WILDFIRE MITIGATION PLAN

VERSION 4.0

(FOURTH ANNUAL AND FIRST COMPREHENSIVE UPDATE)

May 22, 2023

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ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
AGM	Assistant General Manager
AMI	advanced metering infrastructure
CAL FIRE	California Department of Forestry and Fire Protection
CPUC	California Public Utilities Commission
ELF	Energy Limiting Fuse
GIS	geographic information system
GO	General Order
HFTD	High Fire Threat District
kV	kilovolt
NCJPA	Northern California Joint Pole Association
NISC	National Information Solutions Cooperative
OMS	Outage Management System
PIO	Public Information Officer
PSOM	Public Safety Outage Management
PSPS	Public Safety Power Shutdown
RFW	Red Flag Warning
SCADA	Supervisory Control and Data Acquisition
SEMS	Standardized Emergency Management System
TDPUD	Truckee Donner Public Utility District
VMP	Vegetation Management Plan
WMP (or Plan)	Wildfire Mitigation Plan

I. UTILITY OVERVIEW AND CONTEXT

A. UTILITY DESCRIPTION AND CONTEXT SETTING TABLE

The Truckee Donner Public Utility District (TDPUD) is a special district of the State of California engaged in the distribution, sale, and delivery of electric power and water. TDPUD provides retail electric service to about 14,648 customers as of December 31, 2022 and the region has a large transient population driven by second home owners and destination tourism which can increase population by two to three plus times. TDPUD is a transmission-dependent utility connected to NV Energy's transmission system and is located high on the eastern slope of the Sierra Nevada. TDPUD is not directly interconnected with the California transmission system nor to any California utility in a meaningful way. TDPUD's electric service territory comprises approximately 44 square miles in eastern Nevada County and approximately 1.5 square miles in adjacent Placer County. The electric system includes approximately 225 miles total with 135 miles of 12.47 kilovolt (kV) and 14.4 kV overhead distribution lines, and about 0.5 miles of 60 kV overhead transmission lines. In total, TDPUD has 5,490 poles in its service territory (Figure 1).

Utility Name	Truckee Donner Public Utility District (TDPUD)
Service Territory Size	45.5 square miles
Owned Assets	☒ Transmission ☒ Distribution ☐ Generation
Number of Customers Served	14,648 customer accounts
Population Within Service Territory	17,131 people

Utility Name	Truckee Donner Public Utility District (TDPUD)	
	Number of Accounts	*Share of Total Load (MWh)*
Customer Class Makeup	88.65% Residential 2.07% Government 0% Agricultural 9.23% Small/Medium Business .05% Commercial/Industrial	59.96% Residential 16.64% Government 0% Agricultural 20.11% Small/Medium Business 3.29% Commercial/Industrial
Service Territory	.039% Agriculture 2.641% Barren/Other 54.95% Conifer Forest 0% Conifer Woodland	
Location/Topography[1]	0% Desert .75% Hardwood Forest 0% Hardwood Woodland2.99% Herbaceous	

Utility Name	Truckee Donner Public Utility District (TDPUD)
	26.92% Shrub 7.66% Urban 4.11% Water
Service Territory Wildland Urban Interface[1] (based on total area)	29.56% Wildland Urban Interface 19.90% Wildland Urban Intermix
Percent of Service Territory in CPUC High Fire Threat Districts (based on total area)	☒ Includes maps (Appendix A) Tier 2: 55.07% Tier 3: 27.15%
Prevailing Wind Directions and Speeds by Season	☒ Includes maps (Appendix B) Prevailing winds were taken from both the Global Winds Atlas and Wind Rose data from archived records and assembled by Iowa State University. Gradient winds are generally out of the south/southwest shifting to west/southwest in the spring and summer months. The average wind speed is 4.4 mph with frequent gust in excess of 20 mph throughout the year. TDPUD's extreme

[1] Based on the Wildland Urban Interface Maps available from the U.S. Geological Survey website titled "Wildland-urban interface maps for the conterminous U.S. based on 125 million building locations" (Carlson et al. 2022).

Utility Name	Truckee Donner Public Utility District (TDPUD)
	weather and wind events occur in winter months when wildfire threat is typically low. These events are caused by atmospheric rivers and can bring winds in excess of 100 mph. These atmospheric river events and heavy snow falls are the reason TDPUD builds to a heavy loading standard and is able to withstand extreme weather events. Source: https://globalwindatlas.info; https://mesonet.agron.iastate.edu/sites/windrose.phtml?network=CA_ASOS &station=TRK
Miles of Owned Lines Underground and/or Overhead	Overhead Dist.: 134.7 miles Overhead Trans.: 0.3 miles Underground Dist.: 97.6 miles Underground Trans.: 0 miles
	Explanatory Note 1 - *Methodology for Measuring "Miles":* [e.g., circuit miles, line miles.] Data from GIS system
	Explanatory Note 2 – *Description of Unique Ownership Circumstances:* N/A
	Explanatory Note 3 – *Additional Relevant Context:* [e.g., percentage of lines located outside service territory] N/A
	Overhead Distribution Lines as % of Total Distribution System *(Inside and Outside Service Territory)*

Utility Name	Truckee Donner Public Utility District (TDPUD)
Percent of Owned Lines in CPUC High Fire Threat Districts	Tier 2: 23.02% Tier 3: 40.59%
	Overhead Transmission Lines as % of Total Transmission System *(Inside and Outside Service Territory)*
	Tier 2: < 1% Tier 3: 0%
	Explanatory Note 4 – *Additional Relevant Context:* [e.g., explain any difference from data reported in WMP due to different numerator used for this form]
Customers have ever lost service due to an IOU PSPS event?	☐ Yes ☒ No
Customers have ever been notified of a potential loss of service to due to a forecasted IOU PSPS event?	☐ Yes ☒ No

Utility Name	Truckee Donner Public Utility District (TDPUD)
Has developed protocols to pre-emptively shut offelectricity in response toelevated wildfire risks?	☐ Yes ☒ No
Has previously preemptively shut off electricity in response to elevated wildfire risk?	☐ Yes ☒ No If yes, then provide the following data for calendar year 2022: *Number of shut-off events*: N/A *Customer Accounts that lost service for >10 minutes:* N/A *For prior response, average duration before service restored:* N/A

Notes: TDPUD = Truckee Donner Public Utility District; CPUC = California Public Utilities Commission; GIS = geographic information system; N/A = not applicable; IOU = Investor-Owned Utilities; PSPS = Public Safety Power Shutdown.

B. STATUTORY CROSS REFERENCE TABLE

Requirement	Statutory Language	Location in TDPUD's WMP
Persons Responsible	**PUC Section 8387(b)(2)(A):** An accounting of the **responsibilities of persons** responsible for executing the plan.	Section: 3 Pages: 11–12

Requirement	Statutory Language	Location in TDPUD's WMP
Objectives of the Plan	**PUC Section 8387(b)(2)(B):** The **objectives** of the wildfire mitigation plan.	Section: 2 Page: 8
Preventive Strategies	**PUC Section 8387(b)(2)(C):** A description of the **preventive strategies and programs to be adopted by the local publicly owned electric utility** or electrical cooperative to minimize the risk of its electrical lines and equipment causing catastrophic wildfires, including consideration of dynamic climate change risks.	Section: 2 Pages: 9–10
Evaluation Metrics	**PUC Section 8387(b)(2)(D):** A description of the **metrics the local publicly owned electric utility or electrical cooperative plans to use to evaluate the wildfire mitigation plan's performance** and the assumptions that underlie the use of those metrics.	Section: 8 Page: 30
Impact of Metrics	**PUC Section 8387(b)(2)(E):** A discussion of how the **application of previously identified metrics** to previous wildfire mitigation plan performances has informed the wildfire mitigation plan.	Section: 8 Page: 30
De-energization Protocols	**PUC Section 8387(b)(2)(F): Protocols for disabling reclosers and de-energizing portions of the electrical distribution system** that consider the associated impacts on public safety and protocols related to mitigating the public safety impacts of those protocols, including impacts on critical first responders and on health and communication infrastructure.	Section: 5 Page: 24

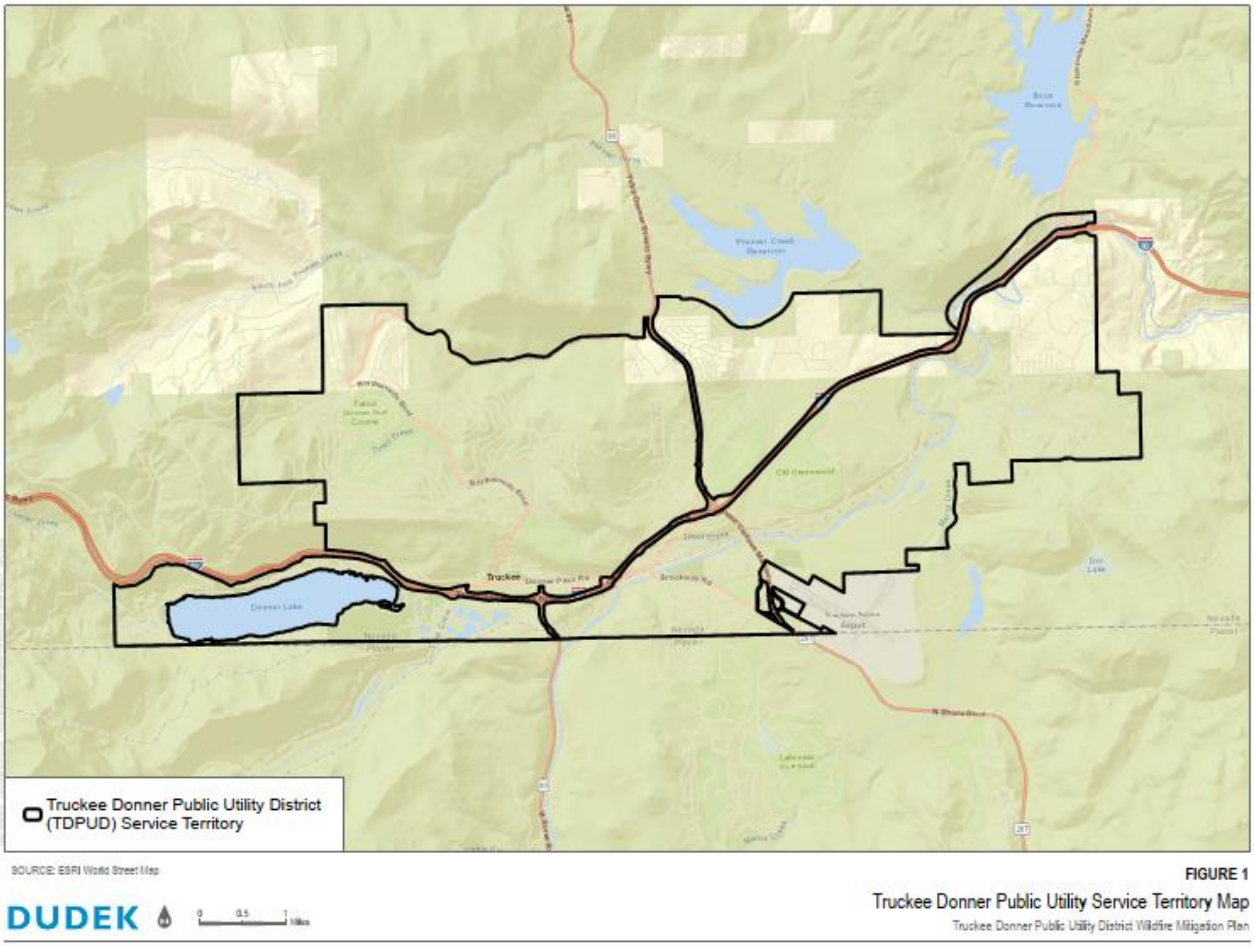
Requirement	Statutory Language	Location in TDPUD's WMP
Customer Notification Procedures	**PUC Section 8387(b)(2)(G):** Appropriate and feasible **procedures for notifying a customer** who may be impacted by the de-energizing of electrical lines. The procedures shall consider the need to notify, as a priority, critical first responders, health care facilities, and operators of telecommunications infrastructure.	Section: 5 Page: 23
Vegetation Management	**PUC Section 8387(b)(2)(H):** Plans for vegetation management.	Section: 5 Pages: 19–21
Inspections	**PUC Section 8387(b)(2)(I): Plans for inspections** of the local publicly owned electric utility's or electrical cooperative's electrical infrastructure.	Section: 5 Page: 21
Prioritization of Wildfire Risks	**PUC Section 8387(b)(2)(J):** A list that **identifies, describes, and prioritizes all wildfire risks, and drivers for those risks, throughout the local publicly owned electric utility's or electrical cooperative's service territory**. The list shall include, but not be limited to, both of the following: **(i)** Risks and risk drivers associated with design, construction, operation, and maintenance of the local publicly owned electric utility's or electrical cooperative's equipment and facilities. **(ii)** Particular risks and **risk drivers** associated with topographical and climatological risk factors throughout the different parts of the local publicly owned electric utility's or electrical cooperative's service territory.	Section: 4 Pages: 17–18
CPUC Fire Threat Map Adjustments	**PUC Section 8387(b)(2)(K):** Identification of any **geographic area in the local publicly owned electric utility's or electrical cooperative's service territory**	Section: 4 Page: 18

Requirement	Statutory Language	Location in TDPUD's WMP
	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 for TDPUD based on new information or changes to the environment.	
Enterprise-wide Risks	**PUC Section 8387(b)(2)(L):** A methodology for identifying and presenting **enterprise-wide** safety risk and wildfire-related risk.	Section: 4 Page: 17
Restoration of Service	**PUC Section 8387(b)(2)(M):** A statement of how the local publicly owned electric utility or electrical cooperative will **restore service after a wildfire**.	Section: 7 Pages: 28–29
Monitor and Audit	**PUC Section 8387(b)(2)(N):** A description of the processes and procedures the local publicly owned electric utility or electrical cooperative shall use to do all of the following: (i) **Monitor and audit** the implementation of the wildfire mitigation plan. (ii) **Identify any deficiencies** in the wildfire mitigation plan or its implementation, and correct those deficiencies. (iii) Monitor and audit the effectiveness of electrical line and equipment inspections, including inspections performed by contractors, that are carried out under the plan, other applicable statutes, or commission rules.	Section: 8 Page: 31
Qualified Independent Evaluator	**PUC Section 8387(c):** The local publicly owned electric utility or electrical cooperative shall contract with a qualified independent evaluator with experience in assessing the safe operation of electrical infrastructure to review and assess the	Section: 9 Page: 32

Requirement	Statutory Language	Location in TDPUD's WMP
	comprehensiveness of its wildfire mitigation plan. The independent evaluator shall issue a report that shall be made available on the Internet website of the local publicly owned electric utility or electrical cooperative and shall present the report at a public meeting of the local publicly owned electric utility's or electrical cooperative's governing board.	

Notes: TDPUD = Truckee Donner Public Utility District; WMP = Wildfire Mitigation Plan; PUC = Public Utilities Code.

Figure 1 TDPUD Electric Service Territory Map



C. PROCESS FOR UTILITY ADOPTION AND SUBMITTAL OF ANNUAL WMP AND OPPORTUNITIES FOR PUBLIC COMMENT

The TDPUD Wildfire Mitigation Plan (WMP or Plan) is adopted by the TDPUD Board (the Board) during a public meeting. TDPUD staff present the final version of the annual WMP to the Board for review. Included with the Plan is an agenda packet with a summary of the background and the contents of the current WMP. The agenda packet also includes a description of major changes from the previous year's WMP.

During the Board meeting, the adoption of the current WMP is presented as an action item. TDPUD staff present an overview of the WMP, accomplishments, and changes to the Board members and the general public. After the conclusion of the presentation, Board members allow a period for public comment. After the public comment period has ended, Board members decide whether to adopt the WMP as presented by TDPUD staff.

Board meeting documents, including meeting minutes, agendas, and presentations, as well as the meeting minutes and the agenda for the adoption of the 2022 WMP, are available online at the TDPUD website: https://web.tdpud.org/WebLink/Browse.aspx?id=289229&dbid=0&repo=TDPUD.

D. DESCRIPTION OF WHERE WMP INFORMATION CAN BE FOUND ON UTILITY WEBSITE

The current version of TDPUD's WMP is published on the utility website on the page dedicated to wildfire mitigation, safety, and emergency preparedness. The webpage contains information about TDPUD's wildfire prevention mitigation efforts, links to sign up for emergency notification by the utility, and links to the WMP and the independent evaluator's report from 2019.

This page is easily accessible from the menu on TDPUD's home page and can be found by using the search tool found on every page on the utility's website. The link to the website is: https://www.tdpud.org/departments/wildfire-emergency-preparedness.

E. PURPOSE OF THE WMP

This WMP describes the range of activities and strategies TDPUD is taking to mitigate the threat of overhead power line- and equipment-ignited wildfires, including its various programs, policies, and procedures. It addresses the unique features of TDPUD's service area such as topography, weather, infrastructure, grid configuration, and potential wildfire risks.

This Plan is subject to direct approval by TDPUD's Board of Directors and is implemented by the General Manager. This Plan meets or exceeds the requirements of Public Utilities Code Section 8387 for publicly owned electric utilities to prepare a WMP by January 1, 2020, and to evaluate and update annually thereafter.

F. ORGANIZATION OF THE WMP

This WMP includes the following elements:

- Utility overview and context
- Objectives of the Plan
- Roles and responsibilities for executing the Plan
- Identification of key wildfire risks and risk drivers
- Description of wildfire prevention strategies
- Metrics for measuring performance of the Plan and identifying areas for improvement
- Annual and historical results for metrics
- Description of community outreach and education, covering communication about wildfire prevention, utility mitigation efforts and strategies, and potential de-energization and re-energization practices
- List of references cited
- Appendices

II. OBJECTIVES OF THE WMP

A. MINIMIZING SOURCES OF IGNITION

The main objective of this Plan is to implement an actionable plan that will create increased reliability and safety while minimizing the probability that TDPUD's distribution system or equipment may be an original or contributing factor in the ignition of a wildfire. TDPUD has evaluated the prudent and cost-effective improvements to its physical assets, operations, and training that can help to meet this objective. Further, TDPUD is updating operational practices to reflect its commitment to prudent system management and will continue to explore new opportunities for improving the efficacy of the Plan. This Plan embraces safety, prevention, mitigation, and recovery programs that are consistent with California State Law.

B. RESILIENCY OF THE ELECTRIC GRID

The secondary objective of this Plan is to ensure and improve, where practicable, system resiliency. System resiliency is defined by the National Infrastructure Advisory Council as the ability to reduce the magnitude and/or duration of disruptive events. As part of the development of this Plan, TDPUD assesses new industry practices and technologies that will reduce the likelihood of a disruption in service and improve the timeline for restoration of service.

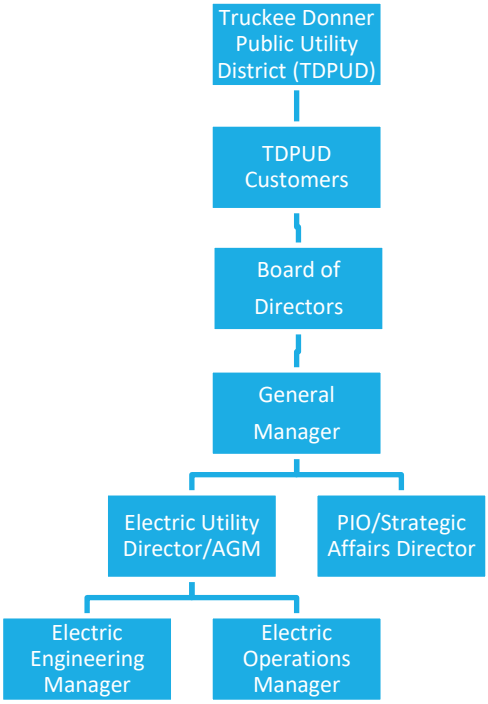
C. MINIMIZING UNNECESSARY OR INEFFECTIVE ACTIONS

The final objective of this Plan is to measure the effectiveness of specific mitigation strategies as they apply to TDPUD. Where a particular action, program component, or protocol is determined to be unnecessary or ineffective, TDPUD will assess whether modification or replacement is

suitable. This approach will also help determine if more cost-effective measures would produce the same or better results. This is particularly true for the implementation of new technologies and practices where an evaluation from prototype to pilot installation to full implementation is often prudent to maximize performance and minimize unintended consequences.

III. ROLES AND RESPONSIBILITIES

A. TDPUD ROLES AND RESPONSIBILITIES



TDPUD utilizes a Public-Owned Utility Board/General Manager reporting hierarchy.

Board members are elected at large by TDPUD customers to staggered 4-year terms, representing constituents across TDPUD's service territory. The Board President and Vice President positions are nominated and appointed by the Board annually. The Board is responsible for adoption and oversight of all policies and delegates the operational implementation of policies to the General Manager.

The General Manager has full operational authority of TDPUD and operates as the Chief Executive, reporting directly to the Board. The General Manager provides direction and management to all TDPUD staff while implementing Board-adopted policy.

The Public Information Officer (PIO)/Strategic Affairs Director serves as TDPUD's public liaison to customers and outside agencies, responds to requests for information, and proactively promulgates public awareness outreach or emergency information.

The Electric Utility Director/Assistant General Manager (AGM) has overall functional management of the electric utility and provides day-to-day oversight of the electric utility. The Electric Utility Director utilizes the Electric Operations Manager and Electric Engineering Manager for division oversight. The AGM also assumes the operational authority of General Manager in the absence of the General Manager.

The Electric Operations Manager oversees the daily electric utility operations, including construction, maintenance, energy control, fleet, facilities, vegetation management, and other ancillary daily duties. The Electric Operations Manager maintains functional management of assigned divisions within the electric utility and reports to the Electric Utility Director/AGM.

The Electric Engineering Manager oversees the design/engineering tasks associated with distribution system modification and development/maintenance of material specifications. The Electric Engineering Manager maintains functional management over the electric engineering related tasks within the electric utility and reports directly to the Electric Utility Director/AGM.

TDPUD staff have the following responsibilities regarding fire prevention, response, and investigation:

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

B. COORDINATION WITH WATER UTILITIES/DEPARTMENT

TDPUD owns and operates a water utility within its service territory, providing retail service to approximately 13,500 customers. The Electric Utility Director's office is literally adjacent to the Water Utility Director's office. When electric operations could or are known to impact the water utility, TDPUD electric and water staff will coordinate to mitigate or, where practicable, eliminate impact to electric and/or water service continuity. TDPUD electric staff collaborates proactively to notify TDPUD water staff of planned outages and communicate as quickly as

practicable during emergency power outages that impact one or both enterprises. This emergency notification will be extended to the Truckee Fire Protection District and other agencies as needed.

C. COORDINATION WITH COMMUNICATION INFRASTRUCTURE PROVIDERS

TDPUD has been a member of the Northern California Joint Pole Association (NCJPA) since 2014. Members of NCJPA participate voluntarily to share expenses for the installation and maintenance of new and existing utility pole structures, as well as relinquishment or removal of those structures based on interest. TDPUD typically acts as the coordinating agency within its service territory because the majority of the structures were installed as solely owned TDPUD poles prior to joining NCJPA. The exception would be existing, solely owned communication poles within the service territory that TDPUD does not currently attach to. AT&T is the only other NCJPA member within TDPUD's service territory and is responsible for the reserved communication space on utility poles. AT&T manages the attachment of other communication providers within the communication space on joint poles.

TDPUD has created a list of local agencies and key partners which does include key operational and management contacts from the communication providers, Truckee Fire Protection District, and the Town of Truckee. TDPUD also has regular communication protocols through our customer account notification, outage management system, and our website.

D. STANDARDIZED EMERGENCY MANAGEMENT SYSTEM

TDPUD has planning, communication, and coordination obligations pursuant to the California Governor's Office of Emergency Services' Standardized Emergency Management System (SEMS) Regulations,[2] adopted in accordance with Government Code Section 8607. The SEMS Regulations specify roles, responsibilities, and structures of communications at five different levels: field response, local government, operational area, regional, and state.[3] Pursuant to this structure,

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[2] 19 California Code of Regulations Section 2407.

[3] Cal. Gov. Code Section 2403(b):
(1) "Field response level" commands emergency response personnel and resources to carry out tactical decisions and activities in direct response to an incident or threat.
(2) "Local government level" manages and coordinates the overall emergency response and recovery activities within their jurisdiction.
(3) "Operational area level" manages and/or coordinates information, resources, and priorities among local governments within the operational area and serves as the coordination and communication link between the local government level and the regional level.
(4) "Regional level" manages and coordinates information and resources among operational areas within the mutual aid region designated pursuant to Government Code §8600 and between the operational areas and the state level. This level along with the state level coordinates overall state agency support for emergency response activities.

TDPUD regularly coordinates and communicates with the relevant safety agencies and other relevant local and state agencies.

TDPUD understand the role of SEMS in emergency communications and follows the Town of Truckee, Nevada County, and Placer County, which are the local leads for emergency operations and disaster response. TDPUD, as a small utility, has not historically had a formal risk management position but due to emerging needs recently added a risk and compliance position. More formally implementing SEMS is a priority for 2023.

Under the SEMS structure, a significant amount of preparation is done through advanced planning at the county level, including the coordination of effort of public, private, and nonprofit organizations. Generally, the majority of TDPUD's service territory resides in Nevada County. Nevada County serves as the operational area, which is guided by the Operational Area Emergency Service Council (Nevada County) and is headed by the Chairman of the Board of Supervisors (or designee). The operational area includes local and regional organizations that bring relevant expertise to the wildfire prevention and recovery planning process. These participants include:

- Office of Emergency Services Program Manager, Nevada County, Paul Cummings (paul.cummings@co.nevada.ca.us, 530.265.1515)
- City of Nevada City (or designee)
- City of Grass Valley (or designee)
- Town of Truckee (or designee)
- Nevada Irrigation District (or designee)
- Nevada County Fire Chief's Association (or designee)
- Nevada County Sheriff (or designee)
- American Red Cross (or designee)
- Tahoe National Forest (or designee)
- California Department of Forestry and Fire Protection (CAL FIRE; or designee)
- Tahoe Forest Hospital District (or designee)
- Pacific Gas and Electric Company (or designee)
- Nevada County Public Health Administrator (or designee)
- Placer County Public Health Administrator (or designee)
- Others that the Operational Area Emergency Service Council requests be in attendance

Additionally, a small portion of TDPUD's service territory resides in Placer County, overseen by the Placer County Office of Emergency Services Council. The Placer County Office of Emergency Services' operational area includes local and regional organizations that bring relevant expertise to the wildfire prevention and recovery planning process. TDPUD staff play a formal role in emergency response through the local lead agency (either Town of Truckee, Nevada County,

(5) "State level" manages state resources in response to the emergency needs of the other levels, manages and coordinates mutual aid among the mutual aid regions and between the regional level and state level, and serves as the coordination and communication link with the federal disaster response system.

or Placer County). TDPUD will staff an Emergency Operations Center upon request and fits into the Utilities Unit of the Emergency Operations Center (note: Truckee is serviced by multiple electric utilities). TDPUD also works directly with its public safety partners on a daily basis in responding to outages, fire, accidents, and a wide-variety of emergencies. The Town of Truckee has an adopted Emergency Operations Plan that is periodically updated and can be found at this link: https://bof.fire.ca.gov/media/420iskxo/rpc-2-b-iv-town-of-truckee-emergency-operations-plan-supplemental.pdf.

TDPUD is a member of the California Utilities Emergency Association, which plays a key role in ensuring communications between utilities and emergency responders during emergencies. TDPUD also participates in the Western Energy Institute's Western Region Mutual Assistance Agreement, which is a mutual assistance agreement covering utilities across a number of western states. In addition to those agreements, TDPUD is also signatory to the American Public Power Association mutual aid agreement, providing nationwide access to resources for system restoration and support after a major event that exhausts TDPUD resources.

It should be noted that TDPUD's service territory is largely within the Town of Truckee boundaries but does include unincorporated areas of Placer and Nevada Counties. The Town of Truckee did not formally incorporate until the 1990s, leaving more than a dozen local governmental agencies covering utilities, fire, and other critical local functions. Each local agency, when it comes to emergency response, is aware of their role and responsibility with overall management and communication strictly controlled by the appropriate town/county/state/federal emergency response agency through the Emergency Operations Center.

IV. WILDFIRE RISKS AND DRIVERS

A. PARTICULAR RISKS AND DRIVERS ASSOCIATED WITH DESIGN, CONSTRUCTION, OPERATION, AND MAINTENANCE

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

Risk drivers associated with design, construction, operations, and maintenance within TDPUD's 45-square-mile service territory include:

- Expulsion fuses still in use in portions of the TDPUD service territory
- Utility poles reaching the end of the service life
- Combustible poles in the High Fire Threat District (HFTD)
- Limited staff and equipment
- 134.7 miles of overhead distribution wires; 64% of overhead wires are in a HFTD
- Overhead circuits in areas with poor road access

B. PARTICULAR RISKS AND RISK DRIVERS ASSOCIATED WITH TOPOGRAPHICAL AND CLIMATOLOGICAL RISK FACTORS

The TDPUD service territory is located between 6,000 and 8,000 feet elevation on the eastern slope of the Sierra Nevada Mountain Chain near Lake Tahoe. The TDPUD service territory experiences the most severe weather during the winter where severe storms can bring damaging levels of snow and/or rain and extreme winds (80++ mph). During the fire season, the Truckee area experiences fast-moving, low-pressure systems that bring high winds and dry lightning to the TDPUD service territory.

Within the TDPUD service territory and the surrounding areas, the primary risk drivers associated with topographical or climatological for wildfires include:

- Overhead circuits traverse mountainous areas of mixed conifer forests with continuous surface fuels, including annual grasses, herbaceous vegetation, and patches of woody shrubs.
- Overhead circuits traverse areas of steep slopes. Several circuits are on slopes or in canyons aligned with the prevailing winds (Interstate 80 corridor).
- Summertime precipitation in the area occurs in the form of afternoon thunderstorms; along with these storms may come dry lightning with very little precipitation.
- Prevailing winds align with the Interstate 80 corridor resulting in strong winds through the center of the TDPUD service territory.

CLIMATE CHANGE

Truckee has warmed an average of 2.0°F over the last 80 years when comparing the historical 30-year period (1937–1966) and the recent 30-year period (1987–2016). There are now eight fewer days per year below freezing, and the number of days above 90°F has increased by 10 days per year. Average snowfall has declined by 15%. All these changes have occurred from a 2.0°F temperature increase. If greenhouse gas emissions continue at current levels globally, then Truckee's average temperatures are expected to warm by 5–7°F by the 2050s and 8–11°F by the 2080s. By the 2080s, April snowpack could be reduced by 84% to 96%. However, if emissions are significantly reduced in the near term, then warming could level off in the 2050s (Town of Truckee Planning Division 2020).

It is expected that by mid-century the TDPUD service territory will experience:

- A 55%–68% reduction of days below freezing per year
- A 68%–71% reduction of April snowpack
- A 31%–51% increase in drought stress
- Up to 31 more days above 90°F
- Up to 61% more acres burned per year by wildfire

C. ENTERPRISE-WIDE SAFETY RISKS

TDPUD uses a methodical approach to address/mitigate enterprise safety risks. This approach utilizes both risk assessment and intimate knowledge of its operational practices. Risk assessment is a process to identify and manage potential risks that could undermine core business functions, threaten business continuity, or impact recover. Risk assessment will be used to analyze safety risks, which include:

- Pole Replacement Ranking Tool (Appendix C)
- Unavailability of NV Energy's transmission because of an outage or planned Public Safety Outage Management (PSOM) de-energization event due to existing wildfire
- Interconnection and distribution interconnection (Glenshire)
- Unavailability of California Pacific Electric Company/Liberty Utilities' alternate distribution feed (Glenshire)
- Loss of internet connectivity
- Loss of radio communications
- Loss of cellular communications
- Impacts of system de-energization
- Impacted roadways limiting movement of personnel and equipment

D. CHANGES TO THE CPUC FIRE THREAT MAP

As part of the development of the 2023 WMP, TDPUD reviewed the conditions present in its territory, including the current extent of the HFTD. TDPUD does not recommend any changes to the CPUC state-wide Fire Threat Map.

V. WILDFIRE PREVENTATIVE STRATEGIES

A. HIGH FIRE THREAT MAP FOR TDPUD

TDPUD participated in the development of the CPUC Fire Threat Map,[4] which designates the HFTDs across California. In the map development process, TDPUD served as a territory lead and worked with CAL FIRE, CPUC staff, and local fire officials to identify areas of the TDPUD service territory that are at an elevated or extreme risk of power line-ignited wildfire.

TDPUD incorporated the HFTD mapping into its construction, inspection, operation, maintenance, repair, and vegetation management practices. The fire threat areas, as designated by both CAL FIRE and CPUC, have been incorporated into the TDPUD geographic information system (GIS) to overlay with TDPUD water and electric facilities and identify any infrastructure within areas of high fire threat.

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

For the purpose of the WMP and to retain consistency, TDPUD treats its entire service territory as Tier 3 high fire threat.

B WEATHER MONITORING

The TDPUD service territory covers a relatively small section of the Truckee watershed. Local, state, and national sources provide accurate and comprehensive weather information for the TDPUD service territory. Variations in weather due to terrain or microclimates are often well known by TDPUD staff. TDPUD monitors current and forecasted weather data from a variety of sources including:

- U.S. National Weather Service–Truckee Donner Remote Automatic Weather Station (TADC1) and the Truckee Airport
- U.S. Forest Service Wildland Fire Assessment System
- Northern California Geographic Area Coordination Center–Predictive Services Fire Weather/Fire Danger Outlooks for Region NC07 (Northern Sierras)
- Internal knowledge of local conditions
- Local weather data from NV Energy and Liberty Utilities automated weather stations

Each day, TDPUD will assign one of four operating conditions based on the relevant weather data and knowledge of local conditions:

(1) Normal: During normal conditions, no changes are made to operations or work procedures.

(2) Elevated: During elevated fire-risk conditions, TDPUD staff will perform normal work with an elevated level of observation for environmental factors that could lead to an ignition.

(3) Extreme: During extreme fire-risk conditions, TDPUD may delay routine work on energized primary lines (12.47 kV and 14.4 kV). TDPUD may perform necessary work to preserve facilities or property. Extreme weather is defined as weather phenomena that are at the extremes of the historical distribution and are rare for a particular place and/or time, especially severe or unseasonal weather. Such extremes include severe thunderstorms, severe snowstorms, ice storms, blizzards, flooding, high winds, or heat waves.

(4) Red Flag: The National Weather Service issues Red Flag Warnings (RFWs) and Fire Weather Watches to alert fire departments of the onset, or possible onset, of critical weather and dry conditions that could lead to rapid or dramatic increases in wildfire activity.[5] An RFW is issued for weather events that may result in extreme fire behavior that will occur within 24 hours. An RFW is the highest alert. While an RFW is in effect, TDPUD's crews limit hot-work, such as welding, grinding, and cutting, and TDPUD will delay all routine work on energized primary lines (12.47 kV and 14.4 kV). TDPUD may perform necessary work to preserve facilities or property. Vegetation management and line crews have on-site fire suppression equipment and conduct tailboard meetings to confirm the location and readiness of the fire suppression equipment.

[5] http://www.fire.ca.gov/programs/communications/red-flag-warnings-fire-weather-watches/

C. DESIGN AND CONSTRUCTION STANDARDS

TDPUD electric facilities are designed and constructed to meet relevant federal, state, and industry standards. TDPUD treats GO 95 as a guiding standard for design and construction of overhead electrical facilities. TDPUD meets all standards in GO 95 and constructs its facilities consistent with the "heavy-loading" district as defined by the CPUC. TDPUD's overhead electric system is designed to withstand severe winter storms, including extreme wind and snow events. Winds during severe winter storms generally exceed the wind speeds that the TDPUD service territory experiences during RFWs. As a result of this approach, TDPUD's system is hardened and more resilient to extreme weather events such as high winds.

As stated above, TDPUD's electric facilities are designed to meet GO 95 for design, construction, and maintenance. While TDPUD may choose to exceed the standard based on local conditions and/or knowledge, the minimum requirement is to meet the standard over the duration of the action. Where review/inspection shows that the minimum standard is not sufficient to maintain compliance, TDPUD adapts accordingly.

In addition to meeting the GO 95 standards, TDPUD is making the following upgrades to its facilities and equipment to reduce the risk that its equipment will start a wildfire.

POLE REPLACEMENT PROGRAM

TDPUD has an ongoing pole replacement program that prioritizes poles for replacement based on three factors: age; conditions; and the impact an event on a given pole could have on safety, reliability, and compliance. As part of this program, TDPUD poles are inspected on a regular basis and scored based on the three factors. Pole scores are recorded in the TDPUD GIS system. Poles with the highest score are prioritized for replacement. Appendix C contains a detailed description of the pole replacement ranking tool used by TDPUD.

In 2022, TDPUD replaced 14 poles requiring attention based on previous years' intrusive pole inspections. In addition, TDPUD replaced numerous poles as part of re-conductor projects and installed a new overhead conductor.

NON-EXPULSION CURRENT LIMITING FUSES

Since 2019, TDPUD has been evaluating the suitability of non-expulsion or current limiting fuses on its overhead system. In locations where the expulsive fuses have been determined to present a risk of starting a wildfire, TDPUD has been replacing the expulsive fuses with non-expulsive fuses. TDPUD selected Eaton's Cooper Power Systems full-range, current-limiting, dropout Energy Limiting Fuse (ELF) for the pilot project. The ELF fuse has been granted permanent exemption by CAL FIRE from pole clearance requirements as specifically listed in Title 14 of the California Code of Regulations, Section 1255.10.

All in-line and transformer fuse locations where an ELF fuse has been installed are tracked in the GIS and tagged with ELF identifier. This allows TDPUD to track and report any outage or hazard occurrences on ELF fuses through TDPUD's Responder Outage Management System (OMS). This program began in early 2019. Staff completed the evaluation of the ELF fuses, validating and confirming their suitability and effectiveness for TDPUD's electric system. Beginning 2021, TDPUD staff implemented a 3-year capital improvement project and funding to replace all overhead fuses in the distribution system with ELF fuses and non-load break cutouts.

In February of 2021, TDPUD staff were notified by Eaton of an ELF fuse recall due to a failed manufacturer process. This resulted in TDPUD staff having to inspect all fuses installed and replace suspect fuses. This recall was further hindered by material shortages and ongoing procurement delays. In 2022, TDPUD was not able to progress on the ELF fuse deployment project after completing efforts to address a manufacturer recall issued in 2021. The ELF deployment project is planned to resume in 2023.

FR3 INSULATING FLUID

TDPUD switched exclusively to FR3 dielectric insulating fluid in 2008. FR3 has an extremely high flashpoint in excess of two times that of its traditional mineral oil counterpart (360°C versus 160°C). It is now a requirement for all new oil-insulated equipment, including transformers (pole-bolted and pad-mounted), substation transformers, and substation voltage regulators. TDPUD staff continue to evaluate the appropriateness of FR3 insulating fluid in its future procurement of pad-mounted switchgear.

COVERED PRIMARY JUMPER WIRE

TDPUD is implementing the use of covered (i.e., tree wire) primary jumper wire in place of bare wire. Primary jumpers are used to connect transformers, underground risers, and fuse cutouts to main overhead circuit conductors. The use of covered primary jumper wires helps to minimize unintentional contact with wildlife and windblown debris.

PROPOSED SERVICE REQUIREMENTS

Since 1995, TDPUD code has required all new or reconstructed developments to take service from TDPUD via an underground system; however, limited exceptions exist in current TDPUD code for some single-family residences. TDPUD seeks to minimize the installation of overhead power lines where practicable and will, therefore, recommend an underground requirement for all electric services and considers the following:

- All new installations will be required to take service from an underground source.
- Like-for-like panel replacements will be required to convert to underground service.
- Upgraded panel replacements will be required to convert to underground service.
- TDPUD will not attach to trees for any reason.

- TDPUD may consider a cost-sharing program for customers that desire to convert an existing overhead service to an underground service.
- Customer(s) receiving service via legacy tree attachment(s) will be required to comply with Section 5.36, Tree Attachments.

TREE ATTACHMENTS (LEGACY ATTACHMENTS)

Existing tree attachment service drops are tracked within the GIS to identify locations where trees and branches may be a potential hazard to electric infrastructure and to provide TDPUD crews with location information for inspecting tree attachments. Legacy tree attachments are no longer allowed. When an existing tree attachment fails or is damaged, a new utility pole is installed and used for securing all secondary attachments.

Pursuant to Title 14 of the California Code of Regulations Section 1257, and annually starting in 2020, contract tree crews are trimming the area of the attachments and performing an inspection. Any hazard found is immediately reported to TDPUD staff for mitigation.

TDPUD monitors trends in materials, technology, and work methods to evaluate prudent operational changes to enhance the efficacy of wildfire mitigation. These evaluations include:

- Engineering pole-ranking tools
- Intrusive pole inspections
- New construction methods/materials
- Undergrounding new construction and tree wire (covered wire) use, where applicable

ADVANCED METERING INFRASTRUCTURE

TDPUD has invested in and deployed advanced metering infrastructure (AMI) across the entire service territory. AMI is an integrated system of smart meters, communications networks, and data management systems that enable two-way communication between utilities and customers. The system provides several important functions that were not previously possible or had to be performed manually, such as the ability to automatically send an outage notification to TDPUD's OMS, automatically and remotely measure electricity use, connect and disconnect services, detect tampering, identify and isolate outages, and monitor voltages.

In 2021, TDPUD implemented the National Information Solutions Cooperative (NISC) Operational Analytics module for the electric utility. The Operational Analytics module is an enhancement to the existing Meter Data Management System used by TDPUD to gather interval data across all AMI meters. The Operational Analytics module has improved TDPUD's operational efficiencies and grid reliability through advanced data analysis. The implementation included integrations with TDPUD's AMI, Esri GIS, and Supervisory Control and Data Acquisition (SCADA) systems that are now used to proactively locate and replace critically overloaded or underloaded transformers and reduce feeder losses.

OUTAGE MANAGEMENT SYSTEM

Since 2007, TDPUD has utilized Schneider Electric's Responder OMS within the GIS for tracking and responding to electric outages and system hazards. The OMS automatically captures outage information in real time from all AMI meters and captures incoming phone calls from the public and TDPUD customers. The OMS very quickly consolidates field events and alerts staff to potential issues impacting the electric system. In 2019, TDPUD extended categorizing incidents to include fires, hazard trees, or branches in proximity of electric lines. The wires down category has been tracked since the program's inception in 2007.

In addition to tracking active hazards to the system, all calls entered into the OMS can later be used for reporting based on outage cause, duration, system device, and number of customers affected. This information is used by TDPUD engineers to plan electric system upgrades and device replacements. Events recorded in the OMS are stored in the Responder archives, available for engineering and operations staff upon request, and made available to public agencies as part of yearly CPUC reporting requirements on reliability indices.

In 2021, TDPUD's Board authorized a contract for a new OMS available through NISC. TDPUD utilizes NISC software as the base enterprise planning resource software that manages TDPUD's accounting, payroll, and customer information systems. TDPUD has standardized this software for the past 18 years due to in-house expertise with the product, the advanced leadership of NISC with other public power utilities, and its compatibility with other TDPUD products including the AMI, Esri GIS, and SCADA systems.

The new NISC OMS has improved upon the existing Schneider OMS by simultaneously informing TDPUD on how to best resolve an outage while automatically communicating with customers that they are experiencing an outage and providing any available information on how the outage is being resolved. NISC's OMS uses a prediction engine that integrates with TDPUD's AMI, Esri GIS, and SCADA systems to accurately locate the source of the outage. The OMS also includes an interactive map with active locations of crews in the field responding to an incident. A reporting platform is also available that provides service and quality industry reports on the electric system including CPUC reporting requirements and reliability indices. TDPUD customer's will be able to customize outage alerts through the NISC MyAccount/SmartHub customer engagement tool.

SUPERVISORY CONTROL AND DATA ACQUISITION

TDPUD has invested in a robust fiber-based SCADA system that provides staff the capability to operate the substation reclosers on supervisory control from the TDPUD office or remotely through a secure virtual private network (VPN) connection.

TDPUD is investigating an upgrade to the system to allow for supervisory control of all critical field reclosers, a function that is currently unavailable. This function would allow TDPUD staff to remotely enable or disable all recloser settings, including setting all reclosers to non-reclose

mode (i.e., one-shot operation) annually as needed to minimize the risk of fires caused by arcing or faults. Currently, TDPUD needs to manually place these reclosers on non-reclose.

D. VEGETATION MANAGEMENT

TDPUD has a developed a comprehensive vegetation management program for maintaining vegetation near its facilities and circuits. TDPUD's vegetation management program is described in detail in its Vegetation Management Plan (VMP) that is attached to this WMP in Appendix D. In addition to maintaining the statutory requirements for clearance around high voltage wires, TDPUD's VMP prescribes a treatment for a 20-foot right-of-way on all sides of its utility poles. Within this easement, all dead vegetation, including dead trees and shrubs, is removed and surface vegetation is maintained to minimize the accumulation of surface fuels. TDPUD vegetation management staff identify standing dead trees within 200 feet of high-voltage wires regardless of ownership and will seek permission to remove any dead tree within this area that has the potential to strike TDPUD wires.

In the current version of the VMP, TDPUD's tree-trimming program is on a 5-year tree-trimming cycle because the majority of the trees near TDPUD lines are mature conifers with compact crowns compared to hardwood trees. These trees have relatively low growth rates and do not respond with rapid shoot growth. Dead vegetation in the right-of-way and dead trees that threaten the wires are treated on an as-needed basis.

As part of TDPUD's VMP, contractors and internal TDPUD staff are equipped with TDPUD-provided mobile devices to record the location and dates of vegetation management-related activities. Vegetation management generally consists of removing, cutting, trimming, and clearing away of trees, tops, limbs, branches, bushes, vines, and foliage, and the removal of hazard trees and inspection of legacy tree attachments in proximity to TDPUD electrical lines, stations, and property within public utility easements. All tree-trimming inspection records are stored in TDPUD's GIS and are used for reporting yearly tree-trimming progress and planning future tree-trimming routes and locations.

In addition to planned tree trimming, the TDPUD customer information system also records customer calls regarding concern for potential tree hazards in proximity to electric lines. Service orders are created for crews to respond to and correct hazard tree reports, as well as record the outcome of the hazard. This information can also be used for reporting the number of customer calls regarding hazard trees, number of hazard tree removals, and number of occurrences by location. This program began in 2005 and, continuing for 2023, TDPUD will be on a 5-year cutting cycle and will adjust as needed.

It should be noted that TDPUD removes dead or dying vegetation within the vegetation management area. Given the high mountain environment and relatively short growing season, TDPUD has not had problems with treatment areas being replaced with fast-growing grasses or invasive species. TDPUD uses minimal or no herbicides while conducting vegetation management.

E. INSPECTIONS

TDPUD meets the minimum inspection requirements provided in CPUC GO 165, Table 1 and CPUC GO 95, Rule 18. Pursuant to these rules, TDPUD inspects electric facilities in the HFTD areas more frequently than its counterparts in non-HFTD areas. Additionally, TDPUD staff use their knowledge of the specific environmental and geographical conditions to determine when areas may require more frequent inspections and/or mitigations. TDPUD utilizes GO 95 and GO 165 as its guiding documents as part of a robust asset management/maintenance program.

TDPUD's GIS contains records for electric system inspections performed as part of the GO inspection program. TDPUD crews are equipped with mobile devices with access to TDPUD's GIS data to record inspections and report any potential issues to be corrected. Beginning in 2019, this inspection program was extended to capture potential tree hazards in proximity to electric infrastructure. Corrections and repairs to the system are also recorded as part of this program, and data are available to TDPUD's engineering and operations staff to plan repairs and upgrades to the electric system.

TDPUD's goal is to ensure that all inspections performed within its service territory are complete before the beginning of the historical fire season, typically by June 1. TDPUD monitors drought conditions and other relevant factors throughout the year to determine if inspections should be completed on an adjusted timeline.

If TDPUD staff discovers a facility in need of repair that is owned by an entity other than TDPUD, TDPUD will notify the facility owner in writing and also notify the agency having jurisdiction.

F. WORKFORCE TRAINING

TDPUD has developed rules and complementary training programs for its workforce to reduce the likelihood of an ignition. All field staff are trained annually in the following areas: in the content of the WMP; in proper use and storage of fire extinguishers; in required pre-job briefings to discuss the potential(s) for ignition and environmental conditions (current and forecasted weather that coincides with the duration of work for the day); and in identifying the closest fire extinguisher.

TDPUD staff are also active in electric utility joint-action groups, such as the California Municipal Utilities Association, Northern California Power Agency, Utah Associated Municipal Power Systems, and the American Public Power Association, to leverage the industries' collective experience and to take advantage of training and other workforce development activities.

G. RECLOSER POLICY

During fire season, TDPUD disables all automatic reclosing function for all automatic circuit reclosers (ACRs or reclosers) on its system (i.e., one-shot operation). This ensures there will be no automatic circuit reclosing during the fire season. Fire season is typically defined as June 1st

through October 31st but may be extended based on actual fire danger and environmental impacts due to climate change.

Operational needs may change due to extended/early winter conditions within the service territory of TDPUD. During these types of weather events the Electric Utility Director or their designee may suspend the summer one-shot operation practice and return the automatic system reclosers to normal operation. In the event there is a lack of winter precipitation due to climate change, reclosers may be placed on one shot early ahead of the summer months due to the dry conditions.

H. DE-ENERGIZATION

TDPUD, in consultation with other Publicly Owned Utilities (POU) and TDPUD water utility staff and in communication with key local agencies, has evaluated the efficacy of a Public Safety Power Shutdown (PSPS) type of de-energization program. Major considerations included:

- TDPUD heavy-loading construction standards that are hardened to withstand high wind, snow loading, and ice formation
- The offset between when TDPUD's overhead electric distribution system experiences its most severe weather threats (i.e., severe winter storm[s]) and the weather conditions during red-flag warnings (i.e., typically in late summer/fall with only moderate weather threats)
- The potential negative impacts to fire response, water supply, public safety, and emergency communications should a fire occur while TDPUD de-energized a portion or all its system
- Potential loss of water supply to fight wildfires due to loss of production wells and pumping facilities
- Negative impacts to emergency response and public safety due to the historical disruptions in internet and cell phone service during periods of extended power outages
- The loss of key community infrastructure and operational efficiency that occurs during power outages

Based on the above considerations, the risks of implementing a PSPS-type program seem to far outweigh the chances that TDPUD's electric overhead distribution system would cause a catastrophic wildfire. TDPUD, on a case-by-case basis, has historically and will continue to consider de-energizing a portion of its system in response to a known public safety issue or in response to a request from an outside emergency management/response agency. Any de-energizing will be performed in coordination with TDPUD water utility staff and key local partner agencies. TDPUD will also monitor the evolution of PSPS implementation by other California electric utilities to continue to refine its evaluation of this important topic.

While TDPUD has not implemented a PSPS-type program for its system, TDPUD is a transmission-dependent utility of NV Energy that, shortly after TDPUD adopted the original WMP, announced

its own de-energizing program (PSOM)[6]. NV Energy originally included TDPUD's service territory in its original program, later removed TDPUD's service territory from the program for the 2019 and 2020 fire seasons, and then included TDPUD's service territory again in the program for the 2021 fire season. It is again possible that, during extreme fire danger, TDPUD could experience a system-wide outage due to a loss of transmission from NV Energy, which will likely be from a PSOM event.

As a result, TDPUD, and other key local agencies, held a series of meetings with NV Energy in 2019, 2021, and 2022 to fully understand the conditions under which NV Energy would de-energize transmission and to develop communication protocols so that NV Energy could notify TDPUD and then TDPUD could notify key agencies and its customers. These meetings will continue into 2023.

IMPACTS TO PUBLIC SAFETY

The TDPUD service territory includes seven Truckee Fire Protection District stations, a CAL FIRE facility at the Truckee Tahoe Airport, one hospital, and three police stations. TDPUD does not generate electricity locally and its sole source of power comes from NV Energy transmission. In the event of a power outage or a NV Energy-initiated PSOM, first responders would be reliant on backup generators for power. The seven fire stations, CAL FIRE facility, three police stations, and the hospital all have backup generators that can supply electricity to their facilities in the event of power shutdown. Truckee residents in general are accustomed to adverse conditions including extreme weather that shuts down public transportation and services. Many of TDPUD's customers have backup generators installed at their properties and TDPUD encourages customers to be prepared for a PSOM event with several informational postings on its website, including generator safety and the installation of permanently installed backup generators.

CUSTOMER NOTIFICATION PROTOCOLS

TDPUD has developed a list of critical agencies/emergency responders with a commitment to make direct contact should NV Energy announce a potential PSOM event. If TDPUD gets notified of a pending PSOM event, then TDPUD staff will contact local emergency responders and the hospital by phone, text, and/or email using all channels until contact and message receipt are confirmed.

Customers are notified of wildfire alerts, related outages, potential PSOM outages, relay setting outages, and re-energizations using contact information in their customer accounts and by signing up for individual alerts through the customer engagement tool (MyAccount/SmartHub). Customer notification is achieved through several channels including text alerts and email alerts. The methods for customer notification are based on the extent of the outage with customer alerts through the OMS and the website outage map in real-time. During limited outages, TDPUD

[6] www.NVenergy.com/safety/PSOM

may only use its website and automated customer notifications through the OMS. For more significant outages, TDPUD will use social media and the website emergency banner to notify customers of an outage and provide updates when available. Major transmission and system-wide outages would also include Nixle alerts and coordination with Code Red posts.

Non-customers can sign up for Nixle alerts for major outages, including NV Energy PSOM outages, by texting "TDPUD" to 333111. TDPUD also posts information regarding emergencies on its website and on several social media outlets such as Twitter and Facebook. An online outage map is available for more information about emergencies and outages in TDPUD. The website also includes information and links to sign up for email and text alerts.

To help TDPUD's customers and community be aware and prepared for NV Energy PSOM wildfire safety transmission power outages, TDPUD has spent significant time and resources to communicate both the timing of a PSOM outage along with the expected start of restoration.

VI. COMMUNITY OUTREACH AND PUBLIC AWARENESS

TDPUD has extensive relationships across all organizations in the community. These relationships include direct interactions with the agencies directly responsible for fighting fires (Truckee Fire Protection District and CAL FIRE), agencies leading emergency response efforts (Town of Truckee, Nevada County, and Placer County), and key public and private landowners (U.S. Forest Service, California State Parks, Tahoe Donner Association, Tahoe-Truckee Airport District, etc.). TDPUD staff regularly provide information to these agencies including updates on fire, vegetation management requirements, and TDPUD programs.

TDPUD also works closely with our partners and considers key planning and other documents in implementing this WMP. This includes the Truckee Fire Protection District's Community Wildfire Protection plan and the Town of Truckee's Right of Way clearing program and other emergency response activities.

As the local electric and water utility, TDPUD has robust community outreach and marketing programs to effectively communicate with its customers and community. The agendas for all TDPUD Board meetings are publicly available and the meetings are open for the public to attend. The regularly scheduled Board meetings are also broadcast locally from TDPUD's website (www.tdpud.org) and archived on TDPUD's website for access after the meeting.

TDPUD is active in the community, typically attending dozens of community events each year, including Truckee Day, Truckee Thursdays, Tahoe Truckee Earth Day, Truckee Home Show, Truckee Cleanup Day, and Big Truck Day. TDPUD staffs booths, has staff available to interact with the community, and delivers energy, water, and customer programs directly to its customers. TDPUD provides information on its Vegetation Management Program, performs free de-energizing of customers' overhead service connections to allow them to clear defensible space while working safely, and educates the community on TDPUD's overall efforts to respond to catastrophic wildfires. TDPUD intends to continue this effective engagement in the future.

TDPUD also has robust marketing and communication efforts leveraging its website (www.tdpud.org), social media (Facebook/Twitter/Instagram), print ads, and digital marketing. TDPUD is a regular advertiser in the Sierra Sun, Moonshine Ink, Truckee Chamber of Commerce, Tahoe Donner News, and The Shire, as well as on KTKE 101.5 local radio. In addition, TDPUD has an informative customer lobby with ready access to customer service representatives, extensive digital media to educate customers, and engaging displays.

Specific to wildfire-related community outreach, TDPUD has been very active promoting the Vegetation Management Program, including regulatory changes increasing the vegetation clearances and vegetation management practices. TDPUD also engages in direct communication with property owners for quick resolution of any concerns or disputes. TDPUD has information on the website, social media, digital media, print advertising, and radio. TDPUD has worked with Tahoe Donner Association, which is in a Tier 3 area and has almost half of TDPUD's residential connections, to include an extensive article in the monthly Tahoe Donner News regarding fire, vegetation management, and everyone doing their part.

VII. RESTORATION OF SERVICE

Although TDPUD does not have a PSPS-type operational practice, it may de-energize a portion or all the overhead electric system for one of the following reasons:

- If an outside emergency management/emergency response agency requests a power shutdown
- If TDPUD elects to de-energize segments of its system due to extreme weather or other safety considerations
- As a result of a NV Energy PSOM event or transmission outage

If TDPUD experiences an outage during wildfire season, staff will patrol the affected portions of the system before the system is re-energized. Suspect equipment or distribution lines that cannot be patrolled will remain de-energized. In addition, system performance abnormalities will be monitored via TDPUD's SCADA system and its AMI/OMS systems.

In addition, TDPUD participates with the California Emergency Management Agency (also known as the California Governor's Office of Emergency Services) and California Utilities Emergency Association. The California Emergency Management Agency is responsible for overseeing and coordinating emergency preparedness, response, recovery, and homeland security activities, while the California Utilities Emergency Association serves as a point-of-contact for critical infrastructure utilities and the California Governor's Office of Emergency Services to facilitate communications, provide emergency response, and support emergency planning, mitigation, training, exercises, and education. NV Energy provides TDPUD with advance notification of PSOM events.

TDPUD does not generate power locally and is dependent on NV Energy for transmission of electricity. NV Energy has a wildfire safety de-energization program (PSOM) where, based on

catastrophic wildfire risk, NV Energy will de-energize transmission lines that deliver power to Truckee. TDPUD has tested and implemented a re-energization protocol in preparation for a system-wide wildfire safety power outage based on NV Energy's current PSOM transmission de-energization program. TDPUD staff worked in close collaboration with NV Energy to establish communication protocols for NV Energy to communicate the end of the extreme wildfire danger and to coordinate the timing of NV Energy's transmission system visual inspections/re-energization and TDPUD's entire distribution system visual inspection/re-energization. Both NV Energy and TDPUD are committed to restoring power as quickly and safely as possible.

VIII. EVALUATING THE PLAN

A. METRICS AND ASSUMPTIONS FOR MEASURING PLAN PERFORMANCE

TDPUD has historically tracked two metrics to measure the performance of the WMP over the entire year. Starting in 2022, TDPUD is only tracking these metrics during fire season (defined as June through October) since winter outages occur when there is no wildfire danger:

1. Number of fire ignitions
2. Wire-down events within the service territory
3. Outage Causes

Metric 1: Fire Ignitions

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

- TDPUD's electrical infrastructure was associated with the fire.
- The fire was self-propagating and of a material other than electrical.
- The resulting fire traveled greater than one linear meter from the ignition point.
- TDPUD has knowledge that the fire occurred.

To evaluate this metric, TDPUD reports the number of fires that occurred that were less than 10 acres in size. Any fires greater than 10 acres will be individually described. New fire ignitions will be reported to management and firefighting agencies.

In 2022, TDPUD recorded zero new fire ignitions caused by TDPUD's electrical facilities or equipment.

Metric 2: Wire-Down Events

The second metric is the number of wire-down events within TDPUD's service territory. For purposes of this metric, a wire-down event includes any instance where a primary distribution conductor falls to the ground or onto a foreign object, which is defined as any object not specifically an asset of TDPUD (i.e., phone, cable, trees, etc.).

TDPUD will not normalize this metric by excluding unusual events (i.e., severe storms, car versus pole incidents, or snow unloading). However, TDPUD will supplement this metric with a qualitative description of any such unusual events.

In 2022, TDPUD recorded no wire down events.

Metric 3: Outage Causes

The third metric used is the number of outages recorded by the month the outage occurred and categorized by cause. This is a new metric for 2022 and was enabled by TDPUD's new OMS. Outage information is collected from the data recorded and stored by the OMS. For the purpose of this metric, TDPUD is defining an outage as an event when a transmission line or electrical equipment is out of service and the event is recorded in the OMS as an outage.

In 2022 from June through October, TDPUD recorded 309 outages; 113 were of unknown origin, 107 of these outages were due to planned events (maintenance, construction, etc.), 36 were caused by animals 19 were caused by equipment failure, and 4 outages were caused by vegetation. The remaining 30 outages had a variety of causes including vehicle impacts and outages caused by the public.

B. IMPACTS OF METRICS ON THE PLAN

New fire ignitions and wire-down events have been used as the metrics of the TDPUD WMP since the initial Plan was drafted in 2019. As part of the annual WMP review process, TDPUD reviews the data collected for each metric and continues to update the WMP annually. The two metrics have proven to be useful for informing the effectiveness of the WMP particularly when complemented by additional data such as location for new fire ignitions and data from the OMS (location, customers impacted, etc.) for wire-down events.

TDPUD uses the data obtained for both metrics with the additional data to pinpoint locations where additional wildfire prevention is needed, including where additional vegetation management treatments are necessary and where TDPUD needs to install more animal deterrents.

C. MONITORING AND AUDITING THE PLAN

Internally, the wildfire prevention strategies and programs described in the WMP are evaluated on an ongoing basis. TDPUD staff tracks the utility's progress in completing wildfire prevention program goals. The progress data and data regarding the metrics plus outage information are reviewed by the Electric Utility Director. The Electric Utility Director, or designee, will, at least on a semi-annual basis, update the General Manager regarding the Plan's implementation, identified deficiencies, or recommendations for updating. Any critical or immediate concerns will be brought to TDPUD's Board of Directors.

In addition to the ongoing internal review, TDPUD presents the current WMP to its Board of Directors for review on an annual basis in a public setting with agendized materials. Development of the Plan, along with the updates, is done collaboratively with the local emergency response and fire agency.

D. IDENTIFYING AND CORRECTING DEFICIENCIES IN THE PLAN

TDPUD staff have the role of vetting current procedures and recommending changes or enhancements to build upon non-optimized strategies in the Plan. TDPUD staff utilizes the data (e.g., progress in completing prevention tasks) obtained during the ongoing review of its wildfire prevention programs to identify areas where additional work is needed, such as increasing clearance between wires and adjacent vegetation or removing dead trees, or areas where system upgrades need to be prioritized, such as pole replacement or the installation of animal deterrents.

The Electric Utility Director, or their designee, will be responsible for spearheading discussions on correcting deficiencies when updating the Plan for its annual presentation to the Board. This is done in collaboration with sister utilities and joint-action groups such as the California Municipal Utilities Association, Northern California Power Agency, and Southern California Public Power Authority. All stakeholders are empowered to suggest improvement opportunities, including, but not limited to, field crews, management, auditors, fire safety professionals, and members of the public.

E. MONITORING THE EFFECTIVENESS OF INSPECTIONS

TDPUD currently utilizes GO 95 and GO 165, respectively, as its guide to inspect its system. Field staff routinely patrol the service territory and correct deficiencies as they are encountered. TDPUD tracks deficiencies that are repaired upon discovery within its GIS and consistent with the guidelines of GO 95 and GO 165, respectively. Further, deficiencies that cannot be repaired upon discovery are assigned a priority level based upon Electric Operation Manager review. TDPUD will investigate a more formally documented process where deficiencies are assigned to a priority level upon field review. The repairs will be re-defined as Level 1 (highest), Level 2 (moderate), or Level 3 (lowest) as defined by GO 95, Rule 18, with the discovery, remedy, and supporting documentation tracked within TDPUD's GIS. Once this improvement is in place, deficiencies and repairs can be tracked according to priority level.

Monitoring the effectiveness of inspection practices will occur through ongoing tracking and annual review of TDPUD's findings, including deficiencies found and corrective actions taken. The Electric Operations Manager or their designee supervises the VMP, all routine fieldwork, and equipment and line inspections. Related strategies that mitigate wildfire risk will be identified and proposed within the next iteration of the Plan. Aggregating these data will guide future decision-making on the direction of the wildfire mitigation strategy with the intention that incidents will become less frequent or less hazardous system wide.

F. INDEPENDENT AUDITOR

Public Utilities Code Section 8387(c) requires TDPUD to contract with a qualified independent evaluator with experience in assessing the safe operation of electrical infrastructure to review and assess the comprehensiveness of this Plan. The independent evaluator must issue a report to be posted on TDPUD's website. This report must also be presented to TDPUD's Board at a public meeting. Navigant Consulting conducted the independent audit of TDPUD's WMP in 2019 and Guidehouse conducted the independent audit in 2023. Both independent audits concluded that:

1. TDPUD's WMP aligns appropriately with Public Utilities Code Section 8387 and includes all required elements.
2. TDPUD's Plan is determined to be comprehensive.

TDPUD's WMP satisfied the requirements of Senate Bill 901 and the 2023 WMP considers the previous recommendations of the two audits. It should be noted that TDPUD, in order to maximize the benefit of direct investments in wildfire prevention, only intends to use the independent auditor when there is value, which is currently anticipated to be during comprehensive revisions of the WMP every 3 years or if major changes are made in between.

IX. WMP ADOPTION PROCESS

Annually, TDPUD presents WMP revisions to the Board for approval before the end of June of each year prior to submitting the WMP to the Wildfire Safety Advisory Board by July 1st of the same year. Board meetings are typically held on the first Wednesday of the month and the meetings are open to the public except for closed sessions. Members of the public can attend the Board meeting in person. Board meeting agendas included an attached agenda report, such as the one that presents the WMP to the Board, and are available online on the TDPUD website.

Board members receive the WMP prior to the meeting date as part of the public Board packet. During the meeting, TDPUD staff presents the WMP to the Board as action item and Board members provide comments when the presentation ends. Board member comments are followed by a period of public comment where the Board opens the meeting for public comment on the WMP. The WMP is either adopted by vote by the Board or returned to TDPUD for revision if there are comments that cannot be resolved during the meeting.

The final adoption of the 2022 WMP by the Board was done on June 1, 2022. A similar schedule is anticipated for 2023 adoption.

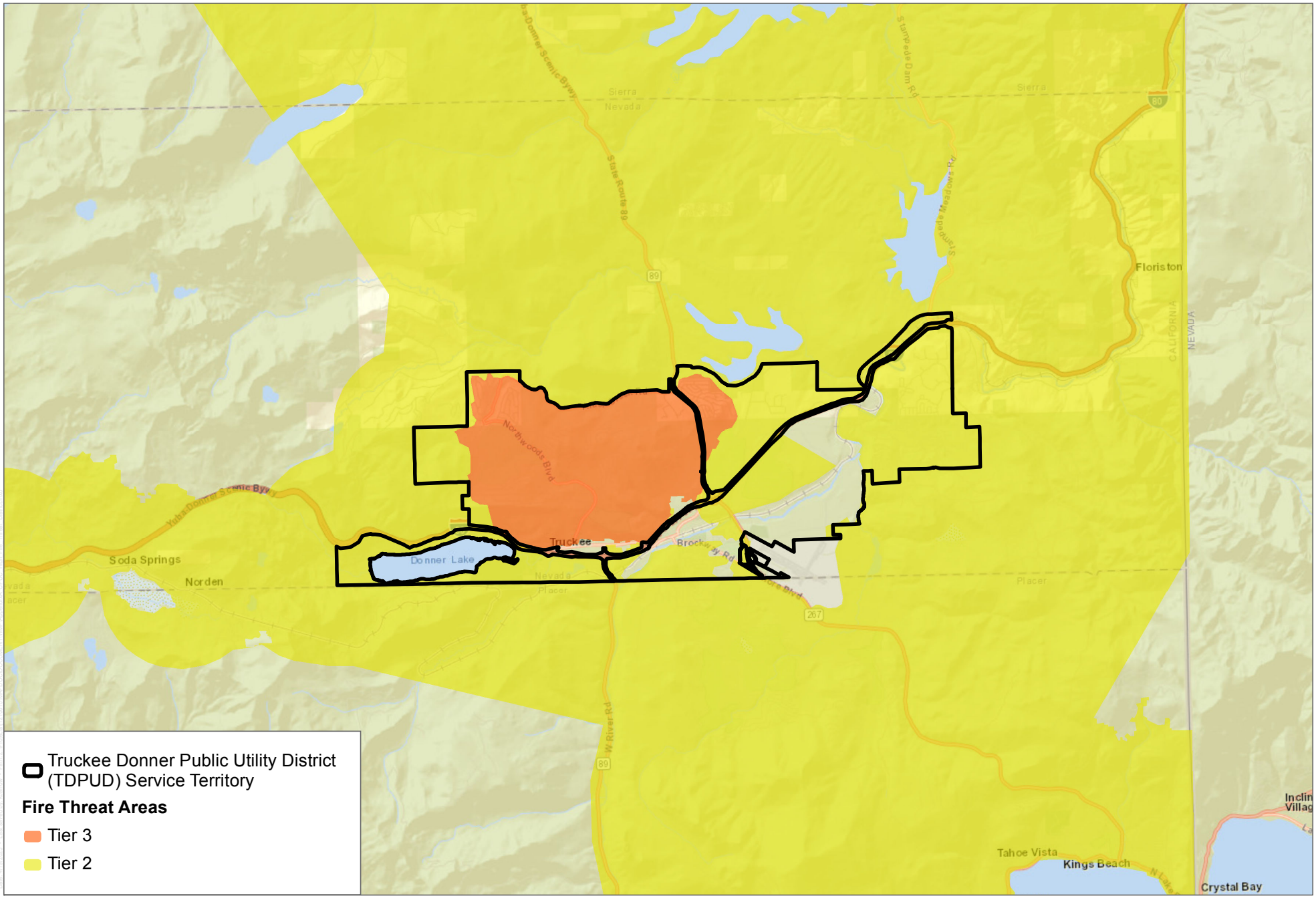
X. REFERENCES

Carlson, A.R., D.P. Helmers, T.J. Hawbaker, M.H. Mockrin, and V.C. Radeloff. 2022. "Wildland-urban interface maps for the conterminous U.S. based on 125 million building locations." Retrieved from USGS ScienceBase Catalog: https://www.sciencebase.gov/catalog/item/617bfb43d34ea58c3c70038f.

Town of Truckee Planning Division. 2020. *Climate Ready Truckee: A Climate Change Adaptation Plan.* Truckee, California: Town of Truckee Planning Division. July 2020.

APPENDIX A

CPUC HIGH FIRE THREAT DISTRICT MAP FOR THE TRUCKEE DONNER PUBLIC UTILITY



SOURCE: ESRI World Street Map, CAL Fire 2021

DUDEK

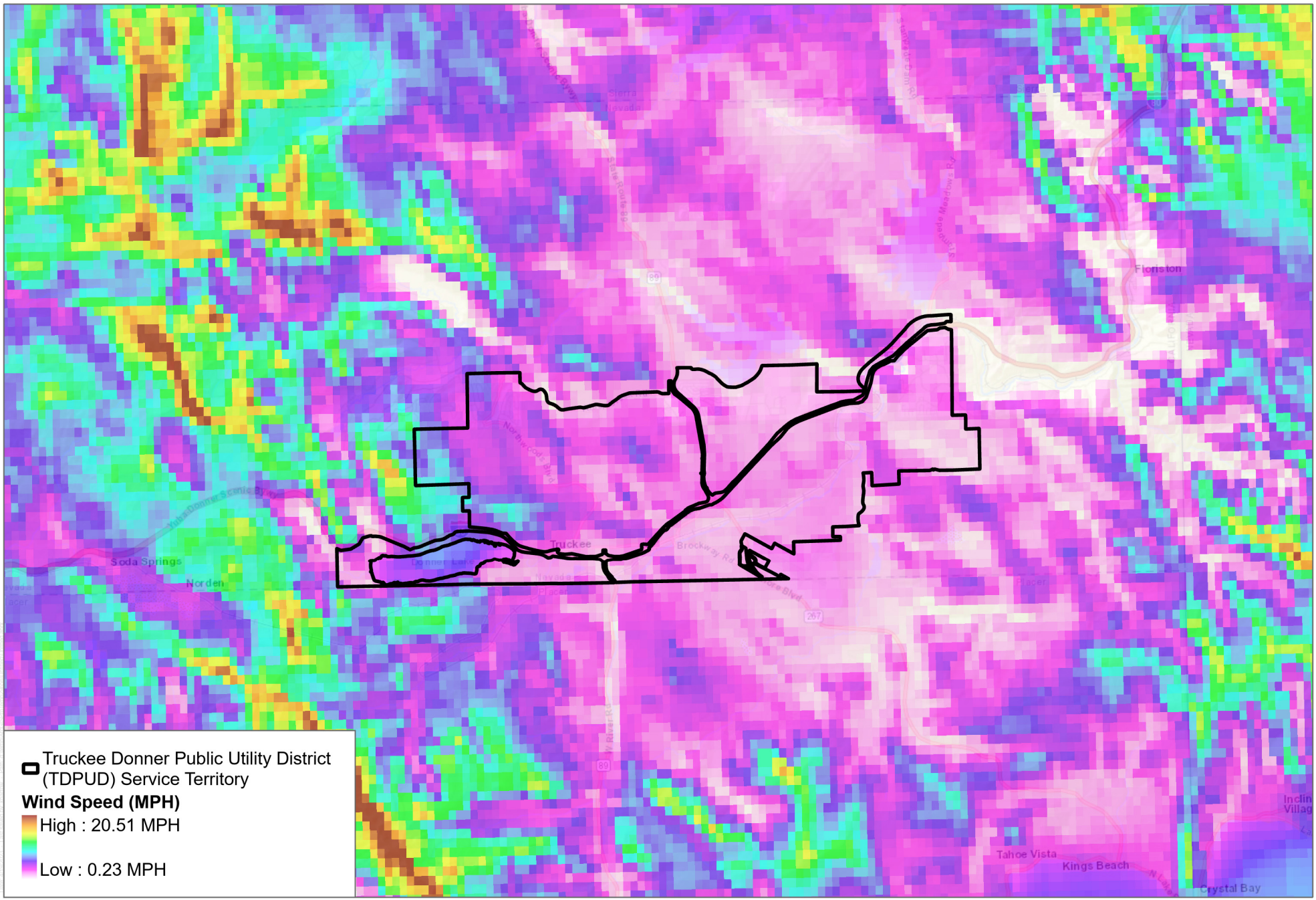
0 1 2 Miles

APPENDIX A

CPUC High Fire Threat District Map for the Truckee Donner Public Utility

APPENDIX B

PREVAILING WIND MAP



SOURCE: ESRI World Street Map

DUDEK

0 1 2 Miles

APPENDIX B

Prevailing Wind Map

APPENDIX C

POLE REPLACEMENT RANKING TOOL

Pole Replacement Ranking Tool

BACKGROUND

In March 2017 District staff initiated a project to prioritize utility pole replacements based on quantitative data. Prior to that, pole replacements associated with Master Plan line upgrades were given priority and other replacements were prioritized by operation staff intuition with limited logical rationale. Staff recognized the importance of prioritizing projects considering Safety, Reliability and Code Compliance.

There are approximately 5400 poles maintained by the District. Assuming a service life of 30-50 years approximately 100 to 180 poles should be replaced annually for an asset management/preventative maintenance program. Planning is required to achieve this rate of annual pole replacements and insure engineering, vegetation management, and joint pole planning proceed at a similar rate in advance of the replacement.

The Pole Replacement Ranking Tool was developed in response to this need for a project planning and prioritization tool. Originally developed in 2017, the Tool is reviewed and updated periodically. The Tool was most recently updated in February 2020.

THE TOOL

The Pole Replacement Ranking tool uses GIS feature attributes to assign a score to each pole feature based on the equation:

Replacement Score = Age Score + Condition Score + Critical Asset Score

This score then becomes an attribute of the pole feature in GIS. The replacement score attribute is then mapped in GIS to provide a visual report of pole replacement priority. The score factors and associated weights are:

Age	20%
Condition	60%
Critical Asset	20%

The maximum score for a pole is 100 pts (100%). The weight assigned to each score represents the estimated risk associated with leaving a given pole in service. Age and Condition establish a 'health' score for the pole, while the Critical Asset factor establishes a relative safety and reliability risk of facilities.

AGE Poles under 35 years old are considered low risk and are assigned an age score of zero. As poles age the Age score increases as noted below.

Age (years)		SCore
60 or older	Oldest	20
55-59		16
50-54		12

45-49		8
40-44		4
35-39		2
0-34	Newest	0

CONDITION There are two elements to the Condition score: GO165 intrusive inspection results and annual patrol inspection results. The Condition: Intrusive Inspection result is a rating from 1 (best) to 5 (worst) recorded in the GO165 inspection Poles Requiring Replacement reports.

Intrusive Inspection

Rating			Score
1	Best	Pole OK	0
2		Decay/Mechanical Damage	8
3		Recommend Change Out	16
4		Reject - Reinforceable	24
5	Worst	Priority Pole	32

The Condition: Patrol Inspection result is a rating from 1 (best) to 5 (worst) based on the annual visual inspection of 100% of the poles in the District.

Patrol Inspection

Rating			Score
1	Best	recommend future action	5
2		Future action 3 categories	10
3		Intrusive tag + 2 categories	15
4		Urgent Action	20
5	Worst	Urgent Action +2 categories	28

CRITICAL ASSET The Critical Asset factor ranks facilities based on the impact an event on a given pole could have on Safety, Reliability and Compliance.

Attribute ID	Asset	Score
1	Distribution	20
2	Secondary	15
4	Guy	5
3	Street Light	0
5	Transmission	0
6	Broadband	0
7	Tree	0

While an event on a Transmission pole could have a significant impact on the distribution system, these facilities are not owned by the DISTRICT and are not included in the pole replacement tool. Currently the tool assigns the Tree asset a zero score as trees typically have secondary/service attachments and, if the tree fails, then the impact on the distribution system is limited. With the increased emphasis on wildfire mitigation and the District's stance on tree attachments, this weighting may be reconsidered.

The final Replacement Score is mapped in GIS by range.

Score Range	Color
61-100	Red

51-60	Orange
41-50	Yellow
31-40	Light Green
<=30	Dark Green

2020 REVISION

The 2017 version of the tool used the equation:

Replacement Score = Age Score + Condition Score + Critical Asset Score + Reliability Score

The Reliability score was to be based on outage management system (OMS) data and reflect the frequency of events on a given device. The Reliability score was not included in the 2017 version of the tool while staff evaluated the parameters. Since then, staff determined the OMS data does not correlate to pole health or the safety/reliability risk of leaving a pole in service. As a result, this factor was not included in the 2020 revision. The OMS data is important to safety and reliability and is considered in planning and prioritizing other engineering and operations activities.

In the 2020 version of the Tool, staff identified Condition as the most important indicator of health and reallocated scoring accordingly. Less emphasis was given to Age, more emphasis given to Condition and Critical Asset emphasis remained unchanged. Staff also determined annual Patrol Inspection results were available. This data is important and up-to-date information related to pole health and has been added the Condition factor scoring.

FUTURE TOOL IMPROVEMENTS

Coordinate the patrol inspection data collection tool with the pole ranking tool to more accurately identify, rank/prioritize and record pole health.

APPENDIX D

VEGETATION MANAGEMENT PROGRAM

Vegetation Management Plan

Revised: May 23, 2022

INDEX

VEGETATION MANAGEMENT PLAN

Truckee Donner Public Utility District

Mission Statement – District Code, Title 1, Section 1.05.010
The Mission of Truckee Donner Public Utility District is to provide reliable, high quality utility and customer services while managing the District's resources in a safe, open, responsible, and environmentally sound manner at the lowest practical cost.

Introduction

The Truckee Donner Public Utility District (the District) has a responsibility to maintain vegetation so as not to threaten the safety and integrity of electric facilities. The District's Vegetation Management Plan (the Plan) is an important part of the District's effort to deliver safe, reliable and cost-effective electric service to customers. The goals of the Vegetation Management Plan include: (1) ensuring the safety of District Personnel and the public, (2) reduction of fire risks due to tree contacts or electrical sparks igniting vegetation (3) the prevention of customer outages due to tree contacts, and (4) aesthetics. The Plan is designed to meet the goals and objectives of the District, as well as State and Federal requirements, as they relate to maintenance of electric facilities in Public Utility Easements (PUE).

Service Area

The District is a Public Utility District of the State of California engaged in the distribution, sale and delivery of electric power and energy. The District is a transmission-dependent utility connected to NV Energy's transmission system and is located high on the eastern slope of the Sierra Nevada. The District is not interconnected with any other utility. The District's electric service territory is comprised of approximately 44 square miles in eastern Nevada County and approximately 1.5 square miles in adjacent Placer County. The electric system includes approximately 135 miles of 12.47 kV and 14.4 kV overhead distribution lines, and about one-half mile of 60kV overhead transmission lines. The District has approximately 5,490 poles in its service territory, making the tree trimming budget one of the largest annual operational expenses for the District.

Plan Description

The District is required by State and Federal laws and regulations to prune or remove vegetation close to energized electrical facilites for public safety and electric system reliability. The District adheres to all applicable vegetation clearance requirements and performs regular vegetation managment in accordance with State and Federal requirements, industry standards, and other procedures that help to prevent outages and fires due to tree contact.

District staff are responsible for preparing work plans for annual vegetation management operations. In addition, staff routinely performs quality control (QC) audits for ongoing work for adherance to clearance requirements and to track progress throughout the year. Circuits are

patrolled and maintained on an ongoing basis, enabling the District to cover all overhead electiric lines on a rotating five-year cycle.

While conducting routine vegetation management operations, the District removes any identified high-risk fuel source vegetation, as required. The District also performs inspections of vegetation concerns for customers or when vegetation management contractors identify at-risk vegetation while performing day-to-day operations. Staff is constently evaluating methods to improve and enhance inspection procedures and vegetation operations. Vegetation management generally consists of removing, cutting, trimming, and clearing away of trees, tree limbs, branches, bushes, vines, foliage, the removal of hazard trees, and inspection of legacy tree attachments in proximity to electrical lines, substations, and other District property within the PUE.

Vegetation removal is performed by mechanical trimming in and around transmission and distribution circuits, from the substations to the end of the each feeder circuit. An emphasis is placed on the removal of tree branches and trees that are located within clearance limits, ground-level clearing around poles, vegetation clearance within the PUE, plus the removal of hazard trees that may be located inside or outside of the PUE. The District does not perform vegetation removal operations in the following areas:

1. **Supply Service Drops**

   Supply service drops, or service wires, are defined as the overhead conductor from the District's distribution pole line to the customers' service entrance or meter base equipment. These overhead supply lines are generally energized at 240 volts. The District does not perform vegetation management operaions along customer supply service drops. Tree triming and maintaining the health of trees on private property is the customer's or property owner's responsibility. The customer or property owner shall maintain a 4 foot clearance at time of trim and a minimum 2 foot clearance from supply service drops to trees and other vegetation at all times. Upon request, and during normal business hours, the District will temporarily de-energize or remove the customer's overhead secondary service line at no charge to the customer, thereby allowing for tree trimming or maintenance work to be performed safely.

2. **Padmounted Equipment**

   In areas served by underground electric facilities, padmounted equipment, including transformers and switchgear, are placed at customer locations or select intervals along main electric lines near streets and roads. Per District code, employees must be able to access this equipment at any time for routine maintenance, troubleshooting, or emergency repairs. This equipment must be visually and phyisically accessable to District crews at all times. A clear working area must be maintained on all sides of padmounted equipment. The door side shall have a 10 foor minimum clear working area. The non-door sides shall have 3 foot minimum clear working area. Clear working area shall mean no fences, shrubs, trees, landscape rocks or other obstructions. The customer or property owner shall maintain these clear working areas for District access.

Plan Personnel

District crews consisting of licensed Journeymen Linemen perform tree trimming operations on an as-needed basis. The majority of the Plan work is performed by licensed tree contractors specializing in vegetation management operations for electric utiltities. Contracts for Vegetation Management are signed for one year, with up to three, one year extensions.The District has very strict requirements for selecting a tree contractor following the public procurement process. The contractor's field supervisor must be a certified arborist with the International Society of Arboriculture. The Contractor must employ only qualified line clearance tree trimming personnel meeting the requirements of OSHA 29 CFR 1910.269, ANSI Standard Z133.1, and California Code of Regulation Title 8 Article 38 standards and requirements. In addition, the contractor must have a category D-49 Tree Service Contractor license issued by the California Contractors State License Board and be a State of California issued Licensed Timber Operator (LTO).

Plan Operation Elements

1. General

Vegetation management operations are performed by mechanical trimming or removal of trees and other vegetation along distribution and transmission line circuits. These operations are performed in a manner which creates minimum disturbance to the surrounding natural vegetation and landscape not directly involved in the work. Ingress and egress to work areas are via existing roads, driveways, access roads, etc. The work is performed so as to cause the least possible obstruction and inconvenience to public traffic. Public vehicular and pedestrian traffic is allowed to travel through the work area with a minimum of interruption or impedance unless otherwise required for safety concerns. All traffic control and related devices conform to requirements set forth by the Town of Truckee.

2. Scheduled Maintaince Cycle

Trees and vegetation are cleared from District facilities on a scheduled maintenance cycle. The District's maintenance cycle goal is 5 years for all facilites. This means that trimming operations are performed on the same portion of a distribution or transmission line typically once every 5 years. The intent of the scheduled maintenance cycle is to perform trimming necessary to obtain clearance that will last for the duration of the cycle. Other benefits include improved access to electric facilities and reduced future maintenance costs. Facilities are worked in a systematic approach. Operations are recorded by staff on the District's Geographical Information Systems (GIS) mapping database to track maintenance cycle goals.

3. Public Utility Easement (PUE) Clearing

The District has the right of access to PUEs and other dedicated electric service easements for purposes related to vegetation management including pole clearing, tree trimming, tree removal, and easement clearing. In the event a recorded easement does not exist, easements by prescription, also called prescriptive easements under California Law, give the District the same rights as recorded easements for access to District facilities. Any tree regardless of size, that’s

located in the PUE may be removed due to present or future conflicts with electrical facilities as determined by District staff. PUE maintenance includes pole clearing, cutting and trimming of all trees and shrubs to the extent necessary to keep electric facilities clear of vegetation and to provide access for electric system operations and maintenance. Refer to Exhibits for a graphical depiction of clearance requirements and PUE clearing activities.

4. Notification of Customers and/or Property Owners

Customers and/or property owners are notified a minimum of twenty-four hours prior to any scheduled vegetation management operations adjacent to private property. The notificaion includes the type of work to be performed, including the trimming or removal of trees and the disposal of logs and/or brush. This is typically done by placing “door hangers” or using other communication methods to notify customers of impending work.

The work may also require temporary power interuptions or planned outages to be performed safely. This work shall be reviewed and authorized by the Electric Operations Manager or their designee prior to the commencment of work. The customer notification contains information such as contractor name, address, contact name, phone number, approximate time and duration of planned outage, and District contact information.

5. Types of Trimming

Natural pruning techniques are performed as recommended by the International Society of Arboriculture and ANSI Standard A300. Operations avoid practices that can cause damage or injury to the tree while achieving the required clearance objectives. Wherever possible, natural pruning cuts are made to direct future growth and sprouting away from electric facilities.

a. **Pruning:** Tree pruning is performed so as to maintain the minimum clearance requirements from electric conductors as shown in the Clearances section of this document. Dead branches overhanging conductors are removed. Portions of dead or decaying trees or portions of trees weakened by decay or disease that may contact conductors from the side or by falling are pruned to eliminate the hazard.

b. **Crown Reduction:** Trees directly under conductors are pruned and shaped. The tree crown is typically reduced and rounded into a symmetrical appearance as much as possible. Conifers are pruned in a natural manner that allows them to retain as much of their natural shape as possible.

c. **Side Prunes:** Where line clearance tree pruning adversely alters the shape of a tree, additional pruning is performed to give such trees a better shape and appearance.

6. Tree Removal

Tree removal is performed for all trees that do not meet the clearance requirement from the tree trunk to energized conductors and also for hazard trees. Hazard trees are trees with the potential to fail and threaten the reliability of the District’s overhead electric facilities. Hazard trees may be

located inside or outside of the PUE. The District will notify and obtain approval from property owners when tree removal work is outside of the PUE. Hazard trees are defined as any tree or portion of a tree that is dead, split, rotten, decayed or diseased and which may fall into or onto electric facilities or trees leaning towards lines. Tree removal includes the falling of the entire tree or crane removal. It also consists of the removal and disposal of trunks, limbs and branches. Following best forest management practices, trees are cut off at ground level to leave a stump height of no more then 3 inches to promote natural decay. The District is not responsible for the removal of stumps.

7. Pole Clearing

The pole clearing program is an annual requirement to clear vegetation around poles that contain electric apparatus in addition to wires in compliance with California Public Resources Code Section 4292. This Code applies to a majority of District poles. The District will notify and obtain approval from property owners when vegetation removal work is outside of the PUE.

In addition, ground level vegetation clearance and removal is performed to provide the required firebreaks and to minimize new spring growth which are essential steps in reducing impacts to the electrical distribution system due to wildland fires. Refer to Exhibits for a graphical depiction of clearance requirements and PUE clearing activities.

8. Tree Attachments (Legacy Attachments)

The District has legacy attachments to trees that consist of: service drop(s); secondary conductor(s); or, security lighting. Although these installations are permitted pursuant to California Code 14CCR § 1257, the District does not engage in this practice for new installations.

In order to ensure the integrity of these attachments, the District performs the following:

- Inspect legacy tree attachments and correct any hazardous condition found such as tree growth around conductors, physical signs of damage, etc;
- Remove tree limbs on trees used as an attachment point(s) consistent with 14CCR § 1257;
- Accurately record attachment point(s) on GIS mapping database for audit purposes.

9. Control of Material and Clean Up

Tree branches and other vegetation less than 5 inches in diameter are chipped and removed from the work area. Wood larger than 5 inches in diameter is cut into lengths for safe lifting purposes. Wood larger than 5 inches in diameter is made available to District customers before removal by the contractor. Customers on whose property a tree or trees have been removed or who are adjacent to such work will have the first opportunity to use the wood collected from such trees before removal by the contractor. The work is performed in an environmentally responsible manner with regards to any and all material generated by the work.

The District may store timber logs temporaraly at the work site while efforts are made to arrange for removal and transport to the mill or final storage facility. Upon completion of the work, the area is cleaned to a condition at least equal to that which existed prior to the commencement of the work. During winter storm restorations, these logs may be left for an extended period of time due to heavy snow fall making them inaccesable to load after power restoration efforts are complete. In these situations the District or its contractors will do their best to minimize impacts to customers by stacking material off of the roadyway or other accessible public walkways.

Clearance Requirements

The following table reflects the District's current minimum clearances required between conductors and vegetation:

Clearance of Conductors to Vegetation

Type of Conductor	Voltage	Trimmed Clearance	Minimum Clearance
Secondary Supply Conductors	0 to 750v	**4 ft.**	**2 ft.**
Primary Supply Conductors	750v to 22,500v	**12 ft.** (1, 3)	**4 ft.** (2,3,4&5)
Primary Supply Conductors	22.5kV to 72.5kV	**12 ft.** (1, 3)	**4 ft.** (2,3& 4)

Notes:

1. GO 95 Appendix E, Guidelines to Rule 35, Case 14, High Fire Threats

2. GO 95 Rule 35, Vegetation Management; Table 1, Case 14, High Fire Threats

3. CPUC Fire Threat Map: The CPUC has identified the District's service territory as a Tier 2 High Fire Threat District (HFTD), with the Tahoe Donner Subdivision identified as a Tier 3, HFTD. Therefore, greater clearance requirements apply as compared to being in a non-fire threat area.

4. California PRC Section 4293

5. The minimum clearance may be reduced to 6 inches for tree trunks and major limbs *"of sufficient strength and rigidity to prevent the trunk or limb from encroaching upon the 6 inch minimum clearance under reasonable foreseeable wind and weather conditions"*; GO 95 Rule 35, Tree Trimming, Exception No. 4.

Regulatory Requirements
The District performs vegetation managment in accordance with State and Federal requirements. In addition, the District follows industry standards, and other procedures that help to prevent outages and fires due to tree contact. These requirements, standards, and procedures include:

- **California General Order No. 95, Rule 35 – Vegetation Management**
  This rule specifies the minimum radial clearance that must be maintained at all times from energized conductors to vegetation.

- **California General Order No. 95, Appendix E – Guidelines to Rule 35**
  This rule specifies the minimum radial clearance that must be maintained from energized conductors to vegetation at time of trimming.

- **California General Order No. 95, Rule 21.2 D – High Fire Threat District**
  This rule specifies the use of California Public Utility Commission (CPUC) Fire Threat Map to identify fire threat level zones.

- **California General Order No. 95 Rule 35, Vegetation Management; Table 1, Case 13, Radial Clearance requirments**
  Radial clearance of bare line conductors from tree branches or foliage.

- **California General Order No. 95 Rule 35, Vegetation Management; Table 1, Case 14, High Fire Threats**
  Radial clearance of bare line conductors from vegetation in Extreme and Very High Fire Threat Zones.

- **California Public Utility Commission (CPUC) Fire Threat Map**
  This is the CPUC's statewide Fire Threat Map identifing areas of the state at an elevated (Tier 2) or extreme (Tier 3) risk of power line ignitied wildfire.

- **California Public Resources Code Section 4292**
  This law is administered by the California Department of Forestry and Fire Protection (CALFIRE). The law requires the maintenance of a 10 foot radial firebreak around electric utility poles that contain switches, fuses, transformers, or other electric equipment.

- **California Public Resources Code Section 4293**
  This law is administered by CALFIRE. The law specifies the minimum clearance between energized conductors and vegetation. It also requires the removal of dead, deseased, or dying trees, or trees that could fall into electric lines. Such trees may be located inside or outside of the right-of-way or easement areas.

- **California Administrative Code, Title 8, Article 37 - Proximity to Overhead Lines**
  This code specifies minimum clearances between personnel and equipment working in close proximity to overhear electric facilities.

- **California Administrative Code, Title 8, Article 38 - Line Clearance Tree Trimming Operations**
  This code specifies requirements for personnel performing line clearance tree trimming operations.

- **California General Order No. 165 – Inspection Requirements for Electric Distribution and Transmission Facilities**
  This rule specifies the minimum cycle times for inspection of electric distribution and transmission lines.

- **ANSI A300.1 – Tree Care Operations - Pruning**
  This national standard addresses pruning practices for tree trimming operations.

- **ANSI Z133 - Standard for Safety Requirements in Arboricultural Operations**
  This national standard addresses arboriculture safety requirements for pruning, repairing, maintaining and removing trees, and for using equipment in such operations.

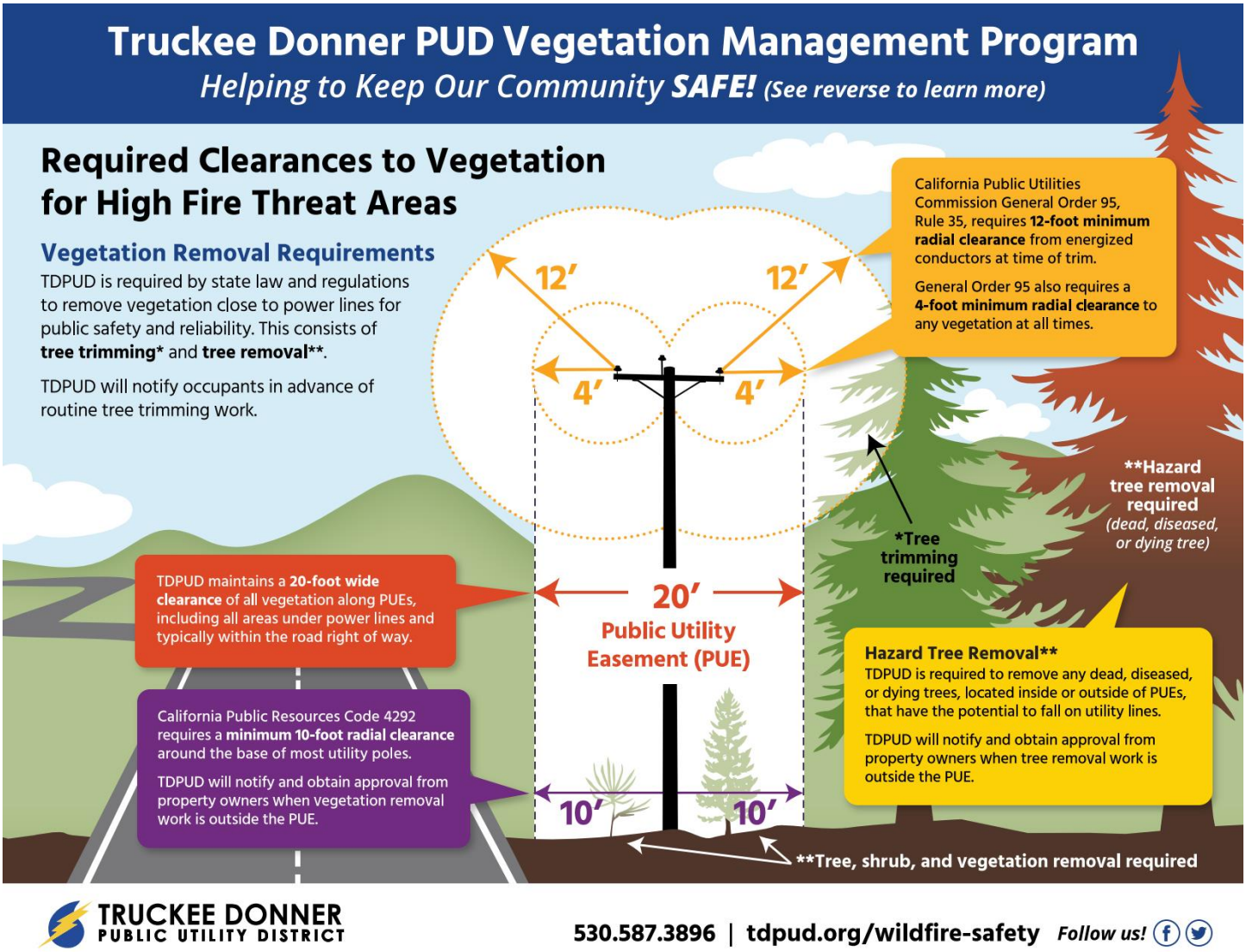
- **OSHA 29 CFR 1910.269 - Electric Power Generation, Transmission, and Distribution**
  This federal standard specifies requirements for worker safety in the electric power industry.

- **ISA Best Management Practices – Vegetation Managment**
  The International Society of Arboriculture (ISA) developed this BMP for the selection and application of methods and techniques for vegetation control for electric rights-of-way.

- **District and other standards as referenced in this document**.

Exhibits

Vegetation Management Handouts



ARE YOU PREPARED FOR *wildfire* SEASON?

Ongoing Vegetation Management Work

Truckee Donner PUD's dedicated staff and contractors are busy conducting vegetation management including, tree trimming and removal of hazard trees around power lines, and maintaining defensible space on properties owned by TDPUD.

Please do your part to protect your home or business and our community. Visit **tdpud.org/wildfire-safety** for information and links to resources.

Sign up for emergency alerts and notifications

Does TDPUD have your updated customer contact information? Do you want to be notified during **wildfire safety outages (PSOM)** and **emergency situations?** TDPUD customers can customize email and text notifications, as well as push alerts by visiting **tdpud.org** and clicking on the **My Account** button.

TDPUD has partnered with Nixle to provide targeted alerts to TDPUD customers, community members, and the public. Everyone can sign up for TDPUD Nixle emergency alerts by **texting TDPUD** to **333111.**

Are you prepared for power outages?

TDPUD has taken steps to make our electrical system more safe during wildfire season, but the result is more and longer outages.

Go to **tdpud.org/wildfire-safety** to learn more.

TRUCKEE DONNER PUBLIC UTILITY DISTRICT | 530.587.3896 tdpud.org/wildfire-safety *Follow us!*