



March 18, 2024

To: Liberty Utilities (Liberty)
Dan Marsh
Senior Manager, Rates and Regulatory Affairs
701 National Avenue
Tahoe Vista, CA 96148

SUBJECT: Office of Energy Infrastructure Safety's Audit and Report on Liberty's 2021 Substantial Vegetation Management Audit

Pursuant to the requirements of California Public Utilities Code section 8386.3(c)(5)(C), the Office of Energy Infrastructure Safety (Energy Safety) completed its final audit and report on Liberty's 2021 Substantial Vegetation Management work. Energy Safety finds that Liberty substantially complied with the substantial portion of the vegetation management requirements in its 2021 Wildfire Mitigation Plan Update.

Pursuant to statutory requirements, a copy of this report is issued to Liberty, published on Energy Safety's 2021 SVM Docket¹ and provided to the California Public Utilities Commission.

Sincerely,

A handwritten signature in black ink, appearing to read "Shannon O'Rourke".

Shannon O'Rourke
Deputy Director | Electrical Infrastructure Directorate
Office of Energy Infrastructure Safety

Cc:

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¹ All documents related to LU's 2021 SVM audit are available on Energy Safety's e-filing under the "[2021-SVM](#)" docket and available here: (<https://efiling.energysafety.ca.gov/Lists/DocketLog.aspx?docketnumber=2021-SVM> [accessed March 14, 2024]).



OFFICE OF ENERGY INFRASTRUCTURE SAFETY
2021 SUBSTANTIAL VEGETATION
MANAGEMENT AUDIT AND REPORT
LIBERTY UTILITIES

March 2024

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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 The 2021 WMP guidelines contained 20 initiatives in the vegetation management section. Four (4) of the initiatives from the WMP guidelines do not apply to the 2021 vegetation management activities conducted by Liberty Utilities (Liberty). 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 Liberty's 2021 WMP Update and conducted this audit to determine if Liberty performed the work required by each of those commitments and statements.

In performing the audit, Energy Safety found that Liberty performed the work required for the vegetation management initiatives in its 2021 WMP Update, as detailed in Table 1 below. As a result of Liberty completing all the work required, no corrective actions are required, and a subsequent Audit Report will not be prepared by Energy Safety.

Table 1. Energy Safety's Analysis of Liberty's 2021 WMP Update Vegetation Management Initiatives

2021 WMP Update Initiative Number	2021 WMP Update Initiative Name	Findings ³
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

¹ Cal. Pub. Util. Code §8386.3, subd. (c)(5)(A); 2023 Compliance Guidelines, Section 6.1, page 14.

² *Id.*

³ There were 20 initiatives, four (4) were not applicable to Liberty since they did not have the infrastructure, therefore, there are 16 total verifiable statements.

2021 WMP Update Initiative Number	2021 WMP Update Initiative Name	Findings ³
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 VM Activities	Performed all required work
7.3.5.6	Improvement of Inspections	Performed all required work
7.3.5.7	LiDAR Inspections of Vegetation Around Distribution Electric Lines and Equipment	Performed all required work
7.3.5.9	Other Discretionary Inspection 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 Inspection 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
7.3.5.13	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
7.3.5.17	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 Clearances Around Electric Lines and Equipment	Performed all required work

2. Scope of the Substantial Vegetation Management Audit

To conduct this audit, Energy Safety evaluated the vegetation management section of Liberty's 2021 WMP Update.⁴ The 2021 WMP Update guidelines contained 20 initiatives in the vegetation management section. Four (4) of the initiatives from the WMP guidelines do not apply to the 2021 vegetation management activities conducted by Liberty. In reviewing the 16 applicable vegetation management initiatives in Liberty's 2021 WMP Updates, Energy Safety identified both quantitative commitments (e.g., miles of lines to inspect, minimum work quality thresholds, etc.) and verifiable statements (e.g., the utility will hold public meetings with communities regarding future vegetation management activities, the utilities will train personnel on utility protocols, etc.) made by Liberty. Energy Safety then reviewed available information and requested additional documentation to support the assessment of whether Liberty met its quantitative commitments and executed its verifiable statements.

On February 7, 2022, Liberty submitted a letter to Energy Safety via Energy Safety's e-filing system notifying that it had "completed a substantial portion of the vegetation management requirements of its 2021 Wildfire Mitigation Plan."⁵

⁴2021 WMP Update guidelines, Resolution WSD-011, attachment 2.2, page 54-55:

<https://energysafety.ca.gov/wp-content/uploads/docs/wmp-2021/docs/352460864.pdf> (accessed May 23, 2023).

⁵ Notice of Substantial Vegetation Management Completion

<https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=52220&shareable=true> (accessed March 21, 2022).

3. Background

The following section provides an overview of Liberty's various vegetation management programs described in its 2021 WMP Update.

3.1 Vegetation Management Programs

Liberty implements the following programs to perform vegetation management work along its distribution lines: Routine Vegetation Maintenance, Enhanced Vegetation Management, LiDAR Inspections, Patrol Inspections and Quality Assurance/Quality Control Program. Each of these programs is described in more detail below for reference throughout the audit.

- **Routine Vegetation Maintenance:** detailed inspections of entire circuits to prescribe pruning and removal of vegetation as a safeguard against grow-ins or fall-ins and to conform to required laws and regulations.⁶
- **Enhanced Vegetation Management:** focuses on removing additional trees under and adjacent to lines that would be future grow-in issues, clearing brush from around all utility poles, and removal of all debris left behind including slash from brush that was previously lopped and scattered and wood that was created after felling trees.⁷
- **LiDAR Inspection:** plan to inspect vegetation around electric lines and equipment for approximately half of its service territory, including all line miles in the Extreme (Tier 3) High Fire Threat District.⁸
- **Patrol Inspections:** performed by completing a Limited Visual Assessment per ANSI A300 (Part 9) Tree Risk Assessment and Liberty's Hazard Tree Management Plan. This is accomplished by conducting an assessment from one side of the tree (side nearest the electric facilities) and can be ground-based, vehicle-based, or aerial-based, as appropriate for the site conditions, type of infrastructure, and tree population being considered.⁹
- **Quality Assurance/Quality Control Program:** QA/QC was performed in higher percentages in Tier 3 and Tier 2 HFTD with a smaller percentage being performed in non-HFTD areas.¹⁰

⁶ Liberty 2021 WMP Update, page 107.

⁷ Liberty 2021 WMP Update, page 110.

⁸ Liberty 2021 WMP Update, page 112.

⁹ Liberty 2021 WMP Update, page 114.

¹⁰ Liberty 2021 WMP Update, page 115.

3.2 2021 WMP Update Vegetation Management Initiatives

In its 2021 WMP Update, Liberty identified 20 vegetation management initiatives (4 of which are not applicable to work conducted in 2021), as listed below.

1. Additional Efforts to Manage Community and Environmental Impacts
2. Detailed Inspections of Vegetation Around Distribution Electric Lines and Equipment
3. Detailed Inspections of Vegetation Around Transmission Electric Lines and Equipment (not applicable)
4. Emergency Response Vegetation Management Due to Red Flag Warning or Other Urgent Conditions
5. Fuel Management and Reduction of “Slash” from VM 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 (not applicable)
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 (not applicable)
13. Quality Assurance/Quality Control of Inspections
14. Recruiting and Training of Vegetation Management Personnel
15. Remediation of At-Risk Species
16. Removal and Remediations of Trees with Strike Potential to Electric Lines and Equipment (not applicable)
17. Substation Inspections
18. Substation Vegetation Management
19. Vegetation Inventory System
20. Vegetation Management to Achieve Clearances around Electric Lines and Equipment

4. Analysis

This section contains an initiative-by-initiative analysis of all vegetation management initiatives in Liberty’s 2021 WMP Update. Within each subsection, verifiable statements, supporting information, and Energy Safety analysis are provided for each initiative followed by a summary of Energy Safety’s disposition on utility compliance.

4.1 Initiative 7.3.5.1: Additional Efforts to Manage Community and Environmental Impacts

The purpose of this initiative is to “mitigate negative impacts from utility vegetation management to local communities and the environment, such as coordination with communities to plan and execute vegetation management work or promotion of fire-resistant planting practices.”¹¹

4.1.1 2021 WMP Update Initiative Statements, Supporting Information, and Analysis

In its 2021 WMP Update, Liberty states that it is “committed to carrying out vegetation management in an environmentally responsible manner, while supporting the principles of ecologically sustainable development. Liberty’s [Vegetation Management] plan includes resource protection measures that are designed to comply with regulations adopted by state, federal, and local government agencies. Implementing best practices for water quality, terrestrial wildlife, sensitive and rare plants, non-native invasive plant management, and hazardous spill control help to address environmental concerns that may arise from vegetation management activities.”¹² Energy Safety reviewed Liberty’s Vegetation Management Plan, which included sections specific to water quality, terrestrial wildlife, sensitive and rare plants, non-native invasive plant management, and hazardous spill control. Therefore, Energy Safety’s audit found Liberty provided information consistent with the completion of the work identified in this statement regarding carrying out vegetation management in an environmentally responsible manner.

¹¹ 2021 WMP Update guidelines, Resolution WSD-011, attachment 2.2, page 54: <https://energysafety.ca.gov/wp-content/uploads/docs/wmp-2021/docs/352460864.pdf> (accessed May 3, 2023).

¹² Liberty 2021 WMP Update, page 104.

Liberty's 2021 WMP Update continues by stating that "Liberty is developing comprehensive communication plans to educate and inform its communities of current and planned VM activities and is dedicated to partnering with community leaders and local businesses to mitigate any potential negative impacts."¹³ Energy Safety reviewed examples of date stamped documentation¹⁴ showing Liberty's efforts to develop comprehensive communication plans to educate and inform communities of current and planned vegetation management activities in 2021, such as postcards and meeting agendas. These documents were sent to customers in 2021. Liberty also provided an email chain that started on March 2, 2021, ending in a meeting on May 13, 2021, which discussed the development of a post card to be sent out on planned vegetation management activities. Liberty also provided examples of date stamped documentation¹⁵ showing Liberty and community leaders/local businesses partnerships worked to mitigate negative impacts in 2021. Finally, Liberty provided two emails to Vail Reports which document notification to Vail Reports of upcoming work that was to be performed on property including vegetation management. Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the work identified in this statement regarding communication planning.

In its 2021 WMP Update, Liberty states, "It is normal VM procedure for contract pre-inspectors and line clearance tree contractors to leave door hangers for pruning notifications."¹⁶ Energy Safety reviewed examples of door hangers¹⁷ used as a pruning notification in 2021. Liberty also provided a copy of the hanger that was left as a pruning notification. Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the work identified in this statement regarding door hangers for pruning notifications.

Liberty's 2021 WMP Update explains that "Notice of Intent Letters and Tree Work Notification Forms are mailed to customers where tree removals are required (but contact was not made with the customer in the field or over the phone) and is also standard procedure."¹⁸ Liberty stated that a total of 758 Notice of Intent Letters and Tree Work Notification Forms were sent in 2021. Liberty provided a copy of a letter dated May 19, 2021,¹⁹ notifying a customer, and requesting the return of a Tree Removal Notification form.²⁰ Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the work identified in this statement regarding Notice of Intent Letters and Tree Work Notification Forms.

¹³ Liberty 2021 WMP Update, page 104.

¹⁴ DR-130, response to question 1.a "Response to Q1.a.pdf."

¹⁵ DR-130, response to question 1.b "Response to Q1.b.pdf."

¹⁶ Liberty 2021 WMP Update, page 104.

¹⁷ DR-130 response to question 2 "Liberty-VM-Door-Hanger-2021.pdf."

¹⁸ Liberty 2021 WMP Update, page 104.

¹⁹ DR-130, response to question 3.a "Response to Q3.pdf."

²⁰ DR-130, response to question 3.b "Response to Q3.pdf."

Per Liberty’s 2021 WMP Update, “Liberty piloted a pre-notification letter for the 7300 Phase 6 WMP re-conductor project, Tahoe City 7300 routine vegetation maintenance, and the Highlands HOA Fuels-Management Project prior to inspections taking place in early 2021.”²¹ Energy Safety reviewed a letter dated January 6, 2021,²² notifying customers of the Liberty 7300 Project. Liberty also provided an undated form letter for Tahoe customers²³ to support the sending of the Tahoe City 7300 Phase 6 WMP reconductor project. Liberty also stated it completed a study in 2021 to evaluate the effectiveness of various communication media, which helped determine how to enhance vegetation management messaging. Liberty generally uses four methods of providing large scale communications including bill inserts, social media, email, and direct mail. For this pilot, Liberty created direct mail notifications formatted as postcards to inform customers of upcoming vegetation inspections or maintenance. Liberty further stated that it piloted a project in 2021 in the Highlands HOA neighborhood²⁴ to develop a coordinated effort between routine and special projects. Liberty stated this project aimed to reduce fuel created by vegetation maintenance and provide support to the local fire agency and that this effort resulted in more than doubling the number of tree removals required by routine notification allowing for much greater clearances in the neighborhood and significantly reducing future maintenance by removing trees out of the trim cycle. Liberty stated it worked closely with the local Forest Fuels Coordinator to provide additional resources supporting the North Tahoe Fire Protection District’s (“NTFPD”) chipping program by removing debris homeowners stacked at the curb. As an additional fuel reduction effort, Liberty stated its tree contractors removed any woody debris—not related to line clearance work—up to 10” in diameter in support of NTFPD’s residential curbside chipping program. Liberty provided an Excel spreadsheet²⁵ documenting the customer sites where services were to be provided. The list provides an inspection date to support when the inspections occurred. Therefore, Energy Safety’s audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the piloted pre-notification programs.

²¹ Liberty 2021 WMP Update, page 104.

²² DR-130 response to question 4.a “Liberty 7300 Project Letter.pdf.”

²³DR-130, response to question 4.b “21-176 LU_Pre Inspection_combined.pdf.”

²⁴ DR-130 response to question 4.a “Highlands Winter 2021 Newsletter.pdf.”

²⁵ DR-130, response to question 5 “2021 SVM DR-130 Q5.xlsx.”

Liberty's 2021 WMP Update continues by stating, "Liberty requires that all such activities are performed in accordance with its documented resource protection measures to mitigate potential negative environmental impacts."²⁶ Liberty stated that VM personnel are required to perform work in accordance with applicable resource protection policies, procedures, and laws. Project specific resource protection measures are issued by land managers and provided to crews performing work. Liberty also stated it verifies VM activities are performed in accordance with applicable resource protection measures through post work verification and project oversight. Liberty provided documentation showing contact with local forest agencies²⁷ discussing the proposed tree removal/clean up in the proposed areas. These documents were for the Rainbow Tract and Lake Tahoe Basin. Liberty also provided the QC review performed on the Pine Lodgepole area.²⁸ Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the activities performed in accordance with its documented resource protection measures.

Liberty's 2021 WMP Update states that, "Liberty maintains working relationships with local, state, and federal resource protection agencies to identify appropriate measures to eliminate or minimize negative impacts to natural and cultural resources."²⁹ Energy Safety reviewed compliance matrices for the Bridge Tract,³⁰ Cathedral Park,³¹ and Lily Lake WMP projects³² and pages from Liberty's Vegetation Management Plan that was in effect in 2021.³³ ³⁴Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the work identified in this statement regarding how Liberty maintains working relationships with local, state, and federal resource protection agencies.

²⁶ Liberty 2021 WMP Update, page 104.

²⁷ DR-130, response to question 6 "FW_Rainbow Tract.pdf; LTF_TESP-IP_LibertyVegMgmt_SL3101_S1andS2.pdf."

²⁸ DR-130 response to question 6 "Liberty_QC_84681_10262021.pdf."

²⁹ Liberty 2021 WMP Update, page 104.

³⁰ DR-130, response to question 7 "Bridge Tract Compliance Matrix with Attachments.pdf."

³¹DR-130, response to questions7 "Cathedral Park Compliance Matrix with Attachments.pdf."

³² DR-130, response to questions 7 "Lily Lake Compliance Matrix with Attachments.pdf."

³³ DR-130, response to questions 7 "Pages from Vegetation Management Plan_V2018-2.pdf."

³⁴ Liberty's 2021 WMP Update, page 104.

Liberty's 2021 WMP Update continues by stating that "Communication and resource protection initiatives occur throughout Liberty's service territory. The prioritization of these efforts are determined by the portfolio of upcoming capital and vegetation-related projects and are planned at the region level."³⁵ Energy Safety reviewed the compliance matrices for the Bridge Tract,³⁶ Cathedral Park,³⁷ and Lily Lake WMP projects.³⁸ Liberty also provided an email chain between Forest Services and Liberty dated May 14, 2021³⁹ detailing a discussion of issues and restrictions for the project. Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the work identified in this statement regarding communication and resource protection initiatives.

In its 2021 WMP Update, Liberty states that it, "coordinates with surrounding land managers to complete environmental and cultural surveys of project areas prior to implementation."⁴⁰ Liberty stated that for many Liberty VM projects, the land manager is responsible for conducting environmental and cultural surveys prior to authorizing the start of projects. When the land manager is unable to complete surveys prior to the start of a project, Liberty will utilize consultants to conduct the surveys and, when necessary, be on site during project implementation to monitor the work, advise crews on mitigations to protect resources, and provide a report after the work is completed. Liberty provided a cultural monitoring letter⁴¹ and inventory report⁴² to support how they coordinate with surrounding land managers to complete surveys of projects. Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the coordination with land managers.

³⁵ Liberty 2021 WMP Update, page 105.

³⁶ DR-130, response to question 8 "Bridge Tract Compliance Matrix with Attachments.pdf."

³⁷ DR-130, response to question 8 "Cathedral Park Compliance Matrix with Attachments.pdf."

³⁸ DR-130, response to question 8 "Lily Lake Compliance Matrix with Attachments.pdf."

³⁹ DR-130, response to question 8 "Pages from Hobart_Direct_Sale_Contract.pdf; FW_Rainbow Tract.pdf."

⁴⁰ Liberty's 2021 WMP Update, page 105.

⁴¹ DR-130. Response to question 9 "FW_ [External Email]Woodford - Liberty Hazardous Tree Removal.pdf."

⁴² DR-130, response to question 9 "Liberty Muller Line 1269 CR Monitoring Report (redacted).pdf."

Liberty's 2021 WMP Update explains that "some efforts to manage community and environmental impacts are prioritized as a result of collaboration with other agencies, land managers, and property owners to increase efficiency of available resources. Additional prioritization may be given to projects focused on forest resiliency and fuels reduction surrounding critical community infrastructure."⁴³ Energy Safety reviewed a signed form between Hobart and Liberty,⁴⁴ Eagle Rock Vegetation Project Proposal,⁴⁵ and Highlands Winter 2021 Newsletter,⁴⁶ and Vegetation Management Project customer email dated August 17, 2021.⁴⁷ Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the collaboration with other agencies, land managers, and property owners.

Liberty's 2021 WMP Update continues by stating, "Forest Resilience Corridors projects on portions of its transmission system [are] multi-jurisdictional efforts focused on tree removal and fuel reduction activities to improve forest resiliency and reduce the risk of wildfire in the Wildland Urban Interface. Liberty's role emphasizes the removal of vegetation with the potential to disrupt the flow of electric service or contribute to wildfire risk by growing into or striking utility assets in the event of tree failure due to structural defects or environmental conditions."⁴⁸ Energy Safety reviewed a signed form between Hobart and Liberty,⁴⁹ Eagle Rock Vegetation Project Proposal,⁵⁰ and Highlands Winter 2021 Newsletter,⁵¹ and Vegetation Management Project customer email dated August 17, 2021.⁵² Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the work identified in this statement regarding multi-jurisdictional efforts.

⁴³ Liberty 2021 WMP Update, page 105.

⁴⁴ DR-130, response to question 10 "HobartLiberty_Signed_attk_cat6app14_iform_100121.pdf."

⁴⁵ DR-130, response to question 10 "RE_Liberty - CTC Eagle Rock Vegetation Project Proposal.pdf."

⁴⁶ DR-130, response to question 10 "Fw_Highlands Winter 2r021 Newsletter.pdf."

⁴⁷ DR-130, response to Question 10 "Veg Management Project in Customer Email - August 17, 2021.pdf."

⁴⁸ Liberty 2021 WMP Update, page 105.

⁴⁹ DR-130, response to question HobartLiberty_Signed_attk_cat6app14_iform_100121.pdf.

⁵⁰ DR-130, response to question 10 "RE_Liberty - CTC Eagle Rock Vegetation Project Proposal.pdf."

⁵¹ DR-130, response to question 10 "Fw_Highlands Winter 2r021 Newsletter.pdf."

⁵² DR-130, response to Question 10 "Veg Management Project in Customer Email - August 17, 2021.pdf."

Liberty's 2021 WMP Update continues by stating, "Forest Resilience Corridors projects prescribe the following treatment zones for areas surrounding utility rights-of-way: Zone 1 (up to 15' each side of power line, ~200 acres): vegetation, including shrubs = 18" high, with potential to grow into utility infrastructure will be removed, along with defect trees. Zone 2 (up to 175' each side of power line, ~2,200 acres): trees with structural defects with the potential to strike utility infrastructure will be removed; fuels will be reduced to improve forest resilience to fire, insect, disease, and drought; and thinning to desired conditions will improve forest health and resilience. The target average stand density is 60 BAF (basal area factor) with a range of 40-80 BAF. For trees less than 10" in diameter in the understory, a minimum of 10 trees per acre will be retained. Zone 3 (up to ~1000' each side of power line, ~5,200 acres): reducing fuel loads and thinning the forest to desired conditions will improve forest health and resilience to disturbance. The target average stand density is 100 BAF, with a range of 80-120 BAF. For trees less than 10" in diameter in the understory, a minimum of 10 trees per acre will be retained. Liberty will not perform work in Zone 3."⁵³ Energy Safety reviewed a signed form between Hobart and Liberty,⁵⁴ Eagle Rock Vegetation Project Proposal,⁵⁵ and Highlands Winter 2021 Newsletter,⁵⁶ and Vegetation Management Project customer email dated August 17, 2021.⁵⁷ Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the work identified in this statement regarding forest resiliency projects.

Liberty's 2021 WMP Update continues by stating, "Liberty's external communications team has been working closely with the VM Department to reach customers and the community about its VM efforts and will continue to seek opportunities to enhance communications, notification and education to its external stakeholders."⁵⁸ Liberty stated that an external stakeholder is any person, group, or entity that Liberty's electrical operations can impact. External stakeholders include Liberty's customers, landowners, governing agencies, and the larger community within the footprint of the service territory. Energy Safety reviewed meeting minutes from Liberty's Communication and VM Collaboration team meeting dated January 21, 2021.⁵⁹ Liberty also provided examples of social media posts published in 2021.⁶⁰ Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the external communication.

⁵³ Liberty 2021 WMP Update, page 105.

⁵⁴ DR-130, response to question 10 [HobartLiberty_Signed_attk_cat6app14_iform_100121.pdf](#).

⁵⁵ DR-130, response to question 10 ["RE_Liberty - CTC Eagle Rock Vegetation Project Proposal.pdf"](#).

⁵⁶ DR-130, response to question 10 ["Fw_Highlands Winter 2021 Newsletter.pdf"](#).

⁵⁷ DR-130, response to Question 10 ["Veg Management Project in Customer Email - August 17, 2021.pdf"](#).

⁵⁸ Liberty 2021 WMP Update, page 106.

⁵⁹ DR-130, response to question 11 ["Comm and VM Collaboration.pdf"](#).

⁶⁰ DR-130, response to question 11 ["Veg Management Social and Email to Customers.pdf"](#).

4.1.2 Energy Safety's Determination for 2021 WMP Update Initiative 7.3.5.1

Based on the analysis above, Energy Safety finds Liberty provided information consistent with completion of the work identified in the 2021 WMP update Initiative 7.3.5.1: Additional Efforts to Manage Community and Environmental Impacts.

4.2 Initiative 7.3.5.2: Detailed Inspections 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.”⁶¹

4.2.1 2021 WMP Update Statements, Supporting Information, and Analysis

In its 2021 WMP Update, Liberty states that “Liberty performs routine vegetation maintenance through detailed inspections of entire circuits to prescribe pruning and removal of vegetation as a safeguard against grow-ins or fall-ins and to conform to required laws and regulations. Liberty intends to perform such inspections and work once every three years per circuit.”⁶² Energy Safety reviewed copies of a Fall-in workorder dated June 2021 and Grow-in workorder dated February 2021 for North Lake and South Lake divisions.⁶³ Liberty also provided an invoice dated June 2021 for the payment of contractors to perform the circuit inspections.⁶⁴ Finally, Liberty provided an Excel file⁶⁵ that identified the distribution and transmission circuits where maintenance was performed. This included such information as the circuit name and dates for when the services were performed. Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the routine vegetation maintenance through detailed inspections.

⁶¹ 2021 WMP Update guidelines, Resolution WSD-011, attachment 2.2, page 54: <https://energysafety.ca.gov/wp-content/uploads/docs/wmp-2021/docs/352460864.pdf> (accessed May 23, 2023).

⁶² Liberty 2021 WMP Update, page 107.

⁶³ DR-130, response to question 12.a “Invoice 54418 Liberty CA 5410331 06.06.2021_06.19.2021.pdf.”

⁶⁴ DR-130, response to question 12.a “Detailed INSP fall-in workorder.pdf, and Detailed INSP grow-in workorder.pdf.”

⁶⁵ DR-130, response to question 12.b “2021_All_Inspections_Export.xlsx.”

Liberty's 2021 WMP Update continues by stating that "in prescribing pruning or removal, the following factors are considered: (1) the potential for vegetation to grow and/or encroach within the minimum allowed distances to the facilities within the cycle, and (2) the potential for vegetation to structurally fail into the facilities within the cycle."⁶⁶ Energy Safety reviewed an Excel spreadsheet⁶⁷ that showed data for inputs for growth potential and vegetation failure. Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the prescribing pruning or removal of vegetation.

Liberty's 2021 WMP Update explains that "additional site conditions and factors are considered in prescribing tree work such as length of span, line sag, planned inspections, location of vegetation within the span, species type, species characteristics, vegetation growth rate, arboricultural practices, environmental characteristics of the site, local climate, and elevation."⁶⁸ Energy Safety reviewed the detailed guidance for performing evaluations on sites dated April 2012.⁶⁹ Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the work identified in this statement regarding additional site conditions and factors.

Per Liberty's 2021 WMP Update, "Liberty manages tree work inventories and workloads through the Vegetation Management System ("VMS") database. The VMS tracks circuit inspections, notification and tree work progress, provides work orders, notification letters and report generating functions, retains historical inspection and tree work data, and also has a variety of query options to specify select tree inventories as needed (i.e., routine circuit work on federal lands for a specific inspection year or a random sample for quality control or assurance audits)."⁷⁰ Energy Safety reviewed screenshots from the VMS system supporting the Circuit inspection,⁷¹ notification letters, report generator functions and query options.⁷² Liberty also provided a work order⁷³ from VMS. The dates on the screen shots were in 2021. Liberty also provided an Excel file⁷⁴ to support that notifications and tree work progress and inspection history were tracked.⁷⁵ Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the work identified in this statement regarding tree work inventories and workloads through the VMS Database.

⁶⁶ Liberty 2021 WMP Update, page 107.

⁶⁷ DR-130, response to question 13 "2021_All_Completed_Work_Export.xlsx."

⁶⁸ Liberty 2021 WMP Update, page 107.

⁶⁹ DR-130, response to question 14, "R5 guide.pdf."

⁷⁰ Liberty 2021 WMP Update, page 107.

⁷¹ DR-130, response to question 15.b, "2021_All_Completed_Work_Export.xlsx."

⁷² DR-130, response to question 15.c, "VMS Detailed INSP wo report 2021.pdf."

⁷³ DR-130, response to question 15.a, "VMS Screenshots 2021.pdf."

⁷⁴ DR-130, response to question 15.e, "2021_All_Completed_Work_Export.xlsx."

⁷⁵ DR-130, response to question 15.f, "VMS Screenshots 2021.pdf."

Liberty's 2021 WMP Update continues by stating that "Liberty has developed a Hazard Tree Management Plan (VM-02) to identify, document, and mitigate trees that are located within the utility strike zone and are expected to pose a risk to electric facilities based on the tree's observed structural condition and site considerations."⁷⁶ Energy Safety reviewed the Hazard Tree Management Plan (VM-03)⁷⁷, effective April 28, 2021. Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the development of a Hazard Tree Management Plan.

Liberty's 2021 WMP Update explains that "During the inspection process, tree and site conditions are assessed to determine tree risk and if work is required to mitigate the identified risk. Inspections to identify hazard trees are conducted during detailed inspections for compliance and reliability. Detailed inspections are performed by completing a Level 2: Basic Assessment of individual trees per ANSI A300 (Part 9) Tree Risk Assessment and Liberty's Hazard Tree Management Plan. This is a detailed ground-based visual assessment of an individual tree and its surrounding site."⁷⁸ Energy Safety reviewed an Excel file listing inspections records of all hazard trees identified⁷⁹ and separate files with all trees mitigated⁸⁰ in 2021. Liberty also stated that it mitigated the risk by removing 3,019 hazard trees with strike potential in 2021. Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the work identified in this statement regarding assessing tree and site conditions during inspections.

Per Liberty's 2021 WMP Update, "Several factors are taken into consideration when planning and prioritizing detailed inspections of vegetation around distribution electric lines and equipment. These factors include vegetation density, maintenance history, regional fire risk rating based on CPUC fire threat areas and REAX fire risk ratings, customer tree inspection requests, observations from field employees and contractors, and vegetation-caused outages."⁸¹ Energy Safety reviewed the Excel files^{82 83 84} that demonstrate the factors reviewed and considered, and the timing of ongoing reviews or potential future issues. Liberty also provided an email for a meeting⁸⁵ that was set up to discuss and review the report data. Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the factors taken into consideration when planning and prioritizing detailed inspections of vegetation.

⁷⁶ Liberty 2021 WMP Update, page 107.

⁷⁷ Liberty incorrectly labeled its VM program as VM-03 in the 2021 WMP.

⁷⁸ Liberty 2021 WMP Update, page 107.

⁷⁹ DR-130, response to question 17.a.

⁸⁰ DR-130, response to question 17.b.

⁸¹ Liberty 2021 WMP Update, page 107.

⁸² DR-130, response to question 18, "CIRCUIT PRIORITY.xlsx."

⁸³ DR-130, response to question 18, "Circuit_Wildfire_Risk_Draft.xlsx."

⁸⁴ DR-130, response to question 18, "LiDAR_Detectations_2020_Working_Sheet.xlsx."

⁸⁵ DR-130, response to question 18, "RE_Project_planning_meeting_tomorrow.pdf."

In its 2021 WMP Update, “Emergency pruning or removal is performed when a tree poses an imminent threat to the electrical facilities.”⁸⁶ Liberty stated that it mitigated 76 trees identified as imminent threats in 2021. Liberty provided an Excel file⁸⁷ listing work orders where trees were identified for removal when posing an imminent threat. Therefore, Energy Safety’s audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the emergency pruning or removal of trees that pose an imminent threat.

Per Liberty’s 2021 WMP Update, “Liberty’s detailed vegetation inspections are performed primarily by a contract workforce of pre-inspectors who are trained to take into consideration the potential likelihood of a grow-in or tree failure, or parts thereof, occurrences that can adversely affect Liberty infrastructure, and the severity of the potential consequences.”⁸⁸ Energy Safety reviewed the 2021 VMI training Check list⁸⁹ and the 2021 Trainings and Benchmarks.⁹⁰ Therefore, Energy Safety’s audit found Liberty provided information consistent with the completion of the work identified in this statement supporting that vegetation inspections are performed by a trained workforce.

4.2.2 Energy Safety’s Determination for 2021 WMP Update Initiative 7.3.5.2

Based on the analysis above, Energy Safety finds Liberty provided information consistent with 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.

⁸⁶ Liberty 2021 WMP Update, page 107.

⁸⁷ DR-130, response to question 19 “2021 SVM – DR-130 – Example of work orders for imminent threat.xls.”

⁸⁸ Liberty 2021 WMP Update, page 107.

⁸⁹ DR-130.response to question 20, “2021 Trainings & Benchmarks.Compressed (zipped) Folder.”

⁹⁰ DR-130, response to question 20, “2021 VMI Training Check Lists.Compressed (zipped) Folder.”

4.3 Initiative 7.3.5.3: Detailed Inspections of Vegetation Around Transmission Electric Lines and Equipment

The purpose of this initiative is “careful visual inspections of vegetation around the rights-of-way, where individual trees are carefully examined, visually, and the condition of each rated and recorded.”⁹¹

4.3.1 2021 WMP Update Statements, Supporting Information and Analysis

Liberty’s WMP Update states, “inspections of vegetation around transmission electric lines and equipment does not differ from that for distribution electric lines and equipment and referred to Section 7.3.5.2.” Liberty’s 2021 WMP Update directs readers to Initiative 7.3.5.2, as applicable to 7.3.5.3. Energy Safety conducted an analysis of the referenced Initiative and determined that Liberty completed all work associated with this initiative; therefore, Energy Safety’s conclusion that all work was complete also applies to 7.3.5.3.

4.3.2 Energy Safety’s Determination for 2021 WMP Update Initiative 7.3.5.3

See Energy Safety’s findings for Initiative 7.3.5.2.

⁹¹ 2021 WMP Update guidelines, Resolution WSD-011, attachment 2.2, page 54: <https://energysafety.ca.gov/wp-content/uploads/docs/wmp-2021/docs/352460864.pdf> (accessed May 23, 2023).

4.4 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 describe the utility's vegetation management in advance of weather conditions that increase ignition probability and wildfire consequence.⁹²

4.4.1 2021 WMP Update Statements, Supporting Information and Analysis

In its 2021 WMP Update, Liberty states that “although there are no costs specifically associated with this activity, the inspections and vegetation management work performed in Sections 7.3.2.2, 7.3.2.3, 7.3.2.5, 7.3.2.7, 7.3.2.8, 7.3.2.11, 7.3.2.12, 7.3.2.15, and 7.3.2.16 prepare for these types of events.”⁹³ ⁹⁴ Liberty directs readers to Initiatives 7.3.5.2, 7.3.5.3, 7.3.5.5, 7.3.5.7, 7.3.5.8, 7.3.5.11, 7.3.5.12, 7.3.5.15, and 7.3.5.16 as applicable to initiative 7.3.5.4; Energy Safety conducted an analysis of the referenced Initiatives and determined that Liberty completed all work associated with these initiatives; therefore, Energy Safety's conclusion that all work was complete also applies to Initiative 7.3.5.4.

4.4.2 Energy Safety's Determination for 2021 WMP Update Initiative 7.3.5.4

See Energy Safety's findings for Initiatives 7.3.5.2, 7.3.5.3, 7.3.5.5, 7.3.5.7, 7.3.5.8, 7.3.5.11, 7.3.5.12, 7.3.5.15, and 7.3.5.16.

⁹² 2021 WMP Update guidelines, Resolution WSD-011, attachment 2.2, page 54: <https://energysafety.ca.gov/wp-content/uploads/docs/wmp-2021/docs/352460864.pdf> (accessed May 10, 2023).

⁹³ Liberty 2021 WMP Update, page 107.

⁹⁴ Through discussion with Liberty, Energy Safety learned that there is a typographical error in section 7.3.5.4 and the referenced sections should read 7.3.5.2, 7.3.5.3, 7.3.5.5, 7.3.5.7, 7.3.5.8, 7.3.5.11, 7.3.5.12, 7.3.5.15, and 7.3.5.16.

4.5 Initiative 7.3.5.5: Fuel Management and Reduction of “Slash” from VM Activities

The purpose of this initiative is to describe the utility’s efforts 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...”⁹⁵

4.5.1 2021 WMP Update Statements, Supporting Information and Analysis

In Liberty’s 2021 WMP Update, “only slash measuring less than 4" diameter is treated as follows: Residential Areas Accessible by Roads – Slash will be chipped. Chips may be hauled off site to a different location or may be broadcasted back onto the site. Rural or Forested Areas not Accessible by Roads – Slash will be lopped and scattered in a non-continuous manner outside of the utility right-of-way; or slash will be lopped and scattered as to ensure that the vertical height is not more than 18" above the ground.”⁹⁶ Energy Safety reviewed an Excel file⁹⁷ listing the method of disposal (either chipped and hauled off or chipped and scattered). Therefore, Energy Safety’s audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the reduction of slash.

Liberty’s 2021 WMP Update continues by stating that “Liberty has begun to offer the hauling of this wood that may have otherwise been left onsite. Liberty recognizes the need for increased fuel management activities and is developing a new methodology for fuels treatment that aligns more closely with joint goals of agency partners and the local community to treat vegetation management fuel in a manner that reduces both fire ignition risk and the potential for increased fire intensity.”⁹⁸ Energy Safety reviewed the listing of sites for removal, the invoice for the removal and the notification sent regarding the removal.⁹⁹ Liberty also provided its methodology for the reduction of fuel.¹⁰⁰ Therefore, Energy Safety’s audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the removal of wood from worksites.

⁹⁵ 2021 WMP Update guidelines, Resolution WSD-011, attachment 2.2, page 54: <https://energysafety.ca.gov/wp-content/uploads/docs/wmp-2021/docs/352460864.pdf> (accessed May 10, 2023).

⁹⁶ Liberty 2021 WMP Update, page 109.

⁹⁷ DR-144, response to Question 2.a, “2021 All VM Completed Work.xlsx” column AM, “Cleanup Method.”

⁹⁸ Liberty 2021 WMP Update, page 109.

⁹⁹ DR-144, Response to question 3.a, “R3.4.a Wood Haul Documentation.pdf.”

¹⁰⁰ DR-144, response to question 3.b, “R3.4.b Fuel Management.pdf.”

Per Liberty's 2021 WMP Update, "selection of fuel management and reduction of slash projects are based on multiple factors, such as fire risk ratings, proximity of overhead conductors to the Wildland Urban Interface, landowner cooperation, ability to carry out activities in alignment with environmental and cultural resource protection measures, and other relevant factors that may affect the success of such projects."¹⁰¹ Energy Safety reviewed the list of the 16 fuel management projects performed in 2021.¹⁰² Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the selection of fuel management and reduction of slash projects.

Liberty's 2021 WMP Update explains that "Liberty looks to partner with local, state, and federal agencies and other larger landowners throughout its service area to collaborate on projects that will reduce fuel loads."¹⁰³ Energy Safety reviewed a newsletter to a homeowners association with information on upcoming vegetation management work,¹⁰⁴ e-mail communication between Liberty and Forest Service personnel,¹⁰⁵ inspection report for the Northstar Substation Fuel management work,¹⁰⁶ and communication between Liberty and the Forest Service related to vegetation management work at Eagle Rock.¹⁰⁷ These documents demonstrate how Liberty is partnering with local, state and federal agencies to collaborate on projects. Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the work identified in this statement regarding partnering with local, state and federal agencies and other larger landowners.

Liberty's 2021 WMP Update continues by stating that "in order to better manage the fuel load, Liberty has begun to offer the hauling of this wood that may have otherwise been left onsite."¹⁰⁸ Energy Safety reviewed a listing of the 16 fuel management projects performed in 2021.¹⁰⁹ Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the management of the fuel load by offering to haul wood.

4.5.2 Energy Safety's Determination for 2021 WMP Update Initiative 7.3.5.5

Based on the analysis above, Energy Safety finds Liberty provided information consistent with the completion of the work identified in the 2021 WMP update Initiative 7.3.5.5: Fuel Management and Reduction of "Slash" from VM Activities.

¹⁰¹ Liberty 2021 WMP Update, page 110.

¹⁰² DR-144 response to question 4 "2021_Fuel_Management_Projects.xlsx."

¹⁰³ Liberty 2021 WMP Update, page 110.

¹⁰⁴ DR-109 response to question 1 "Fw_Highlands Winter 2021 Newsletter.pdf."

¹⁰⁵ DR-109 response to question 1 "FW_Rainbow Tract.pdf."

¹⁰⁶ DR-109 response to question 1 "Northstar_Sub_Fuels_Work.pdf."

¹⁰⁷ DR-109 response to question 1 "RE Liberty - CTC Eagle Rock Vegetation Project Proposal.pdf."

¹⁰⁸ Liberty 2021 WMP Update, page 110.

¹⁰⁹ DR-144 response to question 4 "2021_Fuel_Management_Projects.xlsx."

4.6 Initiative 7.3.5.6: Improvement of Inspections

The purpose of this initiative is to describe the utility’s methods for “identifying and addressing deficiencies in inspections protocols and implementation by improving training and the evaluation of inspectors.”¹¹⁰

4.6.1 2021 WMP Update Statements, Supporting Information and Analysis

Liberty’s 2021 WMP Update states, “Liberty is taking measures to improve its vegetation inspections through the use of technology, inspector training, and post work verification processes.”¹¹¹ Liberty stated that in 2021 Liberty implemented inspections using light detection and ranging (LiDAR) technology on its entire system to identify tree to conductor clearances and manage encroachments. Liberty conducted several benchmarks and trainings with its VM inspectors to align with company inspection protocols and industry best practices in addition to monthly status updates through 2021. In 2021, Liberty implemented quality control assessments of inspection data as part of its post work verification process and reviewed 4,110 records for accuracy. Energy Safety reviewed the 2021 VMI training Check list¹¹² and the 2021 Trainings and Benchmarks.¹¹³ Energy Safety also reviewed an Excel file listing LiDAR work orders.¹¹⁴ Therefore, Energy Safety’s audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the measures taken to improve its vegetation inspections through the use of technology, inspector training, and post work verification.

4.6.2 Energy Safety’s Determination for 2021 WMP Update Initiative 7.3.5.6

Based on the analysis above, Energy Safety finds Liberty provided information consistent with completion of the work identified in the 2021 WMP update Initiative 7.3.5.6: Improvement of Inspections.

¹¹⁰ 2021 WMP Update guidelines, Resolution WSD-011, attachment 2.2, page 54: <https://energysafety.ca.gov/wp-content/uploads/docs/wmp-2021/docs/352460864.pdf> (accessed May 11, 2023).

¹¹¹ Liberty 2021 WMP Update, page 111.

¹¹² DR- 144, response to question 6 2021 VMI Training Check Lists (compressed zip folder).

¹¹³ DR-144, response to question 7 “2021 Trainings & Benchmarks (compressed zip folder).”

¹¹⁴ DR-144, response to question 7 “2021_VMS_LiDAR_Work_Orders.xlsx.”

4.7 Initiative 7.3.5.7: LiDAR Inspections of Vegetation Around Distribution Electric Lines and Equipment

The purpose of this initiative is inspecting distribution right-of-ways using LiDAR.¹¹⁵

4.7.1 2021 WMP Update Statements, Supporting Information and Analysis

Liberty's 2021 WMP Update states, "The data acquired by LiDAR inspections will be used to inform vegetation management activities performed to maintain compliance at all times. Liberty is in the process of utilizing the data acquired to generate work necessary within the next 18 months to achieve and maintain adequate clearances around the electrical lines that were surveyed."¹¹⁶ Energy Safety reviewed the LiDAR Inspection and maintenance Plan¹¹⁷ and the "2021 All VM Completed Work"¹¹⁸ Excel spreadsheet. Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the LiDAR inspections of vegetation management activities.

4.7.2 Energy Safety's Determination for 2021 WMP Update Initiative 7.3.5.7

Based on the analysis above, Energy Safety finds Liberty provided information consistent with 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.

4.8 Initiative 7.3.5.8: LiDAR Inspections of Vegetation Transmission Electric Lines and Equipment

The purpose of this initiative is to describe the electrical corporation's methods for inspecting transmission rights-of-way using LiDAR.¹¹⁹

¹¹⁵ 2021 WMP Update guidelines, Resolution WSD-011, attachment 2.2, page 54: <https://energysafety.ca.gov/wp-content/uploads/docs/wmp-2021/docs/352460864.pdf> (accessed May 23, 2023).

¹¹⁶ Liberty 2021 WMP Update, page 112-113.

¹¹⁷ DR-144, response to question 9 "LiDAR Inspection and Maintenance Plan.docx."

¹¹⁸ DR-144, response to question 9 "2021 All VM Completed Work.xlsx" column H, where Project Type is equal to "LiDAR."

¹¹⁹ 2021 WMP Update guidelines, Resolution WSD-011, attachment 2.2, page 54: <https://energysafety.ca.gov/wp-content/uploads/docs/wmp-2021/docs/352460864.pdf> (accessed May 23, 2023).

4.8.1 2021 WMP Update Statements, Supporting Information and Analysis

Liberty's WMP Update states, "LiDAR inspections of vegetation around transmission electric lines and equipment does not differ from that for distribution electric lines and equipment and referred to see Section 7.3.5.7." Liberty directs readers to Initiative 7.3.5.7 as applicable to Initiative 7.3.5.8. Energy Safety conducted an analysis of the referenced Initiative and determined that Liberty completed all work associated with these initiatives; therefore, Energy Safety's conclusion that all work was complete also applies to Initiative 7.3.5.8.

4.8.2 Energy Safety's Determination for 2021 WMP Update Initiative 7.3.5.8

See Energy Safety's findings for Initiative 7.3.5.7.

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

The purpose of this initiative is inspecting the distribution rights-of-way and the adjacent vegetation that may be hazardous, which goes beyond the minimum standards in rules and regulations.¹²⁰

4.9.1 2021 WMP Update Statements, Supporting Information and Analysis

Liberty's 2021 WMP Update states "Although there are no costs specifically associated with this activity, the work performed in Section 7.3.2.2, 7.3.2.7, and 7.3.2.11 helps to carry out inspections of distribution facilities effectively."¹²¹ ¹²² Liberty directs readers to Initiatives 7.3.5.2, 7.3.5.7, and 7.3.5.11 as applicable to initiative 7.3.5.9. Energy Safety completed an analysis of the referenced Initiatives and determined that Liberty conducted all work associated with these initiatives; therefore, Energy Safety's conclusion that all work was complete also applies to initiative 7.3.5.9.

4.9.2 Energy Safety's Determination for 2021 WMP Update Initiative 7.3.5.9

See Energy Safety's findings for Initiatives 7.3.5.2, 7.3.5.7, and 7.3.5.11.

¹²⁰ 2021 WMP Update guidelines, Resolution WSD-011, attachment 2.2, page 54: <https://energysafety.ca.gov/wp-content/uploads/docs/wmp-2021/docs/352460864.pdf> (accessed May 23, 2023).

¹²¹ Liberty 2021 WMP Update, page 113.

¹²² Through discussion with Liberty, Energy Safety learned that there is a typographical error in section 7.3.5.9 and the referenced sections should read 7.3.5.2, 7.3.5.7, and 7.3.5.11.

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

The purpose of this initiative is to describe the utility’s transmission right of way inspection program to identify vegetation hazards.¹²³

4.10.1 2021 WMP Update Statements, Supporting Information, and Analysis

In its 2021 WMP Update, Liberty states “although there are no costs specifically associated with this activity, the work performed in Section 7.3.2.3, 7.3.2.8, and 7.3.2.12 helps to carry out inspections of distribution facilities effectively.”¹²⁴ ¹²⁵ Liberty directs readers to Initiatives 7.3.5.3, 7.3.5.8, and 7.3.5.12 as applicable to Initiative 7.3.5.10. Energy Safety completed an analysis of the referenced Initiatives and determined that Liberty conducted all work associated with associated with these initiatives; therefore, Energy Safety’s conclusion that all work was complete also applies to initiative 7.3.5.10.

4.10.2 Energy Safety’s Determination for 2021 WMP Update Initiative 7.3.5.10

See Energy Safety’s findings for Initiatives 7.3.5.3, 7.3.5.8, and 7.3.5.12.

¹²³ 2021 WMP Update guidelines, Resolution WSD-011, attachment 2.2, page 54: <https://energysafety.ca.gov/wp-content/uploads/docs/wmp-2021/docs/352460864.pdf> (accessed May 23, 2023).

¹²⁴ Liberty 2021 WMP Update, page 113.

¹²⁵ Through discussion with Liberty, Energy Safety learned that there is a typographical error in section 7.3.5.9 and the referenced sections should read 7.3.5.3, 7.3.5.8, and 7.3.5.12.

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

The purpose of this initiative is to describe the utility’s distribution right of way inspection program to identify obvious [vegetation] hazards.¹²⁶

4.11.1 2021 WMP Update Statements, Supporting Information, and Analysis

In its 2021 WMP Update, Liberty states “patrol inspections of vegetation around electric lines and equipment is performed to identify dead and dying trees with the potential to strike electric facilities. During patrol inspections, trees are also evaluated for compliance to regulated clearance distances from vegetation to conductors per G.O. 95 Rule 35 and Public Resources Code Section 4293. Due to the nature of increasing tree mortality within its service territory, Liberty has identified the need to inspect for dead and dying trees throughout its entire system by performing an inspection of the vegetation around lines and equipment to identify dead and dying trees under a Catastrophic Event Memorandum Account (‘CEMA’).”¹²⁷ Liberty stated that the entire system refers to all overhead distribution and transmission lines operated and maintained by Liberty. Liberty does not complete Patrol inspections for its entire system on an annual basis. Circuits are selected based on the prevalence of tree mortality and inspected as needed to mitigate risk posed by dead and dying trees. Energy Safety reviewed an Excel file listing patrol inspections completed in 2021,¹²⁸ which includes notifications provided and results of each inspection. Therefore, Energy Safety’s audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the patrol inspections of vegetation around electric lines and equipment.

¹²⁶ 2021 WMP Update guidelines, Resolution WSD-011, attachment 2.2, page 55: <https://energysafety.ca.gov/wp-content/uploads/docs/wmp-2021/docs/352460864.pdf> (accessed May 23, 2023).

¹²⁷ DR-144 Response to question 12, “2021 Patrol Inspections.xlsx.”

¹²⁸ 2021 WMP Update guidelines, Resolution WSD-011, attachment 2.2, page 54: <https://energysafety.ca.gov/wp-content/uploads/docs/wmp-2021/docs/352460864.pdf> (accessed May 23, 2023).

Per Liberty’s 2021 WMP Update, “patrol inspections are typically performed by completing a Level 1: Limited Visual Assessment per ANSI A300 (Part 9) Tree Risk Assessment and Liberty’s Hazard Tree Management Plan. This is accomplished by conducting an assessment from one side of the tree (side nearest the electric facilities) and can be ground-based, vehicle-based, or aerial-based, as appropriate for the site conditions, type of infrastructure, and tree population being considered. If the Level 1 assessment cannot sufficiently determine the severity of the condition, a Level 2 assessment is conducted.”¹²⁹ Liberty stated that the type of inspection is mostly affected by site conditions when it impacts vehicle access. When accessible by vehicle, patrol inspections are vehicle-based; otherwise, ground-based inspections are used. Liberty’s Vegetation Management Department did not utilize aircraft-based inspections in 2021. Energy Safety reviewed the transmission¹³⁰ and distribution¹³¹ work orders to support that the inspections occurred. Therefore, Energy Safety’s audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the patrol inspections.

Liberty’s 2021 WMP Update continues by stating that “Several factors are taken into consideration when planning and prioritizing patrol inspections of vegetation around distribution electric lines and equipment. These factors include vegetation density, maintenance history, regional fire risk rating based on CPUC fire threat areas and REAX fire risk ratings, customer tree inspection requests, observations from field employees and contractors, and vegetation caused outages.”¹³² Liberty stated that it does not complete Patrol inspections for its entire system on an annual basis. Circuits are selected based on the prevalence of tree mortality and inspected as needed to mitigate risk posed by dead and dying trees. Energy Safety reviewed an Excel file listing of patrol inspections completed in 2021,¹³³ which includes notifications provided and results of each inspection. Therefore, Energy Safety’s audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the patrol inspections of vegetation around electric lines and equipment.

¹²⁹ Liberty 2021 WMP Update, page 114.

¹³⁰ DR-144, response to question 13, “Pages from 625_Line_CEMA_2021.pdf.”

¹³¹ DR-144, response to question 13, “Pages from TC_7100_S3_CEMA_6.1.21.pdf.”

¹³² Liberty 2021 WMP Update, page 114.

¹³³ 2021 WMP Update guidelines, Resolution WSD-011, attachment 2.2, page 54: <https://energysafety.ca.gov/wp-content/uploads/docs/wmp-2021/docs/352460864.pdf> (accessed May 23, 2023).

Liberty's 2021 WMP Update explains that "Emergency pruning or removal is performed when a tree poses an imminent threat to the electrical facilities."¹³⁴ Liberty stated that the utility mitigated 76 trees identified as imminent threats in 2021. Energy Safety reviewed the "2021 SVM-DR-130 Examples of work orders for imminent threat"¹³⁵ that supported the work orders where trees were identified for removal when posing an imminent threat. Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the work identified in this statement regarding emergency pruning or removal performed when a tree poses an imminent threat to the electrical facilities.

Liberty's 2021 WMP Update states, "Liberty's patrol inspections are performed primarily by a contract workforce of pre-inspectors trained to identify obvious hazards to Liberty infrastructure."¹³⁶ Energy Safety reviewed the "2021 VMI Training Checklist"¹³⁷ and the "2021 Trainings and Benchmarking"¹³⁸ files, which contained documentation of the training provided to the patrol inspectors. Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the training of pre-inspectors to identify obvious hazards to Liberty infrastructure.

4.11.2 Energy Safety's Determination for 2021 WMP Update Initiative 7.3.5.11

Based on the analysis above, Energy Safety finds Liberty provided information consistent with completion of the work identified in the 2021 WMP update Initiative 7.3.5.11: Patrol Inspections of Vegetation Around Distribution Electric Lines and Equipment.

¹³⁴ Liberty 2021 WMP Update, page 114.

¹³⁵DR-130 Response to question 19 "2021 SVM- DR -130 – Example of work orders for imminent threate.xls."

¹³⁶ Liberty 2021 WMP Update, page 114.

¹³⁷ DR-144 Response to question 14 2021 "2021 VMI Training Check Lists."

¹³⁸DR-144 Response to question 14 "Trainings & Benchmarks."

4.12 Initiative 7.3.5.12: Patrol Inspections of Vegetation Around Electric Lines and Equipment

The purpose of this initiative is to inspect transmission rights-of-way to identify “obvious [vegetation] hazards.”¹³⁹

4.12.1 2021 WMP Update Statements, Supporting Information and Analysis

Liberty’s 2021 WMP Update states “the utility’s patrol inspections of vegetation around transmission electric lines and equipment does not differ from that for distribution electric lines and equipment and referred to Section 7.3.5.11.” Liberty directs readers to Initiatives 7.3.5.11 as applicable to Initiative 7.3.5.12. Energy Safety conducted an analysis of the referenced Initiative and determined that Liberty completed all work associated with this initiative; therefore, Energy Safety’s conclusion that all work was completed also applies to Initiative 7.3.5.12.

4.12.2 Energy Safety’s Determination for 2021 WMP Update Initiative 7.3.5.3

See Energy Safety’s findings on Initiative 7.3.5.11.

¹³⁹ 2021 WMP Update guidelines, Resolution WSD-011, attachment 2.2, page 55: <https://energysafety.ca.gov/wp-content/uploads/docs/wmp-2021/docs/352460864.pdf> (accessed May 23, 2023).

4.13 Initiative 7.3.5.13: Quality Assurance/Quality Control of Inspections

The purpose of this initiative is to audit completed vegetation work, including its input into “decision-making and related integrated workforce management processes.”¹⁴⁰

4.13.1 2021 WMP Update Statements, Supporting Information, and Analysis

Liberty’s 2021 WMP Update states, “Liberty has drafted a Post Work Verification Procedure (VM-04), which is applicable to both vegetation inspections and vegetation management work that is conducted on local, federal, and state agency land. This procedure contains both QA and QC components. The purpose of the procedure is to define the program oversight requirements used to provide reasonable assurance that Liberty is meeting the applicable requirements related to vegetation management.”¹⁴¹ Energy Safety reviewed the documentation¹⁴² that details the post verification and quality control of inspections on hazard trees. Therefore, Energy Safety’s audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the drafting of a Post Work Verification Procedures.

Per Liberty’s 2021 WMP Update, “The procedure includes personnel qualification requirements, sampling methodology, sample size by priority, process assessment (QA), results evaluation (QC), acceptable quality level (AQL) and conformance level (CL), description of post work verification (i.e., desktop review, field review), and types of QC inspections (i.e., pre-inspections, tree pruning and removal, hazard trees, pole brushing, reporting accuracy, inventory reconciliation).”¹⁴³ Energy Safety reviewed documentation that details the post verification and quality control of inspections on hazard trees.¹⁴⁴ Additionally, Energy Safety reviewed quality control data¹⁴⁵ that shows the VM inspection and maintenance quality control. Therefore, Energy Safety’s audit found Liberty provided information consistent with the completion of the work identified in this statement regarding Quality Assurance/Quality Control of Inspections.

Liberty’s 2021 WMP Update continues by stating that “QA/QC Inspections will be performed in higher percentages in Tier 3 and Tier 2 HFTD with a smaller percentage being performed in non-HFTD areas.”¹⁴⁶ Energy Safety reviewed the “Complete_Liberty_QC_Data_2021,” which identifies the areas that were subject for a QA/QC inspection. The documentation states the

¹⁴⁰2021 WMP Update guidelines, Resolution WSD-011, attachment 2.2, page 55: <https://energysafety.ca.gov/wp-content/uploads/docs/wmp-2021/docs/352460864.pdf> (accessed May 23, 2023).

¹⁴¹ Liberty 2021 WMP Update, page 115.

¹⁴² DR-201, response to question 1 VM-04_Post_Work_Verfication_1.0.PDF.

¹⁴³ Liberty 2021 WMP Update, page 115.

¹⁴⁴ DR-201, response to question 1 VM-04_Post_Work_Verfication_1.0.PDF.

¹⁴⁵ DR-201, response to question 2 “VM-04_Post_Work_Verfication_1.0.PDF Complete_Liberty_QC_Data_2021.”

¹⁴⁶ Liberty 2021 WMP Update, page 115.

reason the inspection was performed. Energy Safety reviewed documentation,¹⁴⁷ which explains the methodology and rationale used for performing the QA/QC. Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the QA/QC Inspections performed in Tier 3 and Tier 2 HFTD.

Liberty's 2021 WMP Update explains that "the current plan is to implement the post work procedure Q1 of 2021 for all inspections and tree work performed in 2020. The results of the QA/QC initiative will be evaluated and adjusted as needed throughout 2021."¹⁴⁸ Energy Safety reviewed an Excel file listing of all QC work completed in 2021.¹⁴⁹ The report provides information on the 2021 post work producers for inspections and tree work performed in 2021. Documentation included the locations or circuit names, the dates that inspections took place, any subsequent tree work that was required, when post work audits occurred and the results of the audit. Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the QA/QC work identified in this statement regarding the implementation of post work procedures.

4.13.2 Energy Safety's Determination for 2021 WMP Update Initiative 7.3.5.13

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

¹⁴⁷ DR-201, response to question 3 "Complete_Liberty_QC_Data_2021 VM-04_Post_Work_Verficiation_1.0.PDF."

¹⁴⁸ Liberty 2021 WMP Update, page 115.

¹⁴⁹ DR-201, response to question 6.

4.14 Initiative 7.3.5.14: Recruiting and Training of Vegetation Management Personnel

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.”¹⁵⁰

4.14.1 2021 WMP Update Statements, Supporting Information, and Analysis

In its 2021 WMP Update, Liberty states, “the contractors that perform inspections and tree clearing work are required to provide properly trained personnel in order to complete the assigned work in accordance with Liberty’s specifications.”¹⁵¹ Energy Safety reviewed a training agenda¹⁵² as an example of the training performed. Energy Safety also reviewed checklists^{153 154 155} documenting the training that contractors received through the year. Liberty also provided a meeting agenda¹⁵⁶ documenting a UAA Professional Development meeting held on January 13, 2021, which covered the ongoing development plan and training requirements. Energy Safety reviewed the review process¹⁵⁷ for contractor's advancement through trainings. Finally, Energy Safety reviewed contractor certification of completion of training in three periods.^{158 159 160} Therefore, Energy Safety’s audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the training of contractors that perform inspections and tree clearing work.

¹⁵⁰2021 WMP Update guidelines, Resolution WSD-011, attachment 2.2, page 54-55:

<https://energysafety.ca.gov/wp-content/uploads/docs/wmp-2021/docs/352460864.pdf> (accessed May 23, 2023).

¹⁵¹ Liberty 2021 WMP Update, page 116.

¹⁵² DR-201, response to question 8, “Week One Training Agenda - Virtual.PDF.”

¹⁵³ DR-201, response to question 8, “Dawnne Hirty Training Checklist 2021.pdf.”

¹⁵⁴ DR-201, response to question 8, “Daniel Burns Training Checklist 2021-2022.pdf.”

¹⁵⁵ DR-201, response to question 8, “Chris Easley Training Checklist 2021.pdf.”

¹⁵⁶ DR-201, response to question 8, “DR-201_Q15.pdf.”

¹⁵⁷ DR-201, response to question 8, “RE_Rim Lipovsky.”

¹⁵⁸ DR-201, response to question 8, “USSP-UVM Cert of Completion 3-2021.pdf.”

¹⁵⁹ DR-201, response to question 8, “USSP-UVM Cert of Completion 3-2021.pdf.”

¹⁶⁰ DR-201, response to question 8, “UWSP-UVM Cert of Completion 11-2021.pdf.”

Per Liberty’s 2021 WMP Update, “vegetation management contractors are responsible for conducting training of their personnel. Liberty’s contract specifications, for both inspections and tree clearing work, describe minimum requirements for contract personnel. Liberty carefully reviews contract personnel qualifications to remain in compliance with the stated requirements.”¹⁶¹ Energy Safety reviewed contractor certification of completion of training in three periods.^{162 163 164} Therefore, Energy Safety’s audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the training of contractors that perform inspections and tree clearing work.

Liberty’s 2021 WMP Update explains that “Liberty supports the development of utility vegetation management training such as that offered by the University of Wisconsin, Stevens Point. This is a two-year UVM Professional Development Certificate Program aimed at increasing the personnel available to staff utility VM programs and perform vegetation management inspection work.”¹⁶⁵ Energy Safety reviewed certificates of completion^{166 167 168} for programs offered by the University of Wisconsin. Therefore, Energy Safety’s audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the development of utility vegetation management training.

4.14.2 Energy Safety’s Determination for 2021 WMP Update Initiative 7.3.5.14

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

4.15 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....”¹⁶⁹

¹⁶¹ Liberty 2021 WMP Update, page 116.

¹⁶² DR-201, response to question 8, “USSP-UVM Cert of Completion 3-2021.pdf.”

¹⁶³ DR-201, response to question 8, “USSP-UVM Cert of Completion 3-2021.pdf.”

¹⁶⁴ DR-201, response to question 8, “UWSP-UVM Cert of Completion 11-2021.pdf.”

¹⁶⁵ Liberty 2021 WMP Update, page 116.

¹⁶⁶ DR-201, response to question 11, “USSP-UVM Cert of Completion 3-2021.pdf.”

¹⁶⁷ DR-201, response to question 11, “UWSP-UVM Cert of Completion 6-2021.pdf.”

¹⁶⁸ DR-201, response to question 11, “UWSP-UVM Cert of Completion 11-2021.pdf.”

¹⁶⁹ 2021 WMP Update guidelines, Resolution WSD-011, attachment 2.2, page 54-55:

<https://energysafety.ca.gov/wp-content/uploads/docs/wmp-2021/docs/352460864.pdf> (accessed May 23, 2023).

4.15.1 2021 WMP Update Statements, Supporting Information, and Analysis

In its 2021 WMP Update, Liberty states “they have developed a Hazard Tree Management Plan (VM-03) for the purpose of identifying, documenting, and mitigating trees that are located within the Utility Strike Zone and are expected to pose a risk to electric facilities based on the tree’s observed structural condition and site considerations.”¹⁷⁰ Energy Safety reviewed the Hazard Tree Plan (VM-03)¹⁷¹ dated April 2021. Therefore, Energy Safety’s audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the development of a Hazard Tree Management Plan.

Per Liberty’s 2021 WMP Update, “the plan includes an overview of tree risk associated with electric lines and equipment, inspection types, risk assessment levels, work priority levels, and mitigation actions.”¹⁷² Energy Safety reviewed the Hazard Tree Plan (VM-03),¹⁷³ which addresses the risk associated with electrical lines. Therefore, Energy Safety’s audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the plan of tree risks associated with electric lines and equipment, inspection types, risk assessment levels, work priority levels, and mitigation actions.

Liberty’s 2021 WMP Update continues by stating that “Liberty has drafted a Vegetation Threat Procedure (VM-05) to identify methods of prioritization for vegetation threats discovered along electric lines and equipment through the implementation of its vegetation inspection programs. The Vegetation Threat Procedure prioritizes vegetation threats to be mitigated based on observed vegetation and surrounding environmental conditions.”¹⁷⁴ Energy Safety reviewed the Vegetation Threat Procedure (VM-05),¹⁷⁵ which documents the process of prioritizing tree threat starting on page 4. Therefore, Energy Safety’s audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the drafting of a Vegetation Threat Procedure.

4.15.2 Energy Safety’s Determination for 2021 WMP Update Initiative 7.3.5.15

Based on the analysis above, Energy Safety finds Liberty provided information consistent with completion of the work identified in the 2021 WMP update Initiative 7.3.5.15: Remediation of At-Risk Species.

¹⁷⁰ Liberty 2021 WMP Update, page 117.

¹⁷¹ DR-201, response to question 15 “VM-03_Hazard_Tree_Plan_1.0.pdf.”

¹⁷² Liberty 2021 WMP Update, page 117.

¹⁷³ DR-201, response to question 16, “VM-03_Hazard_Tree_Plan_1.0.pdf.”

¹⁷⁴ Liberty 2021 WMP Update, page 117.

¹⁷⁵ DR-201 response to question 16, “VM-05_Vegetation_Threat_Procedure.PDF.”

4.16 Initiative 7.3.5.16: Removal and Remediations of Trees with Strike Potential to Electric Lines and Equipment

The purpose of this initiative is to “remediate trees that could potentially strike electrical equipment, if adverse events such as the failure at the ground-level of the tree or branch breakout within the canopy, occur.”¹⁷⁶

4.16.1 2021 WMP Update Statements, Supporting Information and Analysis

Liberty’s 2021 WMP Update states, “Mitigation of trees with the potential to strike electric lines and equipment are addressed in Section 7.3.5.15.” Liberty directs readers to Initiatives 7.3.5.15 as applicable to Initiative 7.3.5.16. Energy Safety conducted an analysis of the referenced Initiative and determined that Liberty completed all work associated with this initiative; therefore, Energy Safety’s conclusion that all work was complete also applies to initiative 7.3.5.16.

4.16.2 Energy Safety’s Determination for 2021 WMP Update Initiative 7.3.5.16

See Energy Safety’s findings on Initiative 7.3.5.15.

¹⁷⁶ 2021 WMP Update guidelines, Resolution WSD-011, attachment 2.2, page 54-55:
<https://energysafety.ca.gov/wp-content/uploads/docs/wmp-2021/docs/352460864.pdf> (accessed May 23, 2023).

4.17 Initiative 7.3.5.17: Substation Inspections

The purpose of this initiative is to inspect “vegetation surrounding substations.”¹⁷⁷ Liberty states that “Although there are no costs specifically associated with this activity, the inspections performed in Sections 7.3.2.2, 7.3.2.3, 7.3.2.11, and 7.3.2.12 help to see that required vegetation work surrounding substations is adequately documented and scheduled.”¹⁷⁸

4.17.1 2021 WMP Update Statements, Supporting Information, and Analysis

Liberty’s WMP Update states, “Although there are no costs specifically associated with this activity, the inspections performed in Sections 7.3.2.2, 7.3.2.3, 7.3.2.11, and 7.3.2.12 help to see that required vegetation work surrounding substations is adequately documented and scheduled.”¹⁷⁹ Liberty directs readers to Initiatives 7.3.5.2, 7.3.5.3, 7.3.5.11, and 7.3.5.12 as applicable to Initiative 7.3.5.17. Energy Safety conducted an analysis of the referenced Initiatives and determined that Liberty completed all work associated with these initiatives; therefore, Energy Safety’s conclusion that all work was complete also applies to initiative 7.3.5.17.

4.17.2 Energy Safety’s Determination for 2021 WMP Update Initiative 7.3.5.3

See Energy Safety’s findings on Initiative 7.3.5.2, 7.3.5.3, 7.3.5.11, and 7.3.5.12.

¹⁷⁷ 2021 WMP Update guidelines, Resolution WSD-011, attachment 2.2, page 54-55:

<https://energysafety.ca.gov/wp-content/uploads/docs/wmp-2021/docs/352460864.pdf> (accessed May 23, 2023).

¹⁷⁸ Through discussion with Liberty, Energy Safety learned that there is a typographical error in section 7.3.5.17 and the referenced sections should read 7.3.5.2, 7.3.5.3, 7.3.5.11, and 7.3.5.12.

¹⁷⁹ Through discussion with Liberty, Energy Safety learned that there is a typographical error in section 7.3.5.17 and the referenced sections should read 7.3.5.2, 7.3.5.3, 7.3.5.11, and 7.3.5.12.

4.18 Initiative 7.3.5.18: Substation Vegetation Management

The purpose of this initiative is “to reduce the ignition probability and wildfire consequences attributable to contact from vegetation to substation equipment.”¹⁸⁰ Liberty states that although there are no costs specifically associated with this activity, vegetation within the substation footprint is cleared on an as-needed basis using herbicide, pre-emergent and hand treatments. Work that is needed is identified as described in Activity 7.3.2.17.”

4.18.1 2021 WMP Update Statements, Supporting Information, and Analysis

Liberty’s WMP Update states, “although there are no costs specifically associated with this activity, vegetation within the substation footprint is cleared on an as-needed basis using herbicide, pre-emergent and hand treatments. Work that is needed is identified as described in Activity 7.3.2.17.” Liberty directs readers to Initiatives 7.3.5.17 as applicable to Initiative 7.3.5.18. Energy Safety conducted an analysis of the referenced Initiative and determined that Liberty completed all work associated with this initiative; therefore, Energy Safety’s conclusion that all work was completed also applies to initiative 7.3.5.18.

4.18.2 Energy Safety’s Determination for 2021 WMP Update Initiative 7.3.5.18

See Energy Safety’s findings on Initiative 7.3.5.17.

¹⁸⁰ 2021 WMP Update guidelines, Resolution WSD-011, attachment 2.2, page 54-55:
<https://energysafety.ca.gov/wp-content/uploads/docs/wmp-2021/docs/352460864.pdf> (accessed May 23, 2023).

4.19 Initiative 7.3.5.19: Vegetation Inventory System

The purpose of this initiative is having a “centralized inventory of vegetation clearances” that includes species, growth forecast, and grow-in, fly-in, or fall-in risk.¹⁸¹

4.19.1 2021 WMP Update Statements, Supporting Information, and Analysis

Per Liberty’s 2021 WMP Update, “Liberty manages tree work inventories and workloads through the Vegetation Management System (“VMS”) database. The VMS tracks circuit inspections, notification and tree work progress, provides work orders, notification letters and report generating functions, retains historical inspection and tree work data, and also has a variety of query options to specify select tree inventories as needed (i.e., routine circuit work on Federal lands for a specific inspection year or a random sample for quality control or assurance audits).”¹⁸² Energy Safety reviewed the a user list¹⁸³ that documents the access of employees and contractors to the VMS system, various screenshots from the system^{184 185} showing work orders and evidence that each program was included in the system and an attachment listing project types included in VMS.¹⁸⁶ Therefore, Energy Safety’s audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the management of tree work inventories and workloads through the Vegetation Management System (“VMS”) database.

¹⁸¹ 2021 WMP Update guidelines, Resolution WSD-011, attachment 2.2, page 54-55:

<https://energysafety.ca.gov/wp-content/uploads/docs/wmp-2021/docs/352460864.pdf> (accessed May 23, 2023).

¹⁸² Liberty 2021 WMP Update, page 118.

¹⁸³ DR-201, response to question 21 “VMS-User_List.PDF.”

¹⁸⁴ DR-201, response to question 21 “VMS_2021_work_order_Screen.PDF.”

¹⁸⁵ DR-201, response to question 21 “VMS_Status_deop_Down.PDF.”

¹⁸⁶ DR-201, response to question 21 “VMS_Project_Types.pdf.”

Liberty's 2021 WMP Update continues by stating that "trees are inventoried if a specific tree requires remediation for the current inspection; therefore, a new tree is only added to the inventory in VMS if it is being listed for tree work. Every tree inventoried on the system is assigned its own tree ID number. If a tree that has been worked in the past requires work again, that specific tree record is updated to create a new work order and inspection record for the current inspection taking place, but the unique tree ID number for that tree does not change. Past work orders and inspection records for that tree are retained. During the inspection process, trees not requiring work are not inventoried and/or updated. Photographs, tree work authorization forms, and other documents associated with specific trees can be linked to the tree records through local network drives. Each individual tree is also assigned a status drop-down in order to track notifications, project progress, and tree work completion. Upon receipt of a signed and completed work requests, an individual tree records status is changed to a completed status."¹⁸⁷ Energy Safety reviewed Inspections and Maintenance Data¹⁸⁸ from 2021 with tree ID number, work order number, and inspection record number and three examples of trees that were worked on in 2021.¹⁸⁹ Energy Safety also reviewed a screenshot showing the system in 2021 had individual trees with an assigned status drop-down in order to track notifications, project progress, and tree work completion¹⁹⁰ and a screenshot showing the system in 2021 had the ability to change individual tree record status to "completed status" upon receipt of a signed and completed work request.¹⁹¹ Therefore, Energy Safety's audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the addition of new trees to the inventory in VMS.

4.19.2 Energy Safety's Determination for 2021 WMP Update Initiative 7.3.5.19

Based on the analysis above, Energy Safety finds Liberty provided information consistent with completion of the work identified in the 2021 WMP update Initiative 7.3.5.19: Vegetation Inventory System.

¹⁸⁷ Liberty 2021 WMP Update, page 118.

¹⁸⁸ DR-201, response to question 27.

¹⁸⁹ DR-201, response to question 28-29.

¹⁹⁰ DR-201, response to question 30.

¹⁹¹ DR-201, response to question 31.

4.20 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.”¹⁹²

4.20.1 2021 WMP Update Statements, Supporting Information, and Analysis

In its 2021 WMP Update, “Liberty conducts annual inspections of its facilities in order to identify needed vegetation management work. Work performed as a result of these inspections meets the clearance recommendations set forth in Appendix E of G.O. 95, Rule 35 (14.4kV and 60kV – 12’ to 15’; 120kV – 30’).”¹⁹³ Energy Safety reviewed a list of LiDAR Span Inspections completed in 2021.¹⁹⁴ Therefore, Energy Safety’s audit found Liberty provided information consistent with the completion of the work identified in this statement regarding the inspection of facilities in order to identify needed vegetation management work.

4.20.2 Energy Safety’s Determination for 2021 WMP Update Initiative 7.3.5.20

Based on the analysis above, Energy Safety finds Liberty provided information consistent with completion of the work identified in the 2021 WMP update Initiative 7.3.5.20: Vegetation Management to Achieve Clearances around Electric Lines and Equipment.

¹⁹² 2021 WMP Update guidelines, Resolution WSD-011, attachment 2.2, page 54-55:

<https://energysafety.ca.gov/wp-content/uploads/docs/wmp-2021/docs/352460864.pdf> (accessed May 23, 2023).

¹⁹³ Liberty 2021 WMP Update, page 119

¹⁹⁴ DR-201, response to question 30.

5. Conclusion

Energy Safety reviewed the 16 vegetation management initiatives detailed in Liberty's 2021 WMP Update and found that Liberty performed all of the work specified. This audit is not an assessment of the quality of Liberty's execution of its vegetation management program. No deficiencies were identified as a result Energy Safety's audit, therefore, no corrective actions are required.

Energy Safety finds that Liberty substantially complied with the substantial portion of the vegetation management requirements in its 2021 WMP Update.¹⁹⁵

¹⁹⁵ Pub. Util. Code, 8386.3(c)(5)(C).

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