

CITY OF COLTON  
WILDFIRE PREVENTION AND MITIGATION  
PLAN

October 1, 2019

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## Colton Electric Department

### Wildfire Prevention and Mitigation Plan

#### 1.0 Introduction

The past two summers have seen huge, destructive wildfires throughout California. Most scientists and land management experts expect the number and size of wildfires to grow due to a changing climate, hotter temperatures and less spring and summer rainfall that result in more ground vegetation and dead trees to fuel wildfires. The Colton Electric Department (CED) has developed a *Wildfire Prevention and Mitigation Plan* (WPMP) to illustrate the steps CED has taken to reduce the risk of fire posed by its electrical generation, transmission and distribution equipment.

California is making a number of structural planning and infrastructure changes at the state level to try to reduce the number and severity of wildfires. Of particular importance to the CED is “SB 1028: A Compliance Assessment of Potential Risk of Wildfires Caused by Electric Lines and Equipment.” Electric facilities are just one of many potential causes of wildfires in California that also includes actions such as lightning, careless people, vehicles and other factors.

SB 1028 requires all electric utilities to construct, maintain and operate its electrical lines and equipment in a manner that minimizes the risk of wildfire posed by this equipment. SB 1028 (that modifies an earlier wildfire mitigation bill, SB 901) and AB 1054 requires each POU develop and submit a Wildfire Prevention and Mitigation Plan (WPMP) to a new state agency, tentatively named the California Wildfire Safety Advisory Board (CWSAB), for review and approval. The WPMP must include:

- (1) An accounting of the responsibilities of persons responsible for executing the plan.
- (2) The objectives of the plan.
- (3) A description of the preventive strategies and programs adopted by the electrical corporation to minimize the risk of its electrical lines and equipment causing catastrophic wildfires.
- (4) A description of the metrics the electrical corporation plans to use to evaluate the plan’s performance and the assumptions that underlie the use of those metrics.
- (5) A discussion of how the application of previously identified metrics to previous plan performances has informed the plan.
- (6) A description of the processes and procedures the electrical corporation will use to do the following:
  - (A) How the utility intends to monitor and audit the implementation of the plan.
  - (B) How the utility will identify any deficiencies in the plan or the plan’s implementation and correct those deficiencies.
  - (C) How the utility will monitor and audit the effectiveness of electrical line and equipment inspections, including inspections performed by contractors, carried out under the plan and other applicable statutes and commission rules.

(7) Any other information that the commission may require.

CED's overall goal is to provide safe, renewable, sustainable, reliable and low-cost electric service to its residents and businesses. To accomplish this goal, CED must operate its electrical facilities in a manner that minimizes the risk of injury to its employees and its customers, including minimizing the risk of fires caused by CED's electrical system.

In other words, utilities must operate and maintain their systems to comply with their WPMP not just develop the plan and put it on the shelf to be pulled out whenever a regulator or verifier comes by to check on the utility.

The utility must take the WPMP to its governing body for review and approval prior to December 31, 2019. The approved plan is then submitted to the CWSAB for final approval. If the CWSAB has comments or requires additional information, the utility has 30 days to respond.

Utilities must update and re-submit the WPMP annually for approval to the CWSAB so maintaining this document becomes an ongoing process. A failure on the part of the utility to meet the requirements of its own plan when audited by the Wildfire Board would result in fines or other penalties, including the possibility of criminal prosecution.

## **2.0 Purpose**

The primary purpose of CED's WPMP is to present the efforts made by CED to minimize the risk of fires starting due to power line and electrical equipment issues. The WPMP meets CED's statutory obligation to prepare a wildfire mitigation plan by January 1, 2020 and update it annually to incorporate new information and implement industry best practices.

The City of Colton adopted a *Local Hazard Mitigation Plan* in September 2019. CED's WPMP is consistent with the *Local Hazard Mitigation Plan*.

CED follows all appropriate design, construction, operation and maintenance requirements to reduce the risk of fire from equipment malfunctions.

The WPMP describes:

- 1) The legislative background for development of a WPMP;
- 2) Key personnel who are responsible for implementing elements of CED's WPMP;
- 3) Circuit De-energization
- 4) Wildfire Risk and Risk Factors
- 5) Topographic Risk Factors Within Colton
- 6) The safety-related measures that CED follows to reduce the risk of wildfires including vegetation management and daily safety inspections;
- 7) Procedures for notifying customers, businesses and other agencies of any potential electric service interruptions;
- 8) Procedures for working with local fire departments, police and other agencies in the event a fire does start within the City.

9) Metrics for evaluating the performance of the plan and identifying areas of improvement

CED developed this plan in conjunction with the Colton Fire Department (CFD) that has previously developed a fire-fighting plan for fires in both Reche Canyon and La Loma Hills, the two areas identified as higher-risk areas in the City by the State Fire Map. CED is located in a primarily urban area with only the southeast portion of the City in a Tier 3 fire zone as defined by the California Public Utilities Commission (CPUC) fire map.

CED works closely with other local safety and emergency agencies to both reduce the risk of fires and respond to emergencies within its service area. Unfortunately, there are many other reasons a fire could start in the high-risk areas in addition to electric power lines and equipment.

CED's WPMP provides a clear picture to Colton residents on how CED intends to communicate and implement wildfire mitigation measures. This is particularly important in the canyon areas where CED is pursuing an aggressive vegetation management effort that is sometimes at odds with homeowner's desires for trees and shrubs around power poles.

This is CED's first WPMP. At time of this WPMP, there have been no fires attributed to CED's electrical equipment so it is difficult to discuss the metrics or success of CED's fire prevention strategy. During the first update, CED will be able to evaluate the effectiveness of some of the performance measures in the WPMP and revise its planning and annual capital improvements as needed to reduce risk and improve safety.

### 3.0 Background

The California Municipal Utility Association and Braun, Blasing, Smith and Wynn (CED's regulatory attorney) summarized the State's approach to wildfire risk as:

"In a 2012 Decision, the California Public Utilities Commission ("CPUC") adopted three interim fire maps that designated areas of the state where stricter inspection and vegetation clearance requirements would apply to overhead utility poles and equipment.<sup>1</sup> These interim maps were primarily based on generalized wildfire threat, rather than the risk of electric line-ignited fires. The CPUC has acknowledged the need for a better map and, in the same 2012 Decision, the CPUC directed parties to develop a more precise statewide fire map that identified areas of the state at an elevated risk of electric line-ignited wildfires.<sup>2</sup>

In 2018, the CPUC completed the development of the statewide Fire Threat Map that designates areas of the state at an elevated risk of electric line-ignited wildfires.<sup>3</sup> This updated map incorporated

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<sup>1</sup> D.12-01-032.

<sup>2</sup> D.12-01-032 at 146-147.

<sup>3</sup> PG&E Advice Letter 5211-E/3172-E, "Joint Filing – Adoption of Final California Public Utilities Commission Fire-Threat Map," Jan. 5, 2018, *available at* [https://www.pge.com/tariffs/assets/pdf/adviceletter/ELEC\\_5211-E.pdf](https://www.pge.com/tariffs/assets/pdf/adviceletter/ELEC_5211-E.pdf); SED Disposition Letter

historical fire data, fire-behavior modeling, and assessments of fuel, weather modeling, and host of other factors. The map development and approval process involved detailed review by the relevant utility staff and local fire officials, a peer review process, and ultimate approval by a team of technical experts led by CalFire. The CPUC's Fire Threat Map includes three Tiers/Levels of fire threat risk. Tier 1 consists of areas that have the lowest hazards and risks. Tier 2 consists of areas on the CPUC Fire Threat Map where there is an *elevated risk* for destructive utility-associated wildfires. Finally, Tier 3 consists of areas on the CPUC Fire-Threat Map where there is an *extreme risk* for destructive utility-associated wildfires.

SB 1028 was enacted prior to the adoption of the CPUC's Fire Threat Map and does not reference the tiers of fire risk. However, CED believes that the Fire Threat Map is the best source of data for determining whether there is significant risk of wildfire resulting from electrical lines or equipment. The Fire Threat Map incorporates historical fire data and received extensive input from electric utility experts and fire officials.”

The CPUC's Fire Threat Map (Figure 1) for CED identifies two primary areas of wildfire potential within Colton, a tier 2 level in the La Loma Hills / Roquet Ranch Area (La Loma) and a Tier 3 threat level in the Reche Canyon area. There is also a short stretch of transmission line (0.6 miles long) in the Agua Mansa industrial corridor that is in an elevated risk (Tier 2) area.

CED has evaluated prudent improvements to its physical assets and additional training to reduce the fire hazard due to CED's equipment. CED's response has been to:

- significantly increase vegetation removal efforts in the elevated threat areas;
- increase the number of patrols during red-flag periods to check for downed lines and broken or damaged poles and cross-arms, and;
- purchase drones with infrared and regular cameras to inspect all the 12 and 66 kV circuits located in the elevated threat areas on a semi-annual basis.

In 2016, Senator Hill introduced Senate Bill (“SB”) 1028 (stats. 2016) with the goal of encouraging electric utilities to adopt a performance-based plan for mitigating the risk of wildfires from electric lines and equipment.<sup>4</sup> SB 1028 is separated into two basic parts: (1) a mandate for all investor owned utilities (“IOUs”) to develop wildfire mitigation plans, with a specified review process by the CPUC; and (2) a more limited process for publicly owned utilities (“POUs”), that requires the POU to identify wildfire mitigation measures if the POU governing board makes certain findings regarding fire threat risk.

A POU only has an obligation to identify wildfire mitigation measures if its governing board first determines its overhead electric lines and equipment pose a significant risk of causing a catastrophic wildfire.

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Approving Advice Letter 5211-E/3172-E, January 19, 2018, *available at* [https://www.pge.com/tariffs/assets/pdf/adviceletter/ELEC\\_5211-E.pdf](https://www.pge.com/tariffs/assets/pdf/adviceletter/ELEC_5211-E.pdf).

<sup>4</sup> See Senate Floor Analysis, SB 1028, Aug. 23, 2016, *available at*: [http://leginfo.legislature.ca.gov/faces/billAnalysisClient.xhtml?bill\\_id=201520160SB1028#](http://leginfo.legislature.ca.gov/faces/billAnalysisClient.xhtml?bill_id=201520160SB1028#).

To make the initial determination, the POU’s governing board must assess whether “any portion” of the “geographic area where the utility’s overhead electric lines and equipment are located” poses a significant risk of catastrophic wildfire” resulting from the POU’s electrical lines and equipment.<sup>5</sup> The

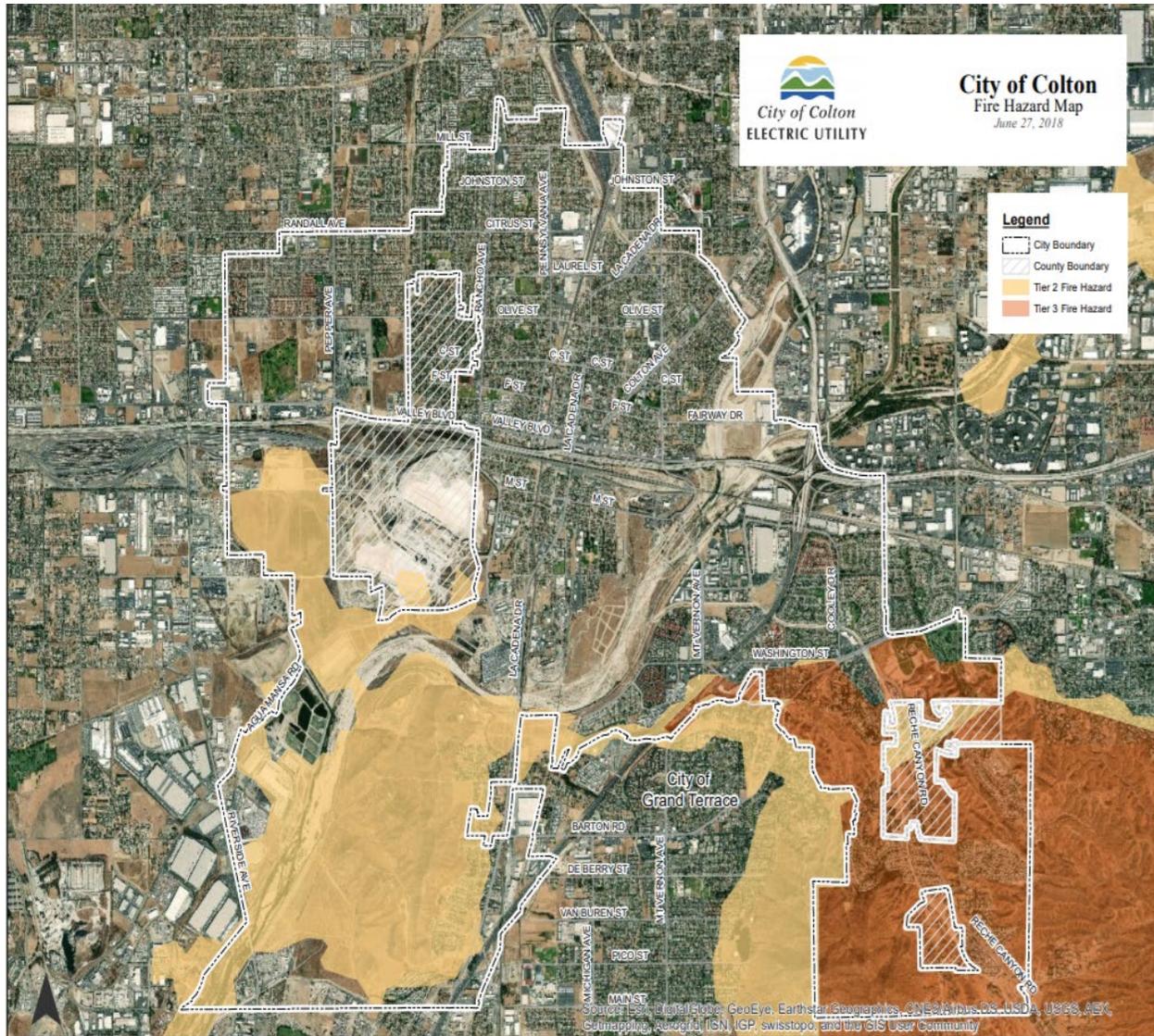


Figure 1: CPUC Fire Map for City of Colton Service Area

POU governing board must base this determination on “historical fires and local conditions,” and must consult with local fire departments and other entities with responsibilities for control of wildfires within the relevant area. SB 1028 does not reference a POU’s service territory, but instead requires the assessment be performed in the geographic area where the POU’s electric lines and equipment are

<sup>5</sup> Cal. Pub. Util. Code § 8387(b).

located. This means CED must work with SCE to assess the fire risk in Reche Canyon and La Loma Hills because both CED's and SCE's transmission and distribution lines traverse the area.

CED has recommended that the Colton Utility Commission and Colton City Council determine that the Reche Canyon area poses a "significant risk of catastrophic wildfire." This would be in conformance with the Colton Fire Department's findings that the Reche Canyon area is an extreme fire area and the CPUC Fire Map that identifies Reche Canyon as a Tier 3 area or an area with an extreme risk of utility caused wildfires.

CED is not recommending that La Loma Hills be designated a high-risk fire area although the CPUC fire map and ConFire show this area as an elevated risk area. This is because CED only has about 500 feet of overhead wire in a highly developed area and has no plans to construct additional overhead lines in the area. Additionally, within the next few years, a new master planned area will be constructed in the area, eliminating much of the undeveloped at-risk area.

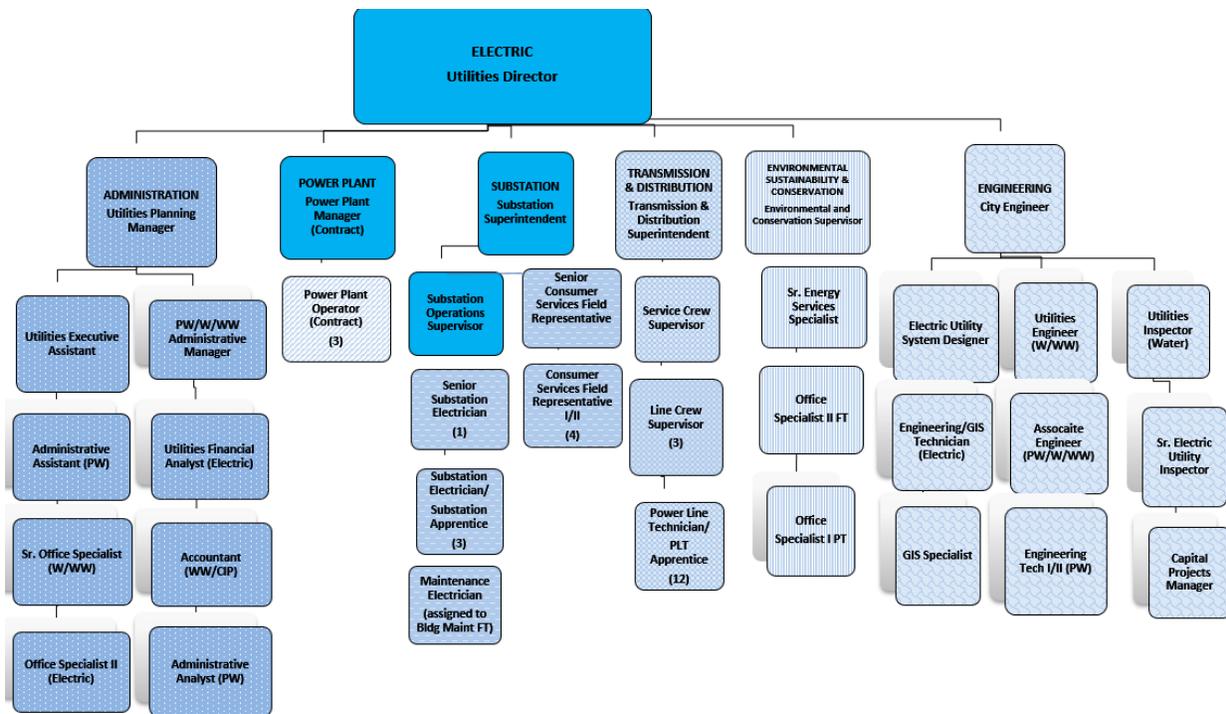
#### **4.0 Wildfire Prevention Programs**

CED has identified the following programs to reduce the risk of its electric system starting a wildfire:

- 1) **Vegetation Management:** Strategies and procedures to identify and control vegetation around CED's transmission and distribution system.
- 2) **Increased Inspections:** Ensure all infrastructure in high fire threat areas is inspected at least daily during red flag periods.
- 3) **Operational Awareness:** Recognition of dangerous environmental conditions that require additional care in operating the electric system.
- 4) **Technological Upgrades:** Adoption of new equipment, such as fiberglass cross arms instead of wood, to reduce the risk of equipment malfunctions.
- 5) **Public Safety and Notification:** Develop strategies to inform residents and businesses of potential risk from wildfires.

#### **5.0 Roles and Responsibilities for Fire Mitigation**

The CED's organization chart is shown below:



A summary of CED staff that have explicit responsibilities for wildfire prevention activities include:

- 1) Utilities Director: Assumes overall responsibility for CED’s planning and mitigation activities, including maintaining compliance with state and federal safety and operating requirements.
- 2) Substation Superintendent: Responsible for the reliable operation of the CED’s 66 kV transmission system and CED’s five 66/12 kV substations. Maintain communication with federal, state and local fire management personnel to ensure that appropriate preventive measures are in place.
- 3) Transmission and Distribution Superintendent: Responsible for the safe operation of the CED’s 12 kV and below circuits and equipment. Supervises CED’s linemen. Has primary responsibility for ensuring that the overhead lines and poles are inspected and a database of pole and equipment inspections and maintenance is created and continuously updated. The T&D Superintendent is responsible for safety programs, including wildfire prevention training, evaluation, and installation of new protective equipment to reduce fire risk.
- 4) Sustainability Manager: Responsible for communications including website, Channel 3 and message boards and outreach to customers with medical issues.

A detailed list of the responsibilities of these key personnel is shown in Table 1:

TABLE 1: Key Wildfire Prevention Personnel and Responsibilities

Tasks	Electric Utility Director	Substation Superintendent	Transmission and Distribution Superintendent	Linemen	Utility Sustainability Manager
Vegetation Management		x	x	x	
Enhanced Pole and Vegetation Inspections			x	x	
Substation Inspections		x			
Operational Awareness	x	x			
Technological Upgrades	x	x	x		
Public Safety and Notification	x				x
Wildfire Response and Recovery (in additional to Police and Fire)	x	x	x	x	x

While other individuals, such as linemen, have the responsibility to inspect and report any faulty operations of equipment, including equipment owned by other utilities within the City, the primary responsibility for preventing fire and coordinating recovery after a fire is the responsibility of the Director and superintendents.

If a wildfire does start in spite of the best efforts of the CED, the City would activate its Emergency Operations Center (EOC). The Colton Fire Chief and Colton Police Chief, acting at the direction of the Colton City Manager, would assume responsibility for public safety and firefighting response including coordinating with ConFire and other state emergency entities. The Utility Director would provide assistance to the Fire and Police Chiefs during the firefighting operations.

The EOC is nominally run by the City’s Emergency Services Coordinator<sup>6</sup>, under the direction of the City Manager, who ensures that the City is meeting its obligations under the Emergency Services’ Standardized Emergency Management System (“SEMS”). The City will also have its chief Financial Officer (CFO) at the EOC ensuring that the City is following all requirements for FEMA reimbursement.

**6.0 Circuit De-energization**

One of the most contentious areas of discussion in wildfire mitigation analysis has been the willingness or ability of utilities to de-energize transmission and distribution circuits during red flag weather events

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<sup>6</sup> Colton and Loma Linda share the Emergency Services Coordinator (ESC) position and in the event of an emergency that affects both Loma Linda and Colton, the ESC will be at Loma Linda.

or other high-risk periods. Public Safety Power Shut-Offs (PSPS) is the de-energization of power lines to protect public safety under California law.

There are two separate justifications for de-energizing a circuit. The first is for operational reasons, such as a local fire or request by safety officers for a specific circuit to be de-energized as a result of an ongoing event. The second is a pre-emptive de-energization to reduce fire risk or some other potential impact due to anticipated conditions.

CED recognizes that de-energizing circuits could have an impact on surrounding utilities (SCE) and independent power producers within Colton that wheel through CED's transmission system. Any de-energization policy has to acknowledge the financial and operational impacts on these entities. More importantly, de-energizing lines will cut electricity to the booster stations in Reche Canyon, stopping water flows to fire hydrants in the area and potentially putting lives at risk. At this time, CED does not intend to pre-emptively de-energize lines due to the impact on firefighting capabilities in the City.

CED will de-energize circuits for operational reasons only at the request of police and fire personnel. However, CED must also evaluate the effects of possible SCE line de-energization on its ability to serve customers during extreme weather events.

### ***6.1 Coordination with Southern California Edison***

SCE has 220, 115, 66 and 12 kV lines within Colton's service territory. SCE has developed its own Wildfire Prevention and Mitigation Plan detailing their plans for preventing any wildfire events and CED and SCE are cooperating to reduce any impacts of the SCE plan on Colton customers.

Colton imports all of its power over SCE's 66 kV transmission lines from Vista Substation to SCE's Colton Substation. There are five 66 kV lines from Vista Substation to Colton Substation. Two of these lines only serve SCE customers, with the remaining three serving Colton loads. SCE has performed system studies to determine what would happen to Colton residents if different combinations of these three lines serving Colton were interrupted.

Depending upon the circuit(s) interrupted, Colton would see between 8 and 22 MW of its load dropped. Colton's internal generation (Agua Mansa Power Plant (or AMPP)) could make up the capacity shortfall and there should be no immediate impact on Colton's electric customers.

Only if all five lines were interrupted would Colton residents notice an impact. AMPP can meet roughly one-half of the entire City load during summer high load periods. During winter months, AMPP can meet almost all of the City energy requirements assuming natural gas supplies were not affected. AMPP would have to be started prior to SCE de-energizing the Vista-Colton substation 66 kV lines because it does not have black start capability. With AMPP operating, CED has the ability to maintain power to circuits in the high fire risk areas as necessary while also maintaining service to selected areas north of the 10 freeway, an area that includes medical facilities, the police station and city hall. CED has protocols for circuit interruptions although these should be reviewed and updated periodically.

SCE and CED are developing protocols for inspecting and energizing SCE lines that have tripped or been purposely de-energized during red flag periods. At this time, the protocols are not finished but both SCE and CED consider completion a high priority. A concern of SCE is what could happen if CED personnel inspected a circuit; approved re-energizing it and then the circuit caused a fire.

## **6.2 Weather Monitoring**

The CED monitors current and forecasted weather data primarily through Confire and the National Weather Service. In the event of forecasted severe weather, the Colton Fire Department (CFD) notifies the CED although the notification process is informal with the CFD calling CED's operations center and notifying them.

CED has three operating levels:

- (1) Normal - when there no changes to operations or work policy;
- (2) Elevated - when patrols begin in the Reche Canyon area;
- (3) Red Flag – when an additional crew is assigned to patrol the Reche Canyon area twice daily

## **7.0 Geographic and Climate Risk Factors Within Colton**

Colton has two primary areas where the potential for wildfires is high due to fuels or vegetation, winds and terrain. The southeastern portion of Colton, the Reche Canyon area, is a rugged, hilly area with canyons that makes travel through it difficult. This is the City's primary fire threat area. Wildfires can start to the east of Reche Canyon and then move west into the populated areas of Colton due to prevailing winds.

The other area of concern is the La Loma Hills area of southwest Colton with residential development on the east side and a undeveloped area comprised of two ranches, Roquet and Pellisier covering roughly 1,350 acres. This area is planned to be developed in the next few years, reducing the possibility of major wildfires. CED has to anticipate fires in the area even though CED does not have any overhead lines traversing the area. SCE has several high voltage lines going east-west across the very northern part of the area and several 66 and 12 kV lines going north-south along the Santa Ana river.

In addition to the two geographic areas within the City with elevated fire risk, climate factors that will increase fire risk include:

- 1) An extended drought that continues to dry out vegetation;
- 2) The type of vegetation in an area;
- 3) High winds from the east through the Banning Pass;
- 4) Low humidity;
- 5) Past fires to the east of Colton that have reduced available fuel for new fires.

## 8.0 Asset Classification

CED has 78 miles of overhead 12 kV line in the City. Approximately 4 miles of overhead 12 kV line is located in Reche Canyon, another 2 miles is located along La Cadena Drive in in the La Loma Hills area and 2 miles in the Agua Mansa corridor. CED also has about 9 miles of 66 kV line of which roughly 2.5 miles is in the Agua Mansa corridor.

CED does not have any substations or 66 kV lines in either Reche Canyon or La Loma Hills. CED has a single, 12 kV overhead circuit along the primary street in both areas with the residences and businesses served by underground facilities. SCE has several high voltage 115/220 kV lines, going east-west through the area and a 66 kV line on paralleling the east side of the Santa Ana River.

In the Reche Canyon area, CED's Reche Canyon 12 kV circuit follows Reche Canyon Road for approximately 4 miles with housing tracts or development served by underground distribution facilities<sup>7</sup>.

In the La Loma Hills area, CED has a single 12 kV overhead circuit running along La Cadena Dr., with almost all of La Loma served by underground distribution circuits.

## 9.0 Reche Canyon

Reche Canyon is a large, mostly undeveloped area between Loma Linda, Colton and Moreno Valley that is experiencing significant planned residential development. With its open, rough and hilly terrain, any fires that started to the east of Reche Canyon would be difficult to contain.

Reche Canyon Rd is an approximately 7 miles long road going North/South from Colton to Moreno Valley. Only about 2.5 – 3.0 miles of the road lies within Colton city limits with the remaining area unincorporated or part of the city of Moreno Valley. New residential developments are planned along this corridor even though there is a lack of infrastructure and access to the area over the existing Reche Canyon Road is poor.

Figure 2 below shows the Reche Canyon area. The map shows that the entire area is a Tier 3 fire hazard area.

Reche Canyon Rd., the only entrance and exit for the canyon, goes through a number of different jurisdictions, including Colton, San Bernardino County, Riverside County and the city of Moreno Valley.

There are two reservoirs at the northern end of Reche Canyon, the Wild Canyon Reservoir and the Montecito Reservoir. Because the southern end of the canyon is at a significantly higher elevation than the northern end, two booster stations, the Prado Booster Station and the Reche Canyon Booster

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<sup>7</sup> There is one exception to this. Shadid Dr., a small development of approximately 17 homes, is served by an overhead 12 kV line.

Station are required to push water up the hill. Neither of these two booster stations have dedicated emergency generators and rely on electricity from CED's distribution lines.

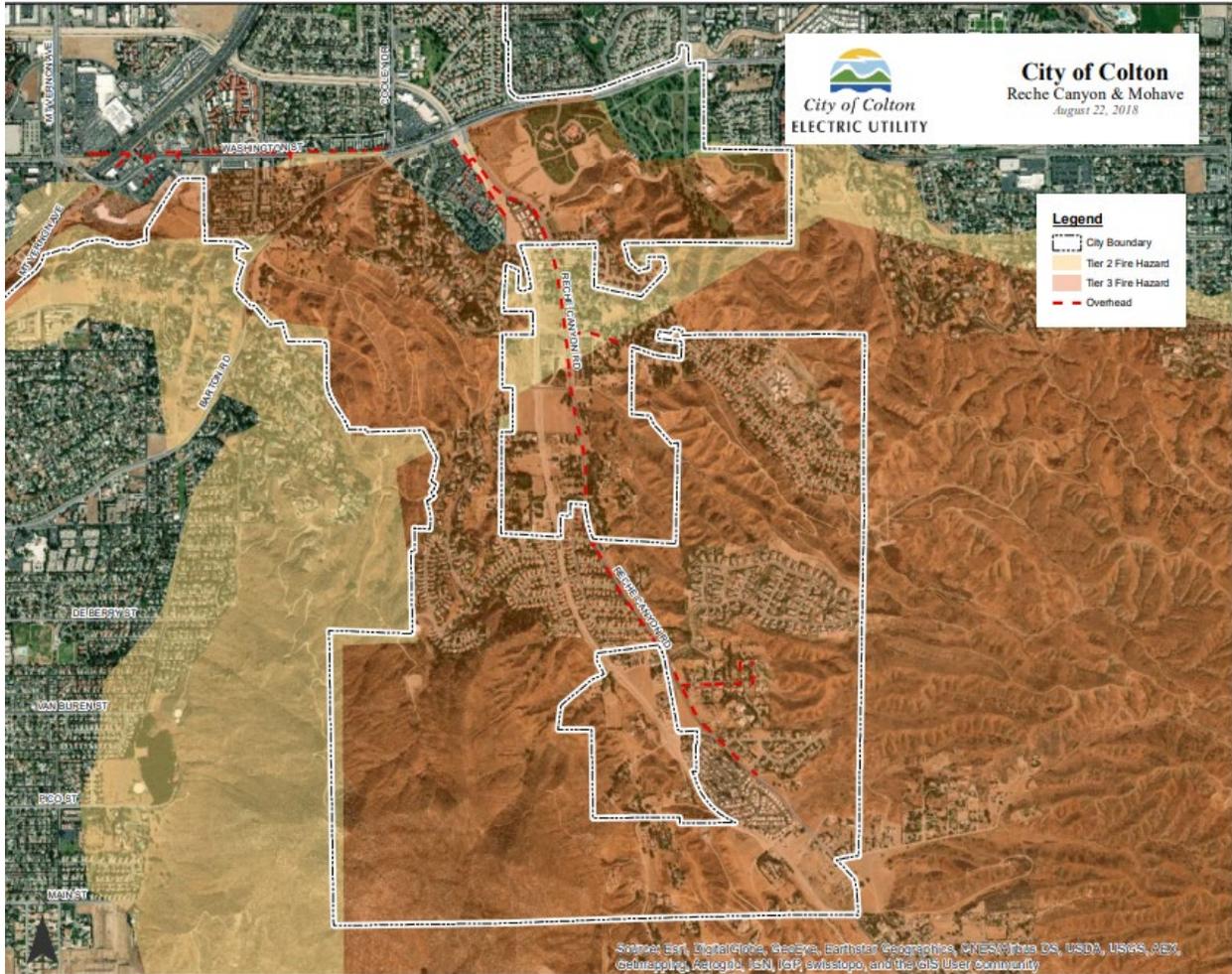


Figure 2: Reche Canyon Area 12 kV Line

In the event of a red flag warning or fire, cutting power to Reche Canyon would interrupt water for firefighting. The CWD has retrofitted the booster pumps (with pigtails) so that mobile emergency generators can be connected to the booster pumps to maintain water flow in the event of electrical outages but it will be difficult to transport the generators to the booster stations if Reche Canyon residents are evacuating. With sufficient warning (preferably 24 hours but at least 6), CWD could connect emergency generators to these two booster stations. The City has requested funding for emergency generators for three community centers in the event of a natural disaster and has identified the need to increase its funding request for at least two additional generators to provide back-up power for the booster stations..

Because of the impacts on firefighting, CED has determined (after significant discussion with water and electric operators and the Fire Department) that its best alternative during red-flag periods is to increase inspection patrols through Reche Canyon and to increase vegetation management activities to ensure that all trees are evaluated and trimmed by the late spring and again by the late-summer. CED inspectors will also identify all equipment issues, including broken poles or cross-arms, damaged or missing guy wires, loose or broken insulators, damaged transformers or any other equipment or vegetation issue. CED also has a drone equipped with both infrared and regular cameras to inspect the overhead line for hot spots that might indicate the need for additional maintenance.

The greatest concern in Reche Canyon identified by ConFire is a fire starting east of Reche Canyon and moving west through the hills, which is the prevailing wind direction. If power is interrupted, due to fire or intentionally de-energized circuits, water would not be available for firefighting until emergency generators can be moved to the booster stations.

It should be noted that SCE's 220 kV transmission lines are in this area, including the Devers-Vista 220 kV line and portions of the west of Devers transmission system. CED and SCE are coordinating line inspections, communications and wildfire response around SCE's lines in and through CED's service area.

In the Reche Canyon area, CED inspects more frequently for vegetation issues than in other, more urban parts of the City. CED anticipates remaining in compliance with GO 95 vegetation management and clearance requirements (discussed further in Section 13).

CED's pole inspection work and vegetation management efforts have reduced (but not totally eliminated) the possibility of wildfires being started by CED's electrical equipment in the La Loma Hills and Reche Canyon areas.

### ***9.1 Infrastructure Improvements Under Study for Reche Canyon***

CED has begun studying the cost of insulating portions of the existing non-insulated overhead wiring in Reche Canyon although this will not be done in 2019. A problem with insulated conductor is the additional weight (insulated wire is roughly twice the weight of non-insulated conductor) could require shorter spans and more and larger poles, significantly increasing the initial cost of installing insulated conductor.

Another issue with converting non-insulated wire to insulated conductor in this area is the divided ownership of the poles. CED owns poles within the City of Colton while SCE owns the poles in County areas<sup>8</sup>. In some areas, SCE leases space on CED's poles while in other areas CED leases space on SCE poles. CED cannot just replace all the poles in Reche Canyon without working with SCE on the design and installation of a new joint pole line.

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<sup>8</sup> Reche Canyon Road goes through Colton, Moreno Valley, County of San Bernardino and County of Riverside.

While planning for the conversion to some insulated conductor or connectors, CED is installing a recloser just south of the Prado booster station. Reclosers open the circuit when a fault is detected and then reclose a few seconds later (depending upon the setting) reenergizing the circuit if the fault has cleared – for example, a tree branch falling across conductors’ causes a fault and the recloser opens, cutting the circuit. A few moments later the recloser closes again and if the branch has been blown away, the circuit is reenergized. If the fault is still there, the recloser opens the circuit again<sup>9</sup> and a troubleshooter must go out and verify that the line is clear before the recloser is manually closed and reset.

During fire season, CED has set all the relays in Reche Canyon to “one-shot” that means once the circuit opens, it will not reclose until a physical inspection of the circuit is performed. This will likely lead to more frequent, short outages in this area that require a lineman to inspect and clear the line if needed before re-energization but will reduce the chance of wildfires.

Insulated blankets, wire covers and other dielectric protection can be used in areas where trees (and other grounded objects) are close to the right-of-way and helps prevent flashovers and short-circuits due to momentary contact with branches and other items. CED is also looking at various dielectric protection covers and insulated line covers as a way of preventing short-circuits in the Reche Canyon area although at this point it appears that the uses are limited. CED is also examining the feasibility of fiberglass cross arms as a possible way to reduce cross arm breaks.

## **10.0 La Loma Hills**

The La Loma Hills residential area is approximately 1.5 miles long (north to south) and 0.4 mile wide (east to west) along La Cadena Drive. To the west of the residential area is an undeveloped area extending to the Santa Ana River, approximately 1 mile. This property will be developed in the next few years but currently this area is an elevated fire hazard (Tier 2). CED does not have any electrical facilities east to west across the undeveloped area and CED’s circuits in the residential portions of La Loma Hills are all undergrounded<sup>10</sup>. SCE has several lines, including a 115 kV line and a 66 kV line east to west and a double circuit 66 kV line on the western portion near the Santa Ana River.

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<sup>9</sup> CED’s reclosers are part of its circuit relays. Reclosers can be set to open several times before stopping attempting to close.

<sup>10</sup> With the exception of one roughly 500-foot section at the south end of La Loma Hills.



Figure 3: La Loma Area Overhead 12 kV Line

In the La Loma Hills area there is sufficient water pressure from reservoirs that electric circuits could be de-energized without immediately impacting fire-fighting efforts. A greater emphasis on vegetation management and increased inspection patrols of the relatively small area will provide many of the same benefits as de-energizing the lines. For this reason, CED does not intend to de-energize circuits unless requested by public safety officials. In this circumstance, CED will do its best to inform people through social media and outreach that power will be turned off to an area and provide an estimate of the time

power will be restored although emergency communications will primarily be through the Fire Department.

### **11.0 Agua Mansa Industrial Corridor**

CED has a 66 kV line from Drews Substation south to Agua Mansa Road, a distance of about 0.6 miles. Most of this area is environmentally sensitive and CED is prohibited from operating equipment within the protected area by the Environmental Protection Agency, Division of Endangered Species<sup>11</sup>. CED can use a service road that is parallel to part of the line and 150 feet west of it, but roughly 0.4 miles of line is located off-limits to equipment under normal circumstances.

CED uses its drone to inspect this line semi-annually and has personnel walk the line several times per year. The inspections include checking each of the poles, including crossarms, insulators and conductor. The infrared camera on the drone checks for hot spots on the line.

Drews Substation is fortified with a cement 10' perimeter wall that provides a 15-50' zone between the wall and electrical equipment. Within the perimeter wall there is gravel with no vegetation. CED plans to install an additional 20' to 40' vegetation buffer zone surrounding the perimeter wall. CED has also incorporated vegetation inspection in CED's GO 174 station inspection program.

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<sup>11</sup> During a wildfire, firefighting crews would enter the area.



CED also performs safety/visual inspections (also known as patrols) of cross-arms, insulators and conductor, a brief visual inspection to identify obvious damage or non-conformance of the poles that could result in an ignition source.

Finally, CED performs detailed pole tests to assess the condition of transmission and distribution poles to identify which poles need to be repaired or replaced. The specific tests include pole sounding, butt testing, and visual inspections. The test information is used to determine the pole strength and shell thickness.

The results of the pole inspections and tests are included in CED's pole database that shows all the CED's poles, each poles condition and any required maintenance. The database has all the information discussed so far in CPUC R 17-206-028 and 17-03-009, recognizing that the proceeding is not yet completed. An example of the data base for the 80 poles in the Reche Canyon area is presented in Appendix A.

When a pole has required maintenance the repair is prioritized and scheduled. The repair is noted in the pole database.

### **13.0 Vegetation Management**

There are two basic types of vegetation management. The first is keeping the area around power poles, transformers and other auxiliary equipment free of combustible plants/weeds. The second is keeping power lines, insulators and poles cleared of branches, foliage and diseased and dying tree limbs and debris.

#### *13.1 Vegetation Management Around Poles*

PRC 4292 requires CED maintain a ten-foot vegetation clearance around poles. Within the ten-foot radius around the pole, flammable material at ground level must be removed while below 8 feet above ground level, brush, grass (weeds) and other materials must be removed up to 8 feet above ground level. CED's pole inspections identify poles where maintenance is required and CED or Public Works personnel perform the necessary maintenance. The great majority of CED's poles are located between the street and sidewalk, in the sidewalk or within two or three feet of the sidewalk and there is no surrounding vegetation. If an inspection shows vegetation growing around the pole, CED personnel will remove it.

#### *13.2 Line Clearances*

CED maintains a database of pole inspections including tree trimming and removal to ensure appropriate line clearances. CED has a tree trimming/tree removal contract with "the Original Mowbray's Tree Service (Mowbray's)" that allows the Transmission and Distribution (T&D) Superintendent to call for immediate tree trimming of branches within the clearance area or removal of City owned trees. CED attempts to keep a 10-foot clearance between lines and all tree branches and

foliage on 12 kV lines and 3 to 4 feet on secondary wires, which are usually insulated and have less chance of sparking.

Osmose’s inspection work and Mowbray’s vegetation activities are overseen by the T&D Superintendent. The T&D Superintendent maintains records of maintenance work on a pole by pole basis and Mowbray’s records of vegetation removal and tree trimming.

CED meets or exceeds the minimum industry standard vegetation management practices. For transmission-level facilities, CED complies with NERC FAC-003-4, where applicable. For both transmission and distribution level facilities, CED meets: (1) Public Resources Code section 4292; (2) Public Resources Code section 4293; (3) GO 95 Rule 35; and (4) the GO 95 Appendix E Guidelines to Rule 35. These standards require significantly increased clearances in the High Fire Threat District<sup>12</sup>. The recommended time-of-trim guidelines do not establish a mandatory standard, but instead provide guidance. CED uses specific knowledge of growing conditions and tree species, in addition to frequent pole inspections to determine the appropriate time of trim clearance in each circumstance.

**Table 2 - GO 95, Rule 35,**

<b>GO 95, Rule 35,</b>					
Case	Type of Clearance	Trolley Contact, Feeder and Span Wires, 0-5kv	Supply Conductors and Supply Cables, 750 - 22,500 Volts	Supply Conductors and Supply Cables, 22.5 - 300 kV	Supply Conductors and Supply Cables, 300 - 550 kV (mm)
13	Radial clearance of bare line conductors from tree branches or foliage	18 inches	18 inches	¼ Pin Spacing	½ Pin Spacing
14	Radial clearance of bare line conductors from vegetation in the Fire-Threat District	18 inches	48 inches	48 inches	120 inches

**Guidelines to Rule 35**

The radial clearances shown below are recommended minimum clearances that should be established, at time of trimming, between the vegetation and the energized conductors and associated live parts where practicable. Reasonable vegetation management practices may make it advantageous for the purposes of public safety or service reliability to obtain greater clearances than those listed below to ensure compliance until the next scheduled maintenance. Each utility may determine and apply additional appropriate clearances beyond clearances listed below, which take into consideration various factors, including: line operating voltage, length of span, line sag, planned maintenance cycles, location of vegetation within the span, species type, experience with

<sup>12</sup> Or Very High Fire Hazard Severity Zones using Cal Fire terminology.

particular species, vegetation growth rate and characteristics, vegetation management standards and best practices, local climate, elevation, fire risk, and vegetation trimming requirements that are applicable to State Responsibility Area lands pursuant to Public Resource Code Sections 4102 and 4293.

Voltage of Lines	Case 13	Case 14
Radial clearances for any conductor of a line operating at 2,400 or more volts, but less than 72,000 volts	4 feet	12 feet
Radial clearances for any conductor of a line operating at 72,000 or more volts, but less than 110,000 volts	6 feet	20 feet
Radial clearances for any conductor of a line operating at 110,000 or more volts, but less than 300,000 volts	10 feet	30 feet
Radial clearances for any conductor of a line operating at 300,000 or more volts	15 feet	30 feet

#### 14.0 Coordination with Other Departments

In November 2016, the Colton Water and Wastewater Departments were combined with the Colton Electric Department to create a new Utilities Department. As a result of this organization, it is relatively easy to coordinate between water and electric. Unfortunately, this does not help the logistics problems of firefighting in Reche Canyon.

Within the Reche Canyon and La Loma areas, CED has overhead and underground 12 kV lines, as shown in the following figures. Note that some of CED’s circuits in Reche Canyon are outside the City boundaries.

#### 15.0 Compatibility with Local Hazard Mitigation Plan (LHMP)

The CED’s Wildfire Mitigation Plan was developed in coordination with the City’s LHMP that deals with the mitigation of potential hazards. Emergency planners identify and prepare for the preparedness, mitigation, recovery and response to natural or man-made hazards, including flood, terrorism, earthquakes, climate change, geologic hazards (such as landslides), storm or other severe weather, drought, wildfire and other human-caused hazards such as hazardous material release. For wildfires, the LHMP recommends the installation of emergency generators on critical facilities, increasing physical security, including protection against fires such as larger vegetation free areas, requiring flame-resistant materials in construction and developing emergency traffic management plans to help evacuate areas, a point of concern for people living in the Reche Canyon area<sup>13</sup>.

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<sup>13</sup> A complete list of identified actions to help reduce the impact of natural or man-made disasters is shown in Chapter 6 of the Local Hazard Mitigation Plan.

There have been a small number of fires in the Reche Canyon and La Loma Hills areas of Colton in the last 50 years. The largest of these was the Colton Fire in June of 1981, which burned approximately 4,051 acres in the Box Springs Mountains to the south and west of Reche Canyon Road. Only a small portion of the burned acreage was in Colton, although this area includes what is now Reche Canyon Mobile Estates mobile home park and homes west of Cordillera Avenue. Other reported wildfires in Colton were:

- An unnamed 1962 fire that burned approximately 1,491 acres, mostly in the unincorporated areas of Riverside County, although a small portion of the burned area extended into the extreme southeast corner of Colton.
- An unnamed fire in 1968 that burned approximately 810 acres, including a small area of southwest Colton around Pellisier Road.
- The Blue Mountain Fire in 1969, which burned approximately 463 acres around Reche Canyon, including the area around Canyon Drive and Cordillera Avenue.
- The Blue Fire in 1980, which burned approximately 247 acres. A small part of the burnt acreage included the undeveloped area around Blue Mountain in southeast Colton.
- A fire in La Loma Hills in July 2017 that burned about 70 acres but was contained before destroying any structures. The cause of the fire was undetermined.
- The Smiley fire between Moreno Valley and Colton that burned 170 acres in July 2017.

## **16.0 Community Outreach and Education**

CED has implemented an outreach strategy to create public awareness of fire threats. Methods of communications includes website updates, traffic message boards, social media posts and public service announcements.

During potential red flag events, SCE begins a region wide public awareness effort to warn people of potential PSPS. Businesses and residents of Colton begin calling CED wanting to know when CED will begin de-energizing lines and where. CED utility personnel tell customers that we do not intend to implement PSPS but that they need to get their information from CED information sources, not SCE sources.

CED's Sustainability Manager is in charge of customer outreach, including website, Channel 3 and message boards and direct contact to customers with medical issues in the Reche Canyon area. There are no Colton area only information sources other than through Colton City Hall to counter SCE's messaging efforts to warn people of possible PSPS.

## **17.0 Frequency of Events**

CED does not have a database of what type of events have caused the most fires over the years. Based on internal conversations, the ranking of factors causing CED's outages was estimated as animals (mainly birds), equipment deterioration or failure, metallic balloons, vehicles running into CED equipment, vegetation (tree branches and palm fronds) and lightning.

CED's largest and long lasting outages have been caused by lightning and metallic balloons that were caught in the 66 kV lines. The most outages (by number) are due to animals, equipment deterioration or failure, vegetation and vehicles hitting CED's poles. CED has had a long-term problem with palm fronds from some of the taller coco palm trees throughout the city that blow free during wind events and fall across CED's lines. The only fires associated with CED's outages were pole fires or palm fronds igniting in the wires or poles. CED has not had a ground fire start as a result of CED's equipment.

## **18.0 Climate Change Considerations**

Throughout the state, climate change is expected to increase temperatures, as well as causing more frequent and intense drought conditions. This will likely cause an increase the amount of dry brush, which can act as fuels for wildfires. Because of this, the overall size of areas burned by wildfires in California is expected to increase. In the immediate future however, new development in Colton will reduce the areas where wildfires are likely to start with development planned in the next three or four years for most of the Agua Mansa corridor and Roquet Ranch

## **19.0 Design and Construction Standards**

CED's electric facilities meet or exceed all relevant federal, state, or industry design and construction standards. CPUC General Order (GO) 95 is the key industry standard for design and construction standards for overhead electrical facilities. CED's infrastructure meets or exceeds all GO 95 standards. Additionally, CED monitors and follows as appropriate the National Electric Safety Code.

## **20.0 Fire Fighting Plans**

Regardless of the small chance of CED's equipment being responsible for wildfires in the Reche Canyon and La Loma areas, the Colton Fire Department<sup>14</sup> has developed a plan for fighting fires in these two areas, identifying personnel and equipment needs to protect structures and lives.

In the Reche Canyon area, the following fire-fighting stand-by areas have been identified:

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<sup>14</sup> The Colton Fire Department and East Valley Fire Command work together under a functional consolidation but are referred to in this document as the Colton Fire Department or CFD.



Figure 6: Proposed Location of Fire Fighting Resources

# Structure Defense Plan

RECHE CANYON Structure Defense Group

Zone: **CRYSTAL RIDGE** Structures: **90 SFD, Tile Roofs**  
SBCo Map: **ConFire COL008** San Bernardino Thomas Brothers Map: Page: **646 & 647**

Access/Route: **Reche Canyon Rd. south to Crystal Ridge Ln.**

Staging Area: **West Colony Park (Wier Rd. & Harwick Dr.)**

Safety Zones: **Crystal Ridge Ln. at Reche Canyon**

Water Supply: **Municipal throughout zone**

Tactical Consideration: **Defensible space:** Good, open area around structures.  
**Fuel types:** light grass, some ornamental vegetation.  
**Suppression Actions:** One engine per 1-2 structures. Prevent spread through light grass areas. Watch for ignition in combustible clutter.

Note: **Good open spaces void of vegetation. Some combustible clutter around structures.**  
**SAFETY:** One-way ingress/egress  
Watch out for wildlife  
  
**MOST THREATENED:** Tiffany Lane, Crystal Ridge Lane and Shadid Dr.

## Suggested Resources

Single Resources  
Engines – Type 1   
Engines – Type 3   
Dozers

Strike Teams  
S/T Engines Type 1   
S/T Engines Type 3   
Hand Crews

Single Resources  
Water Tenders   
Air Tankers   
Helicopters



Figure 7: Proposed Location of Fire Fighting Resources

# Structure Defense Plan

DARK CANYON Structure Defense Group

Zone: **DARK CANYON** Structures: **48 SFD Tile/Comp**  
 SBCo Map: **ConFire COL004** San Bernardino Thomas Brothers Map: Page: **647 A5.A6**

Access/Route: Reche Canyon Rd, south to Little Reche Canyon Rd.,  
 Reche Canyon Rd. south to Ranch Rd. or Center St.

Staging Area: Reche Canyon Rd. & Ranch Rd, (Large clear lot just to the east of Reche Canyon)

Safety Zones: Reche Canyon Rd. & Ranch Rd. (Large clear, flat lot)

Water Supply: Wells system. Most properties have large tanks, some with 2-1/2",  
 Municipal -Along eastside of Reche Canvon Rd from Shadid to Scotch Ln.

Tactical Consideration: **Defensible space:** Good, open area around most structures.  
**Fuel types:** light grass, some ornamental vegetation and canopies.  
**Wind:** Typically transitions to a s/e wind around 1500-1600 hrs.  
**Suppression Actions:** One engine per structures in most areas.  
 Prevent spread through light grass areas.  
 Watch for ignition in combustible clutter.  
 Firing may be an option with right conditions.

Note: **SAFETY:** Some streets are one-way ingress/egress.  
 Several homes have long, narrow drives.  
 Watch out for snakes and burros.  
 Good open spaces void of vegetation. Some combustible clutter around structures.  
 LPG and overhead lines  
 Many homes sit on knolls

**MOST THREATENED: ALL**

## Suggested Resources

Single Resources

Engines – Type 1

Engines – Type 3

Dozers

Strike Teams

S/T Engines Type 1

S/T Engines Type 3

Hand Crews

Single Resources

Water Tenders

Air Tankers

Helicopters



Figure 8: Proposed Location of Fire Fighting Resources

# Structure Defense Plan

SCOTCH Structure Defense Group

Zone: **SCOTCH** Structures: **Apprx 32 SFD, and 9 outbuildings**  
 SBCo Map: **ConFire LOM001** San Bernardino Thomas Brothers Map: Page: **647 A5.B5**

Access/Route: **Reche Canyon Rd south to Scotch Ln.**

Staging Area: **Reche Canyon Rd and Scotch Ln.**

Safety Zones: **Scotch Ln.**

Water Supply: **Limited to one 4" x 2.5" hydrant located at Reche Canyon Rd and Scotch Ln**

Tactical Consideration: **Defensible space:** Good, some accumulation of combustible clutter around structures  
**Fuel type:** light grass, brush, ornamental vegetation, tree canopies  
**Wind:** Typical local wind will drive fire into structures (west to east)  
**Suppression Actions:** One engine per 2-3 structures, defensive firing possible from the northern ridge line.  
**Evacuation:** Evacuating residents will be using Scotch Ln, which is a one way in-out road.

Note: Scotch Ln is a ¼ mile long dead end dirt road which provides access to; Almond Dr, Private Rd#1, Vista Rd, Private Rd #2, Farrar Dr, and the residence to the far east end of Scotch Ln. There are approx 32 single family dwellings and 9 outbuildings (barns, garages, storage sheds). There are also horse corrals throughout the area.  
**SAFETY:** LPG tanks  
 One way ingress/egress road  
 Limited water  
 Overhead lines  
 Light flashy fuel  
 Congestion due to possible evacuation of horses  
 Residents located at the north end of Vista and Private Dr#2 are exposed to fire runs up slope

## Suggested Resources

**Single Resources**  
 Engines – Type 1   
 Engines – Type 3   
 Dozers

**Strike Teams**  
 S/T Engines Type 1   
 S/T Engines Type 3   
 Hand Crews

**Single Resources**  
 Water Tenders   
 Air Tankers   
 Helicopters

In the La Loma area, CFD has developed the following fire-fighting plan:



Figure 5: Proposed Location of Fire Fighting Resources  
(Staging areas for equipment are identified as yellow dots)

# Structure Defense Plan

LA LOMAHILLS Structure Defense Group

Zone:  Structures:   
SBCo Map:  San Bernardino Thomas Brothers Map: Page:

Access/Route:

Staging Area:

Safety Zones:

Water Supply:

Tactical Consideration: **Defensible space:** Good, open area around most structures.  
**Fuel types:** light grass, some ornamental vegetation.  
**Suppression Actions:** One engine per 1-2 structures. Prevent spread through light grass areas. Watch for ignition in combustible clutter.

Note: Good open spaces void of vegetation. Some combustible clutter around structures.  
**SAFETY:** One-way access/egress on some streets  
Watch for roll out and rolling rocks

## Suggested Resources

Single Resources

Engines – Type 1

Engines – Type 3

Dozers

Strike Teams

S/T Engines Type 1

S/T Engines Type 3

Hand Crews

Single Resources

Water Tenders

Air Tankers

Helicopters

## **21.0 Identifying and Correcting Deficiencies in the Plan**

Each year, this WPMP will be reviewed and any noted areas of improvement will be presented to the Colton Utility Commission and Colton City Council for inclusion. Specific areas that should be examined include identifying better communication methods with residents in high threat fire areas and identifying better evacuation methods in Reche Canyon, where people leaving the area, either before or during a wildfire event, can only travel along a single two lane highway and could block emergency vehicles from getting to wildfires. Evacuation and communication issues are part of the Fire Department's LHMP and they will be responsible for implementing their plan(s) with CED's assistance. One of the primary needs of the City identified in the LHMP is the need for a mass communication system to help during disasters.

CED is working with SCE on protocols for notifying residents of Reche Canyon of any potential fire threats. SCE has the ability to make regional notifications of potential PSPS' and fire threats and CED has to coordinate any information it releases with SCE to avoid releasing contradictory information.

### ***21.1 Updating the WPMP***

The WPMP will be reviewed and updated annually and presented to the Colton City Council. On a periodic basis, the approved WPMP will be submitted to the CSWAB for review and acceptance.

## **22.0 Monitoring the Effectiveness of Preventive Measures**

The Wildfire Prevention Plan will be evaluated on an annual basis to assess its effectiveness. This Plan will be judged based upon:

- Fire ignitions caused by CED equipment;
- Number of downed wires in elevated fire threat areas annually;
- Identified violations of GO 95 vegetation management standards in elevated fire threat areas;
- Replacement of sub-standard poles, cross arms and insulators in high threat fire areas.

The numbers of fires caused by CED's electrical equipment is a function of the success CED has with reducing the number of downed wires and maintaining vegetation management standards. If CED keeps wires from falling, is aggressive with maintaining vegetation standards, replaces or repairs equipment when problems are identified, CED will greatly reduce the possibility of fire in elevated fire threat areas that could be attributed to CED electrical equipment even though wildfires may start in the area due to other uncontrollable events. Table 3 shows how CED's planned actions will reduce the possibility of fires.

Table 3: Measures and Threats

<u>Preventive Measures</u>	<u>Wildfire Threat</u>
Increased/Enhanced Inspections	Reduced risk of equipment failures/downed wires
Vegetation management around pole	Reduced risk of fires from equipment failures
Vegetation Management - Line Clearances	Reduced risk of fires from high winds
Additional Insulated wires/dielectric protection	Reduced risk of arcing reducing chance of fire
Resident/Customer Outreach	Reduced physical harm and death, reduced property damage

**24.0 Approval Process**

CED has identified and hired an independent evaluator through SCPPA. The evaluator will review the WPMP for completeness. Once approved by the evaluator, CED will present the WPMP to the Colton Utility Commission for approval and then to the Colton City Council in a public hearing. At some point after City Council approval, the WPMP will be filed with the CSWAB.

**25.0 Summary and Conclusion**

Preventing wildfires is one of CED’s highest priorities. The risk of catastrophic injury and death and high value of property losses justifies taking extreme measures to prevent a wildfire from starting. CED’s WPMP was developed in conjunction with local emergency response agencies and surrounding utilities. CED believes that this WPMP identifies the major issues facing CED, identifies a means for dealing with these issues, allows CED to reduce the risk of wildfire in and around Colton and identifies how any wildfire would be fought should one begin.

## Appendix A

Example of Pole Data Base for Reche Canyon

globalid	created_us	last_edit	pole_no	inspector	brush_clea	clearance_	notes	primary_in
1 [29AA1672-9CC0-499E-AEF5-66B20C1914DF]	sgonzales@COLTON	phinojos@COLTON	4925F	gonzales_steve	yes		2 primary down guys.	Dead_End_Bells
2 [B19883E7-C4C3-4730-95D6-69D8E00F8ECA]	swahlrab@COLTON	phinojos@COLTON	4924F	wahlrab_sean	yes			Pin_&_Insulator
3 [7537A293-E7DE-4EB1-9ED5-C7E24E93C34]	sgonzales@COLTON	sgonzales@COLTON	4923F	gonzales_steve	yes			Pin_&_Insulator
4 [7BEBF1B9-B01C-43E6-A164-46E38F321094]	swahlrab@COLTON	swahlrab@COLTON	2072637E	wahlrab_sean	yes			Pin_&_Insulator
5 [9AC1A6A2-3A8F-4C80-B5DF-C335F0BDE598]	sgonzales@COLTON	sgonzales@COLTON	4857466E	gonzales_steve	yes			Pin_&_Insulator
6 [A5E12757-9C6E-4723-A025-B3133C28F052]	swahlrab@COLTON	swahlrab@COLTON	4921F	wahlrab_sean	yes			Dead_End_Bells,Pin_&_Insulator
7 [88D24C83-4F1C-4BA2-9A82-CE1A5AE82601]	sgonzales@COLTON	sgonzales@COLTON	4920F	gonzales_steve	yes			Pin_&_Insulator
8 [184C5F41-BACB-474E-9E84-DDCDFE887ED0]	swahlrab@COLTON	swahlrab@COLTON	4919F	wahlrab_sean	yes			Pin_&_Insulator
9 [87073316-7B10-4A33-ABC7-F80FF01335E]	swahlrab@COLTON	swahlrab@COLTON	4918F	wahlrab_sean	yes			Pin_&_Insulator
10 [A549DA23-5477-4A7C-825B-94D71507A87C]	sgonzales@COLTON	sgonzales@COLTON	4917	gonzales_steve	yes			Dead_End_Bells
11 [08EA975E-8020-4B90-AB6C-E42140A1C712]	sgonzales@COLTON	sgonzales@COLTON	4975F	gonzales_steve	yes			Dead_End_Bells
12 [ECC533CB-478E-4B90-AB6C-E42140A1C712]	sgonzales@COLTON	sgonzales@COLTON	4967F	gonzales_steve	yes			Pin_&_Insulator
13 [12AF7130-3C91-4323-9824-BEF36D2ADCSA]	swahlrab@COLTON	swahlrab@COLTON	4966F	wahlrab_sean	yes			Pin_&_Insulator
14 [7E70AF0D-38D9-4F5B-92F6-995A1977479E]	sgonzales@COLTON	sgonzales@COLTON	4970F	gonzales_steve	no	Tree on pole		Dead_End_Bells,Pin_&_Insulator
15 [4AC5167F-3932-445A-8D77-FDC822385386]	sgonzales@COLTON	sgonzales@COLTON	4969F	gonzales_steve	yes			Pin_&_Insulator
16 [116C6C47-D0CA-4AFF-BE8C-4C3448162A5B]	swahlrab@COLTON	swahlrab@COLTON	4968F	wahlrab_sean	no	Big bushes		Dead_End_Bells,Pin_&_Insulator
17 [5988CC3C-7C8F-48E4-8274-7CCD1A9788D]	swahlrab@COLTON	swahlrab@COLTON	4916F	wahlrab_sean	no	Can use some clearing		Pin_&_Insulator,Dead_End_Bells
18 [98789E5D-EE35-42C4-94D4-AF5703206EB]	swahlrab@COLTON	swahlrab@COLTON	4915F	wahlrab_sean	yes			Pin_&_Insulator
19 [C1D0C531-EADA-4C7E-8022-04C9F383D5C8]	swahlrab@COLTON	swahlrab@COLTON	4914F	wahlrab_sean	yes			Pin_&_Insulator
20 [18475C30-938E-4FF1-B532-146CEB42942]	swahlrab@COLTON	swahlrab@COLTON	4913F	wahlrab_sean	no			Pin_&_Insulator
21 [60043C84-B200-4462-98F2-4C7D90885E07]	swahlrab@COLTON	swahlrab@COLTON	4912F	wahlrab_sean	yes			Pin_&_Insulator,Dead_End_Bells
22 [05859522-F931-4F0A-89C4-55AA929AA344]	sgonzales@COLTON	sgonzales@COLTON	4617F	gonzales_steve	yes			Pin_&_Insulator
23 [CDF2C1C8-8823-42E0-945D-0479EE30A20F]	cajimenez@COLTON	cajimenez@COLTON	4911F	jimenez_christopher	no			Pin_&_Insulator,Dead_End_Bells
24 [877A3A89-73E8-49C4-B46A-002AFF5268C7]	sgonzales@COLTON	sgonzales@COLTON	4616F	gonzales_steve	no			Pin_&_Insulator
25 [7B28B26A-5489-4F39-8807-35F8946D2FC4]	cajimenez@COLTON	cajimenez@COLTON	4618F	jimenez_christopher	no			Dead_End_Bells,Pin_&_Insulator
26 [AF66803C-C384-447F-86CB-2B18F58A4DC3]	sgonzales@COLTON	sgonzales@COLTON	4615F	gonzales_steve	no	Tree is all over the pole		Pin_&_Insulator
27 [9A9D5987-F70E-41C0-9F8F-38328C6A026]	sgonzales@COLTON	sgonzales@COLTON	10387F	gonzales_steve	yes			Dead_End_Bells
28 [CE1D293E-3A43-4555-9EF4-ED724F933804]	swahlrab@COLTON	swahlrab@COLTON	8488F	wahlrab_sean	yes			Pin_&_Insulator,Dead_End_Bells
29 [548681F5-EDF5-4FE3-B15E-BF0567AAFECC]	sgonzales@COLTON	sgonzales@COLTON	4614F	gonzales_steve	no			Pin_&_Insulator

	primary__1	primary__2	crossarm_i	crossarm_t	crossarm_n	high_volta	fuse_prote	transforme	transfor_1	transfor_2	transfor_3
1	good		yes	Double_Arm	Arms are not doubles they are cubes	yes	no	no			
2	good		yes	Line_Arm		needs_replacement	yes	no			
3	good		yes	Line_Arm		yes	no	no			
4	good		yes	Line_Arm		yes	no	no			
5	good		yes	Line_Arm		yes	no	no			
6	good		yes	Double_Arm		yes	no	no			
7	good		yes	Line_Arm		yes	no	no			
8	good		yes	Line_Arm		yes	no	no			
9	good		yes	Line_Arm		yes	no	yes	1570		
10	good		yes	Double_Arm		yes	no	no			
11	good		yes	Double_Arm		yes	no	no			
12	good		yes	Line_Arm		needs_replacement	no	yes	3873		
13	good		yes	Line_Arm		needs_replacement	no	yes	3024		
14	good		yes	Double_Arm,Buck_Arm		needs_replacement	no	no			
15	good		yes	Line_Arm,Buck_Arm		needs_replacement	no	no			
16	good		yes	Double_Arm,Pothead_Arm,Cutout/Arrestor		yes	yes	no			
17	good		yes	Line_Arm,Double_Arm,Buck_Arm		yes	no	no			
18	good		yes	Line_Arm		yes	no	yes	3023		
19	good		yes	Pothead_Arm,Line_Arm		yes	no	no			
20	good		yes	Line_Arm		yes	no	no			
21	good		yes	Buck_Arm,Cubes_Arm,Double_Arm		yes	no	no			
22	good		yes	Line_Arm		yes	no	no			
23	good		yes	Double_Arm,Buck_Arm		yes	no	no			
24	good		yes	Line_Arm		yes	no	no			
25	good		yes	Cubes_Arm		yes	no	yes	2285		
26	good		yes	Line_Arm		yes	no	no			
27	good		yes	Double_Arm		yes	no	yes	4116		
28	good		yes	Double_Arm		yes	no	no			
29	good		yes	Line_Arm		yes	no	no			

	secondary_pole_group	pole_group_1	secondary1	communication	joint_pole	joint_pole	riser	riser_conc	down_guy_guard	primary_gi	primary_3	
1	no_not_needed		No secondary	no	no				yes			
2	yes_good_condition		No secondary	yes	yes	City_of_Colton	Primary_Riser	good	no	good		
3	yes_good_condition			yes	yes	City_of_Colton			no			
4	None	no_not_needed		yes	yes	SCE	None				no	
5	None	no_not_needed		yes	yes	SCE	None				no	
6	None	no_not_needed		yes	no		None				no	
7	None	no_not_needed		yes	no		None				yes	Span_Guy
8	None	no_not_needed		yes	no		None				yes	Span_Guy
9	Clevis	yes_good_condition	Broken_or_Missing_Molding	yes	no		None				no	
10	Clevis	no_not_needed		yes	no		Secondary_Riser	good			no	
11	Clevis	no_not_needed		yes	yes	City_of_Colton	Secondary_Riser	good			yes	Down_Guy
12	Clevis	yes_good_condition	No_Issues	yes	no		Secondary_Riser	good			no	
13	Clevis	yes_good_condition	No_Issues	yes	no		None				no	
14	None	no_not_needed		yes	no		None				yes	Down_Guy
15	Clevis	no_not_needed		yes	no		None				yes	Down_Guy
16	Clevis	no_not_needed		yes	no		Secondary_Riser.Primary_Ris	good			no	
17	None	no_not_needed		yes	no		None				no	
18	Clevis	yes_good_condition	Ground_Cut_or_Missing_Broken_or_Missing_Molding	yes	no		None				no	
19	Clevis	no_not_needed		yes	no		Secondary_Riser.Primary_Ris	good			no	
20	Clevis	no_not_needed		yes	no		Secondary_Riser	good			no	
21	None	no_not_needed		yes	no		None				yes	Sidewalk_Guy_Down_Gu
22	Clevis	no_not_needed		yes	no		None				no	
23	None	no_not_needed		yes	no		None				yes	Span_Guy_Down_Guy
24	Clevis	no_not_needed		yes	no		None				no	
25	Clevis	yes_good_condition	Broken_or_Missing_Molding	yes	no		Secondary_Riser	good			yes	Down_Guy
26	Clevis	no_not_needed		yes	no		None				no	
27	Clevis	yes_good_condition	No_Issues	no	no		Secondary_Riser	good			yes	Down_Guy
28	Clevis	no_not_needed		yes	no		Secondary_Riser	good			yes	Sidewalk_Guy
29	Clevis	no_not_needed		yes	no		None				yes	Sidewalk_Guy

	primary_pc	primary_4	switched_i	switch_num	switch_cor	switch_not	secondar_i	secondar_f	f_date	created_de	last_edi_1
1				0.00000000000					5/22/2019	5/23/2019	5/23/2019
2				0.00000000000					5/22/2019	5/23/2019	5/23/2019
3				0.00000000000					5/22/2019	5/23/2019	5/23/2019
4	no		no	0.00000000000			no		5/23/2019	5/23/2019	5/23/2019
5	no		no	0.00000000000			no		5/23/2019	5/23/2019	5/23/2019
6	no		no	0.00000000000			no		5/23/2019	5/23/2019	5/23/2019
7	no		no	0.00000000000			no		5/23/2019	5/23/2019	5/23/2019
8	yes	No_Issues	no	0.00000000000			no		5/23/2019	5/24/2019	5/24/2019
9	no		no	0.00000000000			yes	Span_Guy	5/23/2019	5/24/2019	5/24/2019
10	no		no	0.00000000000			no		5/23/2019	5/24/2019	5/24/2019
11	no		no	0.00000000000			yes	Down_Guy	5/23/2019	5/24/2019	5/24/2019
12	no		no	0.00000000000			yes	Span_Guy	5/23/2019	5/24/2019	5/24/2019
13	no		no	0.00000000000			yes	Span_Guy	5/23/2019	5/24/2019	5/24/2019
14	no		no	0.00000000000			no		5/23/2019	5/24/2019	5/24/2019
15	no		no	0.00000000000			no		5/23/2019	5/24/2019	5/24/2019
16	yes	Broken_or_Missing_Moldir	no	0.00000000000			no		5/23/2019	5/24/2019	5/24/2019
17	no		no	0.00000000000			no		5/28/2019	5/29/2019	5/29/2019
18	no		no	0.00000000000			no		5/28/2019	5/29/2019	5/29/2019
19	yes	Broken_or_Missing_Moldir	no	0.00000000000			no		5/28/2019	5/29/2019	5/29/2019
20	yes	No_Issues	no	0.00000000000			no		5/28/2019	5/29/2019	5/29/2019
21	no		no	0.00000000000			no		5/28/2019	5/29/2019	5/29/2019
22	yes	No_Issues	no	0.00000000000			no		5/28/2019	5/29/2019	5/29/2019
23	no		no	0.00000000000			no		5/28/2019	5/29/2019	5/29/2019
24	no		no	0.00000000000			no		5/28/2019	5/29/2019	5/29/2019
25	no		no	0.00000000000			no		5/28/2019	5/29/2019	5/29/2019
26	yes	No_Issues	no	0.00000000000			no		5/28/2019	5/29/2019	5/29/2019
27	no		no	0.00000000000			no		5/30/2019	5/30/2019	5/30/2019
28	no		no	0.00000000000			no		5/30/2019	5/30/2019	5/30/2019
29	no		no	0.00000000000			no		5/30/2019	5/30/2019	5/30/2019



**Legend**

- City Boundary
- County Boundary
- Tier 2 Fire Hazard
- Tier 3 Fire Hazard

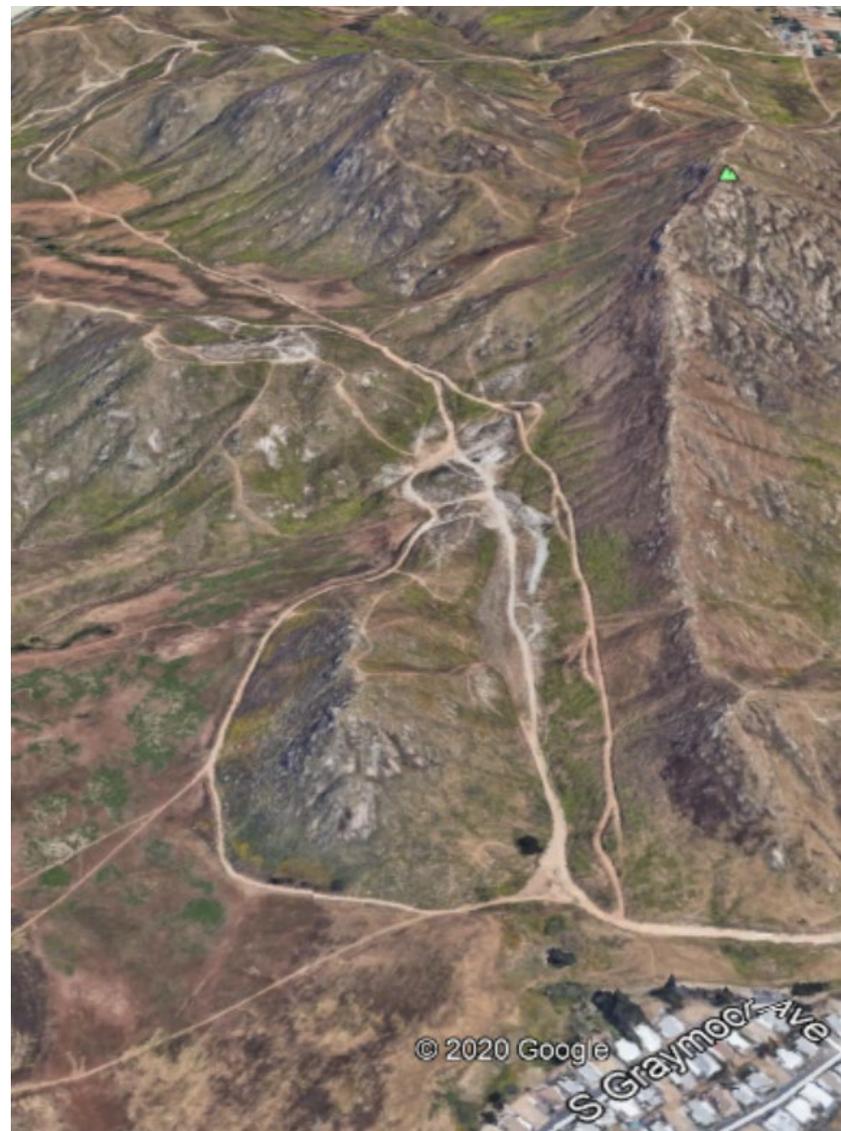
# Wildfire Mitigation Plan Review

Colton Electric Utility

# Colton Electric Utility Wildfire Mitigation Plan Review

## Public Utilities Code Section 8387(b):

- Requires every publicly owned utility to construct, maintain, and operate its electrical facilities to minimize the risk of wildfire posed by those facilities.
- Modified by Senate Bill (SB) 901 and Administrative Law Judge's Ruling (January 17, 2019, CPUC Docket No. R.18 10 007)
- Applies to publicly-owned electric utilities
- Requires preparation of a Wildfire Mitigation Plan before January 1, 2020.
- Requires review and assessment by an independent evaluator





## CEU Wildfire Mitigation Plan Review

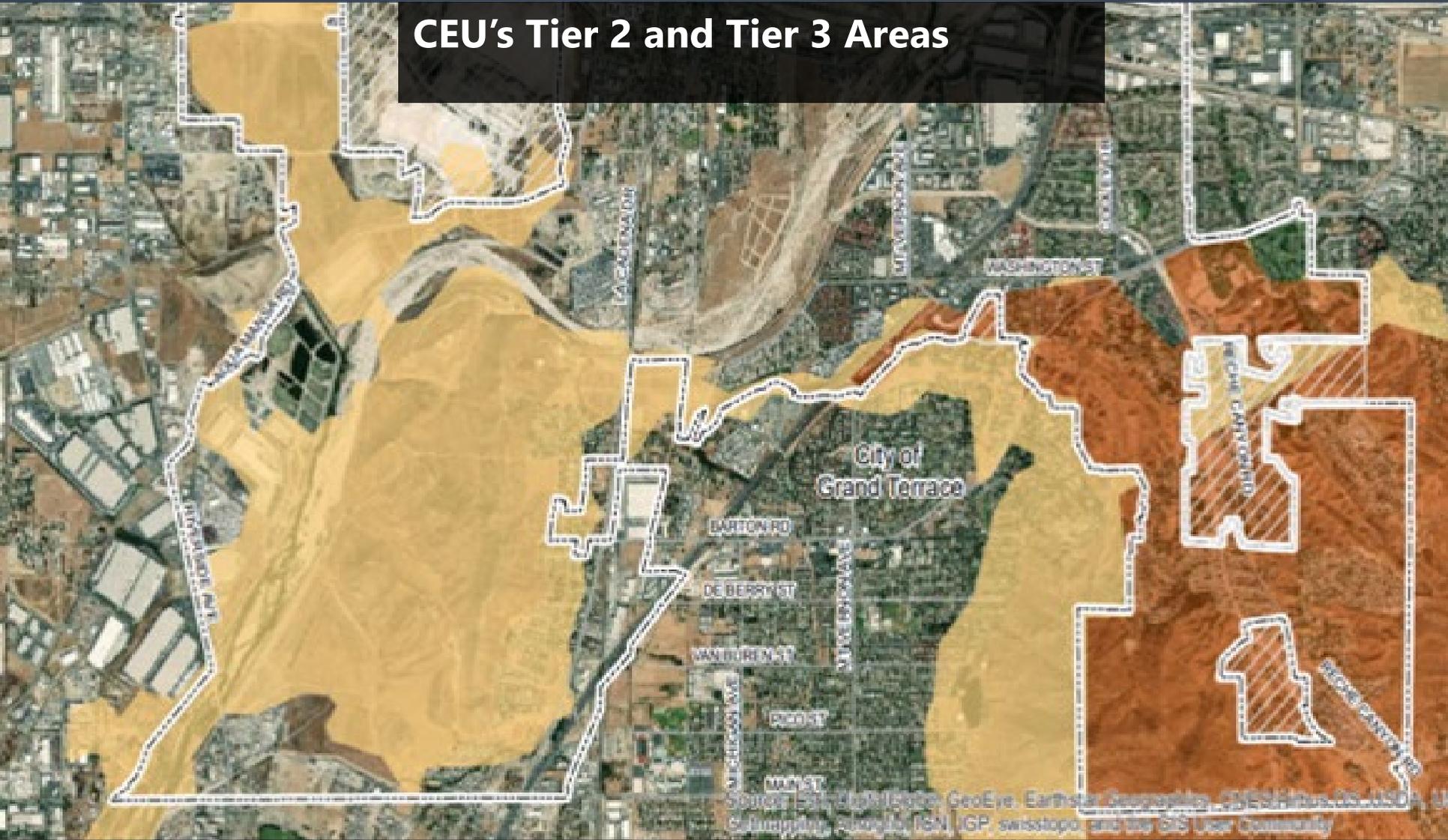
### Public Utilities Code Section 8387(b) Required Elements:

- Responsible parties
- Plan objectives
- Preventative strategies/programs to minimize risk of equipment causing wildfires
- Metrics to evaluate plan performance
- Protocols for disabling reclosers/de-energizing system and consideration of impacts on public safety
- Procedures for notifying customers impacted by system de-energizing
- Plans for vegetation management
- Plans for system inspection
- Identification of risks and risk drivers (system and environmental)
- Identification of high fire threat areas
- Methods for identifying and presenting safety and wildfire risk
- Post-fire service restoration
- Process for:
  - Plan auditing/monitoring
  - Plan deficiency correction
  - Monitoring/auditing inspection effectiveness

# CEU Wildfire Mitigation Plan Review

Public Utilities Code Section 8387(b) Required Elements:

## CEU's Tier 2 and Tier 3 Areas



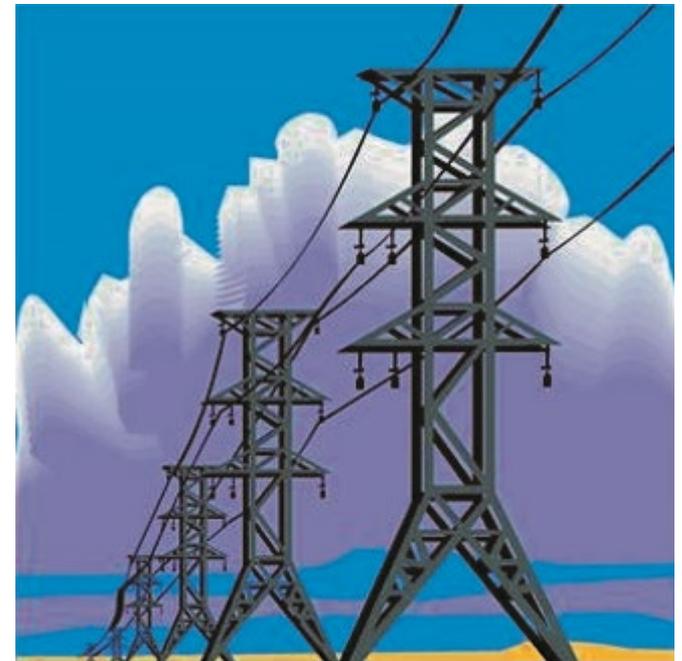
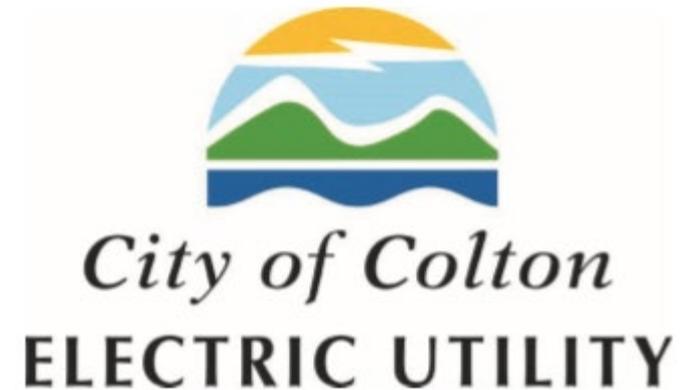
# CEU Wildfire Mitigation Plan Review

## Scope:

- Review CEU's Draft Wildfire Mitigation Plan
- Review supporting documents
- Ensure all required elements are adequately addressed

## Draft Review Findings:

- Minor Clarifications:
  - CEU staff responsibility for Plan execution
  - WMP Objectives Section
  - Risk and Mitigation Clarifications
  - Climate change effects
  - Plan metrics
  - Communications to critical facilities
  - Customer notification during outages/restoration
  - Wildfire Reduction Zone inspection/maintenance program
  - Risk drivers – operations/climate factors
  - Risk identification
  - Post-fire condition assessment





## CEU Wildfire Mitigation Plan Review

### Conclusion:

- Timeline:
  - Draft 1 – reviewed October 2019
  - Draft 2 – reviewed November 2019
  - Evaluation letter – January 2020
- Recommendation:
  - Revised Plan satisfactorily addresses all required Public Utility Code Section 8387(b)(2) elements
  - Plan adoption recommended