2023 Wildfire Mitigation Plan Independent Evaluator Annual Report on Compliance

Utility:

PacifiCorp

Submitted by:

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Executive Summary

The Executive Summary shall contain key takeaways from the IE's evaluation, including key findings from the IE's audit of Wildfire Mitigation Plan (WMP) initiatives assessment, verification of funding, and verification of quality assurance and quality control (QA/QC) programs.

PacifiCorp is a small multi-jurisdictional utility serving approximately 45,000 customers in northern California. PacifiCorp's service area covers a vast stretch of forested wildlife habitats encompassing dense vegetation and sparsely populated community centers with an average of approximately four customers served per square mile. Accordingly, PacifiCorp's service territory stretches across numerous expanses of the California Public Utilities Commission (CPUC) defined High Fire Threat Districts (HFTDs) including Tier 2 elevated and Tier 3 extreme risk areas.

PacifiCorp has undertaken considerable efforts to prevent ignitions and mitigate the impact of wildfire across its substantial service territory. Through emerging technologies, enhanced mitigation practices, and refined Quality Assurance/Quality Control (QA/QC) processes, PacifiCorp is working to achieve risk reduction benefits for their communities in the face of the growing threat of increased wildfire events and potential proactive de-energization activations as a measure of last resort. To achieve these risk reduction results, PacifiCorp tracks and monitors activities as they are executed to maintain conditional awareness of controllable risk drivers, which may lead to a catastrophic ignition event.

This report demonstrates a review of the wildfire mitigation initiatives that PacifiCorp implemented in 2023 and an accounting of whether PacifiCorp met its performance objective targets, whether it is underfunding any of those initiatives, and whether PacifiCorp is following its QA/QC processes. The Independent Evaluator (IE) review of these elements determined that PacifiCorp is largely achieving the reviewed initiative objectives, is not failing to fund the portfolio of its initiatives, and lastly, appears to be following its QA/QC processes, to the degree that they are documented.

PacifiCorp's 2023-2025 Final Wildfire Mitigation Plan[1], **Quarterly Data Reports**[2]**,** and **PacifiCorp's Annual Report on Compliance (ARC)** were used to identify 39 initiatives. Of those thirty-nine (39) initiatives, five (5) were "Quantifiable Field Verifiable," twenty-one (21) were "Quantifiable Not Field Verifiable," and thirteen (13) were "Qualitative." In addition, forty-three (43) financial targets were reviewed as part of the evaluation. In total, seven (7) initiatives were found to have findings of missed targets, with an additional nineteen (19) financial targets being underfunded. **Table 1-1** below illustrates the IE findings for those initiatives that were not deemed sufficient due to a lack/insufficiency of evidence or funding/actuals below the planned 2023 targets set forth by **PacifiCorp's 2023 WMP** and the fourth quarter update to Table 1 the **Quarterly Data Report**.

[1] Referred to throughout the document as "PacifiCorp's 2023 WMP" or "2023 WMP"

[2] Document: "PAC_Q4_QDR_2023.xlsx" – referred to throughout the document as "Q4 QDR"

Table 1-1 – Summary of Findings

2023 Initiative Number/ID	Initiative Name	Finding	Detail on Finding
GH-01	Line Rebuild	Target Missed	PacifiCorp projected the completion of 130-line miles as part of the Line Rebuild Program. PacifiCorp was only able to complete 101-line miles in 2023.
GH-02	Distribution Pole Replacement	Target Missed	PacifiCorp projected the completion of 2,600 pole replacements as part of the Distribution Pole Replacement Program. PacifiCorp was only able to complete 1,565 pole replacements in 2023.
GH-03	Transmission Pole Replacement	Target Missed	PacifiCorp projected the completion of 260 pole replacements as part of the Transmission Pole Replacement Program. PacifiCorp was only able to complete 165 pole replacements in 2023.
GH-05	Expulsion Fuse Replacement	Target Missed	PacifiCorp projected the completion of 5,000 expulsion fuse replacements as part of the Expulsion Fuse Replacement Program. PacifiCorp was only able to complete 4,147 expulsion fuse replacements in 2023.
AI-08	Enhanced (Infrared) Inspections in Distribution Lines	Target Missed	PacifiCorp projected the completion of 810 distribution line miles as part of the Enhanced (Infrared) Inspections in Distribution Lines Program. PacifiCorp was only able to complete 757 distribution line miles in 2023. PacifiCorp reported that the primary contributors to not meeting the targeted line miles for IR inspection was the HEAD fire which occurred during peak load season, when these inspections take place, and the difficulties for the inspection vehicle to reach some of the areas to be inspected. PacifiCorp also noted that they are exploring new/additional ways to reach these more difficult areas in the future.

2023 Initiative Number/ID	Initiative Name	Finding	Detail on Finding
GH-04	Relay/Recloser/CB Replacements / Upgrade	Target Missed	PacifiCorp projected the completion of 40 units and was only able to complete 36 in 2023.
RA-03	Risk Spend Efficiency (RSE) Modeling Implementation	Target Missed	Work on Risk Spend Efficiency (RSE) Modeling has been deferred to 2024.
AI-02	Distribution Patrol Inspections	Underfunded	All the required work under this initiative was completed and fully funded. The plan cost was based on an estimated amount. The initiative was completed for an actual cost less than originally estimated.
AI-03	Transmission Detail Inspections	Underfunded	PacifiCorp experienced increased efficiencies in work planning which led to more timely completion of planned inspections.
AI-04	Distribution Detail Inspections	Underfunded	All the required work under this initiative was completed and fully funded. The plan cost was based on an estimated amount. The initiative was completed for an actual cost less than originally estimated.
AI-05	Transmission Intrusive Pole Inspections	Underfunded	Costs were less than expected due to ongoing WMP activities that replaced a substantial number of formerly wood poles with new fiberglass & steel poles. Less pole-sounding, hole drilling inspections and excavation tests were required.
AI-07	Enhanced (Infrared) Inspections in Transmission Lines	Underfunded	The entire scope was able to be completed and the actuals for 2023 came in under forecast. The forecast for the inspections does include potential weather delays that would add cost.
AI-12	Quality Assurance and Quality Control	Underfunded	PacifiCorp experienced increased efficiencies in work planning which led to a timelier completion of planned inspections.
EP-02	External Collaboration and Coordination	Underfunded	PacifiCorp had two events cancelled, resulting in reduced spend.

2023 Initiative Number/ID	Initiative Name	Finding	Detail on Finding
EP-03	Messaging – PSP Portal	Underfunded	Project milestones for the PSP portal shifted from 2023 to 2024, as described below: PacifiCorp continues to work through improvements to the Public Safety Partner Portal. Planned improvements consist of ensuring compliance with CPUC web-based Public Safety Partner Portal requirements, interactive mapping requirements, and to support PacifiCorp's efforts to prioritize restoration, backup power evaluation, additional communications, and other resources before and during PSPS events.
EP-05	Customer support in wildfire and PSPS emergencies	Underfunded	The program plan was to reach 44 pre-qualified customers for the free portable battery program, however there were only seven eligible medical baseline customers.
GH-05	Expulsion fuse replacement	Underfunded	PacifiCorp completed fewer units than anticipated (details below) and some of the expulsion fuse replacements were funded by GH-01 for work occurring concurrently on the same pole. PacifiCorp was unable to complete 853 expulsion fuse replacements of the 5,000 planned. Due to a material delivery delay, not all of the planned work for expulsion fuses could occur. PacifiCorp plans to receive the material in Q1 of 2024 and will begin work to finish the 2023 targets.
GO-02	Grid Response Procedures and Notifications (Grid Ops): Patrols	Underfunded	Spend for this initiative was not as much as originally expected due to no PSPS events in 2023.
PS-01	Protocols on PSPS	Underfunded	PacifiCorp did not have any PSPS events in 2023.

2023 Initiative Number/ID	Initiative Name	Finding	Detail on Finding
RA-02	Top Risk Areas within the High Fire Risk Area	Underfunded	The work breakdown structure for this work was originally planned to be separate from RA-01 however it was captured in RA-02.
RA-03	Other Key Metrics	Underfunded	The work breakdown structure for this work was originally planned to be separate from RA-01 however it was captured in RA-02.
RA-04	Enterprise System for Risk Assessment	Underfunded	Resource limitations led to reduced spend for this initiative. PacifiCorp resources were prioritized to focus on initiatives RA-01: Risk and Risk Component Calculation and RA-02: Top Risk Areas Within the HFRA. As a result of this prioritization and the effort involved in RA-01 and RA-02, RA-04: Enterprise System for Risk Assessment was deprioritized.
SA-03	Smoke and Air Quality Sensors	Underfunded	The planned spend for this initiative included a partial payment that occurred and cleared at the end of 2022 and did not post to 2023 actuals.
VM-03	Patrol Inspection - Distribution	Underfunded	PacifiCorp's initiative VM-03 was funded and fully completed (100% complete). The planned spend is based on actuals from the prior year. In 2023 VM-03 was completed at a lower cost than planned.
VM-04	Patrol Inspection - Transmission	Underfunded	The lower costs resulted from a larger reliance on internal resources and did not require the originally planned external costs.
VM-06	Clearance - Distribution	Underfunded	PacifiCorp's initiative VM-06 was funded and fully completed (100% complete). The planned spend is based on actuals from the prior year. In 2023 VM-06 was completed at a lower cost than planned.

1. Introduction

The Introduction should state the date the IE contract was executed with the Electric Corporation (EC). It should contain upfront context and a high-level summary of the work performed by the Independent Evaluator.

The state of California has seen an increase of disastrous wildfires in recent years. In the last decade, the California Department of Forestry and Fire Protection (CAL FIRE) reports that larger and more aggressive fires are occurring year over year resulting from prolonged drought conditions, a hotter climate, historic fire suppression, forest management, and bark beetle infestations. Several of the most damaging fires were ignited by utility equipment and operations. This spurred California to pass legislation and supporting regulations requiring ECs to develop and implement an annual WMP, submit periodic filings on the implementation of initiatives under the WMP, and submit to a qualified Independent Evaluator (IE) [3] to review and assess the EC's compliance with their WMP.[4]

Wildfire Mitigation Plan Independent Evaluation Engagement

This Report serves as the IE Annual Report on Compliance ("Report") that aligns with the scope set forth by Energy Safety on April 9, 2024.[5] All California ECs are required to contract with a qualified IE to perform the assessment and deliver a report before July 1, 2024. The IE was contracted to complete this assessment and began work on April 9, 2024.

This Report aims to verify WMP activities performed by PacifiCorp as they compare to the initiatives the Investor Owned Utility planned to accomplish in 2023, whether those activities were funded appropriately, and validate and describe the EC's QA/QC programs to a degree of reasonable assurance that these efforts were completed as described and reported.

1.1 Methodology and Approach

The Report is the product of the IE's assessments of the EC's WMP, publicly available documentation submitted to the Office of Energy Safety, data request responses, field visits, and interviews with the EC's subject matter experts (SMEs). The Report scope includes an assessment of the successful implementation of the EC's WMP initiative activities, funding, and QA/QC efforts executed in 2023.

To perform this assessment, the IE adopted the following approach:

[3] NV5 and Guidehouse were designated as an eligible Qualified Independent Evaluator on April 9, 2024 as part of the *Revised Independent Evaluator List for 2023 Wildfire Mitigation Plan* available at https://efiling.energysafety.ca.gov/Search.aspx?docket=2024-IE

[4] Public Utilities Code (PUC) § 8386.3.

[5] Office of Energy Infrastructure Safety *Request for Qualifications RFQ No.:23-180912* available at https://efiling.energysafety.ca.gov/Search.aspx?docket=2024-IE

- **Review publicly available information, including the WMP:** The IE reviewed publicly available information to prepare for the assessment including the subject utility's WMP and other publicly released or submitted documents.
- **Prepare initial and subsequent data requests:** The first data request focused on programmatic level documentation such as the utility's vegetation management program, inspection program, grid hardening programs, etc. Additional information requested includes any non-public WMP submissions and supplemental geographic information system (GIS) spatial data. This provides the IE a baseline understanding of available documentation beyond publicly available sources.
- **Document discovery review:** The IE reviewed supplemental information about the WMP initiatives in the Quarterly Data Reports (QDRs) and ARC. The IE reviewed each data request response for completeness, responsiveness, and thoroughness. These materials should address all three subject areas addressed in the report – implementation of initiatives, initiative funding, and QA/QC material.
- **Perform risk assessments for field inspections:** Using GIS data submitted by the EC, the IE identified areas where there is a substantial intersection between risk areas, including HFTDs and Wildland Urban Interface populations and WMP initiative activities across the utility's service territory to select meaningful locations for possible site visits to verify initiative activities performed in 2023.
- **Conduct a field inspection survey:** This includes a visual patrol assessment of identified circuits and electrical assets within the selected areas. Results are captured on site and incorporated with other findings of the document discovery tasks.
- **Interpret documents and field inspection results:** Utilizing the WMP and other related compliance documents submitted to the WSD, the IE reviews the field inspection site notes, data request responses, and other evidence of the performed WMP activities and prepared findings surrounding each scoped initiative activity. The IE also conducts interviews, as needed, with SME personnel to gain additional details and clarify questions on program and project targets and QA/QC performance.

2. Independent Evaluator Review of Compliance

The Independent Evaluator Review of Compliance section is for the Independent Evaluator to provide an overview of its process for review and assessment of the electrical corporation's compliance with its WMP. In the sections below, provide a review of the electrical corporation's WMP activity completion, verification of funding and verification of QA/QC programs.

2.1 WMP Review of Initiatives

This section shall include the IE's findings and assessment of electrical corporation compliance with WMP initiatives.

In-scope WMP activities have been broken out into three categories:

1. Quantifiable goal/target + field verifiable WMP activities
2. Quantifiable goal/target + non-field verifiable WMP activities
3. Qualitative goal/target WMP activities

Initiatives were assessed for compliance via multiple dimensions, including work completion, work quality, and adherence to applicable protocols and procedures.

2.1.1 Sampling Methodology and Discussion

In this section, the Independent Evaluator should describe its sampling methodology, the samples that were chosen, and areas of focus. The Independent Evaluator may include the samples that were chosen in the Appendix instead of this section. The Independent Evaluator should also include a discussion of how results of the sampled assessment are indicative of the electrical corporation's broader implementation of WMP initiatives, to give the Energy Safety an understanding of the process the Independent Evaluator used to estimate full completion.

IE Evidence Sampling Methodology

The IE approach to sampling initiatives attempted to formalize a strategy to achieve a statistically valid representative sample of project initiatives in a manner that is objective.

The IE conducted a random sample of the data for each initiative requiring it. The sample size is based upon the North American Electric Reliability Corporation (NERC) **ERO Sampling Handbook Revision 1.0.**[6] This methodology is recognized by the Generally Accepted Government Auditing Standards (GAGAS or "the Yellow Book" which is the US federal government's General Accounting Office's auditing guidebook) and the Institute of Internal Auditors. This handbook sets forth the statistically valid

[6] ERO Sampling Handbook, Revision 1.0, North American Electric Reliability Corp. (2015). Available at **https://www.nerc.com/pa/comp/Documents/Sampling_Handbook_Final_05292015.pdf**.

sample size for different populations as can be seen below. This method is used to sample populations of tens of thousands of relays and cyber devices, among other things, in accordance with NERC's obligations mandated by FERC as part of the Federal Power Act Sec 215.[7]

Table 2-1 – Sampling Methodology

Population Description	Sample Selection
Independent Population of Elements (Examples: Facilities, Line Miles, Financial Spend, etc.)	Using Statistical or Judgmental Sampling
1-9	All Elements
10-19	9 Samples
20-40	16 Samples
41-100	23 Samples
101-1000	29 Samples
1001+	33 Samples

Once a sample size is generated, the IE developed and utilized a random sampling tool developed in Excel, to automatically select the sample from the list based on the table above. The IE applied that methodology to the populations of identified elements in the selected areas.

The IE used the same sampling methodology for initiatives that were and were not field verifiable.

Review of Discovery & Field Inspection Results

Field inspection findings contributed to the documentation discovery process by validating whether activities were executed in accordance with the WMP description of activities. The IE compared these results with documentation produced by the electrical corporation to verify accuracy in reporting.

The IE identified sample areas with conditions illustrating high fire risk and ignition potential within the electrical corporation's service territory. The field inspection location boundaries were layered over the service territory of the utility, along with owned and operated assets, and other geological factors to determine the location of the

[7] 16 U.S.C. § 824o.

evaluation. As the principal map, the IE layered the three Tiers within the CPUC's HFTD map.

Due to the size of PacifiCorp's territory the IE concentrated its field verification efforts within several specific regions. The selected areas were identified through both risk and practical considerations. The practical element focused on the accessibility of the locations for both physical, ground based, inspections in addition to the observability of the work completed. The final regions were selected in consultation with Energy Safety and focused on areas that (1) Energy Safety had not done its own verifications, (2) had significant levels of field verifiable activities completed, (3) provided the ability to perform the greatest number of verifications given the time frame allowed, and (4) had conditions that present high fire risk and ignition potential. The IE then developed and utilized a random sampling tool developed within the NV5 proprietary mapping and auditing tool, INSITE, to randomly select assets for field verification within the chosen zones.

Figure 1-4 below illustrate the territory (Weed, Happy Camp, Hamburg, Etna, and Lake Shastina/Big Springs) for PacifiCorp's field verifiable initiatives and the identified population selected from in consultation with Energy Safety.

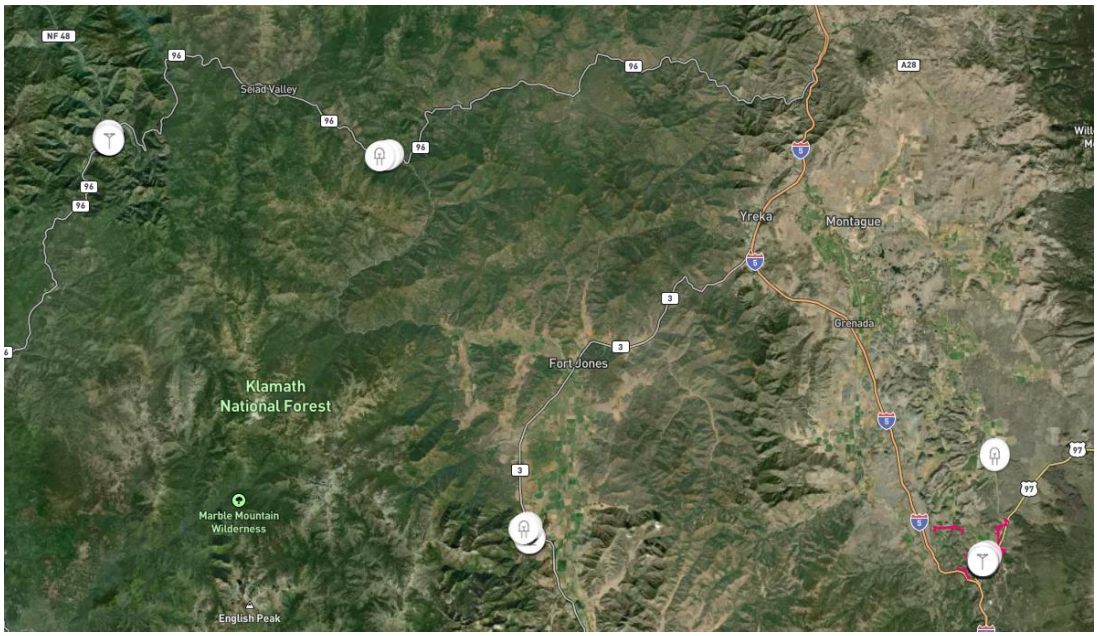

Figure 1

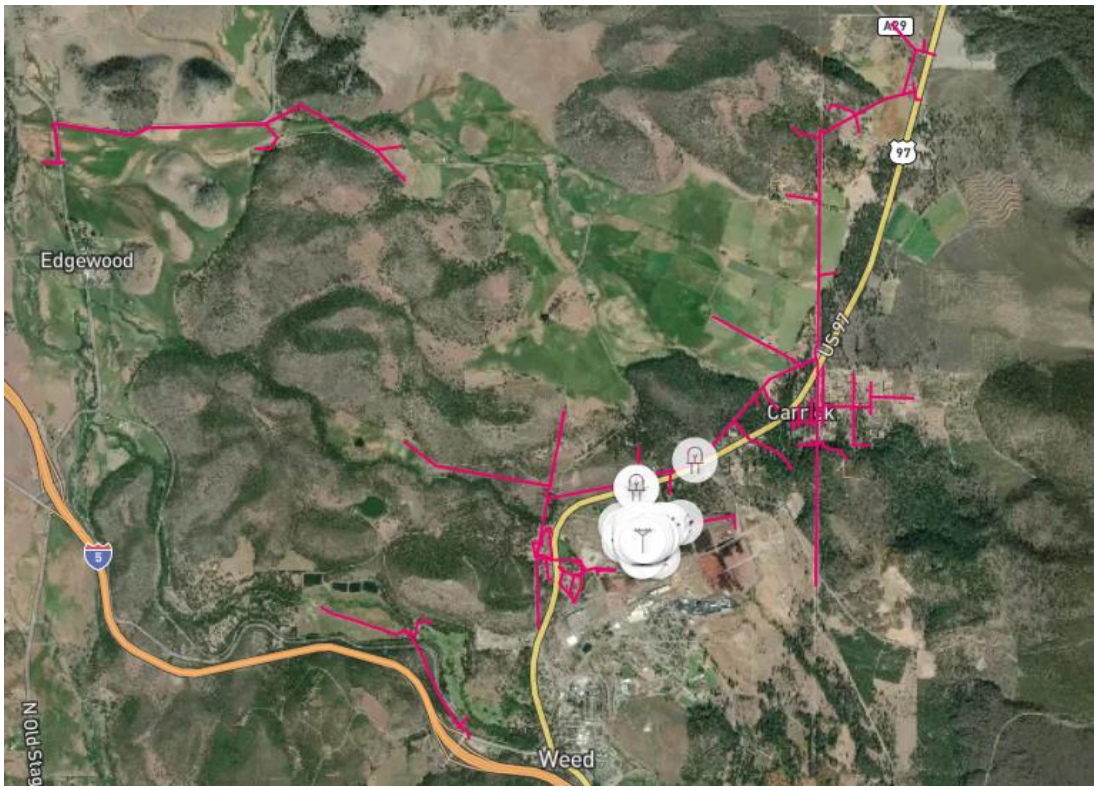

Figure 2

Figure 3

Figure 4

2.1.2 Quantifiable Goal/Target – Field Verifiable

2.1.2.1 Review of Initiatives

If the initiative is quantifiable and field verifiable, then the IE shall select a sample and conduct field verifications to confirm installation, work quality, and adherence to applicable electrical corporation protocols and standards for such work. The electrical corporation's list of initiatives that are quantifiable and field verifiable shall be included in a dedicated appendix or within the body of this subsection. The list shall detail each initiative name and respective goals/targets, and whether the goals/targets were met.

Table 2-2 - Quantifiable Goal/Target – Field Verifiable Summary

Initiative Number / ID	Initiative Name	Population Size / Target	Sample Size	#, % Verified	#, % Verification Failed
GH-01	Line Rebuild	101	29	34, 100%	0, 0%
GH-02	Distribution Pole Replacement	1,565	33	32, 97%	0, 0%
GH-03	Transmission Pole Replacement	165	29	29, 100%	0, 0%
GH-05	Expulsion fuse replacement	4,147	33	30, 91%[8]	0, 0%
VM-05	Pole Clearing	3,126	33	38, 100%	0, 0%

[8] For GH-05 38 items were sampled for field verification to account for possible access issues, upon field verification 8 were inaccessible and 30 were verified. Of the 30 verified none were found to be non-compliant.

Line Rebuild (GH-01)

Section 8.1.2.1 of **PacifiCorp's 2023 WMP** describes PacifiCorp's line rebuild program, PacifiCorp explains that while overhead distribution equipment and lines are designed to meet current compliance requirements, under certain conditions, such as high wind speeds, these lines can become more vulnerable to the "contact by object" risk drivers. PacifiCorp is addressing this risk through the line rebuild program. PacifiCorp's line rebuild program includes deployment of the following main techniques:

- Reconductor with covered conductor: Specialized overhead covered conductors can be constructed with additional shielding and enhanced insulating properties to aid in wildfire mitigation.

- Undergrounding: Under the line rebuild program, PacifiCorp is also considering undergrounding. While an underground design does not eliminate every ignition potential (i.e., because of above ground junctions), it is considered the most effective strategy for reducing the risk of any utility-related ignition. Unfortunately, the cost of underground construction often makes it difficult to apply on a widespread basis. Therefore, PacifiCorp evaluates the potential to convert overhead lines to underground lines for rebuild projects on a project-by-project basis. Through the design process, each individual project is assessed to determine whether sections of the rebuild should be completed with underground construction. For example, a more remote, heavily forested location with few customer connections could be an ideal candidate for undergrounding.

- Line Removal: Overhead lines may become idle facilities due to changes in customer need or construction of alternate feeds. When an overhead line is determined to no longer be needed the line will be removed, fully removing the ignition risks associated with the line.

PacifiCorp's 2023 WMP indicated that PacifiCorp had a line rebuild target of 130-line miles. However, their actual progress in 2023 as documents in the **Q4 QDR** was 101-line miles.

To validate the 101-line miles that were replaced, the IE requested a list of the full population of lines reported as replaced in 2023 in *DR 5.* In response, PacifiCorp provided evidence document, **California 2023 GH-01 completions.kmz** and **2024 IE DR5 line rebuild.xlsx.** The IE selected a sample of 29-line miles (with five contingency miles) to perform a field verification using location data, and a risk assessment to select lines that could reasonably be reached for field inspection with the evaluation timeframe. For the field verifications, the IE physically verified that the line replacements were completed by visiting the site and noting the upgraded materials.

To further validate the work completed, the IE requested detailed documentation demonstrating completion for the sample set of 29-line miles in *DR 11*. PacifiCorp provided work orders, construction drawings, and pull trackers that allowed the IE to desktop verify that the work was performed. Due to the use of midpoint latitude and longitude for field verification, the IE was not able to validate one to one the field verification results with its desktop review. However, the evidence provided for the desktop review did validate the work completed in 2023 for the circuits that were field verified.

Finding

Based on the desktop review of the evidence provided and field verifications performed, the IE has reasonable assurance that PacifiCorp did not meet its target of 130-line miles as part of the Line Rebuild program. The IE however does have reasonable assurance that PacifiCorp did complete its reported 101-line miles in 2023.

Table 2-3 - Field Inspection Results

ObjectID	Latitude	Longitude	Field Verification Finding	Notes
11	41.79970642	-123.3775181	Compliant	HAPPY CAMP (5G16)
10	41.79948634	-123.3769488	Compliant	HAPPY CAMP (5G16)
13	41.79921156	-123.3761684	Compliant	HAPPY CAMP (5G16)
12	41.79828488	-123.3746095	Compliant	HAPPY CAMP (5G16)
5	41.79879049	-123.3743797	Compliant	HAPPY CAMP (5G16)
8	41.79953837	-123.3737153	Compliant	HAPPY CAMP (5G16)
14	41.8017366	-123.3734904	Compliant	HAPPY CAMP (5G16)
6	41.80265953	-123.37284	Compliant	HAPPY CAMP (5G16)
9	41.79960015	-123.3727561	Compliant	HAPPY CAMP (5G16)
4	41.46791038	-122.4345785	Compliant	HAPPY CAMP (5G16)
3	41.46654676	-122.434511	Compliant	EDGEWOOD
2	41.46765172	-122.424576	Compliant	EDGEWOOD
1	41.46858342	-122.4129844	Compliant	EDGEWOOD
105	41.43418939	-122.388864	Compliant	WEED (5G83)

ObjectID	Latitude	Longitude	Field Verification Finding	Notes
104	41.43808851	-122.3887054	Compliant	WEED (5G83)
87	41.44131546	-122.3879913	Compliant	WEED (5G83)
91	41.44167263	-122.3879253	Compliant	WEED (5G83)
102	41.4413379	-122.3871058	Compliant	WEED (5G83)
89	41.4418904	-122.3832418	Compliant	WEED (5G83)
98	41.44224697	-122.3794059	Compliant	WEED (5G83)
103	41.44192785	-122.3793976	Compliant	WEED (5G83)
84	41.44266154	-122.3789061	Compliant	WEED (5G83)
90	41.44289965	-122.3777853	Compliant	WEED (5G83)
86	41.44312963	-122.3766961	Compliant	WEED (5G83)
94	41.44348778	-122.3749702	Compliant	WEED (5G83)
93	41.44461918	-122.3726931	Compliant	WEED (5G83)
95	41.4461152	-122.3709847	Compliant	WEED (5G83)
88	41.44763885	-122.3692291	Compliant	WEED (5G83)
100	41.44886358	-122.3678185	Compliant	WEED (5G83)
85	41.44996284	-122.3661615	Compliant	WEED (5G83)
92	41.4509616	-122.3632163	Compliant	WEED (5G83)
97	41.44712392	-122.3623312	Compliant	WEED (5G83)
96	41.44859131	-122.3623062	Compliant	WEED (5G83)
99	41.44997496	-122.3622872	Compliant	WEED (5G83)

Distribution Pole Replacement (GH-02)

Section 8.1.2.3 of **PacifiCorp's 2023 WMP** described PacifiCorp's distribution pole replacement program, and PacifiCorp explains that they included the pole replacement program with the line rebuild installations as an efficient use of resources. Poles replaced under the line rebuild program were counted in the 2023 WMP. PacifiCorp

explained that, in some cases, poles needed to be replaced to accommodate the additional weight of covered conductors; replacing wooden poles with stronger nonwooden solutions such as fiberglass or steel also increases grid resiliency and eliminates the need to return later. PacifiCorp also stated that this approach ensures that the pole replacements are prioritized effectively.

PacifiCorp's 2023 WMP states that PacifiCorp's target number of distribution pole replacements was 2,600. However, per the **Q4 QDR**, PacifiCorp reported falling short of 2023 target, completing 1,565 distribution pole replacements. This shortage was reported as being a result of constraints related to two wildfires requiring resources to be diverted toward evacuations and emergency response. There were also delays in permitting and construction for some of the scheduled replacements. PacifiCorp reports remedying this by contracting with an external partner and had already started acquiring permits in 2023 for 2024 projects.

To validate the 1,565 distribution poles that were replaced, the IE requested, through the issuance of *DR 2,* a list of the full population of poles reported as replaced in 2023*.* In response, PacifiCorp provided evidence document, **IE_DR2_12_Distribution Poles.xlsx**, which listed a record of 1,565 distribution pole replacements with unique identifiers. From this list, the IE selected a sample of poles to perform a field verification using location data and risk assessment to select poles that could reasonably be reached for field inspection within the evaluation timeframe. For the field verifications, the IE physically verified that the distribution pole replacements were completed by visiting the site and noting the upgraded materials. As noted in the table below, three of the sampled poles were inaccessible by the field verification team, and a decision was made to add additional poles to ensure a representative sample. Even with the expanded sample size, there were additional instances where poles were inaccessible and not visible from accessible areas while in the field. Due to the complexity of the field verification process and the time constraints for verification the field verification team was only able to perform 32 of the 33 field verifications. From those that were able to be verified, all 32 were found to be compliant. The results of the inspections are in Table 2-4. Compliant/Not Compliant was determined through the standard of both PRC 4293 and WMP descriptions of minimum standards.

To further validate the work completed, the IE requested detailed documentation demonstrating completion for the sample set of 33 distribution pole replacements in *DR 9*. PacifiCorp provided several evidence documents that included a map for each project, the work sequences to the segment of new conductor, the field inspection to verify the work, and the final property retirement unit list for the project.

Finding

The IE has reasonable assurance that PacifiCorp did not meet their identified 2023 WMP target and were short of its target by 1,035 poles. Additionally, for reasons highlighted above, while the IE was unable to meet the minimum random sampling requirements, based on the desktop review of the evidence provided and the field

verifications that were performed, the IE has reasonable assurance that PacifiCorp did complete its reported 1,565 distribution pole replacements in 2023.

Table 2-4 - Field Inspection Results

ObjectID	Latitude	Longitude	Field Verification Finding	Notes
4	41.79663012	-123.3750045	Compliant	N/A
8	41.79900491	-123.3755424	Compliant	N/A
9	41.79632853	-123.3737753	Compliant	N/A
15	41.7971613	-123.3733449	Compliant	N/A
16	41.79699971	-123.3742238	Compliant	N/A
20	41.79812656	-123.3746667	Compliant	N/A
24	41.79868005	-123.3744079	Compliant	N/A
26	41.79704129	-123.3729028	Compliant	N/A
27	41.80110231	-123.3733992	Compliant	N/A
28	41.79861486	-123.3744363	Compliant	N/A
29	41.438859	-122.378302	Compliant	N/A
30	41.438381	-122.378237	Compliant	N/A
31	41.438513	-122.378072	Compliant	N/A
32	41.438378	-122.378105	Compliant	N/A
33	41.438148	-122.378101	Compliant	N/A
34	41.438862	-122.379391	Compliant	N/A
35	41.438549	-122.379376	Compliant	N/A
36	41.438139	-122.378429	Compliant	N/A
37	41.438146	-122.378792	Compliant	N/A
38	41.438152	-122.379433	Compliant	N/A
39	41.439273	-122.378401	Compliant	N/A

ObjectID	Latitude	Longitude	Field Verification Finding	Notes
40	41.439283	-122.378927	Compliant	N/A
41	41.439288	-122.379417	Compliant	N/A
42	41.438397	-122.377519	Compliant	N/A
10	41.79656727	-123.3744668	Compliant	N/A
12	41.79640235	-123.3737415	Compliant	N/A
17	41.79761643	-123.3731289	Compliant	N/A
25	41.79593101	-123.3727763	Compliant	N/A
6	41.79723733	-123.3758076	Compliant	N/A
43	41.79663012	-123.3750045	Compliant	Pole added to sample 6/12/24. Same as Fuse pole OID 2.
44	41.79699971	-123.3742238	Compliant	Pole added to sample 6/12/24. Same as Fuse pole OID 8.
45	41.79786054	-123.3739542	Compliant	Pole added to sample 6/12/24. Same as Fuse pole OID 10.
1	41.79954493	-123.3740062	N/A	Not accessible, located on private property behind home.
2	41.80045241	-123.3736348	N/A	Not accessible, located on private property behind home.
3	41.80150197	-123.3736778	N/A	Inaccessible.

ObjectID	Latitude	Longitude	Field Verification Finding	Notes
5	41.7966968	-123.3756197	N/A	Not accessible, located on private property behind home.
7	41.79759784	-123.3748759	N/A	Not accessible, located on private property behind home.
11	41.79663984	-123.3744295	N/A	Not accessible, located on private property behind home.
13	41.79702657	-123.3747193	N/A	Not accessible, located on private property behind home.
14	41.79740299	-123.3745096	N/A	Inaccessible to inspector.
18	41.79782933	-123.3738568	N/A	Inaccessible to inspector. Not visible from road.
19	41.79786054	-123.3739542	N/A	Located on private property and not visible to inspector.
21	41.797906	-123.373814	N/A	Located on private property and not visible to inspector.
22	41.79846865	-123.3744966	N/A	Not accessible, located on private property behind home.
23	41.7983815	-123.3740397	N/A	Not accessible, located on private property behind home.

Transmission Pole Replacement (GH-03)

Section 8.1.2.4 of **PacifiCorp's 2023 WMP** described PacifiCorp's transmission pole replacement program, they explained that they included the pole replacement program with the covered conductor installations as an efficient use of resources. Poles replaced under the line rebuild program were counted in the 2023 WMP. In some cases, poles need to be replaced to accommodate the additional weight of covered conductor; replacing wooden poles with stronger nonwooden solutions such as fiberglass or steel also increases grid resiliency and eliminates the need to return later. This approach also ensures that pole replacements are prioritized effectively.

PacifiCorp's 2023 WMP stated that PacifiCorp's target number of transmission pole replacements was 260. The actual progress was reported as 165 transmission pole replacements. PacifiCorp reported 85 pole replacements were not able to be completed due to resources needing to be reallocated to emergency response and evacuations related to two wildfires in Q3 as well as delays in permitting and construction on some of the projects. PacifiCorp reports that these delays are being addressed through contracting with an outside partner to complete the remaining projects in 2024.

To validate completed work, the IE performed a desktop review and a field verification. As part of *DR 2*, the IE requested the full list of the 165 transmission poles replaced listed by unique identifiers to verify the full population of poles replaced. In response, PacifiCorp provided evidence document, **IE_DR2_13_Transmission Poles.xlsx**, that supplied a list of 167 transmission poles that were replaced listed by unique identifier. The IE requested a random sample of 29 items from the list provided in *DR 9*. In response to *DR 9*, PacifiCorp provided the IE with two evidence folders, **8003684_5G83 Hwy 97 Pt 1** and **8077682_5G83 North Weed Pt 3**, which contained work orders that indicated that over 165 poles were going to be replaced as part of the two projects.

For the field verifications, the IE conducted visual inspection of the sampled transmission pole replacements. The IE was able to verify 29 of the sampled 40 transmission poles. The remaining 11 transmission poles could not be verified due to accessibility issues.

Finding

Based on the desktop review of the evidence provided and field verifications performed, the IE has reasonable assurance that PacifiCorp did not meet its initiative target of 260 transmission pole replacements in 2023.

Table 2-5 - Field Inspection Results

ObjectID	Latitude	Longitude	Field Verification Finding	Notes
1	41.43433	-122.389	Compliant	

ObjectID	Latitude	Longitude	Field Verification Finding	Notes
2	41.43554	-122.389	Compliant	
3	41.43502	-122.389	Compliant	
4	41.43715	-122.389	Compliant	
5	41.43641	-122.389	N/A	Not Accessible
6	41.4384	-122.389	Compliant	
7	41.43778	-122.389	Compliant	
8	41.44007	-122.388	Compliant	
9	41.43922	-122.388	Compliant	Pole on private property behind locked gate. Pole verified is in the foreground of photos.
10	41.44122	-122.388	Compliant	
11	41.4407	-122.388	Compliant	
12	41.44134	-122.388	Compliant	
13	41.44281	-122.388	N/A	Not Accessible
14	41.44211	-122.388	Compliant	
15	41.44148	-122.386	Compliant	
16	41.44128	-122.387	Compliant	
17	41.44183	-122.384	Compliant	
18	41.44176	-122.384	Compliant	
19	41.44161	-122.385	Compliant	
20	41.44216	-122.381	Compliant	
21	41.44206	-122.382	Compliant	
22	41.44191	-122.383	N/A	Not Accessible

ObjectID	Latitude	Longitude	Field Verification Finding	Notes
23	41.44235	-122.38	Compliant	
24	41.4429	-122.378	N/A	Not Accessible
25	41.44277	-122.378	Compliant	
26	41.44257	-122.379	N/A	Not Accessible
27	41.44323	-122.376	N/A	Not Accessible
28	41.44304	-122.377	N/A	Not Accessible
29	41.4435	-122.375	Compliant	
30	41.44337	-122.375	Compliant	
31	41.44144	-122.362	N/A	Not Accessible
32	41.44197	-122.362	N/A	Not Accessible
33	41.44336	-122.362	N/A	Not Accessible
34	41.44388	-122.362	N/A	Located on private property with no road access. Not visible from accessible areas.
35	41.44423	-122.362	N/A	Not Accessible
36	41.4448	-122.362	Compliant	
37	41.44511	-122.362	Compliant	
38	41.44594	-122.362	Compliant	
39	41.44679	-122.362	Compliant	
40	41.4435	-122.387	Compliant	

Expulsion Fuse Replacement (GH-05)

Section 8.1.2.12 of **PacifiCorp's 2023 WMP** described PacifiCorp's expulsion fuse replacement program as a project to install new and CAL FIRE-approved non-expulsion

fuses, including power fuses and current limiting fuses, to replace existing expulsion fuse equipment. PacifiCorp is proactively replacing expulsion fuses throughout the HFTD and is completing replacement of expulsion fuses concurrent with line rebuild where practical to utilize resources most efficiently.

PacifiCorp's 2023 WMP and **QDR** states that PacifiCorp's target number of expulsion fuse replacements in 2023 was 5,000. However, per the **Q4 ARC** and **Q4 QDR** PacifiCorp's actual progress on expulsion fuse replacements was reported as 4,147 fuse locations in 2023. PacifiCorp reports being unable to complete 853 expulsion fuse replacements due to material delivery delay, but they plan to complete all planned replacements in 2024.

To validate the number of completed expulsion fuse replacements, the IE requested a full list of 4,147 expulsion fuses replaced, listed by unique identifier in *DR 2*. In response, PacifiCorp provided document **IE_DR2_15_Expulsion Fuse**, which included the complete list of requested items. The IE requested a random sample of 38 items (33 plus a contingency) from the list provided in *DR 9*. In response, PacifiCorp provided several pieces of evidence, including workorders with screenshots demonstrating the replacements were made.

For field verification, the IE conducted a visual inspection of the sampled expulsion fuses that were selected. The IE was able to verify 30 of the 38 sampled expulsion fuses. The remaining 8 could not be verified due to accessibility issues related to the fuses being located on private property in heavily wooded areas.

Finding

Based on evidence provided and reviewed as well as the field verification the IE has reasonable assurance that PacifiCorp did not meet its initiative target of 5,000 expulsion fuse replacements in 2023.

Table 2-6: Field Verification

ObjectID	Latitude	Longitude	Field Verification Finding	Notes
1	41.79954493	-123.3740062	Compliant	
2	41.79663012	-123.3750045	Compliant	
3	41.79723733	-123.3758076	Compliant	
4	41.79724354	-123.3750056	Compliant	
5	41.79618774	-123.3738601	Compliant	

ObjectID	Latitude	Longitude	Field Verification Finding	Notes
6	41.79740299	-123.3745096	Compliant	
7	41.79673775	-123.373533	Compliant	
8	41.79699971	-123.3742238	Compliant	
9	41.79761643	-123.3731289	N/A	On private property in wooded area. No access or visual verification possible.
10	41.79786054	-123.3739542	Compliant	
11	41.79812656	-123.3746667	Compliant	
12	41.79846865	-123.3744966	Compliant	
13	41.79955644	-123.3734017	Compliant	
14	41.79593101	-123.3727763	N/A	Unable to access.
15	41.79704129	-123.3729028	Compliant	
16	41.46565687	-122.9025831	Compliant	
17	41.46550514	-122.9011203	Compliant	
18	41.46735369	-122.8992513	Compliant	
19	41.46823746	-122.8968964	Compliant	
20	41.52843787	-122.3653355	Compliant	
21	41.5292866	-122.3653249	Compliant	
22	41.79887832	-123.3751838	Compliant	
23	41.79861486	-123.3744363	Compliant	
24	41.44191677	-122.379391	Compliant	
25	41.44388955	-122.3738352	Compliant	
26	41.438397	-122.377519	Compliant	

ObjectID	Latitude	Longitude	Field Verification Finding	Notes
27	41.78321127	-123.0597655	N/A	On private property in wooded area. No access or visual verification possible.
28	41.7826113	-123.0657776	N/A	On private property in wooded area. No access or visual verification possible.
29	41.78353055	-123.0636974	Compliant	
30	41.78317736	-123.0576768	N/A	On private property in wooded area. No access or visual verification possible.
31	41.78479056	-123.0540109	N/A	On private property in wooded area. No access or visual verification possible.
32	41.78355643	-123.0620141	Compliant	
33	41.78308397	-123.0590099	N/A	On private property in wooded area. No access or visual verification possible.
34	41.78447559	-123.0545461	N/A	On private property in wooded area. No access or visual verification possible.
35	41.78355152	-123.0632333	Compliant	
36	41.78351491	-123.0611265	N/A	On private property in wooded area. No access or visual verification possible.
37	41.78391582	-123.0561257	N/A	On private property in wooded area. No access or visual verification possible.
38	41.78266738	-123.064936	N/A	On private property in wooded area. No access or visual verification possible.
39	41.78409934	-123.0553819	N/A	Unable to access.
40	41.53098903	-122.3653956	Compliant	

ObjectID	Latitude	Longitude	Field Verification Finding	Notes
41	41.53011231	-122.365226	Compliant	
42	41.52764308	-122.3653437	Compliant	

Pole Clearing (VM-05)

Consistent with California Public Resource Code (PRC) § 4292, PacifiCorp conducts pole clearing activities involving removal of all vegetation within the required radius to clear space around a subject pole, removal of dead vegetation from 8 feet to the highest point of the conductor and applying herbicides and/or soil sterilant to prevent any vegetation regrowth.

PacifiCorp's 2023 WMP stated that the target number of pole clearings would include 3,126 poles brushed in LRA HFTD areas.

To validate the 3,126 poles brushed, the IE performed a desktop review and a field verification. For the review and verification, the IE requested a list of all pole clearings for 2023, in *DR 3*. In response, PacifiCorp provided document **PpPoleTreatmentDetail_2024-05-08_17-53-03**, which contained the list of requested items. The IE sampled from the list provided and submitted *DR 9,* which included a random sample of 38 items selected from the population to verify work completed through work orders, inspection sign offs, or similar, this is also the same list used for the field verifications. In response, PacifiCorp provided **Item 04 Attachments** folder, which contained workorders with screenshots demonstrating the result of the clearing for the sampled circuits.

For field verifications, the IE physically verified the clearing of the sampled poles. At the time of verification, there were several poles with vegetation regrowth. The IE verified the poles had been cleared in Q1 and Q2 of 2023, and the field verification was performed at least one year after the clearings. Regrowth is to be expected, and therefore, no issues specific to the IE 2023 WMP review for this initiative were identified.

The results of the inspections are in Table 2-7 below. Compliant/Not Compliant was determined through the standard of both PRC 4293 and WMP descriptions of minimum standards.

Finding

Based on the desktop review of the evidence provided and field verifications performed, the IE has reasonable assurance that PacifiCorp met the pole clearing target of 3,126 poles in 2023.

Table 2-7 - Field Inspection Results

Object ID	District	Latitude	Longitude	Desktop Verification	Field Verification	Field Verification Comments
1	MT SHASTA	41.43815256	-122.3805474	Verified	See comments	Regrowth - Grasses in circle
2	MT SHASTA	41.43815806	-122.3793697	Verified	See comments	Regrowth - Grasses in circle
3	MT SHASTA	41.43813502	-122.3788557	Verified	Verified	
4	MT SHASTA	41.43813958	-122.3783988	Verified	Verified	
5	MT SHASTA	41.43815738	-122.3799185	Verified	See comments	Regrowth - Grasses in circle
6	MT SHASTA	41.43791781	-122.3793742	Verified	See comments	Regrowth - Flammable grasses seen in Forbes circle
7	MT SHASTA	41.43887676	-122.3804759	Verified	See comments	Regrowth - Dry grasses in circle
8	MT SHASTA	41.43884624	-122.3799091	Verified	See comments	Regrowth - Dry grasses in circle
9	MT SHASTA	41.43888371	-122.3793609	Verified	See comments	Regrowth - 1 ft grasses in circle
10	MT SHASTA	41.43885434	-122.3789697	Verified	See comments	Regrowth - 3 ft. grasses in circle
11	MT SHASTA	41.43745233	-122.3792183	Verified	See comments	Regrowth - 3 ft. grasses in circle

Object ID	District	Latitude	Longitude	Desktop Verification	Field Verification	Field Verification Comments
12	MT SHASTA	41.43741931	-122.3787735	Verified	See comments	Regrowth - Short grasses seen in circle
13	MT SHASTA	41.43837522	-122.3773205	Verified	See comments	Regrowth - Grasses in circle
14	MT SHASTA	41.4373896	-122.377716	Verified	See comments	Regrowth - 3 ft. Forbes in circle
15	MT SHASTA	41.43741955	-122.3782561	Verified	See comments	Regrowth - Short grasses seen in circle
16	MT SHASTA	41.43705004	-122.3788385	Verified	See comments	Regrowth - Grasses in circle outside fence
17	MT SHASTA	41.43707995	-122.3789389	Verified	See comments	Regrowth -Grasses in circle outside fence
18	MT SHASTA	41.43708453	-122.3782678	Verified	See comments	Regrowth - Inside fence is irrigated
19	MT SHASTA	41.43705757	-122.3773463	Verified	Verified	
20	MT SHASTA	41.43926565	-122.3788896	Verified	See comments	Regrowth - 4 ft grasses in circle
21	MT SHASTA	41.43930151	-122.3770049	Verified	See comments	Regrowth - 4 ft. grasses growing in circle
22	MT SHASTA	41.4392753	-122.3776286	Verified	See comments	Regrowth - 4 ft. grasses growing in circle

Object ID	District	Latitude	Longitude	Desktop Verification	Field Verification	Field Verification Comments
23	MT SHASTA	41.43946207	-122.3751955	Verified	See comments	Regrowth - 4 ft. grasses. Looks to have been grubbed last year
24	MT SHASTA	41.43924675	-122.3765022	Verified	See comments	Regrowth - 4 ft. grasses growing in circle
25	MT SHASTA	41.44193928	-122.3793784	Verified	See comments	Regrowth - 4 ft grasses in circle
26	MT SHASTA	41.43927328	-122.3808572	Verified	See comments	Regrowth - 3 ft. grasses in circle
27	YREKA	41.45754244	-122.8950777	Verified	Verified	
28	YREKA	41.45720778	-122.8959154	Verified	Verified	
29	YREKA	41.45858577	-122.8931084	Verified	Verified	
30	YREKA	41.45922023	-122.8958603	Verified	Verified	
31	YREKA	41.45932454	-122.8967178	Verified	See comments	Regrowth - Flammable material in 10-foot area
32	YREKA	41.45849268	-122.893306	Verified	Verified	
33	YREKA	41.45835305	-122.8936052	Verified	Verified	
34	YREKA	41.45816354	-122.8939661	Verified	Verified	
35	YREKA	41.45731539	-122.8942036	Verified	Verified	
36	YREKA	41.4573368	-122.8948548	Verified	Verified	
37	YREKA	41.45823039	-122.894406	Verified	Verified	

Object ID	District	Latitude	Longitude	Desktop Verification	Field Verification	Field Verification Comments
38	YREKA	41.45774483	-122.8937567	Verified	Verified	

2.1.3 Quantifiable – Not Field Verifiable

2.1.3.1 Review of Initiatives

This section should include the Independent Evaluator's findings and assessment of electrical corporation compliance with activities that fall into the Large Volume Quantifiable Goal/Target – Not Field Verifiable category. Independent Evaluators shall select a sample to seek additional documentation and conduct SME interviews, as needed, to verify that the activity was completed and executed in accordance with all applicable work procedures and protocols. Include the electrical corporation's list of initiatives that fall into the Large Volume Quantifiable Goal/Target – Not Field Verifiable category, including respective goals/targets for each, in the Appendix or within the body of this subsection.

Table 2-8 - Quantifiable Goal/Target – Not Field Verifiable Summary

Initiative Number / ID	Initiative Name	Population Size / Target	Sample Size	#, % Verified	#, % Verification Failed
AI-01	Transmission Patrol inspections	11,678	33	36, 100%	0, 0%
AI-02	Distribution Patrol Inspections	50,444	33	36, 100%	0, 0%
AI-03	Transmission Detail Inspections	2,714	33	36, 100%	0, 0%
AI-04	Distribution Detail Inspections	8,627	33	36, 100%	0, 0%
AI-05	Transmission Intrusive Pole Inspections	935	29	33, 100%	0, 0%
AI-06	Distribution Intrusive Pole Inspections	2,398	33	36, 100%	0, 0%
AI-07	Enhanced (Infrared) Inspections in Transmission Lines	700	29	29, 100%	0, 0%
AI-08	Enhanced (Infrared) Inspections in Distribution Lines	757	29	29, 100%	0, 0%
AI-11	Substation Inspections	449	29	33, 100%	0, 0%

Initiative Number / ID	Initiative Name	Population Size / Target	Sample Size	#, % Verified	#, % Verification Failed
AI-12	QA/QC of Asset Inspections	775	29	33, 100%	0, 0%
GH-04	Relay/Recloser/CB Replacements / Upgrade	36	16	16, 100%	0, 0%
MA-01	Weather Station Maintenance	93	23	28, 100%	0, 0%
SA-01	Installation of weather stations	12	9	10, 100%	0, 0%
SA-02	Distribution Fault Anticipation (DFA) Sensor Pilot	2	2	2, 100%	0, 0%
SA-03	Smoke and Air Quality Sensors	20	16	16, 100%	0, 0%
SA-04	Wildfire Detection Network	2	2	2, 100%	0, 0%
VM-01	Detailed Inspection – Distribution	829	18[9]	18, 100%	0, 0%
VM-02	Detailed Inspection - Transmission	264	10[10]	10, 100%	0, 0%

[9] A unique identifier could not be provided for line miles so work orders were sampled, and the IE verified the miles contained within those work orders was greater than 29.

[10] A unique identifier could not be provided for line miles so work orders were sampled, and the IE verified the miles contained within those work orders was greater than 29.

Initiative Number / ID	Initiative Name	Population Size / Target	Sample Size	#, % Verified	#, % Verification Failed
VM-03	Patrol Inspection - Distribution	1,027	18[11]	18, 100%	0, 0%
VM-04	Patrol Inspection - Transmission	329	18[12]	18, 100%	0, 0%

[11] A unique identifier could not be provided for line miles so work orders were sampled, and the IE verified the miles contained within those work orders was greater than 33.

[12] A unique identifier could not be provided for line miles so work orders were sampled, and the IE verified the miles contained within those work orders was greater than 29.

Transmission Patrol Inspections (AI-01)

Section 8.1.3.1 of **PacifiCorp's 2023 WMP** described the transmission patrol inspections program as being consistent with California GO 95 and 165 regulations, and that the inspections are conducted by viewing each facility from a vantage point allowing reasonable viewing access. These inspections are intended to identify damage or defects to the transmission and distribution system, or other potential hazards or right-of-way-encroachments that may endanger the public or adversely affect the integrity of the electric system, including items that could potentially cause a spark. The annual target for 2023 was identified as 11,754 in the 2023 WMP; however, the actual progress indicated that 11,678 transmission patrol inspections were conducted. The IE issued *DR 9* to gain clarity on the discrepancy, to which PacifiCorp explained that the, "2023 target of 11,754 for overhead transmission visual assurance (Safety) inspections was determined in the fall of 2022 based on all currently active structures at the time. The 76 remaining inspections correlate with retired structures."[13]

To verify that the 11,678 transmission patrol inspections were conducted, the IE requested a full list of the 11,678 transmission inspections performed listed by unique identifiers. In response to *DR 2,* PacifiCorp provided evidence that all 11,678 transmission inspections were performed and were listed within the evidence document with a unique identifier (AI-01_TRANS_SAFETY tab of attachment **CA_INSPECTIONS_2023_SUMMARY.xlsx**). The IE requested a sample size of 33 transmission inspections to verify that the inspections were conducted to the standard described within **PacifiCorp's 2023 WMP**. PacifiCorp provided the 36 samples of their transmission patrol inspections in *DR 4* in addition to an evidence document to help the IE decipher the sample inspection screen documents (**UNDERSTANDING_THE_FP22_INSPECTION_SCREEN.PDF**).

Finding

Based on the desktop review of the evidence provided and field verifications performed, the IE has reasonable assurance that PacifiCorp did not meet its target of 11,754 transmission patrol inspections in 2023. However, the IE has reasonable assurance that the reported 11,678 transmission patrol inspections were conducted to a standard consistent with what is described in their 2023 WMP.

Distribution Patrol Inspections (AI-02)

Section 8.1.3.1 of **PacifiCorp's 2023 WMP** describes the distribution patrol inspections program as being consistent with California GO 95 and 165 regulations, and that the inspections are conducted by viewing each facility from a vantage point allowing reasonable viewing access. These inspections are intended to identify damage or defects to the transmission and distribution system, or other potential hazards or right-of-way-encroachments that may endanger the public or adversely affect the integrity of the electric system, including items that could potentially cause a spark. The annual

[13] PacifiCorp_DR 9_FINAL.xlsx

target for 2023 was identified as 50,474 in the 2023 WMP; however, the actual progress indicated that 50,444 distribution patrol inspections were conducted. The IE issued *DR 10* to gain clarity on the discrepancy, PacifiCorp provided evidence document, **CA_INDEPENDENT_EVALUATOR_DR10_2-5.xlsx**, and held an interview with the SMEs that explained that "the differences between the initiative target and reported counts are due to either retired or ignored facility points. The inspection plan was finalized in the fall of 2022 based on all currently active structures and assumptions at the time. The structures listed as "PPLD_OHTRANS - INSP SHOULD BE OFF TRANS SIDE" are distribution under build structures, where the inspection should be on the transmission side not the distribution side (they were added to the plan in error)."[14]

To verify that the 50,444 distribution patrol inspections were conducted, the IE requested a full list of the 50,444 distribution inspections performed listed by unique identifiers. In response to *DR 2,* PacifiCorp provided evidence that all 50,444 distribution patrol inspections were performed, and they were listed within the evidence document with a unique identifier (AI-02_DIST_SAFETY tab of attachment **CA_INSPECTIONS_2023_SUMMARY.xlsx**). The IE requested a sample size of 33 distribution patrol inspections to verify that the inspections were conducted to the standard described within **PacifiCorp's 2023 WMP**. PacifiCorp provided the 36 samples of their distribution patrol inspections in *DR 4* in addition to an evidence document to help the IE decipher the sample inspection screen documents (**UNDERSTANDING_THE_FP22_INSPECTION_SCREEN.PDF**).

Finding

Based on the desktop review of the evidence provided and field verifications performed, the IE has reasonable assurance that the reported 50,444 patrol inspections were conducted to a standard consistent with what is described in their 2023 WMP. As described above, the IE will note that the year-end target value represented in the **Q4 QDR** is not accurate to the actual value used for tracking by PacifiCorp.

Transmission Detail Inspections (AI-03)

Section 8.1.3.2 of **PacifiCorp's 2023 WMP** described the transmission detail inspections program as an inspection performed to maintain regulatory compliance with California GO 95 and 165. PacifiCorp describe that they involve a careful visual inspection accomplished by visiting each structure, as well as inspecting adjacent spans between structures, which is intended to identify potential nonconformance with GO or other applicable state requirements, infringement by other utilities or individuals, defects, potential safety hazards, and deterioration of the facilities that need to be corrected to maintain reliable and safe service. The annual target for 2023 was identified as 2,715 transmission detail inspections in the 2023 WMP; however, per the **Q4 QDR**, actual progress was reported as 2,714 transmission detail inspections conducted. The IE issued *DR 10* to gain clarity on the discrepancy, PacifiCorp provided evidence document **CA_INDEPENDENT_EVALUATOR_DR10_2-5.xlsx**, and held an

[14] PacifiCorp_DR 10_FINAL.xlsx

interview with the SMEs who explained that “the differences between the initiative target and reported counts are due to either retired or ignored facility points. The inspection plan was finalized in the fall of 2022 based on all currently active structures and assumptions at the time. The structures listed as “PPLD_OHTRANS – INSP SHOULD BE OFF TRANS SIDE” are distribution under build structures, where the inspection should be on the transmission side not the distribution side (they were added to the plan in error).”[15] These clarifications resulted in an updated target that matched the completed 2,714 inspections.

To verify that the 2,714 transmission detail inspections were conducted, the IE requested a full list of the 2,714 inspections performed listed by unique identifiers. In response to *DR 2,* PacifiCorp provided evidence that 2,714 transmission detail inspections were performed, and they were listed within the evidence document with a unique identifier as requested by the IE (AI-03_TRANS_DETAIL tab of attachment **CA_INSPECTIONS_2023_SUMMARY.xlsx**). The IE requested a sample size of 33 transmission detail inspections to verify that the inspections were conducted to the standard described within **PacifiCorp’s 2023 WMP**. PacifiCorp provided the 36 samples of their transmission detail inspections in *DR 4* in addition to an evidence document to help the IE decipher the sample inspection screen documents (**UNDERSTANDING_THE_FP22_INSPECTION_SCREEN.PDF**).

Finding

Based on the desktop review of the evidence provided and field verifications performed the IE has reasonable assurance that the reported 2,714 transmission detail inspections were conducted to a standard consistent with what is described in their 2023 WMP. As described above, the IE will note that the year-end target value represented in the **Q4 QDR** is not accurate to the actual value used for tracking by PacifiCorp.

Distribution Detail Inspections (AI-04)

Section 8.1.3.2 of **PacifiCorp’s 2023 WMP** described the distribution detail inspections program as an inspection performed to maintain regulatory compliance with California GO 95 and 165. PacifiCorp describe that they involve a careful visual inspection accomplished by visiting each structure, as well as inspecting adjacent spans between structures, which is intended to identify potential nonconformance with GO or other applicable state requirements, infringement by other utilities or individuals, defects, potential safety hazards, and deterioration of the facilities that need to be corrected to maintain reliable and safe service. The annual target for 2023 was identified as 8,662 distribution detail inspections performed, however, the actual progress indicated that 8,627 distribution detail inspections were conducted in 2023. The IE issued *DR 10* to gain clarity on the discrepancy, PacifiCorp provided evidence document, **CA_INDEPENDENT_EVALUATOR_DR10_2-5.xlsx**, and held an interview with the SMEs that explained that “the differences between the initiative target and reported counts are due to either retired or ignored facility points. The inspection plan was

[15] PacifiCorp_DR 10_FINAL.xlsx

finalized in the fall of 2022 based on all currently active structures and assumptions at the time. The structures listed as "PPLD_OHTRANS - INSP SHOULD BE OFF TRANS SIDE" are distribution under build structures, where the inspection should be on the transmission side not the distribution side (they were added to the plan in error)."[16]

To verify that the 8,627 distribution detail inspections were conducted, the IE requested a full list of the 8,627 inspections performed listed by unique identifiers. In response to *DR 2*, PacifiCorp provided evidence that 8,627 distribution detail inspections were performed, and they were listed within the evidence document with a unique identifier as requested by the IE (AI-04_DIST_DETAIL tab of attachment **CA_INSPECTIONS_2023_SUMMARY.xlsx**). The IE requested a sample size of 33 distribution detail inspections to verify that the inspections were conducted to the standard described within **PacifiCorp's 2023 WMP**. PacifiCorp provided the 36 samples of their distribution detail inspections in *DR 4* in addition to an evidence document to help the IE decipher the sample inspection screen documents (**UNDERSTANDING_THE_FP22_INSPECTION_SCREEN.PDF**).

Finding

Based on the desktop review of the evidence provided and field verifications performed, the IE has reasonable assurance that the reported 8,627 distribution detail inspections were conducted to a standard consistent with what is described in their 2023 WMP. As described above, the IE will note that the year-end target value represented in the **Q4 QDR** is not accurate to the actual value used for tracking by PacifiCorp.

Transmission Intrusive Pole Inspections (AI-05)

Section 8.1.3.3 of **PacifiCorp's 2023 WMP** described the transmission intrusive pole inspections include pole-sounding, inspection hole drilling and excavation tests, that is designed to identify decay, wear, or woodpecker damage, assess the condition of wood poles, and identify the need for any treatment, repair or replacement. Like other inspection programs, intrusive inspections mitigate some wildfire risk by identifying and correcting conditions. In this case, the inspections identify poles for replacement or reinforcement to prevent potential structural failure of a pole that could lead to a potential wire down event and ignition risk. The intrusive pole inspections are performed consistent with the cycle prescribed in California GO 165. The annual target for 2023 was identified as 935 transmission intrusive pole inspections, the actual progress aligned with the annual target with 935 inspections completed.

To verify that the 935 transmission intrusive pole inspections were indeed conducted, the IE requested a full list of the inspections performed listed with unique identifiers. In response to *DR 2,* PacifiCorp provided evidence of 932 transmission intrusive pole inspections, each with a unique identifier, rather than the requested evidence of 935 transmission intrusive pole inspections (AI-05_TRANS_PTT tab of attachment **CA_INSPECTIONS_2023_SUMMARY.xlsx**). The IE held an interview with the SMEs to

[16] PacifiCorp_DR 10_FINAL.xlsx

understand the discrepancy between the evidence document and the target, PacifiCorp explained that “the differences between the initiative target and reported counts are due to either retired or ignored facility points. The inspection plan was finalized in the fall of 2022 based on all currently active structures and assumptions at the time.”

The IE requested a sample size of 29 transmission intrusive pole inspections to verify that the inspections were conducted to the standard described within **PacifiCorp’s 2023 WMP**. PacifiCorp provided the 33 samples of their transmission intrusive pole inspections in *DR 4* in addition to an evidence document to help the IE decipher the sample inspection screen documents (**UNDERSTANDING_THE_FP22_INSPECTION_SCREEN.PDF**).

Finding

Based on the desktop review of the evidence provided and field verifications performed, the IE has reasonable assurance that PacifiCorp completed the reported 932 transmission intrusive pole inspections to a standard consistent with what is described in their 2023 WMP. As described above, the IE will note that the year-end target value represented in the **Q4 QDR** is not accurate to the actual value used for tracking by PacifiCorp.

Distribution Intrusive Pole Inspections (AI-06)

Section 8.1.3.3 of **PacifiCorp’s 2023 WMP** described the distribution intrusive pole inspections include pole-sounding, inspection hole drilling and excavation tests, that is designed to identify decay, wear, or woodpecker damage, assess the condition of wood poles, and identify the need for any treatment, repair, or replacement. Like other inspection programs, intrusive inspections mitigate some wildfire risk by identifying and correcting conditions. In this case, the inspections identify poles for replacement or reinforcement to prevent potential structural failure of a pole that could lead to a potential wire down event and ignition risk. The intrusive poles inspections are performed consistent with the cycle prescribed in California GO 165. The annual target for 2023 was identified as 2,404 distribution intrusive pole inspections, however, the actual progress indicated that 2,398 distribution intrusive pole inspections were performed in 2023. The IE issued *DR 10* to gain clarity on the discrepancy, PacifiCorp provided evidence document, **CA_INDEPENDENT_EVALUATOR_DR10_2-5.xlsx**, and held an interview with the SMEs that explained that “the differences between the initiative target and reported counts are due to either retired or ignored facility points. The inspection plan was finalized in the fall of 2022 based on all currently active structures and assumptions at the time. The structures listed as “PPLD_OHTRANS - INSP SHOULD BE OFF TRANS SIDE” are distribution under build structures, where the inspection should be on the transmission side not the distribution side (they were added to the plan in error).”[17]

[17] PacifiCorp_DR 10_FINAL.xlsx

To verify that the 2,398 distribution intrusive pole inspections were conducted, the IE requested a full list of the 2,398 inspections performed listed by unique identifiers. In response to *DR 2,* PacifiCorp provided evidence that 2,398 distribution intrusive pole inspections were performed, and they were listed within the evidence document with a unique identifier as requested by the IE (AI-06_DIST_PTT tab of attachment **CA_INSPECTIONS_2023_SUMMARY.xlsx**). The IE requested a sample size of 33 distribution intrusive pole inspections to verify that the inspections were conducted to the standard described within **PacifiCorp's 2023 WMP**. PacifiCorp provided the 36 samples of their distribution intrusive pole inspections in *DR 4* in addition to an evidence document to help the IE decipher the sample inspection screen documents (**UNDERSTANDING_THE_FP22_INSPECTION_SCREEN.PDF**).

Finding

Based on the desktop review of the evidence provided and field verifications performed, the IE has reasonable assurance that the reported 2,398 distribution intrusive pole inspections were conducted to a standard consistent with what is described in their 2023 WMP. As described above, the IE will note that the year-end target value represented in the **Q4 QDR** is not accurate to the actual value used for tracking by PacifiCorp.

Enhanced (Infrared) Inspections in Transmission Lines (AI-07)

Section 8.1.3.6 of **PacifiCorp's 2023 WMP** described the enhanced (infrared) inspections in transmission lines program. Per the WMP, enhanced transmission line inspections have been implemented with a focus on proactive identification and prevention of equipment failures. The inspections are performed annually with the inspections scheduled during peak loading intervals. The inspections are conducted aerially with a helicopter and a licensed thermographer. The annual target for 2023 was identified as 700-line miles inspected; the reported progress aligned with the annual target of 700 lines of IR inspections on transmission lines completed.

Due to the unique nature of tracking line miles inspected, the IE requested a call to discuss the tracking methodology and determine the best way to pull a representative sample of the transmission lines inspected via IR technology. It was determined that a set of work orders would be provided from which the IE could pull a sample of locations to review additional detail. These work orders were provided in response to *DR 5* in file **CA Transmission Lines for IR Inspection.xlsx,** which included a count of total miles (701.22). From this workbook, the IE sampled 18 locations for further detail on inspection, which was returned in *DR 7* as a compilation of points inspected aligning with the sample (Excel workbook **AI-07_2023 Transmission IR Inspection Sampling.xlsx**). This workbook contains an extraction of detail on work completed, with verification including:

- Map_Sec_Line – verifying the number of points matched what was pulled/reported in the population data

- Inspection_Date – verifying the inspection occurred in 2023
- Inspection_Type – verifying it was an enhanced inspection

The IE also requested a phone call to discuss verification of completion with the SMEs who explained that the work is billed to an open purchase order for the inspections and completed work is uploaded into their tracking software where they monitor against the area scheduled for inspections to ensure all points are accounted for.

Finding

Based on the evidence provided of line mile tracking, and phone interviews with PacifiCorp personnel to review the tracking methods, the IE has reasonable assurance that PacifiCorp met their target of performing enhanced IR inspections on 700-line miles in 2023 and that the inspections were completed in accordance with their 2023 WMP.

Enhanced (Infrared) Inspections in Distribution Lines (AI-08)

Section 8.1.3.5 of **PacifiCorp's 2023 WMP** described the enhanced (infrared) inspections in distribution lines program. In the 2023 WMP, PacifiCorp explains that it initiated a pilot to build upon the successes of the transmission infrared inspection program described in section 8.1.3.6 and determine whether using infrared at distribution voltages could detect hot spots. In 2023, PacifiCorp planned to expand the 2022 pilot to include all distribution line miles within the HFTD to evaluate how the program might work on a larger scale. The annual target for 2023 was identified as 810-line miles inspected. Q4 progress fell short of the target at 757 distribution line miles inspected in 2023.

Due to the unique nature of tracking line miles inspected, the IE requested a call to discuss the tracking methodology to determine the best way to pull a representative sample of the reported 757 enhanced IR inspections on distribution lines. During the call, it was reported that the target for 2023 distribution inspections (810-line miles) was calculated by including all line miles within High Fire Threat District territory. At the end of the year, it was calculated that approximately 7% of the HFTD territory was not inspected as part of the IR activities, resulting in an estimated completion of 757-line miles. PacifiCorp's SMEs were able to demonstrate and describe their tracking process and verified the overall population via phone interviews, screensharing of tracking software, and extraction of work order information. To sample the inspections, it was determined that a set of circuits would be provided from which the IE could pull a sample of locations inspected, these circuits were provided in response to *DR 5* in file **CA Distribution Lines for IR Inspection.xlsx**, from this file, the IE requested additional detail on 25 circuit locations which were returned in response to *DR 7* (Excel workbook **AI-08_2023 Distribution IR Inspection Sampling.xlsx**). This workbook contains an extraction of detail on work completed, with verification including:

- Map_Sec_Line – verifying the number of points matched what was pulled/reported in the population data

- Inspection_Date – verifying the inspection occurred in 2023
- Inspection_Type – verifying it was an enhanced inspection

PacifiCorp noted that the shortage of inspections on distribution lines was primarily due to the HEAD fire impeding access to some of the distribution lines to be inspected during the peak load window when these lines are scheduled for inspection. Some areas were difficult to reach for the vehicle with the IR technology and a backup plan for inspections had not yet been developed. PacifiCorp notes that alternative methods for inspecting in the event the primary method is not suitable are under development to ensure full inspections are able to be completed in subsequent years.

Finding

Based on phone interviews with PacifiCorp personnel to review the tracking methods and the associated evidence extracted from the points inspected, the IE has reasonable assurance that PacifiCorp completed IR inspections approximately 93% of distribution lines within their HFTD territory. However, it is noted that this is short of their target by approximately 7%, due to the reasons described above.

Substation Inspections (AI-11)

Section 8.1.3.4 of **PacifiCorp's 2023 WMP** described the substation inspections program assesses both the substation security and key equipment condition, identifying potential corrective work or maintenance needed. This corrective work and maintenance mitigate the risk of misoperations that could negatively impact system operation and protection and control schemes in place. Substation equipment, such as circuit breakers and relays, are critical components of protection and control schemes and system operations and can have an impact on overhead line operation. The annual target for 2023 was identified as 451 substation inspections, the actual progress, however, was 449 actual substation inspections that were performed in 2023.

To verify the 449 substations reported as inspected, the IE requested the full list of inspections performed by unique identifiers in *DR 2*. In response, PacifiCorp provided an Excel workbook with lines for each of the 449 substation inspections performed listed by unique identifier (**CA_2023_Substation Inspection Detail.xlsx**). The IE requested a sample of 29 substation inspections to verify that the inspections were conducted to the standard described within **PacifiCorp's 2023 WMP**. PacifiCorp provided 33 samples of their substation inspections in *DR 4* that were used by the IE to validate that the inspections were performed to the standard listed in **PacifiCorp's 2023 WMP**. The sample inspections that were provided contained several points of information regarding inspections that were being performed within the report. The points that were used to verify completion of the substation inspections and to ensure they were performed to the standard described in the WMP included the date the substation inspection took place, and list of items that were verified, such as the status of the circuit breaker readings, and the results of the security inspection. Through viewing these items within

the sample substation inspection reports, the IE was able to determine whether the inspection met the criteria outlined by PacifiCorp within their WMP.

Finding

While PacifiCorp was short of their target, based on the evidence provided, the IE has reasonable assurance that the reported 449 substations inspections were conducted to a standard consistent with what is described in their 2023 WMP.

QA/QC of Asset Inspections (AI-12)

Section 8.1.6 of **PacifiCorp's 2023 WMP** described the quality assurance QA/QC of asset inspections as using a combination of process controls, software tools, company policy, and physical record checking to quickly identify inaccuracies for corrective action, evaluation, root cause analysis and system improvements. They explain that engaging in these initiatives is a cost-effective means to minimize the risk that inspection results are inaccurate or unreliable. Inspection results are reviewed continuously to confirm that inspections in the HFTD are meeting acceptable standards of performance. PacifiCorp's main QA/QC components, including enhancements to mitigate wildfire risk, are:

- Physical audits of at least 5% of planned inspections of facilities with a focus on fire threats and Tier 2 and Tier 3 prioritization.
- Software controls that prohibit freeform condition assignment, allowing for result controls, minimizing the amount of human error capable.
- A quarterly review of already audited results as a secondary check, including desktop audits.
- Annual training with inspectors to address audit findings and improve inspection reliability and accuracy.

The annual target for 2023 was identified as 736 QA/QC of asset inspections conducted, the actual progress for 2023 was 775 inspections completed, thereby surpassing PacifiCorp's annual target by 39 QA/QC asset inspections.

To verify, the IE requested the full list of the 775 QA/QC of asset inspections performed listed by unique identifiers in *DR 2*. In response, PacifiCorp provided evidence that the 775 inspections were performed, and they were listed within the evidence document with a unique identifier (AI-12_AUDIT tab of attachment **CA_INSPECTIONS_2023_SUMMARY.xlsx**). The IE requested a sample size of 29 QA/QC asset inspections to verify that the inspections were conducted to the standard described within **PacifiCorp's 2023 WMP**. PacifiCorp provided 33 samples of their QA/QC asset inspections in *DR 4* in addition to an evidence document to help the IE decipher the sample inspection screen documents (**UNDERSTANDING_THE_FP22_INSPECTION_SCREEN.PDF**).

Finding

PacifiCorp exceeded their target of 736 QA/QC of asset inspections by performing 775 inspections, and the IE has reasonable assurance that the reported inspections were conducted to a standard consistent with what is described in their 2023 WMP.

Relay/Recloser/CB Replacements / Upgrade (GH-04)

PacifiCorp's Installation of System Automation Equipment program, specifically relay, recloser replacement / upgrade is designed to enhance fault detection capabilities, reduce fault isolation time, improve fault location and record availability, and speed up restoration efforts. In their 2023 WMP, PacifiCorp reported a target of replacement / upgrade to 40 devices and reported in their **Q4 QDR** and ARC completion of 36 devices in 2023.

To verify the 36 devices reported as completed were in fact completed, the IE randomly sampled 16 devices and requested evidence of completion in the form of completed work orders, GIS data submissions, or charging authorization forms. In response to *DR 4*, PacifiCorp provided works orders, or charging authorization forms. The provided evidence contained the GhID (unique identifier), and completion date which the IE was able to verify against the provided population data information provided in *DR 2*. Of the 16 sampled devices all but one device matched the unique identifier and completion date. The one device that did not match the provided information showed a completion date that occurred in 2022. The IE was able to verify that all the 16 sampled items were completed.

Finding

Based on the evidence provide and reviewed, the IE has reasonable assurance that PacifiCorp did not meet their initiative target of completing 40 device replacements / upgrades in 2023. However, the IE does have reasonable assurance that PacifiCorp completed their reported 36 devices replacements/upgrades in 2023.

Weather Station Maintenance (MA-01)

PacifiCorp's Weather Station Maintenance program is an addition to its regular asset maintenance program and is performed to ensure all weather station types are "operational and reporting correct and accurate data." Three types of stations are inspected with varying frequencies, remote automated weather station (RAWS) and Portable weather stations are inspected on a 10-15 month cycle by the manufacturers and microstations are inspected by contract resources annually between April and July. For the 2023 year, PacifiCorp reported a target of inspecting 93 stations and reported completing all 93 of those inspections.

To verify the inspections were completed as described, the IE randomly sampled 23 stations[18] and requested evidence of the inspection such as signed inspection forms or similar. In response to *DR 4*, PacifiCorp provided work orders for 19 MicroStations, an Excel worksheet work order/site verification for one RAWS weather station, and two PDF packages of conformance certificates confirming maintenance on six portable weather stations.

The PDF work orders contained the equipment number (unique ID), latitude/longitude coordinates, site name, and a checklist of maintenance items to check to verify proper function, among other items. The IE verified site identifiers and reviewed the checklists for completeness and next steps if issues found (no issues were identified).

The Excel work order/site verification identified issues with guy wires that needed to be replaced. To verify that action was taken based on inspection, the IE requested evidence of a work order similar showing replaced guy lines. PacifiCorp confirmed that these were replaced and provided a work order showing the matching location with testing to confirm correct tension on the connected guy wires.

The remaining six items all showed maintenance and battery replacement by the manufacturer for serial numbers matching those requested with signed and dated certificates – no issues identified.

Finding

Based on a review of the evidence provided, the IE has reasonable assurance that PacifiCorp completed its weather station maintenance according to their program, performing maintenance on 93 stations in 2023. It was noted that three of the inspections were outside of the April – July window described in the program. Two were in March (still ahead of wildfire season, as described), and one was in August. The stations were all functional with no issues reported. The IE has reasonable assurance that PacifiCorp has achieved its objectives for weather station maintenance.

Installation of Weather Stations (SA-01)

Section 8.3.2 of **PacifiCorp's 2023 WMP** described the installation of weather stations program as a network of weather stations that provide 10-minute observations of temperature, humidity, wind speed, wind direction and wind gusts. Weather stations are calibrated annually before wildfire season to ensure accuracy of the data throughout fire season. There are three different types of weather stations used throughout the territory: microstations, RAWS, and portable stations. The microstations are stations installed directly on the utility infrastructure, distribution, or transmission poles, and are the most common type of weather station used in the weather station network. The RAWS can be installed in remote locations on a tri-pod structure. The portable stations

[18] *DR 2* provided the population and *DR 4* provided the random sample

are stations readily available for deployment in the event of extreme weather conditions to provide better granularity to the weather data collected.

PacifiCorp indicated that their annual target was to have 12 weather station units installed in 2023, the actual progress in 2023 was 15 units installed. To verify this information, the IE requested a full list of the 15 weather stations installed listed by unique identifier in *DR2*. In response, PacifiCorp provided evidence document, **IE_DR2_17_weather station installations.xlsx**, that listed the 15 installed weather stations listed with unique identifiers. The IE sampled from the list provided and submitted *DR4*, which requested detailed documentation demonstrating completion of nine of the installed weather units. PacifiCorp provided detailed documentation in the form of work orders for ten installed weather stations, which included images of the installed units, location, manufacturer information, date of completion, among other details regarding the installed units. The IE reviewed the provided information to confirm that the work was completed as described in **PacifiCorp's 2023 WMP**.

Finding

Based on the evidence provided, the IE has reasonable assurance that PacifiCorp meet its target of installing 12 weather stations, by completing 15 weather station installations in 2023.

Distribution Fault Anticipation (DFA) Sensor Pilot (SA-02)

Section 8.3.3.1 of **PacifiCorp's 2023 WMP** described how they are using the DFA technology with Texas A&M University. This technology provides situational awareness of potential outages by measuring high and low current fault conditions on distribution circuits. Alerts from the DFA devices are communicated through cellular networks preemptively. The DFA devices are continuously monitoring to detect, classify and alert when high or low current fault conditions are measured. The alerts preemptively identify equipment along distribution circuits that could cause an outage.

PacifiCorp indicated that their annual target was to have 2 DFAs installed in 2023, which they met in Q1 of 2023 by completing the two installations. To verify this information, the IE requested details on the 2 DFA sensors that were piloted in *DR2* through proof of installation, work orders for completion, and evidence of data collected from devices. If such information was not available, the IE requested that PacifiCorp provide details on the pilot program and its outputs or similar information to demonstrate this target was met. In response to this data request, PacifiCorp provided four evidence documents: **Lassen 5G79 - Live Data.png** and **Lassen 5G77 - Live Data.png** to demonstrate the live data from devices on the web portal; **Device Web Portal Connection.png** provided a screenshot showing the devices connected to the web portal managed by Texas A&M University; **Work Order #.png** that was the work order used to install the DFA devices as part of the new Lassen substation. The IE reviewed the provided information to confirm that the 2023 program targets were completed as described in **PacifiCorp's 2023 WMP**.

Finding

Based on the evidence provided, the IE has reasonable assurance that PacifiCorp completed the two DFA Sensor installations in accordance with their 2023 WMP.

Smoke and Air Quality Sensors (SA-03)

Section 8.3.4.1 of **PacifiCorp's 2023 WMP** described PacifiCorp's smoke and air quality sensors program, including that PacifiCorp installed 20 intelligent smoke and particulate sensors in the highest fire risk areas of its northern California service territory. PacifiCorp explained that this effort will support continued evaluation of the durability and accuracy of the sensors to support the Department of Homeland Security's Smart Cities Internet of Things (SCITI) Lab's wildland fire sensor program.

PacifiCorp indicated that their annual target was to install 20 smoke and air quality sensors in 2023. PacifiCorp met this target in Q1 of 2023 by completing the 20 installations. To verify this information, in *DR2*, the IE requested a list of the 16 smoke and particulate sensors installed listed by unique identifiers. In response, PacifiCorp provided evidence document **2023-03-02_Air Quality Sensor Install Report.docx**, which showed the date each installation occurred, serial numbers, facility point, pole number, GIS location, and an image of the installation.

Finding

Based on the evidence provided, the IE has reasonable assurance that PacifiCorp completed their 20 smoke and air quality sensors installations in accordance with their 2023 WMP.

Wildfire Detection Network (SA-04)

PacifiCorp has experience with implementing advanced wildfire detection technologies and fire modeling software solutions. PacifiCorp has installed high-definition cameras in other state service territories and plans to implement them in their northern California service territory.

For 2023, PacifiCorp indicated a target of installing two high-definition camera systems. The camera systems were described to include 2 HD, pan-tilt-zoom cameras, one of which would operate in "sentry" mode and continuously rotate 360 degrees. To verify the installation were completed, the IE submitted *DR2* for all documentation, including work orders and or data collected from the working cameras. In response, PacifiCorp provided document **2023-11_Invoice_No_1052_CA.pdf**, which was an invoice of work completed as of October 24, 2023, and included the two Panoramic cameras as described in the **2023 WMP**.

Finding

Based on the evidence provided, the IE has reasonable assurance that PacifiCorp completed the installation of two camera stations in accordance with the 2023 WMP.

Detailed Inspection – Distribution (VM-01)

PacifiCorp's detailed inspections of distribution electric lines and equipment is an inspection performed to maintain regulatory compliance with California GO 95 and 165. These inspections are performed on a planned cycle where vegetation along a circuit scheduled for maintenance is inspected to determine if pruning or removal is required.

PacifiCorp's 2023 WMP stated PacifiCorp's target number of inspections to complete in 2023 would cover 829 circuit miles.

To validate the 829 circuit miles completed, the IE requested supporting documentation, such as a list demonstrating tracking of inspections, in *DR5*. In response, PacifiCorp provided **2023_Contractor_Miles_Tracker_CA**, which contained a list of the 829 circuits and the miles inspected. The IE sampled from the list provided and submitted *DR7,* which included a random sample of 18 circuits selected from the population to verify completed through work orders, inspections sign offs, or similar.

Included in the **Attach Item 3** folder response to *DR7* was inspection exception reports that identified the required work (prune, removal, etc.), including inspection dates, inspection type, name of inspector, facility point, and more for each inspection sampled and the details of the associated work performed in response to the inspection. In addition, PacifiCorp provided the audit records demonstrating verification the work was performed. The IE reviewed the provided documentation against the sample set requested to confirm that the work was completed as described and within the noted timeframe.

Finding

Based on the evidence provided, the IE has reasonable assurance that PacifiCorp completed 829 circuit miles of and vegetation clearances around distribution electrical lines and equipment.

Detailed Inspection – Transmission (VM-02)

PacifiCorp's detailed inspections of transmission electric lines and equipment are performed to maintain regulatory compliance with California GO 95 and 165. These inspections are performed on a planned cycle where vegetation along a circuit scheduled for maintenance is inspected to determine if pruning or removal is required.

PacifiCorp's 2023 WMP stated PacifiCorp's target number of inspections to complete in 2023 inspections covering 264 circuit miles.

To validate the 264 circuit miles were completed, the IE requested supporting documentation, such as a list demonstrating tracking of inspections, in *DR5*. In response, PacifiCorp provided **2023_Contractor_Miles_Tracker_CA**, which contained a list of the 264 circuits and the miles inspected. The IE sampled from the list provided and submitted *DR7, which* included a random sample of ten circuits selected from the population to verify completed through work orders, inspection sign offs, or similar.

Included in the **Attach Item 4** folder response to *DR7* was inspection exception reports that identified the required work (prune, removal, etc.) including inspection dates, inspection type, name of inspector, facility point, and more for each inspection sampled and the details of the associated work performed in response to the inspection. In addition, PacifiCorp provided the audit records demonstrating the work was performed. The IE reviewed the provided documentation against the sample set requested to confirm that the work was completed as described and within the noted timeframe.

Finding

Based on the evidence provided, the IE has reasonable assurance that PacifiCorp completed 264 circuit miles of vegetation clearances around transmission electrical lines and equipment.

Patrol Inspection – Distribution (VM-03)

PacifiCorp conducts annual vegetation patrol inspections, generally of distribution lines that are off cycle and of those lines where the detailed inspection is not completed prior to the height of the fire season patrolled inspections of transmission and distribution electric lines and equipment is an inspection performed to maintain regulatory compliance with California GO 95 and 165. These inspections are performed to further reduce wildfire risk in the HFTD.

PacifiCorp's 2023 WMP states that PacifiCorp's target number of inspections to complete in 2023 would cover 1,027-line miles.

To validate the 1,027-line miles were completed, the IE requested supporting documentation, such as a list demonstrating tracking of inspections, in *DR5*. In response, PacifiCorp provided **2023_Contractor_Miles_Tracker_CA**, which contained a list of the 264 miles inspected, and the associated lines. The IE sampled from the list provided and submitted *DR 7,* which included a random sample of 18 lines selected from the population to verify completed through work orders, inspections sign offs, or similar.

Included in the **Attach Item 5** folder response to *DR 7* was inspection exception reports that identified the required work for clearing including inspection dates, inspection type, name of inspector, facility point, and more for each inspection sampled and the details of the associated clearings performed in response to the inspection. In addition, PacifiCorp provided the audit records demonstrating the work was performed. The IE reviewed the provided documentation against the sample set requested to confirm that the work was completed as described and within the noted timeframe.

Finding

Based on the evidence provided, the IE has reasonable assurance that PacifiCorp completed 1,027-line miles of vegetation clearances around distribution electrical lines and equipment.

Patrol Inspection – Transmission (VM-04)

PacifiCorp conducts annual vegetation patrol inspections, generally of transmission lines that are not scheduled for detail inspection. These patrol inspections are performed to further reduce wildfire risk in the HFTD.

PacifiCorp's 2023 WMP states that PacifiCorp's target number of inspections to complete in 2023 would cover 329-line miles.

To validate the 329-line miles were completed, the IE requested supporting documentation, such as a list demonstrating tracking of inspections, in *DR 5*. In response, PacifiCorp provided **2023_Contractor_Miles_Tracker_CA**, which contained a list of the 329 miles inspected, and the associated lines. The IE sampled from the list provided and submitted *DR 7,* which included a random sample of 18 lines selected from the population to verify completed through work orders, inspections sign offs, or similar.

Included in the **Attach Item 6** folder response to *DR 7* were inspection exception reports that identified the required work for clearing including inspection dates, inspection type, name of inspector, facility point, and more for each inspection sampled. Details of the associated clearings performed in response to the inspection were also included. Audit records were provided verifying the clearing work was performed. The IE reviewed the provided documentation against the sample set requested to confirm that the work was completed as described and within the noted timeframe.

Finding

Based on the evidence provided, the IE has reasonable assurance that PacifiCorp completed 329-line miles of vegetation clearances around transmission electrical lines and equipment.

2.1.4 Qualitative Goal/Target

2.1.4.1 Review of Initiatives

This section should include the Independent Evaluator's findings and assessment of electrical corporation compliance with activities that fall into the Qualitative category. Independent Evaluators shall perform data/documentation review and conduct SME interviews, as needed, to verify completion of these activities and adherence to all applicable work procedures and protocols. Include the electrical corporation's list of initiatives that fall into the Qualitative, including respective goals/targets for each, in the Appendix or within the body of this subsection.

Table 2-9 - Qualitative Goal/Target Summary

Program Category	WMP Identifier	2023 Target
CO-01	Partner with public safety partners in communities throughout California regarding wildfire safety and preparedness and PSPS	Conduct one pre- and post-fire season customer survey
CO-02	Engagement with Access and Functional Needs Populations	Provide medical certificate in one additional language
CO-03	Partner with public safety partners in communities throughout California regarding wildfire safety and preparedness and PSPS	Completion of updates to wildfire safety website, wildfire safety email blast
EP-01	Emergency Preparedness Plan	Complete and implement outage procedure – Restoration Annex
EP-02	External collaboration and coordination	Conduct 1 Functional Exercise, tabletop exercise, workshop, and preparedness fair / CRC demo
EP-03	Public Safety Partner Portal	Testing and implementation of full portal functionality complete
EP-05	Customer Support in Wildfire and PSPS Emergencies	Portable Battery Rebate Program Participation
GO-01	cFCI Maintenance & Support	Update all ZM1s to firmware 2.1.0.2 and get the online % to 98%

Program Category	WMP Identifier	2023 Target
GO-02	Grid Response Procedures and Notifications	Personnel Work Procedures and Training in Conditions of Elevated Fire Risk
RA-01	Risk modeling using WRRM	Identification of circuits with highest ignition risk
RA-01	Public Safety Power Shutoff (PSPS) Risk Assessment Solution	Solution in testing stage
RA-02	Risk map refresh	Testing of proposed changes completed and validated by 3rd party reviewer
RA-03	Risk Spend Efficiency (RSE) Modeling Implementation	Risk Spend Efficiency Capabilities Implemented
SA-05	Advanced Forecasting and Situational Awareness	Improve integration of weather data into PacifiCorp's systems Full integration of 30-year historic weather data analysis into operational and planning processes Develop WRF ensemble configuration and self-organizing map forecast system Continue optimization and improvement of machine learning (ML) models' access to 30-year historic weather data analysis

Partner with public safety partners in communities throughout California regarding wildfire safety and preparedness and PSPS (CO-01)

PacifiCorp explained in section 8.5.2 of their **2023 WMP** that it maintains a flexible, dynamic education, and awareness strategy that is informed by customer survey data, community stakeholder input, and community needs. Some communication efforts target the company's entire customer base, while other communications target communities in the HFTD with some overlap into non-HFTD locations depending on the media market and distribution channel. Overall, PacifiCorp's outreach includes information that can be heard, watched, discussed, and read in a variety of ways with the goal of accessibility and understandability.

PacifiCorp's target for 2023 was to conduct one pre-season survey once a year in Q2, and one post-wildfire season customer survey once a year in Q4. The IE requested

evidence of this to verify PacifiCorp's completion of this initiative in *DR 8*. In response to this evidence request, PacifiCorp provided 1 example of the results of their pre-wildfire season survey that was dated March 2023 (**CO-01_2023-03_Pre-Wildfire Season Survey Results.pptx**), and one example of their post-wildfire season survey that was dated November 2023 (**CO-01_2023-11_Post-Wildfire Season Survey Results.pptx**).

The pre- and post-wildfire season survey evidence documents summarized the results, key findings, and recommendations. PacifiCorp's efforts stated that the objective of the survey was to, "measure the public's awareness of messaging related to wildfire preparedness and safety."[19] The post-wildfire season survey evidence document conveyed similar sentiments.

Finding

Based on the evidence reviewed, the IE has reasonable assurance that PacifiCorp met their 2023 target by completing 1 pre-season wildfire survey once a year in Q2, and one post-wildfire season customer survey once a year in Q4**.**

Engagement with Access and Functional Needs (AFN) Populations (CO-02)

Section 8.5.3 described PacifiCorp's engagement with access and functional needs population program as continuing to refine and enhance both identification of AFN customers and ongoing communication targeted to reach more AFN customers. From February 2022 to January 17, 2023, the company had a net increase of 314 customers who identified as AFN, which represents approximately a 67% increase in AFN customer identification over the year. The total AFN population on January 17, 2023 was 781 customers or approximately 1.7% of the company's customer base. While all medical baseline customers are identified as AFN customers, in 2023, PacifiCorp stated that it intends to increase outreach to all customers to identify more customers relying on medical equipment and to broaden the scope of customers who self-identify as AFN. Customers will receive communications about the medical baseline rate and a Spanish version of the medical baseline application will be available on the website this year.

The initiative target for 2023 as it pertains to the engagement with AFN population program was to provide medical certificates in one additional language. To verify that PacifiCorp met this target, the IE requested evidence of the medical certificate in one additional language in *DR 8.* In response to this evidence request, PacifiCorp provided a copy of Medical Certificate Program application in Spanish, with a date stamp at the bottom stating that it was curated in 2023 (**CO-02_Medical_Certificate_Spanish.pdf**).

Finding

Based on the evidence reviewed, the IE has reasonable assurance that PacifiCorp met their engagement with AFN population program 2023 target by providing medical certificates in one additional language**.**

[19] CO-01_2023-03_Pre-Wildfire Season Survey Results.pptx

Partner with public safety partners in communities throughout California regarding wildfire safety and preparedness and PSPS (CO-03)

PacifiCorp's 2023 WMP set a target to continue partnering with public safety partners in communities throughout California regarding wildfire safety and preparedness, and PSPS. Table 1 of the **Q4 QDR** set the annual target to complete updates to the wildfire safety website and wildfire safety email blast. PacifiCorp reported the status as complete in Q3 with the statement, "website updates and wildfire safety email blast complete." To validate that statement, the IE requested evidence demonstrating completion. In response PacifiCorp provided the following files and links:

- **PP-Wildfire-Safety-Preparedness-Email_2023.png**
- **https://www.pacificpower.net/es/opciones/asistencia/medica.html**
  - Evidence to demonstrate the addition of the Spanish Medical certificate
- **https://www.pacificpower.net/outages-safety/wildfire-safety/wildfire-safety-precautions.html**
  - Evidence of the enhanced safety settings web page
- **https://youtu.be/7ZPVUrrx8VU**
  - Evidence of the new PSPS video
- **https://www.pacificpower.net/content/dam/pcorp/documents/en/pacificpower/outages-safety/PP_Outage_Preparedness_Brochure.pdf**
  - Evidence of the new Preparing of Power Outages brochure in English
- **https://www.pacificpower.net/content/dam/pcorp/documents/es/pacificpower/PP_ES_Preparing_for_Power_Outages.pdf**
  - Evidence of the new Preparing of Power Outages brochure in Spanish
- **https://www.pacificpower.net/content/dam/pcorp/documents/en/pacificpower/outages-safety/wildfire-safety/Wildfire_Safety_Grid_Hardening_Brochure_PP.pdf**
  - Evidence of the new Building a Future-Ready Grid brochure

In addition to the evidence files and links provided, PacifiCorp also provided a statement that, "General wildfire safety and preparedness emails were sent to customers in batches from May 23, 2023 through June 5, 2023," as evidence of the email blast update completion.

In addition to the WMP and QDR targets, **PacifiCorp's ARC** stated that they participated in ongoing meetings with the wildfire advisory board, completed one tabletop exercise, one workshop, and one functional exercise, which was validated as part of the review for EP-02.

Finding

Based on the evidence provided and reviewed, the IE has reasonable assurance that PacifiCorp met their initiative target for 2023, completing the wildfire safety website and email blast updates, as well as the completion of one tabletop exercise, one workshop, and one Functional Exercise.

Emergency Preparedness Plan (EP-01)

PacifiCorp's 2023 WMP set a target to complete and implement an outage procedure for the Restoration Annex. The IE requested documentation to support completion of the procedure as part of *DR 8*. In response, PacifiCorp provided **10_Outage Procedures Restoration -2023.docx** which outlined the outage procedures for restoration. PacifiCorp also provided the following statement:

"In 2023, PacifiCorp updated a document to describe the general guidelines and priorities for system restoration.

During the emergency response plan update for 2024 – the content of the restoration annex was moved into the emergency response plan it is no longer a separate document."

In review of **10_Outage Procedures Restoration -2023.docx** the IE was able to determine that the document had an Origination Date and Last Revision Date of September 30, 2022, with a Last Review date of April 4, 2023. Based on those dates and the information contained within the procedure the IE has reasonable assurance that PacifiCorp met its initiative target.

Finding

Based on the evidence provided and reviewed the IE has reasonable assurance that PacifiCorp met their initiative target for 2023, completing and implementing an outage procedure for Annex.

External Collaboration and Coordination (EP-02)

PacifiCorp's 2023 WMP set a target to complete one Functional Exercise, one Table Top Exercise (TTX), and one Workshop. Table 1 of the **Q4 QDR** reported that initiatives status as completed in Q2 of 2023 with one Table Top Exercise and one Workshop completed in Q1 and one Functional Exercise in Q2. The IE requested documentation to support completion of the three activities as part of *DR 8*. In response, PacifiCorp provided the following list of files:

1. **CA TTX Sign-in Sheet.pdf**
2. **2023 PSPS TTX – Siskiyou County.pptx**
3. **2023 Siskiyou County TTX Post-Exercise Review.pdf**
4. **2023 PSPS Exercises PSP Participation_Pacificorp.xlsx**
5. **CA PSPS FE meetingAttendanceList.txt**
6. **CA Functional Exercise FPM and MSEL.pdf**
7. **2023 CA FE – EXPLAN.docx**
8. **PacifiCorp 2023 PSPS Functional Exercise Participant Guide.docx**
9. **2023 PSPS Siskiyou County FE.pdf**
10. **2023 PSPS FE - Siskiyou County – Cooperators Meeting.pptx**
11. **5-15 CalOES Form.pdf**
12. **5-17 CalOES Form.pdf**

13. **2023 CA PSPS FE chat transcript.docx**
14. **This is an Exercise PSPS De-Energization This is an Exercise.msg**
15. **This is an Exercise PSPS De-Energization This is an Exercise(2).msg**
16. **This is an Exercise PSPS De-Energization This is an Exercise(3).msg**
17. **This is an Exercise PSPS De-Energization This is an Exercise(4).msg**
18. **2023 Siskiyou County PSPS Functional Exercise AAR IP.pdf**
19. **CA Workshop.pptx**
20. **2023 PSPS Exercises PSP Participation_Pacificorp.xlsx**

Files 1-3 demonstrate completion of a Table Top Exercise conducted on March 28, 2023. Files 4-18 demonstrate completion of a Functional Exercise conducted on May15-18, 2023. Finally, files 19-20 demonstrate completion of a workshop conducted January 19, 2023. In additional to the detailed files referenced above PacifiCorp provided the following statement to provide additional detail to the activities conducted:

> "The Siskiyou County PSPS tabletop exercise was held March 28, 2023. The five-hour exercise focused on each phase from initial event notification through re-energization. The exercise was conducted in hybrid format including public safety partners, community-based and tribal organizations.
>
> On May 15-18, 2023, Pacific Power held a Functional Exercise planned for eight hours, over four days with attendees participating from their 'home' locations and virtually. The exercise scenario focused on weather and environmental conditions forecast to meet PSPS criteria initiating the PSPS playbook and response actions from the utility and public safety partners. Local, state, tribal and private organizations were invited to participate.
>
> A workshop was held January 19, 2023."

Finding

Based on the evidence provided and reviewed the IE has reasonable assurance that PacifiCorp met their initiative target for 2023, completion of one FE, one Table Top Exercise (TTX), and one workshop.

Public Safety Partner Portal (EP-03)

PacifiCorp's 2023 target for Public Emergency Communication Strategy initiative was the testing and implementation of the full Public Safety Partners portal. Table 1 of the **Q4 QDR** reported the initiative status complete in Q4 with the progress statement "web-based portal application complete." **PacifiCorp's ARC** also provides insight to their continued efforts on the initiative stated below.

> "Pacific Power continues to work through improvements to the PSP Portal. Planned improvements consist of ensuring compliance with California Public Utilities Commission (CPUC) web-based Public Safety Partner Portal requirements, interactive mapping requirements, and to support Pacific Power's

efforts to prioritize restoration, backup power evaluation, additional communications, and other resources before, after and during PSPS events."

The IE requested documentation to support the above made statements as part of *DR 8*. In response PacifiCorp provided the following files:

- **EP-03_Public Safety Partner Portal Screenshot_1**
- **EP-03_Public Safety Partner Portal Screenshot_2**
- **EP-03_Public Safety Partner Portal Webpage**

The first two files provide screen shots of the portals map-based landing page and the third file provided was a link to the portal home page. The provided files allowed the IE to validate the initiative status statements made by PacifiCorp for 2023.

Finding

Based on the evidence provided and reviewed, the IE has reasonable assurance that PacifiCorp met its initiative target for 2023. The portal screen shots and landing page URL demonstrate that PacifiCorp was able to implement a web-based Public Safety Partner portal that includes interactive maps.

Customer Support in Wildfire and PSPS Emergencies (EP-05)

PacifiCorp's 2023 initiative target for Customer Support in Wildfire and PSPS emergencies was to provide 44 portable batteries to customers for use during de-energization or PSPS events. PacifiCorp's ARC reported that only seven pre-qualified customers participated in the program. The IE requested written explanation for the under performance of the initiative as part of *DR 10*. In response to *DR 10*, PacifiCorp explained the approach to the program and the reasoning behind the missed initiative target.

"At the start of the 2023 program cycle, PacifiCorp provided its consultant, Richard Heath & Associates (RHA), with a list of 44 customers pre-qualified to participate in the program. RHA conducted outreach to all 44 customers to qualify those that: 1) could be reached, 2) were interested to participate and 3) were eligible to receive a free portable battery based on their backup power needs assessment. From previous years' lead conversion rates, RHA anticipated qualifying 10-20 customers out of the 44 customers in the list provided by PacifiCorp. For budgeting purposes, though, pricing for 44 customers (approximately $150K) was reported."

Finding

Based on the evidence provided and reviewed, the IE has reasonable assurance that PacifiCorp did not meet its initiative target for 2023 but did meet its risk reduction target for the initiative. The provided evidence and explanation demonstrate that PacifiCorp and its consultant made reasonable effort to provide batteries to 44 pre-qualified

customers and based on those efforts seven customers elected to participate in the program.

cFCI Maintenance & Support (GO-01)

PacifiCorp's 2023 Target was to update all ZM1's to firmware 2.1.0.2 and get the online percentage to 98%. Table 1 of the **Q4 QDR** reported the initiative status as complete in Q4 with "all online ZM1's have been updated to latest firmware." The IE requested documentation to support completion of the initiative as part of *DR 8*. In response, PacifiCorp provided the following files:

- **5C.15.pdf**
- **PAC-1000.pdf**
- **DR8 Item 6 Data.xlsx**

In review of **DR8 Item 6 Data.xlsx** the IE was able to determine that all ZM1's were updated to firmware 2.1.0.2 and that 99.09% of ZM1's were online at the close of 2023. The IE also reviewed **5C.15.pdf** and **PAC-1000.pdf** which provided detail to the device setting for the ZM1's and the operating procedure for periods of elevated wildfire risk respectively.

Finding

Based on the evidence provided and reviewed the IE has reasonable assurance that PacifiCorp met their initiative target for 2023, to update all ZM1's to firmware 2.1.0.2 and get the online percentage to 98%.

Grid Response Procedures and Notifications (GO-02)

PacifiCorp's 2023 Target was to continue to deploy EFR settings in conditions of elevated wildfire risk. The IE requested documentation to support PacifiCorp's continued deployment of EFR settings as part of *DR 8*. In response, PacifiCorp provided **PAC-1000.pdf**. The IE reviewed **PAC-1000.pdf** which outlines the operating procedures for Transmission and Distribution Assets during periods of elevated wildfire risk.

Finding

Based on the evidence provided and reviewed the IE has reasonable assurance that PacifiCorp met their initiative target for 2023, to continue to deploy EFR settings in conditions of elevated wildfire risk.

Risk Modeling Using WRRM (RA-01a)

As reported in the **2023 Q4 QDR**, PacifiCorp set a qualitative target for completing implementation of WRRM and ignition risk assessment in 2023 to determine circuits with the highest risk of ignition. In the **ARC** and **Q4 QDR**, progress on this initiative was reported as complete. The Q4 ARC describes circuits ranked using composite risk

scores. To verify this completion, the IE requested evidence of the completed risk assessment in *DR 9*. In response, PacifiCorp provided a narrative in a Word document (DR9 Item 7.doc) which described the work completed on ignition likelihood ranking (included in Table 15 of **PC_2024_Q1_Tables1-15_R0**, a publicly filed document). Additional work through this initiative is described below in the PSPS initiative.

Finding

After reviewing the evidence provided, the IE has reasonable assurance that this work was completed to the degree described in the ARC and WMP and that PacifiCorp continues to monitor and update their risk models to reflect up to date information on risk areas and ignition likelihood within their service territory.

Public Safety Power Shutoff Risk Assessment Solution (RA-01b)

The **Q4 QDR** and **ARC** described efforts to update risk and outcome planning across all areas. For their PSPS Risk Assessment Solution, PacifiCorp targeted a qualitative goal of adding PSPS risk assessment to their risk modeling as described in the section above. In *DR 9* the IE requested details on how spend for this initiative contributed to its progress and a description of overall progress. The response provided in narrative form in **DR9 Item 7.doc** describes labor spend for all risk assessment initiatives towards efforts internally at PacifiCorp and work with a third-party to accurately reflect HFRAs for the PacifiCorp service territory and specific efforts to calculate risk inputs and scoring for PSPS risk modeling. Labor spend was also validated through workbook **DR9 Item 7 Labor.xlsx** showing labor categories for risk reduction, hours, cost, etc. PacifiCorp reports that PSPS risk assessment inputs should be complete and ready to include in 2024 wildfire planning, on track with their reported 3-year targets.

Finding

Based on evidence provided for spend toward this effort and narrative descriptions, the IE has reasonable assurance that PacifiCorp is on track to meet objectives for incorporating modeling for PSPS risk into their risk assessments as reported in its WMP.

Risk Map Refresh (RA-02)

Similar to the above two initiatives, the risk map refresh is part of overall risk assessment to understand and rank geographic areas within PacifiCorp's High Fire Risk Areas (HFRA). To validate progress on this initiative, the IE requested evidence of spend and narrative description of how progress was made based on that spend in *DR 7*. In response, PacifiCorp provided **DR9 Item 7.doc** which provided narrative around efforts to refresh the HFRA mapping and resources to identify current risks and HFTD boundaries. Spend on this initiative was also validated through workbook **DR9 Item 7 Labor.xlsx** which included line items for a work order with labor category for updates risk mapping and a sample invoice (redacted) from third-party risk assessor Technosylva describing work performed. A screenshot of the updated mapped territories was also provided as an output of the process.

Finding

Based on the evidence provided and narrative descriptions, the IE has reasonable assurance that PacifiCorp achieved its goal of continuing to evaluate and update boundaries within HFRAs on regular cycles.

Risk Spend Efficiency (RSE) Modeling Implementation (RA-03)

PacifiCorp's 2023 WMP described ongoing efforts to evaluate fire risk reduction by spend through RSE calculations to determine where dollars spent will have the most impact on reduced wildfire risk to better target future initiatives in a risk-based way. These calculations take into account the above risk mapping efforts, among others, as well as available risk mitigating options to determine which mitigations offer the best reduction in risk for the cost. RSE calculations are part of PacifiCorp's continuous improvement efforts for wildfire mitigation planning. When additional information on progress for this initiative was requested in *DR 7*, the narrative returned in **DR9 Item 7.doc** stated that work on these efforts has been deferred to 2024.

Finding

The IE was not able to verify any progress on this initiative as work was pushed to 2024; however, the IE notes efforts toward risk planning and mapping will contribute to RSE calculations when resumed and that PacifiCorp is prepared with those inputs.

Advanced Forecasting and Situational Awareness (SA-05)

Section 8.3.5 described PacifiCorp's systems and procedures used to forecast weather within its service territory. These forecasts inform the electrical corporation's near-real-time-risk assessment and PSPS decision-making processes.

In 2023, PacifiCorp had a qualitative target to do the following:

1. 30-Year WRF Reanalysis - Improve accuracy of forecast and trend analysis
2. WRF Ensemble - Develop WRF Ensemble configuration
3. GEFS Self-Organizing Maps (SOMs) Ensemble Forecast Tool - Build historical SOM node array using ERA5 Reanalysis
4. Bias-corrected WRF Forecast Begin training machine learning models.

To verify efforts were being made for this target in 2023, the IE submitted a request for documentation demonstrating the milestones were completed as described, in *DR 8.* PacifiCorp provided document **SA-05_2024-06-04_Forecast**, which demonstrated item 1, 30-year WRF Reanalysis was completed. To verify the other three items, the IE held an interview with PacifiCorp personnel and included a review of the forecasting system. During the interview the IE verified items 2 and 3 had met the target. Item 4 was listed for progress in 2023, however during the year PacifiCorp determined the project would need to be extended to 2025 for initiation. Document **SOMS output_061324** is a

screenshot for the ensemble configuration and Ensemble forecast tool, items 2 and 3, respectively.

Finding

Based on the evidence provided and narrative descriptions, the IE has reasonable assurance that PacifiCorp is continuing its qualitative efforts to improve weather forecasting systems.

2.1.5 Trends and Themes

Include any trends or recurring themes that the Independent Evaluator found while assessing electrical corporation compliance with quantifiable, field verifiable, or qualitative initiatives.

The IE did not note any significant trends or themes with respect to PacifiCorp's quantifiable, field verifiable, or qualitative initiatives.

2.2 Verification of Funding

The Verification of Funding section should document all instances in which WMP activities were funded less than 100 percent. For all such instances, the Independent Evaluator shall request and document electrical corporation explanation. The IE shall determine if targets have been met for underfunded initiatives. For all such instances, where the targets were unmet, the IE shall determine if the electrical corporation met the risk reduction intent for the initiative.

Fill out the table below containing initiatives which the Independent Evaluator found to be funded less than 100 percent.

Table 2-10 - Verification of Funding Summary

2023 Initiative Number/ID	Initiative Name	2023 WMP Proposed Spend Amt. ($ Thousands)	Actual Spend Amt. ($ Thousands)	Detail on Funding Discrepancy	Satisfied Risk Reduction Goal
AI-02	Distribution Patrol Inspections	$308	$286	All the required work under this initiative was completed and fully funded. The plan cost was based on an estimated amount. The initiative was completed for an actual cost less than originally estimated.	Yes
AI-03	Transmission Detail Inspections	$137	$92	PacifiCorp experienced increased efficiencies in work planning which led to more timely completion of planned inspections.	Yes
AI-04	Distribution Detail Inspections	$203	$182	All the required work under this initiative was completed and fully funded. The plan cost was based on an estimated amount. The initiative was completed for an actual cost less than originally estimated.	Yes
AI-05	Transmission Intrusive Pole Inspections	$171	$106	Costs were less than expected due to ongoing WMP activities that replaced a substantial number of formally wood poles with new fiberglass & steel poles. Less pole-sounding, hole drilling inspections and excavation tests were required.	Yes
AI-07	Enhanced (Infrared) Inspections in Transmission Lines	$90	$81	The entire scope was able to be completed and the actuals for 2023 came in under forecast. The forecast for the inspections does include potential weather delays that would add cost.	Yes

2023 Initiative Number/ID	Initiative Name	2023 WMP Proposed Spend Amt. ($ Thousands)	Actual Spend Amt. ($ Thousands)	Detail on Funding Discrepancy	Satisfied Risk Reduction Goal
AI-12	Quality Assurance and Quality Control	$36	$32	PacifiCorp experienced increased efficiencies in work planning which led to a timelier completion of planned inspections.	Yes
EP-02	External Collaboration and Coordination	$30	$9	PacifiCorp had two events cancelled, resulting in reduced spend.	Yes
EP-03	Messaging – PSP Portal	$110	$95	Project milestones for the PSP portal shifted from 2023 to 2024, as described below: PacifiCorp continues to work through improvements to the Public Safety Partner Portal. Planned improvements consist of ensuring compliance with CPUC web-based Public Safety Partner Portal requirements, interactive mapping requirements, and to support PacifiCorp's efforts to prioritize restoration, backup power evaluation, additional communications, and other resources before and during PSPS events.	Yes

2023 Initiative Number/ID	Initiative Name	2023 WMP Proposed Spend Amt. ($ Thousands)	Actual Spend Amt. ($ Thousands)	Detail on Funding Discrepancy	Satisfied Risk Reduction Goal
EP-05	Customer support in wildfire and PSPS emergencies	$150	$8	The program plan was to reach 44 pre- qualified customers for the free portable battery program, however there were only seven eligible medical baseline customers.	Yes
GH-05	Expulsion fuse replacement	$10,000	$7,976	PacifiCorp completed fewer units than anticipated (details below) and some of the expulsion fuse replacements were funded by GH-01 for work occurring concurrently on the same pole. PacifiCorp was unable to complete 853 expulsion fuse replacements of the 5,000 planned. Due to a material delivery delay, not all of the planned work for expulsion fuses could occur. Pacific Power plans to receive the material in Q1 of 2024 and will begin work to finish out 2023 targets.	No
GO-02	Grid Response Procedures and Notifications (Grid Ops): Patrols	$600	$197	Spend for this initiative was not as much as originally expected due to no PSPS events in 2023.	Yes

2023 Initiative Number/ID	Initiative Name	2023 WMP Proposed Spend Amt. ($ Thousands)	Actual Spend Amt. ($ Thousands)	Detail on Funding Discrepancy	Satisfied Risk Reduction Goal
PS-01	Protocols on PSPS	$850	$0	PacifiCorp did not have any PSPS events in 2023.	Yes
RA-02	Top Risk Areas within the HFRA	$45	$4	The work break down structure for this work was originally planned to be separate from RA-01 however it was captured in RA-02.	Yes
RA-03	Other Key Metrics	$50	$0	The work break down structure for this work was originally planned to be separate from RA-01 however it was captured in RA-02.	Yes
RA-04	Enterprise System for Risk Assessment	$104	$9	Resource limitations led to reduced spend for this initiative. PacifiCorp resources were prioritized to focus on initiatives RA-01: Risk and Risk Component Calculation and RA-02: Top Risk Areas Within the HFRA. As a result of this prioritization and the effort involved in RA-01 and RA-02, RA-04: Enterprise System for Risk Assessment was deprioritized.	No
SA-03	Smoke and Air Quality Sensors	$70	$50	The planned spend for this initiative included a partial payment that occurred and cleared at the end of 2022 and did not post to 2023 actuals.	Yes

2023 Initiative Number/ID	Initiative Name	2023 WMP Proposed Spend Amt. ($ Thousands)	Actual Spend Amt. ($ Thousands)	Detail on Funding Discrepancy	Satisfied Risk Reduction Goal
VM-03	Patrol Inspection - Distribution	$375	$355	PacifiCorp's initiative VM-03 was funded and fully completed (100% complete). The planned spend is based on actuals from the prior year. In 2023, VM-03 was completed at a lower cost than planned.	Yes
VM-04	Patrol Inspection - Transmission	$120	$68	The lower costs resulted from a larger reliance on internal resources and did not require the originally planned external costs.	Yes
VM-06	Clearance - Distribution	$15,915	$15,506	PacifiCorp's initiative VM-06 was funded and fully completed (100% complete). The planned spend is based on actuals from the prior year. In 2023, VM-06 was completed at a lower cost than planned.	Yes

Below the table, provide more detail on the Independent Evaluator's findings regarding these initiatives that were funded less than 100 percent, including the electrical corporation's explanation.

The IE used PacifiCorp's ARC as its baseline for financial evaluation. Given the format of the ARC provided by Energy Safety and the requirement to include detail pertaining to under or overspend the IE felt that the ARC was a sufficient source of evidence in evaluating PacifiCorp's underspend initiatives, and whether those underspend initiatives met the initiative target for 2023. From the ARC the IE was able to determine that 19 initiatives from **PacifiCorp's 2023 WMP** received less funding than projected. Of these initiatives five were within the 10% limit as outlined by Energy Safety, and an additional three had limited descriptions for why the spend target was not met. For the eight said initiatives the IE requested additional detail as part of *DR10*. In response to *DR10* PacifiCorp provided additional descriptions which the IE felt were adequate to account for the underspend. For the remaining 11 initiatives PacifiCorp provided an appropriate level of detail as to why the spending target was not met in the ARC.

Based upon the financial data provided by PacifiCorp, and the discussions conducted on the weekly status calls as well as on SME interviews, the IE verified that the funding presented in the table above is being tracked appropriately. The IE also believes that the above table is reflective of the underspent initiatives in PacifiCorp's 2023 initiative portfolio.

2.3 Verification of QA/QC Programs

This section should include a detailed description of all QA and QC programs that the Independent Evaluator validated during its compliance review. Independent Evaluators shall review all documentation and perform interviews to validate an electrical corporation's QA and QC programs for WMP compliance.

The following assessment is based on the IE's review of PacifiCorp's QA/QC programs through a review of the **PacifiCorp's 2023 WMP**, and data previously submitted to Energy Safety along with information obtained through data requests.

PacifiCorp indicated that it does not have an overarching QA/QC program but rather separate QA/QC programs for its Asset Inspection and Vegetation Management programs. These programs are each administered independently under the asset inspection and VM teams.

Asset Inspections

For QA/QC of asset inspections, PacifiCorp identified the following key program components which are described in the response to *DR1* Questions 12 which provided PacifiCorp's **Overhead Detailed Inspection Program Audit Process (May 2021)**, and **Policy No. 123-PP** documents. The QA/QC program consists of the following:

- PacifiCorp runs a 2-tier QA process described in their *Overhead Detailed Inspection Program Audit Process (May 2021)* that requires
    - Tier 1 requires contractors to audit a minimum of 5% of the poles inspected for the calendar year. The audits are performed on a computer-generated random sample performed on a weekly basis. These QCs must meet 90% conformance for urban areas and 80% for rural areas.
    - Tier 2 of the process is run by PacifiCorp staff that reviews an additional 2-3% of inspections on top of the 5% performed in Tier 1. Approximately half of the audit sample comes from those reviewed in Tier 1 and half are randomly chosen.
- The targeted physical audits of at least 5% of planned inspections of facilities with a focus on HFTD Tier II and Tier III prioritization was met in 2023. The results of this activity, showing 93.79% overall audit accuracy are captured in the **IE DR10 Item 8.png** file.

As part of *DR 10* PacifiCorp also provided the following additional detail to the program:

> "For the two-tiered audit, the inspection contractor's QC Tech will perform an audit of 5% of the inspection section. The audit is submitted to the field inspection team with photos documenting the audit and any changes to the original inspection. Once completed, a Field Inspection supervisor will perform an audit while also taking a sample of the poles chosen for audit by the Inspection contractor. The Field Inspection supervisor will submit an audit result to the

overall larger group of the Inspection contractor and PacifiCorp employee with their findings.

Each audit performed will have an entry whether it's a desktop audit or field audit labeled in column F. Each audit row will have the auditors name, company, results, etc. For the results, we are looking at overall accuracy, how many poles were selected for audit, the percentage of poles chosen for audit by both the inspection contractor and PacifiCorp. Any changes to the original inspections, whether a condition was added, removed, or the priority was changed is accounted for. Any patterns or deficiencies in the inspections, or any accuracy issues will result in reinspection by the inspection contractor."

Vegetation Management Inspections

The following review is based on PacifiCorp's response to *DR 1*, item no. 11 and *DR 6*, item nos. 2 and 3 regarding its Vegetation Management (VM) QA/QC program. A detailed description of PacifiCorp's VM QA/QC program can be found in **Appendix B**.

As noted during previous independent evaluations, PacifiCorp does not appear to have a robust vegetation management QA/QC program. PacifiCorp's vegetation management program includes some, but not all, of the elements that would be expected to be included in a comprehensive QA/QC program.

There is only a high-level discussion regarding VM QA/QC in PacifiCorp's WMP and a brief discussion in PacifiCorp's Transmission and Distribution Program Vegetation Management Standard Operating Procedures (SOP).

There are two distinct processes that are generally employed in a QA/QC program. The first is quality control, which typically verifies a product by testing a sample of the product against a specification, standards, or other criteria. Quality control measures are aimed at checking, measuring, or inspecting a sample of one or more product characteristics and evaluating the results against requirements to confirm compliance. In this case the samples are completed tree work, completed inspection work, and completed pole clearing work.

Quality assurance typically assesses a "process" through analysis of objective evidence that supports the program or process for adherence and/or compliance with specific requirements. In this case the entire process from tree work identification to completion is reviewed for effectiveness.

The documents reviewed and the processes followed primarily focus on QC. Although this is not unusual, QA is also an important component needed to assess program effectiveness.

Findings

The pass rate information provided was for the 2022 year, as indicated in the 2022 VM Pass Rates table. This was also provided to the IE in Excel form in file Pass Rate

2022[20]. This spreadsheet contained the data used to calculate the pass rate. The pass rate was calculated by identifying the number of locations identified where vegetation maintenance was needed and the number of locations where a non-billable audit exception was found. Inventory and audit exception information is contained within the attachment.

2022 VM Pass Rates

	Inventory	Exceptions	Fail Rate	Pass Rate
DST	2398	43	1.79%	98.21%
FMD	2682	234	8.72%	91.28%
THS	399	3	0.75%	99.25%
MHS	148	0	0.00%	100.00%
FMT	165	0	0.00%	100.00%

As noted in Table 8-19 in **Appendix B**, PacifiCorp targets 100% sampling for 4 of 5 activities. Although this is not typically done, PacifiCorp must feel it is necessary to confirm work is completed appropriately. QC inspections for VM are generally based on judgmental sampling and not 100% inspection.

PacifiCorp targets a 10% sample size for pole clearing but it is unknown how this percentage was derived. It is also unknown if a 10% target sample for this activity is statistically valid.

PacifiCorp describes additional steps that are being taken to improve VM QA/QC in its 3-year objectives (Table 8-13 in **Appendix B**). The objectives are described at a high-level and lack specificity on how they are to be implemented.

[20] File: *Pass Rate 2022.xlsx*

3. Conclusions

The Conclusion section shall summarize key findings or findings of import drawing from detail in the sections above. All findings must be supported by documentation, which could be in the body of the report or in an appendix.

This section should include any discussion or recommendations for the electrical corporation or for lessons learned that can be applied to the next year's IE ARC process.

The IE reviewed and assessed all of PacifiCorp's listed initiative activities and conducted a thorough review of evidence through documentation review and field verification assessments. Many of these detailed reviews and assessments were bolstered by interviews with PacifiCorp staff responsible for the management, oversight, and implementation of the EC's wildfire mitigation programs as well as SMEs responsible for technical guidance and implementation. The IE also worked with PacifiCorp and Energy Safety staff to determine relevant materials critical to produce a statistically significant, where possible, and concrete review of PacifiCorp's WMP work performance.

The IE determined PacifiCorp is following its WMP in a substantial way. Except as otherwise noted, PacifiCorp is implementing its WMP initiatives as described in its WMP. Additionally, PacifiCorp is largely funding its programs appropriately, with some noted exceptions. Finally, PacifiCorp maintains a robust QA/QC program for its asset inspection activities, but the vegetation management QA/QC program could use more structure, similar to that developed for asset inspections. Additionally, the IE believes this program could be enhanced with a more comprehensive view of the WMP and centralized oversight of such programs, something that is currently in progress through initiatives to create a central database and other efforts noted during the review process to streamline and track progress toward WMP initiatives specifically.

Findings are presented in detail in each out the initiative write-ups found in section 2.1.2, 2.1.3, 2.1.4, 2.2 and 2.3. Findings related to initiatives that were not deemed sufficient due to a lack / insufficiency evidence or funding/actuals below the planned 2023 targets can be in Table 1-1 of the Executive Summary.

Appendix A. Data Requests and Documents Reviewed

DR No.	Item No.	Item Requested	Name of Files Received with Extension (.xlsx, .doc, .gdb, etc.)
1	1	Please provide 2023 Quarterly Data Reports Non-Spatial Data (the non-public version, if applicable) - include most up to date version with targets and final information.	PC_2023_Q1_Tables1-15_R1.xlsx PC_2023_Q2_Tables1-15_R0.xlsx PC_2023_Q3_Tables1-15_R0.xlsx PC_2023_Q4_Tables1-15_R1.xlsx
1	2	2023 Quarterly Data Reports Spatial Data (the non-public version, if applicable)	PC_2023_Q1_SpatialDataStatusReport.xlsx PC_2023_Q2_SpatialDataStatusReport.xlsx PC_2023_Q3_SpatialDataStatusReport.xlsx PC_2023_Q4_SpatialDataStatusReport.xlsx PC_2023_Q1.gdb.zip PC_2023_Q2.gdb.zip PC_2023_Q3.gdb.zip PC_2023_Q4.gdb.zip
1	3	2023 Annual Report on Compliance (the non-public version, if applicable)	PC_2023ARC_20240402.pdf
1	4	2023 Quarterly Advice Letters/Notification Letters (the non-public version, if applicable)	PacifiCorp did not submit quarterly advice letters for 2023 WMP activities; these are not required because the company does not have the safety certification
1	5	Accounting of Cost Data for Wildfire Mitigation Activities for 2023 (May come from Q4 Table 11 Supplemental data)	PC_2023_Q4_Table11_Supplemental_R1.xlsx
1	6	Vegetation Management clearance specification (i.e., GO 95)	Vegetation Management Program SOP.PDF
1	7	Vegetation Management Plan/Program	Vegetation Management Program SOP.PDF
1	8	Vegetation Management Plan supporting documentation (e.g., supporting procedures, processes, guidance, etc.)	Vegetation Management Program SOP.PDF
1	9	Asset Management & Inspection Plan/Program	001 - PP.xlsx

DR No.	Item No.	Item Requested	Name of Files Received with Extension (.xlsx, .doc, .gdb, etc.)
1	10	Asset Management & Inspection Plan supporting documentation (e.g., supporting procedures, processes, guidance, etc.)	034.pdf 069.xlsx 166.pdf 192.pdf 297.pdf 298.pdf 342.pdf 358.pdf 3274F.xlsx 3274S-PP.xlsx
1	11	Provide all vegetation management QA/QC program documentation that sets forth the parameters for QA/QC activities for vegetation management (e.g., policy, plan, programs, procedures, guidance documents, etc.)	Vegetation Management Program SOP.PDF
1	12	Provide all asset inspection QA/QC program documentation that sets forth the parameters for QA/QC activities for vegetation management (e.g., policy, plan, programs, procedures, guidance documents, etc.)	Overhead Detailed Inspection Program Audit Process (May 2021).docx Policy No. 123-PP.pdf
2	1	Please provide a full list of the 11,678 transmission inspections performed listed by unique identifier. This population information will be used to sample for additional detail evidence.	CA_INSPECTIONS_2023_SUMMARY.xlsx
2	2	Please provide a full list of the 50,444 distribution inspections performed listed by unique identifier. This population information will be used to sample for additional detail evidence.	CA_INSPECTIONS_2023_SUMMARY.xlsx
2	3	Please provide a full list of the 2,714 transmission detail inspections performed listed by unique identifier. This population information will be used to sample for additional detail evidence.	CA_INSPECTIONS_2023_SUMMARY.xlsx
2	4	Please provide a full list of the 8,627 distribution detail inspections performed listed by unique identifier. This population information will be used to sample for additional detail evidence.	CA_INSPECTIONS_2023_SUMMARY.xlsx

DR No.	Item No.	Item Requested	Name of Files Received with Extension (.xlsx, .doc, .gdb, etc.)
2	5	Please provide a full list of the 935 transmission intrusive pole inspections performed listed by unique identifier. This population information will be used to sample for additional detail evidence.	CA_INSPECTIONS_2023_SUMMARY.xlsx
2	6	Please provide a full list of the 2,398 distribution intrusive pole inspections performed listed by unique identifier. This population information will be used to sample for additional detail evidence.	CA_INSPECTIONS_2023_SUMMARY.xlsx
2	7	Guidehouse would like to schedule a call to discuss the tracking and validation of the 700 IR transmission line miles inspected.	This call was held on May 13, 2024
2	8	Guidehouse would like to schedule a call to discuss the tracking and validation of the 757 IR distribution line miles inspected.	This call was held on May 13, 2024
2	9	Please provide a full list of the 449 substation inspections performed listed by unique identifier. This population information will be used to sample for additional detail evidence.	CA_2023_Substation Inspection Detail.xlsx
2	10	Please provide a full list of the 775 QA/QC inspections performed listed by unique identifier. This population information will be used to sample for additional detail evidence.	CA_INSPECTIONS_2023_SUMMARY.xlsx
2	11	Guidehouse would like to schedule a call to discuss the tracking and validation of the 101 line miles updated with covered conductors.	This call was held on May 13, 2024
2	12	Please provide a full list of the 1,592 distribution poles replaced completed listed by unique identifier. This population information will be used to sample for additional detail evidence.	IE_DR2_12_Distribution Poles.xlsx
2	13	Please provide a full list of the 165 transmission poles replaced listed by unique identifier. This population information will be used to sample for additional detail evidence.	IE_DR2_13_Transmission Poles.xlsx

DR No.	Item No.	Item Requested	Name of Files Received with Extension (.xlsx, .doc, .gdb, etc.)
2	14	Please provide a full list of the 36 devices replaced (relay/recloser/CB) listed by unique identifier. This population information will be used to sample for additional detail evidence.	IE_DR2_14_System Automation.xlsx
2	15	Please provide a full list of the 4,147 expulsion fuses replaced listed by unique identifier. This population information will be used to sample for additional detail evidence.	IE_DR2_15_Expulsion Fuse.xlsx
2	16	Please provide a full list of the 93 weather stations where maintenance or calibration was performed listed by unique identifier. This population information will be used to sample for additional detail evidence.	DR2 - 2023 Weather Station Maintenance Data.xlsx
2	17	Please provide a full list of the 15 weather stations installed listed by unique identifier. This population information will be used to sample for additional detail evidence.	IE_DR2_17_Weather Station Installations.xlsx
2	18	Please provide detail on the 2 DFA sensors that were piloted. Detail can include proof of installation, work orders for completion, and evidence of data collected from devices. If such information is not available, provide detail on the pilot program and its outputs or similar information to demonstrate this target was met.	Lassen 5G79 - Live Data.png Lassen 5G77 - Live Data.png Device Web Portal Connection.png Work Order #.png
2	19	Please provide a full list of the 20 smoke and particulate sensors installed listed by unique identifier. This population information will be used to sample for additional detail evidence.	2023-03-02_Air Quality Sensor Install Report.docx
2	20	Please provide details on the 2 advanced wildfire detection cameras installed. Evidence can include work orders, installation confirmation, and/or evidence of data collected from the working cameras.	2023-11_Invoice_No_1052_CA.pdf
2	21	Guidehouse would like to schedule a call to discuss the tracking and validation of the 829 distribution line miles inspected.	This call was held on May 13, 2024

DR No.	Item No.	Item Requested	Name of Files Received with Extension (.xlsx, .doc, .gdb, etc.)
2	22	Guidehouse would like to schedule a call to discuss the tracking and validation of the 264 transmission line miles inspected.	This call was held on May 13, 2024
2	23	Guidehouse would like to schedule a call to discuss the tracking and validation of the 1,027 distribution line miles inspected.	This call was held on May 13, 2024
2	24	Guidehouse would like to schedule a call to discuss the tracking and validation of the 329 transmission line miles inspected.	This call was held on May 13, 2024
3	1	Please provide location data for GH-01, line rebuild-covered conductor work completed in 2023. Location data should include latitude and longitude and any other location information available. *GH note: this DR was sent on 5/10 before the interview was held on 5/13.*	Data will be provided as a.kmz in an attachment as a response to DR5 as discussed in the Grid Hardening interview conducted on Monday 5/13.
3	2	Please provide location data for work related to VM-20 completed in 2023.	*GH Note: Request was sent in error. VM-20 is no longer an initiative tracking ID used by PacifiCorp.*
3	3	Please provide location data for vegetation management - expanded pole clearing work completed in 2023.	PpPoleTreatmentDetail_2024-05-08_17-53-03.xlsx
4	1	For the sampled transmission inspections in excel tab *AI-01 R* please provide detailed documentation demonstrating completion.	AI-01 Folder
4	2	For the sampled distribution inspections in excel tab *AI-02 R* please provide detailed documentation demonstrating completion.	AI-02 Folder
4	3	For the sampled transmission detail inspections in excel tab *AI-03 R* please provide detailed documentation demonstrating completion.	AI-03 Folder
4	4	For the sampled distribution detail inspections in excel tab *AI-04 R* please provide detailed documentation demonstrating completion.	AI-04 Folder
4	5	For the sampled transmission intrusive pole inspections in excel tab *AI-05 R* please provide detailed documentation demonstrating completion.	AI-05 Folder

DR No.	Item No.	Item Requested	Name of Files Received with Extension (.xlsx, .doc, .gdb, etc.)
4	6	For the sampled distribution intrusive pole inspections in excel tab *AI-06 R* please provide detailed documentation demonstrating completion.	AI-06 Folder
4	7	For the sampled substation inspections in excel tab *AI-11 R* please provide detailed documentation demonstrating completion.	AI-11 Folder
4	8	For the sampled QA/QC inspections in excel tab *AI-12 R* please provide detailed documentation demonstrating completion.	AI-12 Folder
4	9	For the sampled distribution pole replacements in excel tab *GH-02 R* please provide detailed documentation demonstrating completion.	GH-02 (distribution poles) Folder
4	10	For the sampled transmission pole replacements in excel tab *GH-03 R* please provide detailed documentation demonstrating completion.	GH-03 (transmission poles) Folder
4	11	For the sampled device replacements (relay/recloser/CB) I excel tab *GH-04 R* please provide detailed documentation demonstrating completion.	GH-04 (system automation) Folder
4	12	For the sampled expulsion fuse replacements in excel tab *GH-05 R* please provide detailed documentation demonstrating completion.	GH-05 (expulsion fuse replacement) Folder
4	13	For the sampled weather station maintenance or calibration in excel tab *MA-01 R* please provide detailed documentation demonstrating completion.	MA-01 Folder
4	14	For the sampled weather station installations in excel tab *SA-01 R* please provide detailed documentation demonstrating completion.	SA-01 (weather station installations) Folder
5	1	Please provide a spreadsheet with all work orders captured for transmission inspection with the associated line miles and plant localities.	CA Transmission Lines for IR Inspection.xlsx
5	2	Please provide a spreadsheet with all work orders captured for distribution inspection with the associated plant localities.	CA Distribution Lines for IR Inspection.xlsx

DR No.	Item No.	Item Requested	Name of Files Received with Extension (.xlsx, .doc, .gdb, etc.)
5	3	Please provide a spreadsheet with all completed grid hardening projects related to GH-01 for all four quarters, including associated line miles completed for each. For these projects, also include the.kmz file mapping the miles where projects were completed so that a sample may be selected in areas that are geographically feasible to field verify in a reasonable timeframe.	California 2023 GH-01 completions.kmz 2024 IE DR5 line rebuild.xlsx
5	4	Please provide a copy of the vegetation management inspection tracking spreadsheet for the Detailed Inspection - Distribution program.	2023_Contractor_Miles_Tracker_CA
5	5	Please provide a copy of the vegetation management inspection tracking spreadsheet for the Detailed Inspection - Transmission program.	2023_Contractor_Miles_Tracker_CA
5	6	Please provide a copy of the vegetation management inspection tracking spreadsheet for the Patrol Inspection - Distribution program.	2023_Contractor_Miles_Tracker_CA
5	7	Please provide a copy of the vegetation management inspection tracking spreadsheet for the Patrol Inspection - Transmission program.	2023_Contractor_Miles_Tracker_CA
6	1	Does the “Overhead Detailed Inspection Program Quality Assurance Process” apply to vegetation management or is it specifically for pole inspections?	Reference WMP Section 8.1.6 and 8.2.5 for asset management and vegetation management QA/QC descriptions.
6	2	The Vegetation Management SOP document was reviewed but does not contain a detailed QA/QC program. Previous years noted that a formal program was in development. There is a brief discussion of VM QA/QC at Page 207 of the WMP but it does not describe the process in detail. Is there any other documentation or other program available that has been developed?	At this time, no other documentation speaking to QAQC has been developed. The Standard Operating Procedures is the primary document that describes QAQC.
6	3	Table 8-19 “Vegetation Management QA/QC Program” at Page 208 in the WMP describes QA/QC Targets and 2022 Audit Results. In an Excel format, please provide the underlying data used to develop the table.	Pass Rate 2022.xlsx

DR No.	Item No.	Item Requested	Name of Files Received with Extension (.xlsx, .doc, .gdb, etc.)
6	4	All vegetation management activities included in the 2023 QA/QC audits have a Yearly Target Pass Rate of 95%. Are the results of the 2023 QA/QC audits available? If so, please provide the results and underlying data in an Excel format.	Refer to response to question 3. Results of the audits are provided in the attachment provided in response to question 3.
6	5	Are vegetation management audits included in PacifiCorp's Facility Point Inspection (FPI) system noted in Pacific Power Policy No. 123-PP? If so, provide any VM reports available for 2023.	The Facility Point Inspection (FPI) is the system of record for pole inspections only. No vegetation management records are stored in FPI unless it is a vegetation violation found by the pole inspector. The record of all pole inspection audits was provided in DR2-Item 10. Vegetation audits are performed in accordance with Section 8.2.5 (page 207) and as further detailed in the Vegetation Management SOP. Pacific Power Policy 123-PP only applies to pole inspection and not vegetation management. Vegetation management audit reports are provided as part of this DR6, under item 3.
6	6	If applicable to vegetation management, please provide a copy of "PacifiCorp Policy 192 California Condition Priorities and Correction Timeframes" noted in Pacific Power Policy No. 123-PP.	PacifiCorp Policy 192 is applicable to pole inspections only. If a pole inspector does find a vegetation violation, a condition would be entered in the pole inspector's system of record and be subject to correction timeframes established in Policy 192. A copy of policy 192 was submitted in DR1. PacifiCorp is currently in the process of updating policy 192 to better identify leve1 violations that require immediate repair.
7	1	For the sampled IR Transmission Inspection workorders in excel tab *AI-07 R* please provide detailed work order documentation demonstrating completion of the recorded miles.	AI-07_2023 Transmission IR Inspection Sampling.xlsx
7	2	For the sampled IR Distribution Inspection workorders in excel tab *AI-08 R* please provide detailed work order documentation demonstrating completion of the recorded miles.	AI-08_2023 Distribution IR Inspection Sampling.xlsx
7	3	For the sampled circuits for Detailed Inspection - Distribution program please provide the associated Post Audit Records and Formal Sign-off documentation.	Attach Item 3 Folder Supplemental_Information_Veg_Management.docx

DR No.	Item No.	Item Requested	Name of Files Received with Extension (.xlsx, .doc, .gdb, etc.)
7	4	For the sampled circuits for Detailed Inspection - Transmission program please provide the associated Post Audit Records and Formal Sign-off documentation.	Attach Item 4 Folder Supplemental_Information_Veg_Management.docx
7	5	For the sampled circuits for Patrol Inspection - Distribution program please provide the associated Post Audit Records and Formal Sign-off documentation.	Attach Item 5 Folder
7	6	For the sampled circuits for Patrol Inspection - Transmission program please provide the associated Post Audit Records and Formal Sign-off documentation.	Attach Item 6 Folder Supplemental_Information_Veg_Management.docx
8	1	Please provide evidence of pre- and post-fire season surveys. Examples of evidence may include survey template, compilation of survey results, and/or dated communications for survey delivery.	* CO-01_2023-03_Pre-Wildfire Season Survey Results * CO-01_2023-11_Post-Wildfire Season Survey Results
8	2	Please provide evidence that medical certificate in 1 additional language was provided. Example of evidence may include screenshots of the website from 2022 and 2023 showing that the medical certificate application is available in 1 additional language compared to the year prior.	CO-02_Medical_Certificate_Spanish
8	3	Please provide evidence that the Outage Procedures for Restoration Annex were completed and implemented.	10_Outage Procedures Restoration -2023.docx

DR No.	Item No.	Item Requested	Name of Files Received with Extension (.xlsx, .doc, .gdb, etc.)
8	4	Please provide evidence that one tabletop exercise, one workshop and one function exercise were completed in 2023.	CA TTX Sign-in Sheet.pdf 2023 PSPS TTX – Siskiyou County.pptx 2023 Siskiyou County TTX Post-Exercise Review.pdf 2023 PSPS Exercises PSP Participation_Pacificorp.xlsx CA PSPS FE meetingAttendanceList.txt CA Functional Exercise FPM and MSEL.pdf 2023 CA FE – EXPLAN.docx PacifiCorp 2023 PSPS Functional Exercise Participant Guide.docx 2023 PSPS Siskiyou County FE.pdf 2023 PSPS FE - Siskiyou County – Cooperators Meeting.pptx 5-15 CalOES Form.pdf 5-17 CalOES Form.pdf 2023 CA PSPS FE chat transcript.docx This is an Exercise PSPS De-Energization This is an Exercise.msg This is an Exercise PSPS De-Energization This is an Exercise(2).msg This is an Exercise PSPS De-Energization This is an Exercise(3).msg This is an Exercise PSPS De-Energization This is an Exercise(4).msg 2023 Siskiyou County PSPS Functional Exercise AAR IP.pdf CA Workshop.pptx 2023 PSPS Exercises PSP Participation_Pacificorp.xlsx
8	5	Please provide evidence that the web-based portal is complete.	* EP-03_Public Safety Partner Portal Screenshot_1 * EP-03_Public Safety Partner Portal Screenshot_2 * EP-03_Public Safety Partner Portal Webpage

DR No.	Item No.	Item Requested	Name of Files Received with Extension (.xlsx, .doc, .gdb, etc.)
8	6	In review of the 2023 WMP Internal Policy PAC-1000 is referenced as the standard / best practice document for GO-01 (Equipment Settings to Reduce Wildfire Risk). Please provide Internal Policy PAC-1000 for review. Please provide evidence that all ZM1's have been updated to current firmware and PacifiCorp has 98% or more operational in the field (outlined as a QDR target). If this is easier to provide via a short meeting with the responsible SME, provide SME availability and the IE will schedule a working session.	5C.15.pdf PAC-1000.pdf DR8 Item 6 Data.xlsx
8	7	In review of the 2023 WMP Internal Policy PAC-1000 is referenced as the standard / best practice document for GO-02 (Personnel Work Procedures and Training in Conditions of Elevated Risk Risk). Please provide Internal Policy PAC-1000 for review.	PAC-1000.pdf
8	8	Please provide any evidence of integration of weather forecasting system improvements as described below. If these updates are easier to demonstrate via Teams call and screen share, please respond to this DR with available times. * Improve integration of weather data into PacifiCorp's systems * Full integration of 30-year historic weather data analysis into operational and planning processes * Develop WRF ensemble configuration and self-organizing map forecast system * Continue optimization and improvement of machine learning (ML) models' access to 30-year historic weather data analysis	SA-05_2024-06-04_Forecast

DR No.	Item No.	Item Requested	Name of Files Received with Extension (.xlsx, .doc, .gdb, etc.)
9	1	For the sampled Distribution Pole Replacements as part of the field verification process in excel tab *GH-02 Distribution_Pole* please provide detailed documentation demonstrating completion.	8003679.pdf Pulling Section Checklist REV 4.1_Happy Camp Pt 1#8003679_Pulling Section #XX.pdf WO 8003679Happy Camp Pt 1 Pulling Section Tracker REV B.xlsx 8077663.pdf Pulling Section Checklist REV 4.1_Edgewood2_WO#80077663_pulling Section#XX.pdf WO 08077663 5G83 Old Edgewood and Lincoln Park Pt 2 Pulling Section Tracker Rev 0 Final.pdf
9	2	For the sampled Transmission Pole Replacements in excel tab *GH-03 Transmission_Pole* please provide detailed documentation demonstrating completion.	WO 8003684 5G83 Weed NE Hwy 97 Pt 1 ER Face Sheet.pdf WO 8003684 5G83 Weed NE Hwy 97 Pt 1 KOB1.pdf WO 8003684 5G83 NE Hwy 97 Pt 1 Signed Construction Map.pdf WO 8003684 5G83 Weed NE Hwy 97 Pt 1 Pulling Section Tracker REV 2 FINAL.xlsx Pulling Section Checklist REV 4.1_Weed NE Hwy 91 P 1#8003684_Pulling Section #XX.pdf WO 8003682.pdf WO 8003682 KOB1.pdf WO 8003682 Maps.pdf WO 8003682 5G83 North Weed Pt 3 Pulling Section Tracker 11-15-23 FINAL.xlsx Pulling Section Checklist REV 4.1_N Weed Pt 3 _WO#8003682_Pulling Section #XX.pdf

DR No.	Item No.	Item Requested	Name of Files Received with Extension (.xlsx, .doc, .gdb, etc.)
9	3	For the sampled Expulsion Fuse Replacements in excel tab *GH-05 Expulsion_Fuse* please provide detailed documentation demonstrating completion.	8003679.pdf Pulling Section Checklist REV 4.1_Happy Camp Pt 1#8003679_Pulling Section #XX.pdf WO 8003679Happy Camp Pt 1 Pulling Section Tracker REV B.xlsx WO 08003685 5G83 Weed NE Hwy 97 Pt 2 OMS Rev4.pdf Pulling Section Checklist REV 4.1_Weed NE Hwy 97 Part 2, 8003685 Pull 3.pdf WO 8003685 5G83 Weed NE Hwy 97 Pt 2 Pulling Section Tracker Rev 0 060723.xlsx 8077663.pdf Pulling Section Checklist REV 4.1_Edgewood2_WO#80077663_pulling Section#XX.pdf WO 08077663 5G83 Old Edgewood and Lincoln Park Pt 2 Pulling Section Tracker Rev 0 Final.pdf 5G41_4G1-CA23.1 Fuses.csv 8G27-CA23-2 Fuses.csv 4G1-Shastina_InspectionReport-WOX08221342.ods
9	4	For the sampled Pole Clearing Activities in excel tab *VM-05 Pole_Clearing* please provide detailed documentation demonstrating completion.	5G41_PP_PoleReport.pdf 5G83_PP_PoleReport.pdf
9	5	The target for 2023 was 11,754 inspections for transmission inspections, but only 11,678 were performed. Please provide a narrative to account for the discrepancy in target vs. actual inspections performed.	*GH note: Narrative description was provided and detail added to report.*
9	6	Please provide evidence that Pacific Power participates in ongoing meetings with the wildfire advisory board and that the company is on track with their plans to attend safety and preparedness fairs. Evidence may include: workshop agendas listing dates, times, locations, and topics discussed, email exchanges confirming participation in safety and preparedness fairs, materials distributed to attendees.	CO-03__PacifiCorp CA Wildfire Advisory Board April 2023 CO-03_PacifiCorp CA Wildfire Advisory Board November 2023

DR No.	Item No.	Item Requested	Name of Files Received with Extension (.xlsx, .doc, .gdb, etc.)
9	7	Please provide details on how the spend for initiatives RA-01, RA-02, and RA-03 contributed to furthering these initiatives and what was completed as a result. If applicable, please provide evidence invoices or other accounting for spend on these activities.	DR9 Item 7.doc 2023-02_Technosylva-PacifiCorp_1629_Invoice_Redacted.pdf DR9 Item 7 Labor.XLSX
10	1	Please provide a narrative or explanation for why the reported actuals in the 2023 Q4 ARC are different from table 1 reported actuals in the QDR for AI-01, 02, 03, 04, 06, 08, and 11. If preferred, we can schedule an interview to discuss tracking methodology.	*GH note: Narrative description was provided and detail added to report.*
10	2	The annual target for 2023 was identified as 50,474 in the 2023 WMP; however, the actual progress indicated that 50,444 distribution patrol inspections were conducted. Please provide a narrative to account for the discrepancy in target vs. actual inspections performed.	CA_INDEPENDENT_EVALUATOR_DR10_2-5.xlsx
10	3	The annual target for 2023 was identified as 2,715 in the 2023 WMP, however, the actual progress indicated that 2,714 transmission detail inspections were conducted. Please provide a narrative to account for the discrepancy in target vs. actual inspections performed.	CA_INDEPENDENT_EVALUATOR_DR10_2-5.xlsx
10	4	The annual target for 2023 was identified as 8,662 in the 2023 WMP, however, the actual progress indicated that 8,627 distribution detail inspections were conducted. Please provide a narrative to account for the discrepancy in target vs. actual inspections performed.	CA_INDEPENDENT_EVALUATOR_DR10_2-5.xlsx
10	5	The annual target for 2023 was identified as 2,404; however, the actual progress indicated that 2,398 Distribution Intrusive Pole Inspections were conducted. Please provide a narrative to account for the discrepancy in target vs. actual inspections performed.	CA_INDEPENDENT_EVALUATOR_DR10_2-5.xlsx

DR No.	Item No.	Item Requested	Name of Files Received with Extension (.xlsx, .doc, .gdb, etc.)
10	6	The annual target for 2023 was identified as 810 transmission lines inspected; however, the actual progress indicated 757 lines miles. Please provide a narrative to account for the discrepancy in target vs. actual inspections performed.	*GH note: Narrative description was provided and detail added to report.*
10	7	The annual target for 2023 was identified as 451 substations inspected; however, the actual progress indicated 449 substations. Please provide a narrative to account for the discrepancy in target vs. actual inspections performed.	*GH note: Narrative description was provided and detail added to report.*
10	8	Please provide evidence of compliance with the two-tier Asset QA/QC process described in *Overhead Detailed Inspection Program Quality Assurance Process.* The requirements have been provided below: - Tier 1 requires contractors to audit a minimum of 5% of the poles inspected for the calendar year. The audits are performed on a computer-generated random sample performed on a weekly basis. These QCs must meet 90% conformance for urban areas and 80% for rural areas. - Tier 2 of the process is run by PacifiCorp staff that reviews an additional 2-3% of inspections on top of the 5% performed in Tier 1. Approximately half of the audit sample comes from those reviewed in Tier 1 and half are randomly chosen.	IE DR10 Item 8.png
10	9	Please provide additional detail explaining why initiative AI-02 was not fully funded.	*GH note: Narrative description was provided and detail added to report.*
10	10	Please provide additional detail explaining why initiative AI-04 was not fully funded.	*GH note: Narrative description was provided and detail added to report.*
10	11	Please provide additional detail explaining why initiative AI-07 was not fully funded.	*GH note: Narrative description was provided and detail added to report.*

DR No.	Item No.	Item Requested	Name of Files Received with Extension (.xlsx, .doc, .gdb, etc.)
10	12	Please provide additional detail regarding the two cancelled events and how that accounts for the $21,000 underspend on the initiative. Please also provide confirmation that the risk target for the initiative EP-02 was met even though two events were cancelled.	*GH note: Narrative description was provided and detail added to report.*
10	13	Please explain the methodology used in selection of the 44 pre-qualified customers, and details to the efforts made to provide the 44 pre-qualified customers with the free portable battery. Please provide detail as to why there were only 7 eligible medical baseline customers provided the free portable battery of the 44 pre-qualified customers targets for the initiative? Please provide detail explaining how PacifiCorp projected the spend for EP-05 to be $150,000 for 44 portable batteries and only spent $8,000 to provide 7 portable batteries.	*GH note: Narrative description was provided and detail added to report.*
10	14	Please provide additional detail for the resource limitations that led to the underspend for initiative RA-04.	DR10 Item 14 Labor.xlsx
10	15	Please provide additional detail explaining why initiative VM-03 was not fully funded.	*GH note: Narrative description was provided and detail added to report.*
10	16	Please provide additional detail explaining why initiative VM-06 was not fully funded, and if the associated targets for this initiative were met even with the program not being 100%funded.	*GH note: Narrative description was provided and detail added to report.*
11	1	Please provide evidence of completed workorders for the Covered Conductor replacement project listed in the included excel file. (PAC_Random Sampling Request_240612). If the above request cannot be fulfilled the IE requests a discussion session with the initiative SME to review the evidence of completion for the requested work.	8077680 North Weed pt 1 8077680 North Weed pt 1

Appendix B. Vegetation Management QA/QC Program

QA/QC Program Description

> "Quality control actions such as audits are critical to ensure vegetation requiring work (pruning and/or removal) is properly identified and the work is subsequently conducted in accordance with vegetation program standards/specifications. Pacific Power conducts post-audits (quality control reviews) to compare completed work against specifications, such as post-work clearances as identified in the Vegetation SOP."[21]

QA/QC Program 3-Year Objectives

The following table describes PacifiCorp's QA/QC program development objectives. Completion dates for the various program objectives range from December 2024 to December 2025.

Table 8-13 Vegetation Management Implementation Objectives (3-year plan)[22]

Objectives for Three Years (2023–2025)	Applicable Initiative(s), Tracking ID(s)	Applicable Regulations, Codes, Standards, and Best Practices (See Note)	Method of Verification (i.e., program)	Completion Date	Reference (section & page #)
Create SME process & procedure for VM database review four times a year.	QA/QC, VM-11	GO 95, Rule 35, PRC 4293, FAC 003-4	process & procedure update	December 2024	8.2.2
Develop audits to provide understanding of the data collection process.	QA/QC, VM-11	GO 95, Rule 35, PRC 4293, FAAC 003-4	Process & procedure update, WMP reporting	December 2024	8.2.5
Create procedure for exchanging best practices with other CA electrical corporations and implementing information into training and QA	QA/QC, VM-11	GO 95, Rule 35, PRC 4293, FAAC 003-4	WMP reporting	December 2024	
Create QA/QC process and procedure for benchmarking data in the database and inspections.	QA/QC, VM-11	GO 95, Rule 35, PRC 4293, FAAC 003-4	WMP reporting	December 2025	
Develop training content for specialized equipment used for inspecting vegetation for conditions that increase wildfire risk.	Patrol Inspection, QA/QC, VM-03, VM-11	GO 95, Rule 35, PRC 4293, FAAC 003-4	Training material update	December 2025	

[21] PacifiCorp 2023-2025 Wildfire Mitigation Plan, at page 207.

[22] PacifiCorp 2023-2025 Wildfire Mitigation Plan, at page 184.

QA/QC Sampling and Audit Results

The following table describes the sample size for each VM activity, the 2022 audit results, and future yearly target pass rates.

Table 8-19 Vegetation Management QA/QC Program[23]

Activity Being Audited	Sample Size	Type of Audit	Audit Results 2022	Yearly Target Pass Rate for 2023-2025
Routine Cycle Maintenance (identified during detailed inspections) - Distribution	Target 100%	Field	72% of all miles audited with a pass rate of 94%	95%
Annual Corrective Work (identified during patrol inspections) - Distribution	Target 100%	Field	100% of all miles audited with a pass rate of 91%	95%
Pole Clearing (Beyond PRC 4292 requirements)	Target 10%	Field/Desktop	17% of targeted poles to audit with pass rate of 99%	95%
Routine Maintenance (identified during detailed inspections) - Transmission	Target 100%	Field	83% of all miles audited with a pass rate of 99%	95%
Annual Corrective Work (identified during patrol inspections) - Transmission	Target 100%	Field	100% of all miles audited with a pass rate of 100%	95%

[23] PacifiCorp 2023-2025 Wildfire Mitigation Plan, at page 208.

Appendix C. Line Clearing Criteria

VM-4 Criteria

1. PRC § 4292 – Clearing of not less than 10 feet in each direction from the outer circumference of pole or tower
2. CCR § 1254 – Minimum Clearance Provisions

   (a) At ground level - remove flammable materials, including but not limited to, ground litter, duff and dead or desiccated vegetation that will allow fire to spread, and.
   (b) From 0-8 feet above ground level remove flammable trash, debris or other materials, grass, herbaceous and brush vegetation. All limbs and foliage of living trees shall be removed up to a height of 8 feet.
   (c) From 8 feet to horizontal plane of highest point of conductor attachment remove dead, diseased or dying limbs and foliage from living sound trees and any dead, diseased or dying trees in their entirety.

Public Resources Codes and California Code of Regulations (VM-06)

1. PRC 4293 - Clearance in all directions between all vegetation and all conductors which are carrying electric current:

   a. For any line which is operating at 2,400 or more volts, but less than 72,000 volts, four feet.
   b. For any line which is operating at 72,000 or more volts, but less than 110,000 volts, six feet.
   c. For any line which is operating at 110,000 or more volts, 10 feet.

2. PRC 4294 – Clearing to obtain line clearance is *NOT* required if self-supporting aerial cable is used. Forked trees, leaning trees, and any other growth which may fall across the line and break it shall, however, be removed.

3. CCR 1256 – Minimum Clearance Provisions

   a. Minimum clearance required by PRC 4293 shall be maintained with the specified distances measured at a right angle to the conductor axis at any location outward throughout an arc of 360 degrees.

   b. Minimum clearance shall include:
      i. Any position through which the conductor may move, considering, among other things, the size and material of the conductor and its span length;
      ii. Any position through which the vegetation may sway, considering, among other things, the climatic conditions, including such things as

foreseeable wind velocities and temperature, and location, height, and species of the vegetation.

4. CCR 1257 – Minimum Clearance Provisions

    a. The minimum clearance provisions of PRC 4293 are *NOT* required:
        i. Where conductors are;
            1. Insulated tree wire, maintained with the high density, abrasion resistant outer covering intact, or,
            2. Insulated self-supporting aerial cable, maintained with the insulation intact
        ii. Except;
            1. Dead and decadent or rotten trees, trees weakened by decay or disease, leaning trees and portions thereof that are leaning toward conductor(s) and any other growth which may fall across the conductor and break it are removed or trimmed to remove such hazard.
            2. The trunk of any tree is not required to be removed when sound and living and is the supporting structure to which conductor(s) are attached.

General Order 95, Rule 35

Where overhead conductors traverse trees and vegetation, safety and reliability of service demand that certain vegetation management activities be performed in order to establish necessary and reasonable clearances the minimum clearances set forth in **Table 1, Cases 13 and 14**, measured between line conductors and vegetation under normal conditions, shall be maintained.

Case	Nature of Clearance	Supply Conductors and Supply Cables, 750 - 22,500 Volts	Supply Conductors and Supply Cables, 22.5 - 300 kV	Supply Conductors and Supply Cables, 300 - 550 kV
13	Radial clearance of bare line conductors from tree branches or foliage	18 inches	Calculated for these voltages	Calculated for these voltages
14	Radial clearance of bare line conductors from vegetation in Extreme and Very	48 inches	48 inches	120 inches

Case	Nature of Clearance	Supply Conductors and Supply Cables, 750 - 22,500 Volts	Supply Conductors and Supply Cables, 22.5 - 300 kV	Supply Conductors and Supply Cables, 300 - 550 kV
	High Fire Threat Zones			