



September 12, 2023

To: San Diego Gas & Electric Company
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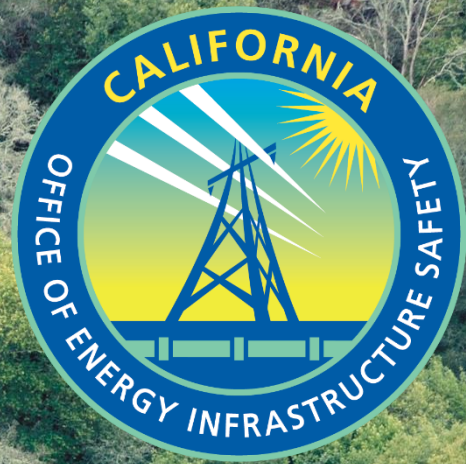
SUBJECT: Office of Energy Infrastructure Safety's Audit on San Diego Gas & Electric Company's 2021 Substantial Vegetation Management Work.

Pursuant to the requirements of Public Utilities Code section 8386.3(c)(5)(A), the Office of Energy Infrastructure Safety (Energy Safety) has completed and enclosed the audit of San Diego Gas & Electric Company's (SDG&E's) 2021 substantial vegetation management work.

During the audit, Energy Safety reviewed data provided by SDG&E and compared it to the representations SDG&E made in its 2021 Wildfire Mitigation Plan. A copy of the audit findings is enclosed. Should SDG&E determine that a response to the enclosed audit is necessary, it must submit such response to the [2021-SVM docket](#) in Energy Safety's e-filing system within 10 business days from the issuance of this audit. If you have any questions concerning this audit, please e-mail Edward Chavez at Edward.Chavez@energysafety.ca.gov, and provide a copy to compliance@energysafety.ca.gov.

Sincerely,

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Attachment: 2021 Substantial Vegetation Management Audit of SDG&E



**OFFICE OF ENERGY INFRASTRUCTURE SAFETY'S
2021 SUBSTANTIAL VEGETATION
MANAGEMENT AUDIT**

San Diego Gas & Electric Company

September 2023

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1. INTRODUCTION AND FRAMEWORK

The Office of Energy Infrastructure Safety (Energy Safety) must, on an annual basis, audit the vegetation management work performed by an electrical corporation upon notification that the electrical corporation has completed a substantial portion of the vegetation management requirements in its Wildfire Mitigation Plan (WMP).¹ In each audit, Energy Safety must specify any failure of the electrical corporation to fully comply with the vegetation management requirements in the WMP.² To effectuate this requirement, Energy Safety identified both quantitative commitments (e.g., miles of lines to inspect) and verifiable statements (e.g., training of personnel) in the vegetation management section of San Diego Gas & Electric Company’s (SDG&E’s) 2021 WMP and conducted this audit to determine if SDG&E performed the work required by each of those commitments and statements.

In performing the audit, Energy Safety found that SDG&E did not complete the work required by one initiative (no. 7.3.5.20) with respect to environmental reviews for three newly installed poles. Energy Safety found that SDG&E performed the work required for the other 19 initiatives in the WMP, as detailed in Table 1 below.

Table 1: Energy Safety’s Analysis of SDG&E’s 2021 WMP Update Vegetation Management Initiatives

2021 WMP Update Initiative Number	2021 WMP Update Initiative Name	Findings
7.3.5.1	Additional Efforts to Manage Community and Environmental Impacts	Performed all required work
7.3.5.2	Detailed Inspections of Vegetation Around Distribution Electric Lines and Equipment	Performed all required work
7.3.5.3	Detailed Inspections of Vegetation Around Transmission Electric Lines and Equipment	Performed all required work
7.3.5.4	Emergency Response Vegetation Management Due to Red Flag Warning or Other Urgent Conditions	Performed all required work
7.3.5.5	Fuel Management and Reduction of “Slash” from Vegetation Management Activities	Performed all required work
7.3.5.6	Improvement of Inspections	Performed all required work
7.3.5.7	LiDAR Inspection of Vegetation Around Distribution Electric Lines and Equipment	Performed all required work
7.3.5.8	LiDAR Inspection for Vegetation Around Transmission Electric Lines and Equipment	Performed all required work

¹ Cal. Pub. Util. Code §8386.3, subd. (c)(5)(A)

² *Id.*

7.3.5.9	Other Discretionary Inspections of Vegetation Around Distribution Electric Lines and Equipment, Beyond Inspections Mandated by Rules and Regulations	Performed all required work
7.3.5.10	Other Discretionary Inspections of Vegetation Around Transmission Electric Lines and Equipment Beyond Inspections Mandated by Rules and Regulations	Performed all required work
7.3.5.11	Patrol Inspections of Vegetation Around Distribution Electric Lines and Equipment	Performed all required work
7.3.5.12	Patrol Inspections of Vegetation Around Transmission Electric Lines and Equipment	Performed all required work
7.3.5.13	Quality Assurance/Quality Control of Inspections	Performed all required work
7.3.5.14	Recruiting and Training of Vegetation Management Personnel	Performed all required work
7.3.5.15	Remediation of At-Risk Species	Performed all required work
7.3.5.16	Removal and Remediation of Trees with Strike Potential to Electric Infrastructure- (Hazard Tree Removal and Right Tree-Right Place)	Performed all required work
7.3.5.17	Substation Inspections	Performed all required work
7.3.5.18	Substation Vegetation Management	Performed all required work
7.3.5.19	Vegetation Inventory System	Performed all required work
7.3.5.20	Vegetation Management to Achieve Clearance Around Electric Lines and Equipment	Did not perform all required work

2. SCOPE OF THE SUBSTANTIAL VEGETATION MANAGEMENT AUDIT

To conduct this audit, Energy Safety evaluated the vegetation management section of SDG&E’s 2021 WMP Update.³ The 2021 WMP Update Guidelines identified the 20 initiatives that must be included in the vegetation management section of each WMP. In reviewing the vegetation management section and initiatives in SDG&E’s 2021 WMP, Energy Safety identified both quantitative commitments and verifiable statements in the WMP. Energy Safety then reviewed available information and requested additional documentation to assess whether SDG&E performed the work specified by its quantitative commitments and executed its verifiable statements.

³ Resolution WSD-11 – Attachment 2.2: 2021 Wildfire Mitigation Plan Guidelines Template, pages 54-55, the 2021 WMP had 10 categories such as asset management and inspections, vegetation management and inspections, data governance, etc.

On October 3, 2022, SDG&E notified Energy Safety⁴ that it had completed a substantial portion of the work required by the vegetation management initiatives in its 2021 WMP Update.⁵ In performing this audit, Energy Safety requested documentation substantiating the work performed by SDG&E. This audit does not assess the quality of that work.

3. VEGETATION MANAGEMENT PROGRAMS

SDG&E states that it implements the following programs to perform vegetation management work near distribution and transmission lines: Routine and Enhanced Pre-Inspection, Hazard Tree Removal, Pole Brushing, Off-Cycle, and Quality Assurance and Quality Control (QA/QC). Each program is described in more detail below.

- **Pre-Inspection (Routine):** “Pre-inspectors determine whether vegetation will encroach the minimum clearance distance...Initial inspection performed annually within each of SDG&E Vegetation Management Areas (VMAs)”⁶
- **Hazard Tree Removal:** “During the annually scheduled routine inspection and enhanced patrol activities, all trees within the strike zone of the transmission and distribution lines receive a “level 2”⁷ hazard evaluation. These inspections are performed by ISA-Certified Arborists”⁸
- **Pole Brushing:** Occurs in conjunction with pre-inspection activities. Pole brushing consists of 3 activities: mechanical pole brushing, chemical application, and re-clearing of pole brushing⁹
- **QA/QC:** “Quality assurance audits of all its vegetation management activities to measure work quality, contractual adherence, compliance, and to determine the effectiveness of each component of the program. These audits include a statistical analysis of a representative sample of all completed work”¹⁰
- **Off-Cycle:** A second annual inspection of High Fire Threat District (HFTD) areas in SDG&E’s territory. SDG&E personnel perform these inspections approximately six months following the initial routine inspection
- **Fuel Management Program:** Consists of three activities: Fuels treatment, which increases clearances around select poles, vegetation abatement, which clears within transmission

⁴ 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 department under the California Natural Resources Agency.

⁵ Letter of Notification of Substantial Compliance from Laura M. Fulton, Attorney for San Diego Gas and Electric Company to the Director of Energy Safety dated October 3, 2022

⁶ Pre-Inspection Procedures, pages 4-5

⁷ Level 2 assessment here means a 360 walk around tree evaluation

⁸ 2021 WMP Update, page 277

⁹ 2021 WMP Update, pages 286-288

¹⁰ 2021 WMP Update, page 279

rights-of-way; and fuels reduction grants, which issue grants to third parties for creating fuel breaks¹¹

4. WMP 2021 VEGETATION MANAGEMENT INITIATIVES

In its 2021 WMP Update, SDG&E identified the 20 vegetation management initiatives listed below:

1. Additional efforts to manage community and environmental impacts
2. Detailed inspections of vegetation around distribution electric lines and equipment
3. Detailed inspections of vegetation around transmission electric lines and equipment
4. Emergency response vegetation management due to red flag warning or other urgent conditions
5. Fuel management and reduction of “slash” from vegetation management activities
6. Improvement of inspections
7. LiDAR inspections of vegetation around distribution electric lines and equipment
8. LiDAR inspections of vegetation around transmission electric lines and equipment
9. Other discretionary inspection of vegetation around distribution electric lines and equipment, beyond inspections mandated by rules and regulations
10. Other discretionary inspection of vegetation around transmission electric lines and equipment, beyond inspections mandated by rules and regulations
11. Patrol inspections of vegetation around distribution electric lines and equipment
12. Patrol inspections of vegetation around transmission electric lines and equipment
13. Quality assurance/quality control of inspections
14. Recruiting and training of vegetation management personnel
15. Remediation of at-risk species
16. Removal and remediation of trees with strike potential to electric lines and equipment (Hazard tree removal and Right Tree-Right Place)
17. Substation inspections
18. Substation vegetation management
19. Vegetation inventory system
20. Vegetation management to achieve clearances around electric lines and equipment

5. SDG&E’S VEGETATION MANAGEMENT PROGRAMS AND THE 2021 WMP UPDATE INITIATIVES

¹¹ 2021 WMP update, page 270

Through a review of SDG&E’s 2021 WMP Update, Energy Safety correlated SDG&E’s vegetation management programs listed in the section above to the following initiatives listed in its 2021 WMP Update as follows:

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

Vegetation Management Program	WMP Initiative
Routine	7.3.5.2, 7.3.5.3, 7.3.5.16
Enhanced Pre-Inspections	7.3.5.9, 7.3.5.16
QA/QC	7.3.5.13
Hazard tree removal	7.3.5.16
Pole brushing	7.3.5.20
Fuel Management Program	7.3.5.5

6. DOCUMENTS REVIEWED

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

1. SDG&E’s 2021 notification stating its completion of a substantial portion of its vegetation management
2. SDG&E’s 2021 Wildfire Mitigation Plan Update
3. SDG&E Response to Energy Safety’s Data Request DR-062
4. SDG&E response to Energy Safety’s Data Request DR-070
5. SDG&E response to Energy Safety’s Data Request DR-121
6. SDG&E response to Energy Safety’s Data Request DR-142
7. SDG&E response to Energy Safety’s Data Request DR-164
8. SDG&E response to Energy Safety’s Data Request DR-176
9. SDG&E response to Energy Safety’s Data Request DR-189
10. Pre-Inspection Procedures
11. Independent Evaluator DR 17
12. Independent Evaluator DR 18
13. Vegetation Management Audit Procedure
14. Pole Brush Pre-Inspection Guidelines for Experienced Pre-Inspectors/Auditors
15. Submitted Spatial Quarterly Data Reports

Table 3 below outlines Energy Safety’s communication with SDG&E pertaining to this SVM audit, including Energy Safety’s Data Requests and SDG&E’s responses.

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

Number	Date(s)	Event
1	October 3, 2022	SDG&E submitted a notification to Energy Safety stating it had completed a substantial portion of its 2021 Wildfire Mitigation Plan (WMP) vegetation management initiatives.
2	March 23, 2023	Energy Safety submitted Data Request DR-121 to SDG&E asking for details pertaining to Initiatives 7.3.5.1, 7.3.5.2, and 7.3.5.5.
3	April 6, 2023	SDG&E submitted a response to DR-121 to Energy Safety.
4	April 12, 2023	Energy Safety submitted Data Request DR-142 to SDG&E asking for details pertaining to Initiatives 7.3.5.7, 7.3.5.9, and 7.3.5.13.
5	May 1, 2023	SDG&E submitted a response to DR-142 to Energy Safety.
6	May 25, 2023	Energy Safety Submitted Data Request DR-164 to SDG&E asking for details pertaining to Initiatives 7.3.5.9, 7.3.5.13, 7.3.5.14, 7.3.5.17, 7.3.5.19, 7.3.5.20.
7	June 19, 2023	SDG&E submitted a response to DR-164 to Energy Safety.
8	July 20, 2023	Energy Safety submitted Data Request DR-176 to SDG&E asking for details pertaining to Initiatives 7.3.5.9, 7.3.5.13, and 7.3.5.14.
9	August 3, 2023	SDG&E submitted a response to DR-176 to Energy Safety.
10	August 18, 2023	Energy Safety submitted Data Request DR-189 to SDG&E asking for details pertaining to Initiatives 7.3.5.20.
11	August 25, 2023	Energy Safety submitted Data Request DR-190 to SDG&E asking for details pertaining to Initiative 7.3.5.16.
12	September 1, 2023	SDG&E submitted a response to DR-190 to Energy Safety.
13	September 5, 2023	Energy Safety and SDG&E representatives had a meeting discussing SDG&E response to DR-190 and DR-142.

7. ANALYSIS

This section contains an initiative-by-initiative analysis of all vegetation management initiatives in SDG&E’s 2021 WMP Update. Each subsection provides the verifiable statements, supporting information, and Energy Safety analysis for an initiative, followed by a summary of Energy Safety’s findings.

7.1 Initiative 7.3.5.1 Additional Efforts to Manage Community and Environmental Impacts

The purpose of this initiative is “careful visual inspections of vegetation around the right-of-way, where individual trees are carefully examined, visually, and the condition of each rated and recorded to mitigate negative impacts of the utility’s vegetation management on local communities and the environment.”¹²

7.1.1 2021 WMP Update Initiative Statements, Supporting Information, and Analysis

In its 2021 WMP update, SDG&E states that it, “educated its customers on the concept of ‘Right Tree-Right Place,’ proper planting near power lines, maintaining safe clearances, and fire safety.”¹³ The SDG&E’s Right Tree Right Place website educates customers about tree height zones. These zones, Tall Zone, Medium Zone, and Small Zone, illustrate the appropriate distance from conductors a tree with a distinct height can be planted in the respective zone. The Small Zone is closest to the power lines, and trees planted in this zone should be under 25 feet below the pruning zone. The site also gives a list of trees suitable to be planted near conductors and discusses watering and fertilizer tips when planting trees. The website illustrates the importance of vegetation near power lines and fire safety.¹⁴ Therefore, Energy Safety’s audit found SDG&E provided information consistent with the completion of the work identified in this statement regarding educating customers on the concept of “Right Tree-Right Place.”

In its 2021 WMP Update, SDG&E states, “SDG&E’s vegetation management operations are also conducted in consideration of the impact to the environment and in accordance with all applicable rules and regulations.”¹⁵ SDG&E continues, “The Vegetation Management department follows the protocols of SDG&E’s wildlife agency-approved Natural Communities Conservation Plan (NCCP).”¹⁶ SDG&E concludes, “SDG&E works with land agencies such as the U.S. Forest Service and California State Parks to identify and implement best practices to protect habitat and species. SDG&E follows state Forest Practice Rules in the dispersal and removal of green waste associated with tree pruning and removal operations.”¹⁷ SDG&E provided samples of Pre-Activity Survey Reports (PSR), which follow the process set forth by the Natural Community Conservation Plan (NCCP).¹⁸ This process “takes a broad-based ecosystem

¹² Resolution WSD-11 – Attachment 2.2: 2021 Wildfire Mitigation Plan Guidelines Template, pages 54-55

¹³ 2021 WMP Update, page 265

¹⁴ <https://www.sdge.com/safety/tree-planting-guide> (accessed June 26, 2023)

¹⁵ 2021 WMP Update, page 265

¹⁶ 2021 WMP Update, page 265

¹⁷ 2021 WMP Update, page 265

¹⁸ Response to DR-121, question 1

approach to planning for the protection and perpetuation of biological diversity.”¹⁹ The samples provided, one from each quarter of 2021, are projects carried out in areas that follow NCCP guidelines. SDG&E provided the project description and constraints that relate to reducing the spread of non-native invasive weeds or protecting migratory bird breeding season.²⁰ SDG&E states that PSR is sent to both the USFWS and the CDFW for their review.²¹ SDG&E also provided a PDF titled “OEIS-121 Q.3b,” a Minor Project Refinement Request Form of the Cleveland National Forest Power Line Replacement Project, which was approved by the USFS and the California Public Utilities Commission (CPUC). The Request Form details that 43 trees needed to be removed due to clearance requirements and that removing these trees would not cause a significant impact.²² SDG&E provided a work order for one of the 43 trees removed from the project.²³ The work order states that a helicopter was used to remove the fallen pine tree and that a chipper was used to remove green waste from the site.²⁴ Therefore, Energy Safety’s audit found SDG&E provided information consistent with the completion of the work identified in these statements regarding Vegetation Management conducted in consideration of the impact on the environment and in accordance with all applicable rules and regulations.

In its 2021 WMP Update, SDG&E states, “To further promote outreach efforts, SDG&E created a 30-minute documentary about its wildfire safety efforts and advancements.”²⁵ SDG&E’s documentary, which can be accessed on YouTube,²⁶ discusses wildfire safety and the importance of vegetation management. The documentary originally aired on local TV station KNSD San Diego channel 7 (NBC) on October 21, 2020, at 3 p.m.²⁷ Therefore, Energy Safety’s audit found SDG&E provided information consistent with the completion of the work identified in this statement regarding promoting outreach by creating a wildfire safety documentary.

In its 2021 WMP Update, SDG&E states, “Collateral materials have also been developed to further educate customers about the need and value of vegetation management. These materials provide tips and recommendations to help customers manage vegetation and defensible space around their homes and businesses. SDG&E’s tree safety website is shared with numerous stakeholders and agencies to post on their respective website, allowing for greater opportunities to engage and educate the public. SDG&E also 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.”²⁸ SDG&E provided educational newsletter material from the 2021 Wildfire Safety Public Education Campaign.²⁹ The newsletter contained information on “Prepare your household now,” which discusses

¹⁹ <https://wildlife.ca.gov/Conservation/Planning/NCCP> (accessed June 26, 2023)

²⁰ Response to DR-121, question 1; attachment “48713 Env Release Q1 2021_Redacted”, “50162.01 Env Release Q3 2021_Redacted”, “ETS 48555 Env Release Q2 2021_State Parks_Redacted” and “ETS 51611 Env Release Q4 2021_Redacted”

²¹ SDG&E Response to DR-121, question 1

²² SDG&E Response to DR-121, attachment “OEIS-121 Q.3b”

²³ SDG&E Response to DR-164, question 1

²⁴ Response to DR-164, question 1; attachment “DR-164_Q1”

²⁵ 2021 WMP Update, page 266

²⁶ <https://www.youtube.com/watch?v=DdkY3P4JWLc> (accessed June 26, 2023)

²⁷ SDG&E response to DR-062, question 10e

²⁸ 2021 WMP Update, page 266

²⁹ Response to IE_DR18, question 4

creating a defensible space around customer property.³⁰ The newsletter also directs customers to SDG&E's Wildfire Safety website, which provides information on tree safety, focusing on vegetation near powerlines.³¹ SDG&E provided a sample door hanger. This is the first step for SDG&E contractors to engage with customers on proper utility line clearance. The contractor leaves their contact information and can leave information regarding tree mitigation needed for the homeowner's tree.³² Therefore, Energy Safety's audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding customer engagement by collateral materials and customer interaction by arborists and tree trimmers.

In its 2021 WMP update, SDG&E states, "All vegetation management contractors are trained in positive customer communications, which affords multiple opportunities to interface with customers regarding vegetation management operations."³³ SDG&E provided training material from all four SDG&E contractors on how to engage with customers. The materials cover a range of topics from professionalism to courtesy and illustrate how to listen and communicate.³⁴ SDG&E also provided sign-in sheets for all personnel who participated in training throughout 2021. SDG&E states, "All four-vegetation management contracting companies...were trained in 2021 with approximately 299 total attendees."³⁵ Therefore, Energy Safety's audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding contractor training related to customer communications.

In its 2021 WMP update, SDG&E states, "SDG&E also continues to lead and participate in Arbor Day events in several of its communities and utilizes 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."³⁶ In response to a data request, SDG&E stated it participated in Arbor Day in Chula Vista, Oceanside, and Encinitas.³⁷ SDG&E also provided the presentation by the non-profit vendor, educating the public on electrical awareness regarding the benefits of trees cleaning the air, by taking carbon dioxide to produce oxygen, and the dangers of trees near powerlines.³⁸ Therefore, Energy Safety's audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding SDG&E-led Arbor Day events.

In its 2021 WMP update, SDG&E states, "SDG&E also continues its development of customer engagement activities via a centralized team of associated departments to improve customer

³⁰ Response to IE_DR18, question 4; attachment "Response _Question4_ 2021 Public Education Sample - HFTD Newsletter"

³¹ <https://www.sdge.com/safety/tree-safety> (accessed, 5/12/2023)

³² Response to DR-121, question 4; attachment "OEIS-121_Q4a"

³³ 2021 WMP Update, page 266

³⁴ Response to DR-121, question 5a; attachments "CustomerService- SDGE Training 2021, Davey_Customer Service_Presentation 07-01-2021", "DRG_Customer Service_Presentation 2021, UTS_Customer Service_Training_2021"

³⁵ Response to DR-121, question 5

³⁶ 2021 WMP Update, page 266

³⁷ Response to DR-121, question 6

³⁸ Response to DR-121, question 6; attachment "OEIS-121 Q.6b"

outreach and awareness of the various wildfire mitigation efforts.”³⁹ SDG&E continues, “SDG&E 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.”⁴⁰ SDG&E concludes, “Surveys and focus groups will be used to engage customers and solicit reactions to the public education campaign materials created. Surveys will continue to be employed during the community outreach events.”⁴¹ Energy Safety reviewed ‘SDG&E Wildfire Communications Research-2021 Pre- and Post-Wave,’ discussing the results of the 2021 media campaign along with breaking down how effective SDG&E communications tactics are (i.e., email, social media, broadcast, etc.).⁴² The key findings found that SDG&E has a high favorability according to respondents, especially customers in High Fire Threat Districts (HFTDs). SDG&E had an overall favorability pre-2021 of 37% in HFTDs, but post-2021, SDG&E favorability rose to 50%.⁴³ Also, SDG&E’s HFTD customers have an increased awareness of SDG&E’s wildfire safety messages.⁴⁴ When looking at the type of media that has a higher appeal to customers, “Video ads have a higher appeal than print.”⁴⁵ Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in these statements regarding SDG&E improving customer outreach, pre- and post-event customer research, and surveys.

In its 2021 WMP update, SDG&E states, “SDG&E will continue to work with multiple internal departments toward the goal of providing comprehensive outreach and education regarding its vegetation management activities, including web content, specific literature, and public events.”⁴⁶ Energy Safety reviewed a notification event flyer regarding fire seasons and how to prepare. The event was held for the La Jolla Band of Luiseno Indians on July 23, 2021. Topics ranged from generator safety to vegetation management to wildfire safety to PSPS.⁴⁷ SDG&E also conducted six days of webinars in the month of May, which discussed PSPS, community centers, and SDG&E wildfire safety efforts.⁴⁸ As mentioned in the above statement, SDG&E’s ‘Right-Tree-Right Place’ gives customers insight into which trees are suitable to be planted near power conductors.⁴⁹ Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding vegetation management activities.

³⁹ 2021 WMP Update, page 266

⁴⁰ 2021 WMP Update, page 266

⁴¹ 2021 WMP Update, page 267

⁴² Response to IE DR 17 attachments; “Response_Question 4_SDGE 2021 SDGE Wildfire Safety Public Education Campaign Results”

⁴³ Response to IE DR 17 attachments; “Response_Question 4_SDGE 2021 SDGE Wildfire Safety Public Education Campaign Results” slide 12

⁴⁴ Response to IE DR 17 attachments; “Response_Question 4_SDGE 2021 SDGE Wildfire Safety Public Education Campaign Results”

⁴⁵ Response to IE DR 17 attachments; “Response_Question 4_SDGE 2021 SDGE Wildfire Safety Public Education Campaign Results”, slide 8

⁴⁶ 2021 WMP Update, page 267

⁴⁷ Response_Question 4_2021 Community Engagement Event Sample - Wildfire Safety Fairs Flier

⁴⁸ Response_Question 4_2021 Community Engagement Event Sample Wildfire Webinars Flyer

⁴⁹ <https://www.sdge.com/safety/tree-planting-guide> (accessed on September 6, 2023)

7.1.2 Energy Safety’s Findings for 2021 WMP Update Initiative 7.3.5.1

Based on the analysis above, Energy Safety finds that SDG&E provided information consistent with the completion of the work identified in the 2021 WMP Update Initiative 7.3.5.1: Vegetation Management-Community Engagement.

7.2 Initiative 7.3.5.2 Detailed Inspection of Vegetation Around Distribution Electric Lines and Equipment

The purpose of this initiative is “Careful visual inspections of vegetation around the right-of-way, where individual trees are carefully examined, visually, and the condition of each rated and recorded.”⁵⁰

7.2.1 2021 WMP Update Initiative Statements, Supporting Information, and Analysis

In its 2021 WMP update, SDG&E states, “SDG&E developed and maintains a vegetation management work plan, which is a schedule-based approach to its operations to ensure applicable lines within its service territory are inspected each year.”⁵¹ SDG&E continues, “SDG&E’s activities in each VMA [Vegetation Management Area] are driven by a master schedule that identifies specific activities that are calendared to take place each VMA every year.”⁵² Energy Safety reviewed SDG&E’s 2021 Pre-Inspection Procedures show that SDG&E territory is divided into 133 distinct VMAs. The schedule for each VMA is broken up into Pre-Inspection, Pre-Inspection audit, Tree trim, Tree trim audit, and Off-Cycle HFTD start dates for the year 2021.⁵³ The schedule also states whether each VMA falls into HFTD territory. If the VMA does not fall in the HFTD, no off-cycle inspection is conducted.⁵⁴ Energy Safety reviewed a sample completed Scheduling Work Order for the Pre-Inspection activity completed in VMA 220 in 2021.⁵⁵ The work order Activity start date coincides with the schedule for 220 in the 2021 Pre-Inspection Procedures of December 1, 2021. The actual activity start date was one day before, on November 30, 2021, ahead of the scheduled date for this VMA. Therefore, Energy Safety’s audit found SDG&E provided information consistent with the completion of the commitment identified in this statement regarding a vegetation management work plan and VMA activities driven by a master schedule.

⁵⁰ Resolution WSD-11 – Attachment 2.2: 2021 Wildfire Mitigation Plan Guidelines Template, pages 54-55

⁵¹ 2021 WMP Update, page 267

⁵² 2021 WMP Update, page 268

⁵³ 2021 Pre-Inspection Procedure, page 22

⁵⁴ 2021 Pre-Inspection Procedure, page 22

⁵⁵ Response to IE_DR-18, question 2; attachment “Response_DR_18_Question_2a”

In its 2021 WMP update, SDG&E states, “Within the HFTD, SDG&E performs separately scheduled routine and non-routine hazard tree inspections annually.”⁵⁶ SDG&E provided two hazard tree work orders from VMA 367 for routine and non-routine hazard tree inspections. The non-routine contained the mitigation of five oak trees,⁵⁷ and the routine contained the summary showing one hazard tree removed and four hazard trees pruned.⁵⁸ Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding two separate hazard tree inspections.

In its 2021 WMP update, SDG&E states, “SDG&E completes work identified during the non-routine inspections prior to the start of the peak fire season (September 1).”⁵⁹ SDG&E provided records of work identified during its non-routine inspections. The Excel file contained the tree ID, mitigation date, and type of mitigation. In total, SDG&E’s records showed that 637 trees were mitigated prior to September 1, 2021.⁶⁰ Of these, 83% were trees that required pruning, and 17% were tree removals. Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding completing work prior to peak fire season.

In its 2021 WMP update, SDG&E states, “SDG&E removes all overhanging branches on its distribution and transmission lines.”⁶¹ Energy Safety reviewed SDG&E Pre-Inspection Procedures, which stipulate “all tree branches that directly overhang the vertical ground-to-sky plane above primary distribution and transmission conductors are to be removed.”⁶² Therefore, Energy Safety’s audit finds that SDG&E provided information consistent with the completion of the work identified in this statement regarding the removal of all overhanging branches.

7.2.2 Energy Safety’s Findings for 2021 WMP Update Initiative 7.3.5.2

Based on the analysis above, Energy Safety finds that SDG&E provided information consistent with the completion of the work identified in the 2021 WMP update Initiative 7.3.5.2: Detailed Inspections of Vegetation Around Distribution Electric Lines and Equipment.

7.3 Initiative 7.3.5.3 Detailed Inspection of Vegetation Around Transmission Electric Lines and Equipment

⁵⁶ 2021 WMP Update, page 269

⁵⁷ Response to DR-121, question 7; attachment “OEIS-121_Non-Routine WO Q.7a”

⁵⁸ Response to DR-121, question 7; attachment “OEIS-121_Routine Inspection WO Q.7a”

⁵⁹ 2021 WMP Update, page 269

⁶⁰ Response to DR-121, question 8; attachment “OEIS-121 Q8”

⁶¹ 2021 WMP Update, page 269

⁶² Pre-Inspection Procedures, page 13

The purpose of this initiative is “careful visual inspections of vegetation around the right-of-way, where individual trees are carefully examined, visually, and the condition of each rated and recorded.”⁶³

7.3.1 2021 WMP Update Initiative Statements, Supporting Information, and Analysis

SDG&E’s 2021 WMP update, Initiative 7.3.5.3 Detailed Inspection of Vegetation Around Transmission Infrastructure, directs readers to Initiative 7.3.5.2.⁶⁴ Therefore, Energy Safety did not conduct a separate analysis of the work performed for this initiative.

7.3.2 Energy Safety’s Findings for 2021 WMP Update Initiative 7.3.5.3

See Energy Safety’s findings for Initiative 7.3.5.2.

7.4 Initiative 7.3.5.4 Emergency Response Vegetation Management due to Red Flag Warning or Other Urgent Conditions

The purpose of this initiative is to detail “plan and execution of vegetation management activities, such as trimming or removal, executed based upon and in advance of forecast weather conditions that indicate high fire threat in terms of ignition probability and wildfire consequence.”⁶⁵

7.4.1 2021 WMP Update Initiative Statements, Supporting Information, and Analysis

SDG&E’s 2021 WMP update, Initiative 7.3.5.4 Emergency Response Vegetation Management, directs readers to Initiatives 7.3.5.1 and 7.3.5.9.⁶⁶ Therefore, Energy Safety did not conduct a separate analysis of the work performed for this initiative.

7.4.2 Energy Safety’s Findings for 2021 WMP Update Initiative 7.3.5.4

See Energy Safety’s findings for Initiatives 7.3.5.1 and 7.3.5.9.

⁶³ Resolution WSD-11 – Attachment 2.2: 2021 Wildfire Mitigation Plan Guidelines Template, pages 54-55

⁶⁴ 2021 WMP Update, page 270

⁶⁵ Resolution WSD-11 – Attachment 2.2: 2021 Wildfire Mitigation Plan Guidelines Template, pages 54-55

⁶⁶ 2021 WMP Update, page 270

7.5 Initiative 7.3.5.5 Fuels Management and Reduction of “Slash” from Vegetation Management Activities

The purpose of this initiative is to reduce fuel near “potential sources of ignition, including both reduction or adjustment of live fuel... and of dead fuel, including ‘slash’ from vegetation management activities...”⁶⁷

7.5.1 2021 WMP Update Initiative Statements, Supporting Information, and Analysis

In its 2021 WMP update, SDG&E states, “Fuels Treatment Activity-Increased clearances around select structures (poles).”⁶⁸ Energy Safety reviewed the Excel file “OEIS-121 Q.9.xlsx,” which provided completed work of SDG&E’s Fuel management program as it relates to select pole structures that received increased clearances than the 10 feet required by Public Resource Code section 4292.⁶⁹ The Excel file showed that 436⁷⁰ poles received increased clearance (greater than 10 feet). The Excel file depicts the pole identification number, mitigation type all poles were mechanically brushed, mitigation date all poles were completed in 2021, and location all poles were in HFTD.⁷¹ Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding increased clearance around select structures (poles).

In its 2021 WMP update, SDG&E states, “Vegetation Abatement activity- Vegetation clearing within transmission right-of-way. This activity primarily consists of the removal of ground level, non-native flashy fuels, and the thinning of tree branches (6-8 feet) above ground...within SDG&E’s Land Services Department.”⁷² Energy Safety reviewed the Excel file “OEIS-121 Q.10a.xlsx” which provided completed work of SDG&E’s Fuel management program on SDG&E owned parcels as it relates to vegetation clearing within transmission right-of-way. The Excel file showed 80⁷³ transmission structures received vegetation clearing. The Excel file shows the structure identification number, mitigation date all structures were completed in 2021, and location with ten structures in HFTD and the rest in Local Response Area(LRA).⁷⁴ Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding vegetation clearing within transmission right-of-way.

⁶⁷ Resolution WSD-11 – Attachment 2.2: 2021 Wildfire Mitigation Plan Guidelines Template, pages 54-55

⁶⁸ 2021 WMP Update, page 270

⁶⁹ Response to DR-121, question 9; attachment “OEIS-121 Q.9.xlsx”

⁷⁰ Sum of Column A of ‘2021 Fuels Modification’ tab and Column A of ‘2021 Fuels Grants Program’ tab

⁷¹ Response to DR-121, question 9; attachment “OEIS-121 Q.9.xlsx”

⁷² 2021 WMP Update, page 270

⁷³ Response to DR-121, question 10; attachment “OEIS-121 Q.10a.xlsx” Sum of Column A ‘structure number’

⁷⁴ Response to DR-121, question 10; attachment “OEIS-121 Q.10a.xlsx”

In its 2021 WMP update, SDG&E states, “A \$500k fuels treatment grant was awarded to Fire Safe Council of San Diego County.”⁷⁵ Energy Safety reviewed the invoice for the Fuel Reduction & Fire Prevention Grant award. The total invoice was \$500,000.00 issued to the Fire Safe Council of San Diego County.⁷⁶ Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding a grant awarded.

7.5.2 Energy Safety’s Findings for 2021 WMP Update Initiative 7.3.5.5

Based on the analysis above, Energy Safety finds that SDG&E provided information consistent with the completion of the work identified in the 2021 WMP update Initiative 7.3.5.5: Fuels Management and Reduction of “Slash” from Vegetation Management Activities.

7.6 Initiative 7.3.5.6 Improvement of Inspections

The purpose of this initiative is “identifying and addressing deficiencies in inspection protocols and implementation by improving training and the evaluation of inspectors.”⁷⁷

7.6.1 2021 WMP Update Initiative Statements, Supporting Information, and Analysis

SDG&E’s 2021 WMP update, Initiative 7.3.5.6 Improvement of Inspections, directs readers to Initiative 7.3.5.10.⁷⁸ Therefore, Energy Safety did not conduct a separate analysis for work performed for this initiative.

7.6.2 Energy Safety’s Findings for 2021 WMP Update Initiative 7.3.5.6

See Energy Safety’s findings for Initiative 7.3.5.10.

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

The purpose of this initiative is to inspect distribution right-of-way using LiDAR (Light Detection and Ranging).⁷⁹

⁷⁵ 2021 WMP Update, page 273

⁷⁶ Response to DR-121, question 11; attachment “OEIS-121 Q.11a”

⁷⁷ Resolution WSD-11 – Attachment 2.2: 2021 Wildfire Mitigation Plan Guidelines Template, pages 54-55

⁷⁸ 2021 WMP Update, page 274

⁷⁹ Resolution WSD-11 – Attachment 2.2: 2021 Wildfire Mitigation Plan Guidelines Template, pages 54-55

7.7.1 2021 WMP Update Initiative Statements, Supporting Information, and Analysis

In its 2021 WMP update, SDG&E states, “SDG&E seeks to engage new and existing technology to help improve its ability to empirically determine vegetation clearances to meet safety and compliance requirements, and to reduce the risk of vegetation related ignitions or wildfire.”⁸⁰ In response to a data request, SDG&E states, “SDG&E began LiDAR capture for all HFTD circuit segments in 2021. In Q2 2021, SDG&E engaged in an 8-week proof of concept exploring building foundations for LiDAR ingestion, storage, visualization, and analysis as part of its internally developed platform called Intelligent Image Processing (IIP). IIP LiDAR features include cloud storage of data, data upload and download feature, point cloud viewer, and ability to analyze data.”⁸¹ SDG&E provided a Proof-of-Concept summary of LiDAR deployment in 2021. The summary states the stages of development of advancing new and existing technology to help improve its ability to determine vegetation clearances.⁸² The timeline starts with the discover/pre-work beginning in early April and the project lasting over eight weeks at the prove and scale stage. The summary also identifies the teams in this project, along with each team’s expectations and responsibilities.⁸³ Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding engaging in new and existing technology as it relates to LiDAR.

In its 2021 WMP update, SDG&E states, “SDG&E has successfully utilized and integrated LiDAR technology across multiple activities for several years.”⁸⁴ SDG&E continues, “SDG&E expects to use LiDAR technology to some degree across multiple company initiatives and throughout a larger portion of the HFTD in 2021.”⁸⁵ SDG&E provided activities in which LiDAR was utilized, which include modeling existing or future structures to align with SDG&E specifications related to clearance of wire to its surroundings and mechanical loading, identifying strike trees in HFTD, and confirming spatial accuracy of overhead structures.⁸⁶ Energy Safety reviewed the Excel file “*LiDAR Veg analysis - 10 circuit results*,” showing vegetation clearance from conductors and identifying trees within HFTD from LiDAR flights flown in 2021. SDG&E also provided Excel files “SDG&E ESH21 Flight Planning V2.0 Export.xlsx,” which contained LiDAR records of 2,188⁸⁷ circuit miles flown in 2021. The majority of each flight contains notes from the flight from “Enhanced Vegetation,”⁸⁸ “not much vegetation to cause sun angle issues,”⁸⁹ “looks like we are missing some poles in this area.”⁹⁰ Therefore, Energy Safety’s audit found that SDG&E provided

⁸⁰ 2021 WMP Update, page 274

⁸¹ Response to DR-142, question 1a

⁸² Response to DR-142, question 1b; attachment “OEIS_DR142_Q1b”

⁸³ Response to DR-142, question 1b; attachment “OEIS_DR142_Q1b” page 2

⁸⁴ 2021 WMP Update, page 274

⁸⁵ 2021 WMP Update, page 275

⁸⁶ Response to DR-142, question 2a

⁸⁷ Sum of column “P” filtered for 2021

⁸⁸ SDG&E ESH21 Flight Planning V2.0 Export, row 10

⁸⁹ SDG&E ESH21 Flight Planning V2.0 Export, row 22

⁹⁰ SDG&E ESH21 Flight Planning V2.0 Export, row 11

information consistent with the completion of the work identified in these statements regarding LiDAR used across multiple activities and initiatives in HFTD.

7.7.2 Energy Safety’s Findings for 2021 WMP Update Initiative 7.3.5.7

Based on the analysis above, Energy Safety finds SDG&E provided information consistent with the completion of the work identified in the 2021 WMP Update Initiative 7.3.5.7: LiDAR Inspections of Vegetation Around Distribution Electric Lines and Equipment.

7.8 Initiative 7.3.5.8 LiDAR Inspections of Vegetation Around Transmission Electric Lines and Equipment

The purpose of this initiative is to inspect distribution right-of-way using LiDAR.⁹¹

7.8.1 2021 WMP Update Initiative Statements, Supporting Information, and Analysis

SDG&E’s 2021 WMP update, Initiative 7.3.5.8 LiDAR Inspections of Vegetation Around Transmission Electric Lines and Equipment, directs readers to Initiative 7.3.5.7.⁹² Therefore, Energy Safety did not conduct a separate analysis of the work performed for this initiative.

7.8.2 Energy Safety’s Findings for 2021 WMP Update Initiative 7.3.5.8

See Energy Safety’s findings for Initiative 7.3.5.7.

7.9 Initiative 7.3.5.9 Other Discretionary Inspections of Vegetation Around Distribution Electric Lines and Equipment, Beyond Inspections Mandated by Rules and Regulations

The purpose of this initiative is to inspect the distribution rights-of-way and the adjacent vegetation that may be hazardous, which goes beyond the minimum standards in rules and regulations.⁹³

⁹¹ Resolution WSD-11 – Attachment 2.2: 2021 Wildfire Mitigation Plan Guidelines Template, pages 54-55

⁹² 2021 WMP Update, page 276

⁹³ Resolution WSD-11 – Attachment 2.2: 2021 Wildfire Mitigation Plan Guidelines Template, pages 54-55

7.9.1 2021 WMP Update Initiative Statements, Supporting Information, and Analysis

In its 2021 WMP update, SDG&E states, “SDG&E also continued its enhanced vegetation management activities, including trimming identified high-risk species in the HFTD to a clearance of approximately 25 feet from electrical facilities, where achievable.”⁹⁴ SDG&E continues, “SDG&E's enhanced vegetation management program is consistent with the approach presented in the 2020 WMP. SDG&E continues to focus on applying expanded post-trim clearances on targeted species identified as a higher risk due to growth potential, failure characteristics, and relative outage frequency.”⁹⁵ SDG&E provided a list of species considered a high risk which includes Eucalyptus, Pine, Sycamore, Oak, and Palm.⁹⁶ SDG&E also provided the records of trees that received enhanced clearance in 2021. Excel file “*OEIS_DR142_Q3a.xlsx*” contains tree identification numbers, clearances obtained (in feet), tree species, and HFTD locations. The records showed 1,970⁹⁷ HFTD trees received enhanced clearance, broken down further, 363⁹⁸ trees received clearance greater than 30 feet, and 1,608⁹⁹ received clearance from 20 feet to 30 feet. All tree species listed in the Excel file were species SDG&E considered high risk. Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in these statements regarding enhanced vegetation management.

In its 2021 WMP update, SDG&E states, “The enhanced patrols are timed to occur mid-cycle with the routine scheduled inspection resulting in inspections occurring within the HFTD twice annually.”¹⁰⁰ SDG&E’s 2021 Pre-Inspection Procedures show that SDG&E territory is divided into 133 VMAs. The schedule for each VMA is broken up into Pre-Inspection, Pre-Inspection audit, Tree trim, Tree trim audit, and off-cycle HFTD start date given for the year 2021.¹⁰¹ The schedule also states whether each VMA falls into HFTD territory. If the VMA does not fall in HFTD territory, no off-cycle inspection is conducted.¹⁰² The master schedule does show that two inspections are carried out in HFTD VMAs. Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding enhanced patrols in HFTD.

In its 2021 WMP update, SDG&E states, “SDG&E's tree trimming operations follow the concept of directional pruning, where all branches growing towards the lines are rolled back to direct

⁹⁴ 2021 WMP Update, page 276

⁹⁵ 2021 WMP Update, page 278

⁹⁶ Response to DR-142, question 4

⁹⁷ OIES_DR142_Q3a.xlsx; Sum of column A

⁹⁸ OEIS_DR142_Q3a.xlsx; Sum of Column A; filter column B for 30.1 and greater

⁹⁹ OEIS_DR142_Q3a.xlsx; Sum of Column A; filter column B for 20.0 to 30.0 feet

¹⁰⁰ 2021 WMP Update, page 277

¹⁰¹ 2021 Pre-Inspection Procedure, page 22

¹⁰² 2021 Pre-Inspection Procedure, page 22

the growth away from the lines and to increase the post-trim clearance.”¹⁰³ Energy Safety reviewed 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.”¹⁰⁴ A-300, the Utility Pruning of Trees, defines directional pruning as “pruning unwanted branches back to lateral branches or parent stems that are growing away from the facility.”¹⁰⁵ Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding trimming operations following the concept of directional pruning.

In its 2021 WMP update, SDG&E states, “SDG&E’s vegetation management contractors are kept informed of conditions in advance, allowing them time to relocate crews into safe work areas or to cease operations if required.”¹⁰⁶ Energy Safety reviewed SDG&E’s data response, which stated there were six red flag warnings. Energy Safety has access to SDG&E’s Weatherphone application, which is used to inform crews of weather conditions. The phone application provided current information for SDG&E’s territory regarding Fire Potential Index (FPI), wind speed, temperature, and other weather-related information. SDG&E provided e-mail communication informing tree contractors that Santa Ana weather events that may trigger PSPS protocols during the Thanksgiving weekend of 2021 and informing crews of a potential district standby.¹⁰⁷ Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding contractors being kept informed on weather conditions.

In its 2021 WMP update, SDG&E states, “SDG&E provides electrical equipment training to CAL FIRE representatives in conjunction with joint utility inspections.”¹⁰⁸ SDG&E stated, “Ongoing Covid restrictions prevented the opportunity for joint inspection and training between SDG&E and Cal Fire throughout 2021.”¹⁰⁹ SDG&E further clarified in DR-176, “while SDG&E typically initiates the joint training all is dependent on availability of Cal fire resource personnel.”¹¹⁰ SDG&E also stated, “It’s preferable to conduct joint activities in the second quarter of the year prior to the region’s peak fire season.”¹¹¹ Therefore, even though no joint inspections and training occurred due to Covid-19, Energy Safety’s audit found that SDG&E provided information consistent with an effort to complete the work identified in this statement.

7.9.2 Energy Safety’s Findings for 2021 WMP Update Initiative 7.3.5.9

¹⁰³ 2021 WMP Update, page 277

¹⁰⁴ SDG&E Service agreement with tree trim Contractor, section 10.

¹⁰⁵ BMP Utility Pruning of Trees, page 10

¹⁰⁶ 2021 WMP Update page 278

¹⁰⁷ Response to DR-162, question 2; DR-164_Q2

¹⁰⁸ 2021 WMP Update, page 278

¹⁰⁹ Response to DR-142, question 5a

¹¹⁰ Response to DR-176, question 1a & 1b

¹¹¹ Response to DR-176, question 1a

Based on the analysis above, Energy Safety finds SDG&E provided information consistent with the completion of work identified in the 2021 WMP update Initiative 7.3.5.9: Other Discretionary Inspections of Vegetation Around Transmission Electric Lines and Equipment, Beyond Inspections Mandated by Rules and Regulations.

7.10 Initiative 7.3.5.10 Other Discretionary Inspections of Vegetation Around Transmission Electric Lines and Equipment, Beyond Inspections Mandated by Rules and Regulations

The purpose of this initiative is the inspection of the transmission rights-of-way to identify vegetation hazards.¹¹²

7.10.1 2021 WMP Update Initiative Statements, Supporting Information, and Analysis

SDG&E's 2021 WMP Update, Initiative 7.3.5.10 Other Discretionary Inspections of Vegetation Around Transmission Electric Lines and Equipment, Beyond Inspections Mandated by Rules and Regulations, directs readers to Initiative 7.3.5.9.¹¹³ Therefore, Energy Safety did not conduct a separate analysis for performed work for this initiative.

7.10.2 Energy Safety's Findings for 2021 WMP Update Initiative 7.3.5.10

See Energy Safety's findings for Initiative 7.3.5.9.

7.11 Initiative 7.3.5.11 Patrol Inspections of Vegetation Around Distribution Electric Lines and Equipment

The purpose of this initiative is to inspect distribution right-of-way to identify obvious [vegetation] hazards.¹¹⁴

¹¹² Resolution WSD-11 – Attachment 2.2: 2021 Wildfire Mitigation Plan Guidelines Template, pages 54-55

¹¹³ 2021 WMP Update, page 279

¹¹⁴ Resolution WSD-11 – Attachment 2.2: 2021 Wildfire Mitigation Plan Guidelines Template, pages 54-55

7.11.1 2021 WMP Update Initiative Statements, Supporting Information, and Analysis

SDG&E's 2021 WMP update, Initiative 7.3.5.11 Patrol Inspections or Vegetation Around Distribution Electric Lines and Equipment, directs readers to Initiative 7.3.5.2.¹¹⁵ Therefore, Energy Safety did not conduct a separate analysis of the work performed for this initiative.

7.11.2 Energy Safety's Findings for 2021 WMP Update Initiative 7.3.5.11

See Energy Safety's findings for Initiative 7.3.5.2.

7.12 Initiative 7.3.5.12 Patrol Inspections of Vegetation Around Transmission Electric Lines and Equipment

The purpose of this initiative is to inspect transmission right-of-way to identify obvious [vegetation] hazards.¹¹⁶

7.12.1 2021 WMP Update Initiative Statements, Supporting Information, and Analysis

SDG&E's 2021 WMP update, Initiative 7.3.5.12 Patrol Inspections or Vegetation Around Transmission Electric Lines and Equipment, directs readers to Initiative 7.3.5.2.¹¹⁷ Therefore, Energy Safety did not conduct a separate analysis of the work performed for this initiative.

7.12.2 Energy Safety's Findings for 2021 WMP Update Initiative 7.3.5.12

See Energy Safety's findings for Initiative 7.3.5.2.

7.13 Initiative 7.3.5.13 Quality Assurance/Quality Control of Inspections

¹¹⁵ 2021 WMP Update, page 279

¹¹⁶ Resolution WSD-11 – Attachment 2.2: 2021 Wildfire Mitigation Plan Guidelines Template, pages 54-55

¹¹⁷ 2021 WMP Update, page 279

The purpose of this initiative is to audit completed vegetation work, including its input into “decision-making and related integrated workforce management processes.”¹¹⁸

7.13.1 2021 WMP Update Initiative Statements, Supporting Information, and Analysis

In its 2021 WMP update, SDG&E states, “SDG&E utilizes a third-party contractor to perform quality assurance audits of all its vegetation management activities to measure work quality, contractual adherence, compliance, and to determine the effectiveness of each component of the program. These audits include a statistical analysis of a representative sample of all completed work. Auditing is performed by certified arborists.”¹¹⁹ SDG&E continues, “A minimum random sampling of 15% of completed work is audited to determine compliance with scoping requirements.”¹²⁰ In the data request response, SDG&E states it utilizes a third-party contractor, Environmental Consultants Inc, which performed quality assurance audits in 2021.¹²¹ SDG&E states, “SDG&E uses a 15% random rate as the baseline for auditing the vegetation management activities. SDG&E considers this an acceptable and representative sample of the population of completed work to audit contractor performance.”¹²² SDG&E audits three activities using a 15% random sampling. They include Pre-Inspections, Tree Trimming/Removal, and Pole Brushing.¹²³ SDG&E provided 2021 audit reports from each of the three programs. They depict which VMA this audit was taking place, the contractor name being audited, population size and sample size, along with the pass rate. All the sample audit reports from each of the three vegetation programs had a sample size of 15% and a pass rate of over 98%.¹²⁴ Therefore, Energy Safety’s audit finds that SDG&E provided information consistent with the completion of the work identified in these statements regarding third-party contractor arborists performing a 15% minimum random QC sample.

In its 2021 WMP update, SDG&E states, “Sempra Energy, SDG&E's parent company, performs an annual internal audit of the vegetation management program through its Internal Audit Services Department.”¹²⁵ SDG&E provided an excerpt from Sempra Energy’s audit to review the “adequacy and effectiveness” of delayed vegetation management activities from August 2020 to September 2021.¹²⁶ Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding an internal audit being conducted.

¹¹⁸ Resolution WSD-11 – Attachment 2.2: 2021 Wildfire Mitigation Plan Guidelines Template, pages 54-55

¹¹⁹ 2021 WMP Update, page 279

¹²⁰ 2021 WMP Update, page 280

¹²¹ Response to DR-142, question 6c

¹²² Response to DR-142, question 6b

¹²³ Vegetation Management Audit Procedure, page 6

¹²⁴ Response to DR-142; question 6a; attachment “351_40 - PB Audit Summary and 353_40 - PB Audit Summary”; “450_42 - Post Trim Audit Summary and 673_42 - Post Trim Audit Summary”; Response to DR-164, question 3; DR-164_Q3

¹²⁵ 2021 WMP Update, page 280

¹²⁶ Response to DR-162, question 6; DR-164_Q6

In its 2021 WMP update, SDG&E states, “Before the upcoming 2021 wildfire season, SDG&E’s audit contractor will hire additional personnel to perform an anticipated increase in audit scope and activities.”¹²⁷ In a data request response, SDG&E stated, “Nine additional auditors were hired by SDG&E contractor Environmental Consultants Inc. in 2021.”¹²⁸ SDG&E provided the hire dates of all nine additional auditors in 2021.¹²⁹ The earliest hire date was in March,¹³⁰ and the latest was in November.¹³¹ SDG&E states, “it considers wildfire season to commence in September, which is when the regional Santa Ana conditions tend to begin, and wildfire risks are generally higher.”¹³² SDG&E’s contractor hired three individuals prior to September, with one during September and the rest later in the year. Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding additional personnel hired prior to the 2021 wildfire season.

In its 2021 WMP update, SDG&E states, “Before an annual update, SDG&E anticipates completion of 100% audit on all its enhanced HFTD trim and removal activities.”¹³³ SDG&E provided an Excel file, “OEIS-DR142_Q9a.xlsx” which contained the records of all trees receiving enhanced clearance. The records showed 396¹³⁴ trees received enhanced clearance, 290¹³⁵ were prescribed trimming, and 107¹³⁶ trees were removed. The file also contained the HFTD classification, mitigation date, and audit date. SDG&E’s records indicate all trees received an audit after the mitigation date. Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding 100% audit on its enhanced trimming and removal.

7.13.2 Energy Safety’s Findings for 2021 WMP Update Initiative 7.3.5.13

Based on the analysis above, Energy Safety finds that SDG&E provided information consistent with the completion of the work identified in the 2021 WMP update Initiative 7.3.5.13: Quality Assurance/Quality Control Inspections.

7.14 Initiative 7.3.5.14 Recruiting and Training of Vegetation Management Personnel

¹²⁷ 2021 WMP Update, page 280

¹²⁸ Response to DR-142, question 9b

¹²⁹ Response to DR-164, question 4, DR-164_Q4 & Response to DR-176, question 2

¹³⁰ Response to DR-164, question 2; attachment Empl ID 1000216007_Redacted

¹³¹ Response to DR-164, question 2; attachment Empl ID 1000224802_Redacted

¹³² Response to DR-164, question 2

¹³³ 2021 WMP Update, page 280

¹³⁴ OEIS_DR142_Q9a; sum of column A

¹³⁵ OEIS_DR142_Q9a; sum of A filtered for tree trim

¹³⁶ OEIS_DR142_Q9a; sum of A filter for removal

The purpose of this initiative is to “identify and hire qualified vegetation management personnel” and to ensure they are “adequately trained to perform vegetation management work, according to the utility’s wildfire mitigation plan, in addition to rules and regulations for safety.”¹³⁷

7.14.1 2021 WMP Update Initiative Statements, Supporting Information, and Analysis

In its 2021 WMP Update, SDG&E states, “SDG&E measures the success of contractor training and performance through metrics such as the reduction of customer complaints, outages, claims, notice of violations, ignitions, and safety incidents.”¹³⁸ SDG&E compares safety metrics annually, looking at crew-caused outages, notice of violations, and crew-caused initiations.¹³⁹ In 2021, SDG&E contractors experienced zero crew-caused outages, violations, and crew-caused initiations.¹⁴⁰ SDG&E stated that its two tree contractors, “Utility Tree Service and Davey Tree, experienced a 25% and 49% reduction respectively in the number of reported customer complaints in 2021 compared to the prior year.”¹⁴¹ SDG&E also states both contractors had zero crew caused outages and ignitions, and notice of violations in 2021.¹⁴² Further, 18 “claims,” between both contractors occurred in 2021 per SDG&E.¹⁴³ SDG&E explains that claims associated “vegetation management usually involve allegations of personal or property damage incurred while the contractor was on the claimant’s property conducting tree trimming operations.”¹⁴⁴ SDG&E also provided a graph showing Total Recordable Incident Rates (TRIR) comparing 2020 and 2021. The graph showed on average, incidents in SDG&E decreased prior to 2020.¹⁴⁵ Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding measuring the success of contractor training.

In its 2021 WMP Update, SDG&E states, “SDG&E requires all contractors to perform annual training to address issues such as hazard trees, customer engagement, fire preparedness, and environmental concerns.”¹⁴⁶ In response to a data request, SDG&E stated, “273 training attendees received training on hazard trees, customer engagement, fire preparedness, and environmental concerns.”¹⁴⁷ SDG&E provided the training material for each topic from each contractor. SDG&E also included the sign-in sheets for each training lecture. The sign-in sheets included the training attendee's full name, date of training, and subject of training.¹⁴⁸

¹³⁷ Resolution WSD-11 – Attachment 2.2: 2021 Wildfire Mitigation Plan Guidelines Template, pages 54-55

¹³⁸ 2021 WMP Update, page 280

¹³⁹ Response to DR-164, question 7

¹⁴⁰ Response to DR-164, question 7

¹⁴¹ Response to DR-164, question 7

¹⁴² Response to DR-166, question 7a

¹⁴³ Email, DR-164 and DR-174 response quick follow-up, dated 8/14/2023

¹⁴⁴ Email, DR-164 and DR-174 response quick follow-up, dated 8/10/2023

¹⁴⁵ Response to DR-164, question 7, DR-164_Q7a

¹⁴⁶ 2021 WMP Update, page 281

¹⁴⁷ Response to DR-164, question 8

¹⁴⁸ Response to DR-164 question 8; attachments

Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding annual training being carried out regarding hazard trees, customer engagement, fire preparedness, and environmental concerns.

In its 2021 WMP Update, SDG&E states, “SDG&E personnel attend and participate in contractor-led training modules.”¹⁴⁹ SDG&E personnel attended a contractor-led training on October 13, 2021.¹⁵⁰ An annual training material, given by contractor-led training, one of the topics of discussion was “SDG&E Update,” which was given by an SDG&E employee discussing customer series, environmental, and hazard trees.¹⁵¹ Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding SDG&E personnel attend and participate in contractor-led training modules.

In its 2021 WMP Update, SDG&E states, “SDG&E also requires tree contractors to have fire PPE staged at each job site and at the ready for use.”¹⁵² Energy Safety reviewed SDG&E 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 present in vehicles and at work sites.”¹⁵³ Therefore, Energy Safety’s audit found SDG&E provided information consistent with the completion of the work identified in this statement regarding fire PPE to be stated at each job site.

In its 2021 WMP Update, SDG&E states, “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.”¹⁵⁴ SDG&E provided a sample safety scorecard for one of its tree trim contractors, Davey, from ISNetWorld Safety Clearinghouse.¹⁵⁵ The scorecard time frame covers from March 2021 to March 2023.¹⁵⁶ The score is based on components that are evaluated by the Clearinghouse. Davey Tree received a passing grade by a criterion established by SDG&E.¹⁵⁷ Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding contractors enrolled in ISNetworld safety clearinghouse.

In its 2021 WMP Update, SDG&E states, “SDG&E requires its contractors to document employee training and to provide it to SDG&E upon request.”¹⁵⁸ SDG&E provided an email chain

¹⁴⁹ 2021 WMP Update, page 281

¹⁵⁰ Response to DR-164, question 9a

¹⁵¹ Response to DR-164, question 9a, DR-164_Q9b & Response to DR-176, question 4

¹⁵² 2021 WMP Update, page 281

¹⁵³ Response to DR-70 question 3; Operations and Maintenance Wildland Fire Prevention Plan, page 1

¹⁵⁴ Response to DR-164, question 10

¹⁵⁵ Response to DR-164, question 10a

¹⁵⁶ Response to DR-164, question 10a

¹⁵⁷ Response to DR-164, question 10b

¹⁵⁸ 2021 WMP Update, page 281

from a tree contractor to SDG&E regarding the 2021 annual training. The subject was to discuss scheduling for the 2021 annual training and to have SDG&E personnel attend.¹⁵⁹ SDG&E also included the sign-in sheets for each training lecture. The sign-in sheets included the training attendees' full names, date of training, and subject of training.¹⁶⁰ Therefore, Energy Safety's audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding documentation of employee training.

In its 2021 WMP Update, SDG&E states, "SDG&E requires the tree trim contractors have a dedicated safety representative on the property to conduct ongoing field observations and workforce training and to perform incident investigations."¹⁶¹ SDG&E provided its Contractor Safety Manual, which stipulates, "Each contractor shall appoint a designated safety person, who will support implementation of the required safety plans, programs and requirements listed in this document, as well as other safety requirements determined by contractor..."¹⁶² SDG&E also provided an agenda from which a tree trim contractor provided to their crew on the 2021 Wildland Fire Training.¹⁶³ Also provided was an e-mail communication between the tree contractor and SDG&E regarding the people who attended the training and the agenda that took place during the 2021 Wildland Fire Training.¹⁶⁴ SDG&E also provided an incident report related to a non-fatal injury related to vegetation work. The incident report was conducted by a tree trim contractor in 2021.¹⁶⁵ Therefore, Energy Safety's audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding a safety representative during work operations.

In its 2021 WMP Update, SDG&E states, "SDG&E tracks the success and effectiveness of the contractors' safety program."¹⁶⁶ SDG&E provided a contractor's detailed safety scorecard, which details the metrics within ISNetWorld that SDG&E tracks.¹⁶⁷ The scorecard looks at the contractor's safety programs and gives a score out of 100. Examples related to Cal/OSHA fall protection, Hazard Communication, and Heat Illness Prevention. Other programs include but are not limited to First Aid, hand and/or power tools, or traffic control. The contractor received a score of 100 for each program that was assessed.¹⁶⁸ Therefore, Energy Safety's audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding tracking the effectiveness of contractors' safety programs.

In its 2021 WMP Update, SDG&E states, "SDG&E is currently working with stakeholders to expand the Utility Arborist Trainee program to colleges in Southern California by early 2021."¹⁶⁹

¹⁵⁹ Response to DR-164, question 11

¹⁶⁰ Response to DR-164 question 8; attachments

¹⁶¹ 2021 WMP Update, page 281

¹⁶² Response to DR-164, question 12a attachment; Contractor Safety Manual page 14

¹⁶³ Response to DR-164, question 12b; attachment "DR-164_Q12b_"

¹⁶⁴ Response to DR-164, question 12b; attachment "DR-164_Q12b"

¹⁶⁵ Response to DR-164, question 12c; attachment "DR-164_Q12c"

¹⁶⁶ 2021 WMP Update, page 281

¹⁶⁷ Response to DR-164, question 13

¹⁶⁸ Response to DR-164, question 13; attachment

¹⁶⁹ 2021 WMP Update, page 282

SDG&E provided photograph evidence of ten individuals receiving its certification of completion related to Utility Line Clearance Arborist training.¹⁷⁰ The class was provided at San Diego Community College in 2021, and topics ranged from Cal OSHA Title 8 Arborist Safety Standards, Tree Identification & Biology, Pruning, Herbicide Training, and Electricity & Utility Industry.¹⁷¹ Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding the expansion of the Utility Arborist Trainee program.

In its 2021 WMP Update, SDG&E states, “SDG&E is also collaborating to develop and implement a "Pre-Inspection" curriculum in 2021 with a goal of developing a career path for local students into the utility workforce.”¹⁷² In a data request response, SDG&E stated, “SDG&E began providing feedback in 2021 in the development of a new Pre-inspection curriculum to be added to the ongoing Utility Line Clearance Arborist training program jointly supported by the joint IOUs, California Community College District, San Diego College of Continuing Education, and the California Conservation Corps...SDG&E is scheduled to hold its first two-week Pre-inspection training course in the fall of 2023.”¹⁷³ SDG&E provided a preliminary draft of its Pre-inspection training curriculum. The draft details agenda items related to what is to be taught on a given day, at what time of the day, and what PowerPoint slide is to be used for a given topic.¹⁷⁴ Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding “Pre-Inspection” curriculum.

7.14.2 Energy Safety’s Findings for 2021 WMP Update Initiative 7.3.5.14

Based on the analysis above, Energy Safety finds that SDG&E provided information consistent with the completion of the work identified in the 2021 WMP update Initiative 7.3.5.14: Recruiting and Training of Vegetation Management Personnel.

7.15 Initiative 7.3.5.15 Remediation of At-Risk Species

The purpose of this initiative is to “reduce ignition probability and wildfire consequences attributable to at-risk vegetation species....”¹⁷⁵

7.15.1 2021 WMP Update Initiative Statements, Supporting Information, and Analysis

¹⁷⁰ Response to IEDR18 question 11; IMG_4055.jpg

¹⁷¹ Response to IEDR18 question 11; Arborist Training Certification Final 4

¹⁷² 2021 WMP Update, page 282

¹⁷³ Response to DR-164, question 14a

¹⁷⁴ Response to DR 164 question 14; DR-164_Q14

¹⁷⁵ Resolution WSD-11 – Attachment 2.2: 2021 Wildfire Mitigation Plan Guidelines Template, pages 54-55

SDG&E's 2021 WMP Update, Initiative 7.3.5.15 Remediation of At-Risk Species, directs readers to Initiatives 7.3.5.2. and 7.3.5.9.¹⁷⁶ Therefore, Energy Safety did not conduct a separate analysis of the work performed for this initiative.

7.15.2 Energy Safety's Findings for 2021 WMP Update Initiative 7.3.5.15

See Energy Safety's findings for Initiatives 7.3.5.2 and 7.3.5.9.

7.16 Initiative 7.3.5.16 Removal and Remediation of Trees with Strike Potential to Electric Lines and Equipment (Hazard Tree Removal and Right Tree-Right Place)

The purpose of this initiative is to "remediate trees that could potentially strike electrical equipment if failure at the ground-level of the tree or branch breakout within the canopy."¹⁷⁷

7.16.1 2021 WMP Initiative Statements, Supporting Information, and Analysis

In its 2021 WMP Update, SDG&E states, "SDG&E has a robust tree removal program that targets problematic species such as Eucalyptus, Palms, Century plant, Bamboo, certain species of Pine, Oak, and Sycamore."¹⁷⁸ SDG&E continues, "SDG&E Vegetation Management performs hazard tree inspections and abatement in all areas of its service territory where trees pose a potential threat to the power lines."¹⁷⁹ SDG&E concludes, "SDG&E inspects all trees under and adjacent to the lines to determine risk potential...Within the HFTD, SDG&E performs a hazard assessment twice annually of all trees located within the utility strike zone."¹⁸⁰

Energy Safety reviewed SDG&E's 2021 Pre-Inspection Procedures. It stipulates that its Pre-Inspectors patrol every span of overhead conductors following the Pre-Inspection Procedures.¹⁸¹ SDG&E states that it performs two inspections annually. The first inspection looks at the entire service territory, while the second inspection focuses on HTFD.¹⁸² Energy Safety reviewed Excel files "Response_DR_18_Question_7_2" and

¹⁷⁶ 2021 WMP Update, page 282

¹⁷⁷ Resolution WSD-11 – Attachment 2.2: 2021 Wildfire Mitigation Plan Guidelines Template, pages 54-55

¹⁷⁸ 2021 WMP Update, page 282

¹⁷⁹ 2021 WMP Update, page 283

¹⁸⁰ 2021 WMP Update, page 283

¹⁸¹ Pre-Inspection Procedure, page 4

¹⁸² Pre-Inspection Procedure, page 5

Response_DR_18_Question_8_3” for sample reports of off-cycle inspection activities.¹⁸³ The files contain records of 41 vegetation work orders, specifics on location using longitude and latitude, circuit number, and pole ID. Other information included species name, number of vegetation removed, and date of activity. SDG&E’s Pre-Inspection Procedures also give an overview of what SDG&E defines as a Reliability Trees (hazard trees) and give a few examples of Reliability Tree defects an inspector should evaluate.¹⁸⁴ Energy Safety also reviewed the SDG&E spatial quarterly data report (QDR) provided throughout 2021. Each report contained information on completed work from each quarter of SDG&E service territory that includes species name, geographical coordinates of work done, growth rate, and mitigation type.¹⁸⁵ SDG&E provided a flow chart that shows a hazard tree cycle from Pre-inspection, to audit, mitigation, and, then to information being sent to Energy Safety by the QDR submission. The flow chart illustrated a hazard Eucalyptus tree, ID GA3648, which the Pre-Inspector inspected in January 2021. Weak branch attachments were observed a prescription of trim was prescribed. An auditor then audits the Pre-Inspectors’ findings and prescriptions to verify the correct mitigation was prescribed. The tree was trimmed in May of 2021. A post-trim audit was completed in August the same year, which passed the work of the tree crew.¹⁸⁶ Energy Safety then received the spatial data of the Eucalyptus tree in the QDR submission as a completed vegetation point.¹⁸⁷ Energy Safety was also able to verify that SDG&E did focus on problematic species in 2021 by looking at each spatial data unique attribute that indicates the name of the species mitigated. SDG&E also gave six examples of Reliability trees removed in 2021.¹⁸⁸ In the Excel file, “*OEIS-121 Q8.xlsx*” SDG&E provided the tree ID of the Reliability trees removed, the date of the mitigation, and the type of mitigation.¹⁸⁹ Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in these statements regarding tree inspections and removals.

In its 2021 WMP Update, SDG&E states, “Contractors conduct annual hazard tree training for all field personnel.”¹⁹⁰ SDG&E continues, “SDG&E requires contractors to perform annual hazard tree training for their field personnel as a refresher and to learn the latest evaluation techniques.”¹⁹¹ In response to a data request, SDG&E stated, “273 training attendees received training on hazard trees.”¹⁹² SDG&E provided the training material for the hazard tree training from each contractor. All training material covered how to identify hazard trees by look at tree characteristics.¹⁹³ SDG&E also included the sign-in sheets for each training lecture. The sign-in sheets included the training attendee’s full name, date of training, and subject of training.¹⁹⁴

¹⁸³ Response to IE DR18, question 7 and 8; attachments

¹⁸⁴ Pre-Inspection Procedure, page 10-11

¹⁸⁵ QDR data submitted Q1 May 1st, Q2 August 1st, Q3 November 1st, Q4 February 1st

¹⁸⁶ Response to DR-189, question 1

¹⁸⁷ QDR data submitted Q1 May 1st, Q2 August 1st, Q3 November 1st, Q4 February 1st

¹⁸⁸ OEIS-121 Q8.xlsx; filter of column D for “completed, Green, Reliability Removal”

¹⁸⁹ Response to DR-121, question 8

¹⁹⁰ 2021 WMP Update, page 283

¹⁹¹ 2021 WMP Update, page 283

¹⁹² Response to DR-164, question 8

¹⁹³ Response to DR-164, question 8; attachments ECI 2021 Tree Risk Assessment, UTS 2021 Hazard Tree Training, DRG 2021 Hazard Tree and Environmental Training

¹⁹⁴ Response to DR-164 question 8; attachments

Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding hazard tree training.

In its 2021 WMP Update, SDG&E states, “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.”¹⁹⁵ SDG&E provided an Excel file, “OEIS-DR142_Q9a.xlsx” which contained the records of trees removed. The records showed 107¹⁹⁶ trees were removed. The file also contained the HFTD classification, mitigation date, and audit date. SDG&E’s records indicate all trees received an audit after the mitigation date. SDG&E stated in a later data response that the tree records in Excel file “OEIS-DR142_Q9a.xlsx” represent 126 tree units removed.¹⁹⁷ Energy Safety and SDG&E further had a meeting to discuss the SDG&E responses to data requests.¹⁹⁸ SDG&E explained that the statement above is in reference to SDG&E’s Off-Cycle patrols related to reliability tree removal. Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding 100% audit on trees removed.

In its 2021 WMP Update, SDG&E states, “SDG&E conducts a thorough investigation of all tree-related outages and maintains an investigation database to track and record the events.”¹⁹⁹ Energy Safety reviewed SDG&E spatial QDR data, which provided tree-related outages. The data provided tells us the type of species that caused the outages and the location of the circuit that was affected.²⁰⁰ SDG&E also provided an investigation report in which a Eucalyptus tree fell onto the conductors due to strong winds.²⁰¹ The investigation report gave tree characteristics like tree height, diameter at breast height, last trim date, and summary report of possible cause. The report stated the possible causes of the fall were saturated soil and heavy winds.²⁰² Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding SDG&E performing an investigation of all tree-related outages and maintaining a database to track and record events.

In its 2021 WMP Update, SDG&E states, “In 2021, SDG&E will continue its robust hazard tree inspection and trimming operations. SDG&E will begin implementing an internal workforce of internal SDG&E inspectors to perform its off-cycle, enhanced inspections and hazard tree assessments within the HFTD.”²⁰³ Energy Safety reviewed SDG&E’s Vegetation Management Highest Threat District (HFTD) Tree Inspection Scope of Work. It overlays the scope of work, which follows SDG&E’s Pre-Inspection Procedure plus additional elements of inspecting trees within the strike zone (trees that could contact power conductors) and HFTD Off-Cycle Scope of

¹⁹⁵ 2021 WMP Update, page 283

¹⁹⁶ OEIS_DR142_Q9a; sum of A filter for removal

¹⁹⁷ Response to DR-190, question 2

¹⁹⁸ Teams Meeting on September 5, 2023

¹⁹⁹ 2021 WMP Update, page 283

²⁰⁰ QDR data submitted Q1 May 1st, Q2 August 1st, Q3 November 1st, Q4 February 1st

²⁰¹ DR-164 response to question 17, attachment DR-164_Q17.pdf

²⁰² DR-164 response to question 17, attachment DR-164_Q17.pdf

²⁰³ 2021 WMP Update, page 283

Work, which discusses Hazard Tree Inspection protocols that direct inspectors to do a 360-degree inspection for defects of strike trees.²⁰⁴ SDG&E's Pre-Inspection Procedure states that "the second annual [Off-cycle] inspection activity of VMAs that include HFTD is performed by SDG&E personnel..."²⁰⁵ The off-cycle inspection includes enhanced inspection in which pre-inspectors follow the Vegetation Management Highest Threat District Tree Inspection Scope of work.²⁰⁶ Therefore, Energy Safety's audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding a hazard tree inspection and trimming operations.

In its 2021 WMP Update, SDG&E states, "SDG&E also offers free tree replacements if an existing tree cannot be maintained safely near power lines."²⁰⁷ Energy Safety reviewed the SDG&E's Right Tree Right Place webpage, which identifies tree species that are safe to plant around power conductors, along with planting tips.²⁰⁸ Energy Safety also reviewed SDG&E's Tree Rebate Program, in which SDG&E customers can receive a \$35 rebate for planting or plotting a 1- or 5-gallon tree/plant species and a \$50 rebate for a 15-gallon tree/plant.²⁰⁹ In response to DR-164, SDG&E states that 503 trees were replaced with utility-friendly trees. As an example of the tree replacement, SDG&E provided a recipient of the free tree replacement program by providing the address.²¹⁰ Therefore, Energy Safety's audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding free tree replacements.

In its 2021 WMP Update, SDG&E states, "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."²¹¹ Energy Safety reviewed SDG&E internal documents "Bamboo Project Procedures 2020" and "2020 Century Plant Patrol." The Bamboo Procedure outlines the inspection timeline and reporting for Bamboo species. Inspection of bamboo consists of two patrols carried out; the first patrol identifies actively growing bamboo, while the second patrol identifies new growth or regrowth.²¹² The "2020 Century Plant Patrol Procedure" outlines the time of inspections and work orders for tree crews for pruning and removal.²¹³ SDG&E provided its Bamboo Patrol and Century Plant Patrol procedures used in 2021. In August of 2021, a total of 36 VMAs were Bamboo Patrols.²¹⁴ In May of 2021, a total of 106 VMAs were Century Plant Patrols.²¹⁵ In total, for 2021, SDG&E inspected 7,276 century plants and 1,451 bamboo plants.²¹⁶ Therefore, Energy Safety's audit found that SDG&E provided information

²⁰⁴ Vegetation Management Highest Threat District (HFTD) Tree Inspection Scope of Work, pages 1-2

²⁰⁵ Pre-Inspection Procedure, page 3

²⁰⁶ Pre-Inspection Procedure, page 5

²⁰⁷ 2021 WMP Update, page 284

²⁰⁸ <https://www.sdge.com/safety/tree-planting-guide> (accessed June 11, 2023)

²⁰⁹ <https://www.sdge.com/trees/community-tree-programs/community-tree-rebate-program> (accessed June 11, 2023)

²¹⁰ Response to DR-164, question 18

²¹¹ 2021 WMP Update, page 284

²¹² Bamboo Project Procedure 2020

²¹³ 2020 Century Plant Patrol Procedure

²¹⁴ Response to DR-164 question 19; attachment "DR-164_Q19a_"

²¹⁵ Response to DR-164 question 19; attachment "DR-164_Q19a"

²¹⁶ Response to DR-164 question 19

consistent with the completion of the work identified in this statement regarding the inspection of Bamboo and Century plants.

7.16.2 Energy Safety’s Findings for 2021 WMP Update Initiative 7.3.5.16.

Based on the analysis above, Energy Safety finds SDG&E provided information consistent with the completion of the work identified in the 2021 WMP update Initiative 7.3.5.16: Removal and Remediation of Trees with Strike Potential to Electric Lines and Equipment (Hazard Tree Removal and Right Tree-Right Place).

7.17 Initiative 7.3.5.17 Substation Inspections

The purpose of this initiative is to inspect “vegetation surrounding substations.”²¹⁷

7.17.1 2021 WMP Update Initiative Statements, Supporting Information, and Analysis

SDG&E’s 2021 WMP Update, Initiative 7.3.5.17 Substation Inspections, directs readers to Initiatives 7.3.5.2. and 7.3.5.9.²¹⁸ Therefore, Energy Safety did not conduct a separate analysis of the work performed for this initiative.

7.17.2 Energy Safety’s Findings for 2021 WMP Update Initiative 7.3.5.17

See Energy Safety’s findings for Initiatives 7.3.5.2 and 7.3.5.9

7.18 Initiative 7.3.5.18 Substation Vegetation Management

The purpose of this initiative is to take actions “to reduce the ignition probability and wildfire consequences attributable to contact from vegetation to substation equipment.”²¹⁹

²¹⁷ Resolution WSD-11 – Attachment 2.2: 2021 Wildfire Mitigation Plan Guidelines Template, pages 54-55

²¹⁸ 2021 WMP update, page 284

²¹⁹ Resolution WSD-11 – Attachment 2.2: 2021 Wildfire Mitigation Plan Guidelines Template, pages 54-55

7.18.1 2021 WMP Update Initiative Statements, Supporting Information, and Analysis

SDG&E's 2021 WMP Update, Initiative 7.3.5.18 Substation Vegetation management, directs readers to Initiatives 7.3.5.2. and 7.3.5.9.²²⁰ Therefore, Energy Safety did not conduct a separate analysis of the work performed for this initiative.

7.18.2 Energy Safety's Findings for 2021 WMP Update Initiative 7.3.5.18

See Energy Safety's findings for Initiatives 7.3.5.2 and 7.3.5.9.

7.19 Initiative 7.3.5.19 Vegetation Inventory System

The purpose of this initiative is to have a "centralized inventory of vegetation clearances" that includes species, growth forecast, and grow-in, fly-in, or fall-in risk.²²¹

7.19.1 2021 WMP Update Initiative Statements, Supporting Information, and Analysis

In its 2021 WMP Update, SDG&E states, "SDG&E's database contains records for approximately 457,000 known, specific trees located near its electric power lines."²²² SDG&E provided a 2021 tree inventory count of 470,337 trees from its Vegetation Management System.²²³ In SDG&E territory for both transmission and distribution for 2021, a total of 149,000 trees were trimmed, and SDG&E removed a total of 7,934 trees.²²⁴ SDG&E stated, "The inventory tree population changes daily as new trees are added to the system based on the inventory tree criteria, and other trees are physically removed in the field."²²⁵ Therefore, Energy Safety's audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding a database containing specific tree records.

In its 2021 WMP Update, 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."²²⁶ SDG&E provided a screenshot from the Vegetation Management System showing a specific Eucalyptus tree trim

²²⁰ 2021 WMP Update, page 284

²²¹ Resolution WSD-11 – Attachment 2.2: 2021 Wildfire Mitigation Plan Guidelines Template, pages 54-55

²²² 2021 WMP Update, page 285

²²³ Response to DR-164, question 20; DR-164_Q20

²²⁴ Response to DR-164, question 20; DR-164_Q20

²²⁵ Response to DR-164, question 20

²²⁶ 2021 WMP Update, page 285

history, growth rate characteristic, and geographical location.²²⁷ Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding the monitoring of trees in SDG&E inventory.

7.19.2 Energy Safety’s Findings for 2021 WMP Update Initiative

7.3.5.19

Based on the analysis above, Energy Safety finds SDG&E provided information consistent with the completion of the 2021 WMP update Initiative 7.3.5.19: Vegetation Inventory System.

7.20 Initiative 7.3.5.20 Vegetation Management to Achieve Clearances around Electric Lines and Equipment

The purpose of this initiative is “to ensure that vegetation does not encroach upon the minimum clearances in GO95.”²²⁸

7.20.1 2021 WMP Update Initiative Statements, Supporting Information, and Analysis

In its 2021 WMP Update, SDG&E states, “SDG&E performs an environmental review in advance of all new pole brushing activities to assess impacts to protected species and habitat.”²²⁹ SDG&E provided the Excel file “DR-164_Q22.xlsx,” which details new pole brushing activities that received an environmental review in 2021.²³⁰ The file contained the pole number, date of environmental review, and date and time of pole brushing. In total, 68 new poles received an environmental review.²³¹ Most received an environmental review prior to pole brushing, but three poles received pole brushing activities prior to an environmental review taking place. All three poles received an environmental review in May, but the pole brushing activity was completed in April for two poles, and the third pole was completed in February. Therefore, Energy Safety’s audit found that SDG&E did not provide information consistent with the completion of the work identified in this statement regarding the environmental review conducted prior to pole brushing.

In its 2021 WMP update, SDG&E states, “SDG&E performs required pole brushing activities on subject pole located within the State Responsibility Area (SRA) per PRC 4292.”²³² SDG&E

²²⁷ Response to DR-164, question 21; DR-64_Q21

²²⁸ Resolution WSD-11 – Attachment 2.2: 2021 Wildfire Mitigation Plan Guidelines Template, pages 54-55

²²⁹ 2021 WMP Update, page 286

²³⁰ Response to DR-164, question 22; attachment “DR-164_Q22.xlsx”

²³¹ DR-164_Q22.xlsx; sum of column C

²³² 2021 WMP Update, page 288

continues, “SDG&E brushes approximately 34,000 distribution poles that have non-exempt subject hardware attached.”²³³ Energy Safety reviewed SDG&E’s Pole Brush Pre-Inspection Guidelines for Experienced Pre-Inspections/Auditors, which details pole brushing required by Public Resource Code section 4292. The overview addresses when Public Resources Code section 4292 applies and pole clearance requirements.²³⁴ In SDG&E spatial QDR submissions throughout the year, Energy Safety is given geographical location points for completed pole brushing for each required pole. In total SDG&E provided completion points on 35,000 poles,²³⁵ 1,000 over the SDG&E stated number in the 2021 WMP Update. Therefore, Energy Safety’s audit found that SDG&E provided information consistent with the completion of the work identified in this statement regarding pole brushing over 34,000 non-exempt distribution poles.

7.20.2 Energy Safety’s Findings for 2020 WMP Initiative 7.3.5.20

Based on the analysis above, Energy Safety finds SDG&E did not complete all the work of the 2021 WMP Initiative 7.3.5.20: Vegetation Management to Achieve Clearances around Electric Lines and Equipment. See Section 8.1 of this audit for a list of corrective actions.

8. CONCLUSION

Energy Safety reviewed all 20 initiatives pertaining to vegetation management in SDG&E’s 2021 WMP Update. Energy Safety found that SDG&E did not complete the work required by one initiative (No. 7.3.5.20) with respect to environmental reviews for three newly installed poles. Energy Safety found that SDG&E performed the work required for the other 19 initiatives in the WMP.

This audit is not an assessment of the quality of SDG&E’s execution of its vegetation management program.

See Table 4 below for a summary of Energy Safety’s findings and corrective actions for SDG&E pertaining to this audit. Within 10 business days following receipt of this audit, SDG&E must submit a response to the Corrective Actions listed in Table 4 below, as well as supporting documentation. SDG&E must title its response “SDG&E 2021 SVM Audit Corrective Action Plan” and submit the response on the 2021 SVM Docket in Energy Safety’s E-Filing System.

²³³ 2021 WMP Update, page 288

²³⁴ Pole Brush Pre-Inspection Guidelines For Experience Pre-Inspections/Auditors, pages 3-6

²³⁵ Spatial QDR data submitted Q1 May 1st 2021, Q2 August 1st 2021, Q3 November 1st 2021, Q4 February 1st 2022

8.1 Corrective Action

Table 4: Findings from Energy Safety's 2021 SVM Audit of SDG&E

Initiative Number	Finding	Corrective Action
7.3.5.20	Failure to perform an environmental review in advance of new pole brushing activities.	SDG&E shall a) provide a reason why it failed to perform an environmental review for poles P519482, P618021, and P110791 prior to pole brushing; and b) detail the steps it is taking to ensure vegetation management operations are consistent with statements made in its WMP for this initiative.

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