



e-FILING REPORT COVER SHEET

COMPANY NAME: Harney Electric Cooperative Inc.

DOES REPORT CONTAIN CONFIDENTIAL INFORMATION?  No  Yes If yes, submit a redacted public version (or a cover letter) by email. Submit the confidential information as directed in OAR 860-001-0070 or the terms of an applicable protective order.

Select report type:  RE (Electric)  RG (Gas)  RW (Water)  RT (Telecommunications)  RO (Other, for example, industry safety information)

Did you previously file a similar report?  No  Yes, report docket number:

Report is required by:  OAR OAR 860-024-0011(1)

Statute

Order

Note: A one-time submission required by an order is a compliance filing and not a report (file compliance in the applicable docket)

Other

(For example, federal regulations, or requested by Staff)

Is this report associated with a specific docket/case?  No  Yes, docket number: RO 11

List Key Words for this report. We use these to improve search results.

5 Year Check In

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# 5 Year Check In Short Form

## Basic Information for the Operator

Operator Name: Harney Electric Cooperative Inc.

Person Completing Form: Jason Hill

Operator Contact Information: [jhill@hec.coop](mailto:jhill@hec.coop) 541-573-2061

Utility Type: Electric

Pole Owner? Yes

### Operators in your area (companies with whom you coordinate related to joint use)

Company Name	Utility Type(E/T)	Contact Name	Contact Phone	Contact Email
Centurylink	T	Chett Smith	541-589-0741	Chett.smith@centurylink.com

## Inspection Plan and Actual Results

Please complete as much of the table below as is appropriate for your assets; at minimum provide data back to 2018.

Year	All Operator Inspections		Pole Owners				Defects		
	Facility Points Planned (attachments subject to inspection)	Facility Points Inspected	Poles Planned	Poles Inspected	Poles Owned by Operator	Poles Tested and Treated	Defects Found: Your Responsibility	Defects Found: Attacher Responsibility	Defects You Corrected
<b>5 Year Check In Total</b>									
<b>2022</b>	187	187	21082	12487	42164	1105	195	1	135
<b>2021</b>	187	187	21082	35458	42164	1473	72	0	72
<b>2020</b>	187	187	21082	17608	42164	0	98	0	98
<b>2019</b>	187	187	21082	36200	42164	0	89	0	89
<b>2018</b>	187	187	21082	22221	42164	0	102	0	102

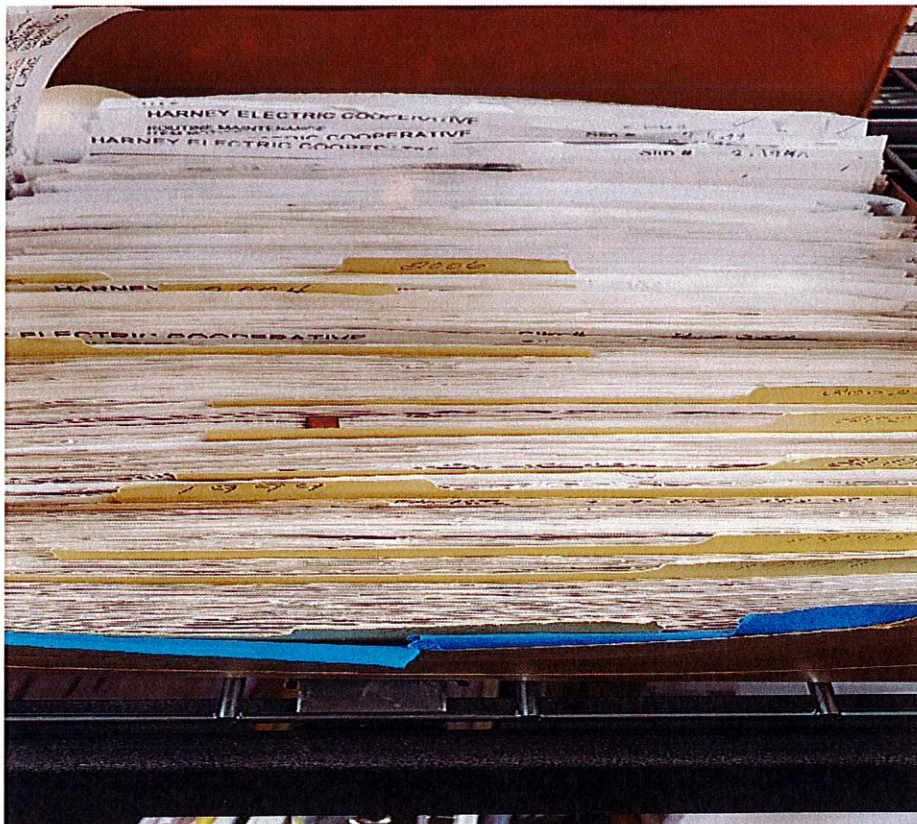
## Program Summary

### 1. Describe your Division 24 inspection program

Oregon PUC Rule (860-024-0011), Inspections of Electric Supply and Communications Facilities, states that the maximum interval between detailed inspections is ten years, with a recommended inspection rate of ten percent of overhead facilities per year.

Recognizing the hazards of equipment that operate high voltage lines, HEC maintains a formal inspection and maintenance program for distribution, transmission, and substation equipment.

In the past, HEC's inspection program consisted of sending linemen out to patrol and inspect all power lines on our system yearly. The Lineman would write down any hazards on a maintenance item sheet. The lineman would then draw a line on a line patrol map and write the date on the map when the particular line was inspected. Substation inspections were documented on paper inspection sheets. There are stacks of records available.



Example Maintenance Item slip:

**HARNEY ELECTRIC COOPERATIVE** Slip # 2.1717

ROUTINE MAINTENANCE ITEM NOTICE Date 3/11/21 Initial KB

Sub LAWEN Location S NEWTON Rd Line & Pole # B43L3

1          PRIORITY 3/11/21  
 2          Date Completed  
 3 X By KB

<input type="checkbox"/> Pole Damaged	<input type="checkbox"/> Cattle Rubbing	<input type="checkbox"/> Hardware Loose
<input type="checkbox"/> NESC Clearance	<input type="checkbox"/> Pole Attachment	<input type="checkbox"/> Insulator Shot
<input type="checkbox"/> Phase Off Arm	<input type="checkbox"/> Connectors Hot	<input checked="" type="checkbox"/> Ground Broken
<input type="checkbox"/> Tie Loose	<input type="checkbox"/> Bushing Cracked	<input type="checkbox"/> Arrestor Blew
<input type="checkbox"/> Crossarm	<input type="checkbox"/> High Voltage Signs	<input type="checkbox"/> Security Light
<input type="checkbox"/> Guy Slack	<input type="checkbox"/> Conductor Stranded	<input type="checkbox"/> Transformer Bad
<input type="checkbox"/> Pole Leaning	<input type="checkbox"/> Meter Glass Broken	<input type="checkbox"/> Bird Crap
<input type="checkbox"/> Tree Branches	<input type="checkbox"/> Meter Seal Missing	

Remarks FIXED BROKEN GROUND

**HARNEY ELECTRIC COOPERATIVE** Slip # 2.1718

ROUTINE MAINTENANCE ITEM NOTICE Date 3/11/21 Initial WS

Sub LAWEN Location SANDHILL LN Line & Pole # V52A R39R3

1          PRIORITY 3/11/21  
 2 X Date Completed  
 3          By KB

<input type="checkbox"/> Pole Damaged	<input type="checkbox"/> Cattle Rubbing	<input type="checkbox"/> Hardware Loose
<input type="checkbox"/> NESC Clearance	<input type="checkbox"/> Pole Attachment	<input type="checkbox"/> Insulator Shot
<input type="checkbox"/> Phase Off Arm	<input type="checkbox"/> Connectors Hot	<input checked="" type="checkbox"/> Ground Broken
<input checked="" type="checkbox"/> Tie Loose	<input type="checkbox"/> Bushing Cracked	<input type="checkbox"/> Arrestor Blew
<input type="checkbox"/> Crossarm	<input type="checkbox"/> High Voltage Signs	<input type="checkbox"/> Security Light
<input type="checkbox"/> Guy Slack	<input type="checkbox"/> Conductor Stranded	<input type="checkbox"/> Transformer Bad
<input type="checkbox"/> Pole Leaning	<input type="checkbox"/> Meter Glass Broken	<input type="checkbox"/> Bird Crap
<input type="checkbox"/> Tree Branches	<input type="checkbox"/> Meter Seal Missing	

Remarks BAD NEUTRAL HAND TIE & BROKEN POLE GROUND  
FIXED BROKEN GROUND, REPLACED TIE & ADDED VIBRATION DAMPNER

**HARNEY ELECTRIC COOPERATIVE** Slip # 2.1719

ROUTINE MAINTENANCE ITEM NOTICE Date 3/11/21 Initial WS

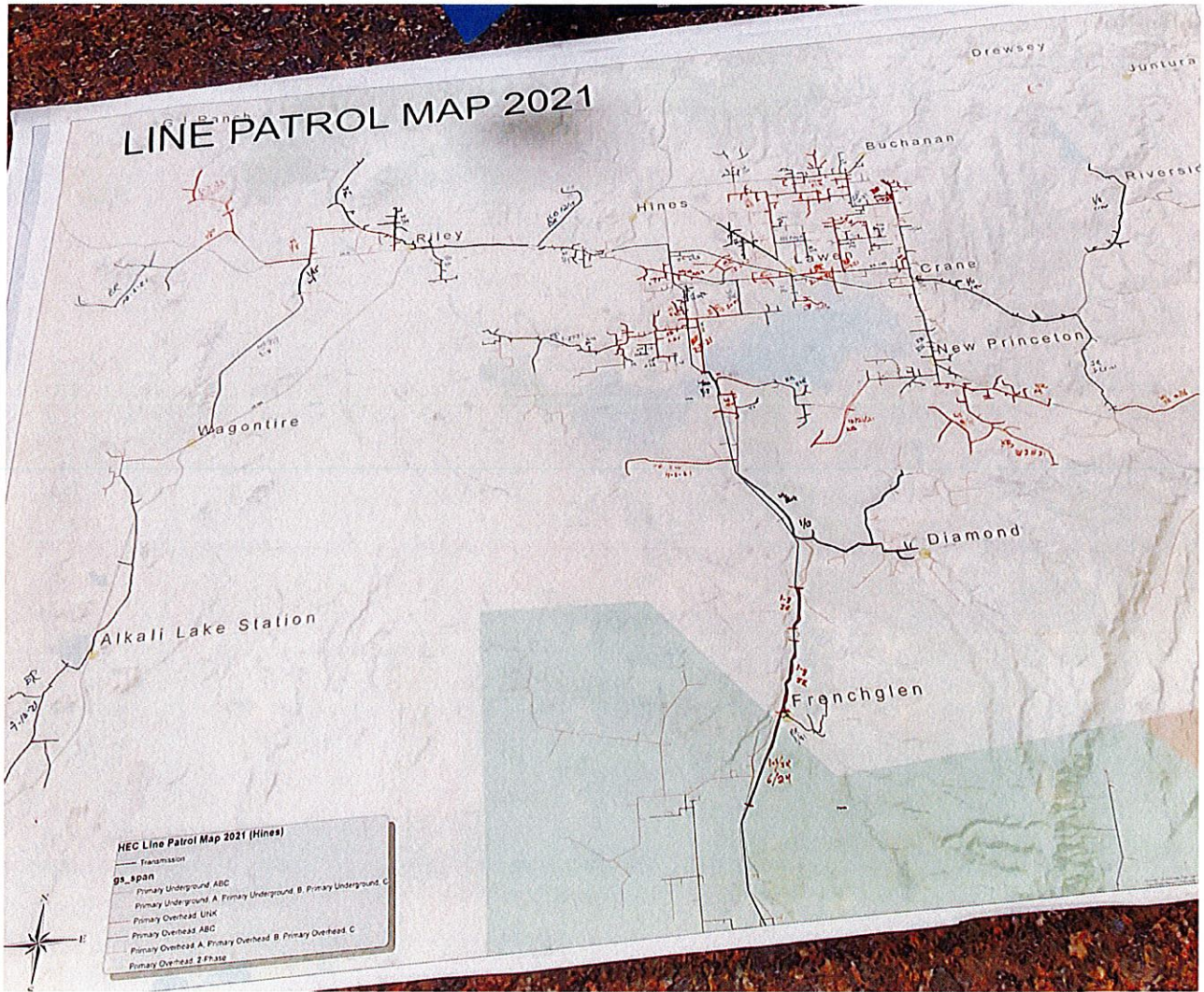
Sub LAWEN Location SANDHILL LN Line & Pole # V52A R47

1          PRIORITY 3/11/21  
 2 X Date Completed  
 3          By KB

<input type="checkbox"/> Pole Damaged	<input type="checkbox"/> Cattle Rubbing	<input type="checkbox"/> Hardware Loose
<input type="checkbox"/> NESC Clearance	<input type="checkbox"/> Pole Attachment	<input type="checkbox"/> Insulator Shot
<input type="checkbox"/> Phase Off Arm	<input type="checkbox"/> Connectors Hot	<input type="checkbox"/> Ground Broken
<input checked="" type="checkbox"/> Tie Loose	<input type="checkbox"/> Bushing Cracked	<input type="checkbox"/> Arrestor Blew
<input type="checkbox"/> Crossarm	<input type="checkbox"/> High Voltage Signs	<input type="checkbox"/> Security Light
<input type="checkbox"/> Guy Slack	<input checked="" type="checkbox"/> Conductor Stranded	<input type="checkbox"/> Transformer Bad
<input type="checkbox"/> Pole Leaning	<input type="checkbox"/> Meter Glass Broken	<input type="checkbox"/> Bird Crap
<input type="checkbox"/> Tree Branches	<input type="checkbox"/> Meter Seal Missing	

Remarks BAD NEUTRAL HAND TIE BURNED DOWN TO ACSR  
REPLACED TIE & ARMOR ROD & ADDED VIBRATION DAMPNER

Example Line Patrol Map:

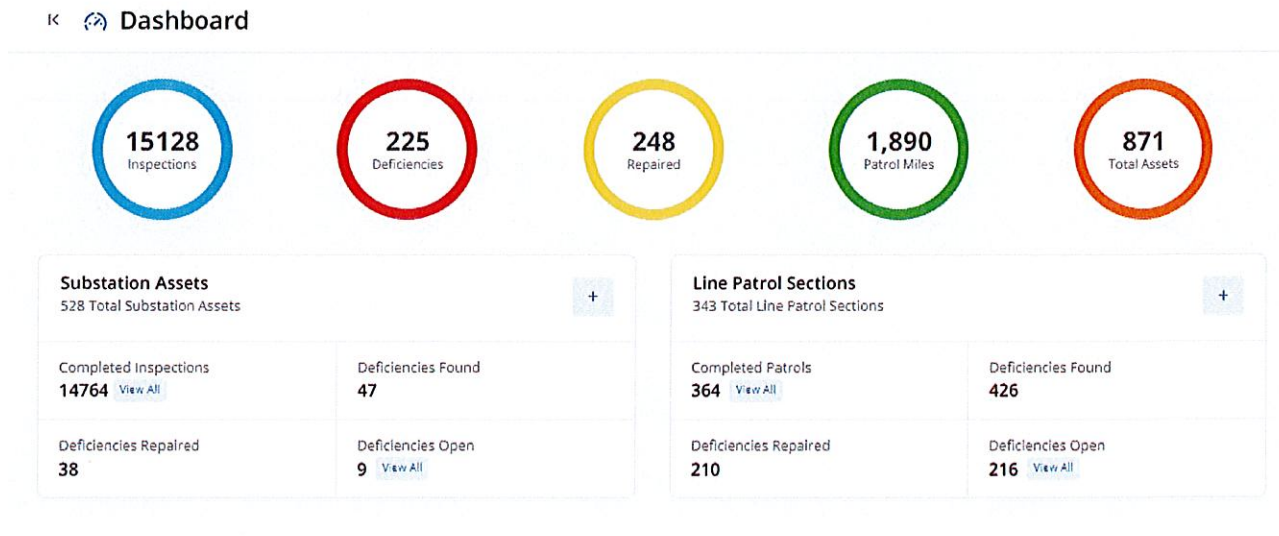


HEC has recently implemented a new inspection and maintenance program, called Protection Zone Management to keep electronic records of all line patrol inspections, substation inspections, vegetation management inspections, and deficiencies found and repaired. The program is still being developed and fine tuned. HEC currently patrols its system regularly and is increasing the frequency of inspections in high-risk areas. HEC tries to inspect 50% of our system every year. General Inspection Instructions: Facilities meeting standards and not requiring maintenance will be recorded as inspected in the PZM software and documented on the line patrol map. Conditions other than satisfactory will be documented in the PZM software and a deficiency will be created for any outstanding item that needs repair or correction. The deficiency list acts as a maintenance item list that the line crews oversee completing and documenting.

The inspector collects the following information at the time of inspection if a deficiency is found.

- Responsibility Area
- Name of inspector
- Date of inspection
- Location of asset
- Damaged (yes/no)
- Work order priority # Emergency,1,2,3,4
- Chance of failure
- Feeder name
- Vegetation (trees that need trimmed)
- Labor Required
- Outage required
- Description of deficiency

## New Inspection Program Example:



## New Maintenance Item List Example:

Deficiency History [View All](#)

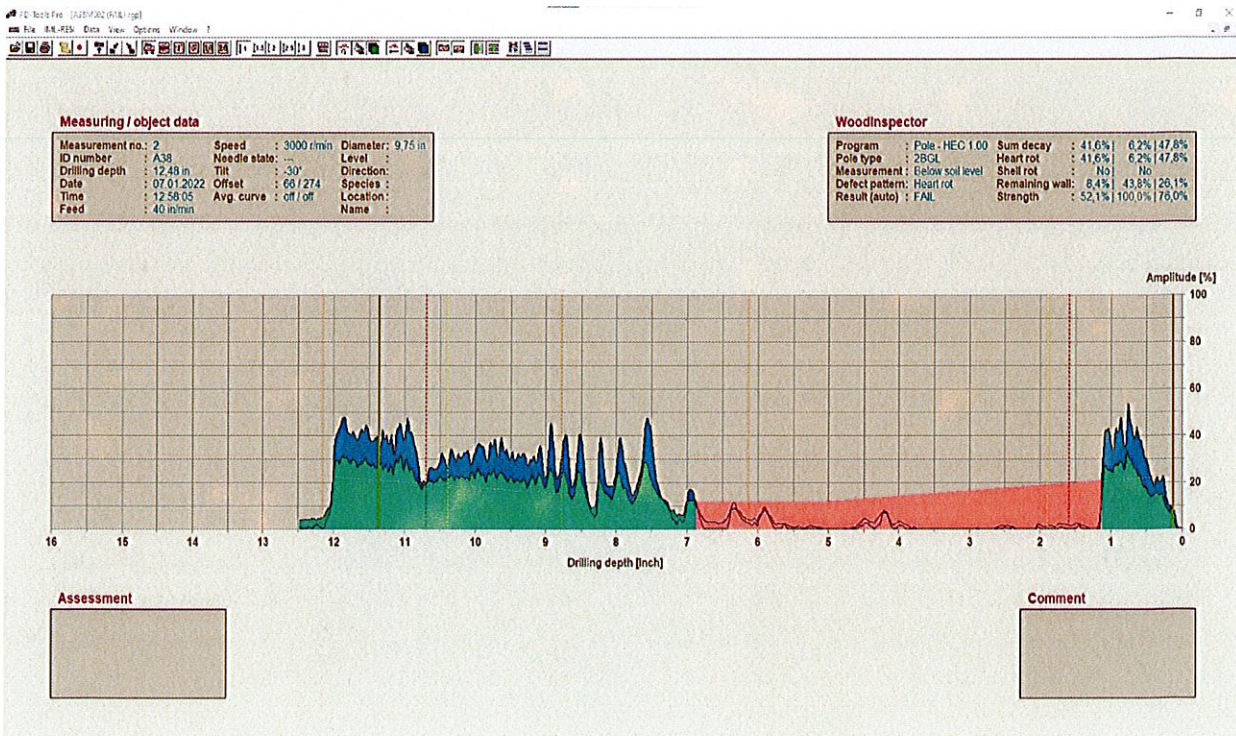
EMPLOYEE ↑ ↓	FOUND / REPAIRED ↓	ISSUE ↑ ↓	LOCATION ↑ ↓	ACTIONS
Wyatt Shelley	Repaired: 05/18/2023	A51L8L1 anchor rotted off at Susan settle establishment.	Lawen Substation Feeder (A) - LPS	<a href="#">Q</a>
Jeff Pyburn	Repaired: 05/17/2023	B402 - Broken neutral tie (#4 over armor)	Daveytown Sub Feeder B - LPS	<a href="#">Q</a>
Charles Knox	Repaired: 05/17/2023	upset bolt is loose and sticking out of pole	Daveytown Sub Feeder B - LPS	<a href="#">Q</a>
Charles Knox	Repaired: 05/17/2023	service wedge broke at B385	Daveytown Sub Feeder B - LPS	<a href="#">Q</a>
Jason Rankin	Repaired: 05/10/2023	neutral wire sitting on the da and not on the spool.	Crane - CA145 - The Brown - LPS	<a href="#">Q</a>
Jason Rankin	Repaired: 05/10/2023	med brace down replace the brace or hardware	Crane - CA145 - The Brown - LPS	<a href="#">Q</a>
Jason Rankin	Repaired: 05/09/2023	canted arm lag came out of the pole	Lawen Substation Feeder (A) - LPS	<a href="#">Q</a>
Mike Estrada	Repaired: 05/04/2023	cocked arm. fixed on site	Fields - B053 - Wrench Ranch - LPS	<a href="#">Q</a>
Zane Bailey	Repaired: 05/04/2023	a and b phase bells should be changed	Dog Mountain - H049L002 - Juniper Basin - LPS	<a href="#">Q</a>
Zane Bailey	Repaired: 05/04/2023	need to change out D.E. polys/ whole bank needs redone.	Dog Mountain - H049L002 - Juniper Basin - LPS	<a href="#">Q</a>



In 2021, HEC implemented a new pole testing program using the IML resistograph tester. HEC's pole testing and inspection program is an ongoing project and completed throughout the year as time permits by HEC employees. HEC employees use the IML resistograph drill with the wood inspector program to test wood pole densities and review auto generated graphs that show the pole inspection results.

HEC is in the high desert part of Oregon and Nevada, and is located in decay zone 1, (low decay hazard), of the AWPA decay hazard zone map. Being in decay zone 1, HEC has a very low failure rate as compared to other utilities in higher decay zone climates.

HEC's pole testing schedule is based on a ten-year cycle. HEC attempts to test around 3,000 poles per year. Records are maintained at HEC's headquarters in Hines, Oregon. If pole test fails, HEC will put on list to change out within one year. If the pole test is marginal, it will be put on a list to re-inspect in three years. Following is an example of a failed pole test result:



HEC employees perform all vegetation management tasks. The line crews are responsible for inspecting HEC's system and identifying infrastructure that needs maintenance or trimming. Any areas that have trees or reoccurring vegetation, are entered into the PZM software on a two-year trimming cycle.

HEC will meet the minimum standards for conductor clearances from vegetation to provide safety for the public and utility workers, reasonable service continuity and fire prevention. As an operator of electric supply facilities, HEC's VM program will keep appropriate records to ensure that timely trimming is accomplished to maintain the designated clearances

HEC's substation inspection protocols include a monthly inspection. All inspections are completed by HEC employees using the Protection Zone Management software. All yard, fences, and equipment are inspected during the inspections. HEC uses the PZM software to maintain inspection records. Infrared and equipment oil tests are completed at each substation and switch station annually.

HEC employees perform all vegetation management tasks. The line crews are responsible for inspecting HEC's system and identifying infrastructure that needs maintenance or trimming. Any areas that have trees or reoccurring vegetation, are entered into the PZM software on a two-year trimming cycle.

HEC's Inspections include the following:

1. **Safety Patrol Inspection:** A simple visual inspection of applicable utility equipment and structures designed to identify obvious structural problems and hazards. Patrol inspections may be carried out during other company business.
2. **Detailed Inspection:** Individual pieces of equipment and structures are carefully examined, visually and through use of routine diagnostic testing, as appropriate.
3. **Wood Pole Inspection:** Using a sophisticated diagnostic tool to drill into pole at ground level to test wood density, and a visual inspection of the pole and hardware.

#### **Routine Safety Patrol Inspection**

HEC performs routine safety patrol inspections as required. Every service is inspected once a year for any hazards or deficiencies that could create a hazard to the public. Every feeder and line are inspected at least once every two years. HEC tries to maintain an inspection rate of 50% of its lines per year.

#### **Detailed T&D Inspections**

HEC performs detailed inspections as required. Every service is inspected once a year for any hazards or deficiencies that could create a hazard to the public. Every feeder and line are inspected thoroughly at least once every ten years. HEC tries to maintain an inspection rate of 50% of its lines every five years.

#### **Deficiency Correction Priority Levels**

The inspector will document the condition of the overhead and underground systems, recording defects, deterioration, violations, safety concerns or any other conditions that require attention. All inspections and defects will be recorded in the Protection Zone Management Application. Focus of the inspection shall be on any hazards that could affect the integrity of the system or the safety of line workers and the general public.

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## 2. Describe how you prioritize repairs

Necessary maintenance service orders resulting from inspections (overhead and underground) will be prioritized and issued as follows:

- **Emergency!**

Condition that is going to immediately or is currently affecting the integrity of the system or presenting a hazard to workers or the public. All Emergency tags will be responded to immediately and appropriate action taken until the hazardous condition is remedied.

- **Priority # 1 – Critical**

Conditions that may affect the integrity of the system or present a hazard to workers or the general public. All Priority #1 tags will be responded to as soon as possible and appropriate action taken until the hazardous condition is remedied.

- **Priority # 2 – Major**

Conditions that require maintenance that can be scheduled to maintain the integrity of the system. Priority #2 service orders will be prioritized by urgency and will be scheduled to have appropriate repairs made to correct the condition within a year where practicable.

- **Priority # 3 – Moderate**

Conditions that do not present a situation that could jeopardize the safety of the system, line workers and the general public. Priority #3 service orders will be submitted by the inspector with the time interval recommended. In the judgment of the inspector, work will be scheduled to be completed within two years.

- **Priority #4 – Minor**

Conditions that do not present a situation that could jeopardize the safety of the system, line workers and the general public. Priority #4 items are housekeeping issues that will be completed as HEC crews are in the affected areas and have time to make repairs.

**3. Describe how you address immediate hazards for both your conditions and any attacher's conditions**

All Emergency tags will be responded to immediately and appropriate action taken until the hazardous condition is remedied. Any attacher's will be notified immediately.

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**4. Describe how you communicate non-immediate hazard conditions to attachers**

If HEC identifies a non-immediate hazard from attachers, we notify local attachers representatives by phone with structure numbers and hazard information.

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**5. Describe the state of electronic record keeping you have had over the last five years**

HEC has not had any electronic record keeping up until 2022. In 2022 HEC implemented a new inspection program that keeps electronic records of inspections and deficiencies. Pole testing records have been done with paper records until 2021 when we implemented a new testing system that has electronic records. HEC's system is not fully GPSed, so past inspections have been documented on the line patrol maps. Since the system is not GPSed, HEC does not know how many poles are on the system. We are currently working toward getting the system GPSed.

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**6. Outline your current plans for any automation of inspection, correction or asset information (i.e. GIS plans or changes to your asset management process)**

HEC is in the process of GPS-ing our system. HEC is in the process of updating our inspection program with an electronically formatted program where records will be easier to produce in an electronic document.

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