

Southern California Edison
2022-WMPs – 2022 Wildfire Mitigation Plan Updates

DATA REQUEST SET O E I S - S C E - 2 2 - 0 0 2

To: Energy Safety
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Received Date: 3/15/2022

Response Date: 3/18/2022

Question 13:

Vegetation Management QA/QC:

- a. SCE conducts Quality Assurance/Quality Control (QA/QC) checks of its vegetation management program.
 - i. Provide the QA/QC results for vegetation management broken down by inspection type completed in 2019, 2020, and 2021. This should include:
 - (1) Percentage of inspections with infractions found (e.g., under-trimming, over-trimming, missed hazard tree, improper clean-up etc.);
 - (2) Percentage of inspections with infractions found which required remediation (e.g., re-inspection, additional trimming, removal of a tree); and
 - (3) List of lessons learned from infractions and associated changes made to inspections moving forward.
 - ii. If unable to provide any of the data requested in Q013ai et seq., explain why that data is unavailable.

Response to Question 13:

i. SCE's Vegetation Management (VM) QC inspection program commenced in April 2019. Initially, QC was focused on Vegetation Line Clearing (VLC) and later expanded to verification of prescribed Hazard Tree mitigations and the performance of independent HTMP risk assessments.

SCE is providing the following "Year End" performance summary data for VLC:

- 2019 Transmission Performance (Image 1)
- 2019 Distribution Performance (Image 2)
- 2020 Transmission and Distribution Performance (Image 3)
- 2020 Transmission and Distribution Performance: Pruning Contractors (Image 4)
- 2020 Transmission and Distribution Performance: Pre-Inspection Contractors (Image 5)

- 2021 Transmission and Distribution Performance (Image 6)
- 2021 Transmission and Distribution Performance: Pruning Contractors (Image 7)
- 2021 Transmission and Distribution Performance: Pre-Inspection Contractors (Image 8)

(1) and (2): The following metrics are captured during SCE's QC inspections for Vegetation Line Clearing and are shown in the high-level report summaries:

- **Regulation Clearance Distance (RCD)** is the minimum clearance required by regulation.
- **Compliance Clearance Distance (CCD)** is SCE's internal standard, which is 1.5 x RCD.
- **Grid Resiliency Clearance Distance (GRCD)** is the distance that SCE seeks to obtain at the time of trim, in accordance with CPUC recommendations in General Order 95, Rule 35, Appendix E. Because this distance is not something SCE can require a property owner to allow, SCE tracks this metric for its own program management purposes but does not consider the failure to obtain GRCD as a non-conformance.
- **ANSI A300 Pruning Quality (ANSI)**
- **Missed Tree Rate (MTR)** refers to trees identified by QC that are not listed in the database.
- **Inventory Inflation Rate (IIR)** refers trees listed in the database but not located in the field.
- **Work Type Accuracy (WTA)** refers to the accuracy of the pre-inspector's prescription, in terms of the type of trim needed (e.g., side-trim, crown reduction, etc.).
- **Species Identification (SI)** refers to the accuracy of the identification of tree species.

SCE has established the following Acceptable Quality Level (AQL) for performance:

- RCD = 100%
- CCD = 95%

The following is a summary of percentages and information contained in each subsequent image.¹

Image	Year	T or D	Activity	RCD	CCD	ANSI	MTR	IIR	WTA	SI
1	2019	T	Overall	99.95	99.02					
2		D	Overall	97.98	89.95					
3	2020	T&D	Overall	98.62	94.42					
4		T&D	Pruning	98.58	93.53	99.56	N/A	N/A	N/A	N/A
5		T&D	PI	99.21	97.16	N/A	18.86	1.05	99.10	99.29
6	2021	T&D	Overall	99.20	96.26					
7		T&D	Pruning	99.12	96.94	99.82	N/A	N/A	N/A	N/A
8		T&D	PI	99.49	98.18	N/A	1.31	0.37	98.93	*

*Consistent with OEIS guidance, in 2021, SCE updated its species index records to delineate genus and species. This update created discrepancies between the record selection available to the pre-inspector prior to the update and the record selection available after the update, which makes this SI metric unreliable for identifying instances in which the pre-inspector selected the wrong species.

¹ The Vegetation Line Clearing QC program has evolved over time, and in 2019 did not track the ANSI, MTR, IIR, WTA, and SI metrics. The ANSI metric is only relevant to pruning/trimming work, whereas the MTR, IIR, WTA, and SI metrics are relevant to pre-inspections (PI).

Image 1 – 2019 Transmission Performance

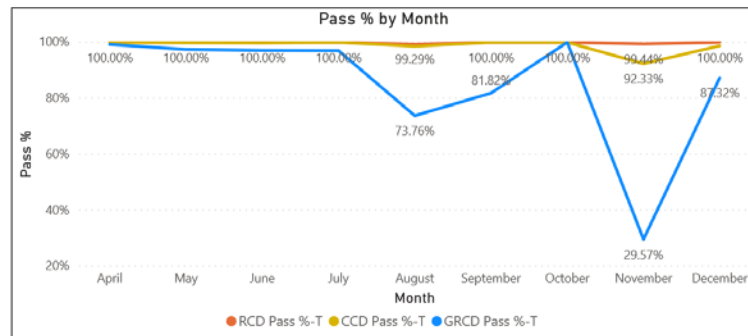
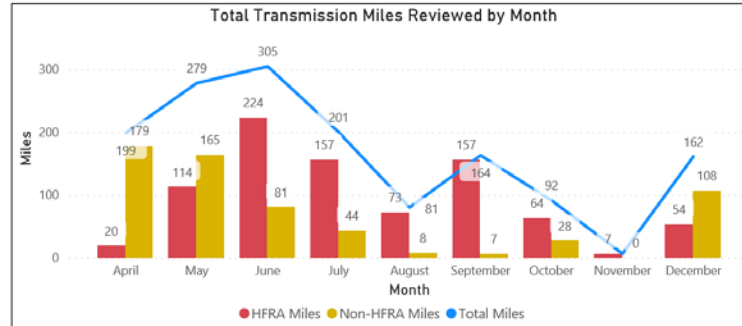
QC Complete Date

4/1/2019

12/29/2019

Transmission Summary

Pass % by District			
DISTRICT	RCD Pass %-T	CCD Pass %-T	GRCD Pass %-T
22	100.00 %	100.00 %	100.00 %
31	100.00 %	100.00 %	79.40 %
34	100.00 %	100.00 %	100.00 %
35	100.00 %	99.74 %	88.87 %
36	100.00 %	100.00 %	100.00 %
39	100.00 %	100.00 %	100.00 %
46	100.00 %	100.00 %	92.42 %
47	100.00 %	100.00 %	100.00 %
48	100.00 %	100.00 %	99.43 %
49	100.00 %	100.00 %	100.00 %
51	100.00 %	100.00 %	98.49 %
52	100.00 %	100.00 %	0.00 %
59	100.00 %	100.00 %	100.00 %
73	100.00 %	100.00 %	100.00 %
77	100.00 %	100.00 %	57.89 %
88	100.00 %	100.00 %	52.17 %
85	99.86 %	97.05 %	73.00 %
27	98.36 %	96.72 %	93.44 %



Total Transmission Miles Reviewed
1,490

Non HFRA Transmission Miles
620

HFRA Transmission Miles
870

Overall RCD Pass %
99.95%

Overall CCD Pass %
99.02%

Overall GRCD Pass %
88.39%

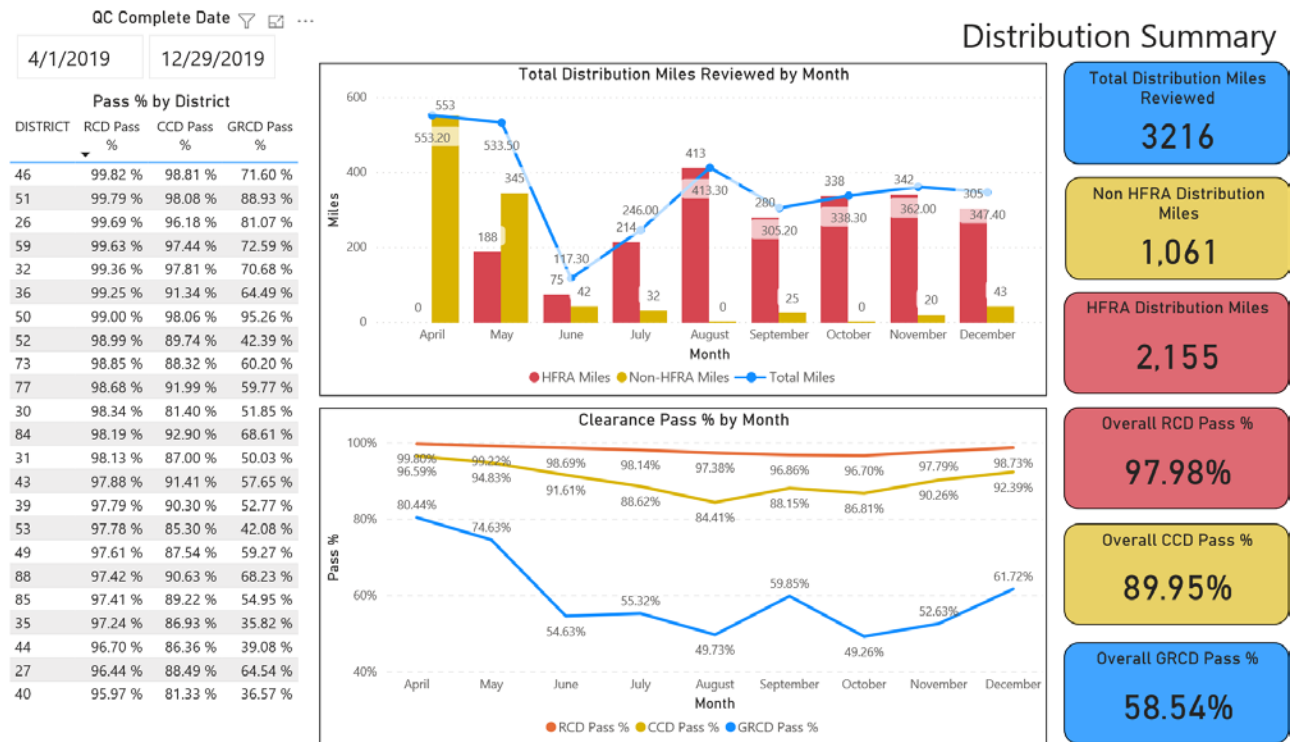
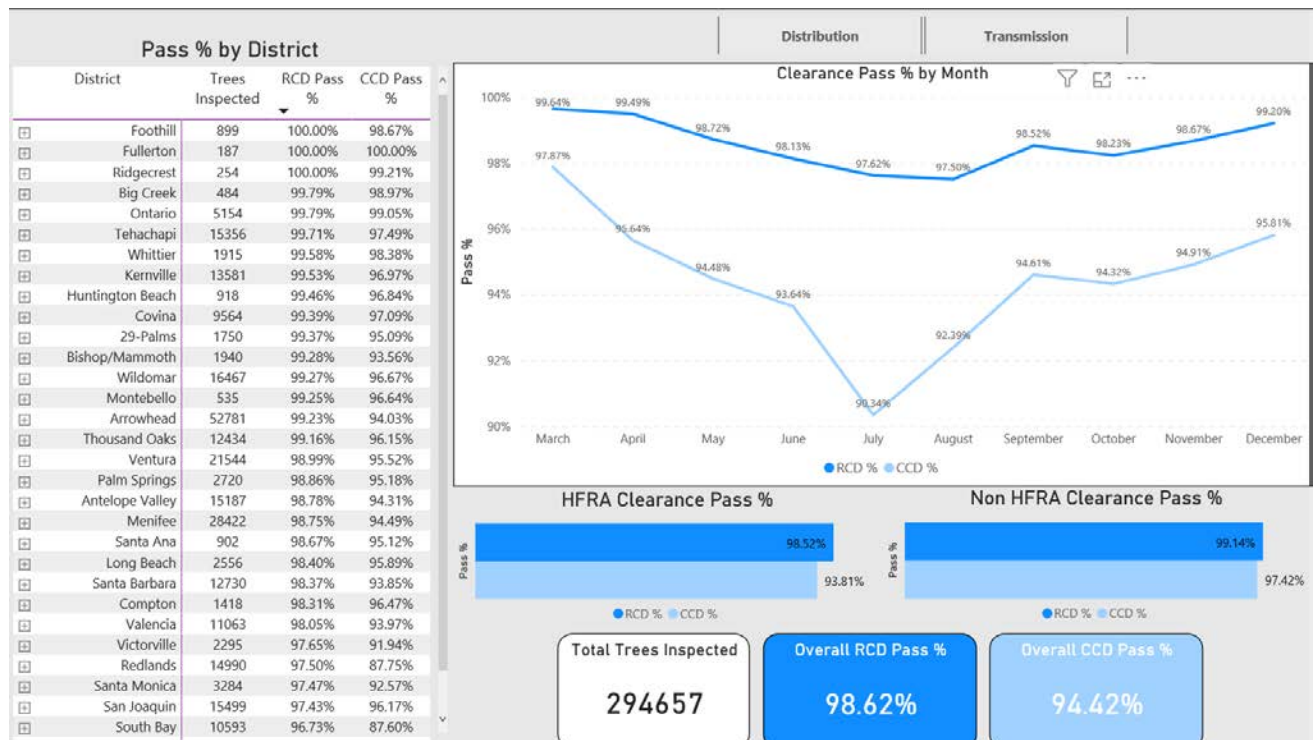
Image 2 – 2019 Distribution Performance**Image 3 – 2020 Transmission and Distribution Performance (Overall)**

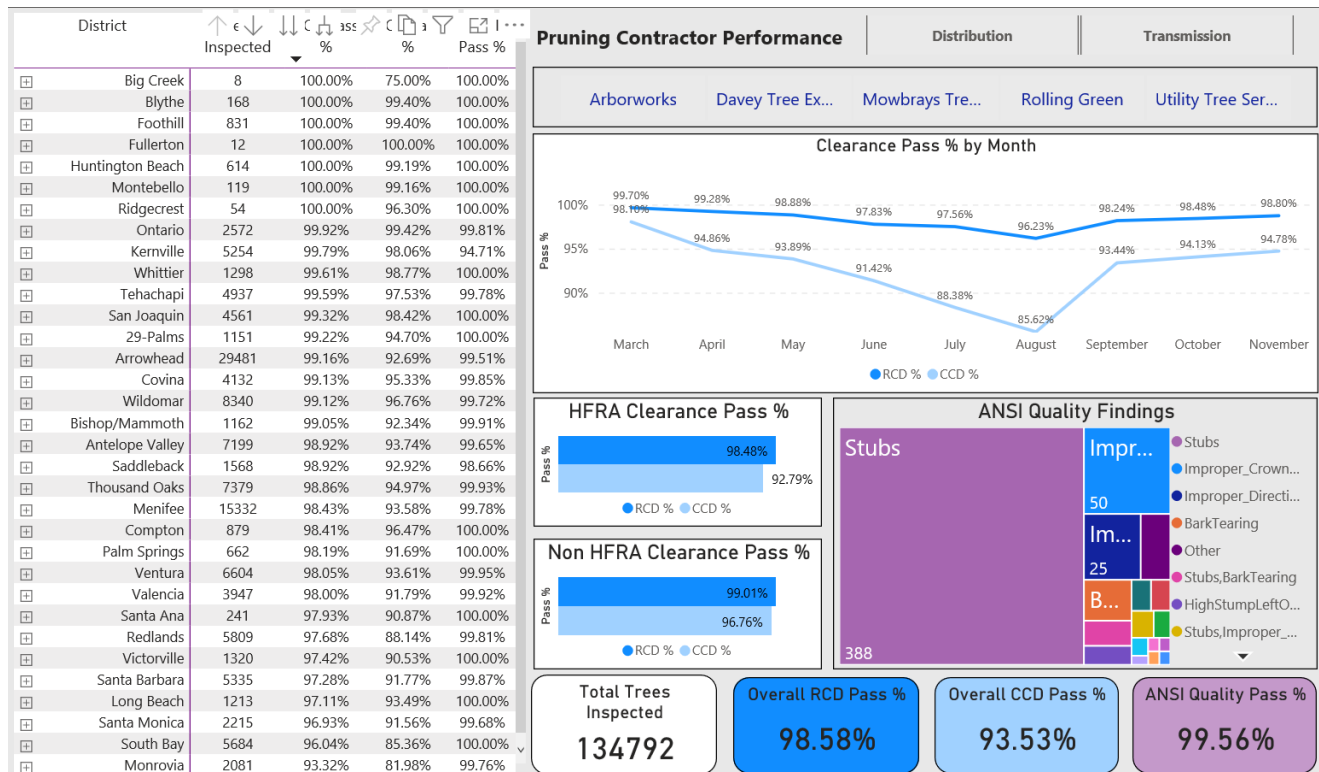
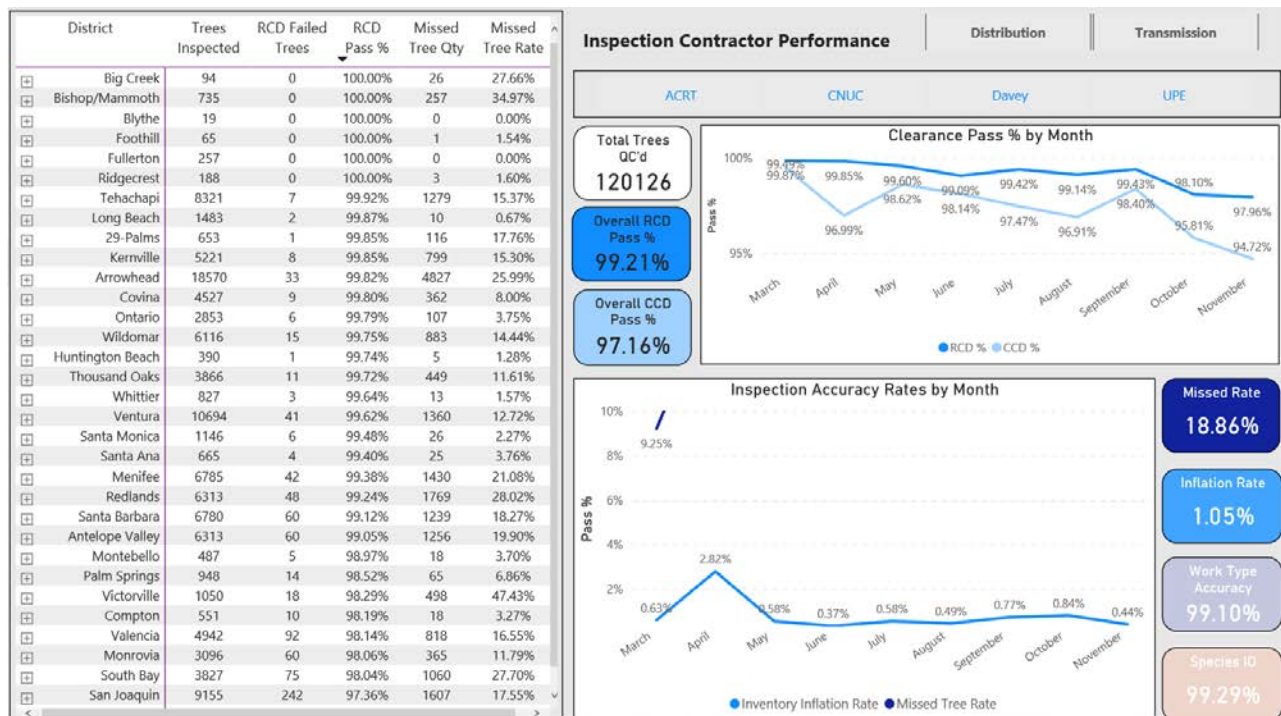
Image 4 – 2020 Transmission and Distribution Performance (Pruning Contractors)**Image 5 – 2020 Transmission and Distribution Performance (Pre-Inspection Contractors)**

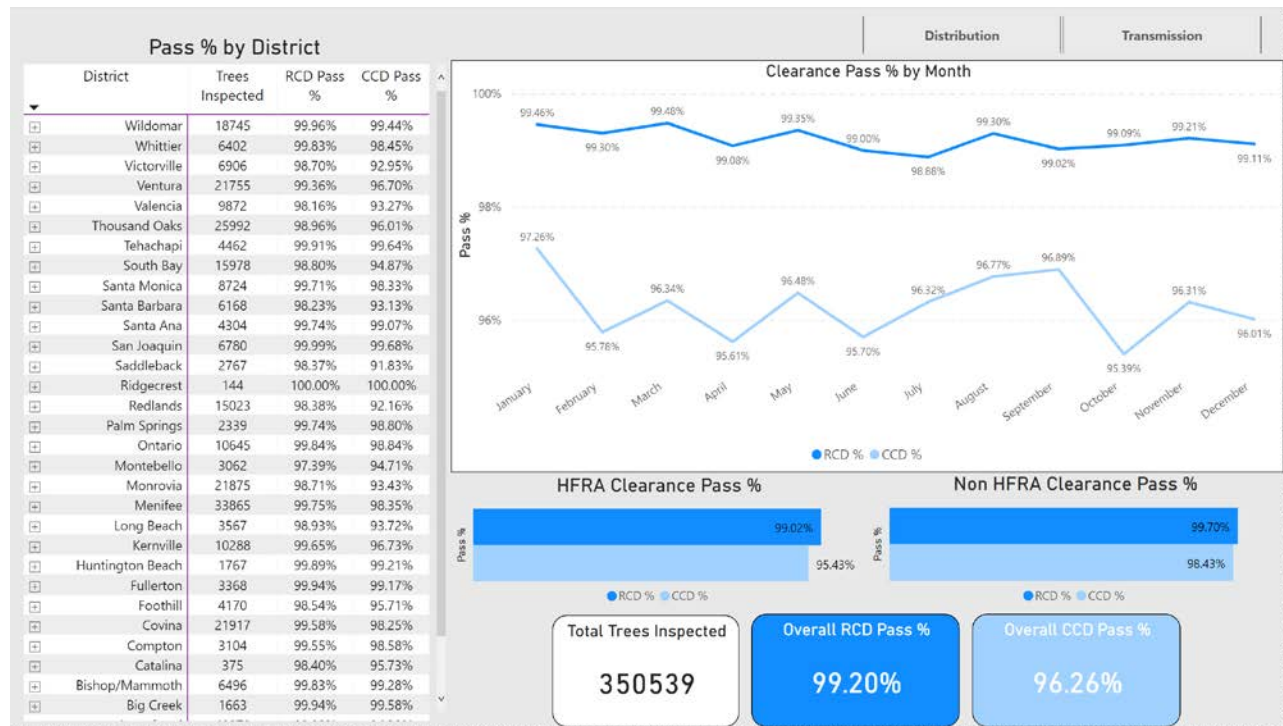
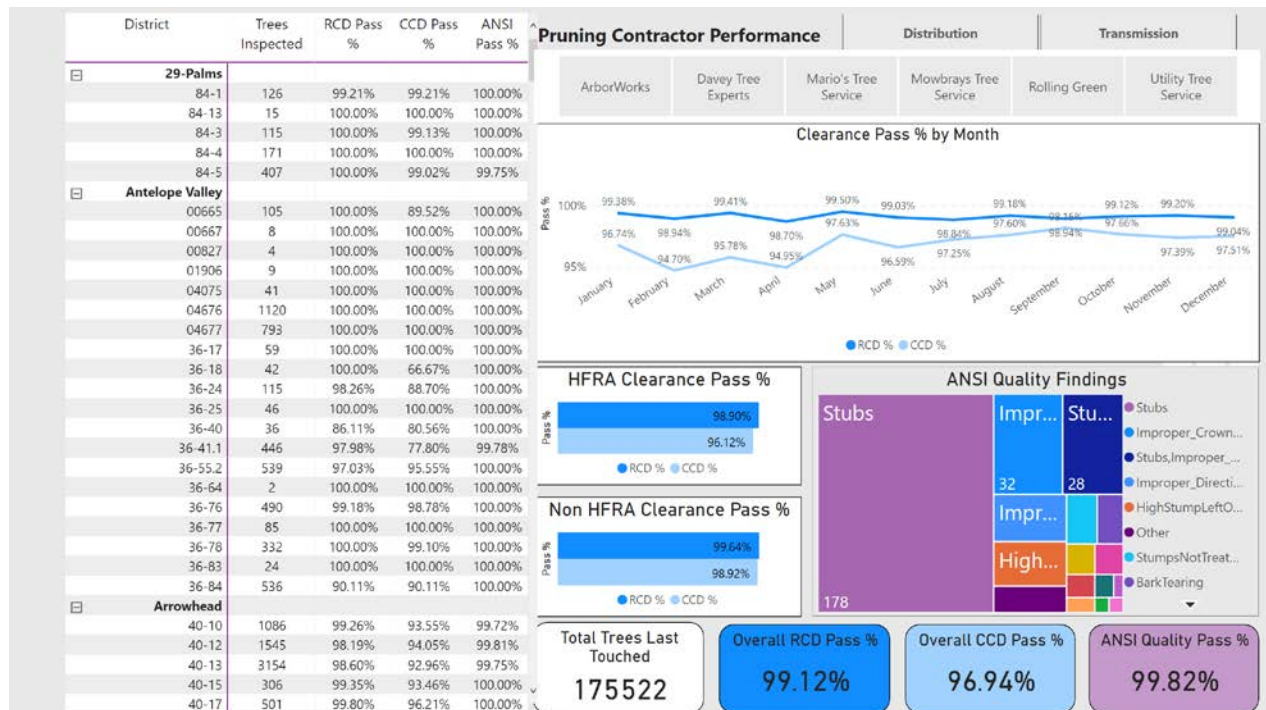
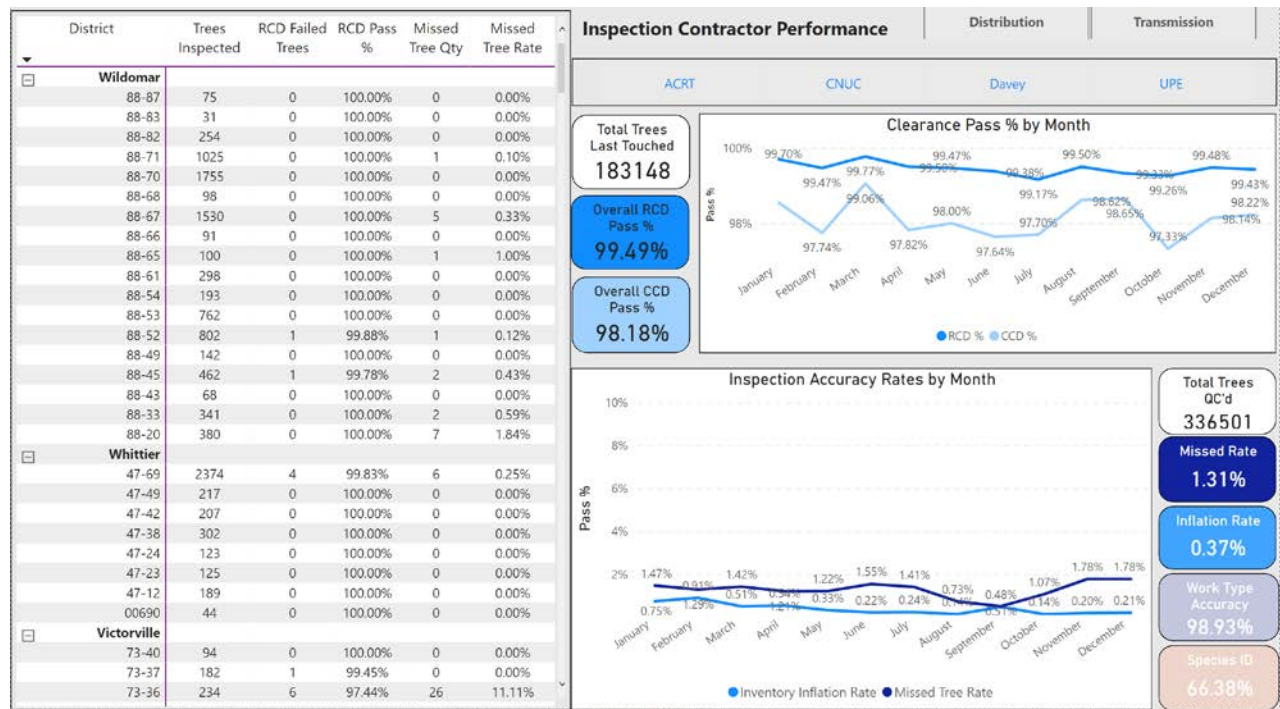
Image 6 – 2021 Transmission and Distribution Performance (Overall)**Image 7 – 2021 Transmission and Distribution Performance (Pruning Contractors)**

Image 8 – 2021 Transmission and Distribution Performance (Pre-Inspection Contractors)

The data provided below is focused on HTMP activities.

Regarding QC inspections for HTMP, two specific inspections are performed: (1) 100% QC to verify the prescribed mitigation was completed, and (2) independent QC risk-assessments at a sampling rate of 99/2% Confidence Level/Confidence Interval. Note: due to current refreshing of the HTMP QC dashboard, exact data counts and images are not available, but are expected to be complete by April 30, 2022. Upon completion of the refresh, additional information related to the HTMP QC program can be provided to OEIS. The below information states approximate values, which are considered reasonably accurate.

With respect to QC inspections to verify that prescribed mitigations were performed, between January 2019 and October 2021, approximately 350,000 HTMP assessments were performed by the HTMP assessors resulting in approximately 45,000 prescribed mitigations. Of the 45,000 prescribed mitigations, approximately 40,000 have been performed, and of the 40,000, QC has been performed on approximately 38,000. Results of the QC inspections for remediation indicated that in most cases the prescribed mitigation was performed, although there were instances where the mitigation was considered incomplete (partial mitigation or debris left at the mitigation location).

SCE began QC of HTMP inspector's risk assessments in March 2020. Between March 2020 and December 2020, independent QC risk assessments were performed on 7,975 on trees with a risk score between 35-49. Of the 7,975, the average QC risk score was 43.02, compared to the average original HTMP assessment risk score of 40.04. which shows general alignment of the risk

assessment process. Of the 7,975 QC assessments, approximately 1,329 trees were identified to have a risk score at or above the threshold for mitigation. Though SCE is aware that some of the 1,329 trees were ultimately mitigated subsequent to the QC, SCE does not have data to accurately report on this metric.

Between January 2021 and October 2021,² independent QC risk-assessments were performed on 12,997 trees with a risk score between 35-49. Of the 12,997 assessments, the average QC risk assessment score was 44.72 compared to the average original assessment risk score of 41.56, which shows general alignment of the risk assessment process. Of the 12,997 QC assessments, approximately 2,700 trees were identified to have a risk score at or above the threshold for mitigation. Those trees were then reassessed a third time, and upon reassessment, approximately 13% of the returned scores resulted in a change in mitigation. Thus, of the 2,700 cases, approximately 350 tree assessments resulted in a change in mitigation, for a total non-conformance rate of 2.7% (350 divided by 13,000). To drive continuous improvement, in late 2021, additional QC requirements were implemented to refine the determination of whether mitigation should be required.

(3) List of Lessons Learned – Many of the lessons learned pertain to understanding the clearance requirements and the available tools to help the contractors achieve the required clearance, such as SCE's customer refusal management process. SCE also took measures to reduce the missed tree rate, including extensive training for SCE's pre-inspectors on identifying trees for trimming, including better identifying trees which currently met CCD, but would not hold adequate clearance distance for the full twelve-month trimming cycle. On a monthly basis, SCE meets with its pre-inspection and pruning contractors to discuss monthly and year-to-date performance, with an emphasis on quality. SCE QC also conducts benchmarking sessions with contractors to learn and share best-practices among its contractors.

ii. As stated above, the QC dashboard for HTMP is being refreshed with expected completion of April 30, 2022. Upon completion of the refresh, more complete QC data can be provided to OEIS if requested.

² SCE's QC program for HTMP continued after October 2021, including through the date of this response. But because SCE's data management system is being refreshed, data after October 2021 is not available at this time. SCE can supplement this response at a later date upon OEIS request.