

First Errata to San Diego Gas and Electric Company’s 2022 Wildfire Mitigation Plan

San Diego Gas and Electric Company (SDG&E) identified 16 errata to the 2022 Wildfire Mitigation Plan Update (WMP Update) submitted on February 11, 2022. The errata consist of additional information that was identified and included in response to data requests, corrections to typographical errors contained within the WMP Update, and corrections to information contained within Appendix B Tables 1-12.

The updates to the 2022 WMP Update are described below and this document.

Table 1: Summary of Updates to the WMP

Location	Updated Information
Section 7.3.1.2 (p. 200)	This information was provided in response to OEIS-SDGE-22-002
Section 8.1 (p. 351)	Additional information provided in Section 8.1 and Attachment A – Long Term Vision in response to OEIS-SDGE-22-001
Section 8.3 (p. 364)	Additional information provided in response to OEIS-SDGE-22-001
Section 4.4.2.9 (p. 76)	Updated rows for Table 4-15 to correct calculation errors
Section 4.5.1.3 (p. 108)	FPI was incorrectly listed as a factor, the correct acronym is FBI (Fire Behavior Index)
Section 7.3.3.3 (p. 214)	The correct title for Table 7-6 is “Average Ignition Rate”
Section 7.3.5.2 (p. 283)	Removes reference to Enhanced Inspections in Section 7.3.5.15
Section 7.3.5.9 (p. 292)	Updates the language to clarify inspection activity referenced in 7.3.5.2.
Section 7.3.5.15 (p. 298)	Correct Title for Table 7-31 is “Risk Reduction Estimation for Enhanced Vegetation Management”
Appendix B – Table 1	Corrected data in Table 1, Section 1.g.ii and 1.i.ii (2021 level 2 findings for patrol and other inspections of distribution lines)
Appendix B – Table 7.1	All forecasted ignitions from splice wire down corrected to 0
Appendix B – Table 12	Updated 2022 projected line miles to be treated with traditional hardening in the HFTD to 5
Appendix B – Table 12	Correct actual 2021 Drone Transmission inspection count to 1,028

Appendix B – Table 12	Reflects increased scope for Transmission Overhead Hardening: Updated estimated RSE in HFTD Tier 2 to 26.95; Updated 2022 projected line miles to be treated in the HFTD to 18.5
Appendix B – Table 12	Updated Distribution Underbuilt Transmission target: Updated estimated RSE in HFTD Tier 2 to 19; Updated 2022 projected line miles to be treated in the HFTD to 7.6
Appendix B – Table 12	Updated 2022 projected units for Generator Grant Program to 3,000

Corrections to Provide Additional Information or Clarify Statements

Section 7.3.1.2: In response to OEIS-SDGE-22-002, SDG&E provided additional information regarding initiative 7.3.1.2 “Climate-driven risk map and modelling based on various relevant weather scenarios.” The question and response is provided below.

OEIS Question:

- a. *Initiative 7.3.1.2 “Climate-driven risk map and modelling based on various relevant weather scenarios” (2022 SDG&E WMP Update p. 200) doesn’t include the details on initiative (parts 1-5). Please provide these details as follows:*
 - 1. *Risk to be mitigated / problem to be addressed*
 - 2. *Initiative selection (“why” engage in initiative)*
 - 3. *Region prioritization (“where” to engage initiative)*
 - 4. *Progress on initiative since the last WMP submission and plans, targets, and/or goals for the current year*
 - 5. *Future improvements to initiative—include known future plans (beyond the current year) and new/novel strategies the utility may implement in the next five years (e.g., references to and strategies from pilot projects and research detailed in Section 4.4)*
- b. *Please point to the document page number where SDG&E’s 2022 WMP Update describes how the utility incorporates the climate trends seen in the climate-driven risk map into risk models or other risk-informed analyses that inform mitigation selection/prioritization and decision-making processes.*

SDG&E Response:

- a. Initiative 7.3.1.2
 - 1. **Risk to be mitigated / problem to be addressed:** The risk to be mitigated is that climate change is contributing to environmental factors that are increasing wildfire risk across the SDG&E Service Territory. This increased wildfire risk is documented in California’s Fourth Climate Assessment.
 - 2. **Initiative selection (“why” engage in initiative):** It is important to engage in the integration of climate effects into risk mapping because climate science is indicating that the baseline wildfire risk is increasing over time, which is important to long-term planning and decision making.

3. **Region prioritization (“where” to engage initiative):** When assessing wildfire risk, the regions prioritized are primarily the High Fire Threat District, though analysis is conducted across the entire region to better understand the potential impacts across coastal canyons and the wildland urban interface.
 4. **Progress on initiative since the last WMP submission and plans, targets, and/or goals for the current year:** Since the last WMP submission, SDG&E’s climate adaptation team analyzed the latest available climate science to determine the most applicable analysis to inform the internal wildfire risk modeling. Based on this analysis, SDG&E determined the following research was most applicable due to the focus on the increased occurrence of fire weather conditions during the fall months, which represent the highest risk events across San Diego County and Orange County.
“Climate change is increasing the likelihood of extreme autumn wildfire conditions across California” by Michael Goss et al 2020.
Below is a link to the full scientific paper.
<https://iopscience.iop.org/article/10.1088/1748-9326/ab83a7>
 5. **Future improvements to initiative—include known future plans (beyond the current year) and new/novel strategies the utility may implement in the next five years (e.g., references to and strategies from pilot projects and research detailed in Section 4.4):** Regarding future improvements, SDG&E will continue to engage with the scientific community in the development and enhancement of climate science and the impacts on wildfire risk. Specifically, SDG&E remains engaged with the climate analysis being conducted by research teams funded by the California Energy Commission to develop the next California Climate Assessment.
- b. As described in the response above, SDG&E incorporates climate trends directly into the WiNGS Planning risk model via probability of ignition and the consequence of a potential wildfire, which is further described in section 4.2 and sections 4.5.1.7. It should be noted that the WiNGS Ops model is intended to look at current and short-term forecasted weather conditions, and not long-term climate trends.

Section 8.1: In response to OEIS-SDGE-DR-001, SDG&E provided additional information regarding Section 8.1 “Directional Vision for Necessity of PSPS. The question and response is provided below.

OEIS Question: *In Section 8.1 “Directional Vision for Necessity of PSPS,” the 2022 Wildfire Mitigation Plan Update Guidelines Template directs utilities to “[d]escribe any lessons learned from PSPS since the last WMP submission and describe expectations for how the utility’s PSPS program will evolve over the coming 1, 3, and 10 years” (p. 79). While SDG&E describes recent progress in its 2022 WMP Update with a significant focus on the past year, it doesn’t describe its expectations for the future. There is some relevant information in Table 8.1-1 “Anticipated Characteristics of PSPS Use Over Next 10 Years” (p. 353), however, Energy Safety is seeking to understand the broad, organization-wide vision for the future. Where can this information be found in the WMP Update?*

- a. *If this information can’t be found in the WMP Update, please provide it.*

SDG&E Response: To further elaborate on the efforts and vision described in the 2022 WMP Update including Section 8 and Attachment A – Long Term Vision, SDG&E is continuously exploring ways to improve its PSPS programs across the enterprise – from meteorology to customer programs to grid hardening. SDG&E has outlined several initiatives in the 2022 WMP Update designed to reduce the number customers impacted by PSPS and mitigate the impacts of PSPS for those who may continue to experience them. SDG&E uses PSPS as a last-resort tool to reduce wildfire risk in extreme circumstances. But it may be impossible to eliminate the use of PSPS as a result of ongoing changes to the climate and the cost-efficiencies of hardening efforts such as undergrounding, as discussed in SDG&E’s 2022 WMP Update.

In an effort to maintain the safety of our customers while mitigating future wildfire risk, some examples of our evolution over the next ten years based on our current trajectory are:

- Strategic undergrounding – average of 90 miles per year, 13 customers per mile will reduce customer impacts by approximately 1,170 customers per year and 11,170 customers over the next ten years.
- PSPS Sectionalizing – average of 10 devices installed per year, 371 customers per device will reduce customer impacts by approximately 3,710 per year. SDG&E will continue to investigate the locations with the largest impact to deploy these sectionalizing devices as more PSPS data is gathered over the next ten years.
- Customer Generation Programs – continuing to offer programs to our customers for backup generation or battery storage will reduce PSPS impacts to approximately 2,000 customers per year. Knowing that the rate of participation in these programs will reduce over time, we can anticipate a maximum of 20,000 customers seeing reduced PSPS impacts over ten years.

Having one of the leading Meteorology teams in the nation has put SDG&E at the forefront of predictive weather and fire risk modeling. In addition to all of the technological advances the Meteorology team has made and continues to make, SDG&E has been rebuilding existing weather stations to provide 30-second reads on wind speed data and adding particulate sensors to provide additional information around air quality. This will allow SDG&E to more strategically pinpoint fire weather impacts and execute PSPS events with increased precision.

SDG&E continues to focus on the safety and comfort of our customers. In order to limit the impacts of PSPS events to our customers, we have participated in customer generation programs that provide portable or fixed generators and backup batteries to our most vulnerable customers. In recent years, SDG&E has increased customer engagement and communications surrounding PSPS events. Looking forward, SDG&E will continue to engage the community and make enhancements to the PSPS notification process based on community feedback.

Section 8.3: In response to OEIS-SDGE-DR-002, SDG&E provided additional information regarding Section 8.3 “Projected changes to PSPS impact”. The question and response is provided below.

OEIS Question: Section 8.3 “Projected changes to PSPS impact” (2022 SDG&E WMP Update p. 364) doesn’t directly answer the question posed in the Guidelines Template (ps. 81-82). Indicate where in the WMP Update (section and page number) this description is provided, or provide these details as follows:

Describe utility-wide plan to reduce scale, scope and frequency of PSPS for each of the following time periods, highlighting changes since the prior WMP report and including key program targets used to track progress over time:

1. By June 1 of current year
2. By September 1 of current year
3. By next WMP submission

See ps. 81-82 of the 2022 Wildfire Mitigation Plan Update Guidelines Template for more information.

SDG&E Response: SDG&E plans to reduce the scope, scale and frequency of PSPS events in 2022 through customer resiliency and microgrid programs, the PSPS sectionalizing enhancement program, and strategic undergrounding (see section 7.3.3.8 Grid topology improvements to mitigate or reduce PSPS events, section 7.3.3.11 Mitigation of impact on customers and other residents affected during PSPS events, and section 7.3.3.16 Undergrounding of electric lines and/or equipment). Though SDG&E does not anticipate having any PSPS events by June 1, 2022, it is projected that 4,526 customers could be saved should the need for a PSPS event occur. By September 1, 2022, it is projected that 9,149 customers could be saved from PSPS impacts. And by year-end 2022, it is projected that 11,695 customers could be saved from PSPS impacts. See Table 8-4: Projected PSPS Reduced Impacts (p. 365) for projected program goals and comparison to prior year-end results.

Section 7.3.5.9: This section is updated to read as follows:

See Section 7.3.5.2 Detailed inspections and management practices for vegetation clearances around distribution electrical lines and equipment.

Other discretionary inspections, otherwise referred to as “enhanced inspections” or “tree trimming”, are comprised of detailed inspections, both routine and off-cycle and may result in the need to achieve an enhanced post-trim clearances of greater than 12’ in the HFTD. Trees identified as “at-risk species” may also warrant enhanced inspection to achieve clearances of up to 25’ but only as a factor, not as a designator. See Section 7.3.5.15. Identification and remediation of “at-risk-species.”

Corrections to Typographical Errors

1. SDG&E has discovered an error in the formula used to calculate the expected outages for the 17.5’ and 25’ line clearance rows in Table 4-15. The expected outages are corrected from the initial filing and are provided in the table below.

Adjust min line clearance	% of Records Changed	Predicted Outages by Model	Assumed true positive outage ratio	Expected Outage (T)	Non-Risk Trees Identified by Model	Assume False Negative Outage Rate	Expected Outage (F)	Total Outages	Difference
adjust <17.5 to 17.5	92%	235,561	1.92E-04	45	1,276,097	1.11E-05	14	59	(19)
adjust <25 to 25	98%	153,119	1.92E-04	29	1,358,539	1.11E-05	15	44	(34)

2. SDG&E has discovered a typographical error in Section 4.5.1.3. On page 108, under section 9 “Timeline for model development” SDG&E lists “Additional conditional impact factors were incorporated...” and lists FPI instead of FBI. The correct factor is FBI (Fire Behavior Index) and not FPI (Fire Potential Index).
3. SDG&E has discovered a typographical error in Section 7.3.3.3. On page 214, Table 7-6 utilizes the term “Ignition Rate.” This should read “Average Ignition Rate,” as these are the average five-year historical ignition rates.
4. SDG&E has discovered a typographical error in Section 7.3.5.15. On page 298, the title of Table 7-31 should read “Risk Reduction Estimation for Enhanced Vegetation Management.”

Corrections to Attachment B Tables 1-12

Revised Tables 1, 7.1, and 12 are attached. Revisions to the original filing of the 2022 WMP Update are entered in red text and summarized in Table 1 above.

Utility Table No. 7.1 Date Modified 2022 02 09

SDG&E Notes

Transmission lines refer to all lines at or above 65kV, and distribution lines refer to all lines below 65kV. Data from 2015 - 2021 Q4 should be actual numbers. 2022 Q1 - 2024 should be projected. In future submissions update projected numbers with actuals

Table 7.1: Key recent and projected drivers of risk events. The table includes columns for Risk Event category, Cause category, #, Sub-cause category, and risk counts for years 2015-2024, plus projected risk events for 2022-2024. It covers various categories like Wire down event, Outage, and Equipment/facility failure.

Includes weather caused equipment failure

Utility	SDG&E
Table No.	7.1
Date Modified	2022 02 09

Notes:

Transmission lines refer to all lines at or above 65kV, and distribution lines refer to all lines below 65kV.

Data from 2015 - 2021 Q4 should be actual numbers. 2022 Q1 - 2024 should be projected. In future submissions update projected numbers with actuals

Table 7.1: Key recent and projected drivers of risk events		Number of risk events																Projected risk events				Unit(s)	Comments					
Risk Event category	Cause category	#	Sub-cause category	Are risk e	2015	2016	2017	2018	2019	2020	2020	2020	2020	2021	2021	2021	2021	2022	2022	2022	2022			2023	2023	2023	2023	
19. Wire-to-wire contact - Distribution	19.a.	Wire-to-wire contact / contamin	Yes	3	6	8	2	4	1	0	0	0	0	0	0	0	0	0	0.7875	0.7875	0.7875	0.7875	0.775	0.775	0.775	0.775	# risk events	
20. Contamination - Distribution	20.a.	Contamination - Distribution	Yes	1	0	0	0	2	0	0	0	0	0	2	0	2	1	0.34925	0.34925	0.34925	0.34925	0.3485	0.3485	0.3485	0.3485	# risk events		
21. Utility work / Operation	21.a.	Utility work / Operation	Yes	6	9	5	9	9	2	8	9	11	4	5	5	2	3.45	3.45	3.45	3.45	3.3	3.3	3.3	3.3	# risk events			
22. Vandalism / Theft - Distribution	22.a.	Vandalism / Theft - Distribution	Yes	2	4	1	3	2	1	4	1	0	2	5	1	2	1.0995	1.0995	1.0995	1.0995	1.099	1.099	1.099	1.099	# risk events			
23. Other - Distribution	23.a.	All Other - Distribution	No	1	0	0	1	0	0	0	0	2	0	0	0	0	0.1495	0.1495	0.1495	0.1495	0.149	0.149	0.149	0.149	# risk events			
24. Unknown - Distribution	24.a.	Unknown - Distribution	Yes	325	361	310	249	264	35	52	121	58	86	52	66	54	66.41525	66.41525	66.41525	66.41525	65.4805	65.4805	65.4805	65.4805	# risk events			
25. Contact from object - Transmission	25.a.	Veg. contact - Transmission	Yes	1	1	0	1	0	0	0	0	0	0	0	0	0	0.04925	0.04925	0.04925	0.04925	0.0485	0.0485	0.0485	0.0485	# risk events			
	25.b.	Animal contact - Transmission	Yes	9	5	4	2	5	2	2	0	1	1	2	0	0	0.943	0.943	0.943	0.943	0.936	0.936	0.936	0.936	# risk events			
	25.c.	Balloon contact - Transmission	Yes	17	24	22	25	16	6	8	2	7	8	2	4	4	5.32	5.32	5.32	5.32	5.29	5.29	5.29	5.29	# risk events			
	25.d.	Vehicle contact - Transmission	Yes	1	2	0	3	1	1	0	0	0	0	3	0	2	0.5	0.5	0.5	0.5	0.125	0.125	0.125	0.125	# risk events			
	25.e.	Other contact from object - Tram	Yes	1	0	2	1	3	0	0	0	0	0	0	0	0	0.298	0.298	0.298	0.298	0.296	0.296	0.296	0.296	# risk events			
26. Equipment / facility failure - Transmission	26.a.	Capacitor bank damage or failure	No	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	# risk events		
	26.b.	Conductor damage or failure - Transmission	Yes	2	6	6	2	0	4	0	2	0	0	0	1	0	0.7455	0.7455	0.7455	0.7455	0.741	0.741	0.741	0.741	# risk events			
	26.c.	Fuse damage or failure - Transmission	No	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	# risk events		
	26.d.	Lightning arrester damage or failure - Transmission	No	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	# risk events		
	26.e.	Switch damage or failure - Transmission	Yes	3	0	1	0	0	0	0	1	1	0	0	1	0	0.19875	0.19875	0.19875	0.19875	0.1975	0.1975	0.1975	0.1975	# risk events			
	26.f.	Pole damage or failure - Transmission	Yes	1	0	0	4	3	0	0	0	0	0	0	0	0	0.34775	0.34775	0.34775	0.34775	0.3455	0.3455	0.3455	0.3455	# risk events			
	26.g.	Insulator and brushing damage or failure - Transmission	Yes	29	13	6	3	8	0	0	0	0	0	0	11	11	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	# risk events		
	26.h.	Crossarm damage or failure - Transmission	Yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	# risk events		
	26.i.	Voltage regulator / booster damage or failure - Transmission	No	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	# risk events		
	26.j.	Recloser damage or failure - Transmission	No	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	# risk events		
	26.k.	Anchor / guy damage or failure - Transmission	Yes	0	0	1	0	0	0	0	0	0	0	0	0	0	0.04975	0.04975	0.04975	0.04975	0.0495	0.0495	0.0495	0.0495	# risk events			
	26.l.	Sectionalizer damage or failure - Transmission	No	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	# risk events		
	26.m.	Connection device damage or failure - Transmission	Yes	0	0	0	1	1	0	0	0	0	0	0	0	0	0.0995	0.0995	0.0995	0.0995	0.099	0.099	0.099	0.099	# risk events			
	26.n.	Transformer damage or failure - Transmission	No	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	# risk events		
	26.o.	Other - Transmission	Yes	1	0	0	0	0	0	2	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	# risk events		
27. Wire-to-wire contact - Transmission	27.a.	Wire-to-wire contact / contamin	Yes	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	# risk events		
28. Contamination - Transmission	28.a.	Contamination - Transmission	Yes	3	8	0	3	1	0	1	0	0	0	1	0	0	0.29575	0.29575	0.29575	0.29575	0.2915	0.2915	0.2915	0.2915	# risk events			
29. Utility work / Operation	29.a.	Utility work / Operation	Yes	0	0	2	0	0	1	0	0	1	1	0	0	0	0.25	0.25	0.25	0.25	0.0625	0.0625	0.0625	0.0625	# risk events			
30. Vandalism / Theft - Transmission	30.a.	Vandalism / Theft - Transmission	Yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	# risk events		
31. Other - Transmission	31.a.	All Other - Transmission	Yes	1	0	0	0	0	0	0	0	0	0	2	2	0	0.2	0.2	0.2	0.2	0.05	0.05	0.05	0.05	# risk events			
32. Unknown - Transmission	32.a.	Unknown - Transmission	Yes	10	10	8	10	4	1	3	1	1	1	1	2	2	1.686	1.686	1.686	1.686	1.672	1.672	1.672	1.672	# risk events			

Priority	SO&E	Notes:
Table No.	11	Risk Spend
Date Modified	2022 02 14	penditure.
		In future submissions update planned spend,

Table 12.1

Metric Type	WMP Table / Category	WMP Initiative #	Initiative activity	Primary driver	Secondary driver	Year	Estimated RSE territory-wide	Estimated RSE in Zone 1	Estimated RSE in Zone 2	Estimated RSE in Zone 3	most recent program	that has exceeded compliance with rule(s) - if multiple, list by separate category, note "N/A" if none apply	not disallowed by separate category, note "N/A" if none apply	Comments
Vegetation Management & Inspection	Vegetation Management & Inspection	7.3.5.14	Recruiting and training of vegetation management personnel			2019	NA	NA	NA	NA	NA	NA	NA	
Vegetation Management & Inspection	Vegetation Management & Inspection	7.3.5.15	Identification and remediation of "at-risk species"			2019	NA	NA	NA	NA	NA	NA	NA	
Vegetation Management & Inspection	Vegetation Management & Inspection	7.3.5.16	Removal and remediation of trees with state potential to electric lines and equipment			1998	NA	NA	NA	NA	NA	NA	NA	106
Vegetation Management & Inspection	Vegetation Management & Inspection	7.3.5.17	Substation inspection			1998	NA	NA	NA	NA	NA	NA	NA	
Vegetation Management & Inspection	Vegetation Management & Inspection	7.3.5.18	Substation vegetation management			1998	NA	NA	NA	NA	NA	NA	NA	
Vegetation Management & Inspection	Vegetation Management & Inspection	7.3.5.19	Vegetation management system			1998	NA	NA	NA	NA	NA	NA	NA	
Vegetation Management & Inspection	Vegetation Management & Inspection	7.3.5.20	Vegetation management to achieve clearance around electric lines and equipment	Other contact with	Equipment failure	2002	NA	NA	NA	NA	NA	NA	NA	
Vegetation Management & Inspection	Vegetation Management & Inspection	7.3.5.21	Vegetation management activities post-fire	Other contact with	Equipment failure	1998	NA	6.89	NA	57.76	78.18	2019	GRC	NA
Other Grid Operations & Operating Protocols	Grid Operations & Operating Protocols	7.3.6.1	Automatic recloser operations	Other contact with	Equipment failure	2022	NA	NA	NA	NA	NA	NA	NA	NA
Other Grid Operations & Operating Protocols	Grid Operations & Operating Protocols	7.3.6.2	Protective equipment and device settings	Other contact with	Equipment failure	2008	NA	NA	NA	1093803	2002522	2019	GRC	NA
Other Grid Operations & Operating Protocols	Grid Operations & Operating Protocols	7.3.6.3	Crew accompanying ignition prevention and suppression resources and services	Equipment failure	Other contact with	2009	NA	0.3	NA	32.03	123.4	2019	GRC	NA
Other Grid Operations & Operating Protocols	Grid Operations & Operating Protocols	7.3.6.4	Personnel work procedures and training in conditions of elevated fire risk	Equipment failure	Other contact with	2008	NA	NA	NA	118.3	135.33	2019	GRC	NA
Other Grid Operations & Operating Protocols	Grid Operations & Operating Protocols	7.3.6.5	Protocols for PUPS re-energization	Other contact with	Equipment failure	2013	NA	NA	NA	NA	NA	NA	WMPMA	Exceeds
Other Grid Operations & Operating Protocols	Grid Operations & Operating Protocols	7.3.6.6	PSPS events and mitigation of PSPS impacts	Other contact with	Equipment failure	2013	NA	NA	NA	77.49	82.86	NA	NA	NA
Other Grid Operations & Operating Protocols	Grid Operations & Operating Protocols	7.3.6.7	Stationed and on-call ignition prevention and suppression resources and services	Other contact with	Equipment failure	2013	NA	NA	NA	NA	NA	NA	NA	NA
Other Grid Operations & Operating Protocols	Grid Operations & Operating Protocols	7.3.6.1.2	Sensitive/Fast Protection settings	Other contact with	Equipment failure	2015	NA	NA	NA	75399.51	1552342	2019	GRC	NA
Other Grid Operations & Operating Protocols	Grid Operations & Operating Protocols	7.3.7.1	Aviation firefighting program	Equipment failure	Other contact with	2008	NA	NA	NA	54.11	61.21	2019	GRC	NA
Other Data Governance	Data Governance	7.3.7.2	Centralized repository for data			2019	NA	NA	NA	NA	NA	NA	WMPMA	Exceeds
Other Data Governance	Data Governance	7.3.7.3	Collaborative research on utility ignition and/or wildfire			2012	NA	NA	NA	NA	NA	NA	NA	NA
Other Data Governance	Data Governance	7.3.7.4	Documentation and disclosure of wildfire-related data and algorithms			2020	NA	NA	NA	NA	NA	NA	WMPMA	Exceeds
Other Data Governance	Data Governance	7.3.7.4	Tracking and analysis of risk event data			2020	NA	NA	NA	NA	NA	NA	WMPMA	Exceeds
Other Data Governance	Data Governance	7.3.7.4.1	Ignition Management Program			2019	NA	NA	NA	NA	NA	NA	NA	NA
Other Data Governance	Data Governance	7.3.7.4.2	Reliability Database			2020	NA	NA	NA	NA	NA	NA	NA	NA
Other Resource Allocation	Resource Allocation	7.3.8.1	Allocation methodology development and application			2019	NA	NA	NA	NA	2019	GRC	NA	Exceeds
Other Resource Allocation	Resource Allocation	7.3.8.2	Risk reduction scenario development and analysis			2019	NA	NA	NA	NA	NA	NA	NA	NA
Other Resource Allocation	Resource Allocation	7.3.8.3	Risk spend efficiency analysis not include PUPS			2019	NA	NA	NA	NA	NA	NA	NA	NA
Other Emergency Planning	Emergency Planning	7.3.9.1	Adequate and trained workforce for service restoration			2019	NA	NA	NA	NA	NA	NA	NA	NA
Other Emergency Planning	Emergency Planning	7.3.9.2	Community outreach, public awareness, and communications efforts			2013	NA	NA	NA	NA	NA	NA	NA	NA
Other Emergency Planning	Emergency Planning	7.3.9.3	Customer support in emergencies			2013	NA	NA	NA	NA	NA	NA	WMPMA	NA
Other Emergency Planning	Emergency Planning	7.3.9.4	Disaster and emergency preparedness plan			2013	NA	NA	NA	NA	NA	NA	NA	NA
Other Emergency Planning	Emergency Planning	7.3.9.5	Preparedness and planning for service restoration			2013	NA	NA	NA	NA	NA	NA	NA	NA
Other Emergency Planning	Emergency Planning	7.3.9.6	Protocols in place to learn from wildfire events			2013	NA	NA	NA	NA	NA	NA	NA	NA
Other Stakeholder Cooper.	Stakeholder Cooper.	7.3.10.1	Community engagement			2013	NA	NA	NA	NA	NA	NA	NA	NA
Other Stakeholder Cooper.	Stakeholder Cooper.	7.3.10.2	Cooperation and best practice sharing with agencies outside CA			2013	NA	NA	NA	NA	NA	NA	NA	NA
Other Stakeholder Cooper.	Stakeholder Cooper.	7.3.10.3	Cooperation with suppression agencies			2013	NA	NA	NA	NA	NA	NA	NA	NA
Other Stakeholder Cooper.	Stakeholder Cooper.	7.3.10.4	Forest service and fuel reduction cooperation and joint roadmap			2019	NA	NA	NA	NA	NA	NA	NA	NA
Other Stakeholder Cooper.	Stakeholder Cooper.	7.3.10.1.1	PUPS Communication Practices			2022	NA	NA	NA	NA	NA	NA	NA	NA
Other Stakeholder Cooper.	Stakeholder Cooper.	7.3.10.1.1	PUPS Communication Practices			2013	NA	NA	NA	NA	2019	GRC	NA	Exceeds

Actual												Projected													
CAPEX (\$ thousands)		OPEx (\$ thousands)		Line miles treated		Alternative units (if used)	CAPEX (\$ thousands)		OPEx (\$ thousands)		Line miles treated		Alternative units (if used)	CAPEX (\$ thousands)		OPEx (\$ thousands)		Line miles treated		Alternative units (if used)					
Territory	HFTD	Territory	HFTD	Territory	HFTD		Territory	HFTD	Territory	HFTD	Territory	HFTD		Territory	HFTD	Territory	HFTD	Territory	HFTD		Territory	HFTD			
		2019						2020						2021						2023					
		3,884	3,391		34,000			5,433	4,743		36,563			5,556	4,991		35,102			5,800	5,209	34,000	6,032	5,417	30,540