

**SILICON VALLEY POWER**

**WILDFIRE**

**MITIGATION**

**PLAN**

---

**AUGUST 2022**

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## I. OVERVIEW

### A. Policy Statement

Silicon Valley Power (SVP) is the City of Santa Clara's municipally owned electric utility. SVP's mission and overarching goal is to provide safe, reliable, affordable, and sustainable energy services with exceptional customer focus. In order to meet this goal, SVP constructs, maintains, and operates its own electrical lines and equipment. SVP carries out these activities in a manner that minimizes the risk of catastrophic wildfire posed by its electrical lines and equipment.

### B. Purpose of the Wildfire Mitigation Plan

This Wildfire Mitigation Plan describes the range of activities that SVP is taking to minimize the risk of wildfires ignited by its electrical lines and equipment, including its various programs, policies, and procedures. This plan is subject to direct approval and oversight by the Santa Clara City Council and is implemented by the Santa Clara City Manager. This plan complies with the requirements of Public Utilities Code section 8387 for publicly owned electric utilities to prepare a wildfire mitigation plan by January 1, 2020, and annually thereafter.

SVP is a department within the City of Santa Clara (City). SVP coordinates closely with the City's Fire Department and Police Department in the planning for and response to any emergency event within the City. ~~The City through~~ SVP also owns, operates and maintains remote transmission assets/electrical facilities outside the limits of the City as further described below and shown in Appendix A. SVP coordinates with local fire and other public safety agencies that have jurisdictions in those locations.

SVP's service territory is contiguous with the City of Santa Clara city limits with limited exceptions in neighboring jurisdictions. The City is an urban environment and is surrounded on all sides by urban environments in other Cities. Pursuant to Public Utilities Code section 8387(b)(2) the City ~~C~~ouncil has determined that, based on historical fire data and local conditions, and in consultation with the ~~f~~ire ~~D~~epartments ~~or that other entities responsible for controlling fires within SVP's geographical service area where the utility's overhead electrical lines and equipment are located,~~ there is no significant risk of catastrophic wildfire resulting from ~~these electrical lines and equipment located within SVP's geographical service area. Therefore, this plan focuses on the management of five transmission assets outside of SVP's service territory~~ Outside of SVP's geographic service area, SVP operates electrical lines and equipment in five separate remote locations in Northern California. Some of these remote assets are located in a CPUC High Fire Threat District. The Wildfire Mitigation Plan contains a description of the operations and equipment that Silicon Valley Power utilizes to minimize the risk of wildfire being ignited by our assets with specific strategies for our assets that are located in high fire hazard severity areas, high fire threat areas, or areas we have determined have a high risk for sustaining a destructive wildfire.

SVP owns remote transmission assets, including, but not limited to, ~~the~~ wires, ~~the~~ poles, and other equipment needed to safely deliver power generated from generation assets located outside the City limits to the grid as more fully described as follows below:

- Grizzly Tie Line - SVP owns the Grizzly Hydroelectric Project (Grizzly), a part of the Bucks Creek Project, FERC No. 619, located in Plumas County, California, as set forth in the Grizzly Development and Mokelumne Settlement Agreement by and between Pacific Gas and Electric (PG&E) and Santa Clara, dated March 8, 1990, as amended (Grizzly Agreement). Through the project, SVP owns approximately 3.4 miles of a 115 kV [transmission-generation tie](#) line, extending from the Grizzly powerhouse to, and including the end structure and disconnect switch, near Bucks Creek Powerhouse and all other facilities necessary for interconnection with PG&E's transmission system. PG&E operates and maintains project including the [transmission-generation tie](#) line through the Grizzly Operations and Maintenance Agreement. [The generation tie line is included as part of PG&E's Wildfire Mitigation Plan.](#)
- Black Butte Tie Line - SVP owns the Black Butte Hydroelectric Project (Black Butte), FERC No. 3190 dated May 5, 1983 and amended June 5, 1987. Through this project, SVP owns a 9.5 mile long 60kV [transmission-generation tie](#) line interconnecting the project to PG&E's existing 60 kV line near the City of Orland, California. SVP operates and maintains the [transmission-generation tie](#) line.
- Stony Gorge Tie Line - SVP owns the Stoney Gorge Hydroelectric Project (Stoney Gorge), FERC No. 3193 dated July 15, 1983. Through this project, SVP owns a one mile-long, 60 kV [transmission-generation tie](#) line connecting the project with PG&E's Elk Creek Substation north of the powerhouse. SVP operates and maintains the [transmission-generation tie](#) line.
- High Line Canal Interconnection - SVP owns the High Line Canal Hydroelectric Project (High Line), FERC No. 7252 dated July 17, 1984. Through this project, SVP owns an approximately 75 foot long 12 kV three phase [transmission-generation tie](#) line that interconnects with existing PG&E lines. SVP operates and maintains the [transmission-generation tie](#) line.
- Castle Rock- Lakeville Transmission Line - SVP has a 4.98 percent ownership interest in a 230 kV double circuit transmission line between Castle Rock Junction and Lakeville Substation in the Geysers, as set forth in the Agreement of Co-Tenancy in the Castle Rock Junction-Lakeville 230 kV Transmission Line, dated June 1, 1984. This line supports SVP's share of the Geothermal Generation Project with the Northern California Power Agency (NCPA). PG&E has a 77.2 percent ownership interest in the line, and is responsible for operations and maintenance.

Appendix A contains maps showing the geographic areas of these assets.

## C. Organization of the Wildfire Mitigation Plan

This Wildfire Mitigation Plan included the following elements:

- Objectives of the plan;
- Roles and responsibilities for carrying out the plan;
- Identification of key wildfire risks and risk drivers;

- Description of wildfire prevention, mitigation, and response strategies and programs;
- [Reclosing Policy](#)
- [De-Energization Policy](#)
- Community outreach and education;
- Metrics for evaluating the performance of the plan and identifying areas for improvement; and
- Review and validation of the plan.

## II. OBJECTIVES OF THE WILDFIRE MITIGATION PLAN

### A. Minimizing Sources of Ignition

The primary goal of this Wildfire Mitigation Plan is to minimize the probability that SVP owned electrical lines and equipment may be the origin or contributing source for the ignition of a vegetation fire. This plan is intended to supplement, but not replace or duplicate applicable building and fire codes. SVP has evaluated its physical assets, operations, and training that can help to meet this objective. Through this evaluation, SVP has identified prudent and cost effective improvements that have been implemented.

### B. Resiliency of the Electric Grid

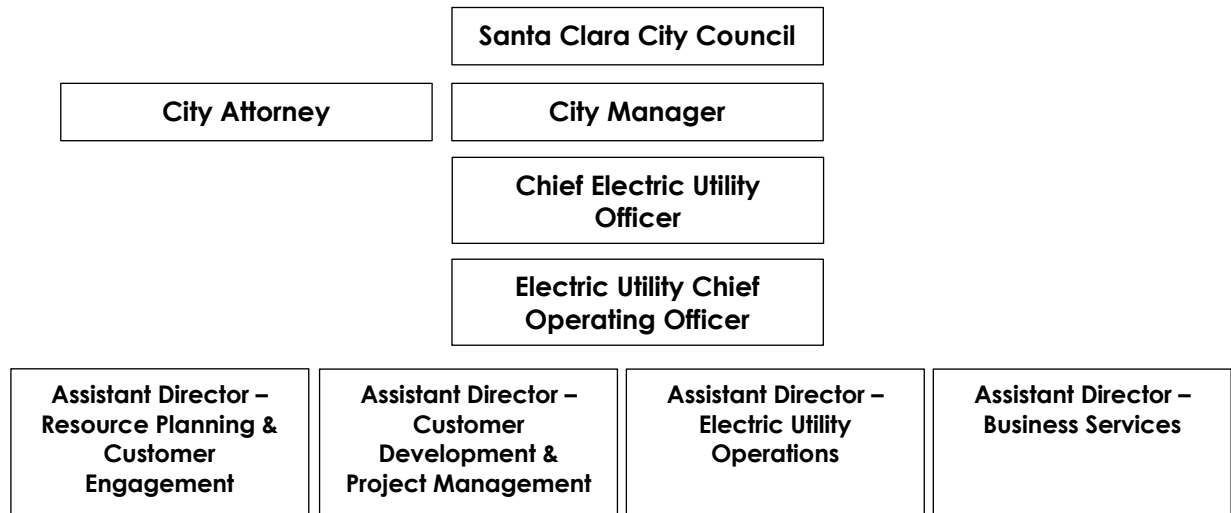
The secondary goal of this Wildfire Mitigation Plan is to improve the resiliency of the electric grid. As part of the development of this plan, SVP assesses new industry practices and technologies that will reduce the likelihood of an interruption (frequency) in service and improve the restoration (duration) of service.

### C. Identifying Unnecessary or Ineffective Actions

The goal for this Wildfire Mitigation Plan is to measure the effectiveness of specific wildfire mitigation strategies. Where a particular action, program component, or protocol is determined to be unnecessary or ineffective, SVP will assess whether a modification or replacement is merited. This plan will also help determine if more cost-effective measures would produce the same or improved results.

### III. ROLES AND RESPONSIBILITIES

#### A. Utility Governance Structure



The City of Santa Clara is a charter city located in the state of California and has adopted a Council/Manager form of government. Pursuant to its charter, the City has the power to furnish electric utility service within its service territory. In connection therewith, the City has the powers of eminent domain, to contract, to construct works, to fix rates and charges for commodities or services it provides and to incur indebtedness. The City provides electric utility service through its electric utility department under the trademarked name of “Silicon Valley Power.” The legal responsibilities and powers of the City are exercised by the elected seven-member Santa Clara City Council. The City Council appoints the Santa Clara City Manager who acts as the Chief Administrative Officer for the City. SVP is operated under the direction of the Chief Electric Utility Officer who, together with certain other senior managers of SVP, is appointed by and reports to the Santa Clara City Manager. The Chief Electric Utility Officer is responsible for the implementation of this Wildfire Mitigation Plan.

#### B. Wildfire Prevention

The Electric Chief Operating Officer coordinates the day to day operation of the utility through the Assistant Directors. The Electric Chief Operating Officer is specifically responsible for the following:

- Assuring that all employees receive regular training as required for the implementation of this Wild Fire Mitigation Plan.
- Complying with relevant federal, state, and industry standard requirements, including the industry standards established by the California Public Utilities Commission.

The Assistant Director of ~~Electric~~ Electric Operations~~Utility Operations~~ is specifically responsible for operating and maintaining the system in a manner that will minimize potential wildfire risks including, but not limited to:

- Taking all reasonable and practicable actions as described in the Wildfire Mitigation Plan to minimize the risk of a catastrophic wildfire caused by SVP's electric facilities.
- Coordinating with federal, state, and local fire management personnel as necessary or appropriate to implement the Wildfire Mitigation Plan.
- Collecting and maintain wildfire data necessary for the implementation of this Wildfire Mitigation Plan.
- Taking corrective action when the staff witnesses or is notified that fire protection measures have not been properly installed or maintained.

All SVP employees and contractors are responsible for actively taking precautions to prevent fires, reporting potentially unsafe conditions and immediately report fires, pursuant to existing SVP's practices and the requirements of this Wildfire Mitigation Plan.

### C. Wildfire Response and Recovery

All SVP employees and contractors are responsible for immediately reporting fires by calling 911 and providing all information required for responsible fire agencies to respond. If the fire involves or is in the vicinity of any SVP facility, SVP's Electric Control should be notified immediately after calling 911.

If the facility is operated under SVP control (Black Butte, Highline and Stony Gorge), Electric Control shall verify with the caller that 911 has been notified and then take action to de-energize any line or other facility potentially creating a hazard to the first responders. If a facility is already de-energized, Electric Control will take any action necessary to assure that it is not re-energized until it is safe to do so. Electric Control will dispatch appropriate personnel to coordinate with first responders and then promptly notify management through the reliability text and email notification process.

If the facility is operated under PG&E control (Grizzly and Castle Rock/Lakeville), Electric Control shall verify with the caller that 911 has been notified and then promptly notify management through the reliability text and email notification process.

The Electric Chief Operating Officer is responsible for notifying the Chief Electric Utility Officer and City Manager's Office. The City Manager is responsible for informing the City Council as appropriate.

The Assistant Director of Utility Operations will coordinate SVP's investigation into any fire involving SVP facilities and will coordinate with the appropriate fire or other agency investigations. The Assistant Director of Utility Operations will also coordinate restoration of SVP facilities.



## IV. WILDFIRE RISKS AND DRIVERS ASSOCIATED WITH DESIGN, CONSTRUCTION, OPERATION, AND MAINTENANCE

### A. Particular Risks and Risk Drivers Associated With Topographic and Climatological Risk Factors

As discussed above, there is no significant risk of catastrophic wildfire within SVP's service territory. However, to ensure reliability and high levels of customer safety and service, SVP performs vegetation management through an area trimming program throughout its service territory on a five year cycle and enhanced focus areas based on outage history in addition to annual and five year facility inspection programs.

Although specific risks differ for each line outside of the SVP service territory, risks associated with extended drought, changing weather patterns and climate change apply to all of the lines. Each of the lines with the exception of the High Line Canal Interconnection are considered transmission lines operating at the 60kV, 115kV or 230kV. For the initial evaluation of the risks, SVP compared location of our remote lines to the CPUC High Fire Threat District Map and the Cal Fire California Fire Hazard Severity Zone Map.

The Grizzly Tie Line is located in the CPUC Tier 3 Extreme Fire Threat Zone, and Cal Fire identifies the area in which the line is located in as Federal jurisdiction (US Forest Service). The mountainous terrain, heavy vegetation and the potential of lightning strikes and high winds are all risk drivers for this line. [There is no known fire history associated with this line. This tie line was damaged by the "Dixie" Wildfire in 2021 which burned 963,309 acres. The cause of the fire was found to be unrelated to the Grizzly Tie Line and/or SVP assets.](#)

The Black Butte Tie Line is not located in a CPUC Tier 2 or Tier 3 Fire Threat Zone. Approximately 3.75 miles of the 9.5 mile line are located on the edge of a Cal Fire moderate hazard zone. The terrain is flat and runs along a road through agricultural land. The line is occasionally subject to lightning strikes. The one known fire associated with the line was caused by a bird contact and was limited to a small area (less than 500 square feet) of grass between poles 82 and 83 immediately under the line on October 6th, 2015.

The Stony Gorge Tie Line is located in a CPUC Tier 2 Elevated Fire Threat Zone. Approximately 0.1 miles are located on the edge of a Cal Fire high hazard zone. The remaining 0.9 miles are located in a Cal Fire moderate hazard zone. Except for the first 250 feet of the line located at the base of an undeveloped hill, the line is constructed over level terrain. The line crosses Stony Creek then follows roads through agricultural land. There is no known fire history associated with this line.

The High Line Canal Interconnection consists of a riser, a pole mounted transformer and a 75 foot overhead span connected to a PG&E distribution line. The entire connection is over a gravel and dirt road and parking area adjacent to a cemetery. The High Line Canal Interconnection is not located in a CPUC Tier 2 or Tier 3 Fire Threat Zone. It is located on the edge of a Cal Fire moderate hazard zone. There is no significant risks and no known fire history from the High Line Canal Interconnection.

The Castle Rock Lakeville Transmission Line is located in the CPUC Tier 2 elevated and Tier 3 Extreme Fire Threat Zones. The line runs through Cal Fire moderate, high and very high hazard zones as well as areas notated as Federal jurisdiction. The communities, mountainous terrain, heavy vegetation and the potential of and high winds are all risk drivers for this line. This line is operated and maintained by PG&E the majority owner and is covered by PG&E's Wildfire Mitigation Plan.

**B. Identifying and Presenting Enterprisewide Safety Risk**

Safety of life and property including mitigation of wildfire risk are part of the culture of SVP. Enterprise risks associated with wildfire including design and construction standards, vegetation management and operational practices have been reviewed by senior utility staff. Experts in vegetation management have been consulted. Discussions with other utilities and experts have occurred to assure that SVP's standards meet or exceed the standards in the industry. The potential risks and this mitigation plan have been presented to SVP's governing body, the Santa Clara City Council and SVP staff.

[A diverse team of SVP staff including System Operators, Engineers, and Senior Managers meets monthly to review the Wildfire Mitigation Plan and vegetation management updates. The electric utility operations group works with SVP's contracted professional tree service company and other contractors to perform annual vegetation inspections as well as inspections of SVP's electrical assets.](#)

[In 2019, SVP also developed a System Operations Procedure for Wildfire Mitigation which SVP's System Operators use to help SVP adhere to this Wildfire Mitigation Plan. The SOP contains detailed roles and responsibilities, and procedures to be followed during various events.](#)

**C. Changes to CPUC Fire Threat Map**

During its review of SVP facilities, SVP has not identified any areas having a higher wildfire threat than has been identified in the CPUC maps. No new information or changes to the environment were identified that would justify that the CPUC should expand its maps.

## V. WILDFIRE PREVENTATIVE STRATEGIES

### A. High Fire Threat District

SVP directly participated in the development of the California Public Utilities Commission's (CPUC) Fire-Threat Map,<sup>1</sup> which designates a High-Fire Threat District. In the map development process, SVP served as a territory lead, and worked with utility staff and local fire & government officials to identify the areas of SVP's service territory that are at an elevated or extreme risk of power line ignited wildfire. None of SVP's service territory nor any territory adjacent to SVP has been designated as a Tier 1, 2, or 3 threat area. ~~SVP has incorporated the High Fire Threat District into its construction, inspection, maintenance, repair, and clearance practices, where applicable to lines SVP owns outside of its service territory.~~

### B. Weather Monitoring

The SVP assets located in ~~Glenn and Tehama Counties~~ Glenn County of California; the Black Butte tie line, Stony Gorge tie line, and the High Line Canal connection, are operated by SVP. Of these assets only the Stony Gorge tie line is located in a wildfire threat area (Tier 2). SVP operates all three of these lines as if they were all within a wildfire threat area. The SVP Electric System Operator monitors current and forecasted weather and associated fire danger data from a variety of sources including:

- ONCC Significant Fire Potential (Website - Primary Source)
- NWS Fire Weather Zone Map (Website - Back-up Source)
- PG&E PSPS Map and Portal (Website - Corroborative Source)
- NWS Watches, Warnings or Advisories; Glenn County (Website - Corroborative Source)

During wildfire season<sup>2</sup>, ~~and on a daily basis~~, the SVP Electric System Operators will monitor the ONCC Significant Fire Potential website on a daily basis to identify the fire risk and corresponding response.

#### Risk Categories:

1. **Moist** (Little or Low Risk): During moist conditions, all SVP staff and contractors involved in the operation and maintenance of the lines in ~~Glenn County~~ Glenn and Tehama Counties will be made aware of the low risk conditions in all safety tailboard briefings. No changes are made to operations or work policy.
2. **Dry** (Low risk of large fires in the absence of a "High Risk" event): During dry conditions, all SVP staff and contractors involved in the operation and maintenance of the lines in Glenn and Tehama Counties ~~Glenn County~~ will be made aware of the low risk conditions in all safety tailboard briefings. No changes are made to operations or work policy.

<sup>1</sup> Adopted by CPUC Decision 17-12-024.

<sup>2</sup> Wildfire season is generally defined by SVP as the period typically between May 1st and October 31st unless determined by the SVP Senior Electric and Water System Operator the season needs to be extended due to conditions that may present in any given year.

3. **Very Dry** (Low/Moderate risk of large fires in the absence of a “High Risk” event): During very dry conditions, all SVP staff and contractors involved in the operation and maintenance of the lines in [Glenn and Tehama Counties](#) ~~Glenn County~~ will be made aware of the Very Dry conditions and will include wildfire safety in all safety tailboard briefings.
4. **High Risk Days**: 20% Chance of a large fire due to a combination of dry or very dry fuel and an ignition trigger, or dry or very dry fuel combined with a critical burn environment. During High Risk days, all SVP staff and contractors involved in the operation and maintenance of the lines in [Glenn and Tehama Counties](#) ~~Glenn County~~ will be made aware of the High Risk and will include wildfire safety in all safety tailboard briefings. A wildfire patrol of the lines will be carried out at the onset of the High Risk condition. [If the High-Risk conditions continue for an extended period of 7 days or more, patrols are to be carried out weekly.](#)
5. **Red Flag Warnings**: If the National Weather Service declares a Red Flag Warning for [Glenn and Tehama Counties](#) ~~Glenn County~~, all SVP staff and contractors involved in the operation and maintenance of the lines in [Glenn and Tehama Counties](#) ~~Glenn County~~ will be made aware of the Red Flag Warning and will include wildfire safety in all safety tailboard briefings. A wildfire patrol of the lines will be carried out prior to the beginning of the Red Flag Warning, and at least daily if the risk factors persist. All maintenance activities will be performed with lines de-energized. Consideration of de-energizing the lines will be made on a case by case basis. If a line trips and locks out on an electrical fault, the line will be left de-energized until it is patrolled and it is determined safe to re-energize the line.

## C. Design and Construction Standards

SVP’s electric facilities are designed and constructed to meet or exceed the relevant federal, state, or industry standard. SVP treats CPUC General Order (GO) 95 as a key industry standard for design and construction standards for overhead electrical facilities. SVP meets or exceeds all standards in GO 95. Additionally, SVP monitors and follows as appropriate the National Electric Safety Code.

[At our High Line Canal Interconnection, there are expulsion fuses, however, the electrical line is located over a dirt and gravel road and is not located in a HFTD. Even though the line is not located in a high fire threat district, SVP mitigates the risk of expulsion fuses as if it were in a HFTD by maintaining a 10ft radius around the poles free of vegetation and flammable materials.](#)

[In 2020, SVP installed raptor guard at 9 locations on the Black Butte 60 kV line to harden them from raptor contact. There are no other planned hardening measures at this time as SVP’s policy is to de-energize the line during high fire threat events. Annual patrols utilizing thermal and corona imaging are performed to ensure that hardware, insulators, and connectors are up to standard.](#)

## D. Vegetation Management

SVP meets or exceeds the minimum industry standard vegetation management practices. For transmission-level facilities, SVP complies with NERC FAC-003-4, where applicable. For both transmission and distribution level facilities, SVP 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. . The recommended time-of-trim guidelines do not establish a mandatory standard, but instead provide useful guidance to utilities. SVP hires-contracts with professional tree service company who has Subject Matter Experts (SMEs) in vegetation management and uses specific knowledge of growing conditions and tree species to determine the appropriate time of trim clearance in each circumstance. SVP does not use herbicides or growth inhibitors.

Although SVP's service territory is not in an area with high wildfire potential, SVP hires a professional tree service company to systematically trim and remove trees to maintain required clearances from overhead circuits.

SVP treats its facilities located in Glenn and Tehama Counties to be within a High Fire Threat District. As these facilities are 60kV lines totaling no more than 11 miles in length and are easily accessible, SVP employs the following methodology for vegetation control. On an annual basis, SVP contracts with a professional tree service company to perform an inventory of trees in the proximity of facilities in Glenn and Tehama Counties. This inventory is recorded electronically and a scope of work for tree trimming, and removal is created. This scope of work is also completed in the same year and a report by the professional tree service company is provided to SVP.

GO 95, Rule 35, Table 1					
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

**Appendix E**  
**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 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.

<b>Voltage of Lines</b>	<b>Case 13</b>	<b>Case 14</b>
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

~~For the overhead remote lines that SVP operates and maintains, SVP hires SMEs to perform an evaluation every two years of every tree that has the potential to contact the lines if it grows into the line, drops a branch or otherwise fails. SVP performs more frequent and detailed inspections in cases where “hazard trees” (Dead, Dying, Diseased or leaning) could strike the facilities, will work with the land owner to remove the tree, or portion of the tree, that poses a risk.~~

## E. Inspections

SVP meets or exceeds the minimum inspection requirements provided in CPUC GO 165 and CPUC GO 95, Rule 18. ~~Pursuant to these rules, SVP inspects remote lines more frequently than the other areas of its service territory.~~ SVP staff and contracted SMEs use their knowledge of the specific environmental and geographical conditions to determine the required frequency of inspections.

Separate vegetation and physical inspections of the remote lines owned and operated by SVP ~~will be~~ performed every ~~two-year~~ and additionally on an as-needed basis. These lines are visually inspected from the ground, drone, helicopter or on elevated platforms. Corona and thermal imaging technologies are also used. Any necessary repairs will be completed in a timely manner as appropriate. Any issue that is creating an eminent safety concern will be immediately addressed.

Inspections carried out on red flag days look for any emergent conditions containing but not limited to the following criteria:

- Broken or slack down guys.
- Leaning poles
- Un-balanced spans.
- Encroachment on minimum 4-foot radial clearance between conductors and vegetation.
- Broken insulators.
- Discolored conductor connections.
- Accumulation of flammable debris encroaching in the SVP facility right of way.

The SVP Electric and Water System Operator maintains procedures and tools for mitigating emergent wildfire threats associated with remote facilities owned and operated by SVP. The System Operator logs conditions and the inspection results for high risk and red flag days.

~~If SVP staff discovers a facility in need of repair that is owned by an entity other than SVP, SVP will issue a notice to repair to the facility owner and work with the facility owner to ensure that necessary repairs are completed promptly.~~

SVP works to ensure that all inspections to be performed are completed before the beginning of the historic fire season. SVP monitors drought conditions and other relevant factors throughout the year to determine if inspections should be completed on a shorter timeframe.

## F. Workforce training

The Electric Utility Chief Operating Officer is specifically responsible for assuring that all employees having obligations for implementation of this Wildfire Mitigation Plan receive regular training. Training on the wildfire plan ~~will be~~ held each spring prior to the start of the wildfire season. Training will include roles and responsibilities, identification of risks, and procedures associated with monitoring and response.

## VI. RECLOSING POLICY

SVP does not have reclosers or reclosing schemes on its remote lines.

If one of the remote lines operated and maintained by SVP is de-energized due fire or high fire risk. It will only be re-energized after physical inspection and in accordance with SVP operating procedures under direction of an SVP Electric and Water System Control Operator and in coordination with PG&E as appropriate. SVP staff or contractors will coordinate with local public safety officials in the event of an active fire. No customers are served by these lines.

## VII. DEENERGIZATION

All SVP remote lines are generation tie lines. SVP has the authority to preemptively de-energize the lines it operates and maintains due to fire-threat conditions. No customers would be affected by the de-energization of these lines. SVP will make a case-by-case decision to shut off power based on the following considerations:

- Red Flag Warnings issued by the National Weather Service for fire weather zones that contain SVP remote lines;
- SVP staff assessments of local conditions, including wind speed (sustained and gust), humidity and temperature, fuel moisture, fuel loading and data from weather stations;
- Real-time information from staff and contractors located in areas identified as at risk of being subject to extreme weather conditions;
- Input from fire experts and vegetation experts;
- Input from local and state fire authorities regarding the potential consequences of wildfires in select locations;
- Availability of alternative generation resources;
- Awareness of mandatory or voluntary evacuation orders in place;
- Other operational considerations to minimize potential wildfire ignitions,;
- On-going fire activity near the remote lines and throughout California;

**VIII. COMMUNITY OUTREACH AND PUBLIC AWARENESS**

This Wildfire Mitigation Plan has been submitted to the Cal Fire Tehama Glenn Unit for review. The plan was also reviewed with Orland Unit Water Association for the lines SVP operates and maintains. The mitigation plan was presented to the City of Santa Clara City Council in a public meeting for approval.

~~IX. RESTORATION OF SERVICE~~

~~X.I. IF ONE OF THE REMOTE LINES OPERATED AND MAINTAINED BY SVP IS DE-ENERGIZED DUE FIRE OR HIGH FIRE RISK, IT WILL ONLY BE RE-ENERGIZED AFTER PHYSICAL INSPECTION AND IN ACCORDANCE WITH SVP OPERATING PROCEDURES UNDER DIRECTION OF AN SVP ELECTRIC AND WATER SYSTEM CONTROL OPERATOR AND IN COORDINATION WITH PG&E AS APPROPRIATE. SVP STAFF OR CONTRACTORS WILL COORDINATE WITH LOCAL PUBLIC SAFETY OFFICIALS IN THE EVENT OF AN ACTIVE FIRE. NO CUSTOMERS ARE SERVED BY THESE LINES.~~

~~XI-IX. METRICS AND ASSUMPTIONS FOR MEASURING PLAN PERFORMANCE~~

SVP will track two metrics to measure the performance of this Wildfire Mitigation Plan: (1) number of fire ignitions; and (2) wires down on the remote lines.

**METRIC 1: FIRE IGNITIONS**

For purposes of this metric, a fire ignition is defined as follows:



- An SVP remote facility was associated with the fire;
- The fire was self-propagating and of a material other than electrical and/or communication facilities;
- The resulting fire traveled greater than one linear meter from the ignition point; and
- SVP has knowledge that the fire occurred.

SVP has knowledge of one Fire Ignition associated with the Black Butte Tie Line. A bird contacted the line and a fire started in the grass immediately under the line. The fire was limited to a small area. SVP has no knowledge of other Fire Ignitions associated with its lines. Each of the lines has been in service for 30 to 35 years.

In future Wildfire Mitigation Plans, SVP will provide the number of fires that occurred that were less than 10 acres in size. Any fires greater than 10 acres will be individually described.

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## METRIC 2: WIRES DOWN

The second metric is the number of remote line wires downed. For purposes of this metric, a wires down event includes any instance where an electric distribution or transmission conductor falls to the ground or on to a foreign object.

SVP will not normalize this metric by excluding unusual events, such as severe storms. Instead, SVP will supplement this metric with a qualitative description of any such unusual events. SVP has no knowledge of any wire down on its remote lines since placed in service.

### A. Impact of Metrics on Plan

Each time an event occurs within one of the metrics above, SVP will perform an analysis of the event including any design or operational recommendations for improvement. SVP will then evaluate potential improvements to the plan.

[Between January 1, 2019 through December 31, 2021, there were no fire ignitions caused by SVP and no wires down events.](#)

## XII.X MONITORING AND AUDITING THE PLAN

This Wildfire Mitigation Plan ~~will be~~ presented to Santa Clara City Council ~~and~~ on an annual basis ~~thereafter~~. Additionally, a qualified independent evaluator will present an initial report on this plan to the Santa Clara City Council.

### A. Identifying and correcting Deficiencies in the Plan

This wildfire mitigation plan is a living document. As the plan is implemented, SVP will compile any deficiencies identified by staff, contractors, SMEs and other sources. Improvements and corrections will be reviewed and implemented in a timely manner as appropriate. Each year the plan will be reviewed and updated prior to submittal to Santa Clara City Council.

### B. Monitoring the effectiveness of inspections

Any vegetation or physical issues found during inspections will be compiled and retained for future review. Trends involving repeated issues, timeliness of issue resolution, metrics listed in section VII A, or other observations will be reviewed on an annual basis. The inspection program will be adjusted as appropriate.

~~XIII.XI.~~ INDEPENDENT AUDITOR

Public Utilities Code section 8387(c) requires SVP to contract with a qualified independent evaluator with experience in assessing the safe operation of electrical infrastructure to review and assess the comprehensiveness of this Wildfire Mitigation Plan. The independent evaluator must issue a report that is posted to SVP's website. This report must also be presented to Santa Clara City Council at a public meeting.

~~A qualified independent evaluator will be selected based on qualifications and ability to perform the work and then contracted in accordance with the City's administrative processes. To extent the CPUC establishes a list of qualified evaluators in a timely manner, the list will be used in the selection process.~~

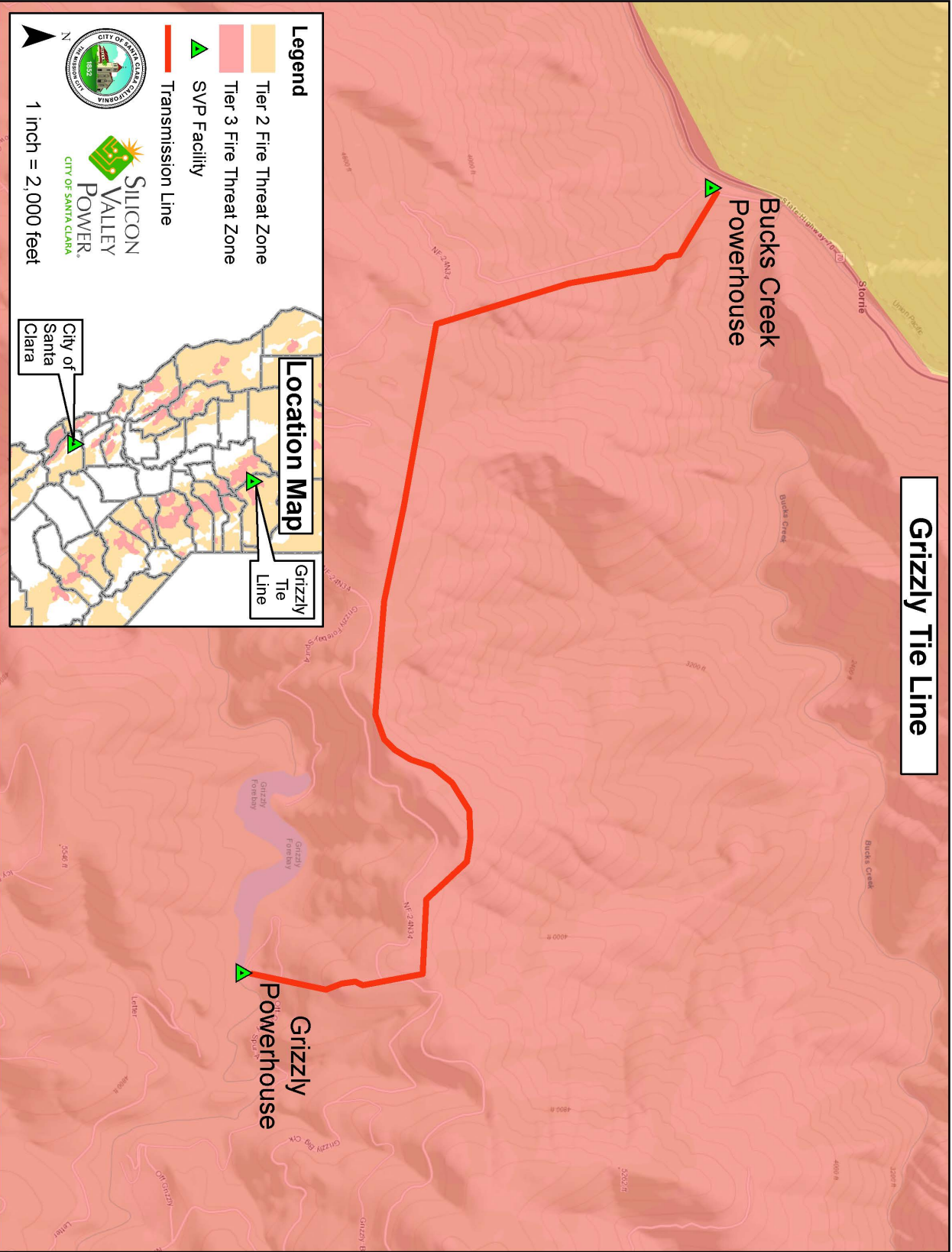
~~SVP submitted the initial plan to Santa Clara City Council in June of 2019. The independent evaluator will be contracted to review the report after the state of California publishes the Qualified Contractor List. In 2021, SVP competitively bid and contracted with a qualified independent evaluator, Dudek, with experience in assessing the safe operation of electrical infrastructure to review and assess the comprehensiveness of this WMP. Dudek has conducted a number of independent evaluator reports for other publicly owned utilities. The independent evaluation and report was reviewed by the internal SVP team and incorporated the recommended changes.~~

~~SVP Staff plans to bring this WMP and the independent evaluator report to the City Council for review and approval.~~

# Appendix A

## Location Maps

# Grizzly Tie Line



**Bucks Creek Powerhouse**

**Grizzly Powerhouse**

**Location Map**

**Grizzly Tie Line**

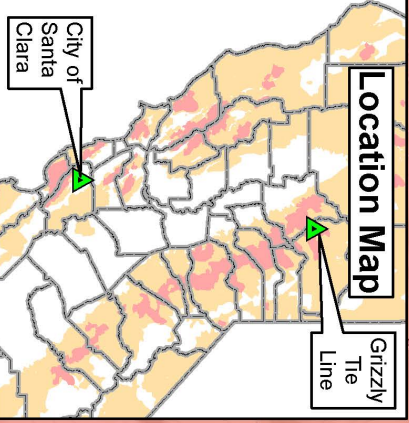
**Legend**

- Tier 2 Fire Threat Zone
- Tier 3 Fire Threat Zone
- SVP Facility
- Transmission Line

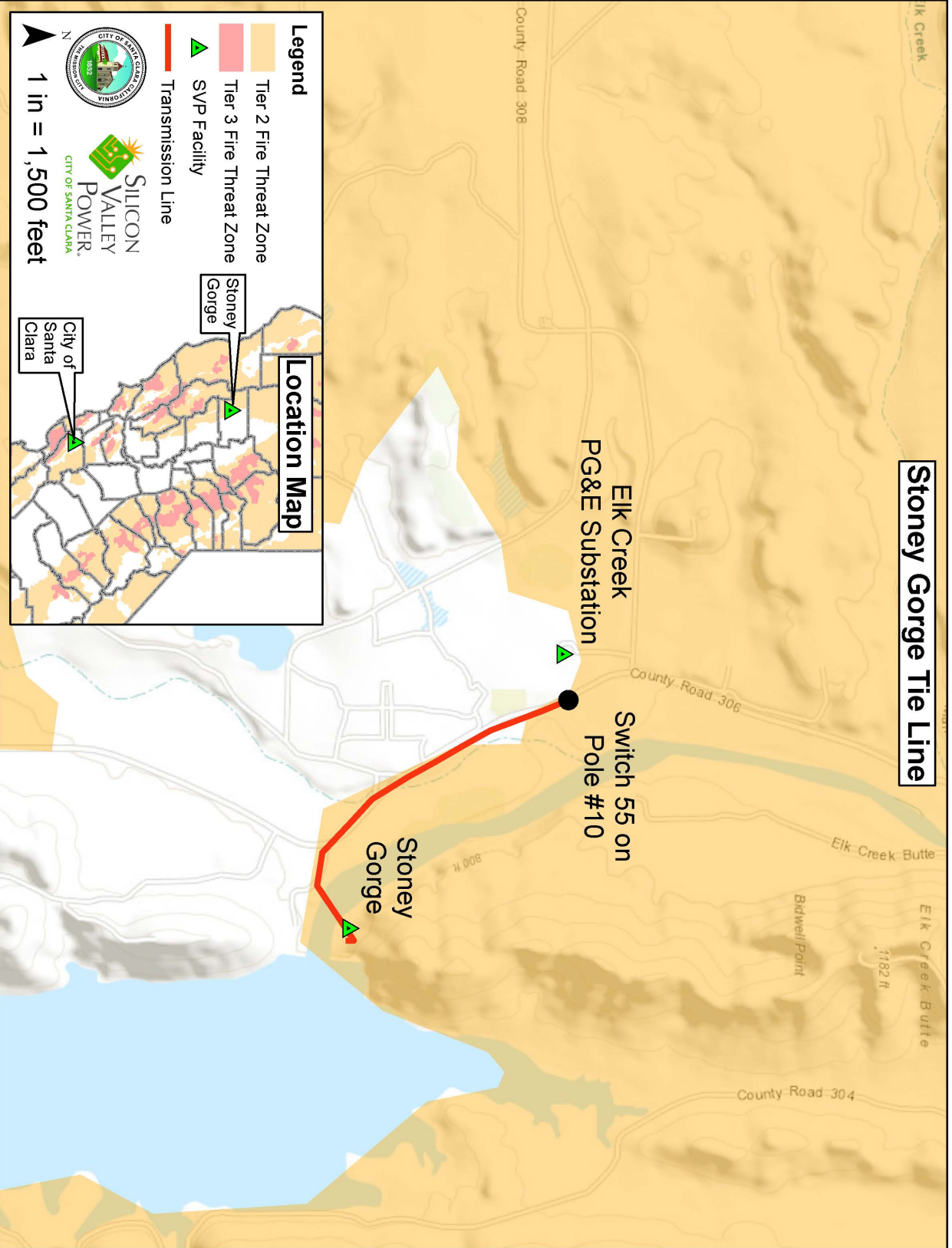
**City of Santa Clara**

**SILICON VALLEY POWER, CITY OF SANTA CLARA**

1 inch = 2,000 feet

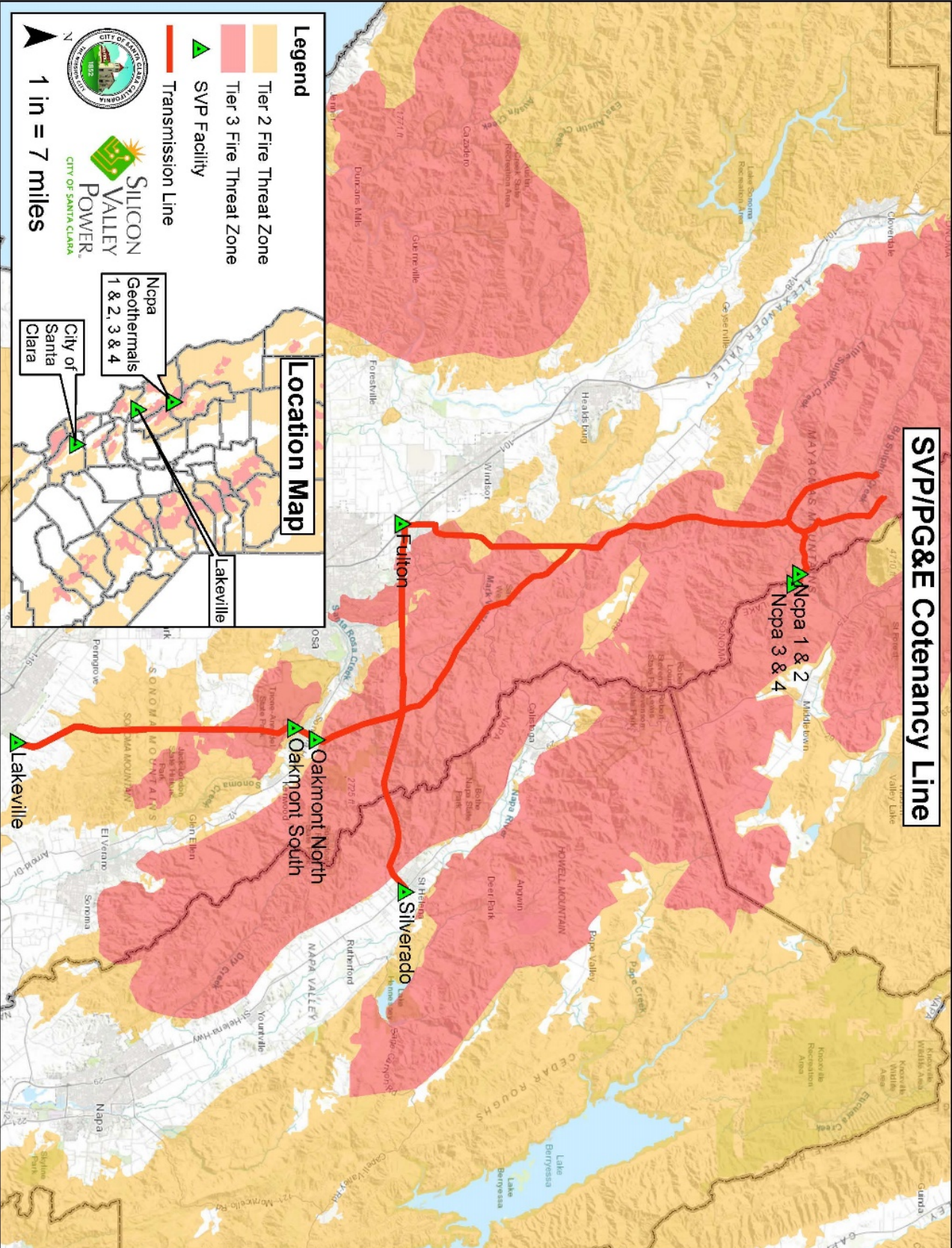


# Stoney Gorge Tie Line

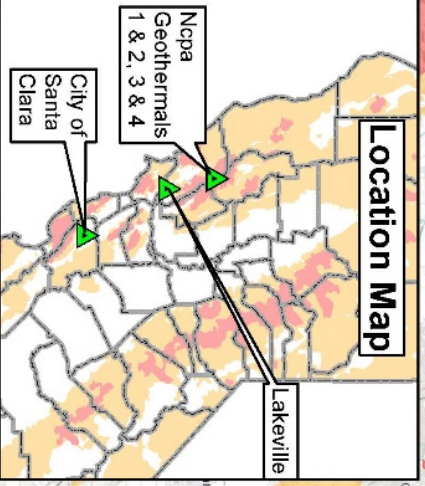




# SVP/PG&E Cotenancy Line



## Location Map



**Legend**

- Tier 2 Fire Threat Zone
- Tier 3 Fire Threat Zone
- SVP Facility
- Transmission Line

**1 in = 7 miles**



# Appendix B

## PUC 8387(b) Requirements Table

<u>PUC 8387</u>	<u>Requirement</u>	<u>Location in WMP</u>
<u>(A)</u>	<u>An accounting of the responsibilities of persons responsible for executing the plan.</u>	<u>Page 6</u>
<u>(B)</u>	<u>The objectives of the wildfire mitigation plan.</u>	<u>Page 6</u>
<u>(C)</u>	<u>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.</u>	<u>Pages 10-14</u>
<u>(D)</u>	<u>A description of the metrics the local publicly owned electric utility or electrical cooperative plans to use to evaluate the wildfire mitigation plan's performance and the assumptions that underlie the use of those metrics.</u>	<u>Page 15</u>
<u>(E)</u>	<u>A discussion of how the application of previously identified metrics to previous wildfire mitigation plan performances has informed the wildfire mitigation plan.</u>	<u>Page 16</u>
<u>(F)</u>	<u>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.</u>	<u>Page 14</u>
<u>(G)</u>	<u>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 de-energization for a given event.</u>	<u>Not Applicable</u>
<u>(H)</u>	<u>Plan for vegetation management</u>	<u>Page 11</u>
<u>(I)</u>	<u>Plans for inspections of the local publicly owned electric utility's or electrical cooperative's electrical infrastructure.</u>	<u>Page 13</u>
<u>(J) (i,ii)</u>	<u>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: <u>(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.</u> <u>(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.</u></u>	<u>Page 8</u>
<u>(K)</u>	<u>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.</u>	<u>Page 9</u>



	<u>and identification of where the commission should expand a high fire-threat district based on new information or changes to the environment.</u>	
<u>(L)</u>	<u>A methodology for identifying and presenting enterprise- wide safety risk and wildfire-related risk.</u>	<u>Page 9</u>
<u>(M)</u>	<u>A statement of how the local publicly owned electric utility or electrical cooperative will restore service after a wildfire.</u>	<u>Page 14</u>
<u>(N)</u> <u>(i,ii,iii)</u>	<u>A description of the processes and procedures the local publicly owned electric utility or electrical cooperative shall use to do all of the following:</u> <u>(i) Monitor and audit the implementation of the wildfire mitigation plan.</u> <u>(ii) Identify any deficiencies in the wildfire mitigation plan or its implementation and correct those deficiencies.</u> <u>(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.</u>	<u>Page 15-16</u>

# Appendix C: Context Setting Information

WSAB requested that POU provide an informational table to assist the Staff and Board member in understanding the unique characteristics of each POU.

**Table 1: Context-Setting Information**

<u>Utility Name</u>	<u>SVP</u>	
<u>Service Territory Size</u>	[ 19.5 ] square miles	
<u>Owned Assets</u>	<input checked="" type="checkbox"/> Transmission <input checked="" type="checkbox"/> Distribution <input checked="" type="checkbox"/> Generation	
<u>Number of Customers Served</u>	[ 57,998 ] customer accounts	
<u>Population Within Service Territory</u>	[ 132,925 ] people	
<u>Customer Class Makeup</u>	<i>Number of Accounts</i>	<i>Share of Total Load (MWh)</i>
	[ 85 ]% Residential;	[ 7 ]% Residential;
	[ 1 ]% Government;	[ 0 ]% Government;
	[ 0 ]% Agricultural;	[ 0 ]% Agricultural;
	[ 12 ]% Small/Medium Business;	[ 2 ]% Small/Medium Business;
	[ 3 ]% Commercial/Industrial	[ 91 ]% Commercial/Industrial
<u>Service Territory Location/Topography</u> <sup>3</sup>	[ 0 ]% Agriculture [ 0 ]% Barren/Other [ 0 ]% Conifer Forest [ 0 ]% Conifer Woodland [ 0 ]% Desert [ 0 ]% Hardwood Forest [ 0 ]% Hardwood Woodland [ 0 ]% Herbaceous [ 0 ]% Shrub [ 100 ]% Urban [ 0 ]% Water	
<u>Service Territory Wildland Urban Interface</u> <sup>4</sup> <u>(based on total area)</u>	[ 0 ]% Wildland Urban Interface; [ 100 ]% Wildland Urban Intermix;	

<sup>3</sup> This data shall be based on the California Department of Forestry and Fire Protection, California Multi-Source Vegetation Layer Map, depicting WHR13 Types (Wildlife Habitat Relationship classes grouped into 13 major land cover types) available at: <https://www.arcgis.com/home/item.html?id=b7ec5d68d8114b1fb2bfbf4665989eb3>.

<sup>4</sup> This data shall be based on the definitions and maps maintained by the United States Department of Agriculture, as most recently assembled in *The 2010 Wildland-Urban Interface of the Conterminous United States*, available at [https://www.fs.fed.us/nrs/pubs/rmap/rmap\\_nrs8.pdf](https://www.fs.fed.us/nrs/pubs/rmap/rmap_nrs8.pdf).

<u>Percent of Service Territory in CPUC High Fire Threat Districts (based on total area)</u>	<input type="checkbox"/> Includes maps Tier 2: [ 0 ]% Tier 3: [ 0 ]%
<u>Prevailing Wind Directions &amp; Speeds by Season</u>	<input type="checkbox"/> Includes maps [Spring – NW/9kts, Summer – NW/9kts, Fall – NW/8kts, Winter – SE/10kts] REF: <a href="#">Wind history map</a>
<u>Miles of Owned Lines Underground and/or Overhead</u>	Overhead Dist.: [ 187 ] miles Overhead Trans. [ 31 ] miles Underground Dist: [ 375 ] miles Underground Trans.: [ 5 ] miles <hr/> <b>Explanatory Note 1</b> – <i>Methodology for Measuring “Miles”</i> : Circuit Miles <b>Explanatory Note 2</b> – <i>Description of Unique Ownership Circumstances</i> : Two lines outside of SVP service territory are maintained and operated by an IOU: 1. Grizzly-Bucks Creek. 3.4 miles, 100% owned by SVP. Data included in this table. 2. Castlerock-Lakeville. 4.8% owned by SVP <hr/> <b>Explanatory Note 3</b> – <i>Additional Relevant Context</i> : 2.1% of lines are outside SVP service territory
<u>Percent of Owned Lines in CPUC High Fire Threat Districts</u>	<hr/> <u>Overhead Distribution Lines as % of Total Distribution System (Inside and Outside Service Territory)</u> Tier 2: [ 0 ]% Tier 3: [ 0 ]% <hr/> <u>Overhead Transmission Lines as % of Total Transmission System (Inside and Outside Service Territory)</u> Tier 2: [ 2 ]% Tier 3: [ 0 ]%
<u>Percent of Service Territory in CAL FIRE FRAP Map Fire Threat Zones</u>	<input type="checkbox"/> Includes maps Extreme: [ 0 ]% Very High: [ 0 ]% High: [ 0 ]%
<u>Customers have ever lost service due to an IOU PSPS event?</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<u>Customers have ever been notified of a potential loss of service to due to a forecasted IOU PSPS event?</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<u>Has developed protocols to pre-emptively shut off electricity in response to elevated wildfire risks?</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<u>Has previously pre-emptively shut off electricity in response to elevated wildfire risk?</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, then provide the following data for calendar year 2020:

	Number of shut-off events: [ 1 ] -*event occurred outside of service territory and no customers were affected.
--	--

	Customer Accounts that lost service for >10 minutes: [ 0 ]
--	--

	For prior response, average duration before service restored: [ 24 hrs ]
--	--