



RIVERSIDE PUBLIC UTILITIES

Board Memorandum

BOARD OF PUBLIC UTILITIES

DATE: JUNE 27, 2022

SUBJECT: RIVERSIDE PUBLIC UTILITIES 2022 WILDFIRE MITIGATION PLAN PREPARED IN ACCORDANCE WITH CALIFORNIA PUBLIC UTILITIES CODE SECTION 8387 FOR SUBMITTAL TO THE WILDFIRE SAFETY ADVISORY BOARD

ISSUE:

Consider approving the Riverside Public Utilities 2022 Wildfire Mitigation Plan for submittal to the Wildfire Safety Advisory Board in accordance with California Public Utilities Code Section 8387.

RECOMMENDATION:

That the Board of Public Utilities approve the Riverside Public Utilities 2022 Wildfire Mitigation Plan, Version 2, for submittal to the Wildfire Safety Advisory Board in accordance with California Public Utilities Code Section 8387.

BACKGROUND:

The Riverside Public Utilities (RPU) Wildfire Mitigation Plan (WMP) is prepared to meet the standards set forth in Section 8387 of the Public Utilities Code. Senate Bill (SB) 901 amended Section 8387 of the Public Utilities Code when it passed in September 2018. The new code section tasked all private and publicly owned utilities and corporations, among other actions, to construct, maintain, and operate their electrical system in a manner that minimizes the risk of wildfire. To ensure that each utility addressed the risk of their electric systems causing a wildfire, several requirements were put in place and are summarized here:

1. All utilities, public and private, are required to prepare a WMP and update the plan annually.
2. A prescriptive list of required elements for the WMP is identified and must be addressed by each utility.
3. The utility must have their WMP reviewed and assessed for comprehensiveness by an independent evaluator with experience in assessing the safe operation of electrical infrastructure.
4. Both the WMP and the report issued by the independent evaluator must be presented at a public meeting of the utility's governing board.
5. The WMP and the independent evaluator report must be posted on the utility's website.

On July 12, 2019, Assembly Bill (AB) 1054 and AB 111 were passed. Neither bill changed the required content of the WMP established by SB 901, but they did change procedure. AB 111 required state agencies to form a new Wildfire Safety Division and establish a Wildfire Safety Advisory Board (Wildfire Board) in 2020. Per the legislation, the new Division and the Wildfire

Board were initially housed within the California Public Utilities Commission and then, on July 1, 2021, were transferred to the California Natural Resources Agency under a newly created Office of Energy Infrastructure Safety.

AB 1054 added, among other actions, the requirement that publicly owned utilities' WMPs be submitted to the Wildfire Board by July 1st of each year for review. The Wildfire Board, after receiving submitted WMPs from all utilities, must review the documents and provide comments to the utilities regarding the WMPs conformance with legislative requirements. Each year, the Wildfire Board will then provide comments back to the public utilities.

Finally, in October 2019, SB 560 was signed into law and became effective on January 1, 2020. The bill changed Public Utilities Code Section 8387(b)(2)(G) modifying requirements for customer notification protocols for emergency de-energization. In the event of a utility de-energizing a portion of their grid infrastructure for the purpose of preventing the equipment from potentially causing wildfire, the utility is required to notify all public safety offices, critical first responders, health care facilities, and operators of telecommunications infrastructure that have facilities within the footprint of the potential de-energization event.

Wildfire Board Advisory Opinions

In accordance with the requirements of these various bills and effective in 2019, RPU prepared and presented its first WMP to the City Council, where it was adopted on December 17, 2019. RPU submitted the first WMP to the Wildfire Board on May 6, 2020.

In December 2020, the Wildfire Board completed their review of electric public utilities' initial WMPs and issued an advisory opinion. The single advisory opinion applied to all publicly owned utilities and identified several themes that they were all requested to address. The advisory opinion offered recommendations intended to help publicly owned utilities fully comply with the statutory requirements to the satisfaction of the Wildfire Board. Public utilities were not required to incorporate the recommendations of the advisory opinion in their WMPs but were instead asked to respond to a matrix of questions to be submitted to the Wildfire Board at the same times as the plan. The matrix was not required to be presented to the public utilities governing board. RPU submitted an updated WMP to the Wildfire Board on September 27, 2021.

On February 23, 2022, the Wildfire Board completed their second review of electric public utilities' WMPs and issued a second, but single, advisory opinion. This opinion contained two sections: first, recommendations applicable to all publicly owned utilities, and second, a section that provided comments specific to individual utilities. Public utilities are not required to incorporate these recommendations into their WMPs for this year due to the late response from the Wildfire Board.

DISCUSSION:

The purpose and content of RPU's WMP is identified in California Public Utilities Code Section 8287, as noted above. As such, the WMP is a compliance document. RPU is provided latitude in how it responds and addresses the required contents, but the focus of the plan is very specific and directs electric utilities to describe the actions they are taking to reduce the risk of their electric equipment causing a wildfire. The WMP needs to be specific and only address the required contents to assist the State Wildfire Board and members of the public that are reviewing the report for compliance with State code and intent.

While there are many detailed sections that must be included in the WMP, there are essentially 6 key components:

1. Identification of the High Fire Threat Districts (HFTD) in RPU Service Territory
2. Identification of RPU electric infrastructure located within the HFTD
3. Assessment of fire risk posed by electric infrastructure in HFTD, including assessment of environmental conditions such as high wind events or high heat events that may exacerbate fire risk
4. Preventative strategies that RPU is taking to reduce fire risk by electric infrastructure in HFTD
5. Customer support and communications if de-energization is utilized as a wildfire risk preventative strategy
6. Identification of the metrics and processes that RPU will take to evaluate the effectiveness of the preventative strategies

RPU does address other impacts of wildfire, including the impact of wildfire on its local power generation and distribution system. However, these assessments and protocols are handled in the various and appropriate other hazard management plans and through internal operating procedures. RPU coordinates closely with the City's emergency response teams including both the Fire and Police Departments and, as a result, how RPU responds to these situations is incorporated into citywide plans, such as the City's Hazard Mitigation Plan.

RPU also has plans and protocols in place to mitigate other risks associated with regional wildfires that may affect regional electricity transmission or generation facilities. These impacts are often coordinated with the California Independent System Operator (CAISO) and with other utilities since they impact regional electric grids and not just RPU.

Because the WMP is a compliance document, it is not appropriate to include wildfire impacts on RPU infrastructure in the plan. These impacts and RPU's responses to them should be addressed in the City's and RPU's hazard mitigation and planning efforts.

Summary of RPU Actions and Metrics from 2021

Safety is always of utmost importance to RPU. RPU implemented several preventative strategies to improve the systems safety in HFTD as well as the rest of the city. Preventative strategies have primarily focused on improvements in situational awareness and operational practices. Unfortunately, in 2021, RPU infrastructure did cause one fire which is discussed below.

Grid Enhancements

Several grid management enhancements have been implemented or have ongoing implementation:

Ongoing Implementation Actions:

1. Electric Operations continues its update of older substation automation systems to migrate to a new real time automation controller infrastructure.
2. RPU did not install any new weather stations but developed processes to utilize the three weather stations installed in 2020 at Harvey Lynn, Springs, and RERC Substations. The data from these newly installed weather stations provides real-time weather information to the system operators. Soon, staff will be able to use temperature, wind speed, and relative

humidity data to block circuit breakers from reclosing on various feeders at our substations (which is a key fire risk mitigation strategy).

3. In 2020, three cameras were installed at Box Springs Mountain Radio Site and City Hall for added visibility. The cameras provide dispatchers with real-time video of the greater Riverside area, paying special attention to wildfire prone regions. No new cameras were installed in 2021.
4. Electric Operations created a video network so that these video streams can be integrated with the Land-Mobile Radio dispatch consoles in the Grid Control Center located at the Utilities Operation Center in 2020. In 2021, Operations and the Grid Control Center utilized these new systems.
5. RPU continues collaboration and partnership with the Fire Department before, during, and after all wildfire events. This includes completing several river bottom inspections and extensive mitigation efforts in the area, like clearing of overgrown vegetation near electric distribution facilities.

New Implementation Action in 2021:

1. In addition to the existing inspections of overhead lines, Electric Operations is working with the Police Department’s Aviation Unit to complete enhanced infrared inspections of power lines in the high fire threat areas.
2. Electric Operations began an update of the Standard Operational Practices for wildfire operations procedures and procedures for high fire hazard areas.

Data Analytics

Data analytics are also an important preventative strategy that will help RPU identify equipment or situations that represent a higher risk of electrical equipment causing a wildfire. With the information, RPU can then determine if preventative strategies should be implemented. Power outage data is reviewed regularly. RPU is working on refining this data to ensure that it clearly identifies if the outage occurred on equipment in the HFTD. While this refinement to the data tracking is not yet completed, it is a strategy that is anticipated to be completed during the current fiscal year. For 2021, system-wide metrics are reported and are not reflective of outage incidents associated only in HFTDs.

RPU WMP Metrics (System-wide) from Calendar Year 2021

Risk Factor	Metric	2020	2021
Equipment Failure	• Number of wire down events caused by conductor failure	4	7
	• Number of pole failures	191	70
	• Number of transformer failures	98	39
Conventional Fuse Operations	• Number of conventional transformer fuse operation events	1	4
	• Number of conventional lateral fuse operation events	18	16

Risk Factor	Metric	2020	2021
Wire Contact with Foreign Object(s)	• Number of outage events caused by wire contact with an animal	16	14
	• Number of outage events caused by wire contact with mylar balloons	27	13
	• Number of pole failures caused by vehicle contact	27	15
Wire Contact with Vegetation	• Number of outage events caused by wire contact with vegetation (system-wide)	49	25
	○ Contact with a tree other than a palm frond	29	11
	○ Contact with a palm frond	20	14
Inspection and Maintenance	• Circuit patrols completed on time (COVID-19 staffing restrictions impacted inspection schedules)	49%	66%
Operations	• Number of outages on circuits	640	530
	• Number of outages on circuits during Red Flag Warning days	**	8
Extreme Weather Conditions	• Number of Red Flag Warning days	7	3
	• Number of times automatic reclosing was defeated	**	0
	• Number of outages during Wind or High Wind Event	74	50
	• Number of outages during High Heat event	93	29
Fire History Events	• Number of events with fire reference (e.g., pole fire, equipment fire)	**	3
	• Number of wildfires caused by RPU electrical equipment	0	0
	• Number of ignitions caused by RPU electrical infrastructure	0	1

** Tracking systems were being developed in 2020 for the identified items.

Wildfire Ignition due to RPU Electrical Infrastructure

On Thursday, July 1, 2021 at 11:24 a.m., the City of Riverside Fire Department responded to a first alarm vegetation fire assignment at the Tequesquite Park Extension located at the Rubidoux Avenue crossing of the Santa Ana River Trail. Firefighters arrived to discover a 1/8-acre vegetation fire under an RPU power pole. The fire was extinguished. The Fire Department determined that there were no homeless camps in the area and no signs of ignition devices. Additionally, there were no witnesses to the fire start and the Fire Department was unable to determine the cause of the fire after their investigation.

After further investigation conducted by RPU Electric Field personnel, failure of the overhead pole switch was determined to be the cause of the fire. Electric Field crews replaced the switch and crossarm on the electric pole. The crews also completed a thorough inspection of the electric utility pole line up and downstream from the ignition point. No additional equipment was replaced nor determined to present a fire threat hazard.

An Incident Information Fact Sheet can be found at the following City website: <https://riversideca.gov/fire/incident/rubidoux-incident>.

Addressing the Wildfire Safety Board Advisory Opinion Recommendations

As noted above, the State established prescriptive requirements for the content of the WMP and requires each utility to continuously improve its grid and processes to implement applicable best practices to minimize risk of utility infrastructure caused wildfire. The advisory opinions of the Wildfire Board are intended to help utilities incorporate, where appropriate and applicable, best practices to continuously improve its electrical grid infrastructure. The Wildfire Board’s advisory opinion issued for the 2021 WMP submissions was delayed and was not released until February 23, 2022.

While the recommendations in the WSAB Advisory Opinion are optional, the Opinion issued this year is more comprehensive than the prior year’s Opinion. RPU needs to evaluate the recommendations to determine their appropriateness and applicability to RPU and, if needed, how best to incorporate them into RPU’s operations. This evaluation will require a detailed review of RPU’s standard operating practices, a review of standard equipment replacement practices, and a review of the financial implications (e.g., if resulting standard equipment changes may result in increased equipment costs). There has been insufficient time to incorporate the recommendations for RPU that were identified in the most recent advisory opinion by the July 1, 2022 submission deadline. Therefore, the recommendations will be evaluated and incorporated into RPU’s 2023 WMP. The 2023 WMP and report will be presented to the RPU Board and City Council prior to submission to the WSAB prior to the July 1, 2023 submission.

Independent Evaluator

Additionally, staff notes that RPU did not engage an Independent Evaluator (IE) for the review of the 2019 as required. While RPU retained the services of an IE to complete a review of the 2019 RPU WMP, the Wildfire Board had not issued its guidance or requirements for the IE reviews as of that time. As such, RPU’s IE only completed a preliminary review and recommendations that were provided to staff. The contract scope and budget, however, were insufficient for the IE to issue a final report. Staff was also unable to issue a request for bid during most of 2020 and a portion of 2021 due to COVID-19 as a result of purchasing restrictions and staffing limitations.

RPU is in the procurement process to hire an independent evaluator to review the 2022 WMP and any updates that may result from the most recent WSAB Advisory Opinion issued in February 2022. The IE’s final report and any changes to the WMP recommended by the IE will be included in RPU’s 2023 WMP submission. At this time, there is no penalty for a late submission of the IE report.

Submission Deadline

If approved, this 2022 RPU WMP is required to be submitted to the Wildfire Board by July 1, 2022.

STRATEGIC PLAN ALIGNMENT:

This item contributes to **Strategic Priority No. 4 - Environmental Stewardship** and **No. 6 Infrastructure, Mobility and Connectivity** and the following goals:

Goal 4.3 – Implement local and support regional proactive policies and inclusive decision-making processes to deliver environmental justice and ensure that all residents breath

healthy and clean air with the goal of having zero days of unhealthy air quality per the South Coast Air Quality District’s Air Quality Index (AQI).

Goal 4.6 – Implement the requisite measures to achieve citywide carbon neutrality no later than 2040.

Goal 6.2 – Maintain, protect, and improve assets and infrastructure within the City’s built environment to ensure and enhance reliability, resiliency, sustainability, and facilitate connectivity.

This item aligns with each of the five Cross-Cutting Threads as follows:

1. **Community Trust** – This item addresses strategies to prevent wildfire caused by RPU electrical equipment and articulates a clear communications strategy for our customers in a de-energization event ensuring public safety for the greater public good.
2. **Equity** – This item is utility wide and identifies measures and strategies to protect the safety and well-being of all customers of RPU and many areas of the region.
3. **Fiscal Responsibility** – This item represents fiscal responsibility by establishing strategies to minimize potential wildfires and the associated financial impacts that RPU and the City could incur.
4. **Innovation** – This item identifies new technology and deployment of new infrastructure that helps RPU mitigate the risks of its electrical equipment causing a wildfire.
5. **Sustainability & Resiliency** – Wildfires are a major source of greenhouse gas emissions that contribute to climate change as well as a source of emissions that negatively impacts local air quality. This item reduces the potential that a wildfire will occur due to RPU’s electrical equipment and thus reduces the potential release of greenhouse gas emissions and pollutants that negatively affect air quality.

FISCAL IMPACT:

There is no fiscal impact for this item.

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Approved by: Kris Martinez, Assistant City Manager

Approved as to form: Phaedra A. Norton, City Attorney

Certifies availability of funds: Edward Enriquez, Interim Assistant City Manager/Chief Financial Officer/City Treasurer

Attachments:

1. 2022 RPU Wildfire Mitigation Plan
2. Presentation