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

Compliance Plan and Inspection Procedures For General Order 165

Revisions

Rev	Date	Description of Change
0	6/26/2025	Initial release

Approval

Name	Signature	Date	Role
Paul Marconi		6/26/2025	President

Contents

Purpose

The purpose of this Compliance Plan and Inspection Procedures For General Order 165 is to establish the requirements regarding inspections for electric distribution facilities at Bear Valley Electric Service, Inc. ("BVES" and "Bear Valley") in order to ensure safe and high-quality electrical service. This G.O. 165 Compliance Plan establishes and implements Bear Valley's auditable maintenance program for its facilities and lines for the purpose of ensuring that they are in good condition so as to conform to the applicable standards including G.O. 95, Rules For Overhead Electric Line Construction, and G.O. 128, Rules For Construction Of Underground Electric Supply And Communication Systems.

Applicability

This Compliance Plan applies to all BVES's electric distribution facilities (excluding those facilities contained in a substation). The requirements of this Compliance Plan are in addition to the requirements imposed in G.O. 95 and G.O. 128 to maintain a safe and reliable electric system. BVES owns and operates sub-transmission (34.5 kV) facilities and distribution (4 kV and lower voltage) facilities. Throughout this plan, the term "distribution facilities" will refer to sub-transmission (34.5 kV) facilities and distribution (4 kV and lower voltage). BVES does not own or operate any transmission facilities (defined as 66 kV and higher voltage). Substations and substation equipment are inspected under a separate program in accordance with G.O. 174, Rules for Electric Utility Substations and are excluded from this instruction.

Background

In accordance with California Public Utilities Commission's (CPUC) General Order (GO) 165, Inspection Requirements for Electric Distribution and Transmission Facilities, BVES has prepared this compliance plan for distribution facilities inspection procedures and activities. Bear Valley's entire service area is "rural", as defined by the United States Bureau of Census, and within the High Fire Threat District (HFTD) Tier 2 and 3. Bear Valley's G.O.-165 Inspection Program consists of:

- Patrol Inspections of sub-transmission and distribution facilities (overhead, underground, pad-mounted, and streetlighting)
- Detailed Inspections of sub-transmission and distribution facilities (overhead, underground, pad-mounted, and streetlighting)
- Intrusive Inspection of wood poles

Bear Valley conducts other line inspection programs such as Third-Party Patrols (in addition for BVES Patrols), LiDAR Surveys, Fly-over UAV Surveys (High-Definition Video/Photography and Thermography), etc. These inspections are outside the scope of this Compliance Plan and are governed by the contract scope of work for the inspections. However, the inspection findings are processed in a manner similar to that described in this Compliance Plan.

Definitions

For the purpose of this Compliance Plan, the following terminology shall be utilized:

"Urban" shall be defined as those areas with a population of more than 1,000 persons per square mile as determined by the United States Bureau of the Census.

"Rural" shall be defined as those areas with a population of less than 1,000 persons per square mile as determined by the United States Bureau of the Census.

"Patrol inspection" shall be defined as a simple visual inspection and reporting the results of the inspection, of applicable utility equipment and structures, that is designed to identify obvious structural problems and hazards. Patrol inspections may be carried out in the course of other company business. Where facilities are clearly visible from the road, Patrol Inspections may be carried out by "drive-by" inspection. In addition to routine Patrol Inspections, BVES line crews are to perform on-going patrols in their course of routine activities.

"Detailed" inspection shall be defined as one where individual piece of equipment and structures are carefully examined, visually and through use of routine diagnostic test, as appropriate, and (if practical and if useful information can be so gathered) opened, and the condition of each rated and recorded. Detail Inspections consist of more critical visual inspections and data reporting of the condition of conductors/cables, transformers, capacitors, regulators, street lighting, and other equipment/devices. Detail Inspections will be performed from ground level or from the air (bucket truck) as necessary to conducted the inspection objectives. BVES owns limited underground equipment and inspects such facilities on a relatively frequent basis while performing meter reading and equipment monitoring activities.

"Intrusive" inspection is defined as one involving movement of soil, taking samples for analysis, and/or using more sophisticated diagnostic tools beyond visual inspections or instrument reading.

"Corrective Action" shall be defined as maintenance, repair, or replacement of utility equipment and structures so that they function properly and safely.

"High Fire-Threat District" (HFTD) means those areas comprised of the following:

- **Zone 1** is Tier 1 of the latest version of the United States Forest Service (USFS) and CAL FIRE's joint map of Tree Mortality High Hazard Zones (HHZs). (Note: The Tree Mortality HHZs Map may be revised regularly by the USFS and CAL FIRE.)
- **Tier 2** is Tier 2 of the CPUC Fire-Threat Map.
- **Tier 3** is Tier 3 of the CPUC Fire-Threat Map.

"Safety Hazard" means a condition that poses a significant threat to human life or property.

Responsibilities

BVES Staff are assigned responsibilities in implementing the requirements of this Compliance Plan as follows:

Utility Engineer & Wildfire Mitigation Manager

Provides overall oversight of the Compliance Plan and Inspection Procedures For General Order 165 program including:

- Ensures compliance with G.O. 165 requirements.
- Reviews reports and directs changes to the G.O. 165 Inspection Program as deemed necessary. Keeps the President informed of such changes.
- Ensures the G.O. 165 Inspection Program is properly resourced. Prepares annual O&M budget for G.O. 165 Inspection Program efforts.
- Responsible for ensuring any contracts necessary to support the G.O. 165 Inspection Program are in place and managed per the BVES procurement policy.
- Responsible for preparing regulatory reports, General Rate Case testimony, Wildfire Mitigation Plan updates, Data Requests responses and other regulatory requests regarding G.O. 165 Inspection Program issues. These should all be forwarded to the Regulatory Affairs Manager and the President prior to issuing.
- Responsible for supporting CPUC audits, OEIS site visits, and other authorized agency reviews of G.O. 165 Inspection Program.
- Ensures inspections conducted per the required schedule, inspections are documented, and inspection results are recorded.
- Ensures inspection findings including potential violation of GO 95 or GO 128 or a Safety Hazard are:

    - Documented and assigned the appropriate priority level,
    - Status of resolution is tracked until fully resolved, and
    - Resolution of the finding is documented.

- Ensures quality assurance and quality controls are established for the inspections under the G.O. 165 Inspection Program.
- Reviews finding trends, determines root causes of findings, and implements corrective action that resulting continuous improvement of the G.O. 165 Inspection Program.
- Ensures G.O. 165 Inspection Program records are retained for a minimum of 10 years.

Field Operations Supervisor

Provides support to the Wildfire Mitigation & Reliability Engineer in managing the G.O. 165 Inspection Program including:

- Ensures Patrol and Detailed Inspections per the G.O. 165 Inspection Program are conducted by qualified Field Inspector(s).
- Designates staff qualified to perform Patrol and Detailed Inspections per the G.O. 165 Inspection Program.
- Develops and maintains a long range (5-year minimum) G.O. 165 Inspection Program schedule for Patrol and Detailed Inspections. Circuits designated as high wildfire risk circuits shall be Detailed Inspected more frequently that the minimum requirements of the G.O. 165 Inspection Program.

- Ensures Patrol and Detailed Inspections are conducted per the G.O. 165 Inspection Program schedule.
- Works closely with the Utility Engineer & Wildfire Mitigation Supervisor and Wildfire Mitigation & Reliability Engineer to ensure findings are resolved within the designated timeframes per the assigned priority level.
- Ensures resources are made available to resolve inspection findings.
- Assists in reviewing finding trends, determining root causes of findings, and implementing corrective action that result continuous improvement of the G.O. 165 Inspection Program.
- Ensures G.O. 165 Inspection Program records are retained for a minimum of 10 years.
- Closely supports the Utility Manager on CPUC audits, OIES site visits, and other authorized agency reviews of vegetation management.
- Ensures Field Inspector works closely with the Wildfire Mitigation & Reliability Engineer to achieve VM program requirements.

<u>Utility Engineer & Wildfire Mitigation Supervisor</u>
Provides support to the Wildfire Mitigation & Reliability Engineer in managing the G.O. 165 Inspection Program including:

- Provides the Field Operations Supervisor a list of circuits that are designated as high wildfire risk circuits so that a risk-based Detailed Inspection schedule may be developed.
- Responsible all aspects of administering the intrusive inspection of wood poles in accordance with the G.O. 165 Inspection Program to include:

    - Ensures wood poles are inspected within the required timeframes of the G.O. 165 Inspection Program.
    - Designates which poles are to be inspected each year.
    - Administers every aspect of contracting intrusive pole inspections per the BVES Procurement Policy.
    - Ensures intrusive pole inspection results are documented.
    - Designates priority level and specific corrective action for wood poles not meeting the satisfactory strength specifications.
    - Ensures work orders are issued and work completed for wood poles not meeting the satisfactory strength specifications.

- Provides the final adjudication for designating priority level for inspection findings and determining the appropriate corrective action to resolve inspection findings.
- Works closely with the Field Operations Supervisor and Wildfire Mitigation & Reliability Engineer to ensure findings are resolved within the designated timeframes per the assigned priority level.
- Ensures work orders, funding and resources are made available to resolve inspection findings.
- Assists in reviewing finding trends, determining root causes of findings, and implementing corrective action that result continuous improvement of the G.O. 165 Inspection Program.
- Ensures G.O. 165 Inspection Program records are retained for a minimum of 10 years.

- Closely supports the Utility Manager on CPUC audits, OIES site visits, and other authorized agency reviews of vegetation management.

Wildfire Mitigation & Reliability Engineer

Administers inspection programs at BVES including the Compliance Plan and Inspection Procedures For General Order 165 program. Specific responsibilities include:

- Ensures compliance with G.O. 165 requirements.
- Assists in ensuring any contracts necessary to support the G.O. 165 Inspection Program are in place and managed per the BVES procurement policy.
- Assists in preparing regulatory reports, Wildfire Mitigation Plan updates, Data Requests responses and other regulatory requests regarding G.O. 165 Inspection Program issues.
- Closely supports the Utility Manager on CPUC audits, OEIS site visits, and other authorized agency reviews of G.O. 165 Inspection Program.
- Ensures inspections conducted per the required schedule, inspections are documented, and inspection results are recorded.
- Ensures inspection findings including potential violation of GO 95 or GO 128 or a Safety Hazard are:

    - Documented and assigned the appropriate priority level,
    - Status of resolution is tracked until fully resolved, and
    - Resolution of the finding is documented.

- Ensures quality assurance and quality controls are established for the inspections under the G.O. 165 Inspection Program.
- Reviews finding trends, determines root causes of findings, and implements corrective actions for continuous improvement of the G.O. 165 Inspection Program.
- Conducts cross-checks of inspections conducted other inspection types to help identify trends and possible errors that may have been found during the inspection.
- Ensures G.O. 165 Inspection Program records are retained for a minimum of 10 years.

Field Inspector

Primary staff member responsible for conducting the Patrol and Detailed Inspections associated with the G.O. 165 Inspection Program including:

- Conducts Patrol and Detailed Inspections per the G.O. 165 Inspection Program schedule.
- Assists in developing and maintaining a 5-year Patrol and Detailed Inspection schedule.
- Documents all Patrol and Detailed Inspections conducted.
- Documents all Patrol and Detailed Inspection findings.
- Assigns the appropriate priority level to each finding and immediately alerts the Field Operations Supervisor of any Level 1 findings.
- Assigns the initial corrective action to inspection findings.
- Reviews finding trends, determines root causes of findings, and recommends corrective action that will result continuous improvement of the G.O. 165 Inspection Program.

- Assists in ensuring other line inspection programs such as Third-Party Patrols, LiDAR Surveys, Fly-over UAV Surveys, etc. are being conducted in compliance with CPUC regulations and BVES requirements and discrepancies are documented.
- Assists in reviewing the results of line inspection programs such as GO-165 Detailed Inspections, GO-165 Patrols, Third Party Patrols, LiDAR Surveys, Fly-over UAV Surveys, etc. and ensuring any discrepancies are recorded, tracked and resolved.
- Assists in issuing or causing to be issued work orders to resolve discrepancies.
- Works closely in supporting CPUC audits, OEIS site visits, and other authorized agency reviews of G.O. 165 Inspection Program.
- Trains other staff as necessary prior to them conducting G.O. 165 Inspection Program inspections.
- Ensures G.O. 165 Inspection Program records are retained for a minimum of 10 years.

GIS Specialist

Supports the Wildfire Mitigation & Reliability Engineer in tracking G.O. 165 Inspection Program efforts and finding management with the GIS and associated applications including:

- Supports data entry and migration of the G.O. 165 Inspection Program into the GIS and associated applications.
- Ensures intrusive pole inspection results are documented in the GIS.
- Generates reports of wood poles approaching inspection periodicity and provides the report to the Utility Engineer & Wildfire Mitigation Supervisor.
- Assists in scope of work development for RFPs regarding G.O. 165 Inspection Program to ensure data and documentation requirements that are compatible with Bear Valley's GIS applications are accurately provided to bidders.
- Assists in developing data reports and GIS overlays to support Management, OEIS, CPUC, CALFIRE, and other authorized agency reporting requirements.
- Assists in developing overlays to support presentations and documents regarding the G.O. 165 Inspection Program.

Qualification of Inspectors

The Field Operation Supervisor is responsible to designating BVES employees qualified to perform Patrol and Detailed Inspections per the G.O. 165 Inspection Program. The Field Inspector shall at a minimum have the following qualifications and experience:

- Three years of Journeyman Lineman or above experience
- IBEW Journeyman Lineman status in good standing
- Demonstrated knowledge and proficiency in GO 95, GO 128, GO 165, and California Public Resource Codes 4292 and 4293
- Experience inspecting overhead and underground facilities
- Class C California Driver's License

The Utility Engineer & Wildfire Mitigation Supervisor is responsible for ensuring contracted personnel are qualified to perform contracted G.O. 165 Inspection Program inspections such as

Intrusive Inspection of wood poles. All contracts associated with the G.O. 165 Inspection Program shall require the contractor to:

- To employ sufficient personnel qualified by reason of education, training, and experience to discharge the services agreed to be performed by the contractor.
- To ensure all personnel employed at the jobsite or in support of the work are properly trained, skilled, qualified, certified, and/or licensed as required by applicable laws, codes, and/or regulations to perform assigned tasks.
- To ensure all employees and subcontractors performing overhead and/or underground transmission and distribution line work are qualified to perform the work per California Code of Regulations, Title 8 Chapter 4, Subchapter 5, Electrical Safety Orders and comply with the requirements of such orders as well as other applicable Title 8 requirements.

Inspection Cycles and Schedules

The Field Operations Supervisor with assistance from the Field Inspector shall prepare a long range (at least 5 years) Patrol and Detailed Inspection schedule for each circuit to ensure distribution facilities are inspected to meet the minimum inspection cycle requirements of the table below and comply with the risk-based inspection requirements specified in this instruction. The Utility Engineer & Wildfire Mitigation Supervisor shall ensure intrusive inspection of wood poles are in compliance with the table below.

Minimum Distribution Facilities Inspection Cycles			
	Patrol (Rural HFTD Tier 2 &3)	**Detailed (Rural HFTD Tier 2 & 3)**	**Intrusive**
Transformers			
Overhead	1	5	--
Underground	2	3	--
Pad-mounted	2	3	--
Switching/Protective Devices			
Overhead	1	5	--
Underground	2	3	--
Pad-mounted	2	3	--
Regulators/Capacitors			
Overhead	1	5	--
Underground	2	3	--
Pad-mounted	2	3	--
Overhead Conductor and Cables	1	5	--
Streetlighting	1	--	--
Wood Poles under 15 years	1	--	--
Wood Poles over 15 years which have not been subject to intrusive inspection	1	--	10

Wood poles which passed intrusive inspection	--	--	20

Notes:
(1) For the purpose of implementing the patrol and detailed inspection intervals in the above table, the term "year" is defined as 12 consecutive calendar months starting the first full calendar month after an inspection is performed, plus three full calendar months, not to exceed the end of the calendar year in which the next inspection is due. A required inspection may be completed any time before the expiration of the associated inspection interval using this definition of "year," but not after. The completion of an inspection starts a new inspection interval that must be completed within the prescribed timeframe using this definition of "year." However, inspection intervals may be extended by up to six months in areas where the Governor of California or the President of the United States has declared an emergency or a disaster following a major earthquake or other catastrophe using the procedure set forth in Decision 13-06-011 issued in Rulemaking 08-11-005. The extension shall not exceed six months from the date that an emergency is declared or the date that a disaster is declared, whichever is earlier.
(2) For wood pole intrusive inspections, the term "year" is defined as a calendar year.

Patrol Inspections of overhead distribution facilities are to be performed on each circuit at least once per year as required by GO-165. Circuits designated as "high wildfire fire" circuits will be prioritized to be inspected before the fire season. Next, circuits that are mostly bare conductors will be prioritized to be patrolled. Finally, circuits that are lower risk (little or no bare conductors) will be the final priority in the annual patrol inspection schedule.

Detailed inspections of overhead distribution facilities are performed on a 5-year cycle at a minimum per the above table. Bear Valley aims to perform approximately 50 circuit miles of Detailed Inspections per year. Circuits that are designated as "high wildfire risk circuits" shall be Detailed Inspected at a minimum of 3-year cycle. The Utility Engineer & Wildfire Mitigation Supervisor shall provide the Field Operations Supervisor the list of circuits that are designated as "high wildfire risk circuits" based on current risk models in use and status of grid hardening initiatives on the distribution system. Only the bare wire portion of a circuit designated as "high wildfire risk" need be inspected at a minimum of 3 years.

Inspection Records

G.O. 165 Inspection Program records are retained for a minimum of 10 years.

Patrol Inspections: The Field Inspector will record the circuit name, portions inspected, and date inspected. Discrepancies discovered during the inspection will be entered in the BVES Distribution Inspection Application (inspection database).

Detailed Inspections: The Field Inspector will record the circuit name, portions inspected, and date inspected. Additionally, the condition of every structure inspected will be recorded in the BVES Distribution Inspection Application (for example, the condition of every pole inspected will be recorded in the database). Discrepancies discovered during the inspection will be entered in the BVES Distribution Inspection Application.

Intrusive Inspections: Each structure inspected will be recorded on a BVES approved form with the following information:

- Facility number
- Manufacturer
- Manufacture date
- Original treatment
- Pole length
- Pole class
- Wood species
- Inspector's name
- Date inspected
- Inspection result
- Additionally, a copy of the resistograph will be provided to BVES.

Inspection Methodology and Requirements

The BVES G.O. 165 Inspection Program is intended to promote safety, circuit reliability, minimal service interruption, and reduced risk of ignitions through routine visual inspection of distribution facility conditions. The inspection focus is ensuring compliance to GO-95 and GO-128 requirements and well as other applicable standards such as California Public Resource Codes 4292 and 4293. Inspection intervals and reports shall comply with the requirements specified in GO-165. The reporting procedures set forth and defined herein may be used to evaluate compliance with the BVES plan. Inspection intervals will conform to GO-165 unless required more frequently by other Federal, State, or local agencies or BVES.

The following are brief descriptions of the inspection methodologies, assumptions, requirements, and key items to identify for each type of inspection (Patrol Inspection, Detailed Inspection, and Intrusive Inspections.

<u>Patrol Inspection</u>

Patrol Inspections shall only be performed by qualified staff as designated by the Field Operations Supervisor. The Patrol Inspection is conducted by foot patrol or by "drive-by" when distribution facilities easily accessed and visible from the road. Aerial patrols are permitted for circuits where access is limited or hindered. For example, aerial patrols on circuits impacted by heavy snow fall may be performed in lieu of foot patrol or "drive-by" patrols.

The Patrol Inspection results will be recorded in the BVES Distribution Inspection Application.

- Appendix A provides an inspection guide checklist.
- A Priority Level rating in accordance with this instruction will be assigned for observations requiring corrective action.
- Inspection results will be reviewed by the Field Operations Supervisor and the Wildfire Mitigation & Reliability Engineer.

The following requirements serve as a guideline to identify the focus of the inspection:

- Visual inspection of distribution circuits from the substation source to end of circuit will be performed and will include support structures, hardware, conductors, transformers

(overhead), capacitors, switches, fuses, etc. to identify obvious problems or hazards for public or worker safety, circuit reliability and fire hazards.
- Vegetation encroachments in violation of BVES tree-trimming requirements or G.O. 95 clearance requirements will be identified.
- Circuit map discrepancies will be reported.

Minor maintenance activities to place guy marker guards, visibility strips, etc. may be performed. Items not performed at the time of inspection will be scheduled for correction according to the assigned priority level.

Patrol Inspections will be performed on each circuit at least once per year as required by GO-165. Circuits designated as "high wildfire fire" circuits will be prioritized to be inspected before the fire season. Next, circuits with mostly bare conductors will be prioritized to be patrolled. Finally, circuits that are lower risk (little or no bare conductors) will be the final priority in the annual patrol inspection schedule. Bear Valley's Emergency and Disaster Response Plan identifies circuits serving key public agencies and critical infrastructure such as hospitals, emergency response services, etc. These circuits shall be patrolled before the fire season as a priority to ensure public safety and reliability. The patrol is intended to identify obvious problems or hazards.

As previously indicated, the aim of the patrol is to identify obvious structural problems and hazards. To aid the Field Inspector in identifying these issues during a Patrol Inspection, a checklist is provided in Appendix A to this plan. Patrol Inspections of Pad-mounted and underground equipment and structures is an external visual inspection of the equipment and structures only.

<u>Detailed Inspection</u>

Detailed Inspections shall only be performed by qualified staff as designated by the Field Operations Supervisor. The Detailed Inspection will be used in place of the Patrol Inspection in the calendar year in which it is performed. The Detail Inspection has much the same emphasis as the Patrol Inspection except that it involves a more detailed examination of facilities in order to identify facilities and circuit problems or hazards which may compromise safety or circuit reliability. Detailed Inspections will be visual-based from ground or air and do not require climbing unless directed by the Field Operations Supervisor and performed by qualified staff.

The Detail Inspection results will be recorded in the BVES Distribution Inspection Application.

- Appendix A provides an inspection guide checklist for overhead and pad-mounted facilities.
- A Priority Level rating in accordance with this instruction will be assigned for observations requiring corrective action.
- The condition of each structure inspected shall be recorded in the BVES Distribution Inspection Application.
- Inspection results will be reviewed by the Field Operations Supervisor and the Wildfire Mitigation & Reliability Engineer.

The following requirements serve as a guideline to identify the focus of the inspection:

- Visual inspection of distribution circuits from the substation source to end of circuit will be performed and will include support structures, hardware, conductors, transformers (overhead), capacitors, switches, fuses, etc. to identify obvious problems or hazards for public or worker safety, circuit reliability and fire hazards.
- Vegetation encroachments in violation of BVES tree-trimming requirements or G.O. 95 clearance requirements will be identified.
- Circuit map discrepancies will be reported.

Minor maintenance activities to place guy marker guards, visibility strips, etc. may be performed. Items not performed at the time of inspection will be scheduled for correction according to the assigned priority level.

Detailed Inspection for underground facilities and equipment requires that the inspector enter vaults, manholes, walk-in enclosures and open pad-mounted transformers. Applicable electrical and confined space entry requirements are to be followed. Appendix B provides an inspection guide for underground facilities and equipment.

Intrusive Inspections

Intrusive Inspections will be performed on wood pole structures on at least a 10-year cycle for poles over 15 years of age which have not been subject to an intrusive inspection and at each 20-year period, thereafter, on poles which have passed an intrusive inspection. Normally, intrusive inspections are performed by qualified contractors utilizing resistograph equipment.

Inspections are to be done by qualified personnel trained in recognizing both biological and non-biological degradation and be able to accurately assess damaged caused by same. Poles in concrete or asphalt will be intrusively inspected at and above the ground line area. A minimum of two borings will be taken per structure to assess internal condition of each structure.

The Utility Engineer & Wildfire Mitigation Supervisor will review and approve the contractor's intrusive inspection procedure prior to allowing the Intrusive Inspection.

Contractor's Intrusive Inspection results will be provided to BVES in a spreadsheet created by resistograph program and will be uploaded into BVES Distribution Inspection Application.

The Utility Engineer & Wildfire Mitigation Supervisor will determine the percent of remaining strength by analyzing the resistograph results utilizing NESC standards.

Appendix C provides Intrusive Inspection procedures when qualified BVES employees perform the Intrusive Inspection.

Processing Inspection Findings

Inspecting findings will be documented in the BVES Distribution Inspection Application per this instruction. Each finding will be assigned a Priority Level (e.g., Level 1, Level 2, or Level 3) as defined in this instruction (see Definitions section) and corrective action will be taken to resolve the findings in accordance with the timeframes listed in this instruction (see Definitions section) and summarized in the table below.

Priority Level Rating	Rating Description	Tier 2 Response Time	Tier 3 Response Time
1*	Requires immediate corrective action	Immediate	Immediate
2	Requires timely corrective action. Potential risk of fire or worker safety	Within 12 Months	Within 6 Months
3	Requires corrective action but does not pose an immediate risk of fire or worker safety	Within 59 Months	Within 59 Months

*Level Rating 1 issues shall be immediately resolved to correct the issue or remediated to a condition where the Priority Level Rating is 2 or 3 and then treated accordingly for final resolution.

The Priority Level may be adjusted by Engineering or supervisors during their review and evaluation of the findings. The Wildfire Mitigation & Reliability Engineer will track findings that have open work orders and alert Engineering & Planning and Field Operations to take corrective action to resolve the findings prior to going past the due date. Appendix D: Asset Inspection Workflows provides the workflows for all asset inspections currently performed at BVES.

Appendix A: Inspection Guide for Overhead and Pad-mounted Facilities (Detailed and Patrol Inspections)

This Inspection Guide is a comprehensive listing of potential hazards and/or discrepancies. For Detailed Inspections, this guide should be followed closely while for Patrol Inspections it is not intended that each patrol identify each of these issues. For Patrol Inspections, the Field Inspector must primarily focus attention on identifying obvious structural problems and hazards. Other less severe findings should be noted as feasible but should not interfere with the primary focus of the Patrol Inspection. Detailed Inspections should cover all of these issues.

Distribution Element	**Potential Hazards/Discrepancies**
Conductors	Check for the following: • Detached/unsupported/unattached • Bare conductors contacting or arcing to other conductors • Bare conductors contacting or arcing to communication cables • Bare conductors contacting or nearly contacting the ground, buildings, or other structures • Inadequate clearances to ground • Inadequate clearances to communications • Inadequate clearances to other structures (e.g., buildings, radio antennas, billboard signs, cranes, scaffolding or other structures) • Burned jumper or connector • Burned high voltage conductor • Covered conductor- significant discoloration, bubbling, change in sag with-in the conductor span between phases and separation of the outer coating from the covered conductor cable, and signs of abrasions that penetrate through the outer coating • Vegetation contacting or arcing to high voltage conductor • Vegetation clearance infractions • Hazardous tree conditions, vegetation encroachment, dead trees, foreign objects in line, etc. • Vegetation contacting low voltage conductor and compromising structure or conductor
Guys	Check for the following: • Broken / damaged in proximity to high voltage conductor • Insulator compromised • Slack • Anchor – decayed / loose • Connectors or fasteners damaged / missing / loose • Missing guard marker • Erosion or excavation around anchor
Insulator/Cutout	Check for the following:

	• Broken / damaged / missing • Covers missing
Pole	Check for the following: • Broken / Damaged / Deteriorated (mechanical damage by vehicle, storm, fire, etc.) • Leaning / Excessive lean • Climbing space obstructed • Erosion or excavation around base • Wire mesh wrap damaged / loose (wood pole only) • Visibility strips damages / missing / adequate • Vegetation clearance around pole • HIGH VOLATAGE signs • Structure number and tags
Crossarm	Check for the following: • Broken / damaged • Loose • Tilted • HIGH VOLATAGE signs
Overhead Equipment and hardware (insulators, arresters, risers, potheads, transformers, capacitors, fuses, fuse tripsaver devices, switches, control boxes, etc.)	Check for the following: • Broken / damaged / missing • Detached • Bulged or discolored capacitor units • Blown fuses and broken fuse holders • Equipment leaking / weeping / seeping • Risers loose / detached • Potheads or molded terminations damaged / detached / loose • Significant corrosion • Broken / cracked / damaged insulators • Blown lightning arresters • Burn marks • Foreign objects interfering with operation
Ground Wire / Rod / Molding	Check for the following: • Exposed / broken / missing at public or communication level • Ground wire exposed above public and below communication level
Pad-mounted and Underground Structures and Equipment	Check for the following: • Exterior damage to structure or equipment enclosure • Enclosures not breeched • Equipment secured to pad and not displaced • Structure is sound and secure • Visual hazards

	• Structure movement • Signs of corrosion (specifically inspect weld seams, corners, door hinges, and enclosure roof.) • Debris in or around structures that present a hazard • Pad-mount structurally sound and not deteriorated • Damage to vault lids or vent pipes • Missing or damaged manhole lid gasket/seal rope • Air vents for damage and presence of shields around vent standpipe in landscaped areas • Vault lid (equipment cover) seal (felt) and lifting hole plugs • Manhole and vault lid for any openings where small objects can be inserted • Evidence of water ponding on top of the structure • Missing or damaged bolts or fasteners • Vegetation clearances around pad-mount or equipment • Cabinet security in pad-mount equipment • Presence and condition of appropriate signage • HIGH VOLTAGE signs and the structure number are legible • Sufficient work space around structure • Snow removal marker missing or damaged
Documentation	Check for the following: • Circuit map accuracy • Pole Tags

Appendix B: Inspection Guide for Underground Facilities and Equipment (Detailed Inspections)

This Inspection Guide is provided for underground facilities and equipment when conducting Detailed Inspections.

Element	Potential Hazards/Discrepancies
External	• Prior to and after entering a structure, perform a general thermal scan for hot spots in structure and all equipment, cable, terminations, and splices. • Check for missing or damaged manhole lid gasket/seal rope. • Check air vents for damage and presence of shields around vent standpipe in landscaped areas. • Check vault lid (equipment cover) seal (felt) and lifting hole plugs. • Check manhole and vault lid for any openings where small objects can be inserted. • Check for evidence of water ponding on top of the structure. • Check for missing/damaged bolts or penta bolts. • Check for debris in or around structures. • Check for visual hazards. • Check for structure movement. • Verify that HIGH VOLTAGE signs and the structure number are legible. • Check for exterior damage to structure. • Check for sufficient work space around structure. • Check for deterioration of concrete. • Check for signs of corrosion (specifically inspect weld seams, corners, door hinges, and enclosure roof.). • Check that the structure is sound and secure. • Check for openings in structure which may allow the passage of wire, or other conducting material into the structure from the outside. • Check for exterior damage to adjacent service handholes or splice boxes.

Internal	• Check for water inside the structure. • Check for sand, dirt, mud, signs of vermin, debris, and so forth • Verify cable tags are as complete as possible and consistent with the circuit map. • Verify that cable clearances are adequate, not rubbing on sharp edges. • Check that duct plugs are installed and in good working order in all necessary ducts. • Check if the vent is leaking, or shows signs of previous leaking. • Check for corrosion of ground rods and cables and all ground connections are proper. • Check for concrete spalling and rebar rusting. • Remove debris and loose materials from inside structure.
Equipment	• Check for signs of termination overheating or distortion. • Check for signs of corrosion, oil leakage, and low oil levels. • Check operation of sump pumps and perform maintenance. • Check for scratches or abrasion to bare metal on equipment. • Inspect weld seams. • Inspect external operating mechanism. • Inspect operating shaft seals. • Inspect gaskets (cover, cable heads, and so forth). • Inspect oil fill plug and sight gauge seals. • Inspect tightness of hold-down bails. • Inspect condition of marine-coating. • Inspect fuse carriers for proper locking and sealing. • Check for sufficient work space around equipment. • Check for signs of contamination, tracking, or deterioration of insulating barriers and arc interrupting chutes • Verify electrical clearances are maintained between barriers, like parts, and other insulated components. • Verify that phase barriers are securely attached. • Verify that the ground conductor is the correct size and is attached to the ground pad on the tank. • Check safety barrier installation and condition on live front equipment (for example, pothead skirt in the PMH switch in contact with the protective barrier). • In live-front equipment, verify that the fuse clips are in good condition (no signs of heating, arcing, or corrosion) • Verify that locking devices are in place. • Inspect mounting bolts for the correct size and number, tightness and corrosion.

Apparatus	• Check for bulging, ruptured, or discolored capacitor units. • Inspect fuse holders, cutouts, or fused disconnects. • Check for blown fuses. • Check cable and cable terminations for signs of deterioration or damage (underground). • Heat scan the cable, terminations, and equipment (underground). • Check for corrosion or other damage. • Check for oil or compound leaks. • Check clearances, barriers, and grounding. • Check weld seams. • Inspect operating shaft seals. • Check oil fill and sight gauge seals (underground) • Check condition of marine coating (underground). • Check to see if relay tripped (if applicable). • Check for loose connections (arcing or burning). • Check for damaged or blown control transformer. • Check for approved locking devices in place and locked. • Check for exterior/interior damage to enclosure (underground). • Check for washout or excavation around enclosure (underground). • Check that High Signs, and so forth, are legible. • Check that enclosure mountings are securely bolted to structure (underground). • Check for signs of rodents or other animals (underground). • Check for any signs of water or oil within the apparatus housing (underground). • Enter the status of equipment, counter and load reads, any abnormal conditions, and the names of all inspection personnel in the log provided at equipment.

Appendix C: Intrusive Inspection Procedures

The Field Operations Supervisor shall ensure BVES employees performing intrusive inspections are trained on this procedure prior to them performing an Intrusive Inspection. The following equipment is required to perform this procedure:

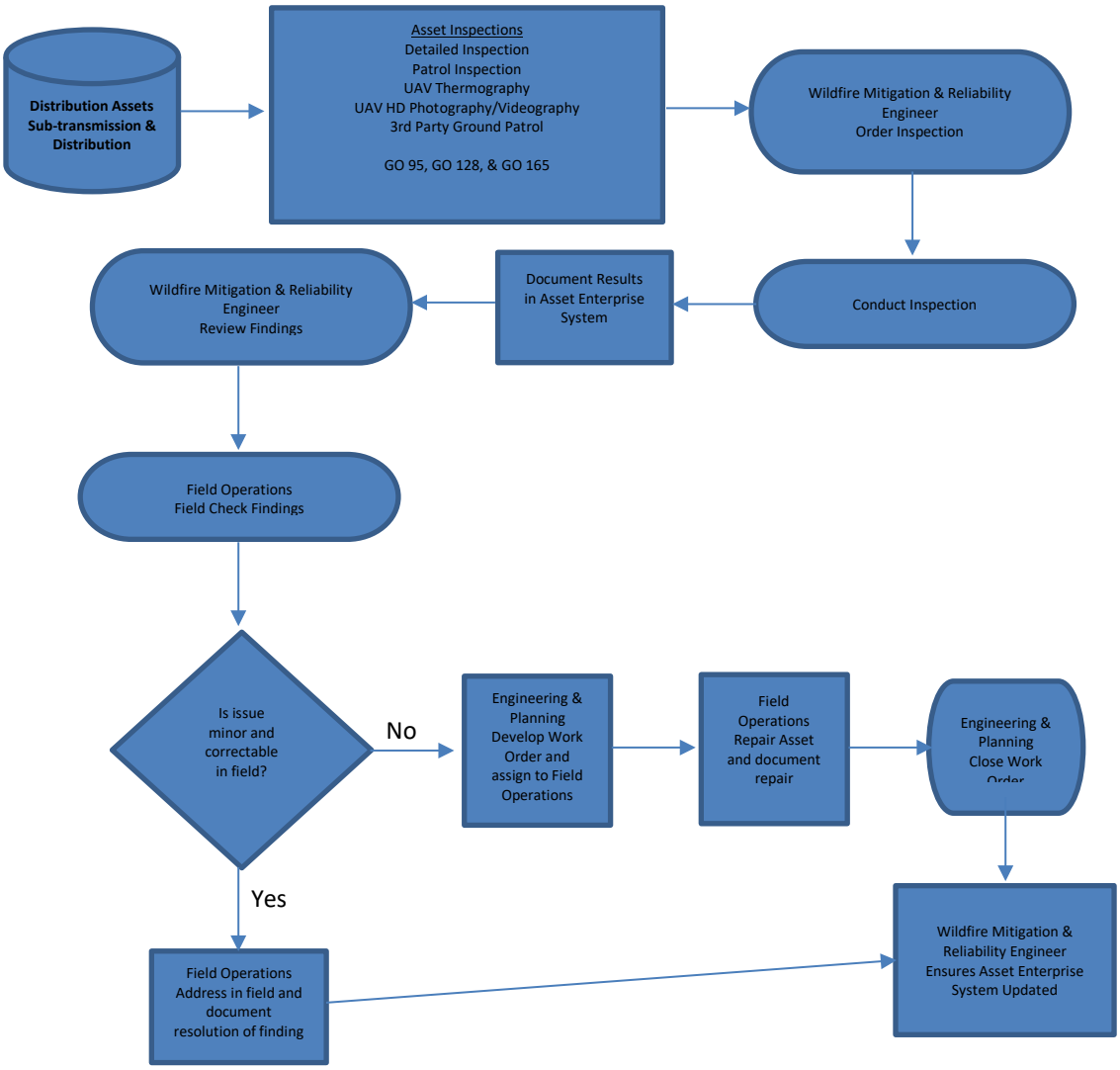
- Hammer and/or small hatchet to sound the poles as well as investigate depth of external decay and/or mechanical damage
- Means to excavate one quadrant of the pole a minimum of 12 in. below the groundline.
- Appropriate boring device. Some examples are:
  - Resistograph Drill System of the PD type
  - Gas powered or electric 1/2 drive drill with a 3/8 in. x 18 in. auger bit
  - Increment bore with a minimum bit length of 12 in.
- Means to measure remaining shell thickness
- Bore hole sterilization substance
- Treated 7/16 in. hardwood plugs

All wood structures 15 years and older will be minimally intrusively inspected by the following criteria:

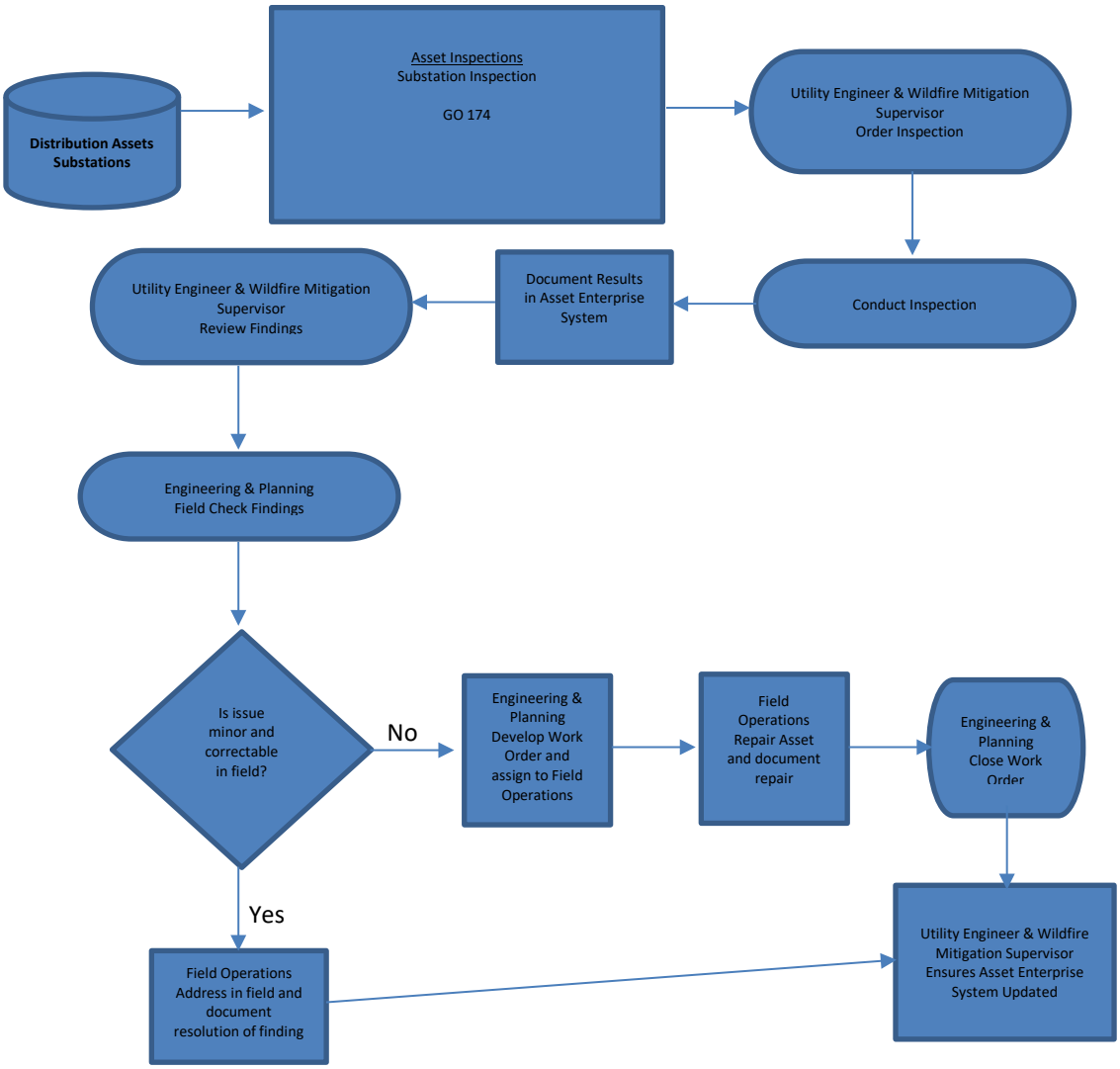
- Hammer to sound the poles six foot above ground line to the bottom of any excavation, as well as investigate the depth of external decay and/or mechanical damage.
- If not in concrete or asphalt, excavate to a minimum depth of 12in. below ground line.
- A minimum of two borings will be taken with appropriate boring device, to be approved by BVES.
- If not in concrete or asphalt one of the borings will be at the bottom of the excavation, the other will be 90 degrees from the first boring and at ground line.
- If in concrete or asphalt one boring will be at ground line, the other will be 90 degrees from the first boring and 12in above ground line.
- Each pole shall be probed with an instrument to determine the presence of internal decay and/or insect damage.
- Inspection holes shall be sterilized by utilizing a BVES approved material.
- Inspection holes will be plugged with a BVES approved material.
- Information will be entered into BVES approved program to determine the remaining section modulus of force for every structure.
- Document inspection results.

Appendix D: Asset Inspection Workflows

Sub-transmission and Distribution Asset Inspection Workflow



Substation Asset Inspection Workflow



Intrusive Inspection Workflow