NORTHERN CALIFORNIA POWER AGENCY WILDFIRE MITIGATION PLAN 2025

VERSION 4.0

CURRENT VERSION DESCRIPTION

Version 4.0 – A comprehensive review of NCPA's 2025 Wildfire Mitigation Plan. NCPA's Commission approved this WMP on May 22, 2025. This WMP includes the Qualified Independent Evaluators (IE)Comprehensive Review Report describing revisions in Appendix 2.

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Northern California Power Agency (NCPA) prepared the following Wildfire Mitigation Plan (WMP) in accordance with Public Utilities Code (PUC) regulation 8387 (Senate Bill 901). NCPA is a Joint Powers Agency, which owns and operates several electrical generation facilities to support its members' generation needs.

The objective of this WMP is to reduce the risk of wildfires, that could be ignited or propagated by NCPA's electrical equipment or facilities, in high fire threat locations. The plan describes the range of activities that NCPA is taking to mitigate the threat of power line-ignited wildfires, including its current programs, policies, and procedures, as well as future plans to decrease risk and improve resiliency. The plan prioritized addressing elements that create a wildfire event: 1) fuel or geographic conditions represented by the California Department of Forestry and Fire Protection and the CPUC risk maps, and 2) ignition represented by facilities subject to creating a fire. The facility types of highest interest are open-wire power lines (transmission and distribution) that are near heavy vegetation or forest.

NCPA does not directly serve retail customers. As such, this report focuses exclusively on NCPA's electrical facilities with minimal discussion regarding customer communication typical of other utility WMPs.

1. OVERVIEW

1.A. POLICY STATEMENT

The Northern California Power Agency (NCPA), a California Joint Action Agency, has an overarching goal to provide safe, reliable, and economic electric service to its public power members and associate members. To meet this goal, NCPA constructs, maintains, and operates its equipment in a manner that minimizes the risk of wildfire ignition and propagation caused by NCPA-owned and -operated electric utility equipment (generation, generation tie-lines, and distribution).

1.B. PURPOSE OF THE WILDFIRE MITIGATION PLAN

The objective of this Wildfire Mitigation Plan (WMP) is to reduce the risk of wildfires that could be ignited or propagated by NCPA's electrical equipment or facilities in high fire threat locations.

This WMP applies to NCPA's Geothermal Facility and Hydroelectric (Hydro) Facility located in two different geographical areas. These facilities contain electrical equipment in high fire threat locations. The Geothermal Plant is located near the Geysers in Lake County and the Hydro Facility is located in the North Fork Stanislaus River watershed.

The WMP describes the range of activities that NCPA is taking to mitigate the threat of power line-ignited wildfires, including: (1) current programs, policies, and procedures; and (2) future plans to decrease risk and improve resiliency. This WMP is subject to direct supervision by the NCPA Commission and is implemented by the NCPA General Manager. This WMP complies with the requirements of Public Utilities Code section 8387 (originally Senate Bill 901) for publicly owned electric utilities to prepare a wildfire mitigation plan by January 1, 2020, and to review and update it annually thereafter.

Historically, NCPA has continuously improved its practices to minimize wildfire risks. This includes:

- A transmission line vegetation management program that is compliant with North American Electric Reliability Corporation Standard FAC-003 and California Department of Forestry and Fire Protection (CAL FIRE) regulations
- Compliance with CAL FIRE and California Public Utilities Commission (CPUC) regulations and guidance for overhead distribution and transmission lines
- CAL FIRE emergency response plans
- Power management/dispatch response procedures
- Periodic equipment inspections and safe work practices
- Workforce training

This WMP complies with the requirements of PUC section 8387 (Senate Bill 901).

NCPA continuously evaluates electrical facilities, processes, and documentation based on the design, configuration, operations, maintenance, and condition of NCPA facilities in relation to their potential to initiate a wildfire event. The comprehensive evaluation includes consideration

of NCPA system descriptions, record design/construction documents, typical facilities layouts, basic fire protection system features, data sheets, inspection practices and procedures, baseline vegetation conditions, potential climate change effects, vegetation management practices, fire threat and hazard maps, and other documentation.

1.B.1. COORDINATION WITH LOCAL AGENCIES

NCPA's local wildfire mitigation coordination efforts include regular meetings for its Emergency Action Plan process. The NCPA Hydro and Geothermal facilities also coordinate vegetation management activities with CAL FIRE and routinely utilize CAL FIRE (in cooperation with California Department of Corrections Conservation Fire Camp labor) for vegetation management and wildfire mitigation around the facilities.

> The NCPA Hydro Facility hosts an annual face-to-face meeting with local emergency management agencies, including: the United States Forest Service (USFS); CAL FIRE; sheriff departments for Calaveras, Tuolumne, and Alpine counties; California Highway Patrol; California Department of Parks and Recreation (Calaveras Big Trees State Park); and others. Since many NCPA Hydro facilities are located on USFS lands, a separate annual meeting is held with the USFS, and wildfire mitigation is a focus of discussion.
>
> NCPA Geothermal Facility staff meet annually with Pacific Gas and Electric (PG&E), Calpine (operator of other geothermal facilities at the Geysers), CAL FIRE, the Bureau of Land Management, and Lake County Sanitation District.

In addition, successful coordination efforts between Geyer Steam Field Operators (NCPA, Calpine/Geysers Power Company, LLC (GPC), Mayacama Geothermal, and Ormat Nevada Inc., (Ormat) and CAL FIRE's Sonoma-Lake Napa Unit resulted in developing the 2024 Wildland Fire Annual Operating Plan. This Plan provides fire officers and Geyser Steam Field Operators with guidelines, goals, and information necessary to mitigate wildland fires. The Plan includes fire prevention activities related to general cooperation, information and education, engineering, and enforcement. Some highlights include, information sharing regarding red flag days, issuing joint press releases, maintaining defensible space, and installing helicopter dipping locations. The Plan will be reviewed annually each April.

Table 1 provides a high-level view of NCPA's wildfire risk profile as recommended by the Wildfire Safety Advisory Board (WSAB).

Table 1. NCPA Facility Risk Profile

Utility Name:	**Northern California Power Agency**
Utility Territory Size in Square Miles:	
Assets:	☒ Generation ☒ Transmission (Only a generator tie line) ☒ Distribution (Only for NCPA Utilities)
Number of Customers:	Wholesale provider to PG&E electrical grid.
Customer Classes:	☐ Residential ☐ Government ☐ Agricultural ☐ Small/Medium Business ☐ Commercial/Industrial ☒N/A
Location Topography:	☐ Urban ☒ Wildland Urban Interface ☒ Rural/Forest ☐ Rural/Desert ☐ Rural/Agricultural
Percent Territory in CPUC High Fire Threat Maps:	☒Includes Maps 61% in Tier 2 7% in Tier 3
CAL Fire Frap Map Fire Threat Zones:	☒Includes Maps 45% Very High 27% High 11% in Moderate
Existing Grid Hardening Measures	☒ Describes hardened & non-hardened infrastructure
Utility Fire Threat Risk Level:	☐ Hi ☐ Low ☒ Mixed
Impact by another utility's PSPS?	☒ Yes ☐ No
Mitigates impact of another utility's PSPS?	☐ Yes ☒ No
Expects to initiate its own PSPS?	☐ Yes ☒ No
Prevailing wind directions and speeds by season?	☐Includes maps ☒ Includes a description

1.C. ORGANIZATION OF THE WILDFIRE MITIGATION PLAN

This WMP includes the following elements:

- Objectives of the plan
- Roles and responsibilities for carrying out the plan
- Identification of key wildfire risks and risk drivers
- Description of wildfire prevention, mitigation, and response strategies and programs
- Metrics for evaluating the performance of the plan and identifying areas for improvement
- Review and validation of the plan
- Timelines

2. GOALS

2.A. MINIMIZING SOURCES OF IGNITION

The primary goal of this WMP is to minimize the probability that NCPA's transmission and distribution system may cause or contribute to a fire ignition. NCPA's priorities include facility improvement projects (Section 5A), as well as continued and improved inspection, maintenance, and vegetation management practices. NCPA continues to evaluate and implement, prudent and cost-effective improvements (Section 5A) to its physical assets, operations, and training to meet this objective.

2.B. RESILIENCY OF THE ELECTRIC GRID

The secondary goal of this WMP is to improve electrical grid resiliency. NCPA assessed, and will continue to assess, new industry practices and technologies that will reduce the likelihood of an interruption (frequency) in service and improve the restoration (duration) of service.

2.C. IDENTIFYING UNNECESSARY OR INEFFECTIVE ACTIONS

The final goal for this WMP is to measure the effectiveness of specific wildfire mitigation strategies. If a particular action, program component, or protocol is unnecessary or ineffective, NCPA will assess whether a modification or replacement is merited. This WMP will also help determine if more cost-effective measures would produce the same or improved results.

NCPA's current and planned wildfire risk mitigation activities are formally reviewed annually to prioritize the highest value activities for fire risk mitigation. A formal review includes evaluating the following:

- Effectiveness of ongoing practices
- Investigating new technologies
- Changing climate and ground conditions

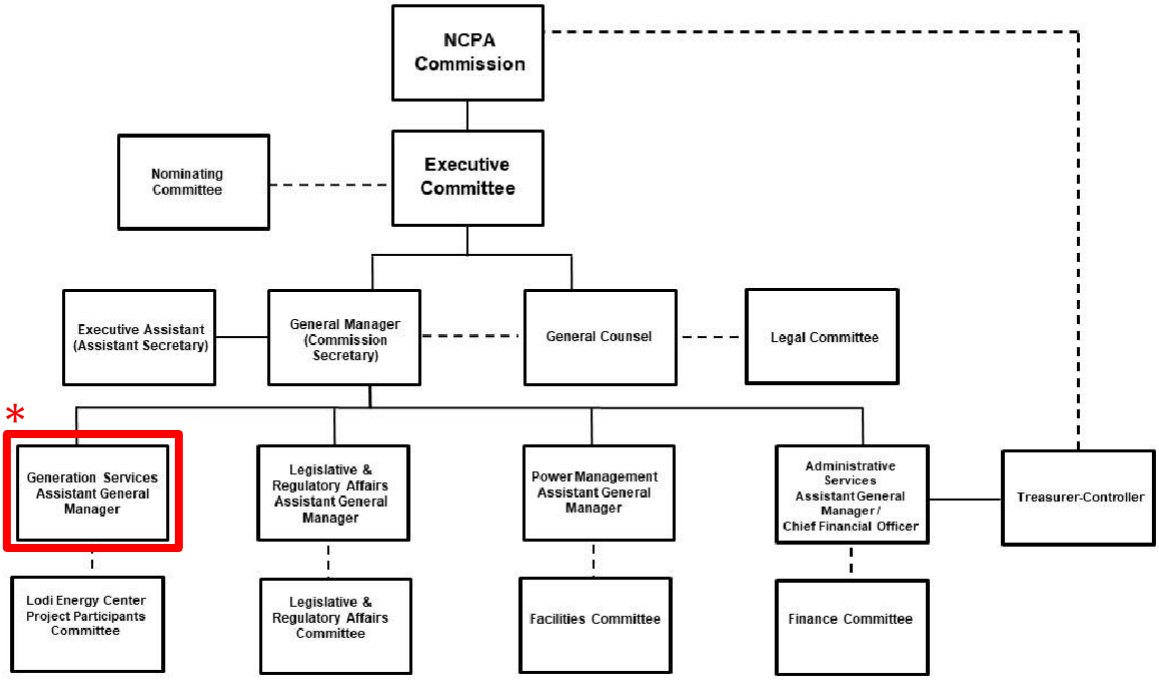
These actions align with NCPA's Strategic Priorities of "Prepare" and "Value": *"Develop and maintain diverse generation resource portfolio in accordance with or exceeding renewable portfolio standard and capacity obligations" and "Develop and enhance strategies to control costs and minimize risks while optimizing the value of assets"*. These Priorities indicate the Agency's commitment to addressing the ongoing shift in service conditions for generation assets brought about by changing climate conditions and risks to energy deliverability brought about by increasing drought and aging transmission and distribution infrastructure.

3. ROLES AND RESPONSIBILITIES

3.A. UTILITY GOVERNANCE STRUCTURE

NCPA is governed by a Commission that maintains several committees, including an Executive Committee, a Nominating Committee, a Legal Committee, a Legislative & Regulatory Affairs Committee, a Facilities Committee, and a Finance Committee. The Executive Committee includes a Chair, Vice Chair, and seven at-large representatives.

Among its approximately 160 employees, NCPA has an internal management team, including a General Manager, an Assistant General Manager for Legislative & Regulatory Affairs, an Assistant General Manager for Power Management, an Assistant General Manager for Generation Services, an Assistant General Manager for Finance & Administrative Services, a General Counsel, and an Executive Assistant & Assistant Secretary to the Commission.



*The red box above indicates the responsible department of the North Fork Stanislaus Hydroelectric Project and Geyser's Geothermal Projects. NCPA plant managers are responsible for executing the WMP and serve under the Generation Services Assistant General Manager.

3.B. WILDFIRE PREVENTION ORGANIZATIONAL RESPONSIBILITIES

NCPA is governed by a Commission comprised of one representative for each of its public power utility members. The Commission is responsible for the general management of the affairs, property, and business of the Agency. Under direction of the General Manager, Agency staff are responsible for providing various administrative, operating, and planning services for the Agency. This establishes all funding and is applied to all wildfire funding mechanisms in this WMP (i.e., 3.B., 3.C., 5.A., 5.F, 5.G., 5.H.).

NCPA's organizational responsibilities with respect to wildfire mitigation correspond to its two main facility locations that reside in high fire threat areas: The North Fork Stanislaus Hydro Project and Geyser's Geothermal Projects. Hydro and Geothermal plant managers have responsibility for operations at each respective generating facility. Plant supervisors at each location are responsible for workforce training and executing all policies and procedures related to fire risks, equipment design, maintenance, inspection, vegetation management, and operations.

Revisions to the NCPA WMP are presented to the NCPA Facilities Committee for review and comment before being routed for final approval to the NCPA Commission. The NCPA WMP and archived versions are available for public review on the NCPA website (Policy ➔ Reports ➔ Wildfire Mitigation Plan).

The NCPA Dispatch Center in Roseville, under the direction of the Assistant General Manager for Power Management, has jurisdictional and operational responsibilities for the generator tie lines, including procedures for Operating Instructions and Emergency Assistance (NCPA-PM-108) and Emergency Operating Guidelines for the Collierville-Bellota 230-kV Lines (NCPA-PM-201).

Under the Assistant General Manager's direction, plant managers are responsible for implementation and execution of the WMP with respect to their facilities (see notes in Section 3.A., Governance Structure Diagram). In coordination with the NCPA Dispatch Center, plant managers coordinate activities with internal and external entities necessary to operate and react to wildfire activity.

Additionally, all NCPA employees are responsible for:

- Performing good housekeeping practices
- Maintaining their work areas free of potentially flammable materials
- Participating in fire prevention and suppression training as required

3.C. WILDFIRE RESPONSE, COMMUNICATION, AND RECOVERY

The objective of crisis management is providing direction for rapid hazard assessment, prioritization, notification, and applicable actions. NCPA evaluated potential hazards in the work environment and surrounding areas and worked with local authorities to develop emergency response plans for each facility that address mitigation of hazards and effective response. The goals are to protect personnel, the public, the environment, and NCPA assets.

NCPA utilizes several resources to communicate emergency or hazardous conditions to personnel

(including non-NCPA personnel) at hydro and geothermal plants, powerhouses, and associated facilities and locations. These resources include two-way radio communications equipment, cell phones, satellite phones, telephone landlines, email, and the Internet.

The Agency maintains separate emergency response plans, due to different geographic locations, for Geothermal and Hydro generation projects. These plans provide guidance and emergency resources for: fire events; unplanned, sudden, or non-sudden hazardous materials/waste releases; air emissions exceedances; natural or manmade disasters (earthquakes, floods, bomb threats, or suspected terrorist or sabotage events, etc.); or emergency hazards.

Any accident or incident requiring emergency response and support from external agencies is reported to the appropriate NCPA plant supervisor. The event(s) type and severity determine the appropriate response and course of action.

The NCPA Dispatch Center is the main point of contact for PG&E on any public safety power shutoff (PSPS) notification affecting any of NCPA's or members' generation and member loads. NCPA does not have a defined service territory; however, the NCPA Dispatch Center's responsibility is to pass along relevant PG&E PSPS notification to affected members based on phone messages or emails received from PG&E through its Everbridge mass notification system. The NCPA Dispatch Center also follows up on the Everbridge PSPS notifications with information on any planed power shutoff events based on PG&E's PSPS websites or direct PG&E communication where current and real-time information is available.

NCPA provides wholesale power to cities and utilities, typically known as NCPA members, only via the utility grid. Since NCPA does not have retail customers, no customer notification protocols are in place.

3.D. COORDINATION WITH WATER UTILITIES/DEPARTMENT

Power from NCPA generation facilities is delivered to the California Independent System Operator (CAISO) grid. The NCPA Hydroelectric Project transports and delivers water, owned by two water utilities, through infrastructure (dams and tunnels) operated by NCPA. One of those entities, the Calaveras County Water District (CCWD), owns the NCPA-operated Hydro Facility that delivers this water. The Utica Water and Power Authority (UWPA) also receives some of the water through the same facilities. Neither curtailment of NCPA generation facilities nor de-energization of the NCPA powerlines has any impact on the abilities of CCWD or UWPA to obtain water. NCPA routinely communicates and coordinates with CCWD and UWPA, and both entities are included on communication flow charts for the relevant emergency plans.

3.E. COORDINATION WITH COMMUNICATION INFRASTRUCTURE PROVIDERS

NCPA does not provide power directly to any communication infrastructure providers, and therefore does not routinely coordinate with communication infrastructure providers related to wildfire mitigation or power outages.

3.F. MUTUAL AID AGREEMENTS

NCPA members are uniquely and ideally qualified to assist with the emergency replacement of poles and wires that are necessary to return electric distribution and communication facilities to normal operating condition. However, mutual aid agreements have also long been utilized by publicly owned utilities during times of need. These agreements are usually formed and exercised among neighboring utilities as proximity allows for quick response and fewer travel expenses. Additionally, mutual aid agreements that have a broader geographical reach, including across states or nations, can provide better protection from large regional events that impact neighboring utilities.

NCPA is a member of the California Utilities Emergency Association, which plays a key role in ensuring emergency communications between utilities and maintains a mutual aid agreement for its members. As a member of the American Public Power Association (APPA), NCPA and its members can also authorize APPA mutual aid agreements.

4. WILDFIRE RISKS AND DRIVERS

NCPA electrical infrastructure consists of the following facilities that are in CAL FIRE Moderate to Very High Fire Hazard Severity Zones (2023) and/or CPUC Tier 2/3 Fire Threat Zones (2021). See Appendix 1.

NCPA Project	NCPA Facility	Fire Hazard Severity Zone (Cal Fire 2023)			Fire Threat Zone (CPUC 2021)	
		Moderate	High	Very High	Tier 2	Tier 3
North Fork Stanislaus Hydroelectric Project (Hydro)	Collierville Powerhouse 11523 Camp 9 Rd., Murphys, CA 38.144944, -120.380022	-	-	-	X	-
	New Spicer Meadows Powerhouse 38.393735, -119.999489	-	-	-	-	-
	McKay's Point Diversion Dam 38°14'3.70"N, 120°17'31.70"W	-	-	-	-	X
	McKay's Point 17-kV Service Line	-	-	1.68 miles	-	0.36 mile
	Beaver Creek 38°14'02.94" N 120°16'43.50" W	-	-	-	-	X
	Collierville-Bellota 230-kV Gen-Tie Line	5 miles	12 miles	18 miles	27 miles	-
Geysers Geothermal (Geo)	Plant 1, Middletown, CA 38.751915, -122.719932	-	-	-	-	X
	Plant 2, Middletown, CA 38.748348, -122.710913	-	-	-	-	X
	230-kV Gen-Tie Line	-	-	0.17 mile	-	2.5 miles
	Effluent Pump System and 21-kV Service Line	-	-	3 miles	-	3 miles
	Steam Field and Delivery (includes 480vac power)	-	-	8 miles	-	8 miles

NCPA is also a 6.13 percent co-tenant of the Castle Rock Junction-Lakeville 230-kV Transmission Line, operated and maintained by PG&E, in the Geysers area. This line is in a Tier 3 CPUC Fire Threat Zone. This line is included within the scope of the PG&E Wildfire Mitigation Plan.

There are no new wildfire risks associated with design and construction of new assets. NCPA is currently operating and maintaining original generating facilities. Fire hardening efforts will occur on the McKay's Point 17-kV Service Line as a maintenance project. Construction activities are projected for summer/fall of 2025.

Note that NCPA does not have "Enterprise-wide" Safety Risks (as addressed under Section 4.B of the CMUA template) as the Agency does not possess general responsibility over assets and geography except for locations tied to specific generation assets, as outlined above.

4.A. RISKS ASSOCIATED WITH TOPOGRAPHIC AND CLIMATOLOGICAL FACTORS

Several of the risk drivers are interrelated:

- **Extended drought**: Extended drought periods result in multiple stress factors for vegetation: dry trees and brush, higher susceptibility to disease and insects, easier ignition, faster burn rate, etc.
- **Excessive precipitation**: Excessive precipitation can affect vegetation density and susceptibility of trees to toppling in high winds.
- **Vegetation type**: Fire risk is partially dependent upon vegetation type. Some vegetation burns quickly (e.g., dry grass), while other types burn hotter (e.g., hardwood trees such as oak). Each vegetation type presents unique challenges for vegetation management and control.
- **Vegetation density**: Dense vegetation generally represents the highest hazard level, while sparse vegetation density is substantially lower risk. Vegetation density is often associated with weather conditions, local micro-climates, precipitation amount, and vegetation type.
- **Weather**: Weather conditions include precipitation, humidity, storms, and winds. Lightning strikes associated with thunderstorms or dry lightning are a natural cause of wildfires.
- **High winds**: High winds drive wildfires. They also down trees (a risk that rises with both drought and excessive rainfall) and sometimes down power lines. In turn, downed power lines are potential ignition sources and the documented cause of major wildfires in California.
- **Prevailing winds**: NCPA is considering monitoring prevailing wind directions and speeds differentiated by season, along with average weather conditions by season, using NCPA real-time observations noting disturbing local weather.
- **Terrain**: Fires generally burn uphill, especially within steep canyons typical of NCPA's Geothermal site. Wind-driven upslope and up-canyon fires spread rapidly and represent increased fire hazards.
- **Changing weather patterns (climate change)**: Climate change alters vegetation habitat, causing species migration. It may result in increased or decreased precipitation, precipitation type changes (e.g., more rain than snow), higher maximum temperatures, extended heatwaves, or more frequent drought. In turn, these changes may cause increased tree mortality, increased stressed vegetation, and greater susceptibility to disease or insect infestation. See Section 5B for additional information.

- **Communities at risk**: The risk level around designated Communities at Risk may change from year to year based on overall weather conditions, as well as during the year, changing from the wet season through the dry summer and fall.
- **Fire Frequency**: Fire frequency is associated with vegetation changes. In addition to fires consuming existing vegetation, the new landscape is open to different vegetation types, both native and invasive. Since different vegetation types represent varied fire hazards, the risk level also evolves over time in conjunction with vegetation changes.

Wildfires have occurred in the general region of NCPA's Hydro and Geothermal facilities; however, NCPA facilities have not been associated with any ignition source. The 2017 Tubbs and 2019 Kincade Fires affected areas nearby and immediately adjacent to the Geothermal Facility. The 2015 Valley Fire destroyed much of the 21-kV Service Line for the Effluent Pump System. Risks specific to NCPA's generation facilities are tied to both residual fuel load (snags) from previous fires and potential soil instability caused by previous damage to area vegetation. These hazards are addressed by enhanced inspection techniques described in Section 5.F

4.B. RISKS RELATED TO DESIGN, OPERATION, AND MAINTENANCE

Risks and risk drivers related to design, construction, operation and maintenance that could create fire ignition sources are listed below. The methodology for identifying, monitoring, analyzing, planning, and evaluating safety-wide risks are defined in NCPA's Preventative Strategies and Programs in Section 5.A. These risks include:

- **Equipment/structure/facilities**: Inherent risk of facilities, primarily open wire transmission and distribution ignition events. This risk is also elevated by adjacent facilities (CALPINE, PG&E) that could act as sources of ignition.
- **Object to wire or equipment contact**: Trees, birds, balloons, downed conductors, lightning strikes, or high wind events resulting in contact of equipment
- **Wire to wire contact**: Wires touching one another, and dropping molten metal to the ground
- **Vehicle operations**: Maintenance, inspection, or vegetation clearing crew vehicles causing fires (i.e., catalytic converters contacting dry brush)
- **Vegetation clearing**: Chain saws and other mechanized equipment use
- **Hot Work**: Welding or other activity that could cause ignition in the work area

4.C. CHANGES TO CPUC FIRE THREAT MAP

A key concern for NCPA is the historical risk of wildfires in the vicinity of the agency's facilities, particularly within potential fire hazard zones. Both CAL FIRE and the CPUC have developed maps to identify potential fire hazard zones, originally published in 2007 and 2018, respectively. The CPUC released an updated version of their Fire-Threat Map in August 2021. CAL FIRE's Statewide Responsibility Map was updated in September 2023. NCPA reviewed current CAL FIRE Hazard Severity Zone and CPUC Fire-Threat Maps with respect to agency facilities, as shown in Appendix 1.

CAL FIRE Hazard Severity Zone and CPUC Fire Threat maps are static until new updates are released, based on data available at the time they were created. As noted below, wildfire risks evolve over time in response to the risk drivers listed above. NCPA will review available data and adjust fire threat hazard zones when applicable to NCPA facilities. CAL FIRE recently released draft updated Hazard Severity Zone maps for review.

4.C.1. MAP COMPARISONS AND UPDATES

Currently published wildfire hazard maps from CAL FIRE and the CPUC show different boundaries for the risk areas delineated. They also use different terminology for hazard zones. Several factors could account for these boundary differences between agency maps: publication dates, study methodology, vegetation changes over time, recent wildfires, and potential climate change effects. The zones delineated by the CAL FIRE and CPUC maps are discussed below.

CAL FIRE CALIFORNIA FIRE HAZARD SEVERITY ZONE MAP

CAL FIRE generated and published Fire Hazard Severity Zone Maps for the entire state of California in 2007, including separate maps for each county. The California Department of Forestry and Fire Protection's Fire and Resource Assessment Program and the Office of the State Fire Marshal updated Fire Hazard Severity Zones. The Statewide Responsibility Area Map was updated in September 2023. The final regulation and map for the State Responsibility Area were adopted on January 31, 2024, effective April 1, 2024. These maps delineate three hazard zone levels: moderate, high, and very high. The figures in Appendix 1 illustrate these Fire Hazard Severity Zones.

Since April 2024, Cal FIRE has been developing a new science model and updated maps. These maps use the latest climate data, fire history, topography, and wildfire modeling. In a phased approach, Cal FIRE released draft Fire Hazard Severity Zone maps for Local Responsibility Areas. The Local Responsibility Area Fire Hazard Severity Zone rollout occurred in four phases. NCPA's Geothermal Facility, located in Lake and Sonoma counties, was included in the Phase I and Phase II rollout, while NCPA's Hydroelectric Facility, located in Calaveras County, was included in Phase III of the rollout. Each local jurisdiction will have 30 days from the release date to share the draft map for public review and comment and must adopt a finalized map and ordinance within 120 days of receiving the map. After adoption, each the local jurisdiction must provide their ordinance to Cal FIRE within 30 days.

CPUC FIRE-THREAT MAPS

The CPUC developed and published Fire-Threat Maps. These updated 2021 maps include Tier 2 (elevated fire risk) and Tier 3 (extreme fire risk) zones. Additionally, the CPUC uses a Tier 1 (zero to moderate fire risk) category, which includes a High-Hazard Zone (HHZ) designation based on a 2018 USFS-CAL FIRE joint map of tree mortality HHZs. This Tier 1 information addresses the hazard areas with large expanses of dead trees and associated fire risks.

4.C.2. FIRE ZONE REVIEW PROCESS

The existing fire zone review process, set forth by regulatory agencies such as CAL FIRE and CPUC, is an important tool for reducing wildfire risks and hazards. Preparing and executing adequate vegetation management plans is a critical component of this process. The current fire zone process incorporates lessons learned from past major wildfire events, with each new occurrence adding knowledge and forming the basis for improving the process.

Since differences exist between currently published CAL FIRE and CPUC wildfire hazard zone maps, NCPA uses the most conservative approach to vegetation management and asset protection, assuming the highest risk factor from the combined datasets.

5. WILDFIRE PREVENTATIVE STRATEGIES

5.A. PREVENTATIVE STRATEGIES AND PROGRAMS

NCPA's strategies to reduce wildfire risk involve continuous evaluation and improvement of its programs and procedures, including NCPA's: (1) facility maintenance program, (2) emergency operating procedures, (3) vegetation management programs, and (4) asset documentation programs. These programs include all details, such as goals, objective, or percentage; monitor ongoing work; accomplishments; internal and external audits; and detailed reports. There are no constraints such as budgets, availability of equipment, knowledge to effectively deploy, or qualified personnel to install and monitor effectively.

NCPA's key wildfire programs and initiatives that support wildfire prevention and mitigation are summarized in Table 2.

Table 2. NCPA Key Wildfire Mitigation Program & Initiatives

NCPA Key Wildfire Mitigation Program & Initiatives	
Design, Operations, and Construction	Reporting Period Goals
	McKay's Point 17-kV line pole upgrades and covered conductors ($610k)
	Provide permanent plumbing to the Helicopter Dip Tank from an established water source (Cost unknown at this time)
	Reporting Period Accomplishments
	Geothermal plant 230-kV physical transmission line inspections and insulation and hardware repairs ($500k)
	Hydro Collierville to Bellota transmission line inspections and insulation and hardware replacement ($54K)
	Helicopter Dip Tank Installation ($100K)
Emergency Preparedness	Reporting Period Goals
	Update draft Hydroelectric and Geothermal PSPS Plans for 230 kV line. (Cost unknown at this time)
Vegetation Management and Inspections	Reporting Period Accomplishments
	Vegetation maintenance/inspections around powerhouses and substations ($110K)
	Vegetation maintenance and clearance/inspections around transmission line ($230K)
	Vegetation maintenance and clearance/inspections around distribution poles ($110K)
	Transmission line corona and IR inspection ($111K)
	LiDAR transmission line inspection ($84K)
Situation Awareness and Forecasting	Reporting Period Goals
	Exploring a subscription-based weather notification service ($10K)
	Reporting Period Accomplishments
	One infrared camera ($)
	One inspection drone/ Two licensed pilots ($32K)

(1) Facility Maintenance Program: NCPA has a robust preventive maintenance program to maintain the safe and reliable operation of its transmission and distribution lines. Given the growing risk of wildfires, opportunities for improvement have been identified and are incorporated into each facility's improvement plan. Additionally, NCPA utilizes risk factors as identified in Section 4.B. during improvement plan evaluations. Improvements such as those listed below have been implemented, while others are currently being developed based on workable solutions and relative priorities:

- **The Collierville-Bellota (CB) 230-kV Gen-Tie Line**: In 2020, NCPA made improvements on its longest transmission line. More than half of the line is within a Tier 2 fire threat zone. NCPA prioritized the safe and reliable operation of the line. The line is over 30 years old. Following a thorough review of the line and its attendant facilities, major improvements, including upgrading insulators, hardware, and conductor damping, were completed in 2020. This project was considered a major capital improvement and was prioritized for wildfire prevention. Avian deterrents and anti-nesting cones were also added in 2020. NCPA is currently developing and implementing a drone inspection program to aid in 230-kV line equipment inspections. A drone was purchased, and training is underway for two licensed pilots. In addition, a PSPS plan for this line is currently in development.
- **McKay's Point 17-kV Service Line**: The three-span overhead section of distribution line is in a Tier 3 fire threat zone. This short line segment is maintained and is monitored consistently. Fire-hardening improvements were analyzed in 2023 for steel pole replacements, installing covered tree wire and covered connections at poles. A contract will be awarded with construction completion projected for summer/fall 2025.
- **Geothermal 230-kV Gen-Tie Transmission Line**: This nine-span line connects with PG&E's 230-kV system. The line is characterized by long dead-ended spans crossing thick vegetation. Vegetation is cleared to a 300-foot width across the right-of-way (ROW) following CAL FIRE recommendations. The line is consistently inspected and maintained. In 2024, a fire spotter camera was installed on radio transmission tower "Y" Site. This camera has infrared capabilities to spot fire ignitions along the 230-kV line starting from Plant 2 and moving along the line to the west. Approximately 82 percent of NCPA's transmission towers are visible from this camera location. The local fire department has access to the camera imagery. Eventually this camera will electronically communicate with the helicopter dip tank. If the camera spots an ignition, it will signal the dip tank to open the supply valve that fills the tank. In addition, a PSPS plan for this line is currently being updated.
- **Geothermal Steam Field and Delivery**: NCPA installed an 8,000-gallon helicopter dip tank at their Geothermal Facility on well pad "E" Site. During wildfire operations, this new dip tank will support helicopter water dropping. CalFire will now have quick and safe access to water, creating improved efficiency and access to wildland fire suppression. To ensure the dip tank is full during wildfire helicopter operations, NCPA plans to solicit bids in Fiscal Year 2026 or 2027, to provide permanent plumbing to the dip tank from an established water source.
- **PG&E/NCPA/Santa Clara/Department of Water Resources Cotenancy 230-kV line**: This line is operated and maintained by PG&E on behalf of the co-owners. It connects NCPA and adjacent CALPINE geothermal plant sites to PG&E's Fulton and Lakeville substations. Annual maintenance practices on this line were enhanced by implementing extended visual inspection techniques. These enhanced inspection techniques significantly reduce ignition hazards from potential line or connector failures. These practices are now subject to an annual coordination meeting between PG&E and NCPA on behalf of the other co-tenants.

- **Geothermal Effluent Pump System 21-kV Line**: This 6-mile distribution line is in a Tier 3 fire threat zone. This line was largely rebuilt following damage caused by the 2017 Valley Fire. The wood pole line has construction framing typical to distribution construction. In addition to typical maintenance and monitoring of the structural and foundational health, NCPA works with Cal Fire and Calpine to coordinate vegetation removal and clearance work, exceeding requirements for rural distribution circuits. This activity includes clearing fire breaks along routes within the NCPA steam fields, resulting in reduced risk of fire spread.

(2) Emergency Operating Procedures: NCPA uses emergency operating procedures to safely react to wildfire events and help guide employees. In addition to annually evaluating training procedure effectiveness, NCPA improves its operational awareness and ability to respond to fire events by ensuring that Hydro and Geothermal plant personnel working adjacent to NCPA line facilities can communicate with plant operations personnel and coordinate emergency wildfire response.

(3) Vegetation Management Program: NCPA developed and implemented a Transmission Vegetation Management Program (TVMP) that establishes vegetation maintenance requirements for each facility to maintain generation interconnection system reliability. The NCPA document, Generation Services Common Procedure GS-305: Transmission Vegetation Management Program, defines NCPA procedures for vegetation management. The full description of this program is described in Section 5.E.

(4) Wind Monitoring: Live data regarding prevailing winds is used with the fire maps located in Appendix 1. PG&E's Weather Awareness website is a resource for real-time conditions: https://www.pge.com/en/outages-and-safety/safety/wildfire-preparedness-support/weather-and-fire-detection.html. This information is used in communication and aids to analyze wildfire situations. In addition, prevailing wind patterns and their effect on transmission conductors due to cyclic loading are taken into account during annual transmission asset inspections conducted in accordance with NCPA's NERC FAC-003 compliance procedure GS-305.

(5) Asset documentation: Current NCPA facility documentation includes geographically referenced facility locations (Appendix 1) and current facility drawings, materials lists, and design criteria. This documentation was coordinated with adjacent asset owners (PG&E and Calpine) to ensure completeness of maintenance actions and track design features (lightning arrestors) that minimize risks of the lines causing an ignition.

NCPA directly participated in the development of the CPUC's Fire-Threat Map,[1] which designates a High Fire-Threat District. In the map development process, NCPA served as a territory lead and worked with utility staff and local fire and government officials to identify the areas of NCPA's service territory that are at an elevated or extreme risk of power line-ignited wildfire. NCPA incorporated the High Fire-Threat District into its construction, inspection, maintenance, repair, and clearance practices, where applicable.

[1] Adopted by CPUC Decision 17-12-024.

The CPUC defines a High Fire-Threat District consisting of three areas:

- Tier 1 HHZs from the USFS and CAL FIRE joint map of Tree Mortality HHZs
- Tier 2 consists of areas on the CPUC Fire-Threat Map where there is an elevated risk for utility-associated wildfires
- Tier 3 of the CPUC Fire-Threat Map where there is an extreme risk for utility-associated wildfires

NCPA facilities in relation to CPUC and CAL FIRE threat maps are shown in Appendix 1 of this report.

5.B. POTENTIAL CLIMATE CHANGE EFFECTS

Climate change affects vegetation in many ways. Droughts are longer and more severe. Large storm events are more common and intense. Summers are hotter and may include more thunderstorms. These climate change factors affect vegetation and the associated wildfire risks:

- Vegetation adapts, with plant migration into different areas
- Vegetation dries out during droughts, presenting increased fire danger
- Stressed vegetation is more susceptible to insect infestations, damaging trees, or accelerating mortality
- Thunderstorms present lighting strike risks along with strong wind events

Extended periods of intense rainfall also typically increase landslide risks. In turn, landslides could damage or topple structures, limit access, create safety hazards by damaging roads, or cause localized tree mortality by severing root systems. Note that heavy rainfall is not the only landslide trigger mechanism, but it is the one most closely associated with climate change.

5.C. POTENTIAL CLIMATE CHANGE RISK MANAGEMENT IMPACTS

Climate change affects the risks associated with wildfires, especially in fire hazard zones. Some specific climate change impacts that affect wildfire risks include:

- Tree and underbrush growth rates
- Vegetation type changes
- Vegetation migration from existing habitats
- Stress and disease contributing to higher tree mortality

As potential impacts shift over time, fire hazard management practices will evolve and adapt to changing risk management requirements.

5.D. TREE MORTALITY

It is estimated that over 100 million trees in California died from drought-related stress between 2012 and 2017. The extended drought period left millions of acres of forestland highly susceptible to insect attacks. Drought stress is aggravated in forests with high competition for limited water resources.

Dead, dying, and diseased trees represent potential wildfire risks for NCPA. Trees adjacent to power line ROW represent a hazard due to falling branches or potential toppling. This threat increases substantially with tall snags or trees with dead tops. Dead or highly stressed trees are also an easily ignitable fuel source. They ignite quicker and generally burn faster than healthy trees. NCPA's internal Transmission Vegetation Management Program specifies tree and snag clearances.

5.E. VEGETATION MANAGEMENT

NCPA developed and implemented a Transmission Vegetation Management Program (TVMP), establishing vegetation maintenance requirements for each facility to achieve generation interconnection system reliability. The NCPA document, Generation Services Common Procedure GS-305: Transmission Vegetation Management Program, defines NCPA procedures for managing all types of vegetation associated with utility infrastructure, including vegetation above and below electrical lines.

NCPA meets or exceeds the minimum industry standard vegetation management practices. For transmission-level facilities, NCPA complies with North American Electric Reliability Corporation (NERC) FAC-003-4. For both transmission and distribution-level facilities, NCPA meets: (1) Public Resources Code section 4292, (2) Public Resources Code section 4293, (3) General Order 95 Rule 35, and (4) General Order 95 Appendix E Guidelines to Rule 35.

The TVMP enhances reliability by preventing vegetation-related outages, maintaining required clearances between power lines and vegetation within or adjacent to the ROW, reporting vegetation-related system outages to the Western Electricity Coordinating Council, and documenting the process for an annual vegetation work plan. This program satisfies requirements for vegetation management specified in NERC FAC-003-4, which requires a Generator Owner to have documented maintenance strategies, procedures, processes, or specifications to prevent the encroachment of vegetation into the Minimum Vegetation Clearance Distance of applicable lines as specified in requirement R3.

NCPA uses a combination of its own staff and qualified consultants (such as scientific experts in ecology, fire ecology, fire behavior, geology, and meteorology) with experience in line design, line construction, NERC Standards compliance, and vegetation management to develop and maintain the TVMP.

The TVMP specifies technical requirements for staff and contractors to comply with or verify compliance with California Division of Occupational Safety and Health (Cal/OSHA) standards, and NCPA Electrical Safety Procedure GS-103 ensures Cal/OSHA and Minimum Approach Distances.

Objectives of the TVMP are:

- Adhere to the Power Line Fire Prevention Field Guide published by CAL FIRE in November 2008 and used by California power utilities for the care and maintenance of trees, shrubs, and other woody plants when pruning vegetation near electric facilities.
- Maintain defined clearance distances between the generation interconnection facilities and all trees, brush, and other vegetation that could grow too close to electrical facilities, including conductors, poles, guy wires, and other structures. NCPA adheres to the CAL FIRE field guide. Clearances specified in the Power Line Fire Prevention Field Guide, published by Cal FIRE in November 2008 are more stringent than the MVCD described in FAC-003-4.
- Where appropriate and necessary, develop site-specific, environmentally sensitive, cost-effective, and socially responsible solutions to vegetation control near the NCPA generation interconnection facilities. Document the process in NCPA's computerized maintenance management system's annual Preventive Maintenance process for the annual vegetation work plan for applicable power lines and other facility infrastructure (steam lines, switchyards, firebreaks).
- Maintain public and worker safety, maintain compliance with NERC standards and other regulatory and legal requirements, provide reliable electric service that allows for operational flexibility, and promote environmental stewardship and habitat enhancement.

Potential improvements to its programs include increasing the frequency and scope of aerial LiDAR surveys on its transmission and distribution facilities and a continued emphasis on identification and timely removal of danger and hazard trees that threaten overhead lines. NCPA's asset management system allows evaluating potential improvements as observations are recorded.

5.F. INSPECTIONS

NCPA performs annual inspections of its transmission and distribution facilities, in accordance with General Order 95 and General Order 165. The following additional inspections were performed on the Collierville-Bellota 230-kV line:

- LiDAR vegetation flights
- Corona scans of insulators
- Infrared "hot-spot" inspections of conductor, conductor splices, and dead-end hardware.

In addition to its annual ground-based inspection, NCPA may augment inspections with aerial drone and/or helicopter surveys.

Inspections are documented and issued by NCPA's computerized maintenance management system, and records of those inspections are maintained.

Strategic improvements to the inspection program are listed below.

- Increasing inspection frequency and scope
- Using drone-based visual inspections
- Considering new technology
- Improving inspection methodology approach
- Considering fire threat zones in inspection programs

NCPA's asset management system also allows evaluation of these improvements as observations and comments are made when work orders for maintenance items are executed.

The TVMP establishes requirements for the type and schedule of ROW vegetation inspections. Specific hazards addressed in the TVMP include identifying encroachments into the clearance area (Section 6.3.7) and additional inspection activities to identify deadfall and brush in the ROW that could provide fuel for wildfire spread (Section 6.3.9). The TVMP also provides explicit direction to treat emergent conditions associated with a potential hazard as an immediate mitigation priority and address extent of condition without delay (Section 6.4.4).

NCPA establishes Geothermal facility inspection procedures related to wildfire mitigation in the following NCPA document: Geothermal Facilities Standard Maintenance Procedure GEO-SMP-646: Geothermal Wildfire Mitigation. The document also addresses vegetation management, safety hazards and precautions, and facility repair procedures.

5.G. FIRE PREVENTION, SAFETY, EMERGENCY RESPONSE TRAINING

Section 4.B. of this WMP outlines the unique risks for which NCPA performs inspections.

NCPA implemented work rules and complementary training programs for its workforce to help reduce the likelihood of fire ignition. Trainings for employees to cover fire hazards and NCPA's Fire Prevention Plan cover the following topics.

- Fire extinguisher use
- Fire prevention
- Hazardous materials handling
- Emergency response

Training is conducted by an outside vendor and/or NCPA supervisors or environmental health and safety specialists.

NCPA employees also receive training on emergency response plans when the employee is initially assigned to the job, when the plan changes, and when the employee's responsibilities or designated actions under the plans change.

Each facility manager is responsible for conducting site-specific training to ensure that employees understand the purpose and function of NCPA safety procedures, and that

knowledge and skills required for safe operation are acquired by employees. Refresher training is performed and documented on an annual basis and retraining is conducted when:

- An annual audit reveals there are deviations from or inadequacies in the employee's knowledge of the procedure or changes in the regulations.
- There is a new or revised control method of a system or piece of equipment.

The following procedures provide additional guidance for employee training specific to the areas described in these NCPA documents:

- Generation Services Procedure GS-101: Lock Out Tag Out Try Procedure
- Generation Services Procedure GS-103: Electrical Safety Procedure
- Generation Services Procedure GS-107: Proper Handling of Hazardous Waste
- Generation Services Procedure GS-111: Hot Work Procedure
- Generation Services Procedure GS-115: Welding Safety Procedure
- Generation Services Procedure GS-126: Fire Protection and Prevention Plan
- Power Management Procedure PM-108: Operating Instructions and Emergency Assistance
- Power Management Procedure PM-201: Emergency Operating Guidelines, Collierville Power House Bellota-Collierville 230-kV Lines

5.H. RECLOSING POLICY

NCPA does not own or use automatic reclosers on its 230-kV transmission lines. Relaying equipment on the 21-kV Bear Canyon line at the Geothermal facility is also set to a "zero-reclose to lockout", requiring physical inspection of the line prior to restoration. This is a typical approach for utility operations in remote terrain, for both personnel and fire hazard safety reasons.

In the event of a planned or emergency line trip, close coordination with NCPA generation services and dispatch, as well as with PG&E's grid control center, is mandatory. Lines are only re-energized after extensive line patrol visual confirmation. If lines are tripped due to a forecasted or imminent wildfire or if a wildfire is believed to be caused by downed lines, close coordination with CAL FIRE's onsite representative and control center are required before NCPA's generation services attempts to energize the line.

5.I. DE-ENERGIZATION

NCPA plant managers are responsible for determining de-energizations. NCPA's Geothermal plant manager relies on PG&E to determine de-energization. NCPA's Hydro plant manager has the authority to preemptively shut off power due to fire-threat conditions; however, this option will only be used in extraordinary circumstances. NCPA is currently updating their existing Geothermal and Hydroelectric PSPS plans for their 230-kV line.

NCPA also maintains transmission line trip procedures to significantly reduce fire risk, including requiring patrols prior to restoring transmission lines. Requiring patrols during high fire risk scenarios is typical and recommended of California utilities.

5.J.1. IMPACTS TO PUBLIC SAFETY

NCPA does not service retail customers and de-energizing agency facilities will not directly affect retail customers, who will be notified of PSPS by their specific utility providers.

5.J.2. CUSTOMER NOTIFICATION PROTOCOLS

NCPA provides wholesale power to cities and utilities, typically known as NCPA members, only via the utility grid. Since NCPA does not have retail customers, no customer notification protocols are in place. However, NCPA is the primary point of contact between PG&E PSPS and its member utilities. Formal procedures are currently in place, NCPA-PM-501, to notify NCPA member utilities of de-energization activities. The primary and backup points of contact for each NCPA member utility are contacted by phone.

6. RESTORATION OF SERVICE

After a de-energization event, NCPA will restore service in coordination with PG&E's restoration efforts. NCPA will follow steps to restore service, such as inspecting, repairing, testing, and finally restoring.

6.A. METRICS AND ASSUMPTIONS FOR MEASURING PLAN PERFORMANCE

NCPA tracks three outcome metrics on an annual basis to measure performance of this WMP. First, fire ignitions are tracked in NCPA territory within the following categories:

- Self-ignited or human-caused
- An NCPA facility failure was associated with the fire
- An NCPA electrical facility wire-to-wire contact was associated with the fire
- The ignition was a result of an extreme weather event

The second metric is the number of NCPA distribution and transmission wires downed. A wire down event includes any instance where an electric transmission or primary distribution conductor falls to the ground or onto a foreign object. NCPA divides the wires down metric between wires down inside and outside of High Fire Threat Districts. All wires down events are documented.

In addition, NCPA measures an element that could lead to a wildfire ignition:

- Fall in trees (trees of height sufficient to represent a contact hazard to the Distribution Line if destabilized due to soil instability at the tree base) without adequate clearance to the ROW in areas previously affected by fire.

Tables 3 and 4 highlight both performance and outcome metrics tracked by NCPA for the Geothermal Facility and the Hydroelectric Facility.

Table 3. NCPA Performance Metrics

NCPA WMP Performance Metrics					
Geothermal Facility					
Metric Type	*Progress Metric Name*	*(Actual) 2024*	*(Forecast) 2025*	*Unit(s)*	*Costs/Comments*
Generation	Routine Inspections/ Maintenance Inspections	Annual	Annual	Number of Inspections	$50K/Sprayed pre-emergent at a 300-foot radius around Plant 1 and Plant 2 cooling towers. Continuous fire break maintenance.
Distribution	Routine Inspections/ Vegetation Management	6	6	Number of Miles	$50k/Sprayed pre-emergent at a 300-foot radius around power poles. Continuous fire break maintenance.
Transmission	Routine Inspections/ Vegetation Management	2.67	2.67	Number of Miles	$50k/Sprayed pre-emergent at a 300-foot radius around transmission tower. Continuous fire break maintenance.

Hydroelectric Facility					
Metric Type	*Progress Metric Name*	*(Actual) 2024*	*(Forecast) 2025*	*Unit(s)*	*Costs/Comments*
Generation	Routine Inspections/ Maintenance Inspections	Annual	Annual	Number of Inspections	$60K/Remove weeds/grass from the powerhouse perimeter and in all switchyards.
Distribution	Routine Inspections/ Vegetation Management	2	2	Number of Miles	$60K/Vegetation is addressed following the inspection if needed.
Transmission	Routine Inspections/ Vegetation Management	40	40	Number of Miles	$375K/LiDAR survey for vegetation clearances on conductors, towers, and guys. Patrol and inspect condition of conductor and hardware at each tower location (160 locations).

Table 4. NCPA Outcome Metrics

NCPA WMP Outcome Metrics				
Geothermal Facility				
Event Category	*Category*	*(Actual) 2024*	*(To Date) 2025*	*Unit(s)*
Fire Ignitions	Self-Ignited Facility Failure Wire to Wire Contact Extreme Weather Event	0 0 0 0	0 0 0 0	Number of Ignitions
Wires Down	Geothermal	0	0	Number of Wires Down
Fall in Hazard Trees Ignition	Geothermal	0	0	Number of Falls
Hydroelectric Facility				
Event Category	*Category*	*(Actual) 2024*	*(To Date) 2025*	*Unit(s)*
Fire Ignitions	Self-Ignited Facility Failure Wire to Wire Contact Extreme Weather Event	0 0 0 0	0 0 0 0	Number of Ignitions
Wires Down	Hydroelectric	0	0	Number of Wires Down
Fall in Hazard Trees Ignition	Hydroelectric	0	0	Number of Falls

6.B. IMPACT OF METRICS ON PLAN

NCPA continues to track these metrics and document overall WMP success at identifying and containing risk. Additional metrics may be added to the WMP, as warranted, to identify which lines are most susceptible to risk factors from unexpected outages (human, animal, or vegetation induced), time-of-year risks (drought or excessive rainfall), shifting fire threat district risks, or impact of maintenance deferment on existing lines. Through this metric review, NCPA will identify lines and other facility assets that are disproportionately impacted and could benefit by focused risk reduction measures that represent potential improvements to the plan.

2024 WMP Impact Due to Metrics – The metrics above show zero incidents and indicate success.

Within the context of California's exposure to wildfire ignition risk resulting from "wires down" or "wire/tree interaction", NCPA operates an asset base in high fire risk territory with roughly 35 miles of 230-kV transmission and 6 miles of 21-kV distribution. By contrast, PG&E operates in excess of 99,000 miles of transmission and distribution circuits within its service territory, experiencing an incident rate of 308 "wires down" or "wire/tree interaction" during 2022, for a rate of 0.3 percent per mile year (PG&E 2023-2025 WMP Revision 1 Figure PG&E-6.1.1-2, page 136). Assuming NCPA's incident rate is equivalent to PG&E, NCPA should expect to experience 0.12 incident per mile year, or about one incident in 8.5 years. A "zero" metric would be indicative of success under NCPA's WMP program metrics and should be sustainable for a period in excess of 10 years.

6.C. MONITORING AND AUDITING THE PLAN

This WMP is presented to the NCPA Commission on an annual basis along with metrics and a summary of updates. Additionally, a qualified independent evaluator will present a report on this plan to the NCPA Commission. See Section 8.

6.D. IDENTIFYING AND CORRECTING DEFICIENCIES IN THE PLAN

NCPA may correct deficiencies and implement plan improvements as needed. Some of these activities and their alignment to the Agency's Strategic Priorities are defined in Section 2.C. In support of these priorities, the annual WMP review provides a framework for evaluating the Agency's plan effectiveness, both in terms of the internal results achieved and the potential for shifting hazards resulting from ongoing drought (e.g., additional areas being designated as high fire threat) and weather-induced changes (e.g., increased fire load as a result of higher than historic rainfall totals). The Agency's strategy involves an ongoing process of assessing risk and developing cost-effective means to address those risks within the WMP (e.g., cooperative effort with Calpine to maintain fire breaks, use of WAPA for transmission line conductor repair and replacement). Improvements are documented in the annual report to the NCPA Commission.

6.E. MONITORING THE EFFECTIVENESS OF INSPECTIONS

Line inspections for NCPA fall into two categories:

1. Line patrol and evaluation of line facilities on a structure-by-structure basis. This is either ground or aerial (drone or helicopter) based.
2. Vegetation monitoring and evaluation, either ground based on a structure-by-structure and span-by-span basis or by LiDAR aerial methods.

Measuring the effectiveness of these inspections is conducted by professionals independent of the inspection documentation and analysis. Baseline comparison of results from adjacent drought and excessive rainfall years will inform earlier inspection timing and/or enhanced scope of the inspections. Developing metrics surrounding identified and mitigated risks will help reinforce a "zero-tolerance" approach for vegetation management and equipment failure-induced outages. Baseline of inspection practices with adjacent owners (PG&E and Calpine) are also used to evaluate effectiveness. An NCPA representative will ride along with inspection personnel to review their methodology and reporting. Lastly, an independent review of similar facilities can be performed and compared with inspection personnel. NCPA currently conducts ride alongs with both Cal-Fire staff and internal NCPA staff. Additional objectives are stated in Section 2.C. above.

7. INDEPENDENT AUDITOR

In 2019, NCPA anticipated that the CPUC would provide a list of qualified independent evaluators. In lieu of such a list, NCPA drew from a list it compiled following a Request for Qualifications issued in June 2019. The selection was based on competitive bid.

In 2020, NCPA competitively bid and contracted with a qualified independent evaluator, Dudek, with experience in assessing the safe operation of electrical infrastructure to review and assess the comprehensiveness of this WMP. The independent evaluator issued a report (Appendix 2) and posted to the NCPA website. The independent evaluation and report were completed on April 30, 2020.

In 2021, 2022, and 2023, NCPA competitively bid and contracted with a qualified independent evaluator, Dudek, to review this WMP using the recommendations provided by the Wildfire Safety Advisory Board's (WSAB) "Guidance Advisory Opinion for the 2021 Wildfire Mitigation Plans of Electric Publicly Owned Utilities and Cooperatives". Per the WSAB, "The guidance document should be viewed as offering an efficient way to meet the WMP requirements in Public Utilities Code Section 8387(b)(2), not as adding to the statutory requirements." The independent evaluator issued reports for each year are posted to the NCPA website.

In 2024 and 2025, NCPA competitively bid and contracted with a qualified independent evaluator, POWER Engineers, Inc., to review this WMP using the recommendations provided by the WSAB's "Guidance Advisory Opinion for the 2024 Wildfire Mitigation Plans of Electric Publicly Owned Utilities and Cooperatives" and WSAB's "Guidance Advisory Opinion for the 2025 Wildfire Mitigation Plans of Publicly Owned Utilities and Cooperatives". Per the WSAB, "The guidance document should be viewed as offering an efficient way to meet the WMP requirements in Public Utilities Code Section 8387(b)(2), not as adding to the statutory requirements." The independent evaluator issued a report for 2024 and 2025 (Appendix 2) and posted to the NCPA website.

8. REFERENCES

California Department of Forestry and Fire Protection. 2023. Fire Hazard Severity Zones. https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones. Accessed March 2025.

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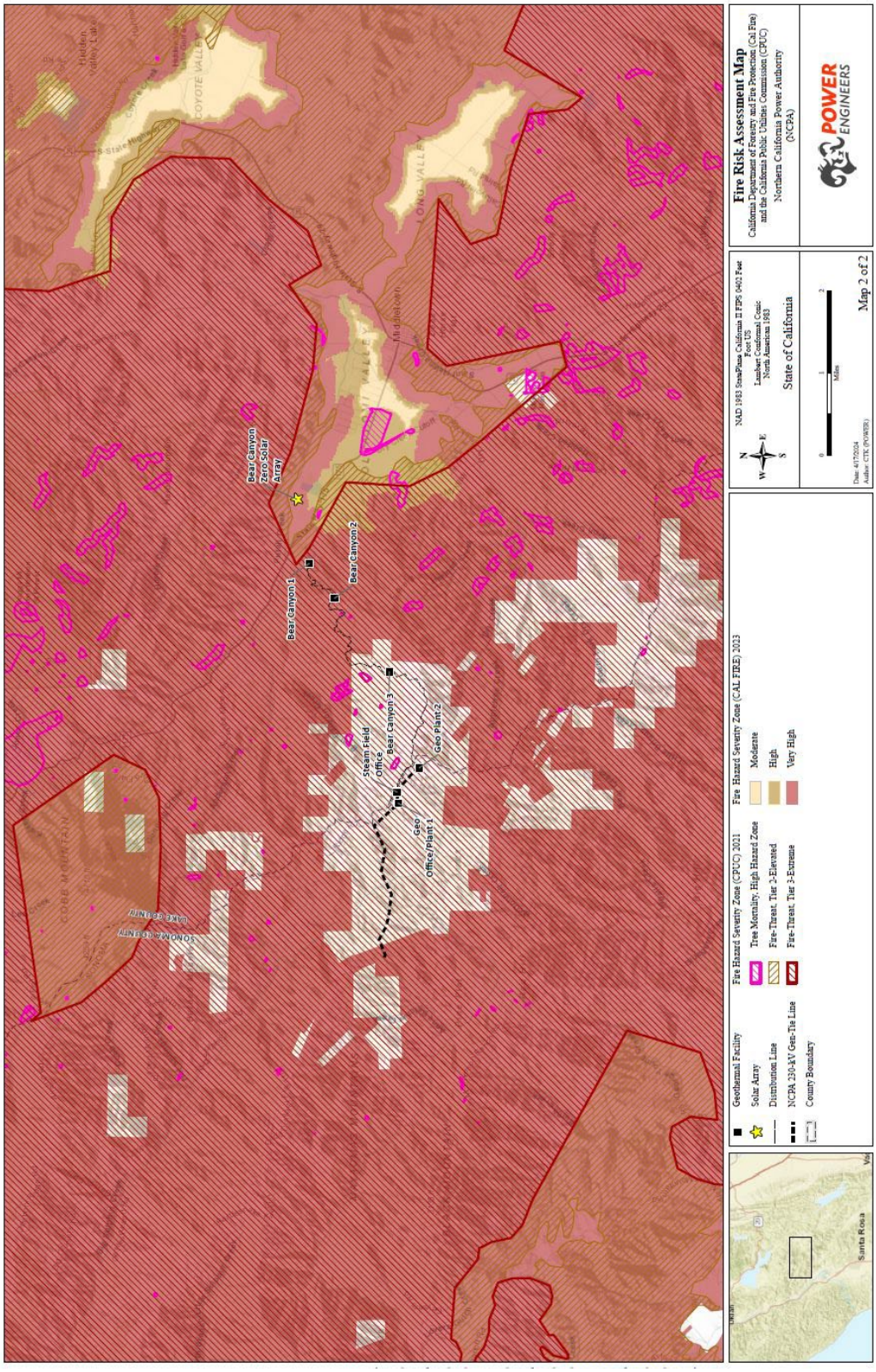
Wildfire Safety Advisory Board. 2024. Advisory Opinion for the 2025 Wildfire Mitigation Plans of Electric Publicly Owned Utilities and Rural Electrical Cooperatives. https://energysafety.ca.gov/wp-content/uploads/2024/12//wsab-advisory-opinion-on-pou-2025-wmps-final.pdf. Accessed March 2025

APPENDIX 1 – FIRE RISK ASSESSMENT MAPS



Fire Risk Assessment Map
California Department of Forestry and Fire Protection (Cal Fire)
and the California Public Utilities Commission (CPUC)
Northern California Power Authority
(NCPA)
POWER ENGINEERS
Hydro Facility
Collierville-Bellota 230-kV Gen-Tie Line
McKay's 17-kV Service Line
County Boundary
Fire Hazard Severity Zone (CPUC) 2021
Tree Mortality, High Hazard Zone
Fire-Threat, Tier 2-Elevated
Fire-Threat, Tier 3-Extreme
Fire Hazard Severity Zone (CAL FIRE) 2023
Moderate
High
Very High
NAD 1983 StatePlane California II FIPS 0402 Feet
Foot US
Lambert Conformal Conic
North American 1983
State of California
Map 1 of 2
Alpine RTU
Lake Alpine RT
NorthFork Repe
Utica Resevoir
N.F. Rper
North Fork Div
North Fork Out
NSM Tower
Higland Creek
Spicer PH
NSM PowerHouse
Liberty Hill
Avery Gauging
Beaver Creek D
Beaver Creek R
McKay's Dam
Mill Creek
Mill Creek Tap
Darby Knob Pas
Collierville Powerhouse
Murphys Oft
Mt. Elizabeth
Bellota Sub
ALPINE COUNTY
TUOLUMNE COUNTY
CALAVERAS COUNTY
AMADOR COUNTY
SAN JOAQUIN COUNTY
STANISLAUS COUNTY
SACRAMENTO COUNTY
Linden
Clements
Carson City
Sacramento
San Francisco
San Jose
California
Fresno

APPENDIX 2 – Independent Evaluator Report 2025

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April 25, 2025

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Subject: Independent Evaluator's Report of the Northern California Power Agency's 2025 Wildfire Mitigation Plan

1. Introduction

POWER Engineers, Inc. (POWER) conducted an independent review of Northern California Power Agency's (NCPA) 2025 Wildfire Mitigation Plan (WMP). This independent evaluator's report describes the technical review of the 2025 WMP and its compliance with Public Utilities Code §8387 (PUC §8387). This independent evaluator's report contains the following elements: (1) an overview of NCPA, (2) a review of the statutory requirements in PUC §8387(b)(2) for WMPs, (3) an evaluation of the WMP for compliance with PUC §8387(b)(2), (4) a review of the specific recommendations published by the Wildfire Safety Advisory Board (WSAB) for the NCPA's 2025 WMP, (5) a discussion of NCPA's progress in implementing wildfire prevention strategies, (6) an overview of the metrics used in the WMP, and (7) a comparison of wildfire prevention industry standards.

Pursuant to California Senate Bill 901 enacted September 21, 2018, and Assembly Bill 1054 enacted July 12, 2019, a WMP must be updated annually and comprehensively every three years to comply with PUC §8387. The WMP requirements are codified in PUC §8387(b)(2) for local publicly owned electric utilities (POUs). PUC §8387(c) requires that an independent evaluator review and assess the comprehensiveness of a POU's WMP and issue a summary report.

In response to this legislation, POWER conducted this independent evaluation of NCPA's 2025 WMP to determine compliance with the comprehensive requirements established by PUC §8387(c) and ensure it includes all of the elements required under PUC §8387(b)(2).

In addition to evaluating the elements required by the PUC, POWER evaluated the WMP for compliance with the WSAB's guidance for POUs published in WSAB's *Guidance Advisory Opinion for the 2025 Wildfire Mitigation Plans of Electric Publicly Owned Utilities and Rural Electrical Cooperatives* (WSAB 2024).

2. Overview of Northern California Power Agency

NCPA is a Joint Powers Agency, which owns and operates electrical generation facilities. NCPA is governed by a Commission comprised of one representative for each of its public power utility members.

The WMP applies to NCPA's Geothermal Facility and Hydroelectric Facility, including transmission and distribution lines. The Geothermal and Hydroelectric facilities contain electrical equipment in high fire threat locations and power lines that traverse high fire threat areas. The Geothermal Facility is located near the Geysers in Lake County and consists of five Geothermal facilities spread over 30 square miles. The Hydroelectric Facility is located in the North Fork Stanislaus River watershed (Calaveras County) and consists of eight generator/water diversion stations and an office in the Village of Murphys. There are approximately 40 miles of power lines between the generation facilities and their tie-in points with Pacific Gas and Electric (PG&E) transmission lines. NCPA's electrical infrastructure consists of facilities that are in the California Department of Forestry and Fire Protection's (CAL FIRE's) Moderate to Very High Fire Hazard Severity Zones and/or the California Public Utilities Commission's (CPUC's) Tier 2 or 3 Fire Threat Zones.

NCPA has taken appropriate actions to help prevent and respond to the increasing risk of devastating wildfires by following all applicable design, construction, operation, and maintenance requirements that reduce safety risks associated with its electrical system.

3. Wildfire Mitigation Plan Statutory Requirements

PUC §8387(b)(2) lists the statutory requirements for WMPs. These are the specific elements that the independent evaluator must review to make its determination for this report. The specific elements that must be addressed in NCPA's WMP are listed in Table 1.

Table 1 Statutorily Required Contents for WMPs Pursuant to Public Utilities Code §8387(b)(2

PUC §8387(b)(2)	Required Contents of WMPs
(A)	Staff responsibilities
(B)	General objectives
(C)	Program descriptions
(D)	Evaluation of metrics
(E)	Lessons learned, metrics
(F)	Protocols for disabling reclosers and de-energizing electrical distribution system
(G)	Community de-energization notification
(H)	Vegetation management
(I)	Inspections
(J)	Risks and risk drivers
(K)	Identification of higher wildfire threat areas
(L)	Identify enterprise-wide risk
(M)	How service will be restored after a wildfire or shutdown event
(N)	The processes and procedures used to 1) monitor and audit the implementation of the WMP, 2) identify any deficiencies, and 3) monitor asset application & inspections

4. Public Utility Code Requirements Evaluation

4.1 Minimizing Wildfire Risks

PUC §8387(a) requires the following: "Each local publicly owned electric utility and electrical cooperative shall construct, maintain, and operate its electrical lines and equipment in a manner that will minimize the risk of wildfire posed by those electrical lines and equipment."

POWER has determined that NCPA complies with this standard through the design of its system, its operational procedures, and the implementation of wildfire risk reduction and wildfire response strategies.

4.2 Evaluation of WMP Elements

POWER found that NCPA's WMP is comprehensive and meets the statutory requirements of PUC §8387. The review of the WMP's elements is summarized below relative to the application of the WMP. POWER's assessment is in **bold text** beneath the description of the requirement.

8387(b)(2)(A): Responsibilities of Persons Responsible for Executing the Plan

- **Chapter 3 describes staff responsibility and functions in the implementation of the WMP.**

8387(b)(2)(B) Objectives of the Wildfire Mitigation Plan

- **Chapter 2 describes the WMP goals and objectives. Chapter 1 describes the purpose of the plan.**

8387(b)(2)(C): Prevention Strategies and Programs

- **Chapter 5 describes NCPA's comprehensive wildfire prevention strategies and programs, including its 1) facility maintenance program, (2) emergency operating procedures, (3) vegetation management programs, and (4) asset documentation programs.**

8387(b)(2)(D): Metrics and Assumptions for Measuring WMP Performance

- **Chapter 6 Section A contains a description of the three metrics used by the NCPA in their WMP. These metrics are evaluated yearly: (1) number of fire ignitions, (2) number of NCPA wires down, and (3) fall in hazard tree ignitions. Data for the years 2024 and Quarter one (Q1) 2025 are included for each metric.**

8387(b)(2)(E): Impact of Previous Metrics on WMP

- **Chapter 6 Section B describes NCPA's plans to continue tracking the three metrics described in Section A. Section B also describes 2024 WMP impact due to metrics.**

8387(b)(2)[F]: Reclosing Protocols

- **Chapter 5 Section H describes NCPA's reclosing policy. NCPA does not own or use automatic reclosers on their 230-kilvolt (kV) transmission lines.**

8387(b)(2)(G): De-energization Notification Procedures

- **Chapter 5 Section. J.2 describes NCPA's customer notification protocols. This section contains an explanation of the notification methods. Policies are currently in place, NCPA-PM-501, to notify NCPA member utilities of de-energization activities.**

8387(b)(2)(H): Vegetation Management

- **Chapter 5 Section E contains a comprehensive description of NCPA's vegetation management program. NCPA developed and implemented a Transmission Vegetation Management Program establishing vegetation maintenance requirements for each facility to achieve generation interconnection system reliability.**

8387(b)(2)(I): Inspections

- **Chapter 5 Section F describes NCPA's inspection program, including the type and frequency of inspections.**

8387(b)(2)(J): Risks and Risk Drivers

- **Chapter 4 provides a comprehensive description of wildfire risk and risk drivers associated with topographic and climatological factors and design and construction standards.**

8387(b)(2)(K): Geographical Area of Higher Wildfire Threat

- **Chapter 4 Section C describes NCPA's review of the CPUC's fire threat map and CAL FIRE's Fire Zones and conclusions about the geographical area of the high fire threat areas.**

8387(b)(2)(L): Enterprise-wide Safety Risks

- **Chapter 4 describes that NCPA does not have enterprise-wide safety risks as NCPA does not possess general responsibility over assets and geography except for locations tied to its specific generation assets, as defined in the table in Chapter 4.**

8387(b)(2)(M): Restoration of Service

- **Chapter 6 describes how NCPA will restore service after a de-energization event in coordination with PG&E's restoration efforts.**

8387(b)(2)(N)(i) Monitoring and Auditing WMP implementation, (ii) identifying and correcting WMP deficiencies, (iii) Monitoring and Auditing the effectiveness of inspections.

- **Chapter 6 describes NCPA's processes for monitoring and auditing WMP implementation, correcting WMP deficiencies, and monitoring the effectiveness of inspections. NCPA uses an ongoing process to identify risks and inefficiencies, and to develop means to address the identified issues.**

5. Wildfire Safety Advisory Board Guidance Advisory Opinions

The WSAB published the California Safety Advisory Boards *Guidance Advisory Opinion for the 2025 Wildfire Mitigation Plans of Electric Publicly Owned Utilities and Rural Electrical Cooperatives* (WSAB 2024), which provides guidance for development of the POUs' 2025 WMP updates and future comprehensive WMPs. The WSAB provided specific recommendations for each utility that submitted a WMP for review by the board.

POWER reviewed the WSAB's report and recommendations; these recommendations provide guidance and are not statutory requirements. Based on review of the 2025 WMP and WSAB's report, POWER determined that NCPA complies with the recommendations below through its system design, operational procedures, and implementing wildfire risk reduction and wildfire response strategies outlined in the WMP.

WSAB's 2025 Recommendations

Based on WSAB's evaluation of the POUs' 2025 WMPs, the WSAB's advisory opinion is that each POU initiate a collaborative approach to improve POU reporting on its wildfire prevention efforts and WSAB's ability to comprehend and advise on those reports.

WSAB provides the following recommendations for the development of the POU's 2025 WMP updates or future comprehensive WMPs:

1. Summary of Projects and Programs: Include a standalone summary of key wildfire mitigation initiatives in their WMPs. The summary should include completion targets, year, and cost estimates of the reporting period categorized by program (e.g., grid design and system hardening, community outreach and engagement), along with accomplishments from the prior reporting period.

2. Late WMP Submissions: If a POU determines it is likely to submit its WMP after the July 1 deadline, the POU should submit a letter to the docket or the WSAB email by the July 1 deadline, notifying the public and WSAB of the delay.

3. Tracking Changes to WMPs: The POUs should include a redline version or a summary of changes to indicate year-to-year updates made on their WMPs, which could take the form of a redline, narrative description, or revision log.

4. Digital Accessibility: The POUs should follow accessible content guidelines such as those offered by W3C and conduct digital accessibility checks of their WMPs prior to submittal. The POUs should include internal hyperlinks in the tables of contents of their WMPs.

5. Areas That Exceed Minimum Standards in General Orders: The POUs should include information in their WMPs about their decision-making process for how they assess if the known local conditions require the utility to exceed any of the applicable minimum design, construction, or maintenance standards for a particular facility. POUs should describe their experience utilizing this decision-making process, including observations to date and any lessons learned.

6. Independent Evaluator Reports: Where appropriate, considering additional costs, the POUs should include in the project scopes for IE reports an evaluation of the WMP strategy and projects, to provide recommendations for improvements for the WMP overall and for specific initiatives/projects.

7. Alternative Reporting for POUs Without Overhead Electric Supply Facilities in the High Fire Threat District: A POU that does not own or control any overhead electric supply facilities in the High Fire Threat District (HFTD), and has no or minimal updates to its WMP, should submit its most recent WMP together with a letter stating that the POU does not own or control any changes to wildfire risks in its service territory in coming years, and has no update since its last WMP.

8. Progress and Achievements: WSAB recommends that POUs highlight their recent progress and achievements in their WMP programs by including more detailed information in the WMP regarding targets and timelines. WSAB recommends POUs include progress updates for each project in each subsequent WMP.

9. Quality Assurance/Quality Control Programs: WSAB recommends that the POUs provide descriptions of their QA/QC programs and the implementation of any resulting improvements in their inspection and maintenance programs in their WMPs.

10. Performance Metrics: WSAB recommends that POUs use the California Municipal Utilities Association's (CMUA) 2024 template as the starting point for developing their own metrics table. It is expected that POUs will tailor the metrics to their unique circumstances. The WSAB recommends that POUs utilize the latest version of the Context Setting Template.

11. Other Topics: WSAB recommends that the POUs and the Joint Associations work with the WSAB POU Committee to refine the list of future topics and develop an action plan of activities that could include WSAB recommendations.

6. Northern California Power Agency 2025 Progress in Implementing Wildfire Mitigation Plan Wildfire Prevention Strategies

This section describes NCPA's accomplishments in 2024 for the wildfire prevention program and strategies described in the WMP.

6.1 Vegetation Management

Geothermal

- Annual maintenance of firebreaks around Plants #1 and #2 completed June 2024.
- Vegetation management and line clearance work along the 230-kV tie-in lines and around all nine tower bases completed June 2024.
- Annual vegetation maintenance around Plants #1 and #2 perimeters, plus along access roads completed April 2024.

Hydroelectric

- Annual vegetation maintenance around powerhouses and substation completed June 2024.
- Vegetation management and line clearance work along 230-kV tie-in lines and around tower bases completed June 2024.
- McKay's Point 17-kV Service Line: Fire-hardening improvements analyzed in 2023 and 2024, with construction anticipated to be complete by summer/fall 2025.

6.2 Annual Inspections

Geothermal

- 230-kV physical transmission line inspections along with insulation and hardware replacement completed June 2024.
- 21-kV line inspection completed June 2024.

Hydroelectric

- 230-kV transmission line inspection completed May 2024.
- 17-kV line wood pole visual inspection completed June 2024.
- 230-kV line daycore corona completed June 2023.
- 230-kV IR inspection completed July 2024.
- 230-kV LiDAR transmission line inspection completed December 2024.
- NSM-Cabbage Patch 21-kV cable tests completed June 2022.

7. Wildfire Mitigation Plan Metric Overview

In 2020 the CMUA published a WMP template for POUs to use in the preparation of their WMPs. Metrics help POUs determine if their wildfire prevention strategies are effective for reducing the risk of a wildfire ignited by their electrical equipment. This template included two metrics: number of fire ignition events and wires down events.

NCPA adopted the two metrics suggested by the CMUA in the first and second iterations

of their WMP. In 2023, NCPA adopted an additional metric: "Fall in Hazard Trees Ignitions." These three metrics: fire ignitions, wires down, and fall in hazard tree ignitions are included in the 2024 and 2025 WMPs.

NCPA records metric data in monthly outage reports. For each event, NCPA records date and time, an event description, and the cause (if known). This information includes if the event was the result of an external cause, whether the outage was forced or planned, and how long the event lasted. If the event occurred along one of the tie-in lines, then the location of the event along the line is described.

NCPA recorded the following data for the three metrics in Table 2 for the year 2024 and Q1 2025.

Table 2. NCPA Outcome Metrics

NCPA WMP Outcome Metrics				
Geothermal Facility				
Event Category	*Category*	*(Actual) 2024*	*(To Date) 2025*	*Unit(s)*
Fire Ignitions	Self-Ignited Facility Failure Wire to Wire Contact Extreme Weather Event	0 0 0 0	0 0 0 0	Number of Ignitions
Wires Down	Geothermal	0	0	Number of Wires Down
Fall in Hazard Trees Ignition	Geothermal	0	0	Number of Falls
Hydroelectric Facility				
Event Category	*Category*	*(Actual) 2024*	*(To Date) 2025*	*Unit(s)*
Fire Ignitions	Self-Ignited Facility Failure Wire to Wire Contact Extreme Weather Event	0 0 0 0	0 0 0 0	Number of Ignitions
Wires Down	Hydroelectric	0	0	Number of Wires Down
Fall in Hazard Trees Ignition	Hydroelectric	0	0	Number of Falls

These three metrics, with the supplemental data regarding the event date and time and event cause, are useful for apprising NCPA about the effectiveness of their wildfire prevention strategies. Comparing their outage event rate on their transmission lines to PG&E's outage event rate for their transmission lines provides a good perspective on why the "0" metric events for the wire down metric is indicative of success and not an indicator of an ineffective metric.

Additional metrics may be added to the WMP, as needed, to identify which lines are most susceptible to risk factors from unexpected outages (human, animal, or vegetation induced), time-of-year risks (drought or excessive rainfall), shifting fire threat districts, or impact of maintenance deferment on existing lines.

8. Comparison of Industry Standards and Similar Utility Wildfire Prevention Strategies

As part of this review, POWER compared the wildfire prevention strategies described in the WMP to the strategies being implemented by POUs and accepted electrical industry practices for reducing wildfire risk. NCPA is unique in that they are primarily a producer of electrical power whose transmission lines are limited to tie-ins to the electrical utilities who provide the distribution of electrical power to retail customers. NCPA's service territory is also unique in that their facilities, including generators and tie-lines, are dispersed in areas with no development except for infrastructure related to their operations. This is particularly important in that they have a greater responsibility for vegetation management/defensible space to protect their facilities than other POUs. Therefore, there are no comparable POUs in the state and it is more appropriate to compare their wildfire prevention programs to a relevant industry standard such as the National American Electric Reliability Corporation (NERC), California Public Utility Code General Order 95 (GO 95), Public Resource Code (PRC) 4292 and 4293, and CAL FIRE's California Power Line Fire Prevention Field Guide.

8.1 Vegetation Management

NCPA performs vegetation management work along their tie-in lines and around their facilities. NCPA maintains the vegetation within the right-of-way of its transmission tie-in lines to meet NERC FAC-003-4 standards. There is at least 30 feet of vertical clearance between the trees and vegetation and the wires. Transmission line corridors are typically 100 feet wide, except where terrain makes it unsafe to maintain the full 100 feet. For generation facilities, NCPA meets PRC 4292 and 4293 requirements, as well as PUC GO 95 requirements, typically maintaining a 50- to 100-foot perimeter around structures.

8.2 System Hardening

Equipment Maintenance and Upgrades

All NCPA transmission line towers are entirely constructed of lattice or tubular steel and so are inherently noncombustible. Conductors and other electrical equipment attached to NCPA towers are also constructed of metal or other non-combustible materials.

Transformers, circuits, and other types of electrical equipment located at substations are constructed entirely of non-combustible materials and surrounded by a large area of bare ground. No system hardening or equipment upgrades would result in significant improvements to fire resistance of NCPA equipment. NCPA inspects its transmission towers on a regular basis, and issues with towers or tower equipment discovered during the inspection are repaired immediately.

NCPA utilizes wood poles for the 17-kV distribution line at the McKay's Point facility and the 21-kV line at NCPA's Geothermal Facility. NCPA rebuilt the 21-kV line and is in the process of fire hardening the McKay's Point 17-kV distribution line.

Construction Standards

NCPA construction standards are designed to reduce the risk of fire ignited by the failure of electrical equipment, which includes the use of animal deterrents, lightning arresters, and arc suppression fusing. NCPA does not use expulsive fuses on any of its lines that pass over areas of vegetation.

Recloser Policy

NCPA does not have reclosers on their 230-kV transmission lines. Relaying equipment on their 21-kV Bear Canyon line is set to a zero-reclose to lockout scheme.

8.3 Situational Awareness

NCPA has a Transmission Maintenance and Inspection Program that meets the standards described in NERC FAC-501-WECC-3. NCPA regularly performs visual inspections of their equipment and lines, including those in remote areas. Regular and thorough inspections, particularly for transmission lines, is a nationally accepted best practice for early equipment fault detection and hazardous vegetation identification.

9. Conclusion and Recommendations

NCPA prepared a comprehensive 2025 WMP. The plan meets all statutory requirements described in PUC §8387(b)(2). NCPA also considered WSAB recommendations. NCPA's WMP, with appendices, describes a wildfire mitigation program that accurately assesses the risks and risk drivers present in their service territory and implements preventative strategies that are effective at reducing wildfire risks.

NCPA may consider creating a prevailing wind map. Maps are useful to illustrate wind direction in relation to NCPA's facilities within high fire threat zones.

NCPA is reviewing and updating the initial draft Public Safety Power Shutoff plan for the Geothermal Facility and developing a Public Safety Power Shutoff Plan for the Hydroelectric Facility.

NCPA may consider updating the amount of the Geothermal effluent pump system and 21-kV service line and steam field and delivery that are within the CAL FIRE Fire Hazard

Severity Zones and CPUC Tier 2/3 Threat Zones based on the updated CAL FIRE and CPUC fire hazard maps.

Based on the wildfire prevention programs described in the WMP and the progress NCPA has made in its wildfire prevention programs, NCPA is taking an active role in minimizing the risk of its equipment starting a wildfire and minimizing the risk of a wildfire near their facilities that could impact their operations.

Sincerely,

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References

WSAB. 2024. *Advisory Opinion for the 2025 Wildfire Mitigation Plans of Electric Publicly Owned Utilities and Rural Electrical Cooperatives.* December 2024. Sacramento, CA. Accessed online: https://energysafety.ca.gov/wp-content/uploads/2024/12//wsab-advisory-opinion-on-pou-2025-wmps-final.pdf

REVISION HISTORY

Version 1.0 - NCPA Commission approved on December 5, 2019, per Resolution 19-100

Version 1.1 – NCPA Commission approved on May 29, 2020, per Resolution 20-43. This WMP includes the qualified Independent Evaluators (IE) report in Appendix 2.

Version 1.2 – NCPA Commission approved on May 27, 202,1 per Resolution 21-56. This WMP includes the qualified Independent Evaluators (IE) report in Appendix 3.

Version 1.3 – NCPA Commission approved on May 26, 2022, per Resolution 22-58. This WMP includes the qualified Independent Evaluators (IE) report in Appendix 4.

Version 2.0 - NCPA Commission approved on May 25, 2023, per Resolution 23-46. This WMP includes the Qualified Independent Evaluators (IE) report in Appendix 5.

Version 3.0 – NCPA Commission approved on June 27, 2024, per Resolution xx-xx. This WMP includes the Qualified Independent Evaluators (IE) report in Appendix 6.

Version 4.0 – NCPA Commission approved on XXXX, 2025, per Resolution xx-xx. This WMP includes the Qualified Independent Evaluators (IE) report in Appendix 2.

ATTACHMENT A – PUC 8387 (B) REQUIREMENTS TABLE

2025 WMP Required Element per PUC Sec 8387(b)(2)	2025 NCPA WMP section
(A): An accounting of the **responsibilities of persons responsible** for executing the plan.	3.B., 3.C.
(B): The **objectives** of the wildfire mitigation plan.	1.B.
(C): A **description of the preventive strategies and programs** to be adopted by the local publicly owned electric utility or electrical cooperative to minimize the risk of its electrical **lines and equipment** causing catastrophic wildfires, including consideration of dynamic **climate change** risks.	5.A., 5.B., 5.C.
(D): A **description of the metrics** the local publicly owned electric utility or electrical cooperative plans to use to **evaluate the wildfire mitigation plan's performance** and the assumptions that underlie the use of those metrics.	6.A.
(E): A discussion of how the application of **previously identified metrics** to previous wildfire mitigation plan performances has informed the wildfire mitigation plan.	6.B.
(F): **Protocols for disabling reclosers** and deenergizing portions of the electrical distribution system that consider the **associated impacts** on public safety, as well as protocols related to **mitigating the public safety impacts** of those protocols, including impacts on critical first responders and on health and communication infrastructure.	N/A – NCPA does not own or use automatic reclosers on its 230 kV lines (5.H.)
(G): Appropriate and feasible **procedures for notifying a customer** who may be impacted by the deenergizing of electrical lines. The procedures shall direct notification to all public safety offices, critical first responders, health care facilities, and operators of telecommunications infrastructure with premises within the footprint of potential deenergization for a given event.	5.J.2.

(H): Plans for **vegetation management**.	5.E.
(I): Plans for **inspections** of the local publicly owned electric utility's or electrical cooperative's electrical infrastructure.	6.E.
(J): A **list that identifies, describes, and prioritizes all wildfire risks, and drivers** for those risks, throughout the local publicly owned electric utility's or electrical cooperative's service territory. The list shall include, but not be limited to, both of the following: (i) **Risks and risk drivers associated with design, construction, operation, and maintenance** of the local publicly owned electric utility's or electrical cooperative's equipment and facilities. (ii) Particular **risks and risk drivers associated with topographic and climatological risk factors** throughout the different parts of the local publicly owned electric utility's or electrical cooperative's service territory.	(J) : 4 (i) : 4.B. (ii) : 4.A.
(K): **Identification of any geographic area** in the local publicly owned electric utility's or electrical cooperative's service territory that is a **higher wildfire threat** than is identified in a commission fire threat map, and identification of where the commission should expand a high-fire threat district based on new information or changes to the environment.	N/A – At this time, NCPA does not identify any needed changes to the current boundaries as identified in current maps included in Appendix 1 – Fire Risk Assessment Maps.
(L): A **methodology for identifying and presenting enterprise wide safety risk** and wildfire-related risk.	4.B.
(M): A statement of **how the local publicly owned electric utility or electrical cooperative will restore service** after a wildfire.	6.
(N): A **description of the processes** and procedures the local publicly owned electric utility or electrical cooperative shall use to do all of the following: (i) **Monitor and audit the implementation** of the wildfire mitigation plan. (ii) **Identify any deficiencies** in the wildfire mitigation plan or its implementation and correct those deficiencies. (iii) **Monitor and audit the effectiveness** of electrical line and equipment inspections, including inspections performed by contractors, that are carried out under the plan, other applicable statutes, or commission rules.	(i) : 6.C. (ii) : 6.D. (iii) : 6.E

ATTACHMENT B – WSAB RECOMMENDED ELEMENTS TABLE

2025 WSAB Recommended Elements	2025 NCPA WMP section
(A): The WSAB recommends that POUs Include a standalone summary of key wildfire mitigation initiatives in their WMPs. The summary should include completion targets, year, and cost estimates of the reporting period categorized by program (e.g., grid design and system hardening, community outreach and engagement), along with accomplishments from the prior reporting period.	NCPA provided a summary of key wildfire programs and initiatives that support wildfire prevention and mitigation in Table 2., Section 5.A. of the WMP.
(B) The WSAB recommends that if a POU determine it is likely for them to submit its WMP after the July 1 deadline, the POU should submit a letter to the docket or the WSAB email by the July 1 deadline, notifying the public and WSAB of the delay.	NCPA plans to submit their WMP to the WSAB prior to the July 1 deadline.
(C) The WSAB recommends that the POUs should include a redline version or a summary of changes to indicate year-to-year updates made on their WMPs, which could take the form of a redline, narrative description, or revision log.	NCPA will provide the WSAB with a redline version of the 2025 WMP.
(D) The WSAB recommends that the POUs should follow accessible content guidelines such as those offered by W3C and conduct digital accessibility checks of their WMPs prior to submittal. The POUs should include internal hyperlinks in the tables of contents of their WMPs.	Hyperlinks are included in the Table of Contents.
(E) The WSAB recommends that Areas That Exceed Minimum Standards in General Orders that the PUS should include information in their WMPs about their decision-making process for how they assess if the known local conditions require the utility to exceed any of the applicable minimum design, construction, or maintenance standards for a particular facility. POUs should describe their experience utilizing this decision-making process, including observations to date and any lessons learned.	NCPA meets or exceeds the minimum industry standard vegetation management practices (Section 5.E.)
(F) The WSAB recommends that where appropriate, considering additional costs, the POUs should include in the project scopes for IE reports an evaluation of the WMP strategy and projects, to provide recommendations for improvements for the WMP overall and for specific initiatives/projects.	NCPA included an IE Report of NCPA's 2025 WMP in Appendix II.

(G) The WSAB recommends that a POU that does not own or control any overhead electric supply facilities in the High Fire Threat District (HFTD), and has no or minimal updates to its WMP, should submit its most recent WMP together with a letter stating that the POU does not own or control any changes to wildfire risks in its service territory in coming years, and has no update since its last WMP.	N/A
(H) The WSAB recommends that POUs highlight their recent progress and achievements in their WMP programs by including more detailed information in the WMP regarding targets and timelines. WSAB recommends POUs include progress updates for each project in each subsequent WMP.	NCPA highlights their recent progress and achievements in their WMP programs in Section 5.A.
(I) The WSAB recommends that the POUs provide descriptions of their QA/QC programs and the implementation of any resulting improvements in their inspection and maintenance programs in their WMPs.	NCPA provides descriptions of their QA/QC programs Section 6.D.
(J) The WSAB recommends that POUs use the California Municipal Utilities Association's (CMUA) 2024 template as the starting point for developing their own metrics table. It is expected that POUs will tailor the metrics to their unique circumstances. The WSAB recommends that POUs utilize the latest version of the Context Setting Template.	NCPA developed and included Table 3. NCPA Performance Metris and Table 4: NCPA Outcome Metrics in Section 6.A. These tables highlight the metrics tracked by NCPA for the Geothermal Facility and the Hydroelectric Facility.
(K) The WSAB recommends that the POUs and the Joint Associations work with the WSAB POU Committee to refine the list of future topics and develop an action plan of activities that could include WSAB recommendations.	NCPA will continue to work with the WSAB.

ATTACHMENT C – WILDFIRE RISK ELEMENTS AND CONTROLS

Table 3 – Index of Wildfire Risks and Controls Evaluations within the WMP

Identify and Assess Wildfire Event Elements	Fuel Ignition	Design Controls	Implement Controls	Evaluate Controls (WMP Section)
Tree contact or downed conductor during wind centered events	X	Design and maintain Distribution and Transmission facilities in accordance with PG&E approved practices for wildland fire prevention. De-energize facilities when needed during high windrelated fog conditions.	PG&E Greenbook Design Standards; Public Safety Power Shutoff (PSPS)	3.C. Wildfire Response, Communication and Recovery and 5.A.(4) Asset documentation.
Dead limbs or trees contacting Distribution lines	X	Identify and remove dead and dying trees or limbs from area adjacent to lines	TVMP and Power Line Fire Prevention Field Guide (PLFPFG)	5.E. Vegetation Management
Increased tree mortality	X	Identify and remove dead and dying trees from area adjacent to line	TVMP and PLFPFG	5.D. Tree Mortality
Trees encroaching on flashover distances to Transmission facilities	X	Identify and remove encroaching trees. De-energize facilities upon CAL FIRE request	TVMP and Emergency Operating Guidelines, Colleville Power House Bellota-Colleville 230 kV Lines (FM-201)	5.I. De-Energization
Fallin trees resulting from landslides or trunk failures	X	Routine inspections and non-routine incidental observation.	PLFPFG, Sections 12-19	5.B. Potential Climate Change Effects
Fuses or conductors dropping molten metal	X	Use of non-expulsion type fuses in High Fire Risk Areas (HFRA) protection of Transmission and Distribution circuits in accordance with design standards; patrolling of lines prior to re-energization.	PG&E Greenbook Design Standards; PSPS, FM-201 & GED-646	3.C. Wildfire Response, Communication and Recovery; 5.A.(4) Asset documentation; 5.H. Recloser Policy and 7. Restoration of Service.
Untimely fire department response	X	Emergency Action Plan (EAP) Training and Coordination with local agencies	Annual tabletop EAP review with USFS, CAL FIRE, CHP, Calpine, BLM, LACOSAN, Calaveras, Tuolumne & Alpine County Sheriffs, CA Dept. of Parks & Recreation	1.B.1. Coordination with Local Agencies
Undetected equipment damage or failures	X	Routine inspections and non-routine incidental observation	Regular patrol of Distribution lines, NERC FAC-003 Inspections in accordance with (IAW) NCPA procedure GM-305	5.A.(1) Facility Maintenance Program and 5.A.(2) Emergency Operating Procedures
Uncoordinated wildfire response	X	Personnel training and notification to Dispatch center for coordinated response.	EAP training for all field personnel, Facility specific Emergency Response Plans (ERP)	Communication and Recovery
Staff unaware of wildfire risk or response	X	Personnel training and seasonal awareness reminders.	EAP training for all field personnel, Monthly safety meetings	5.G. Fire Prevention, Safety, Emergency Response Training
Extended timeframe for fire event recovery	X	Leverage additional line personnel and resources via mutual aid agreements.	Mutual aid agreements with member utilities, California Utilities Emergency Association (CUEA) and American Public Power Association (APPA) for Distribution assets, WAPA agreement for maintenance and repair of Transmission assets.	3.F. Mutual Aid Agreements
Extended drought conditions, Underbrush damage from frost, Vegetation stress or species changes	X	Routine inspections and non-routine incidental observation.	Routine patrol of Distribution lines, NERC FAC-003 Inspections in accordance with (IAW) NCPA procedure GM-305	5.C. Potential Climate Change Risk Management Practices, 5.B. Potential Climate Change Effects
Lightening strikes	X	Awareness and response.	EAP Coordination with CAL FIRE for wildfire ignition	3.B. Wildfire Prevention Organizational Responsibilities
Vehicles operating in dry vegetation areas	X	Awareness and periodic personnel training.	Monthly plant safety meetings	5.A.(3) Vegetation Management Program
Vegetation clearing operations	X	Awareness and periodic personnel training.	TVMP and PLFPFG	5.G. Fire Prevention, Safety, Emergency Response Training
Hot Work	X	Awareness and periodic personnel training.	GS-111 Hot Work Procedure) and GS-116 (Welding Safety Procedure	2.C. Identifying Unnecessary or Ineffective Actions; 4.C. Changes to CPUC Fire Threat Map and 7.C. Monitoring and Auditing the Plan.
Undetected fire risk change	X	Periodic review of fire risk categories. Annual review of protective equipment calibration and testing records. Periodic (every 6 years) verification of protective device operating time IAW NERC PRC-005	Annual review of Wildfire Management Plan including Fire Hazard Zone classifications	
Protective device delayed clearing	X		NCPA GS-304 Protection System Maintenance and Testing Program	5.A.(1) Facility Maintenance Program