Burbank Water and Power

WILDFIRE MITIGATION PLAN

2025

CITY OF BURBANK

WATER AND POWER

TABLE OF CONTENTS

FIGURES

TABLES

List of Acronyms and Abbreviations

AMI	Advanced Metering Infrastructure
BWP	Burbank Water and Power
CAL FIRE	California Department of Forestry and Fire Protection
CPUC	California Public Utilities Commission
CWSAB	California Wildfire Safety Advisory Board
DOC	Department Operations Center
ECC	Energy Control Center
EERP	Electric Emergency Response Plan
ERP	Emergency Response Plan
EM	Emergency Management
GIS	Geographic Information System
GO	General Order
HFTD	High Fire Threat District
IC	Incident Command or Incident Commander
ICS	Incident Command System
IE	Independent Evaluation
kV	Kilovolt
MW	Megawatts
NERC	North American Electric Reliability Corporation
NIMS	National Incident Management System
NWS	National Weather Service
OMS	Outage Management System
PRC	California Public Resources Code
PUC	Public Utilities Code
RFW	Red Flag Warning
SB	Senate Bill
SCADA	Supervisory Control and Data Acquisition
SEMS	Standardized Emergency Management System
SME	Subject Matter Expert
T&D	Transmission and Distribution
WMP	Wildfire Mitigation Plan
WUI	Wildland Urban Interface

Definitions

1. **Energy Control Center (ECC):** BWP's ECC personnel are responsible for directing the safe and reliable operation of BWP's electric system while operating within current policies and procedures during normal and emergency situations. The ECC prepares, checks, and administers the execution of safe and reliable switching procedures. The ECC will monitor and maintain equipment-loading levels to prevent damage to equipment. The ECC is also responsible for updating outage information timely and accurately.

2. **General Order 95 (GO 95):** GO 95 is a set of rules formulated by the California Public Utilities Commission (CPUC) with the purpose of creating requirements for overhead line design, construction, and maintenance. While the CPUC does not have direct governance over publicly owned utilities, BWP designs, constructs, and maintains all overhead electrical lines to meet or exceed this industry standard.

3. **General Order 165 (GO 165):** GO 165 is a set of rules formulated by the CPUC with the purpose of creating requirements for the inspection of electric distribution and transmission facilities in order to ensure safe and high-quality electric service. BWP has an inspection program in place that meets or exceeds this industry standard.

4. **Hardening:** Modifications to electric infrastructure to reduce the likelihood of ignition and improve the survivability of electrical assets.

5. **High Fire Threat District (HFTD):** In 2017, the CPUC adopted new fire safety regulations to combat the threat of wildfire for areas in Northern and Southern California. High Fire Threat Districts (HFTD) have been classified as High Hazard Zones due to tree mortality (Tier 1), elevated risk for utility-associated wildfires (Tier 2), and extreme risk for utility-associated wildfires (Tier 3).

6. **Incident Commander (IC):** The IC is the person responsible for all aspects of an emergency response, including quickly developing incident objectives, managing all incident operations, application of resources, as well as responsibility for all persons involved. The IC sets priorities and defines the organization of the incident response teams and the overall incident action plan.

7. **Incident Command System (ICS):** The ICS "a systematic tool used for the command, control, and coordination of emergency response" according to the state Standardized Emergency Management System and federal National Incident Management System. A more detailed definition of an ICS according to the United States Center for Excellence in Disaster Management & Humanitarian Assistance is "a set of personnel, policies, procedures, facilities, and equipment, integrated into a common organizational structure designed to improve emergency response operations of all types and complexities." Responding emergency service providers would establish the ICS and designate an Incident Commander.

8. **Red Flag Warning (RFW):** An RFW is a warning issued for a stated period of time by the National Weather Service using pre-determined criteria to identify particularly critical wildfire danger in a particular geographic area. The National Weather Service issues an RFW when "warm temperatures, very low humidity, and stronger winds are expected to combine to produce an increased risk of fire danger."

9. **Senate Bill 901 (SB 901):** SB 901 is legislation enacted as of September 21, 2018 that, among other changes and requirements, amended California Public Utilities Code (CPUC) Section 8387 to provide in subpart (b) that each local publicly owned electric utility and electrical corporative shall annually prepare and present a wildfire mitigation plan (WMP) to its governing board for review and approval, and to specify in subpart (b) (2) the elements that must be included in such WMP. As used herein, SB 901 refers to the requirements of CPUC Section 8387.

10. **Wildfire Risk:** The risk of a potential wildfire event caused by BWP electrical lines or equipment.

Chapter 1. Introduction

1.1 Policy Statement

Burbank Water and Power is committed to safely providing reliable, affordable, and sustainable utility services for our community.

1.2 Plan Summary

While the City of Burbank has experienced several wildfires in the Verdugo Mountains throughout its history, no wildfires have ever been caused by BWP electrical facilities. This WMP describes the range of activities that BWP is taking to mitigate the threat of power-line ignited wildfires, including its various programs, policies and procedures. This plan will be reviewed and evaluated by its governing board each year. This plan meets or exceeds the requirements of PUC section 8387 for publicly owned electric utilities to prepare a WMP by January 1, 2020, and annually thereafter. Table 1 below summarizes the plan compliance with the corresponding plan sections referenced.

This plan is available on BWP's website at BurbankWaterAndPower.com under Electric > Wildfire Mitigation Plan. For a summary of changes to the 2025 WMP, refer to Exhibit B, Summary of Key Changes in BWP's 2025 WMP.

Table 1 - Plan compliance with PUC 8387(b)

SB 901 requirement	Description	Plan section number
b (2) (A)	An accounting of the responsibilities of the persons responsible for executing the plan.	7.1
b (2) (B)	The objectives of the wildfire mitigation plan.	1.3
b (2) (C)	Description of the preventative strategies and programs to be adopted by the 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.	3, 5
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 made that underlie the use of those metrics.	7.2

SB 901 requirement	Description	Plan section number
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.	7.3.3
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	5.3.1, 5.5
b (2) (G)	Appropriate and feasible procedures for notifying a customer who may be impacted by the de-energizing of electric lines. The procedures shall consider the need to notify, as a priority, critical first responders, health care facilities,and operators of telecommunications infrastructure.	6.3
b (2) (H)	Plans for vegetation management.	5.2.2
b (2) (I)	Plans for inspections of the local publicly owned electric utilities or electrical cooperative's electrical infrastructure.	5.2.1
b (2) (J)	A list that identifies, describes, and prioritizes all wildfire risks, and drivers for those risks, throughout the local publicly owned electric utilities or electrical cooperative's service territory. The list shall include, but not be limited to, both of the following:	4.2, 4.5
b (2) (J) (i)	Risks and risk drivers associated with the design, construction, operations, and maintenance of the local publicly owned electric utility or electrical cooperative's equipment and facilities.	4.2.1
b (2) (J) (ii)	Particular risks and risk drivers are associated with topographic and climatological risk factors throughout the different parts of the local publicly owned utilities or electrical cooperative's service territory.	4.3
b (2) (K)	Identification of any geographic area in the local publicly owned electric utilities or electrical cooperative's service territory that is a higher wildfire threat than is currently identified in a commission fire threat map, and identification of where the commission should expand the high fire threat district based on new information or changes to the environment.	4.3.3

SB 901 requirement	Description	Plan section number
b (2) (L)	A methodology for identifying and presenting enterprise-wide safety risk and wildfire-related risk.	4.1
b (2) (M)	A statement of how the local publicly owned electric utility will restore service after a wildfire.	6.4
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:	
b (2) (N) (i)	Monitor and audit the wildfire mitigation plan.	7.3
b (2) (N) (ii)	Identify any deficiencies in the wildfire mitigation plan or its implementation, and correct those deficiencies.	7.3.1
b (2) (N) (iii)	Monitor and audit the effectiveness of electrical line and equipment inspections, including inspections performed by contractors that are carried out under the plan, and other applicable statutes, or commission rules.	7.3.2
b (3)	The local publicly owned electric utility or electrical cooperative shall present each wildfire mitigation plan in an appropriately noticed public meeting. The local publicly owned utility or electrical cooperative shall accept comments on its wildfire mitigation plan from the public, other local and state agencies, and interested parties, and shall verify that the wildfire mitigation plan complies with all applicable rules, regulations, and standards as appropriate.	8.2
(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 utilities or electrical cooperative's governing board.	8.3

1.3 WMP Objectives

The primary objectives of this WMP are to:

1. Reduce the probability that BWP's electric system may be the contributing source for the ignition of a wildfire

2. Harden and maintain BWP's electric system against a potential wildfire

3. Create a WMP that is consistent with state law and objectives

BWP continually evaluates prudent and cost-effective improvements to its design standards, physical assets, inspection and maintenance programs, operations, and training in order to meet these objectives. This plan documents mitigation activities that will be carried out by BWP. Lastly, this plan will set measures of effectiveness to inform future improvements or modifications to specific programs and strategies.

Chapter 2. Burbank Water and Power

2.1 BWP Profile

Burbank Water and Power is a vertically integrated, publicly owned municipal utility that has served Burbank's electrical needs for more than 100 years. Being vertically integrated means that BWP generates, transmits, and distributes power to Burbank customers. BWP is owned and operated by the City of Burbank and is governed by the BWP Board and the Burbank City Council. BWP is not-for profit, delivering service at cost.

BWP is committed to providing reliable, affordable, and sustainable electrical service to Burbank. BWP's reliability is superb, maintaining electrical service to BWP's customers 99.99% of the time in 2024. In terms of affordability, BWP's rates are near the lowest in the region. BWP's commitment to sustainability is strong: In 2007, BWP was the first utility to commit to 33% renewables by 2020 and BWP reached 33.3% renewables in fiscal year 2016-17. Consistent with BWP's 2019 Integrated Resource Plan, by the end of the planning period in 2038, BWP would have renewables equivalent to a 67% renewable portfolio standard, approximately double the current level.

For a summary of information regarding BWP's service territory, please refer to Exhibit A, Context-Setting Information Table.

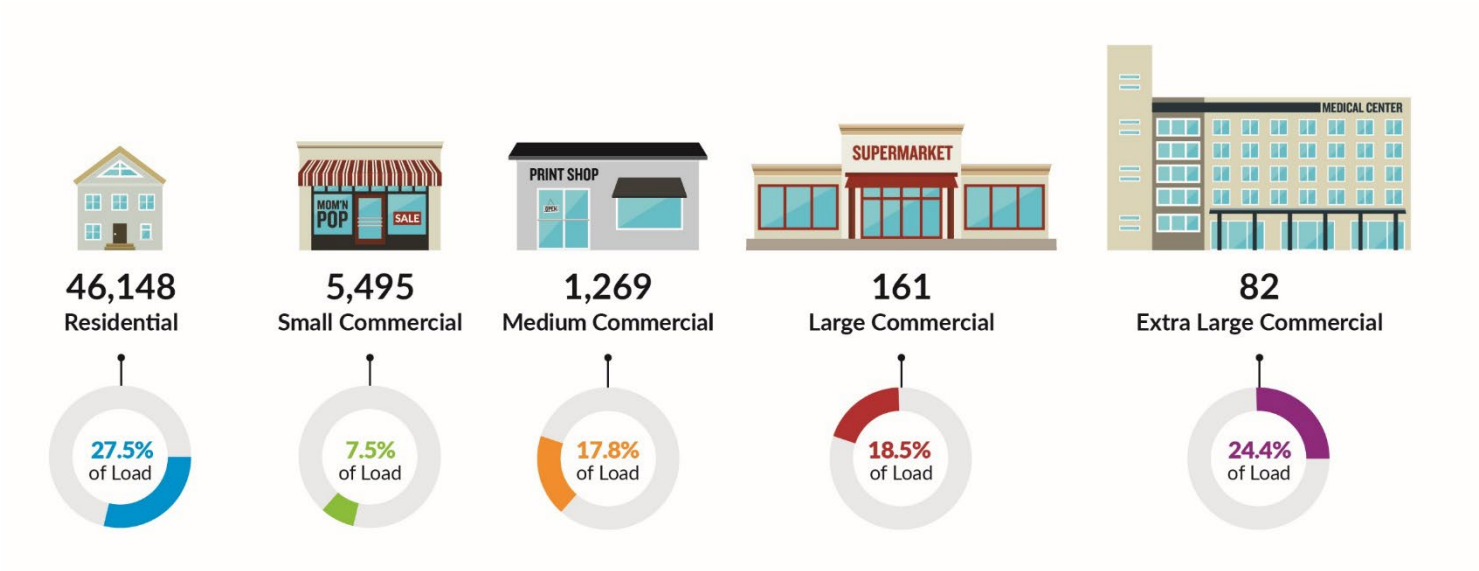
Portions of the context setting table in Exhibit A and this WMP Chapter 2 are updated on a three year cycle coinciding with comprehensive revisions and independent evaluations.

2.2 Service Territory

BWP electric system provides power to approximately 53,000 customers across 17 square miles within the city limits. Burbank is known as the media capital of the world and is home to two of the world's largest studios: Warner Bros. Entertainment and The Walt Disney Company. The city is also home to thousands of smaller businesses, many of whom moved to Burbank in the early 1990s after the aerospace industry contracted and more real estate became available. These businesses have come to expect cost-effective and reliable electrical service, as well as additional services such as fiber optic networking.

Burbank has a vibrant residential community, with a housing mix of about 18,750 single-family homes that range from post-World War II bungalows to two story view homes. There are about 28,850 multifamily homes. In total, BWP currently serves 46,148 residential, 5,495 small commercial, 1,269 medium commercial, 161 large commercial, and 82 extra-large customer accounts. These customer class counts are the 3-year average through 2022.

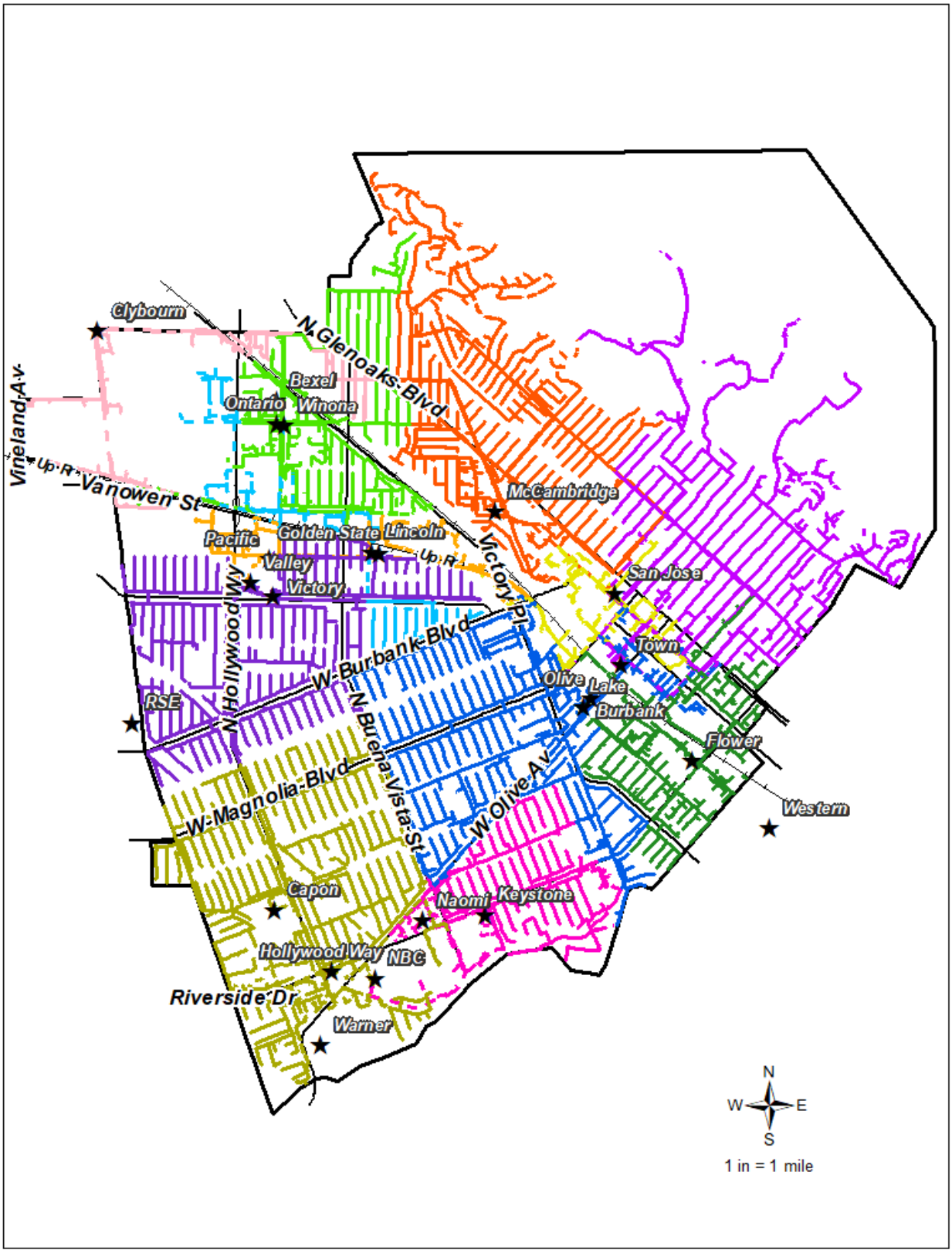
Figure 1 - BWP's electric load



2.3 Electric System

BWP supplies electrical service to its customers through a distribution network, which includes 12 distribution substations, 2 large customer substations, 4 switching stations, 44 miles of 34.5 kilovolts (kV) sub-transmission lines, 33 miles of 69kV transmission lines, 204 miles of overhead distribution lines, 132 miles of underground distribution lines, 584 miles of overhead secondary lines, 119 miles of underground secondary lines, 10,741 poles, and 5,825 transformers. BWP's all-time peak demand was 322 MW in 2017 but is forecast to remain flat for the next several years.

Figure 2 - BWP electric distribution system



Chapter 3. Preventative Strategies and Programs Overview

3.1 Preventative Strategies and Programs Overview

BWP's strategy for preventing wildfires resulting from its electrical infrastructure includes attention to fire prevention during ongoing operations and maintenance and during planning, design, and construction of new assets. The overarching goal is to minimize the risk of BWP facilities starting or contributing to the ignition of vegetation fires. The BWP fire prevention strategies and programs encompass four primary fire safety categories. Each of the fire safety categories below have several mitigation measures, many of which have already been implemented. Each of the mitigation measures is discussed in more detail in Section 5 of the WMP. Table 2 is a summary of BWP's program and strategies that support wildfire prevention and mitigation.

Table 2 - Overview of mitigation activities

Mitigation activities		Description	Timing*
Design and construction			
1	Deteriorated pole replacements	Replacement of poles that do not pass condition-based assessments to prevent pole failure.	B
2	Pole loading assessments & remediation	Structural assessment of poles to identify potential loading issues during high wind events. Replacement of poles that do not pass GO 95 wind loading design criteria to minimize the risk of pole failure.	A
3	Overloaded transformer replacements	Replacement of overhead transformers that do not meet loading criteria to prevent transformer failure.	B
4	Distribution construction standards improvements	Engineering study of distribution construction standard improvements, which could provide additional risk reduction in the Tier 2 HFTD. Analysis will be ongoing as new technologies come to market and best practices are refined.	B
5	Conventional fuse replacements	Replacement of conventional fuses with CALFIRE "Exempt" non-expulsive fuses in the Tier 2 HFTD. These fuses do not emit sparks during normal operation and reduce the risk of wildfire ignitions from fuse operations.	A
6	Covered Conductor / Conductor replacement	Installation of covered conductor in the highest risk areas in the Tier 2 HFTD significantly reduces the chance of contact with foreign objects. Replacing old bare copper significantly reduces the risk of wire-down events.	P

Mitigation activities		Description	Timing*
7	Falling conductor protection	Detection of a broken conductor causing a wire to fall down onto the ground, or "wires down", which would automatically de-energize a power line before the live wire hits the ground, thereby eliminating a potential ignition.	P
Inspection and maintenance			
8	Annual patrol inspection (GO 165)	Annual system patrol to inspect the condition of electrical assets to avoid faults, which could cause ignitions.	A
9	Vegetation management program	Annual vegetation maintenance and clearance from electrical lines to avoid vegetation contact in Tier 2 HFTD	A
10	Intrusive pole inspections	Condition based assessment of remaining pole strength to identify poles at risk of failure	A
11	Infrared inspections	Annual infrared patrol inspections allow for early detection of system defects or loading issues	B
Operational practices			
12	Block reclosing and increase relay sensitivity during RFW	Block reclosing and increase relay sensitivity on all feeder lines in the Tier 2 HFTD during RFW events	A
13	Line patrol after outage event during RFW	Patrol with physical inspection of tripped feeder lines in Tier 2 HFTD during RFW before re-energizing circuit	A
14	Ignition potential work practices during RFW	Except during an emergency, disallow work that may potentially produce an ignition source on all feeder lines in the Tier 2 HFTD during RFW events	A
Situational/conditional awareness			
15	Weather/fire monitoring	Conduct weather and fire monitoring via publicly available weather resources to monitor weather forecast and any potential extreme fire conditions	A
16	Geographic information system (GIS) applications	Implementation of Outage Management System (OMS), which uses GIS data and meter information to help BWP locate outages and decrease response time	A
17	Enhanced system monitoring	Implement a pilot program of pole mounted sensor packages to detect faults and anomalies in real time. See Section 5.4.3.	B

***A – Mitigation activity already implemented, B – Ongoing mitigation activity, P- Mitigation activity in planning**

Chapter 4. Risk Analysis and Risk Drivers

4.1 Risk Analysis Methods

During the development of its Wildfire Mitigation Plan in 2019, BWP retained a consultant (Dudek) to perform a fire risk assessment of its electrical system and equipment utilizing the following approaches:

- **Risk bowtie analysis**. Risk evaluation method to analyze all potential causes of a BWP-caused wildfire as well as the potential impacts of such an event.
- **Site fire environment assessment**. Assessment of natural and landscape environments around BWP facilities to determine the presence of potential threats or conditions that could become a BWP-caused wildfire threat.
- **Electrical equipment assessment**. Inventory of all BWP electrical assets within the Tier 2 HFTD and analysis of historical outage information.

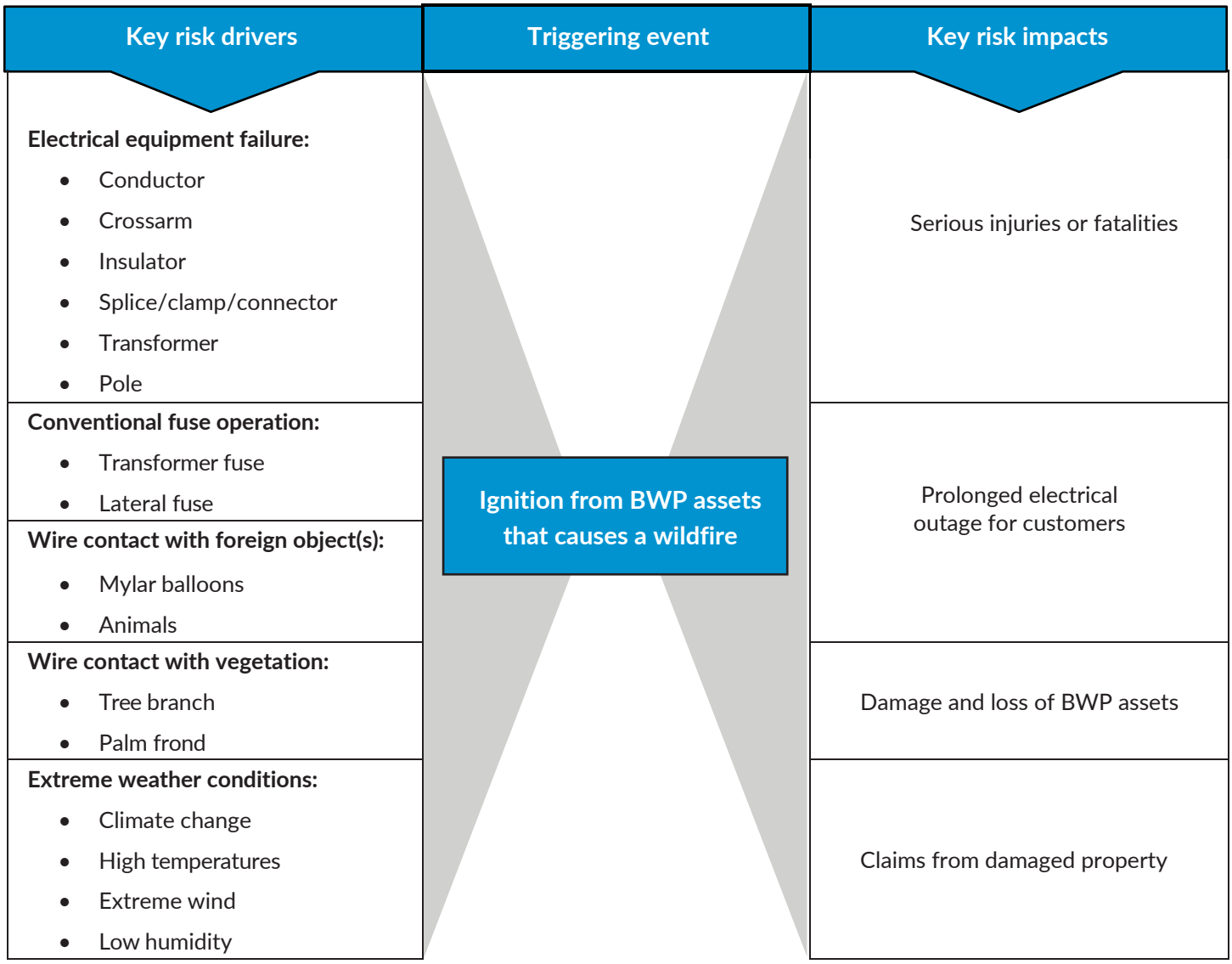
4.1.1 Hazard vs. risk discussion

The definition of a BWP risk of catastrophic wildfires (Wildfire Risk) is a wildfire event itself that is caused by BWP electrical facilities. However, it is important to distinguish between hazard (which the hazard maps categorize) and risk (which the hazard maps do not quantify). Hazard is a property of the potential fire environment or wildfire behavior for a given area (such as flame length, crown fire occurrence, and capacity to generate embers). A wildfire risk, however, relates to potential risk drivers (or triggers) that indicate if a risk event could occur, and do not reflect actual conditions or threatened conditions. Thus, even if there is potential high fire hazard in a given area (with expected high flame lengths, and aggressive wildfire), there may be a low risk of ignition from BWP electrical facilities.

4.2 Wildfire Risk Bowtie Analysis

The risk of a vegetation ignition and potential for an uncontrollable wildfire caused by BWP electrical facilities is related to the type of vegetation (fuel bed) within its vicinity, the local/regional weather patterns, and the potential for a failure of BWP's equipment. For example, areas that include uninterrupted, natural (unmaintained) vegetation present a risk of ignition from ongoing operational activities or equipment failures. When the area also includes weather conditions that result in periodic high wind and low humidity, the wildfire risk is significantly enhanced. Both of these weather conditions can occur in BWP's Tier 2 HFTD area. A bow tie analysis was conducted to identify these risk drivers as well as their potential resulting impacts. Figure 3 provides the risk bow tie diagram, which summarizes the assessment process.

Figure 3 - BWP's wildfire risk bowtie



4.2.1 Potential risk drivers

Risk drivers are important to identify because they are the primary ways in which BWP electrical facilities could result in a catastrophic wildfire. The center of the bow tie chart is the triggering event, which is an ignition caused by a BWP asset resulting in a catastrophic wildfire. During the wildfire threat assessment, five categories were identified as potential drivers for causing fire ignitions:

1. Electrical equipment failure
2. Conventional fuse operation
3. Wire contact with foreign object(s)
4. Wire contact with vegetation
5. Extreme weather conditions

It should be noted that the listed potential risk drivers are just an indication that a risk event could occur from a BWP asset, but actual conditions may differ. This type of analysis helps identify the types of mitigations necessary to minimize the risk of wildfire.

BWP's risk driver analysis identified and studied the five categories of drivers:

4.2.1.1 Electrical equipment failure

Electrical equipment failure is an inherent risk. Failure can occur for a variety of reasons such as manufacturer defects, loading conditions, or deterioration. Failure of electrical components, such as poles, crossarms, conductor, insulators, splices, connectors, or guy wires can result in a downed conductor (or "wire down") situation, which could lead to fire ignition. Electrical equipment such as transformers, voltage regulators, or capacitor banks can have internal shorts that can potentially be destructive and eject materials which could lead to fire ignition.

4.2.1.2 Conventional fuse operation

Fuses are devices that protect electrical lines and equipment during fault or overload conditions. Historically, BWP, 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.

4.2.1.3 Wire contact with a foreign object(s)

BWP constructs its overhead electrical lines in alignment with industry standards by installing bare wires spanned on top of insulators on wooden poles. These lines are constructed at a certain height above the ground and a certain distance from adjacent objects based on appropriate design criteria to prevent contact and faults. Unfortunately, foreign objects such as animals and mylar balloons can still occasionally come into contact with overhead electrical lines.

Animals and mylar balloons are highly conductive and could result in a fault when contact is made with overhead electric lines. Protective devices such as relays, circuit breakers, and fuses are set up to protect and isolate these types of situations. However, there is a time delay between the protective devices sensing the fault and operating to isolate the fault. Although this time delay is nearly instant (within fractions of a second), there is still enough time to cause an emission of sparks, molten metal, or burnt foreign objects, which could lead to a fire ignition. In a worst-case scenario, this could also cause the conductor to fail and land in an energized mode, causing a fire ignition.

Vehicles, that come in contact with an electrical pole or supporting guy wires can damage or break the pole. This could cause energized wires to break and fall to the ground igniting vegetation.

4.2.1.4 Wire contact with vegetation

Vegetation such as tree branches or palm fronds also pose a risk of coming into contact with overhead electrical lines. This contact can cause sparks and arcs, and in some cases can cause the vegetation to ignite into flames and drop to the ground. Vegetation contact could also lead to conductor failure, which could cause a fire ignition. In addition, trees that are near BWP's electrical lines could possibly uproot and fall onto an energized conductor, causing pole failures or wire down events that could cause fire ignition.

4.2.1.5 Extreme weather conditions

Climate change, along with extreme weather conditions, contribute to the risk of wildfires. Higher air temperatures and lower humidity cause trees and vegetation to dry out and create conditions that are ripe for fire ignition and expansion. Additionally, extreme winds can increase tree failures, vegetation contact with overhead electrical lines, and failure of BWP assets such as poles and conductors.

4.2.2 Key Risk Impacts

If one of the risk drivers listed above were to occur, resulting in a wildfire ignition caused by BWP electrical facilities, there could be potential consequences for BWP as presented on Figure 3.

The worst-case scenarios could include:

- Serious injuries or fatalities
- Prolonged electrical outage for customers
- Damage and loss of BWP assets
- Claims from damaged property

BWP is fully aware of the impacts that wildfires can have on the publicly owned utility, Burbank's populace, and local economy. As discussed in Section 5 of the WMP, BWP has established programs and implemented wildfire prevention strategies to create barriers or methods of reducing the likelihood of the risk driver events identified above from occurring and possibly leading to a catastrophic wildfire.

4.3 Site Fire Environment Assessment of BWP's Electric Service Territory

Due to its weather, topography, and native vegetation, the entire southern California area is at risk from wildland fires. The threat of wildfire exists throughout this region, including BWP's service territory. This threat is attributable to a variety of factors including extended drought, which has resulted in vulnerable vegetation for longer periods; climate change which may be driving the drought and vegetation drying; and population growth into the fire-prone areas, which results in the potential for increased ignitions and higher threat based on private and public assets that may be exposed to wildfires.

An assessment was made of the surrounding terrain, vegetative fuels, regional weather patterns, and regional fire history for the HFTD areas within BWP's service territory. **The factors evaluated were:**

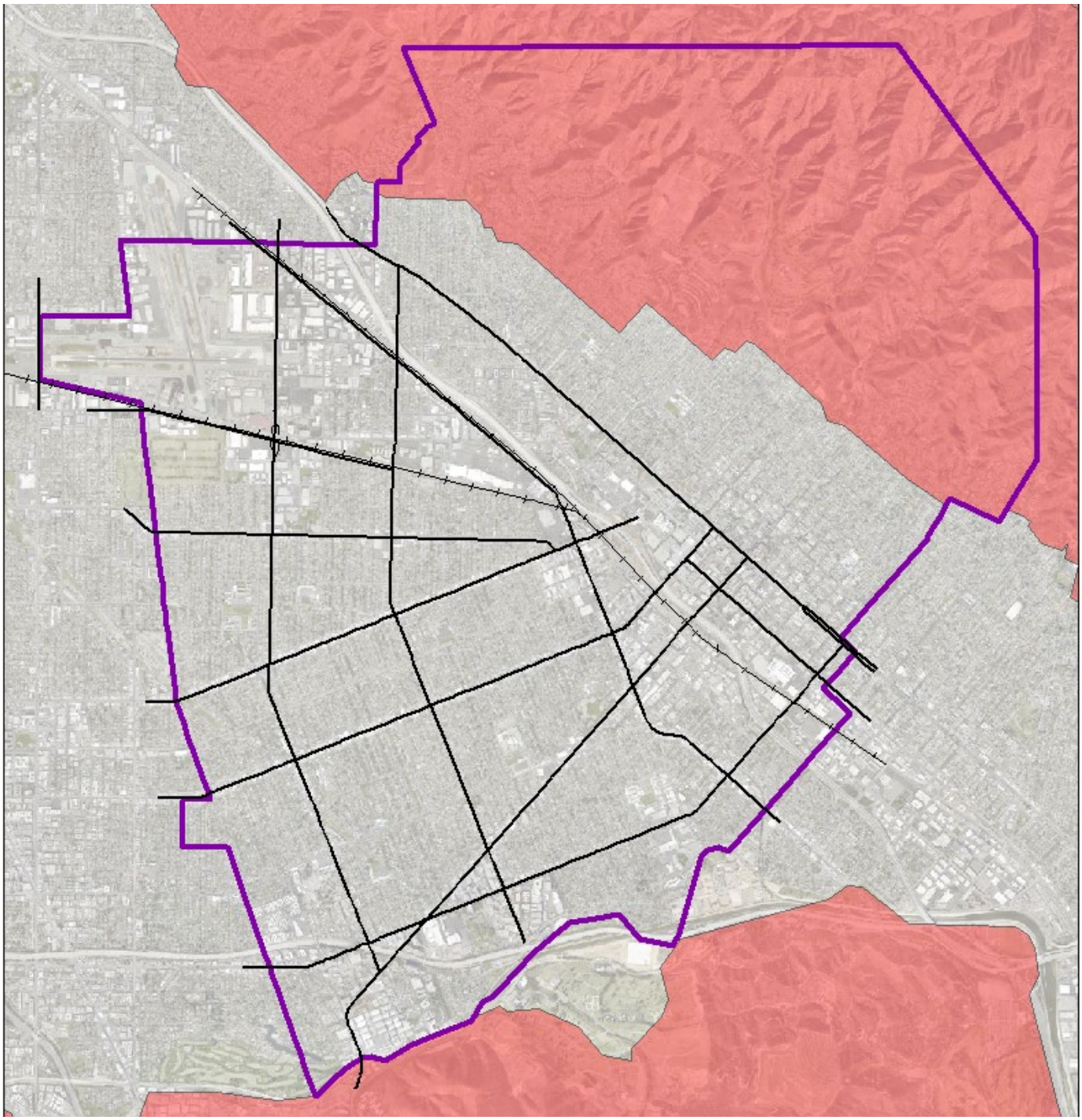
1. **Fire risks:** all activity periods (operation, maintenance, new project design, construction, materials, and methods)
2. **Site and facility ignition sources:** equipment, personnel, processes
3. **Fire prevention strategies:** design, maintenance, inspections, monitoring
4. **Best management practices** for hardening of electrical system
5. **Fire agency coordination:** Firefighting and emergency response technical evaluation, training, and coordination

4.3.1 High Fire Threat District

BWP directly participated in the development of the California Public Utilities Commission' s (CPUC) Fire- Threat

Map which designates high-fire threat districts (HFTDs) throughout the State of California. The CPUC Fire-Threat boundary map ranks HFTDs based on the need to increase infrastructure resiliency to mitigate the wildfire threat posed by electric infrastructure. The CPUC Fire-Threat Map is comprised of Tier 2 HFTDs (elevated risk of potential impacts to people and property) and Tier 3 HFTDs (extreme risk of potential impacts to people and property).

Figure 4 - BWP's Tier 2 High Fire Threat District



In the map development process, BWP served as a territory lead and worked with local fire & government officials to identify the areas of BWP's service territory that are Tier 2 or Tier 3 HFTDs. It was determined through the development process and affirmed by both a peer review and a team of independent nationwide experts led by the California Department of Forestry and Fire Protection (CAL FIRE), that a portion of BWP's service territory is situated within a Tier 2 HFTD. Additionally, no portion of BWP's service territory falls within a Tier 3 HFTD.

For a summary of information regarding BWP's service territory in the Tier 2 HFTD, please refer to Exhibit A, Context-Setting Information Table.

It is BWPs understanding that CAL FIRE will be developing a revised HFTD boundary will likely cause the boundary to be extended. This would mean that a future HFTD boundary would include additional urban BWP Electric assets, especially in the northern portion of the city. A preliminary review of electric assets in this area shows they are all urban, with the majority over irrigated landscaping. The risk of the existing HFTD as adopted remains a priority and the primary focus for mitigation. A new Fire Hazard Severity Zone (FHSZ) map was released on March 24, 2025. The HFTD map is generally based on the FHSZ map. If a revised HFTD map is adopted BWP will provide an update in a future WMP.

4.3.2 Wildfire-Threat Area Site Evaluation

BWP staff provided Wildfire SME (Dudek) with a guided tour on May 9, 2019, of the electric distribution system within Tier 2 HFTD area. The wildfire experts evaluated existing site conditions (e.g., topography, vegetation, and fuel loading) and whether or not there is the presence of potential risk drivers or conditions that could become a BWP-caused wildfire threat. Based on Dudek's field assessment and BWP staff interviews, the following observations were recorded for the distribution system in the Tier 2 HFTD area.

Fire environment observations

1. Most of the Tier 2 HFTD Areas are hilly or mountainous and steeper slopes exacerbate fire spreading, which also impedes fire suppression efforts. In worst-case scenarios, fires on the steep slopes of the Verdugo Mountains could burn well into the heavily developed areas of Burbank.

2. Wildland fires are relatively common in the Verdugo Mountains and have historically burned into the wildland-urban interface or Tier 2 HFTD areas of Burbank. The most recent fire, La Tuna fire (2017), consumed large portions of the south face of the Verdugo range within the City limits. The La Tuna fire significantly changed the fuel beds from chaparral-shrubby species to non-native grasses and other weedy species, especially north to northwest of overhead feeder line T-14.

3. Fuels in Sunset Canyon, off Country Club Drive, remain dense and pose a threat to the residents. Defensible space has been provided around some of the residences along Country Club Drive.

4. The level of fire hazard in wildfire-threat Tier 2 HFTD areas prone to wildland fires is also greatly increased during periods when weather conditions of high temperatures, low humidity, and high winds (e.g., RFW days) would accelerate the spread of a wildland fire and make containment difficult. "90% of the land area burned in California occurs during wildfires that ignite on the 10% of days that meet Red Flag Warning

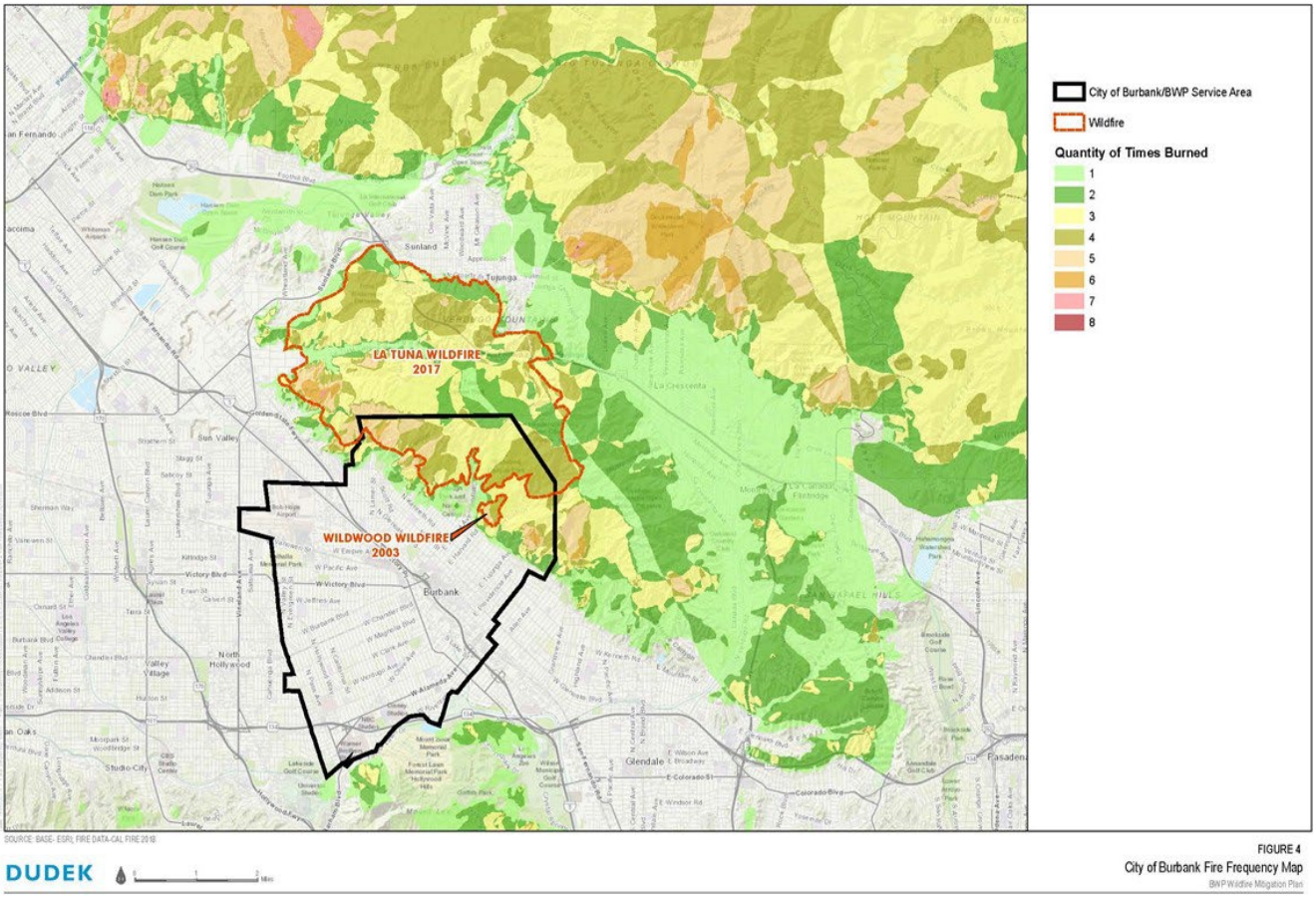
conditions while 10% of the land area burns occurs during the 90% of fires that occur during typical weather conditions."

5. BWP's Tier 2 HFTD area includes brush and grass-covered areas of significant topographic relief in the Verdugo Mountain range that is susceptible to wildland fires. The most recent wildfire (La Tuna fire) in BWP's service territory occurred in September 2017.

6. Although large areas of the Verdugo Mountains are undeveloped, there are many single-family residential neighborhoods that have been developed in the canyons, and at the base or edge of the hillsides, within the Tier 2 HFTD area. In these areas, the wildfire hazard is of significant concern. This is especially true for those older residential areas in the canyons that were built in the 1960's to 1980's before current ignition resistant fire and building codes.

7. Some of the older residential areas are typically reached by narrow roads that do not meet the current fire safety standards for access and egress of fire apparatus. Many roads in the canyons are also dead-end roads that are too long, do not have appropriate turnarounds at their end, and have no secondary access. Of the roads not meeting dead-end road standards, Country Club Drive poses by far the most serious concern regarding accessibility, as this is the only way out during a wildfire for the residents on this street.

Figure 5 - Historical Fires in Burbank



4.3.3 Evaluation of Higher Fire-Threat Areas

A component of this WMP is the evaluation of the area's fire threat 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 designation. BWP will continue to evaluate changes to the Tier 2 HFTD in future WMPs based upon new information that is obtained during the implementation and evaluation of BWP's WMP.

4.4 Electrical Facility Assessment

Figure 6 presents the portion of BWP's service territory (e.g., feeder lines and equipment) within CPUC fire-threat areas. As illustrated in Figure 6, BWP's electrical system is located within both Tier 2 HFTDs, and areas not considered within the HFTD (referred to as outside HFTD in this WMP). Table 3 includes the breakdown of BWP's electric system that falls within the Tier 2 HFTD. The facility counts presented in this section are updated on a three year cycle coinciding with comprehensive revisions and independent evaluations.

Table 3 - Breakdown of BWP's Electrical Assets Within the Tier 2 HFTD

BWP asset	Total assets in entire system	Total assets within Tier 2 HFTD	Percent of total
Overhead distribution wire	204 miles	11 miles	5.4%
Underground distribution lines	132 miles	14 miles	10.6%
Poles	10,741	641	6.0%
Overhead transformers	4,648	192	4.1%
Overhead conventional transformer fuses	4,612	156	3.3%
Overhead conventional lateral and riser fuses	2,060	72[1]	3.5%
Overhead non-expulsive transformer fuses	36	36	100%
Overhead non-expulsive lateral and riser fuses	2	2	100%

As shown in Table 3, approximately five percent of BWP's total 204 miles of overhead wires are located within the Tier 2 HFTD area. In comparison, approximately 11 percent of the total underground lines occur within the Tier 2 HFTD area.

See section 5.1.5 for update on conventional fuse replacement with non-expulsive fuses.

[1] This number was updated in 2023 due to an updated inventory that captured some additional 3-phase fuse banks that were counted as 1 fuse unit

Figure 6 - Electrical Facilities within the Tier 2 HFTD

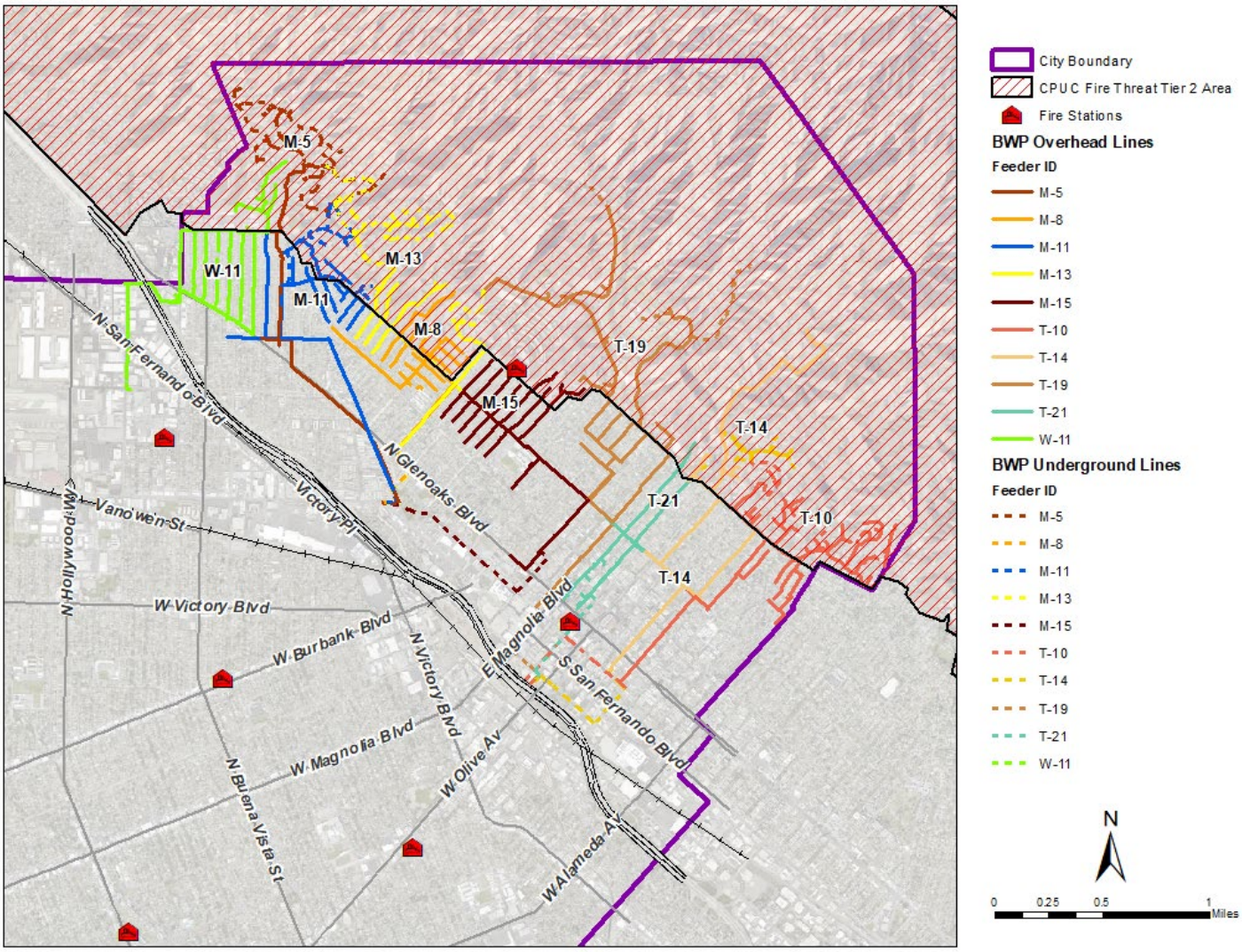


Table 4 provides a detailed inventory of BWP assets within Tier 2 HFTD area organized by distribution feeder circuit. As indicated, there is a total of approximately 25 miles of distribution lines in Tier 2 HFTD, with 14 miles underground lines and 11 miles overhead wire. The overhead wire and related components are the focus of this WMP as they represent the primary source of potential wildfire ignitions. Approximately 56 percent of BWP-owned electrical lines in the Tier 2 HFTD area are currently underground, which significantly reduces the threat of fire ignition.

Table 4 - Inventory of BWP Assets in the Tier 2 HFTD by Circuit

Electric "feeder"[1]	Voltage (kV)	No. of miles UG lines	No. of miles OH lines	No. of poles	No. of OH transformers	No. of OH conventional transformer fuses[2]	No. of conventional lateral fuses[2]
M-5	4.16	3.9	0.4	18	11	11	0
M-8	4.16	0.0	1.23	80	20	20	8
M-11	4.16	1.83	0.45	41	10	10	7
M-13	4.16	4.58	0.8	48	11	11	4
M-15	4.16	0.0	0.46	25	9	9	0
T-10	4.16	1.2	2.3	167	54	54	12
T-14	4.16	1.54	1.53	83	25	25	3
T-19	4.16	1.0	2.91	134	37	37	9
T-21	4.16	0.0	0.08	14	2	2	1
W-11	4.16	0.0	0.9	33	13	13	1
Total		**14.05**	**11.06**	**641**	**192**	**192**	**45**

[1] Feeder lines are identified by the substation within their circuit. W= Winona Substation; M=McCambridge Substation; and T= Town Substation.

[2] The fuse counts for T-14 and T-19 have not been reduced for the non-expulsive fuses installed on these feeders, an exact accounting of non-expulsive fuse deployments by feeder will be provided once the deployment has been completed.

BWP analyzed outage records for energized circuits within wildfire-threat areas. The analysis focused on recent outage data between January 2005 and December 2022 that was obtained from BWP. These records provide documentation about the frequency and cause of outages and represent the most accurate depiction of how often potential ignitions may occur within BWP's Tier 2 HFTD. The electrical equipment risk assessment examined five categories: equipment failure, foreign object contact, vegetation contact, wire down events, and other or unspecified events. Table 5 presents the results of the analysis.

Table 5 - Electrical Equipment Risk Drivers Based on Historical Events

Wildfire risk event	Number of occurrences (by circuit)											
	M-5	M-8	M-11	M-13	M-15	T-10	T-14	T-19	T-21	W-11	Count	Percent
Equipment failure												
Transformer failure	1	1		1							3	5%
Conductor failure (wires down)	3						2	8	1		14	22%
										Total	**17**	**26%**
Conventional fuse operation												
Transformer fuse	1	3	1	1	4	4		1		3	18	28%
Lateral fuse		2			1	3		3			9	14%
										Total	**27**	**42%**
Wire contact with foreign object(s)												
Wire contact - mylar balloons					1			4	1		6	9%
										Total	**6**	**9%**
Wire contact with vegetation												
Wire contact - vegetation	1			2		1	2	4			10	15%
										Total	**10**	**15%**
Other												
Other	**1**		1				**1**	**1**		**1**	5	8%
										Total	**5**	**8%**
Total events per feeder line	**7**	**6**	**2**	**4**	**6**	**8**	**5**	**21**	**2**	**4**	**65**	

Source: BWP outage data between 1/1/2005 and 12/31/2022, percentages are rounded

The risk driver events for the Tier 2 HFTD in 2024 are in Section 7.2.2. Table 14

The risk event frequency for the Tier 2 HFTD area was determined to be 65 events over 18 years for 25 circuit miles of distribution line, with a driver frequency as follows:

- **Equipment failure (27%, 17 potential ignitions).** Failure of transformers and overhead copper conductor wire down events that could have resulted in fire ignition.
- **Conventional fuse operation (42%, 27 potential ignitions).** Operation of a transformer or lateral fuse for a faulted condition that resulted in sparks that could have led to fire ignition.
- **Wire contact with foreign object(s) (9%, 6 potential ignitions):** Mylar balloons or vehicles that could contact with conductors, resulting in ignition.
- **Wire contact with vegetation (16%, 10 potential ignitions):** Tree, tree limb, palm fronds or other vegetation contact with conductors that could result in ignition.
- **Other (8%, 5 potential ignition):** Situations where BWP was unable to determine the cause and location of the outage. These outages are included because it is unknown whether these outages occurred on a portion of the circuit in the Tier 2 HFTD BWP has verified that these outages were not caused by an overload condition and suspects that these outages are likely caused by a temporary or instantaneous wire contact with a foreign object or vegetation that has vaporized or was not discovered during a patrol of the overhead distribution line after the outage.

The risk driver events for the Tier 2 HFTD in 2024 are in Section 7.2.2. Table 14

4.5 Prioritization of Wildfire Risks

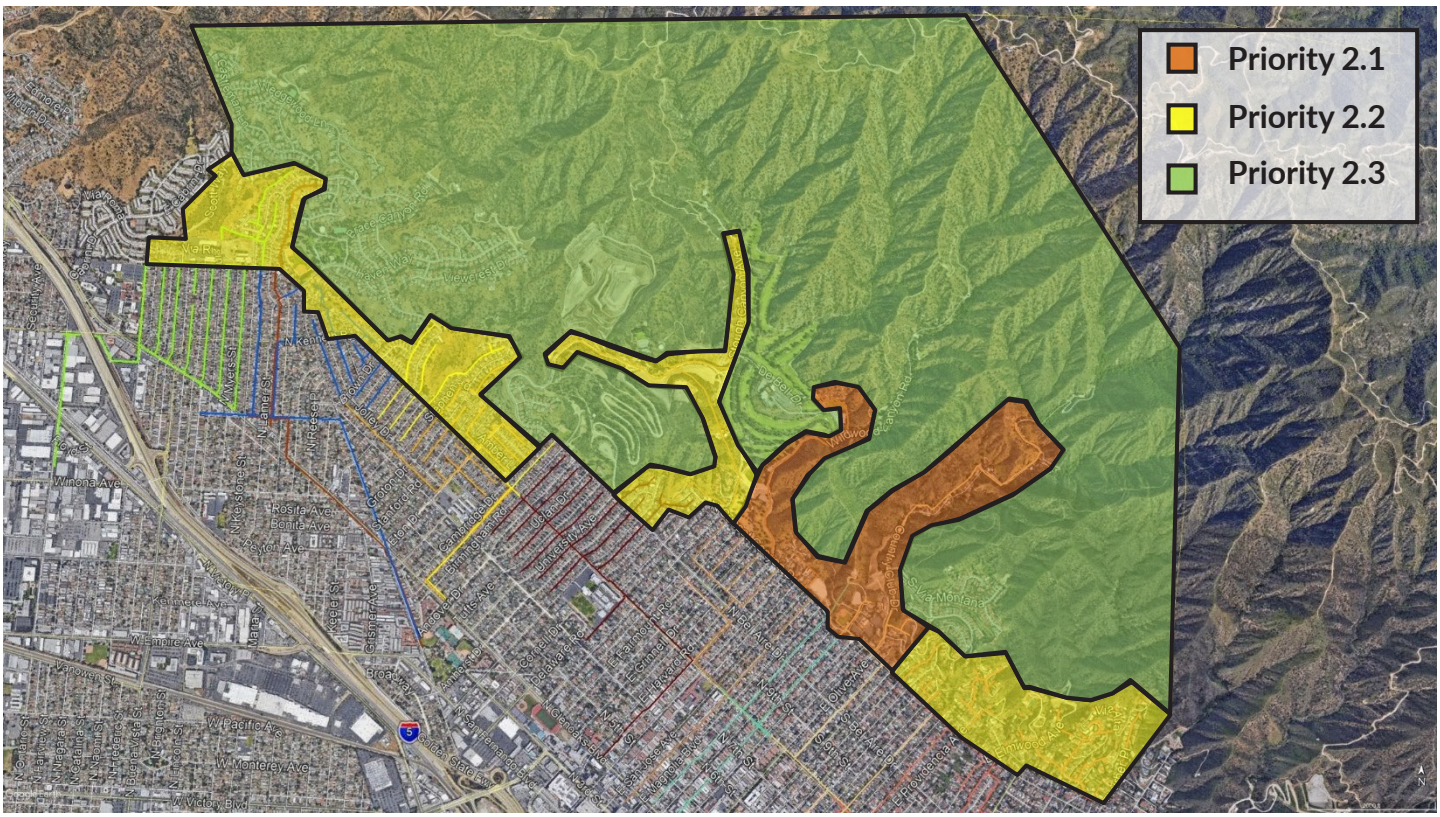
Based on the findings of this risk assessment, Sunset Canyon (the upper road segment of Country Club Drive) poses the greatest risk of wildfire within Burbank's Tier 2 HFTD. This is due to the continuity of vegetation within the canyon and density of tree canopies surrounding the residential homes.

Prioritization of the Tier 2 HFTD mitigation efforts is broken down into three sub-categories as follows: Priority level 2.1 – Tier 2 HFTD with dense vegetation adjacent to overhead electrical facilities

Priority level 2.2 – Tier 2 HFTD with low density vegetation underneath overhead electrical facilities

Priority level 2.3 – Tier 2 HFTD with no overhead electrical facilities

Figure 7 - Wildfire Risk Prioritization Within the Tier 2 HFTD



Risk Modeling for Prioritization and Tracking

Although commercial risk modeling tools have become commonplace for utilities with significant assets in HFTD areas using AI to categorize risk, BWPs limited asset quantities made these commercial tools less viable. Instead, BWP developed an internal risk model, and in 2022 and 2023 created a detailed risk inventory of all poles in the HFTD. This model took into account weighted risk scores for pole type, location, vegetation, fire access, as well as risk drivers on the pole. Using the model as a baseline re-confirmed BWPs prior assessment that the 2.1 priority

area remains the highest priority, with an average risk around 40% higher than the BWP HFTD average. As more mitigation measures are implemented, BWP expects to see a corresponding reduction in risk in the mitigated areas and will continue to track this with the internal model.

4.6 Mitigation Activities That Address Risk Drivers

Table 6 below summarizes each mitigation activity along with risk driver that it addresses. Table 2 provides an overview and Section 5 goes into more detail for each mitigation activity.

Table 6 - Mitigation activities that address risk drivers

Mitigation activity		Risk driver addressed			
		Electrical equipment failure	Conventional fuse operation	Wire contact with foreign object	Wire contact with vegetation
1	Deteriorated pole replacements	X		X	X
2	Pole loading assessments & Remediation	X		X	X
3	Overloaded transformer Replacements	X	X		
4	Distribution construction standards improvements		X	X	X
5	Conventional fuse replacements		X		
6	Covered Conductor / Conductor replacement	X		X	X
7	Falling conductor protection	X		X	X
8	Annual patrol inspection (GO 165)	X		X	X
9	Vegetation management program		X		X
10	Intrusive pole inspections	X		X	X
11	Infrared inspections	X			
12	Block reclosing and increase relay sensitivity during RFW		X	X	X
13	Line patrol after outage event during RFW	X	X	X	X
14	Ignition potential work practices during RFW		X	X	X

4.7 Review of Risk Drivers and Analysis

BWP works with POU associations to discuss unidentified wildfire risk drivers and mitigation measures that could address these risks. BWP participates in ongoing industry discussions regarding wildfire risks and responses to evaluate potential opportunities for improvement. BWP also continuously works with industry suppliers to identify and review new solutions to improve grid hardening and monitoring. New solutions that may improve BWP's system and monitoring are piloted as discussed in section 5.1.

In 2023 BWP performed a comprehensive review of Chapter 4 – Risk analysis and risk drivers as part of the comprehensive 3-year WMP update. This review included updates, as warranted, to facility assessment and counts, prioritization, risk categorization and tracking, and mitigation activities. BWP also coordinated with the Burbank Fire Department for a review of the wildfire-threat area site evaluation and no significant changes in the area site evaluation were identified. BWP will continue to monitor and respond to changing risks as they are identified. This section will continue to be updated on a three-year cycle coinciding with comprehensive revisions and independent evaluations.

Chapter 5. Wildfire Prevention Strategies And Programs

This section describes the strategies and programs BWP has implemented to mitigate the threat of electrical infrastructure-related wildfires within Tier 2 HFTD area of its service territory. As previously mentioned, the prevention strategies and programs are developed to address four primary fire safety categories:

1. Facility design and construction
2. Inspection and maintenance
3. Operational practices
4. Situational/condition awareness

5.1 Facility Design and Construction

5.1.1 Deteriorated Pole Replacements

Because pole failure could result in a wires-down event and potential fire ignition, it is imperative to replace any poles that do not pass condition-based assessments. BWP prioritizes and schedules the replacement of deteriorated poles based on data obtained from intrusive pole inspections. Each year, all priority 1 and 2.1 poles are replaced per the timelines in Table 9 of Section 5.2.3.

Since 2018, BWP has replaced 51 deteriorated poles in our Tier 2 HFTD area, which is about 8% of the poles in our Tier 2 HFTD. In 2024, BWP did not have any priority 1, 2.1, or 2.2 poles that required replacement.

As described further in Section 5.1.4, BWP will continue replacing additional poles with composite poles in the Priority 2.1 area of its Tier 2 HFTD where the benefits of a composite pole (I.e., increased strength, fire resistance, and ease of installation in difficult terrain) are deemed appropriate by BWP.

5.1.2 Pole Loading Assessments & Remediation

Wind Loading is also an important factor in the prevention of pole failure. BWP designs poles to meet or exceed the wind loading criteria set in General Order 95 (GO 95) in order to minimize the chance of pole failure during heavy winds. BWP will perform this loading analysis on all of the poles located within the Tier 2 HFTD. Any poles that do not pass the wind loading criteria are scheduled for replacement. In some cases, poles may only require additional guying reinforcement to meet wind loading criteria.

By the end of 2020, BWP completed pole loading analysis of all poles inside BWP's Priority 2.1 Zone (see Figure

7) having dense vegetation near overhead facilities. BWP will continue to perform pole loading analysis on all poles requiring replacement, during the design phase of each replacement.

5.1.3 Overloaded Transformer Replacements

Distribution transformers are another identified risk because failure could lead to the expulsion of sparks or material that could cause a fire ignition. Ensuring that transformers are not excessively loaded past their capacity can help mitigate failures due to internal faults. Each year BWP uses advanced data analytics to measure the loading levels of every transformer in the electric system. Any transformers that exceed the loading criteria of 175% are scheduled for replacement.

Excessive transformer loading can also lead to transformer fuse operations occurring during high-heat days. If the transformer is fused with a conventional fuse, fuse operation could expel sparks that could lead to fire ignition. As discussed in section 5.1.5, all conventional transformer fuses will be replaced with CALFIRE "Exempt" fuses as soon as operationally feasible. While this will eliminate potential ignition events from conventional transformer fuse operations, excessive transformer loading will still have an ignition risk from transformer equipment failure. Therefore, in the Tier 2 HFTD, BWP uses a more conservative loading criteria of 150% as a threshold for proactive transformer replacement.

In 2024, 2 transformers in the Tier 2 HFTD exceeded the 150% loading threshold. There were 2 transformer failures in the Tier 2 HFTD. In the near-term supply chain constraints may limit BWPs ability to perform proactive replacements, but BWP will continue to prioritize the HFTD mitigation where feasible.

5.1.4 Distribution Construction Standard Improvements

As an ongoing fire prevention strategy, BWP will continuously evaluate distribution construction standard improvements that could reduce the risk of ignitions and harden its electric system in the Tier 2 HFTD. This will include components of the electric system such as fuses, overhead conductors, and detection & isolation technology. Each electrical facility location within the Tier 2 HFTD will be analyzed to determine where material upgrades or the installation of new technology would be appropriate, as some locations may not have vegetation present. Ongoing evaluation is necessary to study and implement new technologies and new developments in industry best practices.

BWP has completed some preliminary efforts toward its engineering study of distribution construction standard improvements, including the following:

- Field reclosers: BWP completed an initial evaluation of field recloser technology in fiscal year 2021/2022. This evaluation analyzed the use of field reclosers in conjunction with falling conductor detection to allow for added isolation, reduced customer impact, and increased sensitivity settings. BWP determined that other mitigation activities could have a higher risk reduction-to-cost ratio. While BWP expected to make a final determination regarding field reclosers in the fiscal year 2022/2023, this final determination was postponed in order to consider the implementation of a new falling conductor technology in lieu of or conjunction with a field recloser.

- Falling conductor protection: Based on its initial review of falling conductor protection during the fiscal year 2022/2023, BWP has decided to implement a pilot project with falling conductor protection on the Town-14 overhead circuit in the HFTD during the fiscal year 2025/2026. Performing this pilot project in 2025/2026 will allow BWP sufficient time to perform its final evaluation of falling conductor technologies and to obtain the necessary budget approvals. Installation of falling conductor protection would allow BWP to detect a broken conductor and automatically de-energize a power line before the live wire hits the ground, thereby eliminating a potential ignition.
- Composite poles: BWP installed two modular composite poles in the Tier 2 HFTD as a pilot project in 2019. These poles, which are manufactured by Highland Composites, are constructed in 3 modular sections, which allow the field crews to assemble the pole in place. Many poles in the Tier 2 HFTD are very difficult to access during replacement due to the existing hillside terrain. This modularity allows for a significant gain in crew efficiency and safety during construction. Additional benefits of composite poles include increased strength, greater fire resistance, greater longevity, and a reduction in maintenance and inspection costs. The pilot was successful; however, Highland Composite ceased composite pole production. Later in the fiscal year 2021/2022, BWP completed an additional pilot of 5 composite pole installations in the fiscal year 2021/2022 using a different manufacturer – RS Poles. After this pilot, BWP has made a final determination to continue replacing poles with composite poles in the Priority 2.1 area of its Tier 2 HFTD, where the benefits of a composite pole (I.e., increased strength, fire resistance, and ease of installation in difficult terrain) are deemed appropriate by BWP.
- Replacement of #6 bare copper conductor in the Tier 2 HFTD: After an analysis of outage events in the Tier 2 HFTD, BWP has found that #6 bare copper conductor has been present in all “wires down” events. For new construction, BWP uses #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 help reduce “wires down” events in the Tier 2 HFTD. BWP also evaluated the use of ACSR covered conductor as a replacement option. The covered conductor has a layer of insulation around the main high-strength ACSR conductor. This insulation would prevent outages (and risk driver events) from wire-to-wire contact and wire contact with foreign objects or vegetation. BWP completed a full analysis of covered conductor options and has selected a specific vendor product for its covered conductor standard. As funding and resources allow, BWP intends to deploy this covered conductor in the HFTD to replace deteriorated wire where appropriate.
- Non-oil filled pole mounted transformers: BWP is piloting the installation of non-oil filled pole mounted transformers as a fire risk reduction strategy. Once the pilot is complete a decision on the use of non-oil filled transformers in the Tier 2 HFTD will be made. An initial pilot installation of 3 dry-type overhead transformers was completed in 2023, with evaluation of the technology ongoing.
- Pole mounted sensor packages: In 2022 BWP installed a pilot of pole mounted sensor packages on 50 poles on T-14 circuit in the Tier 2 HFTD to detect distribution grid faults and continuously monitor equipment degradation or anomalies. The pilot was successful and initial access to the devices was given to the energy control center to increase visibility into distribution assets. Further device installations are planned to cover all BWP poles with risk driver facilities attached in the HFTD.

5.1.5 Conventional Fuse Replacements

Conventional fuses are used in the electric system to protect transformers and wires from damage during fault

conditions. These conventional fuses are expulsive in nature and may generate electrical arcs, sparks or hot material during normal operation. Conventional fuse operations account for 47% of BWP's risk driver events. To further reduce the risk of wildfire, BWP has created a program to replace all conventional fuses in the Tier 2 HFTD with CALFIRE "Exempt" fuses as determined in the "California Power Line Fire Prevention Field Guide." These "Exempt" 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.

By June 2022, BWP planned to replace all conventional fuses with CALFIRE "Exempt" fuses in the Priority 2.1 zone of the Tier 2 HFTD, however the completion date was extended due to supply chain constraints.. BWP was able to complete all 38 fuses in the Priority 2.1 zone by October 2023, and 78 fuses in the Priority 2.2 zone by November 2024. As soon as operationally feasible, BWP intends to replace the remaining transformer fuses and lateral fuses in the Tier 2 HFTD, although ongoing supply chain constraints continue to pose a risk to completing this work. Despite supply challenges causing delays to these replacements, all received fuses are deployed to the field as soon as operationally practical.

5.2 Inspection and Maintenance

5.2.1 Annual Patrol Inspection (GO 165)

In general, BWP performs electrical infrastructure patrol inspections to inspect each component of the electrical system to check that no obvious abnormalities exist to the extent possible. BWP performs these inspections on a cycle that meets or exceeds the timeframes given in General Order 165 (GO 165). During these inspections, problems are identified, prioritized, and corrected. Table 7 below summarizes the inspection cycles.

Table 7 - Distribution inspection cycles (maximum interval in years)

Component	Patrol Inspection	Detailed Inspection	Intrusive Inspection
Overhead Component Inspection	1	5	
Padmounted Transformer	1	5	
Padmounted Switch	1	5	
Padmounted Regulator/Capacitor	1	5	
Component	**Patrol Inspection**	**Detailed Inspection**	**Intrusive Inspection**
Wood Poles over 15 years old which have not been subject to intrusive inspection	1		10*
Wood Poles less than 15 years old	1		
Wood poles which have passed intrusive inspection	1		20

*Within 10 years or prior to 25 years of age

As noted in Table 13 of its Performance Metrics, BWP completed 100% of its annual patrol inspections for poles within the Tier 2 HFTD this annual cycle. Additionally, BWP is implementing digital inspection tools for tracking and record keeping detailed inspections in the HFTD.

5.2.2 Vegetation Management Program

BWP meets or exceeds the minimum industry standard vegetation management practices. For all electrical facilities, BWP 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. BWP will use specific knowledge of growing conditions and tree species to determine the appropriate time of trim clearance in each circumstance. Table 8 below summarizes BWP's vegetation clearances.

Table 8 - Vegetation Clearances

	Outside Tier 2 HFTD	Within Tier 2 HFTD
Minimum clearance at all times between 4kV overhead lines and vegetation	18 inches	4 feet
At time of trim, minimum trimming clearance between 4kV overhead lines and vegetation	4 feet	12 feet

BWP performs routine vegetation management, such as pruning and removal, on an annual basis in the Tier 2 HFTD. Each year, field patrols are performed to inspect tree and conductor clearances and to identify any hazard trees. Areas for vegetation pruning and removal are targeted based on the results of these patrols. BWP hires contracted line clearance tree trimming crews to trim vegetation near its electrical lines. The tree crews will trim a minimum of 12 feet of clearance. BWP's tree trimming contractors are specialists, supervised by a certified arborist. The tree crews are knowledgeable about work near energized electric lines and about trees, growth rates, and pruning methods that maintain tree health. BWP has reviewed and patrolled to verify that the clearances were established by the contract crews with detailed spot checks.

As noted in Table 13 of its performance metrics, BWP completed 100% of its vegetation management inspections and trimming for poles within the Tier 2 HFTD this annual cycle. Over the past year, BWP and its tree-trimming contractor performed an extensive line clearance work as part of its vegetation management program as detailed in Table 13.

5.2.3 Intrusive Pole Inspections

BWP performs intrusive inspections on all poles in the electric system according to the cycle intervals in Table 7. The inspections provide information on the amount of rot and decay inside each pole to measure the amount of remaining strength left in the pole before replacement is necessary. Each pole is given a rating that determines

the priority and schedule of replacement. Table 9 summarizes the priority system.

Table 9 - Priority Level of Deteriorated Poles Based on Intrusive Inspections

Priority level	Recommended action
1	Immediate replacement
2.1	Replace within 1 year
2.2	Replace within 3 years
2.3	Replace within 5 years
3	Replace when practical

All intrusive pole inspections were completed for the Tier 2 HFTD by the 2nd quarter of 2019 and prioritized within the time frames noted above. There were no priority 1, 2.1, 2.2 poles replaced in 2024.

5.3 Operational Practices

5.3.1 Block Reclosing and Increase Relay Sensitivity During RFW

BWP has reclosing capabilities on all substation circuit breakers in the electrical system. Under normal operation, once a fault is detected the circuit will first open and will attempt to reclose the circuit to test if the fault condition still exists. The circuit will make two total attempts to reclose the circuit and will remain open and locked out if unsuccessful. In the Tier 2 HFTD, each attempt to reclose the circuit could cause a spark if fault conditions are still present. This could potentially lead to an ignition of vegetation. For this reason, BWP enacted an operating procedure to block reclosing capabilities on all circuits in the Tier 2 HFTD during RFW conditions to prevent any potential for vegetation ignitions. Additionally, more sensitive, quicker acting relay settings are employed during RFW conditions to increase the chance of detecting and isolating a fault.

In 2024 there were 3 RFW events totaling 3 days. BWP blocked reclosing and enabled more sensitive relay settings on RFW alert days for all circuits that extend into the Tier 2 HFTD.

5.3.2 Line Patrol After Outage Event During RFW

If a circuit within a Tier 2 HFTD sees a fault during RFW conditions, field crews will perform a patrol of the entire circuit to locate the cause of the fault. The ECC dispatcher will wait for confirmation of the patrol inspection to ensure no fire ignition risks are present when the circuit is re-energized.

The following is a summary of the outages that occurred on Tier 2 HFTD circuits during RFW days:

- No outages occurred during RFW days.

5.3.3 Ignition Potential Work Practices During RFW

BWP enhanced the safety of its work practices associated with Ignition Potential Work (IPW) within the Tier 2 HFTD during RFW conditions. IPW is any work having the potential to produce an ignition source to areas adjacent to the work location. BWP's ECC has issued a procedure to notify BWP construction and maintenance crews when a RFW condition exists.

During the RFW, IPW within the Tier 2 HFTD shall not be performed except in response to an emergency. In addition, emergency IPW in the Tier 2 HFTD shall be performed with strict adherence to all required safety precautions including the following:

- A pre-job briefing to review the pre-job briefing form, work plan, and fire safety measures.
- Removal, covering, or wetting of all combustible fuels below or adjacent to the work area as much as practical.
- Readily accessible fire extinguisher with a minimum rating of 3-A-40 BC, a 5-gallon bucket of water, sand or clean dirt, and a round point shovel.
- FR rated clothing worn by all involved personnel.

Any ignitions will be immediately extinguished (as possible) by site personnel and shall be monitored and verified as out and cool by crew supervisor or their designee, prior to leaving the area. BWP will also notify the Burbank Fire Department of any fire, even if extinguished. For record keeping purposes, the ECC shall be informed of all ignitions.

During the current annual cycle, no ignition potential work was performed within the Tier 2 HFTD on any RFW days.

5.4 Situational/conditional awareness

5.4.1 Weather/fire monitoring

The National Weather Service may issue RFWs at any time when humidity and wind conditions meet pre-determined thresholds that would promote fire ignition and spread. BWP's electrical system is located within an area of Los Angeles County that is actively monitored for fire weather conditions. The National Weather Service monitors humidity, wind, and temperatures and will declare RFWs and watches (https://www.weather.gov/sgx/), signaling that fire weather is anticipated. BWP's ECC monitors National Weather Service warnings and watches and coordinates with other agencies and third parties in the area.

Additionally, the ECC will use the fire-monitoring cameras stationed at the peak of the Verdugo Mountains and on Mount Lee to enhance situational awareness of wildfires on an as-needed basis. These cameras offer a view of the surrounding mountains, including BWP's Tier 2 HFTD. The live feed is publicly available and can be viewed at the Alert California links below:

Verdugo Peak 2 camera:
https://alertca.live/cam-console/2478

Mount Lee North camera:
https://alertca.live/cam-console/2176

BWP's ECC monitored National Weather Service warnings and issued alerts to BWP staff for each of the RFW alert days that occurred in the current annual cycle.

BWP is aware of and is reviewing the Wildfire Forecast & Threat Intelligence Integration Center (WFTIIC) Products as an additional potential weather/fire monitoring tool for the ECC to employ to potentially modify operational practices. At this time no formal decision to implement these additional tools has been made. The Burbank Fire Department also has access to WFTIIC products and is considering the integration of these tools into the citywide employee network. The city also uses existing communication channels to disseminate weather hazard information to city employees.

5.4.2 Geographic Information System (GIS) Applications

BWP has implemented a GIS system as well as GIS-based applications to improve situational awareness of the electrical system. Using a fully implemented advanced metering infrastructure (AMI) network, BWP's smart meters will detect an outage and send out a fault message, which is picked up by the Outage Management System (OMS). The OMS helps ECC operators pinpoint the geographic location of the outage as well as the potential electrical component involved. This allows BWP crews to respond faster to the outage location.

BWP's GIS and OMS applications are continually updated on an ongoing basis, allowing BWP crews to respond faster to outage locations.

5.4.3 Enhanced System Monitoring

As discussed in Section 5.1.4, BWP has implemented a pilot project to test new system monitoring devices on 50 poles on the T-14 circuit within the Tier 2 HFTD. These devices are equipped with several optical, environmental, and mechanical sensors that have the potential to provide high visibility at every pole and span location. When processed, the data collected could provide continuous asset health information, improve fault location and response time, rapidly detect fire ignitions, and provide more granular weather monitoring. The pilot project was successful, and BWP intends to deploy the devices to all poles within the HFTD as funding and device availability allow.

5.5 Pre-emptive De-energization

A public safety power shutoff (PSPS) is a mitigation method used among several electrical utilities throughout California. This mitigation method employs pre-emptive de-energization of electrical lines when predicted extreme weather conditions would create too great of a risk of a wildfire being ignited by electrical facilities. BWP has evaluated this approach and has determined that a PSPS is not a necessary mitigation activity for several reasons:

- BWP's compact, urban service territory and accessibility allow for rapid response times from the Burbank Fire Department and BWP electrical field personnel.
- BWP's situational awareness of its electrical system allows for rapid, targeted response to outage event locations. This allows personnel to identify whether any risk driver events led to any ignitions, which allows the Burbank Fire Department to respond quickly and limit any further potential spread.
- BWP's mitigation activities, as described in Section 5 of the WMP, further reduce the risk of its facilities igniting a wildfire in the Tier 2 HFTD

While BWP does not plan to implement a PSPS in its service territory, BWP does have a protocol for de-energizing portions of its electrical system. ECC personnel have the authority to de-energize portions of the electrical system for safety and reliability, during adverse weather or emergency conditions when requested by BWP, Burbank Fire Department, Burbank Police Department, CALFIRE, or other emergency responding agencies. Depending on the specific situation that triggered the de-energization requirement, de-energization can be triggered remotely by the ECC or in the field at a distribution switch by BWP line crews. Current de-energization operational practices call for isolating the smallest necessary area at a field switch to reduce the number of customers impacted by the outage while keeping the remainder of the circuit energized. In the event of a widespread de-energization during an emergency, the city has an existing communication protocol to keep residents informed, and would be implemented through the city's Emergency Operation Center (EOC) to notify affected customers as discussed further in Chapter 6. Additionally, BWP plans to implement a pre-recorded outage notification message that can be disseminated by an auto-dialer to residents in the HFTD in the event a significant planned de-energization becomes necessary. BWP also plans to maintain a prepared list, updated at a minimum on an annual basis, of lifeline and life-support program customers in the HFTD that can be passed on to the EOC if necessary.

As the WMP is updated each year, BWP will continue to consider if a more aggressive de-energization protocol is an appropriate mitigation activity for its electrical system.

5.6 Description of Customer Outreach and Education

In the City of Burbank, the majority of the wildfire prevention outreach and enforcement outside of the utility equipment is handled by the primary firefighting agency for BWPs responsibility area – the Burbank Fire Department. For major projects that involve significant construction or service impacts to BWP customers, BWP develops a comprehensive, project-specific communication plan. The communication plan creates cohesive messaging across the organization and includes multi-platform outreach using some or all of the following: BWPs and/or the citywide digital communication channels, bill inserts, printed letters, FAQs, door hangers, palm cards, message signs, targeted phone calls, and in person or onsite meetings.

Chapter 6. Emergency Preparedness and Response

6.1 Emergency Management

BWP responds to emergencies in accordance with its Emergency Response Plan and in alignment with the State Standardized Emergency Management System (SEMS) and federal National Incident Management System (NIMS). In responding to all-hazard emergencies, BWP staff would be organized based on SEMS and NIMS as outlined in BWP's Emergency Response Plan. The BWP Emergency Response Plan is comprised of separate plans for Electric, Power Supply, Telecommunication, and Water System. Each plan calls for convening a group of experts, or Emergency Response Teams, to respond and coordinate efforts pertaining to any situation where communication and control of an incident would be needed. Once assembled, these Emergency Response Teams will assess a situation and make a recommendation to the General Manager on whether to declare a department system emergency and activate the BWP Emergency Response Plan. The declaration of a department system emergency shall be by the General Manager, by which the Emergency Response Plan would be activated.

BWP's Emergency Response Team is comprised of four teams: operational technology, electric services, power supply, and water. The collective work of these teams consists of preparing for, responding to, and recovering from incidents that may affect BWP operations.

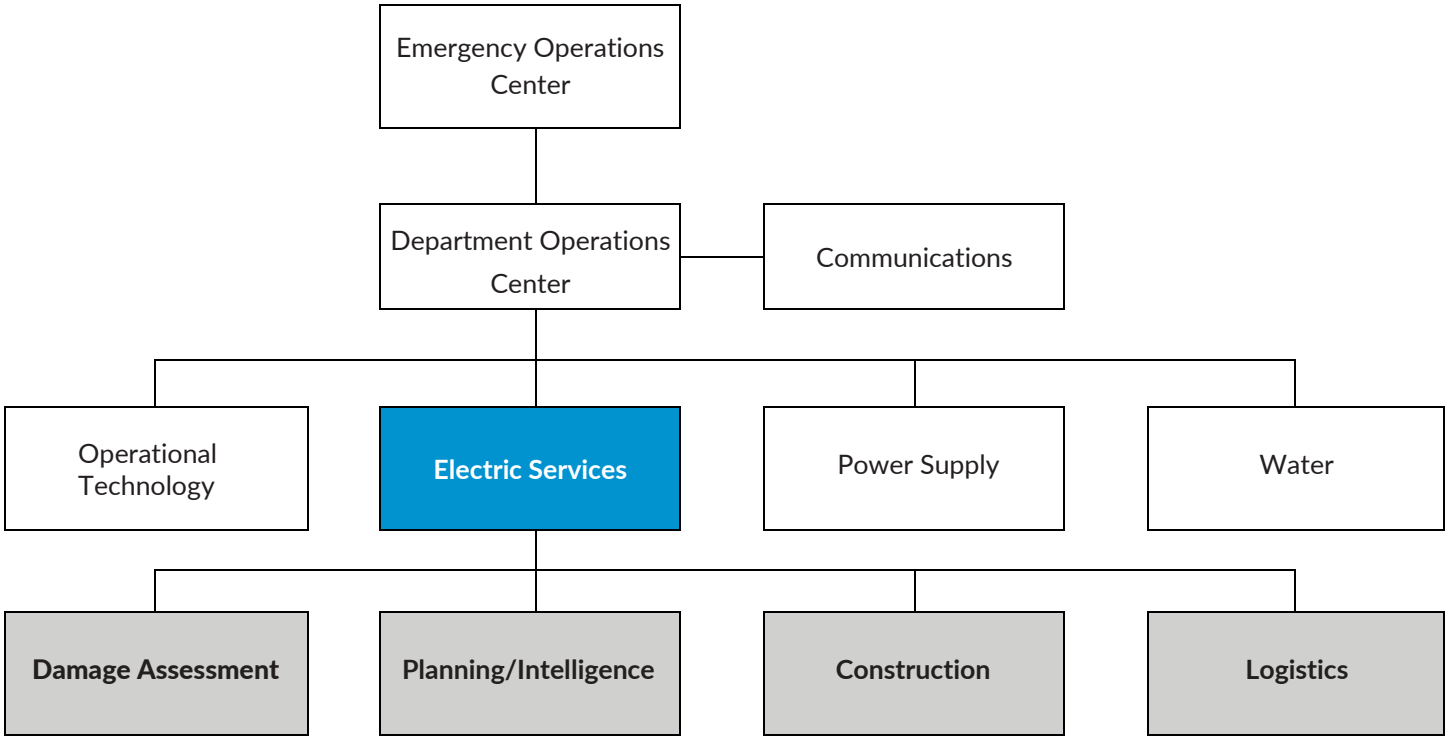
To respond and recover effectively from all hazards and threats, such as wildfires, the Electric Services Team follows guidelines that are detailed in the Electric Emergency Response Plan (EERP).

The EERP may be activated whenever any of the following conditions exist:

- Natural disaster
- Predicted load shedding
- Loss of distribution, one-third or more of the distribution system, or generation facility where load is not transferrable
- Emergency curtailment
- Major civil disturbance

The Electric Services Response Team is comprised of four response teams: damage assessment, planning/ intelligence, construction, and logistics, as presented in Figure 8. The responsibilities of each response team are described in Table 10 below.

Figure 8 - BWP Emergency Response Team organization



Source: BWP Emergency Response Plan

Table 10 – Electric Services Team Responsibilities During an Emergency Response Event

Team	Responsibilities
Damage Assessment	• Visit affected areas to identify safety issues and determine the extent of damage • Estimate labor, material, and equipment needed for restoration • Submit information to the restoration team
Planning/Intelligence	• Prioritize and coordinate restoration according to the restoration philosophy • Maintain system integrity • Ensure continued operation
Construction	• Assign and manage construction crews • Coordinate with mutual aid crews
Logistics	• Obtain, manage, and control materials and equipment to support operations and construction teams • Maintain communication and technology systems to support all teams

Source: BWP Emergency Response Plan

6.1.1 BWP Department Operations Center

BWP is responsible for coordinating BWP's emergency management activities and activation of the Department Operations Center (DOC). The activation of the DOC assembles the internal subject matter experts for the Electric Services Response Team to assess and provide situational awareness to internal and external stakeholders/Assistant General Managers and to provide incident planning objectives and subsequent response.

6.2 Disaster and Emergency Response

BWP EERP is consistent with BWP's system wide response approach. The BWP EERP is customized to provide a framework by which BWP can respond effectively to wildfire threats and other hazards. BWP recognizes its essential role in both restoring normalcy after an incident and the importance of the utility sector to the daily lives of customers and stakeholders and the region's economic well-being and security. The WMP reflects these considerations and is intended to be a framework for BWP's engagement with external entities and the citizens of Burbank.

In the event of a disaster, BWP expects to utilize experienced electric staff and affiliate support to perform incident response and management. Roles and responsibilities are divided by functional areas, and the emergency response is led by an area commander or an incident commander (IC), depending on the incident's scope or complexity. BWP will use the Incident Command System (ICS) as the foundation for its incident response organization. ICS is a standardized, on-scene, all-hazard incident management concept, which provides responders with an integrated organizational structure to match the complexities and demands of single or multiple incidents. Through the use of span of control management and a top-down organizational structure, ICS helps ensure full utilization of all incident resources, decreases confusion, and improves communication. As a system, ICS both provides an organizational structure for incident management, and guides the process for planning, building, and adapting that structure.

When an incident affects multiple entities and/or jurisdictions, a Unified Command structure may be established. The Unified Command organization consists of ICs from various jurisdictions or agencies, who form a single command structure and work together to make joint decisions. Institutions and responding agencies blend into an integrated, unified team.

A unified approach results in:

- A shared understanding of priorities and restrictions.
- A single set of incident objectives.
- Collaborative strategies.
- Improved internal and external information flow.
- Less duplication of efforts.
- Better resource utilization.

By utilizing this emergency response framework, BWP will maintain a coordinated and standardized approach for activating and establishing the emergency response organization. The emergency response framework, along with all associated plans, serves to safeguard BWP's ability to meet its essential missions and functions under wildfire threats and hazards, with or without warning, in preparation for or during any incident, regardless of its expected duration.

6.2.1 Fire Agency Emergency Response

In addition to its internal emergency preparedness procedures, emergencies, including active fire within BWP's Tier 2 HFTD, would be responded to by a robust city fire-fighting system. BWP distribution lines are located within the Burbank Fire Department responsibility area. Emergency response for BWP distribution lines would be provided by the Burbank Fire Department along with Los Angeles County Fire and other agencies, as needed, under existing mutual and automatic aid agreements. The available firefighting resources are considered sufficient to respond to wildfires in BWP's Tier 2 HFTD.

6.3 Customer Support During Emergencies

Customer support is applicable in emergency situations, given the BWP's service area and customer base. BWP includes a communications protocol for communication and coordination with its primary stakeholders, which include the Burbank Fire Department, the City Manager, other utilities, elected officials, fire agencies and first responders, and BWP's emergency response support team. Communication with customers impacted by the de-energizing of electrical lines during an emergency would be initiated using BWP's standard communication protocols. Customer notification of outages would follow the procedure outlined in section 5.6.

6.4 Restoration of Service

Restoration of the electric system would occur in accordance with the BWP Emergency Response Plan. After a wildfire, BWP's Department Operations Center (DOC) will coordinate the restoration of service in alignment with the direction from the City of Burbank's Emergency Operations Center (EOC).

Chapter 7. Performance Metrics and Monitoring

7.1 Accountability of the Plan

BWP's General Manager has overall responsibility for the WMP. Other members of the management team are responsible for executing the various components of the WMP. Table 11 below lists each component of the WMP along with the corresponding owner.

Table 11 - Accountability for WMP components

Mitigation activities		Activity owner
Design and construction		
1	Deteriorated pole replacements	Manager, T&D Engineering
2	Pole loading assessments & remediation	Manager, T&D Engineering
3	Overloaded transformer replacements	Manager, T&D Engineering
4	Distribution construction standards improvements	Manager, T&D Engineering
5	Conventional fuse replacements	Manager, T&D Engineering
Inspection and maintenance		
6	Annual patrol inspection (GO 165)	Manager, Electrical Distribution
7	Vegetation management program	Manager, Electrical Distribution
8	Intrusive Pole Inspections	Manager, T&D Engineering
Operational practices		
9	Block reclosing during RFW	Manager, Energy Control Center
10	Line patrol after outage event during RFW	Manager, Electrical Distribution
11	Ignition potential work practices during RFW	Manager, Electrical Distribution
Situational/conditional awareness		
12	Weather/fire monitoring	Manager, Energy Control Center
13	Geographic information system (GIS) applications	Manager, T&D Engineering
14	Enhanced system monitoring	Manager, T&D Engineering

7.2 Metrics to Evaluate Plan Performance

BWP's performance metrics are focused on the success of fire prevention strategies in lowering the risk of catastrophic wildfires. The metrics process would evaluate the effectiveness of a fire prevention strategy in reducing the risk of wildfire ignition and spread. This performance metric tracking approach will utilize a format that offers the ability to track compliance trends over time, correct issues as they occur, and adapt metrics as conditions mandate.

These metrics will be measured by BWP personnel at timeframes indicated, and as needed to ensure adequate goal achievement tracking. As with this WMP, overall performance metrics will be managed according to an adaptive management approach, which will facilitate changes in the measures and metric goals, as well as the measurement timeframes, if determined necessary. However, BWP recognizes that there may be unforeseen circumstances that result in the inability to meet a specific metric goal for a given timeframe. This does not necessarily indicate a failure in the process that requires immediate action. The overall metric goal achievement trend will be the focus of this performance measurement process, with a primary focus on maintaining upward-trending performance.

7.2.1 BWP Performance Metrics

Performance metrics are derived from and address program measures by fire safety category. Table 12 provides the performance metrics developed to directly address the identified primary wildfire risk drivers.

Table 12 - BWP Wildfire Prevention Performance Metrics Overview

Category	Metric	Responsible	Frequency
Equipment failure	Number of wire-down events caused by conductor failure in Tier 2 HFTD	T&D Engineering Manager	Annually
	Number of pole failures in Tier 2 HFTD		
	Number of transformer failures in the Tier 2 HFTD		
Conventional fuse operations	Number of conventional transformer fuse operation events in Tier 2 HFTD	T&D Engineering Manager	Annually
	Number of conventional lateral fuse operation events in Tier 2 HFTD		
	Number of non-expulsive "Exempt" transformer fuse operation events in Tier 2 HFTD		
	Number of non-expulsive "Exempt" lateral fuse operation events in Tier 2 HFTD		
Wire contact with foreign object(s)	Number of outage events caused by wire contact with an animal in Tier 2 HFTD	T&D Engineering Manager	Annually
	Number of outage events caused by wire contact with mylar balloons in Tier 2 HFTD		
	Number of pole failures caused by vehicle contact in the Tier 2 HFTD		
Wire contact with vegetation	Number of outage events caused by wire contact with vegetation in Tier 2 HFTD	T&D Engineering Manager	Annually
Intrusive pole inspections	100% of intrusive pole inspections in the Tier2 HFTD completed	T&D Engineering Manager	Annually
	Summary of pole replacements based on priority level determined by intrusive inspections in Tier 2 HFTD		
Inspection and maintenance	Number of trees trimmed in the Tier 2HFTD	Manager Electric Distribution	Annually
	Number of recurring "problem" trees removed in Tier 2 HFTD		
	100% of vegetation management inspectionsin the Tier 2 HFTD completed on time		
	100% of patrol inspections ofoverhead facilities in the Tier 2 HFTD completed		
Operations	Number of outages on circuits in Tier 2 HFTD	ECC Manager	Annually
	Number of outages on circuits in Tier 2 HFTD during RFW days		
	Number of ignitions caused by BWP electrical infrastructure in Tier 2 HFTD		
Extreme weather conditions	Number of RFW days	ECC Manager	Annually

7.2.2 Annual Performance Metrics

Performance metrics are derived from and address program measures by fire safety category. Table 13 provides an annual account of the performance metrics developed to directly address the identified primary wildfire risk drivers listed in Table 12.

Table 13 - 2024 BWP wildfire prevention performance metrics data

Category	Metric		
Equipment failure	Number of wire down events caused by conductor failure in Tier 2 HFTD		**0**
	Number of pole failures in Tier 2 HFTD		**0**
	Number of transformer failures in the Tier 2 HFTD		**2**
Conventional fuse operations[2]	Number of conventional transformer fuse operation events in Tier 2 HFTD		**1**
	Number of conventional lateral fuse operation events in Tier 2 HFTD		**1**
Wire contact with foreign object(s)	Number of outage events caused by wire contact with an animal in Tier 2 HFTD		**0**
	Number of outage events caused by wire contact with mylar balloons in Tier 2 HFTD		**0**
	Number of pole failures caused by vehicle contact in the Tier 2 HFTD		**0**
Wire Contact with Vegetation	Number of outage events caused by wire contact with vegetation in Tier 2 HFTD		**0**
	Number of trees trimmed in the Tier 2 HFTD		**238**
	Number of recurring "problem" trees removed in Tier 2 HFTD		**31**
Inspection and Maintenance	Percentage of vegetation management inspections in the Tier 2 HFTD completed on time		**100%**
	Percentage of patrol inspections of overhead facilities in the Tier 2 HFTD completed		**100%**
	Percentage of required intrusive pole inspections in the Tier 2 HFTD completed		**100%**
	Poles replaced based on priority level determined by intrusive inspections in Tier 2 HFTD	Priority 1	**0**
		Priority 2.1	**0**
		Priority 2.2	**0**
Operations	Number of outages on circuits in Tier 2 HFTD		**6**
	Number of outages on circuits in Tier 2 HFTD during RFW days		**0**
	Number of ignitions caused by BWP electrical infrastructure in Tier 2 HFTD		**0**
Extreme Weather Conditions	Number of RFW days		**3**

[2] BWP has had non-expulsive fuse operations which are not accounted for as risk drivers. As the fuse replacement program is completed it is expected that this metric will go to zero because there will be no conventional fuses installed in the HFTD.

A summary of the risk driver events that occurred in 2024 is shown in Table 14 below. For reference, a broader, multi-year period of historical outage information was previously highlighted in Table 5 of Section 4.4.

Table 14 - 2024 summary of risk driver events in the Tier 2 HFTD

Date of outage	Voltage (kV)	Circuit no.	Cause of outage	Risk driver events	During RFW alert?
1/8/24	4.16	T-10	Loose Primary Transformer Connection	Electrical Equipment Failure	N
3/14/24	4.16	T-19	Wind	Extreme Weather Condition	N
6/23/24	4.16	W-11	Transformer Secondary Bushing	Electrical Equipment Failure	N
7/25/24	4.16	T-19	Transformer Fuse Operation	Conventional fuse operation	N
7/30/24	4.16	M-5	Transformer Failure	Electrical Equipment Failure	N
9/5/24	4.16	T-10	Lateral Fuse Operation	Conventional fuse operations	N

An assessment of the above performance metrics above is provided in Section 7.3.3 as part of the annual internal audit.

7.3 Monitoring and Auditing the Plan

BWP will perform an internal audit of the WMP annually to monitor the effectiveness of the plan. This internal audit will align with BWP's planning and budgeting process. This review will include an assessment of the previous plan metrics as well as the effectiveness of the WMP mitigation activities. After the completion of the annual internal audit, the WMP will be updated accordingly. As part of the current annual WMP update, BWP performed an internal audit to monitor the effectiveness of the plan, as discussed in Section 7.3.3.

7.3.1 Identifying and Correcting Deficiencies in the WMP

At any point in time when deficiencies are identified, they should be corrected through the Assistant General Manager – Electric Services. BWP has monitored and audited the implementation of its WMP in the current annual cycle. No deficiencies in the WMP or its implementation were found.

7.3.2 Monitoring and Auditing the Effectiveness of Inspections

BWP meets or exceeds the inspection cycles in GO 165. For the Tier 2 HFTD, BWP performs annual patrols for

all overhead equipment. Problems that are identified during inspection are prioritized for correction. Inspection findings are examined to identify trends and recurring problems. These findings will be combined with analysis of performance metrics to develop changes to design, construction, or maintenance standards and practices so that the overall performance of the electric system, including safety and reliability, is improved.

BWP has monitored and audited the effectiveness of electrical equipment inspections in the current annual cycle, including inspections performed by its vegetation management contractor. As indicated in the WMP performance metrics in Table 13, all inspection, maintenance, and operation activities associated with this plan were completed in the Tier 2 HFTD in the current annual cycle, and no wildfires were caused by BWP's electrical equipment.

7.3.3 Annual Internal Audit

BWP performed an internal audit to measure the effectiveness of its WMP in the current annual cycle using the following methods:

- Assessment of performance metrics
- Consideration of recommendations in the Independent Evaluation Report dated April 17, 2023, by BWP's independent evaluator, Guidehouse.
- Review of mitigation activity accomplishments

Assessment of performance metrics

The following assessment was made regarding the 2024 WMP performance metrics listed in Table 13, Section 7.2.2:

- In 2024, 6 risk driver events occurred in the Tier 2 HFTD. A conventional transformer fuse and a lateral fuse operated. Conventional fuse operation is a risk driver accounting for the largest percentage of outages, both this year and historically in the Tier 2 HFTD. BWP has created a program to replace all conventional fuses in the Tier 2 HFTD with CALFIRE "Exempt" fuses, as discussed in Section 5.1.5. 2 transformers failed in the Tier 2 HFTD and BWP replaced both transformers. 1 of the failed transformers is an older submersible transformer and BWP has program to replace all existing submersible transformers in the system with new padmount transformers as budget and resources allow. 1 risk driver event occurred due to golf course netting contacting power lines as a result of the wind.
- There were no pole failures in the Tier 2 zone. The absence of no pole failures in the Tier 2 zone is a direct result of BWP's active efforts over the past several years with deteriorated pole replacements, intrusive pole inspections, pole loading assessments and remediation, and annual patrol inspections.
- All inspection, maintenance, and operation activities associated with this plan were completed in the Tier 2 HFTD. Over the past year, BWP and its tree trimming contractor performed extensive line clearance work as part of its vegetation management program by trimming trees and removing "problem" trees, which would have created a potential fire hazard, as detailed in Table 13. In addition, BWP enacted procedures to block reclosers, patrol the circuit before re-energizing a tripped circuit, and restrict ignition producing work during an RFW alert.
- There was no significant change in the number of RFW alerts. BWP will continue monitoring this metric in the future to gauge if there is an uptick in the number of RFW alerts which may occur due to climate change.

Consideration of Independent Evaluation Report Recommendations

As discussed in Section 8.3, BWP had contracted with a qualified independent evaluator in 2023 to re-assess the

comprehensiveness of its WMP. While the independent evaluator established that the WMP was comprehensive and met statutory requirements, the independent evaluator also provided a comparison of BWP's mitigation measures with industry best practices and apprised BWP of additional mitigation measures/best practices to consider. Below is a summary of BWP's consideration of those additional best practices mentioned in the Independent Evaluation Report.

- Replacing bare wires with covered conductors.
    - IE Report: Replacing bare wires with covered conductors is a common best practice successfully employed by several utilities with similar operating and environmental conditions as BWP. BWP will benefit from a full analysis and installation of covered conductors at that time.
    - BWP Consideration: 25% of risk driver events since 2005 are associated with wire contact with foreign objects and vegetation. With exception to abnormal events that sever or take down a power line, replacing bare wires with covered conductors could mitigate that risk. BWP has completed the engineering review of a covered conductor solution for the highest priority circuits within the Tier 2 HFTD and plans to deploy a covered conductor as budget, supply, and resources allow.
- Expulsion fuse device change out to current-limiting (non-expulsive) fuses.
    - IE Report: Replacement of expulsion fuses with non-expulsion fuses is a common best practice. BWP plans to replace all conventional fuses with CALFIRE "Exempt" fuses in the Priority 2.1 zone of the Tier 2 HFTD as soon as feasible.
    - BWP Consideration: 42% of risk driver events since 2005 are associated with conventional fuse operations within the Tier 2 HFTD. Replacing conventional fuses with non-expulsive fuses will eliminate this risk driver. After performing an engineering evaluation study in 2021, BWP has determined that replacement of all conventional fuses in the Tier 2 HFTD with CALFIRE "Exempt" fuses is a cost-effective method of reducing the risk of utility-caused wildfires in the Tier 2 HFTD. Further discussion of this conventional fuse replacement program can be found in Section 5.1.5.
- Notify critical facilities and public safety partners.
    - IE Report: Specific communications protocols for PSPS events, even if unlikely, improve communication and coordination.
    - BWP Consideration: BWP, as a department of the City of Burbank, follows the Standard Emergency Management System (SEMS) for improved communication and coordination. Further discussion regarding PSPS communication is in section 5.5.

Review of mitigation activity accomplishments

Section 5.0 highlighted several prevention strategies and programs that BWP implemented to minimize the risk of wildfires. Table 15 below summarizes those accomplishments.

Table 15 - Summary of Mitigation Activity Accomplishments in 2024

Mitigation activities		Description	Accomplishments
Design and construction			
1	Deteriorated pole replacements	Replacement of poles that do not pass condition-based assessments to prevent pole failure.	Replaced 0 poles in Tier 2 HFTD.

Mitigation activities		Description	Accomplishments
2	Pole loading assessments & remediation	Structural assessment of poles to identify potential loading issues during high wind events. Replacement of poles that do not pass GO 95 wind loading design criteria to minimize the risk of pole failure.	All pre-emptive pole loading assessments in the Priority 2.1 area of the Tier 2 HFTD were completed in 2020, and all pole loading issues have been mitigated. All poles that have been replaced since the initial assessment also had new pole loading performed. All future replacements will also require pole loading per GO 95.
3	Overloaded transformer replacements	Replacement of overhead transformers that do not meet loading criteria to prevent transformer failure.	Conducted transformer loading analysis after the 2024 system load peak and plan to replace all transformers in the Tier 2 HFTD above 150%
4	Distribution construction standards improvements	Engineering study of distribution construction standard improvements, which could provide additional risk reduction in the Tier 2 HFTD.	Completed: • An engineering study of conventional fuse replacements (2020). A program was created to replace all conventional fuses with CALFIRE "Exempt" fuses, as discussed in Section 5.1.5. • Field reclosers study is complete, but implementation is on hold pending the completion of the remaining engineering studies. This will help BWP determine the most cost-effective risk reduction method. • Composite pole pilot completed, composite poles will be implemented as a mitigation method in the HFTD for future pole replacements. • Replacement of bare overhead wire with covered conductor or reinforcement of pole lines by replacing aging copper with ACSR, study is completed and this will be implemented as a mitigation strategy as budget, supply, and resources allow. • Infrared inspection technology study is completed, implementation is pending vendor selection through the standard procurement processes The following pilot projects are either planned or on track to be completed: • Pole mounted sensor devices

Mitigation activities		Description	Accomplishments
			for real time monitoring, pilot implemented in 2022. If grant funding support is available BWP will aim to deploy these sensors to all poles in the HFTD. • Replacement of oil filled transformers with non-oil filled pole mounted transformers pilot installation completed, assessment is ongoing. • Falling conductor technology (estimated completion by end of fiscal year 2025/2026)
Inspection and maintenance			
5	Annual patrol inspection (GO 165)	Annual system patrol to inspect the condition of electrical assets to avoid faults, which could cause ignitions.	Completed 100% of annual patrol inspections in the Tier 2 HFTD
6	Vegetation management program	Annual vegetation maintenance and clearance from electrical lines to avoid vegetation contact in Tier 2 HFTD	Completed 100% of annual maintenance and clearance in the Tier 2 HFTD. See Table 13 for details.
7	Intrusive pole inspections	Condition-based assessment of remaining pole strength to identify poles at risk of failure	BWP is up to date with all intrusive pole inspections in the Tier 2 HFTD
Operational practices			
8	Block reclosing and increase relay sensitivity during RFW	Block reclosing and increase relay sensitivity on all feeder lines in the Tier 2 HFTD during RFW events	Blocked reclosing and increased relay sensitivity during all RFW alert days
9	Line patrol after outage event during RFW	Patrol with a physical inspection of tripped feeder lines in Tier 2 HFTD during RFW before re-energizing the circuit	No outages occurred during RFW days in 2024.
10	Ignition potential work practices during RFW	Except during an emergency, disallow work that may potentially produce an ignition source on all feeder lines in the Tier 2 HFTD during RFW events	No ignition potential work was performed in the Tier 2 HFTD during RFW events
Situational/Conditional Awareness			
11	Weather/fire monitoring	Conduct weather monitoring via publicly available weather resources to monitor weather forecasts and any potential extreme fire conditions	Monitored weather and alerted staff on each of the days with a RFW condition. In 2021, the ECC began using the SCE owned fire-monitoring camera in the Verdugo Mountains to enhance situational awareness on an as-needed basis.

Mitigation activities		Description	Accomplishments
12	Geographic information system (GIS) applications	Implementation of Outage Management System (OMS), which uses GIS data and meter information to help BWP locate outages and decrease response time	Updated GIS and OMS data, which helped BWP locate outages and decrease response time

In summary, BWP's accomplishments indicate that it's been effective in carrying out mitigation activities that reduce the risk of its electrical equipment igniting a wildfire. BWP is planning to implement a conductor replacement program potentially in conjunction with falling conductor technology, especially with respect to older bare copper conductors that have been responsible for all wire-down events. As detailed in Table 15 BWP has made significant progress and has now completed the bulk of its pilot and testing processes. Going forward, there will be a greater focus on deploying the chosen mitigation strategies as budget, supply chain, and resources allow, with a primary focus on the higher-risk areas. BWP has seen a decrease in risk driver events; as this trend continues, it is an indicator of the successful results of the mitigation strategies implemented to date. Although environmental factors contribute to the stresses on the electric system and corresponding risk drivers, continued refinement and increased mitigation are expected to continue to reduce risk and, therefore, risk driver events.

Chapter 8. Public Comment, Presentation, and Independent Evaluation

8.1 Public Comment

A draft copy of the WMP will be made available for comment on BWP's website prior to the City Council meeting. BWP Board and City Council meetings are open and accessible to the public. Meeting notices and agendas are posted, at a minimum, 72 hours in advance on the city's website. Those who are unable to attend the meeting in person can livestream the meeting or view a recording on the city's website.

BWP also maintains a copy of the current and previous WMP and independent evaluation reports on its website at BurbankWaterAndPower.com under Electric > Wildfire Mitigation Plan. Council action and public comment are available at BurbankCA.gov.

8.2 Presentation to BWP Board and Burbank City Council

The WMP will be posted on BWP's website and presented to the BWP Board before being presented to the City Council.

BWP follows the process below:

- Draft WMP is posted on BWP website and open for public comment
- BWP presentation to BWP Board, along with public comment and comment from BWP Board
- BWP presentation to City Council, along with public comment and comment from City Council
- WMP is posted on BWP website and submitted to WSAB for review by July 1st, annually

8.3 Independent Evaluation

In accordance with a statutory requirement in Public Utilities Code Section 8387, BWP contracted with a qualified independent evaluator to assess the comprehensiveness of the January 2020 WMP. The independent evaluator completed an Independent Evaluation Report and presented the following evaluation results and conclusions to the City Council on October 27, 2020. The complete Independent Evaluation Report is available at BurbankWaterAndPower.com. During the comprehensive 3-year review cycle of BWP's 2022 WMP, BWP contracted with a qualified independent evaluator to re-evaluate its WMP. This evaluation was performed to ensure the plan's continued comprehensiveness and compliance, along with a re-evaluation of industry best practices. Section 7.3.3 was updated with the revised recommendations.

2022 WMP Independent Evaluation results

- *BWP has addressed each of the mandatory requirements in its WMP*
- *BWP has implemented many industry best practices to prevent and mitigate against the impacts of wildfire, including,*

but not limited to:

- *Enhanced situational awareness*
- *Blocking reclosers during Red Flag Warnings*
- *Operational limitations during RFW*
- *Strong vegetation management practices*
- *Engineering and design best practices*
- *Non-expulsive fuse devices*

Evaluation conclusion

- *BWP's WMP aligns appropriately with PUC Section 8387 and includes all required elements.*
- *BWP's WMP is comprehensive as described through this Report in accordance with PUC Section 8387s.*

The Independent Evaluator's report has been posted to BWP's website and remains available for public consumption. In addition, BWP has used this report as a tool for its internal audit in Section 7.0. An independent evaluation of the WMP will be completed every 3 years. The results of the next evaluation report will be shared in the 2026 update of the WMP.

8.4 Wildfire Safety Advisory Board

On or before July 1, 2020, and annually thereafter, Public Utilities Code Section 8387 requires that BWP submit its WMP to the California Wildfire Safety Advisory Board (WSAB). BWP fulfilled this obligation by submitting its WMP to WSAB in June 2022.

On December 4, 2024, WSAB approved its final "Advisory Opinion for the 2025 Wildfire Mitigation Plans of Publicly Owned Electric Utilities and Electrical Cooperatives." BWP has considered the recommendations from the WSAB in this 2025 update to the WMP and has implemented changes where applicable. BWP will continue to consider comments and opinions received by the WSAB in future updates of the WMP.

Chapter 9. References

BWP. 2020. Burbank Water and Power Emergency Response Plan. September 2020

BWP. 2020. Independent Evaluation Report by Guidehouse Inc., May 13, 2020

BWP. 2023. Independent Evaluation Report by Guidehouse Inc., April 17, 2023

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Exhibit A. Context-setting Information Table

Utility name	BWP	
Service territory size	17 square miles	
Owned assets	☒ Sub-transmission ☒ Distribution ☒ Generation	
Number of customers served	53,717 customer accounts	
Population within service territory[3]	107,337 people	
Customer class makeup	*Number of accounts*	*Share of total load (MWh)*
	86.8% Residential; 10.3% Small commercial; 2.4% Medium commercial; 0.3% Large commercial; 0.2% Extra-large commercial;	27.5% Residential; 7.5% Small commercial; 17.8% Medium commercial; 18.5% Large commercial; 24.4% Extra-large commercial;
Service territory location/topography[4]	Barren/Other 1.012423% Hardwood Woodland 0.555464% Herbaceous 1.212171% Shrub 19.943359% Urban 77.21228% Water 0.064303%	
Service territory Wildland Urban Interface[5] **(based on total area)**	28% Wildland Urban Interface	
Percent of service territory in CPUC High Fire Threat Districts (based on total area)	☒ Refer to WMP, Section 4.3.1, Figure 4 for a map of BWP's Tier 2 High Fire Threat District Tier 2: 28% (geographic area) Tier 2 with overhead electrical facilities: 9% (geographic area) Tier 3: 0%	
Prevailing wind directions & speeds by season	☐ Includes maps intermittent, westerly and easterly winds	
Miles of owned lines underground and/or overhead	Overhead dist.: 204 circuit miles Overhead trans.: 48 circuit miles Underground dist.: 132 circuit miles Underground trans.: 30 circuit 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: 5.4% (of total circuit miles) Tier 3: 0%	

[3] This data shall be based on the United States Census Bureau statistics found in the *2016-2020 American Community Survey 5-Year Estimates at:* https://data.census.gov/cedsci/profile?g=1600000US0608954

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

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

Utility name	BWP
	Overhead transmission lines as % of total transmission system (inside and outside service territory)
	Tier 2: 0% Tier 3: 0%
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 year 2020: *Number of shut-off events*: [____] *Customer Accounts that lost service for >10 minutes:* [____] *For prior response, average duration before service restored:* [____]

Exhibit B. Summary of Key Changes in BWP's 2024 WMP

This document provides a summary of the key changes between BWP's 2025 Wildfire Mitigation Plan (WMP), and BWP's 2024 Wildfire Mitigation Plan.

This document is intended to simplify the process of reviewing BWP's current WMP but does not comprehensively identify every update to BWP's WMP. Therefore, a full review of BWP's wildfire mitigation efforts should be based on the actual WMP.

Changes to the current WMP

Chapter 5 – Wildfire prevention strategies and programs
- Section 5.1 – Provided update on facility design and construction progress/improvements
- Section 5.2 – Provided update on facility construction progress/improvements

Chapter 7 – Performance metrics and monitoring
- Section 7.2 – Updated all performance metrics based on annual cycle data
- Section 7.3 – Updated information in Annual Internal Audit (Section 7.3.3) and Mitigation Activity Accomplishments (Table 15)

Chapter 8 – Public comment, presentation, and independent evaluation
- Section 8.4 – Updated for current cycle

Chapter 9 – References
- Updated to include the latest WSAB opinion

Exhibit B – Summary of key changes in BWP's 2025 WMP
- Updated for the current cycle