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

Wildfire Mitigation Plan 2026-2028
Data Response

BVES Data Request No.	OEIS-P-WMP_2025-BVES-004
Request Date:	May 2, 2025
Due Date:	May 7, 2025
Requester:	Blythe Denton, Senior Wildfire Safety Analyst

SUBJECT(S):

Q01. Regarding Protective Settings Study
Q02. Regarding Coordination of BVES Fast Curve Trip Settings with SCE Supply Lines
Q03. Regarding BVES's Vegetation Management Enterprise System
Q04. Regarding BVES's Supervisor Quality Control of Inspection Findings
Q05. Regarding Post-Fire Service Restoration Procedures
Q06. Regarding Circuit Risk Classification
Q07. Regarding Risk Contributors
Q08. Regarding Consequence Risk
Q09. Regarding PSPS Risk

Total Attachments: 3

P.O. Box 1547, 42020 Garstin Drive, Big Bear Lake, California,
92315 Tel: (909) 866-4678 * Fax (909) 866-5056

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

BVES RESPONSE

Q01. Regarding Protective Settings Study:

On page 167 of the 2026-2028 Base WMP, BVES states "In 2024, Bear Valley engaged an expert power distribution consultant firm to perform an evaluation of the Bear Valley's device setting policy and provide recommendations to improve settings to reduce the probability of ignitions."

a. Provide the report from the completed study of BVES's protective settings on its 10 sample circuits that were performed by the consultant. If the report is subject to any confidentiality claims by the consultant, provide a redacted version of the report.

RESPONSE: See document "Q1. BVES-Enhanced Power Line Safety Setting".

Q02. Regarding Coordination of BVES Fast Curve Trip Settings with SCE Supply Lines:

On page 166 of 2026–2028 Base WMP, BVES discusses that its fast trip settings are dependent on SCE's devices and asserts that slower settings would cause SCE to trip first, resulting in broader outages.

a. Provide an explanation of how BVES's fast curve settings coordinate with SCE's protection relays at the two power supply points.

i. Include any reports from coordination studies, settings files, or protection diagrams showing the time-current coordination curves between BVES and SCE protective devices.

b. If BVES believes SCE would trip first in the event of a localized BVES fault (if BVES delays its trip), provide technical justification or historical examples demonstrating this has occurred or could occur.

ii. Include documentation that BVES has formally requested protection coordination from SCE if relevant.

RESPONSE:

a) In 2019, BVES began implementing a Fault Isolation and Service Restoration (FLISR) system on its 34KV sub-transmission network. To support this effort, BVES engaged its contractor, S&C, to conduct a coordination study between BVES's 34KV sub-transmission system and SCE's supply lines.

The study found that BVES's 34KV Baldwin and Shay circuits were successfully coordinated with SCE's Goldhill Supply Line. However, due to limitations in SCE's protection settings, full coordination could not be achieved with the SCE Zanja Supply Line, which serves the BVES 34KV Radford circuit at the end of the line and is located within the High Fire Threat District (HFTD) Tier 2 & 3 area of the San Bernardino National Forest.

Upon completion of the coordination study, BVES requested that SCE modify its protection settings in accordance with the study's recommendations. However, SCE had already implemented its protective settings and, citing the presence of bare wire on its system, was unwilling to make changes at that time. SCE indicated that additional internal investigation would be required.

In August 2024, BVES held a follow-up meeting with SCE to revisit the issue. During this meeting, BVES informed SCE that it was in the process of upgrading the BVES 34KV Radford line to covered conductors. BVES again requested updated protective settings to reflect this system improvement. SCE is currently in the design phase of reconductoring the Zanja line and, as part of that process, upgraded its recloser controllers. However, SCE opted to retain its existing protection settings at that time. BVES intends to continue working with SCE to resolve the coordination issues and achieve improved system reliability. See document "Q2. BVES-FLISR Study Final".

b) According to the S&C coordination study, a high-magnitude fault current downstream of the BVES Radford circuit could cause the BVES Radford relay to delay tripping, resulting in the upstream SCE relay operating first. In February 2024, BVES believes such a fault occurred on the Radford circuit, during which the SCE Zanja relay tripped before the BVES Radford relay. At that time, BVES was preparing to de-energize the Radford line for reconductoring and therefore did not engage with SCE regarding the coordination issue until August 2024. For additional details regarding the August 2024 meeting with SCE, please refer to the Q2a response. BVES remains committed to working collaboratively with SCE to resolve these coordination challenges and improve overall system reliability.

Q03. Regarding BVES's Vegetation Management Enterprise System:

On page 210 of its 2023-2025 Base WMP, BVES states that "BVES is implementing a new vegetation management enterprise system in 2023 created specifically to meet BVES needs. The program is called 'iRestore Tree Action Inventory Application.'" On page 294 of its 2026-2028 Base WMP, BVES states that "Bear Valley is implementing a new vegetation management enterprise system, Intelligent Vegetation Management System (IVMS), in 2025 created specifically to meet Bear Valley's requirements."

a. Provide the following:

i. A list of the vegetation management data that will be transferred from the iRestore application to the IVMS.

ii. An explanation of how the vegetation management data will be transferred to IVMS.

iii. A list of any vegetation management data that will not be transferred from the iRestore application to the IVMS.

iv. An explanation of how BVES will archive any vegetation management data that is not transferred to IVMS, including how it will ensure future accessibility and recall of this data.

v. Procedure document(s) that describe the transition from the iRestore application to the IVMS to support the explanations above, if available.

RESPONSE: Each tree data point from iRestore will be migrated to the IVMS database. Using the GPS coordinates along with all of the tree data will be transferred and a new point will be created within IVMS. All of the data in iRestore are included fields in IVMS, data migration should include all of the data. The only information that will need to be archived are the photos of each work location. BVES is currently working with AiDash on the best way to transfer the images into IVMS. BVES does not currently have any procedure document for this transfer.

Q04. Regarding BVES's Supervisor Quality Control of Inspection Findings:

On page 220 of its 2026-2028 WMP, BVES indicates that "QA/QC of distribution Detailed Inspections (VM_1) and Patrol Inspections (VM_2) conducted by Bear Valley's Field Inspector will include a supervisor's review and assessment of 100% of the findings identified during inspection. This will be conducted within 1 month of the inspection." BVES also states that "in addition, each year 5% of the inspected facilities will be checked by a qualified inspector other than the person performing the original inspection as a QC check on these inspections."

a. Indicate if the supervisor's QA/QC check is a field review, desktop review, or both a field review and desktop review of the inspector's findings.

b. Indicate if the review of 5% of the inspected facilities, by an inspector that is not the original inspector, is a field review, desktop review, or both a field review and desktop review of the inspector's findings.

c. Indicate if the review of 5% of the inspected facilities by an inspector, that is not the original inspector, is of:

i. The current year's findings only.

ii. The current year's findings and previous year's findings.

iii. All circuit miles regardless of whether an inspector identified a finding.

RESPONSE: a) The supervisor review is conducted by a desktop review of the inspected findings. b) The secondary 5% inspection will be a field review of the inspected findings. c) The 5% review will be of the total circuit miles that are inspected.

Q05. Regarding Post-Fire Service Restoration Procedures:

On page 214 of its 2026-2028 WMP, BVES outlines its Post-Fire Service Restoration procedure and states that "Once it is safe for crews to enter into areas that have been impacted by a fire, an inspection will be initiated to identify trees and vegetation that may be hazardous. These inspections are intended to identify trees and vegetation within striking distance to assets that were impacted by a wildland fire. Once the trees are identified as risks, vegetation crews will begin work on removing the trees." After a wildfire, damaged trees and tree limbs are at a higher risk of failing and impacting re-energized facilities. Therefore, it is important to have detailed post-fire mitigation plans to promptly assess scorched and burned trees. Such details often include prioritization of mitigation activities based on live crown ratios, bark char, needle dieback, species tolerance to fire, bark beetle presence, and other factors.1

a. Do BVES and/or BVES contractor's reference post-fire tree risk assessment guides to prioritize vegetation hazard mitigation work after a wildfire?

i. If yes, provide all post-fire tree risk assessment and prioritization guides used by BVES and/or BVES contractors.

ii. If no, describe any obstacles to producing post-wildfire tree risk assessment and prioritization guides.

RESPONSE: a. No. BVES aims to develop tree risk assessment guides and have them in place by the end of 2026. Currently, BVES does not see any obstacles to producing post-wildfire tree risk assessment and prioritization guides. BVES intends to leverage its relationship with the other IOUs that have more mature programs in this area.

Q06. Regarding Circuit Risk Classification:

On page 61 of BVES's 2026-2028 Base WMP, Figure 5-3 shows different classes of risk circuits.

a. Provide an updated, higher resolution version of this map with a more distinct color coding (such as red for highest risk to green for lowest risk) for the risk classification to improve readability.

RESPONSE:

a. Please see attached "Q6. 5.5.1 Top Risk Areas HFRA v2". Please note that the WMP uses the recommended colormap "Viridis" as specified in the WMP Guidelines.

Q07. Regarding Risk Contributors:

On page 62 of BVES's 2026-2028 Base WMP, Table 5-5 shows the top risk contributors of each of the highest risk circuits. The top risk contributor for each circuit is listed as either "None" or "Overhead Bare Wire Length."

a. Provide a version of Table 5-5 with additional detail on the top risk contributors for each circuit in Table 5-5 based on the components in Table 5-1. For example, for circuits with the top risk contributor listed as "Overhead Bare Wire Length," identify if the top contributor(s) include "Availability of Fuels", "High Winds" or another risk contributor is the top risk contributor detailed in Table 5-1 for that circuit with overhead bare wire.

RESPONSE:

a. As noted in Table 5-1 of BVES's 2026-2028 Base WMP, 10 risk factors are considered in the Fire Safety Circuit Matrix, which is a qualitative risk assessment tool. Risk factors "High Fire Threat District (HFTD)" and "Length of Overhead Bare Wire" are the two dominant contributors to the overall risk score calculation as they include the largest factors. For HFTD Tier 3 circuits, a factor of 10,000 is applied to the length of overhead bare wire. Additionally, risk factor "Length of Overhead Bare Wire" utilizes a risk factor of 200. All other risk factors use significantly smaller factor, and as such they are not top risk contributors.

The "Top Risk Contributors" column in Table 5-5 below has been augmented to note the HTFD, vegetation density (risk factor "Availability of Fuel"), and high wind intensity (risk factor "Susceptibility to High Winds) assignments for each circuit. Additionally, the risk model version column was corrected to indicate that both the Fire Safety Circuit Matrix and FireSight are used to calculate the overall wildfire risk. The modifications are provided below.

Table 5-5 Summary of Top-Risk Circuits, Segments, or Spans

Risk Ranking	Circuit	Overall Utility Risk Score	Wildfire Risk Score	Outage Program Risk Score	Top Risk Contributors	Total Miles	Version of Risk Model Used
1	**Boulder**	**0.59**	**0.66**	**0.51**	**Overhead Bare Wire Length - HFTD Tier 2 - Vegetation: Medium Density - Wind: High Intensity**	**17.5**	**Fire Safety Circuit Matrix FireSight**
2	**Shay**	**0.56**	**0.24**	**0.88**	**None**	**17.3**	**Fire Safety Circuit Matrix FireSight**
3	**Holcomb**	**0.52**	**0.55**	**0.49**	**Overhead Bare Wire Length - HFTD Tier 2 - Vegetation: Medium Density - Wind: High Intensity**	**13.3**	**Fire Safety Circuit Matrix FireSight**

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

Risk Ranking	Circuit	Overall Utility Risk Score	Wildfire Risk Score	Outage Program Risk Score	Top Risk Contributors	Total Miles	Version of Risk Model Used
4	Goldmine	0.51	0.49	0.54	Overhead Bare Wire Length - HFTD Tier 2 - Vegetation: Medium Density - Wind: High Intensity	13.2	Fire Safety Circuit Matrix FireSight
5	Clubview	0.48	0.41	0.55	Overhead Bare Wire Length - HFTD Tier 2 - Vegetation: High Density - Wind: Medium Intensity	10.2	Fire Safety Circuit Matrix FireSight
6	Baldwin	0.48	0.53	0.42	Overhead Bare Wire Length - HFTD Tier 2 - Vegetation: Medium Density - Wind: High Intensity	8.3	Fire Safety Circuit Matrix FireSight
7	North Shore	0.47	0.63	0.31	Overhead Bare Wire Length - HFTD Tier 2 - Vegetation: High Density - Wind: High Intensity	15.7	Fire Safety Circuit Matrix FireSight
8	Pioneer	0.44	0.62	0.26	Overhead Bare Wire Length - HFTD Tier 2 - Vegetation: High Density - Wind: High Intensity	16.4	Fire Safety Circuit Matrix FireSight
9	Sunrise	0.36	0.14	0.58	Overhead Bare Wire Length - HFTD Tier 2 - Vegetation: Medium Density - Wind: Medium Intensity	7.6	Fire Safety Circuit Matrix FireSight
10	Radford	0.36	0.44	0.28	Overhead Bare Wire Length - HFTD Tier 3 - Vegetation: High Density - Wind: High Intensity	3.1	Fire Safety Circuit Matrix FireSight
11	Erwin Lake	0.36	0.10	0.62	None	21.9	Fire Safety Circuit Matrix FireSight
12	Eagle	0.35	0.14	0.57	Overhead Bare Wire Length - HFTD Tier 2 - Vegetation: Medium Density - Wind: Medium Intensity	6.6	Fire Safety Circuit Matrix FireSight
13	Sunset	0.34	0.19	0.48	Overhead Bare Wire Length - HFTD Tier 2 - Vegetation: High Density - Wind: Medium Intensity	10.3	Fire Safety Circuit Matrix FireSight
14	Interlacken	0.33	0.09	0.57	Overhead Bare Wire Length - HFTD Tier 2 - Vegetation: Medium Density - Wind: Medium Intensity	5.5	Fire Safety Circuit Matrix FireSight
15	Castle Glen	0.32	0.13	0.52	Overhead Bare Wire Length - HFTD Tier 2 - Vegetation: Medium Density - Wind: High Intensity	6.9	Fire Safety Circuit Matrix FireSight
16	Garstin	0.32	0.09	0.55	Overhead Bare Wire Length - HFTD Tier 2 - Vegetation: High Density - Wind: Low Intensity	5.3	Fire Safety Circuit Matrix FireSight
17	Paradise	0.30	0.14	0.47	Overhead Bare Wire Length - HFTD Tier 2 - Vegetation: Medium Density - Wind: High Intensity	9.8	Fire Safety Circuit Matrix FireSight
18	Country Club	0.29	0.14	0.44	Overhead Bare Wire Length - HFTD Tier 2 - Vegetation: Medium Density - Wind: Medium Intensity	3.2	Fire Safety Circuit Matrix FireSight

P.O. Box 1547, 42020 Garstin Drive, Big Bear Lake, California,
92315 Tel: (909) 866-4678 * Fax (909) 866-5056

Risk Ranking	Circuit	Overall Utility Risk Score	Wildfire Risk Score	Outage Program Risk Score	Top Risk Contributors	Total Miles	Version of Risk Model Used
19	Georgia	0.28	0.07	0.48	Overhead Bare Wire Length - HFTD Tier 2 - Vegetation: Medium Density - Wind: Low Intensity	4.8	Fire Safety Circuit Matrix FireSight
20	Lagonita	0.28	0.16	0.39	Overhead Bare Wire Length - HFTD Tier 2 - Vegetation: Medium Density - Wind: Low Intensity	6.7	Fire Safety Circuit Matrix FireSight
21	Pump House	0.26	0.03	0.48	Overhead Bare Wire Length - HFTD Tier 2 - Vegetation: Low Density - Wind: High Intensity	0.6	Fire Safety Circuit Matrix FireSight
22	Harnish	0.23	0.10	0.35	Overhead Bare Wire Length - HFTD Tier 2 - Vegetation: Medium Density - Wind: Low Intensity	1.5	Fire Safety Circuit Matrix FireSight
23	Lift	0.03	0.06	0.00	Overhead Bare Wire Length - HFTD Tier 2 - Vegetation: Low Density - Wind: Low Intensity	0.0	Fire Safety Circuit Matrix FireSight

Q08. Regarding Consequence Risk:

On page B-346 of BVES's 2026-2028 Base WMP, the map shows varying consequences in locally similar regions. However, based on the description, this figure does not include the likelihood component, such as risk being impacted by the type of equipment causing the ignition.

a. Explain why locally similar regions in close proximity to one another have high changes in the consequence score. For instance, in the circle in screenshot below, there are circuit segments with a rating of 1 to 3 in green mixed in with areas of 8 to 9 in red.

1 United States Department of Agriculture, Post-fire Assessment of Tree Status and Marking Guidelines for Conifers in Oregon and Washington, Revised June 2021, URL:(https://www.fs.usda.gov/rm/pubs_journals/2021/rmrs_2021_hood_s003.pdf).

RESPONSE:

a. The map provided on page B-346 of BVES's 2026-2028 Base WMP was generated using an early version of the Direxyon model that is being updated. That version of the model was very sensitive to small changes in factors such as grid hardening and AFN populations. The follow-on model is currently in development.

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

Q09. Regarding PSPS Risk:

On page B-349 of BVES's 2026-2028 Base WMP, the map shows a small region of the service territory which is at a higher PSPS risk than the rest of the service territory, shown circled in red below.

a. Explain why this region is at an elevated risk compared to the other parts of the service territory.

RESPONSE:

a. As stated in the map legend, the map provided on page B-349 of BVES's 2026-2028 Base WMP is color-coded according to PSPS consequence, NOT PSPS risk. As that small region has a high proportion of AFN customers, its PSPS consequence was calculated to be higher than surrounding regions.