FINAL INDEPENDENT EVALUATOR ANNUAL REPORT ON COMPLIANCE

JUNE 30, 2023

Liberty

C2 GROUP

BUREAU VERITAS

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1. EXECUTIVE SUMMARY

Background

Derived from the devastating wildfires of 2016 and 2017, California Public Utilities Commission (CPUC) opened Rulemaking 18-10-007 to provide guidance on the Investor-Owned Utilities (IOU) Wildfire Mitigation Plans (WMPs). Moving forward, California Legislature passed several bills increasing the oversight for the investor-owned utilities (IOUs) as it related to mitigating wildfires associated with electrical corporation's infrastructure role in utility-related wildfires. This resulted in key legislative measures, Senate Bill 901 (2018), Assembly Bill 1054 (2019), and Assembly Bill 111 (2019). Since the passing and ratification of this legislation, the Wildfire Safety Division (WSD) of the California Public Utilities Commission (CPUC) transitioned to the Office of Energy Infrastructure Safety (OEIS)/ Energy Safety at the California Natural Resources Agency (CNRA) on July 1, 2021. The wildfire mitigation process requires utilities to submit their annual Wildfire Mitigation Plan (WMP) in a 3-year cycle. The initial WMP is submitted in the first year (2020) and follows with annual updates occurring for years 2 (2021) and 3 (2022).

Pursuant to P.U. Code Section 8386.3(c)(2)(B)(i), (ii), (iii), and (iv), Bureau Veritas North America, Inc. (BVNA) has been selected as an Independent Evaluator (IE) to review and assess Liberty Utilities (CalPeco Electric) LLC (U 933-E) (to be referred to as Liberty within the report), 2022 Wildfire Mitigation Plan (WMP) Update, dated May 6, 2022, referred to within this report as the Plan or WMP; and provide a written report demonstrating Liberty's level of compliance with their commitments demonstrated within the Plan.

In carrying out the stipulations of Resolution WSD-021, BVNA has evaluated Liberty Utilities' compliance with its Plan commitments pursuant to Public Utilities Code Section 8386, validated Liberty Utilities' quality assurance and quality control (QA/QC) programs outlined for support of WMP initiatives, and reviewed its WMP funding activities.

Scope

Pursuant to the OEIS Revision Notice for Liberty Utilities (Liberty) 2022 WMP Update and the requirements of the Public Utilities Code (PU Code); Bureau Veritas North America, Inc. (BVNA), in partnership with C2 Group, as the qualified Independent Evaluator have reviewed the Plan, incorporating updated guidelines of SB 533 (Stats. 2021, Ch.244), for initiative compliance verification for the execution of the WMP goals and targets and is considered the IE Annual Report on Compliance (IE ARC).

The IE evaluation has provided the following narrative and supplemental documents provided within the Appendices of this report for verification of compliance, validation of Quality Assurance (QA)/Quality Control (QC) programs, and assessment of the utility funding activities related to the Plan.

Key Findings

The below key findings have been provided as a summarization of the IE's assessment of Liberty's Plan, for an understanding of Liberty's commitment to initiatives and program targets in an effort to demonstrate Liberty's success in reaching their objectives. The IE further reviews, if available, the EC's Quarterly Data Report (QDR) information specific to Wildfire Mitigation Plan categories and initiative activities that are intended to reduce the probability and risk of wildfire and associated metric outcomes which result in confirming or drive Plan revisions; Quarterly initiative Updates (QIUs) addressing resulting plan changes from trends or findings and Quarterly Notifications or communications between OEIS and the EC. Continuous tracking of programs and trends demonstrate the EC's understanding of the wildfire threat.

Liberty has directly identified and are working to enhance its wildfire prevention and mitigation efforts through working with experts and leaders within regulator groups, Community Based Organizations, other utilities, and industry experts to understand the wildfire problem better and has implemented new programs and QA/QC programs to ensure work related to confirm progress on the Plans initiatives that address and limit wildfire risks such as reducing ignition probabilities. In expanding their efforts, Liberty's work and experience in 2020 & 2021 resulted in Liberty's 2022 wildfire mitigation strategy focusing on an actionable plan that is being implemented into daily operations, with metrics and trends tracking risk reduction through technology systems. Areas of focus in an effort to prevent catastrophic wildfires include:

1. Risk Assessment and Mapping
2. Situational Awareness and Forecasting
3. Grid Design and System Hardening
4. Asset Management and Inspections
5. Vegetation Management and Inspections
6. Grid Operations and Operating Protocols
7. Data Governance
8. Resource Allocation Methodology
9. Emergency Planning and Preparedness
10. Stakeholder Cooperation and Community Engagement

Many lessons learned drove Liberty to use tools such as its circuit risk analysis and fire risk mapping tool to prioritize work and continued to work with Reax to update its wildfire risk model and fire risk map. Liberty also utilized technology to assess Distribution Fault Anticipation where data will be collected and analyzed at Texas A & M to identify circuits requiring additional investigation the effectiveness of the technology as it relates to preventative maintenance and

anticipation of fault events. As part of the grid design and system hardening, Liberty provided for covered conductor, pole replacement, replacement of expulsion fuses, removal of tree attachments, installation of animal guards, and undergrounding, Vegetation management and inspections programs provided for resiliency in utility corridors and initiated detailed inspection of vegetation around distribution lines and equipment; this further included tree mortality and the dead and dying trees throughout Liberty's service territory.

The Independent Evaluator (IE) team reviewed Liberty's Vegetation Management (VM) and Inspection Program efforts under the WMP associated with pole and line clearances to reduce or eliminate the potential for impacts from vegetation to distribution lines and associated equipment. The IE conducted a desktop-level review of data, reports, aerial imagery, and Light Detection and Ranging (LiDAR) as a remote sensing method of documenting and assessing field conditions, along with other materials that were publicly available and as provided by Liberty through data requests. The IE conducted and completed an in-field assessment of the program's VM activities.

Liberty reported completing 203 line miles of VM activities for removal and remediation of trees with strike potential to electric lines and equipment, along with 701 line miles achieving clearances around electric lines and equipment along overhead utility lines; IE in-field inspections were completed along approximately 149.5 miles of these circuit-line miles to confirm that VM activities had occurred and whether they were completed as prescribed within the Plan.

Based on the results of the desktop-level review and in-field survey, the IE determined that Liberty had effectively achieved its VM initiatives as described in the 2022 WMP.

Large volume quantifiable goal/target – not field verifiable section, included showing an effort in the goal of the reduction of fuel management. After analyzing the Plan and the data responses, evidence was obtained that supported compliance or partial compliance based on the initiative commitments. Data was reviewed and collected for small volume quantifiable goal/target in which some sections demonstrated an effort and commitment to meeting or exceeding wildfire risk reduction as demonstrated within Liberty's record documents. Other initiatives were not as clear thus making it difficult to determine compliance. Overall, the initiatives were found to be supportive of the WMP.

The below table demonstrates Liberty's 2022 WMP initiative targets and progress:

Table 1 – 2022 Initiative Targets and Findings Summarized:

Utility Initiative Name	WMP Initiative Category	Plan Initiative Category#	2022 Annual Target	2022 Annual Actual	Units	Assessed Finding
A summarized risk map that shows the overall ignition probability and estimated wildfire consequence along the electric lines and equipment	Risk Assessment & Mapping	7.3.1.1	-	-	N/A	
Advanced weather monitoring and weather stations	Situational Awareness & Forecasting	7.3.2.1	10	4	Weather Stations Installed	Goal not met, ARC indicated 5 Weather stations, DRU002-03 indicates 4 installed
Continuous monitoring sensors	Situational Awareness & Forecasting	7.3.2.2	-	-	N/A	
Fault indicators for detecting faults on electric lines and equipment	Situational Awareness & Forecasting	7.3.2.3	2	Unknown	Fault Indicators Installed	Unable to confirm location of fault indicators
Forecast of a fire risk index, fire potential index, or similar	Situational Awareness & Forecasting	7.3.2.4	-	-	N/A	
Personnel monitoring areas of electric lines and equipment in elevated fire risk conditions	Situational Awareness & Forecasting	7.3.2.5	-	-	N/A	

Circuit breaker maintenance and installation to de-energize lines upon detecting a fault	Grid Design & System Hardening	7.3.3.2	-	-	N/A	
Covered conductor installation	Grid Design & System Hardening	7.3.3.3	9.55	9.6	Circuit miles	Goal met/exceeded by 0.05 circuit miles
Distribution pole replacement and reinforcement, including with composite poles	Grid Design & System Hardening	7.3.3.6	231	226	Poles	Goal Not Met, 2.6% of sampled locations not in compliance.
Expulsion fuse replacement	Grid Design & System Hardening	7.3.3.7	1500	1858	Expulsion Fuses Replaced	Goal met/exceeded 2.08% of sampled locations not in compliance
Grid topology improvements to mitigate or reduce PSPS events	Grid Design & System Hardening	7.3.3.8	-	-	N/A	
Installation of system automation equipment	Grid Design & System Hardening	7.3.3.9	4	2	Automatic Reclosers Installed	Goal not met
Other corrective action	Grid Design & System Hardening	7.3.3.12	45	Unknown	Tree Attachment Removals	Goal not met; information not available to confirm. Only 14 of the requested 20 photos were provided.
Undergrounding of electric lines and/or equipment	Grid Design & System Hardening	7.3.3.16	0.36	0.26	Line Miles	Goal not met

Detailed inspections of distribution electric lines and equipment	Asset Management & Inspections	7.3.4.1	307.8	328.6	Line Miles Inspected	Goal met/ exceeded target by 18.4 Circuit miles
Improvement of inspections	Asset Management & Inspections	7.3.4.3	-	-	N/A	
Infrared inspections of distribution electric lines and equipment	Asset Management & Inspections	7.3.4.4	-	-	N/A	
Intrusive pole inspections	Asset Management & Inspections	7.3.4.6	2598	2735	Poles Inspected	Goal met/ exceeded by 135 poles as shown by DR001 of 2733 poles
Patrol inspections of distribution electric lines and equipment	Asset Management & Inspections	7.3.4.11	706	503	Line Miles Inspected	Goal Not Met
Quality assurance / quality control of inspections	Asset Management & Inspections	7.3.4.14	0.05	Unknown	% Of detailed inspections by third party	Unable to confirm the % of completed third party inspections. DR-013 focused on 8 inspection location.
Substation inspections	Asset Management & Inspections	7.3.4.15	42	42	Substations Inspected	Goal met
Additional efforts to manage community and environmental impacts	Vegetation Management & Inspections	7.3.5.1	6	6.33	Line Miles Treated	Goal met/exceeded by 0.33 line miles treated

Detailed inspections of vegetation around distribution electric lines and equipment	Vegetation Management & Inspections	7.3.5.2	222	201.6	Line Miles Inspected	Goal Not Met
Fuel management and reduction of "slash" from vegetation management activities	Vegetation Management & Inspections	7.3.5.5	280	515	Acres	Goal met
LiDAR inspections of vegetation around distribution electric lines and equipment	Vegetation Management & Inspections	7.3.5.7	701	701	Line Miles Inspected	Goal met/exceeded with no location discrepancies found
Other discretionary inspections of vegetation around transmission electric lines and equipment	Vegetation Management & Inspections	7.3.5.10	-	-	N/A	
Patrol inspections of vegetation around distribution electric lines and equipment	Vegetation Management & Inspections	7.3.5.11	171	224.4	Line Miles Inspected	Goal met/exceeded by 53.4 line miles
Quality assurance / quality control of vegetation inspections	Vegetation Management & Inspections	7.3.5.13	221	271.7	Line Miles Inspected	Goal met/exceeded by 50.7 line miles
Recruiting and training of vegetation management personnel	Vegetation Management & Inspections	7.3.5.14	-	-	N/A	

Remediation of at-risk species	Vegetation Management & Inspections	7.3.5.15	238	223	Line Miles	(Discrepancy with numbers assessed) 2-deficient locations identified among 31 unique sampled sites
Removal and remediation of trees with strike potential to electric lines and equipment	Vegetation Management & Inspections	7.3.5.16	171	224.4	Line Miles	Goal met/exceeded by 53.4 line miles
Vegetation management to achieve clearances around electric lines and equipment	Vegetation Management & Inspections	7.3.5.20	701	707.2	Line Miles	Goal met/exceeded by 6.2 line miles by DR 01 707.2 line miles
Vegetation management activities post-fire	Vegetation Management & Inspections	7.3.5.21	-	-	N/A	
Automatic recloser operations	Grid Operations & Operating Protocols	7.3.6.1	-	-	N/A	
Personnel work procedures and training in conditions of elevated fire risk	Grid Operations & Operating Protocols	7.3.6.3	-	-	N/A	
Protocols for PSPS re-energization	Grid Operations & Operating Protocols	7.3.6.4	-	-	N/A	
Centralized repository for data	Data Governance	7.3.7.1	-	-	N/A	

Collaborative research on utility ignition and/or wildfire	Data Governance	7.3.7.2	-	-	N/A	
Adequate and trained workforce for service restoration	Emergency Planning & Preparedness	7.3.9.1	-	-	N/A	
Community outreach, public awareness, and communications efforts	Emergency Planning & Preparedness	7.3.9.2	-	-	N/A	
Customer support in emergencies	Emergency Planning & Preparedness	7.3.9.3	-	-	N/A	
Community engagement	Stakeholder Cooperation & Community Engagement	7.3.10.1	-	-	N/A	
Cooperation and best practice sharing with agencies outside CA	Stakeholder Cooperation & Community Engagement	7.3.10.2	-	-	N/A	

2. INTRODUCTION

The state of California has suffered extensively from disastrous wildfires in recent years. The California Department of Forestry and Fire Protection (CALFIRE) has indicated that due to warming it is likely that more aggressive fires are in store due to the stresses observed in forests from prolonged drought conditions, forest management and bark beetle infestations.

In effort to address the risk of fire in the wildland, California has passed legislation and supporting regulations that require electrical corporations (EC's/EC) to develop a wildfire mitigation plan that would explicitly address how each Investor Owned Utility (IOU) understands its own risk to the environments and the risk of impact due to wildfire. These Plans describe the strategies and implementation of initiatives uniquely associated with their infrastructure and surrounding environment within the areas defined as Tier 2 and Tier 3 High Fire Threat Districts (HFTDs/HFTD).

Liberty, as an IOU is required by legislation to submit an annual WMP as part of a three (3) year cycle strategy, 2020-2022 and focus on measures the EC will take to reduce the risk of, and impact from wildfire as it relates to its electrical infrastructure and equipment.

This IE report is intended to verify the Plans compliance with the activities described as commitments to reducing wildfire risk as plan performances compared to actual performance, funding of activities and appropriateness of funding and validate the QA/QC program activities. A review of all documents supporting the implementation of the 2022 WMP initiatives has been conducted. BVNA, in partnership with C2 Group, has provided the following IE Annual Report of Compliance (ARC), which aligns with the scope set forth by the Office of Energy Infrastructure and Safety/ Energy Safety (OEIS), describing the technical review and findings.

Figure 1: Map of Liberty's Service Territory

Liberty Utilities is an energy-based holding company whose primary operating subsidiary is CalPeco Electric LLC, an investor-owned utility (IOU) with parent company Algonquin Power & Utilities Corporation, is a diversified energy and water company with more than one million customers across four countries, including North America. Within the state of California, the service territory consists of the Lake Tahoe Region north, and south, and along the eastern Sierra Mountain range, as depicted in Figure 1 map. The area occupied by Liberty's infrastructure is classified as a HFTD of tier 2 and tier 3 extreme risk of fire. The environment is comprised of dense vegetation, wildlife habitats, high mountain terrain and communities positioned in difficult access areas.

Liberty Utilities delivers electricity to nearly 100,000 customer connections in New Hampshire and California. Liberty is a regulated water, wastewater, natural gas, electric, and propane/air utility company providing local utility management, service, and support to small and mid-sized communities across the United States.

3. INDEPENDENT EVALUATOR REVIEW OF COMPLIANCE

For the evaluation of Liberty's compliance with the Plan, the overall approach to verify compliance included the review and assessment of the multiple WMP activities through data requests, Subject Matter Expert (SME) interviews, review of publicly available documents, and conducting field assessments within Liberty's service area to documented and validated aspects detailed and outlined in Liberty's Plan. At the time of commencement of the evaluation, the IE initiated a review of Liberty's 2022 approved Plan and associated publicly available documents; information received as part of BVNA's Data Request (DR/DRs) as listed in Appendix C – Data Request Log and Interview Requests; Appendix B – List of Documents Reviewed, and Appendix D SME Interview Summary found in the Appendices of this Report. The IE further conducted field assessments to assure the information presented was accurately depicted and work was conducted as described. Liberty's plan is to prevent and mitigate the risk of wildfires caused by utility equipment continues to focus on reducing the risk through wildfire prevention and mitigation efforts by enhancing or expanding existing program and implementing new programs or refocusing existing elements. The IE assessed the fulfillment of commitments, initiatives, and metrics are provided narrative included in the QA/QC programs or provisions so outlined within the WMP. BVNA's understanding of utility strategies demonstrated throughout the state are summarized below and incorporate additional wildfire mitigation plan requirements and performance metrics:

1. **Inspection and maintenance of distribution, transmission, and substation assets,** including conducting system patrols and ground inspections using technological inspection tools, managing predictive and electrical preventative maintenance, conducting vegetation inspections and management, vulnerability detection such as Light Detection and Ranging (LiDAR) inspection, and geospatial and topography identification and geographic information system (GIS) mapping data. A key component is identifying collected data elements through each program and understanding how that data is used and shared to improve utility practices.

2. **Vegetation management,** including informed decision making based upon the latest fire science related tradeoff between fire intensity and flammability; routine preventative vegetation maintenance; corrective vegetative management and off-cycle tree work; consideration to longer term ecosystem changes and how it affects fire dangers; utilization of ecologist to consideration and incorporate trends associated with wind speeds, temperatures, moisture content and other wildfire factors; emergency vegetation clearance, prioritized for portions of the service territory in Tier 2 and 3 HFTD;

quality control processes; and resource protection plan, including animal and avian mitigation programs.

To continue to make progress on Liberty's Vegetation Management initiatives, the goal of Liberty's vegetation manager (VM) programs aim to keep all aspects of trees and/or vegetation away from power lines and to prescribe minimum clearances that exceed state standards, which includes covered conductor program, undergrounding of electric lines, detailed inspections of vegetation around electrical lines and equipment, and remediation of at risk species. .

3. **System Design and Operation: Grid Hardening, Workforce Management, Asset Inspection and Emerging Technology** includes concept associated with grid innovation that is specific to identifying opportunities for improvement that aim at demonstrating risk spend efficiencies for grid hardening projects. Prescribed improvements can be pursued as a result of findings from lessons learned from prior fires. Other technological improvements evaluate pole replacement, non-expulsion equipment, advanced fuses, tree attachment removal, less flammable transformer oil, covered wire and wire wrap, idle lines or equipment energized verses de-energizing or removal from service, aging infrastructure impact or contribution to increased fire risk, and undergrounding.

4. **Operational practices,** including communications and executing plans under varying degrees of wildfire risk. Plans to deactivate automatic reclosers, de-energization of "at risk" area power lines based on the type of facility (overhead bare conductions, high voltage, etc.), tree and vegetation density, available dry fuel, and other factors that make specific locations vulnerable to wildfire risk.

5. **Situational awareness** includes obtaining information from devices and sensors on the actual system, weather, and other wildfire conductivity conditions and two-way communication with agencies and key personnel. Programs such as online feeds and websites such as the National Fire Danger Rating System are utilized. Situational awareness should help achieve a shared understanding of actual conditions and serve to improve collaborative planning and decision-making.

6. **De-Energization actions** triggered and prioritized by forecasted extreme fire weather conditions: imminent extreme fire weather conditions; validated extreme fire weather conditions; and plans for re-energization when weather subsides to safe levels. Manual or automatic capabilities exist for implementation.

7. **Advanced Technologies** include Distribution Fault Anticipation technology, tree growth regulators, pulse control fault interrupters, oblique and hyperspectral imagery, advanced transformer fluids, advanced LiDAR, and advanced Supervisory Control and Data Acquisition (SCADA) to reduce electrical ignition while also helping to mitigate power outages and equipment damage.

8. **Emergency Preparedness, Outreach, and Response communications** before, during, and after emergencies, including but not limited to engaging with key stakeholders that include critical facilities and served customers, local governments, critical agencies such as the California Department of Forestry and Fire Protection (CAL FIRE), local law enforcement agencies and other first responders, hospitals, local emergency planning committees, other utility providers, California Independent System Operator and the utility's respective Board. Coordination agreements such as Mutual Aid or Assistance should be leveraged. A community outreach plan should inform and engage first responders, local leaders, land managers, business owners, and others.

In addition, further demonstration of the utility effectiveness in outreach efforts. Progress made should demonstrate the utilities success in reaching its customers and local stakeholders regarding the potential impacts of both wildfire and mitigation efforts. A clear understanding with sufficient information demonstrating how the utility has evaluate their outreach program and efforts and how the findings drive next steps in the wildfire mitigation planning.

3.1 The Plan Activity Completion

The Plan activities are demonstrated as described in section 7.3 – Detailed wildfire mitigation initiatives of the 2022 WMP starting on page 103 and further described in the List of initiative activates by category. Further demonstration can be found in Appendix A of this Report, where detail of the WMP activities and their grouping as Initial IE Categorization. Given the detailed nature of Liberty's asset inventory, the IE assessment of activity completion is itemized in this report's following sections. The details in Section 3.1.1in conjunction with Appendix A, provide a comprehensive overview of the specific verifications conducted by the IE.

3.1.1 Sampling Methodology and Discussion

In total, the IE assessed the following IE Categorizations with the associated Initiative Category/Program Target. WMP Initiative Categorization & IE Verifications required are:

Category 1 - 3.1.2 Large Volume (>/= 100 units) Quantifiable Goal/Target – Field Verifiable, specific verification performed by IE are installation and work quality (adherence to applicable standards and protocols):

- Grid Design & System Hardening
- Vegetation Management & Inspections

Category 2 - 3.1.3 Large Volume (>/= 100 units) Quantifiable Goal/Target – Not Field Verifiable, specific verification performed by IE are work completion and performance.

- Asset Management & Inspections
- Vegetation Management & Inspections

Category 3 - 3.1.4 Small Volume (less than 100 units) Quantifiable Goal/Target, specific verifications performed by IE are the installation or work completion or performance, along with work quality.

- Asset Management and Inspections
- Grid Design and System Hardening
- Situational Awareness and Forecasting
- Vegetation Management and Inspections

Category 4 - 3.1.5 Qualitative Goal/Target, specific verifications performed by IE are work completion and performance.

- Asset Management and Inspections
- Data Governance
- Emergency Planning and Preparedness
- Grid Design and System Hardening
- Grid Operations and Operating Protocols
- Risk Assessment and Mapping
- Situational Awareness and Forecasting
- Stakeholder Cooperation and Community Engagement
- Vegetation Management and Inspections

As demonstrated above, each IE Category has aspects of each defined Initiative Category/Program Target specific to the Initiative Activity and Utility Initiative Name. This depiction illustrates how the electrical corporations categorized the list of all WMP initiatives and accompanying goals and targets as scoped for IE review. From the list, the IE based its sample size and verification method upon the initiative scope, requested additional documentation, conducted SME interviews, and selected samples to be field verified.

Large Volume Quantifiable Goal/Target - Field Verifiable.

The IE applied sampling methodologies and standards to program targets to ensure the sampling quantities were statistically acceptable. The sample sizes were determined using Mil-Std-105-E, an attribute sampling plan adopted in 1995 by the American National Standards Institute (ANSI) / American Society for Quality (ASQ) Z1.4-2008. When Liberty's actual quantity of completed work exceeded the amount targeted, the greater and 'actual' number was used when determining the field review sample quantities. According to the standard, general inspection level two should be used and was applied as the default inspection level unless otherwise specified.

See Table 1: Program Sampling Methodology Summary, Large Volume Quantifiable Goal/Target Field Verifiable that summarizes the individual program targets, actuals, sampling methodologies/standards, and the IE sample size/target.

The IE conducted field inspections assessing compliance for work completion, work quality, and adherence to applicable protocols and procedures. The IE field sample targets are minimums, and larger sample numbers were obtained when possible. In addition, the IE has made data requests on these program targets to review, where applicable, standards, as-builts, and relevant QA/QC program documentation. This multi-faceted approach supports verification results extrapolated across sample populations.

The IE assessed the following 4 items provided as part of Liberty's 2022 WMP's list of initiatives under section **3.1.2 Large Volume Quantifiable Goal/Target - Field Verifiable**. All values shown as Target and Actual have been provided to the IE by Liberty as the “Liberty 2022 WMP Initiative Targets and Progress” spreadsheet requested in the Liberty kick off meeting on April 28, 2023. Those values depicted as “Target” are those projected within the Plan and the values depicted as “Actual” are those that have been confirmed through assessment and DR.

Table 1: Program Sampling Methodology Summary, Large Volume Quantifiable Goal/Target – Field Verifiable

Program	Units	Sections	Sampling Standard	Liberty Target/Actual	IE Field Sample
Distribution pole replacement and reinforcement, including with composite poles	EACH	7.3.3.6 - GDSH_06	ANSI/ASQ Z1.4	231/ 226	38
Expulsion fuse replacement	EACH	7.3.3.7 - GDSH_07	ANSI/ASQ Z1.4	1500/ 1858	192
LiDAR inspections of vegetation around distribution electric lines and equipment	Miles	7.3.5.7 - VMI_07	ANSI/ASQ Z1.4	701/ 701	149.5
Remediation of at-risk species	Miles	7.3.5.15 - VMI_15	ANSI/ASQ Z1.4	238/ 223	33.47

Large Volume Quantifiable Goal/Target – Not Field Verifiable

Similar to the Large Volume Quantifiable Goal/Target Field Verifiable noted previously, the IE applied the same sampling methodologies and standards to program targets to ensure the sampling quantities were statistically acceptable. The sample sizes were also determined using Mil-Std-105-E, an attribute sampling plan adopted in 1995 by the American National Standards Institute (ANSI) / American Society for Quality (ASQ) Z1.4-2008. When Liberty's actual quantity of completed work exceeded the amount targeted, the greater and 'actual' number was used when determining the sample quantities. According to the standard, general inspection level two should be used and was applied as the default inspection level unless otherwise specified.

See Table 2: Program Sampling Methodology Summary, Large Volume Quantifiable Goal/Target Not Field Verifiable that summarizes the individual program targets, actuals, sampling methodologies/standards, and the IE sample size/target.

The IE made initial data requests on these program targets to review the work completed and identify and request completion records for the sample size in conformance with the sampling methodology described herein. The IE has also made data requests on these program targets to review, where applicable, standards, as built, and relevant QA/QC program documentation.

The IE assessed the following 9 items provided as part of Liberty's 2022 WMP's list of initiatives under section **3.1.3 Large Volume Quantifiable Goal/Target - Not Field Verifiable**. All values shown as Target and Actual have been provided to the IE by Liberty as the "Liberty 2022 WMP Initiative Targets and Progress" spreadsheet requested in the Liberty kick off meeting on April 28, 2023. Those values depicted as "Target" are those projected within the Plan and the values depicted as "Actual" are those that have been confirmed through assessment and DR.

Table 2: Program Sampling Methodology Summary, Large Volume Quantifiable Goal/Target – Not Field Verifiable

Program	Units	Sections	Sampling Standard	Liberty Target/Actual	IE Sample Target
Detailed inspections of distribution electric lines and equipment	Miles	7.3.4.1 - AMI_01	ANSI/ASQ Z1.4	307.8/328.6	50
Intrusive pole inspections	EACH	7.3.4.6 - AMI_06	ANSI/ASQ Z1.4	2,598/2,735	125
Patrol inspections of distribution electric lines and equipment	Miles	7.3.4.11 - AMI_11	ANSI/ASQ Z1.4	706/503	80
Detailed inspections of vegetation around distribution electric lines and equipment	Miles	7.3.5.2 - VMI_02	ANSI/ASQ Z1.4	222/210.6	32
Fuel management and reduction of “slash” from vegetation management activities	Acres	7.3.5.5 - VMI_05	Data Request	280/515	80
Patrol inspections of vegetation around distribution electric lines and equipment	Miles	7.3.5.11 - VMI_11	ANSI/ASQ Z1.4	171/235	32
Quality assurance / quality control of vegetation inspections	Miles	7.3.5.13 - VMI_13	ANSI/ASQ Z1.4	221/271.7	32
Removal and remediation of trees with strike potential to electric lines and equipment	Miles	7.3.5.16 - VMI_16	ANSI/ASQ Z1.4	171/203	32
Vegetation management to achieve clearances around electric lines and equipment	Miles	7.3.5.20 - VMI_20	ANSI/ASQ Z1.4	701/701	80

Sampling Distribution

The IE conducted an independent site selection process to determine sample locations for field verifications taken from the populated data for each initiative. Sampling was targeted within HFTD Tiers 2 and 3 areas in all cases. Further, it targeted high-density areas to improve field inspection efficiency and maximize sampling quantities.

Sample sizes were adequate for a general understanding of the reviewed items and approved by OEIS. The sample sizes were consistent with the Mil Sample Standard to gain an understanding and insight of the performance of Liberty's WMP objectives. However, as requested in the Final IE Scope of Work document, general and linear extrapolations and deductions were made from the sample size results, which were distributed as defined within this document. These included the actual installation or removal of the item (work completion), general work quality, adherence to protocols, standards, and procedures, and item location or confirming operational outputs.

See Figure 2: Overview of Areas Sampled, which provides a general overview of the locations sampled within.

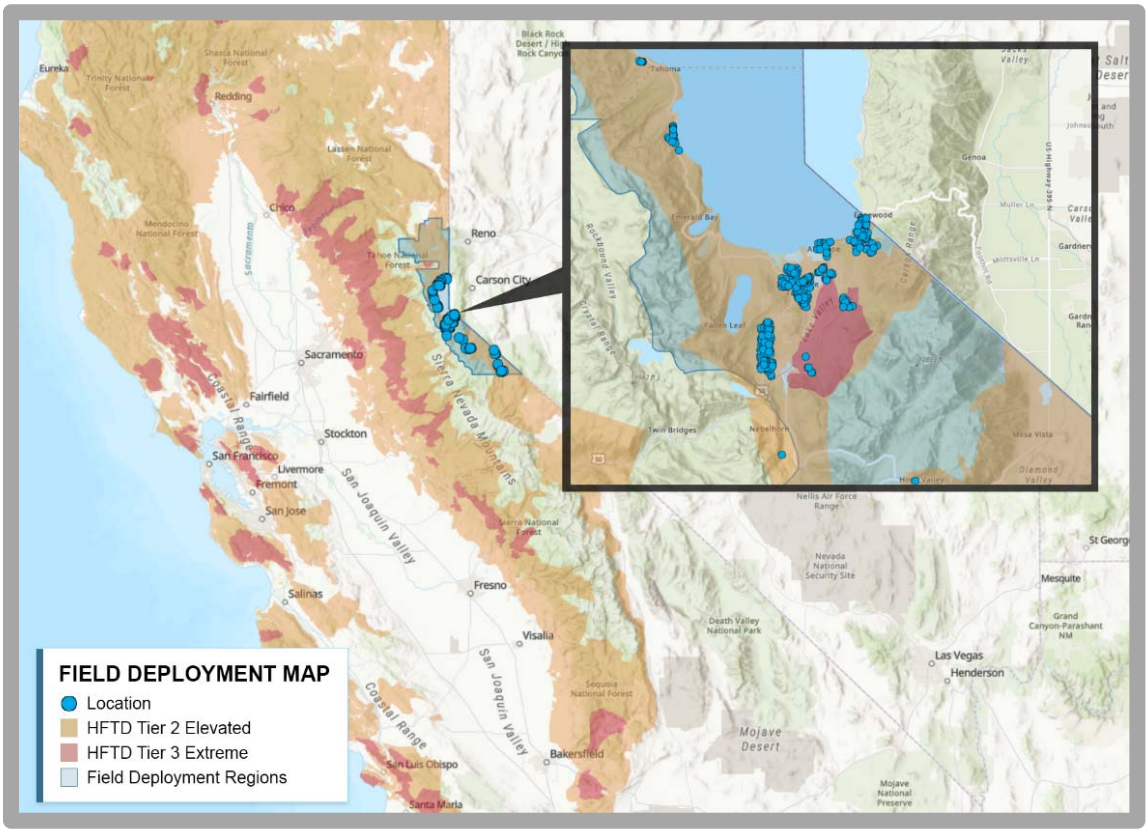

Figure 2: Overview of Areas Sampled

3.1.2 Large Volume Quantifiable Goal/Target – Field Verifiable

3.1.2.1 Review of Initiatives

The following information comprises detailed descriptions of the IE's assessments of Liberty's various initiatives categorized as Large Volume Quantifiable Field Verifiable. The approach to assessing each initiative, along with the IE's findings, are described in this section.

7.3.3.6 - GDSH_06 - Distribution pole replacement and reinforcement, including with composite poles

Replacement and reinforcement of distribution poles reduce the risk of structural failures and contributes to the overall goal of minimizing the risk of ignition in HFTD areas. Liberty committed to replacing 231 distribution poles identified in Tier 2 HFTD areas, while incorporating lessons learned from previous years that include structure location strategies, supply chain resolutions, and inspection data collection processes. Per Table 1 of Liberty's 2022 WMP Quarterly Data Report dated March 6, 2023, Liberty's goal to replace and reinforce 231 distribution poles was not met and fell short by 5 poles, replacing/reinforcing 226 distribution poles.

The program definition for pole replacement is defined in Section 7.3.3.6 Distribution pole replacement and reinforcement, including with composite poles of the 2022 WMP.

Field Photos of Poles Replacements

Figure 03: Example Pole Replacement Field Images

The IE verified a sample of 38 distribution pole replacement locations. Thirty-seven (37) sampled locations complied with the initiative and one (1), or 2.6%, of the sampled locations, was found to be out of compliance due to all signs indicating that this pole had not been replaced as depicted in provided documentation. Based on the IE's verification sample and results, it would appear that Liberty may have not met its stated commitment to replace and reinforce 231 distribution poles. This could be further validated if additional time is allocated for assessment.

The IE team further reviewed how Liberty selects, executes, closes, and tracks the overall Distribution Pole Replacement and Reinforcement initiative and various process flows and found them to align with GO95 Overhead Electric Line Construction and the Plans initiative goals.

7.3.3.7 - GDSH_07 - Expulsion fuse replacement

Replacement of non-exempt expulsion fuses with exempt fuses, considered non-expulsion and operating without creating arcs or sparks, contributes to the overall goal of minimizing the risk of ignition in HFTD areas. Liberty committed to replacing 1,500 non-exempt expulsion fuses identified on poles in Tier 2 and Tier 3 HFTD areas, while incorporating lessons learned from prior installations that include device location strategies and supply chain resolutions. Per Table 1 of Liberty's 2022 WMP Quarterly Data Report dated March 6, 2023, Liberty's goal to replace 1,500 non-exempt fuses was met and exceeded by 358 units, replacing 1,858 non-exempt fuses.

The program definition for replacement is defined in Section 7.3.3.7 Expulsion Fuse Replacement of the 2022 WMP. The IE field assessment team utilized the California Power Line Fire Prevention

Guide, 2021 Edition, as their ruling document to validate Exempt equipment installations (Pages 81-87, Figures B-1 through B-21) vs. Non-Exempt (Pages 54-62, Figures NE-1 through NE-18).

Field Photos of Expulsion Fuse Replacements

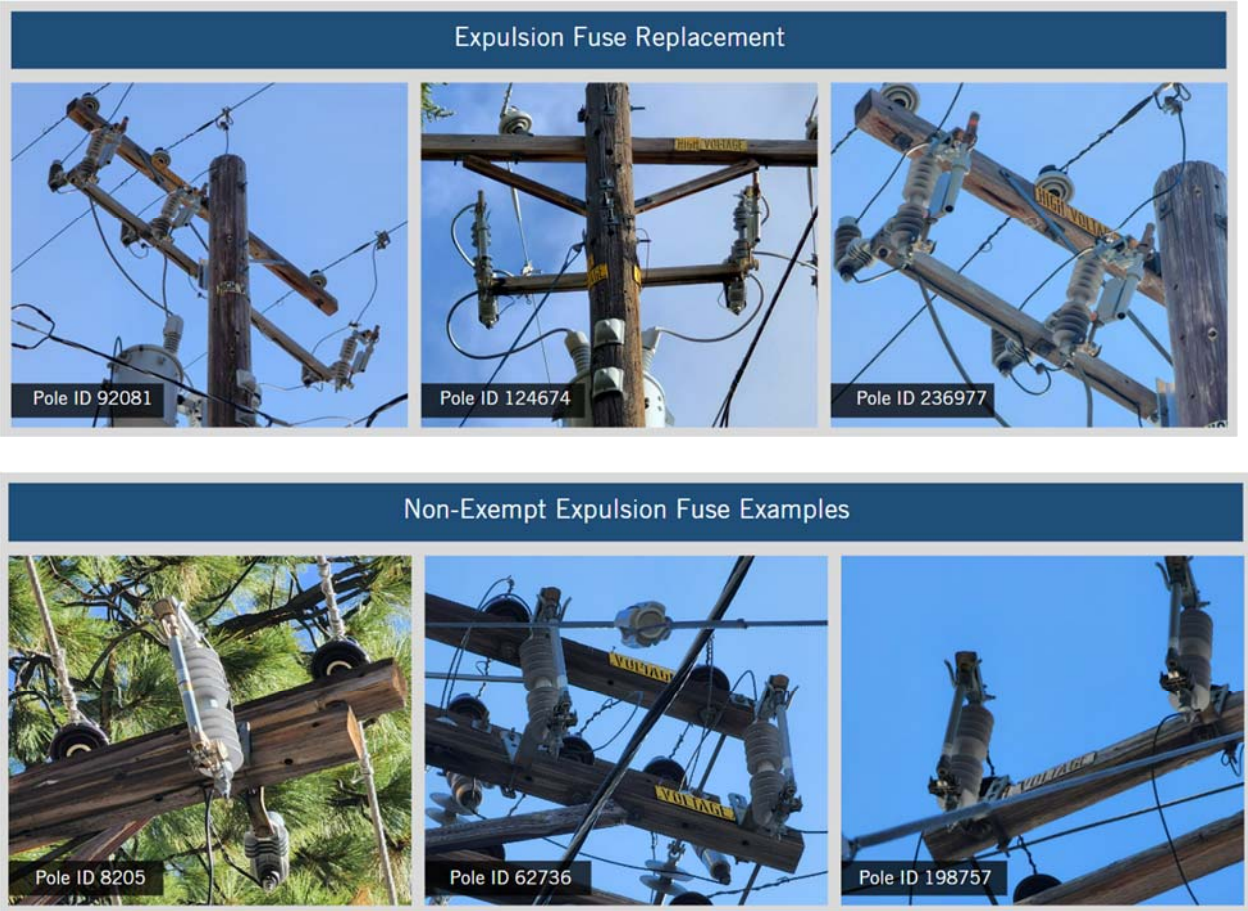

Figure 04: Example Expulsion Fuse Replacement Field Images

The IE verified a sample of 192 non-exempt expulsion fuse replacement locations to be replaced with exempt equipment. One hundred eighty-eight (188) sampled locations complied with the initiative and four (4), or 2.08%, of the sampled locations, were found to be out of compliance since the fuses in question had not been upgraded to an exempt fuse type. Based on the IE's verification sample and results, it appears likely that Liberty met its stated commitment to remove and replace 1,500 non-exempt fuses and exceeded 358 units for a total of 1,858 non-exempt fuses being replaced, as reported.

The IE team reviewed how Liberty selects, executes, closes, and tracks the overall Expulsion Fuse Replacement initiative and various process flows and found them toGO95 Overhead Electric Line Construction and the Plans initiative goals.

7.3.5.7 - VMI 07 - LiDAR inspections of vegetation around distribution electric lines and equipment

LiDAR inspections of vegetation around distribution electric lines and equipment contribute to reducing the overall risk of starting or spreading fires by identifying areas for vegetation management in Liberty's service area. Liberty has committed to inspecting and clearing 701 distribution circuit miles of vegetation, per Table 5.3-1 (page 83) of the 2022 WMP. Liberty's goal to inspect 701 distribution circuit miles was met per Liberty's self-reporting document "Liberty 2022 WMP Initiative Targets and Progress" spreadsheet.

The program definition for vegetation clearance is defined in 7.3.5.7 Remote Sensing Inspections of Vegetation around Distribution Electric Lines and Equipment of the 2022 WMP and in 7.3.5.20 Vegetation Management to Achieve Clearances Around Electric Lines and Equipment of the 2022 WMP. The IE field assessment team utilized the California Power Line Fire Prevention Guide, 2021 Edition, as their ruling document for validation of pole clearances (Pages 21-22, Figures 10 through 12) as well as hazard trees/vegetation clearances (Pages 42-52).

Figure 05: Example Line Vegetation Clearances Field Images

The IE verified a sample of 149.5 distribution circuit miles cleared in 2022. All 149.5 sampled circuit miles complied with the initiative; based on the IE's verification sample and results, it appears likely that Liberty met its commitment to inspect and clear, as necessary, 701 distribution circuit miles as reported.

Additionally, the IE team reviewed how Liberty selects, executes, closes, and tracks the overall LiDAR inspections of vegetation around distribution electric lines and equipment initiative and its various process flows and found them to align with industry inspection techniques and the Plan's initiative goals.

7.3.5.15 - VMI 15 - Remediation of at-risk species

Remediation of at-risk species contributes to reducing the overall risk of starting or spreading fires by assessing trees for risk and trimming or removing them as necessary within the Utility Strike Zone in Liberty's service area. Liberty has committed to remediating 238 distribution circuit miles, per Table 5.3-1 (page 81-83) of the 2022 WMP. Liberty's goal to remediate 238 circuit miles was not met and fell short by 15 circuit miles, for a total of 223 circuit miles remediate per Liberty's self-reporting document, "Liberty 2022 WMP Initiative Targets and Progress" spreadsheet.

The program definition for remediation of at-risk species is defined in 7.3.5.15 Identification and remediation of "at-risk species" of the 2022 Plan. The IE field assessment team utilized the California Power Line Fire Prevention Guide, 2021 Edition, as their ruling document for validation of pole clearances (Pages 21-22, Figures 10 through 12) as well as hazard trees/vegetation clearances (Pages 42-52).

Figure 06: Example At-Risk Species Remediation Field Images

The data delivered to the IE from liberty as part of Data Request DRU001 for this remediation program did not identify work in line-miles as specified in their WMP, but rather as 2,054 individual locations where remediation work occurred. As such, the IE was unable to validate work completion solely on the line-miles completed and had to take a hybrid approach to validation of work completion by assessing a mix of individual locations and also driving circuit segments in associated neighborhoods where remediation events occurred.

The data provided by Liberty in Data Request DRU001 was reviewed by the IE and subsequently categorized into three primary evaluation criteria: **Vegetation Condition,** what is observed by trained inspectors as fail and/or strike vulnerability, what Liberty classified as the hazard to the specific infrastructure; **Tree Defect**, as further describe within table 7.3.5-11, Hazard Tree Attributes table, page 152 of the Plan, what Liberty classified as the remediation category; and **Tree Crew Cleanup**, what Liberty called out as the work type to be conducted on site. For Tree Defects, there were 19 total categories of tree defects as described in Table 7.3.5-11, Hazard Tree Attributes:

- Basal wound
- Bleeding and/or resinous
- Bulges and/or swellings
- Canker, including bleeding & gall rust
- Cavities
- Codominant or multiple stems from base or higher on trunk
- Conks indicating heart rot, root rot, sap rot or canker rot
- Cracks including shear
- Dead branches and/or top
- Dieback of twigs and/or branches
- Embedded wires or cables
- Excessive lean toward electric facilities or excessive bow
- Fire damage
- Foliage – off-color, flagging or loss
- Hazard beam
- History of limb failure(s) on tree
- Included bark
- Insect activity such as frass from termites, bark beetles or carpenter ants
- Lightning damage

The following is a depiction of the work type conducted by the Tree Cleanup Crews and the number of locations where work type was conducted and assessed:

Tree Crew Cleanup

Work Type	Location Count
100% Removal	103
Chip & Broadcast	136
Chip & Haul	1225
Chip & Haul/Firewood Length	40
Lop & Scatter	432
Unspecified	118
Grand Total	**2054**

The IE field verified a sample of 33.47 circuit miles of at-risk species and 230 individual locations across Liberty's service territory where replacement or reinforcement activities were conducted as demonstrated in Table 1: Large Volume Quantifiable Goal/Target – Field Verifiable. All driven areas were assessed, and individual site assessments demonstrated compliance with the initiative goal/target. Based on the IE's verification sample and results, it appears likely that Liberty did meet its commitment to remediate 223 distribution circuit miles of remediation of at-risk species as reported complete but fell short of its originally planned 238 circuit miles.

Field assessments of the remediation's were reviewed for workmanship for the quality of material removal, removal of vegetation litter and the accuracy of the location of work as provided in response to DRU001. The following issues or data discrepancies were identified during the field assessment:

> Two coordinate locations where trees were described as being removed were found with the trees still present. In other words, the trees were not removed at the provided coordinates, see Figure 07 - Job 368 -- 290804 -- Dead Tree at provided Location.

Figure 07 - Job 368 -- 290804 -- Dead Tree at provided Location

Additionally, the IE team reviewed how Liberty selects, executes, closes, and tracks the overall Remediation of at-risk species initiative and its various process flows and found them to align with American National Standard A300 (Part 7) Integrated Vegetation Management standards and WMP initiative goals.

Summary of Initiative Findings

In addition to the Field Reviews conducted, the IE also reviewed satellite data and numerous relevant documents, such as WMP-specific initiative life cycle documentation, inspection and audit records, fire rebuild design and guidance standards, design as-built, maps, and various planning documents along with process flows encompassing how Liberty selects, executes, closes, and tracks specific initiatives. Liberty provided the documentation in confidentiality in response to the IE's various data requests. Table 3 summarizes the IE's findings of Liberty's program initiatives, as they were identified and reported as a part of this evaluation.

Table 3: Large Volume Quantifiable Goal/Target – Field Verifiable Summary Table

Program	Units	Sections	Sampling Methodology	Liberty Target	Liberty Actual	IE Field/ Sample	Summary, Overview, and Review
Distribution pole replacement and reinforcement, including with composite poles	EACH	7.3.3.6 - GDSH_06	ANSI/ASQ Z1.4	231	226	38	Goal not met 2.6% of sampled locations not in compliance
Expulsion fuse replacement	EACH	7.3.3.7 - GDSH_07	ANSI/ASQ Z1.4	1500	1858	192	Goal met/ exceeded 2.08% of sampled locations not in compliance
LiDAR inspections of vegetation around distribution electric lines and equipment	Miles	7.3.5.7 - VMI_07	ANSI/ASQ Z1.4	701	701	149.5	Goal met/Exceeded with no location discrepancies found
Remediation of at-risk species	Miles	7.3.5.15 - VMI_15	ANSI/ASQ Z1.4	238	223	33.47 mi / 31 unique sites	2 deficient locations identified among 31 unique sampled sites

3.1.2.2 Trends and Themes

Liberty has demonstrated a level of conformance with their Plan commitments as outlined in the 2022 WMP. Discrepancies were found during the field assessments of the random samples where either data received indicated the specific sample sites had removed at risk species of trees and the trees were not removed. This is considered a minimal number of efforts identified as deficiencies. Overall commitments to the plan were achieved.

3.1.3 Large Volume Quantifiable Goal/Target – Not Field Verifiable

3.1.3.1 Review of Initiatives

Pursuant to the Final IE Scope of Work for the Review of Compliance with 2022 WMP, Liberty provided a complete list of all 2022 WMP activities classified as Large Volume Quantifiable Goal/Target - Not Field Verifiable completed in 2022. The IE's review and evaluation of these initiatives were completed through data request documentation from Liberty's completion of initiatives and publicly available documents, articles, and reports. These 2022 WMP activities identified within the Large Volume Not Field Verifiable list were reviewed and assessed within this section, and the findings are presented below for each initiative.

7.3.4.1 - AMI_01 - Detailed inspections of distribution electric lines and equipment

As described within the 2022 WMP, Liberty's 2022 WMP target was to complete detailed inspections of distribution and transmission lines and equipment performed in accordance with G.O. 165 guidelines for 307.8 target circuit miles to mitigate the risk of equipment failure by identifying aging and deteriorating equipment in the field. Per Liberty's ARC dated March 31, 2023, Liberty reported completing detailed inspections for 328.6 circuit miles. As detailed in Liberty's response to Data Request 001, Liberty provided GIS files identifying a list of inspected circuits comprising 326.4 line miles of detailed inspections completed.as summarized below in Table 4. The IE reviewed a sample of the data for detailed inspections for 50 line miles of detailed inspections. No issues were identified in the review of the data for the detailed inspections for distribution electric lines and equipment.

Table 4: Detailed inspections of distribution electric lines and equipment
Large Volume Quantifiable Goal/Target – Not Field Verifiable

Description	2022 Target	2022 WMP ARC Report	Data Request 001 Response	Summary
Detailed inspections of distribution electric lines and equipment	307.8 Circuit Miles	328.6 Circuit Miles	328.6 Circuit Miles	Goal Met/Exceeded Target by 20.8 Circuit Miles

Although there is a 2.2 circuit mile difference between the totals for detailed inspections completed as reported in the Q4 QDR for the 2022 WMP and the documentation provided in response to Data Request 001, since both totals exceed the target, the IE confirms that Liberty met the target for this initiative for 2022.

7.3.4.6 - AMI_06 - Intrusive pole inspections

As described within the 2022 WMP, Liberty's 2022 WMP target was to complete intrusive pole inspections for 2,598 wood poles to identify damage, decay, and approximate shell thickness of the poles. Per Liberty's ARC dated March 31, 2023, Liberty reported the completion of 2,735 intrusive pole inspections. As detailed in Liberty's response to Data Request 001, Liberty provided GIS files identifying a list of 2,733 completed intrusive pole inspections including the inspection date, location, and asset information as summarized below in Table 5. The IE reviewed a sample of data for 125 intrusive pole inspections. No issues were identified in the review of the data for the intrusive pole inspections.

Table 5: Intrusive pole inspections
Large Volume Quantifiable Goal/Target – Not Field Verifiable

Description	2022 Target	2022 WMP ARC Report	Data Request 001 Response	Summary
Intrusive pole inspections	2,598 Poles	2,735 Poles	2,735 Poles	Goal Met/Exceeded By 137 Poles

Although there are a two (2) pole difference between the totals for intrusive inspections completed as reported in the Q4 QDR for the 2022 WMP and the documentation provided in response to Data Request 001, indicates that both totals exceed the target, the IE confirms that Liberty met the target for this initiative for 2022.

7.3.4.11 - AMI_11 - Patrol inspections of distribution electric lines and equipment

As described within the 2022 Plan, Liberty's Plan target was to complete patrol inspections of distribution electric lines and equipment for 706 line miles. Per Liberty's ARC dated March 31, 2023, Liberty reported the completion of 503 line miles of patrol inspections. As detailed in Liberty's response to Data Request 001, Liberty provided GIS files identifying 501 circuit miles inspected, demonstrating completed patrol inspections as summarized below in Table 6.

The IE reviewed data for completed patrol inspections and in addition to documentation of findings from patrol inspections provided by Liberty in response to Data Request 0018; no issues were identified in the review of the documentation for patrol inspections of distribution electric lines and equipment. The IE conducted a SME interview as documented in Appendix D, Item No. 1, in order to obtain an explanation of how Liberty tracks and monitors completion of inspections and vegetation management initiatives. Response to Data Request 0018 Liberty confirmed that the GIS data for patrol inspections are the record of completion.

Within the 2022 ARC Report, Liberty identifies that the target of 706 miles of patrol inspections of distribution electric lines and equipment was established in error and should have been set closer to the mileage of patrol inspections that were achieved in 2022, thus the identified discrepancy between the target commitment and the actual completed is significant at 28.8% deficiency.

Table 6: Patrol inspections of distribution electric lines and equipment
Large Volume Quantifiable Goal/Target – Not Field Verifiable

Description	2022 Target	2022 WMP ARC Report	Data Request 001 Response	Summary
Patrol inspections of distribution electric lines and equipment	706 Line Miles	503 Line Miles	503 Line Miles	Goal Not Met

7.3.5.2 - VMI 02 - Detailed inspections of vegetation around distribution electric lines and equipment

As identified in Liberty's 2022 Wildfire Mitigation Plan Annual Report on Compliance (ARC) dated March 31, 2023, Liberty's 2022 Plan target for this initiative was to complete detailed inspections of vegetation around distribution electric lines and equipment for 222 line miles revised from 221 line miles as described within the 2022 WMP. Per the updated 2022 Q4 Quarterly Data Report dated March 8, 2023, Liberty reported the completion of 210.6 line miles. As detailed in Liberty's response to Data Request DR018, Liberty provided a list of completed detailed vegetation inspections for 210.6 circuit miles summarized below in Table 7. The IE noted that Liberty's ARC report identifies 201.6 miles completed of detailed inspections of vegetation around distribution electric lines and equipment and has determined that it is likely due to a transposition of numbers as the quarterly data report and the completion data provided in response to data request 018 identify completion of 210.6 line miles.

The IE reviewed completion data for detailed inspections of vegetation management in addition to findings from detailed inspections provided in Liberty's response to Data Request 001 for a sample relating to 32 line miles. No issues were identified in the review of the detailed inspections of vegetation around distribution electric lines and equipment. The IE conducted a SME interview Per Appendix D Item No. 1 which provided an explanation of how Liberty tracks and monitors completion of inspection and vegetation management initiatives.

Within the 2022 ARC Report, Liberty identifies that completed miles for detailed inspections of vegetation around distribution electric lines and equipment were less than the target as a result of a reallocation of inspection resources from detailed inspections to patrol inspections to

address increased risk posed by dead and dying trees throughout the service territory. The resulting deficiency is considered a reallocation of resources specific to risk priorities assessed by Liberty.

Table 7: Detailed inspections of vegetation around distribution electric lines and equipment Large Volume Quantifiable Goal/Target – Not Field Verifiable

Description	2022 Target	2022 Q4 QDR	Data Request 018 Response	Summary
Detailed inspections of vegetation around distribution electric lines and equipment	222 Line Miles	210.6 Line Miles	210.6 Line Miles	Goal Not Met

7.3.5.5 - VMI_05 - Fuel management and reduction of "slash" from vegetation management activities

Section 7.3.5.5 of the Liberty Wildfire Mitigation Plan (WMP) focuses on fuel management and the reduction of "slash" from vegetation management activities that results in an accumulation of woody debris that can ignite or contribute to the spread and intensity of fire as discussed in the Plan on page 134. The review of Liberty's response to DR-011, provided Liberty's logic regarding Liberty's efforts in fuel management and the goals outlined in the WMP to control vegetation waste as a product of vegetation management activities. Liberty's response to the data request includes a spreadsheet detailing fuel management work conducted by different crews and contractors, along with folders containing images of hand thinning work that is intended of removing materials that affect vegetation contact due to movement while maintaining the health of the species. Additional PDF documents related to the Tamarack Fire recovery efforts were provided to further demonstrate the need of slash/vegetation litter removal. The spreadsheet provides comprehensive data on wood removal and treatment, while the additional documents pertain to Liberty's efforts with fuel management, collaboration with the community, and restoration plans.

The spreadsheet titled "Data Request_BIA_USFS Fuel Management_6-7-23" contains relevant data related to fuel management work conducted by various crews and contractors. It includes information about wood removal work in different locations, crew assignments, wood management status, and acres treated. This aligns with the WMP's emphasis on reducing fuel loads and implementing treatments to manage woody debris.

Additionally, the two folders that were included in the response, "625 hand thin" and "Tamarack Fire Recovery," provide additional insights. The "625 hand thin" folder contains images and a text message exchange mentioning the completion of hand thin work, which document possible efforts towards the goal of creating defensible space and improving tree spacing. The "Tamarack Fire Recovery" folder includes maps and written documents detailing the impact of the Tamarack Fire and the subsequent restoration efforts, aligning with the WMP's focus on mitigating fire risks and collaborating with the community for comprehensive restoration.

Overall, the response collected in the data request demonstrates that Liberty's efforts in fuel management and the reduction of slash are in line with the goals outlined in Section 7.3.5.5 and Figure 7.3.5-6 Slash and Wood treatment Comparison on page 134 of the WMP. The data provided in the spreadsheet, along with the additional documents and images, indicate progress in wood removal, treatment of hazard trees, and collaborative restoration efforts following the Tamarack Fire. These actions contribute to reducing wildfire risks, creating defensible space, and managing fuel accumulation, as emphasized in the WMP. Further effort to quantify slash removal to evaluate the overall comprehensiveness of the program would be beneficial to set specific targets or goals for fuel removal in the future and would be considered an added benefit to fire risk associated with impact to the utility infrastructure.

7.3.5.11 - VMI 11 - Patrol inspections of vegetation around distribution electric lines and equipment

Liberty's patrol inspections are performed primarily by a contract workforce that are trained to identify obvious hazards to the electrical infrastructure. As identified in Liberty's 2022 Wildfire Mitigation Plan Annual Report on Compliance (ARC) dated March 31, 2023, Liberty's 2022 WMP target for this initiative was to complete patrol inspections of vegetation around distribution electric lines and equipment for 171 line miles. The numbers depicted are in line with Liberty's 2021 planned patrol inspections along the 150 miles of electrical lines and equipment, but this was exceeded by Liberty completing 179 miles of electrical lines and equipment as described on page 146 of the 2022 Plan.

Per Liberty's ARC dated March 31, 2023, Liberty reported the completion of 235 line miles in contrast to the annual target of 171 line miles. As detailed in Liberty's response to Data Request DR018, Liberty provided a list of completed patrol vegetation inspections for 224.4 line miles summarized below in Table 8.

The IE reviewed completion data for patrol inspections of vegetation management in addition to findings from patrol inspections provided in Liberty's response to Data Request 001 for a sample relating to 32 line miles. No issues were identified in the review of the patrol inspections of vegetation around distribution electric lines and equipment. The IE conducted a SME interview

Per Appendix D Item No. 1 which provided an explanation of how Liberty tracks and monitors completion of inspection and vegetation management initiatives.

Within the 2022 ARC Report, Liberty identifies that completed miles were exceeded the target for patrol inspections of vegetation around distribution electric lines and equipment as a result of a reallocation of inspection resources from detailed inspections to patrol inspections to address increased risk posed by dead and dying trees throughout the service territory.

Table 8: Patrol inspections of vegetation around distribution electric lines and equipment Large Volume Quantifiable Goal/Target – Not Field Verifiable

Description	2022 Target	2022 WMP ARC Report	Data Request 018 Response	Summary
Patrol inspections of vegetation around distribution electric lines and equipment	171 Line Miles	235 Line Miles	235 Line Miles	Goal Met / Exceeded by 64 Line Miles

Although there is a 10.6 line mile difference between the totals for patrol inspections completed as reported in the updated 2022 ARC and the documentation provided in DR018, since both totals exceed the target, the IE confirms that Liberty met the target for this initiative for 2022.

7.3.5.13 - VMI 13 - Quality assurance / quality control of vegetation inspections

As identified in Liberty's 2022 Wildfire Mitigation Plan Annual Report on Compliance (ARC) dated March 31, 2023, Liberty's 2022 WMP target for this initiative was to complete quality assurance / quality control of vegetation inspections for 221 line miles. Per Liberty's ARC dated March 31, 2023, Liberty reported the completion of quality assurance / quality control of vegetation inspections for 271.7 line miles as stated on page 9 of the ARC. As detailed in Liberty's response to Data Request 018, Liberty provided a list of quality assurance / quality control reviews completed for vegetation for 271.7 line miles summarized below in Table 9.

The IE reviewed completion data for QA/QC of vegetation inspections in addition to findings from QA/QC reviews of vegetation inspections provided in Liberty's response to Data Request 003 for a sample relating to 32 line miles. No issues were identified in the review of the QA/QC reviews of vegetation inspections. The IE conducted a SME interview Per Appendix D Item No. 1 which provided an explanation of how Liberty tracks and monitors completion of inspection and vegetation management initiatives.

Table 9: Quality assurance / quality control of vegetation inspection
Large Volume Quantifiable Goal/Target – Not Field Verifiable

Description	2022 Target	2022 WMP ARC Report	Data Request 018 Response	Summary
Quality assurance / quality control of vegetation inspections	221 Line Miles	271.7 Line Miles	271.7 Line Miles	Goal Met / Exceeded by 50.7 Line Miles

7.3.5.16 - VMI_16 - Removal and remediation of trees with strike potential to electric lines and equipment

As identified in Liberty's 2022 Wildfire Mitigation Plan Annual Report on Compliance (ARC) dated March 31, 2023, Liberty's 2022 WMP target for this initiative was to complete removal and remediation of trees with strike potential to electric lines and equipment for 171 line miles. Per Liberty's ARC dated March 31, 2023, Liberty reported the completion of removal and remediation of trees with strike potential to electric lines and equipment for 203 line miles. The actual miles are greater than the target due to a high amount of tree mortality. Tree work resources are noted to be shifted from removal and remediation of trees with strike potential due to increased risk posed by dead and dying trees throughout Liberty's service territory. As detailed in Liberty's response to Data Request 001, Liberty provided data supporting the removal and remediation of trees with strike potential to electric lines and equipment for 224.4 line miles summarized below in Table 10. The IE conducted a SME interview Per Appendix D Item No. 1 which provided an explanation of how Liberty tracks and monitors completion of inspection and vegetation management initiatives. Per the SME interview and documentation provided in response to Data Request 001, Liberty identified that patrol inspection completions are used to track and validate completions toward this initiative.

The IE reviewed completion data for removal and remediation of trees with strike potential in addition to related findings provided in Liberty's response to Data Request 001 for a sample relating to 32 line miles. No issues were identified in the review of the patrol inspections of vegetation around distribution electric lines and equipment.

Table 10: Removal and remediation of trees with strike potential to electric lines and equipment
Large Volume Quantifiable Goal/Target – Not Field Verifiable

Description	2022 Target	2022 WMP ARC Report	Data Request 018 Response	Summary
Removal and remediation of trees with strike potential to electric lines and equipment	171 Line Miles	203 Line Miles	203 Line Miles	Goal Met / Exceeded by 32 Line Miles

7.3.5.20 - VMI 20 - Vegetation management to achieve clearances around electric lines and equipment

As described within the 2022 WMP, Liberty's 2022 WMP target was to complete vegetation management activities to achieve clearances around electric lines and equipment for 701 line miles. Per Liberty's ARC dated March 31, 2023, Liberty reported the completion of vegetation management to achieve clearances around electric lines and equipment for 701 line miles. As detailed in Liberty's response to Data Request 001, Liberty provided data supporting vegetation management to achieve clearances around electric lines and equipment for 707.2 line miles summarized below in Table 11. The IE conducted a SME interview Per Appendix D Item No. 1 which provided an explanation of how Liberty tracks and monitors completion of inspection and vegetation management initiatives. Per the SME interview and documentation provided in response to Data Request 001, Liberty identified that LiDAR inspection completions are used to track and validate completions toward this initiative. In response to Data Request 018 Liberty provided a list of work orders generated from completed LiDAR inspections that apply to this initiative.

The IE reviewed completion data for LiDAR inspections as well as related work orders generated for vegetation management to achieve clearances around electric lines and equipment in Liberty's response to Data Request 018 for a sample relating to 80 line miles. No issues were identified in the review of the patrol inspections of vegetation around distribution electric lines and equipment.

Table 11: Vegetation management to achieve clearances around electric lines and equipment Large Volume Quantifiable Goal/Target – Not Field Verifiable

Description	2022 Target	2022 ARC	Data Request 001 Response	Summary
Vegetation management to achieve clearances around electric lines and equipment	701 Line Miles	701 Line Miles	701 Line Miles	Goal Met

3.1.3.2 Trends and Themes

As demonstrated above and summarized below in table 12, Liberty has demonstrated their commitment to reducing risk of fire within their Plan. The level of commitment is supported by the successful completion of 8 out of 12 subject initiatives as either goal met, or goal met/exceeded. The remaining 4 initiatives did not meet with depicted annual target values. This appears to be due to a reassessment of priorities due to the high amount of tree mortality which is specific to vegetation management. This demonstrates to the IE that Liberty continues to assess their risk in comparison with the changes in the vegetation environment. Liberty has ascertained that certain initiatives carry more fire risk, and these 8 initiatives are demonstrated as exceeding the 2022 annual targets. The shifting of inspection resources from detailed inspections to patrol inspections is a demonstration of assessments of increased risk posed by dead and dying trees throughout Liberty's service territory.

The following is an overview of the trends and the themes observed from the review of section 3.1.3 Large Volume Quantifiable Goal/Target – Not Field Verifiable.

Per the Independent Evaluator Findings Summaries above, Liberty's Wildfire Mitigation Program progress is summarized below.

Table 12: Large Volume Quantifiable Goal/Target – Not Field Verifiable Summary Table

SOW Category	2022 Initiative Number	Initiative Name	Finding	Detail on Finding
WMP Activity Completion	7.3.4.1 - AMI_01	Detailed inspections of distribution electric lines and equipment	Activity Completed	Compliant with the 2022 WMP
WMP Activity Completion	7.3.4.6 - AMI_06	Intrusive pole inspections	Activity Completed	Compliant with the 2022 WMP
WMP Activity Completion	7.3.4.11 - AMI_11	Patrol inspections of distribution electric lines and equipment	Activity Completed	Not Compliant with the 2022 WMP
WMP Activity Completion	7.3.5.2 - VMI_02	Detailed inspections of vegetation around distribution electric lines and equipment	Activity Completed	Not Compliant with the 2022 WMP
WMP Activity Completion	7.3.5.5 - VMI_05	Fuel management and reduction of “slash” from vegetation management activities	Activity Completed	Compliant with the 2022 WMP
WMP Activity Completion	7.3.5.11 - VMI_11	Patrol inspections of vegetation around distribution electric lines and equipment	Activity Completed	Compliant with the 2022 WMP
WMP Activity Completion	7.3.5.13 - VMI_13	Quality assurance / quality control of vegetation inspections	Activity Completed	Compliant with the 2022 WMP
WMP Activity Completion	7.3.5.16 - VMI_16	Removal and remediation of trees with strike potential to electric lines and equipment	Activity Completed	Compliant with the 2022 WMP
WMP Activity Completion	7.3.5.20 - VMI_20	Vegetation management to achieve clearances around electric lines and equipment	Activity Completed	Compliant with the 2022 WMP

3.1.4 Small (less than 100 times) Volume Quantifiable Goal/Target

3.1.4.1 Review of Initiatives

Pursuant to the Final IE Scope of Work for the Review of Compliance with 2022 WMP, Liberty provided a complete list of all 2022 WMP activities classified as Small (Less than 100 units) Volume Quantifiable Goal/Target that were conducted in 2022. These 2022 WMP activities identified within the Small Volume list were assessed in this section and presented below by each initiative.

7.3.2.1 - SAF_01 - Advanced weather monitoring and weather stations

As described in the 2022 WMP dated May 6, 2022, Liberty committed to "install 10 additional weather stations in 2022 that will expand coverage throughout Liberty's service territory and will prioritize installations based on high fire risk areas and areas where gaps in weather station coverage exist along power lines" (page 106). Per Liberty's Q4 Quarterly Data Report (QDR) Liberty_2022_Q4_Tables115_R1.xlsx Table 1 and ARC for 2022 WMP Report dated March 31, 2023 (page 4), Liberty reported the installation of 5 weather stations.

Liberty provided a written response in DR002-03, which included a website link to Liberty's active weather stations as found at Liberty's website, [redacted] and ArcGIS files showing 4 weather stations that were installed in 2022. The 4 weather stations are indicated as:

- [redacted]
- [redacted];
- [redacted]
- [redacted].

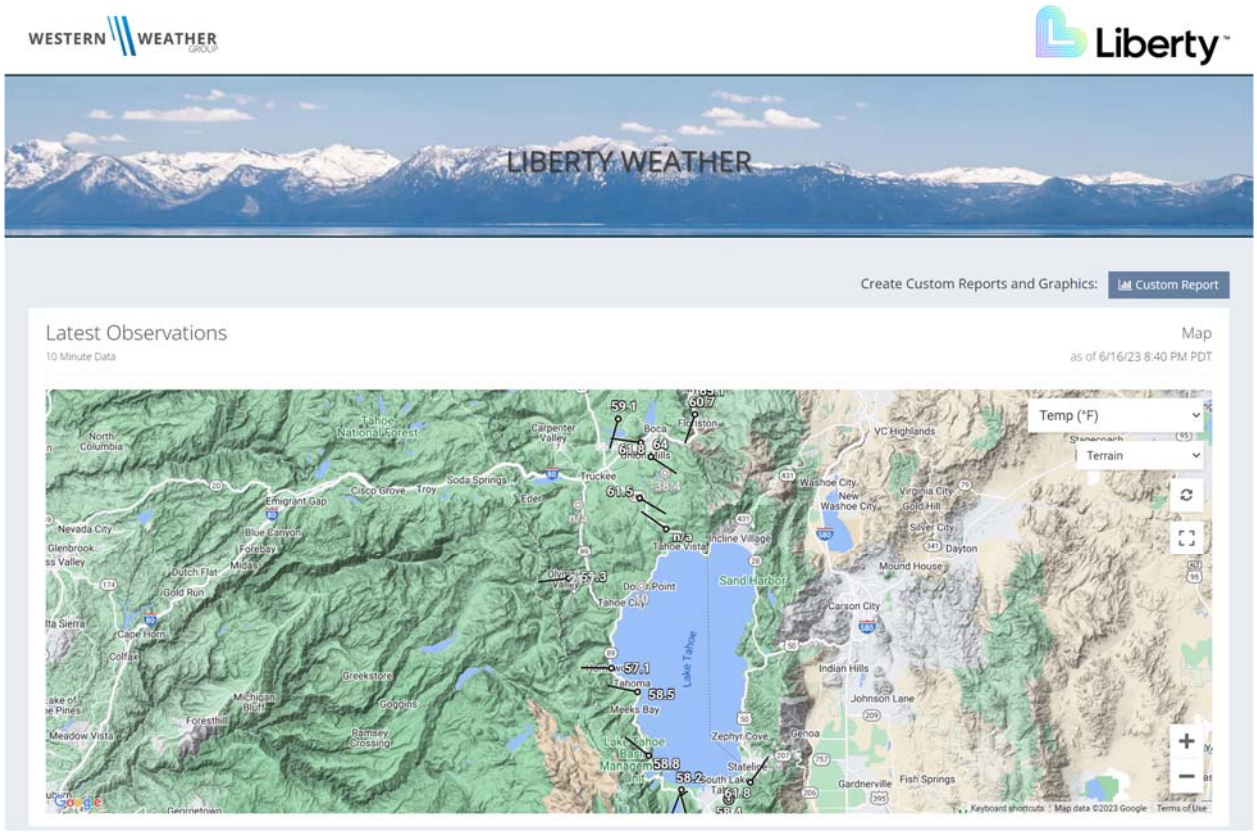

Figure 08: Liberty Weather Platform (Appendix B Item No. 1)

In the DRU002-03 written response, Liberty confirmed that the fifth weather station became operational in 2023 and was misreported as installed in 2022.

Liberty provided the following reason for not meeting the 2022 target in the DRU002-03 response attachment DR002_C2Group_052323_Weather Station Response: Liberty did not have the staff or bucket trucks available to perform the installations until the fall of 2022 and ran out of time to install the remaining five stations with early snowstorms. Some locations were inaccessible due to the amount of snow.

While Liberty did not meet the 2022 target of 10 weather stations installed, it appears at least some or all of the remaining weather stations are planned to be installed before the 2023 WMP update, as demonstrated in Liberty's Plan, table 7.1-1 Liberty's Near – Term Strategy and Goals by WMP Category on page 95.

Table 13: 7.3.2.1 - - SAF_01 - Advanced Weather Monitoring and Weather Stations Summary

Description	2022 Target	2022 WMP ARC Report	DRU002-03 Response	Summary
Advanced Weather Monitoring and Weather Stations	10 Weather Stations Installed	5 Weather Stations Installed	5 Weather Stations Installed	Goal Not Met

7.3.2.2 - SAF_02 - Continuous monitoring sensors

Section 7.3.2.2 of the WMP emphasizes the implementation of continuous monitoring sensors, including Distribution Fault Anticipation (DFA), High Impedance Fault Detection (HIFD), and ALERTWildfire Cameras. These technologies aim to detect faults, anticipate failures, and enhance situational awareness for early fire detection and monitoring. The plan indicates collaborations with Texas A&M for DFA, the University of Nevada, Reno for HIFD, and the ALERTWildfire network for fire cameras. A data request was sent requesting a list of installed Continuous Monitoring Sensors in Tier 2 and 3 locations with identification information.

The response to this data request provided information on reclosers, which are shown to be located in Tier 2 HFTD within Liberty's network of infrastructure. A provided spreadsheet, titled "Liberty Situational Awareness DR Responses," lacks specific location details or general areas for these reclosers.

Although the response collected did not specifically address DFA, HIFD, or ALERTWildfire Cameras; the ongoing progress and initiative detail associated with this technology was noted within the ARC on page 4. Ongoing research for the best technology to support reduced wildfire risk and reliability was understood during the review of the document.

To determine if the response data met the goals of the 2022 Plan, it is necessary to acquire specific information regarding the implementation and performance of DFA, HIFD, and ALERTWildfire Cameras. The lack of location details and the absence of the University of Nevada Reno (UNR) data on these technologies in the collected response limit the ability to make a comprehensive assessment. To determine the extent to which the response data meets the goals of the plan, additional data collection and evaluation of the implemented technologies are necessary.

7.3.2.3 - SAF_03 - Fault indicators for detecting faults on electric lines and equipment

Section 7.3.2.3 of the 2022 Plan focuses on the utilization of fault indicators on circuits that experience a high frequency of faults in Tier 3 HFTD for detecting faults on electric lines and equipment, aiming to mitigate risks associated with faults during summer months. Liberty's plan involves implementing a pilot program in select high fire risk zones using remotely communicated and visual indicating fault indicators as indicated in the 2022 Plan on page 108. The objective is to improve fault detection, location, and clearance, thereby reducing wildfire risk, outages, and equipment damage. DR-015 was sent requesting a list of installed Fault Indicators in Tier 2 and 3 locations with identification information.

The response collected directed to the "Liberty Situational Awareness DR Responses" spreadsheet. Upon analysis, it was found that the spreadsheet contained information on two reclosers classified as Tier 2 within Liberty's network infrastructure. However, the response did not provide specific location details or general areas for these reclosers. This information is essential for evaluating the effectiveness of the response in meeting the goals outlined in Section 7.3.2.3 of the 2022 Plan on page 107.

In terms of region prioritization, Liberty plans to install fault indicators on circuits with a high frequency of faults and lateral lines crossing through Tier 3 High Fire Threat District (HFTD) zones as stated in the 2022 Plan on page 107. Based on regional prioritization, the Meyers district has been identified as a priority located within Tier 3 HFTD. Liberty is in the process of obtaining quotes from vendors for procuring fault indicators, liberty is currently considering adding more fault indicators in 2023 as stated on page 108 of the Plan.

While the response provided information about reclosers in Tier 2, it lacked specific location details necessary to confirm how the collected data aligns with the goals set out in Section 7.3.2.3 of the WMP. While the WMP includes plans to prioritize targets for mitigating wildfire risk, it is also necessary to ensure that location information is included in the data collection process to effectively evaluate the implementation of fault indicators for future improvements to the initiative.

7.3.3.3 - GDSH_03 - Covered conductor installation

As described in the 2022 Plan on page 110, Liberty committed to installing covered conductor to mitigate the “risk of faults due to line impact, animals, and line-to-line faults”. Per Table 7.3.3- 2, Liberty 2022 Covered Conductor Planned Projects, in the 2022 Plan on page 111, Liberty planned approximately 9.55 miles of covered conductor projects in 2022. It should be noted that the mileage listed in Table 7.3.3- 2 in the 2022 WMP add up to 9.58 miles, whereas the total is listed as 9.55 miles. Liberty’s ARC dated March 31, 2023, states a target of 9.6 miles, which appears to be due to rounding from 9.55 miles as described in the 2022 WMP.

Per Liberty's Q4 Quarterly Data Report (QDR) Liberty_2022_Q4_Tables115_R1.xlsx Table 1 and ARC for 2022 WMP Report (page 5), Liberty reported the completion of 9.55 and 9.6 circuit miles, respectively. Again, the difference in completion mileage is likely due to rounding.

Liberty provided the following files in DRU002-01: as-built, inspection reports, stringing tension reports, QA/QC results, and ArcGIS files for the covered conductor projects completed in 2022. The documents and files detail locations and mileage completed for 7 covered conductor projects, and upon review of the provided information, the IE agrees with the reported circuit miles installed. The IE has confirmed that Liberty complied with the 2022 WMP initiative within this section, as summarized in Table 14.

Table 14: - GDSH_03 - Covered Conductor Installation Summary

Description	2022 Target	2022 WMP Q4 Table 1 Actual Progress Q1-4	2022 WMP ARC	DRU002-01 Response	Summary
Covered Conductor Installation	9.55 Circuit Miles	9.55 Circuit Miles	9.6 Circuit Miles	9.6 Circuit Miles	Goal Met / Exceeded by 0.05 Circuit Miles

7.3.3.9 - GDSH_09 - Installation of system automation equipment

Section 7.3.3.9 Installation of system automation equipment on page 116 of the 2022 Plan, describes the installation of reclosers allowing for better clearing times for faults as well as the ability to quickly switch to isolate a potential fault and restore load.

DRU-006 was submitted for a spreadsheet listing all installation locations. For further detail, DR-014 was submitted for two (2) locations. In reviewing the provided documents, the IE observed the following:

- Two (2) reclosers install locations and photos were provided
- Additional files were provided; however, the IE was unable to open

Although limited information was provided, the IE has assessed this initiative as the goal is partially met since information is necessary to confirm that a minimum of 4 line reclosers were to be installed in 2022 and Liberty plans to add a minimum of 3 recloser replacements or new installations in 2023 as depicted on page 117 of the 2022 Plan.

7.3.3.12 - GDSH_12 - Other corrective action

Section 7.3.3.12 Other Corrective Action describes the goal of reducing the number of tree attachments in Liberty's service area which pose a wildfire threat in the event of arcing or sparking at the tree attachment location. As indicated in the 2022 Plan on page 118, Liberty has identified that by using new poles removes the risk of wildfire ignition potential.

An initial data request, DR-006 was submitted for a spreadsheet listing all locations where tree attachments were removed. A second data request, DR-014 was submitted for focusing on twenty (20) locations.

In reviewing the provided documents/photos, the IE observed the following:

- Fourteen (14) out of twenty (20) photos were provided
- No formal documentation was provided for review

The IE reviews this initiative as Activity Not Validated since an insufficient amount of data was provided to complete a full assessment.

7.3.3.16 - GDSH_16 - Undergrounding of electric lines and/or equipment

As described in the 2022 WMP dated May 6, 2022, Liberty committed to "installing 0.37 miles of underground as a part of Liberty's planned resiliency corridor on Brockway 4202 and the Cascade Covered Conductor project" (page 120). It should be noted that 0.37 miles as noted in the 2022 WMP is slightly different than Liberty's 2022 target of 0.36 miles in the Q4 Quarterly Data Report (QDR) Liberty_2022_Q4_Tables115_R1.xlsx Table 1. Per Liberty's Q4 QDR Table 1 and ARC for 2022 WMP Report dated March 31, 2023 (page 6), Liberty reported the completion of 0.24 miles.

Liberty provided the following explanation on page 6 in the 2022 ARC for why this target was not met: "The remaining 0.12 miles was delayed due to permitting" . Liberty plans to complete "0.11 miles of undergrounding on a portion of the Cascade 3400 project" in 2023, per the 2023 WMP dated May 5, 2023 (page 158).

Liberty provided as-built for Brockway and ArcGIS files for the 2022 undergrounding effort in response DRU002-02. The ArcGIS files indicate the total circuit miles completed for Brockway is 0.26, which is a slight discrepancy from what Liberty reported in the Q4 QDR and 2022 ARC. While Liberty did not meet the 2022 target of 0.36 miles undergrounded. Indicated on page 120 of the 2022 Plan it is indicated that no future improvements to the initiative is planned.

Table 15: 7.3.3.16 - GDSH_16 - Undergrounding of Electric Lines and/or Equipment Summary

Description	2022 Target	2022 WMP ARC Report	DRU002-02 Response	Summary
Undergrounding of Electric Lines and/or Equipment	0.36 Line Miles	0.24 Line Miles	0.24 Line Miles	Goal Not Met

7.3.4.14 - AMI_14 - Quality assurance / quality control of inspections

Section 7.3.4.14 Quality Assurance/Quality Control of Inspections describes the establishment of a robust QA/QC program due to the increased reliance of contractors used for activities that did not exist until recently as described on page 124 of the 2022 Plan.

An initial data request, DR-004 was submitted for a spreadsheet listing all QA/QC distribution asset inspections for 2022. A subsequent second data request, DR-013 was submitted focusing on eight (8) inspections. The data received consisted of the following:

- Excel spreadsheet listing eight (8) locations that had been QA/QC
- Folder containing multiple photographs for each of the eight assets

In reviewing the provided spreadsheet and photos, the IE observed the following:

- Out of the eight inspections, two (2) were given a priority level due to damage. One pole was not given a priority level although the inspection comments state “Pole is rotten needs to be replaced, pole has some splitting and cracking, woodpecker holes, idle, riser.”
- Multiple photos were provided for each of the eight poles. Two poles did not have their number documented in the photos provided.

Based on the IE review, it appears that the activity has met the goal of developing a QA/QC program that ensures that inspections conducted by contractors are performed in compliance with regulatory standards and projects are built to specifications has been completed, but partially compliant based on incomplete documentation.

7.3.4.15 - AMI_15 - Substation inspections

Section 7.3.4.15 Substation Inspections describes how Liberty conducts their inspections in accordance with GO 174 where substation inspections can identify issues before they become serious problems as described on page 124 of the 2022 Plan for their twelve (12) substations.

An initial data request, DR-004 was submitted for a spreadsheet listing all inspections performed in 2022. From this list, a second data request, DR-013 was submitted for all inspection forms/photos for the eight (8) selected substation inspections. The information provided to the IE consisted of:

- Excel spreadsheet listing eight (8) substation locations inspected
- Substation Inspection Data folder listing eight (8) locations inspected

In reviewing the provided spreadsheet, the IE observed the following:

- It appears all eight (8) substations were inspected
- No photographs were provided for each substation
- No formal inspection form was provided detailing the inspection.

Based on the IE review, it appears that the activity has partially met the goal outlined in the 2022 Plan on page 124, but partially met status is based on incomplete documentation in the form of a formal inspection form or photograph confirmation.

7.3.5.1 - VMI_01 - Additional efforts to manage community and environmental impacts

As described in the 2022 Plan, Liberty understands that its vegetation management program is "dependent on its ability to implement projects in a manner that manages both community and environmental impacts effectively, while reducing wildfire risk" (page 125). In Section 7.3.5.1, Liberty describes the various ways it is working to reduce community and environmental impacts as part of its comprehensive vegetation management program. Table 5.3-01 (page 83) and Table 12 in Attachment A of the 2022 WMP show the target for this initiative as 9 circuit miles. Liberty's Q4 Quarterly Data Report (QDR) Liberty_2022_Q4_Tables115_R1.xlsx Table 1 specifies this target as 6.0 line miles treated. The IE interprets the 2022 final target for this initiative to be **6.0** miles.

Per Liberty's Q4 QDR and ARC for 2022 WMP Report dated March 31, 2023 (page 7), Liberty reported the completion of 6.3 line miles.

Liberty provided the following items in DRU002-4, 6,7 (VM): a narrative of the data request response, project maps, project permits and conditional waivers, resource protection measures,

and a vegetation report. In DRU002-4,6,7 (VM) response attachment 5-25-23 Data Request - Community Impacts, Liberty describes the two projects completed for this initiative – Sagehen and Cathedral B. Sagehen involved treatment/vegetation removal along 4.16 miles of 12 kV distribution line in the Tahoe National Forest, validated through review of project maps, the project-specific Conditional Waiver for Timber Harvest and Vegetation Management Activities for the California Regional Water Quality Control Board - Lahontan Region, information about the vegetation to be removed, and hydrology and soils resource protection measures. Cathedral B involved treatment/vegetation removal along 2.17 miles of 12 kV distribution line in National Forest lands within the Lake Tahoe Basin Management Unit, validated through review of project maps and the approved Forest Products Removal Permit from Bureau of Land Management. Together, these two projects account for treatment of 6.33 line miles. Liberty noted in its data response that it is continuing some work on these projects including removing debris and fuel management activities. While detailed post-work verification details/photos were not provided for review, based on the review of available information, the IE has reason to believe that Liberty complied with the 2022 WMP initiatives within this section, as summarized in Table 16.

Table 16: 7.3.5.1- VMI_01 - Additional Efforts to Manage Community and Environmental Impacts Summary

Description	2022 Target	2022 WMP ARC Report	DRU002 -4,6,7 (VM) Response	Summary
Additional Efforts to Manage Community and Environmental Impacts	6.0 Line Miles Treated	6.3 Line Miles Treated	6.33 Line Miles Treated	Goal Met/ Exceeded by 0.33 Line Miles

3.1.4.2 Trends and Themes

For the evaluation of the Small Volume Quantifiable Goal/Target initiatives categorized by Liberty, at the commencement of this IE ARC Report, the IE reviewed publicly available documents, online articles, and related published reports as referenced throughout the section and detailed within Appendix B List of Supplemental Documents Reviewed. Concurrently, the IE submitted data requests and reviewed the Liberty provided responses with various verification documentation, reports, verification lists, and as built.

The following is an overview of the themes and trends extrapolated after reviewing the various sections of Small Volume Quantifiable Goal/Target and as summarized in Table 17. The interpretation incorporates various categories, including assessments of the quality of the

information provided to support our overall review. Through the review and evaluation of these WMP activities, Liberty's trend across the 2022 WMP activities identified within this section complies with most of the stated goals (8/10) identified within the 2022 WMP, and Liberty continues to incorporate fire risk mitigation strategies and technological improvements into the 2023 goals and future Liberty initiatives.

Liberty has developed a broad range of activities that are designed to reduce the likelihood of initiating a wildfire such as additional weather stations, infrastructure inspections, sensor and monitoring enhancements, installing covered conductor, conversions to underground facilities, and enhancing the QA/QC programs.

As demonstrated above, Liberty has demonstrated a commitment to complete the planned initiatives as demonstrated by the documents provided in the data requests. However, due to lack of detailed responses such as pictures or supporting documentation to the IE’s requests, it was difficult assure Liberty’s complete compliance with all initiatives or goals of the Plan.

The review for provided spreadsheet, titled "Liberty Situational Awareness DR Responses," lacks specific location details or general areas for these reclosers. Although the response collected for 7.3.2.2 did not specifically address DFA, HIFD, or ALERTWildfire Cameras, ongoing progress and initiatives outlined in the WMP were noted during the review of the document.

While the response for 7.3.2.3 provided information about reclosers in Tier 2, it lacked specific location details necessary to confirm how the collected data aligns with the goals set out in Section 7.3.2.3 of the WMP.

Requested information regarding customer support mitigation efforts in 2022 is currently unavailable. Therefore, a comprehensive analysis of the response's alignment with Section 7.3.3.9 of the WMP cannot be conducted at this time.

For 7.3.3.2.12, the IE requested twenty (20) sample locations to evaluate the removal of tree attachments and received fourteen.

7.3.4.14 details QA/QC for inspections. Out of the eight inspections, two (2) were given a priority level due to damage, while the others did not receive any priority level. One pole was not given a priority level although the inspection comments state “Pole is rotten needs to be replaced, pole has some splitting and cracking, woodpecker holes, idle, riser.” Multiple photos were provided for each of the eight poles. Two poles did not have their number documented in the photos provided.

Table 17: Small Volume Quantifiable Goal/Target Summary Table

SOW Category	2022 Initiative Number	Initiative Name	Finding	Detail on Finding
WMP Activity Completion	7.3.2.1 - SAF_01	Advanced weather monitoring and weather stations	Activity In Progress	Not Compliant with the 2022 WMP
WMP Activity Completion	7.3.2.2 - SAF_02	Continuous monitoring sensors	Activity Completed	Compliant with the 2022 WMP
WMP Activity Completion	7.3.2.3 - SAF_03	Fault indicators for detecting faults on electric lines and equipment	Activity Completed	Compliant with the 2022 WMP
WMP Activity Completion	7.3.3.3 - GDSH_03	Covered conductor installation	Activity Completed	Compliant with the 2022 WMP
WMP Activity Completion	7.3.3.9 - GDSH_09	Installation of system automation equipment	Activity Completed	Compliant with the 2022 WMP
WMP Activity Completion	7.3.3.12 - GDSH_12	Other corrective action	Activity Completed	Compliant with the 2022 WMP
WMP Activity Completion	7.3.3.16 - GDSH_16	Undergrounding of electric lines and/or equipment	Activity In Progress	Not Compliant with the 2022 WMP
WMP Activity Completion	7.3.4.14 - AMI_14	Quality assurance / quality control of inspections	Activity Completed	Compliant with the 2022 WMP
WMP Activity Completion	7.3.4.15 - AMI_15	Substation inspections	Activity Completed	Compliant with the 2022 WMP
WMP Activity Completion	7.3.5.1 - VMI_01	Additional efforts to manage community and environmental impacts	Activity Completed	Compliant with the 2022 WMP

3.1.5 Qualitative Goal/Target

3.1.5.1 Review of Initiatives

Pursuant to the Final IE Scope of Work for the Review of Compliance with 2022 WMP, Liberty provided a complete list of all 2022 WMP activities classified as Qualitative Goal/Target that were conducted in 2022. These 2022 WMP activities identified within the Qualitative list were assessed within this section and are presented below in tables grouped by the associated initiative category. The vegetation management activities follow the table in narrative form. The IE findings are defined as follows:

- Activity Validated – Qualitative work on the initiative began and ended in 2022.
- Activity In Progress – Qualitative work on the initiative began in 2022 and continues into 2023.
- Activity Ongoing – Qualitative work on the initiative is incorporated into operations to be repeated annually.

Table 18: Risk Assessment & Mapping Summary Table

Initiative Name	Initiative Validation	Finding
7.3.1.1 - Risk_01 - A summarized risk map that shows the overall ignition probability and estimated wildfire consequence along the electric lines and equipment	▪ In 2021, Liberty collaborated with Reax to update fire risk study, resulting in the creation of wildfire risk polygons. Fire risk map enables identification of high risk areas.	Activity Ongoing

Table 19: Situational Awareness & Forecasting Summary Table

Initiative Name	Initiative Validation	Finding
7.3.2.4 - SAF_04 - Forecast of a fire risk index, fire potential index, or similar	▪ The FPI enables fire risk awareness, improves operational decision-making, and ensures ongoing improvements in forecast accuracy for effective wildfire mitigation. The response collected appears to align with the goals of Section 7.3.2.4 of the WMP.	Activity Ongoing
7.3.2.5 - SAF_05 - Personnel monitoring areas of electric lines and equipment in elevated fire risk conditions	▪ A response collected as part of Data Request 9 (DR9) directs to Liberty's Fire Prevention Plan (FPP) and provides information on the training protocols for patrol personnel. The FPP mandates annual training for individuals engaged in activities within wildland areas of Liberty's service territory. The data collected and the information provided in the response appears to effectively meet the goals of Section 7.3.2.5 of the WMP.	Activity Validated

Table 20: Grid Design & System Hardening Summary Table

Initiative Name	Initiative Validation	Finding
7.3.3.2 - GDSH_02 - Circuit breaker maintenance and installation to de-energize lines upon detecting a fault	▪ Documentation/photos provided for new breaker installation at Kings Beach Substation. Two OCB replacements delayed due to priority repair project at another location.	Activity Ongoing
7.3.3.8 - GDSH_08 - Grid topology improvements to mitigate or reduce PSPS events	▪ Data requested for the number of energy storage units delivered to customers. Per data response, no energy units were delivered due to getting approved through CPUC.	Activity Ongoing

Table 21: Asset Management & Inspections Summary Table

Initiative Name	Initiative Validation	Finding
7.3.4.3 - AMI_03 - Improvement of inspections	▪ Data requests submitted to review IR pilot program. Liberty did not conduct an IR pilot program in 2022, plans to implement in 2023.	Activity Ongoing
7.3.4.4 - AMI_04 - Infrared inspections of distribution electric lines and equipment	▪ No infrared inspections were completed in 2022. Liberty plans to include "infrared inspections…in detailed asset inspections or other discretionary asset inspections over the 2023-2025 WMP cycle" per the 2023 WMP dated May 5, 2023 (page 174).	Activity In Progress

Table 22: Vegetation Management & Inspections Summary Table

Initiative Name	Initiative Validation	Finding
7.3.5.10 - VMI_10 - Other discretionary inspections of vegetation around transmission electric lines and equipment	▪ There is no current specific applicable WMP initiative per the 2022 WMP dated May 6, 2022 (page 146).	Not Applicable
7.3.5.14 - VMI_14 - Recruiting and training of vegetation management personnel	▪ Liberty increased internal vegetation management staffing in 2022 based on the employee list (2022 Employee Table), certifications, and evidence of continuing education provided in DRU002-4,6,7 (VM).	Activity Validated
7.3.5.21 - VMI_21 - Vegetation management activities post-fire	▪ Per the 2022 WMP, Liberty is "currently managing post-fire mitigation work in accordance with Liberty's special use permit on Federal lands, and in accordance with Section 7.3.5.15 (Identification and remediation of 'at risk' species) and Liberty's Hazard Tree Management Plan (VM-03) on other lands" (page 157). ▪ Liberty provided the 5-25-23 Data Request – 002 Post Fire VM document and copies of the Special Use Permit CAR466 from the U.S. Department of Agriculture, Forest Service for National Forest System lands in the Humboldt-Toiyabe National Forest, the Decision Memo for Tamarack Hazard Tree Removal in Fall 2022, and approval of Amendment 2 for Special Use Permit CAR466 to remove hazard trees that were felled after the Tamarack Fire in DRU002-4,6,7 (VM).	Activity Ongoing

Table 23: Grid Operations & Operating Protocols Summary Table

Initiative Name	Initiative Validation	Finding
7.3.6.1 - GOOP_01 - Automatic recloser operations	▪ Data responses contained information on two reclosers classified as Tier 2 within Liberty's network infrastructure. Data reviewed through data request appear to align with the goals of 7.3.6.1.	Activity Validated
7.3.6.4 - GOOP_03 - Personnel work procedures and training in conditions of elevated fire risk	▪ Attendance records show 31.4% attended and signed in for Wildfire Prevention training. Unclear if consultants and contractors are included.	Activity Ongoing
7.3.6.5 - GOOP_04 - Protocols for PSPS re-energization	▪ Data requests submitted for updates to PSPS plan. Per Liberty, no updates to its protocols for PSPS re-energization in 2022.	Activity Ongoing

Table 24: Data Governance Summary Table

Initiative Name	Initiative Validation	Finding
7.3.7.1 - DG_01 - Centralized repository for data	▪ Liberty provided a narrative response in DR002-05 attachment DR002_C2Group_052323_Data Repository Response which details the creation of the Central Data Repository and includes a screenshot of the reporting platform for the Central Data Repository. Liberty also described improvements to a new GIS system using ArcGIS Utility Network extension in April 2022.	Activity Validated
7.3.7.2 - DG_02 - Collaborative research on utility ignition and/or wildfire	▪ Data requests submitted for information for each HIFD deployed. The response collected for data request 12 regarding the HIFD deployment aligns with the goals outlined in Section 7.3.7.2 of the WMP. The spreadsheet provided includes information for two reclosers, both classified as Tier 2 within Liberty's network infrastructure.	Activity Validated

Table 25: Emergency Planning & Preparedness Summary Table

Initiative Name	Initiative Validation	Finding
7.3.9.1 - EPP_01 - Adequate and trained workforce for service restoration	▪ Liberty's progress on the initiative indicates that they have plans and measures in place to ensure an adequate and trained workforce for service restoration. They are actively working on improving their response capabilities by adding more crew members to enhance emergency restoration and day-to-day work. Overall, the response collected aligns with the goals of section 7.3.9.1.	Activity Ongoing
7.3.9.2 - EPP_02 - Community outreach, public awareness, and communications efforts	▪ Although Liberty does not have a formal CBO program, their ongoing communication and collaboration with CBOs indicates a commitment to engaging with the community. By incorporating lessons learned from exercise after-action reports and discussions with CBOs into program development, Liberty ensures that community feedback and needs are considered.	Activity Validated
7.3.9.3 - EPP_03 - Customer support in emergencies	▪ The response to data request 5 states that the requested information regarding customer support mitigation efforts in 2022 is currently unavailable and will be provided once it becomes available. Therefore, a comprehensive analysis of the response's alignment with Section 7.3.9.3 of the WMP cannot be conducted at this time.	Activity Validated

Table 26: Stakeholder Cooperation & Community Engagement Summary Table

Initiative Name	Initiative Validation	Finding
7.3.10.1 - SCCE_01 - Community engagement	▪ The response collected for Section 7.3.10.1 of the WMP provides insights into the community engagement efforts conducted by Liberty and their alignment with the goals outlined in the plan. The response summary indicates that Liberty has made significant progress in implementing their outreach and engagement plan through various activities and events.	Activity Ongoing
7.3.10.2 - SCCE_02 - Cooperation and best practice sharing with agencies outside CA	▪ The data request response aligns with the goals outlined in Section 7.3.10.2 of the WMP. Liberty's active involvement in collaborative efforts and memberships in relevant organizations demonstrate commitment to cooperation, best practice sharing, and the pursuit of innovative approaches to wildfire mitigation. By actively engaging with various agencies, Liberty contributes to a broader network of knowledge and resources, ultimately benefiting their customers and the larger community in their wildfire safety efforts.	Activity Validated

3.1.5.2 Trends and Themes

The IE team evaluated Qualitative Goals/Targets for 20 initiatives related to Liberty's 2022 WMP. The IE reviewed publicly available documents, online articles, and related published reports as referenced throughout the section and detailed in Appendix B, List of Supplemental Documents Reviewed. Concurrently, the IE submitted data requests and reviewed the Liberty provided responses with various verification documentation, reports with photos, and verification lists with a summary of received documents.

Information reviewed during the evaluation of the initiatives underscored the ongoing nature of the efforts associated with the qualitative goals/targets. Liberty has approached the qualitative goals systematically, relying on established processes where appropriate, developing new strategies to fill in, monitoring outcomes, and refining the approach to incorporate feedback to be carried forward to future wildfire mitigation efforts. Liberty completed improvements to its wildfire awareness program, increased training protocols and the number of certified vegetation management personnel, enhanced fault detection through equipment maintenance and installation, removed at-risk vegetation post-fire, enhanced grid operating protocols, increased community and agency engagement, and enhanced procedures, standards, and overall governance processes for wildfire mitigation.

Liberty's trend across the 2022 WMP activities identified within this section complies with the stated goals identified within the 2022 WMP. There were a number of initiatives that did not occur in 2022 or for which Liberty could not provide verification documentation.

The IE team validated Qualitative Goal/Targets for twenty (20) initiatives and identified twelve as ongoing.

Information reviewed in the course of the evaluation of the initiatives underscored the ongoing nature of the efforts associated with the qualitative goals/targets. Work towards initiatives that has been validated for the 2022 WMP is currently in the process of being executed for the 2023 WMP. Liberty has approached the qualitative goals systematically relying on established processes where appropriate, developing new processes to fill in, monitoring outcomes, and refining the approach to incorporate feedback to be carried forward to future wildfire mitigation efforts.

3.2 Verification of Funding

The IE team reviewed the funding for each initiative of the 2022 WMP to evaluate and verify allotments and distribution of funds. This initial assessment is aimed at assessing the alignment of public records issued by Liberty (from May 6, 2022, to date) for the WMP funding. The assessment included reviewing the Actual and Planned expenditures and their totals, followed by a detailed breakdown of the Actual and Planned expenditures for the Expense and Capital

costs separately as detailed within Appendix E - 2022 Funding Verification Summary - Automated. The approach provided an initial big-picture understanding of the overall initiative spending trends. This section's detailed analysis and findings support the report's associated trends and justifications for funding compliance.

Per OEIS's direction, the IE must record all instances in which Liberty provided less than 100% of the funding for WMP activities in this section. In addition, the IE utilized the information to verify and document Liberty's explanations of the instances in which Liberty funded WMP activities at less than 100 percent.

Table 27: Summary of WMP Expenditures by Category
(Spend in thousand $)

WMP Category	2022 Planned[1]	2022 Actual[2]	2022 Variance
7.3.1 Risk Assessment and Mapping	$55	$0	$(55)
7.3.2 Situational Awareness	$315	$426	$111
7.3.3 Grid Design and System Hardening	$32,712	$27,540	$(5,171)
7.3.4 Asset Management and Inspections	$5,250	$4,597	$(653)
7.3.5 Vegetation Management and Inspections	$14,077	$16,419	$2,342
7.3.6 Grid Operations and Protocols	$450	$340	$(110)
7.3.7 Data Governance	$520	$0	$(520)
7.3.8 Resource Allocation Methodology	$300	$0	$(300)
7.3.9 Emergency Planning and Operations	$1,304	$727	$(577)
7.3.10 Stakeholder Cooperation and Community Engagement	$144	$84	$(60)
Total	**$55,126**	**$50,132**	**$(4,994)**

[1] 2022 Planned data as shown from Table 3.1-2: Summary of WMP Expenditures by Category (Spend in thousand $), page 23, in the 2022 WMP.
[2] 2022 Actual data as shown in Liberty's 2022 ARC dated May 2023.

The IE has observed that a total of 8 out of the 10 initiative categories did not meet their initially planned amounts based on the aggregate total expenditures with a variance between $55K and

$5.2M decrease. The following three WMP initiative categories have the highest underspend amounts, and further described within Table 28:

- 7.3.3 Grid Design and System Hardening
- 7.3.4 Asset Management and Inspections
- 7.3.9 Emergency Planning and Operations

The following table summarizes every instance of Liberty's underspending for the 2022 WMP Expenditures based on the information provided in Liberty's 2022 ARC dated March 31, 2023, and additional information and explanation for the Expense and Capital underspent funds.

Under the "Funding Discrepancy Amount" column, the IE has noted that for every initiative with an underspend record for Expense or Capital, or both, one of the following statuses for Expense or Capital spending is shown: An underspend, an overspend, or no spend/planned amount.

Under the "Detail on Funding Discrepancy" column, the IE provided detail on the amount of the underspend based on the actual costs Liberty shared, the total planned amount for Expense or Capital, and the percentage of the variance to the total amount initially allocated for the initiative.

Table 28: 2022 WMP Funding Verification Summary
(Thousands of Dollars)

Initiative Category	2022 Initiative Number	Initiative Name	2022 WMP Page No.	Funding Discrepancy Amount	Detail on Funding Discrepancy
Risk Assessment and Mapping	7.3.1.1	A summarized risk map that shows the overall ignition probability and estimated wildfire consequence along the electric lines and equipment	80	O&M Underspend: Variance Amount $0M - $1M No Capital amount was planned or spent for this WMP initiative.	No O&M was spent for this WMP Initiative. Per Liberty's 2022 WMP ARC, dated March 31, 2023, Liberty did not incur costs related to risk mapping in 2022.
Situational Awareness and Forecasting	7.3.2.2	Continuous monitoring sensors	82	O&M Underspend: Variance Amount $0M - $1M Capital Underspend: Variance Amount $0M - $1M	No O&M was spent for this WMP Initiative. Per Liberty's 2022 WMP ARC, Dated March 31, 2023, Actual Distribution Fault Anticipation ("DFA") costs captured in 7.3.2.3. No Capital was spent for this WMP Initiative.
Situational Awareness and Forecasting	7.3.2.4	Forecast of a fire risk index, fire potential index, or similar	84	O&M Underspend: Variance Amount $0M - $1M No Capital amount was planned or spent for this WMP initiative.	No O&M was spent for this WMP Initiative. Per Liberty's 2022 WMP ARC, Dated March 31, 2023, Liberty did not incur costs related to its fire potential index ("FPI") in 2022.

Grid Design and System Hardening	7.3.3.2	Circuit breaker maintenance and installation to de-energize lines upon detecting a fault	86	No O&M amount was planned or spent for this WMP Initiative. Capital Underspend: Variance Amount $0M - $1M	Per Liberty's 2022 WMP ARC, Dated March 31, 2023, Liberty did not incur costs in 2022. No Capital was spent for this WMP Initiative.
Grid Design and System Hardening	7.3.3.3	Covered conductor installation	87	No O&M amount was planned or spent for this WMP Initiative. Capital Underspend: Variance Amount $5M - $10M	Per Liberty's 2022 WMP ARC, Dated March 31, 2023, actual costs for covered conductor were lower than projected because portions of some projects were completed in 2021 and because some projects came in under budget. No Capital was spent for this WMP Initiative.
Grid Design and System Hardening	7.3.3.9	Installation of system automation equipment	93	No O&M amount was planned or spent for this WMP Initiative. Capital Underspend: Variance Amount $0M - $1M	Per Liberty's 2022 WMP ARC, Dated March 31, 2023, Liberty installed two of its four targeted automatic reclosers. The remaining two automatic reclosers were delayed due to access issues caused by snow and avalanche danger and will be installed in 2023. No Capital was spent for this WMP Initiative.

Grid Design and System Hardening	7.3.3.16	Undergrounding of electric lines and/or equipment	96	No O&M amount was planned or spent for this WMP Initiative. Capital Underspend: Variance Amount $5M - $10M	Per Liberty's 2022 WMP ARC, Dated March 31, 2023, two of three underground projects in the projected costs were delayed, primarily due to permitting delays. No Capital was spent for this WMP Initiative.
Asset Management and Inspections	7.3.4.6	Intrusive pole inspections	83	O&M Underspend: Variance Amount $0M - $1M No Capital amount was planned or spent for this WMP initiative.	Liberty did not spend $51K of the planned $0.15M, 52% of the total O&M amount initially allocated for this initiative. Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, intrusive pole inspection costs were lower than expected due to overestimating internal labor and contractor expense.
Asset Management and Inspections	7.3.4.9	Other discretionary inspection of distribution electric lines and equipment, beyond inspections mandated by rules and regulations	122	O&M Underspend: Variance Amount $1M - $5M No Capital amount was planned or spent for this WMP initiative.	Liberty did not spend $1.02M of the planned $4.6M, 29% of the total O&M amount initially allocated for this initiative. Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, Liberty's costs associated with repairs from its 2020 system-wide survey were lower than projected in 2022.

Asset Management and Inspections	7.3.4.11	Patrol inspections of distribution electric lines and equipment	85	O&M Underspend: Variance Amount $0M - $1M No Capital amount was planned or spent for this WMP initiative.	No O&M was spent for this WMP Initiative. Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, Liberty did not record asset inspection costs at the WMP initiative level, and thus patrol asset inspection costs are not estimated.
Asset Management and Inspections	7.3.4.14	Quality assurance / quality control of inspections	86	O&M Underspend: Variance Amount $0M - $1M No Capital amount was planned or spent for this WMP initiative.	No O&M was spent for this WMP Initiative. Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, Liberty did not record asset inspection costs at the WMP initiative level, and thus patrol asset inspection costs are not estimated.
Asset Management and Inspections	7.3.4.15	Substation inspections	88	O&M Underspend: Variance Amount $0M - $1M No Capital amount was planned or spent for this WMP initiative.	No O&M was spent for this WMP Initiative. Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, Liberty did not record asset inspection costs at the WMP initiative level, and thus patrol asset inspection costs are not estimated.

Vegetation Management and Inspections	7.3.5.7	LiDAR inspections of vegetation around distribution electric lines and equipment	112	O&M Underspend: Variance Amount $0M - $1M No Capital amount was planned or spent for this WMP initiative.	Liberty did not spend $10K of the planned $0.76M, 1% of the total O&M amount initially allocated for this initiative.
Vegetation Management and Inspections	7.3.5.15	Remediation of at-risk species	117	O&M Underspend: Variance Amount $1M - $5M No Capital amount was planned or spent for this WMP initiative.	Liberty did not spend $2.56M of the planned $5.7M, 81% of the total O&M amount initially allocated for this initiative.
Grid Operations and Protocols	7.3.6.6	PSPS events and mitigation of PSPS impacts	161	O&M Underspend: Variance Amount $0M - $1M No Capital amount was planned or spent for this WMP initiative.	No O&M was spent for this WMP Initiative. Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, Liberty did not incur costs in 2022.
Grid Operations and Protocols	7.3.6.7	Stationed and on-call ignition prevention and suppression resources and services	162	No O&M amount was planned or spent for this WMP Initiative. Capital Underspend: Variance Amount $0M - $1M	Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, Liberty did not incur costs in 2022. No Capital was spent for this WMP Initiative.

Data Governance	7.3.7.1	Centralized repository for data	98	O&M Underspend: Variance Amount $0M - $1M No Capital amount was planned or spent for this WMP initiative.	No O&M was spent for this WMP Initiative. Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, Liberty did not incur costs in 2022.
Data Governance	7.3.7.2	Collaborative research on utility ignition and/or wildfire	126	No O&M amount was planned or spent for this WMP Initiative. Capital Underspend: Variance Amount $0M - $1M	Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, Liberty did not incur costs in 2022. No Capital was spent for this WMP Initiative.
Resource Allocation Methodology	7.3.8.1	Allocation methodology development and application	164	No O&M amount was planned or spent for this WMP Initiative. Capital Underspend: Variance Amount $0M - $1M	No Capital was spent for this WMP Initiative.
Emergency Planning and Preparedness	7.3.9.1	Adequate and trained workforce for service restoration	128	O&M Underspend: Variance Amount $1M - $5M No Capital amount was planned or spent for this WMP initiative.	No O&M was spent for this WMP Initiative. Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, Liberty projected costs for 7.3.9.1. captured in 7.3.9.3 and 7.3.9.5.

Stakeholder Cooperation and Community Engagement	7.3.10.1	Community engagement	135	O&M Underspend: Variance Amount $0M - $1M No Capital amount was planned or spent for this WMP initiative.	Liberty did not spend $60K of the planned $0.14M, 71% of the total O&M amount initially allocated for this initiative. Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, Liberty reported lower than expected costs related to communication and outreach.

*See Appendix E - 2022 WMP Funding Verification Summary (Spend in thousand $) for detailed information and Actuals for CAPEX and O&M as reported by Liberty in the WMP Quarterly Report - Table 11, dated March 2023.

3.3 Verification of QA/QC Programs

Where reference to N/A within the below table is demonstrated, the reference is intended to depict that the type of assessment resulted in no applicable finding or missed commitment. But instead to demonstrate that information was provided to assess the methodology of the documented program information.

Table 29: 2022 QA/QC Initiative Verification Summary Table

Initiative Name	Initiative Validation	Finding	QA/QC Program Type
7.3.1.1 - Risk_01 - A summarized risk map that shows the overall ignition probability and estimated wildfire consequence along the electric lines and equipment	▪ Per Liberty's provided documents per DR.008	N/A	N/A
7.3.2.1 - SAF_01 - Advanced weather monitoring and weather stations	▪ Per Liberty's Response to Data Request 002 in attachment DR002_C2Group_052323_Weather Station Response	N/A	N/A
7.3.2.2 - SAF_02 - Continuous monitoring sensors	▪ Per Liberty's provided documents per DR.009	Activity Validated	New Construction QA/QC
7.3.2.3 - SAF_03 - Fault indicators for detecting faults on electric lines and equipment	▪ Per Liberty's provided documents per DR.009	Activity Validated	New Construction QA/QC
7.3.2.4 - SAF_04 - Forecast of a fire risk index, fire potential index, or similar	▪ Per Liberty's provided documents per DR.009	N/A	N/A
7.3.2.5 - SAF_05 - Personnel monitoring areas of electric lines and equipment in elevated fire risk conditions	▪ Per Liberty's provided documents per DR.009	N/A	N/A

7.3.3.2 - GDSH_02 - Circuit breaker maintenance and installation to de-energize lines upon detecting a fault	▪ Per Liberty's provided documents per DR.006	Activity Validated	New Construction QA/QC
7.3.3.3 - GDSH_03 - Covered conductor installation	▪ Documented in Liberty's Response in Data Request 002 in Attachment liberty_qaqc_go_95_checklist_hobart_20220824 ▪ Documented in Liberty's Response in Data Request 002 in Attachment QAQC_FulcrumPass_Hobart_20220824 ▪ Documented in Liberty's Response in Data Request 002 in Attachment QAQC_FulcrumFail_Hobart_20220824	Activity Validated	New Construction QA/QC
7.3.3.6 - GDSH_06 - Distribution pole replacement and reinforcement, including with composite poles	▪ Documented in Liberty's Response in QAQC Documentation Data Request in Attachment liberty_qaqc_go_95_checklist	Activity Validated	New Construction QA/QC
7.3.3.7 - GDSH_07 - Expulsion fuse replacement	▪ Documented in Liberty's Response in QAQC Documentation Data Request in Attachment liberty_qaqc_go_95_checklist	Activity Validated	New Construction QA/QC
7.3.3.8 - GDSH_08 - Grid topology improvements to mitigate or reduce PSPS events	▪ Per Liberty's provided documents per DR.006	Activity Validated	New Construction QA/QC
7.3.3.9 - GDSH_09 - Installation of system automation equipment	▪ Per Liberty's provided documents per DR.008	Activity Validated	New Construction QA/QC
7.3.3.12 - GDSH_12 - Other corrective action	▪ Per Liberty's provided documents per DR.009	Activity Validated	New Construction QA/QC
7.3.3.16 - GDSH_16 - Undergrounding of electric lines and/or equipment	▪ Documented in Liberty's Response in Data Request 002 in attachment Brockway Resiliency as built	Activity Validated	New Construction QA/QC

7.3.4.1 - AMI_01 - Detailed inspections of distribution electric lines and equipment	▪ Documented in Liberty's Response in QAQC Documentation Data Request in Attachment Existing Assets Inspection QAQC – FINAL DRAFT 03-07-2022	Activity Validated	Asset Inspection QA/QC
7.3.4.3 - AMI_03 - Improvement of inspections	▪ Documented in Liberty's 2022 WMP, Liberty does not have a specific WMP initiative and related activities are incorporated in other initiatives.	N/A	N/A
7.3.4.4 - AMI_04 - Infrared inspections of distribution electric lines and equipment	▪ Documented in Liberty's 2022 WMP, Liberty did not conduct infrared inspections of distribution electric lines and equipment during 2022	N/A	N/A
7.3.4.6 - AMI_06 - Intrusive pole inspections	▪ Documented in Liberty's Response in QAQC Documentation Data Request in Attachment Existing Assets Inspection QAQC – FINAL DRAFT 03-07-2022	Activity Validated	Asset Inspection QA/QC
7.3.4.11 - AMI_11 - Patrol inspections of distribution electric lines and equipment	▪ Documented in Liberty's Response in QAQC Documentation Data Request in Attachment Existing Assets Inspection QAQC – FINAL DRAFT 03-07-2022	Activity Validated	Asset Inspection QA/QC
7.3.4.14 - AMI_14 - Quality assurance / quality control of inspections	▪ Per Liberty's provided documents per DR.004	Activity Validated	Asset Inspection QA/QC
7.3.4.15 - AMI_15 - Substation inspections	▪ Per Liberty's provided documents per DR.004	Activity Validated	Asset Inspection QA/QC
7.3.5.1 - VMI_01 - Additional efforts to manage community and environmental impacts	▪ Documented in Liberty's Response in QAQC Documentation Data Request in Attachment VM-04_Post_Work_Verification_1.0	Activity Validated	Vegetation Management QA/QC
7.3.5.2 - VMI_02 - Detailed inspections of vegetation around distribution electric lines and equipment	▪ Documented in Liberty's Response in QAQC Documentation Data Request in Attachment VM-04_Post_Work_Verification_1.0	Activity Validated	Vegetation Management QA/QC

7.3.5.5 - VMI_05 - Fuel management and reduction of "slash" from vegetation management activities	▪ Per Liberty's provided documents per DR.011	Activity Validated	Vegetation Management QA/QC
7.3.5.7 - VMI_07 - LiDAR inspections of vegetation around distribution electric lines and equipment	▪ Documented in Liberty's Response in QAQC Documentation Data Request in Attachment VM-04_Post_Work_Verification_1.0	Activity Validated	Vegetation Management QA/QC
7.3.5.10 - VMI_10 - Other discretionary inspections of vegetation around transmission electric lines and equipment	▪ Documented in Liberty's 2022 WMP, Liberty does not have a specific WMP initiative and related activities are incorporated in other initiatives.	N/A	N/A
7.3.5.11 - VMI_11 - Patrol inspections of vegetation around distribution electric lines and equipment	▪ Documented in Liberty's Response in QAQC Documentation Data Request in Attachment Existing Assets Inspection QAQC – FINAL DRAFT 03-07-2022	Activity Validated	Vegetation Management QA/QC Asset Inspection QA/QC
7.3.5.13 - VMI_13 - Quality assurance / quality control of vegetation inspections	▪ Documented in Liberty's Response in QAQC Documentation Data Request in Attachment VM-04_Post_Work_Verification_1.0	Activity Validated	Vegetation Management QA/QC
7.3.5.14 - VMI_14 - Recruiting and training of vegetation management personnel	▪ Documentation of QAQC related to this initiative was not included in Liberty's Response in Data Request DR002.	N/A	N/A
7.3.5.15 - VMI_15 - Remediation of at-risk species	▪ Documented in Liberty's Response in QAQC Documentation Data Request in Attachment VM-04_Post_Work_Verification_1.0	Activity Validated	Vegetation Management QA/QC

7.3.5.16 - VMI_16 - Removal and remediation of trees with strike potential to electric lines and equipment	▪ Documented in Liberty's Response in QAQC Documentation Data Request in Attachment VM-04_Post_Work_Verification_1.0	Activity Validated	Vegetation Management QA/QC
7.3.5.20 - VMI_20 - Vegetation management to achieve clearances around electric lines and equipment	▪ Documentation of QAQC related to this initiative was not included in Liberty's Response in Data Request DR001.	N/A	N/A
7.3.5.21 - VMI_21 - Vegetation management activities post-fire	▪ Documented in Liberty's Response in Data Request DR002, Attachment 5-25-23 Data Request-Post Fire VM	N/A	N/A
7.3.6.1 - GOOP_01 - Automatic recloser operations	▪ Per Liberty's provided documents per DR.007	N/A	N/A
7.3.6.3 - GOOP_03 - Personnel work procedures and training in conditions of elevated fire risk	▪ Per Liberty's provided documents per DR.007	N/A	N/A
7.3.6.4 - GOOP_04 - Protocols for PSPS re-energization	▪ Per Liberty's provided documents per DR.007	N/A	N/A
7.3.7.1 - DG_01 - Centralized repository for data	▪ Documented in Liberty's Response in Data Request DR002 in Attachment DR002_C2Group_052323_Data Repository Response	N/A	N/A
7.3.7.2 - DG_02 - Collaborative research on utility ignition and/or wildfire	▪ Per Liberty's provided documents per DR.012	N/A	N/A
7.3.9.1 - EPP_01 - Adequate and trained workforce for service restoration	▪ Per Liberty's provided documents per DR.005	N/A	N/A

7.3.9.2 - EPP_02 - Community outreach, public awareness, and communications efforts	▪ Per Liberty's provided documents per DR.005	N/A	N/A
7.3.9.3 - EPP_03 - Customer support in emergencies	▪ Per Liberty's provided documents per DR.005	N/A	N/A
7.3.10.1 - SCCE_01 - Community engagement	▪ Per Liberty's provided documents per DR.010	N/A	N/A
7.3.10.2 - SCCE_02 - Cooperation and best practice sharing with agencies outside CA	▪ Per Liberty's provided documents per DR.010	N/A	N/A

4. CONCLUSION

As demonstrated within the IE ARC and the information demonstrated in the IE Findings in Appendix F, Liberty has demonstrated the utilities intent to reduce the risk of wildfire by improvements such as system hardening, fault monitoring, investigation of technology to detect fault conditions early on and to maintain annually an inspection program that ensures compliance with regulatory requirements. The continued work to protect the infrastructure from conditions that increase the fire risk and the ability of the infrastructure to engage vegetation in an ignition scenario is continually assessed but has ongoing annually metrics for ongoing operations as described for the WMP programs outlined in the Liberty approved 2022 WMP. Activities and initiatives and their findings are detailed in the Appendices.

APPENDICES

APPENDICES

Appendix A – List of 2022 WMP Activities

SOW Category	2022 WMP Activities	WMP Category	2022 Initiative No.	Initiative Tracking ID	Utility Initiative Name
WMP Activity Completion	b. Large Volume Quantifiable Goal/Target – Not Field Verifiable	Asset Management & Inspections	7.3.4.1	AMI_01	Detailed inspections of distribution electric lines and equipment
WMP Activity Completion	d. Qualitative Goal/Target	Asset Management & Inspections	7.3.4.3	AMI_03	Improvement of inspections
WMP Activity Completion	d. Qualitative Goal/Target	Asset Management & Inspections	7.3.4.4	AMI_04	Infrared inspections of distribution electric lines and equipment
WMP Activity Completion	b. Large Volume Quantifiable Goal/Target – Not Field Verifiable	Asset Management & Inspections	7.3.4.6	AMI_06	Intrusive pole inspections
WMP Activity Completion	b. Large Volume Quantifiable Goal/Target – Not Field Verifiable	Asset Management & Inspections	7.3.4.11	AMI_11	Patrol inspections of distribution electric lines and equipment
WMP Activity Completion	c. Small (less than 100 items) Volume Quantifiable Goal/Target	Asset Management & Inspections	7.3.4.14	AMI_14	Quality assurance / quality control of inspections

WMP Activity Completion	c. Small (less than 100 items) Volume Quantifiable Goal/Target	Asset Management & Inspections	7.3.4.15	AMI_15	Substation inspections
WMP Activity Completion	d. Qualitative Goal/Target	Data Governance	7.3.7.1	DG_01	Centralized repository for data
WMP Activity Completion	d. Qualitative Goal/Target	Data Governance	7.3.7.2	DG_02	Collaborative research on utility ignition and/or wildfire
WMP Activity Completion	d. Qualitative Goal/Target	Emergency Planning & Preparedness	7.3.9.1	EPP_01	Adequate and trained workforce for service restoration
WMP Activity Completion	d. Qualitative Goal/Target	Emergency Planning & Preparedness	7.3.9.2	EPP_02	Community outreach, public awareness, and communications efforts
WMP Activity Completion	d. Qualitative Goal/Target	Emergency Planning & Preparedness	7.3.9.3	EPP_03	Customer support in emergencies
WMP Activity Completion	d. Qualitative Goal/Target	Grid Design & System Hardening	7.3.3.2	GDSH_02	Circuit breaker maintenance and installation to de-energize lines upon detecting a fault
WMP Activity Completion	c. Small (less than 100 items) Volume Quantifiable Goal/Target	Grid Design & System Hardening	7.3.3.3	GDSH_03	Covered conductor installation

WMP Activity Completion	a. Large Volume Quantifiable Goal/Target - Field Verifiable	Grid Design & System Hardening	7.3.3.6	GDSH_06	Distribution pole replacement and reinforcement, including with composite poles
WMP Activity Completion	a. Large Volume Quantifiable Goal/Target - Field Verifiable	Grid Design & System Hardening	7.3.3.7	GDSH_07	Expulsion fuse replacement
WMP Activity Completion	d. Qualitative Goal/Target	Grid Design & System Hardening	7.3.3.8	GDSH_08	Grid topology improvements to mitigate or reduce PSPS events
WMP Activity Completion	c. Small (less than 100 items) Volume Quantifiable Goal/Target	Grid Design & System Hardening	7.3.3.9	GDSH_09	Installation of system automation equipment
WMP Activity Completion	c. Small (less than 100 items) Volume Quantifiable Goal/Target	Grid Design & System Hardening	7.3.3.12	GDSH_12	Other corrective action
WMP Activity Completion	c. Small (less than 100 items) Volume Quantifiable Goal/Target	Grid Design & System Hardening	7.3.3.16	GDSH_16	Undergrounding of electric lines and/or equipment
WMP Activity Completion	d. Qualitative Goal/Target	Grid Operations & Operating Protocols	7.3.6.1	GOOP_01	Automatic recloser operations

WMP Activity Completion	d. Qualitative Goal/Target	Grid Operations & Operating Protocols	7.3.6.3	GOOP_03	Personnel work procedures and training in conditions of elevated fire risk
WMP Activity Completion	d. Qualitative Goal/Target	Grid Operations & Operating Protocols	7.3.6.4	GOOP_04	Protocols for PSPS re-energization
WMP Activity Completion	d. Qualitative Goal/Target	Risk Assessment & Mapping	7.3.1.1	Risk_01	A summarized risk map that shows the overall ignition probability and estimated wildfire consequence along the electric lines and equipment
WMP Activity Completion	c. Small (less than 100 items) Volume Quantifiable Goal/Target	Situational Awareness & Forecasting	7.3.2.1	SAF_01	Advanced weather monitoring and weather stations
WMP Activity Completion	c. Small (less than 100 items) Volume Quantifiable Goal/Target	Situational Awareness & Forecasting	7.3.2.2	SAF_02	Continuous monitoring sensors
WMP Activity Completion	c. Small (less than 100 items) Volume Quantifiable Goal/Target	Situational Awareness & Forecasting	7.3.2.3	SAF_03	Fault indicators for detecting faults on electric lines and equipment
WMP Activity Completion	d. Qualitative Goal/Target	Situational Awareness & Forecasting	7.3.2.4	SAF_04	Forecast of a fire risk index, fire potential index, or similar

WMP Activity Completion	d. Qualitative Goal/Target	Situational Awareness & Forecasting	7.3.2.5	SAF_05	Personnel monitoring areas of electric lines and equipment in elevated fire risk conditions
WMP Activity Completion	d. Qualitative Goal/Target	Stakeholder Cooperation & Community Engagement	7.3.10.1	SCCE_01	Community engagement
WMP Activity Completion	d. Qualitative Goal/Target	Stakeholder Cooperation & Community Engagement	7.3.10.2	SCCE_02	Cooperation and best practice sharing with agencies outside CA
WMP Activity Completion	c. Small (less than 100 items) Volume Quantifiable Goal/Target	Vegetation Management & Inspections	7.3.5.1	VMI_01	Additional efforts to manage community and environmental impacts
WMP Activity Completion	b. Large Volume Quantifiable Goal/Target – Not Field Verifiable	Vegetation Management & Inspections	7.3.5.2	VMI_02	Detailed inspections of vegetation around distribution electric lines and equipment
WMP Activity Completion	b. Large Volume Quantifiable Goal/Target – Not Field Verifiable	Vegetation Management & Inspections	7.3.5.5	VMI_05	Fuel management and reduction of “slash” from vegetation management activities
WMP Activity Completion	a. Large Volume Quantifiable Goal/Target - Field Verifiable	Vegetation Management & Inspections	7.3.5.7	VMI_07	LiDAR inspections of vegetation around distribution electric lines and equipment

WMP Activity Completion	d. Qualitative Goal/Target	Vegetation Management & Inspections	7.3.5.10	VMI_10	Other discretionary inspections of vegetation around transmission electric lines and equipment
WMP Activity Completion	b. Large Volume Quantifiable Goal/Target – Not Field Verifiable	Vegetation Management & Inspections	7.3.5.11	VMI_11	Patrol inspections of vegetation around distribution electric lines and equipment
WMP Activity Completion	b. Large Volume Quantifiable Goal/Target – Not Field Verifiable	Vegetation Management & Inspections	7.3.5.13	VMI_13	Quality assurance / quality control of vegetation inspections
WMP Activity Completion	d. Qualitative Goal/Target	Vegetation Management & Inspections	7.3.5.14	VMI_14	Recruiting and training of vegetation management personnel
WMP Activity Completion	a. Large Volume Quantifiable Goal/Target - Field Verifiable	Vegetation Management & Inspections	7.3.5.15	VMI_15	Remediation of at-risk species
WMP Activity Completion	b. Large Volume Quantifiable Goal/Target – Not Field Verifiable	Vegetation Management & Inspections	7.3.5.16	VMI_16	Removal and remediation of trees with strike potential to electric lines and equipment
WMP Activity Completion	b. Large Volume Quantifiable Goal/Target – Not Field Verifiable	Vegetation Management & Inspections	7.3.5.20	VMI_20	Vegetation management to achieve clearances around electric lines and equipment

WMP Activity Completion	d. Qualitative Goal/Target	Vegetation Management & Inspections	7.3.5.21	VMI_21	Vegetation management activities post-fire

Appendix B – List of Documents Reviewed

Item No.	Documents Reviewed - Public	Document Date
1	Liberty's Weather Platform, https://liberty.westernweathergroup.com/, provided in DRU002-03	NA
2	Public Resource Code - PRC Section 4291 https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=4291.&lawCode=PRC	Apr-22
3	CPUC Fire-Threat Map Adopted by CPUC https://files.cpuc.ca.gov/safety/fire-threat_map/2021/CPUC%20Fire%20Threat%20Map_v.3_08.19.2021.Letter%20Size.pdf	Aug-21
4	CPUC Fire-Threat Maps and Fire-Safety Rulemaking https://www.cpuc.ca.gov/industries-and-topics/wildfires/fire-threat-maps-and-fire-safety-rulemaking	Jun-23
5	Liberty 2022 WMP https://california.libertyutilities.com/uploads/Liberty%20CalPeco%27s%202022%20WMP%20Update%20PUBLIC.pdf	May-22
6	The Liberty 2022 Q4 tables 1-15_R1 https://efiling.energysafety.ca.gov/Lists/DocketLog.aspx?docketnumber=2022-QDR	March-23

Appendix C – Data Log, Data, and Interview Requests

Liberty Data Req. # Tracking Number	Date Sent	From	Subject	Date Response Received	File Name
DR001	5/23/2023	C2	Large Volume	5/26/2023	Folder 1: LU_Detailed_Inspections_Lines_2022.CPG, LU_Detailed_Inspections_Lines_2022.dbf, LU_Detailed_Inspections_Lines_2022.prj, LU_Detailed_Inspections_Lines_2022.sbn, LU_Detailed_Inspections_Lines_2022.sbx, LU_Detailed_Inspections_Lines_2022.shp, LU_Detailed_Inspections_Lines_2022.shp, LU_Detailed_Inspections_Lines_2022.shx, LU_Detailed_Inspections_Point_2022.cpg, LU_Detailed_Inspections_Point_2022.prj, LU_Detailed_Inspections_Point_2022.sbn, LU_Detailed_Inspections_Point_2022.sbx, LU_Detailed_Inspections_Point_2022.shp, LU_Detailed_Inspections_Point_2022.shp, LU_Detailed_Inspections_Point_2022.shx, Unconfirmed 250453.crdownload
DR001	5/23/2023	C2	Large Volume	5/26/2023	Folder 2: LU_Patrol_Inspections_2022.cpg, LU_Patrol_Inspections_2022.dbf, LU_Patrol_Inspections_2022.prj, LU_Patrol_Inspections_2022.sbn, LU_Patrol_Inspections_2022.sbx, LU_Patrol_Inspections_2022.shp, LU_Patrol_Inspections_2022.shp, LU_Patrol_Inspections_2022.shx

DR001	5/23/2023	C2	Large Volume	5/26/2023	Folder 3: 2022_go_165_detailed_inspections, 2022_go_165_detailed_inspections.csv, LU_Intrusive_Pole_Inspections_2022.cpg, LU_Intrusive_Pole_Inspections_2022.dbf, LU_Intrusive_Pole_Inspections_2022.prj, LU_Intrusive_Pole_Inspections_2022.sbn, LU_Intrusive_Pole_Inspections_2022.sbx, LU_Intrusive_Pole_Inspections_2022.shp, LU_Intrusive_Pole_Inspections_2022.shp, LU_Intrusive_Pole_Inspections_2022.shx
DR001	5/23/2023	C2	Large Volume	5/26/2023	Folder 4: LU_Distribution_Pole_Replacements_2022.cpg, LU_Distribution_Pole_Replacements_2022.dbf, LU_Distribution_Pole_Replacements_2022.prj, LU_Distribution_Pole_Replacements_2022.sbn, LU_Distribution_Pole_Replacements_2022.sbx, LU_Distribution_Pole_Replacements_2022.shp, LU_Distribution_Pole_Replacements_2022.shp, LU_Distribution_Pole_Replacements_2022.shx
DR001	5/23/2023	C2	Large Volume	5/26/2023	Folder 5: LU_Expulsion_Fuses_2022.cpg, LU_Expulsion_Fuses_2022.dbf, LU_Expulsion_Fuses_2022.prj, LU_Expulsion_Fuses_2022.sbn, LU_Expulsion_Fuses_2022.sbx, LU_Expulsion_Fuses_2022.shp, LU_Expulsion_Fuses_2022.shp, LU_Expulsion_Fuses_2022.shx

DR001	5/23/2023	C2	Large Volume	5/26/2023	Folder 06 - 11:Folder 2022_VM Inspection and Maintenance Data:Subfolder Q1: Q1_2022_Completed_Work_FieldNote, Q1_2022_Completed_Work_VMS, Q1_2022_Inspections_FieldNote, Q1_2022_Inspections_VMSSubfolder Q2: Q2_2022_Completed_LiDAR_Tree_Work, Q2_2022_Completed_Tree_Work_1, Q2_2022_Completed_Tree_Work_VMS, Q2_2022_Tree_Work_Completed_2, Q2_2022_VM_Inspections_1, Q2_2022_VM_Inspections_2Subfolder Q3: DR_Q3_Inspections_v2_20221410, DR_Q3_VM_Completed_Work_v2_20221410Subfolder Q4: 2022_Q4_VM_Completed_Tree_Work_1, 2022_Q4_VM_Completed_Work_2, 2022_Q4_VM_Completed_Work_3, 2022_Q4_VM_InspectionsZipped Folder 2022 LiDAR Inspection Geodatabase: Subfolder 2022 TreeTops.gdb: 53 various file typesLiDAR Inspection Data Structures and SpansPole Clearing Data 2022VM Data Reference Table
DR002	5/23/2023	C2	Small Volume - Line Item 1	5/26/2023	Folder ASBuilts: Brockway Resiliency as-built 1, Brockway Resiliency as-built 2Folder As-Builts: 8800-0121-0419 As Built, 8800-0220-0540 As Built, As Built - Cathedral Park B 12.20.22, As-Built - 8800-0119-0323, Brockway Resiliency as-built, Cascade Creek - As Built 12.20.22 - OH, Fallen Leaf - Phase A - As Built 12.20.22Brockway resiliency pole structure inspections, Cathedral Main line Inspection Reports, Insp. Rpt. 17895 Liberty Utilities WMP, Liberty 17774 Messenger Stringing Tension, liberty_qaqc_go_95_checklist_Hobart_20220824, LU_Covered_Conductor_2022.cpg,

					LU_Covered_Conductor_2022.dbf, LU_Covered_Conductor_2022.prj, LU_Covered_Conductor_2022.sbn, LU_Covered_Conductor_2022.sbx, LU_Covered_Conductor_2022.shp, LU_Covered_Conductor_2022.shp, LU_Covered_Conductor_2022.shx, QAQC_FulcrumFail_Hobart_20220824, QAQC_FulcrumPass_Hobart_20220824
DR002	5/23/2023	C2	Small Volume - Line Item 2	5/26/2023	Folder As-Built: Brockway Resiliency as-built LU_Undergrounding_2022.cpg, LU_Undergrounding_2022.cpg, LU_Undergrounding_2022.prj, LU_Undergrounding_2022.sbn, LU_Undergrounding_2022.sbx, LU_Undergrounding_2022.shp, LU_Undergrounding_2022.shp, LU_Undergrounding_2022.shx
DR002	5/23/2023	C2	Small Volume - Line Item 3	5/26/2023	DR002_C2Group_052323_Weather Station Response, LU_Weather_Station_Addivtions_2022.cpg, LU_Weather_Station_Addivtions_2022.dbf, LU_Weather_Station_Addivtions_2022.prj, LU_Weather_Station_Addivtions_2022.sbn, LU_Weather_Station_Addivtions_2022.sbx, LU_Weather_Station_Addivtions_2022.shp, LU_Weather_Station_Addivtions_2022.shp, LU_Weather_Station_Addivtions_2022.shx

DR002	5/23/2023	C2	Small Volume - Line Item 3	5/26/2023	Folder 4, 6, 7 (VM) Folder VMI_01 Efforts to Manage Impacts: 5-25-23 Data Request - Community Impacts, 20221003_HobartSageHenTap, CathedralB_TimberWaiverv3, Hydrology and Soils Resource Protection Measures, Notice to proceed - Cathedral B, Sagehen Tap Cat 6 with winter ops Application executed, SagehenTapCruise Folder VMI_14 Recruiting and Training: 2022 Employees Table, Arborist_Scannapieco, BCMA_Stoltman, CEUs_Bjornestad, CEUs_Hirt, CEUs_Oiler, CEUs_Scannapieco, CEUs_Stoltman, GIS_Garcia, ISA_Arborist_Bjornestad, ISA_Arborist_Hirt, ISA_Arborist_Oiler, ISA_Utility_Specialist_Hirt, ISA_Utility_Specialist_Oiler, ISA_Utility_Specialist_Scannapieco, TRAQ_Bjornestad, TRAQ_Oiler, UVM_Professional_Oiler Folder VMI_21 Post Fire Vegetation Management: 5-25-23 Data Request-Post Fire VM, HTNF Master Permit, Liberty_Decision_memo, Liberty_OM_Plan_2022_Muller1296
DR002	5/23/2023	C2	Small Volume - Line Item 3	5/26/2023	Folder 5: DR002_C2Group_052323_Data Repository Response

DR003	5/25/2023	C2	Large Volume	6/01/2023	2022 QC VM Data: Subfolder liberty_hazard_tree_qc photos: 9c256da0-7b99-4d75-ad81-ae7064ff59bf.jpg, 23e952cc-96e3-4969-865a-5e94a44a768e.jpg, 31df8d1f-37c4-4352-9ca7-216af0832918.jpg, 6653dee6-fc81-4a66-89f8-9a816d14fb49.jpg, ab8d8fac-ad8e-450e-8aad-a070678ffb16.jpg Subfolder liberty_qc photos: 1, Cottonwood , 204132, 60-1.jpg, 1, Elm, 266627, 23.jpg, 1, Fir- white , 8535, 16.jpg, 1, Pine - Jeffrey , 290488, 14-2.jpg, 14, Willow, 269472, R1B, 5.jpg Subfolder photos: 1,320 photos - too many to list QC Data from FieldNote; LiDAR QC WC 05-31-2023.xlsx, QC PI 05-31-2023.xlsx 2022_VM_QC_Pass_Results_Report.xlsx, liberty_hazard_tree_qc.xlsx. liberty_pole_brushing_qc.xlsx, liberty_qc.xlsx
DR004	5/26/2023	BV	Asset Management and Inspections	6/01/2023	DR004_ BV_052623 - Asset Management and Inspections_Liberty Response.xlsx Liberty Asset Inspection QAQC Records 2022.xlsx Liberty Substation Inspections_2022.xlsx
DR005	5/26/2023	BV	Emergency Planning and Preparedness	5/26/2023	LU_Expulsion_Fuses_2022.cpg DR005_ BV_052623 - Emergency Planning and Preparedness_Liberty Response.xlsx Liberty DR005 Request #2 Response.xlsx
DR006	5/26/2023	BV	Grid Design and System Hardening	6/01/2023	DR006_ BV_052623 - Grid Design and System Hardening_Liberty Response.xlsx Liberty Automatic Recloser DR Response.xlsx Liberty Tree Attachment DR Response.xlsx

DR007	5/26/2023	BV	Grid Operations and Protocols	6/02/2023	DR007_ BV_052623- Grid Operations and Protocols_Liberty Response.xlsxLiberty Wildfire Prevention Training Roster_7-06-22.pdf
DR008	5/26/2023	BV	Risk Assessment and Mapping	6/01/2023	DR008_ BV_052623- Risk Assessment and Mapping_Liberty Response.xlsx Liberty Wildfire Risk Map.pdf
DR009	5/26/2023	BV	Situational Awareness and Forecasting	6/01/2023	DR009_ BV_052623 - Situational Awareness and Forecasting_Liberty Response.xlsx Liberty Situational Awareness DR Responses.xlsx LU Fire Prevention Plan 10-9-2020.pdf
DR010	5/26/2023	BV	Stakeholder Cooperation and Community Engagement	6/01/2023	DR010_ BV_052623 - Stakeholder Cooperation and Community Engagement_Liberty Response.xlsx Liberty Community Engagement and Collaboration Records 2022.xlsx
DR011	5/26/2023	BV	Veg Management	6/01/2023	DR011_BV_Fuel_Mgt_Table 6-1-23.xlsx
DR012	5/26/2023	BV	Data Governance	6/01/2023	DR012_ BV_052623 - Data Governance_Liberty Response.xlsx Liberty HIFD DR Response.xlsx
DR013	6/1/2023	BV	Asset Management and Inspections related back to DR004	6/06/2023	DR013 Inspection Data, multiple excel sheets Folder - DR013 Pole Photos: 35 multiple named files

DR014	6/1/2023	BV	Grid Design and System Hardening related back to DR006	6/09/2023	Folder Recloser Documentation: 13 files in various formats as pdf, kmz, jpg, pplxFolder Tree Attachment Documentation and Photos:Subfolder 233 Granite Chief 8800-0222-0711: 233 Granite Chief- Pic 1.jpgSubfolder 305 Placer St: (6) jpg photosSubfolder 1765 Cedar Crest 8800-0221-0650: (7) jpg photosSubfolder Reclosers: 3127T1.jpeg, 7173T2.jpeg
DR015	6/1/2023	BV	Situational Awareness and Forecasting	6/09/2023	Folder DFA: 23 files in word, excel, vsdx, pdf formats Folder Fault Indicators: MEY3300 Locations.doc, TPZ1261 Locations.doc Zip Folder DFA: MEY.jpeg, NST.jpeg, STL.jpeg Zip folder Fault indicators: F11-F16 jpg files
DR016	6/2/2023	BV	Vegetation Management	6/07/2023	Data Request_BIA_USFS_Fuel Management_6-7-23 Folder 625 Hand Thin: 625_Hand_Thin_Map1, 625_Hand_Thin_Map2, Completion of Hand Thin Units - Screenshot Jen Miller Folder Tamarack Fire: 2022-06-28_PublicMeeting_LU, Indian Creek Map, Liberty Post Fire Operating Plan_State Parks, USFS Map, Work Area 1
DR017	6/5/2023	BV	7.3.3.2 - GDSH_02 DR	6/08/2023	DR017_BV_Liberty 7.3.3.2 - GDSH_02 DR_Liberty Response; Kings Beach Substation Zip Folder containing file titled " Substation - Wide Shot.pdf" and subfolder, titled "2021 Conversion to 120kV" with multiple subfolders and documents, too many to list
DR018	6/12/2023	C2	Large volume line miles inspected - SME interview request	6/13/2023	Liberty_DR018_C2_061223_Liberty Responses 2022-NLT Level 1 Patrols found and repaired 2022-SLT Level 1 Patrols found and repaired LiDAR Work Orders 06-13-2023 2022 VM Workplan Main

DATA REQUEST

Data Request Number: 001

Data Request Date: 05/22/23

Name: [redacted]

Email [redacted]

Phone #: [redacted]

Company: C2 Group

Preferred Point of Contact: Email

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Medium = Task Driven Not Critical. Data responses can be received secondary
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Program Target	Units	Sections	Target	Actual	Method	Data Request	Priority Level
Large Volume	Line Miles Inspected	7.3.4.1 - AMI_01 - Detailed inspections of distribution electric lines and equipment	307.8	328.6	Document	Please provide the latitude and longitude locations of Liberty structures that represent the start and stop sections of completed detailed inspections of distribution lines and equipment, including the equipment inspected, miles completed, and inspection completion date.	High

Large Volume	Line Miles Inspected	7.3.4.11 - AMI_11 - Patrol inspections of distribution electric lines and equipment	706.28	503	Document	Please provide the latitude and longitude locations of Liberty structures that represent the start and stop sections of completed patrol inspections of distribution lines and equipment, including the equipment inspected, miles completed, and inspection completion date.	High
Large Volume	Poles Inspected	7.3.4.6 - AMI_06 - Intrusive pole inspections	2598	2735	Document	Please provide the pole numbers and the latitude/longitude locations of poles with completed Intrusion Pole Inspections, including the inspection completion date and inspection reports.	High
Large Volume	Poles	7.3.3.6 - GDSH_06 - Distribution pole replacement and reinforcement, including with composite poles	231	226	Document	Please provide the pole numbers and the latitude/longitude locations of distribution poles that were replaced per this initiative, including the date of replacement, the pole material type, and associated asbuilts.	High
Large Volume	Expulsion Fuses Replaced	7.3.3.7 - GDSH_07 - Expulsion fuse replacement	1500	1858	Document	Please provide the pole numbers and the latitude/longitude locations of poles with replaced fuses/cutouts, as well as a description of the new equipment installed.	High

Large Volume	Line Miles Treated	7.3.5.15 - VMI_15 - Remediation of at-risk species	238	223	Document	Please provide the latitude and longitude of the area of Liberty structures that represent the start and stop sections of the completed remediation of at-risk species, including a description of remediation (pruning or removing), and the completion date. Additionally, please include the locations and descriptions of the work completed related to initiative 7.3.5.16 VMI_16.	High
Large Volume	Line Miles Inspected	7.3.5.7 - VMI_07 - LiDAR inspections of vegetation around distribution electric lines and equipment	701	701	Document	Please provide the latitude and longitude locations of the Liberty structures that represent the start and stop sections of the LiDAR inspections, line miles completed by circuit, and the dates of the completed inspections.	High
Large Volume	Line Miles Inspected	7.3.5.11 - VMI_11 - Patrol inspections of vegetation around distribution electric lines and equipment	171	235	Document	Please provide the pole numbers and the latitude/longitude locations of poles subject to PRC4293 that were inspected and cleared as needed, describe the clearing completed, and the date of clearing completed.	High

Large Volume	Line Miles Treated	7.3.5.16 - VMI_16 - Removal and remediation of trees with strike potential to electric lines and equipment	171	203	Document	See 7.3.5.15	High
Large Volume	Line Miles Inspected	7.3.5.2 - VMI_02 - Detailed inspections of vegetation around distribution electric lines and equipment	222	210.6	Document	Please provide the latitude and longitude locations of Liberty structures that represent the start and stop sections of the completed detailed inspections of distribution lines and equipment, including the equipment inspected, miles completed, and inspection completion date.	High
Large Volume	Line Miles Treated	7.3.5.20 - VMI_20 - Vegetation management to achieve clearances around electric lines and equipment	701	701	Document	Please provide the latitude and longitude locations of Liberty structures that represent the start and stop sections of the completed vegetation management around lines and equipment, including the equipment inspected, miles completed, describe clearing completed, and date of clearing completed.	High

DATA REQUEST

Data Request Number: 002 **Data Request Date: 05/23/23**

Name: [redacted] Email: [redacted]

Phone #: [redacted]

Company: C2 Group Preferred Point of Contact: Email

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Program Target	Units	Sections	Target	Actual	Method	Data Request	Priority Level
Small Volume	Circuit miles	7.3.3.3 - GDSH_03 - Covered conductor installation	9.55	9.6	Document	1. Please provide the list of locations of the covered conductor, including the circuit name, HFTD designation, length of hardened line, identification if the line was replaced or removed and completion date, and include associated as-builts of completed hardening work. 2. Please confirm the QA/QC Programs applicable to this initiative, and provide QA/QC documentation, including the QA/QC verification of the work in conformance with applicable standards.	Medium

Small Volume	Line Miles	7.3.3.16 - GDSH_16 - Undergrounding of electric lines and/or equipment	0.36	0.24	Document	1. Please provide the list of locations of the completed lines, including the circuit name, HFTD designation, length of underground lines, and completion date, and include associated as-builts of completed underground work. 2. Please describe the reasons for the line miles being less than the 2022 target. 3. Please confirm the QA/QC Programs applicable to this initiative, and provide QA/QC documentation, including the QA/QC verification of the work in conformance with applicable standards.	Medium
Small Volume	Weather Stations Installed	7.3.2.1 - SAF_01 - Advanced weather monitoring and weather stations	10	5	Document	1. Please provide the list of locations of the installed weather stations, including the completion date and a link to the website which contains outputs of the Liberty weather stations.2. Please describe the reasons for the number of installed weather stations being less than the 2022 target. 3. Please confirm the QA/QC Programs applicable to this initiative, and provide QA/QC documentation, including the QA/QC verification of the work in conformance with applicable standards.	Medium

Small Volume	Line Miles Treated	7.3.5.1 - VMI_01 - Additional efforts to manage community and environmental impacts	6	6.33	Document	1. Please provide a copy of the strategy and accomplishments to mitigate negative impacts from utility vegetation management to local communities and the environment with the location(s) of the 6.3 completed line miles, details of work performed, and associated as-built records. Please provide any relevant information that will assist to review the efforts and accomplishments for this initiative. 2. Please confirm the QA/QC Programs applicable to this initiative, and provide QA/QC documentation, including the QA/QC verification of the work in conformance with applicable standards.	Medium
Small Volume	N/A	7.3.7.1 - DG_01 - Centralized repository for data	N/A	N/A	Document	1. Please provide documentation (screenshots, information related to software improvements) of the continued improvements made to centralizing data systems. If unable to provide documented improvements, please schedule SME interview to review and discuss this initiative progress. 2. Please confirm the QA/QC Programs applicable to this initiative, and provide QA/QC documentation, including the QA/QC verification of the work in conformance with applicable standards.	Medium

Small Volume	N/A	7.3.5.14 - VMI_14 - Recruiting and training of vegetation management personnel	N/A	N/A	Document	1. Please provide the total number of VM Department employees and provide the updated Table 7.3.5-10 VM Credentials or Certifications for 2022 Liberty Employees along with a copy of their certificate and completed training completed in 2022. 2. Please confirm the QA/QC Programs applicable to this initiative, and provide QA/QC documentation, including the QA/QC verification of the work in conformance with applicable standards.	Medium
Small Volume	N/A	7.3.5.21 - VMI_21 - Vegetation management activities post-fire	N/A	N/A	Document	1. Please provide documentation that shows conformance to Liberty's special use permit on Federal Lands.2. Please confirm the QA/QC Programs applicable to this initiative, and provide QA/QC documentation, including the QA/QC verification of the work in conformance with applicable standards.	Medium

DATA REQUEST

Data Request Number: 003

Data Request Date: 05/25/23

Name: [redacted]

Email: [redacted]

Phone #: [redacted]

Company: C2 Group

Preferred Point of Contact: Email

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Program Target	Units	Sections	Target	Actual	Method	Data Request	Priority Level
Large Volume	Line Miles Inspected	7.3.5.13 - VMI_13 - Quality assurance / quality control of vegetation inspections	221	271.7	Document	1. Please provide the latitude and longitude of the area of Liberty structures that represent the start and stop sections of the completed vegetation QAQC, including a description of the type of work audited, the audit completion date, the completed audit inspection reports, findings, and photos.	Medium

DATA REQUEST

Data Request Number: 004

Data Request Date: 05-26-2023

Name: [redacted]

Email: [redacted]

WMP Category: **Asset Management and Inspections**

Phone #: [redacted]

Company: BVNA

Preferred Point of Contact: Email

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Program Target	Units	Sections	Target	Actual	Method	Data Request	Priority Level
Small Volume	% of detailed inspections	7.3.4.14 - AMI_14 Quality Assurance/Quality Control of Inspections	0.005	0.0044	Document Review	In an Excel spreadsheet, please provide: 1. List of all QA/QC'd distribution asset inspections for 2022 2. Identified by Tier 2 or Tier 3	Medium
Small Volume	# of substations inspected	7.3.4.15 - AMI_15 Substation Inspections	42	45	Document Review	In an Excel spreadsheet, please provide for the forty-five (45) substation inspections: 1. Order/job number 2. Tier 2 and Tier 3	Medium
Qualitative Goal/Target	N/A	7.3.4.3 - AMI_03 Improvement of Inspections	N/A	N/A	Document Review	Please provide all documentation related to Liberty's IR pilot program to improve asset inspections: 1. Tier 2 and Tier 3	Medium

DATA REQUEST

Data Request Number: 005 **Data Request Date: 05-26-2023**

Name: [redacted] Email: [redacted]

WMP Category: Emergency Planning and Preparedness Phone #: [redacted]

Company: BVNA Preferred Point of Contact: Email

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Medium = Task Driven Not Critical. Data responses can be received secondary
Low = Not Task Driven, Not Critical, Informational Only. Data responses can be received without pressing demands.

Program Target	Units	Sections	Target	Actual	Method	Data Request	Priority Level
Qualitative Goal/Target	N/A	7.3.9.1 - EPP_01 Adequate and trained workforce for service restoration	N/A	N/A	Document Review	1. Please provide the Restoration Guideline Plan described in the 2022 WMP.	Medium
Qualitative Goal/Target	N/A	7.3.9.2 - EPP_02 Community outreach, public awareness, and communications efforts	N/A	N/A	Document Review	In an Excel spreadsheet, please provide the following for outreach:1. Number of online town hall dates and topic2. Number of community newsletters sent 3. Description and number of digital communications sent4. Description of CBO program	Medium
Qualitative Goal/Target	N/A	7.3.9.3 - EPP_03 Customer support in emergencies	N/A	N/A	Document Review	In an Excel spreadsheet, please provide for each inspection: 1. number of customer support mitigation efforts initiated in 2022 due to an emergency.	Medium

DATA REQUEST

Data Request Number: 006

Data Request Date: 05-26-2023

Name: [redacted]

Email: [redacted]

WMP Category: Grid Design and System Hardening

Phone #: [redacted]

Company: BVNA

Preferred Point of Contact: Email

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Program Target	Units	Sections	Target	Actual	Method	Data Request	Priority Level
Small Volume	# of automatic reclosers	7.3.3.9 - GDSH_09 Installation of system automation equipment	4	2	Document Review	In an Excel spreadsheet, please provide for each installation: 1. notification/order/job number 2. Tier 2 and Tier 3	Medium
Small Volume	# of tree attachment removals	7.3.3.12 - GDSH_12 Other corrective action	45	145	Document Review	In an Excel spreadsheet, please provide for each tree removal: 1. notification/order/job number 2. Tier 2 and Tier 3	Medium

Qualitative Goal/Target	N/A	7.3.3.2 - GDSH_02Circuit Breaker Maintenance and Installation to de-energize lines upon detecting a fault	N/A	N/A	Document Review	In an Excel spreadsheet, please provide for each installation:1. notification/order/job number2. Tier 2 and Tier 3	Medium
Qualitative Goal/Target	# of line miles	7.3.3.8 - GDSH_08 Grid topology improvements to mitigate or reduce PSPS events	line miles	N/A	Document Review	In an Excel spreadsheet, please provide for the customer resiliency program: 1. Number of energy storage units delivered to customers	Medium

DATA REQUEST

Data Request Number: 007

Data Request Date: 05-26-2023

Name: [redacted]

Email: [redacted]

WMP Category: Grid Operations and Protocols

Phone #: [redacted]

Company: BVNA

Preferred Point of Contact: Email

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Medium = Task Driven Not Critical. Data responses can be received secondary
Low = Not Task Driven, Not Critical, Informational Only. Data responses can be received without pressing demands.

Program Target	Units	Sections	Target	Actual	Method	Data Request	Priority Level
Qualitative Goal/Target	N/A	7.3.6.1 - GOOP_01 Automatic recloser operations	N/A	N/A	Document Review	In an Excel spreadsheet, please provide for each installation: 1. notification/order/job number 2. Tier 2 and Tier 3	Low
Qualitative Goal/Target	N/A	7.3.6.3 - GOOP_03 Personnel work procedures and training in conditions of elevated fire risk	N/A	N/A	Document Review	In an Excel spreadsheet, please provide for personnel training: 1. List of all training topics for 2022 2. Number of employees that received training 3. Number of training hours for each employee	Low

Qualitative Goal/Target	N/A	7.3.6.4 (5?) - GOOP_04Protocols for PSPS re-energization	N/A	N/A	Document Review	In an Excel spreadsheet, please provide: 1. Any updates to the PSPS plan	Low

DATA REQUEST

Data Request Number: 008

Data Request Date: 05-26-2023

Name: [redacted]

Email: [redacted]

WMP Category: Risk Assessment and Mapping

Phone #: [redacted]

Company: BVNA

Preferred Point of Contact: Email

High = Critical Path, Task Dependent. Need to receive this data response first before all others.
Medium = Task Driven Not Critical. Data responses can be received secondary
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Program Target	Units	Sections	Target	Actual	Method	Data Request	Priority Level
Qualitative Goal/Target		7.3..1.1 - Risk_01-A A summarized risk map that shows the overall ignition probability and estimated wildfire consequence along the electric lines and equipment	N/A	N/A	Document Review	Please provide a link to view risk map	High

DATA REQUEST

Data Request Number: 009

Data Request Date: 05-26-2023

Name: [redacted]

Email: [redacted]

WMP Category: Situational Awareness and Forecasting

Phone #: [redacted]

Company: BVNA

Preferred Point of Contact: Email

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Low = Not Task Driven, Not Critical, Informational Only. Data responses can be received without pressing demands.

Program Target	Units	Sections	Target	Actual	Method	Data Request	Priority Level
Small Volume	% of DFA units installed	7.3.2.2 - SAF_02 Continuous Monitoring Sensors	0.005	0.004	Document Review	In an Excel spreadsheet, please provide for each installation: 1. notification/order/job number 2. Tier 2 and Tier 3	Medium
Small Volume	# of fault indicators installed	7.3.2.3 - SAF_03 Fault Indicators for Detecting Faults on Electric Lines and Equipment	42	45	Document Review	In an Excel spreadsheet, please provide for each installation: 1. notification/order/job number 2. Tier 2 and Tier 3	Medium
Qualitative Goal/Target	N/A	7.3.2.4 - SAF_04Forecast of a Fire Risk Index, Fire Potential Index, or	N/A	N/A	Document Review	Please provide link to the eleven FPI zones for review.	Low

		Similar					
Qualitative Goal/Target	N/A	7.3.2.5 - SAF_05 Personnel Monitoring areas of Electric Lines and Equipment in Elevated Fire Risk Conditions	N/A	N/A	Document Review	1. Please provide protocol and training for patrol personnel 2. Please provide a spreadsheet listing weather station location's	Low

DATA REQUEST

Data Request Number: 010

Data Request Date: 05-26-2023

Name: [redacted]

Email: [redacted]

WMP Category: Stakeholder Cooperation and Community Engagement

Phone #: [redacted]

Company: BVNA

Preferred Point of Contact: Email

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Program Target	Units	Sections	Target	Actual	Method	Data Request	Priority Level
Qualitative Goal/Target	N/A	7.3.10.1 - SCCE_01 Community engagement	N/A	N/A	Document Review	In an Excel spreadsheet, please provide for each community engagement effort: 1. List of listening sessions performed 2. List of tabletop exercises performed 3. List of PSPS workshops performed 4. List of stakeholder meetings attended	Low
Qualitative Goal/Target	N/A	7.3.10.2 - SCCE_02 Cooperation and best practices sharing with agencies outside CA	N/A	N/A	Document Review	In an Excel spreadsheet:1. Please list all collaboration efforts with other entities.2. Please list all memberships Liberty belongs to and meetings/conferences attended.	Low

DATA REQUEST

Data Request Number: 011

Data Request Date: 05-26-2023

Name: [redacted]

Email: [redacted]

WMP Category: Vegetation Management

Phone #: [redacted]

Company: BVNA

Preferred Point of Contact: Email

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Program Target	Units	Sections	Target	Actual	Method	Data Request	Priority Level
Large Volume Quantifiable Goal/Target - Non-Field Verifiable	# of acres	7.3.5.5 - VMI_05 Fuel management and reduction of "slash" from vegetation management activities	280	515	Document Review	In an Excel spreadsheet, please provide for each inspection: 1. Project category 2. Project name 3. Completion date 4. HFTD designation	High

DATA REQUEST

Data Request Number: 012 **Data Request Date: 05-26-2023**

Name: [redacted]

Email: [redacted]

WMP Category: Data Governance Phone #: [redacted]

Company: BVNA Preferred Point of Contact: Email

High = Critical Path, Task Dependent. Need to receive this data response first before all others.
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Program Target	Units	Sections	Target	Actual	Method	Data Request	Priority Level
Qualitative Goal/Target	N/A	7.3.7.2 - GD_02 - Collaborative research on utility ignition and/or wildfire	N/A	N/A	Document Review	In an Excel spreadsheet, please provide for each HIFD deployed: 1. notification/order/job number 2. Tier 2 and Tier 3	Low

DATA REQUEST

Data Request Number: 013

Data Request Date: 06-01-23

Name: [redacted]

Email: [redacted]

WMP Category: **Asset Management and Inspections**

Phone #: [redacted]

Company: BVNA

Preferred Point of Contact: Email

High = Critical Path, Task Dependent. Need to receive this data response first before all others.
Medium = Task Driven Not Critical. Data responses can be received secondary
Low = Not Task Driven, Not Critical, Informational Only. Data responses can be received without pressing demands.

Program Target	Units	Sections	Target	Actual	Method	Sampling Methodology	Unit Sampling	Data Request	Priority Level
Small Volume (<100 units) Quantifiable Goal/Target	Detailed Inspections	7.3.4.14 - AMI_14	0.005	.0044	Document Review	MilStd 105E General Inspection Level II	8	Per Data Request 004, please provide inspection forms/photos based on unit sampling. See attached spreadsheet 7.3.4.14 for locations:	Medium
Small Volume (<100 units) Quantifiable Goal/Target	Substation Inspections	7.3.4.15 - AMI_15	42	45	Document Review	MilStd 105E General Inspection Level II	8	Per Data Request 004, please provide inspection forms/photos based on unit sampling. See attached spreadsheet 7.3.4.15 for locations:	Medium

DATA REQUEST

Data Request Number: 014

Data Request Date: 06-01-23

Name: [redacted]

Email: [redacted]

WMP Category: **Grid Design and System Hardening**

Phone #: [redacted]

Company: BVNA

Preferred Point of Contact: Email

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Medium = Task Driven Not Critical. Data responses can be received secondary
Low = Not Task Driven, Not Critical, Informational Only. Data responses can be received without pressing demands.

Program Target	Units	Sections	Target	Actual	Method	Sampling Methodology	Unit Sampling	Data Request	Priority Level
Small Volume (<100 units) Quantifiable Goal/Target	# of Automatic Reclosers	7.3.3.9 - GDSH_09 Installation of System Automation Equipment	4	2	Document Review	MilStd 105E General Inspection Level II	2	Per Data Request 006, please provide installation forms/photos based on unit sampling. See attached spreadsheet 7.3.3.9 for locations:	Medium
Small Volume (<100 units) Quantifiable Goal/Target	# of Tree Attachment Removals	7.3.3.12 - GDSH_12 Other Corrective Action	45	145	Document Review	MilStd 105E General Inspection Level II	20	Per Data Request 006, please provide forms/photos of removals based on unit sampling. See attached spreadsheet 7.3.3.12 for locations:	Medium

DATA REQUEST

Data Request Number: 015

Data Request Date: 06-01-23

Name: [redacted]

Email: [redacted]

WMP Category: Situational Awareness and Forecasting

Phone #: [redacted]

Company: BVNA

Preferred Point of Contact: Email

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Medium = Task Driven Not Critical. Data responses can be received secondary
Low = Not Task Driven, Not Critical, Informational Only. Data responses can be received without pressing demands.

Program Target	Units	Sections	Target	Actual	Method	Sampling Methodology	Unit Sampling	Data Request	Priority Level
Small Volume (<100 units) Quantifiable Goal/Target	% of DFA Units	7.3.2.2 - SAF_02 Continuous Monitoring Sensors	10	10	Document Review	MilStd 105E General Inspection Level II	2	Per Data Request 009, please provide forms/photos based on unit sampling. See attached spreadsheet 7.3.2.2 for locations:	Medium
Small Volume (<100 units) Quantifiable Goal/Target	# of Fault Indicators Installed	7.3.2.3 - SAF_03Fault Indicators for Detecting Faults on Electric Lines and Equipment	2	2	Document Review	MilStd 105E General Inspection Level II	2	Per Data Request 009, please provide forms/photos of installations based on unit sampling. See attached spreadsheet 7.3.2.3 for locations:	Medium

DATA REQUEST

Data Request Number: 016

Data Request Date: 06-02-23

Name: [redacted]

Email: [redacted]

WMP Category: Vegetation Management

Phone #: [redacted]

Company: BVNA

Preferred Point of Contact: Email

High = Critical Path, Task Dependent. Need to receive this data response first before all others.
Medium = Task Driven Not Critical. Data responses can be received secondary
Low = Not Task Driven, Not Critical, Informational Only. Data responses can be received without pressing demands.

Program Target	Units	Sections	Target	Actual	Method	Sampling Methodology	Unit Sampling	Data Request	Priority Level
Large Volume Quantifiable Goal/Target - Non-Field Verifiable	# of acres	7.3.5.5 - VMI_05 Fuel management and reduction of "slash" from vegetation management activities	280	515	Document Review	MilStd 105E General Inspection Level II	80	Per Data Request 011, please provide all documentation/photos for slash projects based on unit sampling. See attached spreadsheet 7.3.5.5 for locations:	Medium

DATA REQUEST

Data Request Number: 017

Data Request Date: 06-05-2023

Name: [redacted]

Email: [redacted]

WMP Category: Grid Design and System Hardening

Phone #: [redacted]

Company: BVNA

Preferred Point of Contact: Email

High = Critical Path, Task Dependent. Need to receive this data response first before all others.
Medium = Task Driven Not Critical. Data responses can be received secondary
Low = Not Task Driven, Not Critical, Informational Only. Data responses can be received without pressing demands.

Program Target	Units	Sections	Target	Actual	Method	Data Request	Priority Level
Qualitative Goal/Target	N/A	7.3.3.2 - GDSH_02 Circuit Breaker Maintenance and Installation to de-energize lines upon detecting a fault	N/A	N/A	Document Review	Please provide all documentation and any photos for: 1. New breaker installation at Kings Beach Substation. 2. Oil Circuit breaker (OCB) replacement at Squaw Valley	Medium

DATA REQUEST

Data Request Number: 018 **Data Request Date: 06/12/23**

Name: [redacted] Email [redacted]

Phone #: [redacted]

Company: C2 Group Preferred Point of Contact: Email

High = Critical Path, Task Dependent. Need to receive this data response first before all others.
Medium = Task Driven Not Critical. Data responses can be received secondary
Low = Not Task Driven, Not Critical, Informational Only. Data responses can be received without pressing demands.

Program Target	Units	Sections	Target	Actual	Method	Data Request	Priority Level
Large Volume	Line Miles Inspected	7.3.4.11 - AMI_11 - Patrol inspections of distribution electric lines and equipment	706.28	503	SME Interview / Document	Please provide the inspection records for patrol inspections of distribution electric lines and equipment or provide confirmation the GIS provided data are the inspection records. **If detailed documentation is not available or easily transmittable, please schedule a SME interview to review and discuss the progress on this initiative.**	High

Large Volume	Line Miles Inspected	7.3.5.2 - VMI_02 - Detailed inspections of vegetation around distribution electric lines and equipment	222	210.6	SME Interview / Document	Please provide documentation to translate detailed inspections of vegetation around distribution electric lines and equipment to line miles identified in the goal for this initiative. **If detailed documentation is not available or easily transmittable, please schedule a SME interview to review and discuss the progress on this initiative.**	High
Large Volume	Line Miles Inspected	7.3.5.11 - VMI_11 - Patrol inspections of vegetation around distribution electric lines and equipment	171	235	SME Interview / Document	Please provide documentation to translate patrol inspections of vegetation around distribution electric lines and equipment to line miles identified in the goal for this initiative. **If detailed documentation is not available or easily transmittable, please schedule a SME interview to review and discuss the progress on this initiative.**	High
Large Volume	Line Miles Inspected	7.3.5.13 - VMI_13 - Quality assurance / quality control of vegetation inspections	221	271.7	SME Interview / Document	Please provide documentation to translate quality assurance/quality control reviews of vegetation inspections to line miles identified in the goal for this initiative. **If detailed documentation is not available or easily transmittable, please schedule a SME interview to review and discuss the progress on this initiative.**	High

Large Volume	Line Miles Treated	7.3.5.16 - VMI_16 - Removal and remediation of trees with strike potential to electric lines and equipment	171	203	SME Interview / Document	Please provide documentation to translate removal and remediation of trees with strike potential to line miles identified in the goal for this initiative. **If detailed documentation is not available or easily transmittable, please schedule a SME interview to review and discuss the progress on this initiative.**	High
Large Volume	Line Miles Treated	7.3.5.20 - VMI_20 - Vegetation management to achieve clearances around electric lines and equipment	701	701	SME Interview / Document	Please provide documentation to identify the vegetation work completed related to completed lidar inspections. **If detailed documentation is not available or easily transmittable, please schedule a SME interview to review and discuss the progress on this initiative.**	High

Appendix D – SME Interview Summary

Item No.	2022 WMP Activities	Initiative Category	Initiative Name	SME Name, Title	Interview Date	Summary
1	Large Volume Quantifiable Goal/Target – Not Field Verifiable	Asset Management & Inspections	7.3.4.11 - AMI_11 - Patrol inspections of distribution electric lines and equipment	Jordan Parrillo, Manager of Regulatory Affairs, Peter Stoltman, Manager Vegetation Management, Blaine Ladd, Director of Operations	06/13/23	Completion Tracking for Asset Inspections and Vegetation Management Initiatives - An explanation of how Liberty tracks and records progress towards completion for asset inspection and vegetation management initiatives. Liberty utilizes GIS systems in conjunction with work management systems for tracking and recording progress. Liberty demonstrated the work management system for vegetation management.
2	Large Volume Quantifiable Goal/Target – Not Field Verifiable	Vegetation Management & Inspections	7.3.5.2 - VMI_02 - Detailed inspections of vegetation around distribution electric lines and equipment	Jordan Parrillo, Manager of Regulatory Affairs, Peter Stoltman, Manager Vegetation Management, Blaine Ladd, Director of Operations	06/13/23	Completion Tracking for Asset Inspections and Vegetation Management Initiatives - An explanation of how Liberty tracks and records progress towards completion for asset inspection and vegetation management initiatives. Liberty utilizes GIS systems in conjunction with work management systems for tracking and recording progress. Liberty demonstrated the work management system for vegetation management.

3	Large Volume Quantifiable Goal/Target – Not Field Verifiable	Vegetation Management & Inspections	7.3.5.11 - VMI_11 - Patrol inspections of vegetation around distribution electric lines and equipment	Jordan Parrillo, Manager of Regulatory Affairs, Peter Stoltman, Manager Vegetation Management, Blaine Ladd, Director of Operations	06/13/23	Completion Tracking for Asset Inspections and Vegetation Management Initiatives - An explanation of how Liberty tracks and records progress towards completion for asset inspection and vegetation management initiatives. Liberty utilizes GIS systems in conjunction with work management systems for tracking and recording progress. Liberty demonstrated the work management system for vegetation management.
4	Large Volume Quantifiable Goal/Target – Not Field Verifiable	Vegetation Management & Inspections	7.3.5.13 - VMI_13 - Quality assurance / quality control of vegetation inspections	Jordan Parrillo, Manager of Regulatory Affairs, Peter Stoltman, Manager Vegetation Management, Blaine Ladd, Director of Operations	06/13/23	Completion Tracking for Asset Inspections and Vegetation Management Initiatives - An explanation of how Liberty tracks and records progress towards completion for asset inspection and vegetation management initiatives. Liberty utilizes GIS systems in conjunction with work management systems for tracking and recording progress. Liberty demonstrated the work management system for vegetation management.

5	Large Volume Quantifiable Goal/Target – Not Field Verifiable	Vegetation Management & Inspections	7.3.5.16 - VMI_16 - Removal and remediation of trees with strike potential to electric lines and equipment	Jordan Parrillo, Manager of Regulatory Affairs, Peter Stoltman, Manager Vegetation Management, Blaine Ladd, Director of Operations	06/13/23	Completion Tracking for Asset Inspections and Vegetation Management Initiatives - An explanation of how Liberty tracks and records progress towards completion for asset inspection and vegetation management initiatives. Liberty utilizes GIS systems in conjunction with work management systems for tracking and recording progress. Liberty demonstrated the work management system for vegetation management.
6	Large Volume Quantifiable Goal/Target – Not Field Verifiable	Vegetation Management & Inspections	7.3.5.20 - VMI_20 - Vegetation management to achieve clearances around electric lines and equipment	Jordan Parrillo, Manager of Regulatory Affairs, Peter Stoltman, Manager Vegetation Management, Blaine Ladd, Director of Operations	06/13/23	Completion Tracking for Asset Inspections and Vegetation Management Initiatives - An explanation of how Liberty tracks and records progress towards completion for asset inspection and vegetation management initiatives. Liberty utilizes GIS systems in conjunction with work management systems for tracking and recording progress. Liberty demonstrated the work management system for vegetation management.

Appendix E – 2022 WMP Funding Verification Summary

Initiative Category	2022 Initiative Number	Initiative Name	2022 WMP Page No.	2022 O&M Planned	2022 O&M Actual	2022 O&M Variance	2022 O&M % Variance (Under 100%)	2022 Cap. Planned	2022 Cap. Actual	2022 Cap. Variance	2022 Cap. % Variance (Under 100%)	2022 Total Planned	2022 Total Actual	2022 Total Variance	Funding Discrepancy Amount	Detail of Funding Discrepancy
Risk Assessment and Mapping	7.3.1.1	A summarized risk map that shows the overall ignition probability and estimated wildfire consequence along the electric lines and equipment	80	$ 55.00	$ -	$ (55.00)	-	$ -	$ -	$ -	-	$ 55.00	$ -	$ (55.00)	O&M Underspend: Variance Amount $0M - $1M No Capital amount was planned or spent for this WMP initiative.	No O&M was spent for this WMP Initiative. Per Liberty's 2022 WMP ARC, Dated March 31, 2023, Liberty did not incur costs related to risk mapping in 2022.
Situational Awareness and Forecasting	7.3.2.1	Advanced weather monitoring and weather stations	81	$ -	$ 229.00	$ 229.00	100%	$ 115.00	$ 144.00	$ 29.00	25%	$ 115.00	$ 373.00	$ 258.00	O&M Overspend Capital Overspend	Per Liberty's 2022 WMP ARC, Dated March 31, 2023, lower than expected capital costs due to missing targeted weather station installations. Liberty captured additional O&M costs related to fuel sampling, weekly fire season meetings, and weather analytics that were not forecasted.

Situational Awareness and Forecasting	7.3.2.2	Continuous monitoring sensors	82	$ 115.00	$ -	$ (115.00)	-	$ 75.00	$ -	$ (75.00)	-100%	$ 190.00	$ -	$ (190.00)	O&M Underspend: Variance Amount $0M - $1M Capital Underspend: Variance Amount $0M - $1M	No O&M was spent for this WMP Initiative. Per Liberty's 2022 WMP ARC, Dated March 31, 2023, Actual Distribution Fault Anticipation ("DFA") costs captured in 7.3.2.3. No Capital was spent for this WMP Initiative.
Situational Awareness and Forecasting	7.3.2.3	Fault indicators for detecting faults on electric lines and equipment	83	$ -	$ -	$ -	-	$ -	$ 52.00	$ 52.00	-	$ -	$ 52.00	$ 52.00	No O&M amount was planned or spent for this WMP Initiative. Capital Overspend	Per Liberty's 2022 WMP ARC, Dated March 31, 2023, DFA costs were less than forecasted in 7.3.2.2, with some costs shifting to 2023.
Situational Awareness and Forecasting	7.3.2.4	Forecast of a fire risk index, fire potential index, or similar	84	$ 10.00	$ -	$ (10.00)	-	$ -	$ -	$ -	-	$ 10.00	$ -	$ (10.00)	O&M Underspend: Variance Amount $0M - $1M No Capital amount was planned or spent for this WMP initiative.	No O&M was spent for this WMP Initiative. Per Liberty's 2022 WMP ARC, Dated March 31, 2023, Liberty did not incur costs related to its fire potential index ("FPI") in 2022.

Situational Awareness and Forecasting	7.3.2.5	Personnel monitoring areas of electric lines and equipment in elevated fire risk conditions	85	$ -	$ -	$ -	-	$ -	$ -	$ -	-	$ -	$ -	$ -	No O&M amount was planned or spent for this WMP Initiative. No Capital amount was planned or spent for this WMP initiative.	
Grid Design and System Hardening	7.3.3.2	Circuit breaker maintenance and installation to de-energize lines upon detecting a fault	86	$ -	$ -	$ -	-	$ 400.00	$ -	$ (400.00)	-100%	$ 400.00	$ -	$ (400.00)	No O&M amount was planned or spent for this WMP Initiative. Capital Underspend: Variance Amount $0M - $1M	Per Liberty's 2022 WMP ARC, Dated March 31, 2023, Liberty did not incur costs in 2022. No Capital was spent for this WMP Initiative.
Grid Design and System Hardening	7.3.3.3	Covered conductor installation	87	$ -	$ -	$ -	-	$ 14,915.00	$ 9,610.00	$ (5,305.00)	-36%	$ 14,915.00	$ 9,610.00	$ (5,305.00)	No O&M amount was planned or spent for this WMP Initiative. Capital Underspend: Variance Amount $5M - $10M	Per Liberty's 2022 WMP ARC, Dated March 31, 2023, actual costs for covered conductor were lower than projected because portions of some projects were completed in 2021 and because some projects came in under budget. No Capital was spent for this WMP Initiative.

Grid Design and System Hardening	7.3.3.6	Distribution pole replacement and reinforcement, including with composite poles	90	$ -	$ -	$ -	-	$ 6,000.00	$ 6,909.00	$ 909.00	15%	$ 6,000.00	$ 6,909.00	$ 909.00	No O&M amount was planned or spent for this WMP Initiative. Capital Overspend	Per Liberty's 2022 WMP ARC, Dated March 31, 2023, pole replacement costs were higher than projected in 2022 due to a higher percentage of hard rock and hard to access poles than anticipated.
Grid Design and System Hardening	7.3.3.7	Expulsion fuse replacement	91	$ -	$ -	$ -	-	$ 1,500.00	$ 3,432.00	$ 1,932.00	129%	$ 1,500.00	$ 3,432.00	$ 1,932.00	No O&M amount was planned or spent for this WMP Initiative. Capital Overspend	Per Liberty's 2022 WMP ARC, Dated March 31, 2023, expulsion fuse replacement costs were higher than projected in 2022 because Liberty completed more fuse replacements than planned and underestimated the average cost per pole.
Grid Design and System Hardening	7.3.3.8	Grid topology improvements to mitigate or reduce PSPS events	93	$ -	$ 33.00	$ 33.00	100%	$ -	$ 231.00	$ 231.00	-	$ -	$ 264.00	$ 264.00	O&M Overspend Capital Overspend	Per Liberty's 2022 WMP ARC, Dated March 31, 2023, actual costs include planning, design and permitting costs that were not projected.

Grid Design and System Hardening	7.3.3.9	Installation of system automation equipment	93	$ -	$ -	$ -	-	$ 360.00	$ 191.00	$ (169.00)	-47%	$ 360.00	$ 191.00	$ (169.00)	No O&M amount was planned or spent for this WMP Initiative. Capital Underspend: Variance Amount $0M - $1M	Per Liberty's 2022 WMP ARC, Dated March 31, 2023, Liberty installed two of its four targeted automatic reclosers. The remaining two automatic reclosers were delayed due to access issues caused by snow and avalanche danger and will be installed in 2023. No Capital was spent for this WMP Initiative.
Grid Design and System Hardening	7.3.3.12	Other corrective action	94	$ -	$ 48.00	$ 48.00	100%	$ 2,536.00	$ 6,610.00	$ 4,074.00	161%	$ 2,536.00	$ 6,658.00	$ 4,122.00	O&M Overspend Capital Overspend	Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in addition to the projected costs for tree attachment removals and animal guard installations in 2022, Liberty captured actual costs for open wire/grey wire and substation equipment replacement.

Grid Design and System Hardening	7.3.3.16	Undergrounding of electric lines and/or equipment	96	$ -	$ -	$ -	-	$ 7,000.00	$ 475.00	$ (6,525.00)	-93%	$ 7,000.00	$ 475.00	$ (6,525.00)	No O&M amount was planned or spent for this WMP Initiative. Capital Underspend: Variance Amount $5M - $10M	Per Liberty's 2022 WMP ARC, Dated March 31, 2023, two of three underground projects in the projected costs were delayed, primarily due to permitting delays. No Capital was spent for this WMP Initiative.
Asset Management and Inspections	7.3.4.1	Detailed inspections of distribution electric lines and equipment	81	$ 400.00	$ 919.00	$ 519.00	56%	$ -	$ -	$ -	-	$ 400.00	$ 919.00	$ 519.00	O&M Overspend No Capital amount was planned or spent for this WMP initiative.	Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, Liberty did not record asset inspection costs at the WMP initiative level, and thus detailed asset inspection costs are estimated as a percentage of its G.O. 165 WMP expense account.
Asset Management and Inspections	7.3.4.3	Improvement of inspections	82												No O&M amount was planned or spent for this WMP Initiative. No Capital amount was planned or spent for this WMP initiative.	

Asset Management and Inspections	7.3.4.4	Infrared inspections of distribution electric lines and equipment	82												No O&M amount was planned or spent for this WMP Initiative. No Capital amount was planned or spent for this WMP initiative.	
Asset Management and Inspections	7.3.4.6	Intrusive pole inspections	83	$ 150.00	$ 99.00	$ (51.00)	-52%	$ -	$ -	$ -	-	$ 150.00	$ 99.00	$ (51.00)	O&M Underspend: Variance Amount $0M - $1M No Capital amount was planned or spent for this WMP initiative.	Liberty did not spend $51K of the planned $0.15M, 52% of the total O&M amount initially allocated for this initiative. Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, intrusive pole inspection costs were lower than expected due to overestimating internal labor and contractor expense.

Asset Management and Inspections	7.3.4.9	Other discretionary inspection of distribution electric lines and equipment, beyond inspections mandated by rules and regulations	122	$ 4,600.00	$ 3,579.00	$ (1,021.00)	-29%	$ -	$ -	$ -	-	$ 4,600.00	$ 3,579.00	$ (1,021.00)	O&M Underspend: Variance Amount $1M - $5M No Capital amount was planned or spent for this WMP initiative.	Liberty did not spend $1.02M of the planned $4.6M, 29% of the total O&M amount initially allocated for this initiative. Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, Liberty's costs associated with repairs from its 2020 system-wide survey were lower than projected in 2022.
Asset Management and Inspections	7.3.4.11	Patrol inspections of distribution electric lines and equipment	85	$ 60.00	$ -	$ (60.00)	-	$ -	$ -	$ -	-	$ 60.00	$ -	$ (60.00)	O&M Underspend: Variance Amount $0M - $1M No Capital amount was planned or spent for this WMP initiative.	No O&M was spent for this WMP Initiative. Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, Liberty did not record asset inspection costs at the WMP initiative level, and thus patrol asset inspection costs are not estimated.

Asset Management and Inspections	7.3.4.14	Quality assurance / quality control of inspections	86	$ 30.00	$ -	$ (30.00)	-	$ -	$ -	$ -	-	$ 30.00	$ -	$ (30.00)	O&M Underspend: Variance Amount $0M - $1M No Capital amount was planned or spent for this WMP initiative.	No O&M was spent for this WMP Initiative. Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, Liberty did not record asset inspection costs at the WMP initiative level, and thus patrol asset inspection costs are not estimated.
Asset Management and Inspections	7.3.4.15	Substation inspections	88	$ 10.00	$ -	$ (10.00)	-	$ -	$ -	$ -	-	$ 10.00	$ -	$ (10.00)	O&M Underspend: Variance Amount $0M - $1M No Capital amount was planned or spent for this WMP initiative.	No O&M was spent for this WMP Initiative. Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, Liberty did not record asset inspection costs at the WMP initiative level, and thus patrol asset inspection costs are not estimated.
Vegetation Management and Inspections	7.3.5.1	Additional efforts to manage community and environmental impacts	104	$ 754.00	$ 928.00	$ 174.00	19%	$ -	$ -	$ -	-	$ 754.00	$ 928.00	$ 174.00	O&M Overspend No Capital amount was planned or spent for this WMP initiative.	

Vegetation Management and Inspections	7.3.5.2	Detailed inspections of vegetation around distribution electric lines and equipment	107	$ 715.00	$ 872.00	$ 157.00	18%	$ -	$ -	$ -	-	$ 715.00	$ 872.00	$ 157.00	O&M Overspend No Capital amount was planned or spent for this WMP initiative.	
Vegetation Management and Inspections	7.3.5.5	Fuel management and reduction of “slash” from vegetation management activities	109	$ 1,163.00	$ 1,515.00	$ 352.00	23%	$ -	$ -	$ -	-	$ 1,163.00	$ 1,515.00	$ 352.00	O&M Overspend No Capital amount was planned or spent for this WMP initiative.	
Vegetation Management and Inspections	7.3.5.7	LiDAR inspections of vegetation around distribution electric lines and equipment	112	$ 764.00	$ 754.00	$ (10.00)	-1%	$ -	$ -	$ -	-	$ 764.00	$ 754.00	$ (10.00)	O&M Underspend: Variance Amount $0M - $1M No Capital amount was planned or spent for this WMP initiative.	Liberty did not spend $10K of the planned $0.76M, 1% of the total O&M amount initially allocated for this initiative.
Vegetation Management and Inspections	7.3.5.10	Other discretionary inspections of vegetation around transmission electric lines and equipment	113	$ -	$ -	$ -	-	$ -	$ -	$ -	-	$ -	$ -	$ -	No O&M amount was planned or spent for this WMP Initiative. No Capital amount was planned or spent for this WMP initiative.	

Vegetation Management and Inspections	7.3.5.11	Patrol inspections of vegetation around distribution electric lines and equipment	113	$ 357.00	$ 638.00	$ 281.00	44%	$ -	$ -	$ -	-	$ 357.00	$ 638.00	$ 281.00	O&M Overspend No Capital amount was planned or spent for this WMP initiative.	
Vegetation Management and Inspections	7.3.5.13	Quality assurance / quality control of vegetation inspections	114	$ 418.00	$ 447.00	$ 29.00	6%	$ -	$ -	$ -	-	$ 418.00	$ 447.00	$ 29.00	O&M Overspend No Capital amount was planned or spent for this WMP initiative.	
Vegetation Management and Inspections	7.3.5.14	Recruiting and training of vegetation management personnel	116	$ -	$ -	$ -	-	$ -	$ -	$ -	-	$ -	$ -	$ -	No O&M amount was planned or spent for this WMP Initiative. No Capital amount was planned or spent for this WMP initiative.	
Vegetation Management and Inspections	7.3.5.15	Remediation of at-risk species	117	$ 5,704.00	$ 3,149.00	$ (2,555.00)	-81%	$ -	$ -	$ -	-	$ 5,704.00	$ 3,149.00	$ (2,555.00)	O&M Underspend: Variance Amount $1M - $5M No Capital amount was planned or spent for this WMP initiative.	Liberty did not spend $2.56M of the planned $5.7M, 81% of the total O&M amount initially allocated for this initiative.

Vegetation Management and Inspections	7.3.5.16	Removal and remediation of trees with strike potential to electric lines and equipment	118	$ 2,709.00	$ 5,444.00	$ 2,735.00	50%	$ -	$ -	$ -	-	$ 2,709.00	$ 5,444.00	$ 2,735.00	O&M Overspend No Capital amount was planned or spent for this WMP initiative.	Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, Liberty reported actual spend was greater than target due to a high amount of tree mortality. Tree work resources were shifted from remediation of at-risk species to removal and remediation of trees with strike potential to address the increased risk posed by dead and dying trees throughout the service territory.
Vegetation Management and Inspections	7.3.5.20	Vegetation management to achieve clearances around electric lines and equipment	119	$ 1,493.00	$ 2,671.00	$ 1,178.00	44%	$ -	$ -	$ -	-	$ 1,493.00	$ 2,671.00	$ 1,178.00	O&M Overspend No Capital amount was planned or spent for this WMP initiative.	Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, Liberty completed more work units than projected in this category to maintain clearance for all 701 miles of its system leading to greater than projected costs. Additionally, Liberty did not project costs for pole clearing activities related to PRC 4292 which are recorded in this category.

Vegetation Management and Inspections	7.3.5.21	Vegetation management activities post-fire	N/A	$ -	$ -	$ -	-	$ -	$ -	$ -	-	$ -	$ -	$ -	No O&M amount was planned or spent for this WMP Initiative. No Capital amount was planned or spent for this WMP initiative.	
Grid Operations and Protocols	7.3.6.1	Automatic recloser operations	120	$ -	$ -	$ -	-	$ -	$ -	$ -	-	$ -	$ -	$ -	No O&M amount was planned or spent for this WMP Initiative. No Capital amount was planned or spent for this WMP initiative.	
Grid Operations and Protocols	7.3.6.2	Protective equipment and device settings	158	$ -	$ 47.00	$ 47.00	100%	$ -	$ -	$ -	-	$ -	$ 47.00	$ 47.00	O&M Overspend No Capital amount was planned or spent for this WMP initiative.	Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022,Liberty reported costs related to this initiative were not projected for 2022.
Grid Operations and Protocols	7.3.6.3	Personnel work procedures and training in conditions of elevated fire risk	121												No O&M amount was planned or spent for this WMP Initiative. No Capital amount was planned or spent for this WMP initiative.	

Grid Operations and Protocols	7.3.6.4	Protocols for PSPS re-energization	124	$ 250.00	$ 293.00	$ 43.00	15%	$ -	$ -	$ -	-	$ 250.00	$ 293.00	$ 43.00	O&M Overspend No Capital amount was planned or spent for this WMP initiative.	Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, Liberty higher than expected costs.
Grid Operations and Protocols	7.3.6.6	PSPS events and mitigation of PSPS impacts	161	$ 100.00	$ -	$ (100.00)	-	$ -	$ -	$ -	-	$ 100.00	$ -	$ (100.00)	O&M Underspend: Variance Amount $0M - $1M No Capital amount was planned or spent for this WMP initiative.	No O&M was spent for this WMP Initiative. Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, Liberty did not incur costs in 2022.
Grid Operations and Protocols	7.3.6.7	Stationed and on-call ignition prevention and suppression resources and services	162		$ -	$ -	-	$ 100.00	$ -	$ (100.00)	-100%	$ 100.00	$ -	$ (100.00)	No O&M amount was planned or spent for this WMP Initiative. Capital Underspend: Variance Amount $0M - $1M	Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, Liberty did not incur costs in 2022. No Capital was spent for this WMP Initiative.

Data Governance	7.3.7.1	Centralized repository for data	98	$ 400.00	$ -	$ (400.00)	-	$ -	$ -	$ -	-	$ 400.00	$ -	$ (400.00)	O&M Underspend: Variance Amount $0M - $1M No Capital amount was planned or spent for this WMP initiative.	No O&M was spent for this WMP Initiative. Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, Liberty did not incur costs in 2022.
Data Governance	7.3.7.2	Collaborative research on utility ignition and/or wildfire	126	$ -	$ -	$ -	-	$ 120.00	$ -	$ (120.00)	-100%	$ 120.00	$ -	$ (120.00)	No O&M amount was planned or spent for this WMP Initiative. Capital Underspend: Variance Amount $0M - $1M	Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, Liberty did not incur costs in 2022. No Capital was spent for this WMP Initiative.
Resource Allocation Methodology	7.3.8.1	Allocation methodology development and application	164	$ -	$ -	$ -	-	$ 300.00	$ -	$ (300.00)	-100%	$ 300.00	$ -	$ (300.00)	No O&M amount was planned or spent for this WMP Initiative. Capital Underspend: Variance Amount $0M - $1M	No Capital was spent for this WMP Initiative.

Emergency Planning and Preparedness	7.3.9.1	Adequate and trained workforce for service restoration	128	$ 1,304.00	$ -	$ (1,304.00)	-	$ -	$ -	$ -	-	$ 1,304.00	$ -	$ (1,304.00)	O&M Underspend: Variance Amount $1M - $5M No Capital amount was planned or spent for this WMP initiative.	No O&M was spent for this WMP Initiative. Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, Liberty projected costs for 7.3.9.1. captured in 7.3.9.3 and 7.3.9.5.
Emergency Planning and Preparedness	7.3.9.2	Community outreach, public awareness, and communications efforts	130												No O&M amount was planned or spent for this WMP Initiative. No Capital amount was planned or spent for this WMP initiative.	
Emergency Planning and Preparedness	7.3.9.3	Customer support in emergencies	132	$ -	$ 65.00	$ 65.00	100%	$ -	$ -	$ -	-	$ -	$ 65.00	$ 65.00	O&M Overspend No Capital amount was planned or spent for this WMP initiative.	Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, Liberty projected costs for 7.3.9.1. captured in 7.3.9.3 and 7.3.9.5.
Emergency Planning and Preparedness	7.3.9.5	Preparedness and planning for service restoration	169	$ -	$ 659.00	$ 659.00	100%	$ -	$ 4.00	$ 4.00	-	$ -	$ 663.00	$ 663.00	O&M Overspend Capital Overspend	

Stakeholder Cooperation and Community Engagement	7.3.10.1	Community engagement	135	$ 144.00	$ 84.00	$ (60.00)	-71%	$ -	$ -	$ -	-	$ 144.00	$ 84.00	$ (60.00)	O&M Underspend: Variance Amount $0M - $1M No Capital amount was planned or spent for this WMP initiative.	Liberty did not spend $60K of the planned $0.14M, 71% of the total O&M amount initially allocated for this initiative. Per Liberty's 2022 WMP ARC, Dated March 31, 2023, in 2022, Liberty reported lower than expected costs related to communication and outreach.
Stakeholder Cooperation and Community Engagement	7.3.10.2	Cooperation and best practice sharing with agencies outside CA	141												No O&M amount was planned or spent for this WMP Initiative. No Capital amount was planned or spent for this WMP initiative.	

Appendix F – Conclusion Table

SOW Category	2022 Initiative Number	Initiative Name	Finding	Detail on Finding
WMP Activity Completion	7.3.1.1 - Risk_01	A summarized risk map that shows the overall ignition probability and estimated wildfire consequence along the electric lines and equipment	Activity Validated	Compliant with the 2022 WMP, per Data Request
WMP Activity Completion	7.3.2.1 - SAF_01	Advanced weather monitoring and weather stations	Goal Not Met	4 of 10 weather stations installed in 2022, per Data Request
WMP Activity Completion	7.3.2.2 - SAF_02	Continuous monitoring sensors	Activity Validated	Compliant with the 2022 WMP, per Data Request
WMP Activity Completion	7.3.2.3 - SAF_03	Fault indicators for detecting faults on electric lines and equipment	Activity Validated	Compliant with the 2022 WMP, per Data Request
WMP Activity Completion	7.3.2.4 - SAF_04	Forecast of a fire risk index, fire potential index, or similar	Activity Validated	Compliant with the 2022 WMP, per Data Request
WMP Activity Completion	7.3.2.5 - SAF_05	Personnel monitoring areas of electric lines and equipment in elevated fire risk conditions	Activity Validated	Compliant with the 2022 WMP, per Data Request

WMP Activity Completion	7.3.3.2 - GDSH_02	Circuit breaker maintenance and installation to de-energize lines upon detecting a fault	Activity Validated	Compliant with the 2022 WMP, per Data Request
WMP Activity Completion	7.3.3.3 - GDSH_03	Covered conductor installation	Activity Validated	Compliant with the 2022 WMP, per Data Request
WMP Activity Completion	7.3.3.6 - GDSH_06	Distribution pole replacement and reinforcement, including with composite poles	Goal Not Met	2.6% of sampled locations not in compliance
WMP Activity Completion	7.3.3.7 - GDSH_07	Expulsion fuse replacement	Goal Met/Exceeded	2.08% of sampled locations not in compliance
WMP Activity Completion	7.3.3.8 - GDSH_08	Grid topology improvements to mitigate or reduce PSPS events	Activity Validated	Compliant with the 2022 WMP, per Data Request
WMP Activity Completion	7.3.3.9 - GDSH_09	Installation of system automation equipment	Activity Validated	Compliant with the 2022 WMP, per Data Request
WMP Activity Completion	7.3.3.12 - GDSH_12	Other corrective action	Activity Validated	Compliant with the 2022 WMP, per Data Request
WMP Activity Completion	7.3.3.16 - GDSH_16	Undergrounding of electric lines and/or equipment	Goal Not Met	0.26 of 0.36 line miles install in 2022, per Data Request
WMP Activity Completion	7.3.4.1 - AMI_01	Detailed inspections of distribution electric lines and equipment	Activity Validated	Compliant with the 2022 WMP
WMP Activity Completion	7.3.4.3 - AMI_03	Improvement of inspections	Activity Validated	Compliant with the 2022 WMP, per Data Request

WMP Activity Completion	7.3.4.4 - AMI_04	Infrared inspections of distribution electric lines and equipment	Activity In Progress	No infrared inspections were completed in 2022, but are planned for the future
WMP Activity Completion	7.3.4.6 - AMI_06	Intrusive pole inspections	Activity Validated	Compliant with the 2022 WMP
WMP Activity Completion	7.3.4.11 - AMI_11	Patrol inspections of distribution electric lines and equipment	Goal Not Met	2022 WMP indicated 706 line miles, ARC shows 503, DR-001 indicated 501
WMP Activity Completion	7.3.4.14 - AMI_14	Quality assurance / quality control of inspections	Activity Validated	Compliant with the 2022 WMP, per Data Request
WMP Activity Completion	7.3.4.15 - AMI_15	Substation inspections	Activity Validated	Compliant with the 2022 WMP, per Data Request
WMP Activity Completion	7.3.5.1 - VMI_01	Additional efforts to manage community and environmental impacts	Activity Validated	Compliant with the 2022 WMP, per Data Request
WMP Activity Completion	7.3.5.2 - VMI_02	Detailed inspections of vegetation around distribution electric lines and equipment	Goal Not Met	Liberty reported completion 210.6 was less than commitment and IE found 201.6 miles complete.
WMP Activity Completion	7.3.5.5 - VMI_05	Fuel management and reduction of “slash” from vegetation management activities	Activity Validated	Compliant with the 2022 WMP, per Data Request
WMP Activity Completion	7.3.5.7 - VMI_07	LiDAR inspections of vegetation around distribution electric lines and equipment	Activity Validated	Compliant with the 2022 WMP

WMP Activity Completion	7.3.5.10 - VMI_10	Other discretionary inspections of vegetation around transmission electric lines and equipment	Not Applicable	No current specific applicable WMP initiative, per the 2022 WMP
WMP Activity Completion	7.3.5.11 - VMI_11	Patrol inspections of vegetation around distribution electric lines and equipment	Activity Validated	Compliant and exceeded the 2022 WMP totals
WMP Activity Completion	7.3.5.13 - VMI_13	Quality assurance / quality control of vegetation inspections	Activity Validated	Compliant and exceeded the 2022 WMP totals by 50.7 line miles
WMP Activity Completion	7.3.5.14 - VMI_14	Recruiting and training of vegetation management personnel	Activity Validated	Compliant with the 2022 WMP, per Data Request
WMP Activity Completion	7.3.5.15 - VMI_15	Remediation of at-risk species	Goal Not Met	2 deficient locations identified among 31 unique sampled sites
WMP Activity Completion	7.3.5.16 - VMI_16	Removal and remediation of trees with strike potential to electric lines and equipment	Activity Validated	Compliant and exceeded 2022 goal
WMP Activity Completion	7.3.5.20 - VMI_20	Vegetation management to achieve clearances around electric lines and equipment	Activity Validated	Compliant and exceeded 2022 goal by 6.2 line miles
WMP Activity Completion	7.3.5.21 - VMI_21	Vegetation management activities post-fire	Activity Ongoing	Compliant with the 2022 WMP, per Data Request

WMP Activity Completion	7.3.6.1 - GOOP_01	Automatic recloser operations	Activity Validated	Compliant with the 2022 WMP, per Data Request
WMP Activity Completion	7.3.6.3 - GOOP_03	Personnel work procedures and training in conditions of elevated fire risk	Activity Validated	Compliant with the 2022 WMP, per Data Request
WMP Activity Completion	7.3.6.4 - GOOP_04	Protocols for PSPS re-energization	Activity Validated	Compliant with the 2022 WMP, per Data Request
WMP Activity Completion	7.3.7.1 - DG_01	Centralized repository for data	Activity Validated	Compliant with the 2022 WMP, per Data Request
WMP Activity Completion	7.3.7.2 - DG_02	Collaborative research on utility ignition and/or wildfire	Activity Validated	Compliant with the 2022 WMP, per Data Request
WMP Activity Completion	7.3.9.1 - EPP_01	Adequate and trained workforce for service restoration	Activity Validated	Compliant with the 2022 WMP, per Data Request
WMP Activity Completion	7.3.9.2 - EPP_02	Community outreach, public awareness, and communications efforts	Activity Validated	Compliant with the 2022 WMP, per Data Request
WMP Activity Completion	7.3.9.3 - EPP_03	Customer support in emergencies	Activity Validated	Compliant with the 2022 WMP, per Data Request
WMP Activity Completion	7.3.10.1 - SCCE_01	Community engagement	Activity Validated	Compliant with the 2022 WMP, per Data Request
WMP Activity Completion	7.3.10.2 - SCCE_02	Cooperation and best practice sharing with agencies outside CA	Activity Validated	Compliant with the 2022 WMP, per Data Request