

City of Anaheim Public Utilities Department

2023 Wildfire Mitigation Plan Independent Evaluation Report

Date Prepared: April 26, 2023



GRIDSME:
bdgroup@gridsme.com
916.800.4545

DISCLAIMER

California Public Utilities Code (PUC) 8387 mandates that local publicly owned electric utilities or electrical cooperatives (herein POU) shall, before January 1, 2020, prepare a Wildfire Mitigation Plan (WMP or Plan). Additionally, POUs are required to engage, every three years, a qualified independent evaluator (IE) with experience to assess the comprehensiveness of its WMP.

Anaheim Public Utilities (APU) has requested that Grid Subject Matter Experts (“GridSME”) conduct a review and provide an independent evaluation report of the APU 2023 WMP to ensure it meets the requirements of PUC § 8387. GridSME’s Independent Evaluator review and assessment is based only on APU’s 2023 WMP and evaluates only the comprehensiveness of the Plan as it is written.

The information provided in this report represents GridSME’s IE analysis based only on the information available at the time the review was conducted. GridSME is not responsible for the success or failure of APU’s projects nor any potential ignition resulting therefrom. GridSME makes no representations or warranties expressed or implied regarding the reliability or thoroughness of APU’s 2023 WMP. Recipients of the independent evaluation report assume all liabilities incurred by themselves, or third parties, resulting from their reliance on the report, or the data, information, and/or assessment contained therein.

TABLE OF CONTENTS

DISCLAIMER	1
TABLE OF CONTENTS	2
1.0 STATUTORY REQUIREMENTS OF THE WILDFIRE MITIGATION PLAN	3
2.0 INTRODUCTION	3
3.0 INDEPENDENT EVALUATOR QUALIFICATIONS	4
4.0 WMP REVIEW AND ASSESSMENT METHODOLOGY	4
5.0 APU COMPANY OVERVIEW	5
6.0 INDEPENDENT EVALUATION	7
7.0 INDEPENDENT EVALUATION AND ASSESSMENT OF APU 2023 WMP	8
7.1 WMP Section 1 – Introduction Overview	8
7.2 WMP Section 2 – Enterprise-wide Safety Risk Assessment, Section 3 - Overview of Risks and Risk Drivers Related to Wildfires, and Section 4 - Dynamic Climate Change Overview	11
7.3 WMP Section 5 – Assessment of High Fire Threat in APU’s Electric Service Territory Overview	14
7.4 WMP Section 6 – Overview of Preventative Strategies and Programs and Section 8 - Preventative Strategies for Building Infrastructure Resiliency Overview	15
7.5 WMP Section 7 – Situational Awareness Overview	20
7.6 WMP Section 9 – Operational Strategies to Reduce Risk of Wildfire Ignition.....	22
7.7 WMP Section 10 – Community Support in Emergencies	24
7.8 WMP Section 11 – Workforce Training Overview	25
7.9 WMP Section 12 – Organization and Assignment Responsibilities	26
7.10 WMP Section 13 – Metrics, Monitoring and Reporting, and Section 14 - Monitor and Auditing the Plan	27
8.0 CONCLUSION	28

-

1.0 STATUTORY REQUIREMENTS OF THE WILDFIRE MITIGATION PLAN

California Public Utilities Code (PUC) § 8387 requires, “Each local publicly owned electric utility and electrical cooperative (herein a POU) shall construct, maintain, and operate its electrical lines and equipment in a manner that will minimize the risk of wildfire posed by those electrical lines and equipment.”

PUC § 8387 requires that after January 1, 2020, publicly owned electric utilities and electrical cooperatives (herein POU) shall prepare a wildfire mitigation plan (WMP) annually and shall submit the plan to the California Wildfire Safety Advisory Board (WSAB) on or before July 1 of that calendar year. Each POU shall update its plan annually and submit the update to the WSAB by July 1 of each year. At least once every three years, the submission shall be a comprehensive revision of the plan.

Prior California legislation, codified in PUC § 8387, established the WSAB. The WSAB consists of an appointed seven-member panel which serves in an advisory role within the California Office of Energy Infrastructure Safety (OEIS)¹. PUC § 326.2(C) requires that the WSAB, “Review and provide comments and advisory opinions to each local publicly owned electric utility and electrical cooperative regarding the content and sufficiency of its wildfire mitigation plan and recommendations on how to mitigate wildfire risk.”

PUC § 8387(3)(c) requires that each POU “shall contract with a qualified independent evaluator (IE) with experience in assessing the safe operation of electrical infrastructure to review and assess the comprehensiveness of its wildfire mitigation plan. The IE shall issue a report that shall be made available on the internet website of the local publicly owned electric utility or electrical cooperative and shall present the report at a public meeting of the local publicly owned electric utility’s or electrical cooperative’s governing board.”

2.0 INTRODUCTION

Over the past several years the threat of catastrophic wildfires has significantly increased, not only in the state of California, but the entire Western United States. These fires are fueled in part by changing weather patterns that have contributed to extended drought conditions, more intense windstorms, hotter temperatures, and in Southern California, stronger Santa Ana wind events. If an ignition occurs during these weather conditions, it could result in a catastrophic wildfire. Although there are many different sources of ignition for wildland fires these type of weather events increases the threat to utility infrastructure which could result in a risk event (fault). Origin and Cause investigations by fire authorities have concluded that utility electrical infrastructure has previously been the origin or contributing source for a fire.

¹ The OEIS is a department within the California Natural Resources Agency (CNRA).

APU's 2023 WMP details its wildfire mitigation programs and initiatives to construct, maintain, and operate its electrical lines and equipment in a manner that will minimize the risk of wildfire posed by those electrical lines and equipment.

In accordance with PUC § 8387(3)(c), Anaheim Public Utilities (APU), a publicly owned utility (POU), engaged the services of Grid Subject Matter Experts (GridSME) to conduct an independent evaluation of its 2023 WMP to review and assess the comprehensiveness of the Plan as written.

3.0 INDEPENDENT EVALUATOR QUALIFICATIONS

In accordance with PUC § 8387(3)(c) APU, a publicly owned utility (POU), engaged the services of GridSME to conduct an independent evaluation of its 2023 WMP to review and assess the comprehensiveness of the Plan as written. The GridSME team brings over 100 years of combined electric utility system operations experience and are qualified to review and assess the comprehensiveness of APU's 2023 WMP. The GridSME project team lead is a former investor-owned utility executive with 40 years of experience in electric system operations. The GridSME project lead also had a significant role in developing and executing wildfire mitigation programs at the utility from 2008 until his retirement from the utility in 2017. The GridSME team provided IE services for five different POUs in 2019/2020.

Based on our review of APU's 2023 WMP, GridSME has concluded that the Plan is comprehensive and meets the requirements of PUC § 8387.

4.0 WMP REVIEW AND ASSESSMENT METHODOLOGY

GridSME's review and evaluation of the APU 2023 Plan consisted of reviewing the written draft Plan and providing comments and recommendations for APU's consideration prior to finalizing the 2023 Plan. GridSME's final review and evaluation of APU's 2023 WMP assesses the Plan's comprehensiveness to ensure it satisfies each of the required elements of PUC § 8387, and considers the guidance and recommendations issued by the WSAB in previous advisory opinions.

Per the WSAB Guidance Advisory Opinion for the 2023 WMP of POUs², WSAB states that their reviews are performed in the context of the following elements (Image 1). GridSME's review of the Plan ensures that APU provide an overview of its programs and initiatives corresponding to each one of the 17 elements listed below.

² <https://energysafety.ca.gov/wp-content/uploads/wsab-wmp-pou-guidance-advisory-opinion-adopted.pdf>

A	Staff responsibilities	G	Community notification	L	Identify enterprise-wide risk
B	General objectives	H	Vegetation management	M	Restoration of service
C	Program descriptions	I	Infrastructure inspections	N(i)	Monitoring & auditing of WMPs
D	Evaluation metrics	J(i)	Grid design, construction & operation risks	N(ii)	Identifying and correcting deficiencies
E	Lessons learned, metrics application	J(ii)	Vegetation, topographic, & climate risks	N(iii)	Monitoring asset inspections
F	Protocols for reclosers, de-energization, and PSPS mitigation	K	Identification and expansion of higher wildfire threat areas		

Image 1 / WSAB List of Statutory Requirements

5.0 APU COMPANY OVERVIEW

The City of Anaheim, incorporated in 1876, is a city in northern Orange County, CA south of Los Angeles. Anaheim’s population has grown to approximately 350,000 people, it is the 10th largest city in California, and the only municipally owned electric and water utility in Orange County.

APU began providing electric utility services to the City of Anaheim in 1895. APU is governed by the Anaheim City Council who appoints a Public Utilities Board (PUB) that serves as an advisory body consisting of residents. The PUB reviews APU’s operations and finances and provides recommendations.

The APU service territory spans an area of approximately 50 square miles (Image 2). APU owns, operates, and maintains approximately 1,200 miles of electric transmission/sub-transmission lines, approximately 1,166 miles of distribution lines, and generation assets. Approximately 83% of APU’s accounts are residential customers, approximately 15% are small/medium businesses, with the remainder comprised of government, agriculture, and commercial/industrial accounts.

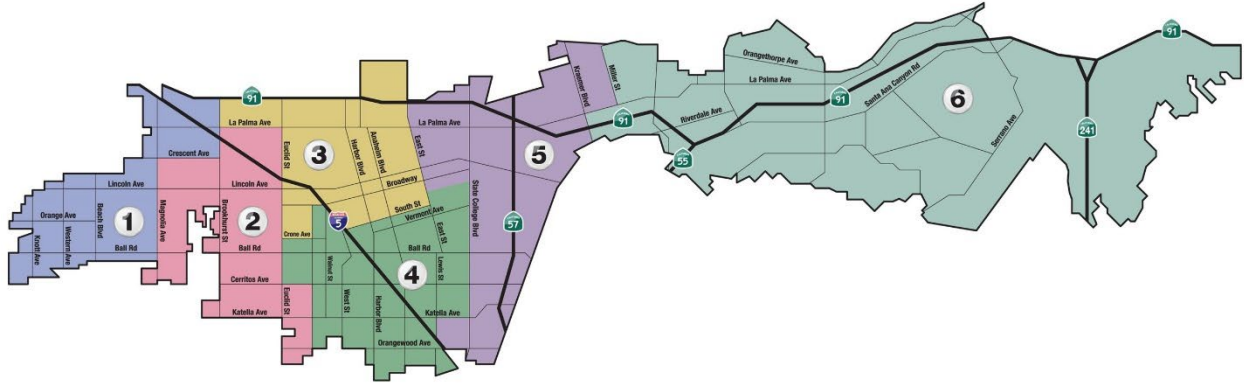


Image 2 / APU Service Area with Council Districts

The APU’s WMP Section 5 – Assessment of High Fire Threat in APU’s Electric Service Territory, provides an overview of areas within APU’s service territory that are of higher risk for a wildfire and where the wildfire mitigation measures described in the APU 2023 WMP would be applied. APU identified a Fire Threat Zone (FTZ) which is comprised of a:

- Tier 1 - Elevated Fire Threat Zone,
- Tier 2 - Very High Fire Threat Zone, and
- Tier 3 - Extreme Fire Threat Zone.

APU leveraged the California Public Utilities Commission (CPUC) High Fire-Threat District (HFTD) map which designates a Tier 2 and Tier 3 high fire-threat areas, and the CAL FIRE Fire and Resource Assessment Program (FRAP) map which designates a Very High Fire Hazard Severity Zones (VHFHSZ) to develop the APU FTZ.

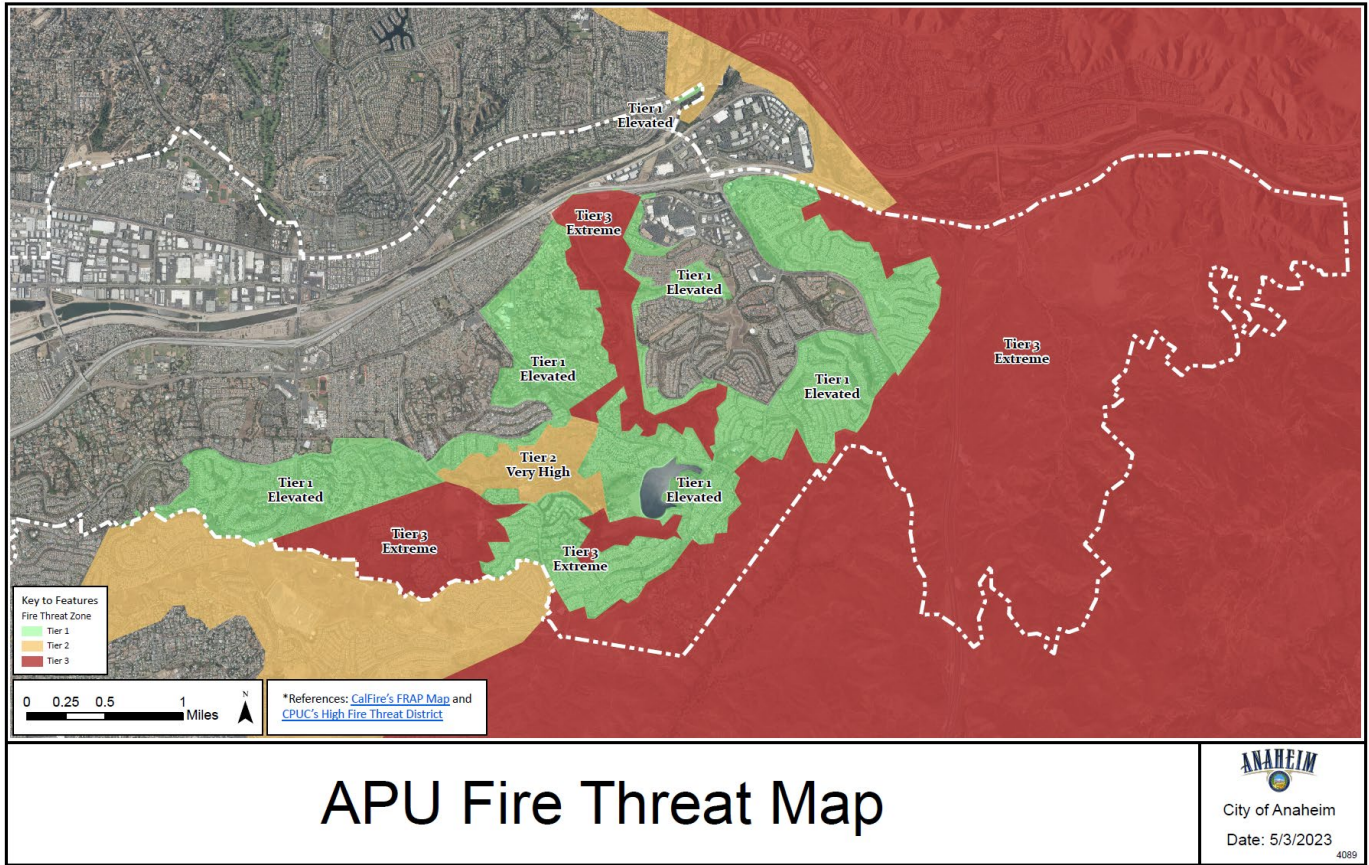


Image 3 / APU FTZs

6.0 INDEPENDENT EVALUATION

Following an initial review of APU's 2023 draft WMP, GridSME provided comments and recommendations for APU to consider prior to finalizing its Plan. This final report includes a statement regarding APU's plan to consider or adopt the IE recommendations. GridSME provides this Independent Evaluation report on the final 2023 APU WMP to assess the comprehensiveness of its Plan and whether it meets the 17 requirements of PUC § 8387. This report provides GridSME's evaluation, comments, and/or recommendations regarding each section of the 2023 APU WMP.

APU's overarching goal is to provide safe, reliable, resilient, and economic electric service to its local community. To meet this goal, APU constructs, maintains, and operates its electrical lines and equipment in a manner that minimizes the risk of catastrophic fire posed by those electrical lines and equipment. The APU 2023 WMP provides a comprehensive overview of the wildfire mitigation programs and initiatives undertaken by APU in support of reducing the risk of APU assets causing a catastrophic wildfire. The APU 2023 WMP provides an excellent summary of how the APU wildfire mitigation initiatives have matured since the APU's first WMP in 2018.

7.0 INDEPENDENT EVALUATION AND ASSESSMENT OF APU 2023 WMP

7.1 WMP Section 1 – Introduction Overview

8387(b)(2)(B)	The objectives of the wildfire mitigation plan.
---------------	--

This section of the APU Plan includes the WSAB recommended context setting table which provides much more granular detail regarding APU’s service territory, topography and type of vegetation, assets owned and operated by APU, assets in the APU Fire Threat Zone (FTZ), and a breakdown of type of customer accounts.

APU owns and operates 130.42 circuit miles of electric distribution lines in the APU FTZ. 98% of the APU distribution system, in the APU FTZ, is of underground construction with only 2.63 circuit miles of overhead construction. In the opinion of the IE, APU electrical assets could be considered a very low risk for the ignition of a wildfire. APU states a goal of converting the remaining OH facilities in the FTZ to UG facilities by 2025.

As stated by APU, “The primary goals of this WMP are to minimize the probability that APU-owned infrastructure be an original or contributing source towards the ignition of a fire and to improve the resiliency of its electrical grid by incorporating methods and procedures to construct, maintain, and operate APU’s electrical lines and equipment safely.” Section 1.B, Goals and Objectives, details 11 elements of the WMP that guide the development of APU’s WMP.

This sections also contains the WSAB recommended statutory cross reference table (Image 4) listing the requirements of PUC § 8387 with section numbers hyperlinked to where in the WMP each requirement is addressed.

Requirement	Statute and Description	Section Number
Persons Responsible	PUC § 8387(b)(2)(A): An accounting of the responsibilities of persons responsible for executing the WMP	9(D) , 10 , 12
Objectives of the Plan	PUC § 8387(b)(2)(B): The objectives of the WMP	1
Preventative Strategies	PUC § 8387(b)(2)(C): A description of the preventive strategies and programs to be adopted by the POU to minimize the risk of its electrical lines and equipment causing catastrophic wildfires, including consideration of dynamic climate change risks.	3 , 7 , 8 , 9 , 10

Requirement	Statute and Description	Section Number
Evaluation Metrics	PUC § 8387(b)(2)(D): A description of the metrics the POU plans to use to evaluate the plan’s performance and the assumptions that underlie the use of those metrics.	13
Impact of Metrics	PUC § 8387(b)(2)(E): A discussion of how the application of previously identified metrics to previous wildfire mitigation plan performances has informed this plan.	13
De-Energization Protocols	PUC § 8387(b)(2)(F): Protocols for disabling reclosers and de-energizing portions of the electrical distribution system that consider the associated impacts on public safety, as well as protocols related to mitigating the public safety impacts of those protocols, including impacts on critical first responders and on health and communication infrastructure.	9(B) , 9(D)
Customer Notification Procedures	PUC § 8387(b)(2)(G): Appropriate and feasible procedures for notifying a customer who may be impacted by the de-energizing of electrical lines. The procedures shall direct notification to all public safety offices, critical first responders, health care facilities, and operators of telecommunications infrastructure with premises within the footprint of potential de-energization for a given event.	9(D) , 10
Vegetation Management	PUC § 8387(b)(2)(H): Plans for vegetation management.	8(A)
Inspections	PUC § 8387(b)(2)(I): Plans for inspections of POU’s electrical infrastructure.	8(B)
Prioritization of Wildfire Risks	PUC § 8387(b)(2)(J): A list that identifies, describes, and prioritizes all wildfire risks, and drivers for those risks, throughout POU’s service territory. The list shall include, but not be limited to, both the following: <ul style="list-style-type: none"> <li data-bbox="418 1486 1247 1591">i. Risks and risk drivers associated with design, construction, operation, and maintenance of POU’s equipment and facilities <li data-bbox="418 1612 1247 1717">ii. Particular Risks and risk drivers associated with topographic and climatological risk factors throughout the different parts of POU’s service territory. 	4
CPUC Fire Threat Map Adjustments	PUC § 8387(b)(2)(K): Identification of any geographic area in POU service territory that is a higher wildfire threat than is identified in a California Public Utilities Commission (CPUC) fire threat map, and identification of where the CPUC should expand a high fire threat district based on new information or changes to the environment.	5

Requirement	Statute and Description	Section Number
Enterprise Risk	PUC § 8387(b)(2)(L): A methodology for identifying and presenting enterprise-wide safety risk and wildfire-related risk.	2
Restoration of Service	PUC § 8387(b)(2)(M): A statement of how the POU will restore service after a wildfire.	9(D) , 10
Monitor and Audit	PUC § 8387(b)(2)(N): A description of the processes and procedures the POU shall use to do all the following: <ul style="list-style-type: none"> i. Monitor and audit the implementation of the WMP. ii. Identify any deficiencies in the WMP or its implementation, and correct those deficiencies. iii. Monitor and audit the effectiveness of electrical line and equipment inspections, including inspections performed by contractors, that are carried out under the plan, other applicable statutes, or commission rules. 	13 , 14
Qualified Independent Evaluator	PUC § 8387(c): The local publicly owned electric utility or electrical cooperative shall contract with a qualified independent evaluator with experience in assessing the safe operation of electrical infrastructure to review and assess the comprehensiveness of its wildfire mitigation plan. The independent evaluator shall issue a report that shall be made available on the Internet Web site of the local publicly owned electric utility or electrical cooperative, and shall present the report at a public meeting of the local publicly owned electric utility’s or electrical cooperative’s governing board.	14

Image 4 / Statutory Cross Reference Public Utilities Code Section 8387(b)

Recommendations / Comments:

1. The context setting table used by APU has minor changes from the context setting table recommended by the WSAB. The APU context setting table does not provide details regarding the number of generation assets and transmission asset information. This information is detailed in the narrative section; however, it is recommended to input asset information in the context setting table and reference the context setting table from the narrative section.
 - a. Outcome – APU added a very detailed account of electrical assets for the entire APU service territory, including asset details for each tier of the FTZ.

2. It is recommended that APU’s Fire Threat Zone map be introduced in Section 1. The APU FTZ is referenced throughout the WMP and would be very beneficial if described in Section 1 along with the context setting table.

Outcome – The APU fire threat map is included in Section 5, Assessment of High Fire

Threat in APU’s Electric Service Territory.

3. APU should consider using consistent terms throughout the WMP. For example, the term Fire Threat Zone (FTZ) is also referred to as High Fire Threat Zone (HFTZ), Fire Threat Areas, or High Risk Fire Areas, and it is not clear if this is a different zone than FTZ.
 - a. Outcome – APU’s final 2023 WMP uses the term FTZ throughout the WMP.

7.2 WMP Section 2 – Enterprise-wide Safety Risk Assessment, Section 3 - Overview of Risks and Risk Drivers Related to Wildfires, and Section 4 - Dynamic Climate Change Overview

8387(b)(2)(C)	A description of the preventive strategies and programs to be adopted by the local publicly owned electric utility or electrical cooperative to minimize the risk of its electrical lines and equipment causing catastrophic wildfires, including consideration of dynamic climate change risks.
8387(b)(2)(J)	A list that identifies, describes, and prioritizes all wildfire risks, and drivers for those risks, throughout the local publicly owned electric utility’s or electrical cooperative’s service territory. The list shall include, but not be limited to, both of the following:
8387(b)(2)(J)(i)	Risks and risk drivers associated with design, construction, operation, and maintenance of the local publicly owned electric utility’s or electrical cooperative’s equipment and facilities.
8387(b)(2)(J)(ii)	Particular risks and risk drivers associated with topographic and climatological risk factors throughout the different parts of the local publicly owned electric utility’s or electrical cooperative’s service territory.
8387(b)(2)(L)	A methodology for identifying and presenting enterprise- wide safety risk and wildfire-related risk.

WMP Sections 2, 3, and 4, provide details describing the methodology used by APU to identify risks and risk drivers that could result in APU assets being the origin or contributing source for a catastrophic wildfire.

WMP Section 2 – Enterprise Wide Safety Risk Assessment, describes APU’s methods to evaluate enterprise-wide risk. APU evaluates risk through the “bow-tie method” (Image 5) and follows the Committee of Sponsoring Organizations of the Treadway Commission (COSO) Enterprise Risk Management - Integrated Framework.



Image 5 / Risk Bow Tie

The purpose “is to identify and manage potential enterprise and safety risks, including those associated with electrical infrastructure igniting a wildfire, that could threaten the community, interrupt core business functions, and threaten business continuity or impact recovery. City and APU leadership, and subject matter experts, will collaborate to identify credible and foreseeable threats to APU. Risk mitigation plans are established for each risk identified and a risk owner assigned to oversee implementation and progress of the mitigation measures.”

WMP Section 3 - Overview of Risks and Risk Drivers Related to Wildfires, provides a very comprehensive list, as shown in Image 6 below, of (1) Potential Drivers, (2) Description of Driver, and (3) Mitigation Measures and Programs. This list is consistent with what other POU's and Investor Owned Utilities (IOU) list as risk drivers. Although APU has very few overhead assets within their FTZ they are continuously evaluating risk within their service area.

Risk- APU Equipment including Third Party Attachment Igniting a Wildfire		
Potential Drivers	Description of Driver	Mitigation Measures and Programs
Topology	Wildland areas and steep terrain with exposure to overhead power lines.	<ul style="list-style-type: none"> • Vegetation Management • Construction Standards • Water infrastructure reliability improvements to help protect homes near wildland areas • Ensure availability of water in Walnut Canyon Reservoir for water aircraft support • Patrols of utility equipment and structures

Risk- APU Equipment including Third Party Attachment Igniting a Wildfire

Potential Drivers	Description of Driver	Mitigation Measures and Programs
Elevated wildfire conditions	High winds and other weather conditions plus topology more conducive to the spread of wildfire.	<ul style="list-style-type: none"> • Construction Standards • Disable Reclosers • Wildfire Cameras • Weather Stations • Pole Loading • Threat Level Communications and Public Outreach
Climate Change	Expanding FTZs and more extreme weather conditions caused by extended drought seasons and lack of early fall rains.	<ul style="list-style-type: none"> • Inventory Assessment in the FTZs • Vegetation Management
Contact by a foreign object	Vegetation, metallic balloons, avian, vehicle accidents, for example, coming into contact with APU overhead electric facilities.	<ul style="list-style-type: none"> • System Inspection • System Patrols • Vegetation Management • Construction Standards • Avian Deterrents • Conductor Spacing • Undergrounding
Failure of Equipment	Electrical equipment containing flammable material or potential for arcing when operated in a FTZ.	<ul style="list-style-type: none"> • System Inspection • System Patrols • Transformer replacement
Downed Conductors including Third Party attachments	Energized electrical wires falling and coming into contact with wild grass, brush, and other vegetation below.	<ul style="list-style-type: none"> • System Inspection • System Patrols • Reclosers Blocking • Vegetation Management • De-Energize Equipment • Undergrounding
Energized lines coming into contact with each other	Multiple energized lines in contact with each other creating arcing and sparking in dry conditions.	<ul style="list-style-type: none"> • Construction Standards • Conductor Spacing • De-energize Equipment • Undergrounding
Operational Procedures	Automatic operations to re-energize a line after an interruption or programmable settings that de-energize during specific conditions.	<ul style="list-style-type: none"> • Disable Reclosers • De-Energize Lines for Wildfire Mitigation • Notification to AF&R emergency operations to determine necessity of activation of local Emergency Operations Center (EOC) and establishment of incident command • Evacuation Assessment • Initiate citywide communications and public outreach

Risk- APU Equipment including Third Party Attachment Igniting a Wildfire		
Potential Drivers	Description of Driver	Mitigation Measures and Programs
		<ul style="list-style-type: none"> Staffing of 311 Call Center to assist with customer inquiries.
Lack of Coordinated Response	When ignition is identified, a well-coordinated response to suppression and de-energizing lines to limit progression of the fire.	<ul style="list-style-type: none"> Customer Support and Emergency Response coordination with local and regional first responders Coordination with SCE Staffing of EOC and inter-departmental collaboration on traffic, emergency management, and communications

Image 6 / Risk Mitigation for Wildfire Ignition

WMP Section 4 – Dynamic Climate Change, references the United States Environmental Protection Agency (EPA) in defining climate change, specifically in increased temperatures over the next 100 years. APU describes weather events of increasing intensity and the potential impacts to the community and environment. APU describes the collaboration with the Anaheim Fire and Rescue department (AF&R) to continually evaluate areas within their service territory where there could be an increase in risk for an ignition from APU assets.

Recommendations / Comments:

1. APU provides excellent detail for identifying risk and has a very comprehensive understanding of risk drivers within its service territory.

7.3 WMP Section 5 – Assessment of High Fire Threat in APU’s Electric Service Territory Overview

8387(b)(2)(K)	Identification of any geographic area in the local publicly owned electric utility’s or electrical cooperative’s service territory that is a higher wildfire threat than is identified in a commission fire threat map, and identification of where the commission should expand a high fire-threat district based on new information or changes to the environment.
---------------	--

APU utilized the CPUC Fire Threat Map and High Fire Threat District (HFTD) as the basis for developing the APU FTZ (Image 3). APU’s FTZ consists of a Tier 1 - Elevated, Tier 2 – Very High, and a Tier 3 - Extreme FTZs. The APU Tier 2 and Tier 3 FTZ are consistent with the CPUC HFTD Tier 2 and Tier 3 fire threat areas. The APU Tier 1 was created using the CAL FIRE Very High Fire Hazard Severity Zone (VHFSZ) area developed by CAL FIRE’s Fire and Resource Assessment Program (FRAP).

Recommendations / Comments:

1. APU must be commended for expanding their FTZ to include an APU designated Tier 1 FTZ which is adjacent to the CPUC HFTD. However, the description for the APU Tier 2 is not consistent with the CPUC Tier 2. Additionally, the APU Tier 1 Zone is identified as Elevated which is like the CPUC Tier 2 area which introduces some ambiguity. The IE recommends that the naming conventions be either the same as the CPUC HFTD or changed to remove any confusion.
 - a. Outcome – The APU revised the APU tier designations to a Tier 1 Elevated, Tier 2 Very High, and Tier 3 Extreme. Additionally, the APU provides a very descriptive narrative in section 5 for additional clarity regarding the APU defined FTZ.

2. It is recommended that APU overlay the CPUC HFTD boundaries on the APU FTZ to clearly distinguish the similarities or differences of each fire threat boundary.
 - a. Outcome –The APU included additional language in the WMP Section 5 narrative and Figure 4 to describe how the APU FTZ aligns with the CPUC HFTD .

7.4 WMP Section 6 – Overview of Preventative Strategies and Programs and Section 8 - Preventative Strategies for Building Infrastructure Resiliency Overview

8387(b)(2)(C)	A description of the preventive strategies and programs to be adopted by the local publicly owned electric utility or electrical cooperative to minimize the risk of its electrical lines and equipment causing catastrophic wildfires, including consideration of dynamic climate change risks.
8387(b)(2)(F)	Protocols for disabling reclosers and deenergizing portions of the electrical distribution system that consider the associated impacts on public safety, as well as protocols related to mitigating the public safety impacts of those protocols, including impacts on critical first responders and on health and communication infrastructure.
8387(b)(2)(G)	Appropriate and feasible procedures for notifying a customer who may be impacted by the deenergizing of electrical lines. The procedures shall direct notification to all public safety offices, critical first responders, health care facilities, and operators of telecommunications infrastructure with premises within the footprint of potential deenergization for a given event.
8387(b)(2)(H)	Plans for vegetation management.
8387(b)(2)(I)	Plans for inspections of the local publicly owned electric utility’s or electrical cooperative’s electrical infrastructure.
8387(b)(2)(J)	A list that identifies, describes, and prioritizes all wildfire risks, and drivers for those risks, throughout the local publicly owned electric utility’s or electrical cooperative’s service territory. The list shall include, but not be limited to, both of the following:
8387(b)(2)(J)(i)	Risks and risk drivers associated with design, construction, operation, and maintenance of the local publicly owned electric utility’s or electrical cooperative’s equipment and facilities.
8387(b)(2)(M)	A statement of how the local publicly owned electric utility or electrical cooperative will restore service after a wildfire.

WMP Section 6 provides a very comprehensive list of strategies and programs (Image 7) undertaken by APU in its continuous effort to reduce the risk of APU assets being the origin or contributing source for a

catastrophic wildfire.

Situational/Conditional Awareness
Collaboration with AF&R, Fire Safe Councils and OCFA in preparation for RFW and SAWTI events
Fire cameras installed in Anaheim’s FTZs and connected to the regional network AlertWildfire.org
Weather monitoring stations installed in FTZ and network access for local weather station data
Training for AF&R Dispatch Center and APU Operators in fire camera view and operations
Daily monitoring and reporting of elevated fire weather conditions including RFW and SAWTI
On-site visual inspection by APU troubleshooter and CERTS during elevated conditions
Training for APU Operations on Disabling Reclosers
Training for APU Operations on De-energize/Restore protocols and communications
Design and Construction
Modified Construction Standards for FTZ
Wood to Ductile Iron pole replacement
Concealed lightning arrester replacement
Insulated covers on equipment mounting brackets
Increase overhead wire spacing
Increased wind loading for pole strength and integrity
Installation of avian diversion equipment
Expulsion-proof fusing
Undergrounding electric lines in FTZ
Inspection and Maintenance
Vegetation Management- Line Clearance
Surface fuel management
Vegetation tracking and recording
Detailed distribution overhead and underground lines and infrared thermography inspections
Distribution wood pole intrusive testing
Visual inspection and infrared thermography of distribution substations
Substation equipment oil sampling
Operational Practices
Overhead Distribution line patrols
Disable reclosing during RFW and SAWTI Extreme conditions
Independent fiber-optic communication network
De-energized power lines through Oak Canyon Nature Center
Response and Recovery
Wildfire Mitigation Response Procedures- Operation and communication protocols including emergency shut-off
Communication strategy for de-energize/restore response.
Emergency Response planning for Stakeholder support during an emergency shut-off
Field Operations recovery procedures
Post event customer support and protection services
Modifications to policies, practices, and procedures
Waiver of electric and water service connection fees
Waiver of electric and water design/engineering, plan checks, and inspection fees
Impacted customer payment extensions, payment plans
Irrigation controllers provided at no cost to extend longevity of landscaping

Image 7 / Preventative Strategies and Programs

WMP Section 8 provides more specific details regarding a few of the strategies and programs listed in Section 6. Those programs include (A) Vegetation Management (VM), (B) System Inspection and Maintenance, (C) Undergrounding Power Lines, (D) Overhead Construction Practices, and (E) Pole Loading and Wire Spacing.

APU’s VM inspection and maintenance, electric system inspection and maintenance, overhead construction standards, and pole loading assessments comply with the applicable CPUC General Orders and industry standard best practices.

WMP Section 8.A – Vegetation Management describes how APU utilizes contractors to trim approximately 13,000 trees per year system wide. APU employs a Certified Arborist and a Certified Power Line Clearance Tree Trimming Supervisor who oversee all work done by the VM contractors. APU leverages their Geographical Information System (GIS) to maintain a tree inventory (Image 8). There is a GPS coordinate for each inventoried tree that provides an accurate location of the tree. Additional tree attributes, such as, species, condition, and trim schedule are also included to help better manage the VM program. The APU GIS also contains an inventory of trees surveyed for potential infestation of the Gold Spotted Oak Borer (GSOB). Through 2022, this survey has resulted in the removal of about 60 trees and treated approximately 400 infected trees.

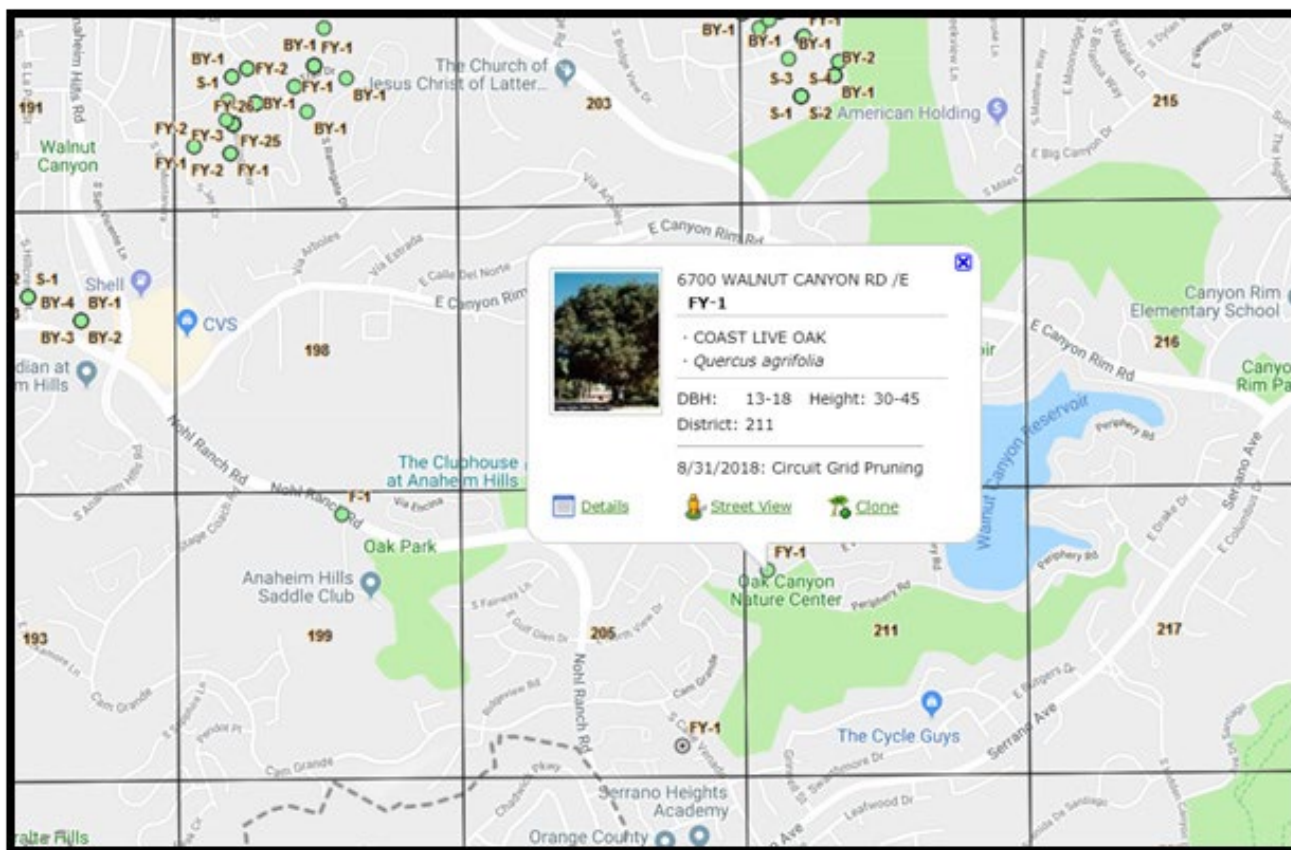


Image 8 / Tree Inventory Tracking in a GIS Map

WMP Section 8.B – System Inspection and Maintenance, describes a comprehensive asset inspection and maintenance routine for its electrical assets including pole loading assessments and increase wire spacing as described in WMP Section 9.E. APU’s asset inventory and maintenance records utilize ArcGIS Survey 123³ and ArcGIS Collector⁴ as a record repository. Compliance infractions or equipment that requires maintenance are assigned a Condition Level depending on severity of the finding and potential safety or reliability impacts if not addressed in a timely manner. Condition Levels and description of corrective actions is listed below:

- Condition Level “1”: Maintenance required. Repair or replace within 90 days. If there is an imminent safety or reliability problem, the inspector should contact Electric Operations for confirmation with field personnel and to identify and schedule immediate mitigation procedures.
- Condition Level “2”: Maintenance needed but deferrable, no immediate safety or reliability concern.
- Condition Level “3”: Minor aging, fully serviceable, no safety or reliability concern. Appropriate for next scheduled inspection.

WMP Section 8.C – Undergrounding Power Lines provides excellent detail regarding projects completed during the 2020-2022 WMP cycle to UG assets in the APU FTZ. This section also provides detail on projects and funding to convert the remaining 2.63 miles from OH facilities within the APU FTZ to UG facilities. This project is currently scheduled for completion by 2025.

WMP Section 8.D – Overhead Construction Practices describes a few of the projects that support APU’s ongoing efforts to reduce the risk of APU assets being the origin or contributing source for a catastrophic wildfire. APU has replaced wood poles with ductile iron poles, replaced fuses with non-expulsion fuses, adopted the use of a sealed lightning arrestor, and installed avian protection hardware in areas of heightened exposure to animal/bird contact.

Recommendations / Comments:

1. APU describes an excellent VM program, including the use of ArcGIS, and provides good detail on inspection and trim cycles, and identifying programs for managing trees that could be subject to failure (diseased). However, it is not always clear if the inventory numbers shown are for trees in the APU FTZ or system wide numbers. The IE recommends APU provide this information for trees within the FTZ.
 - a. Outcome – APU provides a more descriptive narrative to read “APU contractors perform

³ <https://survey123.arcgis.com/>

⁴ <https://doc.arcgis.com/en/collector-classic/>

power line clearance tree trimming for approximately 13,000 trees annually across the City, with approximately 5% of those trees within the FTZ. Trees within the FTZs are prioritized for trimming to be completed prior to summer before extreme temperatures begin to elevate wildfire risk.”

2. APU states. “Vegetation around the base of power poles where typically switching equipment is located or animal contacting energized electric lines is most prominent are trimmed annually under the APU vegetation management program.” The IE interprets this statement to describe compliance with CA Public Resource Code § 4292. The IE recommends specifically stating compliance with PRC § 4292.
 - a. Outcome – APU provides a more descriptive narrative to read, “APU performs vegetation clearing around the base of power poles in accordance with PRC § 4292 where CAL FIRE non-exempt switching equipment is located, or animal contacting energized electric lines is most prominent. Surface fuel clearing is performed after rains have subsided and ambient temperatures begin to rise.”
3. APU describes monthly inspections of 14 substations in compliance with GO 174 - Rules for Electric Utility Substations - Inspection Programs. The IE recommends substation counts be included in Context Setting Table in Section 1 and detailing how many substations are in the APU FTZ and how many are outside the APU FTZ.
 - a. Outcome – The number of substations is now included in the context setting table, including any within each FTZ.
4. The IE recommends that APU describe if asset and VM inspections and maintenance cycles are more frequent than what is required by CPUC general orders for assets within the APU FTZ.
 - a. Outcome – APU provides excellent detail regarding VM and asset inspections per an established schedule. APU conducts annual inspections and states in Section 8.A that “Trees within the FTZs are prioritized for trimming to be completed prior to summer before extreme temperatures begin to elevate wildfire risk.”
5. APU reports they have replaced 12 fuses with non-expulsion type fuses in the APU FTZ, and “will continue its fuse replacement program on an as-needed basis or if undergrounding the remaining overhead line is delayed.” The IE recommends providing more specific detail defining “on an as-needed basis”. The IE also recommends providing an inventory of total fuses that have been identified for replacement and projected schedule to cover the 2023-2025 WMP cycle.
 - a. Outcome – Section 8.D, Overhead Construction Practices, APU states, “APU has replaced twelve (12) fuses with non-expulsion type fuses in the FTZs to minimize the risk of ignition from an electrical fault and will continue its fuse replacement if undergrounding the remaining overhead line is delayed.”

6. The IE recommends APU reference the CAL FIRE Power Line Fire Prevention Field Guide⁵ and adopting the terms “exempt” and “non-exempt” equipment.
 - a. Outcome – APU made edits throughout the WMP to describe exempt and non-exempt equipment.

7. In Section 9.B APU states compliance with CPUC GO 95, Rule 18⁶, for system inspections and maintenance. Both the APU and CPUC describe a Priority Level 1, 2, or 3 to assign an asset that has been identified as a safety hazard or nonconformance. However, the APU priority level description and remediation timeframes are not consistent with what is described in the CPUC GO95 Rule 18. The IE recommends APU make clear their remediation timeframe when a safety hazard or nonconformance has been identified.
 - a. Outcome – APU added clarifying language to the description of each Condition Level.

7.5 WMP Section 7 – Situational Awareness Overview

8387(b)(2)(K)	Identification of any geographic area in the local publicly owned electric utility’s or electrical cooperative’s service territory that is a higher wildfire threat than is identified in a commission fire threat map, and identification of where the commission should expand a high fire-threat district based on new information or changes to the environment.
---------------	--

Anaheim Fire and Rescue (AF&R) provides a daily condition assessment to APU for the East Anaheim mountainous areas of the APU service territory. The daily assessments risk conditions are Normal Condition, Elevated Condition, Extreme Condition, and Red Flag Warning (RFW). AF&R is the subject matter experts for classifying fire risk conditions in the service area; however, it is not clear what the triggers or thresholds are for each condition. Additionally, it is not clear if APU operations, and construction and maintenance departments utilize these condition assessment levels for daily operating decisions.

APU must be applauded in their use of publicly available information for daily situational awareness. In addition to collaborating daily with AF&R, APU also leverages weather forecasts and RFW from the National Weather Service (NWS) and access the Santa Ana Wildfire Threat Index (SAWTI) rating via the internet. APU also utilizes the large network of high-definition cameras through AlertCalifornia.org, and four weather stations within or near the APU FTZ. When the NWS issues a RFW, APU will dispatch personnel to the FTZ areas to provide real-time on site assessments of any potential threats to APU assets.

⁵ https://osfm.fire.ca.gov/media/3vqj2sft/2021-power-line-fire-prevention-field-guide-ada-final_jf_20210125.pdf

⁶ https://ia.cpuc.ca.gov/gos/GO95/go_95_rule_18.htm

Recommendations / Comments:

1. The Santa Ana Wildfire Threat Index⁷ (SAWTI) categorizes Santa Ana winds based on anticipated fire potential and produces a daily rating. The ratings are (1) No Rating, (2) Marginal, (3) Moderate, (4) High, and (5) Extreme. It is unclear at which rating the APU begins to implement procedures described in the APU WMP. The IE recommends the APU be specific as to which SAWTI rating would cause heightened situational awareness and/or an operational response for increased fire weather conditions.
 - a. Outcome – APU has added clarifying language describing the SAWTI ratings. Operational actions at a SAWTI rating of Extreme are further described in Section 9, Operational Strategies to Reduce Risk of Wildfire Ignition.
2. A RFW is issued by the NWS for defined California Fire Weather Zones. The IE recommends that APU add, in the WMP, a reference to Fire Weather Zone CAZ554, an area of 551 square miles, which includes the APU service area.
 - a. Outcome – The APU added the Fire Weather Zone information to the WMP to clearly understand within which fire weather zone the APU service area is in.

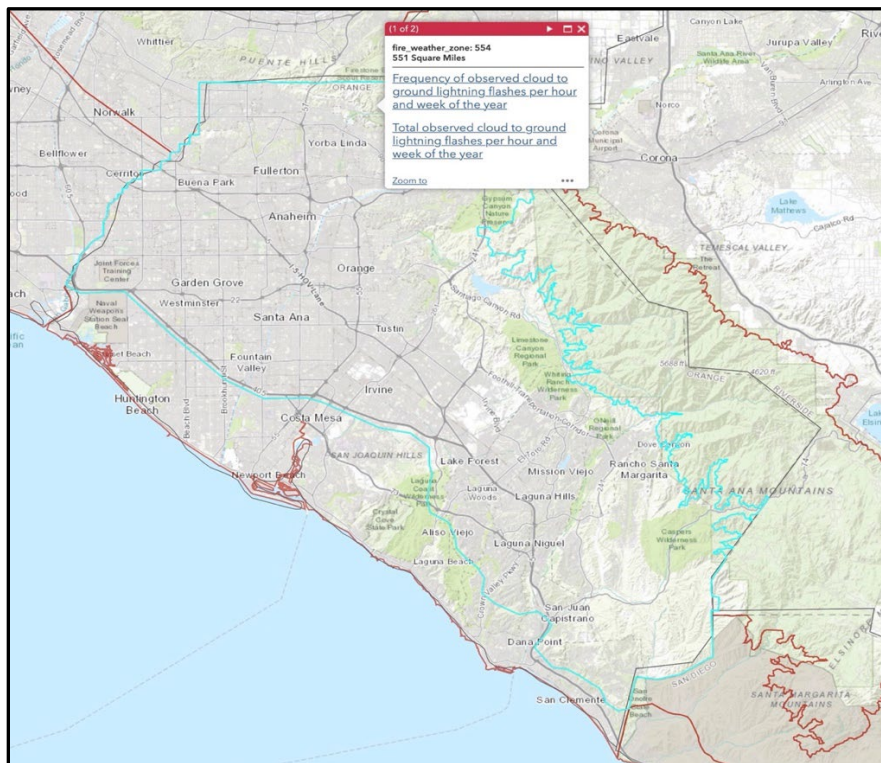


Image 9 / California Fire Weather Zone 554

⁷ <https://fsapps.nwcg.gov/psp/sawti>

3. The RFW provides valuable information for APU to prepare and/or respond to critical fire weather conditions. However, the RFW is issued per FWZ. The APU service area is within the CAZ554, an area of 551 square miles. The IE recommends APU evaluate how to leverage their existing situational awareness tools to provide more granular and real-time weather information and to monitor critical fire weather conditions near their assets in the APU FTZ.
 - a. The APU added additional information to the WMP describing the internal process for identifying potential risks to areas within the APU FTZ when a RFW is declared. The IE recommends APU continue to explore opportunities to leverage its situational awareness tools and provide a more granular risk assessment for assets within its FTZ.

4. “AF&R provides a daily assessment of conditions classified as ‘Normal’, ‘Elevated’, ‘Extreme’, and ‘RFW’.” Other POU leverage a fire agency condition level assessment for situational awareness to designate daily fire risk conditions in lieu of producing an IOU type of fire potential index (FPI). The WSAB template, Section VII. B. Weather Monitoring also suggests/recommends incorporating these “Operating Conditions” in a POU WMP. If adopted, APU would specify the criteria or triggers for moving from one operating condition to the other. The IE recommends APU consider adopting the use of the Operating Conditions to provide operations personnel a consistent situational awareness tool.
 - a. Outcome – The APU would like to further discuss and explore developing Operating Condition criteria and, if adopted, how to operationalize it. The IE recommends the APU provide an update on this recommendation in its 2024 WMP.

7.6 WMP Section 9 – Operational Strategies to Reduce Risk of Wildfire Ignition

8387(b)(2)(C)	A description of the preventive strategies and programs to be adopted by the local publicly owned electric utility or electrical cooperative to minimize the risk of its electrical lines and equipment causing catastrophic wildfires, including consideration of dynamic climate change risks.
8387(b)(2)(F)	Protocols for disabling reclosers and deenergizing portions of the electrical distribution system that consider the associated impacts on public safety, as well as protocols related to mitigating the public safety impacts of those protocols, including impacts on critical first responders and on health and communication infrastructure.
8387(b)(2)(G)	Appropriate and feasible procedures for notifying a customer who may be impacted by the deenergizing of electrical lines. The procedures shall direct notification to all public safety offices, critical first responders, health care facilities, and operators of telecommunications infrastructure with premises within the footprint of potential deenergization for a given event.
8387(b)(2)(I)	Plans for inspections of the local publicly owned electric utility’s or electrical cooperative’s electrical infrastructure.

APU highlights four operational strategies employed by APU to reduce the risk of APU assets being the

origin or contributing source for a catastrophic wildfire. The situational awareness tools described in the APU WMP Section 7 are used to inform APU leadership and operations personnel on actions to be taken when critical fire weather conditions are forecast or are being observed. The four operational strategies described are (1) System Patrols, (2) Circuit Reclosers, (3) Communication Network, and (4) De-Energize Power Lines.

Consistent with utility best practices, APU will initiate system patrols when “during forecasted elevated ambient temperatures, or RFW and high wind conditions, utility staff will be dispatched to patrol the overhead infrastructure in the FTZs as a precautionary measure”. Additionally, APU will leverage the use of the AF&R Community Emergency Response Teams (CERT) to assist in identifying and reporting potential hazards to APU infrastructure in the APU FTZ. What is not clear is what are the thresholds for “elevated ambient temperatures” and “high wind conditions”.

Consistent with utility best practices, APU will disable the reclose function of substation circuit breakers and/or line reclosers when the NWS issues a RFW and/or when the SAWTI “indicates wind speeds are excessive”. The SAWTI has five ratings as previously described but does not provide a rating for “excessive wind speeds”. APU has identified four circuits subject to disabling the reclose function; however it is not clear if these circuits are in the Tier 1, Tier 2, or Tier 3 of the APU FTZ.

WMP Section 9.D – De-Energize Power Lines, states that in 2021 APU completed an OH to UG conversion project in an APU Tier 3 FTZ. This line segment was the last remaining APU line that served customer load and subject to de-energization due to forecasted or observed critical fire weather conditions. APU goes on to describe customer communication and support programs available to them in the event of loss of power. However, this section is not clear if the loss of power is due to an unplanned interruption or de-energization due to forecasted or observed critical fire weather conditions.

WMP Section 9.E – Summary of Operational Strategies, outlines the Operational Strategies (Image 10) undertaken by APU and the specific triggers for executing the strategy.

Operating Strategies	Red Flag Warning (RFW)	Santa Ana Wildfire Threat Index (SAWTI) Extreme
Monitor Warnings	X	X
Patrols	X	X
Disable Reclosers	X	X
De-Energize Tier 3 FTZ Overhead Line		X

Image 10 / Operational Strategies

Recommendations / Comments:

1. Throughout the WMP APU refers to conditions such as “elevated ambient temperatures” and “high wind conditions”. The IE recommends that APU establish specific triggers to replace these generic terms to better inform response personnel of actions that should be taken pursuant to established operating procedures.
 - a. Outcome – The APU revised the WMP and will initiate operating strategies at either a Red Flag Warning or an Extreme SAWTI.

2. The IE recommends that APU provide additional details regarding the four distribution circuits that are subject to disabling the reclose function when specific triggers are met. The IE recommends APU state whether the devices operable via Supervisory Control and Data Acquisition (SCADA) and are they in or outside of the APU FTZ.
 - a. Outcome – The APU added language that describes the four distribution circuits mentioned here are in the FTZ and the reclosing relay can be enabled/disabled via SCADA.

3. The IE recommends APU clearly state whether it will execute a proactive (preemptive) deenergization, based of forecasted or observed high fire risk conditions. APU states it has completed an OH to UG conversion project and have no remaining customers supplied from OH lines previously subject to a proactive deenergization; however, APU still describes potential impacts to customers. If a proactive deenergization is executed, it is recommended that APU describe the protocols for making the decision for when to turn off the power.
 - a. Outcome – WMP Section 9.D, Power Shutoffs, states that APU completed an undergrounding project and there is no customer load served from OH lines in the Tier 3 FTZ which “eliminates the need for APU to initiate a pre-emptive power shutoff as a wildfire mitigation strategy in their service territory”.

7.7 WMP Section 10 – Community Support in Emergencies

8387(b)(2)(F)	Protocols for disabling reclosers and deenergizing portions of the electrical distribution system that consider the associated impacts on public safety, as well as protocols related to mitigating the public safety impacts of those protocols, including impacts on critical first responders and on health and communication infrastructure.
8387(b)(2)(G)	Appropriate and feasible procedures for notifying a customer who may be impacted by the deenergizing of electrical lines. The procedures shall direct notification to all public safety offices, critical first responders, health care facilities, and operators of telecommunications infrastructure with premises within the footprint of potential deenergization for a given event.
8387(b)(2)(M)	A statement of how the local publicly owned electric utility or electrical cooperative will restore service after a wildfire.

APU outlines numerous programs for supporting customers during power system emergencies.

The four programs described in this section are (A) Community Outreach, (B) Emergency Response, (C) Community Support, and (D) Post-Event Customer Support.

WMP Sections 10.A, 10.C, and 10.D, Community Outreach, Community Support, and Post-Event Customer Support provide a very good description of the various programs available to customers impacted by electric system emergencies, i.e., assistance to special needs customers, customer rebate programs, establishing Mobile Neighborhood Utility Centers, waive new service connection and inspection fees, and provide emergency generators. Additionally, APU provides excellent information on its public facing websites and provides a comprehensive list of tools used for disseminating emergency communications to the public.

WMP Section 10.B, Emergency Response, is described in various sections of the 2023 APU WMP, in the APU Electric System Order (ESO) 2529 – Wildfire Mitigation Response Plan in FTZs, and in the APU Emergency Response Plan.

Recommendations / Comments:

1. WMP Section 10.D – Post-Event Restoration and Response, provides good detail regarding customer programs to support customers experiencing significant impacts following a major emergency. However, this section lacks detail regarding restoration procedures, priorities, and coordination with internal and external stakeholders. It is not clear if post event is referring to a preemptive deenergization event due to forecasted or observed fire weather conditions, or an unplanned interruption event.
 - a. Outcome – As a result of APU’s ungrounding initiatives within the FTZ, APU no longer will execute a preemptive deenergization, as a measure of last resort, when critical fire weather conditions are forecasted or observed.

2. This section referenced the APU internal procedure Electric System Order (ESO) 2529 – Wildfire Mitigation Response Plan dated February 15, 2019. The IE recommends ESO 2529 be updated to remain applicable to the 2023 WMP.
 - a. Outcome – APU to follow up and update ESO 2529.

7.8 WMP Section 11 – Workforce Training Overview

8387(b)(2)(C)	A description of the preventive strategies and programs to be adopted by the local publicly owned electric utility or electrical cooperative to minimize the risk of its electrical lines and equipment causing catastrophic wildfires, including consideration of dynamic climate change risks.
---------------	--

APU clearly articulates the various annual training programs in place to prepare APU employees and other stakeholders for responding to critical fire weather events and the use of the various tools for

situational awareness.

APU states that “specific wildfire emergency training scenarios will be conducted annually, either as part of the larger Department-wide training or through table-top exercises with key personnel responsible for electric operations”. “Training on operating the wildfire cameras by the AF&R Dispatchers is conducted using a train-the-trainer method.” Additionally, “APU conducts an annual training with the AF&R CERTS as part of a larger AF&R safety training program to review relevant electrical infrastructure including the pole tag numbers, switches, conductors and connections, transformers, and other equipment.”

Recommendations / Comments:

1. No recommendations.
 - a. The IE applauds APU’s training programs notably conducting table-top exercises.

7.9 WMP Section 12 – Organization and Assignment Responsibilities

8387(b)(2)(A)	An accounting of the responsibilities of persons responsible for executing the plan.
---------------	--

APU provides an organization chart of the City of Anaheim Organizational Structure (WMP Figure 21). Image 11, Roles and Responsibilities for Implementation of the WMP, provides a listing of the actions or programs described in the APU 2023 WMP and the organization responsible and accountable for each specific action or program.

Action	Organization
Advisory Warning Watch and Notification	AF&R EMP/APU Operations
Fire Threat Zone area assessment	AF&R Fire Prevention/APU Operations
Fire Monitoring Cameras and Weather Stations	APU Operations/ AF&R Fire Prevention
On-Site Visual Inspections during RFW and SAWTI Extreme events	APU Electric Trouble/AF&R CERTS
Disabled Reclosers Procedure	APU Operations
Infrastructure Integrity Assessment	APU Electric Trouble/T&D Engineering
Construction Standards	APU T&D Engineering
Vegetation Management	APU Electric T&D Field/Public Works
Equipment Evaluation and Replacement	APU Standards/Electric Operations
Distribution System Inspection	APU Standards/T&D Engineering
Substation Inspection/Maintenance	APU Substation Test and Maintenance
Reporting	APU Administration and Compliance
WMP Review and Approval	Public Utilities Board/City Council
Budgetary approval for WMP mitigation	Public Utilities Board/City Council

Image 11 / Roles and Responsibilities for Implementation of the WMP

Recommendations / Comments:

- 1. No recommendations.

7.10 WMP Section 13 – Metrics, Monitoring and Reporting, and Section 14 - Monitor and Auditing the Plan

WMP Section 13 graphically displays the list of metrics APU tracks to monitor the performance of the APU WMP. APU tracks two categories of metrics (1) specific metrics of fire incidents, and (2) the WMP’s performance metrics. The WSAB, in its Advisory Opinion for the 2023 POU WMP, states that “the WSAB is interested in both performance metrics – measuring how a utility is performing on wildfire mitigation actions such as inspections and vegetation management for a particular period – and outcome metrics – measuring events that happen in the utility service area such as fire ignitions and down utility conductors or other assets.”

APU provides an excellent example of how tracking risk events or other electrical incidents has informed APU’s continuous improvement of wildfire mitigation programs. APU described a risk event where a foreign object contacted an energized lightning arrestor which resulted in an ignition of a small vegetation fire at the base of the pole. Upon evaluation of the incident, APU made the decision to replace all lightning arrestors with a sealed lightning arrestor which would reduce the risk of a similar occurrence.

Examples, not all inclusive, of APU metrics tracked in the APU 2023 WMP include:

Performance Metrics	Outcome Metrics
Reportable fire ignitions in the FTZ caused by downed power lines	Percentage of OH facilities converted to UG.
Reportable fire ignitions in the FTZ caused by other equipment	Number of annual trainings completed.
Down power lines in the FTZ	Percentage of lines cleared of vegetation.
Number of PSPS	Percentage of distribution inspections and patrols completed
Number of reclosers disabled	Percentage of substation inspections and patrols completed

Image 12 / Partial List of Metrics

WMP Section 14 describes APU’s method for monitoring and auditing the Plan. APU reviews and updates the WMP on an annual basis to align with APU’s planning and budgeting process. The updated plan is presented to the Anaheim Public Utilities Board and upon their approval, the Plan is submitted to the CA WSAB on or before July 1 of each year.

PUC § 8387(3)(c) requires that the local POU utility or electrical cooperative shall contract with a qualified independent evaluator with experience in assessing the safe operation of electrical infrastructure to review and assess the comprehensiveness of its wildfire mitigation plan. The independent evaluator shall issue a report that shall be made available on the internet website of the local POU or electrical cooperative and shall present the report at a public meeting of the local publicly owned electric utility's or electrical cooperative's governing board.

APU engaged the services of GridSME as its IE for evaluating the APU 2023 WMP. The IE is scheduled to present the findings of the WMP evaluation to the Anaheim Public Utilities Board on May 24, 2023, and to the Anaheim City Council on June 13, 2023.

Recommendations / Comments:

1. The IE recommends that APU provide historical year-end metric outcomes in the WMP. It is difficult to determine year after year trends when only the previous year end numbers are provided.
 - a. Outcome – Within the 2023 WMP the APU has included Table 10, Summary of Performance Metrics, which provides a very comprehensive list of metrics with yearly outcomes for a 3-year period.
2. The IE recommends APU describe the process for public review and comment of the WMP prior to the annual approval.
 - a. Outcome – The APU added clarify language to WMP Section 14.

8.0 CONCLUSION

APU's primary goal is to construct, maintain, and operate its electrical lines and equipment in a manner that will minimize the risk of wildfire posed by those electrical lines and equipment, and ensure compliance with California PUC § 8387. Following an independent evaluation of APU's 2023 WMP, GridSME concludes that the Plan is comprehensive and meets the requirements of PUC § 8387.