November 1, 2021 VIA EMAIL

Melissa Semcer
Program Manager, Safety Policy Division
Office of Energy Infrastructure Safety
715 P Street, 20th Floor
Sacramento, CA 95814

RE: Bear Valley Electric Service Inc. 2021 Third Quarter Notification of its 2021 WMP Progress Report.

Dear Ms. Semcer,
Pursuant to your letter dated September 8, 2021 and Public Utilities Code Section 8389(e)(7), please find attached hereto Bear Valley Electric Service, Inc. ("BVES") 2021 Third Quarter Notification of its 2021 WMP Progress Report. In addition, BVES has attached for your reference the Final Action Statement on the 2021 Wildfire Mitigation Plan Update of BVES.

Sincerely,

Paul Marconi
President, Treasurer and Secretary

Attachments: BVES 2021 WMP Progress Report
Final Action Statement on WMP Update of BVES

Bear Valley Electric Service

Wildfire Mitigation Plan Update

2021 Progress Report

Bear Valley
Electric Service, Inc.
A Subsidiary of American States Water Company

November 1, 2021

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EXECUTIVE SUMMARY

The state of California (CA) and the California Public Utilities Commission (Commission or CPUC) mandated in Order Instituting Rulemaking (OIR) 18-10-007 that the electric utilities develop Wildfire Mitigation Plans (WMPs) pursuant to Senate Bill (SB) 901 with inaugural filings required in early 2019. Assembly Bill (AB) 1054 further modified requirements setting a framework for the regulatory entities to track and monitor continued improvement and compliance of the WMPs through routine data collection submissions and audit practices. The Wildfire Safety Division (WSD), now the Office of Energy Infrastructure Safety (Energy Safety or OEIS), is the compliance branch under the Department of Natural Resources Agency ensuring ongoing obligations to enforce WMP requirements, monitor results of inspections and quality checks, WMP independent evaluations, and associated statutory mandates.

To date in 2021, Bear Valley Electric Service, Inc. (BVES)[1] did not experience any ignition events or the need to activate Public Safety Power Shutoffs (PSPS) to mitigate potential wildfire threats. BVES maintains its service territory under a foundational understanding of natural resource management, as the area is surrounded by mountainous terrain and high alpine trees. The utility has an ongoing history of working collaboratively with public safety partners, and state and federally managed lands agencies in an effort to ensure its region is well-maintained to face the ever-evolving threat of catastrophic wildfires. Despite an absence of ignition or PSPS events, BVES embraces wildfire safety as a core competency through executed work, adopting fire operational standards, and monitoring live conditions. These activities, along with a hardened system, prevent the increase of at-risk events and assist the utility in accounting for near-miss risk drivers that could result in a potential spark or arc. Over time, the WMP data will establish a baseline for understanding the unique threats associated with BVES's service area, which will help inform future iterations of the WMP.

This endeavor focuses on incremental measures that collectively will reduce the fire risk to BVES and its customers through a risk-based approach. This approach seeks to direct resources to the most cost-effective projects to bring down the risk as efficiently as possible, while maintaining affordability and reliability. Specifically, BVES aims to 1) improve its understanding of the wildfire risk posed by and to its systems, 2) focus on reducing the highest risks aggressively and efficiently, and 3) maximize scarce financial and human resources in its efforts to mitigate wildfire risks.

BVES submitted its 2021 WMP on March 5, 2021, followed by a 2021 WMP Update on June 3, 2021. The WSD, transitioning to the OEIS in July 2021, approved BVES's 2021 WMP Update with conditions for remedy. This progress report aims to address issues identified in the approval notice of the 2021 WMP through Resolution WSD-022, issued on September 9, 2021.

[1] BVES is a subsidiary of American States Water Company.

1. WILDFIRE MITIGATION PLAN PROGRESS REPORT

In accordance with the May 4, 2021 Revision Notice to Bear Valley Electric Service, Inc. (BVES), the utility submitted revisions to its 2021 Wildfire Mitigation Plan (WMP) on June 3, 2021. After submission of the revised 2021 WMP, the regulatory agency brought forth several concerns for future remediation while addressing conditions for improvement when reviewing BVES's WMP for approval. BVES has made strides to rectify the issues identified in the Final Action Statement in Resolution (R.) WSD-022, issued on September 9, 2021, and as directed by the Office of Energy Infrastructure Safety (Energy Safety or OEIS).

The following sections discuss each of the issues communicated to BVES with progress updates, plans for fully remedying the defects, and alternative timelines, as applicable. A full report and update will be communicated in BVES's next annual WMP filing set to be filed in early 2022. BVES has provided updates to each of the 14 issues from the Final Action Statement with specific remedy progress reports for those not stipulating a later timeline (e.g., in the 2022 WMP Update).

1.1 BVES-21-01: Inadequate Disaggregation of Expenditure

Table 1 below highlights the following issue requiring a complete remedy in the 2022 WMP Update. BVES presents its progress and movement toward addressing the concern in this Progress Report to the OEIS.

Table 1: BVES-21-01

Utility-#	Issue Title	Issue Description	Remedies Required and Alternative Timeline, If Applicable
BVES-21-01	Inadequate disaggregation of expenditure	As discussed in Section 1.2 of the Action Statement, BVES was required to disaggregate its WMP expenditure for its Revision Notice Response. However, Cal Advocates discovered that 17 of BVES's initiatives have the same expense amount in 2020, 11 in 2021, and 13 in 2022. In response to a Cal Advocates' data request, BVES states that it spreads certain expenses equally across multiple initiatives, but BVES offers no quantitative analysis to support such allocation.	For its **2022 WMP Update**, BVES must identify where common costs are allocated across multiple initiatives. In addition, BVES must justify its allocation methodology by describing these common costs in detail, explaining how they relate to each initiative and demonstrating that the allocated values reasonably reflect the initiatives' true costs.

On May 4, 2021, the Wildfire Safety Division's (WSD) issued its Revision Notice to BVES regarding the utility's 2021 WMP Update. The WSD (now the OEIS) advised BVES to address two critical issues, which included the need of disaggregation of expenditures related to the 86 approved initiatives. With respect to deficiency BVES-01, WSD found that BVES failed to use WSD-defined initiatives and labeling in Section 7.3 of its 2021 WMP Update and required BVES to submit a revised Section 7.3 that adheres to the 2021 WMP Guidelines. BVES provided this update in the 2021 WMP Update Revision on June 3, 2021. Within the second Finding BVES-02, the deficiency notice requires that additional description of aggregated spending on certain initiatives be documented with a revised Table 12 from the Quarterly Data Report (QDR). On June 23, 2021, the Public Advocates Office (Cal Advocates) submitted reply comments regarding BVES's revisions to its 2021 WMP Update.

BVES has worked to develop accounting methods to more accurately capture mitigation measures across multiple programs and projects as they correspond with risk reduction efforts of the 86 initiatives. BVES understands that imprecise accounting could yield misappropriated Risk-Spend Efficiency (RSE) scores and thus skew risk methodology outputs. Historically, the utility has measured effectiveness through successful implementation of described initiatives. This process is reflected in the latest quarterly reports in 2021 highlighting a practice to track, record, and project capital and operating expenditures attributed to each of the applicable initiatives. It should be noted that most of the values to which this cost allocation method has been applied are less than $10,000 per year. In preparing its next WMP, BVES will perform sensitivity analysis to determine the extent to which cost estimation may impact certain RSE values.

BVES recently submitted third quarter updates with its applied accounting practice methodology. This approach will be communicated in detail within the 2022 WMP Update.

1.2 BVES- 21-02: Program Targets are Unmeasurable and Difficult to Track

Table 2 below highlights the following issue requiring a complete remedy in the 2022 WMP Update. BVES presents its progress and movement toward addressing the concern in this Progress Report to the OEIS.

Table 2: BVES-21-02

Utility-#	Issue Title	Issue Description	Remedies Required and Alternative Timeline, If Applicable
BVES-21-02	Program targets are unmeasurable and difficult to track	The 2021 WMP guidelines defines program targets as "quantifiable measurements of activity." In Table 5.3-1: List and Description of Program Targets, Last 5 Years, BVES lists 86 program targets; 32 of	In its **2022 WMP Update**, BVES must: 1. Only include quantifiable measurements of activity in its list of program

Utility-#	Issue Title	Issue Description	Remedies Required and Alternative Timeline, If Applicable
		these targets have no numerical target and 42 targets are quantified by the unmeasurable unit "Percent Project Milestones Completed" (or similar).	targets in Table 5.3-1 (or similar). 2. To the extent possible, modify existing targets to use measurable units. For example, the unit for intrusive pole inspections should be "# of Pole Inspections" rather than "Percent of Scheduled Circuits Completed." 3. If using milestones as a sign of progress, describe milestones in Section 7.3 under appropriate initiatives.

BVES has been working to translate initiative targets into more quantitative assessments and value-based measurements in order to align with legacy tracking metrics. BVES has utilized progress-based tracking for a majority of measures and, through lessons learned of project execution, is modifying existing metrics to generate values that can be tracked for trends and risk reduction outputs.

To address **Item 1**, BVES will, to the extent possible, modify its future 2022 Quarterly Initiative Update (QIU) units to represent quantifiable trackable execution targets, in addition to those with a qualitative unit measurement. BVES notes that several trackable measurements will change for the upcoming WMP cycle to properly address this issue. BVES will also look at what other utilities have used to establish quantitative metrics for WMP initiatives and see how BVES can make similar metric work for BVES WMP initiatives.

Item 2: BVES will review current targets and modify those that are qualitative into numerical tracking functions for quantitative targets, to the extent possible. BVES has historically followed its practices through percentages of completion due to the moderate size of its service area and ability to inspect and harden infrastructure reaching 100 percent of assets throughout a program period. This approach will be enhanced starting in 2022 for more precise measurements.

Item 3: For initiatives that require progress milestones that have descriptive elements for internal key performance metrics, BVES will make these goals available in the 2022 WMP.

1.3 BVES-21-03: Vegetation Inspection Roles Lack Minimum Forestry and Arboriculture Qualifications

The following issue has been identified for a progress report update in Table 3.

Table 3: BVES-21-03

Utility-#	Issue Title	Issue Description	Remedies Required and Alternative Timeline, If Applicable
BVES-21-03	Vegetation inspection roles lack minimum forestry and arboriculture qualifications	As discussed in Section 1.2 of the Action Statement, BVES was required None of the roles described in Supporting Table 5.4.1-1 include minimum qualifications in forestry and arboriculture. In contrast, Liberty and PacifiCorp require their vegetation inspection personnel to either have ISA Arborist Certification, be a Register Professional Forester, or have some arboriculture experience. Energy Safety is concerned that BVES does not hire qualified workers to conduct vegetation inspections.	BVES must: 1. Provide evidence that its vegetation inspection personnel are adequately qualified and trained to perform vegetation inspections. 2. Include forestry and/or arboriculture certifications and/or experience as minimum qualifications for appropriate vegetation inspections roles.

BVES does enforce its vegetation inspection contractors to maintain adequate evidence of qualified training. Additionally, BVES geographically employs a higher number of arborists per square mile compared to California regulated utilities due to its 32-square mile service territory. Whereas a team of tree crews may have responsibility for a larger service territory region of a neighboring utility, BVES's service area is small enough to be uniquely managed by a mid-size crew, supported by a contracted forester, along with internal field crew and linemen that periodically assist in vegetation clearing activities. BVES is thus able to address a larger swath of its territory year over year in part with detailed inspection cycles. This is similar per circuit mile of managed and operated electrical lines. BVES also contracted with a forester to provide observational support during vegetation management activities, providing additional oversight and work verification during activities performed in the field.

BVES acknowledges that information was not detailed in full; however, BVES provides the following evidence to address Items 1 and 2.

Item 1: BVES submits the following evidence that its contractor personnel are adequately qualified.

Contracted Personnel:

- Shane Smith (Davey Resource Group) serves as the main contractor managing BVES's account and holds more than four years of experience as a Utility Forester with three years attributed to certifications through the International society of Arboriculture Certified Arborist. Mr. Smith also holds a Tree Risk Assessment Qualification
- Additional foreman (Mowbray Tree Service) account for:
    - 29 ISA Certified Arborists
    - One Registered Professional Forester
    - Two biologists supporting environmental compliance and commitments

BVES Personnel:

- Paul Marconi (President)
    - 37 years of engineering and technical experience with electrical power systems including field inspections of equipment
    - Managed the vegetation management program for four years and provided oversight of the vegetation management program for an additional three years
    - Has conducted vegetation management clearance inspections for seven years
- Jeff Barber (Operations Supervisor)
    - Spent over 42 years in the utility industry
    - Journeyman Lineman- Trimmed and maintained proper clearances
    - Power Troubleman – Emergency trimming and identification for planned vegetation crew trimming
    - Line Crew Foreman – Direct crews during emergency power restoration on proper vegetation clearing
    - Operations Manager – Developed and directed the day to day vegetation trimming program through operations staff
    - Assistant General Manager of Operations – Oversee the entire vegetation management program for Pasadena Water and Power Municipal Utility (PWP) – under my program implementation and oversight, for 17 years PWP received the

highest award given to a utility vegetation program; the Tree Line Utility USA award given by the National Arbor Day Foundation

- Jon Pecchia (Utility Manager)
    - BS and PE Chemical Engineer
    - Five months of quality check (QC) tree trims
    - 10 years as environmental consultant conducting site inspections and project management involving a variety of environmental and safety issues
    - 13 years of experience in general management of industrial equipment used in hazardous areas
- Tom Chou (Utility Engineer and Wildfire Mitigation Supervisor)
    - 13 years as an Electrical Engineer
    - Eight Years with BVES as substation designer, transmission/distribution designer and compliance engineer
    - Five months of conducting QC experience for vegetation management
- Jared Hennen (Wildfire Mitigation and Reliability Engineer)
    - 10+ years as a wildland firefighter, three of which were utility firefighter contracted by San Diego Gas & Electric and Pacific Gas & Electric
    - Almost one year of conducting tree trim QC for BVES
    - Manages the vegetation management programs at BVES
- Anthony Rivera (Field Inspector)
    - 23-year Journeyman lineman
    - Managed vegetation management program at BVES for almost two years
    - 15 years contractor and project management

Item 2: A listing of certifications and relevant experience is described below that communicate minimum qualifications for inspection roles.

All Mowbray's tree crews possess the following:

- Environment Health and Safety Training

- California Occupational Safety and Health Administration Hazards Training
- Fire Prevention and Chemical Handling Training
- Electrical Hazard Awareness Training
- First Aid and cardiopulmonary resuscitation Training
- Aerial Rescue Training
- All requirements for Line Clearance Compliance

1.4 BVES-21-04: No Climate Driven Risk Mapping

Table 4 below highlights the following issue requiring a complete remedy in the 2022 WMP Update. BVES presents its progress and movement toward addressing the concern in this Progress Report to the OEIS.

Table 4: BVES-21-04

Utility-#	Issue Title	Issue Description	Remedies Required and Alternative Timeline, If Applicable
BVES-21-04	No climate driven risk mapping	BVES does not have a program that addresses climate- driven risk mapping.	In its **2022 WMP Update**, BVES shall describe how it applies risk analysis models to consider future climate projections.

Over the second half of 2021, BVES began its initiative to develop risk-based initiatives and predictive fire behavior models that incorporate climate-driven parameters and conditions. Utilizing REAX Engineering, an experienced firm operating in California and with great reach into the evolution of California's high fire threat district (HFTD) map development, BVES has recently showcased initial modeling results at the October 5, 2021 OEIS-led Risk Mapping Working Group.

Weather and climate assumptions are an implicit layer within the risk maps, which includes current climatological conditions with real time mesoscale analysis over an hourly forecast at 2.5-kilometer resolution, with a historical impact probability with fuel thresholds over the last ten years. Additionally, modeling layers include climate adjusted conditions for a mid-century look illustrating potential affects during years 2046-2055.

A full report is currently being developed in contribution to the working group workshops. BVES will provide this complete update in its 2022 WMP update. Below are several image stills resulting from the modeling activities.

Figure 1: Ignition Risk on Powerlines based on Asset and Fire Conditions

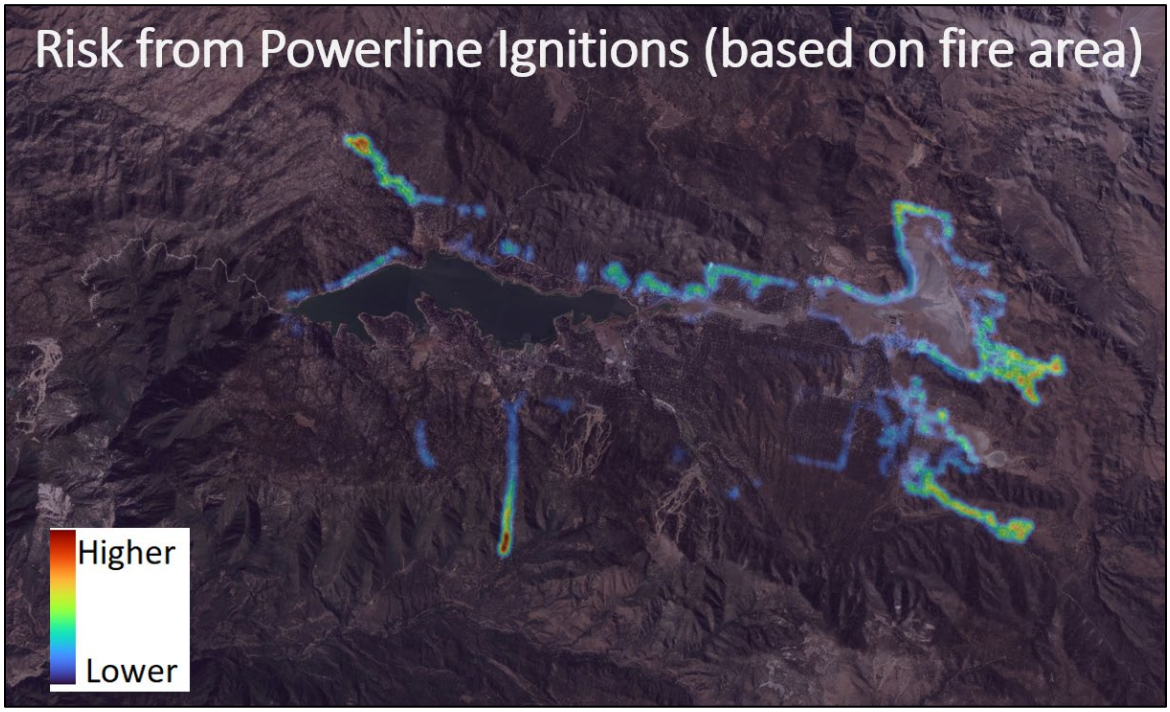
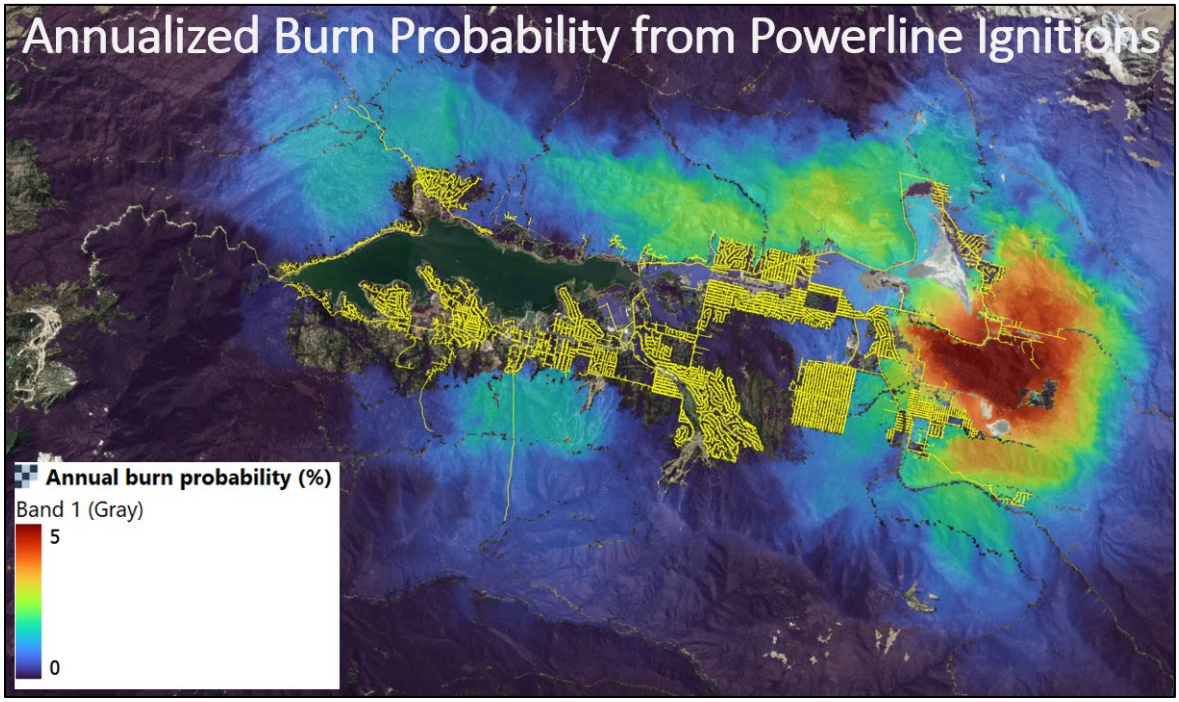


Figure 2: Annualized Burn Probability due to Line Ignition



1.5 BVES-21-05: Lack of Consistency in Approach to Wildfire Risk Modeling Across Utilities

The following issue has been identified for a progress report update in Table 5.

Table 5: BVES-21-05

Utility-#	Issue Title	Issue Description	Remedies Required and Alternative Timeline, If Applicable
BVES-21-05	Lack of consistency in approach to wildfire risk modeling across utilities	The utilities do not have a consistent approach to wildfire risk modeling. For example, in their wildfire risk models, utilities use different types of data, use their individual data sets in different ways, and use different third-party vendors. The WSD recognizes that the utilities have differing service territory characteristics, differing data availability, and are at different stages in developing their wildfire risk models. However, the utilities face similar enough circumstances that there should be some level of consistency in their approaches to wildfire risk modeling statewide.	The utilities must collaborate through a working group facilitated by Energy Safety to develop a more consistent statewide approach to wildfire risk modeling. After Energy Safety completes its evaluation of all the utilities' 2021 WMP Updates, it will provide additional detail on the specifics of this working group. A working group to address wildfire risk modeling will allow for: 1. Collaboration among the utilities; 2. Stakeholder and academic expert input; and 3. Increased transparency.

BVES has been participating in the OEIS Risk Mapping Working Group, which commenced in early October 2021. Part of the initial conversations centered around understanding each of the investor-owned utility (IOU) methodologies for demonstrating risk assessment approaches, as well as current modeling techniques and data elements embedded within those models. Details on lessons learned, transference in methodologies and modeling approaches, and movement

toward a more standardized approach will be better communicated in the 2022 WMP update, following the initial working group meetings to occur in late 2021.

Item 1: Collaboration among the utilities will continue through the established modeling workshop, though, BVES has not yet engaged directly on mapping approaches among the small multijurisdictional utilities (SMJUs).

Item 2: BVES has contracted with an experienced wildfire risk modeling subject matter expert with broad expertise on aspects of California's high fire threat district zone mapping process. This consultant has worked over the second half of 2021 to produce updated risk maps for BVES, recently updated to the OEIS on October 5, 2021.

Item 3: Increased transparency in the processes to arrive at the current risk maps have been an implicit process in the early stages of the working group engagements. BVES has submitted a detailed description of its risk methodologies to the OEIS on October 13, 2021.

1.6 BVES-21-06: Disparities Between BVES's Situational Awareness and Forecasting Capabilities and Maturity Model Reporting

The following issue has been identified for a progress report update in Table 6.

Table 6: BVES-21-06

Utility-#	Issue Title	Issue Description	Remedies Required and Alternative Timeline, If Applicable
BVES-21-06	Disparities between BVES's situational awareness, forecasting capabilities, and maturity model reporting	BVES had a significant increase in its maturity assessment ratings for situational awareness and forecasting in its WMP update. The ratings are much higher in comparison to peer utilities and prior reporting in 2020. It remains unclear if the ratings selected are accurate representations of BVES's maturity, as the explanations in the initiatives do not explain these improvements.	BVES must describe: 1. How it intends to collect and measure physical impacts of weather on its grid, such as sway in lines and sway in vegetation. 2. How it plans to include wind estimations at various atmospheric altitudes relevant to ignition risk. 3. What initiative it has or how it is using ignition detection software. 4. How it plans to accurately forecast weather at least three weeks in advance.

In responding to the Maturity Model questions, BVES interpreted the instructions as follows:

- "Cycle" is three years.
- "Start of cycle" is January 2021.
- "By end of year 1 (current)" is December 2021.
- "Planned state by end of cycle" December is 2023.

Item 1: Regarding how it intends to collect and measure physical impacts of weather on its grid, such as sway in lines and sway in vegetation (Maturity Model: 6a: What weather data is currently collected?), BVES provided the following responses:

6a: What weather data is currently collected?

- BVES Response for "Start of cycle": iii. Range of accurate weather variables (e.g. humidity, precipitation, surface and atmospheric wind conditions) that impact probability of ignition and propagation from utility assets.
- BVES Response for "By end of year 1 (current)": iii. Range of accurate weather variables (e.g. humidity, precipitation, surface and atmospheric wind conditions) that impact probability of ignition and propagation from utility assets.
- BVES Response for "Planned state by end of cycle": iv. Range of accurate weather variables that impact probability of ignition and propagation from utility assets; additional data to measure physical impact of weather on grid collected (e.g., sway in lines, sway in vegetation).

In responding to this question, BVES considered in its response that it is developing the ability to use its most current LiDAR survey to estimate the extent of sway in vegetation at various wind speeds and identify limiting areas and wind speeds by the end of 2023. BVES does not operate any long spans that make its lines susceptible to sway (e.g., BVES does not operate transmission lines); therefore, line sway will not be pursued at this time.

Item 2: Regarding wind estimations at various atmospheric altitudes relevant to ignition risk (Maturity Model: 7a: How granular is the weather data that is collected?), BVES provided the following responses:

7a: How granular is the weather data that is collected?

- BVES Response for "Start of cycle": iii. Weather data has sufficient granularity to reliably measure weather conditions in HFTD areas, along the entire grid, and in all areas needed to predict weather on the grid.
- BVES Response for "By end of year 1 (current)": iii. Weather data has sufficient granularity to reliably measure weather conditions in HFTD areas, along the entire grid, and in all areas needed to predict weather on the grid.

- BVES Response for "Planned state by end of cycle": iv. Weather data has sufficient granularity to reliably measure weather conditions in HFTD areas, along the entire grid, and in all areas needed to predict weather on the grid. It also includes wind estimations at various atmospheric altitudes relevant to ignition risk.

In responding to this question, BVES considered that by the end of 2021, it would have installed 20 weather stations throughout its 32-square mile service territory at varying elevations. In fact, all 20 weather stations are installed. BVES's weather consultant has access to BVES owned weather stations, as well as other weather stations on several mountain peaks, in the lower elevations of Big Bear Lake (lake level), and other lower elevations below the BVES service territory. Therefore, BVES is working with its consultant to attempt to include wind estimations (forecasts) at various atmospheric altitudes relevant to ignition risk in forecasts.

Item 3: Regarding ignition detection software (Maturity Model: Item 10d: What role does ignition detection software play in wildfire detection?), BVES provided the following responses:

10d: What role does ignition detection software play in wildfire detection?

- BVES Response for "Start of cycle": i. Ignition detection software not currently deployed.

- BVES Response for "By end of year 1 (current)": i. Ignition detection software not currently deployed.

- BVES Response for "Planned state by end of cycle": iii. Ignition detection software in cameras operates automatically as part of ignition detection procedures.

In responding to this question, BVES was referring to the ALERTWildfire cameras that it installed in partnership with UCSD. These cameras currently do not include ignition detection software. It was BVES's understanding that ALERTWildfire was developing software to detect ignitions. BVES has re-evaluated the response to "Planned state by end of cycle" to be "ii. Ignition detection software in cameras used to augment ignition detection procedures" and will update its response in the next maturity survey. However, BVES will continue to collaborate with UCSD on this issue.

Item 4: Regarding the ability to forecast weather in advance (Maturity Model: Item 8b: How far in advance can accurate forecasts be prepared?), BVES provided the following responses:

- BVES Response for "Start of cycle": ii. At least two weeks in advance.

- BVES Response for "By end of year 1 (current)": ii. At least two weeks in advance.

- BVES Response for "Planned state by end of cycle": iii. At least three weeks in advance.

BVES is working with its weather consultant to obtain longer range forecasting. This effort includes improving the weather models used in forecasting, if possible. BVES notes that this is a goal that is currently not achievable but may be achievable by the end of 2023.

1.7 BVES-21-07: Lack of Detail on Prioritization of Initiatives Based on Determined Risk

The following issue has been identified for a progress report update in Table 7.

Table 7: BVES-21-07

Utility-#	Issue Title	Issue Description	Remedies Required and Alternative Timeline, If Applicable
BVES-21-07	Lack of detail on prioritization of initiatives based on determined risk	BVES does not provide any details on the actual prioritization of its grid hardening efforts, despite having determined the highest risk circuits along its system. Instead, BVES relies on the Tier 2 and Tier 3 HFTD designations to justify prioritization. BVES fails to provide the details on how the timing of deployment of its grid hardening efforts mitigate its highest risk areas, and fails to provide a plan that demonstrates it is addressing and mitigating its highest risk areas.	BVES must: 1. Explain how the timing of deployment of its grid hardening efforts are based on its risk calculations and prioritize mitigating its highest risk areas; and 2. Provide a plan that demonstrates that BVES is addressing and mitigating its self- identified highest risk areas through system hardening initiatives.

The scale, geographical context, and topography associated with BVES's Risk Register model is conveyed through BVES's 32-square mile service territory, which covers rural and mountainous terrain at approximately 7,000 feet within the San Bernardino Mountains. Vegetation conditions include a heavily forested environment with mostly dry climatological conditions spanning 80.5 percent of the service area. Fuel conditions include coniferous trees such as ponderosa, jeffrey, sugar, coulter, and lodgepole pines with minimal cheatgrass and shrubs. BVES's territory is entirely within the HFTD with mostly Tier 2 and a small percentage in Tier 3. Additionally, the entire service territory is located within the Heavy Loading District (greater than 3,000 feet).

BVES's Risk Register model includes the top asset-related risks to the service territory and electrical infrastructure, which guides additional mitigation strategies beyond those already in place. The 7x7 Logarithmic Risk Matrix identifies the frequency of hazardous events and the possible consequences and impacts. The identified impacts include those associated with reliability, compliance, quality of service, safety, and environmental damage. The quality of historical outages, faults, and ignition data influences the development of the risk matrix along with periods or project terms, including all vegetation management activities. BVES equipment and operations have not ignited any fires in recent years, though, the potential for such ignitions and their consequences are considered in the data. Additionally, BVES has not initiated a Public Safety Power Shutoff (PSPS) event, but the consequential outcomes of such are also

considered within the model. BVES performs quality checks for data inputs semi-annually, especially prior to WMP updates and performs an annual calibration event.

Item 1: The Risk Register and risk-based decision-making methodology includes weighted score indices to perform the calibrations of frequency and impact. Frequency is defined as "number of events per unit of time." It is a measure of how often a risk event has occurred or is likely to occur. The frequency measured is the approximate frequency of the worst reasonable case of a specific risk event. These results influence the risk score rating of the Fire Safety Circuit Matrix, the principal planning guide utilized by BVES staff in scheduling grid hardening activities across all evaluated circuits.

The timing and deployment of grid hardening efforts are currently linked to the scoring resulting from BVES's Fire Safety Circuit Matrix tool, which is derived from the Risk Register determination of risk drivers and probabilistic consequences. The Fire Safety Circuit Matrix tool exists to quantify the unique assets, inspection conditions, and available risk drivers per circuit managed by BVES. However, BVES understands that segmentation of the circuits to determine granularity of risk by span has not yet been integrated into the methodology. BVES notes that each circuit is inherently smaller than one segment of a comparable IOU due to the nature of the service area size. In the future, BVES will use the risk maps and models generated in the second half of 2021 in the design, prioritization, and planning of its mitigation activities to address segments of line more prone to ignition risk.

Timing and deployment of activities are also characterized through the HFTD Tier 3 and Tier 2 determinations, followed with risk driver and consequence assessments attributed to each of the circuits. This includes circuits with legacy devices prone to sparking or arcing, incidents found through inspection cycles, pole loading and replacement determinations, outage history, and other at-risk details resulting in a weighted function of "high," "medium," and "low" risk exposure. Scheduling and execution may also be challenged by seasonal restrictions, permitting timelines, access to materials and resources, and contractor availability. These unknown externalities are not mapping within the Fire Safety Circuit Matrix but are discussed in planned implementation of the WMPs.

Item 2: BVES currently utilizes its engineering department resources to determine the lines to be worked on based on the results of the risk methodology framework and Fire Safety Circuit Matrix. RSE values are determined through the Risk Register, accounting for cost-beneficial hardening strategies in conjunction with enhanced routine vegetation management and inspection practices. The potential impacts of the worst reasonable scenario across six identified impact categories are rated between one and seven, with seven as the greatest severity.

Once the impact is articulated, frequency of consequence is established, based on data, and a subject matter expert is assigned to each scenario. The Risk Register then applies a formula to create a score between zero and 1,000,000,000. Direct impacts of climate change are considered, as well as invasive species and other impacts, such as the recent bark beetle infestation, which resulted in a high number of dead, diseased, and dying trees. The Risk Register calculates a total risk score from the data collected in risk analysis.

Ultimately, BVES plans to address each of the utility's circuits over ten years with remedies applied to each that are prioritized as "highest risk" based on the weighted formula score. Effectively, results can be assessed by way of number of circuit miles hardened, bringing the risk impact down by an accompanying percentage or numerical value. Due to the nature of the HFTD and BVES's entire service area making up mostly Tier 2 and a few miles of the Radford Line in Tier 3, the utility plans to address all circuits with priority areas determined through the process described above.

Future updates will include the assessment of the risk mapping models generated in mid-2021. These maps (illustrated in Figure 1 and 2) will allow BVES to identify risk areas of circuit segments with greatest ignition and consequence potential in conjunction with the risk methodologies discussed above. The combination of these resources will allow BVES to plan and schedule its mitigation initiatives to maximize effectiveness of its efforts.

1.8 BVES-21-08: Limited Evidence to Support the Effectiveness of Covered Conductor

The following issue has been identified for a progress report update in Table 8.

Table 8: BVES-21-08

Utility-#	Issue Title	Issue Description	Remedies Required and Alternative Timeline, If Applicable
BVES-21-08	Limited evidence to support the effectiveness of covered conductor	The rationale to support the selection of covered conductor as a preferred initiative to mitigate wildfire risk lacks consistency among the utilities, leading some utilities to potentially expedite covered conductor deployment without first demonstrating a full understanding of its long-term risk reduction and cost-effectiveness. The utilities' current covered conductor pilot efforts are limited in scope and therefore fail to provide a full basis for understanding how covered conductor will perform in the field. Additionally, utilities justify covered conductor installation by alluding to reduced PSPS risk but fail to provide adequate comparison to other initiatives' ability to reduce PSPS risk.	The utilities must coordinate to develop a consistent approach to evaluating the long- term risk reduction and cost-effectiveness of covered conductor deployment, including: 1. The effectiveness of covered conductor in the field in comparison to alternative initiatives. 2. How covered conductor installation compares to other initiatives in its potential to reduce PSPS risk.

BVES has investigated methods to capture the risk reduction and cost-effectiveness across California and North America through internal engineering reviews, external consultant support, and ongoing discussions with the IOUs. To date, a formalized approach in arriving to a consistent methodology among utilities has not been established, though BVES acknowledges that several IOUs have communicated lessons learned and execution successes and challenges related to deploying covered conductor types.

BVES is amenable to working in a structured manner with similar utilities to develop a cohesive stance on insulated wire best practices, though, it understands that this process is continuing to evolve across the greater west coast as utilities opt to harden systems with greatest risk reduction, in cost-effective manners. Coordination begun informally in the fall of 2021 during lessons learned discussions with affected utilities of wildfire ignitions and a newly established technical working group addressing covered conductor approaches, successes, and challenges. BVES plans to draw greatly from discussions with other California regulated utilities.

Item 1: BVES has evaluated several approaches for replacing bare wire with hardened materials. Technical specifications, manufacturer saturation, as well as variants of covered conductor within the industry within areas of the northeast and Canada were likewise reviewed. BVES also followed closely the common deployment approaches of California utilities such as pilots led by Southern California Edison (SCE) and PG&E as well as insight gained from the technical workshops held at the CPUC in 2019 and 2020.

BVES has determined that primary tree wire conductor cables are most effective based upon engineering, financial viability, and risk reduction needs of owned and managed assets. This is primarily driven by the fire retardant insulation design within the shield layers and open air design of the shielded cables. These devices allow for an open wire configuration on cross-arms (or armless brackets depending on the line design) with polyethylene insulation versus spacer cables that are configured with a multi-messenger, heavily-insulated conductor construct. The functionality of either sheath coverings or bare wire intrinsically provide similar risk reduction benefits in insulating electrical wire and mitigating sparks and faults from outside contact on the line between the two designs. However, BVES generally found primary tree wire to be more responsive in fault reduction through field analysis of deployed materials as it prevents transference of fire or ignition and localizes the threat in a confined area. Additionally, this design was found to be more economical, allows BVES to readily stock materials, and passed loading tests based on BVES's conductor span lengths and voltage classes. BVES continues to evaluate new and evolving manufacturers in this space in due diligence activities of mitigation initiative selection processes.

Aerial spacer cables and undergrounding lines were considered as alternative constructs. Insulation materials were also vetted in comparison to industry use for covered wire. BVES opted not to utilize Hendrix aerial spacer cables due to unfit design needs for its voltage classes, availability of materials, cost prohibitive stance, the strength being concentrated within the engineering construct of the messenger infrastructure, which may result in greater maintenance response, and other factors.

BVES's position as a result of fire damage to lines is to replace bare conductors with stockpiled materials of primary tree wire cables and remediate or replace new poles with fire-resistant materials during recovery activities. While BVES has not experienced catastrophic loss due to

wildfires, the utility can more quickly rebuild a line with hardened conductors as opposed to the time delay that may be found with alternative constructs such as spacer cables or undergrounding lines immediately following the ignition event.

Undergrounding has occurred in BVES's territory in high concentrated residential areas and has been considered and evaluated for the Ute line in 2019 (however, was later abandoned due to alternatives). BVES continues to evaluate potential undergrounding alternatives, though, finds the schedule timeline, permitting requirements, and costs to be prohibitive in implementation at this time.

Item 2: In relationships to reduction of PSPS risk, BVES has gained insight based on its engineering reviews and exemplified demonstrations from other utilities. This is due to the fact that BVES has not had to actuate a PSPS event, though remains prepared with plans, procedures, and switching mechanisms if this were to ever occur. BVES finds that covered conductor methods are most effective in reducing PSPS risk with consideration of cost-effective approaches. While undergrounding circuits may nearly entirely reduce ignition risk or the need to proactively de-energize, the useful case has not been appropriate for BVES at this time due to several factors such as inflated cost projections, environmental concerns, potential permitting delays, and generally a longer lead time for deployment.

Once the utility implements covered wire methodologies on a circuit or segment of circuit, nearby and adjacent facilities and structures are assessed to determine high wind impacts with high levels of confidence. This leads to the understanding that structural failure is greatly reduced due to hardening circuits through covered conductor approaches. BVES acknowledges that blow-ins from vegetation, felled trees, or large branches can still occur during high wind events, though this risk is managed through enhanced right-of-way clearances, increased cycle inspections, and due to the intrinsic design of the shield covering reducing electrical sparks. BVES also evaluated and assessed the success rate of hardened poles with composite, steel, and fire retardant mechanisms applied. These modifications in conjunction with covered wire provide a greater risk reduction outcome in preventing ignitions and faults. This was performed through three-dimensional assessment models. Connector failures are also greatly reduced due to downed wire events as the covered conductor can smolder for minutes without igniting fuels on the ground. Fault detection technologies can also enhance this risk reduction measurement by isolating faults and identifying when a wire falls due to structural failures, blow-ins, or strong winds.

BVES will plan to continue gaining insight from utilities and lessons learned communicated within future technical workshops and report any modifications to business plan developments in a future WMP update.

1.9 BVES-21-09: Lack of Asset Inspection Quality Assurance and Quality Control (QA/QC) Program

The following issue has been identified for a progress report update in Table 9.

Table 9: BVES-21-09

Utility-#	Issue Title	Issue Description	Remedies Required and Alternative Timeline, If Applicable
BVES-21-09	Lack of asset inspection quality assurance and quality control (QA/QC) program.	BVES is in the process of adopting a formal QA/QC program in 2021 but did not provide dates on when it intends to implement such, did not provide details on its current informal QA/QC process, nor provide details on the scope of the QA/QC program currently in development.	BVES must: 1. Provide a timeline for its implementation of a formal QA/QC process. 2. Explain how it conducts quality checks of its asset inspections prior to the adoption of the formal program. 3. Develop an interim QA/QC procedure for asset inspections between now and the establishment of its new QA/QC program, if such has yet to be adopted, in order to ensure that work is being completed accurately and effectively. 4. Provide updates on the development of its QA/QC program in its Progress Report, including: (i) the scope of the QA/QC program, (ii) procedures of the QA/QC program that BVES has developed, and (iii) the status of the QA/QC program implementation.

BVES monitors all aspects of inspection execution including work verification performed through third-party contractors on an annual basis.

Item 1: A formalized QA/QC instruction will be issued in within the fourth quarter of 2021 for implementation in 2022.

Item 2: Currently, equipment inspections are primarily conducted by internal BVES staff as described in the 2021 WMP. Additional detailed inspections are conducted by contract inspectors. The internal inspectors utilize informal procedures and team communication to govern and control the majority of inspection activities, which result in quick responses and correction activities, and has been a relatively effective process in legacy practices. Being a smaller utility, BVES is uniquely positioned to work directly with field crew and contractors with ability to contact/reach field operators within hours of initial notice.

Additional inspections are performed using a truck-mounted LiDAR inspection performed by a third-party contractor. All inspection records are reviewed by the inspection manager and a summary of findings and issues is issued to the Utility Manager for review.

Item 3: BVES's interim QA/QC program is described below:

1. Contractor's design/planning group develops work package (instructions, drawings, materials, etc.).

2. QA/QC: All design/planning work is reviewed by the BVES Field Inspector and/or the Engineering & Planning Department prior to construction to ensure the accuracy of the inspection.

3. Upon approval from BVES, contractor performs work.

4. QA/QC: BVES Field Inspector performs in-process QC checks. Discrepancies are resolved by the contractor with BVES oversight.

5. QA/QC: Upon work complete, BVES Field Inspector performs final inspection of the work in the field and performs the initial work package audit. Upon approval of fieldwork and final work package (as built), an initial billing review is performed and approval for invoicing is given.

6. QA/QC: Prior to authorizing an invoice for the work, the Project Coordinator performs a work package audit and validates the materials and work performed. Project Coordinator also performs a validation of billing units and ensures the Field Inspector's verification of work completion and approval for billing.

Item 4: BVES is working to construct a formal program in Q4 of 2021 to be implemented in 2022. Activities to develop a framework and approach were initiated with internal discussions among contracted third-party resources, internal staff, and BVES's wildfire mitigation program consultants.

(i) The scope of the QA/QC program will expand upon the design and governance structure communicated in the **Item 3** response.

(ii) The procedures developed to date have been referenced in response to **Item 3** above.

(iii) The status of the QA/QC implementation is on target to be initiated in early 2022 pending senior approvals and other unforeseen delays.

1.10 BVES-21-10: Limited Discussion of Community Outreach

The following issue has been identified for a progress report update in Table 10.

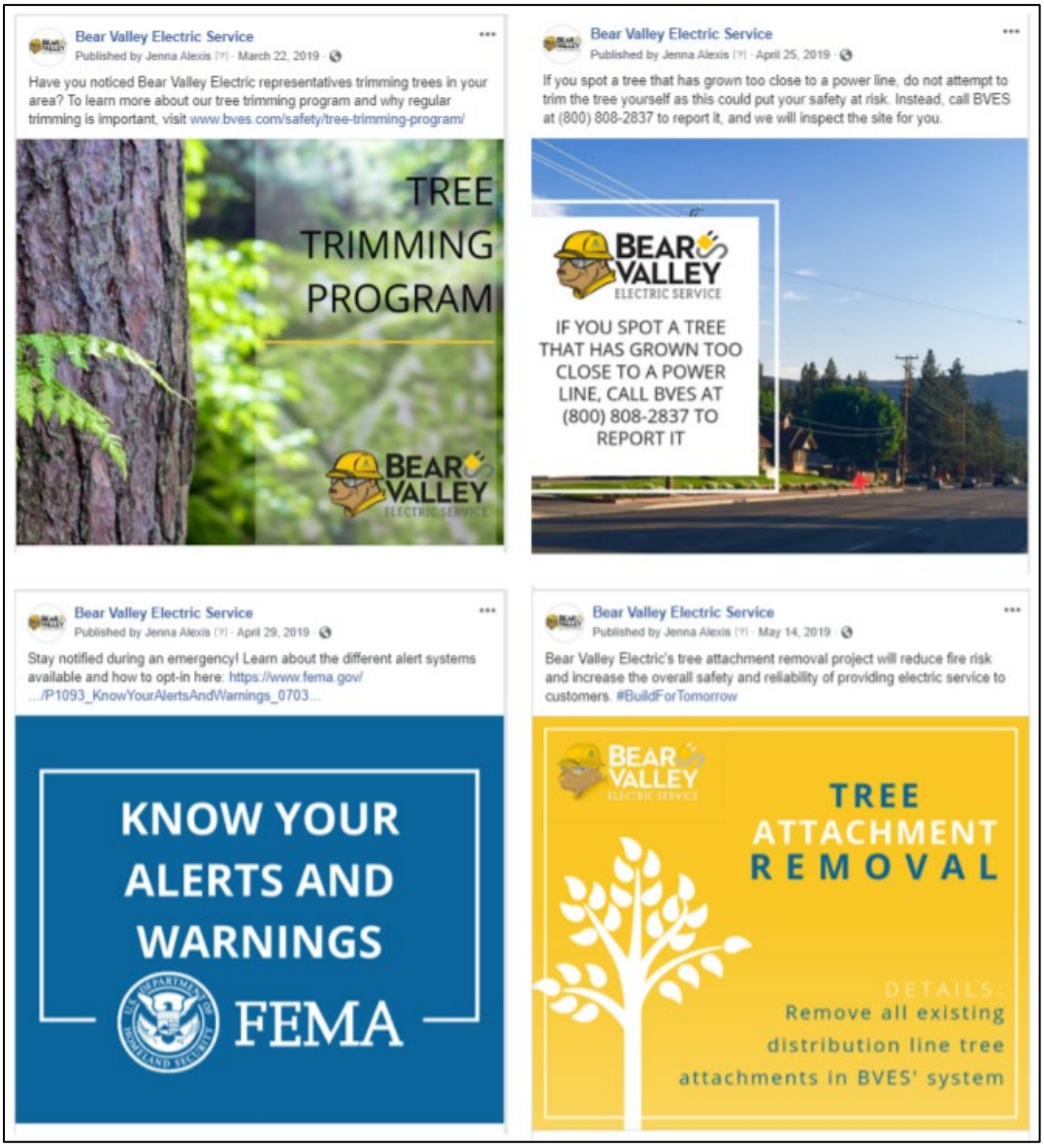
Table 10: BVES-21-10

Utility-#	Issue Title	Issue Description	Remedies Required and Alternative Timeline, If Applicable
BVES-21-10	Limited discussion of community outreach	BVES-R7 requires BVES to discuss its community engagement and outreach as it relates to VM in Section 7.3.5.1. BVES instead discusses fuels management activities performed by other entities including Big Bear Fire Department and Bear Valley Community Service District. BVES mentions outreach efforts to "USFS, CAL FIRE and Big Bear Fire Department in an effort to develop collaborative measures in the area of fuels management," but fails to discuss how it mitigates the community impacts of major VM activities including tree-trimming and tree removal.	BVES must: 1. Provide descriptions of notification and communication methods for customers and partner agencies regarding VM activities including, but not limited to, tree-trimming and tree removal. 2. Detail any efforts in community outreach and public education related to vegetation management.

In addition to Section 7.3.5.1 description in the 2021 WMP, BVES provides communication to its customer base through various methods with respects to vegetation management activities.

Item 1: BVES has posted a concise training video on its website to demonstrate the activities performed within the utility's vegetation management program. BVES utilizes social media, bill inserts, communication emails, community workshop discussions, and radio advertisements to alert customers of vegetation management activities as well as general WMP related initiatives and possible PSPS risk during fire season. An example of social media outreach activities are illustrated in the compiled figure below.

Figure 3: Social Media Vegetation Management Notices



Item 2: Weekly updates on tree trimming crew locations are provided on BVES's public website. BVES also offers a direct phone line for patrons to utilize with any questions on activities, encroachments on private residences, and for notifying the utility if a hazardous vegetation contact is identified. On its website, BVES provides education to viewers regarding appropriate tree planting practices that mitigate powerline contacts and differences in tree heights, vegetation density and fuel availability, and locations to plant certain trees on residential property. Example tips and outage prevention strategies are outlined below:

- Call BVES, Inc. for a free inspection if you suspect a branch is too close to a power line.

- Call BVES, Inc. to disconnect power lines before you remove a tree that may come in contact with the line. We will reconnect once the work is complete.
- Never trim or prune a tree within 12-15 feet of a power line. Call BVES, Inc. first to inspect the tree. In many instances, we'll do the tree work at no cost.
- Be aware of the hazards posed by vegetation near power lines. Branches that break and trees that blow over during a storm can cause short circuits, outages, fire and electrocution.
- Clear all flammable vegetation within 30 feet of your home and other structures.
- Plant the right tree in the right place. If you must plant near power lines, make sure the maximum mature tree height is 12-15 feet from the closest line.
- Never let children climb trees near power lines.
- Inspect your trees annually for hazards. For advice, consult a certified arborist.

Additionally, BVES provides a list of frequently asked questions to communicate awareness into the types of tree species that are appropriate for the area and provide lower contact risk of electrical lines, information regarding the entities performing the tree-trimming activities, how BVES implements recovery support in clearing fallen debris due to winter storms, among other common concerns.

1.11 BVES-21-11: Inadequate Discussion of QA/QC of VM Inspections

The following issue has been identified for a progress report update in Table 11.

Table 11: BVES-21-11

Utility-#	Issue Title	Issue Description	Remedies Required and Alternative Timeline, If Applicable
BVES-21-11	Inadequate discussion of QA/QC of VM inspections	From the discussion in Section 7.3.5.13, it is difficult to know whether BVES has a QA/QC program for VM. A brief mention of third- party evaluations is the only unequivocal detail. It is unclear whom at BVES performs QA/QC, how often QA/QC is performed, and what	BVES must: 1. Describe the "lessons learned from third party evaluations and inspections." 2. Provide the number of QA/QC evaluation and inspections completed each year. 3. Provide a QA/QC audit target as a percentage of total VM inspections per year.

Utility-#	Issue Title	Issue Description	Remedies Required and Alternative Timeline, If Applicable
		goals and targets exist for QA/QC.	4. Detail BVES's differentiation between its quality assurance program and quality control program. 5. Report on BVES's plan to add a QA program to the current QC program.

Item 1: BVES tracks lessons learned from vegetation management (VM) QA/QC activities through post-work execution meetings with its contractor service and field personnel also clearing vegetation as part of parallel operations. Following the recent hiring of a qualified forester, BVES is drafting internal review procedures for detailed work verification. The forester started with BVES in Q2 2021 and is still in the process of navigating the training environment of the utility and will be fully utilized by 2022 in day-to-day activities. BVES recently generated a training manual to better position its resources to preform QA/QC activities. BVES also provided decision-tree manuals for clearance standards, which generates a checklist for crew to maintain during day-to-day operations.

Findings from third-party evaluations of vegetation management inspection practices reveal a reduction of vegetation contacts overtime due to programmatic improvements with enhanced vegetation management practices. In 2016, BVES recorded 47 vegetation contacts, 16 in 2017, nine events in 2019, and five in both 2019 and 2020. This data indicates that enhanced specifications are having a meaningful impact on reducing bare wire contact events overtime. BVES will gather additional lessons learned as they are recorded and tracked for the 2022 WMP update.

Item 2: As submitted in BVES's Q3 2021 QDR, the figure below presents the inspection clearance findings totals, which also account for QA/QC activities performed over the service area. BVES performs a service area wide inspection practice of its 32-square mile territory, with additional activities performed to date as a result of Q3 2021.

Figure 4: Vegetation Inspection Findings YOY

Table 1: Recent performance on progress metrics

Metric type	#	Progress metric name	2015	2016	2017	2018	2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021	Q3 2021
2. Vegetation clearance findings from inspection - total	2.a.i	Number of spans insepcted where at least some vegetation was found in non-compliant condition - total	NA	NA	NA	NA	NA	486	157	395	285	239	133	107
	2.a.ii	Number of spans insepcted for vegetation compliance - total	NA	NA	NA	NA	NA	863	328	659	648	675	567	5221
2. Vegetation clearance findings from inspection - in HFTD	2.b.i	Number of spans insepcted where at least some vegetation was found in non-compliant condition in HFTD	NA	NA	NA	NA	NA	486	157	395	285	239	133	107
	2.b.ii	Number of spans insepcted for vegetation compliance in HFTD	NA	NA	NA	NA	NA	863	328	659	648	675	567	5221

Item 3: BVES VM QC target is 72 VM QC checks of VM clearance work per year. This equates to about 15 percent of the service area. BVES's VM contractor utilizes a three-year plan and

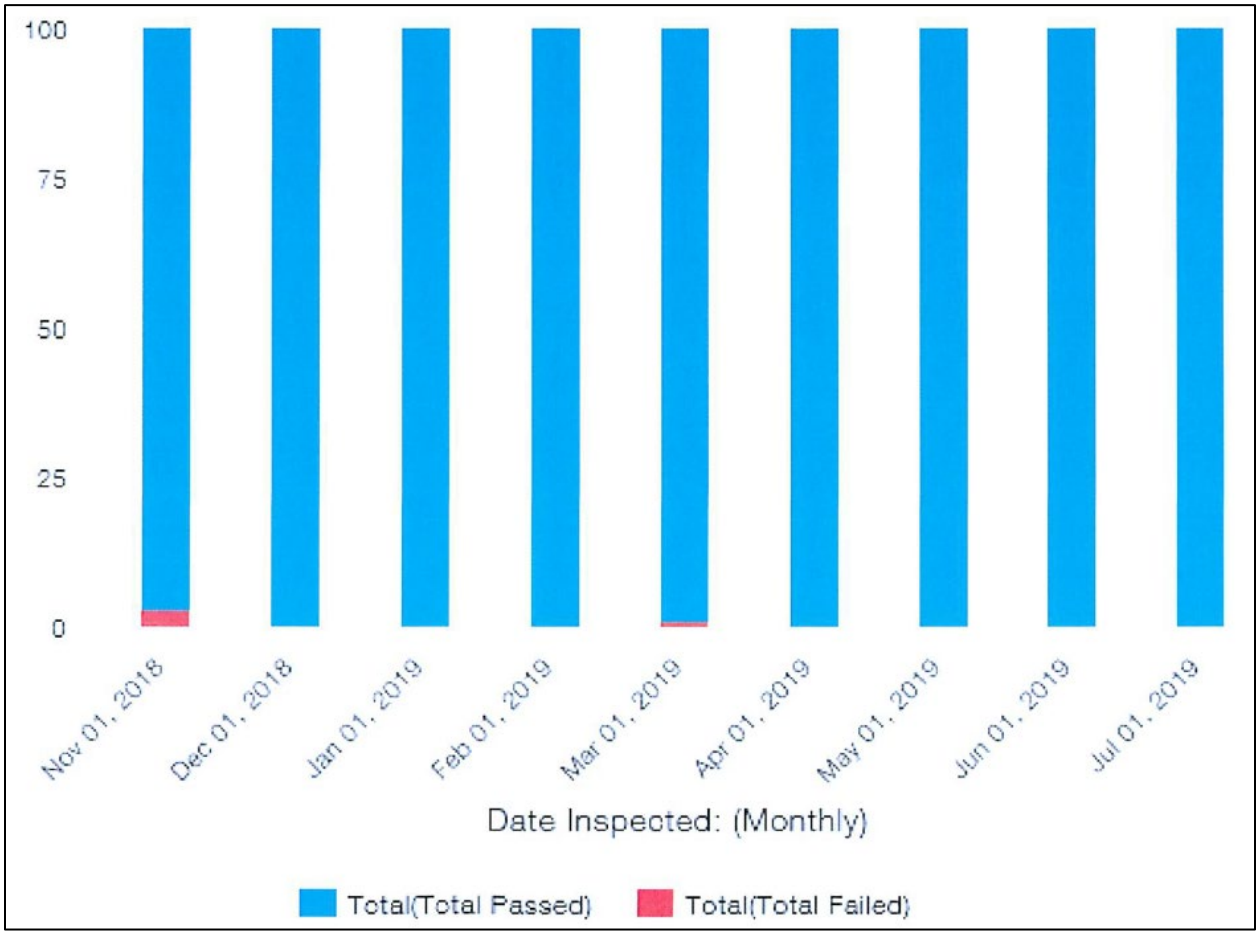
clears about 33 percent of the service area per year. Therefore, BVES inspects through VM QC at least 50 percent of the VM contractor's work.

Item 4: BVES conducts frequent QC checks of its vegetation contractor's work execution. Discrepancies noted during QC checks, detailed inspections or patrols of overhead circuits or other means, are generally forwarded to contracted resource via the Kintone Tree Trimming QC application provided by BVES. The contractor responds by marking whether completion of corrective actions were achieved through the software database. Additionally, the contractor documents the vegetation trimming activities performed in the utility right-of-way application to BVES' Partner Software (part of BVES' GIS suite). Discrepancies are 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.

BVES utilizes a tree trimming QC program, Kintone Tree Trimming, as part of its internal quality control for vegetation management activities. This database provides several fuel characteristics that are tracked for recordkeeping and presents the number of trees targeted for remediation with those that have passed a QC review and those that have failed. This results in an efficiency rating based on set parameters that align with General Order 95 Rule 35 and internal enhance vegetation management practices. An example report product of tracked activities can be found in the figure below.

Figure 5: Kintone Tree Trimming QC Monthly Inspection Summary Example



The log additionally accounts for the number of successful trimming services and inspections performed for at-risk species, which are reported by field crews and digitized into the software with vegetation specifications, photos, and timelines for cycled growth.

Detailed parameters of tracked data elements are collated in the table below.

Table 12: Vegetation Management Verification Functions

Vegetation Management QC Resource	Feld ID/ Metadata	Data Element Description
Kintone Tree Trimming QC Module	Record Number	ID of the Tree Trimming request
	Address	Location of the tree to be trimmed. Usually includes the pole number nearest to the tree
	Infract or Type	The type of job to be performed, depends on the type of tree and the rating of the conductors
	Complete	Flag to identify if the job was completed.
	Comments	Additional comments regarding the job
	Time Frame	General time frame by when the job should be done
	Date Complete	Date When the job was complete
	Due Date (If urgent)	Date by which the job needs to be completed. Only provided if the job is urgent.
	Completed by	Name of the person who did the job
	Reason	Description of the job that was completed
Vegetation Management Report	Corrective / Preventative	Each form must indicate whether the vegetation management work was corrective or preventative
	Due At:	Data by which the vegetation management work is to be performed
	Crew Size:	Number of personnel to engage in the work
	Scheduled Work:	Date and time of the scheduled work
	Pole Number:	Location marker by the adjacent pole number
	Line Number:	The associated line nearby the work performed
	Underground Device #:	If applicable, the underground device related to the vegetation management activity
	Photo Before:	Illustration of the vegetation prior to corrective/preventative action
	Photo After:	Illustration of the vegetation after the corrective/preventative action
	Comments:	Additional comments related to the scope of work
Vegetation Inspection Report	Tree Species:	Toggle options that list the classification of tree based upon the service territory ecology
	Density of Vegetation:	The level of vegetation density determined from the inspection
	Height of Vegetation:	Measurement of the identified vegetation species
	Type of Permission:	Determination of permission of utility to remedy vegetation concerns
	Proof of Permission:	Supporting documents demonstrating permissions
	Trim Info	Check boxes for information related to the status of the tree and nearby lines
	Amount Trimmed (FTS):	The reported amount of vegetation trimmed
	Width:	Width of vegetation
	Work Info:	Check boxes for work completion items
	Date of Visit	Recorded time and date of inspection
	Priority:	Determination of the rank of priority

Vegetation Management QC Resource	Feld ID/ Metadata	Data Element Description
	Suggested Return Date:	Date determined for return routine inspection or as part of a corrective action, depending on the priority level
	Permits	Check boxes for permits in hand related to selected agencies and jurisdictions
	Inaccessible / Special Equipment Needed	Yes / No with additional comments
	Comments:	Additional comments on the scope of work

The VM QA program is part of the quality management program for vegetation inspections and clearing activities that provides confidence VM work meets expectations and requirements are fulfilled. The QA program delivers both:

- Internal reports and updates to management, and
- External updates to customers, government agencies, regulators, certifiers, and other vested stakeholders.

The VM QA program consists of the following elements:

- Annual VM Program Audit conducted by the Forester, if assigned (if not assigned, the Regulatory Compliance Project Engineer will perform the audit).
    - This activity is conducted at the beginning of each year with an annual lookback at executed work and is intended to be a comprehensive review of the entire VM Program.
    - The Wildfire Mitigation & Reliability Engineer will issue a report of any necessary corrective actions on identified issues in the annual audit by May 1st of each year.
- Quarterly VM Program Assessment conducted by the Wildfire Mitigation & Reliability Engineer
    - The Wildfire Mitigation & Reliability Engineer conducts quarterly assessments in preparation of a quarterly report to senior advisors within BVES. The report includes, among other items, a brief narrative on the status of the VM Program, VM QC checks performed, analysis or commentary on metrics and findings, and any corrective actions taken.
- Periodic VM QC checks are conducted by staff per
    - Evaluators assigned to perform QC checks are provided a map of the assigned circuit areas and a maintained requirements checklist.
    - The Wildfire Mitigation & Reliability Engineer analyzes results of the VM QC checks for trends and recommends a corrective action plan, as necessary

- The VM QC electronic tracking application, details records of performed activities.

Item 5: BVES recently updated its Vegetation Management QC Program in early October 2021. With the recent inclusion of a certified contracted forester, BVES is in the process of training and defining an appropriate process. BVES aims to achieve reasonable assurance of executed vegetation management activities performed throughout the year by BVES. BVES is also working to include the procedures outlining the QA verification and quarterly/annual audits within the 2022 WMP update.

1.12 BVES-21-12: Spatial Data Issues

The following issue has been identified for a progress report update in Table 13.

Table 13: BVES-21-12

Utility-#	Issue Title	Issue Description	Remedies Required and Alternative Timeline, If Applicable
BVES-21-12	Spatial data issues	Energy Safety has identified numerous areas for improvement for BVES's Quarterly Data Reports. These issues negatively affect the usability of the data and do not meet Energy Safety GIS Standard. Energy Safety has specified these issues in Table 3 of the Action Statement.	See Table 3[1] for specific remedies related to each data issue. In the November 1, 2021 report, BVES must report on its progress in advancing its GIS capabilities.

[1]Table 3 is labeled as such and directed from WSD-022 Action Statement on BVES's 2021 WMP.

BVES has continued to enhance its GIS capabilities over 2021 and digitize prior work and inspection implementation and results. In the last year, BVES has executed changes respective to its Gap Analysis for GIS results, identified in November 2020. Since then, BVES has worked with external consultants to carry over training and future mapping needs to acquire in-house staff to ensure data issues are moving toward remediation. BVES has made progress to address the issues discussed in the table below.

Table 14: Spatial Data Issues Remedy Timeline

Data Issue Title	Data Issue Description	Data Remedies Required	Progress to Remedy Issue & Timeline
Empty/null geometry	Of 37 records submitted in the "Red Flag Warning Day" feature, 36 have no geometry. The single record with a polygon associated with it has no attributes.	BVES must follow Energy Safety GIS Data Reporting Standard, including items that require a geometry.	This will be addressed in Q4 2021 or before the 2022 WMP Update.
OH and UG conductors separated	Overhead and underground asset line (conductor) data were reported separately, which is not necessary and does not meet the data standard.	Underground and overhead assets comprising the same portion of a utility's infrastructure (transmission / primary distribution / secondary distribution) are to be submitted in a single feature class, and the field "Asset OH or UG" used to describe the location of each asset.	BVES has updated its GIS package to account for this data issue in the Q3 2021 spatial data QDR submission.
Non-unique primary keys	Primary keys were not unique. Primary key / unique ID fields are fundamental, and data submitted without a unique primary key is not useable.	Each record submitted must have a primary key; each primary key must be unique.	BVES has updated its GIS package to account for this data issue in the Q3 2021 spatial data QDR submission.
Missing foreign keys	The records in the "VM Outages" feature class submitted did not have any values in the "DoutageID" field, which is the foreign key to the Distribution Outage feature.	Foreign keys must be submitted where specified in the data standard.	BVES has updated its GIS package to account for this data issue in the Q3 2021 spatial data QDR submission.
Domain values not used	In several cases, BVES submitted data which did not conform to the domains specified. One example of this is the "Asset OH or UG" field in the Transformer feature class.	BVES must use coded-value domains where specified in the data standard.	BVES has updated its GIS package to account for this data issue in the Q3 2021 spatial data QDR submission.

Data Issue Title	Data Issue Description	Data Remedies Required	Progress to Remedy Issue & Timeline
Changed field names	BVES submitted data which did not conform to the specifications in many cases. Fields/feature classes listed below do not match the specified names: "Substation" in Primary Distribution Line "DvmOutageI", "Inspection", "Assoc", "Assoc1", "TreeSpecie", "TreeD", "VmOutgDe", "Location", "Y_Coord", and "X_Coord" in VM Outages "Y2_COORD" and "X2_COORD" in Critical Facility	BVES must use feature class and field names specified in the data standard.	BVES has updated its GIS package to account for this data issue in the Q3 2021 spatial data QDR submission.
Removed fields	The data BVES submitted is missing the following fields specified in the data standard: "CircuitName", "SubstationID", and "Conductor Type" in Primary Distribution Line (OH) "CircuitName" and "SubstationName" in Primary Distribution Line (UG) "Basic Object Cause Comment" in Distribution Outage	BVES must not remove fields from the geodatabase template.	BVES has updated its GIS package to account for this data issue in the Q3 2021 spatial data QDR submission.
Changed field type or length	BVES submitted data which did not conform to the specifications in many cases. Fields/feature classes listed below were not of the correct type, or were longer than specified: "Outage Description", Damaged Device Comment", "MED", and "Expulsion Fuse Operation" in Distribution Outage Every string type field in VM Outage feature (11 fields) "Red flag warning issue date" and "Fire Weather ZoneName" in Red Flag Warning Day	BVES must not modify the length or data type of fields.	BVES has updated its GIS package to account for this data issue in the Q3 2021 spatial data QDR submission.

1.13 BVES-21-13: Unexplained changes to risk spend efficiency (RSE) estimates for wildfire and PSPS Mitigation Initiatives

The following issue has been identified for a progress report update in Table 15.

Table 15: BVES-21-13

Utility-#	Issue Title	Issue Description	Remedies Required and Alternative Timeline, If Applicable
BVES-21-13	Unexplained changes to risk spend efficiency (RSE) estimates for wildfire and PSPS mitigation initiatives	In its 2021 Revised WMP Update, BVES reported six different RSE estimates for wildfire mitigation initiatives and four different RSE estimates for PSPS mitigation initiatives compared to its 2020 WMP without explanation. Refer to Table 4 and Table 5 for specific initiatives and RSE estimates.	BVES must provide all supporting documents and workpapers to justify the changes in RSE estimates outlined in Table 4 and Table 5 of the Action Statement.

There are two components to RSE estimates: (1) risk reduction estimate and (2) annualized cost estimate. The changes in RSE values was almost exclusively due to updating the annualized cost data for each initiative. Each year, BVES reviews and updates cost estimates for WMP initiative to ensure it is reflective of the market (including adjustments for inflation) and any changes to the details of the project scope.

BVES also re-evaluates the risk benefit as well each year. In Table 5 (found as Table 17 of this progress report), the “Install Grid Automation” initiative also had a reduction in “Risk Reduction”. This risk benefit was re-evaluated in preparing the 2021 WMP and it was determined that it was too high.

Table 16: Table 4 Wildfire Mitigation Initiatives RSE Changes

Table 4	2021			2020			Reason for Change in RSE
Wildfire Mitigation Initiatives	**Risk Reduction**	**Cost**	**RSE**	**Risk Reduction**	**Cost**	**RSE**	
Increased Vegetation Management	872292	$2,504,401	0.35	872292	$3,265,11	0.27	Change in annualized cost
Covered Wire Installation Program (34.5 kV)	872292	$2,200,800	0.40	872292	$1,821,994	0.48	Change in annualized cost

Table 4	2021			2020			Reason for Change in RSE
Wildfire Mitigation Initiatives	**Risk Reduction**	**Cost**	**RSE**	**Risk Reduction**	**Cost**	**RSE**	
Evacuation Route Hardening	1022629	$380,000	2.69	1022629	$1,710,000	0.6	Change in annualized cost
Automatic Recloser Upgrades	1115047	$290,459	3.84	1115047	$300,000	3.72	Change in annualized cost
Install Grid Automation	1148136	$970,422	1.18	1148136	$1,940,845	0.59	Change in annualized cost
Situational Awareness Enhancement Project	1143069	$456,000	2.51	1143069	$342,000	3.34	Change in annualized cost

Table 17: Table 5 PSPS Mitigation Initiatives RSE Changes

Table 5	2021			2020			Reason for Change in RSE
PSPS Mitigation Initiatives	**Risk Reduction**	**Cost**	**RSE**	**Risk Reduction**	**Cost**	**RSE**	
Rebuild Radford Line	2601813	$5,600,000	0.46	2601813	$5,250,000	0.5	Change in annualized cost
Install Grid Automation	1691178	$970,422	2.68	2601813	$1,940,845	1.34	Change in annualized cost & risk reduction benefit
Situational Awareness Enhancement Project	2397142	$456,000	5.26	2397142	$342,000	7.01	Change in annualized cost
Construct Energy Storage Facility	2638046	$13,110,000	0.2	2638046	$9,151,350	0.29	Change in annualized cost

1.14 BVES-21-14: Limited discussion on reduction of scale, scope, and frequency of PSPS

The following issue has been identified for a progress report update in Table 18.

Table 18: BVES-21-14

Utility-#	Issue Title	Issue Description	Remedies Required and Alternative Timeline, If Applicable
BVES-21-14	Limited discussion on reduction of scale, scope, and frequency of PSPS	BVES has limited discussion on its near-term progress for reduction in scale, scope, and frequency of PSPS. BVES stated that due to its minimal use of PSPS in the past, it is unable to further reduce PSPS. Nevertheless, BVES must still report its plans to minimize PSPS scale, scope, and frequency, normalized for weather events and climatic conditions.	BVES must report on its plan to minimize the scale, scope, and frequency of PSPS events normalized for weather events and climatic conditions, and fully describe how its planned mitigation initiatives minimize PSPS impact.

The appearance of limited discussion on BVES's near-term progress for reduction of scale, scope, and frequency of PSPS has been inherently tied to lack of any activation of PSPS events since the protocols were formally defined through Rulemaking 18-12-005. BVES provided a PSPS plan update in on February 24, 2021 in tandem with an updated Emergency Response Plan ahead of the 2021 WMP submission.[2] BVES has determined PSPS susceptibility to directly impact customers when:

- There exists the presence of extreme fire weather forecasts within the service area, and not solely based on county-wide Red Flag Warning issuances, and whereas these conditions meet set criteria threshold for initiating a PSPS activation.
    - Factors to activate PSPS include: design strength and characteristics of distribution overhead facilities, adjacent vegetation density, the National Fire Danger Rating System seven-day fire threat outlook, National Weather Service advisories, local weather forecasts, BVES's meteorologist's forecast, information received from BVES-owned weather stations, real-time information from trained personnel positioned in HFTD areas, and any other input received from public safety partners, the state, and local authorities.
- Conditions of extreme fire weather that are forecasted outside of BVES's service area, and likewise do not meet service territory criteria thresholds. For this case, SCE would

[2] BVES, Public Safety Power Shutoff Plan, February 24, 2021. https://www.bvesinc.com/media/managed/psps/BVES_INC_PSPS_Procedures_Rev1.pdf.

direct PSPS activation on SCE-owned and operated assets, which may lead to partial or complete loss of three service SCE supply lines into the territory.

- In this situation, BVES would seek to supply power to its customers using all available resources, which include the Bear Valley Power Plant (BVPP) generating 8.4MW of local power that would supply critical facilities and the majority of the service area.

The table below outlines BVES's action plan for addressing partial or complete loss of power due to SCE supply line de-energization events.

Table 19: BVES Action for SCE Lines De-Energized due to PSPS

Condition	BVES Action
SCE De-energizes Doble or Cushenberry Line for PSPS.	1. Notify key internal staff and brief Field Operations staff on condition for situational awareness. 2. Energize Radford Line as needed to meet load demand. If the Utility Manager deems it necessary, energize the Radford Line as needed for reliability. 3. Startup of the BVPP as needed to meet load demand. 4. No reduction on load necessary, since the Doble and Cushenberry are capable of carrying the other's load. 5. Implement applicable portions of BVES Emergency Response Plan for a partial loss of SCE supply lines
SCE De-energizes Bear Valley Line for PSPS.	1. Notify key internal staff and brief Field Operations staff on condition for situational awareness. 2. If Radford is energized, shift loads to Shay Line prior to deenergizing for PSPS. Generally, this should be done about 4 hours prior to the SCE de-energizing the line. 3. If needed, start up the BVPP to meet load demand. 4. If needed, instruct interruptible customers (Bear Mountain Resorts) to reduce load as needed to meet load demand. 5. Implement applicable portions of BVES Emergency Response Plan for a partial loss of SCE supply lines
SCE De-energizes Doble or Cushenberry and Bear Valley Lines for PSPS.	1. Notify key internal staff and brief Field Operations staff on condition for situational awareness. 2. Since the Doble and Cushenberry are capable of carrying the other's load, follow the procedure for "SCE De-energizes Bear Valley Line for PSPS" above. 3. Prepare for potentially losing all SCE supply lines into BVES service area. 4. Prepare for sustained BVPP operations and rolling blackouts. 5. Evaluate distribution circuit loads. 6. Implement applicable portions of BVES Emergency Response Plan for a partial loss of SCE supply lines.
SCE De-energizes Doble and Cushenberry Lines for PSPS.	1. Notify key internal staff and brief Field Operations staff on condition for situational awareness. 2. If not already done, energize the Radford Line. 3. Four hours prior to SCE de-energizing the lines, per the Field Operations Supervisor's direction, shift as much of the load to the BVPP and Radford Line as follows: a. Open the Shay and Baldwin automatic reclosers. b. "Express" the Radford Line to Meadow Substation without overloading the Radford Line per Field Operations' switching order. c. Start up the BVPP, place enginators on-line and increase load to within the combined capacity of the BVPP and Radford Line. d. Implement BVES Emergency Response Plan for sustained loss of SCE supplies from Lucerne including "rolling blackout" procedures. 4. Prepare for sustained BVPP operations and rolling blackouts. 5. Frequently monitor distribution circuit loads.

Condition	BVES Action
SCE de-energizes Doble, Cushenberry, and Bear Valley Lines for PSPS.	1. Notify key internal staff and brief Field Operations staff on condition for situational awareness. 2. If the Radford Line is energized, shift loads to the Shay Line. 3. Four hours prior to SCE de-energizing the lines, per the Field Operations Supervisor's direction, perform the following: a. Start up all of the BVPP enginators. b. Reduce system load to within the capacity of the BVPP by isolating distribution circuits as directed by the Field Operations Supervisor. c. Once system load is matched with the BVPP capacity, open the Shay and Baldwin automatic reclosers. d. Implement BVES Emergency Response Plan for sustained loss of all SCE supply lines including "rolling blackout" procedures.

Scope, scale, and frequency of PSPS activations will be mitigated through BVES's seasonal operational posture that direct the following actions taken throughout the year:

- The Radford Line is to be de-energized from April to October or else otherwise recommended by the Field Operations Supervisor. Re-energization can be achieved should the forecasted demand require additional generation, for planned maintenance, system upgrades, or other directed action. No redundancy degradation exists with this operational protocol since the supply lines from the Lucerne area are separated and independent of one another. The Radford Line assists to supply power during winter high load periods as BVES profiles as a winter-peaking utility.

- From April to October, BVES will place certain auto-reclosers, fuse TripSavers, and switches in "manual" operation such that they will not shut and test upon detection of a fault. A specific list of switched mechanisms will be derived ahead of each fire season to ensure load forecasts align with present conditions to the best ability possible. The completion of the Grid Automation Project, which establishes connectivity and control of these devices, will necessitate a policy revision or re-evaluation.

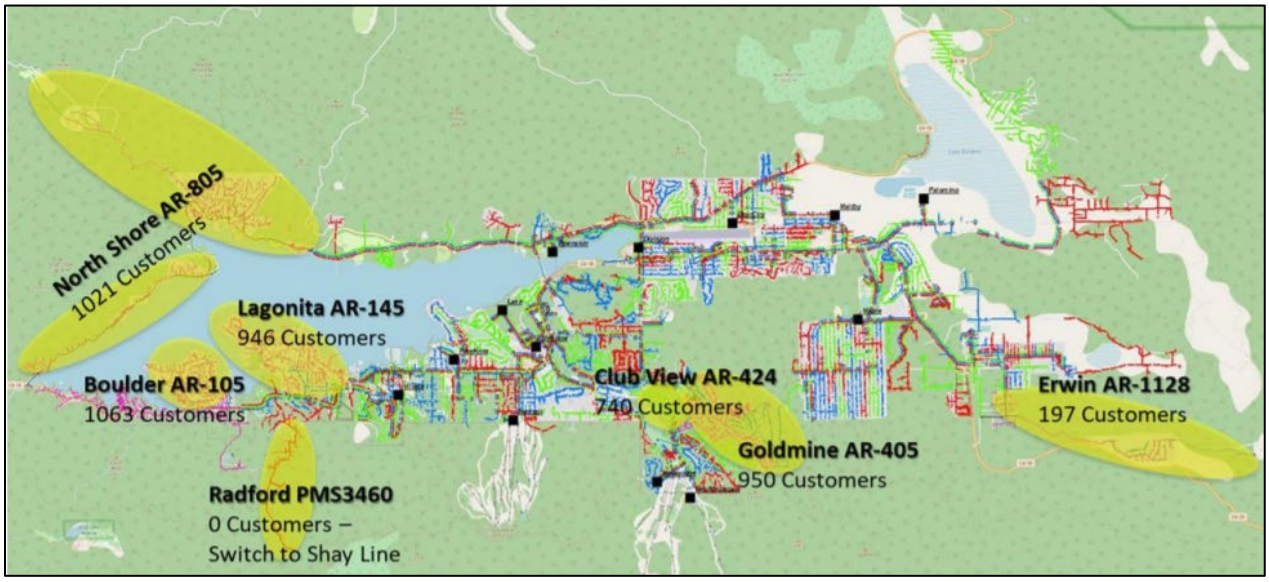
    - When an auto-recloser, switch, or fuse TripSaver that was placed in "Manual" due to the above policy trips open, the affected portions of the de-energized circuit or feeder will be patrolled prior to re-energizing them. If the cause is likely known and the fire risk is "Green" or "Yellow," the Field Operations Supervisor may authorize the Line Crew to test the device once. If the device trips open again, the circuit or feeder must be thoroughly patrolled to determine the fault and ensure there is no risk of causing fire.

- Due to reduced load in non-winter period, the Utility Engineer & Wildfire Mitigation Supervisor will develop specific settings for auto-reclosers and other protective devices in the field to enhance fire prevention. The list of affected devices will be provided to the Utility Manager and the Field Operations Supervisor. Additionally, the Field Operations Supervisor will be provided the settings that the Field Operations staff will be required to set on each device. Specific dates to enter these reduced settings will be recommended by the Field Operations Supervisor and approved by the Utility Manager. Engineering staff will not change device settings without the Field Operations Supervisor's authorization.

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 a need 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. Isolating areas with switching devices allows for sectionalization of the areas affected, which will be communicated to affected parties if a decision to activate PSPS is made.

BVES has identified seven areas (six of which include customer impact) that are subject to proactive de-energization as well as the potential power loss to affected residents. This is illustrated in the map below. BVES estimates these outages to affect the number of customers during the worst-case conditions, and due to enhanced operational protocols and sectionalization design, minimal impact is expected in the event of a PSPS activation. It is presumed that only a "black swan" event would result in all areas being de-energized (i.e., SCE initiates the highest affected de-energization activation impacting supply lines and BVES lacks the ability to support base load due to unforeseen circumstances).

Figure 6: BVES High Risk Areas for PSPS Consideration



Recent PSPS Briefs and Initiative Mitigation Measures

In recent briefs to the WSD/OEIS in June 2021, BVES provided its action plans to monitor weather conditions, provide contextual information to customers regarding the potential of a PSPS activation, and efforts to reduce impact of a potential PSPS activation. This is summarized in the table below.[3]

[3] OEIS. 2021 Small Multi-Jurisdictional Utilities PSPS Briefing Workshop. June 2021. https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/safety-and-enforcement-division/documents/smju-2021-psps-preparedness-staff-briefing-1-presentation-final.pdf.

Table 20: June 2021 PSPS Briefing Summary

Microgrids, Resiliency Zones, and Temporary Generation	Mitigation Measures to reduce need and/or impact of PSPS
Critical infrastructure already has backup generation and is outside PSPS high risk areas.	34.5 kV Supply Line re-closers have all been changed out to Pulse Conditioned IntelliRupters. (Completed in 2019)
BVES in process of developing a small utility scale solar-battery project: Solar: 5 MW AC single-axis tracker solar generation facility. Battery: 4 MW/16 MWh lithium-ion NMC battery energy storage system	PSPS high risk areas sectionalized from rest of BVES system. (Completed in 2019)
Provide portable storage devices for access and functional needs or life support customers on an as needed basis	Covered conductor project in progress. Installed 7.7 circuit miles in 2020. Installed 1.4 circuit miles to date in 2021 of 12.9 circuit miles planned.
Customer Resource Center backup generation available	Eliminated all expulsion fuses from system.

Appendix A. ISSUES AND REMEDIES FOR 2022 WMP

The table below collates the remedies requiring an address within this Progress Report update to BVES's 2021 WMP as well as modifications for the upcoming 2022 WMP.

Utility-#	Issue title	Issue description	Remedies required and alternative timeline if applicable
BVES-21-01	Inadequate disaggregation of expenditure	As discussed in Section 1.2 of the Action Statement, BVES was required to disaggregate its WMP expenditure for its Revision Notice Response. However, Cal Advocates discovered that 17 of BVES's initiativeshave the same expense amount in 2020, 11 in 2021, and 13 in 2022. In response to a Cal Advocates' data request, BVES statesthat it spreads certain expenses equally across multiple initiatives, but BVES offers no quantitative analysis to support such allocation.	For its 2022 WMP Update, BVES must identify where common costs are allocated across multiple initiatives. In addition, BVES must justify its allocation methodology by describing these common costs in detail, explaining how theyrelate to each initiative anddemonstrating that the allocated values reasonably reflect the initiatives' true costs.
BVES-21-02	Program targets are unmeasurable and difficult totrack	The 2021 WMP guidelines defines program targets as "quantifiable lists 86 program targets; 32 of these targets have no numerical target and 42 targets are quantified by the unmeasurable unit"Percent Project Milestones Completed" (or similar).measurements of activity." In Table5.3-1: List and Description of Program Targets, Last 5 Years, BVES	In its 2022 WMP Update, BVES must: 1. Only include quantifiable measurements of activity in its list of program targets in Table5.3-1 (or similar). **2.** To the extent possible, modify existing targets to use measurable units.For example, the unit for intrusive pole inspections should be "# of Pole

Utility-#	Issue title	Issue description	Remedies required and alternative timeline if applicable
			Inspections" rather than "Percent of Scheduled Circuits Completed." 3. If using milestones as asign of progress, describe milestones in Section 7.3 under appropriate initiatives.
BVES-21-03	Vegetation inspection roles lack minimum forestry and arboriculture qualifications	None of the roles described in Supporting Table 5.4.1-1 include minimum qualifications in forestry and arboriculture. In contrast, Liberty and PacifiCorp require their vegetation inspection personnel to either have ISA Arborist Certification, be a Register Professional Forester, or have some arboriculture experience.-Energy Safety is concerned that BVES does not hire qualified workers to conduct vegetation inspections.	BVES must: 1. Provide evidence that its vegetation inspection personnel are adequately qualified and trained to perform vegetation inspections. 2. Include forestry and/orarboriculture certifications and/or experience as minimum qualifications for appropriate vegetationinspections roles.
BVES-21-04	No climatedriven riskmapping	BVES does not havea program that addresses climate- driven risk mapping.	In its 2022 WMP Update, BVES shall describe how itapplies risk analysis models to consider future climate projections.
BVES-21-05	Lack of consistency in approach to wildfire risk modeling across	The utilities do not have a consistent approach to wildfire risk modeling. For example, in their wildfire risk models, utilities use different types of	The utilities must collaborate through a working group facilitatedby Energy Safety to develop a more consistentstatewide

Utility-#	Issue title	Issue description	Remedies required and alternative timeline if applicable
	utilities	data, use their individual data sets in different ways, and use different third-party vendors. The WSD recognizes that the utilities have differing service territory characteristics, differing data availability, and are at different stages in developing their wildfire risk models. However, the utilities face similar enough circumstances that there should be some level of consistency in their approaches to wildfire risk modeling statewide.	approach to wildfire risk modeling. After Energy Safety completes its evaluation of all the utilities' 2021 WMP Updates, it will provide additional detail on the specifics of this working group. A working group to address wildfire risk modeling will allow for: 1. Collaboration among the utilities; 2. Stakeholder and academic expert input; and Increased transparency.
BVES-21-06	Disparities between BVES's situational awareness and forecasting capabilities and maturity model reporting	BVES had a significant increasein its maturity assessment ratings for situational awareness and forecasting in its WMP update. Theratings are much higher in comparison to peer utilities and prior reporting in 2020. It remains unclear if the ratings selected are accurate representations of BVES's maturity, as the explanations in the initiatives do notexplain these improvements.	BVES must describe: 1. How it intends to collect and measure physical impacts of weather on its grid, such as sway in lines and sway in vegetation. 2. How it plans to include wind estimations at various atmospheric altitudes relevant to ignition risk. 3. What initiative it has or how it is using ignition detection software.

Utility-#	Issue title	Issue description	Remedies required and alternative timeline if applicable
			4. How it plans to accurately forecast weather at least three weeks in advance.
BVES-21-07	Lack of detailon prioritizationof initiatives based on determined risk	BVES does not provide any details on the actual prioritization of its grid hardening efforts, despite having determined the highest risk circuits along its system. Instead, BVES relies on the Tier 2 and Tier 3 HFTD designations to justify prioritization. BVESfails to provide the details on how the timing of deployment of its grid hardening efforts mitigate its highest risk areas, and fails to providea plan that demonstrates it is addressing and mitigating its highest risk areas.	BVES must: 1. Explain how the timing of deployment of its grid hardening efforts are based on its risk calculations and prioritize mitigating its highest risk areas; and 2. Provide a plan that demonstrates that BVES is addressing and mitigating its self-identified highest risk areas through system hardening initiatives.
BVES-21-08	Limited evidence to support the effectiveness of covered conductor	The rationale to support the selection of covered conductor as a preferred initiative to mitigate wildfire risk lacks consistency among the utilities, leading some utilities to potentially expedite covered conductor deployment without first demonstrating a full understandingof its long-term risk reduction and cost-effectiveness. The utilities' currentcovered conductor pilot efforts are	The utilities must coordinate to develop a consistent approach to evaluating the long- term risk reduction and cost- effectiveness of covered conductor deployment, including: 1. The effectiveness of covered conductor in the field in comparison to alternative initiatives.

Utility-#	Issue title	Issue description	Remedies required and alternative timeline if applicable
		limited in scope and therefore fail to provide a full basis for understanding how covered conductor will perform in the field. Additionally, utilities justify covered conductor installation by alluding to reduced PSPS risk but fail to provide adequate comparison to other initiatives' ability to reduce PSPS risk.	2. How covered conductor installation compares to other initiatives in its potential to reduce PSPS risk.
BVES-21-09	Lack of asset inspection quality assurance and quality control (QA/QC) program.	BVES is in the process of adopting a formal QA/QC program in 2021 butdid not provide dates on when it intends to implement such, did not provide details on its current informal QA/QC process, nor providedetails on the scope of the QA/QC program currently in development.	BVES must: 1. Provide a timeline for its implementation of a formal QA/QC process. 2. Explain how it conducts quality checks of its asset inspections prior to the adoption of the formal program. 3. Develop an interim QA/QC procedure for asset inspections between now and the establishment of its new QA/QC program, if such has yet to be adopted, in order to ensure that work is being completed accurately and effectively. 4. Provide updates on the development of its QA/QC program in its

Utility-#	Issue title	Issue description	Remedies required and alternative timeline if applicable
			Progress Report, including: (i) the scope of the QA/QC program, (ii) procedures of the QA/QC program that BVES has developed, and (iii) the status of the QA/QC program implementation.
BVES-21-10	Limited discussion of community outreach	BVES-R7 requires BVES to discuss its community engagement and outreach as it relatesto VM in Section 7.3.5.1. BVES instead discusses fuels management activities performedby other entities including Big Bear Fire Department and Bear Valley Community Service District.25 BVES mentions outreach efforts to "USFS, CAL FIRE and Big Bear Fire Department in an effort to develop collaborative measures in the area of fuels management," but fails to discuss how it mitigates the community impacts of major VM activities including tree-trimming and tree removal.	BVES must: 1. Provide descriptions of notification and communication methods for customers and partner agencies regarding VM activitiesincluding, but not limited to, tree- trimming and tree removal. 2. Detail any efforts in community outreachand public educationrelated to vegetation management.
BVES-21-11	Inadequate discussion of QA/QC of VM inspections	From the discussionin Section 7.3.5.13, itis difficult to know whether BVES has aQA/QC program for VM. A brief mention of third- party evaluations isthe only	BVES must: 1. Describe the "lessons learned from third party evaluations and inspections."

Utility-#	Issue title	Issue description	Remedies required and alternative timeline if applicable
		unequivocal detail. It is unclear whom at BVES performs QA/QC, how oftenQA/QC is performed, and what goals and targets exist for QA/QC.	2. Provide the number of QA/QC evaluation and inspections completed each year. 3. Provide a QA/QC audit target as a percentage of total VM inspections per year. 4. Detail BVES's differentiation between its quality assurance program and quality control program. 5. Report on BVES's plan to add a QA program tothe current QC program.
BVES-21-12	Spatial dataissues	Energy Safety has identified numerousareas for improvement for BVES's Quarterly Data Reports. These issues negatively affect the usability of the data and do not meet Energy Safety GIS Standard.Energy Safety has specified these issues in Table 3 of the Action Statement.	See Table 3 for specific remedies related to each data issue. In the November 1, 2021 report,BVES must report on its progress in advancing itsGIS capabilities.
BVES-21-13	Unexplained changes to risk spend efficiency (RSE)estimates for wildfire and PSPS mitigation initiatives	In its 2021 Revised WMP Update, BVESreported six different RSE estimates for wildfire mitigation initiatives and four different RSE estimates for PSPS mitigation initiatives comparedto its 2020 WMP without explanation.	BVES must provide all supporting documents and workpapers to justify the changes in RSE estimates outlined in Table 4 and Table 5 of the Action Statement.

Utility-#	Issue title	Issue description	Remedies required and alternative timeline if applicable
		Refer to Table 4 and Table5 for specific initiatives and RSE estimates.	
BVES-21-14	Limited discussion on reduction of scale, scope, and frequencyof PSPS	BVES has limited discussion on its near-term progress for reduction in scale, scope, and frequency of PSPS. BVES stated that due to its minimal use of PSPS in the past, it is unable to further reduce PSPS. Nevertheless, BVES must still report its plans to minimize PSPS scale, scope, and frequency, normalized for weather events andclimatic conditions.	BVES must report on its plan to minimize the scale, scope, and frequency of PSPS events normalized forweather events and climaticconditions, and fully describe how its planned mitigation initiatives minimize PSPS impact.