



September 25, 2022

Koko Tomassian
Program Manager, Compliance Assurance Division
Office of Energy Infrastructure Safety
715 P Street, 20th Floor
Sacramento, CA 95814

RE: BVES Response to the Office of Energy Infrastructure Safety's Audit on BVES's Substantial Vegetation Management Work in 2020

Dear Mr. Tomassian,

Bear Valley Electric Service, Inc. (BVES) submits this response pursuant to Office of Energy Infrastructure Safety (Energy Safety) Report of Substantial Vegetation Management in 2020 Audit dated August 26, 2022.

Pursuant to the requirements of California Public Utilities Code Section 8386.3(c)(5)(A), Energy Safety completed and forwarded the results of its audit of BVES's substantial vegetation management work in 2020 on August 26, 2022.

During the audit, Energy Safety reviewed data provided by BVES, which Energy Safety compared to the representations BVES made in its 2020 Wildfire Mitigation Plan (WMP). The audit specifies areas where BVES failed to fully comply with the vegetation management requirements in its wildfire mitigation plan.

In the audit report Energy Safety provided a table in Section 6 (Table 3) that provided a summary of Energy Safety's findings and corrective actions for BVES pertaining to this audit. Within 30 days following receipt of this audit, BVES is required to submit a response to the Corrective Actions listed in Table 3, as well as supporting documentation to Energy Safety. The following response is provided to the Table 3 findings:

Initiative 5.3.5.2 Detailed inspections of vegetation around distribution electric lines and equipment

Finding: BVES failed to have an internal plan for its vegetation management programs prior to contracting out to contractors.

Corrective Action: BVES shall a) provide the steps it is taking or has taken to ensure it has an internal vegetation management plan, and b) detail the steps it is taking to ensure vegetation management operations are consistent with statements made in this initiative of the WMP.

BVES Response: In 2020, BVES had an internal vegetation management plan that was promulgated verbally to BVES staff and in writing through its “Fire Prevention Plan” (Attachment A) and in writing to BVES’s vegetation management contractor via the scope of work in the contract between BVES and the vegetation management contractor. The internal BVES vegetation management plan was based on applicable laws, California Public Utilities Commission (CPUC) General Order 95 (GO 95), GO 165, CAL FIRE regulations, and BVES’s unique conditions (local climate, likelihood of icing conditions, tree limbs and branches subject to weakening due to high winds and snow weight, elevation, local conditions and access to vegetation for trimming, and species growth rates and characteristics). The policy that was in effect in 2020 was actually developed and implemented in 2018. Staff received training on this policy when it was implemented. Attached to this letter are the training slides (Attachment B) used to train staff when the revised internal policy was implemented by management. Also, attached is a copy of a BVES Memorandum (Attachment C) documenting implementation of the new policy with BVES’s vegetation management contractor at the time. Additionally, BVES provided details of its unique internal vegetation management plan in its Wildfire Mitigation Plan (WMP) for 2019 and 2020.

On April 26, 2021 BVES issued “Bear Valley Electric Service, Inc.’s Vegetation Management and Vegetation Quality Control Programs.” This instruction was a formal written internal vegetation management plan providing comprehensive internal guidance on purpose, role and responsibilities, clearances and other requirements, and vegetation quality control checks. On October 6, 2021 the instruction was updated to provide additional requirements on clearances, clarify certain aspects of the plan and implement a quality assurance program. BVES will continue to update this document as improvements to the program are developed.

The Operations and Planning Group have reviewed this finding and understand the issues. The group has also been trained on ensuring vegetation management operations are consistent with statements made in this initiative of the WMP. Each quarter, in conjunction with preparing the Quarterly Data Report (QDR), Quarterly Initiative Update (QIU) and Quarterly Notification Letter to Energy Safety, BVES staff will review the status of fully implementing commitments made in the current WMP for each initiative and take action to keep them on track, if necessary.

Initiative 5.3.5.14 Recruiting and Training of Vegetation Management Personnel

Finding: BVES failed to hire a contractor utility forester in 2020.

Corrective Action: BVES shall a) explain the reason why the contractor was not hired in 2020, and b) detail the steps it is taking to ensure vegetation management operations are consistent with statements made in this initiative of the WMP.

BVES Response: From a contractual standpoint, BVES did hire a contracted forester in 2020 as the contract was fully executed on December 22, 2020. However, the contractor was not able to provide a forester on site until March 2021.

Internally, BVES had to determine the optimal method of bringing on the forester. There were several options, which included direct hire, hire through a staffing company, directly engage as a consultant, or engage a qualified contractor to provide a forester on BVES’s staff as a service. This process took longer than originally contemplated. Ultimately, BVES determined that

engaging a qualified contractor to provide a forester on BVES's staff as a service would be best due to challenges in the labor market for this type of expertise. Additionally, recruiting staff to live in Big Bear Lake is very challenging in general and even more challenging when specific and unique skillsets are required. On August 27, 2020, BVES issued a request for proposal (RFP) for qualified contractors to provide a forester on BVES's staff with bid proposals due on September 18, 2020. BVES only received one bid proposal. Therefore, additional procurement review was required before BVES determined it was acceptable to engage the sole bidder contractor. The contractor objected to BVES's standard contract terms and conditions; specifically, the liability terms regarding wildfires. BVES and the contractor finally negotiated terms and conditions acceptable to both companies and the contract was signed on December 21, 2020 by the contractor and December 22, 2020 by BVES. The contractor then had to identify the forester assigned to BVES and relocate the individual to Big Bear Lake. This process took several months and the forester started work at BVES in March of 2021 and is still currently working with BVES.

Current contract documents provide for the contract to remain in place through December 31, 2023. Based on BVES's experience in this process, BVES will start the contracting process sooner than it normally does to keep a forester on staff.

The Operations and Planning Group have reviewed this finding and understand the issues and root causes. The group has also been trained on ensuring vegetation management operations are consistent with statements made in this initiative of the WMP. Each quarter, in conjunction with preparing the QDR, QIU and Quarterly Notification Letter to Energy Safety, BVES staff will review the status of fully implementing commitments made in the current WMP for each initiative and take action to keep them on track, if necessary.

If you have any questions concerning this audit, please contact Jon Pecchia at Jon.Pecchia@bvesinc.com.

Sincerely,

/s/ Paul A. Marconi

Paul A. Marconi
President, Treasurer, and Secretary
Bear Valley Electric Service, Inc.

Attachment A: BVES Fire Prevention Plan 102518
Attachment B: BVES Tree Trimming Policy Training
Attachment C: Vegetation Management Contractor Agreement Memorandum

Attachment A

BVES Fire Prevention Plan 102518

Attachment A

BVES Fire Prevention Plan

Bear Valley Electric Service

Fire Prevention Plan

October 25, 2018

Submitted By: _____



Paul Marconi, Director Bear Valley Electric Service

TABLE OF CONTENTS

I. PURPOSE1

II. GENERAL DESCRIPTION OF BVES SERVICE AREA2

III. PREVENTATIVE MEASURES.....3

 III.I INSPECTION PROGRAM AND DEFECTS REMEDIATION3

 III.II VEGETATION MANAGEMENT4

IV. SYSTEM OPERATIONS5

 IV.I CONDITIONAL OPERATIONS6

 IV.II PROACTIVE DE-ENERGIZATION (PDE).....7

 IV.III PROACTIVE DE-ENERGIZATION PLAN (PDE).....8

 IV.IV COMMUNICATIONS PLAN.....10

V. PLAN EVOLUTION12

VI. CHAIN OF RESPONSIBILITY13

VII. THE BIG BEAR VALLEY COMMUNITY WILDFIRE PROTECTION PLAN15

APPENDIX A17

I. PURPOSE

This document describes measures implemented by Bear Valley Electric Service ("BVES") to mitigate the threat of overhead power-line fire ignitions within its service territory.

BVES prepared this plan in compliance with California Public Utilities Commission ("Commission") Decision ("D.") 12-01-032, D.14- 05-020 and D.17-12-024.

Ordering Paragraph 5 of D.12-01-032 required BVES to prepare a Fire Prevention Plan to identify the occurrence of 3-second wind gusts that exceed the structural and mechanical design standards for overhead power-line facilities. D.14-05-020 modified D.12-01-032 by eliminating the requirement to identify 3-second wind gusts in real time, provided a utility will still address the situation when all three of the following conditions occur simultaneously: (i) 3-second wind gusts exceed the structural or mechanical design standards for the affected overhead power-line facilities, (ii) these 3-second gusts occur during a period of high fire danger, and (iii) the affected facilities are located in a high fire-threat area. D.14-05-020 also required utilities to identify the specific parts of their service territories where all three conditions listed in Ordering Paragraph 1 (a) occur simultaneously, based on a minimum probability of 3% over a 50-year period that 3-second wind gusts which exceed the design standards for the affected facilities will occur during a Red Flag Warning in a high fire-threat area. Ordering Paragraph 2 of D.17-12-024 requires each electric investor-owned utility have a fire prevention plan for facilities in the High Fire-Threat District containing the information specified in General Order ("GO") 166, Standard 1, Part E, to the extent applicable to the electric utility's service area and to file a report containing the fire prevention plan annually beginning October 31, 2018.

In accordance with D.12-01-032, D.14-05-020, D.17-12-024, and GO-166, this Fire Prevention Plan lists and describes the fire prevention measures BVES intends to implement, both in the short run and in the long run, to mitigate the threat of power-line fires generally and in the situation where all three of the conditions listed in GO-166, Standard 1, Part E occur simultaneously. BVES' Fire Prevention Plan identifies areas that could be susceptible to these conditions. These areas are heavily forested, abundant in available fuel and could threaten the system when high winds occur. When these conditions exist, BVES has pre-identified areas that are targeted for Proactive De-Energization in Appendix A.

BVES' Fire Prevention Plan is an inventory of the organizational and operational activities that BVES undertakes in order to address the risk of fire in its service territory. BVES' Fire Prevention Plan is a "living document" that is shared with stakeholders, community leaders and the public. The goal is to ensure that the Fire Prevention Plan is continuously improved and remains effective.

BVES' approach to fire prevention is a comprehensive mitigation strategy focused on four principal areas to enhance public safety:

- Stringent Construction Standards
- System Design to Enhance Fire Prevention
- Pro-active Operations and Maintenance (O&M) Programs
- Operating Procedures and Staff Training

The specifics detailed in this plan will focus mostly on the pro-active O&M programs and operating procedures.

II. GENERAL DESCRIPTION OF BVES SERVICE AREA

Bear Valley Electric Service (BVES) is a small electric utility, located in the mountain resort community of Big Bear Lake, California, that provides service to approximately 24,000 customers in a 31-square mile service area. BVES owns and operates 87.8 miles of overhead 34.5 kilovolt sub-transmission miles, 2.7 miles of 34.5 kilovolt underground sub-transmission miles, 488.6 miles of overhead distribution circuit miles, 89.1 miles of underground distribution circuit miles, 13 sub-stations and a natural gas-fueled 8.4 MW peaking generation facility. The BVES service area is rural and mountainous and is served predominantly from overhead facilities. BVES' entire service area is under the jurisdictional responsibility of the City of Big Bear Lake and some areas (unincorporated) under the responsibility of the County of San Bernardino. The San Bernardino Mountains and forests are managed by the United States Forest Service, California Environmental Protection Agency, and the California Department of Fish and Wildlife.

Since the service territory is entirely above 3,000 feet, all construction is required to conform to "heavy" loading standards of GO-95. In addition, the high elevation provides for a beautiful alpine, heavily treed, mountainous environment that is vulnerable to wildfires. The entire service area is within the High Fire-Threat Districts and has areas designated as Tier 2 and Tier 3 per GO-95 Rule 21.2. Additionally, some of BVES' service area overlap with the Zone 1 per GO-95 Rule 21.2. Therefore, all construction, inspection, vegetation management, and emergency planning must also conform to the High Fire-Threat District requirements of GO-95, GO-165, and GO-166.

Bear Valley serves as a desirable vacation destination during the winter months due to the local ski resorts and winter activities. This creates a winter peaking environment that is enhanced by local snow making activity during the late evening hours. After the normal winter months, the population and load profile dramatically change. Understanding the local load profile is one key element to designing a successful Fire Prevention Plan.

No electrical system is exempt from the possibility of providing an ignition source that could start a wildfire. BVES developed and implemented a conditions based system operations plan that bases system lineup, operating parameters, and operations procedures

on forecasted and actual conditions. This system plan serves as a hybrid that can transform from an operationally optimized system for safety and reliability to being optimized for fire prevention under certain fire threat weather conditions.

The BVES Fire Prevention Plan is intended as a starting point. As system improvements are made and environmental conditions change, the plan will evolve to meet these changes. In creating the plan, BVES has incorporated the input and interests of our stakeholders to ensure that the needs of the community are effectively met while mitigating the risk of wildfire. Community outreach and communications are a key component of this plan as well as maintaining partnerships with the Big Bear Valley Mountain Mutual Aid Association, City of Big Bear Lake, San Bernardino County, Big Bear Fire Department, Big Bear Lake Sheriff's Department, other local agencies, local utilities, local radio stations, news media, and the public.

III. PREVENTATIVE MEASURES

BVES places high value on the integrity of the electrical system. To ensure this, BVES performs detailed inspections, patrols and intrusive inspections at regular intervals per GO-165 guidelines. All findings are prioritized and entered into a GIS supported application database and tracked for timely resolution. Additionally, BVES has implemented an aggressive vegetation management program to ensure proper clearance between vegetation and bare conductors.

III.I INSPECTION PROGRAM AND DEFECTS REMEDIATION

In compliance with GO-165, BVES has established an Inspection Program that requires overhead facilities to undergo a detailed inspection at least every five years and a patrol inspection every year.

- A "detailed inspection" is one where individual pieces of equipment and structures are carefully examined, visually and through use of routine diagnostic tests, as appropriate, and (if practical and if useful information can be so gathered) opened, and the condition of each rated and recorded. These inspections are designed to identify as many existing defects as reasonably achievable including minor defects. These minor defects may include, but are not limited to: open wire secondary clearance, corona effect on cross-arms, warning signage issues, visibility strips and pole-tag issues, rotten poles, vegetation encroachment inside of minimum clearance standards or encroachment that will lead to violation of minimum clearance standards before the next scheduled vegetation clearance crew visit, etc.
- A "patrol inspection" is a simple visual inspection, of applicable utility equipment and structures that is designed to identify obvious structural problems and hazards. These patrols are designed to identify gross defects. Gross defects may include, but are not limited to: damaged poles, broken cross-arms, damaged insulators, sagging wires, leaking transformers, vegetation encroachment inside of minimum clearance standards, etc.

- Defects and other issues that have been identified and characterized per GO-95 Rule 18 and repaired and/or resolved in a prioritized manner not to exceed GO-95 Rule 18 timeframes. GO-95 Rule 18 does prioritize potential safety hazards or potential violations that create a fire risk in the High Fire-threat District.
- Examples of defects and issues that are safety hazards, risks of at least moderate potential impact to safety or reliability, and/or risks of low potential impact to safety or reliability are provided in GO-95 Appendices I and J. These appendices also provide examples of repair/resolution priorities and timeframes.
- In addition to the regular inspection of its distribution system, BVES annually inspects two lines that are owned and operated by Southern California Edison (SCE) and dedicated to BVES' service area. The first line is the Radford Line from the Harnish station located in the Village area of the City of Big Bear Lake to Camp Radford in the Santa Ana Canyon where the SCE line ends. The Radford Line is inspected by foot patrol or helicopter aerial inspection depending on weather conditions. The Radford/Harnish sub-transmission line traverses heavily forested areas and steep mountain slopes. The second line is the Ute Line, which connects to the SCE's Goldhill switch station near Baldwin Lake in Big Bear Valley. BVES receives the majority of its power via the SCE's Goldhill switch station. SCE's Ute Line connects BVES' Baldwin and Shay Lines to the Goldhill switch station. BVES performs an annual patrol inspection of the Ute Line. These patrols are in addition to routine inspections performed by SCE.

III.II VEGETATION MANAGEMENT

In addition to the soundness of the electrical system, trees in close proximity to bare conductors are a constant threat to fire prevention. Given the high density of trees in BVES' service area, vegetation management is a critical program for fire prevention and system reliability. Based upon revised GO-95 requirements (directed by D.17-12-024), the local climate, likelihood of icing conditions, tree limbs and branches being subject to weakening due to repeated high winds and snow weight, high elevation, other local conditions, access to vegetation for trimming near bare conductors, and species growth rates and characteristics; the minimum allowable radial clearance for bare line conductors from vegetation that BVES has implemented better serve the local environment and further protect against accidental contact between bare power lines and vegetation.

Proactive and aggressive vegetation management is the first line of defense. BVES has established stringent vegetation trimming requirements that meet GO-95 standards and incorporate the local environmental considerations as discussed above. The line clearance guidelines include the following:

- **Blue Sky:** All vegetation above any 34 kV sub-transmission bare line conductors will be removed to achieve "Blue sky."

- **Minimum Line Clearance:** Any vegetation within 72 inches of bare conductors is trimmed to 12 feet minimum.
- **Fast Growing Species:** All fast growing trees will be trimmed to 12' minimum or more based on species' growth rate. Additionally, tree removal is to be evaluated and removed, if deemed necessary.
- **Drip Line:** Trees within the drip line of primary wires are proactively removed or trimmed such that they do not violate the 72-inch line clearance standard between trimming cycles.
- **Suspect Trees:** Unhealthy and/or dead trees that are outside the clearance zone but pose a threat of falling into bare conductors are to be proactively evaluated for removal and removed if deemed necessary.
- **Tree Trunks:** The minimum clearance exemption articulated in GO-95 Rule 35 regarding mature trees whose trunks and major limbs are located less than the required clearance from bare conductors is to be no less than 18 inches away from the bare conductor and the trunk or limb must be at least 18 inches in diameter at the closest point of approach to the bare conductor.

Having robust tree trimming guidelines tailored to the specific environment of the BVES service area is a good standard but verifying that the standard is being followed correctly is equally important. Quality Control (QC) has been established to ensure the above guidelines are consistently achieved. BVES QC's two separate locations each week and maintains performance statistics. Results are reviewed weekly with staff and periodically with vegetation contractors to provide for continuous improvement.

IV. SYSTEM OPERATIONS

As discussed earlier, understanding system demand allows BVES to create a hybrid operating system that can be optimized for safety and reliability or fire prevention. The winter months bring the heaviest demand and the BVES distribution system is optimized for safety and reliability. Following the winter season, the system operational focus becomes more defensive and optimized for fire prevention. It should be noted that fire prevention measures during high fire risk weather conditions always override reliability optimization regardless of season or system demand.

- From November 1 through March 31, the system is focused on safety and reliability with higher load settings to accommodate higher demand due to colder temperatures and reclosures set to automatic.
- From April 1 through October 31, BVES adopts a more defensive operational scheme. To accomplish this the following proactive operational settings will be enacted.
 - All Fuse Tripsavers set to not reclose.
 - Auto-Reclosure field trip settings will be reduced for summer load.
 - Radford 34kV line will be de-energized.

However, fire prevention is not as simple as looking at a calendar, but it does provide a simple first step in mitigating the risk of fire. As a mountainous climate, BVES is forced to operate in extreme weather conditions that can change rapidly. BVES' forecasting framework for fire prevention measures relies on the National Fire Danger Rating System. The National Fire Danger Rating System (NFDRS) can be found at <https://gacc.nifc.gov/oscc/predictive/weather/index.htm#>. The entire BVES system is in Predictive Service Area SC10. The predictive service provides a forecast on fuel dryness and high-risk days as indicated in Table IV-1 below:

Table IV-1: Fuel Dryness and High-Risk Days

Fuel Dryness & High Risk Days	Rating	Description
Green	Moist	Little to no risk of fires.
Yellow	Dry	Low risk of large fires in the absence of a "High Risk" event.
Brown	Very Dry	Low/moderate risk of large fires in the absence of a "High Risk" event.
Orange	High-Risk Day	At least a 20% chance of a "Large Fire" due to a combination of either "Dry" or "Very Dry" fuel dryness and a critical burn environment (e.g., Santa Ana winds).
Red	High-Risk Day	At least a 20% chance of a "Large Fire" due to a combination of either "Dry" or "Very Dry" fuel dryness and an ignition trigger (lightening).

An example of the seven-day forecast is provided below in Table IV-2:

Table IV-2: Example NFDRS Forecast

SC09-Western Mountains							
SC10-Eastern Mountains							
SC11-Southern Mountains							

Thus, using seasonal characteristics of the BVES' climate and load profile, overall system configuration is optimized for fire prevention from April 1 to October 31. The system is further optimized based on the seven-day NFDRS forecast as well as other operational and weather information available to BVES.

IV.I CONDITIONAL OPERATIONS

BVES Field Operations monitors each day the NFDRS fire danger forecast and then determines the proper operational focus from reliability to fire prevention. As indicated in Table IV-3 below, "Brown", "Red", and "Orange" are considered

elevated fire threat conditions that required the BVES system to be configured for fire prevention over reliability concerns.

Table IV-3: Operational Direction Based on NFDRS Forecast

Operational Action	Green	Yellow	Brown	Orange	Red
Circuit Reclosure Settings	Automatic	Automatic	Non-Automatic	Non-Automatic	Non-Automatic
Patrol following circuit outage	No ¹	No ¹	Yes	Yes	Yes
TripSavers	Automatic	Automatic	Non-Automatic	Non-Automatic	Non-Automatic
Proactive De-energization (PDE)	No	No	No	Yes – “at risk” lines when wind gusts greater than 55 mph	

¹No patrol is required. Re-test allowed following check of fault indicators, SCADA, other system indicators, and reports from the field. If the re-test fails, a patrol is mandatory.

When a “Red Flag” condition is declared, Field Operations will closely monitor the NFDRS Forecast and other local forecasts to determine the appropriate operational conditions to be implemented. It should be noted that generally “Red Flag” conditions are assigned to areas much larger than the BVES service area such as the County of San Bernardino. Therefore, it is important to also factor in the localized conditions for BVES’ service area.

IV.II PROACTIVE DE-ENERGIZATION (PDE)

BVES’ entire service area is in the “high fire-threat district” as defined in GO-95 Rule 21. Additionally, the entire BVES service area elevation is greater than 3,000 feet, which places BVES’ facilities in the “heavy loading district” as defined in GO-95 Rule 43. This requires BVES to use higher construction standards with respect to strength than those used at lower elevations. Based on BVES’ evaluation of its potentially weakest overhead facilities, BVES has determined that specific actions per table IV-3 above should be taken when wind gusts of 3 seconds or more exceed 55 mph and a period of high fire danger exists. This action satisfies GO-166 Standard 1.E requirements.

Despite having a proactive and aggressive vegetation management program, vegetation may still contact power lines; for example, in high winds, branches outside the vegetation clearance zone may break and be blown onto bare conductors and/or trees outside the clearance zone may fall into bare conductors. The specific strength of trees and branches is unknown; therefore, in high winds, it is impossible to predict how every tree and branch in the service territory will respond. This condition plays a key role how BVES has selected “at risk” locations for proactive de-energization during extreme fire weather conditions.

BVES has identified seven sections of “at risk” areas based on type of distribution facilities (overhead bare conductions, high voltage, etc.), tree and vegetation density, available dry fuel, and other factors that make certain locations vulnerable to wildfire risk. The “at risk” line sections are identified shown in Appendix A map. These line sections may be de-energized by “opening” the Auto-Reclosures (AR) designated in Table IV-4 below.

Circuit (AR To Be Opened)	Number of Customers
Radford 34kV	0 ¹
North Shore 4kV (Open AR)	1021
Erwin 4 kV (Open AR 1128)	197
Boulder 4kV (Open AR 105)	1063
Lagonita 4kV (Open AR 145)	946
Club View 4kV kv (Open AR)	740
Goldmine 4kV (Open AR)	950

¹Load is shifted to Shay 34kV line.

Changes in vegetation density, circuit improvements such as conversion from overhead to underground, or other environmental factors may drive BVES to re-evaluate the designated “at risk” line sections in its system and, therefore, specific line sections may be added, removed or modified to the “at risk” list as appropriate in the future.

It should be noted that while BVES is able to evaluate its facilities and determine the limiting wind speeds when distribution facilities are possibly at high risk, BVES is not able to determine the strength or health of vegetation surrounding bare conductors outside of the required vegetation clearance zones as well as other structures that may come loose and impact BVES distribution facilities. Therefore, BVES may determine to proactively de-energize facilities during high fire threat and high wind conditions. This would be done in close consult and coordination with local government and agencies.

IV.III PROACTIVE DE-ENERGIZATION PLAN (PDE)

When the National Fire Danger Rating System forecast is “red” or “orange” coupled with high winds, BVES considers the forecast to be “extreme fire weather conditions.” Therefore, if the NFDRS is “red” or “orange”, BVES will actively monitor forecasted local wind speeds using weather advisories from various sources (national and local) and actual wind speeds using weather monitoring equipment. If the winds are forecasted to exceed 50 mph, BVES will take predetermined actions and execute a notification policy, which may lead to proactive de-energization of “at risk” areas. Table IV-5, Proactive De-energization Policy and Procedures, below provides the actions and notification procedures that BVES will follow leading up to, during and after extreme fire weather conditions.

For the purpose of the procedure discussed in Table IV-5, the Operations and Planning Manager will be overall in charge. The Field Operations Supervisor will direct field activities and operations. The Service Crew (or Dutyman outside normal working hours) will provide initial field response. Additional linemen will be called out as needed. Furthermore, Customer Service staff and/or additional staff may be called out to assist with notification procedures as needed. Other staff may be called out at the direction of the Operations and Planning Manager to assist as needed. For example, Engineering staff may be called out to assist linemen in monitoring local wind speeds. Collectively, these staff described above are referred to as the Emergency Response Team (ERT).

Table IV-5: Proactive De-energization Policy and Procedures	
Forecasted Extreme Fire Weather Conditions	
Communication Notifications	Field Operations Actions
<ul style="list-style-type: none"> • Notify local government and agencies per notification instructions. Encourage widest dissemination of this information. • Post notification of possible power outages on website and social media. • Issue a press release to local media (newspaper and radio) on possible power outages. 	<ul style="list-style-type: none"> • Service Crew or Dutyman will monitor existing wind speed in “at risk” locations and communicate with Field Operations Supervisor to determine specific actions to be taken. • Keep Customer Service informed of latest forecast to ensure accurate communications with stakeholders.
Imminent Extreme Fire Weather Conditions (Wind speed or gusts (>3 seconds) forecasted or measured at 50 mph.)	
Communication Notifications	Field Operations Actions
<ul style="list-style-type: none"> • Continue to coordinate closely with local government and agencies per notification instructions. Encourage widest dissemination of this information. • Update website and social media with a notification on the strong potential for imminent power shutoff. • Issue a press release to local media (newspaper and radio) on the strong potential for imminent power shutoff. 	<ul style="list-style-type: none"> • Crews dispatched to monitor various actual field conditions for extreme fire weather and other dangerous conditions throughout the service area and “at risk” areas. • Crews may de-energize any power line they evaluate as posing a public safety hazard.
Validated Extreme Fire Weather Conditions (Wind speed or gusts (>3 seconds) measured at 55 mph or greater.)	
Communication Notifications	Field Operations Actions
<ul style="list-style-type: none"> • Notify local government and agencies of de-energized circuits per notification instructions. Encourage widest dissemination of this information. • Notify customers of de-energized circuits via Interactive Voice Response (IVR), website and social media. • Issue a press release to local media (newspaper and radio) on de-energized circuits. 	<ul style="list-style-type: none"> • Crews will monitor local wind gusts and de-energize circuits in “at risk” areas as wind gusts reach 55 mph for 3 or more seconds. • Crews patrol throughout service area and “at risk” areas and monitor various actual field conditions for extreme fire weather and other dangerous conditions. • Crews may de-energize additional power lines they evaluate as posing a public safety hazard.

<ul style="list-style-type: none"> • Notify California Public Utilities Commission (CPUC) and Warning Center at the Office of Emergency Services San Bernardino within one hour of shutting off the power if the outage meets the major outage criteria of GO-166. • Notify Director Safety Enforcement Division (SED), CPUC within twelve hours of the power being shut-off per ESRB-8. • Provide a report (written) to Director of SED no later than 10 business days after the shut-off event ends per ESRB-8. 	
Weather Subsides to Safe Levels (Validated)	
Communication Notifications	Field Operations Actions
<ul style="list-style-type: none"> • Notify local government, agencies and customers. Encourage widest dissemination of this information. • Notify customers by Interactive Voice Response (IVR) system, website and social media postings. • Issue a press release to local media (newspaper and radio) on restored circuits. 	<ul style="list-style-type: none"> • Crews validate that the extreme fire weather conditions have subsided to safe levels.¹ • Crews conduct field inspections and patrols of facilities that were de-energized. • When field inspections and patrols are completed satisfactory, power is restored to the affected circuits.

¹When wind speeds in the affected area calm below 50 mph for a minimum period of 20 minutes, crews may assess the fire weather conditions have subsided to "safe levels." However, the crews may extend the calm period beyond 20 minutes, if they assess that further gusts of greater than 50 mph are likely based on their direct observation of local conditions. Crews should communicate with the Field Operations Supervisor prior to assessing the situation as "safe levels."

IV.IV COMMUNICATIONS PLAN

Communications with local government, agencies and customers are vital to the successful implementation of this plan. The Customer Care & Operations Support Superintendent is responsible for updating and executing the BVES communications plan in support of the Fire Prevention Plan. The Operations & Planning Manager is responsible for ensuring that accurate information from the field flows to staff responsible for executing the communications plan. The BVES communications strategy and plan consist of the following elements:

Customer Outreach and Education: Conduct customer education programs such as public workshops, media articles, BVES newsletter articles, social media posts, website posts, etc. to educate the BVES customers in the following areas:

- Vegetation management program and its importance for fire prevention.
- Distribution inspection program and its importance for fire prevention.
- Proactive de-energization policy and other operational initiatives that support fire prevention efforts.
- Other topics regarding fire prevention deemed appropriate by the Operations & Planning Manager.

Local Government and Agency Engagement and Notification Procedures: The Operations & Planning Manager and Customer Care & Operations Support Superintendent shall develop and implement a strategy to periodically brief local government and agencies on BVES' fire prevention plan and more specifically ensure they are briefed on how the plan may impact the distribution system including BVES' policy on proactive de-energization. They will develop a contact list of the key staff at local government and agencies to notify during events that impact the distribution system such as proactive de-energization. The contact list should include preferred and back-up means of contact (e.g., mobile phone number, email, office phone, etc.). The contact list will be verified correct and updated as necessary at least every six months by the Administrative Support Associate.

The list of local government and agencies shall include at a minimum the following organizations:

- Big Bear Area Regional Wastewater Agency (BBARWA)
- Bear Valley Community Hospital
- Bear Valley Unified School District
- Big Bear Chamber of Commerce
- Big Bear Airport District
- Big Bear City Community Services District (CSD)
- Big Bear Fire Department
- Big Bear Lake Water Department (DWP)
- Big Bear Mountain Resort
- Big Bear Municipal Water District (MWD)
- San Bernardino County Sheriff's Department Big Bear Lake Patrol Station
- California Department of Forestry and Fire Protection (CAL FIRE)
- California Highway Patrol (CHP) Arrowhead Area
- California Department of Transportation (Caltrans)
- City of Big Bear Lake
- San Bernardino County Fire Department
- San Bernardino County Fire Department Office of Emergency Services (County OES)
- Southwest Gas Corporation
- U.S. Forest Service

Staff performing local government and agency notifications will have access to the contact list and will receive training on generating these notifications.

Mountain Mutual Aid Association Participation: The mission of the Big Bear Valley Mountain Mutual Aid Association ("MMAA") is to coordinate and facilitate resources to minimize the impact of disasters and emergencies on people, property, the environment, and the economy. MMAA enjoys 31 member organizations including local government and agencies, utilities, business groups, and other non-government organizations committed to the local community. Therefore, BVES will actively participate at

scheduled MMAA meetings and use the opportunities of these meeting to brief member organizations on this plan and the operation impacts it has on the Big Bear Valley distribution grid. Additionally, BVES will use the MMAA's communications channel as another layer in its communications plan to notify local government, agencies, and customers.

Customer Notification Procedures: The Customer Care & Operations Support Superintendent shall develop pre-planned statements with fill-in-the-blank sections for potential proactive de-energization events. These pre-planned statements shall cover the four specific stages of the "Proactive De-energization Policy and Procedures" identified in Table IV-5 above. These pre-planned statements shall be used as deemed appropriate by the Customer Care & Operations Support Superintendent as follows:

- News releases (newspaper, online news outlets, radio, etc.)
- Website updates
- Social media updates
- IVR messages
- Other public and customer engagement media (e.g., City of Big Bear Lake's email blast)

These statements will be made available to staff performing customer and public information functions. Additionally, these staff will receive training on generating customer and media notification statements and utilizing the above communications systems.

Reports to the Commission's Divisions: The Operations & Planning Manager shall ensure required reports to the Commission and its Divisions are made in a timely and complete manner. These reports include:

- Notify California Public Utilities Commission (CPUC) and Warning Center at the Office of Emergency Services San Bernardino within one hour of shutting off the power if the outage meets the major outage criteria of GO-166.
- Notify Director Safety Enforcement Division (SED), CPUC within twelve hours of the power being shut-off per ESRB-8.
- Provide a report (written) to Director of SED no later than 10 business days after the shut-off event ends per ESRB-8.

V. PLAN EVOLUTION

BVES recognizes that while this plan provides for a significant set of mitigations toward reducing the risk of fire, the key to any ongoing plan is to measure its effectiveness, and make changes to the plan as warranted with the aim of achieving continuous improvement.

BVES will keep records and data on inspections and patrols, vegetation management, proactive de-energization events and other operations data as well as weather data so that it is able to re-

evaluate the plan and make any necessary plan adjustments. BVES will also consider industry best practices to identify opportunities to improve system safety and fire prevention.

Additionally, BVES will continue to evaluate ways in which specific facility improvements may be performed and new technologies may be applied to reduce the amount of circuitry considered at risk. For example, converting bare conductor overhead facilities to underground facilities would remove those circuits from the at risk designation. BVES will also consider industry best practices to identify opportunities to improve system safety and fire prevention.

At least annually, the Operations & Planning Manager will evaluate whether or not changes to this plan are warranted and, if so, will issue and implement the changes as necessary. The Operations & Planning manager will establish and review metrics to review reliability performance by circuit, review recorded wind speeds, and evaluate tree trimming effectiveness.

VI. CHAIN OF RESPONSIBILITY

Director is overall responsible for the BVES Fire Prevention Plan and ensuring it is properly implemented, resourced, trained upon, executed, and updated as appropriate. Furthermore, the Director shall ensure proper communications and coordination with local government, agencies and customers.

Operations & Planning Manager is responsible for executing the BVES Fire Prevention Plan to include:

- Directing emergency operations per this plan and the BVES Emergency Response Plan;
- Providing oversight of engineering designs and standards, GO-165 inspection and patrols, maintenance and repair of electric distribution, sub-transmission and substation facilities; vegetation management program execution, and compliance with applicable government rules and regulations to mitigate fire;
- Ensuring that monitoring of weather forecasts and actual weather conditions is being properly conducted by appropriate staff per this plan (Section IV);
- Directing (or causing to be directed) the operational activities related to system line-up and proactive de-energization of circuits as described in Section IV of this plan as warranted;
- Ensuring that Field Operations staff are providing timely and accurate information to the Customer Care & Operations Support Superintendent and/or other staff performing customer and public information functions per Section IV.IV of this plan;
- Working closely and coordinating with counterparts at local government and agencies during proactive de-energization procedures and as necessary to achieve the fire prevention objectives of this plan;
- Overseeing activation of the Emergency Response Team (ERT) for proactive de-energization procedures per Section IV.III of this plan and determining the appropriate staff composition of the ERT when activated;
- Training (or causing to be trained) BVES staff assigned to perform the various activities required by this plan;

- Ensuring resources are available to properly execute this plan and identifying any gaps in resources to the Director as well as proposed remedies;
- Making all reports required by GO-166 and ESRB-8 to the applicable Commission Divisions;
- Working closely with Regulatory Affairs staff to ensure this plan meets regulatory compliance requirements enacted by the Commission;
- Reviewing and evaluating relevant data and documentation of inspections, patrols, operational system lineup, and proactive de-energization activities; and
- Evaluating, at least annually, whether changes to this plan are warranted and implementing any necessary changes.

Field Operations Supervisor is responsible for directing operations in the field to include:

- Managing GO-165 inspections and patrols, follow-up on corrective action for noted deficiencies, and routine preventative and corrective repair maintenance of electric facilities;
- Supervising of vegetation management activities along the BVES distribution and sub-transmission system and ensuring compliance with line clearance requirements;
- Monitoring (or causing to be monitored) weather advisories and the NFDRS forecast frequently and at least daily;
- Directing and managing operational system line-ups as described in Section IV.I and Table IV-3, Operational Direction Based on NFDRS Forecast, of this plan;
- Directing and managing proactive de-energization procedures as described in Sections IV.II and IV.III and Table IV-5, Proactive De-energization Policy and Procedures, of this plan;
- Providing (or causing to be provided) timely and accurate information to the Customer Care & Operations Support Superintendent and/or other staff performing customer and public information functions;
- Collecting relevant data and maintaining documentation of inspections, patrols, operational system lineup, and proactive de-energization activities; and
- Submitting to the Operations & Planning Manager recommended changes to this plan as warranted and at least annually.

Engineering & Planning Supervisor is responsible for fire prevention planning and engineering design of the electric distribution, sub-transmission and substations to include:

- Ensuring appropriate construction standards for “heavy loading district” and “high fire-threat district” are called out in work packages as well as all other applicable GO-95 and GO-128 standards;
- Ensuring system design and construction is in compliance with applicable government rules and regulations to mitigate fire;
- Developing distribution, sub-transmission and substation designs that would enhance fire prevention;
- Researching, evaluating, and sourcing materials that would enhance fire prevention;
- Developing device protective settings and selecting fuses that enhance fire prevention while taking into account the served load demand;

- Supporting Field Operations and the Emergency Response Team (ERT) as directed by the Operations & Planning Manager in the execution of system operations per Section IV of this plan; and
- Submitting to the Operations & Planning Manager recommended changes to this plan as warranted and at least annually.

Customer Care & Operations Support Superintendent is responsible for the BVES Communications Plan to include:

- Making (or causing to be made) local government, agency, and customer notifications per Section IV.IV of this plan;
- Ensuring pre-planned statements are prepared to support proactive de-energization notifications per Section IV.III and Table IV-5, Proactive De-energization Policy and Procedures, of this plan;
- Establishing and maintaining customer communications methods, systems, and equipment to support customer proactive de-energization notifications per Section IV.III and Table IV-5, Proactive De-energization Policy and Procedures, of this plan;
- Training staff assigned to perform customer and public information functions on generating customer and media notification statements and utilizing the customer communications methods, systems, and equipment;
- Developing (or causing to be developed) the contact list of local government and agencies per Section IV.IV of this plan;
- Directing a customer education strategy to inform customers about BVES' fire mitigation programs, policies and procedures; and
- Submitting to the Operations & Planning Manager recommended changes to this plan as warranted and at least annually.

VII. THE BIG BEAR VALLEY COMMUNITY WILDFIRE PROTECTION PLAN

The BVES Fire Prevention Plan is part of the wider ranging Big Bear Valley Community Wildfire Protection Plan. The former is a "living document" that is closely related to the latter as part of BVES' mission to provide its customers safe and reliable electric service.

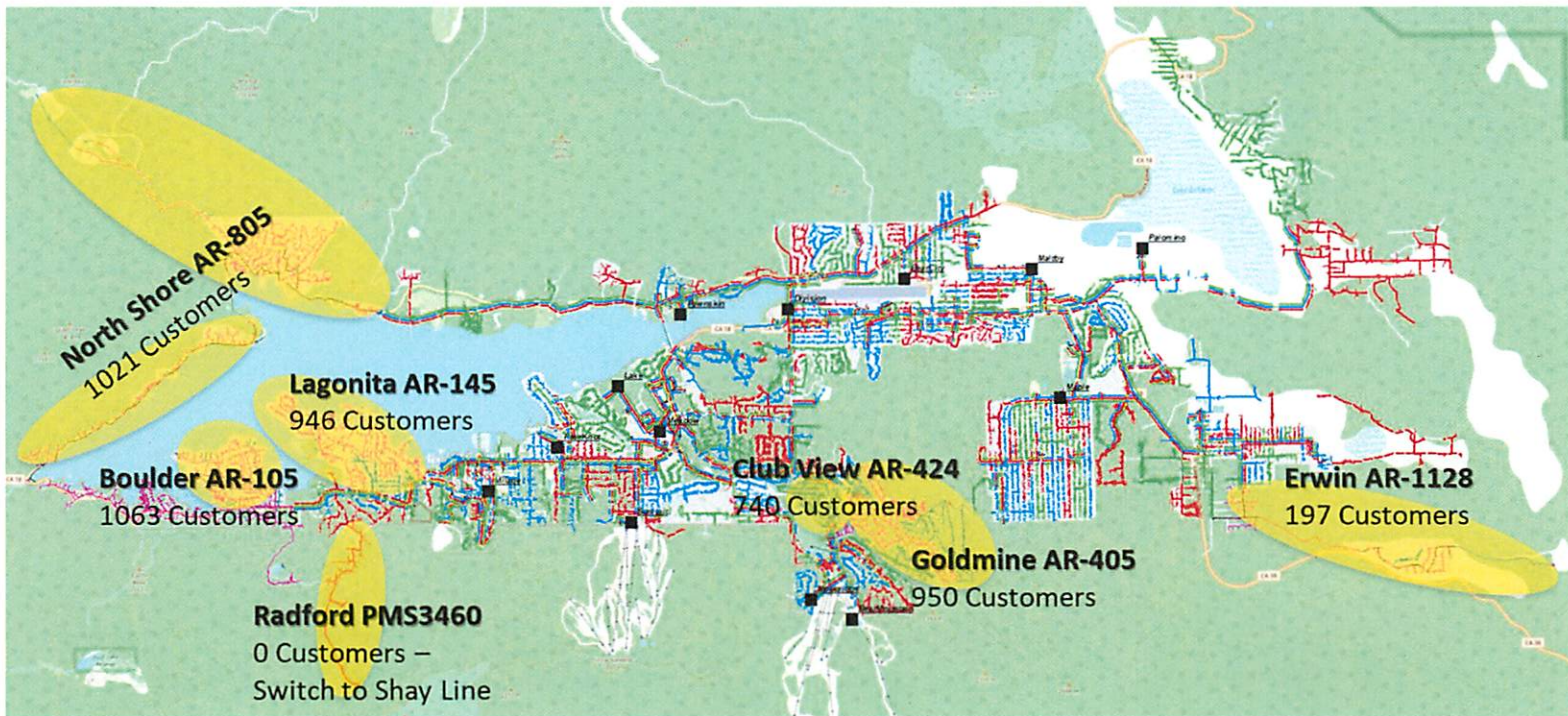
BVES' fire prevention efforts are not separated or unrelated to the communities and districts surrounding its service territory. BVES serves the City of Big Bear Lake as well as unincorporated communities located in the Big Bear Valley. Big Bear Valley is nestled in the San Bernardino National Forest and it supports year round activities for snow skiing, fishing, boating, hiking, mountain biking, etc. More important is that the City of Big Bear Lake and the unincorporated communities are listed in the Federal Registry as communities at high risk to wild fires. The effects of the drought and the alarming increase in the death rate of various trees within the San Bernardino National Forest has led communities in Big Bear Valley to propose measures that can reduce the threat of fire and at the same time restore the health of the forest.

The resulting measures are contained in the Big Bear Valley Community Wildfire Protection Plan, which was collaboratively developed by City of Big Bear Lake Fire Department, Big

Bear City Fire Department, Big Bear Fire Protection District, San Bernardino County Fire Department, and California Department of Forestry and Fire Protection.¹

The Big Bear Valley Community Wildfire Protection Plan recommends 13 mitigation measures. These measures include the prioritization and coordination of mitigation treatments on private/public lands to reduce fire risks while promoting biodiversity, the review of fire related building codes, the mandates to develop a landscape plan on all new dwellings and a minimum setback of 5 and/or 10 feet separation between dwellings, the establishment of oversight functions with City/County Fire departments, the administration of a public education and outreach program, the search for funds to construct a dedicated emergency operations center, the implementation of vegetation management on public and private properties, and the involvement of timber harvesters and environmental groups to identify the beneficial use of trees that have been removed and the restoration of forests.

¹ Source: Big Bear Valley Community Wildfire Protection Plan, Final Plan "A Systems Approach", June 2006 and Addendum, August 2018



Attachment B

BVES Tree Trimming Policy Training



Tree Trimming Policy

March 2018

Attachment B

BVES Tree Trimming Policy Training

Policy

1. The radial clearance of uninsulated primary conductors to any vegetation will not be permitted to be within 6'/60". Vegetation that encroaches within this specification will be trimmed to a minimum of 12'/144" from energized primary conductors. This applies in all cases.
2. All poplars, cottonwoods, and other fast growing trees will be trimmed to 12' and removal will be considered.
3. Blue Sky guideline – It is BVES's goal to remove all vegetation above the 34,000-volt system. The only exception is when aggressive tree trimming will cause the tree potential harm. In which case, the arborist and BVES Field Operations Supervisor will evaluate the potential for a branch to fall into the 34,000 volt lines and will consider removal of the affected tree.
4. All vegetation below or between the drip line of primary conductors with that has been previously trimmed or has the potential of growing into the secondary's or within 12'/144" of the energized primary conductors within the next 3 years will proactively be removed.
5. At primary conductor level, mature tree trunks greater than 18" and major limbs greater than 10" with sufficient strength and rigidity to prevent further encroachment may encroach within the minimum distance but not within 18" of energized conductors.

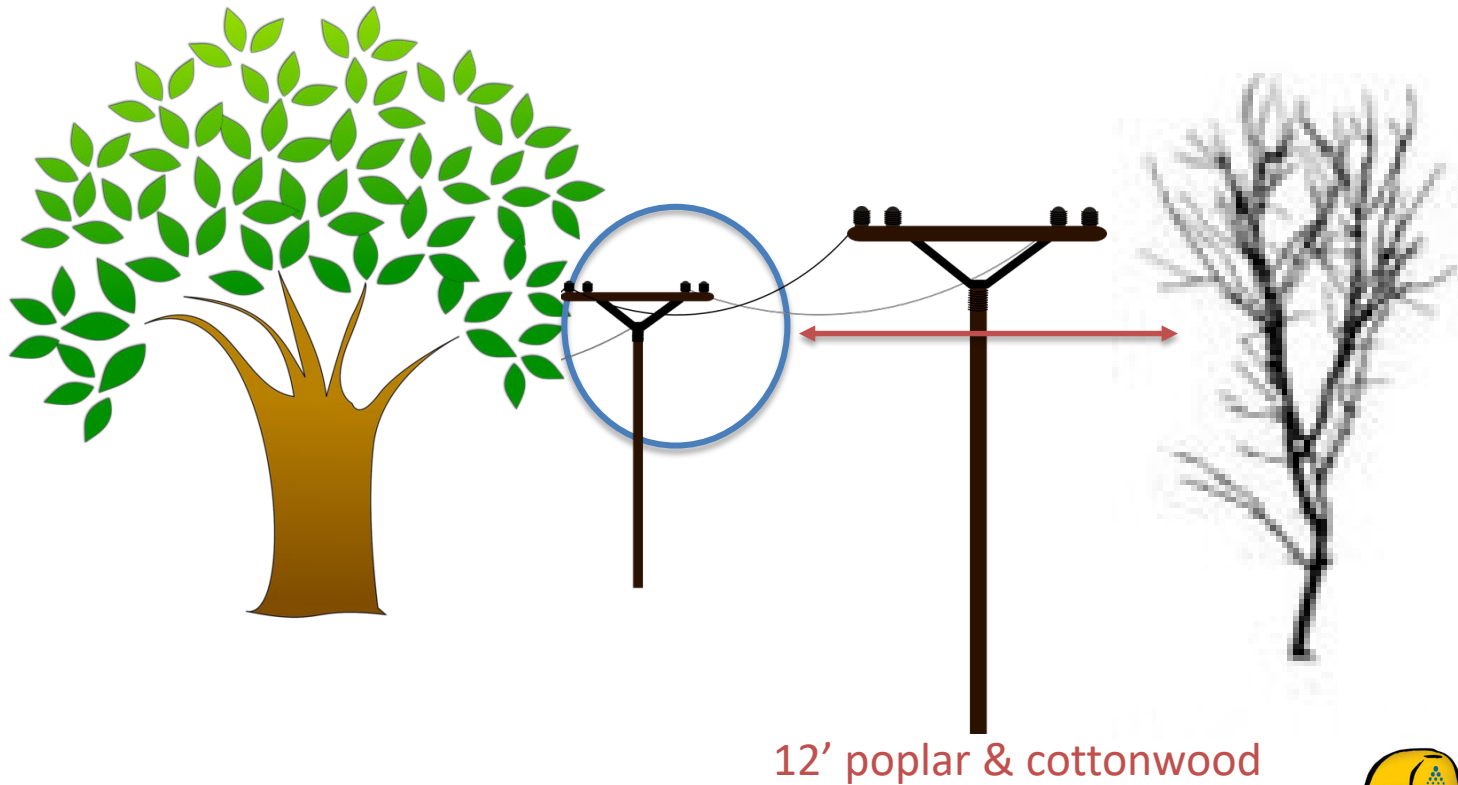


Application # 1 & 2

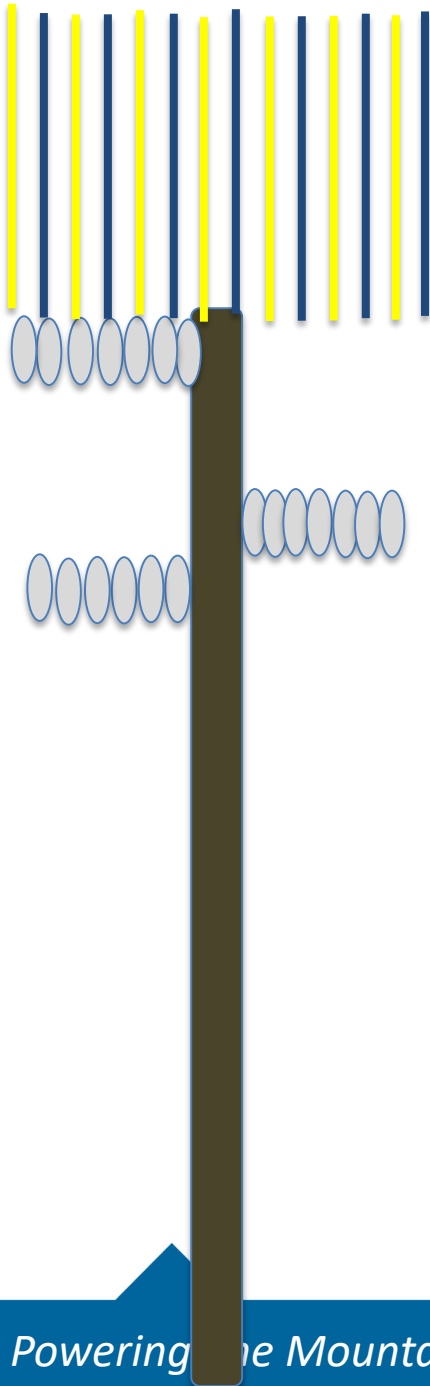
OLD: If a tree is within 4' it should be trimmed to 10'

NEW: If a tree is within 6' it will be trimmed to 12'

All poplar, cottonwood, & fast growing trees to 12'



Application #3



Blue Sky

No trees above the 34Kv system.

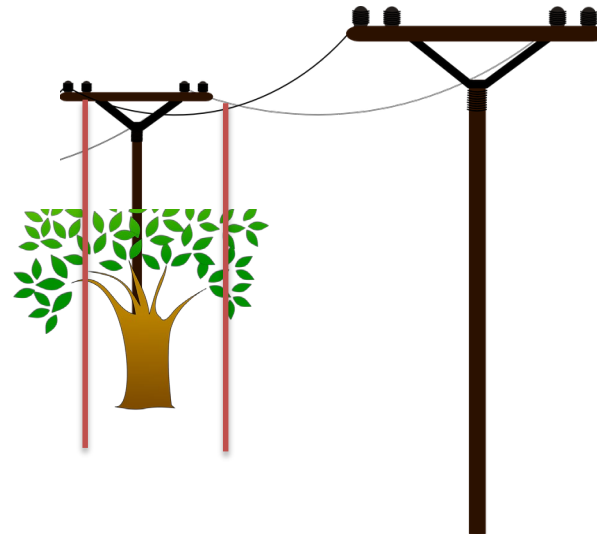
If removing all branches on one side of a tree will unbalance a tree, the arborist will work with the FOS to remove the tree.



Application #4

All vegetation below or between the drip line of primary conductors that has been previously trimmed or has the potential of growing into the secondary's or within 12'/144" of the energized primary conductors within the next 3 years will proactively be removed.

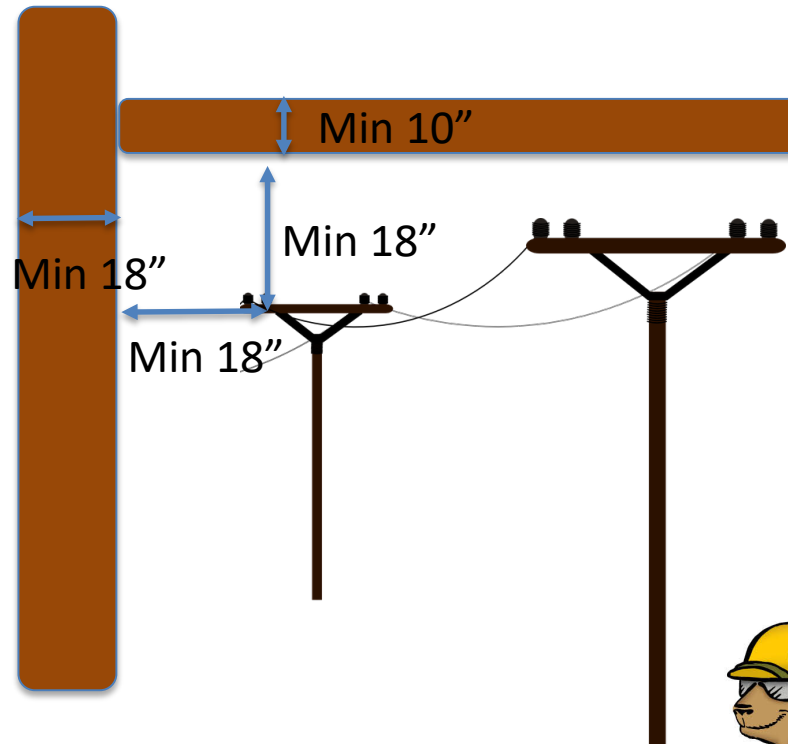
Note: After this 3 year cycle this will change: To remove any tree inside the drip line that has the potential of growing within 12' of the primary.



Application #5

OLD: G095 rule 35 gave an exception that a tree with sufficient rigidity may encroach within 6"

NEW: At primary conductor level, mature tree trunks greater than 18" and major limbs greater than 10" with sufficient strength and rigidity to prevent further encroachment may encroach within the minimum distance but not within 18" of energized conductors.



Why QC?

- We need to know and document our tree trimming competency.
- Our goal is consistent application of the policy.
- Wildfire threat is real!
 - We need to ensure we have done all we can to reduce/eliminate this threat.



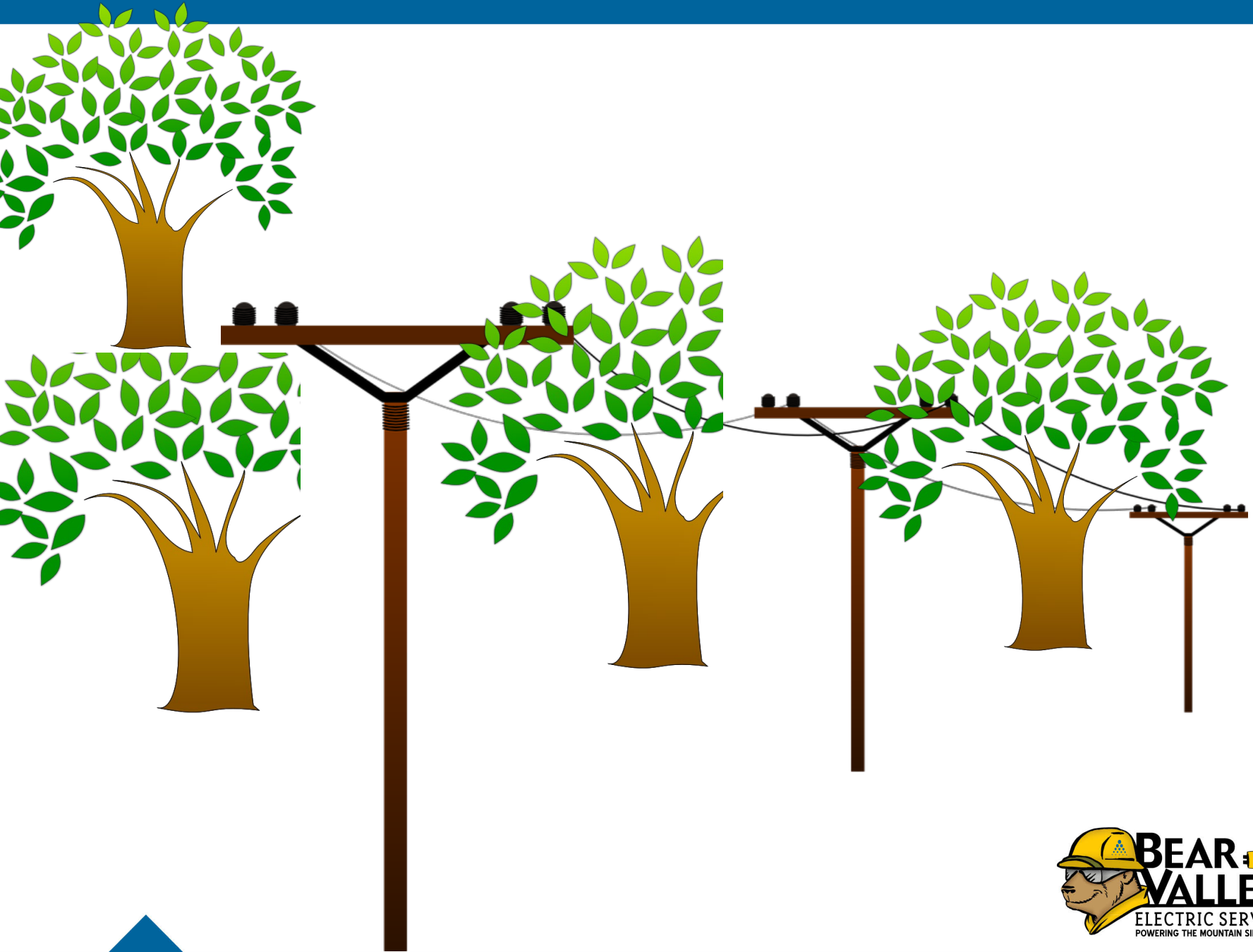
TREE TRIMMING QC						
LOCATION:	1234 pine				18031	
ASSIGNED TO:	Bryan Kelly					
DATE ASSIGNED:	3/1/2018		DATE INSPECTED:			
MUST BE RETURNED TO ENG. WITHIN 2 WEEKS OF DATE ISSUED					YES	NO
*	All vegetation encroaching within 5'/60" of uncovered lines primary conductors, trimmed to a minimum of 12'/144" from energized conductors.				<input type="checkbox"/>	<input type="checkbox"/>
*	Blue Sky guideline- Above 34kv lines, it is our goal to remove all vegetation above the 34kv system. The only exception is when aggressive tree trimming will cause the tree potential harm. In which case, the arborist and BVES will consider removal.				<input type="checkbox"/>	<input type="checkbox"/>
*	All vegetation below or between the drip line of primary conductors with the potential of eventually growing into the secondary's or within 12'/144" of the energized primary conductors will proactively be removed.				<input type="checkbox"/>	<input type="checkbox"/>
*	Mature tree trunks (<18") and major limbs (<10") with sufficient strength and rigidity to prevent further encroachment may encroach within the minimum distance but not within 18" of energized conductors.				<input type="checkbox"/>	<input type="checkbox"/>
NOTES:						
TREES TRIMMED		# Trees QC'd	PASS	FAIL	%	
					YES	NO
NEED TO RETURN TO COMPLETE WORK					<input type="checkbox"/>	<input type="checkbox"/>
REASON:						
Caring The Mountain Since 1929						



Why QC?

- We need to know and document our tree trimming competency.
- Our goal is consistent application of the policy.
- Wildfire threat is real!
 - We need to ensure we have done all we can to reduce/eliminate this threat.





Powering The Mountain Since 1929

Questions?



TEST Q1

Q) You notice a 4" branch that is 5.5' under the 4kv. In other places the same tree has been cleared to 12".

A) When you trim a tree you must trim the tree back to 12'.



TEST Q2

Q) You notice a poplar tree 5.5' under the 4kv.

A) Poplar trees are fast growing and in this case will encroach within the 3 year trim cycle. This tree should be removed.



TEST Q3

Q) You notice a pine tree adjacent to 4kv it is 2' away.

A) Trees with sufficient rigidity are permitted to encroach up to 18" providing the tree is greater than 18" in diameter.



TEST Q4

Q) You notice a pine tree adjacent to 4kv it is 2' away.

A) Trees with sufficient rigidity are permitted to encroach up to 18" providing the tree is greater than 18" in diameter.



TEST Q5

Q) How long do you have to complete your QC after it has been assigned?

A) 2 weeks



TEST Q6

Q) How long do you have to complete your QC after it has been assigned?

A) 2 weeks



TEST Q7

Q) The purpose of doing the tree trimming QC is to...

- A) Beat up Chris Teale
- B) Prove our trees are properly trimmed
- C) Waste time
- D) Provide consistency

A) B and D



Attachment C

Vegetation Management Contractor Agreement Memorandum

Attachment C

Vegetation Management Contractor Agreement Memorandum

Memorandum for the Record

From: Phil Pivovarov, Operations & Planning Manager BVES

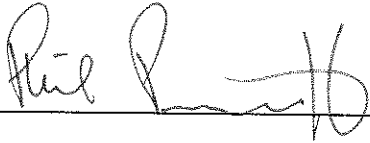
To: The Record

Re: Bear Valley Electric Service (BVES) -Teele Tree Service, Inc. Contract

1. The purpose of this Memorandum is to memorialize that on March 21, 2018 the authorized representative for BVES (Phil Pivovarov) directed its Vegetation Management contractor's authorized representative (Chris Teele, Teele Tree Service, Inc.) to implement the following scope of work changes effective March 21, 2018:

- The minimum allowable radial clearance of bare line conductors from vegetation will now be 72 inches as of the time of the revision of the contract. Contractor shall ensure the minimum 72-inch safe clearance along bare line conductors is maintained throughout the BVES service area during the entire length of the vegetation management program cycle (3-years).
- Anytime it is determined that trimming of vegetation is necessary, Contractor shall trim to least 12 feet in accordance with Appendix E Guidelines to Rule 35 of GO-95. Taking into account vegetation species and growth rates and characteristics, Contractor will trim beyond 12 feet if necessary to ensure that the vegetation remains outside the minimum 72-inch safe clearance distance for the entire length of the vegetation management program cycle (3-years). If Contractor cannot achieve this minimum standard, Contractor shall inform BVES Representative.
- No vertical coverage shall be allowed above BVES sub-transmission lines (34.5 kV). If Contractor cannot achieve this minimum standard, Contractor shall inform BVES Representative.
- All fast growing trees, (poplar, aspen, cottonwood...) will be trimmed to at least 12 feet and removal will be considered.
- All vegetation within the drip line of primary conductors that has the potential of growing into the secondary system or within 12 feet of the energized primary conductors within the 3-year vegetation management program cycle will be removed.
- *Tree Trunk and Major Limb Exception:* At the primary conductor level, mature tree trunks that are greater than 18 inches in diameter and major limbs that are greater than 10 inches in diameter with sufficient strength and rigidity may encroach within the minimum safe distance (72-inches) but not within 18 inches of the bare line conductors. The rigidity of the tree trunk or major limb must be such that it would be impossible for it to encroach within 12 inches of the bare conductor at any time during high wind, heavy icing and snow, or other conditions.
- *Quality Control:* BVES will conduct frequent quality control (QC) checks of Contractor's work. Discrepancies noted during QC checks, detailed inspections or patrols of overhead circuits or other means, shall normally be forwarded to Contractor via Kintone application provided by BVES. Contractor shall indicate completion of corrective action in Kintone and document the vegetation trimming in the "Right of Way" application to BVES' Partner Software (part of BVES' GIS suite). Discrepancies will be designated and corrected as follows:

- Emergency (Priority 1) vegetation orders will be corrected immediately (or mitigated to reduce the priority level to at least Priority 2).
- Urgent (Priority 2) vegetation orders will be corrected within 30 days.
- Routine (Priority 3) vegetation orders will document non urgent items that will be addressed during the regular tree trimming cycle.

Signed: 
Phil Pivovaroff, Operations & Planning Manager

Signed: 
Chris Teele, Teele Tree Services, Inc.