



# Enhanced Vegetation Management (EVM) Work Verification

## Exit Meeting

**VEG Quality Verification**

**2020\_QVVM\_\_460\_EVM Work Verification Audit**

**November 10, 2020**



# Safety Orientation: Remote Workplace

**Reminder - Check in on the LiveSafe App before heading into the field**



- ❑ **Earthquake:** Know the safest places to duck, cover, and hold, such as under sturdy desks and tables



- ❑ **Fire:** Know your exits, escape routes, and evacuation plan. Use your [compliant fire extinguisher](#) if safe to do so, exit the house, and call 911



- ❑ **Active Shooter:** Get out, hide out, take out, and call out to 911



- ❑ **Medical Emergency:** Know who can perform first aid/CPR. Call 911 if you're alone or share your location with call leader to send help. Ensure you and others in your household know how to use AED and where it's located if you have one.



- ❑ **Psychological Safety:**
  - ❑ I'm cared for
  - ❑ People have each others backs
  - ❑ It's safe to Speak Up and share different perspectives
  - ❑ New ideas are welcome



- ❑ **Ergonomics:**
  - ❑ Practice **30/30** (every 30 minutes, move/stretch for 30 seconds)
  - ❑ Ensure proper ergonomics
  - ❑ Use and update your RSIGuard



- ❑ **Emergencies**
  - ❑ Update your [emergency contacts](#) via PG&E@Work for Me
  - ❑ Create/update a [personal emergency preparedness plan](#)

- ❑ **Resources:**
  - ❑ Corporate Security: 800-691-0410
  - ❑ Nurse Care Line: 888-449-7787  
Power Gen, Fresno and San Carlos Service Centers 877-888-8656
  - ❑ Employee Assistance Program (EAP) - Reach Out. Get Help. Feel Better. 888-445-4436
  - ❑ [Speak Up Now site](#)

For current COVID-19 information, visit the PG&E [COVID-19 page](#)

# Meeting Attendees or Designee

Name	Title
[REDACTED]	Manager, Work Verification Vegetation Mgmt.
[REDACTED]	Project Manager, Work Verification Vegetation Mgmt.
Stephen Fischer II	Director, Vegetation Management Execution
[REDACTED]	Vegetation Quality Verification, Senior Veg Program Manager
[REDACTED]	Vegetation Quality Verification, Senior Veg Program Manager
[REDACTED]	Vegetation Quality Verification, Senior Veg Program Manager
Michael Ritter (Optional)	Sr. Director, Vegetation Management Ops
Lise Jordan (Optional)	Sr. Director, Electric Compliance
[REDACTED]	Quality Management, Compliance Data Analyst
Joanne Martin (Optional)	RCQA - Quality Management, Director
Sumeet Singh (Optional)	SVP & Chief Risk Officer

- **Be concise, stay on topic, if needed use parking lot**
- **Time for questions will be allowed at the end of each section**
- **Brainstorming or problem solving should be completed in a different forum**
- **Be engaged**
- **Respect each other**
- **Phones on mute unless speaking**

## **Objectives:**

To present the Vegetation Quality Verification results for the Enhanced Vegetation Management (EVM) Work Verification focus review.

## **Desired Outcome:**

- By the end of this meeting, all interested parties will be aware of the results of the EVM Work Verification sample locations reviewed. The observed non-conformances will be discussed as well as the corrective action follow-up and submitted CAP issues if any.
- The completion of a brief exit survey is requested.

## Audit Purpose

This review will examine Enhanced Vegetation Management – Work Verification “pass locations” – system wide and is being performed to provide relative assurance that vegetation in this area meets the EVM Scope as defined in TD-7106P-01 “Enhanced Vegetation Management Scope”.

VM Quality Verification will patrol a statistically random sample of EVM Work Verification “Pass” Line Segments that are subject to EVM requirements and Public Resource Code (PRC) 4293 regulations.

## Audit Scope

This audit assesses Enhanced Vegetation Management (EVM) work verification performed by the vendor Atlas Field Services. The vendor performed work verification audits following PG&E’s completion of EVM work. The purpose of this audit is to review line segments recorded as having met the work verification “pass” criteria from 01/01/2020 to 08/31/2020 for quality verification.

## Audit Scope (cont.)

- The population consists of 1455-line miles of which 42 claimed miles were randomly selected for the review.
- 891 segments were reviewed to ensure compliance with the EVM Scope as defined in TD-7106P-01 “Enhanced Vegetation Management Scope”:
  - Is there vegetation within 4'? (*Compliance*)
  - Is there vegetation within the 4' overhang zone? (*Conformance*)
  - Are there any hazard trees present with strike potential to primary? (*Conformance*)
  - Are there any hazard trees present with strike potential to secondary? (*Conformance*)
- Pass with Observation
  - Is the site clean?
    - Non-Riparian
    - BMP 12 a
    - BMP 12 b

## Audit Scope (cont.)

- Is vegetation straining secondary line causing significant deflection of line or obvious abrasion to line?
- Is there vegetation that will be within 4' of conductors before the next routine cycle (include overhang)?
  - Provide Species and current clearance as well as next known routine cycle
- Are there ANSI A300 issues from current EVM work?



## Audit Scope (cont.)

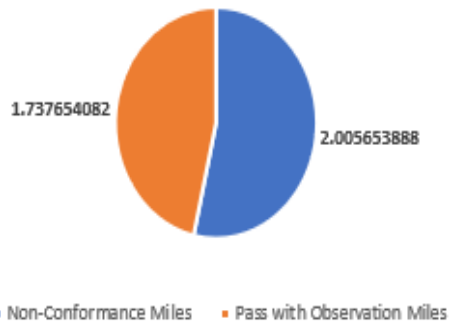
### Random Sampling Calculator:

- VM Quality Verification utilized a random sampling calculator with a 99% Compliance Level, 95% Confidence Level, 3% Error Rate sample methodology

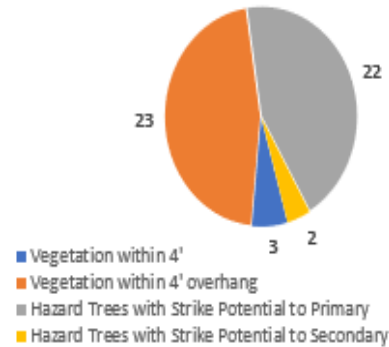
### The audit scope did not include:

- Locations where customers would not allow access OR the location was inaccessible by auditor and approved by the Sr. Auditor to be skipped.
- Locations within a 2020 fire footprint.
- Any locations skipped due to the above concerns were replaced by an alternate sample location.

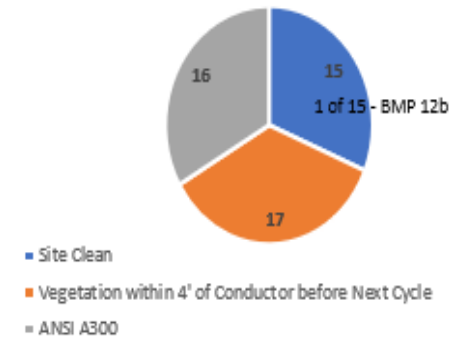
### Claimed Miles with a Finding



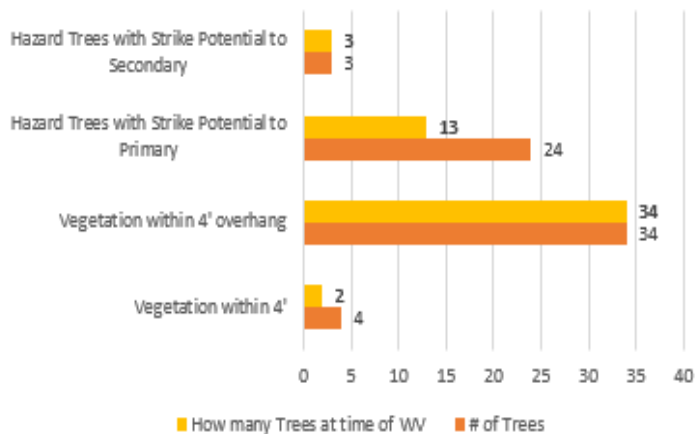
### Non-Conformance Findings by Segments



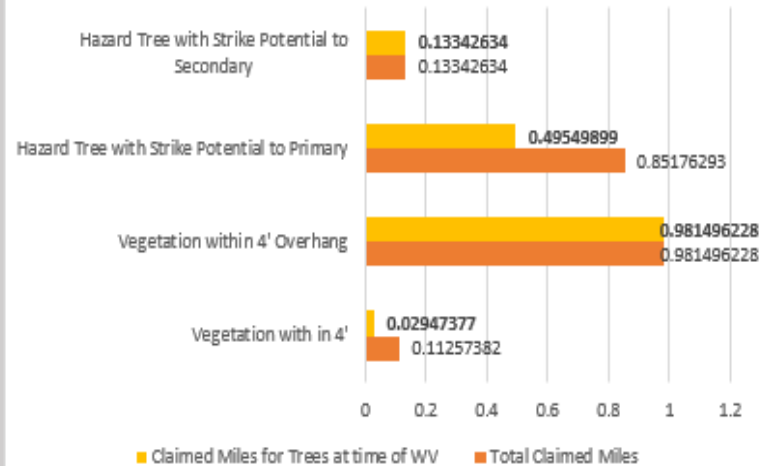
### Pass with Observation # of Findings



### Non-Conformance Findings by Total # of Trees vs. # of Trees at time of WV



### Miles by Total Trees vs. # of Trees at time of WV



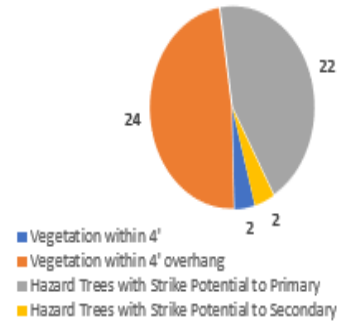
**EVM WV Pass Rate**  
96.17%

1.64 - 42.8169 = 41.1769 / 42.8169

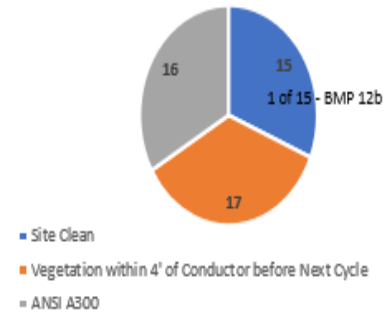
### Claimed Miles with a Finding



### Non-Conformance Findings by Segments



### Pass with Observation # of Findings

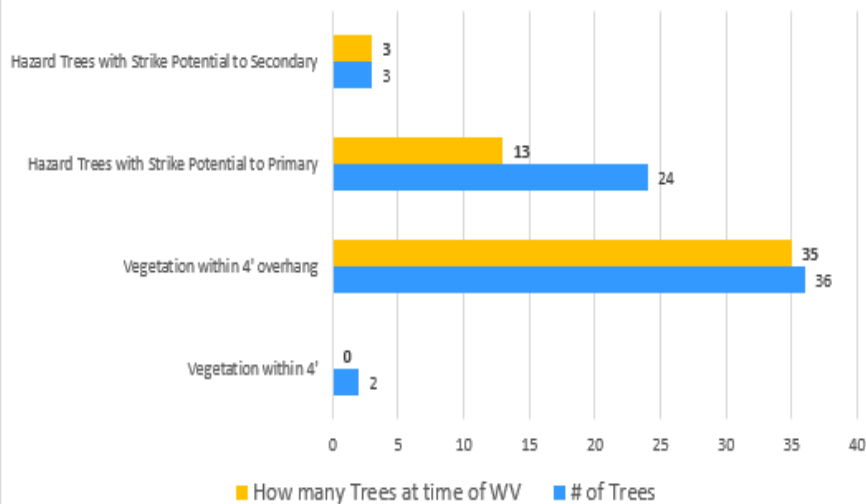


**EVM WV  
Pass Rate**

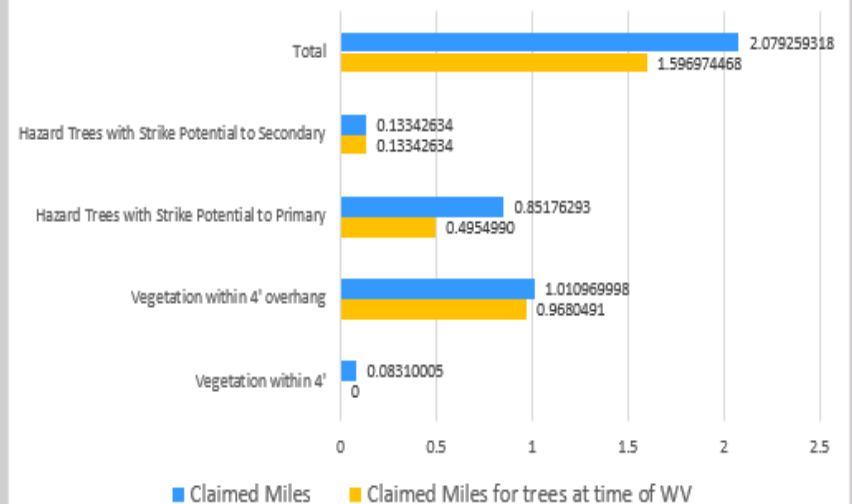
**96.26%**

Calculation:  $1.60 - 42.8169 = 41.2169 / 42.8169$

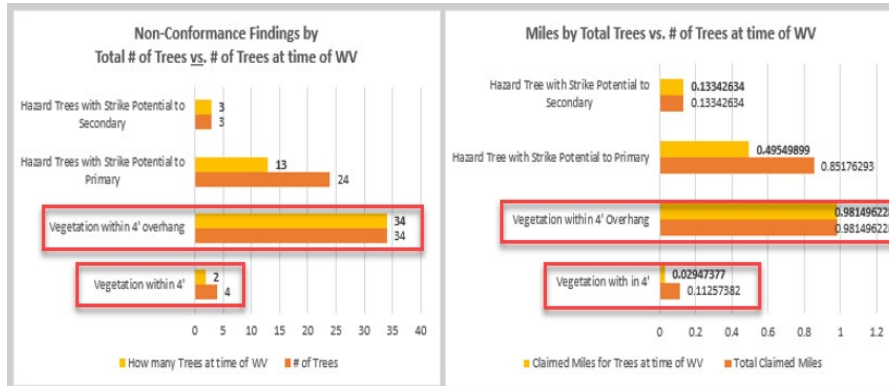
### Total # of Trees vs. Total # of Trees at time of WV (non-conformance)



### Total miles where there was a finding vs. Total Miles where there was a finding that would have been at time of WV



## Preliminary



## Final



The above results represent the number of trees identified with a non-conformance versus the number of trees with a non-conformance that would have been at the time of Work Verification and the claimed miles for those trees:

- 2 Trees originally captured for “Vegetation within 4’ ” at time of Work Verification were moved to “Vegetation within 4’ Overhang”. Due to further investigation, the field tech recorded the finding incorrectly in the survey.
- 1 Tree originally identified as “Vegetation within 4’ Overhang” at time of Work Verification was determined to be a “Pass with Observation”. Those miles were re-claimed in the Pass Rate (0.43 miles).

## CAPs Issued

Circuit/CAP#	Units	Non-Compliant
119828014	1	PRC 4292
119828791	1	PRC 4292

- An additional 5 CAPs (HNU) were issued that were identified on non-sample locations.
  - The above 5 CAPs do not reflect as findings per the audit scope.
- CAP are entered within 24 hours.

## CAPs Recommended

### Segment Status Discrepancies

EVM work verification passed segments provided to QVVM for Audit Sample Population were later determined by Veg Ops to not have been passed. This was referred to by Veg Ops as ‘a known Veg IT issue where claimed miles should not have been claimed’. Additionally these segments resulted in disputes of the QVVM EVM WV audit findings.

### Algorithmic Segment Status

Due to algorithmic assignment of work verification pass or fail status, segments can be “passed”, and line miles claimed that still present compliance and/or conformance issues. Work Verification field personnel can intend to fail a given segment and have the back-office pass that segment due to algorithmic processing. There are scenarios where a line segment that is associated with the veg point would fail, but not always necessarily the line segment that the risk affects. The risk could affect more than one line segment. The limitation of the algorithm is that a veg point can only be associated to one line segment.

- Enhanced Vegetation Management Scope (TD-7106P-01)
- EVM Work Verification Responsibilities One-Pager\_20200528
- Vegetation Management Hazard Notification Procedure
- Vegetation Management Abnormal Field Conditions Procedure
- [TD-7103P-09 Vegetation Management Hazard Notification Procedure](#) (HN)
- [GOV-6101S Enterprise Corrective Action Program Standard](#) (CAP)

# Questions?

Veg QV Supervisor: [REDACTED]: cell [REDACTED]

Veg QV Senior PM: [REDACTED]: cell ([REDACTED])

Please complete the [QM Client Survey](#) it will assist us in giving a better product to our customers in the future.





# Appendix

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Inform

X

Action

# EVM WORK VERIFICATION AUDIT

October 29, 2020





# OVERVIEW

## Background:

The overall scope of the Quality Verification audit of EVM Work Verification was to patrol a statistically valid random sample of EVM Work Verification “Pass” line segments that are subject to EVM requirements as outlined in TD-7106P-01 and Public Resource Code (PRC) 4293 regulations with the following being pass/fail criteria:

- Vegetation within 4’ at time of work verification
- Vegetation within the 4’ overhang zone at time of work verification
- Hazard trees with strike potential to primary at time of work verification (as determined by TAT)
- Hazard trees with strike potential to secondary at time of work verification (as determined by TAT)

## How was this handled:

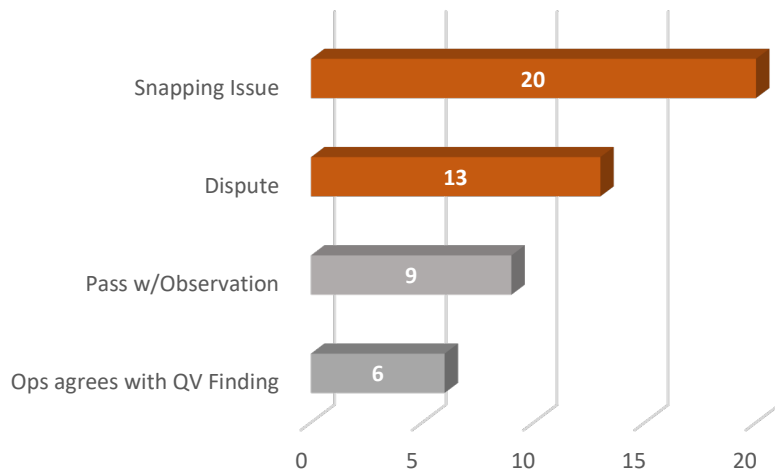
The field process for this audit involved using the centroid data for each segment to navigate to the general location of the sample line segments, and then utilizing the ArcGIS Collector application to view the relevant segment location. Once field personnel had reviewed the location and work verified date, they proceeded to complete a survey related only to their field observations of potential nonconformances affecting the sample segment. If potential nonconformances were found, they were recorded in relation to the sample segment and comments and/or photos were included if possible.

## Challenges:

- The EVM work verification pass/fail process does not appear to function similarly to the QV audit process, pass/fail criteria is instead determined algorithmically. A possible limitation of this system is that a tree that is represented in the ArcGIS data as a vegetation point may not associate or “snap” to the line with which it has the greatest potential for nonconformance, leading to the possibility of discrepancies in the field.
- A veg point or line segment may be “pass eligible” based on the algorithmic assignment that in fact presents nonconformance issues in the field. A line segment may be passed despite nonconformances if the nonconformance units are algorithmically associated with other segments of line, regardless which segment they may pose the greatest physical risk to.
- Line segments which could have nonconformances can receive a “Work Verification Pass” result even when identified vegetation affecting that segment has yet to be addressed, due to the automated nature of the work verification pass/fail process. This could lead to segments of line mileage being claimed as complete which in fact do not meet the criteria set forth in TD-7106P-01 and/or PRC 4293 regulations.



# OPS RESPONSES TO FINDINGS



The above represents the 3.83% non-conformance rate, apart from the Pass with Observation which does not contribute to the Non-Conformance Rate.

## Snapping Issue/Should not have been Reviewed:

- Tree is snapped to a line segment different than what was received as a Work Verification Pass.
- Tree is snapped to a line segment that was not in the scope of the audit.

## Dispute:

- These are findings where Operations disagrees with the QV field personnel on the status of the tree at time of Work Verification, the interpretation of the correct segment location on collector, or the QV arborist's professional opinion.

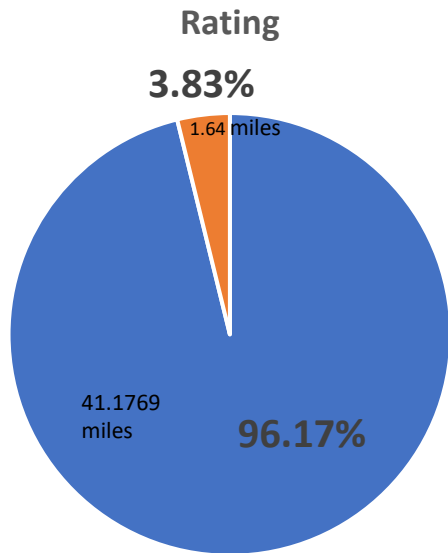
## Pass with Observation:

- Findings where there were no trees were identified as "at time of Work Verification".
  - The 9 called out by Operations were already part of the 11 identified by Quality Verification as "Pass with Observation" and were included in the Pass Rate Score.



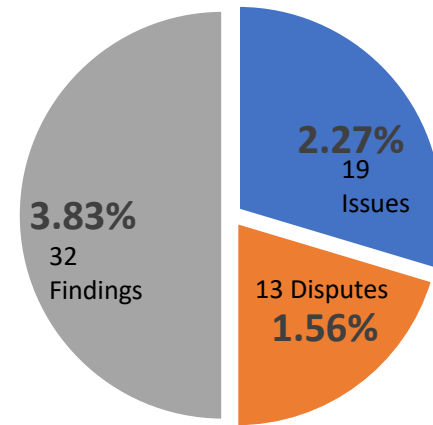
# RATING/CONTRIBUTING FACTORS

Total Miles:  
42.8169



■ Pass Rate ■ WV Findings Rate

### Contributing Factors to the 3.83% Findings Rate



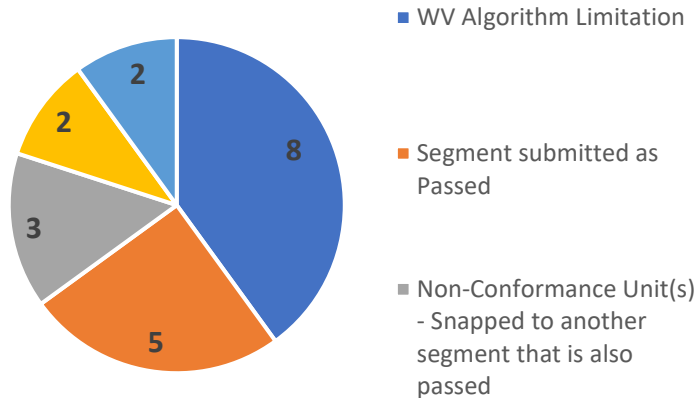
■ Snapping Issues ■ Disputes ■ Total



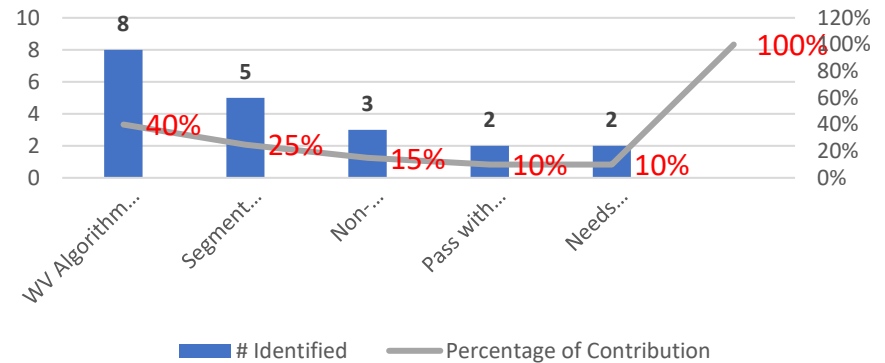
# QUALITY VERIFICATION RESPONSES

## Breakdown of Snapping Issues from Operations

### Categories of Snapping Issues



### Categories Contribution to Snapping Issues



- **Work Verification Algorithm Limitation**– Where the EVM Work Verification process was correctly followed but the results does not appear to fulfill the intended purpose.
- **Segment Submitted as Passed** – Line Segment was provided by Operations to QV as part of the audit scope, but ops is claiming it was not a passed segment.
- **Non-Conformance Unit(s) - Snapped to another segment that is also passed**– Tree(s) QV found as a non-conformance based on field conditions, which snap to a passed segment other than the one reviewed by QV.
- **Pass with Observation** – Already a Pass with Observation or will be changed to Pass with Observation.
  - The one finding that QV has agreed to change to Pass with Observation would change the Pass Rate from 96.17% to 96.26%
- **Needs Additional Information** - QV is requesting additional information to make a recommendation.



# EVM WV RESPONSIBILITIES

- Please note section 6 in the work verification process.
  - “Walk the entire segment and identify...”
- States that if an answer is yes, then the back office will fail the segment
- The findings in the QV audit show that the segment was not failed.
  - This has been explained as the veg point in question is “snapped” to another line segment.
  - The assumption is that the line segment that the veg point is “snapped to” is failed.
  - This means that a failed veg point could be a non-conformance for more than one segment, can only be associated with one, therefore there are cases where a passed line segment has a veg point that is failed.
- The first question in section 6 has been identified by operations as a question that was not always included in the survey. QV does not have information as to when this was added.

## Work Verification Process

WVs follow the steps below when verifying work.

1.	Receive work package	<ul style="list-style-type: none"> <li>① <b>NOTE:</b> Work packages are created based on segment and point status and compiled only once a day, 24 hours <b>AFTER</b> work is completed in the field, by the Central Performance and Data Management Team</li> </ul>
2.	Open the Collector App	<ul style="list-style-type: none"> <li>• Select “<b>Work Verification Inspector Map</b>”</li> </ul>
3.	Search the segment ID referenced in the work package to find the segment to inspect	<ul style="list-style-type: none"> <li>• The segment will be <b>highlighted blue</b></li> <li>• Verify that the highlighted segment contains the correct segment ID on your work package</li> </ul>
4.	Click the “Work Verification Survey” button	<ul style="list-style-type: none"> <li>• This automatically opens <b>Survey 123</b></li> <li>• Some existing fields are pre-populated, and no action is needed</li> </ul>
5.	Fill-in the following fields:	<ul style="list-style-type: none"> <li>• Username</li> <li>• Company</li> <li>• Restriction (i.e. access issues, safety, other)</li> </ul>
6.	Walk the entire segment and identify the following:	<ul style="list-style-type: none"> <li>• Any missed overhang or overhead work?           <ul style="list-style-type: none"> <li>◦ <b>If yes</b> – Select yes; insert the number of missed overhang and overheads</li> <li>◦ <b>If no</b> – Select no; no further action needed</li> </ul> </li> <li>• Are any non-listed trees present?           <ul style="list-style-type: none"> <li>◦ <b>If yes</b> – Select yes; insert the number of missed trees               <ul style="list-style-type: none"> <li>– This will trigger <b>the back office to fail the segment</b> based on their query</li> </ul> </li> <li>◦ <b>If no</b> – Select no; no further action needed</li> </ul> </li> <li>• Are primary overhead electric lines present?           <ul style="list-style-type: none"> <li>◦ <b>If yes</b> – Select yes               <ul style="list-style-type: none"> <li>– <b>The back office will fail the segment</b></li> <li>– Segment is sent to Regional Manager and noted as primary overhead lines missing</li> <li>– Local WV double verifies in the field</li> </ul> </li> <li>◦ <b>If no</b> – Select no</li> </ul> </li> <li>• Any EVM work debris found in waterways?</li> <li>• Any additional Work Verification Comments?</li> </ul>
7.	Submit survey	<ul style="list-style-type: none"> <li>• Select the check mark icon to submit</li> </ul>
8.	Return to the Collector App	<ul style="list-style-type: none"> <li>• <b>Assign a pass or fail status to the veg point based on whether the EVM scope was met</b></li> </ul>

Once a pass or fail status has been assigned to a veg point, the GIS Team will run a query that will determine and automatically assign a pass or fail status to the segment. This happens every night. If the segment passes, the miles are claimed towards the EVM yearly goal.

Some of the measures included in this document are contemplated as additional precautionary measures intended to further reduce the risk of wildfires. 05/28/2020

# SNAPPING ISSUES/ OPS STATES SHOULD NOT HAVE BEEN REVIEWED

## FINDINGS, COMMENTS, RECOMMENDATIONS

Based on Operations' Responses – The following segments were defined as Snapping Issues





# WORK VERIFICATION ALGORITHM LIMITATIONS

Based on Quality Verification Response – Accounts for 40% of the 3.83%



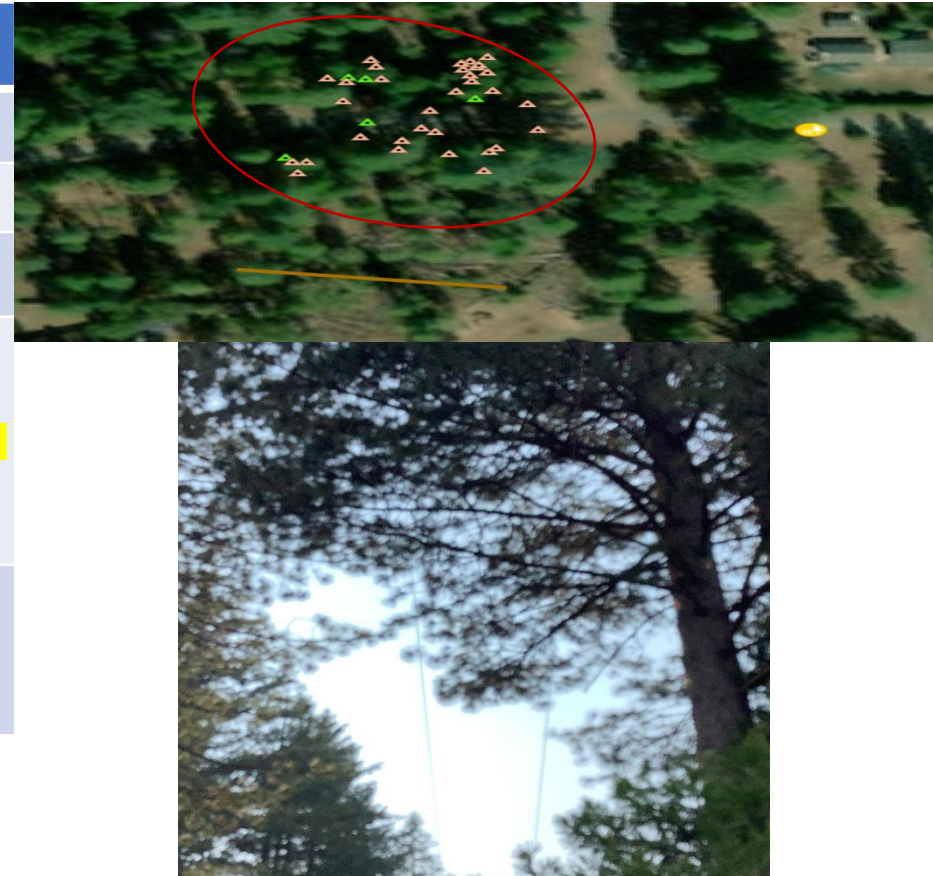
	Details
QV Finding	Hazard trees present with strike potential to primary
Quantity	1
Quantity @ time of WV	1
Operations Comments	<p><b>WV failed veg point correctly</b> as it affects and is at the border of two segments. The dead pine had a work identified veg point that is snapped to the neighboring segment, but the tree can impact both segments. WV intended to fail this segment by failing the tree to denote scope was not met on this specific tree at the border of two segments.</p> <p>VP_BB123-F22_1236467_2020 is a work identified veg point and is failed currently, the segment it is clipped to is CIP_BB123-F22_583687 and is <b>not currently passed</b>. It is a yellow line segment "phase 1 inspected".</p>
QV Recommendation	Findings stands. Operations' comments indicate Work Verification Algorithm Limitations per EVM V Responsibility one-pager.



	Details
QV Findings	Vegetation within the 4' overhang zone
Quantity	1
Quantity @ time of WV	1
Operations Comments	<p>WV survey data we received shows this segment was failed by WV for not meeting scope. WV most recent survey denotes this segment was never passed due to non listed trees present. The veg point representing this tree was correctly failed by WV. When standing at tree and under limbs gps shows your location in next segment. This tree in question is on the adjacent segment as it shows when standing in the field and comparing your location of gps icon to where segments are shown on collector. Tree is at border of two segments and the QV auditor was inspecting the adjacent segment not this one noted on the finding. When looking at the tree on satellite imagery and compared to gps location when in field it is on the next segment. When using the segment footage data this tree would be very close to the border of the two different segments so it would be very subjective as to what segment one would say the trees limbs actually overhang. The veg point is clipped to the next segment not this one noted on the finding, but WV correctly failed the veg point regardless.</p> <p>VP_AL122-J19_1213774_2020 is a work identified veg point and is currently not passed, the segment it is clipped to is CIP_AL122-J19_92906 and is not passed currently a blue line segment "phase 1 &amp; 2 inspected"</p>
QV Recommendation	Findings stands. Operations' comments indicate Work Verification Algorithm Limitations per EVM V Responsibility one-pager.



	Details
QV Findings	Vegetation within the 4' overhang zone
Quantity	3
Quantity @ time of WV	3
Operations Comments	WV failed the survey for this segment denoting scope was not met. Pines are on neighboring green segment and are not snapped to segment in question. VP_BD124-O20_1440054_2020 is a tree work complete veg point and it is not passed, it is clipped to segment CIP_BD124-O20_597819, which is a green "inspection needed" line segment currently.
QV Recommendation	Findings stands. Operations' comments indicate Work Verification Algorithm Limitations per EVM V Responsibility one-pager.





# CIP\_BD124-P21\_597399

	Details
QV Findings	Vegetation within the 4' overhang zone
Quantity	4
Quantity @ time of WV	4
Operations Comments	Cedar mid span P4-P5 and cedar 1/4 span P3-P4 are on different segments and are not snapped to segment. However the 2 cedars mid span may be interpreted as overhanging the segment in question. VP_BD124-P21_1482221_2020, VP_BD124-P21_1482243_2020, VP_BD124-P21_1482055_2020 are tree work complete veg points not passed, clipped to segment CIP_BD124-P21_597392, which is not passed and currently a blue line segment "phase 1 & 2 inspected.
QV Recommendation	Findings stands. Operations' comments indicate Work Verification Algorithm Limitations per EVM V Responsibility one-pager.



	Details
QV Findings	Vegetation within the 4' overhang zone
Quantity	1
Quantity @ time of WV	1
Operations Comments	<p>Veg point is at border of two segments causing clipping data issue where tree affects both segments. <b>WV correctly failed this veg point for not meeting OV scope. There was no way to denote on survey at this point in time that OV scope was not met.</b> WV inspectors did everything correctly. Veg point is clipped to neighboring segment and affects both of them since it is at the border of the two. Tree in question currently does not meet OV scope for both segments it is at the border of.</p> <p><b>VP_AK117-F14_1332315_2020 is a hold/work identified point that is not passed, it is clipped to segment CIP_AK117-F13_48521, which is not passed and is currently a blue segment "phase 1 &amp; 2 inspected".</b></p>
QV Recommendation	Findings stands. Operations' comments indicate Work Verification Algorithm Limitations per EVM V Responsibility one-pager.



	Details
QV Findings	Vegetation within the 4' overhang zone
Quantity	1
Quantity @ time of WV	1
Operations Comments	<p>WV survey data we received shows that WV failed this segment survey by denoting there were non listed trees present. WV never passed this segment survey. <b>WV also failed the veg point correctly</b>, however the tree has overhang on two different segments since it is at the border of both. The VP is tied to the neighboring segment and that is correctly not passed. <b>This probably was from early in the year when there was no survey questions to denote overhang scope was not met. WV intended to fail this segment. Will coach WV inspectors to fail the survey for both segments when tree is at border of both segments with overhang.</b></p> <p>VP_AO123-G08_619088_2019 is a work identified veg point that is not passed, <b>it is clipped to segment CIP_AO123-G08_172446 and is not passed currently</b> a blue line segment "phase 1 &amp; 2 inspected"</p>
QV Recommendation	Findings stands. Operations' comments indicate Work Verification Algorithm Limitations per EVM V Responsibility one-pager.



	Details
QV Findings	Vegetation within the 4' overhang zone
Quantity	1
Quantity @ time of WV	1
Operations Comments	<p>WV failed this veg point correctly as it affects two segments. The Viewpoint in question is not overhanging the segment it is clipped to, but it is overhanging the segment on it's East side, which is white and passed. VP_AY119-F03_1236953_2020. WV intended to fail this segment by failing this specific veg point, but when this WV inspection occurred there was not a question on the survey to denote overhang scope was not met.</p> <p>VP_AY119-F03_1236953_2020 is a work identified veg point and not passed, it is clipped to segment CIP_AY119-F03_691193 which is not passed and is currently a blue line segment "phase 1 &amp; 2 inspected".</p>
QV Recommendation	Findings stands. Operations' comments indicate Work Verification Algorithm Limitations per EVM V Responsibility one-pager.





	Details
QV Findings	Vegetation within the 4' overhang zone
Quantity	1
Quantity @ time of WV	1
Operations Comments	<p>The tree is a <b>work identified point failed by WV</b>, but snapped to another segment, but is overhanging the segment in question. <b>WV intended to fail this segment, but at this point in time there was no survey questions to denote overhang scope was not met.</b></p> <p>VP_BE126-C22_1492597_2020 is a work identified veg point that is not passed, it is clipped to segment <b>CIP_BE126-C22_621629</b>, which is currently a blue line segment "phase 1 &amp; 2 inspected".</p>
QV Recommendation	Findings stands. Operations' comments indicate Work Verification Algorithm Limitations per EVM V Responsibility one-pager.



# SEGMENT PROVIDED AS PASSED

Based on Quality Verification Response – Accounts for 25% of the 3.83%





# CIP\_AK117-G11\_47313

	Details
QV Findings	Hazard trees present with strike potential to primary
Quantity	1
Quantity @ time of WV	1
Operations Comments	<p>WV correctly failed veg points and segment survey. Due to GIS inaccuracies these veg points are clipped to neighboring segment. <b>This segment in reality is still failed.</b> WV survey data we received has comments that state "Work Identified".</p> <p>VP_AK117-G11_1359810_2020 is a work identified veg point that is failed, it is clipped to segment CIP_AK117-G11_47314, which is not passed and is currently a blue segment "phase 1 &amp; 2 inspected"</p>
QV Recommendation	Finding stands. Segment assessed per audit scope, as it was provided as a "Passed" location. Operations' comments states Work verification process issue. Tree in question is non-conformant for sample segment.



	Details
QV Findings	Vegetation within the 4' overhang zone
Quantity	1
Quantity @ time of WV	1
Operations Comments	<p><b>Segment is not passed currently.</b> Did not review and field check since the segment is still in process of EVM and has not been work verified.</p> <p>Segment is blue "Phase 1 &amp; Phase 2 Inspected" Numerous in progress veg points with work prescribed.</p>
QV Recommendation	Finding stands. Segment assessed as per audit scope, was provided as a Passed segment.



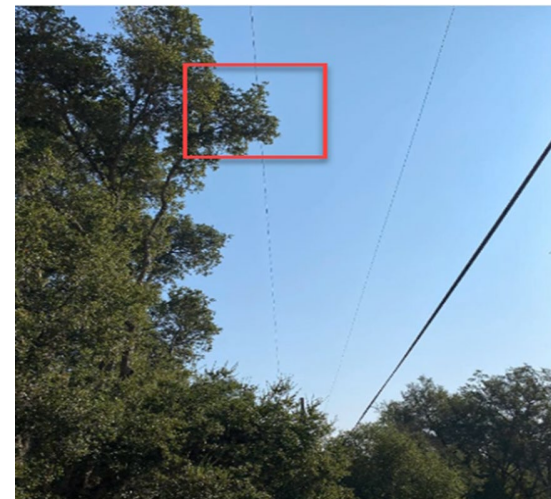
	Details
QV Findings	<ul style="list-style-type: none"> <li>Hazard trees present with strike potential to primary</li> <li>Vegetation within the 4' overhang zone</li> </ul>
Quantity	1
Quantity @ time of WV	1
Operations Comments	<p><b>Segment is not passed currently.</b> Did not review and field check since the segment is still in process of EVM and has not been work verified. Segment is blue "Phase 1 &amp; Phase 2 Inspected" Numerous veg points with no status.</p>
QV Recommendation	Finding stands. Segment assessed as per audit scope, was provided as a Passed segment.



	Details
QV Findings	Vegetation within the 4' overhang zone
Quantity	1
Quantity @ time of WV	1
Operations Comments	We disagree there was a WV error. Segment is not passed currently. Did not review and field check since the segment is still in process of EVM and has not been work verified. Segment is blue "Phase 1 & Phase 2 Inspected" Numerous in progress veg points with work prescribed.
QV Recommendation	Finding stands. Segment assessed as per audit scope, was provided as a Passed segment.



	Details
QV Finding	Vegetation within the 4' overhang zone
Quantity	1
Quantity @ time of WV	1
Operations Comments	<p>WV survey data we received denotes this segment was failed by WV due to not meeting scope. <b>WV did not submit a passing survey for this segment</b> and survey shows non listed trees present with comments, "Oak roll between poles. Redwood behind corner pole. Fail." WV lead also disagrees with the QV findings.</p> <p>The tree in question ( VP_AL119-F20_1499502_2020 ) is a pending unit, in a different segment ( CIP_AL119-F20_77640 ) that has not passed WV.</p> <p>VP_AL119-F20_1499502_2020 is a work identified veg point not passed, it is clipped to segment CIP_AL119-F20_77640, which is not passed and is currently a blue "phase 1 &amp; phase 2 inspected" segment.</p>
QV Recommendation	Finding stands. Tree in question is non-conformance to sample segment.



# NON-CONFORMANCE UNIT(S) - SNAPPED TO ANOTHER SEGMENT THAT IS ALSO PASSED

Based on Quality Verification Response – Accounts for 15% of the 3.83%







# CIP\_AS113-O20\_299472

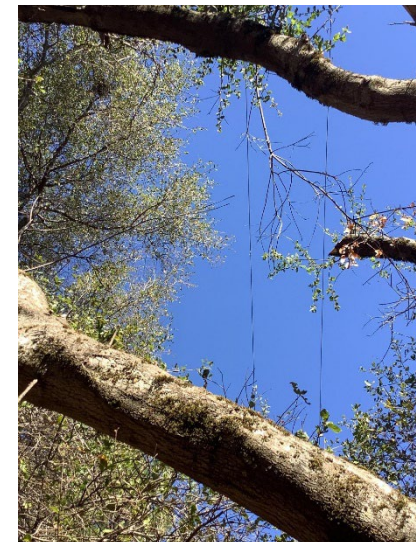
	Details
QV Findings	Hazard trees present with strike potential to primary
Quantity	1
Quantity @ time of WV	1
Operations Comments	The Veg Point in question has a minor defect that has healed over, and the holding wood is solid. The limb that is most likely to fail (however highly unlikely) is not tall enough to strike the line. It should also be noted that the VP in question (VP_AS113-P16_1315453_2020) is not tied to the segment QC sited but is tied to CIP_AS113-O20_299470. VP_AS113-P16_1315453_2020 passed on 7/6/20, segment it is clipped to is passed CIP_AS113-O20_299470
QV Recommendation	Finding stands. Tree meets Abate criteria (per TAT) and would impact sample segment.





# CIP\_AT114-C09\_312631

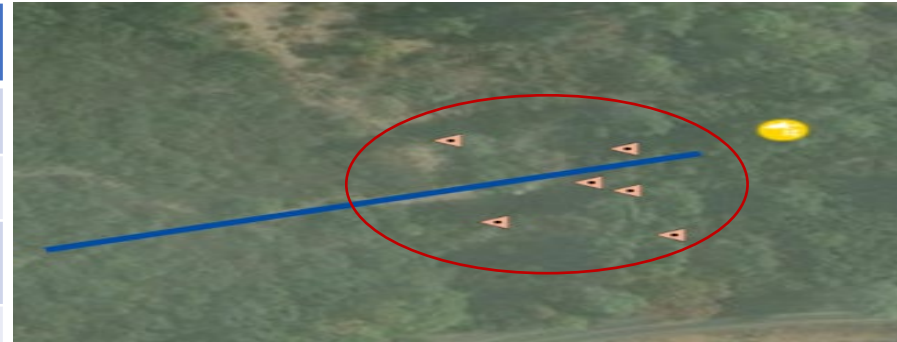
	Details
QV Findings	Vegetation within the 4' overhang zone
Quantity	1
Quantity @ time of WV	1
Operations Comments	The tree in question (VP_AT114-C09_1726880_2020) is not in this segment. VP_AT114-C09_1726880_2020 Passed on 8/14/20, segment it is clipped to is passed CIP_AT114-C09_312627
QV Recommendation	Finding stands. Tree in question is non-conformance to sample segment.





# CIP\_AK117-H23\_48140

	Details
QV Findings	Vegetation within the 4' overhang zone
Quantity	2
Quantity @ time of WV	2
Operations Comments	<p>GIS is inaccurate would have caused a WV to pass this segment if they are looking at only their gps in relation to line segment on collector. This is a section of lines with only straight line segments in cross country area. There are no line &amp; buck poles or 3way poles/taps to refer to. We didn't have the pole layer on collector at this point in time so WV correctly passed this line segment based on in the field GPS location. The trees in question are clipped to neighboring segment and not this one. <b>This was before we had the support structure layer</b> on collector to see poles. The trees in question would make the neighboring segment fail scope and not this one.</p> <p><b>VP_AK117-H23_1352388_2020 is not passed currently</b>, and the segment it is clipped to CIP_AK117-H23_48139 <b>is passed currently</b></p>
QV Recommendation	Finding stands. Segment assessed per audit scope, as it was provided as a "Passed" location. Operations' comments states Work Verification process issue. Tree in question is non-conformant for sample segment.

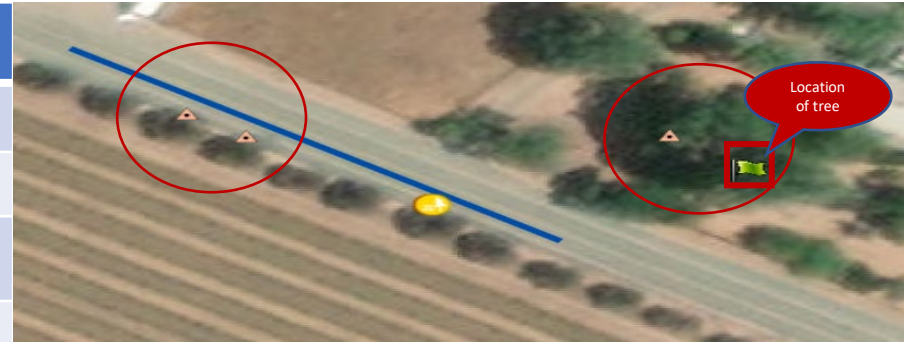


# PASS WITH OBSERVATION – INCLUDES ADDITION AFTER OPS REVIEW

Based on Quality Verification Response – Accounts for 0% of the 3.83%



	Details
QV Findings	Hazard trees present with strike potential to primary
Quantity	1
Quantity @ time of WV	0
Operations Comments	<p>Dead cedar tree is listed for work and the veg point is failed correctly by WV. Veg Point failed by WV on 5/8/20 by Abutla. WV intended to fail this segment. Tree is at border of 2 segments and wv correctly failed segment tree is clipped to and has more strike potential on due to lean that way. Tree has low likelihood of falling towards this segment that is passed, however both segments surveys should have been failed. Will coach WV inspectors on proper documentation. VP_AL119-C17_1405632_2020 is currently a work identified point not passed, the segment it is clipped to is VP_AL119-C17_1405632_2020 is not passed and is currently a blue segment "phase 1 &amp; 2 inspected"</p>
QV Recommendation	Tree is already identified as "Pass with Observation" as part of the original 11 "Pass with Observation" locations.



	Details
QV Finding	Vegetation within the 4' overhang zone
Quantity	1
Quantity @ time of WV	1
Operations Comments	<p>QV auditor isn't looking at correct segment. This segment is not encompassing the end pole that does not meet overhang scope according to QV auditor. Qv auditor is looking at the wrong segment. This segment denoted on this spreadsheet stops 14 ft before the end pole. The last 14 ft of primary lines is an entirely different segment that encompasses the end pole with the overhang scope not met the QV auditor is referring to.</p> <p>That segment, which is CIP_AQ125-D22_234073, is correctly failed and is a green "inspection needed" line segment.</p>
QV Recommendation	<p>QV agrees that due to GIS data being unclear the overhang observed in the field in fact affects a segment adjacent to the sample segment. <b>This can be changed to "Pass with Observation"</b>.</p> <p>This one will be added to the 11 Pass with Observation to make it 12.</p>



# ADDITIONAL INFORMATION REQUESTED

Based on Quality Verification Response – Accounts for 10% of the 3.83%



	Details
QV Findings	Vegetation within the 4' overhang zone
Quantity	5
Quantity @ time of WV	5
Operations Comments	Segment was accurately passed. None of the overhanging trees are on this segment nor are their veg points snapped to it. No TAT double check needed, No Overhanging trees are on this segment and none of the veg points are snapped to it. QV looking at wrong segment and no hazard tree denoted.
QV Recommendation	Additional information needed from Operations to verify findings vs. Pass with observation status.
Ops Action	██████ to review and provide additional information to QV.





	Details
QV Findings	Vegetation within 4 feet
Quantity	2
Quantity @ time of WV	2
Operations Comments	<b>These trees would have been breaking 4ft. at time of work verification.</b> QV auditor is looking at wrong line segment in reality and <b>this segment can pass WV due to GIS inaccuracies.</b> Wv correctly failed the line segment these trees actually fall on in reality in the field. These trees are currently right at 4 - 4.5ft. away and would not have been within 4ft at time of WV in February 2020. 1-1.5 ft of new growth since then. WV did everything correct here comments on survey even state two non listed trees need work referring to these trees. See collector map, QV is reading map wrong and is not looking at correct segment in the field. Need to use the GIS inaccurate line that was drawn in
QV Recommendation	Additional information needed from Operations to verify findings vs. Pass with observation status. Further explanation requested on statement that "segment can pass WV due to GIS inaccuracies".
Ops Action	██████ to review and provide additional information to QV.



# TAT VERIFIED

## DISPUTED TREES WHERE TAT COULD BE USED TO OBJECTIVELY DETERMINE TREE STATUS

Where significant condition changes would not have likely occurred since time of work verification.

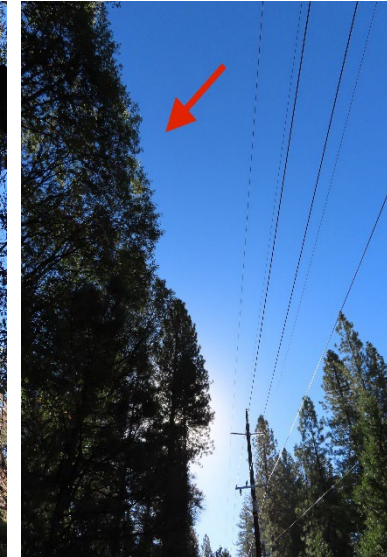
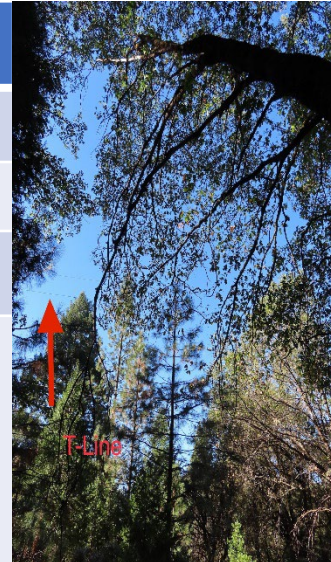
Based on Quality Verification Response – These 4 accounts for 31% of the 1.56%





# CIP\_AW116-A04\_398509

	Details
QV Findings	Hazard trees present with strike potential to primary
Quantity	1
Quantity @ time of WV	1
Operations Comments	The Veg Point in question (VP_AW116-A04_1327971_2020) is not a hazard tree, or a threat to the power lines at this time. the holding wood is solid with no signs of rot, and union between the stems in question is health. The QV comment of lean toward the line is natural growth toward the sun & ROW and has self corrected, also the base of the tree is not leaning or uprooting
QV Recommendation	Finding stands. Tree in question received an EVM PI HTRS rating of 3,3; which was work verified in 6/2020. QV SPM performed follow up TAT assessment on 10/28/2020, resulting in "Abate", which affirmed prior QV field tech result. No significant condition change would have likely occurred since work verification date.



10:06 AM Wed Oct 28 LTE 100%

Tree Assessment Tool

▼ Preliminary Strike Assessment \*

Is tree tall enough to strike the facilities? \*

Yes

Is the tree completely blocked from falling towards facilities? \*

Some trees are tall enough to strike, but cannot because the path is blocked. CONSIDER that other trees can reduce the likelihood of a tree falling toward facilities, but only in extreme cases do they completely and reliably block the path to facilities

No

Is the tree leaning severely (>25 degrees)? \*

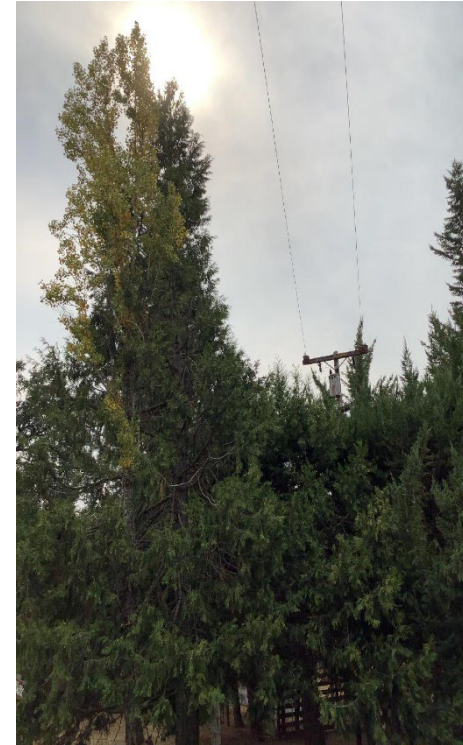
Toward Facilities

ABATE



# CIP\_BA122-G21\_719302

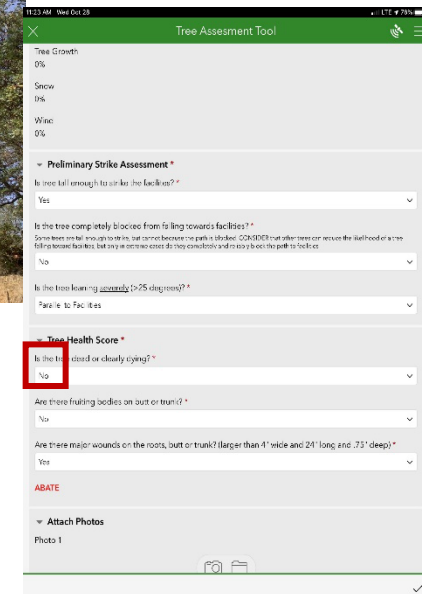
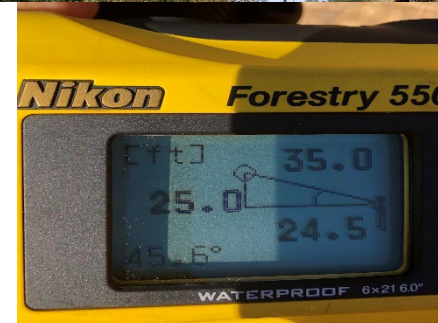
	Details
QV Findings	Hazard trees present with strike potential to primary
Quantity	1
Quantity @ time of WV	1
Operations Comments	Tree has lean away from line and will fail away from the facilities.
QV Recommendation	Finding stands. Tree in question received an EVM PI HTRS rating of 3,4; which was work verified in 1/2020. QV SFT, QV FT and QV Supervisor together performed a TAT assessment on 10/8/2020, resulting in "abate." No significant condition change would have likely occurred since work verification date.





# CIP\_AL116-N23\_63661

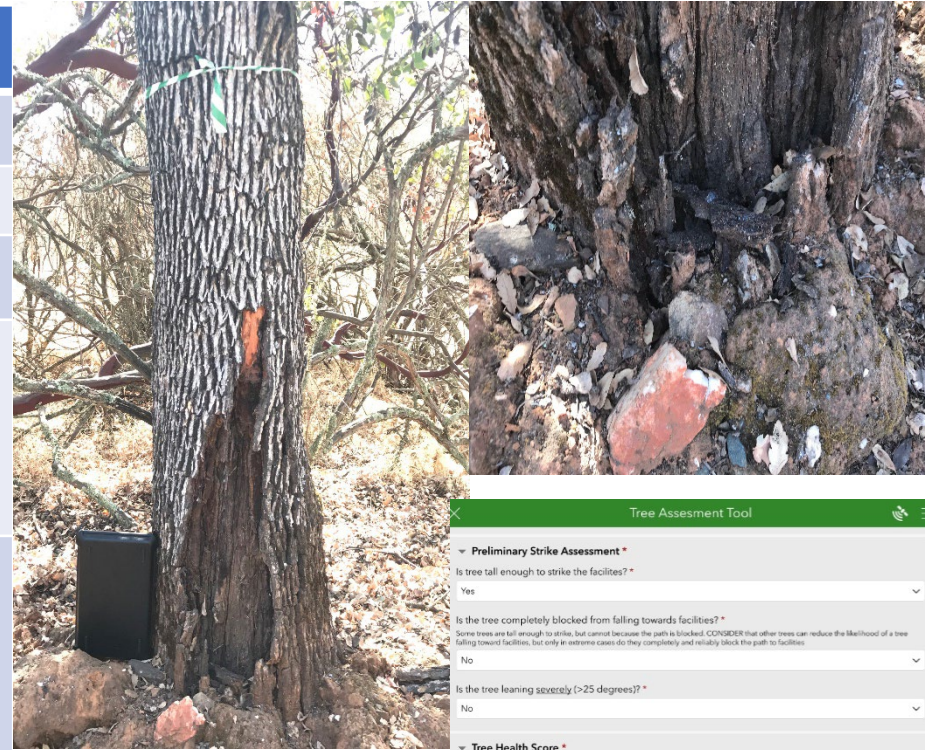
	Details
QV Findings	Hazard trees present with strike potential to primary
Quantity	1
Quantity @ time of WV	1
Operations Comments	Tree in question has significant lean parallel with lines and is not tall enough to strike facilities. If the tree fails at base with the amount of lean and weight of canopy parallel to lines it will miss all facilities. Tree does have a large cavity at base of trunk, however, will not strike any facilities if it were to fail.
QV Recommendation	Finding stands. No prior Veg point exists for tree in question. Location was work verified in 1/2020. QV SPM performed a TAT assessment on 10/28/2020, resulting in "abate", which affirmed prior QV field tech result. No significant condition change would have likely occurred since work verification date.





# CIL\_AW120-C25\_72912

	Details
QV Findings	Hazard trees present with strike potential to primary
Quantity	1
Quantity @ time of WV	1
Operations Comments	The tree in question has holding wood is solid, minor wound is healing over well, the tree is vertical with no lean towards the line, and 70% of the weight is away from the line.
QV Recommendation	Finding stands. Tree in question received an EVM PI TAT result of "Do not Abate"; which was work verified in 6/2020. QV SPM performed a TAT assessment on 10/28/2020, resulting in "abate", which affirmed prior QV field tech result. No significant condition change would have likely occurred since work verification date.



Tree Assessment Tool

**▼ Preliminary Strike Assessment \***

Is tree tall enough to strike the facilities? \*

Yes  No

Is the tree completely blocked from falling towards facilities? \*

Some trees are tall enough to strike, but cannot because the path is blocked. CONSIDER that other trees can reduce the likelihood of a tree falling toward facilities, but only in extreme cases do they completely and reliably block the path to facilities.

No  Yes

Is the tree leaning severely (>25 degrees)? \*

No  Yes

**▼ Tree Health Score \***

Is the tree dead or clearly dying? \*

No  Yes

Are there fruiting bodies on butt or trunk? \*

No  Yes

Are there major wounds on the roots, butt or trunk? (larger than 4" wide and 24" long and .75" deep) \*

Yes  No

**ABATE**



# DISPUTES

- The 4 segments reviewed are examples where the TAT was used to determine an objective prescription based on PG&E's process for defining "Abate" trees.
- The additional 9 trees come down to professional disagreement, which do incur the subjectivity inherent in arboricultural assessment.

# QUESTIONS

