



Transmission Agency of Northern California
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June 1, 2022

To: California Wildfire Safety Advisory Board
Submitted via email to: WildfireSafetyAdvisoryBoard@cpuc.ca.gov

Subject: Transmission Agency of Northern California 2021 Wildfire Mitigation Plan for the California-Oregon Transmission Project

Dear California Wildfire Safety Advisory Board (WSAB):

Please accept the attached 2022 update to the Wildfire Mitigation Plan (Plan) for the California-Oregon Transmission Project (COTP) as prepared by the Transmission Agency of Northern California (TANC). TANC is a joint powers agency (JPA) comprised of 15 publicly owned utilities (POUs) located throughout northern and central California. It has been our intent to prepare and update a Plan that is clear, concise, and easy to read and navigate.

We understand that the WSAB has been working with the California Municipal Utilities Association (CMUA) and individual POUs in an effort to clearly describe and differentiate the characteristics of over 50 POUs from one another to support clearer, more informed and therefore more structured POU Plan reviews. Although TANC is a JPA of POUs, we are clearly differentiated in very substantive and meaningful ways from individual POUs. We hope this transmittal letter helps clarify the characteristics of **TANC as a transmission agency** that owns, operates, and maintains one singular transmission line and right of way traversing northern California.

TANC constructed, maintains, and operates the COTP, a 340-mile 500 kilovolt (kV) transmission line and related facilities, that extends from the California-Oregon border to central California. The attached Plan provides more detailed overviews of TANC's mission and organization, the importance of the COTP to the bulk electric grid, and TANC's relationship with the Western Area Power Administration (WAPA), which provides operations and maintenance services for the COTP under contract with TANC.

During your review of this Plan, it is important to understand the **limited electric and geographic contexts of the COTP as entirely distinct and different from individual POUs**, as follows:

A Public Entity whose Members include:
Alameda, Biggs, Gridley, Healdsburg, Lodi, Lompoc, Modesto Irrigation District,
Palo Alto, Plumas-Sierra Rural Electric Cooperative, Redding, Roseville,
Sacramento Municipal Utility District, Santa Clara, Turlock Irrigation District, Ukiah

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- The COTP consists of only one 340-mile 500kV right of way (ROW) that ranges from 125 to 200-feet wide;
- There are no additional transmission facilities within the COTP ROW;
- **The COTP includes no distribution facilities;**
- TANC has no direct residential, commercial, or industrial customers; the COTP provides wholesale power for TANC's Members and the other COTP Participants;
- All COTP transmission and communication towers are comprised of steel; only five miles of COTP transmission towers lie within or adjacent to High Fire Threat District (HFTD) Tier 3;
- All switching (i.e. reclosing) equipment is located within the COTP substations; and
- The transmission substations and compensation station are surrounded by managed agricultural land uses with low-growing vegetation.

The COTP crosses several miles of remote, variable, and often rugged topography and terrain. COTP towers are located at elevations ranging from sea level or slightly below near the Sacramento-San Joaquin Delta to over 6,000 feet in Shasta County. TANC and WAPA therefore designed and constantly maintain the COTP to preventatively minimize risks to reliability that included extremes in climatic conditions and the potential for wildfires. Because of its importance to the electric grid, the COTP has always been operated and maintained to ensure its full availability and reliability since construction in the early 1990s.

The attached 2022 Plan was developed in coordination with, and under the guidance of an Ad Hoc Wildfire Planning Committee comprised of staff representing TANC, its JPA members, and WAPA. It was approved and adopted by the TANC Commission and COTP Management Committee in May 2022. To assist in focusing your review of this 2022 WMP, please note the following:

- Table I-1 (page 3) is intended to assist your reviewers in locating PUC § 8387 statutory requirements by section and page number in this 2022 Plan version.
- Tables V-1 and V-2 have been updated for 2021 progress achieved in implementing wildfire prevention, mitigation, and response strategies (Wildfire Strategies), and the 2022 approach for each Wildfire Strategy.
- Table VII-1 has been updated to indicate that metrics developed for the COTP will focus on the highest priority needs across the whole of the COTP system without disaggregation on a "per-High Fire Threat District (HFTD) basis." This will allow WAPA maintenance staff to prioritize increased inspection frequencies in the future at those specific facilities and right of way segments where ongoing routine and enhanced inspection results indicate that COTP facilities are indicating they may be needed, regardless of HFTD.
- Attached to this transmittal letter is the informational response that you requested in your review of the 2021 version of this Plan. We hope that it is useful in supporting your review. Please consider it within the contexts of the COTP as described above.

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Please do not hesitate to call either me at (408) 621-5875, or TANC's Environmental and Land Manager, Don Wagenet at (916) 798-3899 if you have any questions regarding our Plan.

Sincerely,

DocuSigned by:
John Roukema
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John Roukema
TANC Interim General Manager

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Attachment 1



Utility Name: Transmission Agency of Northern California	
Size in Square Miles: Not Applicable	square miles
Assets	<input checked="" type="checkbox"/> Transmission <input type="checkbox"/> Distribution <input type="checkbox"/> Generation
Number of Customers Served	Customers
Customer Classes (Wholesale)	<input type="checkbox"/> Residential <input checked="" type="checkbox"/> Government <input type="checkbox"/> Agricultural <input type="checkbox"/> Small/Medium Business <input type="checkbox"/> Commercial/Industrial
Location/Topography	<input checked="" type="checkbox"/> Urban <input checked="" type="checkbox"/> Wildland Urban Interface <input checked="" type="checkbox"/> Rural/Forest <input type="checkbox"/> Rural/Desert <input checked="" type="checkbox"/> Rural/Agriculture
Percent of Right of Way Crossing CPUC High Fire Threat Districts	<input checked="" type="checkbox"/> Includes maps 34% in Tier 2 1% in Tier 3
CAL FIRE FRAP Map Fire Threat Zones	<input checked="" type="checkbox"/> Includes maps % Extreme % Very High % High _____
Existing Grid Hardening Measures	<input checked="" type="checkbox"/> Describes hardened & non-hardened <u>infrastructure</u>
Utility Fire Threat Risk Level	<input type="checkbox"/> High <input type="checkbox"/> Low <input checked="" type="checkbox"/> Mixed
Impacted by another utility's PSPS?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Mitigates impact of another utility's PSPS?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Expects to initiate its own PSPS?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Prevailing wind directions & speeds by season	<input type="checkbox"/> Includes maps <input checked="" type="checkbox"/> Includes a description – see Attachment 1.

Background

The WSAB Context Template requests context-setting information about the prevailing wind directions and speeds differentiated by season. We have also included brief descriptions of average weather conditions at selected locations by season.

Introduction

The COTP consists of a 340-mile, 500kV high-voltage transmission line extending from the California-Oregon border to the Tracy Substation in central California. The COTP originates at the Captain Jack Substation in southeastern Oregon. The first six miles of the line – from the Captain Jack Substation to the Oregon-California border - is managed by the Bonneville Power Administration. The transmission line right of way then trends south and slightly southwest

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through the Modoc Plateau area in northeastern California, then generally westward through forested lands to Olinda, near Redding. The right of way then travels south through the central and western Sacramento Valley to Tracy, and then further south to its southern terminus near the Tesla Substation. Wind direction and speed data and average weather conditions are therefore presented for representative locations along the COTP.

Prevailing Wind Directions and Speeds

Tables 1-1 and 1-2 provide information on representative monthly wind directions and speeds along the COTP. These tables indicate that prevailing wind speeds and directions are highly variable by location and season.

Station	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Ann
Mt. Shasta City	SE	SE	SE	NW	N	N	N	NE	NE	N	NE	SE	N
Redding AP	N	N	N	N	N	N	S	S	N	N	N	N	N
Red Bluff AP	NN W	SSE	N	NN W	SSE	N	S	S	NN W	NN W	NN W	NN W	NN W
Vacaville AP	NN W	S	SSW	SSW	SSW	SSW	S	SSW	SS W	SSW	SSW	NN W	SSW
Sacramento Int. AP	SSE	SSE	S	S	S	S	S	S	S	S	NW	SSE	S

AP: Airport

Prevailing wind direction is based on the hourly data from 1992-2002 and is defined as the direction with the highest percent of frequency. Many of these locations have very close secondary maximum which can lead to noticeable differences month to month. All directions are where the wind blows from.

Source: Western Regional Climate Center. Comparative Table Prevailing Wind Directions. 2021.

Station	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Ann
Mt. Shasta City	2.3	3.0	3.7	3.8	3.4	3.7	1.8	1.5	2.3	2.5	2.3	2.9	2.7
Redding AP	5.2	6.8	6.4	6.9	6.6	6.9	5.7	5.4	5.7	5.7	4.9	6.2	6.0
Red Bluff AP	7.4	8.9	8.7	8.9	8.5	8.8	7.2	7.0	7.5	7.7	7.5	8.7	8.0
Vacaville AP	4.4	5.5	6.3	7.1	7.0	7.5	7.3	6.7	5.9	5.5	4.4	4.9	6.0
Sacramento Int. AP	6.9	8.0	7.9	8.7	8.6	9.4	9.0	8.4	7.6	7.3	6.4	7.7	8.0

AP: Airport

Average wind speeds are based on the hourly data from 1996-2006 from automated stations at reporting airports (ASOS) unless otherwise noted.

Source: Western Regional Climate Center. Comparative Table Average Wind Speeds (miles per hour) 2021.

Average Weather Conditions by Season – Representative Locations

The COTP right of way proceeds southward from the Oregon-California border where average weather conditions are well-represented by the following temperature ranges in Tulelake, McCloud, Redding, Sacramento, and Tracy, California.

- In Tulelake, the summers are warm, dry, and mostly clear and the winters are cold and somewhat dry. Over the course of the year, the temperature typically varies from 20°F to 85°F.

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- In McCloud, the summers are warm, dry, and mostly clear and the winters are long, very cold, wet, and partly cloudy. Over the course of the year, the temperature typically varies from 28°F to 86°F and is rarely below 19°F or above 94°F.
- In Redding, the summers are sweltering, dry, and mostly clear and the winters are cold, wet, and partly cloudy. Over the course of the year, the temperature typically varies from 37°F to 99°F and is rarely below 28°F or above 107°F.
- In Sacramento, the summers are hot, arid, and mostly clear and the winters are short, cold, wet, and partly cloudy. Over the course of the year, the temperature typically varies from 39°F to 94°F and is rarely below 31°F or above 102°F.
- In Tracy, the summers are hot, arid, and clear and the winters are short, cold, wet, and partly cloudy. Over the course of the year, the temperature typically varies from 40°F to 92°F and is rarely below 31°F or above 101°F.