



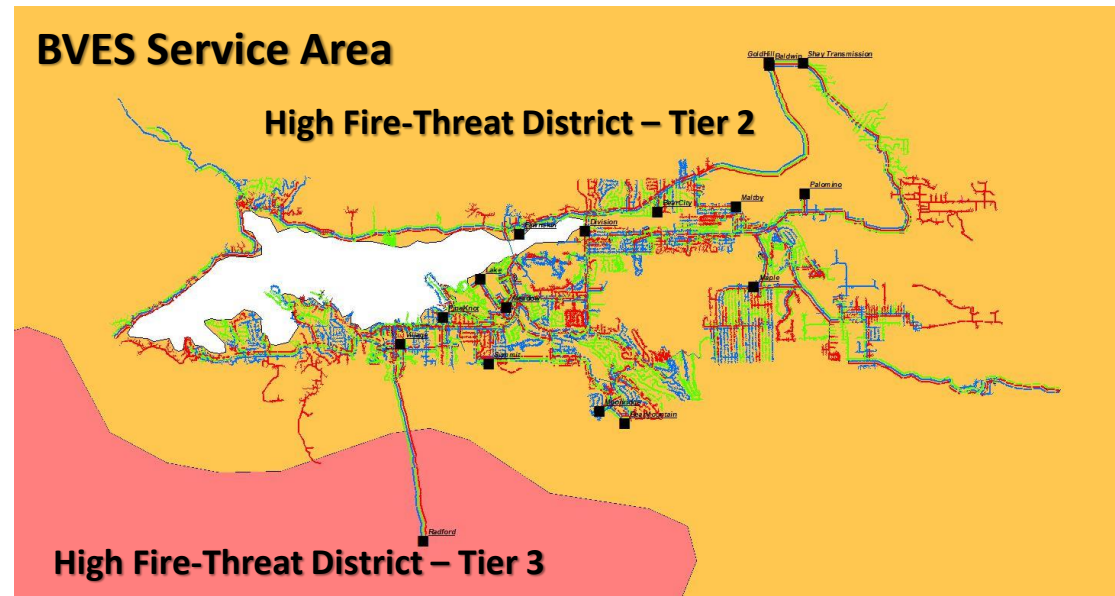
# Bear Valley Electric Service Proactive De-energization Policy



*Powering The Mountain Since 1929*

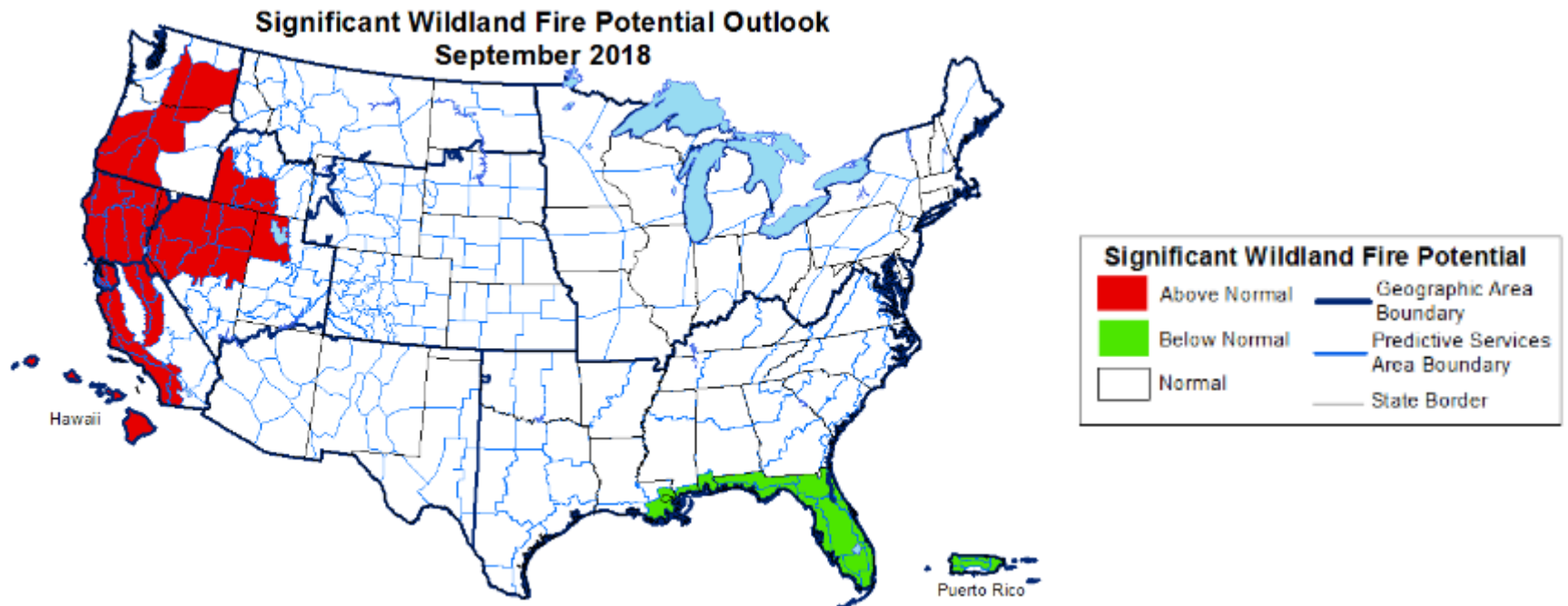
# Bear Valley Electric Service

- Bear Valley Electric Service (BVES) serves 24,323 customers in a 32-square mile service area.
- BVES' service area is under the jurisdictional responsibility of City of Big Bear Lake and some areas (unincorporated) under the responsibility of the County of San Bernardino that have overhead and underground lines, distribution circuits, substations and a natural gas fueled generation facility.
- BVES' service area is in the “High Fire-Threat District” as defined by California Public Utilities Commission (CPUC). This invokes additional inspection, line clearance, repair, emergency planning, and construction regulations.
- The service area is entirely above 3,000', requiring all construction to meet “heavy” loading standards.



# California's Wildlife Risk

- Year-Round Fire Season: changes to California's climate mean the traditional "fire season" no longer exists
- Hazardous fuel is building up due to many trees that have been killed or weakened by bark beetle damage or drought (tree mortality in California is at its highest level)





# BVES Practices for a Safe & Reliable Grid

BVES works year-round to strengthen and protect against natural and man-made threats

- BVES is working to reduce wildfire risk, we continually seek options to enhance our efforts through:
  - ✓ Stringent Construction Standards
  - ✓ “Fail Safe” System Design
  - ✓ Pro-active Operations and Maintenance (O&M) Programs
  - ✓ Operating Procedures and Staff Training



# Vegetation Management

BVES' Tree Trimming Program is designed to enhance public safety, prevent fires and improve electric grid reliability. Proactive and aggressive vegetation management is first line of defense. Elements of our line clearance standards include:

- **Blue Sky** above 34 kV sub-transmission lines.
- **Minimum Line Clearance:** Vegetation within 72" of bare conductors is trimmed to 12'.
- **Fast Growing Species** trimmed to 12' or more and removal is evaluated and removed, if deemed necessary.
- **Drip Line:** Trees within the drip line of primary wires are proactively removed or trimmed such that they do not violate 72" line clearance between trimming cycles.
- **Suspect Trees:** Unhealthy/dead trees that pose a threat of falling into bare conductors are pro-actively evaluated for removal and removed, if deemed necessary.
- **Tree Trunks:** Mature trees whose trunks and major limbs are located less than the required clearance from bare conductors are to be no less than 18" away and the trunk or limb must be at least 18" in diameter.



# Inspection of Distribution Facilities

In compliance with CPUC regulations, BVES established an inspection program that requires overhead facilities to undergo a detailed inspection at least every five years and a patrol inspection every year.

- **Detailed inspection** is one where individual pieces of equipment and structures are carefully examined and the condition of each rated and recorded.
- **Patrol Inspection** is a simple visual inspection, of applicable utility equipment and structures, that is designed to identify obvious structural problems and hazards.
- Defects and other issues that have been identified and characterized and repaired and/or resolved in a prioritized manner not to exceed CPUC directed timeframes.
- Priority is given to repairing/resolving safety hazards or potential violations that create a fire risk.



# Fire and Severe Weather Monitoring

## BVES Monitors Several Weather Sources

- National Fire Danger Rating System (NFDRS) for 7-day fire threat outlook.
- National Weather Service advisories
- Local weather forecasts

## NFDRS

- Provides 7-day outlook on fuel dryness & high risk days.
- Monitored at least daily
- Drives operational decision making
- <https://gacc.nifc.gov/oscc/predictive/weather/index.htm#p>

## Weather Stations

- BVES installing on “at risk” circuits
- Collect hi-resolution local weather data
- Enable more precise forecasting and operations



### Fuel Dryness:

- Moist - Little to no risk of fires.
- Dry - Low risk of large fires in the absence of a "High Risk" event.
- Very Dry - Low/moderate risk of large fires in the absence of a "High Risk" event.

### High Risk Days

- At least a 20% chance of a "Large Fire" due to a combination of either "Dry" or "Very Dry" Fuel Dryness and an ignition trigger.
- At least a 20% chance of a new "Large Fire" or significant growth on existing fires due to a combination of either "Dry" or "Very Dry" Fuel Dryness and a critical burn environment.

### Current 7 Day Fire Potential

	Fri	Sat	Sun	Mon	Tue	Wed	Thu
	500-750	750-1000	1000-1250	1250-1500	1500-1750	1750-2000	2000-2500
9001 - Eastern Sierra	Moist	Dry	Very Dry	Very Dry	Very Dry	Very Dry	Very Dry
9002 - Central Sierra	Moist	Dry	Very Dry	Very Dry	Very Dry	Very Dry	Very Dry
9003 - Southern Sierra	Moist	Dry	Very Dry	Very Dry	Very Dry	Very Dry	Very Dry
9024 - Sierra Front	Moist	Dry	Very Dry	Very Dry	Very Dry	Very Dry	Very Dry
9025 - Central Valley	Moist	Dry	Very Dry	Very Dry	Very Dry	Very Dry	Very Dry
9026 - Central Coast Interior	Moist	Dry	Very Dry	Very Dry	Very Dry	Very Dry	Very Dry
9027 - Central Coast	Moist	Dry	Very Dry	Very Dry	Very Dry	Very Dry	Very Dry
9028 - South Coast	Moist	Dry	Very Dry	Very Dry	Very Dry	Very Dry	Very Dry
9030 - Western Mountains	Moist	Dry	Very Dry	Very Dry	Very Dry	Very Dry	Very Dry
9031 - Eastern Mountains	Moist	Dry	Very Dry	Very Dry	Very Dry	Very Dry	Very Dry
9032 - Southern Mountains	Moist	Dry	Very Dry	Very Dry	Very Dry	Very Dry	Very Dry
9043 - Northern Deserts	Moist	Dry	Very Dry	Very Dry	Very Dry	Very Dry	Very Dry
9044 - Central Mojave	Moist	Dry	Very Dry	Very Dry	Very Dry	Very Dry	Very Dry
9045 - Upper Deserts	Moist	Dry	Very Dry	Very Dry	Very Dry	Very Dry	Very Dry
9046 - Northern Deserts	Moist	Dry	Very Dry	Very Dry	Very Dry	Very Dry	Very Dry

Alternate Version



# Conditional Operations

- From November 1 through March 31 focus is on reliability with higher load settings to accommodate higher loads and colder temperatures and reclosures set to automatic.
- From April 1 through October 31, BVES adopts a more defensive operational scheme:
  - ✓ Fuse TripSavers set to non-automatic operation
  - ✓ Auto Reclosures field trip settings reduced to lower summer load
  - ✓ Radford 34kV line is de-energized

Operational Action	Green	Yellow	Brown	Orange	Red
Circuit Reclosure Settings	Automatic	Automatic	Non-Automatic	Non-Automatic	Non-Automatic
Patrol following circuit outage	No*	No*	Yes	Yes	Yes
TripSavers	Automatic	Automatic	Non-Automatic	Non-Automatic	Non-Automatic
Proactive De-energization (PDE)	No	No	No	Yes – “at risk” circuitry	

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

- However, in addition to seasonal actions, BVES monitors NFDRS fire danger forecast and determines the proper operational focus from reliability to fire prevention daily.
  - ✓ “Brown”, “Red”, and “Orange” are considered elevated fire threat conditions that require BVES system to be configured for fire prevention over reliability (even during winter months)





# Proactive De-energization (PDE)

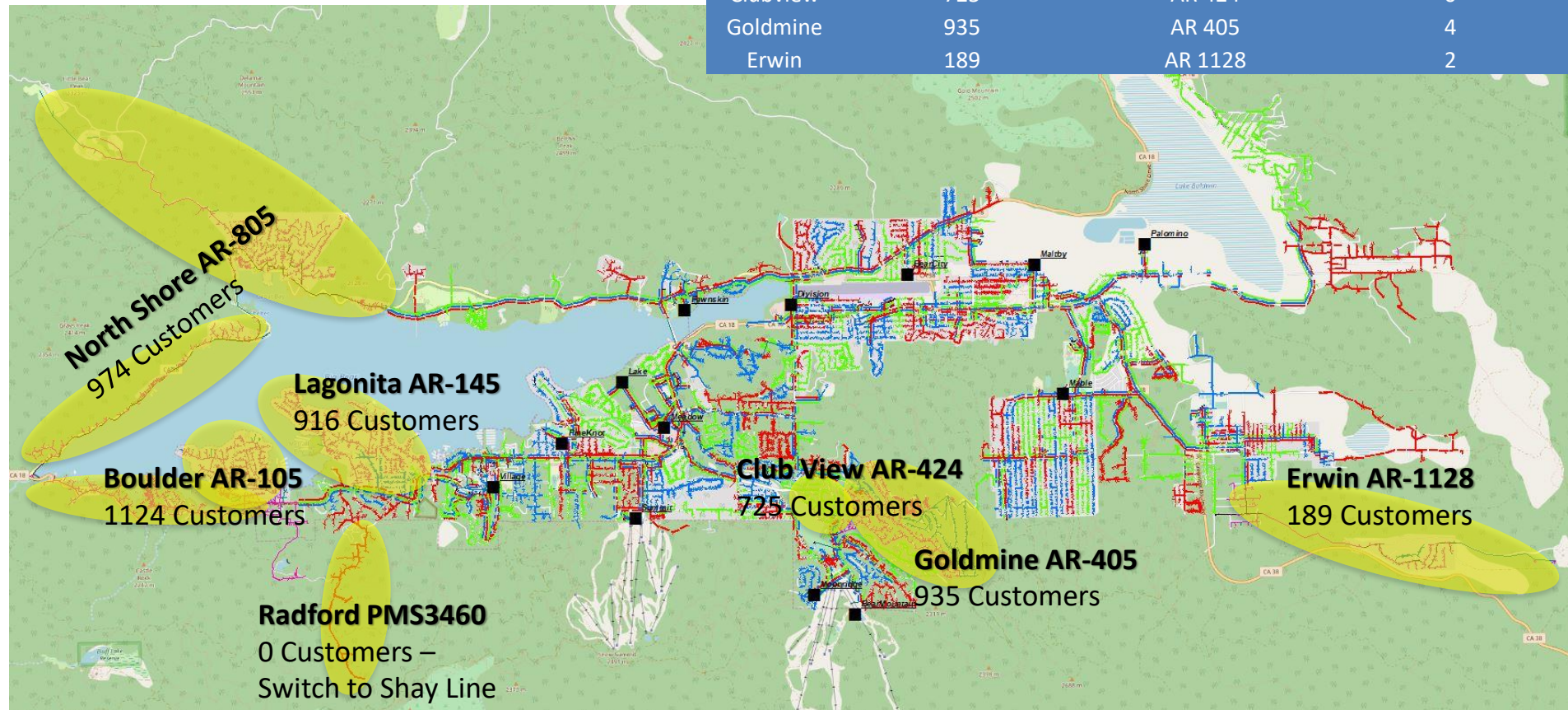
BVES puts public safety at the forefront of operational practices and may de-energize certain portions of the grid in high-risk areas when extreme fire conditions present imminent danger to public safety.

- BVES has identified 7 high-risk areas potentially affecting up to about 20% of its customers
  - ✓ Depending on conditions some or all of these areas may be affected
  - ✓ Localized weather conditions will be considered
- PDE is intended to reduce fire risk in high-risk areas (“at risk” areas)
  - ✓ Outages are not something we take lightly
  - ✓ Utilized when extreme fire conditions present imminent danger to public safety
  - ✓ Very high dry winds combined with dry fuel conditions is the principal trigger
- BVES will make every effort to notify customers and local government ahead of time, especially critical care and medical baseline customers
- Power restoration will occur after conditions have improved and safety checks have been performed

# Seven High-Risk Fire Areas

High-risk areas that may be de-energized when extreme fire conditions present imminent danger to public safety.

Circuit	Number of Customers	Downline From Device	Life-Support Customers
North Shore	974	AR 805	2
Boulder	1124	AR 105	1
Lagonita	916	AR 145	4
Clubview	725	AR 424	0
Goldmine	935	AR 405	4
Erwin	189	AR 1128	2



# PDE Considerations

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BVES considers many factors before making the decision to de-energize the grid.

Factors include but are not limited to, the following:

- Design strength and other characteristics of distribution overhead facilities
- Vegetation density
- National Fire Danger Rating System (NFDRS) for 7-day fire threat outlook.
- National Weather Service advisories
- Local weather forecasts and advisories
- Information from weather stations (when installed)
- Real-time information from trained personnel positioned in high-risk areas
- Input from state and local authorities and Emergency Management Personnel

# PDE Policy – Forecasted Extreme Fire Weather

## Forecasted Extreme Fire Weather Conditions

- **Notifications**

- ✓ BVES will notify local government and agencies first
- ✓ BVES will post on its website and social media platform notification of possible power shutoffs
- ✓ BVES will issue a press release to local media (newspaper and radio) on the situation

- **Actions**

- ✓ Service crew will monitor existing wind speed at “at risk” locations and internally communicate with Field Operations Supervisor to determine action to be taken and Customer Service for accurate communications.





# PDE Policy – Imminent Extreme Fire Weather

## Imminent Extreme Fire Weather Conditions

### • Notifications

- ✓ Continue to coordinate closely with local government and agencies
- ✓ Update website and social media platform with a notification of the strong potential for imminent power shutoff
- ✓ Update press release to local media (newspaper and radio) on the situation

### • Actions

- ✓ Service crews monitor various field conditions for extreme fire weather and dangerous conditions throughout service territory and in the “at risk” areas
- ✓ Crews may de-energize any line they evaluate as a danger or imminent danger to public safety



# PDE Policy – Validated Extreme Fire Weather

## Validated Extreme Fire Weather Conditions

- **Notifications**

- ✓ Notify local government, agencies and customers
- ✓ Customers will be notified by BVES' Interactive Voice Response (IVR) proactive calling system, website and social media postings
- ✓ Update website and social media platform with a notification of the strong potential for imminent power shutoff
- ✓ Update press release to local media (newspaper and radio) on the situation

- **Actions**

- ✓ Shut off power to the affected “at risk” areas
- ✓ Service crews patrol throughout service territory and “at risk” areas
- ✓ Crews may de-energize additional lines they evaluate as a danger or imminent danger to public safety



# PDE Policy – Weather Subsidies to Safe Levels

## Weather Subsidies to Safe Levels (Validated)

- **Notifications**

- ✓ Notify local government, agencies and customers
- ✓ Customers will be notified by BVES' Interactive Voice Response (IVR) proactive calling system, website and social media postings
- ✓ Update website and social media platform with a notification of power restoration.
- ✓ Update press release to local media (newspaper and radio) on the situation.

- **Actions**

- ✓ Service crews conduct field inspections and patrols of affected facilities
- ✓ Power is restored as each de-energized circuit is inspected and verified safe to energize



# Partner Agency PDE Notification

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Recognizing that Bear Valley local governments may need to implement their own emergency plans, BVES will make every attempt to provide advance notice to our agency partners

- Notice to Bear Valley local government/agency partners two hours prior to executing customer notifications.
- Notifications:
  - All notifications will be sent to contacts provided by the agency using email, phone call and/or text as requested
  - Crews will monitor the situation and be available to respond to city and county emergency personal, including requests to restore service in response to emergency situations



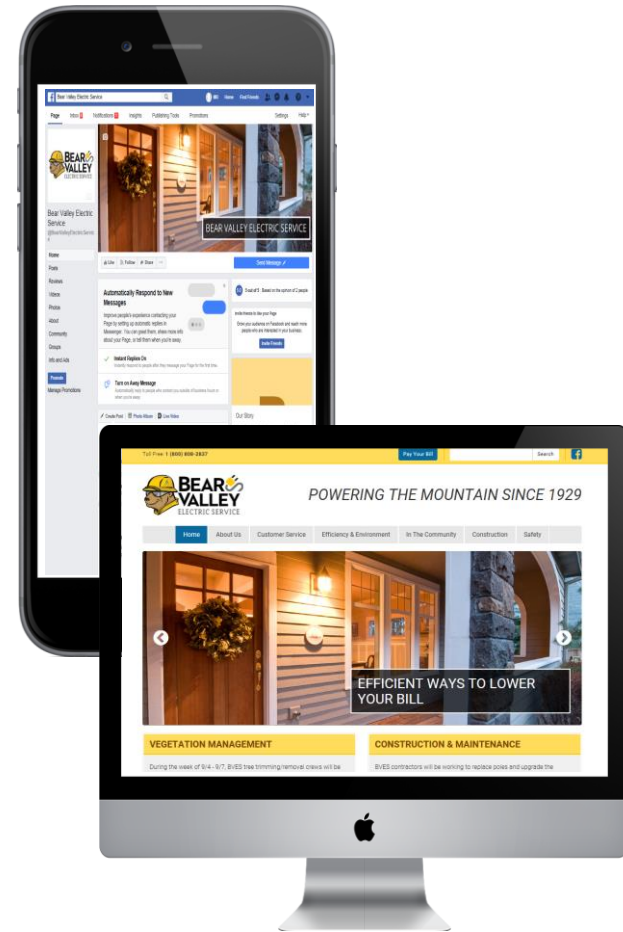
# Customer PDE Notification

Notification may occur via email, telephone calls, Interactive Voice Response (IVR) proactive calling system, website and social media in advance of and during de-energization events.

Local media will also be provided press released on conditions.

During a de-energization event, BVES provides:

- 24 hour contact information – 1-800-808-2837
- Info will be posted to [www.BVES.com](http://www.BVES.com) and on BVES Facebook





# Q & A