State of California – A Natural Resources Agency
Gavin Newsom, Governor

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To: The Public, Local and State Agencies, and Stakeholders for PacifiCorp's 2021 Wildfire Mitigation Plan Independent Evaluator Annual Report on Compliance

July 15, 2022

Enclosed is the Final 2021 Wildfire Mitigation Plan (WMP) Independent Evaluator Annual Report on Compliance detailing the independent evaluator's assessment of PacifiCorp's compliance with its 2021 WMP. This report was prepared by PacifiCorp's contracted independent evaluator and issued to the Office of Energy Infrastructure Safety (Energy Safety) on July 1, 2022, to fulfill the requirements of Public Utilities Code Section 8386.3(c)(2)(B)(i).

The content of this report is the work product of the respective independent evaluator. The findings and conclusions in this report do not represent the views or opinions of the Office of Energy Infrastructure Safety (Energy Safety) or any of its employees. Pursuant to Public Utilities Code Section 8386.3(c)(2)(B)(ii) the independent evaluator's findings are not binding on Energy Safety. Neither Energy Safety nor the State of California, nor any officer, employee, or any of its contractors or subcontractors makes any warranty, express or implied, or assumes any legal liability whatsoever for the contents of these documents.

On July 15, 2022, a public version of this 2021 WMP Independent Evaluator Annual Report on Compliance is published for public review and comment. Please be advised, information designated by PacifiCorp as confidential has been redacted from the published report. Comments must be submitted no later than August 15, 2022.[1] Comments must be submitted to Energy Safety's e-filing system in the 2022 Independent Evaluator docket (#2022-IE).[2]

Sincerely,

Melissa Semcer
Deputy Director | Electrical Safety Directorate
Office of Energy Infrastructure Safety

[1] Dates falling on a Saturday, Sunday, or a holiday as defined in Government Code Section 6700 have been adjusted to the next business day in accordance with Government Code Section 6707.
[2] Submit comments to the 2022-IE docket via the Energy Safety e-filing system here: https://efiling.energysafety.ca.gov/EFiling/DocketInformation.aspx?docketnumber=2022-IE (accessed June 28, 2022)

INDEPENDENT EVALUATOR ANNUAL REPORT ON COMPLIANCE

Independent Evaluator: **Guidehouse, Inc & NV5**

Utility: **PacifiCorp**

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1. EXECUTIVE SUMMARY

The Executive Summary should contain key takeaways from the Independent Evaluator's evaluation, including key findings from the Independent Evaluator's audit of Wildfire Mitigation Plan (WMP) activity completion, verification of funding, and verification of 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 (QA)/quality control (QC) (collectively "QA/QC") processes, PacifiCorp is working to achieve risk reduction benefits for their communities in the face of 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 2021 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.
The table below illustrates the IE findings for those initiatives that were not deemed sufficient due to sufficient evidence to completely validate the evidence during the review period, a lack or insufficiency of evidence, or funding below the planned 2021 targets set forth by the **PacifiCorp California Wildfire Mitigation Plan 2021**

Table 1: PacifiCorp 2021 WMP Execution - Insufficient Findings

2021 Initiative Number	Initiative Name	Finding	Detail on finding
7.3.3.3	Covered Conductor	The IE verified that approximately 20 miles of covered conductor was installed in 2021.	PacifiCorp completed approximately 25% of its stated goal of 81 line miles of covered conductor installation in 2021.

2021 Initiative Number	Initiative Name	Finding	Detail on finding
7.3.3.6	Targeted Pole Replacement	The IE verified 87 out of the targeted 128 poles were completed in 2021.	PacifiCorp did not provide detail to why the target for 2021 was not achieved
7.3.3.12	Small Diameter Conductor Replacement	The IE verified that approximately 1 line mile of small diameter conductor was replaced in 2021	PacifiCorp completed approximately 25% of its stated goal of 3.78 line miles.
7.3.4.11	Standard Distribution Patrol Inspections	The IE could only verify that 50,576 inspections were completed in 2021.	PacifiCorp completed more than 99% of their stated goal of 50,603 inspections.
7.3.4.15	Substation Inspections	The IE could only verify that 438 inspections were completed in 2021.	PacifiCorp completed more than 98% of their stated goal of 444 inspections.
7.3.5.5	Expanded Pole Clearing	PAC reported 2,872 poles cleared; however, the IE could only verify 1,595 (out of 3,047 targeted).	PAC reports the discrepancy between reported completions and evidence provided to be due to legacy tracking methods that were not updated in time for 2021 reporting. No reason was provided for falling short of the overall target.
7.3.5.11	Augmented Distribution Readiness Patrol	The IE could only verify 1,167 line miles of inspections (out of 1,369 targeted).	Based on the evidence provided, the IE has determined that the Distribution inspections fell short of the target by 202 line-miles. However, the initiative was reported as complete for 2021.
7.3.5.13	Vegetation QA/QC	The IE could only verify that 1,385 miles were audited inspections were completed in 2021.	PacifiCorp completed approximately 80% of their stated goal of 1,717 audited miles.

2021 Initiative Number	Initiative Name	Finding	Detail on finding
7.3.2.1.	Advanced weather monitoring and weather stations	Initiative Underfunded	See Section 3.2 for more details
7.3.3.2.	Circuit breaker maintenance and installation to de-energize lines upon detecting a fault	Initiative Underfunded	See Section 3.2 for more details
7.3.3.6.	Distribution pole replacement and reinforcement, including with composite poles	Initiative Underfunded	See Section 3.2 for more details
7.3.3.13.	Pole loading infrastructure hardening and replacement program based on pole loading assessment program	Initiative Underfunded	See Section 3.2 for more details
7.3.4.2.	Detailed inspections of transmission electric lines and equipment	Initiative Underfunded	See Section 3.2 for more details
7.3.4.6.	Intrusive pole inspections	Initiative Underfunded	See Section 3.2 for more details
7.3.4.11.	Patrol inspections of distribution	Initiative Underfunded	See Section 3.2 for more details

2021 Initiative Number	Initiative Name	Finding	Detail on finding
	electric lines and equipment		
7.3.4.12.	Patrol inspections of transmission electric lines and equipment	Initiative Underfunded	See Section 3.2 for more details
7.3.4.15.	Substation inspections	Initiative Underfunded	See Section 3.2 for more details
7.3.7.2.	Collaborative research on utility ignition and/or wildfire	Initiative Underfunded	See Section 3.2 for more details
7.3.7.3.	Documentation and disclosure of wildfire-related data and algorithms	Initiative Underfunded	See Section 3.2 for more details
7.3.7.4.	Tracking and analysis of near miss data	Initiative Underfunded	See Section 3.2 for more details
7.3.10.1.	Community engagement	Initiative Underfunded	See Section 3.2 for more details

2. INTRODUCTION

The Introduction 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 an Independent Evaluation to review and assess the EC's compliance with their WMP[1] by a qualified independent evaluator (IE).[2]

Wildfire Mitigation Plan Independent Evaluation Engagement

This report serves as the IE Annual Report on Compliance (IEARC or "Report") that aligns with the scope set forth by Energy Safety on November 5, 2021.[3] All California ECs are required to engage and contract with a qualified IE to perform the compliance assessment and deliver a report before July 1, 2022.

This IE report aims to verify WMP compliance activities of PacifiCorp for its 2021 performance as it corresponds to the initiatives the IOU planned to accomplish in 2021 compared to actual performance, whether those activities were funded appropriately, and validate and describe the EC's QA/QC programs for WMP compliance.

Methodology and Approach

The Report is the product of the IE's assessments of the EC's WMP, publicly available documentation submitted to the 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 ECs' WMP initiative activities, funding, and QA/QC efforts executed in 2021.

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

- **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. Review publicly available documents, which should include, at minimum, the WMP initiatives.
- **Prepare initiative 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 program(s), etc. Additional information to request includes any of the WMP submissions that are not on public websites or not available in useful formats and supplemental geographic information system (GIS) spatial data. This provides the IE a baseline understanding of available

[1] Public Utilities Code (PUC) § 8386.3.
[2] NV5 and Guidehouse were designated as an eligible Qualified Independent Evaluator on February 8, 2022 as part of the *2021 WMP: Revised 2022 IE Enlistment* available at https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=52018&shareable=true.
[3] California Public Utilities Commission, "Final Independent Evaluator Scope of Work for the Review of Compliance with 2020 WMP," April 21, 2021 ("April 21 IE Scope of Work"). Available at https://www.cpuc.ca.gov/uploadedFiles/CPUCWebsite/Content/About_Us/Organization/Divisions/WSD/Final%20IE%20SOW_20210421.pdf.

documentation apart from publicly available sources.

- **Document discovery review:** Review the supplemental information about the WMP initiatives in the Quarterly Data Reports (QDRs), Annual Report on Compliance (ARC), and the Quarterly Initiative Update (QIU). Review 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 assessment for field inspections:** Using GIS maps 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 2021.
- **Conduct 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 document 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.

3. 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.

3.1 WMP Activity Completion

The WMP Activity Completion section should detail the Independent Evaluator's review and verification of compliance for all WMP activities that have specific quantifiable or qualitative performance goals/targets set forth in the electrical corporation's 2020 WMP.

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

1. *Large volume (≥100 units) + quantifiable goal/target + field verifiable WMP activities*
2. *Large volume (≥100 units) + quantifiable goal/target + non-field verifiable WMP activities*
3. *Small volume (<100 units) + quantifiable goal/target WMP activities*
4. *Qualitative goal/target WMP activities*

The WSD expects Independent Evaluators to assess compliance via multiple dimensions, including work completion, work quality, and adherence to applicable protocols and procedures.

For Field Verifiable WMP activities, the Independent Evaluator must verify work quality in addition to completion of initiative installation and adherence to applicable protocols and procedures. For all other WMP activities, the Independent Evaluator must verify initiative installation and adherence to applicable protocols and procedures.

3.1.1 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.***[4]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 (IIA).[5] This handbook sets forth the statistically valid 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.[6]

[4] 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.
[5] *Id.* at p. 1.
[6] 16 U.S.C. § 824o.

Table 2: Sampling Methodology Based on Overall Population

Sample Table A	
Population Description	**Sample Selection**
Statistical Sampling	
Primary Population (Examples: Substations, Generating Stations, ESPs, PSPs,	**Using Statistical Sampling**
1-8	Entire population
9 +	8 Samples
Dependent Population of Elements: (Examples: Relays, CCAs, Routers, Firewalls & Other	**Using Statistical Sampling**
1-9	All Elements
10-19	9 Samples
20-40	16 Samples
41-100	23 Samples
101-1000	29 Samples
1001 +	33 Samples
Independent Population of Elements: (Examples: Transmission Segments, Blackstart units, Outages, Mis-operations, Daily Operations reports, Line Ratings, others)	**Using Statistical or Judgemental 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

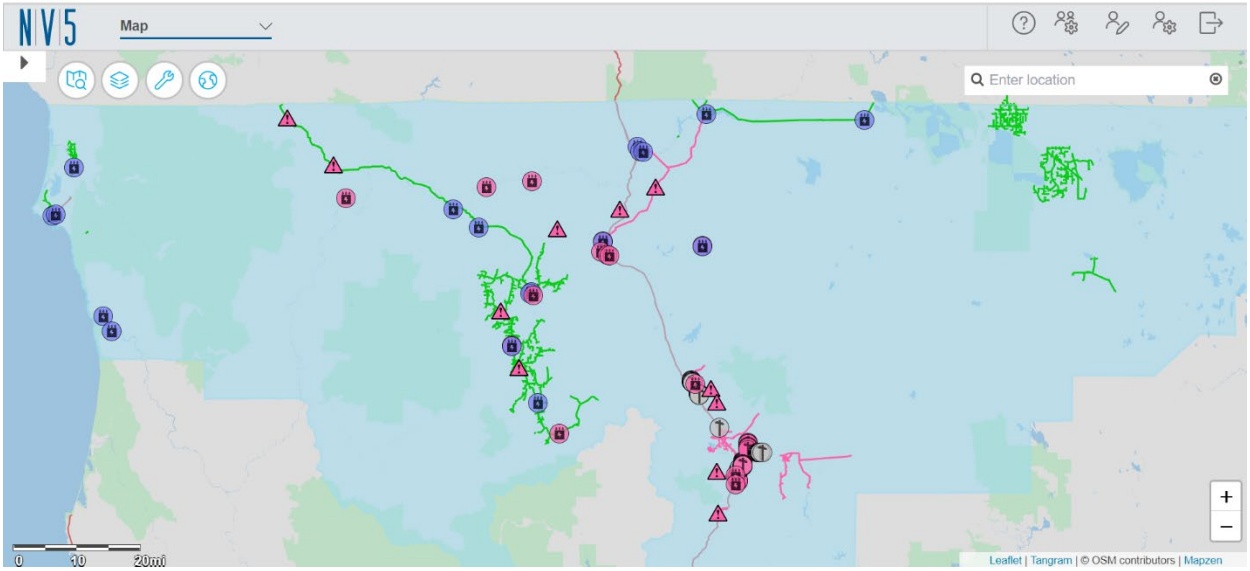
Field inspection findings contributed to the documentation discovery process by validating whether activities were executed in accordance with the WMP description of activities. The IE compared these results with documentation produced by the electrical corporation to verify accuracy in reporting.

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,

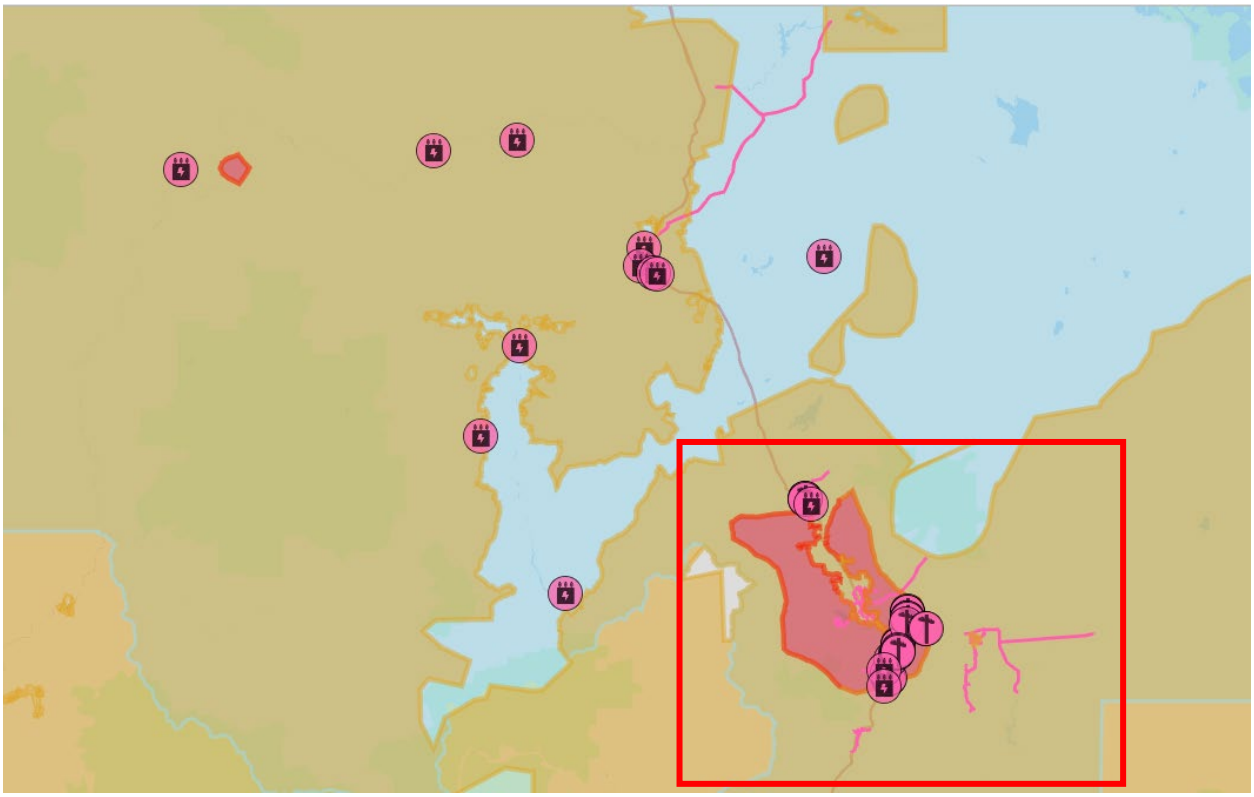
and other geological factors to determine the location of the evaluation. As the principal map, the IE layered the three Tiers within the CPUC's HFTD map.

Due to the size of PacifiCorp's territory the IE concentrated its field verification efforts within a specific region. The selected area was identified through both risk and practical considerations. The practical element focused on the accessibility of the locations for both physical, ground-based inspections and possible UAV operations as well as 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 our proprietary mapping and auditing tool, INSITE, to randomly select assets for field verification within the chosen zones.

The image below illustrates the amount of reported field verifiable work completed by PacifiCorp in 2021 as part of the efforts made to comply with the WMP.



IE field verification activities were concentrated in the areas shown below. Site selection was made using the methodology and criteria explained above and in consultation with Energy Safety.



IE field verification staff met with several challenges when trying to access areas to confirm work completed. The IE was provided with field contacts to coordinate with in the event that access was needed or issues that needed to be addressed were discovered. These field contacts had very limited availability to assist the IE. Scheduled vacations, primary work assignments (i.e. outage response), etc. limited our ability to field verify many of the assets in our sample set in a timely manner and required demobilization and remobilization of field verification staff to verify many sample set items. In subsequent years the IE will request dedicated resources be available to field verification staff for a specified time frame.

3.1.2 Large Volume Quantifiable Goal/Target – Field Verifiable

3.1.2.1 Review of Initiatives

This section should include the Independent Evaluator's findings and assessment of utility compliance with activities that fall into the Large Volume Quantifiable Goal/Target – Field Verifiable category. Independent Evaluators shall conduct field verification to confirm installation, work quality, and adherence to applicable utility protocols and standards for such work.

Include the electrical corporation's list of initiatives that fall into the Large Volume Quantifiable Goal/Target – Field Verifiable category, including respective goals/targets for each, in the Appendix or within the body of this subsection.

Table 3: PacifiCorp 2021 WMP Execution – Large Volume Quantifiable, Field Verifiable

Program Category	WMP Identifier	Initiative / Activity	Utility Initiative Name	Target Units	2021 Target	Desktop Review
Vegetation Management	VM-4	Fuel management (including all wood management) and management of "slash" from vegetation management activities	Expanded Pole Clearing	Program Target - Poles	3,047	Yes
Vegetation Management	VM-20	Vegetation management to achieve clearances around electric lines and equipment	Vegetation Cycle Clearing / Pruning / Corrective Work	Financial Goal	N/A	Yes

Radial Pole Clearing / Fuel Management and Reduction of "Slash" (VM-4)

To validate pole grubbing and vegetation clearing efforts, the IE performed a field sample survey of treated lines in the Mt. Shasta area on May 24 and 25, 2022 in adherence to Public Resources Code 4292, whereas all poles should maintain 10 feet of clearance of high-risk vegetation in a circumference around the pole or tower. Additionally, the IE field inspector verified CCR 1254 of Title 14 for minimum clearance provisions regarding flammable materials, which could also include combustible sources that may not necessarily be from vegetation debris within 8 feet of the ground level or horizontal plane of highest point of the conductor / attachment. According to the ***2021 California Wildfire Mitigation Plan,*** the ***Q4 2021 QIU***, and the ***Q4 2021 QDR***, it was projected that 3,047 of PacifiCorp's electric poles would be inspected and cleared in 2021; however, only 2,872 were reported in PacifiCorp's Q4 2021 QIU, falling short of the target by 175.

The IE requested population data to validate the reported poles inspected/cleared and received workbook ***PpPoleDetail_2021_LRA_WMP Req 5*** which lists the structure number, district, and latitude/longitude of each pole cleared. This workbook contained information for 1,595 poles, which falls short of the reported completion of 2,872. PacifiCorp reported this discrepancy to be due to legacy methods of tracking pole clearing information and states that they are in the process of updating tracking and data management, but the updates were not completed in

time for the 2021 pole clearing work. From the information provided, a total of 25 pole locations were selected using the sampling method described in Section 3.1.1 to perform field inspection and desktop review for adequate clearing as described in Public Resources Code (PRC) § 4292 and the California Code of Regulations (14 CCR) § 1254.

Of the selected sample of the risk zone surveyed, all 25 poles at the field locations were visually inspected.

Pole clearing was evaluated using the following criteria:

1. PRC 4292 – Clearing of not less than 10 feet in each direction from the outer circumference of pole or tower
2. 14 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.

   (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.

The results of the inspections at the 25 pole locations are as follows:

Table 4: Vegetation Management Field Inspection Results

Object ID	District	Latitude	Longitude	Inspection Results	Notes
1720	MT SHASTA	41.20498440	-122.2715269	Not Compliant	The 10’ radius has not been maintained to be free of vegetation.
853	MT SHASTA	41.31812001	-122.3254075	Compliant	
767	MT SHASTA	41.39461239	-122.3817999	Compliant	
838	MT SHASTA	41.39440803	-122.3723984	Compliant	
836	MT SHASTA	41.40055972	-122.3819893	Compliant	
835	MT SHASTA	41.40054601	-122.3818081	Compliant	
831	MT SHASTA	41.40226209	-122.3695924	Not Compliant	At the time of inspection, the 10’ radius has not been cleared of vegetation
764	MT SHASTA	41.40262033	-122.3693064	Compliant	
832	MT SHASTA	41.40342357	-122.3690767	Compliant	
833	MT SHASTA	41.40401555	-122.3690187	Compliant	

690	MT SHASTA	41.43146797	-122.4005472	Compliant	
718	MT SHASTA	41.43017525	-122.3889753	Compliant	
792	MT SHASTA	41.42561185	-122.3895377	Compliant	
794	MT SHASTA	41.42559592	-122.3906083	Compliant	
858	MT SHASTA	41.42312868	-122.3840746	Not Compliant	Grass is green now, but when dry later in the season, there will be path to other vegetation. Location does not appear to have been cleared in past year.
857	MT SHASTA	41.42338130	-122.3840311	Compliant	
864	MT SHASTA	41.42203609	-122.3838569	Not Compliant	While the lawn on one side of the pole is exempt from clearing because it is maintained by the property owner and is irrigated, the remaining radius has not been kept clear of vegetation at the time of inspection and is not maintained or watered. There are weeds that will dry out and a pile of pallets, both causing risk of ignition.
866	MT SHASTA	41.42448322	-122.3830309	Not Compliant	Vegetation has not been cleared.
861	MT SHASTA	41.42848160	-122.3846495	Compliant	
788	MT SHASTA	41.42767832	-122.3862840	Compliant	
717	MT SHASTA	41.42869919	-122.3874211	Compliant	
789	MT SHASTA	41.42690789	-122.3877253	Not Compliant	Vegetation has not been cleared, tree limbs are in contact with approximately 6’ of pole at approximately 15’ up
3194	MT SHASTA	41.43106260	-122.3731480	Not Compliant	Grass and weeds have not been cleared at the time of inspection
895	MT SHASTA	41.41156336	-122.3791223	Exempt	
897	MT SHASTA	41.40947398	-122.3778066	Compliant	

Of the 25 locations inspected, seven locations were identified as not compliant, resulting in a 28% failure rate.

In most instances, visual evidence confirmed that work had been done to clear the poles apart from overgrowth findings at the time of the field survey. In other words, the insufficient finding accounted for any single instance of non-compliant requirements and does not necessarily reflect that no work occurred in that area. For this evaluation, the IE field inspectors made the compliant versus non-compliant determinations in strict definitions adhering to the aforementioned requirements at the time of the visual inspection.

Finding: Based on the sample identified, the evidence provided, and a failure rate of 28% on the field inspections. The IE notes that geographic location and time constraints affected the ability to fully inspect a representative sample. Additionally, it is noted that clearance work may have been performed on these poles at some point during the previous year, but re-growth may have occurred. Due to the tracking limitations reported by PacifiCorp, only 1,595 of the poles targeted could be verified, falling short of the original 3,047 pole target by 1,452, or 47%.

The IE recommends that PacifiCorp prioritize tracking methods for tree clearing in the future to demonstrate all work performed.

3.1.2.2 Trends and Themes

Include any trends or recurring themes that the Independent Evaluator found while assessing utility compliance to Large Volume Quantifiable Goal/Target – Field Verifiable initiatives.

The IE did not note any significant trends or themes with respect to PacifiCorp's large volume quantifiable goal/target – field verifiable initiatives. The IE noted several instances of PAC's QIU reporting that an initiative was "Complete" for the year, despite the tracked progress falling short of the identified target. The IE recommends PAC provide additional narrative in these instances to describe why the initiative is considered complete and any narrative explaining why progress did not meet goal.

3.1.3 Large Volume Quantifiable Goal/Target – Not Field Verifiable

Table 5: PacifiCorp 2021 WMP Execution – Large Volume Quantifiable, Not Field Verifiable

Program Category	WMP Identifier	Initiative / Activity	Utility Initiative Name	Target Units	2021 Target	Desktop Review
Grid Design & System Hardening	AH-1	Circuit breaker maintenance and installation to de-energize lines upon detecting a fault	Circuit Breaker Maintenance & Replacement	Financial	$432,000	Yes

Program Category	WMP Identifier	Initiative / Activity	Utility Initiative Name	Target Units	2021 Target	Desktop Review
Grid Design & System Hardening	AH-3	Crossarm maintenance, repair, and replacement	Standard Crossarm Replacement	Financial	$272,000	Yes
Asset Management & Inspections	IN-1	Detailed inspections of distribution electric lines and equipment	Standard Distribution Detailed Inspections	Program Target-Facilities	9,213	Yes
Asset Management & Inspections	IN-2	Detailed inspections of transmission electric lines and equipment	Standard Transmission Detailed Inspections	Program Target-Facilities	666	Yes
Asset Management & Inspections	IN-5	Infrared inspections of transmission electric lines and equipment	Enhanced Inspections (IR Inspections)	Program Target-Line-Miles	700	Yes
Asset Management & Inspections	IN-6	Intrusive pole inspections	Standard Intrusive Pole Inspections	Program Target-Facilities	2,668	Yes
Asset Management & Inspections	IN-11	Patrol inspections of distribution electric lines and equipment	Standard Distribution Patrol Inspections	Program Target-Facilities	50,603	Yes
Asset Management & Inspections	IN-12	Patrol inspections of transmission electric lines and equipment	Standard Transmission Patrol Inspections	Program Target-Facilities	98	Yes
Asset Management	IN-14	Quality assurance /	Inspection QA/QC	Financial	$36,000	Yes

Program Category	WMP Identifier	Initiative / Activity	Utility Initiative Name	Target Units	2021 Target	Desktop Review
& Inspections		quality control of inspections				
Vegetation Management & Inspections	VM-1	Patrol inspections of vegetation around distribution electric lines and equipment	Augmented Distribution Readiness Patrol	Program Target-Line-Miles	1,369	Yes
Vegetation Management & Inspections	VM-1	Patrol inspections of vegetation around transmission electric lines and equipment	Augmented Transmission Readiness Patrol	Program Target-Line-Miles	348	Yes
Vegetation Management & Inspections	VM-13	Quality assurance / quality control of vegetation inspections	Vegetation QA/QC	Program Target-Line-Miles	1,717	Yes
Vegetation Management & Inspections	VM-2	Detailed inspections of vegetation around distribution electric lines and equipment	Distribution Detailed Inspections of Vegetation	Program Target-Line-Miles	1,380	Yes
Vegetation Management & Inspections	VM-3	Detailed inspections of vegetation around transmission electric lines and equipment	Transmission Detailed Inspections of Vegetation	Program Target-Line-Miles	181	Yes

3.1.3.1 Review of Initiatives

This section should include the Independent Evaluator's findings and assessment of utility 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.

Circuit Breaker Maintenance & Replacement (AH-1)

PacifiCorp_2021_Wildfire_Mitigation_Plan_Update_3-5-21 states that PacifiCorp performs maintenance on breakers under the company's existing substation inspection and circuit breaker maintenance standard programs. This includes a visual inspection of the circuit breakers and corrective work consistent with substation inspections. Additionally, circuit breaker maintenance activities are performed on either an annual to bi-annual basis, depending on the type and operating voltage. PacifiCorp's breaker maintenance program is a standard program implemented across PacifiCorp's system and is not solely a WMP initiative. There was no incremental funding for this initiative and all funding was incorporated in PacifiCorp's most recent General Rate Case; however, the standard program spend and units were included in the WMP, Table 12.

PacifiCorp set a goal of spending $432,000 specific to circuit breaker maintenance and replacement. According to PacifiCorp's 2021 Q4 QIU (***PAC_2021_QIU_Q4***) PacifiCorp spent $306,851 in 2021 for circuit breaker maintenance and replacement.

The IE requested that PacifiCorp provide detailed transactions to verify the spend amount for 2021 as part of *Data Request 6*. In response to the data request, PacifiCorp provided a detailed line-item list of expenses for breaker maintenance and replacement (***Item 1 Circuit Breaker Maintenance***). The spreadsheet listed the individual workorders, posting date for the expenses, and object being worked on, the cost, and the number of units (hours) spent on each project. The IE reviewed the spreadsheet and confirmed that the total spend for breaker maintenance was $413, 860 for 2021.

Finding: PacifiCorp performed maintenance on breakers as stated in the WMP and 2021 QIU. PacifiCorp spent $413,860 which was below the targeted spend of $432,000 in 2021. The IE would recommend that PacifiCorp modify its WMP goal for AH-1 to make it a quantifiable goal based on maintenance and replacement of breakers instead of a financial spend goal.

Standard Crossarm Replacement (AH-3)

PacifiCorp_2021_Wildfire_Mitigation_Plan_Update_3-5-21 included a statement that crossarm maintenance, repair, and replacements is one element of maintenance of overhead distribution and transmission lines, which is captured in Section 7.9.4. It is of note that Section

7.9.4 does not exist in PacifiCorp's *WMP.* The WMP does state that a projected units and costs are tracked separately as part of ***R18-10-007_Attachment_1-2021_Performance_Metrics_Data_Template_PacifiCorp_3-5-21*** PacifiCorp's QDR Table 12. Table 12 of the QDR states that the projected target for this initiative is 136 crossarm's at an estimated cost of $272,000. The ***PAC_2021_QIU_Q4*** quarterly submission workbook also confirms this projected cost for 2021. PacifiCorp indicated in the QIU that $685,558 was spend in calendar year 2021.

The IE submitted *Data Request 2* for locational data details demonstrating where, what types of actions, and dates of actions executed for the 2021 WMP activities. PacifiCorp provided ***Grid hardening line data 2021*** and ***Grid Hardening point data 2021*** which did not provide detail regarding AH-3. In response to the missing information the IE requested a discussion with PacifiCorp and sent *Data Request 8 & 9* to obtain verification of recorded cost in 2021. Following the receipt of *Data Request 9* the IE was able to determine that PacifiCorp spent $685560 in 2021 exceeding their program target of $272,000. Data Request 8 provided the following statement to explain the possibility of extreme overspend or underspend:

> "During a given year, PacifiCorp establishes a plan or a projection of how many crossarms it will replace as part of the inspection corrective maintenance program, outage repair, or other programs. These numbers are projected based on historical spend for this type of activity, however during the process, the actual spend may include more or less spend, depending on the number of cross arm repairs needed.
>
> Crossarm repair is often not planned but essential to complete in an expedited manner. Due to the expedited nature that this work is completed and that it is reactive to what is discovered during the year, the target spend is not likely to perfectly align with actual spend."

Finding: The IE determined that PacifiCorp was able to meet its initiative target for 2021. The IE would also like to provide the recommendation that moving forward PacifiCorp uses a non-financial quantitative target for this initiative. The IE would suggest that PacifiCorp track number of crossarm's repaired, replaced, or remediated as its initiative metric in its next WMP submission.

Detailed Inspections of Distribution Electric Lines and Equipment (IN-1)

The IE reviewed publicly available and requested specific documentation, policies, and procedures including the ***2021 California Wildfire Mitigation Plan*** Section 7.3.4.1, ***Policy 297 Detailed Inspections of T & D Lines*** which outlines PacifiCorp's approach to visually inspecting structures (*i.e*. poles, guys, anchors, grounding, etc.) and the associated actions to be taken at each, ***Policy 192 Correction Management Plan, Correction Time Periods and Compliance Requirements*** which outlines PacifiCorp's approach to logging any nonconformance issues found during an inspection and applying appropriate remedial actions and timelines, and ***Procedure 069*** which summarizes clearance requirements set forth by NESC and GO 95. Upon review, the IE has found that the provided policies and procedures adequately cover all requirements set forth for this initiative in PacifiCorp's 2021 WMP.

PacifiCorp projected that 9,213 facility inspections would be completed in 2021. The IE requested the evidence indicating that the 9,213 facility inspections were completed in *Data Request 2*. PacifiCorp provided this evidence; however, the IE was only able to verify that 9,157 distribution facility inspections were performed. PacifiCorp's QIU states that 9,157 inspections were performed.

The IE submitted *Data Request 7* to obtain a sample of data to further verify that distribution inspections were completed. PacifiCorp provided a response to *Data Request* 7, which included copies of the work orders for the 33 requested sample points. Using this sampling methodology, the IE has reasonable assurance that PacifiCorp has completed 9,157 distribution inspections.

Finding: The IE found that the provided policies and procedures adequately cover all requirements set forth for this initiative in PacifiCorp's ***2021 California Wildfire Mitigation Plan***. The IE can say with reasonable confidence that PacifiCorp completed 9,157 distribution inspections in 2021; however, this is short of the goal of 9,213. PAC did not provide reasoning for falling short of 2021 target.

Detailed Inspections of Transmission Electric Lines and Equipment (IN-2)

The IE reviewed publicly available and entity specific documentation, policies, and procedures including the ***2021 California Wildfire Mitigation Plan*** document Section 7.3.4.2, ***Policy 27 Detailed Inspections of T & D Lines*** document, which outlines PacifiCorp's approach to visually inspecting structures (*i.e*. poles, guys, anchors, grounding, etc.) and the associated actions to be taken at each, ***Policy 192 Correction Management Plan, Correction Time Periods and Compliance Requirements*** document, which outlines PacifiCorp's approach to logging any nonconformance issues found during an inspection and applying appropriate remedial actions and timelines, and ***Procedure 069*** document, which summarizes clearance requirements set forth by NESC and GO 95. Upon review, the IE has found that the provided policies and procedures adequately cover all requirements set forth for this initiative in PacifiCorp's WMP.

PacifiCorp projected that 666 transmission facility inspection would be completed in 2021. The IE requested the evidence indicating that the 666 facility inspections were completed in *Data Request 2*. PacifiCorp provided this evidence and the IE was able to verify that 1,408 transmission facility inspections were performed.

The IE submitted *Data Request 7* to obtain a sample of data to further verify that transmission inspections were completed. PacifiCorp provided a response to *Data Request* 7, which included copies of the work orders for the 33 requested sample points. Using this sampling methodology, the IE has reasonable assurance that PacifiCorp has completed 1,408 transmission inspections.

Finding: The IE has reasonable assurance that PacifiCorp has completed 1,408 transmission inspections in 2021.

Enhanced Inspections (IR Inspections) (IN-5)

The IE reviewed publicly available and requested specific documentation, policies, and procedures including the ***2021 California Wildfire Mitigation Plan*** Section 7.3.4.5, ***Policy 297 Detailed Inspections of T & D Lines*** which outlines PacifiCorp's approach to visually inspecting structures (*i.e*. poles, guys, anchors, grounding, etc.) and the associated actions to be taken at each, ***Policy 192 Correction Management Plan, Correction Time Periods and Compliance Requirements*** which outlines PacifiCorp's approach to logging any nonconformance issues found during an inspection and applying appropriate remedial actions and timelines, and ***Procedure 069*** which summarizes clearance requirements set forth by NESC and GO 95. Upon review, the IE has found that the provided policies and procedures adequately cover all requirements set forth for this initiative in PacifiCorp's 2021 WMP.

PacifiCorp projected that 700 line miles of inspections would be completed in 2021. The IE requested the evidence indicating that 700 line miles were completed in *Data Request 6*. PacifiCorp provided this evidence, and the IE was able to verify that 729 miles worth of inspections were performed. PacifiCorp's QIU states that 706 miles were completed. The IE was not provided information to clear up this discrepancy.

The IE submitted *Data Request 6* to obtain a sample of data to further verify that IR inspections were completed. In response, PacifiCorp provided individual pdf output files from their tracking software for the selected random sample.

Finding: The IE found that the provided policies and procedures adequately cover all requirements set forth for this initiative in PacifiCorp's ***2021 California Wildfire Mitigation Plan***. The IE has reasonable assurance that PacifiCorp completed 729 IR inspections in 2021.

Standard Intrusive Pole Inspections (IN-6)

The IE reviewed publicly available and requested specific documentation, policies, and procedures including the ***2021 California Wildfire Mitigation Plan*** Section 7.3.4.6, ***Policy 297 Detailed Inspections of T & D Lines*** which outlines PacifiCorp's approach to visually inspecting structures (*i.e*. poles, guys, anchors, grounding, etc.) and the associated actions to be taken at each, ***Policy 192 Correction Management Plan, Correction Time Periods and Compliance Requirements*** which outlines PacifiCorp's approach to logging any nonconformance issues found during an inspection and applying appropriate remedial actions and timelines, and ***Procedure 069*** which summarizes clearance requirements set forth by NESC and GO 95. Upon review, the IE has found that the provided policies and procedures adequately cover all requirements set forth for this initiative in PacifiCorp's 2021 WMP.

PacifiCorp projected that 2,668 inspections would be completed in 2021. The IE requested the evidence indicating that 2,668 inspections were completed in *Data Request 2*. PacifiCorp provided this evidence and the IE was able to verify that 4,632 inspections were performed. PacifiCorp's QIU states that 4,632 inspections completed.

The IE submitted *Data Request 6* to obtain a sample of data to further verify that intrusive pole inspections were completed. In response, PacifiCorp provided individual pdf output files from

their tracking software for the selected random sample.

Finding: The IE found that the provided policies and procedures adequately cover all requirements set forth for this initiative in PacifiCorp's ***2021 California Wildfire Mitigation Plan***. The IE has reasonable assurance that PacifiCorp completed 4,632 pole inspections in 2021.

Standard Distribution Patrol Inspections (IN-11)

The IE reviewed publicly available and requested specific documentation, policies, and procedures including the ***2021 California Wildfire Mitigation Plan*** Section 7.3.4.11, ***Policy 297 Detailed Inspections of T & D Lines*** which outlines PacifiCorp's approach to visually inspecting structures (*i.e*. poles, guys, anchors, grounding, etc.) and the associated actions to be taken at each, ***Policy 192 Correction Management Plan, Correction Time Periods and Compliance Requirements*** which outlines PacifiCorp's approach to logging any nonconformance issues found during an inspection and applying appropriate remedial actions and timelines, and ***Procedure 069*** which summarizes clearance requirements set forth by NESC and GO 95. Patrol inspections are brief visual inspections that do not evaluate structures as thoroughly as a detailed inspection, and therefore result in fewer findings. Upon review, the IE has found that the provided policies and procedures adequately cover all requirements set forth for this initiative in PacifiCorp's 2021 WMP.

PacifiCorp projected that 50,603 facility inspections would be completed in 2021. The IE requested the evidence indicating that 50,603 facility inspections were completed in *Data Request 2*. PacifiCorp provided this evidence; however, the IE was only able to verify that 50,576 distribution facility inspections were performed. PacifiCorp's QIU states that 50,578 inspections were performed.

The IE submitted *Data Request 7* to obtain a sample of data to further verify that distribution inspections were completed. PacifiCorp provided a response to *Data Request* 7, which included copies of the work orders for the 33 requested sample points. Using this sampling methodology, the IE has reasonable assurance that PacifiCorp has completed 50,576 distribution inspections; however, this is less than the stated goal of 50,603. No explanation was provided to explain this discrepancy.

Finding: The IE found that the provided policies and procedures adequately cover all requirements set forth for this initiative in PacifiCorp's ***2021 California Wildfire Mitigation Plan***. The IE has reasonable assurance that PacifiCorp completed 50,576 distribution patrol inspections in 2021, however this is short of the stated goal of 50,603.

Standard Transmission Patrol Inspections (IN-12)

The IE reviewed publicly available and requested specific documentation, policies, and procedures including the ***2021 California Wildfire Mitigation Plan*** Section 7.3.4.12, which outlines PacifiCorp's approach to logging any nonconformance issues found during an inspection and applying appropriate remedial actions and timelines, and ***Procedure 069*** which summarizes clearance requirements set forth by NESC and GO 95. Patrol inspections are brief

visual inspections that do not evaluate structures as thoroughly as a detailed inspection, and therefore result in fewer findings. Upon review, the IE has found that the provided policies and procedures adequately cover all requirements set forth for this initiative in PacifiCorp's 2021 WMP.

PacifiCorp projected that 98 facility inspections would be completed in 2021. The IE requested the evidence indicating that 98 facility inspections were completed in *Data Request 2*. PacifiCorp provided this evidence and the IE was able to verify that 12,389 inspections were performed. PacifiCorp's QIU states that 12,389 inspections were performed.

The IE submitted *Data Request 7* to obtain a sample of data to further verify that transmission inspections were completed. PacifiCorp provided a response to *Data Request* 7, which included copies of the work orders for the 33 requested sample points. Using this sampling methodology, the IE has reasonable assurance that PacifiCorp has completed 12,389 distribution inspections.

Finding: The IE found that the provided policies and procedures adequately cover all requirements set forth for this initiative in PacifiCorp's ***2021 California Wildfire Mitigation Plan***. The IE has reasonable assurance that PacifiCorp completed 12,389 transmission patrol inspections in 2021.

Quality Assurance/Quality Control of OH Inspections (IN-14)

As described in the ***2021 California Wildfire Mitigation Plan*** Section 7.3.4.14, PacifiCorp's quality assurance and quality control aims to enable the planned reduction of risk through implementation of the inspection programs. Quality assurance and quality control at PacifiCorp includes desktop audits and field audits catered to identify gaps in the inspection programs, inspector capability, and corrective actions increasing inspection result accuracy and reliability. In 2021, PacifiCorp planned to incrementally improve the QA/QC of inspection results by evaluating audit results at the end of the year, identifying gaps or misalignments, conducting a root cause analysis of how to best address issues, and correcting them through annual inspector training. The ***PAC_2021_QIU_Q4*** quarterly submission workbook states a projected goal for 2021 for this effort was $36,000. PacifiCorp indicated in the QIU that $49,615 was spent in calendar year 2021.

Finding: In the fourth quarter update of the QIU, PacifiCorp reported this initiative goal was achieved by spending $49,615. However, since PacifiCorp identified only a financial goal and did not include a work goal, the IE was unable to verify actual work performed. The IE recommends in the future PacifiCorp identify work goals for all initiatives.

See Section 3.3 for specific details of PacifiCorp's QA/QC programs.

Patrol Inspections of Vegetation Around Electric Lines and Equipment (VM-1)

PacifiCorp described in the ***2021 California Wildfire Mitigation Plan*** that the method they use for meeting this initiative is the same as their detailed inspections of vegetation around distribution electric lines and equipment (described in section 7.3.5.2 of the WMP). Along with

the information already described above, PacifiCorp further indicates they conduct a patrol vegetation inspection of the High Fire Threat Districts (HFTDs) each year prior to the "height of the fire season" (undefined) to identify for pruning and removal of vegetation likely to violate minimum clearance distance prior to the next annual inspection using a method for identifying high-risk trees and suspect trees.

Patrol Inspections of Vegetation – Distribution (7.3.5.11)

In its ***Quarterly Initiative Update*** workbook, PacifiCorp targeted 1,369 Distribution line-miles for patrol and in Q4 reported completing 1,167 line-miles. In *Data Request 5*, the IE requested evidence to confirm the population reported. PacifiCorp provided workbook ***WE01012022_Contractor Miles Tracker –5-CA WMP IE*** containing the work performed as tracked by three letter identifiers denoting the type of work (e.g., FIN for distribution or inspection). PacifiCorp also provided a supplemental document describing the workbook and how to read the data to find the information contained therein. Between these two documents, the IE was able to confirm the line miles reported.

Findings: Based on the evidence provided, the IE has determined that the Distribution inspections fell short of the target by 202 line-miles. Between the workbook provided and the supplemental document describing how to group and sort the data to filter for Transmission vs. Distribution, the IE received reasonable assurance that the line miles tracked were accurate. No additional evidence was provided for why PAC fell short of the target.

Patrol Inspections of Vegetation – Transmission (7.3.5.12)

In its Quarterly Initiative Update workbook, PacifiCorp targeted 348 Transmission line-miles for patrol and reported 354 line-miles completed by the end of Q4. In *Data Request 5*, the IE requested evidence to confirm the population reported. PacifiCorp provided workbook ***WE01012022_Contractor Miles Tracker –5-CA WMP IE*** containing work performed tracked by three letter identifiers denoting the type of work (e.g., FMT for transmission inspection). PacifiCorp also provided a supplemental document describing the workbook and where to find the information contained therein. Between these two documents, the IE was able to confirm the line miles reported.

Findings: The Transmission inspections exceeded the target by six line-miles. Between the workbook provided and the supplemental document describing how to group and sort the data to filter for Transmission vs. Distribution, the IE received reasonable assurance that the line miles tracked were accurate.

Detailed Inspections of Vegetation Around Transmission and Distribution Electric Lines and Equipment (VM-2 and VM-3)

PacifiCorp maintains a plan to inspect its transmission and distribution lines and facilities. As described in the ***2021 California Wildfire Mitigation Plan***, the inspections include as a component and identification if imminent threat, or hazards and vegetation conditions that do not comply with PacifiCorp's program standards/specifications. This can be found on page 159 in Sections 7.3.5.2 (Distribution) and 7.3.5.3 (Transmission). Inspections for Distribution and

Transmission lines are very similar, the primary difference being transmission clearing distances are much greater. Section 7.3.4.1 describes the detail of the inspection that PacifiCorp implements, which includes visiting each structure and spans between structures to perform a detailed inspection including potential nonconformance with the NESC or other applicable state requirements such as California GOs, nonconformance with PacifiCorp construction standards, infringement by other utilities or individuals, defects, potential safety hazards, and deterioration of the facilities which need to be corrected in order to maintain reliable and safe service. This is, according to PacifiCorp, consistent with GO165 and California GO 95 requirements regarding frequency and correction timeframe.

Detailed Inspection of Vegetation – Distribution (VM-2)

The following review is based on PacifiCorp's response to data requests regarding its detailed inspections of vegetation on its *distribution* system.

In the Quarterly Initiative Update workbook, PacifiCorp includes a target of 1,380 line-miles committed for inspection and treatment around Distribution lines in 2021. In the fourth quarter update of the QIU, PacifiCorp reports progress of 1,376 line-miles. The IE reviewed workbook ***WE01012022_Contractor Miles Tracker –5-CA WMP IE*** as provided in response to *Data Request 5*, which contained record of all line miles reviewed. PacifiCorp also provided a supplemental Word document response to DR5 describing how the data is tracked by initiative and line-mile type. This document matches and corroborates the miles reported.

Findings: Though the line miles inspected fell slightly short of the target set for 2021 at 1,376 out of 1,380, the IE has reasonable assurance that the miles completed were reported accurately and does not note the discrepancy to be significant.

Detailed Inspections of Vegetation – Transmission (VM-3)

The following review is based on PacifiCorp's response to data requests regarding its detailed inspections of vegetation on its *transmission* system.

In the Quarterly Initiative Update workbook, PacifiCorp includes a target of the number of line miles committed for inspection and treatment around Distribution lines in 2021. The goal shows a target of 181 line-miles. In the fourth quarter update of the QIU, PacifiCorp reports progress of 181 line-miles. The IE reviewed workbook ***WE01012022_Contractor Miles Tracker –5-CA WMP IE*** as provided in response to *Data Request 5*, which contained record of all line miles reviewed. PacifiCorp also provided a supplemental Word document response to DR5 describing how the data is tracked by initiative and line-mile type. This document matches and corroborates the miles reported.

Findings: The 181 line-miles reported matches what was provided in the evidence reviewed. Based on the evidence and progress updates, the IE has reasonable assurance that this initiative was completed as reported.

Quality Assurance/Quality Control of Inspections (VM-13)

In the ***2021 California Wildfire Mitigation Plan,*** PacifiCorp describes that their initiative Audits are performed on program cycle and incremental work and are conducted as a result of annual patrols. Responding to *Data Request 5,* under ***Post Audits_Foresters_Final_2021_used for CPUC reporting,*** PacifiCorp reported that at the end of December 2021, they were only able to audit 1,383 miles, falling short of the 1,717 miles targeted in the Quarterly Initiative Update workbook.

To verify the line miles that were completed, the IE team issued *Data Request 5* requesting an in-depth report on miles audited associated with VM-13 (vegetation management corrective work conducted associated with patrols). Pos- audits of distribution and transmission patrol correction activities are documented in ***Post Audits_Foresters_Final_2021_used for CPUC reporting*** in the "2021 F Codes Post Audits" worksheet tab. The evidence provided shows that 1,385 miles were audited. This number is slightly higher than what was reported (1,383), and as noted above it is below the reported goal of 1,717 miles by 334 miles.

Finding: PacifiCorp reported that this initiative was "Completed" in 2021, however the total line miles did not meet their quality assurance/quality control goal, falling short by 334 miles. No description or narrative was provided for why. A full review of the QA/QC program can be found in **Section 3.3** of this document.

Vegetation Management to Achieve Clearances (VM-20)

PacifiCorp maintains a plan to inspect its transmission and distribution lines and facilities. As described in the ***2021 California Wildfire Mitigation Plan.pdf*** section 7.3.5.20, the inspections include as a component an identification of imminent threat, or hazards and vegetation conditions that do not comply with PacifiCorp's program standards/specifications. The goal of PacifiCorp for 2021 was to provide vegetation management activities of providing 12 feet and 25 feet clearance 115kV to 230kV distribution lines.

PacifiCorp's vegetation management program conducts cycle maintenance to achieve clearances around electric lines and equipment consistent with Guidelines of GO 95, Rule 35, identifies and removes hazard trees and conducts patrols of lines in High Fire Threat District (HFTD) where cycle maintenance has not been completed. PacifiCorp prunes vegetation beyond minimum required clearances in multiple ways. PacifiCorp use increased clearance distances on distribution lines for certain species of trees, depending on tree growth rate. PacifiCorp uses natural target pruning for all prune work. Natural targets are the final pruning cut location at a strong point in a tree's disease defense system.

To achieve this, PacifiCorp set a goal of spending $6,561,237 on these efforts. In the fourth quarter update of the QIU, PacifiCorp reported this initiative goal was achieved with a total of $6.7 million towards hazardous/diseased trees posing a threat to distribution lines. To verify this, the IE requested evidence of services provided to corroborate this number (see *Data Request 10*). PacifiCorp provided ***VM-20 DR#10 item 5 Support.xlsm*** detailing invoices from

services completed by Trees Inc, ArborWorks, and Wright Tree Service, totaling the amount reported.

Findings: Based on the evidence provided by PacifiCorp, the IE has reasonable assurance that this initiative target was met and exceeded.

Inspection Date	Asset ID	Object ID	Status	Comments
5/24/2022	TU440-45-23519	81404	Yes	
5/24/2022	214701	79663	Yes	
5/24/2022	5/49	91858	Yes	
5/24/2022	169410	108577	Yes	
5/24/2022	169203	91657	Yes	
5/24/2022	10/46	81309	Yes	
5/24/2022	2/47	81310	Yes	13.5 feet clear on a cherry tree under conductor. Compliant but not meeting clearance stated in WMP.
5/24/2022	6/47	81305	Yes	
5/24/2022	N/A	81306	Yes	14’ of clearance on pruned trees. Compliant but not meeting clearance stated in WMP.
5/24/2022	2/47	81308	Yes	
5/24/2022	15	92838	Yes	
5/24/2022	13	92837	Yes	
5/24/2022	304101	104794	Yes	
5/24/2022	281600	103824	Yes	
5/24/2022	209503	91859	Yes	Span is compliant; however, evidence of recent pruning not observed
5/24/2022	209502	94943	Yes	Span is compliant, however several trees in span with poor structure (e.g., co-dominant tops)
5/24/2022	150142	101317	Yes	
5/25/2022	222600	75614	Yes	N/A
5/25/2022	5/48	81304	Yes	A 1/4 span vegetation at 19’ clear under conductor, otherwise; recent pruning achieved 30’ clearance. Co-dominant conifer outside easement could strike.
5/25/2022	131101	92813	Yes	
5/25/2022	137202	99658	Yes	White fir with multiple co-dominant stems and included bark; one tree pruned exceeds 12’ of clearance; however, in field 4 trees with pink

				flagging have been pruned, but will barely hold 12' of clearance.
5/25/2022	139400	99657	Yes	
5/25/2022	9/47	88581	Yes	
5/25/2022	187442	88630	Yes	
5/25/2022	12/49	12317	Yes	
5/25/2022	206500	92334	No	10" Douglas fir aprox. 3.5 feet from conductor
5/25/2022	204702	91992	Yes	
5/25/2022	210802	71860	Yes	
5/25/2022	172502	73241	Yes	
5/25/2022	172505	91751	Yes	
5/25/2022	11/47	89272	Yes	
5/25/2022	177804	88580	Yes	
5/26/2022	277442	89518	Yes	

3.1.3.2 Trends and Themes

Include any trends or recurring themes that the Independent Evaluator found while assessing utility compliance to Large Volume Quantifiable Goal/Target – Not Field Verifiable initiatives.

PacifiCorp identified financial reporting goals for multiple initiatives. Financial goals can be misleading and does not indicate the actual amount of work forecasted to be done. The IE was unable to compare actual work completed to a set goal for these initiatives. The IE recommends that PacifiCorp identify work goals for all initiatives rather than financial goals.

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

3.1.4.1 Review of Initiatives

This section should include the Independent Evaluator's findings and assessment of utility compliance with activities that fall into the Small Volume Quantifiable Goal/Target 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 Small Volume Quantifiable Goal/Target category, including respective goals/targets for each, in the Appendix or within the body of this subsection.

Table 6: PacifiCorp 2021 WMP Execution – Small Volume Quantifiable

Program Category	WMP Identifier	Initiative / Activity	Utility Initiative Name	Target Units	2021 Target	Desktop Review
Situational Awareness & Forecasting	SA-1	Advanced weather monitoring and weather stations	Weather Station Installation	Program Target- Weather Stations	21	Yes
Situational Awareness & Forecasting	SA-3	Continuous monitoring sensors	Pilot 1: DFA	Program Target- Devices / Projects	2	Yes
Grid Design & System Hardening	AH-5	Covered conductor installation	Covered Conductor	Program Target- Line-Miles	81	Yes
Grid Design & System Hardening	AH-2	Distribution pole replacement and reinforcement, including with composite poles	Targeted Pole Replacement	Program Target- Poles	128	Yes
Grid Design & System Hardening	AH-4	Installation of system automation equipment	Relay/Recloser Replacements / Upgrade	Program Target- Devices / Projects	27	Yes
Grid Design & System Hardening	AH-6	Other corrective action	Small Diameter Conductor Replacement	Program Target- Line-Miles	4	Yes
Asset Management & Inspections	IN-15	Substation Inspections	Standard Substation Inspections	Program Target – Inspections	444	Yes

Weather Station Installation (SA-1)

According to section 7.3.2.1 of ***PacifiCorp_2021_Wildfire_Mitigation_Plan_Update_3-5-21***, PacifiCorp's wildfire risk modeling efforts and general situational awareness vastly expanded following the 2020 initiative of building a weather network to monitor its entire territory. PacifiCorp targeted a small volume quantitative goal of installing 21 advanced weather monitoring stations in 2021.

PacifiCorp reported the 2021 target was met by installing 21 additional advanced monitoring stations to its weather network, per the ***06-IE Initiatives List*** spreadsheet.

The IE sent *Data Request 7* to PacifiCorp requesting work orders of the 21 advanced monitoring stations installed in 2021. PacifiCorp provided an excel spreadsheet listing working order numbers, SAP equipment numbers, weather station type, service date, wildfire risk area, and descriptions of work completed. The excel spreadsheet contained data for # advanced weather monitoring stations installed in 2021. Based on the provided documentation, the IE has reasonable assurance PacifiCorp installed # advanced monitoring stations in 2021.

The IE performed a desktop review of the system automation equipment data provided by PacifiCorp to further review and validate findings. The IE reviewed a sample of 16 advanced weather monitoring station work orders provided by PacifiCorp.

Finding: Based on the 2021 quantitative target and provided documentation, the IE has reasonable assurance PacifiCorp installed 21 advanced weather monitoring stations, hence meeting the program target.

Distribution Fault Anticipation (SA-3)

In section 4.4.1 of the company's pilot projects area of ***PacifiCorp_2021_Wildfire_Mitigation_Plan_Update_3-5-21***, Pilot 1, PacifiCorp states that it has contracted with Texas A&M to facilitate the DFA pilot and the first installation at Weed substation (on two circuits) is in final stages of implementation, with commissioning expected in Q2 2021. In Section 7.3.2, PacifiCorp describes its initiative for the installation of DFA devices on two circuits out of Weed substation (5G45 and 5G83) and two additional circuits out of Lassen substation (5G77 and 5G79) during 2021 covering PacifiCorp's Weed and Mt. Shasta service areas. Based upon the experience at these locations additional substation circuits will be targeted.

PacifiCorp reported in ***PAC 2021 Q4 QIU*** that the Annual Quantitative target for this initiative was for the installation of 22 DFAs in 2021 and reported 2 were actually installed. PacifiCorp also reported an Annual Qualitative Target for the review and assessment of the event history of initial installations to determine expansion/phasing of pilot project (Q4 2021). PacifiCorp revised the Annual Qualitative initiative scope and phasing for inclusion in the 2022 WMP Update.

The IE submitted *Data Request* 2 for supporting evidence of the installation of DFAs to further verify that the DFA installation was completed. PacifiCorp provided to *Data Request* 2, ***DFA Data Request***, that provided evidentiary support that the two DFAs were installed on the in

2021. Additional information included the number of DFA devices, the substation, associated circuit, Work Order #, Purchase Order # and the date of installation. This document also has a screenshot of the web portal used to view the connected devices which shows the two Weed Substation devices are installed and operational in October 2021. ***POWER SOLUTIONS LLC TEXAS A AND M PO_4500996186_ AND SOW***, was also provided, that is the purchase order used to purchase the two DFA devices for Weed substation in August of 2020.

The IE submitted *Data Request* 10, requesting clarification on the differences between the DFA Pilot descriptions in Section 4.4.1 and Section 7.3.2 in the 2021 WMP, as well as the difference with the reported Annual Quantitative target for this initiative of the installation of 22 DFAs in 2021, in the PacifiCorp Q4 QIU. PacifiCorp response on the differences between the DFA Pilot descriptions in Section 4.4.1 and Section 7.3.2 in the 2021 WMP included a summary of their previous response to DR2 and that the documents should not serve as evidence that the entire DFA pilot was completed. Even though, the two DFA devices were installed at Weed substation and operational in October of 2021. The other two devices expected at Lassen substation are expected to be installed by end of year 2022. Additionally, after the installation of the entirety of 4 DFA devices, there is a data gathering phase which will occur before this pilot is completed. Regarding the reported Annual Quantitative target for this initiative of the installation of 22 DFAs in 2021, in the PacifiCorp Q4 QIU. PacifiCorp stated that it makes every attempt to report an accurate plan, however at the time where the target of 22 was put into the 2020 WMP, the full scope of the pilot program was being drafted. As PacifiCorp worked with A&M to identify the scope and circuits for the pilot program, a final number of 4 DFA devices in California was set for this initial phase of the pilot. Therefore, PacifiCorp has updated its reported targets to align with the pilot plan; the planned number of DFAs to be installed in 2021 was 2 and 2 in 2022.

Finding: The IE determined with reasonable assurance the evidence PacifiCorp demonstrated under Pilot 1, it contracted with Texas A&M to facilitate the DFA pilot and completed the first two DFAs installation at Weed substation (5G45 and 5G83) in 2021 and plans for the other two devices to be installed at the Lassen substation by end of year 2022. Additionally, after the installation of the entirety of 4 DFA devices, there is a data gathering phase which will occur before this pilot is completed. PacifiCorp has reported that it has updated its reported targets to align with the pilot plan; the planned number of DFAs to be installed in 2021 was 2 and 2 in 2022.

Covered Conductor Installation (AH-5)

According to the ***PacifiCorp_2021_Wildfire_Mitigation_Plan_Update_3-5-21*** for this initiative, PacifiCorp is installing specialized overhead covered conductors with additional shielding and enhanced insulating properties to aid in wildfire mitigation. PacifiCorp set a goal of installing 81 miles for 2021. According to PacifiCorps 2021 Q4 QUI PacifiCorp installed 20 line-miles of covered conductor in 2021.

The IE requested location information for the completed installation in *Data Request 2*. PacifiCorp provided GIS files with the location of the covered conductor for field verification. In *Data Request 6* the IE also requested a listing of the workorders used for installation of covered

conductors. The IE performed a random sample for field verification of the installation of the covered conductor. In addition to the field verification, in *Data Request 7* the IE requested that PacifiCorp provide the workorder paperwork for the random sample so that a tabletop verification could be completed along with the field verification.

In response to *Data Request 6*, PacifiCorp provided multiple documents, listed below.

- ***Item 2.xlsx*** – Spreadsheet that lists the covered conductor installation projects completed and their corresponding.kmz files
- ***6771707.kmz, 6810404.kmx, 6920346.kmz, 8094476.kmz, 8094878.kmz, 8143343a.kmz, 8143343b.kmz, 8143344.kmz, 8143347a.kmz, 8143347b.kmz, 8143347d.kmz*** – files showing the geographic location of the covered conductor installation projects completed in 2021

In response to *Data Request 7*, PacifiCorp provided completed workorders and construction drawings for each of the covered conductor installation projects listed in ***Item 2***. The documents provided are listed below.

- ***RMS 6771707.docx*** – A workorder for the replacement of bare conductor with covered conductor for the Dunsmuir-Mott line
- ***RCMS 6810404.docx*** – A workorder for the replacement of bare conductor with covered conductor for the Snowbrush RCND to Spacer CBL Sys
- ***RCMS 6920346.docx*** – A workorder for the installation of spacer cable system for the Mt. Bradley area
- ***RCMS 8052057.docx*** – A workorder for the replacement of bare conductor with covered conductor for the 5G79 South Rich Fence Hendrix CBL
- ***RCMS8094878.docx*** – A workorder for the replacement of bare conductor with covered conductor for the Dunsmuir-Mott Hendrix line
- ***RCMS 8143343.docx*** – A workorder for the Weed College of the Siskiyous distribution covered conductor project
- ***RCMS 8143347.docx*** – A workorder for the replacement of bare conductor with covered conductor for the NDU City 1&2 lines
- ***WO 6771706 and 8052057 sketch.pdf*** – Construction drawings for the Mt. Shasta Ring Fence reconductor work
- ***WO 06771707 5G69 Dunsmuir-Mott OMS*** – Construction drawings for the Dunsmuir-Mott conductor replacement
- ***WO 06810394 7G71 & 7G73 North Dunsmuir City 1 & 2 OMS Rev 2.pdf*** – Construction drawings for the North Dunsmuir City 1& 2 spacer cable system rebuild
- ***WO06810404 6G101 Snowbrush OMS Rev 1.pdf*** – Construction drawings for the Snowbrush cable system rebuild
- ***WO 06920346 7G71 Mount Bradley OMS REV A.pdf*** – Construction drawings for the Mount Bradley Spacer cable system build
- ***WO 08003683 Weed College of the Siskiyous OMS Rev 1.pdf*** – Construction drawings for the Weed College of the Siskiyious covered conductor rebuild

As part of a tabletop review, the IE reviewed the workorders and associated constructions drawings. The IE verified that PacifiCorp completed approximately replaced bare cable with covered conductor for approximately 20 line miles.

The IE also conducted a random sample of the completed covered conductor projects and performed a site inspection to field verify that the covered conductor was installed. The IE selected seven locations to perform field verification. Five sites were inspected and field verified compliant with the installation of covered conductor. The locations sampled and verified is provided in the table below.

Inspection Date	Circuit ID	Object ID	Status
	7G73	199	Access Issues
5/19/2022	5G83	203	Compliant
5/19/2022	5G69	206	Compliant
6/3/2022	5G83	207	Compliant
5/19/2022	6G101	192	Compliant
5/19/2022	7G71	209	Compliant
	7G71	201	Access Issues
5/19/2022	5G69	194	Compliant

Finding: In 2021 PacifiCorp completed installation of 20 circuit miles of covered conductor but failed to meet the stated initiative goal of 81 circuit miles. PAC failed to meet the target goal of 81 circuit miles of covered conductor due to lack of contractor resources. According to the Q4 QIU, the target goal was not met and a change order was developed internally at PAC. This change order sought to obtain additional contractor resources to allow for quicker completion of the covered conductor installation.

Targeted Pole Replacement (AH-2)

PacifiCorp_2021_Wildfire_Mitigation_Plan_Update_3-5-21 included a 2021 target for this initiative of roughly 128 poles, with a breakdown of 51 Transmission and 77 Distribution, respectively. Reported in the ***PAC_2021_QIU_Q4*** quarterly submission workbook, PacifiCorp indicated that 87 poles were replaced or reinforced in calendar year 2021. In the QIU PacifiCorp stated that "Change Order Submitted to incorporate into CC program" and marked the initiative as Completed.

The IE submitted *Data Request 2* for locational data details demonstrating where, what types of actions, and dates of actions executed for the 2021 WMP activities. PacifiCorp provi*ded* ***Grid hardening line data 2021*** *and* ***Grid Hardening point data 2021*** which included the necessary information to conduct random sampling for desktop and field verification. The IE submitted

Data Request 7 to obtain the work orders for the 23 sampled pole replacement / reinforcements. PacifiCorp provided three JPG files, ten Word files, and six PDF files to demonstrate the completion of the replacements / reinforcements performed.

- JPG – Image files of replaced / reinforced poles
  - ***331460***
  - ***331462***
  - ***332462***
- Word Files – Expenditure Requisition documents detailing pole replacement or reinforcement request
  - ***RCMS 6771706***
  - ***RCMS 6771765***
  - ***RCMS 6810404***
  - ***RCMS 6970202***
  - ***RCMS 8003689***
  - ***RCMS 8052057***
  - ***RCMS 8094476***
  - ***RCMS 8094880***
  - ***RCMS 8143343***
  - ***RCMS 8143347***
- PDF Files – Detailed Work Order plans outline poles to be replace or reinforced
  - ***WO 06771706 5G69 Radio Tower Feed OMS***
  - ***WO 06771707 5G69 Dunsmuir-Mott OMS***
  - ***WO 06771765 5G77 North Ringfence OMS***
  - ***WO 06810394 7G71 & 7G73 North Dunsmuir City 1 & 2 OMS Rev 2***
  - ***WO 06810404 6G101 Snowbrush OMS Rev 1***
  - ***WO 08003683 5G83 Weed College of the Siskiyous OMS Rev 1***

The IE surveyed the random sampled pole replacement items within PacifiCorp's service area. As seen in Table 7, 23 of the 27 assets surveyed received satisfactory results. There were four assets that could not be field verified due to access issues.

Table 7: Pole Replacement / Reinforcement Field Verification Results

Inspection Date	Asset ID	Circuit ID	Status	Comments
5/18/2022	06239004.0257945	7G71	Compliant	
6/5/2022	06240003.0329460	6G101	Compliant	
6/5/2022	06240003.0328461	6G101	Compliant	
6/5/2022	06241005.0110800	5G83	Compliant	

Inspection Date	Asset ID	Circuit ID	Status	Comments
5/19/2022	06241005.0110801	5G83	Compliant	Access was limited due to locked gate, but covered conductor is installed.
5/18/2022	06239003.0074661	5G69	N/A	No access gate is locked
5/18/2022	06239003.0074761	5G69	N/A	No access gate is locked
5/19/2022	06239004.0139060	5G69	Compliant	
5/17/2022	06240003.0314801	6G101	Compliant	Vegetation has been cleared around pole.
5/17/2022	06240003.0305801	6G101	Compliant	Vegetation has been cleared around the pole and has some kind of mesh around the bottom of pole.
5/17/2022	06240003.0305800	6G101	Compliant	Vegetation has been cleared around the pole.
5/17/2022	6240003.03047010	6G101	Compliant	Vegetation has been cleared around pole
5/17/2022	06240003.0305202	6G101	Compliant	Vegetation has been cleared around pole.
5/17/2022	06240003.0305100	6G101	Compliant	Vegetation has been cleared around the pole.
5/18/2022	06239003.0064261	5G69	N/A	No access to pole gate is locked
5/19/2022	06239003.0064160	5G69	Compliant	
5/19/2022	06239003.0064061	5G69	Compliant	
5/18/2022	06239004.0258500	7G71	Compliant	
6/5/2022	06239004.0258400	7G71	Compliant	
5/19/2022	06239003.0074560	5G69	Compliant	
5/19/2022	06239003.0073561	5G69	Compliant	
5/18/2022	06239003.0073560	5G69	N/A	No access gate is locked
5/18/2022	06239003.0073460	5G69	N/A	No access gate is locked
5/18/2022	06241005.0110900	5G83	Compliant	
5/18/2022	06241005.0110901	5G83	Compliant	
6/3/2022	6240003.0328462	6G101	Compliant	

Inspection Date	Asset ID	Circuit ID	Status	Comments
6/3/2022	6241005.0110700	5G83	Compliant	
6/3/2022	6241005.0111700	5G83	Compliant	

Finding: The IE determine that PacifiCorp was not able to meet its annual target of 128 pole replacements / reinforcements in 2021. PacifiCorp was only able to complete 87 pole replacement / reinforcements in 2021. PacifiCorp did not provide detail to why the target for 2021 was not achieved but did mark the initiative as complete in its quarter four *QIU* for 2021 and noted that a change order was submitted to incorporate this initiative into the Covered Conducted Installation initiative that PacifiCorp currently has.

Pilot 2: Pole Loading/LiDAR (AH-12)

PacifiCorp_2021_Wildfire_Mitigation_Plan_Update_3-5-21 details how PacifiCorp has subdivided this initiative into four major objective areas. The areas are as follows:

- Identify any transmission poles at risk for structural integrity and recommend corrective action;
- Determine what improvements or accuracy can be made to structural modeling through the collection of LiDAR data;
- Observe differences between CA Heavy (installations > 3000ft elevation) and CA Light (installation < 3000ft elevation) Structural Modeling Cases; and
- Inform additional program funding or risk assessment of other transmission lines.

PacifiCorp is currently operating in area 1 and has evaluated 23 transmission line miles and identified 134 high priority pole locations but has not determined course of action for correction for the identified poles. PacifiCorp did state in its 2021 WMP that it intends to complete the detailed scope, plan, and corrective actions in 2021/2022. Reported in the ***PAC_2021_QIU_Q4*** quarterly submission workbook, PacifiCorp indicated that it would spend $100,000 on this initiative with an actual spend of $0 in 2021.

The IE submitted *Data Request 6* to determine why the spend for 2021 was reported as $0. In response PacifiCorp provided the following:

> "The pole loading assessment initiative is a pilot program where poles were identified for replacement. At the time the 2021 WMP Update was written, PacifiCorp had expected to replace the poles found as part of the pilot within the year, however the work was shifted to 2022/2023 due to the need to re-prioritize work and opportunity gained by coincident covered conductor installation. Additionally, none of the poles identified for replacement, through the pole loading assessment program, were imminent threats, thus they did not need to be replaced immediately."

Finding: The IE determined that PacifiCorp was not able to meet its initiative target for 2021. The IE would also like to provide the recommendation that moving forward PacifiCorp uses a non-financial quantitative target for this initiative as it is difficult to show progress and can provide a false narrative to those reviewing the program (overspend with below desired outcome should not be rewarded as program success).

Relay/Recloser Replacements / Upgrade (AH-4)

According to section 7.3.3.9 of the ***PacifiCorp_2021_Wildfire_Mitigation_Plan_Update_3-5-21***, PacifiCorp targeted a small volume quantitative goal of completing 27 system automation equipment device installations in the year 2021. PacifiCorp projected 13 equipment device installations would take place by Q3 of 2021 and the 14 remaining installations would occur in Q4.

PacifiCorp declared the goal was satisfied in Q4 of 2021 by installing 31 automation equipment devices, per the ***PAC_2021_QIU_Q4***. PacifiCorp reported 13 equipment device installations took place by Q3 of 2021 and 18 completed installations in Q4.

The IE requested PacifiCorp provide evidence of installing automation equipment devices during the year 2021 in *Data Request 2*. PacifiCorp provided a spreadsheet with global positioning coordinates, data structure numbers, activity descriptions, and activity identifiers. The spreadsheet provides information and figures pertaining to various initiatives within the grid design and system hardening WMP category. The data correlating to automation equipment device installations is classified as AH-4 within the Utility Initiative Tracking ID column and can be reviewed in the ***Grid Hardening Point Data 2021*** spreadsheet. The IE reviewed PacifiCorp's documentation provided and reasonably assures PacifiCorp logged 39 system automation equipment installation activities.

To further verify PacifiCorp completed the system automation equipment installation activities, the IE performed a field inspection review of the reported installations by PacifiCorp. In their field inspection, the IE reviewed a random sample of 17 automation equipment installation activities. Per the inspection results, PacifiCorp compliantly completed 12 automation equipment installation activities in 2021. The IE found the installation for Circuit ID 5G83 to be non-applicable to initiative AH-4. The remaining 4 installations to be field inspected have not occurred as of 06/08/2022 due to time constraints related to project delivery. The IE field inspections results can be reviewed in the reclosers tab in the following excel spreadsheet, ***PAC Field Report Log***.

Findings: Based on the WMP 2021 target, documentation provided by PacifiCorp, and the field inspection results the IE has reasonable assurance PacifiCorp met the 2021 small-volume quantitative target of installing automation equipment for 27 devices.

Table 8: System Automation Installation Field Verification Results

Inspection Date	Circuit ID	Object ID	Status
6/3/2022	5G1	247	Compliant

6/3/2022	5G41	253	Compliant
5/17/2022	5G69	288	Compliant
6/3/2022	5G45	277	Compliant
6/3/2022	5G7	252	Compliant
5/18/2022	5G7	244	Compliant
6/3/2022	5G5	246	Compliant
5/18/2022	5G7	245	Compliant
5/17/2022	7G71	287	Compliant
6/3/2022	5G83	276	N/A
5/17/2022	7G73	286	Compliant
5/17/2022	7G75	283	Compliant
6/3/2022	5G41	263	Compliant

Small Diameter Conductor Replacement (AH-6)

PacifiCorp_2021_Wildfire_Mitigation_Plan_Update_3-5-21 states that PacifiCorp's other corrective action is also known as the small diameter conductor replacement initiative. Specifically, PacifiCorp uses small diameter copper and iron conductors that coordinate with devices and line equipment under normal operating conditions and standard system faults. Upstream fusing and relay settings required for fault detection program in sections of PacifiCorp's plan cause arc energy risk under specific fault conditions with these conductors. Therefore, PacifiCorp must replace the small diameter copper and iron conductors with aluminum conductors to reduce the arc energy risks.

PacifiCorp_2021_Wildfire_Mitigation_Plan_Update_3-5-21 Table 7-3 identifies a program goal of 3.78 distribution line miles for small conductor replacement. According to PacifiCorp's 2021 Q4 QIU (**PAC_2021_QIU_Q4**) PacifiCorp completed conductor replacement for one line mile in 2021.

The IE requested that PacifiCorp provide documentation to verify the completion of the small diameter conductor replacement as part of *Data Request 6*. In response to *Data Request 6*, PacifiCorp provided three workorder documents, listed below.

- ***Item 4 – 6810404 small diameter conductor.doc*** – Workorder for replacing 3 miles of bare conductor; 12/07/2021 completion date
- ***Item 4 – 8094476 small diameter conductor.doc*** – Workorder for removal of 1 mile of retired distribution conductor; 9/28/2021 completion date
- ***Item 4 – 8143347 small diameter conductor.doc*** – Workorder for reconductor of existing circuit; 12/29/2021 completion date

The IE reviewed the workorders, which included ft of conductor used, as part of a tabletop verification and concluded that PacifiCorp completed conductor replacement of approximately 1 mile of small diameter conductor replacement.

Finding: PacifiCorp replaced approximately one line mile of small diameter conductor, which failed to meet the projected goal in the 2021 WMP of 3.78 line miles. Based on the 2021 PAC WMP (***PacifiCorp_2021_Wildfire_Mitigation_Plan_Update_3-5-21***), the projects for AH-6 are in lower fire risk locations when compared to other programs such as covered conductor installation that target PSPS zones. Therefore these projects were assigned a lower priority and are not targeted for construction until 2022 and later, except where coincident with other programs.

Standard Substation Inspections (IN-15)

The IE reviewed publicly available and requested specific documentation, policies, and procedures including the ***2021 California Wildfire Mitigation Plan*** Section 7.3.4.15, ***Policy 297 Detailed Inspections of T & D Lines*** which outlines PacifiCorp's approach to visually inspecting structures (*i.e*. poles, guys, anchors, grounding, etc.) and the associated actions to be taken at each, ***Policy 192 Correction Management Plan, Correction Time Periods and Compliance Requirements*** which outlines PacifiCorp's approach to logging any nonconformance issues found during an inspection and applying appropriate remedial actions and timelines, and ***Procedure 069*** which summarizes clearance requirements set forth by NESC and GO 95. Upon review, the IE has found that the provided policies and procedures adequately cover all requirements set forth for this initiative in PacifiCorp's 2021 WMP.

PacifiCorp projected that 444 inspections would be completed in 2021. The IE requested the evidence indicating that 444 line-miles were completed in *Data Request 6*. PacifiCorp provided this evidence, and the IE was able to verify that only 438 inspections were performed. PacifiCorp's QIU states that 438 inspections were completed.

The IE submitted *Data Request 6* to obtain a sample of data to further verify that substation inspections were completed. PacifiCorp provided a response to *Data Request* 6, which included screenshots of the system of record for one of the selected random samples. PacifiCorp indicated that the total population of inspections provided in *Data Request 2* was an output from the system of record. Using this sampling methodology, the IE has reasonable assurance that PacifiCorp has completed 438 substation inspections.

Finding: The IE found that the provided policies and procedures adequately cover all requirements set forth for this initiative in PacifiCorp's ***2021 California Wildfire Mitigation Plan***. The IE has reasonable assurance that PacifiCorp completed 438 substation inspections in 2021 however this is less than the stated goal of 444 inspections.

3.1.4.2 Trends and Themes

Include any trends or recurring themes that the Independent Evaluator found while assessing utility compliance to Small Volume Quantifiable Goal/Target initiatives.

The IE noted several instances of PAC's QIU reporting that an initiative was "Complete" for the year, despite the tracked progress falling short of the identified target. The IE recommends PAC provide additional narrative in these instances to describe why the initiative is considered complete and any narrative explaining why progress did not meet goal.

3.1.5 Qualitative Goal/Target

3.1.5.1 Review of Initiative

This section should include the Independent Evaluator's findings and assessment of utility compliance with activities that fall into the Qualitative Goal/Target category. Independent Evaluators shall review documentation and conduct SME interviews, as needed, to verify the qualitative goals/targets of these activities were met.

Include the electrical corporation's list of initiatives that fall into the Qualitative Goal/Target category, including respective goals/targets for each, in the Appendix or within the body of this subsection.

Table 9: PacifiCorp 2021 WMP Execution – Qualitative

Program Category	WMP Identifier	Initiative / Activity	Utility Initiative Name	Target Units	2021 Target	Desktop Review
Risk Assessment & Mapping	RA-1	A summarized risk map that shows the overall ignition probability and estimated wildfire consequence along the electric lines and equipment	Risk Modeling Platform	Financial Reporting - $	$186,000	Yes
Situational awareness and forecasting	PS-5	Personnel monitoring areas of electric lines and equipment in elevated fire risk conditions	Fire Risk Monitoring (Patrols)	Financial Reporting - $	$0	Yes
Data Governance	DG-1	Centralized repository for data	Data Governance	Financial Reporting - $	$181,000	Yes
Stakeholder Cooperation & Community Engagement	CE-1	Community engagement	Multi-Pronged Community Engagement	Financial Reporting - $	$72,948	Yes

Risk Modeling Platform (RA-1)

PacifiCorp_2021_Wildfire_Mitigation_Plan_Update_3-5-21 included a statement that they have "materially delivered Phase 1 of its LRAM" and has outlined several areas for future development including "the incorporation of equipment/components and their ignition probability. It further intends to integrate various aspects of asset health and the inclusion of the 10 RAMP Elements that were part of the 2018 GRC from the company's risk-based decision-making framework. It further anticipates more direct and transparent cost quantification to support extensible RSE metrics." Reported in the ***PAC_2021_QIU_Q4*** quarterly submission workbook, PacifiCorp indicated that the target spend for the initiative was $186,000 in calendar year 2021. PacifiCorp recorded spend of $187,529, exceeding their target spend by $1,529 for 2021.

The IE submitted *Data Request 2* for the documentation that supported the completion of Phase 1 of its LRAM. The IE also submitted *Data Request 9* for a more detailed documentation as it related to spend. PacifiCorp provided ***LRAMUserGuide*** as well as LRAM Shape Files for the IE's review which supported the statement that Phase 1 of the program was complete. PacifiCorp also provided ***Comparison*** as part of *Data Request 9* which supported the spend numbers reported in the ***PAC_2021_QIU_Q4***.

Finding: The IE determined that PacifiCorp was able to meet its initiative target for 2021. The IE would also like to provide the recommendation that moving forward PacifiCorp uses a non-financial quantitative target for this initiative as it is difficult to show progress and can provide a false narrative to those reviewing the program (overspend with below desired outcome should not be rewarded as program success). The IE believes that it may be in PacifiCorp's best interest to track this as a qualitative initiative and report on LRAM progress in its quarterly submissions moving forward.

Fire Risk Monitoring (Patrols) (PS-5)

In the ***2021 Wildfire Mitigation Plan Update***, in Section 7.3.2.3, PacifiCorp states that it trains and deploys personnel during periods of elevated fire risk, activating what it has called "watches" or "activations" depending on the extent to which fire climatology indicates elevated fire risk. These personnel perform readiness patrols, may modify system protection settings and monitor the network during the elevated fire risk period.

PacifiCorp reported in ***PAC 2021 Q4 QIU*** a financial Quantitative target for this initiative as an expenditure of [$0k] with expenditures of $800,797 in Q1-4. This is because there was no planned target identified in the WMP but PacifiCorp spent these funds to support a PSPS event. PacifiCorp also reported an Annual Qualitative Target as "Complete monitoring as needed for elevated risk events" and with a status of "Completed" with 1 PSPS in Q3.

PacifiCorp reported in ***PacifiCorp 2021 Annual Report on Compliance*****,** that the planned WMP initiative spend vs actual WMP initiative spend for Personnel monitoring of electric lines and equipment in elevated fire risk conditions program tracks spend for PSPS emergency type work,

however, PacifiCorp did not planned targets at the time of the 2021 WMP Update. Spend incurred during Q3 to support PSPS event which accounts for the variance.

The IE submitted *Data Request 2* for supporting documentation to corroborate the processes and personnel have become trained on the protocols. PacifiCorp provided to Data Request 2, a number of documents, that provided evidentiary support that wildfire preparedness training is delivered annually to frontline employees; the in-person training session provides an overview of specific transmission and distribution operations policies and procedures designed to reduce the risk of wildfire. PacifiCorp provided the PSPS execution playbook which includes procedures for PSPS Execution and documentation of its implementation on August 16-17, 2021. In addition, the following documents PacifiCorp's activation of personnel during periods of elevated risk through a daily briefing process. This daily process, which was implemented during 2021, identifies forecasted weather risks (**See *PacifiCorp Daily Weather Briefing***) as well as a localized risk assessment in the form of a risk matrix (***Wx_RelatedHazards_Matrix_21-8017***). These tools are then used to notify local operations that action may or may not be needed. Work orders are only created when the risk escalates to a more extreme level such as a PSPS watch. The work orders for 2021 were included in ***PSPS Event Work Order Tracking***, the PSPS, that identified the CO partner and assigned expenditure for an event total of $789,999.

Finding: The IE has reasonable assurance that PacifiCorp completed this initiative. The IE would also like to provide the recommendation that moving forward PacifiCorp uses a non-financial quantitative target for this initiative as it is difficult to show progress and can provide a false narrative to those reviewing the program (overspend with below desired outcome should not be rewarded as program success).

Centralized Repository for Date (DG-1)

PacifiCorp described in the ***2021 California Wildfire Mitigation Plan***, section 7.3.7.1 that PacifiCorp does not have a single, overarching data governance plan but that the company recognizes the need to develop a plan to close this gap. As a result, PacifiCorp intended to build methods to make its operational data sets extensible by proper data mapping into appropriate taxonomy, such that it does not require the creation and maintenance of parallel sets of systems to support both operational and regulatory needs. The ***PAC_2021_QIU_Q4*** quarterly submission workbook states a projected goal for 2021 for this effort was $181,000. PacifiCorp indicated in the QIU that $214,862 was spent in calendar year 2021.

Finding: In the fourth quarter update of the QIU, PacifiCorp reported this initiative goal was achieved by spending $214,862 which exceeded the target which was spending $181,000 on this effort. However, since PacifiCorp identified only a financial goal and did not include a work goal, the IE was unable to verify actual work performed. The IE recommends in the future that PacifiCorp identifies quantitative or qualitative work goals for all initiatives.

Community Engagement (CE-1)

PacifiCorp employs a multi-pronged approach to community engagement and outreach with the goal to provide clear, actionable, and timely information to customers, community

stakeholders and regulators. The company uses a variety of channels and tactics to maximize its customer reach including its website, bill inserts, emails, community events, social media, printed materials such as brochures and flyers, radio advertisements, messaging collaboration with local agencies and press releases/proactive media engagement. PacifiCorp provides wildfire safety and preparedness and Public Safety Power Shutoff (PSPS) targeted public outreach and education through a variety of methods.

The Community engagement budget plan consisted of producing two customer surveys, collateral production, wildfire safety videos and advertising. In reviewing the supplied invoices from MDC Research for customer survey work (in total) $37,580.67 are provided as an attachment. An additional $15k (approximate figure) was spent on collateral production - California Alternative Rates for Energy (CARE) brochures with wildfire safety, 2021 wildfire safety video, and approximately $5k was spent on advertising charges in 2021 were not tracked specifically for the effort and were part of a larger campaign. In reviewing the submitted advertisements from *Data Request 11*, the IE team reviewed and verified that PacifiCorp was able to accomplish their community engagement initiative. The following documents were submitted to the IE team for review:

- ***60663_PP_Wildfire_Safety_Letter***
- ***Customer email - fire settings V5.1***
- ***PP_PSPS_Brochure_3_PANEL***
- ***PP_PSPS_Handout***
- ***PP_Wildfire Safety_Checklist***
- ***PP_Wildfire_Safety_Handout***

Finding: In the fourth quarter update of the QIU, PacifiCorp reported this initiative goal was completed. With the services provided by MDC Research providing wildfire safety marketing services. PacifiCorp spent a total of $57,000 towards wildfire safety marketing and education for their customers.

3.1.5.2 Trends and Themes

Include any trends or recurring themes that the Independent Evaluator found while assessing utility compliance to Qualitative Goal/Target initiatives.

The IE did not note any significant trends or themes with respect to PacifiCorp's qualitative initiatives. The IE noted several instances of PAC's QIU reporting that an initiative was "Complete" for the year, despite the tracked progress falling short of the identified target. The IE recommends PAC provide additional narrative in these instances to describe why the initiative is considered complete and any narrative explaining why progress did not meet goal.

3.2 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 utility explanation of such instances.

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

Table 10: PacifiCorp 2021 WMP Execution – Verification of Funding

Initiative Category	2021 Initiative Number	Initiative Name	2021 WMP Page Number	Funding Discrepancy Amount	Detail on Funding Discrepancy
Situational Awareness and Forecasting	7.3.2.1.	Advanced weather monitoring and weather stations	123	$7,200	PacifiCorp planned to install 21 weather stations for the year of 2021 and completed the 21 weather stations by year end. The underspend in this category is for 3% of the total planned spend and can be attributed to the planned spend being a block estimate based on expected costs before final locations have been determined.
Grid Design and System Hardening	7.3.3.2.	Circuit breaker maintenance and installation to de-energize lines upon detecting a fault	129	$152,160	PacifiCorp estimates circuit breaker installations and maintenance based on historical spend for this type of activity. Due to the nature of this activity, several factors such as permitting, and resources, material and equipment availability may impact the plan. Please note that, as stated in *Data Request 6*, the total final spend in 2021 is $346,786, which exceeds the previously reported amount of $306,851 due to the timing for processing of invoices and payment.
Grid Design and System Hardening	7.3.3.6.	Distribution pole replacement and reinforcement,	131	$1,897,513	In the 2021 Change Order, filed on November 1, 2021, PacifiCorp has included the pole replacement and reinforcement initiative spend with the covered conductor project of 7.3.3.3, as this the

		including with composite poles			spend is included in the Line Rebuild Program. In actuality, this is not underspend.
Grid Design and System Hardening	7.3.3.13.	Pole loading infrastructure hardening and replacement program based on pole loading assessment program	138	$100	The pole loading assessment initiative is a pilot program where poles were identified for replacement. At the time the 2021 WMP Update was written, PacifiCorp had expected to replace the poles found as part of the pilot within the year, however the work was shifted to 2022/2023 due to the need to re-prioritize work and opportunity gained by coincident covered conductor installation. Additionally, none of the poles identified for replacement, through the pole loading assessment program, were imminent threats, thus they did not need to be replaced immediately.
Asset Management and Inspections	7.3.4.2.	Detailed inspections of transmission electric lines and equipment	145	$808	PacifiCorp estimates the spend associated with inspections based on historical spend for this type of activity. Due to the nature of this activity, several factors such as the resource time to visit facilities, may impact actuals recorded.
Asset Management and Inspections	7.3.4.6.	Intrusive pole inspections	149	$968	PacifiCorp estimates the spend associated with inspections based on historical spend for this type of activity. Due to the nature of this activity, several factors such as the resource time to visit facilities, may impact actuals reported.
Asset Management and Inspections	7.3.4.11.	Patrol inspections of distribution electric lines and equipment	151	$149	Underspend less than 1%

Asset Management and Inspections	7.3.4.12.	Patrol inspections of transmission electric lines and equipment	152	$50	Underspend less than 1%
Asset Management and Inspections	7.3.4.15.	Substation inspections	155	$44	Underspend less than 1%
Data Governance	7.3.7.2.	Collaborative research on utility ignition and/or wildfire	175	$45,250	As per the Change Order, submitted by PacifiCorp on November 1, 2021, this initiative spend was included in 7.3.7.1.
Data Governance	7.3.7.3.	Documentation and disclosure of wildfire-related data and algorithms	175	$45,250	As per the Change Order, submitted by PacifiCorp on November 1, 2021, this initiative spend was included in 7.3.7.1.
Data Governance	7.3.7.4.	Tracking and analysis of near miss data	175	$45,250	As per the Change Order, submitted by PacifiCorp on November 1, 2021, this initiative spend was included in 7.3.7.1.
Stakeholder Cooperation and Community Engagement	7.3.10.1.	Community engagement	185	$14,988	Community engagement spend for 2021 consisted of two customer surveys, collateral production, wildfire safety videos and advertising. Invoices for California customer survey work completed by MDC Research for (in total) $37,580.67 were provided as an attachment in DR4 Q1. An additional $15k (approximate figure) was spent on collateral production – CARE brochure with wildfire safety, 2021 wildfire safety video – and approximately $5k was spent on advertising. Approximate figures in 2021 were not tracked specifically for the California wildfire mitigation

					effort and were part of a larger campaign; community engagement programs were not tracked through a separate spending mechanism. In the future, PacifiCorp plans to improve this process and orders are in place to track spend accounting for community engagement programs in 2022.

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

To further verify the funding amounts presented in the table above, the IE planned to request that PacifiCorp provide all applicable transactions for 2021 for a randomly sampled initiative. Due to time constraints associated with the IE evaluation timeline as well as misunderstandings in data needs the IE was not able to sample a random initiative to further verify the financial data in the table above.

Based off the financial data provided by PacifiCorp containing all 2021 Projected vs Actual spend data and discussions conducted on the weekly status call the IE believes that funding is being tracked appropriately.

3.3 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 2021 WMP and data previously submitted to the Energy Safety along with information obtained data requests and interviews.

PacifiCorp indicated that it does not have an overarching QA/QC program but rather separate QA/QC programs for its asset inspection and VM programs. These programs are each administered independently under the asset inspection and VM teams. Additionally, there is a separate monitoring and auditing group that measures the compliance performance of the WMP initiatives on a monthly basis. The IE did not evaluate this monitoring and auditing group as it does not hold responsibility for any QA/QC programs.

Asset Inspections

For QA/QC of asset inspections, PacifiCorp identified the following key program components which are described in the response to *Data Request 1* Questions 21-27 and PacifiCorp's *Overhead Detailed Inspection Program Quality Assurance Process,* and *Policy No. 123-PP Pacific Power Facility Inspection Audit Policy for Transmission & Distribution Lines for California, Oregon, and Washington*[7] documents. The QA/QC program consists of the following:

- PacifiCorp runs a 2-tier QA process described in their *Overhead Detailed Inspection Program Quality Assurance Process* 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. If significant performance issues are found in the contractor's work, PacifiCorp may withhold 20% of payment due, an option that has rarely needed to be invoked.[8]
- 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 exceeded in 2021. The results of this

[7] **Both documents were submitted in response to Data Request 1 Question 24.**

[8] **Discussed in an interview with PacifiCorp subject matter experts June 3, 2022. Interview request is captured in Data Request 10.**

activity are captured in the *Scorecard Tracking 2021* Excel spreadsheet submitted in response to *Data Request 12* Question 1.

- Annual training with inspectors to address audit findings and improve inspection reliability and accuracy

Vegetation Management Inspections

The following review is based on PacifiCorp's response to data requests regarding its vegetation management QA/QC program. The EC's QA/QC program includes some, but not all, of the elements expected to be included in a comprehensive QA/QC program. Therefore, as noted in last year's IE ARC, PacifiCorp does not appear to have a robust vegetation management QA/QC program.

In 2021, there were 11,262 VM work locations noted in the Work Completed Report[9] and 1,213 locations noted in the VM Audit Exception Report[10]. This equates to approximately 10 percent of the work locations with deficiencies. However, it is not clear how many locations were audited in order to compile the exception report. This may indicate that the locations audited are likely higher than 10 percent. There were also 20 locations noted in the *Yreka Detailed Facility Point Report*[11] needing VM work. This indicates that vegetation issues are noted during line inspections or audits.

In response to DR 1 Question 12, which asked whether the utility conducted a QA review of its VM processes, PacifiCorp describe the ongoing development and staffing of the VM program but did not indicate how or if a review of the program processes have been conducted. PacifiCorp further indicates it conducts audits of all, or as much as possible, completed work, including Hazard Tree Work.

PacifiCorp notes it reviews pre-inspections (prescriptions) at the time of conducting audits of completed work. PacifiCorp stated that it identifies work missed by the pre-inspection contractor during the audit of completed work. Although this is an acceptable practice, PacifiCorp did not provide any additional attributes, other than missed trees, reviewed during these audits (e.g., site and access information, accurate inventory, appropriate work categories, etc.). PacifiCorp also stated that as the enhancements to the QA/QC process continue, audits of pre-inspection will be considered.

Although the PacifiCorp VM SOP does not describe all conditions when an audit may occur, it does not appear to be consistent with the DR1 response. A review of PacifiCorp's 2021 VM Audit Exception Report confirms that these audits are being performed and by whom. Although likely captured elsewhere, the report does not indicate whether or when the exception was resolved. Also, in the VM Audit Exception Report, the IE notes there were no exceptions for Pole Clearing. The PacifiCorp VM SOP states that "All work including work identification,

[9] File: *14 - PpWorkCompleted_2022-04-15.xlsx*
[10] File: *11 - PpAuditException_2022-04-15.xlsx*
[11] File: *Yreka Trans Audit 06162021.docx*

transmission, TGR, post-inspection, and pole clearing will be subject to audit at any time" but Pole Clearing QC audits cannot be confirmed based on the data provided.

Finally, PacifiCorp appears to complete a comprehensive desktop review of all planned and completed work. The review is conducted by internal VM staff.

Findings

During a review of the Overhead Detailed Inspection Program Quality Assurance Process[12] and the Pacific Power Facility Inspection Audit Policy for T&D Lines[13], it was noted that some QA/QC attributes are being implemented for line inspections and line construction. Although not a comprehensive guide, these could be used to assist in the further development of PacifiCorp's VM QA/QC program

To date, PacifiCorp has not determined a statistically valid sample size that would result in an acceptable confidence level or margin of error for its VM QA/QC work.

4. CONCLUSION

The Conclusion section shall summarize all findings that the Independent Evaluator detailed in the sections above.

Fill out the table below with all findings.

The IE reviewed and assessed all of PacifiCorp's listed initiative activities and conducted a thorough review of evidence through documentary reviews and field 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 subject matter experts 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 table below presents the IE findings supported by desktop and field inspection reviews of PacifiCorp evidence. Results and interpretations from the verification of QA/QC programs are found in Section 3.3 above. Findings associated with verification of funding are presented within Section 3.2. **Table 11,** below. further lists reviewed explanations and documentation determinations for underfunded activities and their associated deficiency determination.

The IE determined PacifiCorp is substantially compliant with its WMP. 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

[12] File: *Overhead Detailed Inspection Program Audit Process (May 2021).docx*
[13] File: *PP Fac Insp Audit Policy for Trans and Dist Lines for CA-OR-WA (Policy No. 123-PP).pdf*

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.

Reviewed initiative findings are presented in accordance with the WMP Initiative Activity below.

Table 11: Independent Evaluator Findings Summary

2021 Initiative Number	Initiative Name	Finding	Detail on finding
7.3.3.3	Covered Conductor	The IE verified that approximately 20 miles of covered conductor was installed in 2021.	PacifiCorp completed approximately 25% of its stated goal of 81 line miles of covered conductor installation in 2021.
7.3.3.6	Targeted Pole Replacement	Initiative Target Not Met	PacifiCorp was only able to complete 87 pole replacement / reinforcements in 2021. PacifiCorp did not provide detail to why the target for 2021 was not achieved
7.3.3.12	Small Diameter Conductor Replacement	The IE verified that approximately 1 line mile of small diameter conductor was replaced in 2021	PacifiCorp completed approximately 25% of its stated goal of 3.78 line miles.
7.3.4.11	Standard Distribution Patrol Inspections	The IE could only verify that 50,576 inspections were completed in 2021.	PacifiCorp completed more than 99% of their stated goal of 50,603 inspections.
7.3.4.15	Substation Inspections	The IE could only verify that 438 inspections were completed in 2021.	PacifiCorp completed more than 98% of their stated goal of 444 inspections.
7.3.5.5	Expanded Pole Clearing	PAC reported 2,872 poles cleared; however, the IE could only verify 1,595 (out of 3,047 targeted).	PAC reports the discrepancy between reported completions and evidence provided to be due to legacy tracking methods that were not updated in time for 2021 reporting. No reason was provided

2021 Initiative Number	Initiative Name	Finding	Detail on finding
			for falling short of the overall target.
7.3.5.11	Augmented Distribution Readiness Patrol	The IE could only verify 1,167 line miles of inspections (out of 1,369 targeted).	PAC reported the initiative as complete for 2021, despite achieving patrols on 1,167 line miles of the 1,369 line miles target. No additional information was provided on why the completed miles were short of the target.
7.3.5.13	Vegetation QA/QC	The IE could only verify that 1,385 miles were audited inspections were completed in 2021.	PacifiCorp completed more 80% of their stated goal of 1,717 audited miles.
7.3.2.1.	Advanced weather monitoring and weather stations	Initiative Underfunded	See Section 3.2 for more details
7.3.3.2.	Circuit breaker maintenance and installation to de-energize lines upon detecting a fault	Initiative Underfunded	See Section 3.2 for more details
7.3.3.6.	Distribution pole replacement and reinforcement, including with composite poles	Initiative Underfunded	See Section 3.2 for more details
7.3.3.13.	Pole loading infrastructure hardening and replacement program based on pole loading assessment program	Initiative Underfunded	See Section 3.2 for more details

2021 Initiative Number	Initiative Name	Finding	Detail on finding
7.3.4.2.	Detailed inspections of transmission electric lines and equipment	Initiative Underfunded	See Section 3.2 for more details
7.3.4.6.	Intrusive pole inspections	Initiative Underfunded	See Section 3.2 for more details
7.3.4.11.	Patrol inspections of distribution electric lines and equipment	Initiative Underfunded	See Section 3.2 for more details
7.3.4.12.	Patrol inspections of transmission electric lines and equipment	Initiative Underfunded	See Section 3.2 for more details
7.3.4.15.	Substation inspections	Initiative Underfunded	See Section 3.2 for more details
7.3.7.2.	Collaborative research on utility ignition and/or wildfire	Initiative Underfunded	See Section 3.2 for more details
7.3.7.3.	Documentation and disclosure of wildfire-related data and algorithms	Initiative Underfunded	See Section 3.2 for more details
7.3.7.4.	Tracking and analysis of near miss data	Initiative Underfunded	See Section 3.2 for more details
7.3.10.1.	Community engagement	Initiative Underfunded	See Section 3.2 for more details

APPENDIX

5. APPENDICES

TABLE OF APPENDICES

APPENDIX A – DATA REQUEST LOG

The Appendix can include:

- *Electrical corporation's list of Large Volume Quantifiable Goal/Target – Field Verifiable initiatives*
- *Electrical corporation's list of Large Volume Quantifiable Goal/Target – Not Field Verifiable initiatives*
- *Electrical corporation's list of Small Volume Quantifiable Goal/Target initiatives*
- *Electrical corporation's list of Qualitative Goal/Target initiatives*
- *Electrical corporation's complete listing and description of existing QA/QC programs in place*
- *Data requests and interview requests*
- *Samples chosen by the Independent Evaluator*
- *Financial audit reports and memorandum accounts*
- *Any additional documentation*

DR	Item No.	Item Requested	Initiative Identifier or "N/A"
1	1	2021 **Quarterly Data Reports Non-Spatial Data** (the non-public version, if applicable)	N/A
1	2	2021 **Quarterly Data Reports Spatial Data** (the non-public version, if applicable)	N/A
1	3	2021 **Annual Report on Compliance** (the non-public version, if applicable). Please indicate any targets that may change.	N/A
1	4	2021 **Quarterly Initiative Updates** (the non-public version, if applicable). Please indicate any targets that may change.	N/A
1	5	2021 **Quarterly Advice Letters/Notification Letters** (the non-public version, if applicable). Please indicate any targets that may change.	N/A
1	6	Provide a listing of all WMP initiative activities within the **four categories of sampling**: • **Large volume** (>= 100 units) + quantifiable goal/target + field verifiable • **Large volume** (>= 100 units) + quantifiable goal/target + non field verifiable • **Small volume** (<100 units) + quantifiable goal/target (could also be field verifiable) • **Qualitative** goal/target WMP activities	N/A

1	7	Accounting of **Cost Data for Wildfire Mitigation Activities** • may come from any of the following WMP projected, actual, and recovered financials can be found in: 2019+ General Rate Case work papers, Wildfire Mitigation Plan Memorandum Account (WMPMA), Fire Risk Mitigation Memorandum Account (FRMMA), Fire Hazard Prevention Memorandum Account (FHPMA), Catastrophic Event Memorandum Account (CEMA), the 2021 & 2022 WMP, and associated quarterly reports (Quarterly Data Reports).	N/A
1	8	Vegetation Management clearance specification (i.e., GO 95)	
1	9	Vegetation Management Plan	
1	10	Vegetation Management Plan supporting documentation	
1	11	Provide **sample results of QC reviews of vegetation management** activities conducted in 2021. (Monthly, quarterly, or annual summary report, as available).	
1	12	Has the utility conducted a **QA review** of its **vegetation management processes**? • If so, what were the results of that review?	
1	13	**Detailed pre-inspection** population, with unique identifier information, in 2021 (e.g., annual circuit miles of lines, spans, number of pre-inspected locations, etc.). Will be used for sampling total population.	VM-3
1	14	**Completed routine tree work** population, with unique identifier information, in 2021 (e.g., annual circuit miles of lines, spans, number of pre-inspected locations, etc.). Will be used for sampling total population.	VM-1, VM-4
1	15	**Hazard tree work** population, with unique identifier information, in 2021 (e.g., annual circuit miles of lines, spans, number of pre-inspected locations, etc.)	VM-1, VM-4
1	16	**Pole clearing** population size in 2021 (e.g., annual number of poles that require clearing per the regulations, all poles with equipment that could be an ignition source, etc..). Will be used for sampling total population.	VM-2
1	17	If QC reviews include a statistically valid sample size, please provide the **confidence level and margin of error** (e.g., 99% / 5%) used to determine the sample sizes for **Detailed Pre-Inspection**	VM-1, VM2, VM-3, VM-4, and VM-6
1	18	If QC reviews include a statistically valid sample size, please provide the **confidence level and margin of error** (e.g., 99% / 5%) used to determine the sample sizes for Completed **Routine Tree Work**	VM-1, VM-4
1	19	If QC reviews include a statistically valid sample size, please provide the **confidence level and margin of error** (e.g., 99% / 5%) used to determine the sample sizes for **Hazard Tree Work**	VM-1, VM-4

1	20	If QC reviews include a statistically valid sample size, please provide the **confidence level and margin of error** (e.g., 99% / 5%) used to determine the sample sizes for **Pole Clearing**	VM-2
1	21	Is there a **desktop review** (paper / electronic) of completed **VM & inspection** work? • If so, who conducts the desktop review? • What percentage of the completed work is subject to a desktop review?	VM-1, VM2, VM-3, VM-4, and VM-6
1	22	Documentation for **Asset Management & Inspections** Initiatives	IN-1.1, IN-1.2, IN-3, IN-4, IN-5, IN-8
1	23	Provide any distribution and transmission **inspection management plan**(s)	IN-1.1, IN-1.2, IN-3, IN-4, IN-5, IN-8
1	24	Provide the **QA/QC Plan** applicable to wildfire mitigation distribution and transmission **inspection procedures**	IN-8
1	25	Are all **equipment inspection activities** (e.g., patrol, detailed, infrared, LiDAR, UAV surveys, etc.) reviewed as part of the **QC Program**? • If not all describe which and why	IN-8
1	26	Provide **sample results of QC reviews of asset management & inspection** activities conducted in 2021. (Monthly, quarterly, or annual summary report, as available).	IN-1.1, IN-1.2, IN-3, IN-4, IN-5, IN-8
1	27	Has the utility conducted a **QA review** of its **asset management & inspection processes**? • If so, what were the results of that review?	IN-1.1, IN-1.2, IN-3, IN-4, IN-5, IN-8
2	1	We would like to schedule an interview with Brian King for the week of 5/2 to discuss documentation provided in DR-1	N/A
2	2	Provide proof of LRAM Phase 1 completion/activation, as well as the financial breakdown associated with 2021 spend.	RA-1
2	3	Provide installation work orders for the 21 program target-weather stations installed in calendar year 2021	SA-1
2	4	Provide the supporting documentation to corroborate the number of Distribution Fault Anticipations presented in PAC_2021_QIU_4 (e.g. list of all installed DFAs in 2021, date of installation, location, part of pilot or expansion, etc.)	SA-3
2	5	Provide a representative set of available documentation associated with each installation (e.g. Equipment Purchase Orders, Completed Field installation Work Orders, other evidence demonstrating its operational) for subsequent sampling and field verification.	SA-3
2	6	Provide the supporting documentation to corroborate the processes and personnel have become trained on the protocols. (e.g. training materials and training records)	PS-5

2	7	Provide the emergency action center's established procedures for on-alert status to be recognized and activated.	PS-5
2	8	Provide dated lists or periods of elevated fire risks for activating "watches or "activations".	PS-5
2	9	Provide evidence of personnel being activated during periods of elevated climate risk in areas designated as having high fire risk (e.g. Emergency action center logbook entries, work orders for field crews to be activated, After Action reports, etc.)	PS-5
2	10	Provide Location Data for applicable work performed under Grid Design & System Hardening activities. Excel sheet with Latitude, longitude, activity description, structure numbers, and activity identifiers will be accepted.	AH-1, AH-2, AH-3, AH-4, AH-5, AH-6, AH-12
2	11	Provide Identification Data for applicable work performed under Inspection activities. Excel sheet with total population of activity identifiers will be accepted.	IN-1, IN-2, IN-5, IN-6, IN-11, IN-12, IN-14, IN-15
3	1	Please provide location information (latitude and longitude) for pole clearing work related to Vegetation Management.	N/A
4	1	Please provide documentation to show dollars spent on community engagement	CE-1
4	2	Provide Identification Data for applicable work performed under Inspection activities. Excel sheet with total population of activity identifiers will be accepted.	IN-5, IN-15
4	3	Please provide a justification for each initiative where actual funding was less than projected funding for 2021.	
4	4	Please provide a contact person for field verification personnel.	N/A
4	5	Please indicate is UAV personnel should submit flight plans prior to field verifications with the use of drones. Please provide contact information for any person that may need to be notified of UAV use.	N/A
5	1	Please provide the Vegetation Management inspections (Detailed and Patrol) performed by circuit mile for both transmission and distribution	VM-1, VM-2, VM-3
5	2	Please provide population evidence with unique identifier by location for poles cleared during 2021	VM-4
5	3	Please provide population evidence for miles audited for vegetation management QA/QC	VM-13
6	1	Please provide detailed transactions that will allow us to verify that PAC has performed circuit breaker maintenance and installation that meets or exceeds the reported total of $306,851 for 2021.	AH-1
6	2	Please provide documentation to verify the completion of the covered conductor installation for the selected circuits. The documentation should include location data, explanation of work completed (including miles of conductor installed), and completion date.	AH-5

6	3	Please provide a justification for funding target for the year 2021, and why the funding target was not met in 2021. (QIU states $306,851 of $432,000 target spent) NOTE - The ARC does not go into detail on this initiative.	AH-3
6	4	Please provide work orders/invoices for the completed 1 mile of small conductor replacement	AH-6
6	5	Please provide a justification for funding target for the year 2021, and why the funding target was not met in 2021. (QIU states $0 of $100,000 target spent) NOTE - The ARC does not go into detail on this initiative.	AH-12
6	6	Please provide a description for all underfunded initiatives. Note the ARC provides a discrepancy description at the category level not the initiative.	
6	7	Please describe how IR inspections can be obtained from the data provided in DR 2 response 11. Data only provided for IN-1, IN-2, IN-6, IN-11, IN-12	IN-5
6	8	Please describe how substation inspections can be obtained from the data provided in DR 2 response 11. Data only provided for IN-1, IN-2, IN-6, IN-11, IN-12	IN-15
7	1	Provide work orders, invoices or other evidence showing completion of the sample set identified in the "Initiatives Requiring Sampling" workbook provided below.	IN-1
7	2	Provide work orders, invoices or other evidence showing completion of the sample set identified in the "Initiatives Requiring Sampling" workbook provided below.	IN-2
7	3	Provide work orders, invoices or other evidence showing completion of the sample set identified in the "Initiatives Requiring Sampling" workbook provided below.	IN-11
7	4	Provide work orders, invoices or other evidence showing completion of the sample set identified in the "Initiatives Requiring Sampling" workbook.	IN-12
7	5	Provide work orders, invoices or other evidence showing completion of the sample set identified in the "Initiatives Requiring Sampling" workbook provided below.	AH-2
7	6	Provide work orders, invoices or other evidence showing completion of the sample set identified in the "Initiatives Requiring Sampling" workbook provided below.	AH-4
7	7	Provide work orders, invoices or other evidence showing completion of the sample set identified in the "Initiatives Requiring Sampling" workbook provided below.	AH-5
7	8	Provide work orders, invoices or other evidence showing completion of the sample set identified in the "Initiatives Requiring Sampling" workbook provided below.	SA-1

8	1	Provide work orders, invoices or other evidence showing completion of the sample set identified in the "Field Verifiable Initiatives Requiring Sampling" workbook. THE SAMPLE WORKSHEET FROM THE IE IS INCLUDED AS A TAB BELOW: VM-4	VM-4
8	2	Please provide a justification for funding target for the year 2021, and why the funding target was not met in 2021. (QIU states $685,558 of $272,000 target spent) NOTE - The ARC does not go into detail on this initiative.	AH-3
9	1	Please provide funding information at the initiative level (2021 planned spend, 2021 actual spend). Numbers provided in DR 1 in the Q4 QDR Table 12 do not match the numbers provided in the ARC. For example, Grid Design and System Hardening projected initiative spend adds up to $19M while the ARC has a projected spend of $25M.	
10	1	Provide work orders, invoices or other evidence showing completion of the sample set identified in the "Initiatives Requiring Sampling" workbook.	IN-5
10	2	Provide work orders, invoices or other evidence showing completion of the sample set identified in the "Initiatives Requiring Sampling" workbook.	IN-6
10	3	Provide work orders, invoices or other evidence showing completion of the sample set identified in the "Initiatives Requiring Sampling" workbook.	IN-15
10	4	In the WMP's Section 4.4.1, Pilot 1, PacifiCorp states that it has contracted with Texas A&M to facilitate the DFA pilot, and the first installation at Weed substation (on two circuits) is in final stages of implementation, with commissioning expected in Q2 2021. In Section 7.3.2, PacifiCorp describes its initiative for the installation of DFA devices on two circuits out of Weed substation (5G45 and 5G83) and two additional circuits out of Lassen substation (5G77 and 5G79) during 2021 covering PacifiCorp's Weed and Mt. Shasta service areas. However, in response to DR2 Question [5] PAC provided evidence that it had completed the DFA pilot with Texas A&M and completed the first DFAs installation at Weed substation (5G45 and 5G83). Please explain the basis in the differences between the DFA Pilot descriptions in these sections. Please explain the difference with the reported Annual Quantitative target for this initiative of the installation of 22 DFAs in 2021, in the PAC Q4 QIU, as well as the reported Annual Qualitative Target for the review and assessment of the event history of initial installations to determine expansion/phasing of pilot project (Q4 2021).	SA-3

10	5	Please provide documentation for the reported $6,778,605 spend for this initiative or evidence mapping this spend to VM initiatives. Reference 'sheet 1 - color coded in grey below, line 27 for detail requested'	VM-20
10	6	Interview request - GH requests PAC walk us through the audit summary spreadsheet - Audit Summary (CA) (2021).xlsx to help GH better understand how QA/QC are selected and tracked, understand the Yreka Trans Audit 06162021.docx and other associated QA/QC questions about the overall program as well as specific implementations	

APPENDIX B – NON-COMPLIANT FIELD VERIFICATION

Supervising Inspector: Robert Novembri

Report Summary					
Report Sequence	Object ID	District	Latitude	Longitude	Inspection Results Compliance with PRC 4292, CCRs, & WMP
1	1720	MT SHASTA	41.20498440	-122.2715269	Not Compliant
2	853	MT SHASTA	41.31812001	-122.3254075	Compliant
3	767	MT SHASTA	41.39461239	-122.3817999	Compliant
4	838	MT SHASTA	41.39440803	-122.3723984	Compliant
5	836	MT SHASTA	41.40055972	-122.3819893	Compliant
6	835	MT SHASTA	41.40054601	-122.3818081	Compliant
7	831	MT SHASTA	41.40226209	-122.3695924	Not Compliant
8	764	MT SHASTA	41.40262033	-122.3693064	Compliant
9	832	MT SHASTA	41.40342357	-122.3690767	Compliant
10	833	MT SHASTA	41.40401555	-122.3690187	Compliant
11	690	MT SHASTA	41.43146797	-122.4005472	Compliant
12	718	MT SHASTA	41.43017525	-122.3889753	Compliant
13	792	MT SHASTA	41.42561185	-122.3895377	Compliant
14	794	MT SHASTA	41.42559592	-122.3906083	Compliant
15	858	MT SHASTA	41.42312868	-122.3840746	Not Compliant
16	857	MT SHASTA	41.42338130	-122.3840311	Compliant
17	864	MT SHASTA	41.42203609	-122.3838569	Not Compliant
18	866	MT SHASTA	41.42448322	-122.3830309	Not Compliant
19	861	MT SHASTA	41.42848160	-122.3846495	Compliant
20	788	MT SHASTA	41.42767832	-122.3862840	Compliant
21	717	MT SHASTA	41.42869919	-122.3874211	Compliant
22	789	MT SHASTA	41.42690789	-122.3877253	Not Compliant

Supervising Inspector: Robert Novembri

Report Sequence	Object ID	District	Latitude	Longitude	Inspection Results Compliance with PRC 4292, CCRs, & WMP
23	3194	MT SHASTA	41.43106260	-122.3731480	Not Compliant
24	895	MT SHASTA	41.41156336	-122.3791223	Exempt
25	897	MT SHASTA	41.40947398	-122.3778066	Compliant

VEGETATION MANAGEMENT INSPECTION REPORT – POLE CLEARING

Utility	Pacific Power (PacifiCorp)		
Inspector	Joe Hiss	**Object ID**	1720
Inspection Date	May 14, 2022		
Pole/Tower ID	257205		
Structure Type	Bushing mounted cut		
Voltage			
Address *(if available)*	0 Sherrer Avemue		
Location	Latitude	41.204985	
	Longitude	-122.271542	

CONDITIONS

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.

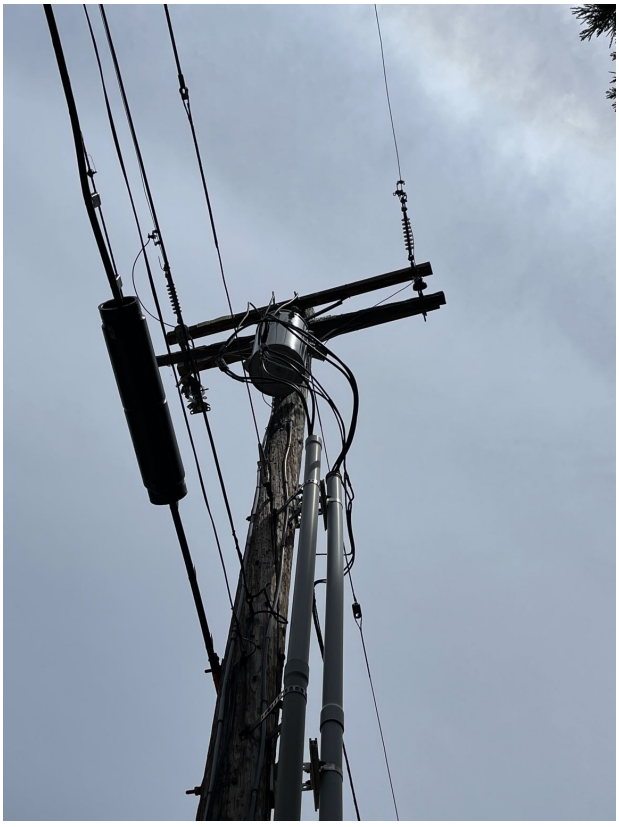
Not Compliant

Describe Not Compliant Findings

The 10' radius has not been maintained to be free of vegetation.

Inspection Photos and Descriptions

Photo 1 – Base of pole or tower depicting 10' radial clearing of vegetation
Photo 2 – 10' radial cylinder from ground to horizontal plane of highest point of conductor
Other photos as necessary



VEGETATION MANAGEMENT INSPECTION REPORT – POLE CLEARING

Utility	Pacific Power (PacifiCorp)		
Inspector	Joe Hiss	**Object ID**	831
Inspection Date	May 14, 2022		
Pole/Tower ID	136601		
Structure Type	NE 3		
Voltage			
Address *(if available)*	1400 Marys Drive		
Location	Latitude	41.402234	
	Longitude	-122.369601	

CONDITIONS

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.

Not Compliant

Describe Not Compliant Findings

At the time of inspection the 10' radius has not been cleared of vegetation

Inspection Photos and Descriptions

Photo 1 – Base of pole or tower depicting 10' radial clearing of vegetation
Photo 2 – 10' radial cylinder from ground to horizontal plane of highest point of conductor
Other photos as necessary

VEGETATION MANAGEMENT INSPECTION REPORT – POLE CLEARING

Utility	Pacific Power (PacifiCorp)		
Inspector	Joe Hiss	**Object ID**	833
Inspection Date	May 14, 2022		
Pole/Tower ID	136703		
Structure Type			
Voltage			
Address *(if available)*	1400 Marys Drive		
Location	Latitude	41.403982	
	Longitude	-122.369019	

CONDITIONS

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.

Compliant

Describe Not Compliant Findings

Although at the time of inspection the 10' radius has not been completely cleared of vegetation, there does not appear to be enough vegetation present to propagate a fire.

Inspection Photos and Descriptions

Photo 1 – Base of pole or tower depicting 10' radial clearing of vegetation
Photo 2 – 10' radial cylinder from ground to horizontal plane of highest point of conductor
Other photos as necessary

VEGETATION MANAGEMENT INSPECTION REPORT – POLE CLEARING

Utility	Pacific Power (PacifiCorp)		
Inspector	Joe Hiss	**Object ID**	858
Inspection Date	May 14, 2022		
Pole/Tower ID	28100		
Structure Type	NE-3		
Voltage			
Address *(if available)*	123 Main Street		
Location	Latitude 41.4231		
	Longitude -122.384062		

CONDITIONS

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.

Not Compliant

Describe Not Compliant Findings

Grass is green now, but when dry later in the season, there will be path to other vegetation. Location does not appear to have been cleared in past year

Inspection Photos and Descriptions

Photo 1 – Base of pole or tower depicting 10' radial clearing of vegetation
Photo 2 – 10' radial cylinder from ground to horizontal plane of highest point of conductor
Other photos as necessary


BLUE STAR GAS

VEGETATION MANAGEMENT INSPECTION REPORT – POLE CLEARING

Utility	Pacific Power (PacifiCorp)		
Inspector	Joe Hiss	**Object ID**	857
Inspection Date	May 14, 2022		
Pole/Tower ID	28102		
Structure Type	NE-6		
Voltage			
Address *(if available)*	123 Main Street		
Location	Latitude	41.42336	
	Longitude	-122.384041	

CONDITIONS

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.

Compliant

Describe Not Compliant Findings

Although the fenced area is not cleared, it appears to be irrigated.

Inspection Photos and Descriptions

Photo 1 – Base of pole or tower depicting 10' radial clearing of vegetation
Photo 2 – 10' radial cylinder from ground to horizontal plane of highest point of conductor
Other photos as necessary

VEGETATION MANAGEMENT INSPECTION REPORT – POLE CLEARING

Utility	Pacific Power (PacifiCorp)		
Inspector	Joe Hiss	**Object ID**	864
Inspection Date	May 14, 2022		
Pole/Tower ID	28043		
Structure Type	NE-6		
Voltage			
Address *(if available)*	0 Ripon Way		
Location	Latitude 41.421968		
	Longitude -122.38388		

CONDITIONS

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.

Not Compliant

Describe Not Compliant Findings

While the maintained lawn on the one side of the pole is exempt from clearing, the remaining radius has not been kept clear of vegetation at the time of inspection

Inspection Photos and Descriptions

Photo 1 – Base of pole or tower depicting 10' radial clearing of vegetation
Photo 2 – 10' radial cylinder from ground to horizontal plane of highest point of conductor
Other photos as necessary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VEGETATION MANAGEMENT INSPECTION REPORT – POLE CLEARING

Utility	Pacific Power (PacifiCorp)		
Inspector	Joe Hiss	**Object ID**	866
Inspection Date	May 14, 2022		
Pole/Tower ID	029/01		
Structure Type	NE-6		
Voltage			
Address *(if available)*	0 Butte Street		
Location	Latitude	41.424483	
	Longitude	-122.382997	

CONDITIONS

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.

Not Compliant

Describe Not Compliant Findings

Vegetation has not been cleared

Inspection Photos and Descriptions

Photo 1 – Base of pole or tower depicting 10' radial clearing of vegetation
Photo 2 – 10' radial cylinder from ground to horizontal plane of highest point of conductor
Other photos as necessary

VEGETATION MANAGEMENT INSPECTION REPORT – POLE CLEARING

Utility	Pacific Power (PacifiCorp)		
Inspector	Joe Hiss	**Object ID**	861
Inspection Date	May 14, 2022		
Pole/Tower ID	E10705/028405		
Structure Type	NE-6		
Voltage			
Address *(if available)*	590 Main Street		
Location	Latitude	41.428494	
	Longitude	-122.384636	

CONDITIONS

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.

Compliant

Describe Not Compliant Findings

Although at the time of inspection the 10' radius has not been completely cleared of vegetation, there does not appear to be enough vegetation present to propagate a fire.

Inspection Photos and Descriptions

Photo 1 – Base of pole or tower depicting 10' radial clearing of vegetation
Photo 2 – 10' radial cylinder from ground to horizontal plane of highest point of conductor
Other photos as necessary

VEGETATION MANAGEMENT INSPECTION REPORT – POLE CLEARING

Utility	Pacific Power (PacifiCorp)		
Inspector	Joe Hiss	**Object ID**	789
Inspection Date	May 14, 2022		
Pole/Tower ID	E10366 /026302		
Structure Type	NE 6		
Voltage			
Address *(if available)*	0 Columbus Way		
Location	Latitude	41.426863	
	Longitude	-122.387776	

CONDITIONS

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.

Not Compliant

Describe Not Compliant Findings

Vegetation has not been cleared, tree limbs are in contact with approximately 6' of pole at approximately 15' up

Inspection Photos and Descriptions

Photo 1 – Base of pole or tower depicting 10' radial clearing of vegetation
Photo 2 – 10' radial cylinder from ground to horizontal plane of highest point of conductor
Other photos as necessary

VEGETATION MANAGEMENT INSPECTION REPORT – POLE CLEARING

Utility	Pacific Power (PacifiCorp)		
Inspector	Joe Hiss	**Object ID**	3194
Inspection Date	May 14, 2022		
Pole/Tower ID	965/ 014641		
Structure Type	NE —3		
Voltage			
Address *(if available)*	0 North Davis Avenue		
Location	Latitude	41.431052	
	Longitude	-122.373151	

CONDITIONS

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.

Not Compliant

Describe Not Compliant Findings

Grass and weeds have not been cleared at the time of inspection

Inspection Photos and Descriptions

Photo 1 – Base of pole or tower depicting 10' radial clearing of vegetation
Photo 2 – 10' radial cylinder from ground to horizontal plane of highest point of conductor
Other photos as necessary

VEGETATION MANAGEMENT INSPECTION REPORT – POLE CLEARING

Utility	Pacific Power (PacifiCorp)		
Inspector	Joe Hiss	**Object ID**	895
Inspection Date	May 14, 2022		
Pole/Tower ID	E15194/121300		
Structure Type			
Voltage			
Address *(if available)*	800 Shastina Drive		
Location	Latitude	41.41153	
	Longitude	-122.379131	

CONDITIONS

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.

N/A

Describe Not Compliant Findings

Pole is no longer in use, new pole does not appear to have non exempt equipment

Inspection Photos and Descriptions

Photo 1 – Base of pole or tower depicting 10' radial clearing of vegetation
Photo 2 – 10' radial cylinder from ground to horizontal plane of highest point of conductor
Other photos as necessary


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VEGETATION MANAGEMENT INSPECTION REPORT – POLE CLEARING

Utility	Pacific Power (PacifiCorp)		
Inspector	Joe Hiss	**Object ID**	897
Inspection Date	May 14, 2022		
Pole/Tower ID	E23708/122100		
Structure Type	NE 1		
Voltage			
Address *(if available)*	0 Alves Road		
Location	Latitude	41.409481	
	Longitude	-122.377791	

CONDITIONS

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.

Compliant

Describe Not Compliant Findings

Inspection Photos and Descriptions

Photo 1 – Base of pole or tower depicting 10' radial clearing of vegetation
Photo 2 – 10' radial cylinder from ground to horizontal plane of highest point of conductor
Other photos as necessary


1872