

Docket	:	<u>A.25-06-017</u>
Exhibit Number	:	<u>CA-03-A</u>
Commissioner	:	<u>M. Baker</u>
Admin Law Judge	:	<u>R. Haga</u>
Witness	:	<u>B. Tang</u>



**PUBLIC ADVOCATES OFFICE
CALIFORNIA PUBLIC UTILITIES COMMISSION**

**AMENDED TESTIMONY
ON
LOCAL EXTERNAL FACTORS
FOR MOUNTAIN VIEW FIRE
COST-RECOVERY APPLICATION**

Reasonableness of Operations Prior to Ignitions

San Francisco, California
January 13, 2026

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EXTERNAL FACTORS

I. INTRODUCTION

This exhibit pertains to the application of Liberty Utilities (CalPeco Electric) LLC, (“Liberty”) to recover costs associated with the Mountain View Fire (Application 25-06-017).

This exhibit presents the analyses of the Public Advocates Office (Cal Advocates) regarding local geography and environmental risk factors in the vicinity of the Mountain View Fire ignition. The ignition origin area is associated with Liberty’s Topaz distribution circuit.

This exhibit relates specifically to portions of Exhibit Liberty-03, Liberty’s testimony on prudence of operations, and of Exhibit Liberty-04, Liberty’s testimony on external factors.¹

II. LOCAL ENVIRONMENTAL RISKS OF TOPAZ 1261 CIRCUIT

This section addresses the local environmental risks in the area surrounding the Topaz 1261 distribution circuit and the location of the initial Mountain View Fire ignition. Environmental risks are illustrated with maps of high-fire threat districts, fire burn history, and wind-related issues, such as red flag warning days for assets located in the region.

A. Wildfire Risk of Mountain View Area

1. High Fire Threat Districts (HFTD) Procedural History

In response to catastrophic wildfires in 2007 that were attributed to electric utility facilities, the California Public Utilities Commission (CPUC or Commission) opened rulemakings in 2008 and 2015 to develop safety regulations to address wildfire risk,

¹ Exhibit (Ex.) Liberty-03 and Ex. Liberty-04.

1 including mapping areas with high fire risk.²⁻³ In January 2017, D.17-01-009 (issued in
2 R.15-05-006) established a work plan and schedule for developing a fire threat map
3 (called “Fire Map 2”), which was subject to final approval by advice letter.⁴⁻⁵ The
4 Commission approved the map of HFTDs in D.17-12-024 (issued on December 21,
5 2017),⁶ and the final map took effect on January 19, 2018 pursuant to a joint advice
6 letter.⁷⁻⁸

² Rulemaking (R.)08-11-005, *Rulemaking re Safety of Electric Utility and Communication Facilities* initiated the process of creating fire threat maps. See Decision (D.)16-05-036, *Decision Adopting Fire Map 1* (Attachment 1).

³ D.17-01-009, *Decision Adopting Regulations to Enhance Fire Safety in the High Fire-Threat District* (Attachment 2) at 2:

The purpose of Fire Map 2 is to designate areas where there is an elevated hazard for utility-associated wildfires to occur and spread rapidly, and where communities face an elevated risk from utility-associated wildfires. Fire Map 2 will be used to delineate the boundaries of a new High Fire-Threat District where stricter fire-safety regulations apply. The Fire Map 2 work plan adopted by today’s decision reflects input and advice from the California Department of Forestry and Fire Protection (CAL FIRE).

⁴ D.17-01-009 at 42-48 and 77-86 (Ordering Paragraph 1).

⁵ D.17-01-009 at 86, Ordering Paragraph 1.nn.

⁶ D.17-12-024, *Decision Adopting Regulations to Enhance Fire Safety in the High Fire-Threat District*, December 21, 2017 (Attachment 3). Starting in February 2017, the Commission examined changes to GO 95 in Rulemaking 15-05-006, *Rulemaking to Develop and Adopt Fire-Threat Maps and Fire-Safety Regulations*. Track 2 of the rulemaking considered “additional fire-safety regulations in the High Fire-Threat District.” See D.17-12-024 at 7 and 11-13. Liberty was an active participant in the rulemaking, attended workshops in February to June 2017, filed comments in July 2017, and filed reply comments in August 2017. See D.17-12-024 at 11-13. The resulting decision adopted changes to Rule 18 but was not issued until December 21, 2017. D.17-12-024 at 1 and 17-20.

⁷ D.17-12-024 concluded the map would become effective upon final adoption of the map developed pursuant to D.17-01-009, which required Safety and Enforcement Division’s (SED) disposition of a Tier 1 advice letter. D.17-12-024 at 151, Conclusion of Law 10.

⁸ R.15-05-006 led to wildfire risk mapping decisions, including D.17-01-009 and D.17-12-024. These decisions updated and expanded fire threat maps from R.08-11-005. See D.17-12-024 at 151, Conclusion of Law 10.

⁹ Pacific Gas and Electric Company (PG&E) and San Diego Gas & Electric Company (SDG&E), PG&E Advice 5211-E and SDG&E Advice 3172-E, *Joint Filing – Adoption of Final California Public Utilities Commission Fire-Threat Map*, January 19, 2018, https://www.pge.com/tariffs/assets/pdf/adviceletter/ELEC_5211-E.pdf, accessed December 7, 2025 (Attachment 4).

SED approved the Advice 5211-E and SDG&E Advice 3172-E. As a Tier 1 advice letter, it was effective on the date of submission. CPUC, “Fire-Threat Maps and Fire-Safety Rulemaking,”

1 The Commission determined that HFTDs have greater likelihood of powerline
2 ignition and fire spread, with associated consequences to people or property.¹⁰ The
3 Commission categorized HFTDs into two tiers of heightened concern: Tier 3 districts
4 have extreme wildland fire risk (with the most restrictive regulations applying), while
5 Tier 2 districts have elevated risk (where enhanced regulations are deemed necessary).¹¹
6 (Tier 1 means non-HFTD.¹²)

7 In D.17-12-024, the Commission added “Zone 1” (not to be confused with *Tier 1*)
8 to the HFTD. However, Zone 1 is based on tree mortality hazard zones and almost
9 entirely overlaps with HFTD Tiers 2 and 3.¹³

10 The Commission continues to use the HFTD map (with revisions) at the time of
11 this testimony. The Commission last revised the HFTD boundaries in D.20-12-030, in
12 Southern California Edison (SCE) territory.¹⁴

<https://www.cpuc.ca.gov/industries-and-topics/wildfires/fire-threat-maps-and-fire-safety-rulemaking>,
accessed December 7, 2025 (Attachment 5).

¹⁰ Decision 16-05-036 under R.08-11-005, as well as D.17-01-009 and D.17-12-024 under R.15-05-006,
state that the purpose of fire threat maps is to designate areas of elevated hazard. See D.16-05-036 at 1-7,
20, and 30; D.17-01-009 at 2-7 and 26; and D.17-12-024 at 6-7 and 145-146.

¹¹ D.17-01-009 at 25.

¹² Tier 1 comprises those areas not in Tiers 2 and 3, which are regarded as “zero to moderate wildfire risk”
(not high fire risk). D.17-01-009 at 25.

¹³ In D.17-12-024, the Commission adopted the following definition:

A new High Fire-Threat District (“HFTD”) is added to General Order 95 (“GO 95”).
The HFTD consists of three areas:

- Zone 1 consists of Tier 1 High Hazard Zones (“HHZs”) on the map of Tree Mortality HHZs prepared jointly by the United States Forest Service and the California Department of Forestry and Fire Protection (“CAL FIRE”). Tier 1 HHZs are in direct proximity to communities, roads, and utility lines, and represent a direct threat to public safety.
- Tier 2 consists of areas on the California Public Utilities Commission’s Fire-Threat Map (“CPUC Fire-Threat Map”) where there is an elevated risk for destructive utility-associated wildfires. The CPUC Fire-Threat Map is currently in an advanced stage of development.
- Tier 3 consists of areas on the CPUC Fire-Threat Map where there is an extreme risk for destructive utility-associated wildfires.

D.17-12-024 at 2 and 145-146 (Finding of Fact 1).

¹⁴ D.20-12-030, *Decision Modifying the High Fire-Threat District Boundaries in Southern California Edison Company’s Service*, December 17, 2020 (Attachment 6). A more recent Petition for Modification

2. HFTD Maps of Liberty Territory and Mountain View Area

Figure 1 below is a map of the HFTD tiers, as of March 2018.¹⁵ Figures 1 and 2 show the area within Liberty's service territory, with the following specific features:

- HFTD Tier 2 regions (light blue).
- HFTD Tier 3 regions (blue).
- Liberty service territory (yellow outline).¹⁶
- Mountain View Fire burn perimeter (green outline).¹⁷
- Mountain View Fire ignition point (yellow dot).¹⁸

The majority (about 69 percent) of Liberty's service territory is in HFTD Tier 2.^{19, 20} Notably, certain sections of the Eastern Sierra mountains – which separate the Lake Tahoe basin from Topaz Lake Valley area and the City of Walker – are not designated HFTD.

from SCE was recently denied for procedural reasons. See Proposed *Decision Denying Petition to Modify Decisions (D.) 17-01-009, D.17-12-024 and D.20-12-030 and Dismissing Petition to Modify Decision 17-12-024 without Prejudice and D.25-01-037 Decision Denying Petition to Modify Decisions (D.) 17-01-009, D.17-12-024 and D.20-12-030.*

¹⁵ HFTD maps from 2018 accessed from SED's HFTD archive, https://files.cpuc.ca.gov/safety/fire-threat_map/, accessed December 7, 2025 (Attachment 7). The most recent HFTD map can be accessed from CPUC (Attachment 5).

¹⁶ Liberty's GIS submission for the Wildfire Mitigation Plan (WMP) Quarterly Data Report for the 3rd and 4th Quarters of 2020, submitted December 9, 2020, and March 5, 2021, respectively. Service territory data publicly available at California Energy Commission, "Administrative Boundary Data," <https://cecgis-caenergy.opendata.arcgis.com/>, accessed December 7, 2025 (Attachment 8).

¹⁷ CAL FIRE, Fire Resource and Assessment Program, "Historical Fire Perimeters," <https://www.fire.ca.gov/what-we-do/fire-resource-assessment-program/fire-perimeters>, accessed December 7, 2025 (Attachment 9).

¹⁸ Liberty's response to data request CalAdvocates-LIB-A2506017-006, Question 2, September 5, 2025 (Attachment 10). For all maps in this testimony, the coordinates for the West Pole (Pole 266731), the pole of interest for ignition, is used to approximate the true ignition location, which are indistinguishable at these scales. See Ex. Liberty-02 at 2-3.

¹⁹ Liberty service territory from California Energy Commission (Attachment 8) and HFTD maps from SED archive (Attachment 7). Calculated Liberty service territory area excludes surface area of Lake Tahoe itself; Lake Tahoe boundary from Tahoe Regional Planning Agency, "Lake Tahoe," <https://nationaldataplatfrom.org/catalog/dataset/lake-tahoe>, accessed December 7, 2025 (Attachment 11).

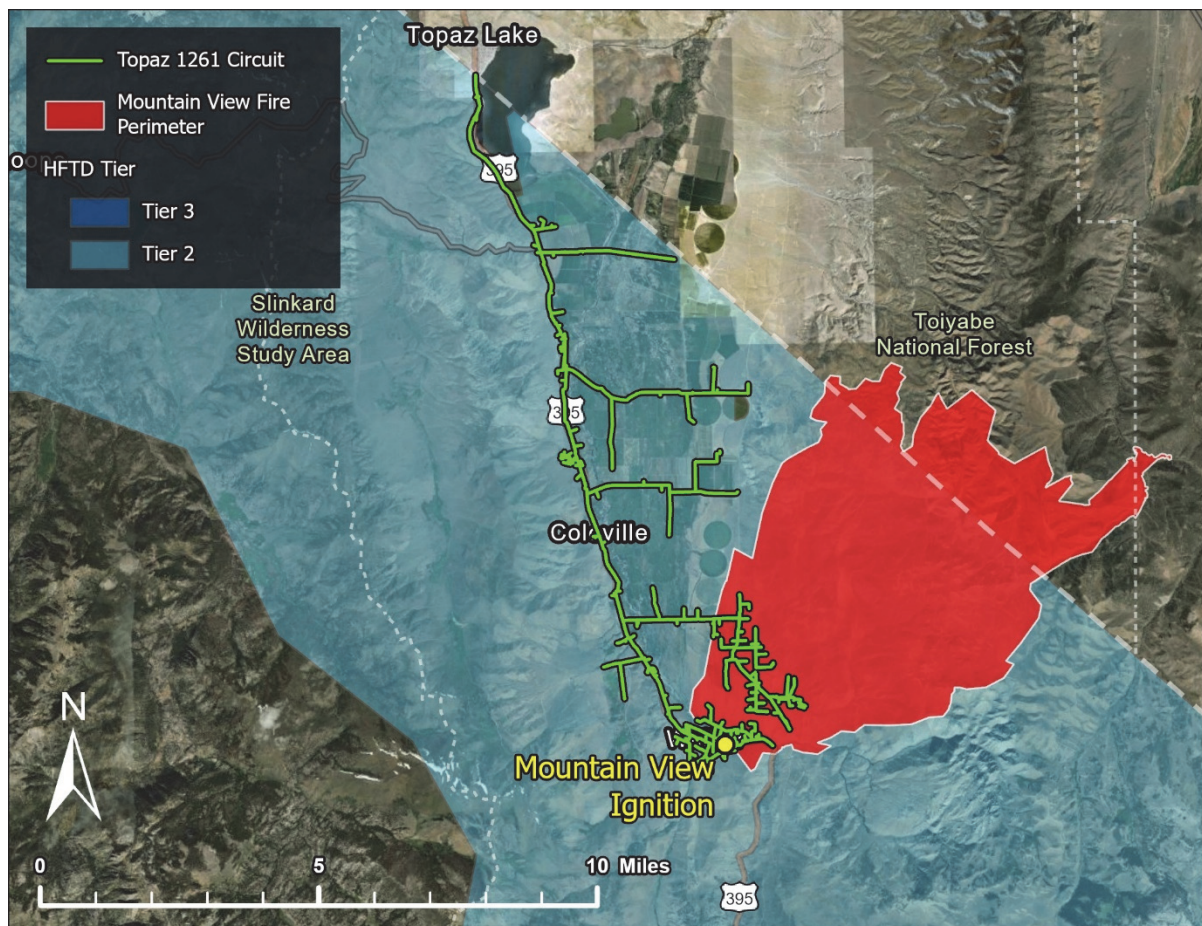
²⁰ Liberty calculates 63 percent of Liberty's service area as Tier 2 or Tier 3 HFTD, but this seems to include Lake Tahoe's surface area in the total service area. Ex. Liberty-03 at 5.

Figure 1:
High Fire Threat Districts in Liberty Service Area, with Mountain View Fire Perimeter



Below, Figure 2 is a closer look showing the HFTD zones around the City of Walker and with the Topaz circuit. Figure 2 includes Liberty's Topaz circuit (green lines) in addition to the features mentioned for Figure 1.²¹ The entirety of the Topaz circuit, including the region around the City of Walker and the Mountain View Fire ignition point, is wholly within HFTD Tier 2.

Figure 2:
High Fire Threat District around Topaz Circuit



²¹ Liberty's response to data request CalAdvocates-LIB-A2506017-006, Question 1, September 5, 2025, GIS geodatabase file "*WEMA_RequestedData.gdb*" (Attachment 10). Geodatabase file available via email upon request.

3. Wildfire History of Mountain View Area

CAL FIRE's Fire Resource and Assessment Program, in partnership with contract counties and federal agencies, maintains and annually updates an historical fire perimeter dataset for California. The most recent iteration was published in April 2025 to include fires from the 2024 fire season, as well as six fires from January 2025.²² The dataset includes 22,810 fires dating back to 1898.²³ Many fires burn through the same places, so their fire perimeters overlap.

The U.S. Bureau of Land Management's (BLM) Nevada Fire and Aviation program maintains datasets on wildland fire activity on public lands in Nevada, including historic wildland fire information. The most recent version was updated in April 2025 and tracks 4,044 fires dating from 1980.²⁴ Wildfire data from CAL FIRE and BLM are combined to form a dataset covering California and Nevada, respectively; however, note that CAL FIRE's California dataset starts from 1898 while the BLM's Nevada dataset starts in 1980.

Figures 3, 4, and 5 below are "heat maps" of wildfire frequency that indicate the number of wildfires that have burned through each location, in the period up to November 16, 2020 (prior to the Mountain View Fire). Areas are colored based on the number of wildfires in the dataset: places with the fewest wildfires (just one) are shown in pale pink, while places with the most fires (eight to 11) are shown in dark red. Figure 3 below displays the wildfire history of Liberty's service territory.

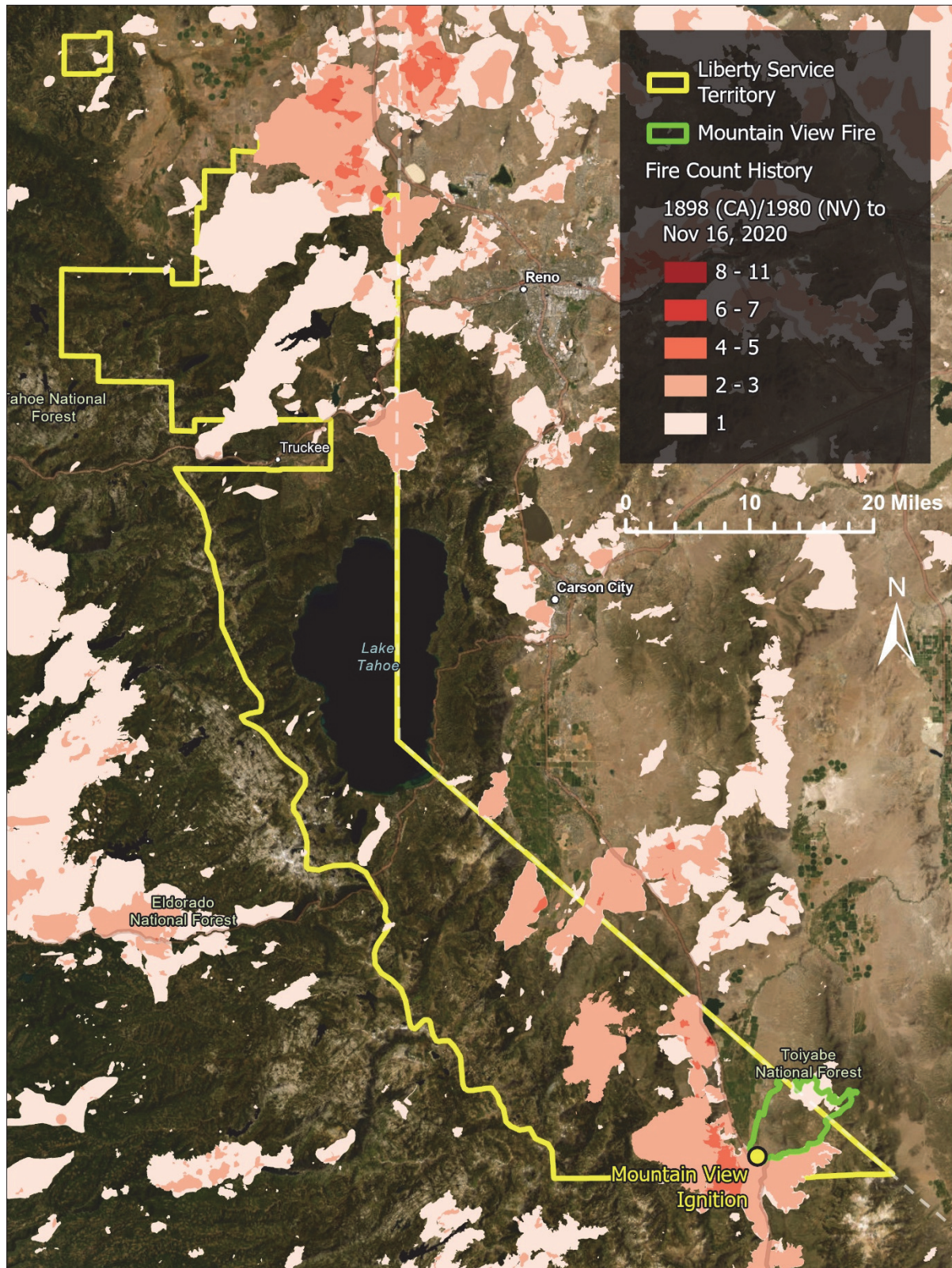
²² CAL FIRE (Attachment 9).

²³ The criteria for inclusion are fires with perimeters ≥ 10 acres in timber, ≥ 50 acres in brush, or ≥ 300 acres in grass, and/or ≥ 3 damaged/ destroyed residential or commercial structures, and/or caused ≥ 1 fatality. Cooperating agencies submit perimeters ≥ 10 acres. Not all qualifying fires are included due to changes to inclusion criteria over the years: 488 total fires from the CAL FIRE Redbook Large Damaging Fires list are missing from the Fire Perimeter data. See the geodatabase metadata for more details.

²⁴ BLM Nevada Wildfire Intelligence, "Nevada Wildland Fire Perimeters," <https://nvfireintel-nifc.hub.arcgis.com/>, accessed December 7, 2025 (Attachment 12).

1
2

Figure 3:
Historical Fire Count in Liberty Service Territory



3

1 Figure 3 shows Liberty service territory (yellow outline) and the entire Mountain
2 View Fire burn perimeter (green outline), with the ignition location marked (yellow
3 dot).²⁵ ²⁶ ²⁷ Figure 3 reveals that most past wildfires in Liberty’s service territory
4 concentrated in the area north of Lake Tahoe and in the immediate area within 5 miles of
5 Walker.

6 Figure 4 below is a closer look at the Mountain View Fire area around the city of
7 Walker, with Liberty service territory boundaries (yellow outline), Mountain View Fire
8 burn perimeter (green outline), and ignition location marked (yellow dot).²⁸ ²⁹ ³⁰ Figure 4
9 shows that the immediate vicinity around Walker historically had one to five wildfires, as
10 denoted by the pale pink, pink, and orange regions.³¹ Liberty states that “Mountain View
11 Fire’s perimeter had not seen any large fires in at least a decade,” which, while
12 technically true, ignores the rest of the surrounding territory.³²

²⁵ Liberty’s response to data request CalAdvocates-LIB-A2506017-006, Question 2 (Attachment 10).

²⁶ CAL FIRE (Attachment 9).

²⁷ California Energy Commission, Open Data Portal, Administrative Boundaries, “Electric Load Serving Entities (IOU & POU),” <https://cecgis-caenergy.opendata.arcgis.com/>, accessed December 7, 2025 (Attachment 8).

²⁸ Liberty’s response to data request CalAdvocates-LIB-A2506017-006, Question 2 (Attachment 10).

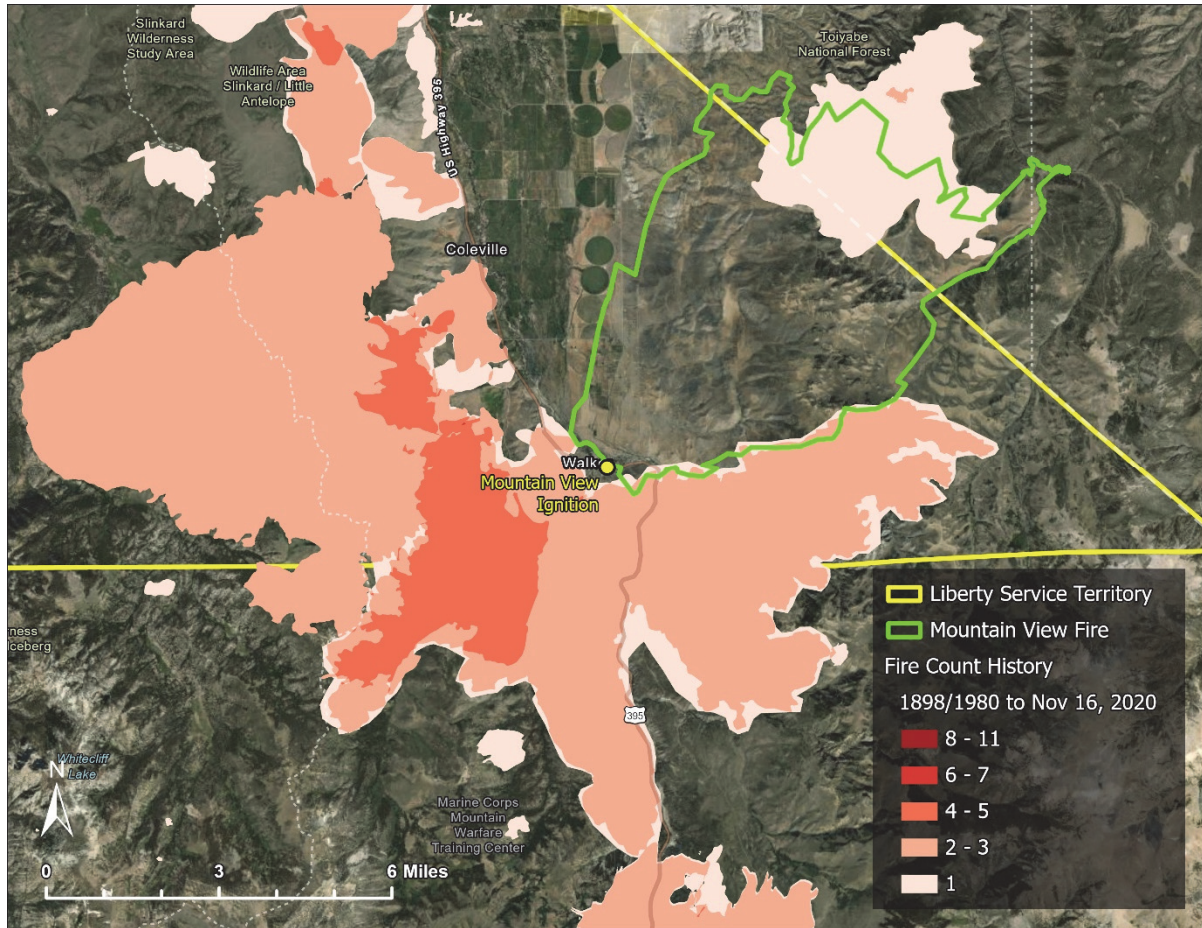
²⁹ CAL FIRE (Attachment 9).

³⁰ California Energy Commission (Attachment 8).

³¹ CAL FIRE (Attachment 9).

³² Ex. Liberty-04 at 10. Liberty asserts that a lack of past fires meant fuel buildup increased wildfire intensity, but that implies wildfire was inevitable (either a place historically has many fires and thus fire-prone, or fuel-rich from lack of fires and thus fire-prone).

Figure 4:
Historical Fire Count around the Topaz Circuit

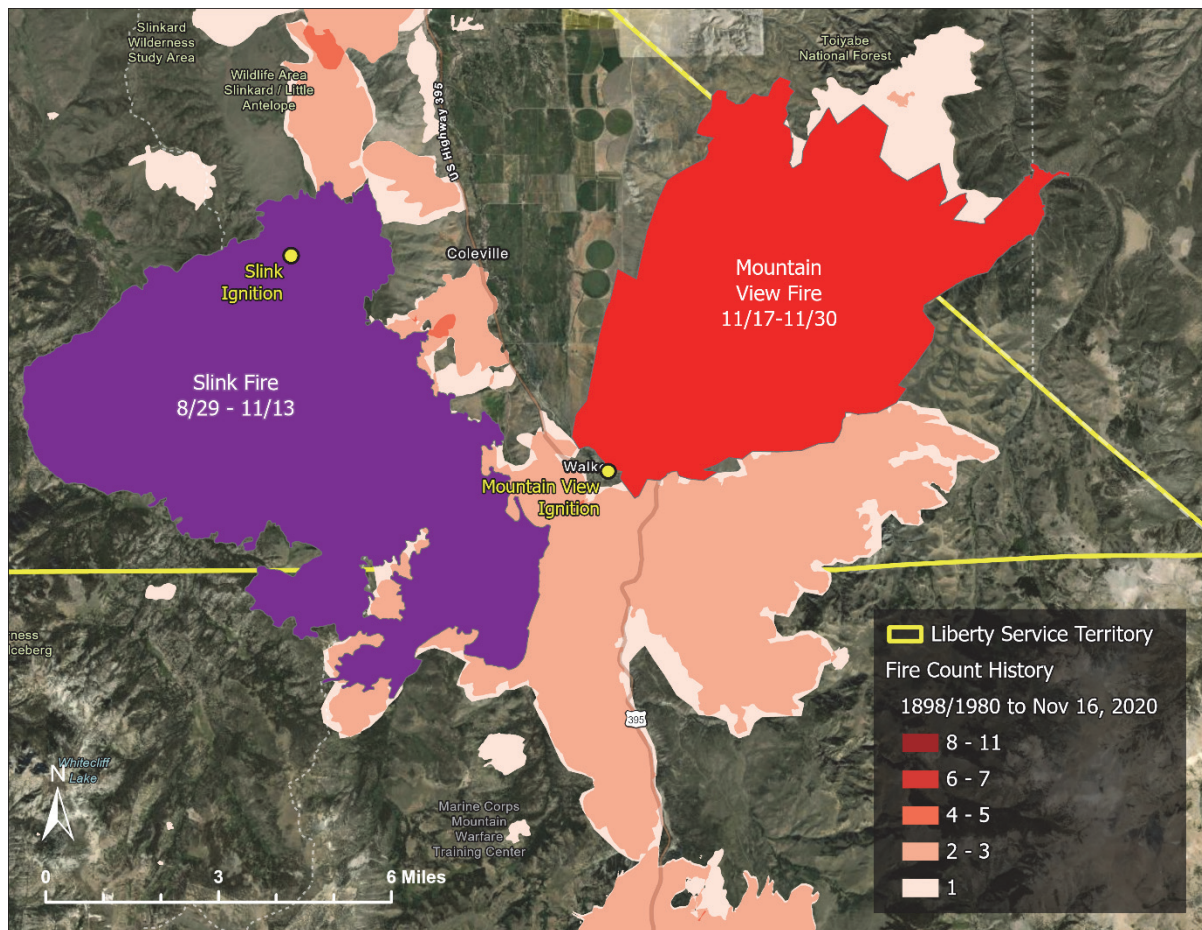


The Slink Fire ignited on August 29, 2020, and was contained on November 13, 2020, only four days before the Mountain View Fire ignited.³³ Figure 5 below focuses on the area around City of Walker, and highlights the Slink Fire, the most recent wildfire in the immediate vicinity. Specific map features include Liberty’s service territory (yellow outline), Mountain View Fire burn perimeter (red), and Slink Fire burn perimeter

³³ CAL FIRE (Attachment 9).

(purple).³⁴ ³⁵ ³⁶ The Slink Fire burned 26,752 acres and caused evacuations for the cities of Walker and Coleville and the temporary closure of Highway 395.³⁷ ³⁸ ³⁹

**Figure 5:
Mountain View and Slink Fires, November 2020**



³⁴ Liberty's response to data request CalAdvocates-LIB-A2506017-006, Question 1, GIS geodatabase file "WEMA_RequestedData.gdb" (Attachment 10).

³⁵ CAL FIRE (Attachment 9).

³⁶ CAL FIRE (Attachment 9).

³⁷ The Pine Tree, "Slink Fire Grows to 11,000 Acres, Evacuations Lifted, Hwy 395 Reopens & Smoke Output Drops," September 1, 2020, <https://new.thepinetree.net/?p=106522>, accessed December 7, 2025 (Attachment 13).

³⁸ NBC News 4 and Fox 11, "Slink Fire grows to 26,752 acres with 86% containment; evacuations lifted," September 28, 2020, <https://mynews4.com/news/local/slink-fire-west-of-coleville-grows-to-4700-acres-5-contained>, accessed December 7, 2025 (Attachment 14).

³⁹ CAL FIRE (Attachment 9).

B. Weather Risk of Mountain View Area

1. Red Flag Warning (RFW) Days

The National Weather Service (NWS) issues RFWs for each distinct NWS forecast zone: a RFW means warm temperatures, very low humidities, and stronger winds are expected to combine to produce increased risks of fire danger in that zone for a specific time period.⁴⁰

From January 1, 2015, to November 16, 2020 (prior to the Mountain View Fire), the NWS issued 40 total RFWs (which equaled 40 distinct warning periods) that affected Liberty in the NWS forecast zone surrounding the City of Walker.^{41, 42} These 40 RFWs include 13 Warnings with Cancelled status, but the Cancelled condition means that the NWS ended the RFW before the initial expiration datetime was reached. In other words, the RFW was active but terminated sooner than originally estimated, rather than entirely nullified before it started (this can be seen by comparing update and end datetimes with the initial expiration datetime set when the RFW was issued).⁴³

The Topaz Circuit rests entirely within the NWS forecast zone NVZ421, overseen by the NWS Reno office in Nevada.⁴⁴ However, NWS zones were reorganized for 2020; before 2020, the portion of NVZ421 within California boundaries was part of forecast zone CAZ273, which included the Tahoe basin.⁴⁵ In 2020, the NVZ421 zone was split to

⁴⁰ National Weather Service, “Red Flag Warning,” <https://www.weather.gov/mqt/redflagtips>, accessed December 7, 2025 (Attachment 15).

⁴¹ Iowa State University, Iowa Environmental Mesonet, “Archived NWS Watch, Warnings, Advisories,” <https://mesonet.agron.iastate.edu/request/gis/watchwarn.phtml>, accessed December 7, 2025 (Attachment 16).

⁴² This contradicts Liberty’s response to data request CalAdvocates-LIB-A2506017-006, Question 4, September 5, 2025, Excel spreadsheet file “TZP_2016_2020_RFW_Data.xlsx” (Attachment 17), which omits Cancelled RFWs and lists only 27 RFWs for the years 2016 to 2020.

⁴³ Cancelled RFWs still active RFWs confirmed by NWS Reno Office. Colin McKellar, National Weather Service Reno, Email communication, November 18-19, 2025 (Attachment 18). See also National Weather Service, “CON/COR/EXP/CAN VTEC Logic,” <https://vlab.noaa.gov/web/hazard-services/con-cor-exp-can-vtec-logic>, accessed December 7, 2025 (Attachment 19).

⁴⁴ Iowa Environmental Mesonet (Attachment 16).

⁴⁵ NWS Reno Office (Attachment 18).

cover the Topaz Lake valley, Walker, and northern Mono County, while the Tahoe basin was reorganized as CAZ272. This split suggests the two regions (Topaz Lake/Walker and Lake Tahoe) are different enough to necessitate two distinct forecast zones.

Table 1 below lists the 40 RFWs for the five-year period (2016-2020) before the Mountain View Fire for forecast zones CAZ273 and NVZ421, ordered by initial issued datetime. The 13 Cancelled RFWs are numbered with an asterisk and color-coded light orange.

Table 1:
Red Flag Warnings in NWS Zones CAZ273 and NVZ421, 2016-2020

#	NWS Zone	Initial Issuance	Initial Expiration	RFW Start Datetime	RFW Update	RFW End Datetime	Duration (hrs)
1*	CAZ273	7/8/2016 20:57	7/10/2016 6:00	7/9/2016 18:00	7/10/2016 3:00	7/10/2016 3:00	9.00
2	CAZ273	7/28/2016 21:43	7/30/2016 4:00	7/29/2016 21:00	7/30/2016 3:50	7/30/2016 4:00	7.00
3	CAZ273	10/2/2016 10:16	10/3/2016 1:00	10/2/2016 19:00	10/3/2016 0:40	10/3/2016 1:00	6.00
4	CAZ273	10/12/2016 18:17	10/15/2016 0:00	10/13/2016 21:00	10/14/2016 23:38	10/15/2016 0:00	27.00
5	CAZ273	10/22/2016 16:31	10/24/2016 1:00	10/23/2016 18:00	10/24/2016 1:00	10/24/2016 1:00	7.00
6	CAZ273	7/4/2017 14:35	7/6/2017 12:00	7/5/2017 20:00	7/5/2017 21:23	7/6/2017 12:00	16.00
7*	CAZ273	7/22/2017 16:09	7/24/2017 4:00	7/23/2017 20:00	7/24/2017 5:05	7/24/2017 5:05	9.08
8*	CAZ273	8/29/2017 13:24	8/30/2017 6:00	8/29/2017 21:00	8/30/2017 5:17	8/30/2017 5:17	8.28
9	CAZ273	10/19/2017 13:05	10/20/2017 3:00	10/19/2017 15:00	10/20/2017 2:55	10/20/2017 3:00	12.00
10*	CAZ273	11/14/2017 22:15	11/16/2017 3:00	11/15/2017 18:00	11/15/2017 21:07	11/15/2017 21:07	3.12
11*	CAZ273	12/18/2017 22:31	12/21/2017 3:00	12/20/2017 3:00	12/20/2017 18:45	12/20/2017 18:45	15.75
12*	CAZ273	5/9/2018 21:58	5/12/2018 6:00	5/11/2018 22:00	5/12/2018 2:05	5/12/2018 2:05	4.08
13	CAZ273	7/11/2018 11:52	7/12/2018 4:00	7/11/2018 20:00	7/12/2018 4:09	7/12/2018 4:00	8.00

#	NWS Zone	Initial Issuance	Initial Expiration	RFW Start Datetime	RFW Update	RFW End Datetime	Duration (hrs)
14	CAZ273	8/2/2018 18:00	8/5/2018 5:00	8/4/2018 19:00	8/4/2018 11:26	8/5/2018 5:00	10.00
15*	CAZ273	8/12/2018 12:21	8/13/2018 4:00	8/12/2018 21:00	8/13/2018 1:17	8/13/2018 1:17	4.28
16	CAZ273	9/10/2018 18:10	9/13/2018 12:00	9/11/2018 20:00	9/13/2018 11:34	9/13/2018 12:00	40.00
17*	CAZ273	9/28/2018 12:10	9/30/2018 6:00	9/29/2018 19:00	9/30/2018 3:01	9/30/2018 3:01	8.02
18*	CAZ273	10/27/2018 18:11	10/29/2018 3:00	10/28/2018 20:00	10/29/2018 5:06	10/29/2018 5:06	9.10
19	CAZ273	8/27/2019 16:34	8/29/2019 3:00	8/28/2019 18:00	8/29/2019 2:57	8/29/2019 3:00	9.00
20	CAZ273	9/9/2019 15:13	9/10/2019 4:00	9/9/2019 20:00	9/10/2019 3:57	9/10/2019 4:00	8.00
21	CAZ273	9/14/2019 10:19	9/17/2019 1:00	9/15/2019 21:00	9/17/2019 0:57	9/17/2019 1:00	28.00
22*	CAZ273	9/27/2019 18:40	9/29/2019 6:00	9/28/2019 18:00	9/29/2019 2:35	9/29/2019 2:35	8.58
23	CAZ273	10/7/2019 20:55	10/9/2019 21:00	10/8/2019 21:00	10/9/2019 21:00	10/9/2019 21:00	24.00
24	NVZ421	5/29/2020 21:07	5/31/2020 3:00	5/30/2020 15:00	5/30/2020 10:43	5/31/2020 3:00	12.00
25	NVZ421	6/11/2020 17:49	6/13/2020 3:00	6/12/2020 19:00	6/13/2020 3:00	6/13/2020 3:00	8.00
26	NVZ421	6/14/2020 19:39	6/16/2020 3:00	6/15/2020 19:00	6/16/2020 3:10	6/16/2020 3:00	8.00
27	NVZ421	6/15/2020 21:59	6/17/2020 3:00	6/16/2020 19:00	6/16/2020 15:25	6/17/2020 3:00	8.00
28	NVZ421	6/23/2020 12:46	6/24/2020 3:00	6/23/2020 21:00	6/24/2020 2:44	6/24/2020 3:00	6.00
29	NVZ421	6/26/2020 16:00	6/29/2020 6:00	6/27/2020 19:00	6/29/2020 5:34	6/29/2020 6:00	35.00
30	NVZ421	7/5/2020 9:58	7/7/2020 4:00	7/6/2020 21:00	7/5/2020 15:32	7/7/2020 4:00	7.00
31*	NVZ421	7/15/2020 16:33	7/17/2020 4:00	7/16/2020 21:00	7/17/2020 2:14	7/17/2020 2:14	5.23
32	NVZ421	7/20/2020 20:53	7/22/2020 4:00	7/21/2020 20:00	7/23/2020 3:55	7/23/2020 4:00	32.00

#	NWS Zone	Initial Issuance	Initial Expiration	RFW Start Datetime	RFW Update	RFW End Datetime	Duration (hrs)
33	NVZ421	8/16/2020 10:42	8/17/2020 4:00	8/16/2020 20:00	8/17/2020 12:04	8/17/2020 12:00	16.00
34	NVZ421	8/19/2020 18:44	8/21/2020 4:00	8/20/2020 21:00	8/21/2020 3:49	8/21/2020 4:00	7.00
35	NVZ421	8/23/2020 1:25	8/24/2020 18:00	8/24/2020 3:00	8/24/2020 17:55	8/24/2020 18:00	15.00
36*	NVZ421	8/24/2020 4:23	8/25/2020 15:00	8/24/2020 22:00	8/25/2020 13:10	8/25/2020 13:10	15.17
37	NVZ421	9/6/2020 15:14	9/8/2020 18:00	9/7/2020 19:00	9/9/2020 3:04	9/9/2020 3:00	32.00
38*	NVZ421	9/16/2020 22:12	9/19/2020 9:00	9/17/2020 20:00	9/18/2020 23:18	9/18/2020 23:18	27.30
39	NVZ421	10/9/2020 18:26	10/11/2020 3:00	10/10/2020 20:00	10/11/2020 2:57	10/11/2020 3:00	7.00
40	NVZ421	11/4/2020 21:40	11/6/2020 17:00	11/6/2020 6:00	11/6/2020 16:59	11/6/2020 17:00	11.00

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2 Below, Table 2 summarizes the yearly number and duration of RFWs covering

3 zones CAZ273 and NVZ421 prior to the Mountain View Fire. Table 2 shows that RFWs

4 occurred every year from 2016 to 2020 and increased substantially in 2020. The 40

5 RFWs totaled 533 hours (or 22.2 days) in duration, with an average duration per RFW of

6 13.325 hours (799.5 minutes). The last RFW before the Mountain View Fire occurred on

7 November 6, 2020, from 6:00 AM to 5:00 PM.

Table 2:
Summary of Red Flag Warnings Prior to November 17, 2020

Year	Number of RFW Events	Calendar Days Affected	Total RFW Duration (hrs)	Average RFW Duration (hrs)
2016	5	11	56.00	11.20
2017	6	10	64.23	10.71
2018	7	15	83.48	11.93
2019	5	11	77.58	15.52
2020 (to 11/16)	17	35	251.70	14.81
Total	40	82	533.00	13.325

Figure 6 below maps the number of Red Flag Warnings in 2020 for NWS zones within Liberty’s service territory and vicinity.⁴⁶ Specific map features are: Liberty service territory (yellow outline), Topaz circuit (green lines), and Mountain View Fire ignition point (yellow dot).^{47, 48, 49}

⁴⁶ Iowa Environmental Mesonet (Attachment 16).

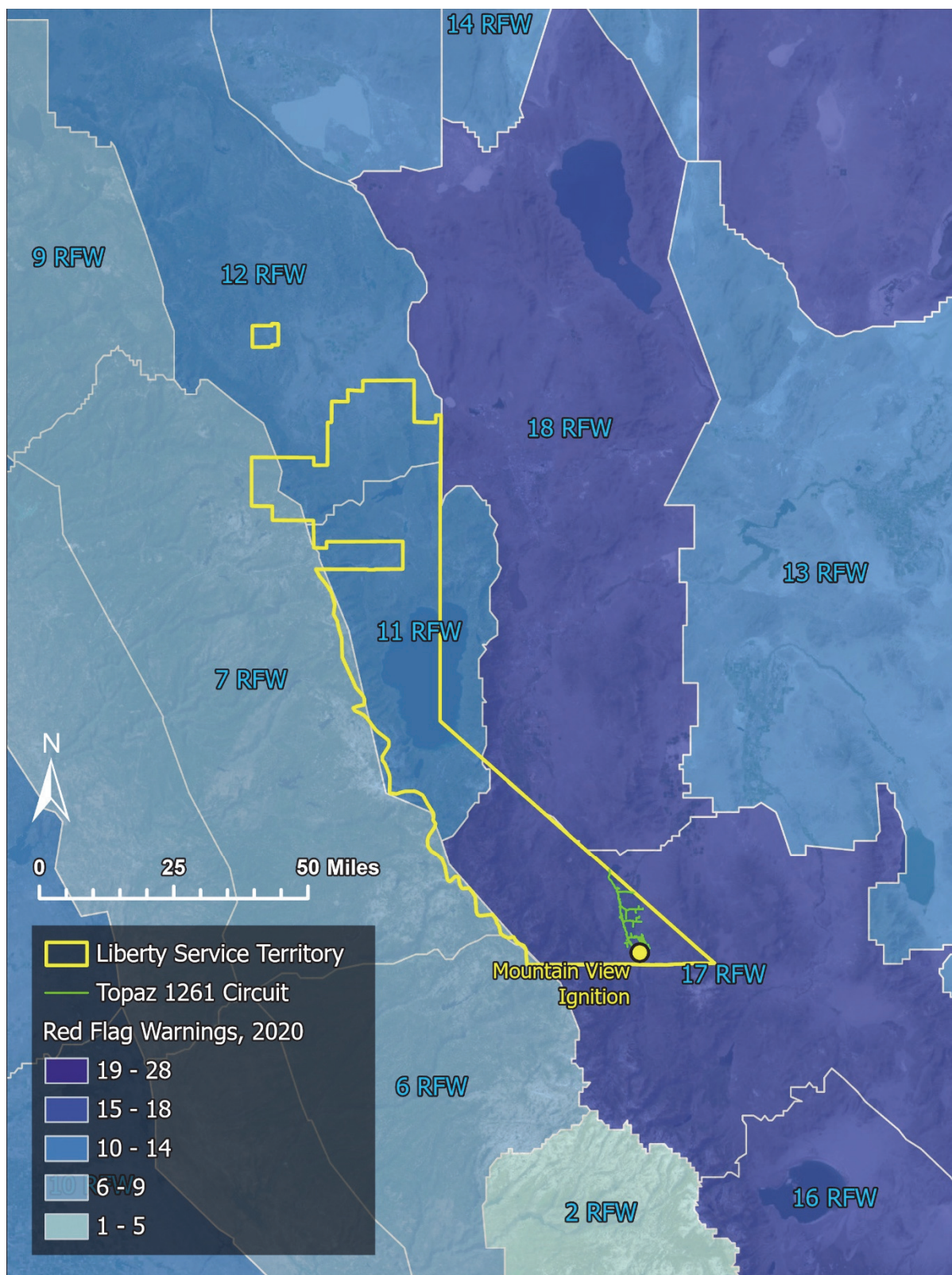
⁴⁷ California Energy Commission (Attachment 8).

⁴⁸ Liberty’s response to data request CalAdvocates-LIB-A2506017-006, Question 1, GIS geodatabase file “*WEMA_RequestedData.gdb*” (Attachment 10).

⁴⁹ Liberty’s response to data request CalAdvocates-LIB-A2506017-006, Question 2 (Attachment 10).

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Figure 6:
Red Flag Warnings in Liberty NWS Zones, 2020



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1 NWS zone NVZ421 had 17 RFWs in 2020. This is much higher than the
2 neighboring zones to the southwest (2 Warnings) and west (6 Warnings), where the
3 western section of the Eastern Sierras are. The Lake Tahoe basin also has fewer RFWs
4 (with 11). Mono County to the southeast (16 Warnings) and western Nevada to the north
5 (18 Warnings) also have high counts for RFWs. The differences in RFW levels indicate
6 the Walker/Topaz Lake valley is similar with respect to wind conditions to the rest of
7 Mono County to the south and qualitatively different from Lake Tahoe.

8 **2. Wind Gust History from Slink to Mountain View**

9 Wind speeds and gusts for November 17, 2020, were known to be high ahead of
10 time, with the NWS issuing a high wind warning on the morning of the 17th.^{50, 51} Liberty
11 explains that: “[t]he higher the wind gust, the higher the likelihood that a hazard such as
12 animal or debris contact or conductor contact may occur.”⁵²

13 Figure 7 below shows the maximum wind gusts recorded each day, from August
14 28, 2020, to December 1, 2020, by four weather stations near the Mountain View Fire
15 ignition point.^{53, 54} Each weather station time series data is plotted as its own timeline,
16 and the time periods during which the Slink and Mountain View Fires started and became
17 contained are colored with light purple and light red backgrounds, respectively.⁵⁵ The

⁵⁰ “Wind speed” is the average or sustained wind speed over a certain time period, while “wind gust” is a sudden and brief peak in wind speed reaching a maximum instantaneous speed during a shorter time period. The National Weather Service typically measures wind gust in 3-second time periods. National Weather Service, “National Digital Forecast Database Definitions,” <https://graphical.weather.gov/supplementalpages/definitions.php>, accessed December 7, 2025 (Attachment 20).

⁵¹ Ex. Liberty-03 at 40, fn. 47.

⁵² Ex. Liberty-03 at 37.

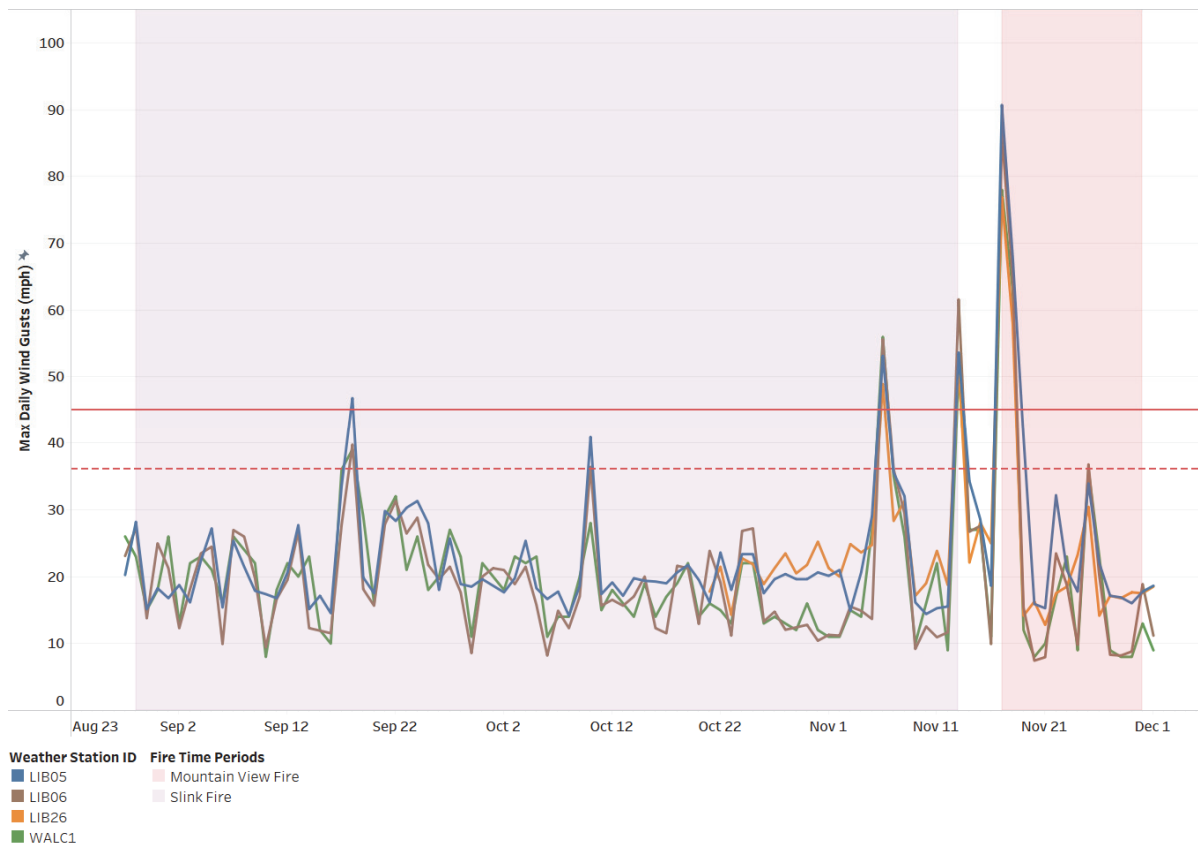
⁵³ University of Utah, MesoWest, <https://mesowest.utah.edu/>, accessed December 7, 2025 (Attachment 21).

⁵⁴ The four weather stations are LIB05 Park Ranch, LIB06 Walker, LIB26 Eastside Lane, and WALC1 Walker RAWS. LIB05, LIB06, and LIB26 are Liberty’s weather stations on the Topaz Circuit. WALC1 RAWS is the nearest public weather station operating since April 2001 and referenced in Liberty’s response to data request CalAdvocates-LIB-A2506017-006, Question 4, September 5, 2025 (Attachment 10).

⁵⁵ CAL FIRE (Attachment 9).

1 solid and dashed red lines represent 100% and 80%, respectively, of Liberty’s de-
2 energization threshold (45 mph) for Public Safety Power Shutoff on the Topaz
3 distribution circuit.⁵⁶

5 **Figure 7:**
6 **Max Daily Wind Gusts per Weather Station, Slink and Mountain View Fires**

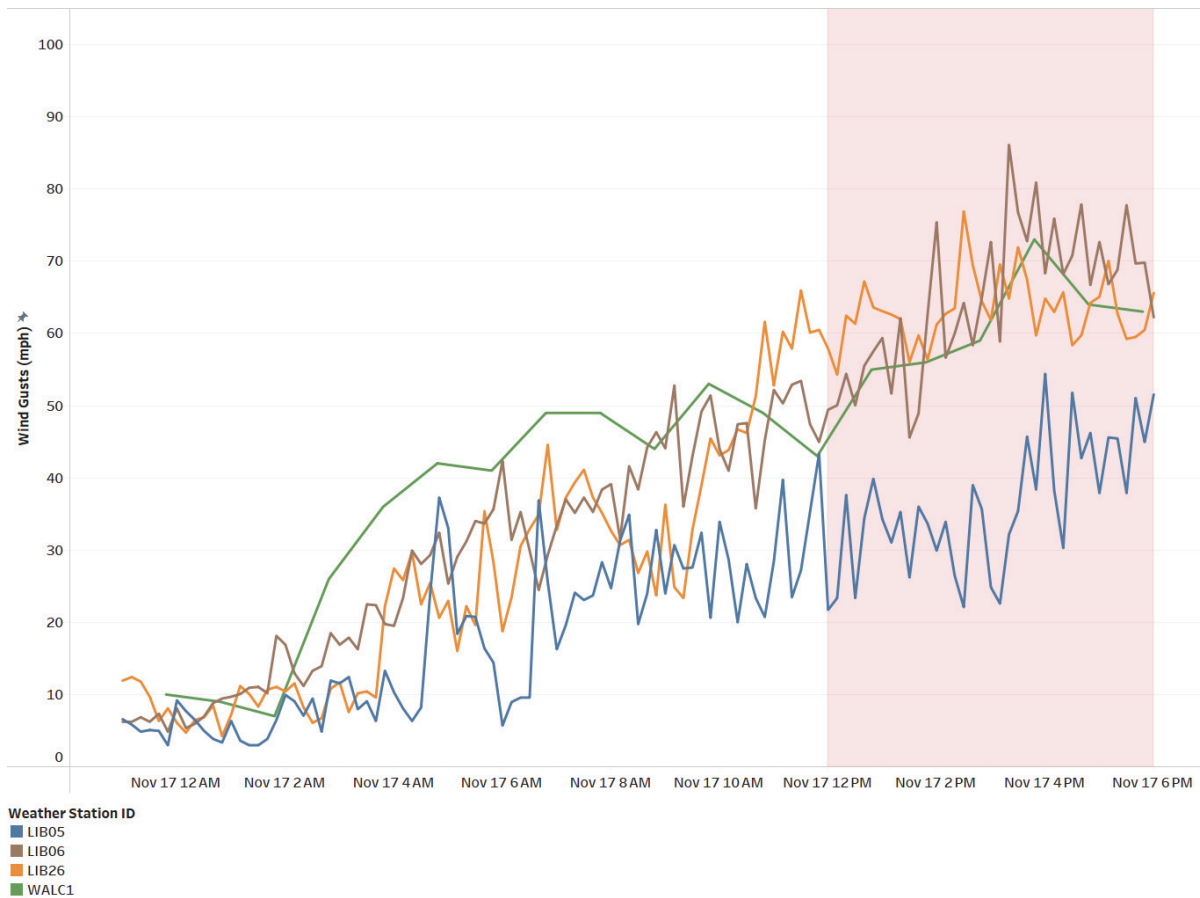


9 Figure 7 shows that the wind gusts on November 17, 2020, were the highest
10 recorded since the end of August, higher than any wind gusts measured during the Slink
11 Fire. The last Red Flag Warning issued before the Mountain View Fire, on November 6,
12 2020, can be identified by the last spike of wind gusts during the Slink Fire period (not
13 the spike on November 13, the last day of the Slink Fire).

⁵⁶ Ex Liberty-03 at 39.

Figure 8 below is a similar wind gusts plot for November 17, 2020, the day the Mountain View Fire started. Wind gust measurements from the same four weather stations in Figure 7 are again plotted as their own lines: Liberty's weather stations (LIB05, LIB06, and LIB26) record wind gust data every ten minutes, and the public weather station (WALC1) records gusts every hour.⁵⁷ The Mountain View Fire time period (starting at approximately 11:58 AM) is colored with light red background.⁵⁸

**Figure 8:
Wind Gusts per Weather Station, Day of Mountain View Ignition**



⁵⁷ MesoWest (Attachment 21).

⁵⁸ Ex. Liberty-02 at 1.

Figure 8 shows that the recorded wind gusts steadily increased throughout the morning of November 17. The weather station nearest to the ignition point measured a wind gust of 57.89 mph at 12:00 PM (LIB26).⁵⁹ The other wind gust measurements near the time of ignition are 49.44 mph (LIB06 at 12:00 PM), 43.02 mph (WALC1 at 11:50 AM), and 21.72 mph (LIB05, the farthest station, at 12:00 PM).

Table 3 below compares the wind gust measurements from the day of ignition, November 17, with those from the latest RFW day, November 6.⁶⁰ The wind gusts at the start of the RFW period and the maximum recorded wind gusts during the warning period are listed for each weather station. The times during the morning of November 17 when those wind gusts (starting speed and maximum speed) are matched or exceeded are listed for each weather station. For example, LIB05 recorded a 33.4-mph wind gust at the start of the RFW period on November 6. On November 17, the time when LIB05 first records a 33.4-mph or faster wind gust is at 4:50 AM.

**Table 3:
Last RFW Day Versus Ignition Day Wind Gusts per Weather Station**

Date	Threshold	LIB05	LIB06	LIB26	WALC1
11/06/2020 (RFW Day)	Wind gust at 6:00 (at RFW start)	33.4 mph	16.78 mph	16.89 mph	35.99 mph (at 5:48)
	Max wind gust (during RFW period)	52.9 mph	55.63 mph	48.92 mph	55.99 mph
11/17/2020 (Ignition Day)	Time when wind gust first matches/exceeds RFW start	37.27 mph at 04:50	18.12 mph at 01:50	22.24 mph at 03:50	35.99 mph at 03:48
	Time when wind gust first matches/exceeds RFW max	54.40 mph at 16:00	57.51 mph at 12:50	51.29 mph at 10:40	55.99 mph at 13:48

Table 3 illustrates the steady increasing trend of wind gusts on the morning of November 17. Wind gusts on November 17 matched the start of the November 6 RFW

⁵⁹ MesoWest (Attachment 21).

⁶⁰ MesoWest (Attachment 21).

winds early in the morning, hours before ignition. The weather station nearest the ignition point, LIB26, measured a wind gust of 51.29 mph at 10:40 AM, which exceeds the maximum wind gust measured during the RFW period. This time is highlighted in light orange in Table 3.

The wind gusts measured at the time of the Mountain View Fire ignition can be compared to wind gusts of all the RFW periods in 2020. Figures 9 to 11 below show, for every RFW in 2020 measured by the weather stations LIB05, LIB06, and WALC1, the following features:⁶¹

- Wind gust measurements (red circles).⁶²
- Average wind gust during each Red Flag Warning period (red bars).
- Wind gust measurement at time of Mountain View Fire ignition: 21.72 mph for LIB05, 49.44 mph for LIB06, and 43.02 mph for WALC1 (dashed green lines).

Figures 9 to 11 show that the wind gusts at ignition exceeded the average wind gust of each RFW, with only two exceptions (both of which were the November 6 RFW). This suggests that the wind risk on November 17 was comparable to the wind risk during most of the RFWs in 2020.

⁶¹ Iowa Environmental Mesonet (Attachment 16).

⁶² MesoWest (Attachment 21). The LIB26 and F1750 weather stations were operational for only the last RFW on November 6, 2020.

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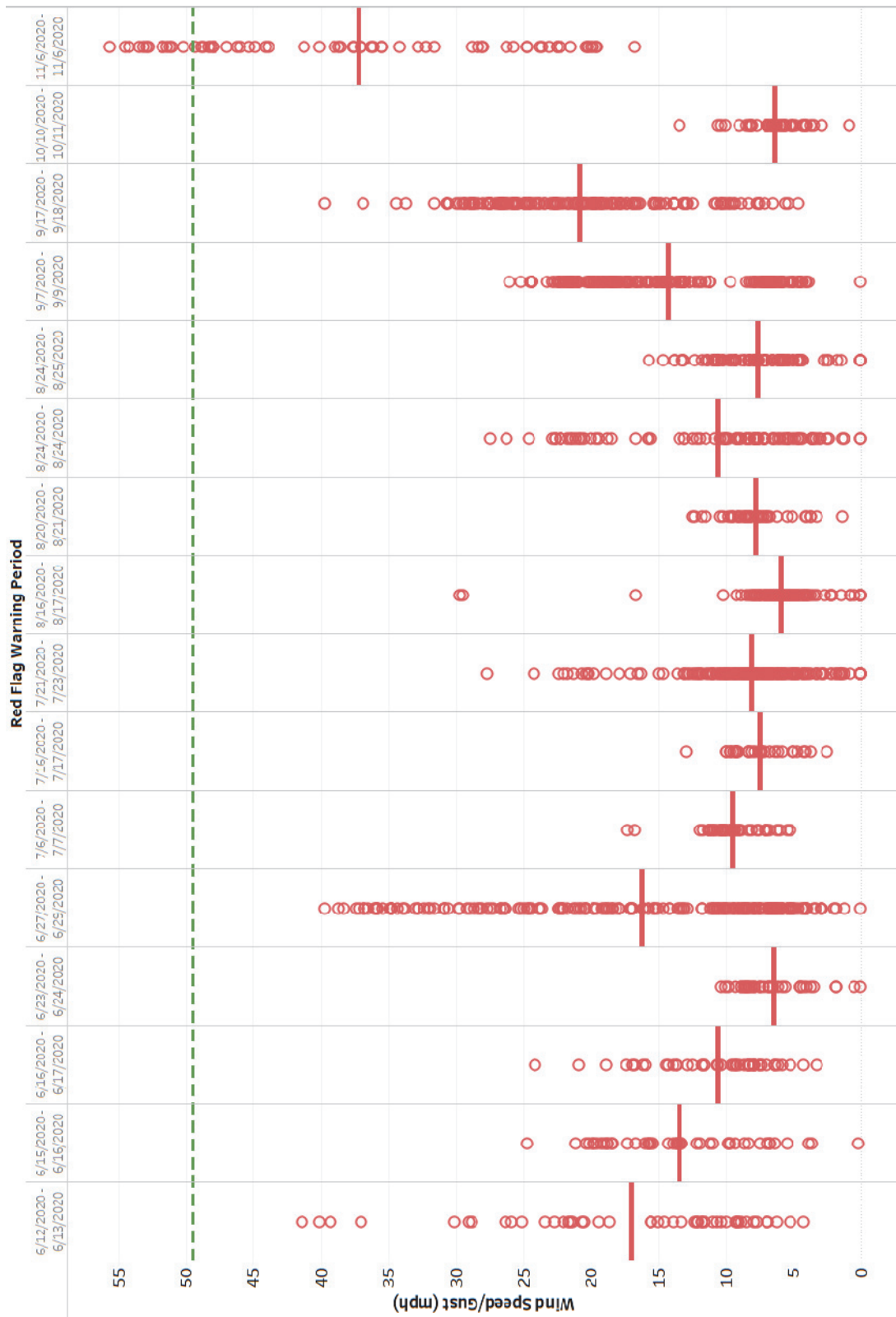
Figure 9:
Wind Speeds/Gusts in Red Flag Warning Days, 2020 (LIB05 Park Ranch)



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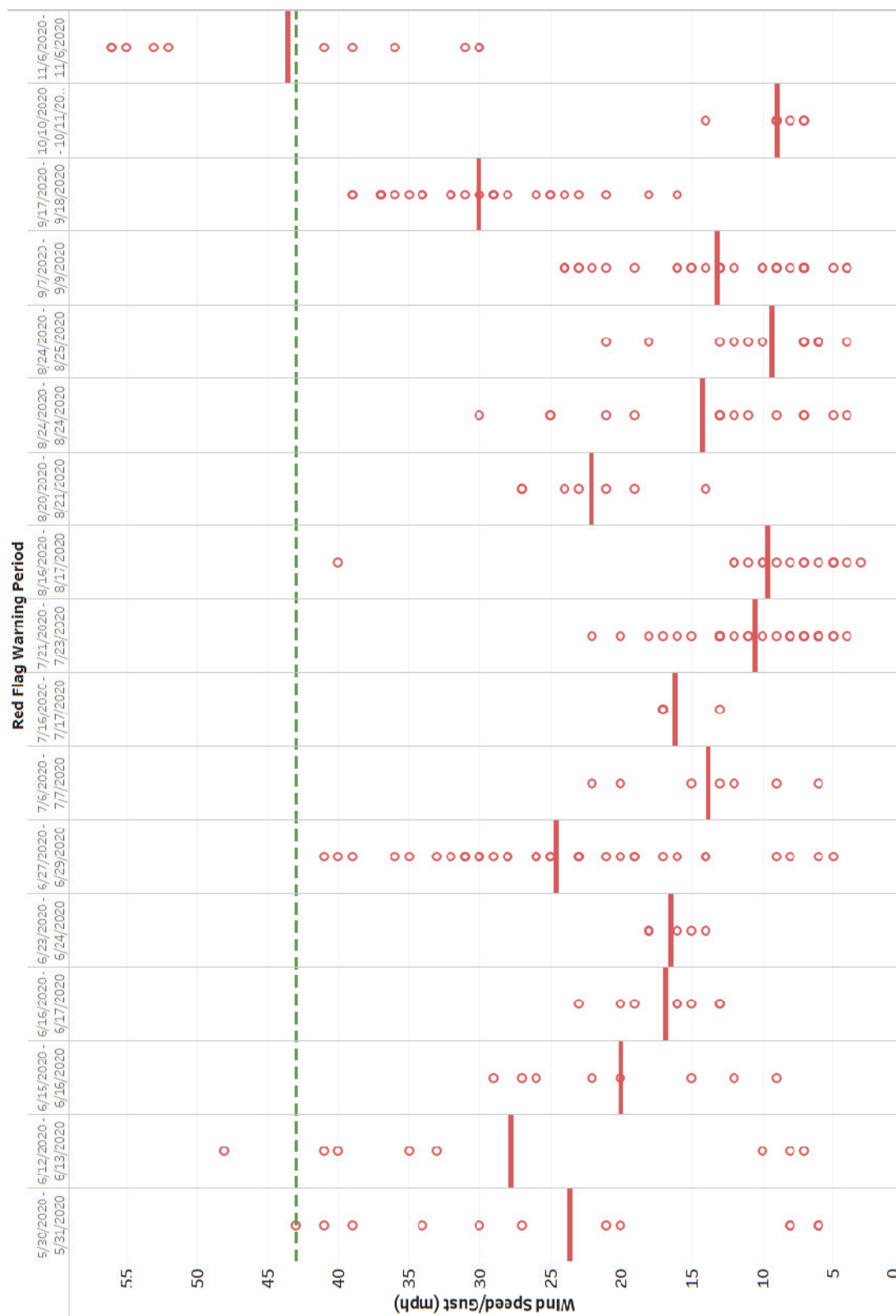
Figure 10:
Wind Speeds/Gusts in Red Flag Warning Days, 2020 (LIB06 Walker)



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A-25



3. Precipitation History of Mountain View Area

Liberty states that it deactivated fire mode/non-reclose mode on its automatic reclosers on Topaz Circuit by November 11, 2020, before the Slink Fire was fully contained or the Mountain View Fire ignited, because NWS briefings assessed “fire risk as low, given the more favorable moisture content” and Liberty anticipated winter storms would enhance those conditions.⁶³

Figures 12 and 13 below are cumulative precipitation maps from August 1 to November 16, 2020, modeled by the PRISM Climate Group. The PRISM Group processes precipitation and temperature data from over 25,000 federal, state, and regional stations through its Parameter-elevation Regressions on Independent Slopes Model (PRISM) to create a continuous weather map across the country, including places not covered by weather stations.⁶⁴ Figure 12 shows cumulative precipitation levels throughout Liberty’s service territory; Figure 13 shows the same levels within 10 miles of five weather stations near the Mountain View Fire ignition point. Specific features are:

- Liberty service territory (yellow outline).⁶⁵
- Liberty’s Topaz circuit (green lines).⁶⁶
- Mountain View Fire ignition point (yellow dot).⁶⁷
- Weather stations near ignition point (purple dots).⁶⁸

⁶³ Ex. Liberty-03 at 41 and 42.

⁶⁴ PRISM Climate Group, “PRISM Time Series Data,” <https://prism.oregonstate.edu/data/>, accessed December 7, 2025 (Attachment 22).

⁶⁵ California Energy Commission (Attachment 8).

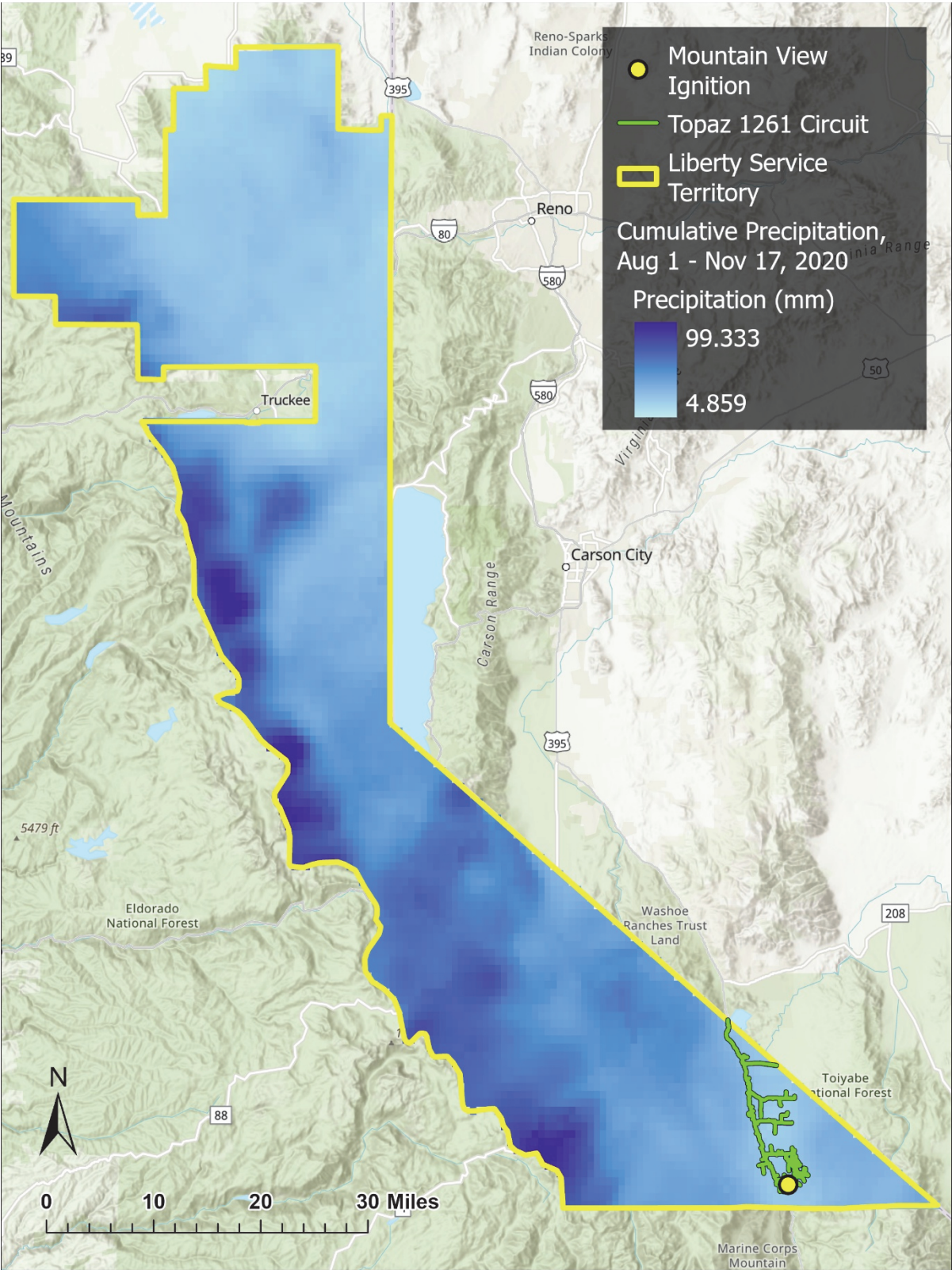
⁶⁶ Liberty’s response to CalAdvocates-LIB-A2506017-006, Question 1, GIS geodatabase file “WEMA_RequestedData.gdb” (Attachment 10).

⁶⁷ Liberty’s response to CalAdvocates-LIB-A2506017-006, Question 2 (Attachment 10).

⁶⁸ Coordinates of Liberty’s weather stations (LIB05, LIB06, LIB26) from Liberty’s response to data request CalAdvocates-LIB-A2506017-006, Question 3, September 5, 2025, Excel spreadsheet file “CalAdvocates-LIB-A2506017-006-Q3.xlsx” (Attachment 23). Coordinates of F1750 Coleville and Walker RAWS stations from MesoWest (Attachment 21).

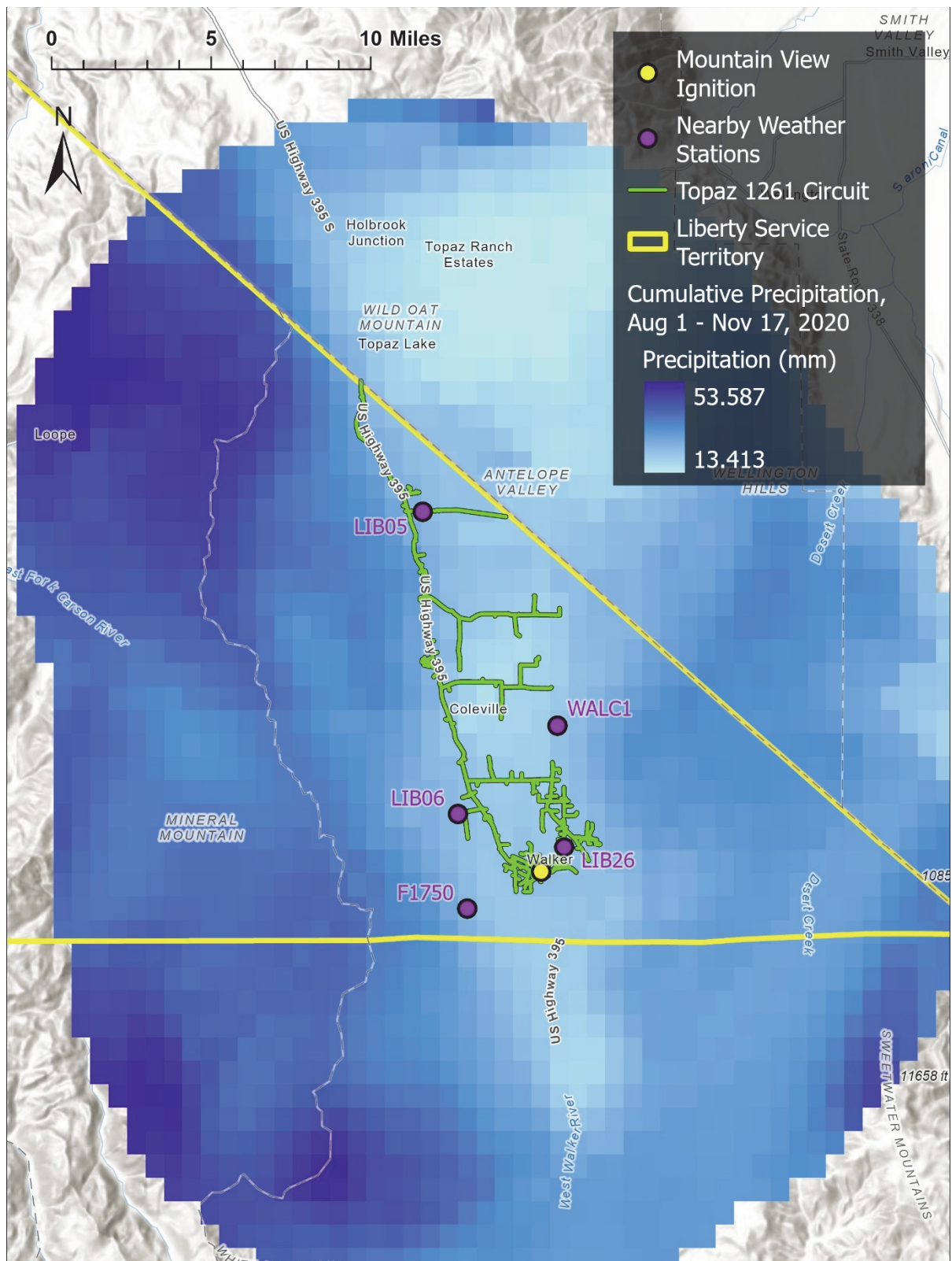
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Figure 12:
Modeled Cumulative Precipitation, Liberty Service Area, Aug 1 – Nov 17 (PRISM)



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Figure 13:
Modeled Cumulative Precipitation, Topaz Circuit Area, Aug 1 – Nov 17 (PRISM)



Figures 12 and 13 show that the Walker/Topaz Lake valley area, including the Topaz Circuit, receives much less precipitation than the sheltering mountains surrounding it. The PRISM model estimates the cumulative precipitation for weather station and Mountain View Fire ignition locations as shown in Table 4.⁶⁹ Table 4 shows that the cumulative precipitation levels at those point locations are modeled to be the low end of the spectrum.

Table 4:
Modeled Cumulative Precipitation, Specific Grid Locations, Aug 1 – Nov 17 (PRISM)

Location	Cumulative Precipitation (mm)	Cumulative Precipitation (in)
F1750 Coleville	24.096	0.949
LIB05 Park Ranch	23.187	0.913
LIB06 Walker	22.582	0.889
LIB26 Eastside Lane	20.793	0.819
WALC1 Walker RAWS	21.945	0.864
Ignition Point	21.304	0.839

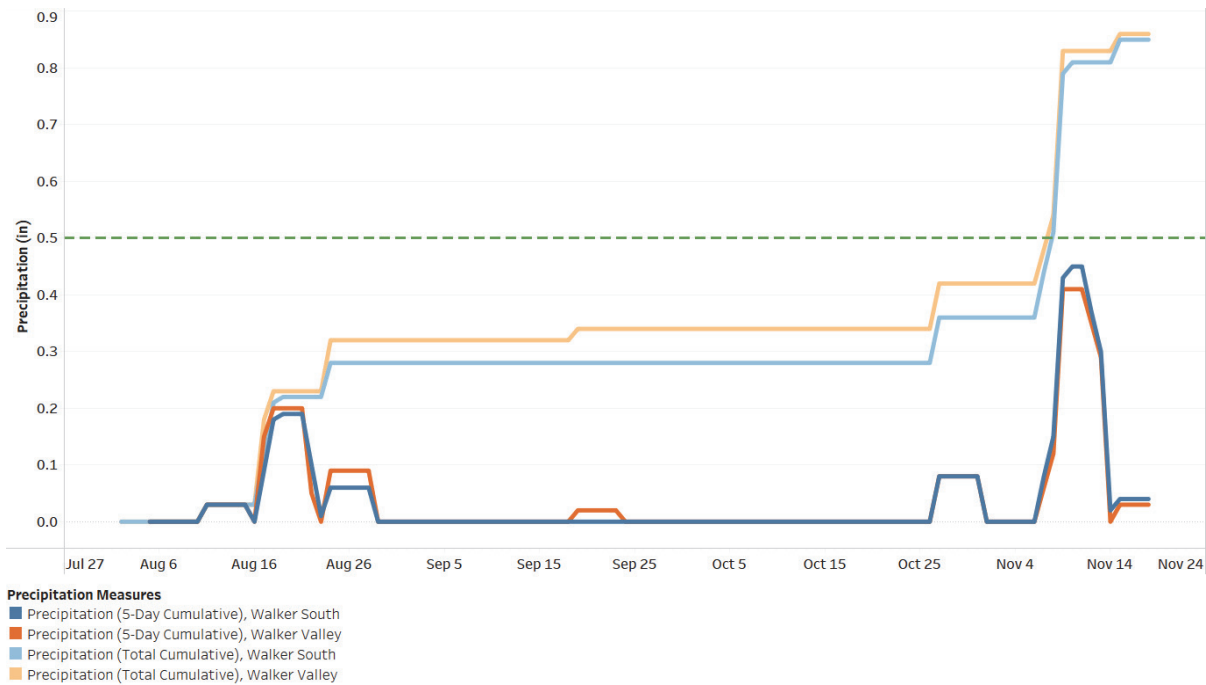
Cumulative precipitation levels depend on the period chosen for measurement; longer periods potentially accumulate more precipitation. A more normalized criterion for fire stopping weather is 0.5 inches of rain accumulated in five days or fewer.⁷⁰ Five-day cumulative precipitation data from the PRISM weather model and the National Operational Hydrologic Remote Sensing Center (NOHRSC) for August 1 to November

⁶⁹ PRISM Climate Group (Attachment 22).

⁷⁰ National Wildfire Coordinating Group, “Weather: Fire Season Climatology,” <https://www.nwcg.gov/publications/pms437/weather/fire-season-climatology>, accessed December 7, 2025 (Attachment 24).

16 are plotted below in Figures 14 and 15, respectively.^{71, 72} The 0.5-inch criteria is visualized as dotted green lines.

**Figure 14:
Total and 5-Day Cumulative Precipitation per 4-km Walker Block (PRISM)**



The PRISM model has spatial data for the United States at a resolution of 800-meter grid cells grouped into 4-kilometer blocks (5x5 grid cells). The Mountain View Fire ignition point lies at the boundary between two blocks. Figure 14 shows the PRISM-modeled cumulative precipitation for the 4-kilometer block that contains the ignition point (Walker South) and the 4-kilometer block just north of the ignition, which also contains the nearest weather station LIB26 (Walker Valley).⁷³ The five-day running total

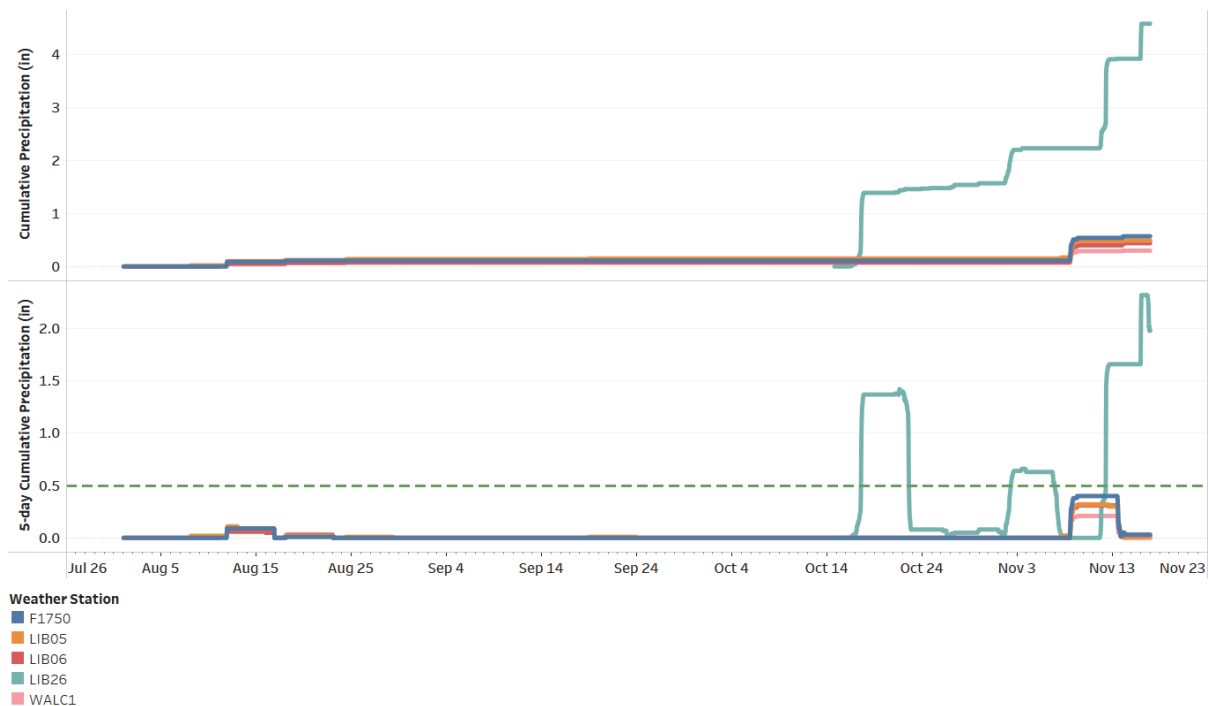
⁷¹ PRISM Climate Group, “Time Series Values for Individual Locations,” <https://prism.oregonstate.edu/explorer/>, accessed December 7, 2025 (Attachment 25).

⁷² NOHRSC, “Interactive Snow Information,” <https://www.nohrsc.noaa.gov/nearest/index.html>, accessed December 7, 2025 (Attachment 26).

⁷³ The WALC1 RAWS weather station lies just north of the Walker Valley block.

for precipitation never exceeds the 0.5-inch fire-damping threshold, and there is minimal precipitation in September and October.

Figure 15:
Total and 5-Day Cumulative Precipitation per Weather Station (NOHRSC)



The NOHRSC tracks snowfall and rainfall information through weather station observations and models areas without station coverage. Figure 15 shows the NOHRSC-modeled cumulative precipitation for the five weather stations near the ignition point. Four weather stations never exceed the 0.5-inch threshold for five-day cumulative precipitation, although LIB26 does three times in mid-October and November.

The LIB26 NOHRSC-modeled precipitation appears inconsistent with the other stations, however, as the LIB26 station experiences a trough in precipitation accumulation during the November 7-10 snowfall seen in the other stations. Liberty notes that photographs of LIB05 and LIB06 taken on November 10, 2020, reveal snow

1 cover on the ground.⁷⁴ Liberty reports that NWS data showed its Minden, Nevada
2 station, 35 miles northwest of Walker, reported 12 inches of snow on November 8,
3 2020.⁷⁵ In fact, Liberty mentions that the first snowfall in the Tahoe region “traditionally
4 marked the end of the fire season in the area.”⁷⁶

5 However, weather patterns for the Lake Tahoe basin do not necessarily apply to
6 the Walker and Topaz area. Figure 16 below plots the snow depth at five weather stations
7 near the ignition point from November 1 to November 16, 2020.⁷⁷ The snow depths
8 increased due to snowfall on November 8 and 9 but dropped quickly such that snow
9 cover disappeared by November 14, three days before the Mountain View Fire.

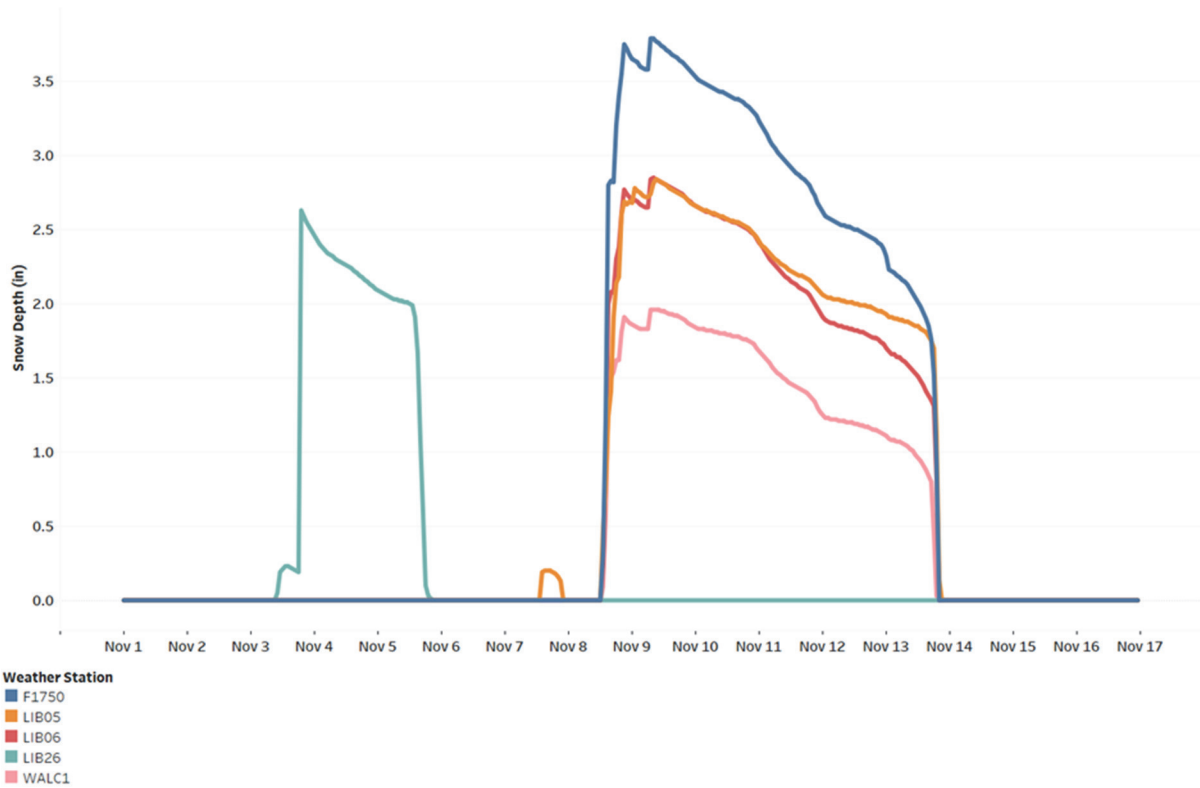
⁷⁴ Ex. Liberty-03 at 41-42.

⁷⁵ Minden in Nevada is much closer to the Tahoe basin than to Walker. Ex. Liberty-03 at 41.

⁷⁶ Ex. Liberty-03 at 41.

⁷⁷ NOHRSC (Attachment 26).

**Figure 16:
Snow Depth per Weather Station, Nov 1 - 16 (NOHRSC)**



III. Risk Events on Topaz Circuit

This section of testimony presents information about risk events that occurred on the Topaz distribution circuit or nearby during the period of January 1, 2016 up to November 16, 2020. Risk events are abnormal, adverse outcomes that may create safety hazards.⁷⁸ These include unplanned outages, wire-down events, and ignitions.

⁷⁸ See, for example, Office of Energy Infrastructure Safety, *2023-2025 Wildfire Mitigation Plan Technical Guidelines*, December 7, 2022, Appendix A: Definitions, at A-15 to A-16, <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=2023-2025-WMPs>, accessed December 7, 2025 (Attachment 27).

A. Outages: Windspeeds and Map

Following receipt of amendment to CalAdvocates-LIB-A2506017-001, outages identified by Liberty went from 129 to 181 outages (planned went down from 41 to 40, and unplanned went up from 88 to 141) that occurred on the Topaz Circuit between January 1, 2010, and November 16, 2020.⁷⁹ Table 5 below lists the Topaz Circuit outages during Red Flag Warnings before the fire from 2016 to 2020 that were listed in Liberty's original response to CalAdvocates-LIB-A2506017-001.^{80, 81}

**Table 5:
Outage Incidents on Topaz Circuit During RFWs, 2016-2020**

Event ID	Outage Start	Outage Cause	Outage Duration (mins)	Nearest Station	Wind Gust (mph)	RFW Start	RFW End
7067	10/14/2016 7:31:23	3rd Party Outage	103	WALC1	44.0	10/13/2016 21:00:00	10/15/2016 0:00:00
7091	10/14/2016 10:59:38	3rd Party Outage	240	WALC1	52.0	10/13/2016 21:00:00	10/15/2016 0:00:00
17187	10/20/2017 0:18:09	Unknown	101	WALC1	52.0	10/19/2017 15:00:00	10/20/2017 3:00:00
17188	10/20/2017 2:10:45	Unknown	84	WALC1	57.0	10/19/2017 15:00:00	10/20/2017 3:00:00
24277	9/16/2019 13:04:37	Tree - Broken Limb	495	LIB05	48.9	9/15/2019 21:00:00	9/17/2019 1:00:00
24279	9/16/2019 18:03:30	Flying Debris	112	WALC1	31.0	9/15/2019 21:00:00	9/17/2019 1:00:00

Table 5 shows that during the years prior to the Mountain View Fire, Red Flag Warnings were associated with six outages on the Topaz circuit (therefore, 82 unplanned

⁷⁹ Liberty's amended response to data request CalAdvocates-LIB-A2506017-001, Question 12, December 9, 2025, Excel spreadsheet file "CalAdvocates-LIB-A2506017-001-Q12_Amended.xlsx" (Attachment 28A).

⁸⁰ Liberty's response to data request CalAdvocates-LIB-A2506017-001, Question 12, September 10, 2025, Excel spreadsheet file "CalAdvocates-LIB-A2506017-001-Q12.xlsx" (Attachment 28).

⁸¹ Iowa Environmental Mesonet (Attachment 16).

outages occurred outside Red Flag Warning periods between 2016 and 2020). Five incidents correlated with wind gusts measured faster than 43.02 mph, which was the wind gust at ignition time recorded by the WALC1 station.

Following receipt of amendment to CalAdvocates-LIB-A2506017-001, Table 5 Revised below lists the amended outages on the Topaz circuit during Red Flag Warnings from 2010 to 2020.⁸² There were seven outages, an increase of one from the pre-amended list. Notably, four of the seven outages were caused by wire or tree/vegetation contact.

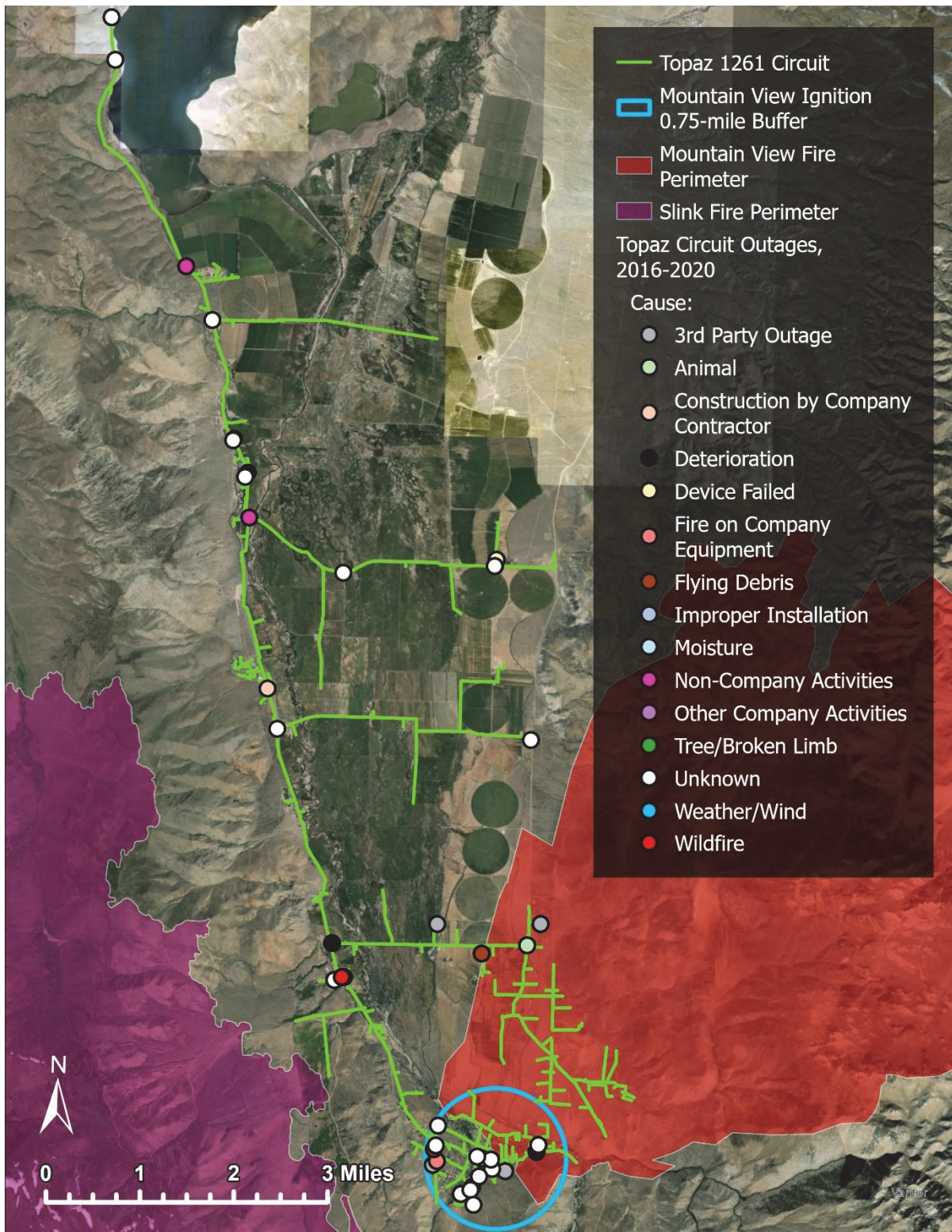
**Table 6 Revised:
Outage Incidents on Topaz Circuit During RFWs, 2010-2020**

Event ID	Outage Start	Outage Cause	Outage Duration (mins)	Nearest Station	Wind Gust (mph)	RFW Start	RFW End
7067	10/14/2016 7:31:23	Wire Contact	103	WALC1	44.0	10/13/2016 21:00:00	10/15/2016 0:00:00
7091	10/14/2016 10:59:38	External System	240	WALC1	52.0	10/13/2016 21:00:00	10/15/2016 0:00:00
7095	10/14/2016 15:17:00	External System	13	WALC1	38.0	10/13/2016 21:00	10/15/2016 0:00
17187	10/20/2017 0:18:09	Wire Contact	101	WALC1	52.0	10/19/2017 15:00:00	10/20/2017 3:00:00
17188	10/20/2017 2:10:45	Trees	84	WALC1	57.0	10/19/2017 15:00:00	10/20/2017 3:00:00
24277	9/16/2019 13:04:37	Trees	495	LIB05	48.9	9/15/2019 21:00:00	9/17/2019 1:00:00
24279	9/16/2019 18:03:30	Flying Debris	112	WALC1	31.0	9/15/2019 21:00:00	9/17/2019 1:00:00

⁸² Liberty's amended response to CalAdvocates-LIB-A2506017-001, Question 12 (Attachment 28A).

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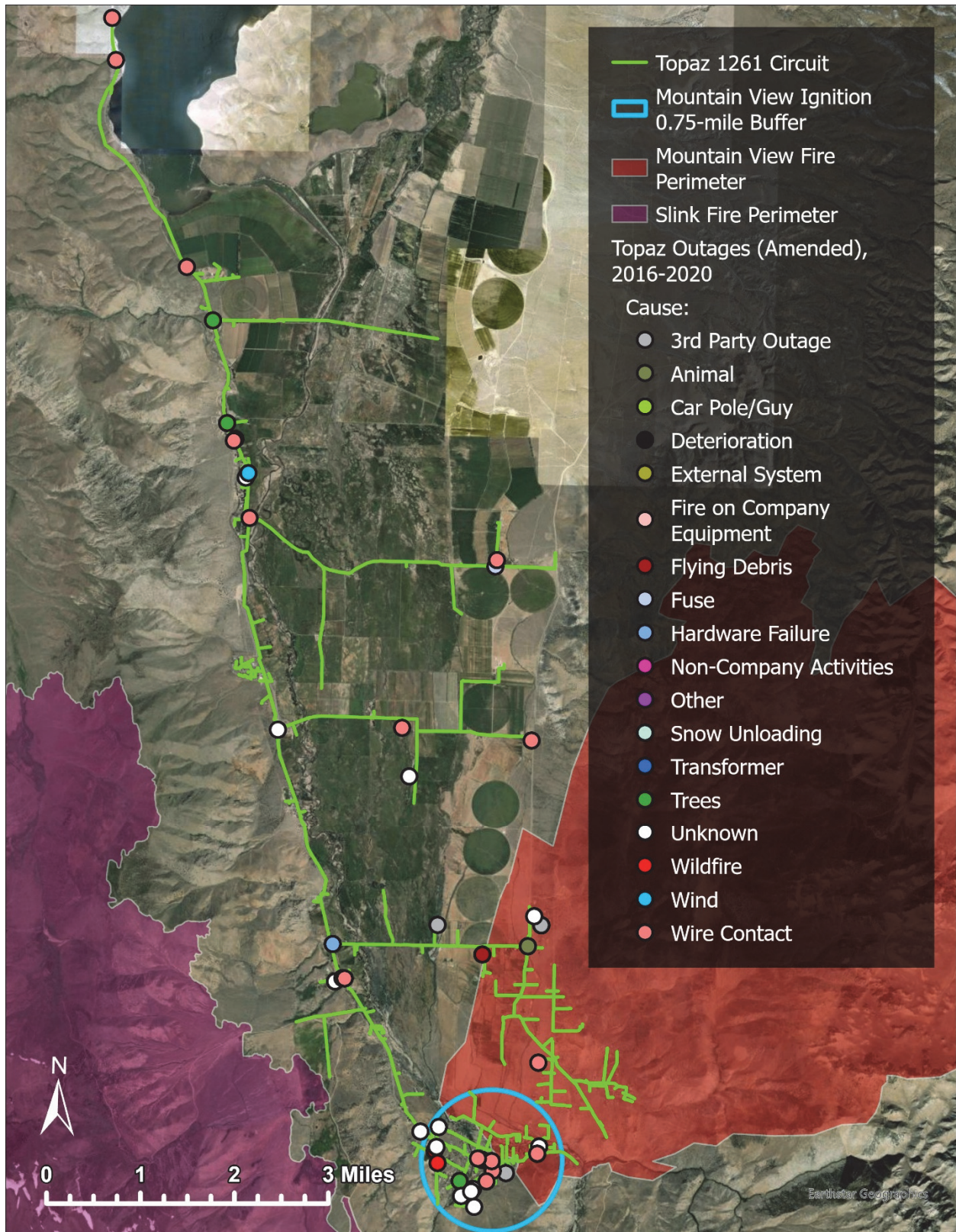
Figure 17:
Topaz Circuit Unplanned Outages, 2016-2020



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Figure 18
Topaz Circuit Unplanned Outages (Amended), 2016-2020



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1 Of the 141 unplanned outages since 2010, Liberty has spatial coordinates for 88 of
2 them, all occurring in the period 2016 to 2020.⁸³ Figure 17 Revised maps these 88
3 unplanned outages with known coordinates (as various colored dots for different causes)
4 on the Topaz Circuit (green lines).⁸⁴ ⁸⁵ The Slink Fire (purple) and Mountain View Fire
5 (red) perimeters are also mapped.⁸⁶ Of the 88 mapped unplanned outages, 21 outages (or
6 rather, the associated protection devices) were located within 0.75 miles of the Mountain
7 View Fire ignition.

8 Table 6 lists the 88 total unplanned outages from 2016 to 2020 by cause.⁸⁷
9 Following receipt of amendment to CalAdvocates-LIB-A2506017-001, Table 6 Revised
10 lists the amended 141 unplanned outages from 2010 to 2020 with the amended cause
11 categories.⁸⁸ Based on the new information provided by Liberty, multiple new categories
12 were added, including “External System,” “Fuse,” “Hardware Failure,” and “Wire
13 Contact” categories.⁸⁹ Additionally, there were increases in “Tree” outages from two to
14 ten, “Weather - Wind” from one to three, and “Wildfire” from one to three.

⁸³ Liberty’s amended response to CalAdvocates-LIB-A2506017-001, Question 12 (Attachment 28A).

⁸⁴ Liberty’s amended response to CalAdvocates-LIB-A2506017-001, Question 12 (Attachment 28A).

⁸⁵ Liberty’s response to data request CalAdvocates-LIB-A2506017-006, Question 1, GIS geodatabase file “*WEMA_RequestedData.gdb*” (Attachment 10).

⁸⁶ CAL FIRE (Attachment 9).

⁸⁷ Liberty’s response to data request CalAdvocates-LIB-A2506017-001, Question 12 (Attachment 28).

⁸⁸ Liberty’s amended response to CalAdvocates-LIB-A2506017-001, Question 12 (Attachment 28A).

⁸⁹ For convenience, certain cause categories added by Liberty are consolidated as mapped in Figure 17 Revised and listed in Table 6 Revised. Among others, these consolidations include: “Cutout,” “Cutout/Other,” “Device Failed,” “Hardware Fail,” “Hardware Failure,” “Hardware/Material,” and “Hardware/Material/Other” as “Hardware Failure”; “Range Fire” and “Wildfire” as “Wildfire”; “Tree - Broken Limb,” “Trees” and “Trees/Structure Down” as “Trees”; “Weather - wind” and “Wind” as “Weather/Wind”; and “Snow Unloading/Wire Down,” “Wire Down,” and “Wire Slapping” as “Wire Contact.”

Table 7:
Causes of Unplanned Outages on Topaz Circuit, 2016-2020

Outage Cause	Count
Unknown	39
3rd Party Outage	13
Animal	2
Construction by Contractor	2
Deterioration	8
Device Failed	7
Fire on Company Equipment	2
Flying Debris	2

Outage Cause	Count
Improper Installation	1
Moisture	2
Non-Company Activities	5
Other Company Activities	1
Tree - Broken Limb	2
Weather - Wind	1
Wildfire	1

Table 8 Revised:
Causes of Unplanned Outages on Topaz Circuit (Amended), 2010-2020

Outage Cause	Count
Unknown	41
3rd Party Outage	8
Animal	3
Car Pole/Guy	3
Deterioration	2
External System	8
Fire on Company Equipment	1
Flying Debris	2
Fuse	7

Outage Cause	Count
Hardware Failure	10
Non-Company Activities	1
Other Company Activities	2
Snow Unloading	4
Transformer	3
Tree	10
Weather/Wind	3
Wildfire	3
Wire Contact (Down/Slap)	30

B. Wires Down: Windspeeds

Following receipt of amendment to CalAdvocates-LIB-A2506017-001, wires down events recorded by Liberty increased from three to six different wire-down incidents on the Topaz Circuit from 2016 to November 16, 2020.⁹⁰ None of these wire-down events occurred during a Red Flag Warning event. However, two events seem to

⁹⁰ Liberty's amended response to data request CalAdvocates-LIB-A2506017-001, Question 11, December 9, 2025, Excel spreadsheet file "*CalAdvocates-LIB-A2506017-001-Q11_Amended.xlsx*" (Attachment 29A).

have occurred during a time of high winds. Table 7 below lists the three wire-down incidents that occurred on the Topaz Circuit from Liberty's original response to CalAdvocates-LIB-A2506017-001, with key information about each incident.²¹ Table 7 Revised lists the amended wire-down incidents.²²

**Table 9:
Wires Down on Topaz Circuit, 2016-2020**

Event ID	Datetime	Cause	Nearest Station	Wind Gust (mph)	Gust Datetime	RFW in Effect?
7710	12/24/2016 7:55:49	Tree Fell	WALC1	11.01	12/24/2016 7:48:00	No
12711	1/23/2017 16:59:00	Unknown	WALC1	13.00	1/23/2017 16:48:00	No
13401	2/9/2017 14:56:35	Unknown	WALC1	72.01	2/9/2017 14:48:00	No

**Table 10 Revised:
Wires Down on Topaz Circuit (Amended), 2016-2020**

Event ID	Datetime	Cause	Nearest Station	Wind Gust (mph)	Gust Datetime	RFW in Effect?
597	12/29/2015 15:03	Wire Down	WALC1	8.01	12/29/2015 14:48	No
7430	11/19/2016 16:31	Wire Down	WALC1	59.01	11/19/2016 16:48	No
7710	12/24/2016 7:55:49	Tree Fell	WALC1	11.01	12/24/2016 7:48:00	No
12693	1/23/2017 14:30	Wire Down	WALC1	18.99	1/23/2017 14:48	No
12711	1/23/2017 16:59:00	Unknown	WALC1	13.00	1/23/2017 16:48:00	No
13401	2/9/2017 14:56:35	Hardware/ Material	WALC1	72.01	2/9/2017 14:48:00	No

²¹ Liberty's response to data request CalAdvocates-LIB-A2506017-001, Question 11, September 10, 2025, Excel spreadsheet file "*CalAdvocates-LIB-A2506017-001-Q11.xlsx*" (Attachment 29).

²² Liberty's amended response to CalAdvocates-LIB-A2506017-001, Question 11 (Attachment 29A).

1 IV. CONCLUSION

2 In its consideration of external factors on its operations, Liberty seems to rely
3 heavily on NWS forecasts and its third-party consultant rather than building its own
4 procedures. Compared to the larger investor-owned utilities in California, Liberty could
5 be seen to have less wildfire risk given the fewer fires in its service territory's history and
6 the proportionally smaller HFTD Tier 3 area. However, lower risk is still risk. The
7 Commission classified HFTD Tier 2 areas as having elevated risk requiring enhanced
8 regulations, and the majority of Liberty's service territory remains HFTD Tier 2. Liberty
9 should have been on alert given that the Slink Fire had been contained just days before
10 the Mountain View Fire ignited. Liberty had the good fortune that the Slink Fire ignited
11 on nonresidential land away from Liberty's powerlines and merely threatened to
12 encompass Walker and Coleville.

13 Additionally, Liberty seems to conflate environmental assessments (from NWS or
14 otherwise) about the Tahoe basin or the western Eastern Sierras with everywhere else in
15 its service territory. The differences in Red Flag Warnings and precipitation levels, as
16 well as the historic wildfire locations, indicates that the southern portion of Liberty's
17 territory encompassing Walker and the Topaz Lake valley has different risk factors and
18 thresholds than the Tahoe basin. The reorganization of NWS forecast zones to split the
19 southern half of CAZ273 into its own zone (or at least, away from the Tahoe basin and
20 combined with the rest of Mono County) supports this distinction between Tahoe and
21 Topaz.

22 Liberty's own weather station wind data reveals that the morning of November 17
23 had worse wind gusts than any Red Flag Warning winds of the year. Given the clear
24 warnings about wind, Liberty's main defense is that fuel and soil moisture levels from
25 expected precipitation would be sufficient to prevent any ignitions. However, the Walker
26 region receives much less precipitation than the Tahoe basin and the mountain ranges

- 1 surrounding Walker, and the rapid snow melt shows that fuel moisture quickly changed
- 2 for the worse, as small fuels such as grass can quickly lose moisture.^{93, 94}

⁹³ National Wildfire Coordinating Group, “Weather and Fuel Moisture,” <https://www.nwcg.gov/publications/pms425-1/11-weather-and-fuel-moisture>, accessed December 7, 2025 (Attachment 30).

⁹⁴ National Oceanic and Atmospheric Administration, “Dead Fuel Moisture,” <https://www.ncei.noaa.gov/access/monitoring/dyk/deadfuelmoisture>, accessed December 7, 2025 (Attachment 31).

APPENDIX A
QUALIFICATIONS OF WITNESS

1 **PREPARED TESTIMONY AND QUALIFICATIONS**
2 **OF**
3 **BENJAMIN TANG**

4 My name is Benjamin Tang. My business address is 320 West 4th Street, Suite
5 500, Los Angeles, California. I am employed by the California Public Utilities
6 Commission as a Public Utilities Regulatory Analyst (PURA) IV in the Public Advocates
7 Office, Safety Branch.

8 I earned an Associate of Science degree in Geographic Information Systems (GIS)
9 at American River College. Previously, I earned a Master of Science degree in
10 International Relations at the University of Bristol in the United Kingdom, and a Master
11 of Arts degree in Political Science at the University of California, San Diego. I also
12 earned a Bachelor of Science degree in Bioengineering, summa cum laude, at the
13 University of California, San Diego.

14 I joined the Commission in 2022 as a Research Data Specialist III in the Wildfire
15 and Safety Performance Section of the Safety Policy Division, in which role I worked on
16 wildfire safety issues. My focus was the analysis of Safety Performance Metrics
17 submitted by the major electrical investor-owned utilities in California (D.19-04-
18 020 and D.21-11-009 for A.15-05-005), and analysis of the Safety and Operational
19 Metrics required from Pacific Gas and Electric Company (PG&E) as part of the
20 Enhanced Oversight and Enforcement process instituted in PG&E's post-bankruptcy
21 proceedings (D.20-05-053). My role also included review of the annual wildfire
22 mitigation plans (WMPs) submitted by electrical investor-owned utilities.

23 I joined Cal Advocates as a PURA III in early 2024. At Cal Advocates, I work on
24 hydrogen (A.22-02-007) and long-term gas planning (R.24-09-012) issues, particularly
25 on the neighborhood decarbonization pilot projects from Senate Bill (SB) 1221 (Min;
26 Stats. 2024, Ch. 602). I support Cal Advocates' other staff with spatial and non-spatial
27 data analysis and visualization, particularly with the Powerline De-energization
28 Rulemaking (R.18-12-005), the Risk-based Decision-making Framework Rulemaking
29 (R.20-07-013) and the Expedited Undergrounding Program from Senate Bill (SB) 884

1 (McGuire; Stats. 2022, Ch. 819). Additionally, I reviewed and analyzed PG&E's WMP
2 Update for 2025.

3 In 2024, I worked on the Thomas Fire and Debris Flow Cost-Recovery
4 Application (A.23-08-013), for which I prepared testimony regarding local environmental
5 risk factors and local wind conditions of the Castro Circuit. Similarly, in 2024-2025, I
6 worked on the Woolsey Fire Cost-Recovery Application (A.24-10-002), for which I
7 prepared testimony regarding local environmental risk factors and local wind conditions,
8 this time of the Big Rock Circuit and neighboring distribution circuits.

9 Prior to joining the Commission, I worked at the California Research Bureau
10 within the California State Library on confidential policy research for the State
11 Legislature and the Governor's Office, including legislative district maps of bill-related
12 topics. Notable public GIS work includes an online dashboard for the First Partner's
13 summer reading program. I was also the sole author of four public reports submitted to
14 the State Legislature:

- 15 • On frivolous action filings, required by Assembly Bill (AB) 2494
16 (Cooley; Stats. 2014, Ch. 425)
- 17 • On California driver's licenses for undocumented residents,
18 required by AB 60 (Alejo; Stats. 2013, Ch. 524)
- 19 • Two updates on California's unlawful detainer pilot program,
20 initially created by AB 1384 (Havice; Stats. 1998, Ch. 613) and
21 amended by AB 2310 (Ridley-Thomas; Stats. 2014, Ch. 339), AB
22 2485 (Dickinson; Stats. 2014, Ch. 341), and AB 2930 (Santiago;
23 Stats. 2018, Ch. 880).

24 This concludes my statement of qualifications.

APPENDIX B
AMENDED
SUPPORTING ATTACHMENTS

Attachment #	Title	Bates No.
1	Decision D.16-05-036, <i>Decision Adopting Fire Map 1</i>	CA-03-0001
2	Decision D.17-01-009, <i>Decision Adopting Regulations to Enhance Fire Safety in the High Fire-Threat District</i>	CA-03-0041
3	Decision D.17-12-024, <i>Decision Adopting Regulations to Enhance Fire Safety in the High-Fire Threat District</i>	CA-03-0187
4	PG&E Advice Letter 5211-E and SDG&E Advice Letter 3172-E, Joint Filing – <i>Adoption of the Final California Public Utilities Commission Fire-Threat Map</i>	CA-03-0416
5	California Public Utilities Commission, High Fire-Threat District Map, “Fire-Threat Maps and Fire-Safety Rulemaking.” https://www.cpuc.ca.gov/industries-and-topics/wildfires/fire-threat-maps-and-fire-safety-rulemaking	CA-03-0427
6	Decision D.20-12-030, <i>Decision Modifying the High Fire-Threat District Boundaries in Southern California Edison Company’s Service</i>	CA-03-0432
7	Safety Enforcement Division, High Fire-Threat District Map Archive. https://files.cpuc.ca.gov/safety/fire-threat_map/	CA-03-0443
8	California Energy Commission, Open Data Portal, Administrative Boundaries Dataset “Electric Load Serving Entities (IOU & POU).” https://cecgis-caenergy.opendata.arcgis.com/	CA-03-0445
9	California Department of Forestry and Fire Protection, Fire Resource and Assessment Program, “Historical Fire Perimeters.” https://www.fire.ca.gov/what-we-do/fire-resource-assessment-program/fire-perimeters	CA-03-0449
10	Liberty’s Response to Data Request CalAdvocates-LIB-A2506017-006	CA-03-0453

Attachment #	Title	Bates No.
11	Tahoe Regional Planning Agency, Lake Tahoe Boundary Dataset “Lake Tahoe.” https://nationaldatapatform.org/catalog/dataset/lake-tahoe	CA-03-00458
12	Bureau of Land Management, Nevada Wildfire Intelligence, Nevada Wildland Fire Perimeters Dataset “Nevada Wildland Fire Perimeters.” https://nvfireintel-nifc.hub.arcgis.com/	CA-03-0461
13	The Pine Tree, “Slink Fire Grows to 11,000 Acres, Evacuations Lifted, Hwy 395 Reopens & Smoke Output Drops,” September 1, 2020. https://new.thepinetree.net/?p=106522	CA-03-0463
14	NBC News 4 and Fox 11, “Slink Fire grows to 26,752 acres with 86% containment; evacuations lifted,” September 28, 2020. https://mynews4.com/news/local/slink-fire-west-of-coleville-grows-to-4700-acres-5-contained	CA-03-0467
15	National Weather Service, “Red Flag Warning.” https://www.weather.gov/mqt/redflagtips	CA-03-0475
16	Iowa State University, Iowa Environmental Mesonet, Red Flag Warnings Dataset “Archived NWS Watch, Warnings, Advisories.” https://mesonet.agron.iastate.edu/request/gis/watchwarn.phtml	CA-03-0477
17	Liberty’s Response to Data Request CalAdvocates-LIB-A2506017-006, Question 4, September 5, 2025, Excel spreadsheet file “TZP_2016_2020_RFW_Data.xlsx”.	CA-03-0483
18	Colin McKellar, National Weather Service Reno, Email Communication, November 18-19, 2025.	CA-03-0485
19	National Weather Service, “CON/COR/EXP/CAN VTEC Logic.” https://vlab.noaa.gov/web/hazard-services/con-cor-exp-can-vtec-logic	CA-03-0488

Attachment #	Title	Bates No.
20	National Weather Service, “National Digital Forecast Database Definitions.” https://graphical.weather.gov/supplementalpages/definitions.php	CA-03-00498
21	University of Utah, MesoWest, Weather Station Measurements Dataset. https://mesowest.utah.edu/	CA-03-0505
22	Oregon State University PRISM Group, “PRISM Time Series Data.” https://prism.oregonstate.edu/data/	CA-03-0507
23	Liberty’s Response to Data Request CalAdvocates-LIB-A2506017-006, Question 3, September 5, 2025, Excel spreadsheet file “ <i>CalAdvocates-LIB-A2506017-006-Q3.xlsx</i> ”.	CA-03-0509
24	Latham and Rothermel (1993), “Probability of fire-stopping precipitation events,” in National Wildfire Coordinating Group, “Weather: Fire Season Climatology.” https://www.nwcg.gov/publications/pms437/weather/fire-season-climatology	CA-03-0511
25	Oregon State University PRISM Group, “Time Series Values for Individual Locations.” https://prism.oregonstate.edu/explorer/	CA-03-0530
26	National Weather Service, National Operational Hydrologic Remote Sensing Center, “Interactive Snow Information.” https://www.nohrsc.noaa.gov/nearest/index.html	CA-03-0533
27	Office of Energy Infrastructure Safety, 2023-2025 Wildfire Mitigation Plan Technical Guidelines, December 7, 2022, Appendix A: Definitions, at A-15 to A-16. https://efiling.energysafety.ca.gov/Lists/DocketLog.aspx?docketnumber=2023-2025-WMPs	CA-03-0535
28A	Liberty’s Amended Response to Data Request CalAdvocates-LIB-A2506017-001, Question 12, December 9, 2025, Excel spreadsheet file “ <i>CalAdvocates-LIB-A2506017-001-Q12_Amended.xlsx</i> ”.	CA-03-0588A

Attachment #	Title	Bates No.
29A	Liberty's Amended Response to Data Request CalAdvocates-LIB-A2506017-001, Question 11, December 9, 2025, Excel spreadsheet file " <i>CalAdvocates-LIB-A2506017-001-Q11_Amended.xlsx</i> ".	CA-03-0590A
30	National Wildfire Coordinating Group, "Weather and Fuel Moisture." https://www.nwcg.gov/publications/pms425-1/11-weather-and-fuel-moisture	CA-03-0597
31	National Oceanic and Air Administration, "Dead Fuel Moisture." https://www.ncei.noaa.gov/access/monitoring/dyk/deadfuelmoisture	CA-03-0610