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OFFICE OF ENERGY INFRASTRUCTURE SAFETY
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August 11, 2022

To: San Diego Gas & Electric
Shaun P. Gahagan
Wildfire Mitigation Program Manager
8330 Century Park Ct, San Diego, Ca 92123

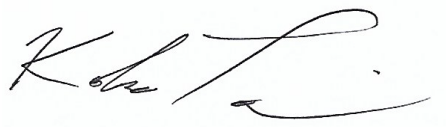
SUBJECT: Office of Energy Infrastructure Safety's Audit on SDG&E's Substantial Vegetation Management Work in 2020.

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 audit of San Diego Gas & Electric (SDG&E) substantial vegetation management work in 2020.

During the audit, Energy Safety reviewed data provided by SDG&E, which Energy Safety compared to the representations SDG&E made in its 2020 Wildfire Mitigation Plan (WMP). A copy of the audit findings is enclosed. Should SDG&E determine that a response to the enclosed audit is necessary, please submit such response to the 2020-SVM docket in Energy Safety's e-filing system within 30 days from the issuance of this audit.

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

Sincerely,



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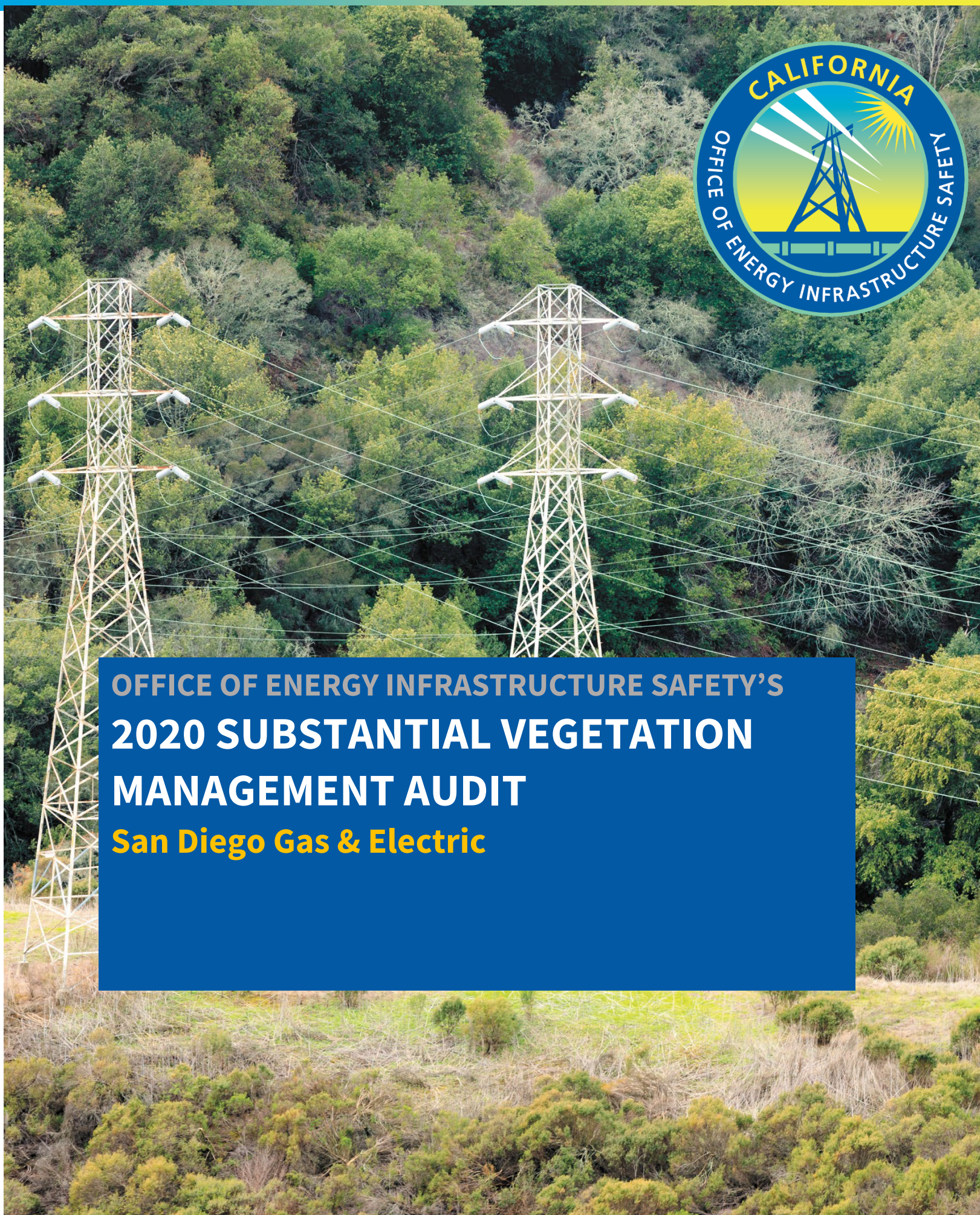
Attachment: Audit



OFFICE OF ENERGY INFRASTRUCTURE SAFETY'S

2020 SUBSTANTIAL VEGETATION MANAGEMENT AUDIT

San Diego Gas & Electric

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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 San Diego Gas & Electric's (SDG&E) 2020 WMP.[2] The 2020 WMP guidelines contained 20 initiatives in the vegetation management section. In reviewing the vegetation management section and initiatives in utility 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 utilities will train personnel on utility protocols, etc.) made by SDG&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 SDG&E compliant with 20 out of the 20 vegetation initiatives audited in its 2020 WMP, as detailed in Table 1 below.

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

2020 WMP Initiative Number	2020 WMP Initiative Name	Determination[3]
5.3.5.1	Vegetation management-Community Engagement	Compliant
5.3.5.2	Detailed Inspections of Vegetation Around Distribution Infrastructure-Tree Trimming	Compliant
5.3.5.3	Detailed Inspections of Vegetation Around Transmission Infrastructure	Compliant

[1] California Public Utilities Code (PUC) section (§)8386.3(c)(5)(A)
[2] 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.
[3] 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	Compliant
5.3.5.5	Fuel management	Compliant
5.3.5.6	Improvement of Inspections	Compliant
5.3.5.7	LiDAR Inspection of Vegetation Around Distribution Infrastructure and Vegetation Management Technology	Compliant
5.3.5.8	LiDAR Inspection of Vegetation Around Transmission infrastructure	Compliant
5.3.5.9	Other Discretionary Inspections of Vegetation Around Distribution Infrastructure-Enhanced Inspections, patrols, and trims	Compliant
5.3.5.10	Other Discretionary Inspections of Vegetation Around Transmission infrastructure	Compliant
5.3.5.11	Patrol Inspections of Vegetation Around Distribution infrastructure	Compliant
5.3.5.12	Patrol Inspections of Vegetation Around Transmission infrastructure	Compliant
5.3.5.13	Quality Assurance/Quality Control of Inspections	Compliant
5.3.5.14	Recruiting and Training of Vegetation Management Personnel	Compliant
5.3.5.15	Remediation of At-Risk Species	Compliant
5.3.5.16	Removal and Remediation of Trees with Strike Potential to Electric Infrastructure-Hazard Tree Removal and Right Tree-Right Place	Compliant
5.3.5.17	Substation Inspections	Compliant
5.3.5.18	Substation Vegetation Management	Compliant
5.3.5.19	Vegetation Inventory System-Tree Database	Compliant
5.3.5.20	Vegetation Management to Achieve Clearance Around Electric infrastructure- Pole Brushing	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 exiting 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 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 fully 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[6] 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 SDG&E's 2020 WMP.[7] The 2020 WMP guidelines contained 20 initiatives in the vegetation management

[4] PUC §8386.3(c)(5)(A)
[5] California Public Utilities Code (PUC) section (§) 8386.3(c)(5)(A)
[6] Wildfire Safety shall be referred to as Office of Energy Infrastructure Safety
[7] 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.

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

In 2020, SDG&E submitted a notification to Energy Safety[8] upon completing a substantial portion of its 2020 WMP vegetation management requirements. In support of its audit, Energy Safety requested documentation to verify SDG&E's compliance with verifiable statements and quantifiable commitments in the vegetation management sections of its 2020 WMP. This audit did not assess the quality of how SDG&E's vegetation management programs were executed beyond SDG&E's own self-assessments of work quality.

4.0 BACKGROUND

Energy Safety conducted an audit of the work performed by SDG&E, as reported in SDG&E's notification dated December 16, 2020,[9] indicating that a substantial portion of vegetation management requirements in its 2020 WMP had been completed. The following is an explanation of the multiple vegetation management programs and a list of the 2020 WMP initiatives.

4.1 Vegetation Management Programs

SDG&E ties each vegetation management program to a WMP initiative that best fits the program description (see Table 2 below in section 4.3). The following is an explanation of SDG&E's vegetation management programs and a list indicating which 2020 WMP initiatives they correlate to.

[8] 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.

[9] Letters of Notification of Substantial Compliance (SB-247) from Jonathan Woldermariam, Director of Wildfire Mitigation and Vegetation Management to the Director of WSD dated December 16, 2020

SDG&E implements the following programs to perform vegetation management work along distribution and transmission lines: Routine and Enhanced Pre-Inspection, Hazard Tree Removal, Pole Brushing, and Quality Assurance and Quality Control (QA/QC). Each of these programs is described in more detail below for reference throughout this audit.

- **Pre-Inspection (Routine): "**Pre-inspectors determine whether vegetation will encroach the minimum clearance distance...Initial inspection performed annually within each of SDG&E ['s] Vegetation Management Areas (VMAs)."[10]
- **Enhanced Pre-Inspection:** a second annual inspection of High Fire Threat District (HFTD) areas in SDG&E's territory. SDG&E personnel performs these inspections approximately six months following the initial routine inspection.[11]
- **Hazard Tree Removal:** "Integrated within the routine inspection cycle and its enhanced patrols. Certified arborists trained in hazard tree evaluation perform these inspections."[12]
- **Pole Brushing:** Occurs in conjunction with pre-inspection activities. Inspectors determine which poles will require brushing and which are clear and require no work. Pole brushing consists of 3 activities: mechanical pole brushing, chemical application, and re-clearing of pole brushing.[13]
- **QA/QC:** "SDG&E utilizes a third-party contractor to perform quality assurance audits of all vegetation management activities. These audits include a statistical analysis of a representative sampling of all completed work."[14]

4.2 WMP 2020 Vegetation Management Initiatives

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

1. Vegetation management-community engagement[15]
2. Detailed inspections of vegetation around distribution infrastructure-tree trimming[16]
3. Detailed inspections of vegetation around transmission infrastructure[17]
4. Emergency response vegetation management[18]
5. Fuel management

[10] Pre-Inspection Procedures, pages 4-5
[11] Pre-Inspection Procedures, page 5
[12] 2020 WMP, page 126
[13] 2020 WMP, page 128-129
[14] 2020 WMP, page 124
[15] 2020 WMP guidelines, R.18-10-007 titles this initiative: Additional efforts to manage community and environmental impacts, page 60
[16] 2020 WMP guidelines, R.18-10-007 titles this initiative: Detailed inspections of vegetation around distribution electric lines and equipment, page 60
[17] 2020 WMP guidelines, R.18-10-007 titles this initiative: Detailed inspections of vegetation around distribution electric lines and equipment, page 61
[18] 2020 WMP guidelines, R.18-10-007 titles this initiative: Fuel management and reduction of "slash" from vegetation management activities, page 61

6. Improvement of inspections
7. LiDAR inspections of vegetation around distribution infrastructure and vegetation management technology[19]
8. LiDAR inspections of vegetation around transmission infrastructure[20]
9. Other discretionary inspection of vegetation around distribution infrastructure- enhanced inspections, patrols, and trims[21]
10. Other discretionary inspection of vegetation around transmission infrastructure[22]
11. Patrol inspections of vegetation around distribution infrastructure[23]
12. Patrol inspections of vegetation around transmission infrastructure[24]
13. Quality assurance/quality control of inspections
14. Recruiting and training of vegetation management personnel
15. Remediation of at-risk species
16. Removal and remediation of trees with strike potential to electric infrastructure- hazard tree removal and right tree-right place[25]
17. Substation inspections
18. Substation vegetation management
19. Vegetation inventory system-tree database[26]
20. Vegetation management to achieve clearances around electric infrastructure- pole brushing[27]

4.3 SDG&E's Vegetation Management Programs and the 2020 WMP initiatives

Through a review of SDG&E's 2020 WMP, Energy Safety correlated SDG&E's vegetation management programs listed in Section 4.1 above to the initiatives listed in its 2020 WMP as follows:

[19] 2020 WMP guidelines, R.18-10-007 titles this initiative: LiDAR inspections of vegetation around distribution electric lines and equipment, page 61
[20] 2020 WMP guidelines, R.18-10-007 titles this initiative: LiDAR inspections of vegetation around transmission electric lines and equipment, page 61
[21] 2020 WMP guidelines, R.18-10-007 titles this initiative: Other discretionary inspection of vegetation around distribution electric lines and equipment, beyond inspections mandated by rules and regulations, page 61
[22] 2020 WMP guidelines, R.18-10-007 titles this initiative: Other discretionary inspection of vegetation around transmission electric lines and equipment, beyond inspections mandated by rules and regulations, page 61
[23] 2020 WMP guidelines, R.18-10-007 titles this initiative: Patrol inspections of vegetation around distribution electric lines and equipment, page 61
[24] 2020 WMP guidelines, R.18-10-007 titles this initiative: Patrol inspections of vegetation around transmission electric lines and equipment, page 61
[25] 2020 WMP guidelines, R.18-10-007 titles this initiative: Removal and remediation of trees with strike potential to electric lines and equipment, page 61
[26] 2020 WMP guidelines, R.18-10-007 titles this initiative: Vegetation inventory system, page 61
2020 WMP guidelines, R.18-10-007 titles this initiative:
[27] 2020 WMP guidelines, R.18-10-007 titles this initiative: Vegetation management to achieve clearances around electric lines and equipment, page 61

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

Vegetation Management Program	WMP Initiative
Routine	5.3.5.2, 5.3.5.3, 5.3.5.11, 5.3.5.12, 5.3.5.17, 5.3.5.18
Enhanced Pre-Inspections	5.3.5.4, 5.3.5.6, 5.3.5.9, 5.3.5.10, 5.3.5.17, 5.3.5.18
QA/QC	5.3.5.13
Hazard tree removal	5.3.5.16
Pole brushing	5.3.5.20

4.4 Documents Reviewed

To complete this audit, Energy Safety reviewed the following records and documents:

1. SDG&E's 2020 notification indicating a substantial portion of its vegetation management has been completed
2. SDG&E's 2020 Wildfire Mitigation Plan
3. SDG&E response to WSD's data request DR- 010
4. SDG&E response to WSD's data request DR-026
5. SDG&E response to Energy Safety's data request DR-029
6. SDG&E response to Energy Safety's data request DR-036
7. SDG&E response to Energy Safety's data request DR-062
8. SDG&E response to Energy Safety's data request DR-070
9. SDG&E response to Energy Safety's data request DR-085
10. SDG&E response to Energy Safety's data request DR-102
11. SDG&E response to Energy Safety's data request DR-104
12. Pre-Inspection Procedures
13. SDG&E's service agreement with tree contractors (excerpts)
14. Off Cycle HFTD Patrol Field Procedures and Scope

15. Contractor Safety Manual

Below in Table 3 is a timeline of events that outlines Energy Safety communication with SDG&E pertaining to this SVM audit. Communication below includes data requests, as listed above, and SDG&E's subsequent responses.

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

Number	Date(s)	Event
1	December 16, 2020	SDG&E submitted notification to Energy Safety that it has completed a substantial portion of its 2020 Wildfire Mitigation Plan (WMP) vegetation management initiatives.
2	April 23, 2021	Energy Safety submitted data request DR-010 asking for data supporting the claim in the notification. Energy Safety requested supporting documentation for the following Initiatives:5.3.5.2,5.3.5.5,5.3.5.9, and 5.3.5.16.
3	May 7, 2021	SDG&E submitted its first half response to DR-010 to Energy Safety.
4	May 10, 2021	SDG&E submitted its second half response to DR-010 to Energy Safety.
5	May 21, 2021	Energy Safety submitted data request DR-026 asking for further details pertaining to initiatives 5.3.5.2, 5.3.5.5, and 5.3.5.16.
6	June 4, 2021	SDG&E submitted its response to DR-026 to Energy Safety.
7	July 26, 2021	Energy Safety submitted data request DR-029 asking for details pertaining to initiatives 5.3.5.2.
8	October 4, 2021	SDG&E submitted its response to DR-029 to Energy Safety.
9	October 12, 2021	Energy Safety submitted data request DR-036 asking for details pertaining to initiatives 5.3.5.13, 5.3.5.18, 5.3.5.19, and 5.3.5.20.
10	October 28, 2021	SDG&E submitted its response to DR-036 to Energy Safety.
11	December 1, 2021	Energy Safety and SDG&E had a meeting to discuss SDG&E's response to DR-036.
12	December 2, 2021	Energy Safety and SDG&E had a follow-up meeting to discuss SDG&E's response to DR-036.
13	January 25, 2022	Energy Safety submitted data request DR-062 asking for further details pertaining to initiatives 5.3.5.1, 5.3.5.2, 5.3.5.5, 5.3.5.7, 5.3.5.9, 5.3.5.13, 5.3.5.14, 5.3.5.15, 5.3.5.19, and 5.3.5.20

13	January 25, 2022	Energy Safety and SDG&E held a meeting to review a data request DR-062
14	February 14, 2022	SDG&E submitted its response to DR-62 to Energy Safety.
15	March 7, 2022	Energy Safety submitted data request DR-070 asking for vegetation management protocols and data pertaining to initiatives 5.3.5.14, 5.3.5.16 and 5.3.5.20.
16	March 18, 2022	SDG&E submitted its response to DR-070 to Energy Safety.
17	April 29, 2022	Energy Safety submitted data request DR-085 asking for further details pertaining to initiatives 5.3.5.1, 5.3.5.7, 5.3.5.9, 5.3.5.14, and 5.3.5.16.
18	May 13, 2022	SDG&E submitted its response to DR-085 to Energy Safety.
19	June 24, 2022	Energy Safety submitted data request DR-102 asking for further details pertaining to initiatives 5.3.5.1, 5.3.5.2, 5.3.5.13, 5.3.5.14, and 5.3.5.16
20	June 30, 20222	SDG&E submitted its response to DR-102
21	June 28, 2022	Energy Safety submitted data request DR-104 asking for further details pertaining to initiatives 5.3.5.7, 5.3.5.9, and 5.3.5.14
22	July 11, 2022	SDG&E submitted its response to DR-104 to Energy Safety. SDG&E asked for extension to 7/14/2022 to respond to question 1
23	July 13, 2022	SDG&E submitted its response to question 1 of DR-104

5.0 ANALYSIS

This section contains an initiative-by-initiative analysis of all vegetation management initiatives in SDG&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 Vegetation Management-Community Engagement

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."[28]

[28] 2020 WMP guidelines, R.18-10-007, page 78

5.1.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

In its 2020 WMP, SDG&E states, "SDG&E has participated in several community town hall meetings centered in communities in its service territory that are subject to enhanced vegetation management operations."[29] SDG&E continues, "During these meetings, customers are provided detailed information about Company activities, work scope, and potential impacts to property. Customers are educated on the concept of 'Right Tree-Right Place,' proper planting near power lines, maintaining safe clearance, and fire safety."[30] SDG&E concludes, "Collateral materials have also been developed to further educate customers about the need and value of vegetation management."[31] Energy Safety reviewed SDG&E's response to DR-062, which contained a meeting agenda for a webinar that SDG&E held on October 7, 2020. The meeting's main objective was to discuss green infrastructure solutions to build a sustainable urban space. Speakers ranged from city foresters and engineers to nursery staff.[32] SDG&E held four such wildfire-preparedness webinars and drive-through wildfire safety fairs in 2020.[33] Furthermore, Energy Safety reviewed SDG&E's "collateral materials" which included information about tree care and power safety, Right Tree-Right place, and specific examples of plants that are compatible with powerlines.[34] The material also included a brief overview of SDG&E vegetation programs.[35] Following the evaluation of SDG&E's response and demonstrating SDG&E held community meetings, provided information ranging from 'Right Tree-Right Place' and tree care and power safety, Energy Safety finds that SDG&E was able to produce information consistent with the above statements made in its 2020 WMP for this initiative.

SDG&E also states, "SDG&E Vegetation Management personnel participate in Company-led tours of its Emergency Operations Center."[36] Energy Safety reviewed SDG&E's response to multiple data requests, which stated that SDG&E held 35[37] tours of its Emergency Operations Center. One such tour was held on February 3, 2020, and led by SDG&E's System Forester. Those in attendance included various representatives from the insurance industry organizations and insurance underwriters.[38] Following the evaluation of SDG&E's responses demonstrating tours were conducted, Energy Safety finds that SDG&E was able to provide information consistent with the above statement made in its 2020 WMP for this initiative.

[29] 2020 WMP, page 115
[30] 2020 WMP, page 115
[31] 2020 WMP, page 115
[32] DR-062_Question_1
[33] SDG&E response to DR-102, question 1
[34] https://www.sdge.com/sites/default/files/FINAL_S1870096_VegMgmtBro.pdf
[35] https://www.sdge.com/sites/default/files/documents/FINAL_S2110014_Onsert_March21.pdf
[36] 2020 WMP, page 115
[37] Energy Safety DR-102, response to question 2
[38] Energy Safety DR-062, response to question 3

In its 2020 WMP, SDG&E states, "SDG&E utilizes its contract workforce of professional arborists and tree trimmers to directly engage customers on the positive benefits of safe and proper utility line clearance operations."[39] SDG&E continues, "All vegetation management contractors are trained in positive customer communications, which affords multiple opportunities to interface with customers regarding vegetation management operations."[40] Energy Safety reviewed SDG&E's response to DR-062, which provided a sample training presentation on customer communications. Energy Safety reviewed the presentation, titled "Customer Service," and conducted on June 25, 2020. The training was offered to each of the SDG&E vegetation management contractors. A total of 345 individuals received this training in 2020.[41] The training module covers how to engage with customers and the importance of customer service.[42] Energy Safety additionally reviewed SDG&E's Pre-Inspection Procedures, which direct pre-inspectors to engage with customers about the benefits of utility line clearances.[43] Following the evaluation of SDG&E's response demonstrating employee training on how to explain the benefits of safe and proper line clearance to customers, Energy Safety finds that SDG&E was able to provide information consistent with the above statements made in its 2020 WMP for this initiative.

SDG&E continues, "SDG&E leads and participates in Arbor Day events in several of its communities and utilities as a non-profit vendor to educate the public and school-age children on electrical awareness, and safe and proper management of trees near power lines."[44] SDG&E further states, "[it] will continue to conduct pre-and post-event customer research to obtain feedback on the quality of the messaging and communication tactics that are employed. Surveys and focus groups will be used to engage customers and solicit reactions to the public education campaign materials created. Surveys are also employed during community outreach events. Attendees are asked to provide feedback about the event as well as any additional information they would like a future event."[45] Energy Safety reviewed SDG&E's response to DR-062 to evaluate these statements. SDG&E participated in an Arbor Day event on December 3, 2020, and partnered with the City of Chula Vista to plant 13 Canary Island pine trees. SDG&E's vendor, Urban Corps of San Diego, participated in this event and provided electrical awareness and proper tree selection education to school-age children.[46] Furthermore, SDG&E provided a pre-and post-event customer feedback survey for participants who attended a drive-through[47] wildfire safety fair held in Alpine, on September 18, 2020. SDG&E's statistical analysis of survey responses showed that 95% of respondents were "very satisfied" with the information presented at the event.[48] Following the evaluation of SDG&E's response stating community

[39] 2020 WMP, page 115
[40] 2020 WMP, page 116
[41] Energy Safety DR-085, response to question 1
[42] DR-062_Question_6
[43] Pre-Inspection Procedures
[44] 2020 WMP, page 116
[45] 2020 WMP, page 116
[46] Energy Safety DR-062, response to question 7
[47] The event was a drive-through due to Covid-19 protocols.
[48] DR-062_Question_9.msg

events were held, as well as the evidence of post-event surveys completed providing feedback on the community events, Energy Safety finds that SDG&E was able to provide information consistent with the above statements made in its 2020 WMP for this initiative.

In its 2020 WMP, SDG&E states, "SDG&E is developing its customer engagement activities via a centralized team of associated departments to improve customer outreach and awareness of the various wildfire mitigation efforts."[49] SDG&E continues, "SDG&E also conducts affected customer research after wildfire season events to gather feedback on communications and process optimization, which is evaluated and incorporated into the WMP Annual Update as appropriate."[50] To evaluate these statements, Energy Safety reviewed SDG&E's response to DR-062. SDG&E provided survey evaluations that stated, the wildfire public education campaign was conducted to measure awareness and preparedness behavior of campaign topics. The Wildfire Mitigation Pre- and Post-PSPS surveys which contains standardized questions for comparing between other utilities regarding language preference, recall and usefulness of wildfire and PSPS communications.[51] SDG&E provided the results of those surveys, which covered pre-and post-wildfire season events and PSPS. English and Spanish covered 96% of the preferred languages for communication.[52] 60% of respondents felt at least "somewhat prepared" for a PSPS outage, and 14% felt "completely prepared."[53] During a PSPS event, 72% of respondents used the SDG&E website for PSPS updates. Of those, 69% were "satisfied" with the website.[54] Following the evaluation of SDG&E's response showing the results of customer engagement to improve customer outreach and awareness of the various wildfire mitigation efforts, Energy Safety finds that SDG&E was able to provide information consistent with the above statements made in its 2020 WMP for this initiative.

In its 2020 WMP, SDG&E states, "SDG&E has also produced multimedia content on its internet website to illustrate its enhanced vegetation management operations for the public."[55] SDG&E also states, "SDG&E will continue to create content for its public education campaign, outreach activities and broadcast and social media outreach. Initiatives considered for this effort include:

- Expanded collateral materials to proactively support the awareness of mitigation efforts
- An updated vegetation management education video
- Updated content of the annual public education campaign (e.g., bill insert, HFTD newsletter, social media, TV/radio - broadcast media, sdge.com)
- Educational materials for outreach events such as back-country Open Houses and Fire Safety Fairs
- Continue to air the SDG&E documentary on local TV stations during wildfire season
- Content for public awareness stories pitched to the media outlets

[49] 2020 WMP, page 116
[50] 2020 WMP, page 116
[51] Energy Safety DR-062, response to question 8
[52] Energy Safety DR-062, response to question 8
[53] Energy Safety DR-062, response to question 8
[54] Energy Safety DR-062, response to question 8
[55] 2020 WMP, page 115

- Develop and air public service announcements/TV and radio commercials."[56]

Energy Safety reviewed SDG&E's response to DR-062. As evidence to support its claims, SDG&E provided the following: one link to a document containing information used to inform the public about pruning a tree and tree removal,[57] another link to a YouTube video discussing vegetation management education video discussing SDG&E's wildfire safety measures,[58] a pamphlet containing information on how to prepare for public safety power shut-off events,[59] an annual public education pamphlet on PSPS,[60] a documentary[61] discussing wildfire safety (SDG&E stated its documentary was aired on local TV stations on KNSD San Diego channel 7 (NBC) on October 31, 2020, at 3:00 pm),[62] created awareness story,[63] and public service announcements that aired on KFMP San Diego Channel 8 (CBS) on September 14, 2020.[64] Following the evaluation of SDG&E's response showing multimedia content provided to the public, Energy Safety finds that SDG&E was able to provide information consistent with the above statements made in its 2020 WMP for this initiative.

5.1.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.1

Based on the analysis above, Energy Safety finds SDG&E compliant with its 2020 WMP Initiative 5.3.5.1: Vegetation Management-Community Engagement.

5.2 Initiative 5.3.5.2 Detailed Inspection of Vegetation Around Distribution Infrastructure-Tree Trimming

The purpose of this initiative is to describe the utility's visual inspections of tree conditions within the utility's distribution right-of-way.[65]

5.2.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

[56] 2020 WMP, page 116
[57] https://www.sdge.com/sites/default/files/FINAL_S1870096_VegMgmtBro.pdf
[58] https://www.youtube.com/watch?v=58eqgSnqn6o&t=360s
[59] Energy Safety DR-062_Question_10a
[60] Energy Safety DR-062_Quesiton_10c
[61] https://www.youtube.com/watch?v=DdkY3P4JWLc
[62] Energy Safety DR-062, response to question 10e
[63] https://www.sdgenews.com/article/sdge-announces-wildfire-safety-advancements-2020-wildfire-season
[64] Energy Safety DR-062, response to 10f
[65] 2020 WMP guidelines, R.18-10-007, page 78

In its 2020 WMP, SDG&E states, "SDG&E developed and maintains a vegetation management work plan, which is a schedule-based approach to its operations so that applicable lines within its service territory are inspected each year."[66] SDG&E continues, "SDG&E 's activities in each Vegetation Management Area (VMA) are driven by a master schedule that identifies specific activities that are calendared to take place in each VMA every year. The activities include pre-inspection, audit of pre-inspection work, tree pruning and removal, pole brushing, post-trim, and brushing audits."[67] Energy Safety reviewed SDG&E's response to DR-062, in which a master schedule was provided. The master schedule detailed the start dates of vegetation activities for each of SDG&E's VMAs in 2020. The activities start with pre-inspection, pole brushing is carried out in conjunction with pre-inspection, followed by a pre-inspection audit, tree trim/removal, followed by a post trim audit, and if needed, HFTD inspection and HFTD post trim audit.[68] Following the evaluation of SDG&E's response showing the master schedule for vegetation management activities, Energy Safety finds that SDG&E was able to provide information consistent with the above statements made in its 2020 WMP for this initiative.

In its 2020 WMP, SDG&E states,

> During the pre-inspection activity, trees in proximity to SDG&E's power lines are inspected and evaluated, and the tree condition in the database is updated accordingly. Each tree is visited on an annual cycle. The annual inspections include routine maintenance and hazard tree assessments to verify that trees will remain compliant for the duration of the cycle and/or pruned according to standards and clearances. Trees that will not maintain compliance or that have the potential to impact power lines within the annual pruning cycle are identified and assigned to the tree contractor to work. If a tree requires urgent work, the inspector has the discretion to issue the job to the tree contractor for priority completion. Emergency pruning occurs when a tree requires immediate attention to clear an infraction or poses an imminent threat to the electrical facilities….SDG&E removes all branches that cross the vertical plane of the conductors from the conductor to the top of the tree.[69]

SDG&E further states,

> SDG&E integrated a second hazard tree inspection activity throughout the entire HFTD to coincide with the post-trim audit activity. This inspection activity is performed by ISA-Certified Arborists trained [in] tree species characteristics and hazard tree assessment....SDG&E performs routine and non-routine hazard tree inspections annually. These inspections are performed by an International Society of Arboriculture (ISA) certified

[66] 2020 WMP, page 117
[67] 2020 WMP, page 117
[68] DR-062_Question_12
[69] 2020 WMP, page 117

> arborist. These inspections include a 360-degree assessment of every tree within the 'strike zone' of the conductors.[70]

Energy Safety reviewed SDG&E's response to DR-010, which provided the Excel files "*VTREEACTIVITY_PI__2020.xlsx.*"and "*WSD_SDGE_R2.xlsx*". The former contained records regarding trees inspected in 2020. SDG&E inspected 480,980[71] trees in its territory. The file contained records including tree identification number, date of inspection, tree species, and tree height. The latter containing records of trees that required trimming or removal, the priority of each tree remediation, and the associated trees VMA. Upon reviewing the master schedule for both 2020 and 2021 and column 'R' in "*WSD_SDGE_R2.xlsx*" pertaining to the trees VMA location. Each VMA is inspected annually and subsequently each tree within the VMA is inspected. Additionally, the latter Excel file contained the trim priority. Trees that required urgent work were given the condition code "CGRP" (Completed Green Reliability Prune) or "CDRP" (Completed Dead or Dying Reliability Prune). The term "Reliability" SDG&E defines as "hazard trees that poses a potential danger or threat to overhead electrical facilities due to poor health, structural deficiency, and/or site-specific conditions."[72] SDG&E pruned 7,027[73] trees under condition codes CGRP and CDRP. Energy Safety also reviewed internal SDG&E document titled "Pre-Inspection Procedures", which provide an overview of the pre-inspection activities. It describes how and when pre-inspection activities are carried out. Pre-Inspection Procedures further distinguish between routine maintenance and a second inspection conducted in HFTD areas. The procedure also states, "all tree branches that directly overhang the vertical ground-to-sky plane above primary distribution and transmission conductors are to be removed."[74] As an example of the pre-inspection process, Energy Safety reviewed a sample inspection report conducted in 2020. The inspection report contained the type of inspection (pre-inspection or off-cycle patrol), date, work order ID, line clearance, diameter at breast height (DBH), species, pole ID and equipment needed.[75] The second inspection which SDG&E calls the "Off-Cycle Inspection" is carried out in HFTD areas. The "Off-Cycle Patrol Field Procedures and Scope" details the procedures in off-cycle inspections in HFTD areas. The procedure stipulate that a Level 2 inspection (i.e., a 360-degree inspection around the base of the tree) is carried out in HFTD areas and must be performed by ISA Certified Arborist.[76] Energy Safety reviewed a sample off-cycle inspection report conducted by a certified arborist. The report contained information related to the 360-degree inspection such as, tree diameter at breast height, species, number of stems and trunks, and height.[77] Following the evaluation of submitted Excel files trees are inspected annually and which trees required urgent work, documents detailing the protocols for SDG&E pre-inspection activities and off-

[70] 2020 WMP, page 118
[71] "VTREEACTIVITY_PI_2020.xlsx"; sum of column BG in all tabs
[72] Pre-Inspection Procedures, page 10
[73] "WSD_SDGE_R2.xlsx"; Tab R2 Tree pruning all filtered for "CGRP" and "CDRP" sum of column "I"
[74] Pre-Inspection Procedures, page 13
[75] "OEIS_SDGE_22-012_Q3_Q4_Q6_Q7_Q8_Q9.xlsx"; Tab Question 3
[76] Off Cycle HFTD Patrol Field Procedures and Scope
[77] "OEIS_SDGE_22-012_Q3_Q4_Q6_Q8_Q9.xlsx"; Tab Question 9

cycle patrols and a sample pre-inspection report, Energy Safety finds that SDG&E was able to provide information consistent with the above statements made in its 2020 WMP for this initiative.

In its 2020 WMP, SDG&E states, "SDG&E tree contractors follow American National Standards Institute (ANSI) A300 industry tree standards and the concept of directional pruning, which fosters the health of a tree while maximizing clearance and extending the pruning cycle."[78] To assess SDG&E's claims, Energy Safety reviewed the response to DR-062, which provided an excerpt from SDG&E's Service Agreement with its tree contractors. The agreement states, "contractors shall perform the services in accordance with the American National Standards Institute (ANSI) A-300 and Z133.1 standards."[79] Following the evaluation of SDG&E's response showing that ANSI 300 industry tree standards are required to be followed, Energy Safety finds that SDG&E was able to provide information consistent with the above statement made in its 2020 WMP for this initiative.

In its 2020 WMP, SDG&E states, "[w]here prudent and achievable, SDG&E prunes trees 12 feet (or more)."[80] SDG&E continues, "[o]n average, SDG&E prunes approximately 175,000 trees each year and removes approximately 8,500 non-compatible trees."[81] To assess SDG&E's compliance with this statement, Energy Safety reviewed SDG&E's response to DR-010. In this response, SDG&E provided the Excel file "*WSD_SDGE_R4_12ft,*" which contained records of each tree that was pruned to 12 feet or more.[82] The record showed that 11,635 trees were pruned to a clearance of 12 feet or more.[83] SDG&E also provided Excel file "*WSD_SDGE_R2.xlsx*" containing the records of trees pruned and removed. The records contained additional information pertaining to tree identification number, activity type, activity date, HFTD tier level, pole identification number, and species. Energy Safety's analysis of the file revealed that a total of 193,220[84] trees were pruned and 12,137[85] trees were removed in 2020. Following the evaluation of SDG&E's response, which showed that over 175,000 trees were pruned and over 8,500 trees were removed, Energy Safety finds that SDG&E was able to provide information consistent with the above statements made in its 2020 WMP for this initiative.

In its 2020 WMP, SDG&E states, "SDG&E's audit services department also performs an internal audit on all its vegetation management activities."[86] SDG&E continues, "SDG&E conducts QA/QC audits on a random sample population of all work completed by its contractors to assess work quality and contractual adherence."[87] Energy Safety reviewed SDG&E's response to DR-

[78] 2020 WMP, page 117
[79] DR-062_Question_13
[80] 2020 WMP, page 117
[81] 2020 WMP, page 117
[82] WSD_SDGE_R4_12ft.xlsx
[83] WSD_SDGE_R4_12ft.xlsx; the sum of "J" under "number of units"
[84] "WSD_SDGE_R2.xlsx"; the sum of "I" under "tree pruning tab"
[85] "WSD_SDGE_R2.xlsx"; the sum of "G" under "removal tab"
[86] 2020 WMP, page 118
[87] 2020 WMP, page 118

036, which included two Excel files, "*Reliability Trim_Removal Audit.xlsx*" and "*VM Activities Audit.xlsx*." The former listed audits pertaining to completed reliability trimming and removals performed within HFTD. The latter contained audit results for SDG&E's other vegetation management programs for both HFTD and Non-HFTD: Other (routine) trimming or removals, Vegetation Pre-Inspection, Chemical Pole Brush, Mechanical Pole Brush. Both Excel files included the audit date, object identification number or pole number, activity type, results of the audit, and HFTD tier. SDG&E provided the audit rates and pass rates for each program in a separate table.[88] Energy Safety was able to validate both the audit rate and audit pass rate for all programs in Table 4 below.

Table 4 – Vegetation Management Activities Audit Results

Vegetation Management Activities	Audit Rate	Audit Pass Rate
Reliability Trimming or Removal in HFTD[89]	90%	93%
Other Trimming or Removals (HFTD and Non-HFTD)[90]	21%	99%
Vegetation Pre-Inspection (HFTD and Non-HFTD)[91]	14%	94%
Chemical Pole Brush (HFTD and Non-HFTD)[92]	34%	99%
Mechanical Pole Brush (HFTD and Non-HFTD)[93]	22%	99%

Following the evaluation of SDG&E's response showing audit results, Energy Safety finds that SDG&E provided information consistent with the above statements made in its 2020 WMP for this initiative.

In its 2020 WMP, SDG&E states, "SDG&E will determine the need to increase the number of internal SDG&E inspectors within the Vegetation Management program and will further engage

[88] SDG&E response to DR-036, question 1(b)
[89] "Reliability Trim_Removal Audit.xlsx"; filtered column "A" for 2020. To calculate audit rate: sum of column "E" filtered for "TTA" divided by Sum of "E" filtered for "TT" and "TRM". To calculate audit pass rate: sum of column "F" filtered for "1" and divided by sum of column "E" filtered for "TTA"
[90] "VM Activities Auidt.xlsx"; Tab "Audit Other Veg Activities" filtered column "B" for 2020. To calculate audit rate: sum of column "E" filtered for "TTA" divided by sum of column "E" filtered for "TT" and "TRM". To calculate audit pass rate: sum of column "G" filtered for "1" and divided by sum of column "E" filtered for "TTA"
[91] "VM Activities Auidt.xlsx"; Tab "Audit Pre-Inspection" to calculate audit rate: sum of column "E" filter for "PIA" divided by sum of column "E" filtered for "PI". To calculate audit pass rate: sum of column "G" filtered for "1" and divided by sum of "E" filtered for "PIA"
[92] "VM Activities Auidt.xlsx"; Tab "Audit CPB" filtered column "B" for 2020. To calculate audit rate: sum of column "D" filtered for "CPBA" divided by sum of column "D" filter for "CPB". To calculate audit pass rate: sum of column "I" filtered for "1" and divided by sum of "D" filtered for "CPBA"
[93] "VM Activities Auidt.xlsx"; Tab "Audit MPB" filtered column "B" for 2020. To calculate audit rate: sum of column "D" filtered for "MPBA" divided by sum of column "D" filtered for "MPB". To calculate audit pass rate: sum of column "I" filtered for "1" and divided by sum of "D" filtered for "MPBA"

with the Fire Science & Climate Adaptation Department in the refinement and application of the Vegetation Risk Index."[94] To evaluate compliance with this statement, Energy Safety reviewed SDG&E's response to DR-062, which states that, "SDG&E hired four (4) new internal Patroller employees in December 2020 to assist in the off-cycle HFTD patrols."[95] SDG&E provided the Vegetation Risk Index (VRI) which provides support to SDG&E staff in determining the risk of vegetation-related outages along a given distribution circuit segment.[96]Following the evaluation of SDG&E's response stating additional internal inspectors were hired within the vegetation management program, Energy Safety finds that SDG&E was able to provide information consistent with the above statement made in its 2020 WMP for this initiative.

5.2.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.2

Based on the analysis above, Energy Safety finds SDG&E compliant with its 2020 WMP initiative 5.3.5.2: Detailed Inspections of Vegetation Around Distribution Infrastructure-Tree Trimming.

5.3 Initiative 5.3.5.3 Detailed Inspection of Vegetation Around Transmission Infrastructure

The purpose of this initiative is to describe the utility's visual inspections of tree conditions within the utility's distribution right-of-way.[97]

5.3.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

SDG&E's 2020 WMP, initiative 5.3.5.3: Detailed inspection of vegetation around transmission infrastructure, directs readers to initiatives 5.3.5.2.[98] Therefore, Energy Safety did not conduct a separate analysis for compliance with this initiative.

5.3.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.3

See Energy Safety's determination for initiative 5.3.5.2.

[94] 2020 WMP, page 119
[95] Energy Safety_DR-062, response to question 14
[96] DR-62_question_20
[97] 2020 WMP guidelines, R.18-10-007, page 78
[98] 2020 WMP, page 119

5.4 Initiative 5.3.5.4 Emergency Response Vegetation Management

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.[99]

5.4.1 2020 WMP initiative Statements, Supporting Information, and Analysis

SDG&E's 2020 WMP, initiative 5.3.5.4: Emergency response vegetation management, directs readers to initiative 5.3.5.9.[100] Therefore, Energy Safety did not conduct a separate analysis for compliance with this initiative.

5.4.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.4

See Energy Safety's determination for initiative 5.3.5.9.

5.5 Initiative 5.3.5.5 Fuels Management

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."[101]

5.5.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

In its 2020 WMP, SDG&E states, "accordingly, SDG&E (in partnership with fire departments, fire safe councils, and other stakeholders) is implementing a comprehensive fuels management program to reduce wildfire fuel accumulations."[102] SDG&E continues, "Prior to the 2020 wildfire season and before 2021, SDG&E will continue to expand upon the work that was completed in 2019 to develop additional relationships and collaboration efforts in the fuel management community."[103] Energy Safety reviewed SDG&E's response to DR-062, which provided a copy of the memorandum of understanding (MOU) between the Fire Safe Council of San Diego County (FSCSDCC) and SDG&E. The program is intended to remove, thin or treat vegetation along

[99] 2020 WMP guidelines, R.18-10-007, page 78
[100] 2020 WMP, page 119
[101] 2020 WMP guidelines, R.18-10-007, page 78
[102] 2020 WMP, page 119
[103] 2020 WMP, page 120

SDG&E right of way. The MOU list all parties involved in facilitating and implementing community-based fuels management programs and projects for public safety. The MOU further distinguishes responsibilities for both parties, and how the program is funded in performing hazard fuel management within and adjacent to SDG&E easement right-of-way locations in San Diego.[104] Following the evaluation of the MOU, Energy Safety finds that SDG&E provided information consistent with the above statements made in its 2020 WMP for this initiative.

5.5.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.5

Based on the analysis above, Energy Safety finds SDG&E compliant with its 2020 WMP initiative 5.3.5.5: Fuels Management.

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."[105]

5.6.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

SDG&E's 2020 WMP, initiative 5.3.5.6: Improvement of inspections, directs readers to initiative 5.3.5.9.[106] 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 initiative 5.3.5.9.

5.7 Initiative 5.3.5.7: LiDAR Inspections of Vegetation Around Distribution Infrastructure and Vegetation Management Technology

The purpose of this initiative is to describe the utility's Light Detection and Ranging (LiDAR) distribution right of way inspection program.[107]

[104] DR-062_Question_15 & 16
[105] 2020 WMP guidelines, R.18-10-007, page 79
[106] 2020 WMP, page 120
[107] 2020 WMP guidelines, R.18-10-007, page 79

5.7.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

In its 2020 WMP, SDG&E states, "SDG&E periodically utilizes LiDAR as a tool in its vegetation management operations."[108] SDG&E continues, "SDG&E is researching future use of LiDAR to identify change detection on trees, to serve as an audit tool, and to identify pole movement and equipment condition, although this technology is still in the early phases of development."[109] To assess SDG&E's compliance with these statements, Energy Safety reviewed the response to DR-062, which states, "LiDAR was flown for vegetation management on distribution circuit 214 on July 16, 2020, between 10:38 am-12:00 pm."[110] In a subsequent data request, SDG&E stated it had conducted LiDAR inspections on approximately 585[111] miles. SDG&E also completed the development and implementation of an enterprise LiDAR platform for upload, storage, and download of LiDAR data in Q1 of 2021. Following the evaluation of SDG&E's response stating LiDAR was flown, Energy Safety finds SDG&E provided information consistent with the above statements made in its 2020 WMP for this initiative.

SDG&E continues, "SDG&E has in recent years implemented the use of Tree Growth Regulators (TGR), which is a chemical application that dramatically reduces the new shoot growth of trees."[112] To assess compliance with this statement, Energy Safety reviewed SDG&E's response to DR-062 and DR-085, in which SDG&E provided an example of its TGR use. SDG&E stated, "TGR was applied to asset (eucalyptus tree) ID AD5069 on October 12, 2020, at 4:07 pm using the product, ArborLock 2SC with the active ingredient Paclobutrazol."[113] In total, SDG&E applied TGR to 3,453 trees in 2020.[114] Following the evaluation of SDG&E's response detailing a sample TGR use case and total TR applications in 2020, Energy Safety finds that SDG&E provided information consistent with its statement made in its 2020 WMP for this initiative.

SDG&E concludes, "SDG&E is utilizing the information from its tree inventory database, outage history, and meteorology data to develop its VRI [vegetation risk index] of the highest tree risk areas of its service territory."[115] Energy Safety reviewed SDG&E's response to DR-062, which provided the vegetation risk index equation that is used to "determine the risk of vegetation-related outages along a given distribution circuit segment during wind events based on the number of trees, species of trees, height of the trees, and outage history along that given circuit

[108] 2020 WMP, page 121
[109] 2020 WMP, page 121
[110] Energy Safety_DR-062, response to question 17
[111] Energy Safety DR-104, response to question 1
[112] 2020 WMP, page 121
[113] Energy Safety DR-062, response to question 19
[114] Energy Safety DR-085, response to question 2
[115] 2020 WMP, page 121

segment."[116] Following the evaluation of SDG&E's response showing information from its tree inventory, outage, and meteorology databases are used in calculating its vegetation risk index, Energy Safety finds SDG&E provided information consistent with its statement made in its 2020 WMP for this initiative.

5.7.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.7

Based on the analysis above, Energy Safety finds SDG&E compliant with its 2020 WMP initiative 5.3.5.7: LiDAR inspections of vegetation around distribution infrastructure and vegetation management technology.

5.8 Initiative 5.3.5.8 LiDAR Inspections of Vegetation Around Transmission Infrastructure

The purpose of this initiative is to describe the utility's LiDAR transmission right-of-way inspection program.[117]

5.8.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

SDG&E's 2020 WMP, initiative 5.3.5.8: LiDAR inspections of vegetation around transmission infrastructure and vegetation management technology, directs readers to initiative 5.3.5.7[118] Therefore, Energy Safety did not conduct a separate analysis for compliance with this initiative.

5.8.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.8

See Energy Safety's determination for initiative 5.3.5.7.

5.9 Initiative 5.3.5.9 Other Discretionary Inspections of Vegetation Around Distribution Infrastructure-Enhance Inspection, Patrols, and Trims

[116] Energy Safety_DR-062, response to question 20
[117] 2020 WMP guidelines, R.18-10-007, page 79
[118] 2020 WMP, page 122

The purpose of this initiative is to describe the utility's inspection program of the distribution rights-of-way and the adjacent vegetation that may be hazardous and goes beyond the minimum standards in rules and regulations.[119]

5.9.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

In its 2020 WMP, SDG&E states, "SDG&E proposed that, during the annually scheduled routine inspections, the pre-inspection scope for all VMAs would be increased to include trees within the strike zone of transmission and distribution electric facilities. Trees tall enough to strike overhead electric lines will be assessed for hazardous conditions, and tree crown height will be reduced or removed to prevent a line strike from either whole tree failure or limb break out."[120] SDG&E continues, "This same scope and criteria will be applied during off-cycle tree patrols of all VMAs within SDG&E's service territory."[121] Energy Safety reviewed SDG&E's internal document "Pre-Inspection Procedures," which defines Reliability Trees as a "tree that poses a potential danger or threat to overhead electrical facilities due to poor health, structural deficiency, and/or site-specific conditions."[122] Energy Safety also reviewed SDG&E's "Off Cycle HFTD Patrol Field Procedures and Scope" which states, "[a]ll trees with strike potential to Transmission, Primary, and Secondary conductors, or trees that can impact SDG&E shall receive a level 2 inspection."[123] In response to DR-010, SDG&E provided the records of tree inspections completed in 2020. SDG&E inspected approximately 480,980 trees in its territory.[124] SDG&E also provided Excel file "*WSD_SDGE_R2.xlsx*" containing records to tree identification number, activity type, activity date, HFTD tier level, pole identification number, and species. The file showed a total of 193,220[125] trees pruned and 12,137[126] trees removed. Following the evaluation of SDG&E's response showing inspection include trees within the strike zone of electric facilities and records of the inspections. Energy Safety finds SDG&E was able to provide information consistent with its statements made in its 2020 WMP for this initiative.

SDG&E continues, "All tree operations will use the concept of directional pruning, where all branches growing towards the lines will be rolled back to direct the growth away from the lines and to increase the post-trim clearance."[127] Energy Safety reviewed SDG&E's response to DR-062, in which SDG&E provided an excerpt from its "Service Agreement" with tree contractors. The agreement states, "contractors shall perform the services in accordance with the American

[119] 2020 WMP guidelines, R.18-10-007, page 79
[120] 2020 WMP, page 122
[121] 2020 WMP, page 122
[122] Pre-Inspection Procedures, page 10
[123] Off Cycle HFTD Patrol Field Procedures and Scope
[124] "VTREEACTIVITY_PI_2020.xlsx"; sum of column BG in all tabs
[125] "WSD_SDGE_R2.xlsx"; the sum of "I" under tree pruning tab
[126] "WSD_SDGE_R2.xlsx"; the sum of "G" under removal tab
[127] 2020 WMP, page 122

National Standards Institute (ANSI) A-300 and Z133.1 standards."[128] A-300 part one outlines best practices for directional pruning. Following the evaluation of SDG&E's response showing that ANSI 300 industry tree standards are followed, Energy Safety finds that SDG&E was able to provide information consistent with the above statement made in its 2020 WMP for this initiative.

SDG&E continues, "in addition, during elevated or extreme weather events, SDG&E's vegetation management contractors are kept informed of the conditions, allowing them time to relocate crews into safe work areas."[129] To assess compliance with this statement, Energy Safety reviewed SDG&E's response to DR-062. In that response, SDG&E provided a sample email from SDG&E's Meteorology Department detailing the Fire Potential Index (FPI) for December 2, 2020. The FPI is a measure of fire weather conditions for a specific time period in a specific location, SDG&E contractors on included in the distribution list to inform them of the elevated weather conditions in its territory.[130] SDG&E's response further elaborates that, "Vegetation management contractors are included in the distribution list for [daily weather]. In addition, all contractor management receives the same information via a phone app."[131] SDG&E provided Energy Safety access to the phone application used to inform crews of weather conditions. Energy Safety reviewed the application and found it provided current information for SDG&E's territory regarding FPI, wind speed, temperature, and other weather-related information. Following the evaluation of SDG&E's response showing vegetation management contractors being kept informed of weather conditions during elevated or extreme weather events and the assessment of the mobile application, Energy Safety finds that SDG&E was able to provide information consistent with the above statement made in its 2020 WMP for this initiative.

SDG&E continues, "In advance of a forecasted RFW [red flag warning], SDG&E will determine if vegetation management patrols are warranted to reassess tree conditions in advance of, during, or immediately following red flag events."[132] Energy Safety reviewed SDG&E's response to DR-062. SDG&E provided information of vegetation inspections performed after the Valley Fire, which started in early September during RFW conditions and burned areas of Alpine and Japatul Valley. Following the red flag event, prior to service restoration activities, vegetation management was engaged to perform a hazard tree inspection to identify threats to the overhead structure to prevent trees falling into the lines..[133] SDG&E did not perform any specific patrols in advance of a forecasted RFW event in 2020 but the "pre-inspection contractor's full workforce was deployed performing routine patrols in advance and during a RFW."[134] SDG&E only performed one post-RFW patrol in 2020.[135] Following the evaluation of

[128] DR-062_Question_13
[129] 2020 WMP, page 122
[130] DR-062_Question_22
[131] Energy Safety DR-062, response to question 22
[132] 2020 WMP, page 122
[133] Energy Safety DR-062, response to question 23
[134] Energy Safety DR-104, response to question 2a&b
[135] Energy Safety DR-104, response to question 2c

SDG&E's response showing vegetation management patrol was executed following a red flag event, Energy Safety finds that SDG&E provided information consistent with the above statement made in its 2020 WMP for this initiative.

SDG&E continues, "Further, SDG&E provides electrical equipment training to CAL FIRE representatives, while CAL FIRE inspections have been jointly performed with SDG&E. This training is intended for CAL FIRE to better understand the operation of the electric system and which equipment should be targeted to best prevent an ignition source."[136] SDG&E continues, "SDG&E will work with CAL FIRE to schedule annual training and joint inspection activities. SDG&E will continue to partner and collaborate with fire agencies and stakeholders on fire avoidance and fuel reduction initiatives."[137] Energy Safety reviewed SDG&E's response to DR-062. SDG&E provided an email sent in June of 2020, which was an invitation to CAL FIRE pertaining to Public Resource Code (PRC) 4292 and 4293 training and to perform joint inspections.[138] SDG&E did not receive a response, and the training was canceled due to COVID-19 restrictions and lack of availability by CAL FIRE.[139] SDG&E stated that training was provided to CAL FIRE personnel on August 2019, discussing electrical safety awareness and PRC 4292.[140] Following the evaluation of SDG&E's response, showing SDG&E made an effort to initiate the joint training and inspections with CAL FIRE. Energy Safety finds that SDG&E provided information consistent with the above statements made in its 2020 WMP for this initiative.

SDG&E continues, "SDG&E conducts QA/QC audits on a random sample population of all work completed by our contractors to assess work quality and contractual adherence."[141] SDG&E also states, "SDG&E will perform post-trim audits on all completed tree trim activities conducted during the off-cycle activities."[142] Energy Safety reviewed SDG&E's response to DR-036. SDG&E provided two Excel files, "*Reliability Trim_Removal Audit.xlsx*" and "*VM Activities Audit.xlsx*." The former detailed audit information pertaining to reliability trimming and completed removals performed within HFTD. The latter contained audit results for SDG&E other programs in HFTD and Non-HFTD: other (routine) trimming or removals, Vegetation Pre-Inspection, Chemical Pole Brush, and Mechanical Pole Brush. All Excel files included audit date, results of the audit, and HFTD tier location. SDG&E audit rate, which is the amount (as a percentage) of the total completed off-cycle activities that were audited, was 90% with a pass rate of 93% for its off-cycle activities.[143] SDG&E stated in the response, "SDG&E endeavors to achieve a 100% audit on all completed reliability trimming and removals within HFTD where possible."[144] SDG&E provided several reasons why the data did not reflect a 100% audit rate. "If

[136] 2020 WMP, page 122
[137] 2020 WMP, page 124
[138] DR-062_Question_24
[139] Energy Safety DR-062, response to question 24
[140] Energy Safety DR-062, response to question 24
[141] 2020 WMP, page 123
[142] 2020 WMP, page 123
[143] SDG&E response to DR-036, question 1(b)
[144] SDG&E response to DR-036, question 1(a)

a reliability condition code is changed from reliability to non-reliability before the audit work order was created, this tree will not be picked up by the reliability audit work order. Additionally, in some instances, an audit activity may not have occurred for a particular tree because the auditor was unable to access a tree or property, or a tree is located outside the HFTD."[145] Energy Safety held a clarifying call with SDG&E on March 1, 2022 to discuss the meaning of "reliability trimming and removals" within HFTD with respect to the statement made in the 2020 WMP. On the call, SDG&E clarified that audits of "reliability trimming and removal," provided in the Excel file "*Reliability Trim_Removal.xlsx,*" were synonymous with the "off-cycle activities" audits.[146] Following the evaluation of SDG&E's response showing QC work done for all activities, Energy Safety finds SDG&E provided information consistent with the above statement made in its 2020 WMP for this initiative.

In its 2020 WMP, SDG&E states, "SDG&E is planning to create internal SDG&E inspector positions to augment the contractor workforce to perform the off-cycle HFTD and additional patrol activities for target species, such as Century plant and bamboo."[147] In response to DR-062, SDG&E stated, "SDG&E hired four new internal Patroller employees in December 2020 to assist in the off-cycle HFTD patrols." Following the evaluation of SDG&E's response stating that four new additional staff were hired, Energy Safety finds that SDG&E provided information consistent with the above statement made in its 2020 WMP for this initiative.

In its 2020 WMP, SDG&E states, "Prior to 2021, SDG&E will expand its wildfire mitigation activities with a fuels modification activity which will include the thinning and removal of non-native, flammable vegetation around structures to reduce the risk of ignition due to electrical facilities."[148] In response to DR-062, Energy Safety reviewed information of a sample pole that received fuels modification with the removal of non-native, flammable vegetation. SDG&E cleared vegetation around pole P198389, which was completed in October 2020.[149] In 2020, SDG&E completed fuels modification activities on 614 poles.[150] Following the evaluation of SDG&E's response and reviewing a sample pole that received fuels modification activity and details of all poles treated as such, Energy Safety finds that SDG&E provided information consistent with the above statement made in its 2020 WMP for this initiative.

5.9.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.9

Based on the analysis above, Energy Safety finds SDG&E compliant with its 2020 WMP initiative 5.3.5.9: Other discretionary inspection of vegetation around distribution infrastructure-Enhanced inspections, patrols, and trims.

[145] SDG&E response to DR-036, question 1(a)
[146] Energy Safety and SDG&E bi-weekly meeting held on March 1, 2022
[147] 2020 WMP, page 123
[148] 2020 WMP, page 124
[149] Energy Safety DR-062, response to question 28
[150] Energy Safety DR-085, response to question 3

5.10 Initiative 5.3.5.10 Other Discretionary Inspections of Vegetation Around Transmission Infrastructure

The purpose of this initiative is to describe the utility's inspection program of the transmission rights-of-way and the adjacent vegetation that may be hazardous and goes beyond the minimum standards in rules and regulations.[151]

5.10.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

SDG&E's 2020 WMP, initiative 5.3.5.10: Other discretionary inspections of vegetation around transmission infrastructure directs readers to initiative 5.3.5.9.[152] 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 5.3.5.9

See Energy Safety's determination for initiative 5.3.5.9.

5.11 Initiative 5.3.5.11 Patrol Inspections of Vegetation Around Distribution Infrastructure

The purpose of this initiative is to describe the utility's distribution right-of-way inspection program to identify "obvious [vegetation] hazards."[153]

5.11.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

SDG&E's 2020 WMP, initiative 5.3.5.11: Patrol inspections of vegetation around distribution infrastructure, directs readers to initiative 5.3.5.2.[154] Therefore, Energy Safety did not conduct a separate analysis for compliance with this initiative.

[151] 2020 WMP guidelines, R.18-10-007, page 79
[152] 2020 WMP, page 124
[153] 2020 WMP guidelines, R.18-10-007 page 79
[154] 2020 WMP, page 124

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.

5.12 Initiative 5.3.5.12 Patrol Inspections of Vegetation Around Transmission Infrastructure

The purpose of this initiative is to describe the utility's transmission right-of-way inspection program to identify "obvious [vegetation] hazards."[155]

5.12.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

SDG&E's 2020 WMP, initiative 5.3.5.12: Patrol inspections of vegetation around transmission infrastructure, directs readers to initiative 5.3.5.2.[156] 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 5.3.5.2.

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."[157]

5.13.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

In its 2020 WMP, SDG&E states, "SDG&E utilizes a third-party contractor to perform quality assurance audits of all its vegetation management activities. These audits include a statistical analysis of a representative sampling of all completed work. A minimum random sampling of

[155] 2020 WMP guidelines, R.18-10-007, page 79
[156] 2020 WMP, page 124
[157] 2020 WMP guidelines, R.18-10-007 page 79

10% is audited to determine compliance with scoping requirements."[158] SDG&E continues, "SDG&E works with the audit contractor to determine the scope, frequency, and number of resources needed to complete all audit activities."[159] Energy Safety reviewed SDG&E's response to DR-062, in which SDG&E provided an excerpt from its "Vegetation Management Audit Procedures" outlining the audit sampling criteria for pre-inspection and tree trim activities. SDG&E utilizes its PowerWorkz System as the primary application to generate audit samples. SDG&E applies a variety statistical principles to complete its vegetation management audits, which aid audit contractors in determining the scope, frequency, and number of resources needed to complete all audit activities.[160] In response to DR-102, SDG&E provided sample audit reports conducted by a third-party for each of SDG&E's vegetation management activities. The sample audit reports evaluate completed SDG&E vegetation management activities, including pre-inspection, tree trimming, and pole brushing. The sample reports contained information such as audit date, Pole ID, line clearances of vegetation from conductors, auditor, original work order date, and pass/fail result. Following the evaluation of SDG&E's response showing SDG&E utilizes a third-party contractor who determines the minimum 10% random sampling size, Energy Safety finds that SDG&E provided information consistent with its statements made in its 2020 WMP for this initiative.

In its 2020 WMP, SDG&E states, "During the post-prune audit, the Certified Arborist also performs an inspection of all the power lines within the VMA for any trees that will not remain compliant with applicable regulatory requirements for the duration of the annual cycle."[161] Energy Safety reviewed SDG&E's internal document "Pre-Inspection Procedure" and its response to data requests pertaining to post-prune audit. SDG&E provided its master schedule for 2020, which lists all VMAs and the start date of the off-cycle patrol, which is conducted simultaneously with the post prune audit, for each of SDG&Es VMAs. Energy Safety also reviewed the Excel file "*Off Cycle Patrol.xlsx,*" which provided the list of VMAs within HFTD areas, along with the name of the auditor who conducted the audit within that specific VMA.[162] Additional information included the start and completion months of post trim audits along with the completion status. All VMAs within HFTD areas were audited in 2020.[163] After cross-referencing the start and completion months of post-trim audits with SDG&E's master schedule for 2020, Energy Safety found that the execution of post-trim audits aligned with SDG&E's master schedule and performed inspections in 107 VMA within HFTD. Following the evaluation of SDG&E's response showing certified arborists perform inspections during the post-prune audit, Energy Safety finds SDG&E provided information consistent with its statement made in its 2020 WMP for this initiative.

[158] 2020 WMP, page 124
[159] 2020 WMP, page 124
[160] Energy Safety DR-062, response to question 29
[161] 2020 WMP, page 124
[162] Off-Cycle Patrols. Xlsx; column VMA and column Auditor
[163] Off-Cycle Patrols. Xlsx; column "D" complete

In its 2020 WMP, SDG&E states, "SDG&E performs an annual, internal audit of its vegetation management program through its Internal Audit Services Department."[164] SDG&E continues, "[b]efore an annual update, SDG&E anticipates completion of 100% audit on all its enhanced HFTD trim and removal activities."[165] Energy Safety reviewed SDG&E's response to DR-036, in which SDG&E provided two Excel files, "*Reliability Trim_Removal Audit.xlsx" and "VM Activities Audit.xlsx*." The former provided audits conducted in the HFTD pertaining to reliability trimming and completed removals performed within HFTD. The latter contained audit results for SDG&E's other initiative activities for both HFTD and Non-HFTD: other (routine) trimming or removals, Vegetation Pre-Inspection, Chemical Pole Brush, Mechanical Pole Brush. All Excel files included audit date, results of the audit, and Tier location. SDG&E provided the audit rates and pass rates in a table.[166] Energy Safety was able to validate both the audit rate and audit pass rate for all programs in Table 5 below.

Table 5- Vegetation Management Activity audit

Vegetation Management Activities	Audit Rate	Audit Pass Rate
Reliability Trimming or Removal in HFTD[167]	90%	93%
Other Trimming or Removals (HFTD and Non-HFTD)[168]	21%	99%
Vegetation Pre-Inspection (HFTD and Non-HFTD)[169]	14%	94%
Chemical Pole Brush (HFTD and Non-HFTD)[170]	34%	99%
Mechanical Pole Brush (HFTD and Non-HFTD)[171]	22%	99%

SDG&E planned to audit all of its enhanced trims and removals in HFTD areas but only completed a 90% audit rate. SDG&E stated, "[it] endeavors to achieve a 100%...there are several reasons why the data may not reflect a 100% completion rate. For instance, if a reliability condition code is changed from reliability to non-reliability before the audit work

[164] 2020 WMP, page 124
[165] 2020 WMP, page 124
[166] SDG&E response to DR-036, question 1(b)
[167] "Reliability Trim_Removal Audit.xlsx"; filter column "A" for 2020. Step 1 sum of E filter for "TTA" divided by Sum of E filter for "TT" and "TRM". Step 2 Sum of column "F" filter for "1" and divided by sum of E filter for "TTA"
[168] "VM Activities Auidt.xlsx"; Tab Audit Other Veg Activites filter column "B" for 2020. Step 1 sum of column E filter for "TTA" divided by Sum of column E filter for "TT" and "TRM". Step 2 Sum of column "G" filter for "1" and divided by sum of column E filter for "TTA"
[169] "VM Activities Auidt.xlsx"; Tab Audit Pre-Inspection. Step 1 sum of column E filter for "PIA" divided by Sum of column E filter for "PI". Step 2 Sum of column "G" filter for "1" and divided by sum of E filter for "PIA"
[170] "VM Activities Auidt.xlsx"; Tab Audit CPB filter column "B" for 2020. Step 1 sum of column D filter for "CPBA" divided by Sum of column D filter for "CPB". Step 2 Sum of column "I" filter for "1" and divided by sum of D filter for "CPBA"
[171] "VM Activities Auidt.xlsx"; Tab Audit MPB filter column "B" for 2020. Step 1 sum of column D filter for "MPBA" divided by Sum of column D filter for "MPB". Step 2 Sum of column "I" filter for "1" and divided by sum of D filter for "MPBA"

order was created, this tree will not be picked up by the reliability audit work order. Additionally, in some instances, an audit activity may not have occurred for a particular tree because the auditor was unable to access a tree or property or a tree is located outside the HFTD."[172] Following the evaluation of SDG&E response showing audit rates and pass rates of SDG&E vegetation activities, Energy Safety finds SDG&E provided information consistent with its statements made in its 2020 WMP for this initiative.

SDG&E concludes, "Before the upcoming 2020 wildfire season, SDG&E's audit contractor will hire additional personnel to perform an anticipated increase in audit scope and activities."[173] Energy Safety reviewed SDG&E's response in DR-062. SDG&E stated, "In late 2019, SDG&E's audit contractor, Environmental Services, Inc., added one (1) Lead position and five (5) Auditor positions for a total of four (4) and twenty (20) staff positions respectfully."[174] Following the evaluation of SDG&E's response stating additional staff added, Energy Safety finds SDG&E provided information consistent with its statement made in its 2020 WMP for this initiative.

5.13.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.13

Based on the analysis above, Energy Safety finds SDG&E compliant with its 2020 WMP initiative 5.3.5.13: Quality Assurance/Quality Control of Inspection.

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 "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."[175]

5.14.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

In its 2020 WMP, SDG&E states, "SDG&E does require all its contractors to perform annual training to include hazard tree assessments, customer engagement, fire preparedness, and environmental regulations."[176] SDG&E further states, "SDG&E provides training to contractors

[172] OEIS-SDGE-DR-036, response to question 1
[173] 2020 WMP, page 124
[174] Energy Safety_DR-062, response to question 30
[175] 2020 WMP guidelines, R.18-10-007, page 79
[176] 2020 WMP, page 125

where scoping activities are changed or modified."[177] SDG&E continues, "SDG&E also provides training to contract leadership. SDG&E documents procedural changes."[178] SDG&E concludes, "SDG&E personnel attend and participate in contractor-led training modules."[179] Energy Safety reviewed SDG&E's response to DR-062, in which SDG&E stated, "In 2020, most contractor training sessions were virtual (on-line) or restricted due to indoor space limitation due to Covid protocols."[180] SDG&E provided a sign-in sheet that provided the name and signatures of participants in training related to customer service, environmental regulation, and hazard tree annual training in October 2020.[181] Along with the sign-in sheet, SDG&E provided the Environmentally Sensitive Area training material used.[182] SDG&E also held a virtual meeting in June 2020 with Davey Resource Group to review the "HFTD scope of work which included changes for the upcoming cycle."[183] SDG&E stated in response to DR-085, "Each of the four vegetation management contractors conducted each of the training modules once in 2020 [and] the total number of individuals that received this training was 1,333."[184] In response to DR-102, SDG&E provided fire preparedness training material used to train approximately 400 contractors in 2020.[185] Following the evaluation of SDG&E's sample materials documenting annual training with contractors and reviewing the training materials, Energy Safety finds SDG&E provided information consistent with the above statements made in its 2020 WMP for this initiative.

SDG&E continues, "All contractors are required to have personal protective equipment (PPE), including all applicable fire PPE on their vehicles at all times, and be trained in the safe and proper use of the equipment. SDG&E also requires tree contractors to have fire PPE staged at each job site and at the ready for use. SDG&E contractors must be enrolled in the ISNetworld safety clearinghouse that scores and tracks contractor safety performance. Contractors must also meet minimum safety thresholds to remain a viable vendor and work for SDG&E."[186] To assess compliance with this statement, Energy Safety reviewed SDG&E's response to DR-070. SDG&E provided a copy of its "Contractor Safety Manual," which stipulates, "[t]he Contractor shall provide all required Personal Protective Equipment (PPE), safety equipment, and supplies, and shall ensure their employees are trained and properly use PPE."[187] SDG&E also provided its operations and maintenance wildland fire prevention plan which states "contractors and consultants in their understanding of fire prevention and to improve their ability to prevent the start of any fire [and] set standards for fire tools and equipment to be

[177] 2020 WMP, page 125
[178] 2020 WMP, page 125
[179] 2020 WMP, page 125
[180] Energy Safety DR-062, response to question 31
[181] DR-062_Question_31a
[182] DR-062_Quesiton_32b
[183] Energy Safety DR-062, response to question 32
[184] Energy Safety DR-085, response to question 4
[185] Energy Safety DR-102, response to question 5
[186] 2020 WMP, page 125
[187] Contractor Safety Manual, page 20

present in vehicles and at work sites."[188] SDG&E also provided a sample safety scorecard for one of its tree trim contractor from ISNetWorld safety clearinghouse. The scorecard time frame covers September 2020 through March 2021. The trim tree contractor score is based on components that are evaluated by the clearinghouse.[189] Following the evaluation of SDG&E's response showing protocols in place for contractors to always have PPE and contractors enrolled in the ISNetworld safety clearing house. Energy Safety finds SDG&E provided information consistent with its statements made in its 2020 WMP for this initiative.

SDG&E continues, "SDG&E requires its contractors to document employee training and to provide it to SDG&E upon request."[190] Energy Safety reviewed SDG&E's response to DR-070, which provided information detailing training conducted by an SDG&E contactor for its internal field personnel in October of 2020. The training covered customer service, environmental regulations, and hazard tree inspection. SDG&E provided the sign-in sheet listing those who participated in the training. Following the evaluation of SDG&E's response showing contractors document employee training, Energy Safety finds SDG&E provided information consistent with its statement made in its 2020 WMP for this initiative.

SDG&E concludes, "SDG&E's Safety Department supports Vegetation Management by utilizing a third-party vendor to perform field safety observations."[191] To assess compliance with this statement, Energy Safety reviewed SDG&E's response to DR-070 and DR-085. SDG&E has two third-party vendors that perform safety observations. SDG&E provided a Safety Job Observation summary for Energy Safety review. This Safety Job Observation summary detailed observations of a tree trimming crew made in June 2020. The crew's safety was assessed relative to PPE equipment, tools and equipment, and safety compliance. In 2020, a total of 32,512 field safety observations were conducted.[192] Following the evaluation of SDG&E's response showing safety observations are performed by a third-party vendor, Energy Safety finds that SDG&E provided information consistent with its statement made in its 2020 WMP for this initiative.

5.14.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.14

Based on the analysis above, Energy Safety finds SDG&E compliant with its 2020 WMP initiative 5.3.5.14: Recruiting and Training of Vegetation Management Personnel.

5.15 Initiative 5.3.5.15 Remediation of At-Risk Species

[188] Operations and maintenance wildland fire prevention plan, page 1
[189] Energy Safety DR-070, response to question 4
[190] 2020 WMP, page 125
[191] 2020 WMP, page 125
[192] Energy Safety DR-085, response to question 5

The purpose of this initiative is to describe the utility's "action to reduce ignition probability and wildfire consequences attributable to at-risk vegetation species…."[193]

5.15.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

SDG&E's 2020 WMP, initiative 5.3.5.15: Remediation of At-Risk Species, directs readers to initiatives 5.3.5.2 and 5.3.5.9.[194] Therefore, Energy Safety did not conduct a separate analysis for compliance with this initiative.

5.15.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.15

See Energy Safety's determination for initiatives 5.3.5.2 and 5.3.5.9.

5.16 Initiative 5.3.5.16 Removal and Remediation of Trees with Strike Potential to Electric Infrastructure-Hazard Tree Removal and Right Tree-Right Place

The purpose of this initiative is to describe the utility's "actions to remediate trees that could potentially strike electrical equipment if failure at the ground-level of the tree or branch breakout within the canopy."[195]

5.16.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

In its 2020 WMP, SDG&E states, "SDG&E has a robust tree removal program that targets problematic species such as eucalyptus and palms."[196] SDG&E continues, "SDG&E performs additional off-cycle patrols of select species (such as bamboo and Century plants) that have fast and unpredictable growth rates and are difficult to manage near power lines."[197] Energy Safety reviewed SDG&E's "Pre-Inspector Procedure", which provides an overview of pre-inspections and enhanced pre-inspection activities, vegetation clearance requirements, the pre-inspection process for problematic species like palms, century plants, and vines, and customer engagement. The procedure list basic tree characteristics which assist inspectors in identifying a

[193] 2020 WMP guidelines, R.18-10-007, page 79
[194] 2020 WMP, page 125
[195] 2020 WMP guidelines, R.18-10-007, page 79
[196] 2020 WMP, page 125
[197] 2020 WMP, page 126

hazard tree, including, but not limited to, evidence of disease, lean, included bark, root lifting, and leaf discoloration. The procedure then details how the inspector should pursue removal.[198] As a sample of this process, Energy Safety reviewed inspection reports for a Eucalyptus tree and Palm tree. The reports contained information about the tree's location, diameter at breast height, work order for removal, pole identification, and date of removal.[199] SDG&E removed approximately 4,172[200] Eucalyptus trees and 4,735[201] palms trees in its service territory. Energy Safety also reviewed SDG&E internal documents "Bamboo Project Procedures 2020" and "2020 Century Plant Patrol Procedures". The "Bamboo Project Procedures 2020" outlines the inspection timeline and reporting for Bamboo species. Inspection of Bamboo consist of two patrols carried out; the first patrol identifies actively growing bamboo while the second patrol identifies new growth or regrowth.[202] The "2020 Century Plant Patrol Procedures" outlines the time of inspections and work orders for tree crews for pruning and removal.[203] SDG&E provided two pre-inspection reports for Bamboo and Century plants. The reports contained information about the date of inspection, name of the inspector, clearance distance from conductors, tree height, pole identification number, and prune date (if needed).[204] SDG&E inspected approximately 6,945 bamboo and 31,237 Century plants in 2020.[205] Following the evaluation of SDG&E's internal document showing tree removal for problematic species and sample inspection reports, Energy Safety finds SDG&E provided information consistent with the above statement made in its 2020 WMP for this initiative.

SDGE continues, "SDG&E follows the industry-established 'Right Tree-Right Place' program to assist customers in the selection of compatible tree species with the goal of minimizing interference with electrical infrastructure and maximizing energy savings and environmental benefits."[206] Energy Safety reviewed SDG&E's response to DR-062, which provided a link to a flyer discussing the "Right Tree-Right Place" program. The flyer provides customers information about trees species that are compatible with powerlines (i.e., will not interfere with powerlines at their mature height). Five compatible tree species are provided, along with tree characteristics for each one and an associated photograph. The flyer illustrates three zones that define the maximum allowable tree height based on the proximity to powerlines. The 'small zone' recommends planting of trees no taller than 25 feet at maturity. The 'medium zone' recommends planting of trees no taller than 40 feet at maturity, and the 'tall zone' identifies the areas where trees taller than 40 feet at maturity can be planted.[207] Following the evaluation of SDG&E's response and information provided to customers to aid in determining the appropriate types of trees to plant relative to their proximity to powerlines, Energy Safety finds

[198] Pre-Inspection Procedure
[199] Energy Safety DR-102, response to question 6 and 7
[200] "WSD_SDGE_R2.xlsx"; filter J Species for Eucalyptus
[201] Energy Safety DR-102; response to question 7
[202] Bamboo Project Procedure 2020
[203] 2020 Century Plant Patrol Procedure
[204] "OEIS_SDGE_22-012_Q3_Q4_Q6_Q7_Q8_Q9.xlsx"
[205] Energy Safety DR-102; response to question 8
[206] 2020 WMP, page 125
[207] https://www.sdge.com/sites/default/files/FINAL_S1870096_VegMgmtBro.pdf

SDG&E provided information consistent with its statement made in its 2020 WMP for this initiative.

SDG&E continues, "SDG&E also offers free tree replacements if an existing tree cannot be maintained safely near power lines."[208] In SDG&E's response to DR-062 and DR-085, SDG&E provided a sample address where two Mexican fan palms were removed and replaced with two fifteen-gallon Hong Kong orchids in August of 2020.[209] In total, SDG&E replaced 2,415 trees under this program in 2020.[210] Following the evaluation of SDG&E's response stating that tree replacements were provided, Energy Safety finds SDG&E provided information consistent with its statement made in its 2020 WMP for this initiative.

SDG&E continues, "SDG&E conducts a thorough investigation of all tree-related outages and maintains an investigation database to track and record the events."[211] To assess compliance with this statement, Energy Safety reviewed SDG&E's response to DR-070. SDG&E records outage investigation data in an application called Epoch, and stores outage investigation and all tree activity data in a database called PRO_PWZ_VMS2_61.[212] SDG&E has submitted data in accordance with Energy Safety's "Geographic Information System (GIS) Data Reporting Requirements and Schema for California Electrical Corporations." One aspect of these submissions requires utilities to report data related to transmission and distribution outages caused by vegetation.[213] Following the evaluation of SDG&E's response and review of SDG&E's GIS data submissions to Energy Safety showing that tree-related outage information is recorded and submitted, Energy Safety finds SDG&E provided information consistent with its statement made in its 2020 WMP for this initiative.

In its 2020 WMP, SDG&E states, "All hazard trees are assessed for risk and prioritized based on severity of condition and activity schedule."[214] SDG&E continues, "SDG&E's hazard tree removal program is integrated within the routine inspection cycle and its enhanced patrols."[215] SDG&E further states, "Certified Arborists trained in hazard tree evaluation perform these inspections."[216] SDG&E continues, "SDG&E will continue in its approach to hazard tree assessment with multiple, annual inspections within the HFTD."[217] Energy Safety reviewed SDG&E's "Hazard Tree Inspection Protocol" and "HFTD Scope of Work". The protocol stipulates a 360-degree inspection is done to identify defects on each tree. A list of potential defects is presented in the "HFTD Scope of Work" for the arborist to assess. This includes, but is not limited to, any readily visible hazardous branch(es) such as those striking the conductors, and

[208] 2020 WMP, page 126
[209] Energy Safety DR-062, response to question 35
[210] Energy Safety DR-085, response to question 6
[211] 2020 WMP, page, 126
[212] Energy Safety DR-070, response to question 8
[213] WSD GIS Data Reporting Requirements, page 46
[214] 2020 WMP, page 126
[215] 2020 WMP, page 126
[216] 2020 WMP, page 126
[217] 2020 WMP, page 127

trees that lean towards the lines.[218] SDG&E issues memos for vegetation that requires priority pruning in advance of the routine tree-trim timeframe.[219] Memos are classified as either same day/next day or group based on work prioritization. Trees that present an imminent threat of striking SDG&E facilities are classified as same day/next day.[220] Per SDG&E internal procedures, "SDG&E performs two pre-inspection activities annually within the HFTD."[221] The first inspection is performed by contracted resources, while the second is performed only in HFTD and conducted by SDG&E personnel.[222] SDG&E provided a sample off-cycle hazard tree inspection report conducted by an SDG&E certified arborist. The report contained information containing the tree location, tree species characteristics, and mitigation prescription.[223] SDG&E conducted 15,163 such hazard tree evaluations in 2020.[224] Following the evaluation of SDG&E's internal documents showing SDG&E has a detailed hazard tree program that entails inspection twice annually and which is performed by ISA personnel, and a sample inspection report. Energy Safety finds SDG&E provided information consistent with its statements made in its 2020 WMP for this initiative.

In its 2020 WMP, SDG&E states, "[i]n addition, the tree trim contractors receive hazard tree training and perform a safety assessment before working on any tree to identify potential defects."[225] SDG&E continues, "Contractors conduct annual hazard tree training for all field personnel."[226] To assess compliance with these statements, Energy Safety reviewed SDG&E's response to multiple data request pertaining to training and safety. In DR-062 SDG&E states, "[i]n 2020, most contractor training sessions were virtual (on-line) or restricted due to indoor space limitation due to Covid protocols."[227] SDG&E provided a sign-in sheet that included the name and signatures of those who participated in hazard tree annual training in October 2020.[228] Following the evaluation of SDG&E's response showing that hazard tree training was provided, Energy Safety finds SDG&E provided information consistent with its statement made in its 2020 WMP for this initiative.

In its 2020 WMP, SDG&E states, "SDG&E will develop a customer survey initiative to assess the overall success of its tree replacement program."[229] SDG&E continues, "SDG&E will enhance its tree replacement program with more direct and specialized customer involvement including online selection of species and by improving the timelines of tree replacements."[230] SDG&E

[218] HFTD Scope of Work
[219] Pre-Inspection Procedures, page 8
[220] Pre-Inspection Procedures, page 9
[221] Pre-Inspection Procedures, page 5
[222] Pre-Inspection Procedures, page 5
[223] "OEIS_SDGE_22-012_Q3_Q4_Q6_Q7_Q8_Q9.xlsx"
[224] Energy Safety DR-102; response to question 9
[225] 2020 WMP, page 126
[226] 2020 WMP, page 126
[227] Energy Safety DR-036, response to question 31
[228] DR-062_Question_31a
[229] 2020 WMP, page 127
[230] 2020 WMP, page 127

continues, “SDG&E will establish a metric for increasing the annual number of tree replacements.”[231] SDG&E concludes, “SDG&E will research collaborative opportunities with outside organizations to develop a means of tracking the sustainability of its tree replacement program including assessing the health of its tree replacement and measuring the ancillary environmental benefits.”[232] To assess compliance with these statements, Energy Safety reviewed SDG&E’s response in DR-062. In that response, SDG&E states, “[i]n November 2021, Vegetation Management deployed a new customer survey developed with SDG&E customer research. The survey allows customers to provide feedback on Vegetation Management operations, including its tree replacement program.”[233] SDG&E also provided a link to a webpage for customers to provide feedback on the tree replacement program and for SDG&E customers to be placed on a list to receive a utility-friendly tree.[234] SDG&E provided a copy of a survey completed by a tree replacement program recipient.[235] SDG&E contracts with outside organization Davey Resource Group to manage the tree removal/replacement program.[236] To establish a metric for increasing the annual number of tree replacements, SDG&E states, “[it] has a goal to provide or plant 10,000 trees annually through its tree rebate and tree removal/replacement programs [and] progress is tracked via an internal dashboard.”[237] SDG&E provided Energy Safety with a snapshot copy of the internal dashboard. The dashboard tracks information related to where the sustainable tree came from (type of nursery), the source of funding, and type of location (e.g., residential, community, park, etc.). Sustainability metrics are tracked via an application called Row Keeper. This application allows SDG&E to quantify the program benefits in dollar values for various categories. These categories include stormwater, carbon sequestration, air quality, and property value.[238] Following the evaluation of SDG&E’s response showing SDG&E provided customers access to feedback on its tree replacement, on-line selection of species, a metric for increase tree replacements, collaborative research for the SDG&E tree replacement program, Energy Safety finds SDG&E provided information consistent with its statements made in its 2020 WMP for this initiative.

SDG&E continues, “A third-party contractor performs an audit on 100% of all trees removed to ensure work was completed per scope and contract, including an assessment of the efficacy of stump treatment application and facility protection.”[239] To assess compliance with this statement, Energy Safety reviewed SDG&E’s response to DR-102. SDG&E provided Excel file “*OEIS_SDGE_22_Q11.xlsx,*” which details information containing tree ID, date removed, contractor performing removal, date of audit, and contractor performing audit.[240] SDG&E also

[231] 2020 WMP, page 127
[232] 2020 WMP, page 127
[233] Energy Safety DR-062, response to question 36
[234] https://sites.google.com/davey.com/treeplantingprogramlist
[235] OEIS_SDGE_22-012Q10.pdf
[236] Energy Safety DR-062, response to question 39
[237] Energy Safety DR-062, response to question 38
[238] DR-062_Question_39
[239] 2020 WMP, page 126
[240] “*OEIS_SDGE_22-012_Q11.xlsx”;* Tabs A, B,C D,E

stated the Excel file is "detailing the 100% audit of all hazard trees removed in 2020."[241] Energy Safety was able to verify that an audit was completed after trees were removed. Following the evaluation of SDG&E completing a 100% audit on trees removed by a third-party contractor, Energy Safety finds SDG&E provided information inconsistent with its statement made in its 2020 WMP for this initiative.

SDG&E continues, "The Pre-inspection contractor performs an internal review of trees identified for removal. This assessment is used to determine whether the contractor is correctly identifying tree hazards."[242] Energy Safety reviewed SDG&E's response to DR-070, showing a sample pre-inspection audit report. This review was conducted by an SDG&E contractor and concluded that the tree assessment prescribing removal was correctly identified.[243] SDG&E stated that 27 hazard trees were identified for removal in 2020, and all were reviewed for accurate assessment of removal.[244] Following the evaluation of SDG&E's response showing an audit report of a pre-inspection in which the assessment was to remove a hazard tree, Energy Safety finds SDG&E provided information consistent with its statement made in its 2020 WMP for this initiative.

SDG&E continues, "SDG&E will work with contractors to identify the most accurate tools and technology to assist in hazard tree assessment."[245]Energy Safety reviewed SDG&E's response to DR-070, in which SDG&E included a copy of a presentation provided by a tree contractor on how to assess hazard trees. The presentation provides an overview of common tree defects like fruiting bodies, cavities, and weak attachments. The presentation also covers the tree risk assessment guide, which is a tool used to help inspectors rate a tree's failure potential. Following the evaluation of SDG&E's response showing that it aids contractors in hazard tree assessment, Energy Safety finds SDG&E provided information consistent with its statement made in its 2020 WMP for this initiative.

5.16.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.16.

Based on the analysis above, Energy Safety finds SDG&E compliant with its 2020 WMP initiative 5.3.5.16: Removal and Remediation of Trees with Strike Potential to Electric infrastructure-hazard tree removal and right tree-right place.

5.17 Initiative 5.3.5.17 Substation Inspections

[241] Energy Safety DR-0102, response to question 11
[242] 2020 WMP, page 126
[243] DR-070_Question_10.pdf
[244] Energy Safety DR-070, response to question 10
[245] 2020 WMP, page 127

The purpose of this initiative is to describe the utility's "inspection of vegetation surrounding substations."[246]

5.17.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

SDG&E's 2020 WMP, initiative 5.3.5.17: Substation inspection, directs readers to initiatives 5.3.5.2. and 5.3.5.9[247] Therefore, Energy Safety did not conduct a separate analysis for compliance with this initiative.

5.17.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.17

See Energy Safety's determination for initiatives 5.3.5.2 and section 5.3.5.9.

5.18 Initiative 5.3.5.18 Substation Vegetation Management

The purpose of this initiative is to describe the utility's "actions taken to reduce the ignition probability and wildfire consequences attributable to contact from vegetation to substation equipment."[248]

5.18.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

SDG&E's 2020 WMP, initiative 5.3.5.18: Substation vegetation management, directs readers to initiatives 5.3.5.2. and 5.3.5.9[249] 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 5.3.5.17

See Energy Safety's determination for initiatives 5.3.5.2 and section 5.3.5.9.

[246] 2020 WMP guidelines, R.18-10-007, page79
[247] 2020 WMP, page 127
[248] 2020 WMP guidelines, R.18-10-007, page 80
[249] 2020 WMP, page 127

5.19 Initiative 5.3.5.19 Vegetation Inventory System-Tree Database

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.[250]

5.19.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

In its 2020 WMP, SDG&E states, "SDG&E monitors all trees in its inventory using known species growth rates, with additional consideration given to the amount of rainfall occurring during periods affecting overall tree growth and past pruning practices."[251] Energy Safety reviewed SDG&E's response to DR-062, in which SDG&E provided screenshots from Epoch, its tree record inventory database. Epoch details information pertaining to the tree's growth rate, pruning history, diameter at breast height, species name, etc.[252] Following the evaluation of SDG&E's response showing that species growth rates and past pruning practices are monitored, Energy Safety finds SDG&E provided information consistent with its statement made in its 2020 WMP for this initiative.

In its 2020 WMP, SDG&E states, "Each inventory tree is assigned a unique alpha-numeric identification number within the electronic database, which allows the activity history of each tree to be tracked." In reviewing SDG&E Excel files "*VTREEACTIVITY_PI_2020.xlsx,*" *"WSD_SDGE_R4_12ft.xlsx,"* and *"WSD_SDGE_R4_20ft more.xlsx*" provided in response to DR-010. In all these files, each tree contains a unique alpha-numeric identification number which allows for joining of various databases to track all relevant historical data of each tree. Following the evaluation of SDG&E's responses showing each tree being assigned a unique identification number, Energy Safety finds SDG&E provided information consistent with its statement made in its 2020 WMP for this initiative.

In its 2020 WMP, SDG&E states, "SDG&E is currently working with a vendor on the next generation of its electronic work management system to provide greater efficiency and functionality."[253] SDG&E continues, "SDG&E currently expects to phase-in the new work management system in 2020."[254] Energy Safety reviewed SDG&E's response to DR-036, in which SDG&E stated that, "[it] implemented PowerWorkz, a Cityworks and EpochField based

[250] 2020 WMP guidelines, R.18-10-007 page 80
[251] 2020 WMP, page 128
[252] Energy Safety DR-062, response to question 40
[253] 2020 WMP, page 128
[254] 2020 WMP, page 128

work and asset management solution for SDG&E's Vegetation Management (VM) program."[255] As further evidence, SDG&E provided sample screenshots of this system, the screenshot provided information regarding a pole and associated trees near pole along with tree characteristics (i.e., tree species, height, and DBH). Following the evaluation of SDG&E's response showing its new work management system, Energy Safety finds SDG&E provided information consistent with its statements made in its 2020 WMP for this initiative.

In its 2020 WMP, SDG&E states, "SDG&E will research opportunities to share its inventory data with external stakeholders for cross-activity initiatives."[256] To assess compliance with this statement, Energy Safety reviewed SDG&E's response to DR-062. SDG&E provided two instances where its inventory data was shared with external stakeholders. One is "PLSCADD engineering data provided to an external vendor to promote development of an app that informs inspectors of max sag and blowout potential of transmission lines relative to [the] position [of] surrounding vegetation."[257] The other is "inventory tree data provided to LiDAR/satellite imagery vendors for modeling tree/conductor clearances."[258] Following the evaluation of SDG&E's response detailing two examples of SDG&E sharing its tree inventory data with external stakeholders, Energy Safety finds SDG&E provided information consistent with its statement made in its 2020 WMP for this initiative.

5.19.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.19

Based on the analysis above, Energy Safety finds SDG&E compliant with its 2020 WMP initiative 5.3.5.19: Vegetation inventory systems-tree database.

5.20 Initiative 5.3.5.20 Vegetation Management to Achieve Clearances around Electric Infrastructure-Pole Brushing

The purpose of this initiative is to describe the utility's "actions taken to ensure that vegetation does not encroach upon the minimum clearances in GO95."[259]

5.20.1 2020 WMP Initiative Statements, Supporting Information, and Analysis

[255] Energy Safety DR-036, response to question 3(b)
[256] 2020 WMP, page 128
[257] Energy Safety DR-062, response to question 41
[258] Energy Safety DR-062, response to question 41
[259] 2020 WMP guidelines, R.18-10-007 page 80

In its 2020 WMP, SDG&E states, "SDG&E utilizes the same work management system to manage and track the inventory of all poles that require inspection and brush clearing in the State Responsibility Area."[260] SDG&E continues, "[a] work order is assigned to the pole Brush Contractor to perform the clearing of identified poles requiring brush clearing."[261] SDG&E continues, "SDG&E currently performs three activities to more effectively manage subject poles annually. These activities include mechanical pole brushing, chemical application, and a re-clearing of pole brushing."[262] SDG&E continues, "SDG&E treats approximately 10,000 poles with a pre-emergent herbicide to minimize vegetation re-growth and reduce overall maintenance costs."[263] SDG&E continues, "[t]he chemical application is typically done just before the rain season (during the fall and winter months) so that the application is activated and effective."[264] SDG&E continues, "re-clearing is performed in summer months by removing any additional flammable vegetation which has grown into, or blown into, the required clearance area since the last maintenance activity occurred."[265] SDG&E concludes, "SDG&E also performs pole brushing on approximately 1,500 poles located outside the SRA [state responsibility area] that are not subjected to brushing requirements. These poles are in portions of the service territory where the surrounding vegetation could propagate a fire."[266]

To assess compliance with the above statements, Energy Safety reviewed SDG&E's response to DR-036. SDG&E utilizes PowerWorkz to track the inventory of all poles.[267] SDG&E provided the Excel file "*2020_Pole Activity Records.xlsx,*" which contained records on poles in SDG&E territory. The Excel includes associated info related to a specific pole regarding the work order identification number, date of activity, and the activity done (mechanical brush or herbicide applied). Analysis of that data showed that chemical applications occurred during the winter months of January, February, and December.[268] Additionally, poles that required re-clearing were done in the summer months of August and September.[269] In its territory, SDG&E had a total of 10,451 poles that received herbicide treatment in 2020.[270] A subsequent data request response revealed that SDG&E pole brushed 1,581[271] poles outside of SRA territory. Following the evaluation of SDG&E response showing over 10,000 poles were brushed with herbicide in SDG&E territory and over 1,500 poles brushed in non-SRA territory, Energy Safety finds that SDG&E provided information consistent with its statements made in its 2020 WMP for this initiative.

[260] 2020 WMP, page 128
[261] 2020 WMP, page 128
[262] 2020 WMP, page 129
[263] 2020 WMP, page 129
[264] 2020 WMP, page 129
[265] 2020 WMP, page 129
[266] 2020 WMP, page 129
[267] Energy Safety DR-036, response to question 4(b)
[268] "*2020 Pole Activity Records.xlsx"*; filtered for chemical and herbicide applied
[269] "WSD_SDGE_R3.xlsx"; tab FuelsMod_2020_MaintPoles
[270] "*2020 Pole Activity Records.xlsx*"; sum of column "E"
[271] "2020 Pole Activity Records.xlsx"; filtered column "J" for non-SRA and column "D" for MPB (mechanical pole brushing)

SDG&E continues, "SDG&E performs an environmental review in advance of all new pole brushing activities to assess impacts to protected habitat and resources."[272] Energy Safety reviewed DR-062 and DR-070, in which SDG&E provided an environmental review release form for new poles being brushed for the first time in 2020. The form requires environmental specialist pertaining to biological (biologist) regarding potential wildlife near pole brushing activity and archaeologist to notify SDG&E in the event of a discovery.[273] SDG&E provided the Excel file "*DR-070_Question_12,*" which listed all poles that required an environmental review in 2020. Analysis of the data showed that 418 poles received an environmental review in 2020.[274] Following SDG&E's response showing environmental reviews carried out in 2020, Energy Safety finds SDG&E provided information consistent with its statements made in it is 2020 WMP for this initiative.

SDG&E continues, "Like all other vegetation management activities, a QA/QC audit is performed on a random, representative sample of all completed pole-brush work."[275] Energy Safety reviewed SDG&E's response to DR-036, in which SDG&E provided "*VM Activities Audit.xlsx*." The file contained audit results for SDG&E's Chemical Pole Brush, and Mechanical Pole Brush. Each activity included audit date, results of the audit, and HFTD tier location. SDG&E provided the audit rate and audit pass rate for both chemical pole brushing, and mechanical pole brushing, as shown in Table 6 below.

Table 6- Pole Brushing Audit Results

Pole Brushing Audit Results	Audit Rate	Audit Pass Rate
Chemical Pole Brush (HFTD and Non-HFTD)[276]	34%	99%
Mechanical Pole Brush (HFTD and Non-HFTD)[277]	22%	99%

Following the evaluation of SDG&E's response showing audit results for pole-brush work, Energy Safety finds SDG&E provided information consistent with its statement made in its 2020 WMP for this initiative.

5.20.2 Energy Safety's Determination for 2020 WMP Initiative 5.3.5.20

[272] 2020 WMP, page 129
[273] DR-062_Question_43
[274] DR-070_Question_12; sum of column "B"
[275] 2020 WMP, page 129
[276] "VM Activities Auidt.xlsx"; Tab Audit CPB filtered column "B" for 2020. Step 1 sum of column "D" filtered for "CPBA" divided by Sum of column D filter for "CPB". Step 2 Sum of column "I" filtered for "1" and divided by sum of D filtered for "CPBA"
[277] "VM Activities Auidt.xlsx"; Tab Audit MPB filter column "B" for 2020. Step 1 sum of column D filter for "MPBA" divided by Sum of column D filter for "MPB". Step 2 Sum of column "I" filter for "1" and divided by sum of D filter for "MPBA"

Based on the analysis above, Energy Safety finds SDG&E compliant with its 2020 WMP initiative 5.3.5.20: Vegetation management to achieve clearances around electric infrastructure-pole brushing.

6.0 CONCLUSION

Energy Safety received documentation from SDG&E consistent with its commitments and statements made for each of the 20 vegetation management initiatives in its 2020 WMP. Upon review of documentation, Energy Safety found that SDG&E provided sufficient evidence showing compliance with all the vegetation management initiatives detailed in its 2020 WMP. This audit is not an assessment of the quality of SDG&E's execution of its vegetation management programs. Because this audit found no compliance failures, Energy Safety has no corrective action requirements or timeline for SDG&E.

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