TRUCKEE DONNER PUBLIC UTILITY DISTRICT
WILDFIRE MITIGATION PLAN
2021 INFORMATIONAL RESPONSE

RESPONSES TO WILDFIRE SAFETY ADVISORY BOARD'S 2021 GUIDANCE ADVISORY OPINION

June 25, 2021

I. PURPOSE OF THIS 2021 INFORMATIONAL RESPONSE

The California Wildfire Safety Advisory Board (WSAB) issued the *Guidance Advisory Opinion for the 2021 Wildfire Mitigation Plans of Electric Publicly Owned Utilities and Cooperatives* ("2021 WSAB Guidance Advisory Opinion") on December 15, 2020. Truckee Donner Public Utility District (TDPUD) provides this document to the WSAB in order to respond to each of the recommendations included in the 2021 WSAB Guidance Advisory Opinion. TDPUD will provide a narrative response and/or a cross reference to the location in TDPUD's Wildfire Mitigation Plan (WMP) where the topic is addressed. Where the recommendation is not applicable to TDPUD, the response will provide a brief description supporting this conclusion.

II. CONTEXT SETTING INFORMATION

WSAB requested that POUs provide an informational table to assist the Staff and Board member in understanding the unique characteristics of each POU.

Table 1: Context-Setting Information

Utility Name	**Truckee Donner Public Utility District**	
Service Territory Size	45.5 square miles	
Owned Assets	☐ Transmission ☐ Distribution ☐ Generation	
Number of Customers Served	14,360 customer accounts	
Population Within Service Territory	17,131 people	
Customer Class Makeup	*Number of Accounts*	*Share of Total Load (MWh)*
	88.65% Residential; 2.07% Government; -% Agricultural; 9.23% Small/Medium Business; .05% Commercial/Industrial	59.96% Residential; 16.64% Government; -% Agricultural; 20.11% Small/Medium Business; 3.29% Commercial/Industrial
Service Territory Location/Topography[1]	.039% Agriculture 2.641% Barren/Other 54.95% Conifer Forest -% Conifer Woodland -% Desert .75% Hardwood Forest -% Hardwood Woodland	

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

	2.99% Herbaceous 26.92% Shrub 7.66% Urban 4.11% Water
Service Territory Wildland Urban Interface[2] (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 Tier 2: 55.07% Tier 3: 27.15%
Prevailing Wind Directions & Speeds by Season	☐ Includes maps 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 weather and wind events occurs 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 fall are the reason TDPUD builds to a heavy loading standard and 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:* NA
	Explanatory Note 3 – *Additional Relevant Context:* [e.g., percentage of lines located outside service territory] NA
Percent of Owned Lines in CPUC High Fire Threat Districts	*Overhead Distribution Lines as % of Total Distribution System (Inside and Outside Service Territory)*
	Tier 2: 23.02% Tier 3: 40.59%
	Overhead Transmission Lines as % of Total Transmission System (Inside and Outside Service Territory)
	Tier 2: .21%

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

	Tier 3: -%
	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
Has developed protocols to pre-emptively shut off electricity in response to elevated wildfire risks?	☐ Yes ☐ No
Has previously pre-emptively shut off electricity in response to elevated wildfire risk?	☐ Yes ☐ No If yes, then provide the following data for calendar year 2020: *Number of shut-off events*: NA *Customer Accounts that lost service for >10 minutes:* NA *For prior response, average duration before service restored:* NA

III. CROSS REFERENCE TO STATUTORY REQUIREMENTS

WSAB requested that POUs provide a clear roadmap as to where each statutory requirement is addressed within the POU WMP.

Table 2: Cross References to Statutory Requirements

Requirement	Statutory Language	Location in WMP
Persons Responsible	**PUC § 8387(b)(2)(A):** An accounting of the **responsibilities of persons** responsible for executing the plan.	Section III.A Page 7-8
Objectives of the Plan	**PUC § 8387(b)(2)(B):** The **objectives** of the wildfire mitigation plan.	Section II Page: 6-7
Preventive Strategies	**PUC § 8387(b)(2)(C):** A description of the **preventive strategies and programs to be adopted by the local publicly owned electric utility** or electrical cooperative to minimize the risk of its electrical lines and equipment causing catastrophic wildfires, including consideration of dynamic climate change risks.	Section IV & V Page 11-12 &12-21
Evaluation Metrics	**PUC § 8387(b)(2)(D):** A description of the **metrics the local publicly owned electric utility or electrical cooperative plans**	Section VIII Page 23-25

	to use to evaluate the wildfire mitigation plan's performance and the assumptions that underlie the use of those metrics.	
Impact of Metrics	**PUC § 8387(b)(2)(E):** A discussion of how the **application of previously identified metrics** to previous wildfire mitigation plan performances has informed the wildfire mitigation plan.	Section VIII Page 23-25
Deenergization Protocols	**PUC § 8387(b)(2)(F): Protocols for disabling reclosers and deenergizing portions of the electrical distribution system** that consider the associated impacts on public safety, as well as protocols related to mitigating the public safety impacts of those protocols, including impacts on critical first responders and on health and communication infrastructure.	Section V.L-M Page 18-19
Customer Notification Procedures	**PUC § 8387(b)(2)(G):** Appropriate and feasible **procedures for notifying a customer** who may be impacted by the deenergizing of electrical lines. The procedures shall consider the need to notify, as a priority, critical first responders, health care facilities, and operators of telecommunications infrastructure.	Section III.B-D & VI Page 8-11 & 21-22
Vegetation Management	**PUC § 8387(b)(2)(H):** Plans for vegetation management.	Section V.G Page 15
Inspections	**PUC § 8387(b)(2)(I): Plans for inspections** of the local publicly owned electric utility's or electrical cooperative's electrical infrastructure.	Section V.H Page 16
Prioritization of Wildfire Risks	**PUC § 8387(b)(2)(J):** A list that **identifies, describes, and prioritizes all wildfire risks, and drivers for those risks, throughout the local publicly owned electric utility's or electrical cooperative's service territory**. The list shall include, but not be limited to, both of the following: **(i)** Risks and risk drivers associated with design, construction, operation, and maintenance of the local publicly owned electric utility's or electrical cooperative's equipment and facilities. **(ii)** Particular risks and **risk drivers** associated with topographic and climatological risk factors throughout the different parts of the local publicly owned electric utility's or electrical cooperative's service territory.	Section IV.A-B Page 11-12
CPUC Fire Threat Map Adjustments	**PUC § 8387(b)(2)(K):** Identification of any **geographic area in the local publicly owned electric utility's or electrical cooperative's service territory** that is a higher wildfire threat than is identified in a commission fire threat map, and identification of where the commission should expand a high fire threat district based on new information or changes to the environment.	Section IV.C & V.A Page 12
Enterprisewide Risks	**PUC § 8387(b)(2)(L):** A methodology for identifying and presenting **enterprisewide** safety risk and wildfire-related risk.	Section IV.B Page 12

Restoration of Service	**PUC § 8387(b)(2)(M):** A statement of how the local publicly owned electric utility or electrical cooperative will **restore service after a wildfire**.	Section III.D & VII Page 9-11 & 23
Monitor and Audit	**PUC § 8387(b)(2)(N):** A description of the processes and procedures the local publicly owned electric utility or electrical cooperative shall use to do all of the following (i) **Monitor and audit** the implementation of the wildfire mitigation plan. (ii) **Identify any deficiencies** in the wildfire mitigation plan or its implementation, and correct those deficiencies. (iii) Monitor and audit the effectiveness of electrical line and equipment inspections, including inspections performed by contractors that are carried out under the plan, other applicable statutes, or commission rules.	Section (i) VIII.C (ii) II.C & VIII.C-D (iii) VIII.E Page (i) 24 (ii) 7 & 24-25 (iii) 25
Qualified Independent Evaluator	**PUC § 8387(c):** The local publicly owned electric utility or electrical cooperative shall contract with a qualified independent evaluator with experience in assessing the safe operation of electrical infrastructure to review and assess the comprehensiveness of its wildfire mitigation plan. The independent evaluator shall issue a report that shall be made available on the Internet Web site of the local publicly owned electric utility or electrical cooperative, and shall present the report at a public meeting of the local publicly owned electric utility's or electrical cooperative's governing board.	Section IX Page 25-26

IV. WSAB GUIDANCE ADVISORY OPINION RECOMMENDATIONS

The WSAB Guidance Advisory Opinion identifies 14 specific recommendations that POUs are requested to address in their 2021 WMPs. As specified in Public Utilities Code § 8387(b)(1), each POU is required to perform a comprehensive revision to the POU's WMP at least once every three years. Pursuant to this guidance, the POUs will be updating their WMPs based on the direction of their local governing boards within this 3-year cycle. Because the WSAB's recommendations have been provided after the initial WMP submission, the POUs will have varying capacities to fully address each recommendation in their 2021 WMP. This Section IV restates each of the WSAB recommendations and provides an opportunity for each POU to do one or more of the following: (1) provide a narrative response to the recommendation; (2) provide a cross reference to where in the POU's WMP this topic is addressed; (3) describe why the recommendation is not applicable to the POU; or (4) inform the WSAB of the POU's intent

to address the recommendation at the point of the POU's next comprehensive revision, occurring in either the 2022 or 2023 WMP.

A. Plan Structure

WSAB Recommendation #1: Provide context-setting information about the POU and provide a simple guide to where the statutory requirements are addressed within the WMP.

POU Response: See Sections II and III above.

WSAB Recommendation #2: Provide a short description of the POU's public review and approval (if required) for the WMP. This description may also include a brief explanation of the funding mechanisms for wildfire mitigation efforts.

TDPUD Response: The adoption of the original WMP in 2019 along with the updates in 2020 and 2021 have gone through a thorough process. Staff presented two workshops to the TDPUD Board in March and June, 2019, followed by Board adoption of the TDPUD's initial 2019 WMP in July of the same year. In October 2019, the TDPUD Board awarded a contract for third party auditor services to review and comment on the WMP and their findings were presented to the TDPUD Board during a public meeting for consideration in December of 2019. The third party auditor confirmed TPDUD's plan complies with the intent of SB 901 and their recommendations were considered in the updated 2020 WMP which was approved by the Board in May of 2020 and sent to the California Wildfire Safety Advisory Board (WSAB) by July 1, of 2020. Staff again presented an updated WMP to the TDPUD Board for adoption on June 2, 2021 and sent to the WASP by July 1, 2021.

Funding for the increase in costs associated with vegetation management and compliance with SB 901 and other requirements are funding from customer rates. TDPUD's vegetation management budget alone has grown from ~$350,000 in 2018 to $1,500,000 in 2021 plus the costs to prepare the WMP's, the consultant cost for the third party auditor, plus responding to other data requests.

WSAB Recommendation #3: Identify where the POU has posted the most recent Independent Evaluator (IE) Report and if your POU plans to enhance future IE reports, please summarize in what ways.

TDPUD Response: The TDPUD 2021 WMP along with the most recent Independent Evaluator (IE) Report are posted on the TDPUD website at the following link (www.tdpud.org/wildfire--safety).

TDPUD's WMP is a living document and is reviewed annually with a comprehensive review/update every three years. As a small utility, TDPUD collaborates within the electric utility industry and, specifically, with sister Public Owned Utilities (POUs) to share best practices by actively participating in the California Municipal Utilities Association's Wildfire Preparedness, Response, and Recovery Working Group and the Northern California Power Agency's (NCPA) working groups. TDPUD will bring in additional outside expertise and resources as needed and plans to enhance the IE report during the three year update.

WSAB Recommendation #4: Develop, in collaboration with POU industry associations, WMP guidelines for future WMPs, and understanding that it may take multiple cycles for POUs to integrate these recommendations into the WMPs.

TDPUD Response: This document is intended to include, as appropriate, responses to the recommendations in the WSAB's Guidance Advisory Opinion for the POUs' 2021 WMP. This document also represents the combined effort of the POU industry associations to further the development of a template to respond to the WSAB's Guidance Advisory Opinion in a future reporting WMP cycle.

B. Customer Impacts

WSAB Recommendation #5: Describe the potential impact investor-owned utilities (IOU) public safety power shutoff (PSPS) events could have on POU customers and how the POU manages these impacts. For POUs that are also balancing authorities, describe the criteria for wildfire related de-energizations. Responses shall only provide aggregated information that does not provide customer-specific information or other potentially sensitive data.

TDPUD Response: TDPUD customers are unlikely to be directly impacted by an IOU PSPS event because TDPUD is not connected to an IOU in California nor are we connected to the CAISO or another balancing authority in California. TDPUD is transmission dependent on NV Energy. However, customers outside of TDPUD's service territory in California are served by IOU's and have experienced multiple PSPS events creating collateral impacts and increased fire danger as many people come to Truckee to escape the PSPS event and utilize TDPUD's electric services.

TDPUD's customer have been unlikely to be directly impacted by any PSPS-type event since NV Energy did not have a similar program for de-energizing transmission to Truckee during extreme wildfire danger. However, NV Energy in May of 2021, informed TDPUD that they were expanding of their Public Safety Outage Management (PSOM) wildfire de-energization program to include all transmission lines feeding TDPUD. As of

the time of the writing of this response, NV Energy's expanded PSOM program was before the Nevada Public Utility Commission but is expected to be approved and implemented this wildfire season.

TDPUD staff have held extensive meetings with NV Energy, along with emergency response leaders from Town of Truckee, Nevada County, and Placer County, to understand the impacts of NV Energy's PSOM program for Truckee and to ensure timely and accurate communications between the utilities and impacted parties. While we have no direct experience with a PSOM to date, NV Energy's engagement and communication with TDPUD and out community has been solid.

The following provides responses to specific questions included in the WSAB's 2021 WSAB Guidance Advisory Opinion:

- What is the relationship between the IOU and the POU during PSPS events?

  TDPUD Response: As stated above, TDPUD has not yet experienced an NV Energy PSOM event. We hope that our strong relationship and communication with NV Energy will lead to productive interactions during a PSO*M.*

Does the POU receive advance notification?

TDPUD Response: TDPUD is working with NV Energy to receive a series of advance notification at 72 hours minimum plus standing daily meetings starting within 48 hours of the event. NV Energy has also committed to provide TDPUD with an 'all-clear' when the PSOM conditions no longer exist along with advance warning when NV Energy starts to patrol their transmission lines that feed TDPUD and when they re-energize.

- Is the POU affected at the transmission or distribution level?

  TDPUD Response: TDPUD is only affected at the distribution level. TDPUD is 100% transmission dependent on NV Energy.

- Is the POU implementing a mitigation strategy for IOU PSPS?

  TDPUD Response: Yes. As stated above, TDPUD has had extensive meetings with NV Energy and local emergency responders to fully understand and begin to mitigate the significant known impacts of NV Energy's PSOM. This was followed up by a series of meetings with over 20 local agencies and critical infrastructure providers to raise awareness, educate, establish communications protocols, and begin to mitigate known impacts. This larger Local Truckee Public Safety Provider (LTPSP) group includes local government, schools, hospitals, airport, telecommunication providers, utilities, emergency response, large HOA's, and business groups.

- Does the POU have its own permanent or temporary generation, (or customer provision of same) allowing it to withstand an IOU PSPS?

TDPUD Response: TDPUD is a small POU with only 70 employees serving approximately 14,500 electric and water customers. We do not generate power locally and rely on generators which we have installed at critical electric and water operational facilities to facilitate restoration and attempt to provide water for as long as possible during an extended outage such as a NV Energy PSOM. TDPUD has a limited number of portable generators used for operations. Based on recent experiences with system-wide outages, TDPUD's community will struggle to withstand a NV Energy PSOM; this is particularly true of our local telecommunications providers who have inadequate or no emergency back-up and our community quickly loses internet, followed by basic telecommunications during power outages. This could be particularly devastating during an actual wildfire evacuation.

- Does the POU distribute back-up generators to customers?

TDPUD Response: No. TDPUD is not legally required to provide, and does not have the resources or capacity to provide, back-up generation to customers. TPDUD is collaborating with Town of Truckee, Nevada County, and other local public agencies to help identify their deficiencies and assist in locating resources and funding to further their efforts to acquire back-up generation resources.

- Does the POU de-energize their own lines when a wildfire threat looms, even if it is not labelled a PSPS?

TDPUD Response: As documented in the TDPUD WMP, TDPUD does not have a formal PSPS-type program as the dangers of de-energizing during extreme wildfire danger – primarily loss of communications and eventual loss of fire flows during an actual wildfire – far outweigh the risks of TDPUD's electric equipment starting a catastrophic wildfire. It is important to note that due to TDPUD's location, between 6,000-8,000 feet elevation in the high sierra, requires that our overhead distribution system be designed and constructed to a Heavy Loading standard and built to withstand winter blizzards, snow, and ice. These conditions are far worse than the conditions during Red Flag or other wildfire conditions.

It should be noted, however, that TDPUD's Electric Utility Director has the authority and obligation to de-energize immediately if they determine that a situation is unsafe.

- Is the POU a Balancing Authority Area? If yes, describe any applicable criteria for wildfire related de-energization.

TDPUD Response: TDPUD is not a Balancing Authority and is transmission dependent on NV Energy.

WSAB Recommendation #6: Describe the utility customer communication plans with respect to wildfires and PSPS, and in particular describe the methods, content and timing used to communicate with the most vulnerable customers, such as Access and Functional Needs (AFN) customers, medical baseline customers, non-English speakers, and those at risk of losing water or telecommunications service.

TDPUD Response: TDPUD, as part of routine and emergency customer communications, has a customer engagement portal 'My Account' called SmartHub which is used to send e-mails, texts, and push alerts. TDPUD's website (www.tdpud.org) is a central hub for information and action. Overall communications and outreach, including to at-risk communities and non-English speakers, leverages traditional media (press releases, bill stuffers, print advertising, etc.), social media (Facebook, Twitter, and Instagram), local media, local radio, and local communications networks. TDPUD also collaborates with local partners (Town of Truckee, Nevada County, Placer County, Truckee Fire, Schools, Hospital), and local groups (Sierra Community House/Family Resource Center, HOA's, and business groups). TDPUD's website has translation capabilities and TDPUD translates into Spanish (our primary non-English audience) key communications and outreach materials.

TDPUD has conducted robust communications and outreach over the last few years on our dramatic increase in vegetation management, wildfire mitigation efforts including the WMP adoptions, and overall wildfire safety-preparedness. Since being informed by NV Energy in May of 2021 of their proposed wildfire de-energization program (PSOM), TDPUD has been working closely with NV Energy, local emergency managers, and Local Truckee Public Safety Partner (LTPSP) to develop communication plans/protocols before, during, and after a PSOM outage. This includes a commitment to communicate with customers and LTPSP partners, at a minimum, at 48 to 24 hours and 12 to 4 hours before a scheduled PSOM and when TDPUD begins visual patrol to restore power to our entire distribution system. TDPUD is working with the Town of Truckee, Nevada County, and Placer County to communicate and address the needs of our most vulnerable customers.

TDPUD has a database of medical baseline customers and is ensuring that contact information is up to date. These customers will be notified of a potential PSOM within 48-24 hours and 12-4 hours as part of TDPUD's communications protocols. TDPUD is working directly with Tahoe Forest Hospital District and Town of Truckee emergency

management to try and further identify these vulnerable populations and collaborate on ways to serve their needs during this emergency situation. Community Resource Centers (CRC')s will be available for the charging of typical medical devices.

C. The Grid

WSAB Recommendation #7: Provide details on each POU's system hardening and grid design programs, including: (1) the goals of the programs and the risk any particular program is designed to mitigate; (2) approach to PSPS mitigation and prevention; and (3) identify any resource shortages.

TDPUD's Response: TDPUD's approach to grid hardening, including the goals/risks of the program, rationale for not having a PSPS-type program, and discussion of resource shortages is discussed in TDPUD's WMP section V, pages 12-21.

The following provides responses to specific questions included in the WSAB's 2021 WSAB Guidance Advisory Opinion:

- Does the POU perform a circuit-by-circuit analysis to identify essential facilities (and whether they have backup power) like hospitals, communication centers, and community resource centers?

TDPUD Response: TDPUD has analyzed our circuits to identify essential facilities for emergency response and public safety and is developing a list of who has backup power and for how long. Given NV Energy's recent announcement of their new PSOM wildfire de-energization, program impacting Truckee, completing and enhancing this analysis is ever more critical.

- Does the POU assess system hardening measures that could be installed to prevent PSPS for those facilities?

TDPUD Response: TDPUD does not have a PSPS-type program and NV Energy's PSOM, over which we have no control, will create and outage impacting all of TPDUD's service territory.

- In what way does the POU prepare these facilities for a PSPS or another wildfire related de-energization event?

TDPUD Response: TDPUD is implementing a Wildfire Mitigation Plan which includes system hardening. TDPUD works close with key emergency response and critical facilities to ensure that they understand the magnitude of NV Energy's PSOM program/outages and that they take the steps to be prepared and mitigate where needed.

- For POUs that power water utilities or supply water themselves, if that water is used for drinking and firefighting, are certain projects being undertaken to harden the system for water delivery purposes?

  TDPUD Response: TDPUD operates a water utility that provides both potable and non-potable water used for firefighting. TDPUD's water utility is taking steps to harden the system for water delivery purposes; mostly by installing back-up generators in additional key facilities. It should be noted that loss of fire flows during a PSOM/PSPS event is a major concern for TDPUD and our community should a wildfire start during a power outage.

- Are pump stations self-contained or have some level of fire protection? Is the supply to sewage treatment plants hardened?

  TDPUD Response: Key facilities have some level of fire protection and the transference of sewage and the sewage treatment plan are operated by Truckee Sanitary District and Truckee Tahoe Sanitation Agency respectively. Both have backup generators at key facilities.

- Is supplemental generation available such as backup batteries or backup power facilities?

  TDPUD Response: TDPUD does not generator power locally and has backup generators at key facilities and is expanding the number as funds become available. TDPUD has a limited number of portable generators used for operations. Many local agencies/critical facilities also have backup generators with varying capacity and on-site fuel storage.

- Are the majority installed by the customers themselves or the utility?

  TDPUD Response: Installed by customers

- Can the utility open and close taps? Can the utility back-feed?

  TDPUD Response: Yes, manually and with some limitations.

- Are there wildfire related circumstances wherein either of these tactics would be useful?

  TDPUD Response: In the event of a NV PSOM outage, TDPUD's entire service territory would be out of power.

- Can the utility sectionalize in a localized fashion?

  TDPUD Response: Yes, TDPUD has extensive field switching capability to feed load from many circuits and substations. We are also minimizing the impacts of placing our automatic reclosers to 'one shot' during wildfire danger.

WSAB Recommendation #8: Describe annual visual patrols on potentially impacted circuits and the risks the POU is inspecting for. Describe whether and how system inspections lead to

system improvements. Describe line patrols before, during, and/or after a critical fire weather event, such as a Red Flag Warning with strong winds, or following a fire that burned in areas where electric facilities are or could have been impacted.

> ***TDPUD Response:*** TDPUD's Wildfire Mitigation Plan and attached Vegetation Management Plan provide detailed information on annual visual patrols and other wildfire safety efforts.

WSAB Recommendation #9: Describe options considered by POU (including through the joint efforts of the POU associations) to identify previously unidentified risks that could lead to catastrophic wildfires.

> ***TDPUD Response:***
>
> The California Municipal Utilities Association (CMUA) will be holding a special meeting of its Wildfire Preparedness, Response, and Recovery Working Group, of which TDPUD is an active member, this fall. The meeting will be focused on risk drivers for power-line caused catastrophic wildfires and innovative mitigation options. CMUA plans to invite a broad range of utility staff, state agency staff (including the WSAB), industry experts, and academics to participate in this discussion. As part of this meeting, the working group will discuss unidentified wildfire risk drivers and mitigation measures that could address these risks. Based on the input provided during this meeting, CMUA will produce a publicly-available, post-meeting report that summarizes the group's conclusions and recommendations. TDPUD's staff will participate in CMUA's meeting and will discuss any changes that TDPUD has made to its operations in response to the conclusions and recommendations of the working group in a future WMP.

D. Risk Assessment

WSAB Recommendation #10: Describe the particular wildfire risks associated with system design and construction such as topography and location near the HFTD areas of another utility's service territory. Describe any G.O. 95 exempt assets and possible updates to G.O. 95 that could facilitate more resilient utility transmission and distribution assets.

> ***TDPUD Response:*** TDPUD's assessment of wildfire risks is discussed in Section's IV and V on pages 11-21 of TDPUD's WMP. TDPUD constructs our overhead electric facilities to a Heavy Loading District standard needed to withstand the high sierra severe winter storms. TDPUD designs and constructs its electric facilities to meet or exceed the relevant federal, state, or industry standards. TDPUD treats CPUC General Order (GO) 95 as a key industry standard for design and construction standards for overhead

electric facilities and, as such, meets or exceeds all applicable standards in GO95. Additionally, TDPUD monitors and follows as appropriate the National Electric Safety Code. The following provides responses to specific questions included in the WSAB's 2021 WSAB Guidance Advisory Opinion:

- Are there design or construction issues related to the utility's specific topography or geographic location that the Board should be aware of?

  TDPDU Response: TDPUD's service territory is located in the high Sierra Nevada range between 6,000-8,000 feet elevation. The area experiences severe winter storms with snow, ice, and wind. Many feet of snow and 100+ MPH winds are not uncommon in the winter and TDPUD's electric system is designed to withstand these conditions (Heavy Loading District Standard). The area has large pine forest which can also withstand very harsh conditions and which fall and impact TDPUD's overhead electric system almost entirely during winter blizzards due to wind, snow, and ice and late fall atmospheric rivers (very high winds combined with 4-6 inches of rain). While conditions can be dangerous during extreme wildfire danger, they rarely approach those seen in winter or during an atmospheric river. As a result, TDPUD's system is less likely to be the cause of a wildfire than others.

  TDPUD's service territory is also relatively small (~44 square miles, roughly 4 miles wide and 10 miles long) and we are surrounded by PG&E to the west and Liberty Utilities on the south, east, and north with NV Energy providing transmission services to TDPUD and Liberty Utilities and distribution services 20 miles away in the State of Nevada. The Truckee-Tahoe region has many counties, cities, local agencies, and State and Federal agencies active and involved. TDPUD works closely with our local partners to leverage resources, share communications, and support our mutual stakeholders.

- How will the utility address risks associated with facilities requiring power that abut a Tier 2 or Tier 3 HFTD?

  TDPUD Response: Again, TDPUD's service territory is relatively small (~44 square miles, roughly 4 miles wide and 10 miles long) and, due to the fact that NV Energy's PSOM outage will result TDPUD's entire service territory being down, TDPUD is evaluating all facilities in our service territory working closely with Town of Truckee, Nevada County, and Placer County emergency manager and the robust group of Local Truckee Public Safety Providers that TDPUD has convened.

  TDPUD has required, for over 25 years, that all new development be constructed with underground electric facilities. TDPUD also works closely with local agencies, stakeholders and the community to ensure that everyone is prepared for power outages and wildfires.

- How does the utility assess its risks associated with system design and construction?

TDPUD Response: This item is covered in Section IV on pages 11-12 of the WMP. TDPUD is systematically replacing older equipment designs with more safe technologies where feasible/available and new construction is done to the current standards as documented in the TDPUD WMP and other plans and documents.

- What design and construction standards has the POU implemented that go beyond G.O. 95 or other General Order standards related to design and construction?

TDPUD Response: As stated previously, due to TDPUD's location in the high Sierra Nevada mountains, the overhead electric system is constructed to a Heavy Loading District standard.

E. SITUATIONAL AWARENESS TECHNOLOGY

WSAB Recommendation #11: Provide context-setting information about the prevailing wind directions and speeds, differentiated by season, along with average weather conditions by season. Describe how and why situational awareness technology is installed, and where on the system. Describe the decision-making process regarding the installation of situational awareness technology, including constraints such as budgets, availability of equipment, knowledge to effectively deploy, or qualified personnel to install and monitor effectively. Identify any other agencies, utilities, or fire professionals that the data from these devices is shared with.

TDPUD Response: TDPUD's service territory is located in the high Sierra Nevada range between 6,000-8,000 feet elevation. The area experiences severe winter storms with snow, ice, and wind. Many feet of snow and 100+ MPH winds are not uncommon in the winter and TDPUD's electric system is designed to withstand these conditions (Heavy Loading District Standard). The area has large pine forest which can also withstand very harsh conditions and which fall and impact TDPUD's overhead electric system almost entirely during winter blizzards due to wind, snow, and ice and late fall atmospheric rivers (very high winds combined with 4-6 inches of rain). Prevailing winds tend to be West-Southwest during the major storms. During wildfire season, the dominant threat to start catastrophic wildfires is lightening or humans. It is rare to see winds above 40-60 MPH during fire season.

TDPUD's service territory is also relatively small (~44 square miles, roughly 4 miles wide and 10 miles long) and we have approximately 70 employees who serve 14,500 electric and water customers. TDPUD is surrounded by PG&E to the west and Liberty Utilities on the south, east, and north with NV Energy - providing transmission services to TDPUD and Liberty Utilities - and distribution services 20 miles away in the State of Nevada. Each of these three utilities has extensive situational awareness technology and we are

in direct contract with them before, during, and after extreme wildfire danger events. Given that NV Energy's PSOM program covers TDPUD service territory, we have no choice but to rely on their situational analysis during a PSOM event.

It is important to note that, while we leverage existing situational awareness technology in our region, TDPUD does track and monitor local weather. In addition to using NOAA and other local weather sources and alerts, TDPUD is provided direct briefings – through the Town of Truckee Emergency Manager – from the Reno NOAA regional office during elevated wildfire danger. TDPUD also works closely with Truckee Fire Protection District, Nevada County, Placer County and other local agencies. Finally, Truckee has supported and has access to the live feeds of AlertWildfire.Org to install a network of fire cameras in our region by facilitation installation on our utility sites where needed (http://www.alertwildfire.org/tahoe/?camera=Axis-TahoeDonner).

F. VEGETATION MANAGEMENT

WSAB Recommendation #12: Describe treatment plans for all types of vegetation associated with utility infrastructure, from the ground to the sky, which includes vegetation above and below electrical lines.

TDPUD's Response: TDPUD's vegetation management program is discussed in Section V (G) on page 15 of TPUD's WMP and is fully details in the WMP's attached TDPUD Vegetation Plan.

WSAB Recommendation #13: List the qualifications of any experts relied upon, such as scientific experts in ecology, fire ecology, fire behavior, geology, and meteorology. Specify the level of expertise of the POU staff that manages the contractors performing vegetation management. Describe measures each POU takes to ensure that POU staff and contractors comply with or verify compliance with Cal/OSHA standards on Minimum Approach Distances (MAD).

POU Response: TDPUD RESPONSE: TDPUD utilizes the expertise provided through the National Oceanic and Atmospheric Administration's (NOAA) weather notification program. Red Flag Warnings (RFW) are an example of key information provided during the fire season. TDPUD contracts with Vegetation Management contractors that are Line Clearance Certified so that they can safely operate around energized facilities.

WSAB Recommendation #14: Describe whether the POU has considered innovative and alternative approaches to vegetation management.

TDPUD Response: TDPUD has worked closely with our contracted vegetation management experts, local fire experts, and others to review and enhance TDPUD's Vegetation Management

Plan and current practices. TDPUD has increased the vegetation management budget from ~$350,000 in 2018 to ~$1,500,000 in 2021. TDPUD does rely heavily on LIDAR and our GIS system to target, track, and document the vegetation management efforts. It should be noted, due to our location in the high Sierra Nevada Mountains and unique climate, that vegetation management practices for TDPUD will likely vary from what is done in other parts of the State.