State of California – A Natural Resources Agency
Gavin Newsom, Governor
Caroline Thomas Jacobs, Director

OFFICE OF ENERGY INFRASTRUCTURE SAFETY
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June 14, 2022

TO: PG&E
Lise H. Jordan, Senior Director Regulatory Compliance and Quality Assurance, Electric Operations
77 Beale St.
San Francisco, CA 94177

SUBJECT: Office of Energy Infrastructure Safety's Audit of PG&E's Substantial Vegetation Management Work in 2020

Pursuant to the requirements of California Public Utilities Code Section 8386.3(c)(5)(A), the Office of Energy Infrastructure Safety (Energy Safety) under the California Natural Resource Agency (CNRA) has completed and enclosed the results of its audit of PG&E's substantial vegetation management work in 2020.

During the audit, Energy Safety reviewed data provided by PG&E, which Energy Safety compared to the representations PG&E made in its 2020 Wildfire Mitigation Plan (WMP). The enclosed audit specifies areas where PG&E failed to fully comply with the vegetation management requirements in its wildfire mitigation plan. PG&E is permitted 60 days from the date of this transmission to correct and eliminate any deficiency specified in the audit. Subsequently, Energy Safety will issue a final report.

Please submit by electronic copy the requested Substantial Vegetation Management Audit Response & Corrective Action Plan no later than 60 days from issuance of this letter to the 2020-SVM docket in Energy Safety's e-filing system with a file named "PGE 2020 SVM Audit Corrective Action Plan."

Thank you for your courtesy and cooperation throughout the audit process. If you have any questions concerning this audit, please contact MaryBeth Farley at Marybeth.Farley@energysafety.ca.gov, with a copy to compliance@energysafety.ca.gov.

Sincerely,

Koko Tomassian
Compliance Program Manager
Compliance Assurance Division
Office of Energy Infrastructure Safety

Attachment: 2020 SVM Audit

Cc:
Anne Beech, PG&E
Roberto Morales, PG&E
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Wade Greenacre, PG&E
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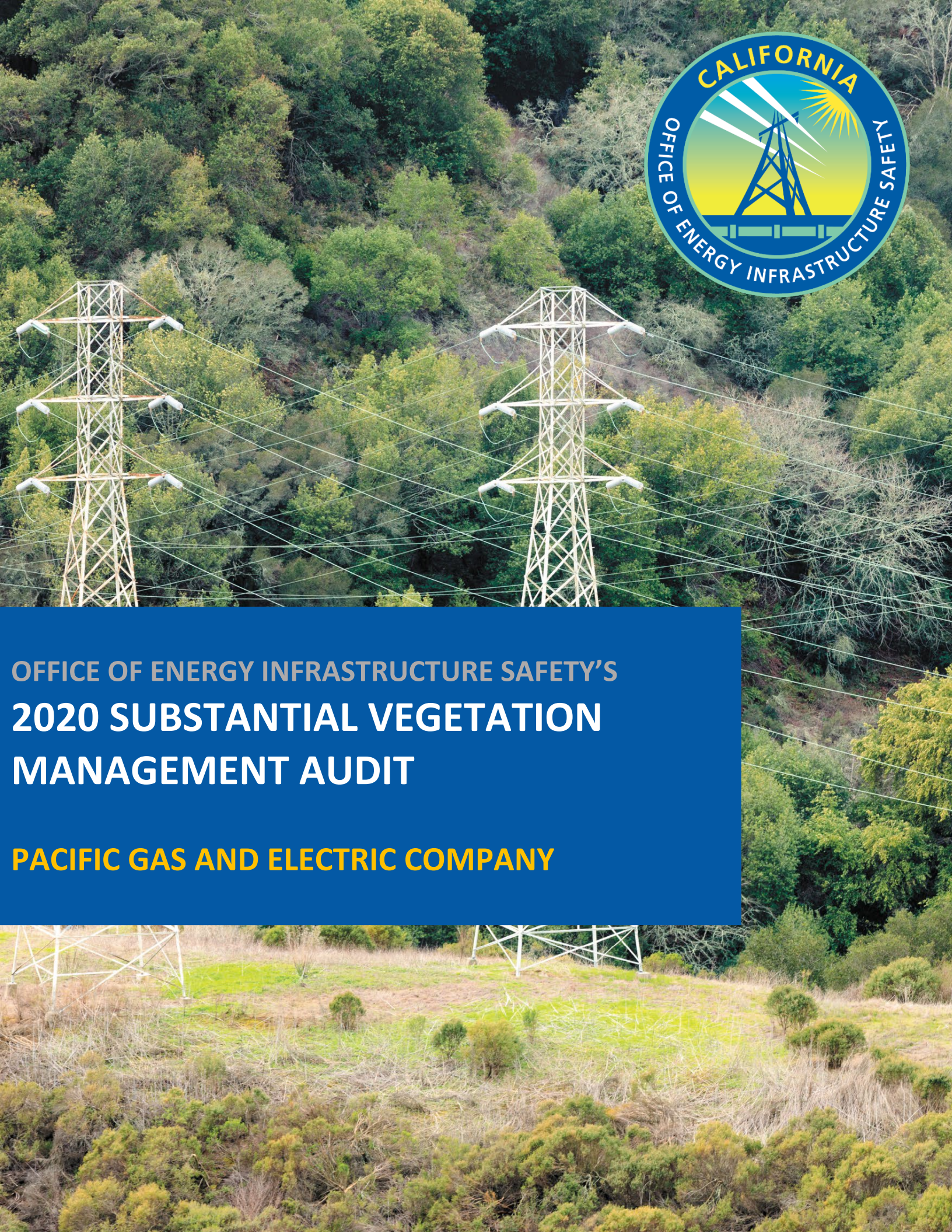

OFFICE OF ENERGY INFRASTRUCTURE SAFETY'S

2020 SUBSTANTIAL VEGETATION MANAGEMENT AUDIT

PACIFIC GAS AND ELECTRIC COMPANY

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1.0 EXECUTIVE SUMMARY

Statute requires electrical corporations (utilities) to notify Energy Safety after completing substantial portions of vegetation management requirements in their approved Wildfire Mitigation Plans (WMPs) and requires Energy Safety to audit compliance with these requirements.[1] Energy Safety refers to this audit as the "Substantial Vegetation Management" (SVM) audit.

To conduct this audit, Energy Safety evaluated the vegetation management section of Pacific Gas and Electric Company's (PG&E's) 2020 WMP.[2] The 2020 WMP Guidelines contained 20 initiatives in the vegetation management section. In reviewing the vegetation management section and initiatives in PG&E's 2020 WMP, Energy Safety identified both quantitative commitments (e.g., miles of lines to inspect, minimum work quality thresholds, etc.) and verifiable statements (e.g., the utility will hold public meetings with communities regarding future vegetation management activities, the utility will train personnel on utilities protocols, etc.) made by PG&E. Energy Safety then reviewed available information and requested additional documentation to support the assessment of whether utilities met their quantitative commitments and executed their verifiable statements.

Based on the scope above and subsequent analysis, Energy Safety found PG&E was not compliant in seven out of the 20 vegetation initiatives audited in its 2020 WMP, as detailed in Table 1 below.

Table 1: Energy Safety's Analysis of PG&E's 2020 WMP Vegetation Management Initiatives

2020 WMP Initiative Number	2020 WMP Initiative Name	Determination[3]
5.3.5.1	Additional Efforts to Manage Community and Environmental Impacts	**Noncompliant**
5.3.5.2	Detailed Inspections of Vegetation Around Distribution Electric Lines and Equipment	Compliant
5.3.5.3	Detailed Inspections of Vegetation Around Transmission Electric Lines and Equipment	Compliant

[1] Cal. Pub. Util. Code § 8386.3, subd. (c)(5)(A)
[2] 2020 WMP guidelines, R.18-10-007 page78, the 2020 WMP had 10 categories such as asset management and inspections, vegetation management and inspections, data governance, etc.
[3] As used in this context, "Compliant" means the utility was able to provide Energy Safety document(s) to support statements made in its 2020 WMP. "Noncompliant" means the utility was not able to provide Energy Safety document(s) to support commitments and statements made in its 2020 WMP. Energy Safety's analysis did not assess the quality of how said WMP statement was executed.

2020 WMP Initiative Number	2020 WMP Initiative Name	Determination[3]
5.3.5.4	Emergency Response Vegetation Management Due to Red Flag Warning or Other Urgent Conditions	Compliant
5.3.5.5	Fuel management and reduction of "slash" from vegetation management activities	**Noncompliant**
5.3.5.6	Improvement of Inspections	Compliant
5.3.5.7	LiDAR Inspections of Vegetation Around Distribution Electric Lines and Equipment	**Noncompliant**
5.3.5.8	LiDAR Inspections of Vegetation Around Transmission Electric Lines and Equipment	Compliant
5.3.5.9	Other Discretionary Inspection of Vegetation Around Distribution Electric Lines and Equipment, Beyond Inspections Mandated by Rules and Regulations	Compliant
5.3.5.10	Other Discretionary Inspection of Vegetation Around Transmission Electric Lines and Equipment, Beyond Inspections Mandated by Rules and Regulations	Compliant
5.3.5.11	Patrol Inspections of Vegetation Around Distribution Electric Lines and Equipment	Compliant
5.3.5.12	Patrol Inspections of Vegetation Around Transmission Electric Lines and Equipment	Compliant
5.3.5.13	Quality Assurance / Quality Control of Inspections	**Noncompliant**
5.3.5.14	Recruiting and Training of Vegetation Management Personnel	**Noncompliant**
5.3.5.15	Remediation of At-Risk Species	**Noncompliant**
5.3.5.16	Removal and Remediation of Trees with Strike Potential to Electric Lines and Equipment	Compliant
5.3.5.17	Substation Inspections	Compliant
5.3.5.18	Substation Vegetation Management	Compliant
5.3.5.19	Vegetation Inventory System	**Noncompliant**
5.3.5.20	Vegetation Management to Achieve Clearances Around Electric Lines and Equipment	Compliant

The 2020 WMP was the first year for which these SVM audit requirements were in effect. As with any inaugural process or effort, there was no existing precedent. Lessons learned in the execution of this audit will be carried over into future WMP guidelines and compliance operations. Energy Safety looks forward to further refining and developing these SVM audits as the program matures.

2.0 PURPOSE

A utility must notify Energy Safety when it completes a substantial portion of the vegetation management requirements in its WMP on an annual basis.[4] Energy Safety is then required to audit the utility's vegetation management work and specify any failure of the utility to comply with the vegetation management requirements in its WMP.[5]

Energy Safety conducted this audit based on the statutory language as described below:

Pursuant to the California Public Utilities Code (PUC), section (§)8386.3(c)(5)(A):

> An electrical corporation shall notify the Wildfire Safety Division, within one month after it completes a substantial portion of the vegetation management requirements in its wildfire mitigation plan, of the completion. Upon receiving the notice from the electrical corporation, the division shall, consistent with its authority pursuant to paragraph (1) of subdivision (a) of section 326, promptly audit the work performed by, or on behalf of, the electrical corporation. The audit shall specify any failure of the electrical corporation to fully comply with the vegetation management requirements in the wildfire mitigation plan. The division shall provide the audit to the electrical corporation. The electrical corporation shall have a reasonable time, as determined by the division, to correct and eliminate any deficiency specified in the audit.

3.0 SCOPE OF THE SUBSTANTIAL VEGETATION MANAGEMENT AUDIT

To conduct this audit, Energy Safety evaluated the vegetation management section of PG&E's 2020 WMP.[6] The 2020 WMP guidelines contained 20 initiatives in the vegetation management section. In reviewing the vegetation management section and initiatives in PG&E's 2020 WMPs, Energy Safety identified both quantitative commitments (e.g., miles of lines to inspect, minimum work quality thresholds, etc.) and verifiable statements (e.g., the utility will hold public meetings with communities regarding future vegetation management activities, the

[4] Cal. Pub. Util. Code § 8386.3, subd. (c)(5)(A)
[5] Cal. Pub. Util. Code § 8386.3, subd. (c)(5)(A)
[6] 2020 WMP guidelines, R.18-10-007 p.78, the 2020 WMP had 10 categories such as asset management and inspections, vegetation management and inspections, data governance, etc.

utilities will train personnel on utility protocols, etc.) made by PG&E. Energy Safety then reviewed available information and requested additional documentation to support the assessment of whether PG&E met their quantitative commitments and executed their verifiable statements.

Beginning in 2020 and continuing through early 2021, PG&E submitted letters to Energy Safety[7] on a quarterly basis notifying "completion of a 'substantial portion of the vegetation management requirements in its wildfire mitigation plan.'"[8] In each letter, PG&E stated that it had "completed a substantial portion of its Enhanced Vegetation Management (EVM)" and stated the number of miles completed against an annual target.[9] From these submissions, it appears that PG&E believed that only its EVM program is subject to notice of substantial work completion. However, consistent with statutory language, Energy Safety's substantial vegetation management audit encompasses all vegetation management programs and initiatives described in PG&E's 2020 WMP. Therefore, Energy Safety requested documentation to verify PG&E compliance with verifiable statements and quantifiable commitments in the vegetation management sections of its 2020 WMP. This audit did not assess the quality of PG&E's vegetation management programs execution, beyond PG&E's own self-assessments of work quality.

4.0 BACKGROUND

4.1 Vegetation Management Programs

PG&E implements the following programs to perform vegetation management work along its distribution lines: EVM, Routine Vegetation Management (Routine), and the Catastrophic Event Memorandum Account (CEMA) Program. PG&E's vegetation management work on its transmission lines includes the following programs: Routine Transmission, Right of Way (ROW) Maintenance, and Integrated Vegetation Management (IVM). In addition, PG&E has various quality assessment and quality control programs to oversee effective implementation of its vegetation management programs. Each of these programs is described in more detail below for reference throughout this audit.

[7] Pursuant to Public Utilities Code section 326, subdivision (b), on July 1, 2021, the Wildfire Safety Division (WSD) transitioned from the Commission into the Office of Energy Infrastructure Safety (Energy Safety), a new department under the California Natural Resources Agency. Energy Safety "is the successor to" and "is vested with all of the duties, powers, and responsibilities of the Wildfire Safety Division" (Government Code Section 15475), including, but not limited to, jurisdiction for evaluating and approving or denying electrical corporations' WMPs and evaluating compliance with regulations related to the WMPs. The Commission and the newly formed Energy Safety will adhere to all statutory requirements pertaining to the WMP process. WSD is used to describe the work of the WSD prior to July 1, 2021. Energy Safety is used to describe the work of Energy Safety beginning on July 1, 2021. Any references to WSD action post July 1, 2021, or to Energy Safety action prior to July 1, 2021, are inadvertent and should be interpreted as the actions of WSD or Energy Safety as appropriate.

[8] Letters from Matthew Pender, PG&E, to the Director of WSD dated April 30, 2020, July 28, 2020, November 2, 2020, and January 28, 2021

[9] On October 21, 2020, WSD initiated an audit of PG&E's EVM vegetation management work (2020 EVM Audit), as reported in the letters; the audit report was submitted to PG&E on February 8, 2021. The EVM audit focused on PG&E's EVM program and whether PG&E appropriately prioritized its EVM work in high-risk areas and on high-risk circuits.

- **Enhanced Vegetation Management (EVM) program:** encompasses distribution lines in Tier 2 and Tier 3 High Fire Threat District (HFTD) areas and includes radial clearances, overhang trimming, and assessing trees with the potential to strike power lines.[10]

- **Routine Vegetation Management program:** focuses on meeting the regulatory standard of a four-foot radial clearance around overhead distribution lines in HFTD areas.[11] WMP Initiative 5.3.5.2 "Detailed Inspections of Vegetation Around Distribution Electric Lines and Equipment" includes work under PG&E's Routine Distribution program.[12]

- **Catastrophic Emergency Memorandum Account (CEMA) program:** identifies trees that are dead and dying for remediation in areas that are "at a higher risk of tree mortality and/or wildfire risk."[13] This additional patrol occurs as a second inspection beyond the Routine program.[14] WMP Initiatives 5.3.5.2 "Detailed Inspections of Vegetation Around Transmission Electric Lines and Equipment" and 5.3.5.9 "Other Discretionary Inspection of Vegetation Around Distribution Electric Lines and Equipment, Beyond Inspections Mandated by Rules and Regulations" include work under PG&E's CEMA program.[15]

- **Routine Transmission program:** includes vegetation management to meet or exceed the requirements of North American Electric Reliability Corporation (NERC).[16] This program addresses vegetation with the potential to grow, fall, or sway into transmission conductors.[17] Vegetation Management and Inspections Initiative 5.3.5.3 "Detailed Inspections of Vegetation Around Transmission Electric Lines and Equipment" includes work under PG&E's Routine Transmission vegetation program.[18]

- **Right Of Way (ROW) Maintenance program:** is a vegetation management program to maintain and reclaim transmission corridors in a manner that meets or exceeds the requirements as outlined by NERC.[19] The program removes danger trees and incompatible vegetation within the Wire Zone and Border Zones of transmission lines.[20] Vegetation Management and Inspections Initiative 5.3.5.3 "Detailed Inspections of Vegetation Around Transmission Electric Lines and Equipment" and Initiative 5.3.5.16 "Removal and Remediation of Trees with Strike Potential to Electric Lines and Equipment" includes work under PG&E's ROW Expansion program.[21]

[10] 2020 WMP, page 5-176, 177
[11] 2020 WMP, page 5-176
[12] 2020 WMP, page 5-182
[13] 2020 WMP, page 5-190
[14] 2020 WMP, page 5-190
[15] 2020 WMP, page 5-190
[16] TD-7103P-01 "Transmission Right-of-Way Maintenance Procedure (TROW)"
[17] TD-7103P-01 "Transmission Right-of-Way Maintenance Procedure (TROW)"
[18] 2020 WMP, page 5-184
[19] TD-7103P-03 "Transmission Right-of-Way Maintenance Procedure (TROW)"
[20] TD-7103P-03 "Transmission Right-of-Way Maintenance Procedure (TROW)"
[21] 2020 WMP, page 5-197

- **Integrated Vegetation Management (IVM) program:** is an "ongoing maintenance program designated to maintain cleared rights-of-way in a sustainable and compatible condition by eliminating tall-growing and fire-prone vegetation and promoting low-growing fire-resistant vegetation."[22] Vegetation Management and Inspections Initiative 5.3.5.3 "Detailed Inspections of Vegetation Around Transmission Electric Lines and Equipment" includes work under PG&E's IVM program.[23]

- **Quality Verification Vegetation Management (QV) program:** reviews vegetation management work for "contractor performance."[24]

- **Quality Assurance Vegetation Management (QA) program:** conducts audits to ensure requirements are met at the program level.[25]

- **Work Verification (WV) program:** is specific to EVM work and checks for compliance with the EVM scope.[26]

4.2 2020 WMP Vegetation Management Initiatives

In its 2020 WMP, PG&E identified 20 vegetation management initiatives, as listed below.

1. Additional efforts to manage community and environmental impacts
2. Detailed inspections of vegetation around distribution electric lines and equipment
3. Detailed inspections of vegetation around transmission electric lines and equipment
4. Emergency response vegetation management due to red flag warning or other urgent conditions
5. Fuel management and reduction of "slash" from vegetation management activities
6. Improvement of inspections
7. LiDAR inspections of vegetation around distribution electric lines and equipment
8. LiDAR inspections of vegetation around transmission electric lines and equipment
9. Other discretionary inspection of vegetation around distribution electric lines and equipment, beyond inspections mandated by rules and regulations
10. Other discretionary inspection of vegetation around transmission electric lines and equipment, beyond inspections mandated by rules and regulations
11. Patrol inspections of vegetation around distribution electric lines and equipment
12. Patrol inspections of vegetation around transmission electric lines and equipment
13. Quality assurance / quality control of inspections
14. Recruiting and training of vegetation management personnel

[22] 2021 WMP Update Revised, page 697
[23] 2020 WMP, page 5-184
[24] DR034-SVM-20211008, response to question 1a
[25] DR034-SVM-20211008, response to question 1g
[26] 2020 WMP, page 5-191

15. Remediation of at-risk species
16. Removal and remediation of trees with strike potential to electric lines and equipment
17. Substation inspections
18. Substation vegetation management
19. Vegetation inventory system
20. Vegetation management to achieve clearances around electric lines and equipment

4.3 PG&E's Vegetation Management Programs and the 2020 WMP Initiatives

Through a review of PG&E's 2020 WMP, Energy Safety related PG&E's vegetation management programs listed in the section above to the following initiatives listed in its 2020 WMP:

Table 2: PG&E Vegetation Management Program and Corresponding 2020 WMP Vegetation Management Initiative

VM Program	2020 WMP Initiative Number
EVM program	5.3.5.1 5.3.5.2 5.3.5.13 5.3.5.14 5.3.5.15 5.3.5.16 5.3.5.20
Routine [Distribution] program	5.3.5.2 5.3.5.14 5.3.5.16 5.3.5.20
CEMA program	5.3.5.2 5.3.5.9
Routine [Transmission] program	5.3.5.3
ROW Maintenance program	5.3.5.3 5.3.5.16
IVM program	5.3.5.3
Quality Assurance, Quality Verification, and Work Verification programs	5.3.5.2 5.3.5.3 5.3.5.13 5.3.5.15

The above vegetation management program names are based on Energy Safety's assessment of PG&E's various vegetation management programs. PG&E is inconsistent with its naming convention. For example, in the 2020 and 2021 WMPs, PG&E calls the CEMA program all the following: "Mid-cycle Patrol," "dead and dying tree program," "Tree Mortality Program,"

"second patrol program," "CEMA Patrol," and "VM Second Patrol." Energy Safety found this issue of inconsistent naming conventions as a matter requiring corrective action after conducting the 2020 EVM Audit.[27] Please see the "Corrective Actions" section of this SVM audit for this finding's corrective action.

4.3.1 Documents Reviewed

In performing this audit, Energy Safety reviewed the following records and documents:

1. PG&E 2020 Wildfire Mitigation Plan Report Updated February 28, 2020 (2020 WMP)
2. PG&E EVM notification letters for locations worked with applicable miles complete for Q1, Q2, Q3 and Q4 2020
3. PG&E 2020 Q4 Quarterly Initiative Update (QIU), March 31, 2021
4. PG&E's response to data request DR002
5. PG&E's response to data request DR003
6. PG&E's responses to data request DR9-SVM20210329
7. PG&E's responses to data request DR16-SVM2-20210430
8. PG&E's responses to data request DR034-SVM-20211008
9. PG&E's responses to data request DR063-SVM-20220119
10. PG&E's responses to data request DR086-SVM-20220429
11. Enhanced Vegetation Management Pre-Inspection Procedure[28]
12. Distribution Routine Patrol Procedure[29]
13. Transmission Non-Orchard Routine Patrol Procedure (TRPP)[30]
14. Transmission Right-of-Way Maintenance Procedure (TROW)[31]
15. Transmission Integrated Vegetation Management Procedure[32]
16. Quality Assurance Vegetation Management Distribution Audit Procedure[33]
17. Distribution Vegetation-Related Outage Investigation Procedure[34]

[27] Energy Safety's Audit Report on PG&E's Implementation of their Enhanced Vegetation Management Program in 2020, published on February 8, 2021, finding 2
[28] TD-7106P-01, published May 12, 2020
[29] TD-7102P-01, published October 27, 2015
[30] TD-7103P-01, published October 1, 2016
[31] TD-7103P-03, published October 1, 2016
[32] TD-7103P-04, published October 1, 2016
[33] RISK-6301P-06, published January 14, 2021
[34] TD-7102P-02, published October 26, 2015

18. Transmission Vegetation-Related Outage Investigation Procedure[35]
19. Wildfire Defensible Space for Substations Procedure[36]
20. Best Management Practices document[37]
21. "Community Wildfire Safety Program" PowerPoint presentations by PG&E from Spring to Summer 2020

Below is timeline of events that outlines Energy Safety communication with PG&E pertaining to this SVM audit. Communication below includes data requests, as listed above, and PG&E's subsequent responses.

Table 3: Timeline of Events PG&E's Communication with Energy Safety Regarding SVM Audit

Number	Date(s)	Event
1	April 30, 2020, July 28, 2020, November 2, 2020, and January 28, 2021	PG&E submitted to Energy Safety quarterly notices that it had completed a substantial portion of miles in its EVM program toward its 2020 WMP target. Energy Safety sent PG&E an audit report related to its EVM work on February 8, 2021.
2	March 29, 2021	Energy Safety submitted data request DR9-SVM20210329 asking for data supporting the claims made in PG&E's 2021 WMP Update for completion of 2020 WMP vegetation management Initiatives 5.3.5.2, 5.3.5.5, 5.3.5.9 and 5.3.5.16.
3	April 13, 2021	PG&E submitted their response to DR9-SVM20210329.
4	April 30, 2021	Energy Safety submitted data request DR16-SVM2-20210430 asking for clarification regarding the response in DR9-SVM20210329 for initiatives 5.3.5.3, for progress updates on work under 5.3.5.2 and 5.3.5.9, and claims made in the 2020 fourth quarter QIU for initiative 5.3.5.16.
5	May 7, 2021	Energy Safety and PG&E met to clarify the questions asked in DR16-SVM2-20210430 and PG&E's response to DR9-SVM20210329.
6	May 11, 2021	PG&E requested a three-day extension to respond to DR16-SVM2-20210430. Energy Safety approved the extension the same day.
7	May 19, 2021	PG&E submitted its response to DR16-SVM2-20210430.
8	September 24, 2021	Energy Safety and PG&E met to discuss the data PG&E submitted to date.
9	October 8, 2021	Energy Safety submitted data request DR-034-SVM-20211008 asking for data supporting claims made in PG&E's 2021 WMP Update and 2020 fourth quarter QIU under 2020 WMP initiatives 5.3.5.13 and 5.3.5.17.

[35] TD-7103P-06, published October 1, 2016
[36] TD-3322B-065, published May 8, 2019
[37] TD-7102P-01-JA01, published March 14, 2019

Number	Date(s)	Event
10	October 15, 2021	PG&E requested a two-week extension to respond to DR-034-SVM-20211008.
11	October 18, 2021	Energy Safety granted a one-week extension for DR-034-SVM-20211008.
12	October 29, 2021	PG&E provided a partial response to DR034 -SVM-20211008.
13	November 2, 2021	PG&E submitted the remaining requested data for DR034 -SVM-20211008.
14	November 10, 2021	PG&E and Energy Safety met to review the data submitted for DR034 -SVM-20211008.
15	January 19, 2022	PG&E and Energy Safety met to review a data request to be submitted: DR063-SVM-20220119. Energy Safety submitted the data request the same day.
16	February 7, 2022	PG&E requested a one-week extension to respond to DR063-SVM-20220119. Energy Safety approved the extension the following day.
17	February 9, 2022	Despite the extension granted, PG&E provided its response to DR063-SVM-2022011 on the original due date, February 9, 2022.
18	April 29, 2022	Energy Safety submitted data request DR086-SVM-20220429.
19	May 6, 2022	PG&E provided a response to DR086-SVM-20220429.

5.0 ANALYSIS

This section contains an initiative-by-initiative analysis of all vegetation management initiatives in PG&E's 2020 WMP. Within each subsection, verifiable statements, supporting information, and Energy Safety analysis are provided for each initiative followed by a summary of Energy Safety's disposition on utility compliance.

5.1 Initiative 5.3.5.1: Additional Efforts to Manage Community and Environmental Impacts

The purpose of this initiative is to describe the utility's "strategy to mitigate negative impacts from utility vegetation management to local communities and the environment."[38]

5.1.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

In its 2020 WMP, PG&E states, "PG&E proactively communicates to and partners with land owners, government agencies and community organizations on the work we are planning in and around their neighborhood."[39] Later in describing this initiative, PG&E also states, "PG&E will continue to communicate and partner with stakeholders regarding this important vegetation safety work. In addition, and where possible, PG&E will inform cities and counties of vegetation management work within their community and work with them to address any questions they may have."[40] Energy Safety reviewed PG&E's PowerPoint presentations, titled "Community Wildfire Safety Program," from 2020 to various counties detailing local wildfire mitigation projects, including vegetation management.[41] Additionally, Energy Safety staff observed a subset of these meetings in 2020. This supports PG&E's statement regarding its proactive communication with government agencies, land owners, and community organizations about the vegetation management and other wildfire mitigation work. Therefore, Energy Safety's audit found that PG&E was able to produce information consistent with the statement above in its 2020 WMP about communicating with communities regarding its vegetation management activities.

In its 2020 WMP, PG&E states, "PG&E has provided grant funding to community organizations (generally Fire Safe Councils) to support them in performing community wildfire risk mitigation efforts."[42] PG&E provided a confidential invoice showing PG&E gave grant funding in 2020 to

[38] 2020 WMP Guidelines, R.18-10-007, page 78
[39] 2020 WMP, page 5-180
[40] 2020 WMP, page 5-181
[41] PowerPoint presentations titled "Community Wildfire Safety Program" from Spring to Summer 2020
[42] 2020 WMP, page 5-180

support wildfire risk mitigation efforts.[43] In total, PG&E provided 91 grants[44] amounting to approximately $2.9 million to community organizations to support wildfire risk mitigation and to support firefighting efforts in 2020.[45] Therefore, Energy Safety's audit found that PG&E was able to produce information consistent with the statement above in its 2020 WMP about providing grant funding.

In its 2020 WMP, PG&E states, "PG&E vegetation management contractors are trained on Best Management Practices and Avoidance and Minimization Measures to manage erosion, prevent impacts to sensitive environmental resources (e.g., bird nests, sensitive species and habitats) and protect waterways."[46] Energy Safety reviewed PG&E protocol, TD-7102P-01-JA01, published March 14, 2019, detailing Best Management Practices to manage erosion, prevent environmental and waterway impacts.[47] PG&E provided a list of eight courses for the above-mentioned training that were provided throughout the year via "self-directed web[-]based trainings on the PG&E MyLearning platform with various deadlines for completion."[48] However, PG&E failed to provide the number of times contractors took this training in 2020, as requested by Energy Safety, to help support such trainings being taken by its vegetation management contractors. Therefore, Energy Safety's audit found that PG&E was not able to produce information consistent with the above statement in its 2020 WMP.

In its 2020 WMP, PG&E states that it "coordinates with numerous cities, counties, and other local authorities to obtain local encroachment permits or to manage other local requirements, such as heritage tree ordinances."[49] PG&E provided several examples of permits obtained, including confidential documentation showing an encroachment permit filed in 2020 including coordination for traffic control of the impacted area,[50] Wildfire Stormwater Pollution and Prevention Plan (SWPPP),[51] and a United States Fish and Wildlife Service Multi-Region Operations and Maintenance Habitat Conservation Plan.[52] Therefore, Energy Safety's audit found that PG&E was able to produce information consistent with the above statement in its 2020 WMP.

In its 2020 WMP PG&E states,

> PG&E's land and environmental management and customer care teams work closely with PG&E's vegetation management team to overcome challenges as described above and any other challenges that may come with this impactful

[43] DR063-SVM-20220119, response to question 1, DRU_4631_Q01_Atch01_CONF.pdf
[44] DR086-SVM-20220429, response to question 1a; the sum of 41 grants for the Vegetation Management Catastrophic Events Memorandum Account Fire Safe Council (CEMA FSC) and 50 grants for the Wildfire Safety and Preparedness Program
[45] DR086-SVM-20220429, response to question 1b; the sum of approximately $2,360,130 CEMA FSC grants and approximately $517,000 for the Wildfire Safety and Preparedness Program
[46] 2020 WMP, page 5-180
[47] DR15-GlassFire2, response to question 9a, PGE-WSD_DR15_GlassFire2_Q09_Atch02_CONF.pdf, TD-7102P-01-JA01 "Best Management Practices"
[48] DR086-SVM-20220429, response to question 2
[49] 2020 WMP, page 5-180
[50] DR063-SVM-20220119, response to question 2b, DRU_4631_Q02_Atch02_CONF.pdf
[51] Non-CaseDiscovery_DR_WSD_002-Q01.pdf, response to question 1
[52] Non-CaseDiscovery_DR_WSD_002-Q01.pdf, response to question 1

> work as quickly as possible. They coordinate and plan the work in order to reach out to landowners, communities, and local governments to address concerns in advance of the proposed vegetation management activities.[53]

As a sample of this process, PG&E provided a series of email correspondences between PG&E's land and environmental team and its vegetation management team overcoming vegetation management challenges with a state agency by filing for an emergency permit.[54] Additionally, PG&E provided Energy Safety with a representative workflow process pertaining to EVM scheduled work on a sample circuit between these two teams beginning in mid-November 2020 and completing in mid-January 2021.[55] Therefore, Energy Safety's audit found that PG&E was able to produce information consistent with the above statement in its 2020 WMP.

5.1.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.1

Based on the analysis above, Energy Safety finds PG&E not compliant with the 2020 WMP Initiative 5.3.5.1: Additional Efforts to Manage Community and Environmental Impacts. See Section 6.0 of this audit for a list of corrective actions.

5.2 Initiative 5.3.5.2: Detailed Inspections of Vegetation Around Distribution Electric Lines and Equipment

The purpose of this initiative is to describe the utility's visual inspections of tree conditions within the utility's distribution right-of-way.[56]

5.2.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

In its 2020 WMP, PG&E states that it "conducts detailed inspections of vegetation around distribution electric lines and equipment on an annual cycle under its [R]outine VM program."[57] PG&E provided confidential maps[58] and a confidential Excel document[59] showing the locations of the vegetation management work and the prescribed trim type performed on a circuit inspected for Routine vegetation management work in 2020 and 2021.[60] Therefore, Energy Safety's audit found PG&E was able to produce information consistent with the 2020 WMP statement above indicating that Routine inspections occur annually as stated in the 2020 WMP.

[53] 2020 WMP, page 5-181
[54] DR063-SVM-20220119, response to question 3
[55] DR086-SVM-20220429, response to question 3, OEIS_DRU4923_Q3_Project_History_Example_SF_2020_CONF.pd
[56] 2020 WMP Guidelines, R.18-10-007, page 78
[57] 2020 WMP, page 5-182
[58] DR063-SVM-20220119, response to question 4, DRU_4631_Q04_Atch02_2020_Index_Maps_CONF.pdf, DRU_4631_Q4_Atch03_2021_Index_Maps_LAYTONVILLE 1101 NBFD_CONF.pdf
[59] DR063-SVM-20220119, response to question 4, DRU_4631_Q04_Atch01_CONF.xlsx
[60] DR063-SVM-20220119, response to question 4, DRU_4631_Q04_Atch01_CONF.xlsx

In its 2020 WMP, PG&E states, "Pre-inspection is the first step in the vegetation management process…. pre-inspectors are assigned circuits and deployed to work in various areas throughout PG&E's service territory."[61] PG&E's confidential Distribution Routine Patrol Procedure, TD-7102P-01, details that pre-inspections are the first step in the Routine program procedure.[62] Therefore, Energy Safety's audit found PG&E's Distribution Routine Patrol Procedure document is consistent with the 2020 WMP statement above stating that pre-inspections are the first step in the vegetation management process as stated in the 2020 WMP.

PG&E's 2020 WMP continues, stating

> …all trees identified for work by pre-inspectors are evaluated for the urgency of the required tree work. If tree failure is judged to be possibly imminent, a crew will be dispatched the same day. Trees can also be flagged for immediate follow-up work, while trees that require work but show no near-term risk factors are scheduled following the standard process.[63]

To support the above statement, PG&E provided the Vegetation Management Hazard Tree Rating and Scoring tool (evaluation tool), that pre-inspectors used in 2020 to evaluate the urgency of the required tree work.[64] This evaluation tool helped pre-inspectors assess the likelihood of tree failure.[65] The evaluation tool helped pre-inspectors assign trees a qualitative tree score, ranking them "very high," "high," "moderate," "low," or "very low."[66] The tree score was used in conjunction with a qualitative score for the failure's impact to safety, fire and reliability to aid pre-inspectors in determining whether to recommend tree abatement.[67] PG&E also provided confidential Excel documents and a confidential Portable Document Format (PDF) document showing trees identified in 2020 that were at risk of imminent failure,[68] required immediate follow-up work,[69] and trees that were worked on a standard schedule (i.e., under the Routine Distribution program).[70] Therefore, Energy Safety's audit found PG&E was able to produce information consistent with the 2020 WMP statement above stating trees are assessed for urgency of work as stated in the 2020 WMP.

In its 2020 WMP, PG&E states, "Trees identified for work by the pre-inspector are then assigned to a tree crew to be worked according to PG&E standards to create adequate tree-to-line clearances."[71] As a sample of this workflow between pre-inspector and tree crews, Energy

[61] 2020 WMP, page 5-182
[62] DR-063-SVM-20220119, response to question 28, DRU 4631_Q28_Atch01_Redacted.pdf (TD-7102P-01), page 2 of 25, section 1.2
[63] 2020 WMP, page 5-182
[64] DR063-SVM-20220119, response to question 5a
[65] DR063-SVM-20220119, response to question 5a
[66] DR063-SVM-20220119, response to question 5a, DRU_4631_Q05a_Atch01_Redacted.pdf
[67] DR063-SVM-20220119, response to question 5a, DRU_4631_Q05a_Atch01_Redacted.pdf
[68] DR063-SVM-20220119, response to question 5b, DRU_4631_Q5bi_Atch01_CONF.pdf and DRU_4631_Q05b_Atch01_CONF.xlsx
[69] DR063-SVM-20220119, response to question 5b, DRU_4631_Q05b_Atch02_CONF.xls
[70] DR063-SVM-20220119, response to question 5, DRU 4631_Q05b_Atch02_CONF.xlsx
[71] 2020 WMP, page 5-182

Safety has read-only access to PG&E's ArcGIS program that shows vegetation points (trees) along lines (circuits) that EVM pre-inspectors identify as needing vegetation management work and are subsequently worked by contracted EVM tree crews. Energy Safety uses access to this program to verify this workflow. Therefore, Energy Safety's audit found PG&E's use of its ArcGIS program was consistent with the 2020 WMP statement above.

5.2.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.2

Based on the analysis above, Energy Safety finds PG&E compliant with the 2020 WMP Initiative 5.3.5.2: Detailed Inspections of Vegetation Around Distribution Electric Lines and Equipment.

5.3 Initiative 5.3.5.3: Detailed Inspections of Vegetation Around Transmission Electric Lines and Equipment

The purpose of this initiative is to describe the utility's visual inspections of the tree's conditions within the utility's transmission right-of-way.[72]

5.3.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

In its 2020 WMP, PG&E states that it "patrol[s] and clear[s] any vegetation that is incompatible with the clearances set forth in the FAC-003-4 standard."[73] Energy Safety reviewed PG&E's confidential procedural document, TD-7103P-03, detailing PG&E's transmission right-of-way minimum clearances that meet or exceed clearances set forth in FAC-003-04.[74] PG&E also provided an Excel document showing transmission lines cleared in 2020 as part of Routine NERC projects which includes FAC-003-04 standards.[75] Therefore, Energy Safety's audit found that PG&E was able to produce information consistent with the above statement in its 2020 WMP stating vegetation along transmission lines is cleared per the FAC-003-04 standard as stated in the 2020 WMP.

PG&E also states in its 2020 WMP that it "compl[ies] with the American National Standards Institute's (ANSI) A300 – Part 7 Integrated Vegetation Management (IVM) Standard, followed by electric utilities nation-wide. IVM involves removing any vegetation that is incompatible with the safe and reliable operation and maintenance of high-voltage transmission lines."[76] Energy Safety reviewed PG&E's confidential procedural document, TD-7103P-04, detailing PG&E's IVM practices and procedures.[77] PG&E also provided an Excel document showing transmission lines

[72] 2020 WMP Guidelines, R.18-10-007, page 78
[73] 2020 WMP, page 5-184
[74] TD-7103P-03 Transmission Right-of-Way Maintenance Procedure_CONF.pdf, published October 1, 2016, page 14
[75] DR16-SVM2-20210430, response to question 2b, PGE-WSD_2020WMP_SVM2_DR16_Q2_Atch03.xlsx
[76] 2020 WMP, page 5-184
[77] TD-7103P-04 Transmission Integrated Vegetation Management_CONF.pdf, published October 1, 2016, pages 1, 5, and 6

cleared in 2020 as part of IVM projects.[78] Therefore, Energy Safety's audit found that PG&E was able to produce information consistent with the above statement in its 2020 WMP.

PG&E's 2020 WMP states it is "maintaining the Wire Zone and Border Zone surrounding the lines by establishing and maintaining a corridor that retains low fire risk, along with healthy and compatible vegetation, and removal of all incompatible vegetation. The Wire Zone is the area under the transmission wires, plus 10 feet beyond the outside wires. The Border Zone extends from the Wire Zone out to the edge of the corridor, which may be up to 50 feet from the transmission centerline on 115 kV lines."[79] PG&E provided its confidential transmission right of way procedural documents emphasizing the removal of incompatible vegetation within the Wire Zone and Border Zone[80] and describing the maintenance of compatible vegetation.[81] PG&E also provided a confidential Excel document showing transmission lines cleared as part of transmission right of way projects.[82] Therefore, Energy Safety's audit found that PG&E was able to produce documents consistent with the above statement in its 2020 WMP regarding maintaining the Wire Zone and Border Zone of transmission lines as stated in the 2020 WMP.

PG&E's 2020 WMP states it "will remove or trim any hazard and/or danger trees beyond the Border Zone that could fail and strike the line."[83] Energy Safety has confidential PG&E procedural documentation, TD-7103P-01, published October 1, 2016, instructing pre-inspectors to list hazard trees[84] for removal along transmission lines.[85] Therefore, Energy Safety's audit found that PG&E was able to produce information consistent with the above statements made in the 2020 WMP. See the next paragraph regarding the removal of vegetation that risk the safety of transmission lines and equipment.

PG&E's 2020 WMP states, "PG&E conducts annual inspections to remove any vegetation that is incompatible with the safety of high-voltage transmission lines and equipment."[86] As an example of this workflow, PG&E provided Energy Safety with confidential Excel files showing transmission circuit data including inspection data from 2020,[87] vegetation management data,[88] and reinspection data from 2021.[89] Therefore, Energy Safety's audit found that PG&E was able to produce information consistent with the above statement in its 2020 WMP regarding annually inspecting vegetation along transmission lines.

[78] DR9-SVM20210329, response to question 6a, 2020WMP_WSD_DR9_Q6_Atch05_Transmission PMD_IVM.xlsx
[79] 2020 WMP, page 5-184
[80] TD-7103P-03 Transmission Right-of-Way Maintenance Procedure_CONF.pdf, page 1
[81] TD-7103P-04 Transmission Integrated Vegetation Management_CONF.pdf, pages 1, 5, and 6
[82] DR16-SVM2-20210430, response to question 2b, PGE-WSD_2020WMP_SVM2_DR16_Q2_Atch04_CONF.xlsx
[83] 2020 WMP, page 5-184
[84] Per PG&E's 2020 WMP, page 5-184, PG&E defines "danger trees" per Title 14 Title 14 California Code of Regulations, Sec. 895.1, and "hazard trees" as danger trees with an "increased potential risk of falling into lines." Energy Safety understands "hazard trees" to include "danger trees" based on PG&E's definition.
[85] TD-7103P-01 Transmission Non-Orchard Routine Patrol Procedure_CONF.pdf, page 8
[86] 2020 WMP, page 5-184
[87] DR063-SVM-20220119, response to question 7a, DRU_4631_Q07_Atch01_CONF.xlsx, sheet "2020 Haas Woodchuck Project"
[88] DR063-SVM-20220119, response to question 7b, DRU_4631_Q07_Atch01_CONF.xlsx, sheet "2020 Haas Woodchuck WorkReq"
[89] DR063-SVM-20220119, response to question 7c, "DRU_4631_Q07_Atch01_CONF.xlsx, sheet "2021 Haas Woodchuck Project"

5.3.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.3

Based on the analysis above, Energy Safety finds PG&E compliant with the 2020 WMP Initiative 5.3.5.3: Detailed Inspections of Vegetation Around Transmission Electric Lines and Equipment.

5.4 Initiative 5.3.5.4: Emergency Response Vegetation Management Due to Red Flag Warning or Other Urgent Conditions

The purpose of this initiative is to describe the utility's vegetation management in advance of weather conditions that increase ignition probability and wildfire consequence.[90]

5.4.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

PG&E's 2020 WMP states, "As described above in Section 5.3.5.2, all trees identified for work by pre-inspectors are evaluated for the urgency of the required tree work…. The same process would be followed during any urgent conditions, as long as conditions are safe enough for the tree crews to work in."[91] Please see Energy Safety's analysis of a similar statement under 5.3.5.2: Detailed Inspections of Vegetation Around Distribution Electric Lines and Equipment.

5.4.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.4

See Energy Safety's determination for initiative 5.3.5.2.

5.5 Initiative 5.3.5.5: Fuel Management and Reduction of "Slash" From Vegetation Management Activities

The purpose of this initiative is to describe the utility's efforts to reduce "the availability of fuel in proximity to potential sources of ignition, including 'slash' from vegetation."[92]

5.5.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

In PG&E's 2020 WMP, PG&E states it started a "fuel reduction program" in 2018 that reduces vegetative fuel from ground to the conductors in "select locations" to create "fire defense

[90] 2020 WMP Guidelines, R.18-10-007, page 78
[91] 2020 WMP, page 5-186
[92] 2020 WMP guidelines, R.18-10-007, page 78

zones."[93] When Energy Safety asked about this program, PG&E stated that it was still being developed.[94] However, PG&E claimed in its 2020 fourth quarter Quarterly Initiative Update under Initiative 5.3.5.5 that "work was performed as part of PG&E's 2020 EVM program" and that the initiative was completed.[95] Consequently, Energy Safety asked PG&E for its protocol(s) and to identify locations where this "fuel reduction program" took place in 2020.[96] PG&E failed to provide supporting documentation, as requested, explaining that it had two fuel reduction programs in 2019 but those programs "were paused to evaluate the effectiveness and scope which resulted in modifications to both programs."[97] Therefore, Energy Safety's audit found that PG&E could not produce information consistent with the statement in its 2020 WMP that it had a fuel reduction program in 2020.

5.5.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.5

Based on the analysis above, Energy Safety finds PG&E not compliant with the 2020 WMP Initiative 5.3.5.5: Fuel Management and Reduction of "Slash" From Vegetation Management Activities. See Section 6.0 of this audit for a list of corrective actions.

5.6 Initiative 5.3.5.6: Improvement of Inspections

The purpose of this initiative is to describe the utility's efforts to improve "inspection protocols and implementation of training and the evaluation of inspectors."[98]

5.6.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

PG&E's 2020 WMP, initiative 5.3.5.6: Improvement of Inspections, directs readers to initiatives 5.3.5.2 and 5.3.5.3.[99] Therefore, Energy Safety did not conduct a separate analysis for compliance with this initiative.

5.6.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.6

See Energy Safety's determination for initiatives 5.3.5.2 and 5.3.5.3.

[93] 2020 WMP, page 5-187
[94] DR9-SVM20210329, response to question 4a
[95] PG&E's 2020 Q4 Quarterly Initiative Update
[96] DR-063-SVM-20220119, question 8
[97] DR-063-SVM-20220119, response to question 8
[98] 2020 WMP guidelines, R.18-10-007, page 79
[99] 2020 WMP, page 5-188

5.7 Initiative 5.3.5.7: LiDAR Inspections of Vegetation Around Distribution Electric Lines and Equipment

The purpose of this initiative is to describe the utility's Light Detection and Ranging (LiDAR) distribution right of way inspection program.[100]

5.7.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

Under this initiative in its 2020 WMP, PG&E directs readers to initiative 5.3.4.7: LiDAR Inspections of Distribution Electric Lines and Equipment.[101] Initiative 5.3.4.7 indicates that PG&E quality control staff "manually review the [LiDAR] data to look for gaps in acquisition coverage, incorrect classification of assets and inconsistencies in what was delivered to the Vendor from PG&E's EDGIS (Electric Distribution Geographic Information System) data. Data Quality Control is being performed by PG&E's IT Department. In addition, samples of the deliverables are being reviewed by contract Foresters in the field." [102] In support of these statements, PG&E provided the confidential process document published on November 12, 2020 used by contractors to manually review LiDAR data for accuracy in 2020.[103] This manual directs PG&E contractors to assess LiDAR data for inconsistencies and errors, consistent with the above statements in PG&E's 2020 WMP. PG&E also provided data showing that a Forester conducted a LiDAR data inspection in September 2021, using LiDAR data collected in November 2019, and the Forester found a tree requiring work.[104] However, PG&E failed to provide a sample report of findings and analysis that was field reviewed by a Forester in 2020. Instead, PG&E stated that "the development and revisions of the workflow… began in May 2020 and was finalized in November 2020."[105] PG&E did not start generating reports, i.e. an output of this Data Quality Control program, based on the workflow described in the confidential process document until 2021.[106] Consequently, although this LiDAR data quality control program development started in 2020, Energy Safety cannot confirm that information found as a result of executing this program was evaluated or utilized in any vegetation management programs in 2020 outside the Data Quality Control program. Therefore, Energy Safety cannot verify that LiDAR data was quality-controlled as described in its 2020 WMP.

Initiative 5.3.4.7 continues:

> PG&E end users across the system will have the ability to "validate" the individual LiDAR tree points before prescribing work. PG&E will begin utilizing

[100] 2020 WMP guidelines, R.18-10-007, page 79
[101] 2020 WMP, page 5-188
[102] 2020 WMP, page 5-163
[103] DR-063-SVM-20220119, response to question 9a, DRU_4631_Q09a_Atch01_CONF.pdf
[104] DR-063-SVM-20220119, response to question 9c
[105] DR-063-SVM-20220119, response to question 9b
[106] DR-063-SVM-20220119, response to question 9b

> data captured by Vegetation Management personnel for any new circuits not already having any amount of completed work within the EVM program. This data will include: (1) LiDAR derived "Strike Tree" inventory that field inspectors can then utilize as a baseline for trees that need assessments and (2) LiDAR derived Electric Asset Layer that better portrays spatially where our Electric Assets are located.[107]

As a sample of this LiDAR validation process, Energy Safety has read-only access to PG&E's ArcGIS program. The ArcGIS program shows vegetation points (i.e., trees) along lines (i.e., circuits) that were identified via LiDAR. Per PG&E's confidential EVM pre-inspection procedural document, TD-7106P-01, these points are then physically validated by EVM pre-inspectors "before the inspection is considered complete."[108] Energy Safety uses access to this program to verify this workflow. Therefore, Energy Safety's audit found PG&E's use of its ArcGIS program and its procedural document were consistent with the 2020 WMP statement that LiDAR points (trees) are validated by field personnel.

PG&E states it uses LiDAR to "reveal patterns and identify risk."[109] Energy Safety asked PG&E for a sample pattern and a sample of risk identified via LiDAR in 2020.[110] PG&E provided a sample of a risk identified based on LiDAR; however, PG&E failed to provide any documentation indicating the identification of a pattern using LiDAR data in 2020.[111] Therefore, Energy Safety's audit found PG&E was unable to provide information consistent with the statement that PG&E identifies patterns using LiDAR data, as described in its 2020 WMP.

5.7.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.7

Based on the analysis above, Energy Safety finds PG&E not compliant with the 2020 WMP Initiative 5.3.5.7: LiDAR Inspections of Vegetation Around Distribution Electric Lines and Equipment. See Section 6.0 of this audit for a list of corrective actions.

5.8 Initiative 5.3.5.8: LiDAR Inspections of Vegetation Around Transmission Electric Lines and Equipment

The purpose of this initiative is to describe the utility's Light Detection and Ranging (LiDAR) transmission right of way inspection program.[112]

[107] 2020 WMP, page 5-163
[108] DR-063-SVM-20220119, response to question 26, DRU4631_Q26_Atch01_Redacted.pdf (TD-7106P-01), page 3 of 6, section 5
[109] 2020 WMP, page 5-188
[110] DR-063-SVM-20220119, question 10
[111] DR-063-SVM-20220119, response to question 10
[112] 2020 WMP guidelines, R.18-10-007, page 79

5.8.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

PG&E's 2020 WMP states that it conducts LiDAR inspections of its transmission lines annually to identify vegetation management work.[113] PG&E provided Energy Safety with LiDAR data identifying vegetation management work, including names of the transmission projects, vegetation management work descriptions, and inspection dates.[114] Following review of this data, Energy Safety's audit found PG&E was able to provide information consistent with this statement in the 2020 WMP.

PG&E's 2020 WMP continues by stating that LiDAR-identified vegetation management work is reviewed by pre-inspectors to prescribe work and identify hazard trees, and the "transmission LiDAR inspections are designed to identify work prior to any vegetation coming out of compliance and to align with PG&E's standards that exceed compliance clearances."[115] PG&E provided Energy Safety with a confidential Excel file showing a LiDAR inspection of a transmission line from 2020 identifying the possible need for vegetation management work to prevent compliance issues.[116] Additionally, PG&E provided LiDAR data from 2020 along transmission lines, the field verification dates, and whether contractors managed the vegetation.[117] Therefore, Energy Safety's audit found PG&E was able to provide information consistent with PG&E's use of LiDAR along transmission lines to identify vegetation management work as stated in the 2020 WMP.

PG&E's 2020 WMP also states that it "is developing a risk matrix using topographical and wind analysis to differentiate tree risk in HFTD areas from non-high fire-threat areas."[118] PG&E provided Energy Safety with an output of the above mentioned risk matrix used in 2020.[119] The risk matrix shows transmission lines in HFTD areas assessed in 2019 and categorized "as high risk… or low risk,"[120] and updated tree risk designations of the same lines from 2020, based on tree removals.[121] Therefore, Energy Safety's audit found PG&E was able to provide information consistent with the 2020 WMP statement that PG&E has a risk matrix.

5.8.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.8

Based on the analysis above, Energy Safety finds PG&E compliant with the 2020 WMP Initiative 5.3.5.8: LiDAR Inspections of Vegetation Around Transmission Electric Lines and Equipment.

[113] 2020 WMP, page 5-189
[114] DR9-SVM20210329, response to question 6a, 2020WMP_WSD_DR9_Q6_Atch05_Transmission PMD_IVM.xlsx
[115] 2020 WMP, page 5-189
[116] DR-063-SVM-20220119, response to question 11, DRU_4631_Q11_Atch01_CONF.xlsx, columns AC, AF, AG, AL, and AU
[117] DR16-SVM2-20210430, supplemental response to question 2b, PGE-WSD_2020 WMP_SMV2_DR16_Q2_Supp01_Atch03.xlsx
[118] 2020 WMP, page 5-189
[119] DR-063-SVM-20220119, response to question 12a, DRU_4631_Q12a_Atch01.xlsx
[120] DR-063-SVM-20220119, response to question 12a
[121] DR-063-SVM-20220119, response to question 12a, DRU_4631_Q12a_Atch01.xlsx

5.9 Initiative 5.3.5.9: Other Discretionary Inspection of Vegetation Around Distribution Electric Lines and Equipment, Beyond Inspections Mandated by Rules and Regulations

The purpose of this initiative is to describe the utility's inspection program of the distribution right of ways and the adjacent vegetation that may be hazardous, which goes beyond the minimum standards in rules and regulations.[122]

5.9.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

PG&E's 2020 WMP states, "Primarily this effort, referred to as the CEMA program or 'dead and dying tree program,' involves performing a second annual inspection in many parts of our service territory, namely HFTDs and State Responsibility Areas (SRA), that are at higher risk of tree mortality and/or wildfire risk."[123] PG&E provided confidential sample inspection reports of one distribution circuit in HFTD or State Responsibility Area (SRA) inspected from March 18, 2020 to June 20, 2020 under the Routine Distribution program,[124] and inspected again June 18, 2020 to July 23, 2020 under the CEMA program.[125] Additionally, PG&E's 2020 WMP states, "as these CEMA/'dead and dying' inspections result in identification of trees that need to be addressed[,] they are assigned to a tree crew and removed."[126] PG&E provided a confidential Excel file detailing CEMA inspections completed in 2020 and the inspections that resulted in remediation work by tree crews.[127] Therefore, Energy Safety's audit found that PG&E was able to provide information consistent with the 2020 WMP statements above.

5.9.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.9

Based on the analysis above, Energy Safety finds PG&E compliant with the 2020 WMP Initiative 5.3.5.9: Other Discretionary Inspection of Vegetation Around Distribution Electric Lines and Equipment, Beyond Inspections Mandated by Rules and Regulations.

5.10 Initiative 5.3.5.10: Other Discretionary Inspection of Vegetation Around Transmission Electric Lines and

[122] 2020 WMP guidelines, R.18-10-007, page 79
[123] 2020 WMP, page 5-190
[124] DR-063-SVM-20220119, response to question 13a, DRU_4631_Q13a_Atch01_CONF.pdf
[125] DR-063-SVM-20220119, response to question 13b, DRU_4631_Q13b_Atch01_CONF.pdf
[126] 2020 WMP, page 5-190
[127] DR9-SVM20210329, response to question 5, 2020WMP_WSD_DR9_Q5_Atch03_CEMA_PMD_CONF.xlsx, sheet "2020 CEMA PMD"

Equipment, Beyond Inspections Mandated by Rules and Regulations

The purpose of this initiative is to describe the utility's inspection program of the transmission right of ways and the adjacent vegetation that may be hazardous, which goes beyond the minimum standards in rules and regulations.[128]

5.10.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

PG&E's 2020 WMP, initiative 5.3.5.10: Other Discretionary Inspection of Vegetation Around Transmission Electric Lines and Equipment, Beyond Inspections Mandated by Rules and Regulations, directs readers to initiative 5.3.5.3.[129] Therefore Energy Safety did not conduct a separate analysis for compliance with this initiative.

5.10.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.10

See Energy Safety's determination for initiative 5.3.5.3.

5.11 Initiative 5.3.5.11: Patrol Inspections of Vegetation Around Distribution Electric Lines and Equipment

The purpose of this initiative is to describe the utility's distribution right of way inspection program to identify "obvious [vegetation] hazards."[130]

5.11.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

PG&E's 2020 WMP, initiative 5.3.5.11: Patrol Inspections of Vegetation Around Distribution Electric Lines and Equipment, directs readers to initiative 5.3.5.2.[131] Therefore, Energy Safety did not conduct a separate analysis for compliance with this initiative.

5.11.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.11

See Energy Safety's determination for initiative 5.3.5.2.

[128] 2020 WMP guidelines, R.18-10-007, page 79
[129] 2020 WMP, page 5-191
[130] 2020 WMP guidelines, R.18-10-007, page 79
[131] 2020 WMP, page 5-191

5.12 Initiative 5.3.5.12: Patrol Inspections of Vegetation Around Transmission Electric Lines and Equipment

The purpose of this initiative is to describe the utility's transmission right of way inspection program to identify "obvious [vegetation] hazards."[132]

5.12.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

PG&E's 2020 WMP, initiative 5.3.5.12: Patrol Inspections of Vegetation Around Transmission Electric Lines and Equipment, directs readers to initiative 5.3.5.3.[133] Therefore Energy Safety did not conduct a separate analysis for compliance with this initiative.

5.12.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.12

See Energy Safety's determination for initiative 5.3.5.3.

5.13 Initiative 5.3.5.13: Quality Assurance / Quality Control of Inspections

The purpose of this initiative is to describe the utility's program to audit completed vegetation work, including its input into "decision-making and related integrated workforce management processes."[134]

5.13.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

PG&E's 2020 WMP states,

> [Quality Control] QC samples inspections or tree work recently completed to validate that all work was performed in accordance with PG&E standards. The [Quality Assurance] QA effort is designed to validate that the entire process, starting with pre inspectors, is creating the desired outcomes and identify areas where expectations are not being met, and if additional work is needed or other process modifications are required....PG&E uses the results of the QA Program to improve future performance and to also help inform performance management activities such as re-training of pre-inspectors.[135]

[132] 2020 WMP guidelines, R.18-10-007, page 79
[133] 2020 WMP, page 5-191
[134] 2020 WMP guidelines, R.18-10-007, page 79
[135] 2020 WMP, page 5-191

To support the above statement in the 2020 WMP regarding QC inspections, PG&E provided confidential Quality Control (QC) inspection records, including locations, dates, and inspection results, from 2020.[136] Therefore, Energy Safety's audit found that PG&E was able to provide information consistent with the 2020 WMP statement above regarding QC inspections.

To support the above statement in the 2020 WMP regarding the QA program, Energy Safety asked for PG&E's Quality Assurance (QA) protocol in effect during 2020.[137] In response, PG&E provided the procedural document RISK-6301 P-06 (2021 QA protocol),[138] published January 14, 2021, that showed the program validates the entire process, from reviewing pre-inspection contract specifications to inspecting the lines after vegetation management work was completed,[139] to identify areas that are not meeting expectations.[140] The 2021 QA protocol requires QA inspectors to send an email of the non-compliance observations from the audit to the supervising vegetation program manager one business day after the audit is complete.[141] Trends found during the audit are also recorded, and the auditor schedules a meeting to present the audit to the local Supervising Vegetation Program Manager or Vegetation Program Manager within a week of completing the field audit.[142] The audit report includes the audit results, observations, audit scores per contractor, compliance trends over multiple years, and the "prior year corrective/preventative action assessment."[143] If there were findings in the audit report and corrective action is necessary, the auditing team creates a Corrective Action Plan.[144] Though PG&E provided the 2021 QA protocol, and it supports the statement in the 2020 WMP, PG&E did not provide a QA protocol that was effective in 2020. Therefore, Energy Safety cannot confirm the QA program was executed as described in 2020.

PG&E's 2020 WMP states that "QA is accomplished through the physical inspection of a sample of the newly cleared PG&E system."[145] PG&E's 2021 QA protocol[146] supports the statement that the QA team conducts a field audit (see above). PG&E also provided a confidential sample QA audit report from 2020[147] where the auditor conveyed the results and observations from the audit.[148] Additionally, PG&E provided data supporting execution of 28 QA audits on the distribution system in 2020.[149] Therefore, Energy Safety's audit found that PG&E was able to produce information consistent with this statement in the 2020 WMP.

[136] DR-063-SVM-20220119, response to question 14a, DRU_4631_Q14a_CONF.xlsx
[137] DR-063-SVM-20220119, question 14b
[138] DR-063-SVM-20220119, response to question 14b, DRU_4631_Q14b_Atch03_Redacted.pdf (titled RISK-6301 P-06)
[139] RISK-6301 P-06, page 28 of 30
[140] RISK-6301 P-06, page 29 of 30
[141] RISK-6301 P-06, page 14 of 30
[142] RISK-6301 P-06, page 18 of 30
[143] RISK-6301 P-06, page 19 of 30
[144] RISK-6301 P-06, page 20 of 30
[145] 2020 WMP, page 5-191
[146] RISK-6301 P-06
[147] DR-063-SVM-20220119, response to question 15, DRU_4631_Q15_Atch01_CONF.pdf
[148] DR-063-SVM-20220119, response to question 15, DRU_4631_Q15_Atch01_CONF.pdf, page 3 of 9
[149] DR034-SVM-20211008, response to question 1c, OEIS_DRU4313_Q1_Atch1_2020 Audit Progress.xlsx

PG&E's 2020 WMP states its QA program and procedures were reviewed with third-party experts.[150] PG&E provided a confidential letter, dated February 1, 2019, from the third-party company that reviewed the QA program in 2018.[151] The review found that the "sampling protocol is statistically valid, and… the sampling protocol, if adhered to, will yield estimated compliance rates that will meet PG&E's stated level of precision."[152] Therefore, Energy Safety's audit found that PG&E was able to produce information consistent with this statement in the 2020 WMP.

PG&E's 2020 WMP states that 100% of PG&E's EVM program work completed is reviewed by a work verification (WV) program in which all EVM-completed miles are re-inspected to the EVM standards.[153] As part of DR063-SVM-20220119, Energy Safety requested an Excel file listing the EVM miles worked (completed) in 2020 and a column for the work verified miles,[154] intending this to be in a separate column to compare the number of miles completed and the number of miles work verified. PG&E responded with a confidential Excel file and a corresponding explanation, stating "please see column for 2020 work verified, or for completed EVM miles in 2020, please see column E" that is titled "WV_CLAIMED_MILES."[155] PG&E failed to format the Excel file in the manner requested by Energy Safety by neglecting to have separate columns for the miles worked (completed) and miles work verified. Regardless, the confidential Excel file shows 1,791.68 miles were work verified in 2020.[156] As a result of PG&E failing to provide the miles worked in a separate column, Energy Safety relied on the most accurate data it had on file: Energy Safety's audit of PG&E's 2020 EVM program (2020 EVM Audit). Through the 2020 EVM Audit, Energy Safety found that PG&E completed 1,877.9 miles of EVM in 2020.[157] The total miles completed per the 2020 EVM Audit contradicts PG&E's response to SVM data request DR-063-SVM-20220119 listing 1,791.68 miles of EVM completed in 2020.[158] Regardless of this apparent contradiction, with 1,878 miles completed for EVM in 2020, this results in a discrepancy of approximately 86 miles of EVM work that Energy Safety cannot verify (see Table 4 below). Therefore, Energy Safety's audit found that PG&E was not able to produce information consistent with the 2020 WMP statement that all EVM-completed miles are re-inspected as part of the work verification program.

Table 4: EVM Miles Completed in 2020 and 2020 EVM Miles Work Verified

Total Miles Completed per 2020 EVM Audit	**Total Miles Work Verified per SVM Audit**
1,877.9 miles	1,791.68 miles

[150] 2020 WMP, page 5-191
[151] DR-063-SVM-20220119, response to question 16, DRU_4631_Q16_Atch01_CONF.pdf
[152] DR-063-SVM-20220119, response to question 16, DRU_4631_Q16_Atch01_CONF.pdf, page 1 of 3
[153] 2020 WMP, page 5-191
[154] DR-063-SVM-20220119, question 17a
[155] DR-063-SVM-20220119, response to question 17a
[156] DR-063-SVM-20220119, response to question 17a, DRU_4631_Q17_Atch01_CONF.xlsx, sheet "DRU-4631 Q17a SUMMARY," sum of column "E" "WV_CLAIMED_MILES"
[157] Non-CaseDiscovery_DR_WSD_003-Q01-10Atch02.xlsx, sum of column "B" "2020 Completed MILES"
[158] DR-063-SVM-20220119, response to question 17, DRU_4631_Atch01_CONF.xlsx, sheet "DRU-4631 Q17a WV Dates"

PG&E's 2020 WMP continues by stating that "If any trees were not managed to [the EVM] program scope then rework is assigned for completion before work verification is completed."[159] As an example of this, PG&E provided a confidential Excel file showing a circuit that was pre-inspected, worked by a tree crew, re-inspected by a WV inspector who identified more work was required (categorized as a work verification fail) in 2020.[160] The tree was then reworked and reinspected by a work verification inspector who confirmed that the work was complete (categorized as a work verification pass).[161] Therefore, Energy Safety's audit found PG&E was able to produce information consistent with the above statement in the 2020 WMP.

PG&E's 2020 WMP states that "On top of that 100% work verification process the EVM program is then also assessed with a sample-based QA program."[162] When Energy Safety requested a sample of a QA program assessment performed, for work verification of EVM in 2020, PG&E stated that "While QA did not conduct audits on EVM work verification (WV) in 2020, [Quality Verification] QV did conduct audits."[163] Though the QV program and the QA program may be similar, they are different programs.[164] PG&E failed to provide a "sample-based assessment from the QA program for work verification of EVM in 2020"[165] as requested in DR-063-SVM-20220119. Furthermore, PG&E stated in DR034-SVM-20211008 that "EVM audits were not completed by QA in 2019 or 2020."[166] Therefore, Energy Safety's audit found PG&E was unable to produce information consistent with the above statement in its 2020 WMP regarding the QA program auditing the EVM program as stated in the 2020 WMP.

5.13.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.13

Based on the analysis above, Energy Safety finds PG&E not compliant with the 2020 WMP initiative 5.3.5.13: Quality Assurance / Quality Control of Inspections. See Section 6.0 of this audit for a list of corrective actions.

5.14 Initiative 5.3.5.14: Recruiting and Training of Vegetation Management Personnel

The purpose of this initiative is to describe the utility's program to "identify and hire qualified vegetation management personnel" and to ensure they are "adequately trained to perform vegetation management work, according to the utility's wildfire mitigation plan, in addition to rules and regulations for safety."[167]

[159] 2020 WMP, page 5-191
[160] DR-063-SVM-20220119, response to question 18, DRU_4631_Q18_Atch01_CONF.xlsx
[161] DR-063-SVM-20220119, response to question 18, DRU_4631_Q18_Atch01_CONF.xlsx
[162] 2020 WMP, page 5-191
[163] DR-063-SVM-20220119, response to question 19
[164] See introduction of this audit where QV and QA are described
[165] DR-063-SVM-20220119, question 19
[166] DR034-SVM-20211008, response to question 2b
[167] 2020 WMP guidelines, R.18-10-007, page 79

5.14.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

PG&E's 2020 WMP states:

> The pre-inspectors performing EVM work receive training from PG&E to teach contractors program scope, tools and relevant procedures to ensure consistency in how the work should be performed and how findings/prescriptions should be recorded. This process includes training and skills assessment testing.[168]

PG&E provided a confidential PowerPoint presentation, VEGM-0410,[169] from 2020 used to teach EVM pre-inspector contractors the program scope,[170] use of the EVM ArcCollector App tool to collect data,[171] and a weblink to the skills assessment test.[172] PG&E also provided a confidential PDF version of the skills assessment test.[173] Therefore, Energy Safety's audit found that PG&E was able to produce information consistent with the 2020 WMP statement above.

PG&E's 2020 WMP continues by stating that a multiple-choice test assesses pre-inspector's knowledge on the EVM scope and ability to identify work to be prescribed.[174] PG&E also provided a confidential PDF version of the skills assessment test that included questions on EVM scope and which trees to assess for the program (see above).[175] Therefore, Energy Safety's audit found that PG&E was able to produce information consistent with the above statement in the 2020 WMP.

PG&E's 2020 WMP continues by stating that "All pre-inspectors are required to take a skills assessment [test] to show their competency on the program requirements and appropriate processes to gain and maintain access to PG&E EVM tools."[176] To evaluate whether the skills assessment test was used to assess pre-inspector competency on EVM program requirements, Energy Safety sent DR-063-SVM-20220119 to request information on pass rates and results from skills assessment tests completed in 2020.[177] PG&E failed to provide Energy Safety with the requested information.[178] Instead, in response to Energy Safety's request, PG&E stated that "the VEGM-0410 course only contained knowledge check functionality, therefore no pass rates are available."[179] PG&E continued by stating that it "preform[s] checks to ensure that personnel

[168] 2020 WMP, page 5-193
[169] DR-063-SVM-20220119, response to question 20a, DRU_4631_Q20a_Atch01_CONF.pdf
[170] DR-063-SVM-20220119, response to question 20a, DRU_4631_Q20a_Atch01_CONF.pdf, slides 7-19
[171] DR-063-SVM-20220119, response to question 20a, DRU_4631_Q20a_Atch01_CONF.pdf, slides 20, 24-26
[172] DR-063-SVM-20220119, response to question 20a, DRU_4631_Q20a_Atch01_CONF.pdf, slide 28
[173] DR-063-SVM-20220119, response to question 20b, DRU_4631_Q20b_Atch01_CONF.pdf
[174] 2020 WMP, page 5-193
[175] DR-063-SVM-20220119, response to question 20b, DRU_4631_Q20b_Atch01_CONF.pdf
[176] 2020 WMP, page 5-193
[177] DR-063-SVM-20220119, question 20c
[178] DR-063-SVM-20220119, response to question 20c
[179] DR-063-SVM-20220119, response to question 20c

had knowledge around EVM policies and procedures before entering the field."[180] However, PG&E did not provide Energy Safety with supporting documentation for these "checks." Therefore, Energy Safety's audit found that PG&E was unable to produce information consistent with the 2020 WMP statement above indicating that the pre-inspectors that took this test demonstrated competency on the EVM program requirements.

PG&E's 2020 WMP states, "PG&E is exploring possible partnerships with community colleges to develop VM pre-inspector and utility-qualified tree trimmer certificate programs to increase the talent pipeline."[181] Energy Safety requested sample communication to "develop Vegetation Management pre-inspector and utility-qualified tree trimmer certificate programs."[182] PG&E provided a confidential email correspondence with Butte College from 2020 and a report on a "Utility Line Clearance Arborist Training" program to help onboard additional utility arborists.[183] This Butte College training program's goal was to train "3,000 newly skilled utility line clearance Arborist trainees."[184] Therefore, Energy Safety's audit found that PG&E was able to produce information consistent with the above 2020 WMP statement that PG&E is exploring opportunities with community colleges to increase the talent pipeline.

PG&E's 2020 WMP states, "PG&E has also developed a series of trainings for transitioning pre-inspectors to move them from [R]outine VM to EVM, to expand the available pool of contractor resources which can perform EVM work."[185] Energy Safety requested training syllabi for the series of trainings from 2020 used to transition Routine pre-inspector resources to work on the EVM program.[186] PG&E's response was that it did not have training syllabi available to show this transition, but that it had training requirements on its internal web page.[187] PG&E provided a screenshot of "training requirements," that showed a list of pre-inspector courses and skills tests.[188] Therefore, Energy Safety's audit found that PG&E was able to produce information consistent with the 2020 WMP statement that PG&E trained Routine pre-inspectors in order to transition to EVM work.

5.14.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.14

Based on the analysis above, Energy Safety finds PG&E not compliant with the 2020 WMP initiative 5.3.5.14: Recruiting and Training of Vegetation Management Personnel. See Section 6.0 of this audit for a list of corrective actions.

[180] DR-063-SVM-20220119, response to question 20c
[181] 2020 WMP, page 5-193
[182] DR-063-SVM-20220119, question 22
[183] DR-063-SVM-20220119, response to question 22, DRU_4631_Q22_3.13.2020_PGE Utility Line Clearance Arborist Training Update_CONF.pdf
[184] DR-063-SVM-20220119, response to question 22, DRU_4631_Q22_3.13.2020_PGE Utility Line Clearance Arborist Training Update_CONF.pdf, page 2 of 4
[185] 2020 WMP, page 5-193
[186] DR-063-SVM-20220119, question 23
[187] DR-063-SVM-20220119, response to question 23
[188] DR-063-SVM-20220119, response to question 23

5.15 Initiative 5.3.5.15: Remediation of At-Risk Species

The purpose of this initiative is to describe the utility's actions to "reduce the ignition probability and wildfire consequence attributable to at-risk vegetation species…."[189]

5.15.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

PG&E's 2020 WMP states, "PG&E's VM team conducts site visits to vegetation-caused outage events as part of its standard service interruption investigation process."[190] PG&E provided its procedural documents detailing the investigation process for a vegetation-related outage along its distribution system, TD-7102P-02,[191] and transmission system, TD-7103P-06.[192] PG&E also provided a confidential "Vegetation Management Distribution Outage" form from 2020, which showed a vegetation-caused outage resulting in a standard service interruption investigation.[193] Energy Safety's GIS Data Standard requires the reporting of vegetation-caused outages. Based on an analysis of PG&E's reported data, there were more than 1,800 vegetation-caused outages in 2020 during the second, third, and fourth quarter of 2020.[194] Therefore, Energy Safety's audit found that PG&E was able to produce information consistent with the 2020 WMP statement that PG&E investigates vegetation-caused outage events.

PG&E's 2020 WMP continues to state that "the data collected from these investigations informs failure patterns by specific tree species associated with wire-down events."[195] Energy Safety asked PG&E to produce a failure pattern identified in 2020 by tree species associated with wire-down events.[196] PG&E provided Energy Safety with a confidential Excel file detailing the wire-down vegetation-caused outage data[197] but failed to show the failure patterns extrapolated by tree species from the outage data as requested. However, Energy Safety reviewed an Excel file provided by PG&E in 2020 as a reference document for its EVM program that shows the outages and percentages by failure cause (i.e., root and trunk count and percent) by tree species from 2019.[198] Energy Safety found that the reference document was consistent with the above statement in PG&E's 2020 WMP.

PG&E's 2020 WMP states

[189] 2020 WMP guidelines, R.18-10-007, page 79
[190] 2020 WMP, page 5-195
[191] DR-063-SVM-20220119, response to question 24a, DRU_4631_Q24A_Atch01_Redacted.pdf (TD-7102P-02)
[192] DR-063-SVM-20220119, response to question 24a, DRU_4631_Q24A_Atch02_Redacted.pdf (TD-7103P-06)
[193] DR-063-SVM-20220119, response to question 24b, DRU_4631_Q24B_Atch01_CONF.pdf
[194] The GIS Data Standards was published on August 21, 2020, and PG&E reported data from the second, third, and fourth quarters of 2020.
[195] 2020 WMP, page 5-195
[196] DR-063-SVM-20220119, question 25
[197] DR-063-SVM-20220119, response to question 25, DRU_4631_Q25_Atch01_CONF.xlsx
[198] Provided via email from PG&E to WSD on July 21, 2020 regarding EVM reference materials, "2019 EVM species RX guide SIERRA REGION_population factored_DRAFT_v6.xlsx"

> The two other aspects of the EVM program are (1) that all branches and limbs will be trimmed to the CPUC recommended 12-foot clearance at the time of trim (GO 95, Rule 35, Appendix E), and in some cases, trimming beyond the 12 feet depending on tree growth rates, among other factors, to remain compliant year-round; and (2) trimming and removal of overhanging vegetation from directly above and around distribution lines to supplement radial clearances... PG&E began evaluating all trees with the potential to strike or fall into power lines[199]

PG&E provided procedural documentation, TD-7106P-01 "Enhanced Vegetation Management Pre-Inspection Procedure," for the EVM pre-inspector program from 2020.[200] Energy Safety's review of TD-7106P-01 concluded that the document accurately describes the overhang clearance and the evaluation of all strike-potential trees.[201] However, in terms of radial clearance of vegetation from primary conductors, the document details that for "vegetation with the potential to encroach within a 4 [foot] radius of the primary conductor before the next [R]outine/compliance tree work cycle," the pre-inspector prescribes a minimum of 12-foot radial clearance.[202] This contradicts PG&E's 2020 WMP statement, as quoted above, indicating that all limbs and branches are minimally trimmed to the 12 foot clearance. The 2020 WMP fails to describe the important caveat described in TD-7106P-01 that only if branches risk encroaching the four-foot radius will they be trimmed to 12-foot clearances.

Additionally, during a public workshop on November 8, 2021, PG&E stated that a WV manager identified a procedural gap in the EVM encroachment criteria in mid-June 2021.[203] As a result of this procedural gap, PG&E had to re-patrol approximately 530 miles of EVM work conducted in 2020. Of the approximately 530 miles of 2020 EVM work re-patrolled, approximately 32 miles (6%) required additional vegetation management work to align with the EVM scope according to proper procedure (i.e., TD-7106P-01).

Due to this contradiction between PG&E's 2020 WMP EVM protocol and PG&E's internal EVM protocol with which contractors are trained to comply, Energy Safety's audit found that PG&E was unable to produce information consistent with the above statements in its 2020 WMP.

PG&E's 2020 WMP states

> Pre-inspectors are identifying these trees using PG&E's tree assessment tool which is designed to evaluate a tree's risk of striking the electrical equipment. The tool was developed by a team of ISA Certified Utility Arborists and uses PG&E data regarding regional vegetation-caused outages and ignitions during fire season, tree species height and distance to the electrical equipment, lean,

[199] 2020 WMP, page 5-195
[200] DR-063-SVM-20220119, response to question 26, DRU4631_Q26_Atch01_Redacted.pdf (TD-7106P-01)
[201] DR-063-SVM-20220119, response to question 26, DRU4631_Q26_Atch01_Redacted.pdf (TD-7106P-01), page 2 of 6
[202] DR-063-SVM-20220119, response to question 26, DRU4631_Q26_Atch01_Redacted.pdf (TD-7106P-01), page 2 of 6
[203] PG&E public workshop on November 8, 2021, PowerPoint presentation, slide 18 (including verbal discussion)

> health, and the terrain, and among other factors. PG&E will continue assessing strike-potential trees in the coming years as part of the EVM program.[204]

Energy Safety has read-only access to PG&E's ArcGIS program. The ArcGIS program is a tool that includes a section (i.e., a separate layer) that allows the user to assess and record a tree's strike potential based on a variety of risk factors consistent with the above-quoted language. Energy Safety uses access to this program to verify this workflow. Therefore, Energy Safety can verify PG&E's use of its ArcGIS program is consistent with this statement in the 2020 WMP.

PG&E's 2020 WMP states

> Pre-inspectors will then prescribe the appropriate work to meet the EVM scope requirements. This prescribed tree work is then assigned to a Tree Crew to perform the work in a safe, compliant, efficient manner…. After all EVM-required tree work is completed by PG&E's contractors and passed 100% Work Verification (including the performance of an[y] necessary rework before it is "passed" by the Work Verification assessor)... the final step in the vegetation management process is the QA Program to assess the quality of work performed in the field.[205]

Similar statements were made in initiatives 5.3.5.2 and 5.3.5.13. See Energy Safety's assessment of these statements in the respective initiatives. Note that Energy Safety found PG&E compliant with its statements made under initiative 5.3.5.2 but not compliant with statements made under initiative 5.3.5.13. PG&E was unable to produce documentation demonstrating completion of QA audits of its completed EVM work, stating that "QA did not conduct audits on EVM work verification (WV) in 2020."[206]

In its 2020 WMP, PG&E provided a quantitative target of 1,800 miles where EVM work would be completed.[207] Through Energy Safety's audit of PG&E's 2020 EVM program (2020 EVM Audit), Energy Safety found that although PG&E did not conduct EVM on the highest wildfire risk distribution circuits,[208] PG&E did conduct EVM on approximately 1,878 miles.[209] Therefore, Energy Safety finds that PG&E was able to produce information consistent with its 2020 WMP commitment to conduct EVM work on 1,800 miles of its distribution system.

PG&E states in its 2020 WMP that it "will begin the process to study and assess the need for and scope of the targeted tree species program" with other California electrical utilities.[210] Energy Safety asked PG&E for "date stamped documentation from 2020 to support PG&E starting the process to study and assess the need for and scope of the targeted species program

[204] 2020 WMP, page 5-195
[205] 2020 WMP, page 5-195
[206] DR-063-SVM-20220119, response to question 19
[207] 2020 WMP, page 5-196
[208] Wildfire Safety Division's Audit Report on PG&E's Implementation of their Enhanced Vegetation Management Program in 2020, published on February 8, 2021
[209] Non-CaseDiscovery_DR_WSD_003-Q01-10Atch02.xlsx, sum of column "B" "2020 Completed MILES"
[210] 2020 WMP, page 5-196

with other California utilities."[211] PG&E provided documentation supporting the process to develop a "Targeted Tree Species study," to study the effectiveness of its Tree Assessment Tool, among other tree-risk topics;[212] however, this documentation was not date stamped as requested. Consequently, Energy Safety cannot verify it is from 2020. Furthermore, the provided document shows steps the vendor will take to support this process[213] but fails to show the utility reaching out to other California electrical utilities as the WMP statement implies. Therefore, Energy Safety's audit found that PG&E was unable to produce information consistent with the above WMP statement regarding coordination with other California electrical utilities for a targeted tree species program.

5.15.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.15

Based on the analysis above, Energy Safety finds PG&E not compliant with the 2020 WMP initiative 5.3.5.15: Remediation of At-Risk Species. See Section 6.0 of this audit for a list of corrective actions.

5.16 Initiative 5.3.5.16: Removal and Remediation of Trees with Strike Potential to Electric Lines and Equipment

The purpose of this initiative is to describe the utility's program to remove or remediate strike-potential trees."[214]

5.16.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

PG&E's 2020 WMP states, "Pursuant to PRC Section 4293 and GO 95, Rule 35, all PG&E vegetation management inspections assess for hazard trees."[215] When asked for the procedural documents for each vegetation management program from 2020,[216] PG&E provided two vegetation management inspection scopes: Distribution Routine Patrol[217] (Routine Distribution program) and the Enhanced Vegetation Management Pre-Inspection.[218] Both documents direct pre-inspectors to identify hazard trees.[219] Energy Safety also reviewed PG&E's Transmission ROW Procedure document and found it guides pre-inspectors to identify "hazardous

[211] DR-063-SVM-20220119, question 27
[212] DR-063-SVM-20220119, response to question 27, DRU_4631_Q27_Atch01.pdf, page 1 of 3
[213] DR-063-SVM-20220119, response to question 27, DRU_4631_Q27_Atch01.pdf, page 2 of 3
[214] 2020 WMP guidelines, R.18-10-007, page 79
[215] 2020 WMP, page 5-197
[216] DR-063-SVM-20220119, question 28
[217] DR-063-SVM-20220119, response to question 28, DRU 4631_Q28_Atch01_Redacted.pdf (TD-7102P-01)
[218] DR-063-SVM-20220119, response to question 28, DRU_4631_Q28_Atch02_Redacted.pdf, (TD-7106P-01)
[219] DRU 4631_Q28_Atch01_Redacted.pdf (TD-7102P-01), page 8 of 25, section 2.6; DRU_4631_Q28_Atch02_Redacted.pdf (TD-7106P-01), page 3 of 6, section 4

conditions."[220] "Hazardous conditions" is not defined in the Transmission Right-of-Way Maintenance Procedure document, however, "hazard trees" are defined.[221] Therefore, Energy Safety's audit found that PG&E was able to produce information consistent with the 2020 WMP statement above that all PG&E vegetation management inspections assess for hazard trees.

PG&E's 2020 WMP states that its Right-of-Way clearing program:

> seeks to create increased clearances, beyond compliance minimums, to further reduce wildfire risk and improve system reliability. This Right of Way expansion program seeks to create broader clearances on lower voltage transmission lines (60/70kV or 115kV) similar to the Wire Zone and Border Zone concepts applied to higher voltage lines (and discussed in Section 5.3.5.3). This work includes establishing and maintaining a corridor that retains low fire risk, along with healthy and compatible vegetation, and removal of all incompatible vegetation.[222]

PG&E's Transmission Right-of-Way Maintenance Procedure document details that ROW vegetation management work mitigates fall-in and grow-in risk to its transmission system by removing "structurally unsound trees from inside and outside the ROW" and removing "incompatible vegetation within the Wire Zone and Border Zone."[223] PG&E's Transmission Right-of-Way Maintenance Procedure document continues by stating that the ROW vegetation management work includes using Environmental Protection Agency-approved herbicides to maintain compatible vegetation and reduces "wildfire fuel around transmission facilities to create defensible space and add the ancillary benefit of a fire break."[224] Therefore, Energy Safety's audit found that PG&E was able to produce information consistent with the above statement from the 2020 WMP.

PG&E's 2020 WMP states it is completing an analysis to determine how Public Safety Power Shutoff (PSPS) thresholds can be changed due to the above-mentioned transmission ROW vegetation management work to both reduce wildfire risk and reduce PSPS outages for customers.[225] PG&E provided a confidential Excel file in response to DR-063-SVM-20220119 that showed transmission lines that contain high risk trees and within PSPS scope as of fourth quarter of 2019, but due to vegetation management work between the fourth quarter 2019 and the fourth quarter 2020, the corridors were no longer in PSPS scope.[226] Therefore, Energy Safety's audit found that PG&E was able to produce information consistent with the 2020 WMP

[220] DR-063-SVM-20220119, response to question 6a, DRU_4631_Q06a_Atch02_Redacted.pdf, TD-7103P-03, page 4 of 14, section 3.2
[221] DR-063-SVM-20220119, response to question 6a, DRU_4631_Q06a_Atch02_Redacted.pdf, TD-7103P-03, page 10 of 14
[222] 2020 WMP, page 5-197
[223] DR-063-SVM-20220119, response to question 6a, DRU_4631_Q06a_Atch02_Redacted.pdf (TD-7103P-03), page 1 of 14
[224] DR-063-SVM-20220119, response to question 6a, DRU_4631_Q06a_Atch02_Redacted.pdf (TD-7103P-03), page 1 of 14
[225] 2020 WMP, page 5-198
[226] DR-063-SVM-20220119, response to question 29, DRU_4632_Q29_Atch01_CONF.xlsx, sheets "lines that went from red to green"

statement above that PG&E analyzed how PSPS thresholds can be changed due to transmission vegetation management work as stated in the 2020 WMP.

5.16.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.16

Based on the analysis above, Energy Safety finds PG&E compliant with the 2020 WMP initiative 5.3.5.16: Removal and Remediation of Trees with Strike Potential to Electric Lines and Equipment.

5.17 Initiative 5.3.5.17: Substation Inspections

The purpose of this initiative is to describe the utility's vegetation inspection program around its substations."[227]

5.17.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

PG&E's 2020 WMP states that on an annual basis it ensures there is defensible space around its substations, going out to 100 feet to manage the surrounding vegetation.[228] Energy Safety reviewed PG&E's procedural document, "Wildfire Defensible Space for Substations," that requires a "Clean Zone" where all vegetation and combustible fuels are removed 30 feet around the substation.[229] The "Reduced Fuel Zone" is where vegetative litter is cleared, annual grasses are mowed, and trees and shrubs are pruned or removed that extends from the "Clean Zone" out to 100 feet away from the substation.[230] PG&E also provided inspection reports and work orders from 2020 for substations where defensible space was achieved.[231] Therefore, Energy Safety's audit found that PG&E was able to produce information consistent with the above 2020 WMP statement that substations should have defensible space going out 100 feet.

5.17.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.17

Based on the analysis above, Energy Safety finds PG&E compliant with the 2020 WMP initiative 5.3.5.17: Substation Inspections.

[227] 2020 WMP guidelines, R.18-10-007, page 79
[228] 2020 WMP, page 5-199
[229] DR034-SVM-20211008, response to question 3e, OEIS_DRU4313_Q3-5_Atch2_TD-3322B-065_Redacted, TD-3322B-065, Wildfire Defensible Space for Substations, page 1 of 4
[230] DR034-SVM-20211008, response to question 3e, OEIS_DRU4313_Q3-5_Atch2_TD-3322B-065_Redacted, TD-3322B-065, Wildfire Defensible Space for Substations, page 1 of 4
[231] DR034-SVM-20211008, response to questions 3, 4, and 5

5.18 Initiative 5.3.5.18: Substation Vegetation Management

The purpose of this initiative is to describe the utility's vegetation management program for substations in terms of "actions taken to reduce the ignition probability and wildfire consequence attributable to contact from vegetation to substation equipment."[232]

5.18.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

PG&E's 2020 WMP, initiative 5.3.5.18: Substation Vegetation Management, directs readers to initiative 5.3.5.17.[233] Therefore, Energy Safety did not conduct a separate analysis for compliance with this initiative.

5.18.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.18

See Energy Safety's determination for initiative 5.3.5.17.

5.19 Initiative 5.3.5.19: Vegetation Inventory System

The purpose of this initiative is to describe the utility's efforts toward having a "centralized inventory of vegetation clearances" that includes species, growth forecast, and grow-in, fly-in, or fall-in risk."[234]

5.19.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

PG&E's 2020 WMP states that its EVM program "utilizes an ArcGIS application to manage work flows."[235] Energy Safety has read-only access to PG&E's EVM ArcGIS program. Energy Safety uses access to this program to verify this workflow. In a Microsoft Teams meeting between Energy Safety and PG&E on September 24, 2021, PG&E vegetation management representatives explained that the EVM ArcGIS program tracks vegetation management work from pre-inspection to post-tree trim debris management. Energy Safety can view different sections (i.e., separate layers) within the EVM ArcGIS program that detail the different stages of work along a circuit (i.e., pre-inspection, work verified). Furthermore, PG&E provided a confidential PowerPoint presentation, VEGM-0410,[236] from 2020 used to teach EVM pre-

[232] 2020 WMP guidelines, R.18-10-007, page 80
[233] 2020 WMP, page 5-200
[234] 2020 WMP guidelines, R.18-10-007, page 80
[235] 2020 WMP, page 5-200
[236] DR-063-SVM-20220119, response to question 20a, DRU_4631_Q20a_Atch01_CONF.pdf

inspector contractors the program scope[237] and use of the EVM ArcCollector App tool to collect data.[238] Therefore, Energy Safety can verify that PG&E's use of its ArcGIS program is consistent with the above statement in the 2020 WMP.

PG&E's 2020 WMP states that its "vegetation management work is kept in a centralized system that includes the historical work prescribed and the timing of any tree work or inspections completed."[239]

During this audit, Energy Safety became aware of six separate locations where vegetation data is recorded and operationalized:

- **Vegetation Management Database (VMD):** "tracks the individual tree record."[240]
- **Project Management Database (PMD):** plans vegetation management "inspections (or projects) and track[s] vendor reported status of tree work" but "not all tree work is assigned to a project in PMD."[241]
- **ArcCollector:** is a mobile data collection app used for EVM and post-fire response by tracking pre-inspections, vegetation management work, and debris management post-vegetation management work.[242]
- **Issue Tracking System:** is for a part of VMD to manage constraints, such as permits and customer refusals, during projects, however, it is not used routinely used in the EVM program.[243]
- **Electric Distribution Geographic Information System:** is used to spatially relate vegetation data to utility assets (equipment).
- **Quality Control Database:** is used to record quality verification vegetation management reviews.[244]

Given the above information, Energy Safety asked PG&E for the name of the centralized vegetation management database referenced in its 2020 WMP, and for a sample output of the database such as historical inspection record for a tree and previous trims contained within the database from 2020.[245] In response to Energy Safety's request, PG&E indicated that its centralized database is the VMD and provided an inspection from 2020 and subsequent trim work.[246] However, given that vegetation management data is tracked across at least six different databases, Energy Safety finds that data on PG&E's vegetation management work is kept in decentralized disparate systems. Accordingly, Energy Safety cannot confirm PG&E's vegetation management work is kept in a centralized system as claimed in the 2020 WMP. Therefore, Energy Safety's audit found that PG&E was unable to produce information

[237] DR-063-SVM-20220119, response to question 20a, DRU_4631_Q20a_Atch01_CONF.pdf, slides 7-19
[238] DR-063-SVM-20220119, response to question 20a, DRU_4631_Q20a_Atch01_CONF.pdf, slides 20, 24-26
[239] 2020 WMP, page 5-200
[240] DR9-SVM20210329, response to question 3b
[241] DR9-SVM20210329, response to question 5a
[242] Meeting between Energy Safety and PG&E on September 24, 2021
[243] Meeting between Energy Safety and PG&E on September 24, 2021
[244] DR034-SVM-20211008, response to question 1d
[245] DR-063-SVM-20220119, question 30a and 30b
[246] DR-063-SVM-20220119, response to question 30a and 30b

consistent with the above WMP statement regarding a centralized system as stated in its 2020 WMP.

5.19.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.19

Based on the analysis above, Energy Safety finds PG&E not compliant with the 2020 WMP initiative 5.3.5.19: Vegetation Inventory System. See Section 6.0 of this audit for a list of corrective actions.

5.20 Initiative 5.3.5.20: Vegetation Management to Achieve Clearances Around Electric Lines and Equipment

The purpose of this initiative is to describe the utility's actions to safeguard vegetation so that it does not encroach upon the minimum clearances in GO 95.[247]

5.20.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

PG&E's 2020 WMP, initiative 5.3.5.20: Vegetation Management to Achieve Clearances Around Electric Lines and Equipment directs readers to initiatives 5.3.5.2 and 5.3.5.3.[248] Therefore Energy Safety did not conduct a separate analysis for compliance with this initiative.

5.20.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.20

See Energy Safety's determination for initiatives 5.3.5.2 and 5.3.5.3.

[247] 2020 WMP guidelines, R.18-10-007, page 80
[248] 2020 WMP, page 5-200

6.0 CORRECTIVE ACTIONS

Energy Safety reviewed all 20 initiatives pertaining to vegetation management in PG&E's 2020 WMP. Energy Safety's audit found PG&E noncompliant with seven of the 20 vegetation management initiatives in its 2020 WMP. In these instances of noncompliance, Energy Safety's audit found that PG&E was unable to provide supporting documentation or information consistent with statements made in its 2020 WMP regarding its vegetation management initiatives.

This audit is not an assessment of the quality of PG&E's execution of its vegetation management programs.

See Table 5 below for a summary of Energy Safety's findings and corrective actions for PG&E pertaining to this audit. Within 60 days following receipt of this audit, PG&E must submit a response to the Corrective Actions listed in Table 5 below, as well as supporting documentation. PG&E must title its response "PGE 2020 SVM Audit Corrective Action Plan" and submit the response on the 2020 SVM Docket in Energy Safety's E-Filing System.

Corrective Actions

Table 5: Findings from Energy Safety's 2020 SVM Audit of PG&E

Noncompliant Initiative Number	Finding	Corrective Action
5.3.5.1	**1.** PG&E failed to provide the number of times contractors were trained in Best Management Practices in 2020.	PG&E shall a) provide a reason why it failed to provide the number of times contractors were trained in Best Management Practices, as requested in DR086-SVM-20220429, and b) detail the steps it is taking to ensure vegetation management operations are consistent with statements made in this initiative of the WMP.
5.3.5.5	**2.** PG&E failed to implement a fuel reduction program as described in its 2020 WMP.	PG&E shall provide the steps it is taking to ensure statements made in this initiative of the WMP are consistent with vegetation management operations.
5.3.5.7	**3a.** PG&E failed to provide a sample dataset of its LiDAR data quality control program that was field reviewed in 2020. PG&E did not generate quality	PG&E shall a) provide a reason why it failed to generate quality control reports until 2021, and b) detail the steps it is taking to ensure appropriate quality control reporting occurs.

Noncompliant Initiative Number	Finding	Corrective Action
	control reports until 2021.	
5.3.5.7	**3b.** PG&E failed to provide a pattern identified by LiDAR from 2020.	PG&E shall a) explain what pattern(s) it is trying to assess with LiDAR data under this WMP initiative, b) provide an explanation of why it failed to provide a pattern identified by LiDAR from 2020, as requested in DR-063-SVM-20220119, and c) detail the steps it is taking to ensure LiDAR use is consistent with statements made in this initiative of the WMP.
5.3.5.13	**4a.** PG&E failed to provide the 2020 QA protocol, instead providing the 2021 QA protocol. Due to this inability to provide documentation, Energy Safety's assessment is PG&E did not have a formal QA protocol in 2020.	PG&E shall a) state whether the 2021 QA protocol,[249] that was published in January 2021, was in place in 2020 b) if it did have the QA protocol in place in 2020, explain why it did not provide the 2020 QA protocol as requested in DR-063-SVM-20220119, and c) detail the steps it is taking to ensure QA protocols are consistent with statements made in this initiative of the WMP.
5.3.5.13	**4b.** PG&E failed to conduct Work Verification (WV) on 100% of the EVM miles in 2020.	PG&E shall a) explain why there is a discrepancy between PG&E-submitted documents[250] for total miles completed under the EVM scope in 2020, b) confirm whether it conducted WV on 100% of the EVM miles in 2020, and if PG&E did not conduct WV on 100% of the EVM miles in 2020, explain why not, and c) explain the steps it takes to ensure 100% of the EVM miles are Work Verified.
5.3.5.13	**4c.** PG&E failed to provide a sample of a QA assessment for the EVM program in 2020.	PG&E shall a) provide the reason why QA is not applied to the EVM program, b) explain why PG&E's responses to DR034-SVM-20211008 and DR-063-SVM-20220119 directly contradict statements made in the 2020 WMP,[251] c) detail the steps it is taking to assure the EVM program is executed in accordance with expected quality standards, and d) detail the steps it is taking to ensure the implementation of quality assurance programs for EVM are consistent with statements made in this initiative of the WMP.

[249] RISK-6301 P-06, publication date: January 14, 2021
[250] DRU_4631_Q17_Atch01_CONF.xlsx and Non-CaseDiscovery_DR_WSD_003-Q01-10Atch02.xlsx
[251] See section 5.13.1 of this audit, 2020 WMP, page 5-191

Noncompliant Initiative Number	Finding	Corrective Action
5.3.5.14	**5.** PG&E failed to provide Energy Safety with documentation supporting EVM pre-inspectors showing competency in the EVM program requirements through the skills assessment test.	PG&E shall a) state whether it tracked pass rates of the skills assessment test performed in 2020, b) if not, provide an explanation of why, c) explain how it tracked the "checks"[252] performed in 2020 to ensure EVM pre-inspectors are competent in the EVM program requirements, and d) if PG&E did not track these "checks," explain why.
5.3.5.15	**6a.** The language in the 2020 WMP conflicts with the EVM scope as described in PG&E's procedural document.	PG&E shall a) explain why the WMP statement regarding the EVM scope contradicts TD-7106P-01 "Enhanced Vegetation Management Pre-Inspection Procedure" as described in Section 5.15.1 of this audit and b) detail the steps it is taking to ensure vegetation management operations are consistent with statements made in this initiative of the WMP as described in Section 5.15.1 of this audit.
5.3.5.15	**6b.** PG&E failed to provide sample documentation consistent with its WMP statement indicating it would begin the process to study and assess the need for, and scope of, the targeted species program with other California utilities in 2020. Due to this inability to provide documentation consistent with its WMP statement, Energy Safety concludes PG&E did not start the process with other California utilities to develop a	PG&E shall a) state whether it started this process with other California utilities in 2020, b) if not, provide an explanation of why, c) if it did start this process, explain why it did not provide the documentation as requested in DR-063-SVM-20220119, and d) detail the steps it is taking to ensure that it is studying and assessing the need for and scope of the targeted species program with other California utilities consistent with statements made in this initiative of the WMP.

[252] As referenced in PG&E's response to DR-063-SVM-20220119, question 20c

Noncompliant Initiative Number	Finding	Corrective Action
	targeted species program in 2020.	
5.3.5.19	**7.** PG&E failed to utilize a central database for vegetation, as stated in its 2020 WMP, and instead has at least six databases for tracking vegetation data.	PG&E shall provide: a) a draft of the project plan and documented processes to support the development of central vegetation inventory system,[253] b) documentation to outline the proof-of-concepts with vendors in 2021,[254] c) an explanation of how it is implementing controls to ensure consistency across programs while it builds the central vegetation inventory system, d) a description of controls in place to migrate data from legacy databases, e) a list and description of supportive tools to help PG&E and contract vegetation management staff successfully transition to using the centralized vegetation inventory system, f) a timeline for completion, and g) the steps it is taking to ensure vegetation data is tracked in a manner consistent with statements made in this initiative of the WMP.
Multiple	**8.** PG&E is inconsistent in its naming of various vegetation management programs	PG&E shall a) state whether it has a process, protocol or procedure to ensure consistent use of vegetation management program names across its various documents (i.e., vegetation management procedural documents, WMP, etc.), b) if such processes, protocols, or procedures exist, provide Energy Safety with a copy of all such documents, or c) if such processes, protocols, or procedures do not exist, produce such documentation to ensure consistent naming convention in all documents (i.e. vegetation management procedural documents, WMP, etc.) moving forward.

[253] As referenced in PG&E's fourth quarter 2020 Quarterly Initiative Update, cell Z106
[254] 2021 WMP Update Revised, page 752

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