



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

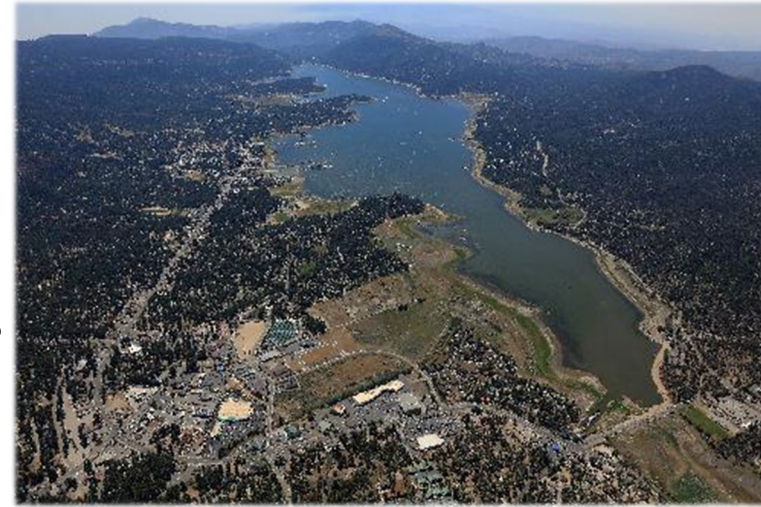
Safety and Operations Committee Board Level Brief to CPUC and OEIS

November 10, 2021

Paul Marconi, President & Safety Committee Chairman, BVES, Inc.

Outline

- Service territory overview
- Key priorities and efforts to improve safety and operational performance.
- Recent safety outcomes achieved and goals for the future.
- Primary challenges to improving safety performance and actions to address those challenges.
- Aspects of safety culture and safety culture initiatives that will drive performance.
- Board-level accountability for Executive Officers if safety performance targets and metrics are not met.



Service Territory Overview

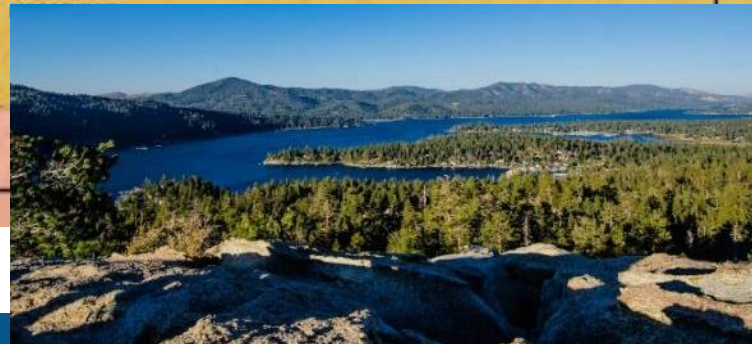
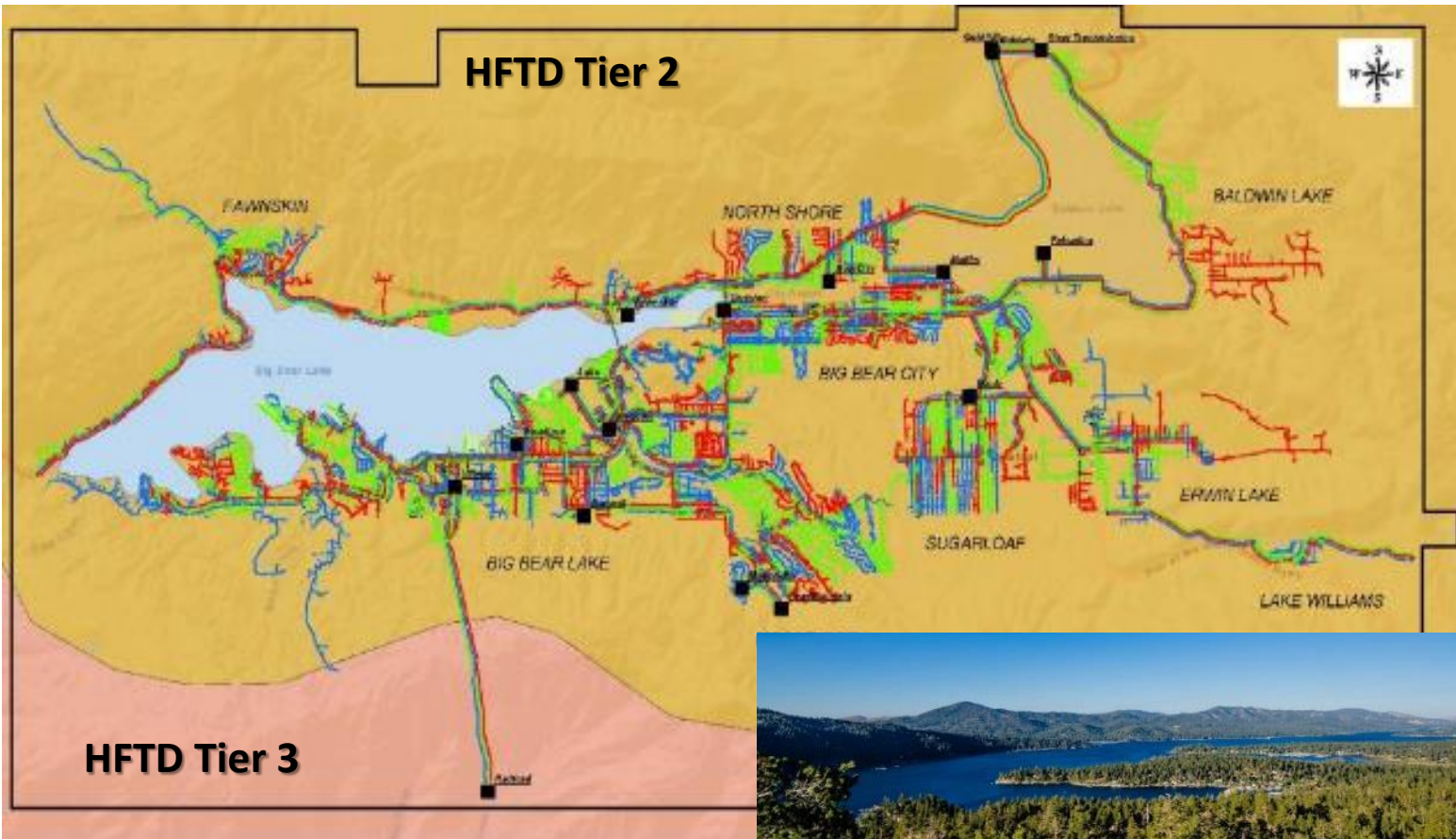
Location: 32 square miles of rural and mountainous terrain at approximately 7,000 ft. in San Bernardino Mountains (80 miles East of Los Angeles).

- Heavy vegetation density and mostly dry environment (80.5%).
- Entire Service Territory in High Fire Threat District (Tiers 2 & 3).
- Entire Service Territory in Heavy Loading District (>3,000 ft.).

Key jurisdictions: County of San Bernardino, City of Big Bear Lake, U.S. Forest Service.

Customers: 24,623 total [23,113 residential and 1,510 commercial].

Power Supplies: BVES system is entirely within the balancing area under the control of the California Independent System Operator. Supply lines to BVES are owned and operated by Southern California Edison.



Key Priorities & Efforts

- At the tactical level
 - Situational Awareness and Forecasting
 - Grid Design and System Hardening
 - Asset Management and Inspections
 - Vegetation Management and Inspections
 - Grid Operations and Protocols
 - Stakeholder Cooperation and Community Engagement
- At the strategic Level
 - Safety Culture
 - Risk Assessment and Mapping
 - Resource Allocation Methodology
 - Data Governance
 - Emergency Planning and Preparedness



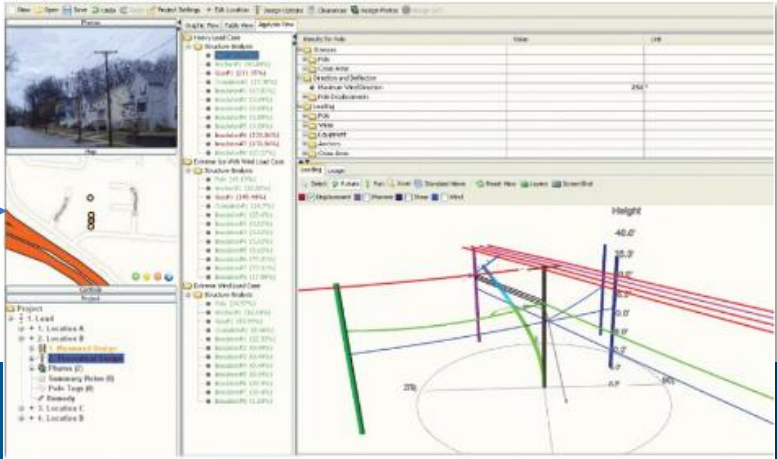
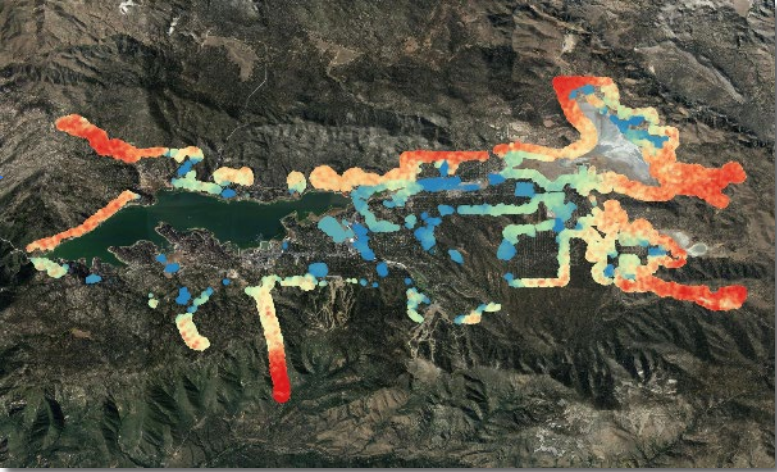
Some Initiatives In Progress

Covered Wire Project: Replaces bare wire with covered wire (4.3 circuit miles on 34 kV & 8.6 circuit miles 4 kV systems per year).

Risk Assessment & Mapping: Developing area and system specific risk modeling to include risk map that shows the overall ignition probability and estimated wildfire consequence along the electric lines and equipment. Also develops climate-driven risk map and modeling based on various relevant weather scenarios. Project to be completed by December 2021.

UAV Surveys: Implementing program to conduct annual UAV HD imaging and thermography inspections of system facilities.

Pole Loading Assessment & Remediation Program: Assess approximately 8,000 poles and replaces/remediates deficient poles.



Some Initiatives In Progress

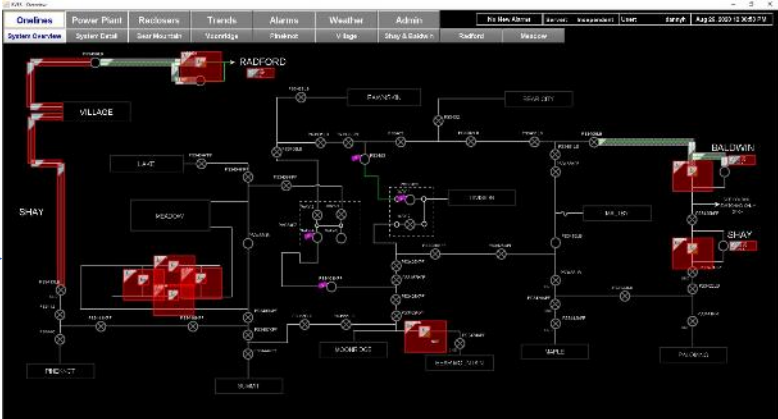
Evacuation Route Hardening: Hardens T&D facilities along main evacuation routes to prevent facilities from blocking or impeding evacuation if subject to wildfire.

Grid Automation Project: Installs fiber network in service area, implements SCADA software and automates substations and field switches.

FLISR Project: Installs 9 Fault Localization Isolation System Restoration devices on 34 kV system.

Radford Line Replacement Project: Replaces 34 kV line & poles with covered wire & fire resistant poles in HFTD Tier 3 area.

Tree Attachment Removal Program: Removes approximately 1,207 tree attachments.



Safety Outcomes

As of October 29, 2021, BVES's Safety Record:

- Accident/injury free for 892 days.
- No fatalities in over 10 years.
- No employee contact with High Voltage in over 10 years.
- No ignitions in over 10 years.
- No COVID-19 workplace outbreaks.

Risk Reduction as Result of WMP Initiatives

- Executing 86 wildfire mitigation initiatives in 10 categories.
 - Metrics tracking progress are submitted to OEIS.
- Continue to reduce overall risk.
 - Seeking to reduce risk on all “high risk” circuits to eliminate “high risk” circuits.
 - Then intent is to further reduce “medium risk” circuits to achieve all circuits in low risk range.

Date	System Risk (Per Fire Safety Model)
12/31/2019	115,500
12/31/2020	103,470
6/30/2021	99,069
12/31/2021	95,000*
12/31/2023	60,000*
12/31/2030	<100*

*Projected risk score base on planned initiatives.

Enhanced Vegetation Management (EVM)

Year	Vegetation Contact on Lines
2021 (as of Sept. 30, 2021)	2
2020	5
2019	5
2018	9
2017	16
2016	47

- Implemented EVM program in the spring of 2018 and fully achieved the enhanced clearances by the end of 2020.
- Program invokes higher clearance standards.



Some Completed Initiatives

34.5 kV Supply Line Re-closers: All have been changed out to Pulse Conditioned IntelliRupters.

ALERTWildfire HD Cameras: Have 15 cameras in ALERTWildfire network providing complete coverage of service area.

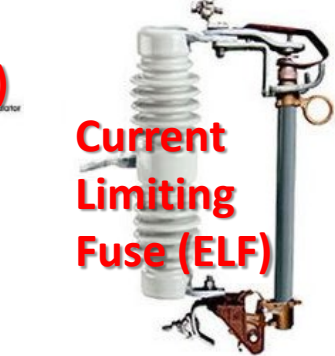
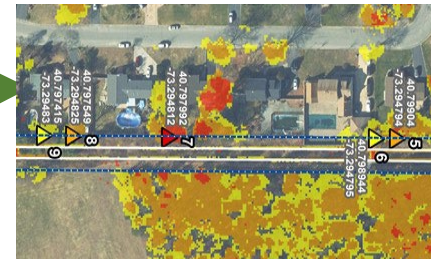
System Sectionalized: PSPS high risk areas sectionalized from rest of BVES system.

3rd Party Ground Patrol: Implemented annual 3rd Party Ground Patrol of the overhead system. (In addition to annual GO-165 ground patrol.)

Fuse Upgrade Program: Eliminated all expulsion (conventional) fuses from the system. 3,114 expulsion fuses were replaced by 2,578 current limiting fuses and 536 electronic fuses.

LiDAR: Implemented annual Light Detection and Ranging (LiDAR) survey of system to identify areas where additional vegetation clearing is necessary.

Weather Stations: Installed 20 weather stations throughout service area.



Primary Challenges to Improving Safety Performance

- Recruiting and retaining skilled staff.
- Qualified power line construction contractors.
- Supply chain.
- Permitting.
- COVID-19 mitigations: Less person-to-person engagement challenges worksite leadership, monitoring, mentoring, and teaching of staff.

Safety Culture Initiatives To Drive Performance

Initiative	Summary of Target
Engaged Management December 31, 2021	Management is fully engaged in public and worker safety in a productive and positive manner that significantly elevates management's awareness of utility field work and how it affects the public and employees.
Active Safety Committee December 31, 2021	Safety Committee directs the Company's actions to promote public and worker safety. The committee is formal with designated attendees that properly represent highest level of management, line supervisors, and various workforce roles and employee types.
Safety Program Properly Resourced December 31, 2021	The Company properly resources all safety program elements and management expends allocated budget on the intended safety initiatives. Safety Committee leads the budgeting process.
Safety Training Program December 31, 2022	The Company has a purposeful, comprehensive, formal, and documented safety oriented training program. Employees are trained in specific areas to improve public and workplace safety based on their roles and responsibilities. Lessons learned and impromptu training on emergent or changing conditions are utilized.
Leading Indicators December 31, 2022	A set of leading indicators and metrics relevant to the workplace and public safety are regularly reported to the Safety Committee and all employees. Leading indicators and metrics are analyzed and used in decision-making.
Continuous Improvement Program December 31, 2022	Highly functional continuous improvement program in place that empowers employees to refer improvement opportunities, establishes plan of action for improvements, evaluates effectiveness of action taken, and determines if further adjustments are necessary to achieve desire improvements. Results of the continuous improvement program are shared with employees.
Safety Recognition Program December 31, 2023	Employees that go above and beyond to improve public and workplace safety are recognized, celebrated, and rewarded.
Transparency & Open Communication December 31, 2023	Management frequently conducts safety briefs and encourages employees to periodically lead them. Safety Committee meeting minutes and safety performance metrics are shared with employees. Employees are motivated to report safety hazards and encouraged to make recommendations on how to reduce workplace hazards and public safety risks. Employees have buy-in in all aspects of safety.

Safety Culture Assessment

Recommendations That Will Drive Performance

- Safety culture assessment (SCA) report for 2021 noted the following:
 - “To drive consistent improvement in its safety culture throughout the organization, Bear Valley should act on the following recommendations:
 1. Embed leadership skills development into the “Engaged Management” 12-month objective to improve the Bear Valley safety culture.
 2. In collaboration with Bear Valley’s vegetation management contractor, develop and implement an action plan to address safety culture issues, in particular regarding the flow of information about wildfire hazard mitigation.”
- BVES agreed to implement all of the findings and recommendations for improvements in its 2021 SCA.

Key Safety Culture Findings in 2021 SCA

- Two areas to capitalize upon to improve performance are:
 - “Bear Valley’s safety culture emphasizes identifying wildfire hazards and protecting the community.”
 - “Employees feel a strong personal responsibility for their own and others’ safety. They believe they are authorized to stop the job for safety if necessary and that doing so would be viewed positively by management.”
- Gaps in the present safety culture:
 - While Bear Valley’s average workforce survey scores were highest in the safety and wildfire categories of the workforce survey (an average score of 4.28 and 4.25, respectively, on a five-point scale), the culture category of statements had a much lower average score (4.01). The Engineering and Planning unit seems to have a relatively strong safety culture, but the Customer Service and Accounting units have considerable challenges.
 - Bear Valley’s contractor for vegetation management has a culture in which employees feel they cannot talk to their supervisors about wildfire hazards and a workgroup that does not follow procedures to control workplace and wildfire hazards.
 - Bear Valley’s safety culture objectives do not provide details for how progress will be monitored and sustained.”

Organization

Bear Valley Electric Service, Inc.

Board of Directors

Safety & Operations Committee

Management Team

Safety & Operations Committee is responsible for overseeing:

- Preparation of BVES's wildfire mitigation plan and the assessment of BVES's compliance with the plan,
- Other activities intended to identify wildfire risks and other safety risks related to the operation and maintenance of the BVES electric utility system,
- Steps taken to reduce such risks and to respond to safety events, and
- Such other matters as set forth in the charter or delegated to the Committee from time to time by the Board.



Board-level Accountability of Executive Officers

- Executive Officer performance is accountable to and subject to control of the Board of Directors.
- Executive Compensation Plan is designed to promote public safety and financial stability. The Plan is structured to:
 - Promote safety as a priority.
 - Ensure public safety.
 - Ensure financial stability of the utility.
 - Utilize performance metrics that are measurable and enforceable.
 - Allocate the primary portion of the compensation based on achievement of performance metrics that are measurable and enforceable.



Questions?

Our Values

In pursuing our mission, the board of directors, management and the company's employees are guided by the shared Values presented below:

- Integrity** - Building trust through honest communications and doing what is right
- Teamwork** - Maximizing efficiency through collaboration and individual strengths
- Respect** - Valuing diversity and treating all stakeholders with fairness
- Excellence in Service** - Striving for excellence and quality in everything we do
- Accountability** - Taking ownership of one's actions