has a mix of urbanized areas, some of which are adjacent to elevated fire risk districts. These areas include single-family housing, apartments, medical services, retail shopping, restaurants, schools, industrial zones, mixed-zones, and parks. Residents in these areas may be critical care customers, customers with minimal access to communications, medical and other facilities that would be essential for managing an emergency response.

RPU maintains a database of Utilicare customers, that is those customers who rely on life supporting machines. In an emergency, RPU will work to ensure that these customers are made aware of any available assistance and that they are provided with as much advanced information as possible about the event. Where possible, RPU will contact Utilicare customers directly by phone.

RPU also works closely with the City's emergency responders to ensure that there is communication within our communities in the event of a wildfire or loss of power. The RPU service territory encompasses an area of river-bottom and other undeveloped areas that are frequented by unhoused community members; these areas will need to be evacuated during an event or emergency.

D. Community Outreach and Public Awareness

RPU recognizes that it is essential to increase public awareness of wildfire risk, provide details on how customers can prepare for wildfire and outages, and how RPU is addressing the potential for its facilities and equipment to cause a wildfire. As noted, a website has been created that provides information about RPU's efforts relative to prevention of and how electric equipment cause wildfires.

The Riverside Fire Department provides robust community outreach through its Fire Public Education Coordinator, OEM Community Preparedness Coordinator, and Operations Fire Personnel. Together, they deliver fire

safety education, emergency preparedness training, and public safety awareness throughout the city. Programs and activities include school visits and fire station tours, CERT (Community Emergency Response Team) classes, disaster preparedness workshops, fire & emergency preparedness safety campaigns, Fire Prevention Week, National Preparedness Month, Participation in local events and career fairs.

This collaborative approach helps build a safer, more resilient community by promoting prevention, readiness, and awareness. Online resources for fire safety and emergency preparedness resources are available at ReadyRiverside.org.

The Riverside Fire Department's Public Education Coordinator serves as a liaison between schools, businesses, and other organizations to provide information about fire and life safety topics and regularly coordinates with RPU.

VIII. Monitoring and Evaluating the Plan and Metrics

A. Metric and Assumptions for Measuring the Plan Performance

RPU uses three primary metrics to measure the performance of this Plan including the number of fire ignitions, wires down within the service territory, and unplanned electric outages. Counts will be provided for the number of fires that occurred that were less than 10 acres in size and all fires greater than 10 acres are individually described. If any unusual events occur, they are reported individually as well. There are no fires larger than 10 acres or unusual events to report for calendar year 2022. Data is reported separately for events that occur within the HFTD and events that occur outside of the HFTD areas, as applicable.

Metric 1: Fire Ignitions

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

- Any wildfire-related fire ignitions, whether caused by the utility or not, that can impact the utility's community or customers
- The fire was self-propagating and of a material other than electrical and/or communication facilities; and
- The resulting fire traveled greater than one linear meter from the ignition point

Metric 2: Wires Down

The second metric is the number of distribution and transmission wires downed within RPU's service territory. For purposes of this metric, a wires down event includes any instance where an electric transmission or primary distribution conductor falls to the ground or on to a foreign object. Any unusual events will be individually described.

Metric 3: Electric Outages

The third metric is the number of unplanned electric outages that occur per calendar year by cause. Any unusual event or event that caused a wildfire over 10 acres will be reported individually and in further detail.

Table 7: Utility Caused Fire Ignitions and Wires Down Per Calendar Year

Cause Category	2022		2023		2024	
	Inside HFTD	Outside HFTD	Inside HFTD	Outside HFTD	Inside HFTD	Outside HFTD
Fire Ignitions	0	0	0	5	0	3
Wires Down	0	8	1	0	0	0

Table 8: Unplanned Electric Outages Per Calendar Year

Cause Category	2022		2023		2024	
	Inside HFTD	Outside HFTD	Inside HFTD	Outside HFTD	Inside HFTD	Outside HFTD
Contact from object (non-vegetation)	4	77	2	50	1	48
Vegetation caused	0	31	3	24	0	13
Equipment / facility failure	4	115	4	126	2	140
Wire-to-wire contact	0	1	0	0	0	1
Utility work / Operation	3	56	3	48	2	58
Vandalism / Theft	0	4	0	0	0	4
Other	2	9	0	16	0	18
Unknown	1	102	1	77	1	85
TOTAL	**14**	**395**	**13**	**341**	**6**	**367**

B. Impacts of Metrics on Plan

The metrics provide guidance as to how time, cost, and resources will be allocated for future years. RPU will make data-driven decisions to implement preventative strategies to improve equipment, operations, and processes to continue to reduce the risk of utility caused wildfire incidents. The following table describes the wildfire preventative strategies undertaken to address each type of risk. Specific projects completed in 2023 and future planned projects in response to the metrics are listed in Section IX.

Table 9: Preventative Strategies Matrix

Preventative Strategy	Electrical Equipment Failure	Conventional Fuse Operation	Wire Contact with Foreign Object	Wire Contact with Vegetation	Environmental
Design and Construction Standards					
Deteriorated Pole Replacements	✓		✓	✓	
Pole Loading Assessments & Remediation	✓			✓	
Overloaded Transformer Replacements	✓	✓			
Distribution Construction Standards Improvements		✓	✓	✓	
Grid Resiliency Devices	✓	✓	✓	✓	
Inspections and Maintenance					
Annual Patrol Inspection (GO 165)	✓		✓	✓	
Intrusive Pole Inspections	✓			✓	
Enhanced Infrared Inspections	✓	✓			
Vegetation Management Program		✓		✓	✓
Operational Practices					
De-Energization	✓	✓	✓	✓	✓
Restoration of Service	✓	✓	✓	✓	
Workforce Training	✓	✓	✓	✓	✓
Reclosing Policy	✓	✓	✓	✓	✓
Block Reclosing during RFW			✓	✓	✓
Line Patrol after outage event during RFW		✓	✓	✓	✓
Situational and Conditions Awareness					
Weather Monitoring	✓	✓	✓	✓	✓
Use of Big Data and Predictive Analytics	✓	✓	✓	✓	✓
WMP Mapping and HFT areas kept current	✓	✓	✓	✓	✓

C. Monitoring and Auditing the Plan

On an annual basis, RPU presents the WMP to the Board who makes a recommendation to the Council to approve the Plan. The WMP is submitted to the Wildfire Safety Advisory Board by July 1st of each year, in accordance with AB 1054. AB 1054 allows annual updates but requires comprehensive submissions every 3 years.

RPU contracts with a qualified independent evaluator with experience in assessing the safe operations of electrical infrastructure to review and assess the comprehensiveness of the plan. The independent evaluator issues a report that is available on the RPU website and is presented at the

Board and Council meetings. This will occur when comprehensive updates are made, at least once every three years, beginning with the 2023 Plan.

RPU continuously monitors and evaluates data for potential improvements to the plan. Fan areas of its operation and service territory that are disproportionately impacted. RPU Executive Staff are responsible for ensuring risks are continuously monitored and the Plan is adhered to by all involved personnel.

D. Identifying and Correcting Deficiencies in the Plan

RPU is committed to making the WMP as effective and robust as possible. RPU is also aware that identifying gaps and deficiencies in the WMP is a continuous process which is learned through experience and specific record keeping. Once identified, any gaps or deficiencies will be corrected. RPU understands that changes to the WMP could occur due to new policies, changes in strategies, changes in technology or any overlooked areas. These may add gaps to the Plan. RPU will evaluate such gaps and will work on determining a solution. Any such changes will be incorporated into the Plan.

E. Monitoring the Effectiveness of Inspections

RPU's Field Engineering group monitors and inspects overhead distribution and transmission lines on a yearly basis. They also monitor and inspect vegetation around the overhead power lines as described in the vegetation management programs. The Substation Maintenance group inspects the condition of its equipment on a regular basis.

During the inspection process, RPU crews take necessary actions to address any non-compliance. Any equipment that is not operating as designed or expected is subject to further investigation. RPU crews document any areas of concern that could result in a hazardous situation or could compromise safety and reliability. Any repair work performed on or around the lines and poles, including the inspection process, is recorded and corrective and preventive action steps are taken.

F. Independent Auditor

Per Public Utilities Code section 8387(c), RPU issued a request for proposal and contracted with a qualified independent evaluator with experience in assessing the safe operation of electrical infrastructure to review and assess the comprehensiveness of this Plan. The independent evaluator's report can be found on RPU's website at https://riversideca.gov/utilities/wmp.

IX. Project and Programs Related to WMP

A. Budgeting Process

As part of RPU's Fiscal Policy, a Capital Improvement Plan (CIP) is prepared based on internally developed financial targets and established priorities. CIP budgets are developed to meet the strategic goals and mission of RPU, which includes safety and wildfire mitigation planning. The CIP is prepared every two years in conjunction with the operating budget. This is a multi-year plan forecasting annual capital improvement projects for a minimum of the next five years. The budget is prepared in accordance with existing Board and City Council policies, procedures, guidelines, and any requirements including the California Government Code. The CIP is reviewed and approved by the Board and City Council biennially, with the first two years of said plan included in the City Council adopted two-year operating budget.

B. 2024 Completed Projects

RPU completed the following capital and operational projects in 2024 that improved system safety in the HFTD and the rest of the city. These projects primarily focused on improvements in situational awareness and operational practices.

Overhead Detailed Inspections (GO165)

RPU hired 3rd party contractors to conduct overhead detailed inspections to inspect the condition of electrical assets to identify obvious defects in accordance with G.O. 165 and G.O. 95. There are 22,678 poles in RPU's service territory. Approximately 20%, or 4500 poles will be inspected each year within the designated inspection area for that year. Each pole is visually inspected from the groundline to the top for evidence of defects, external decay, and insect damage. Each piece of equipment installed on the pole is inspected, including crossarms, transformers, switches, capacitors, etc. (On-going)

Substation Automation

Electric Operations continued to update older substation automation systems using new Schweitzer Engineering Laboratories (SEL) Real-time Automation Controller (RTAC) data concentrators that are integrated with the protective relays controlling our substation distribution feeders. This allows System Operators to block reclosing during high heat and high wind situations to mitigate risk in our HFTD. (on-going)

Distribution Equipment

Equipment failure can lead to ignition of nearby vegetation or other flammable material. RPU developed an updated inspection plan that includes inspection of distribution equipment (switches, insulators, transformers, surge arresters, etc.) on a regular basis to minimize hazards related to equipment failure. When defective equipment is found, the equipment will be removed from service until repairs or replacement is completed. (on-going)

C. Future Planned Projects

The following are planned future capital and operational projects. Updates to these projects will be provided in future WMPs.

Intrusive Pole Inspections (GO 165)

RPU hired 3rd party contractors to conduct intrusive pole inspections to inspect the condition of wood poles to prevent ignitions in the HFTD and the rest of the city. They will conduct intrusive inspections of its distribution wood poles every 10 years. There are 22,678 wood poles in RPU's service territory. Approximately 10%, or 2,268, poles will be inspected each year within the designated inspection area for that year. Intrusive Wood pole inspections identify deteriorated wood poles with insufficient remaining structural strength to meet design loading. If deficiencies are identified, poles are replaced or reinforced to meet design loads and accommodate future improvements.

New Fuse Installations and Replacements

Historically, RPU, as well as most of the electric industry, standardized on conventional type fuses to protect their system. During overload or fault conditions, a conventional fuse will operate and can expel hot particles and gases, which could ignite nearby vegetation. RPU is developing projects to replace these conventional type fuses, with CALFIRE "Exempt" fuses that suppresses and contains the arc. These fuses substantially reduce the risk of initiating wildfires. These fuses clear faults faster and reduce the fault energy. This minimizes electrical arcs and sparks during fault events and minimizes the impact of a fault on electrical equipment along the circuit. Any new fuse added or replaced in the service territory will be CALFIRE "Exempt" fuses.

FuseSavers

Evaluating the use and installation of "Fusesavers," which are designed to rapidly clear electrical faults on power lines in the HFTD. This will significantly reduce the risk of arcing and sparking that could ignite wildfires by acting much faster than traditional fuses when a fault occurs. It minimizes the duration of an electrical arc, drastically lowering the chance of igniting nearby vegetation.

Reconductoring

Conducting studies for the replacement of existing #6 bare copper conductors in the HFTD. For new construction, RPU utilizes #2 aluminum conductor steel reinforced (ACSR) as a standard for local circuit segments that branch off from a main backbone. The increased strength gained from this steel reinforcement will help reduce "wires down" events in the HFTD. RPU is also evaluating the use of ACSR covered conductor as a replacement option. Covered conductors have a layer of insulation around the main high strength ACSR conductor. This insulation would prevent outages from wire-to-wire contact and wire contact with foreign objects or vegetation