



To: The Public, Local and State Agencies, and Stakeholders for Horizon West Transmission'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 Horizon West Transmission's (HWT) compliance with its 2021 WMP. This report was prepared by HWT'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 HWT as confidential has been redacted from the published report. Comments must be submitted no later than August 15, 2022.<sup>1</sup> Comments must be submitted to Energy Safety's e-filing system in the 2022 Independent Evaluator docket (#2022-IE).<sup>2</sup>

Sincerely,

A handwritten signature in black ink, appearing to read "Melissa Semcer".

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

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<sup>1</sup> 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.

<sup>2</sup> 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)



**BUREAU  
VERITAS**

# FINAL INDEPENDENT EVALUATOR ANNUAL REPORT ON COMPLIANCE

June 30, 2022

Bureau Veritas North America  
Horizon West Transmission



**TABLE OF CONTENTS**

- 1. EXECUTIVE SUMMARY .....4**
- 2. INTRODUCTION .....6**
- 3. INDEPENDENT EVALUATOR REVIEW OF COMPLIANCE.....9**
  - 3.1 WMP ACTIVITY COMPLETION .....9
    - 3.1.1 SAMPLING METHODOLOGY AND DISCUSSION.....11
    - 3.1.2 LARGE VOLUME QUANTIFIABLE GOAL/TARGET – FIELD VERIFIABLE.....11
    - 3.1.3 LARGE VOLUME QUANTIFIABLE GOAL/TARGET – NOT FIELD VERIFIABLE .....11
    - 3.1.4 SMALL (LESS THAN 100 TIMES) VOLUME QUANTIFIABLE GOAL/TARGET .....11
    - 3.1.5 QUALITATIVE GOAL/TARGET.....20
  - 3.2 VERIFICATION OF FUNDING .....24
  - 3.3 VERIFICATION OF QA/QC PROGRAMS .....27
- 4. CONCLUSION .....28**
- 5. APPENDICES .....32**

## **DISCLAIMER**

This report has been compiled through the process of observation and review of documents provided by the electric service provider named herein. The Office of Energy Infrastructure Safety (Energy Safety) instituted the requirement for an independent evaluation of electric utility providers Wildfire Mitigation Plans (“WMP”). Bureau Veritas is not the designer, implementer, or owner of the WMP and is not responsible for its content, implementation and/or any liabilities, obligations or responsibilities arising therein.

The report reflects only those conditions and practices which could be ascertained through observation at the time of evaluation. This report is limited to those items specifically identified herein. The report is not intended to validate that dangers, hazards and/or exposures are or are not present. Bureau Veritas shall only be responsible for the performance of the services identified or defined in its specific scope of services.

Bureau Veritas does not assume any responsibility for inaccurate, erroneous or false information, express or implied, that was provided to Bureau Veritas for its evaluation herein. In addition, Bureau Veritas shall have no responsibility to any third party relying on this report. This report is for the sole benefit of the CPUC and the electric Service Provider herein.

## **1. EXECUTIVE SUMMARY**

### ***Background***

Pursuant to P.U. Code Section 8386.3(c)(2)(B)(i), (ii), (iii), and (iv), Bureau Veritas North America, Inc. (BVNA) has been selected as an Independent Evaluator (IE) to review and assess Horizon West Transmission's (HWT) 2021 Wildfire Mitigation Plan (WMP) and provide a report on July 1 of each year. In carrying out the stipulations of Resolution WSD-021, BVNA has evaluated HWT's compliance with its 2021 WMP pursuant to Public Utilities Code Section 8386, validated HWT's quality assurance and quality control (QA/QC) programs outlined for support of WMP initiatives, and reviewed its WMP funding activities.

### ***Scope***

Pursuant to the requirements of the Public Utilities Code (PU Code); BVNA, in partnership with C2 Group, has reviewed HWT's 2021 WMP issued on March 5, 2021, known as the "Wildfire Mitigation Plan 2021", Rulemaking 18-10-007, for initiative compliance verification for the execution of the WMP goals and targets. In addition, supplemental documents (see Appendix A) were also reviewed for verification of compliance, validation of quality assurance QA/QC programs, and assessment of the utility funding activities related to WMP.

### ***Horizon West Transmission***

As described within HWT's Annual Report on Compliance (ARC) dated March 2022, HWT is a new, transmission-only utility with no distribution customers. HWT is the Suncrest Dynamic Reactive Power Support Facility (Suncrest Facility) owner and operator, located near the town of Alpine in San Diego County, California. The Suncrest Facility is comprised of a static VAR compensator (SVC) facility and an approximately one mile, 230 kV transmission line that connects the SVC facility to the Suncrest Substation owned by San Diego Gas and Electric Company (SDG&E). Most of the approximately one mile 230 kV connecting transmission line was installed underground in accordance with the Suncrest Facility's planned design. As a result, only an approximately 115-foot segment of the HWT-owned 230 kV transmission line was overhead and has recently been rebuilt as underground. A short overhead segment interconnects directly with SDG&E's facilities at the Suncrest Substation. The Facility's construction began in 2019 and consisted of the SVC substation, 230 kV underground transmission line, and a short overhead span that connects to the SDG&E-owned Suncrest Substation. The Suncrest SVC Facility is in an area designated as Tier 3 Extreme Fire-Threat District (HFTD) in San Diego County.

### ***Key Findings***

As described in further detail within Section 3, the IE compliance review has found that the 2021 WMP and data found in supplemental documents (see Appendix A), along with confirmation of verifiable field goals, HWT is substantially in compliance with the 2021 WMP:

1. 2021 WMP activities are substantially completed.
2. WMP activities overall were overspent, as verified with the HWT ARC for 2021, dated March 2022. HWT provided the IE team with individual activity underfunding details on funding discrepancies.
3. Through the review of the Monthly Facility Inspection Reports provided through Data Request 001, and the QA/QC program developed and implemented by HWT, HWT was found to be in conformance with the 2021 WMP.

## **2. INTRODUCTION**

A review of all documents supporting the implementation of the 2021 WMP strategic initiatives has been conducted. As a result, BVNA has provided the following IE evaluation report (Report) describing the technical review and findings. HWT is a new, transmission-only utility placed into operation on February 29, 2020. HWT's first Facility, Suncrest SVC, is located in San Diego County, California, on privately owned lands in the south-central portion of San Diego County, approximately 3.8 miles southwest of the community of Descanso and 3.4 miles southeast of the community of Alpine. The Facility consists of the SVC facility, 230 kV underground transmission line, and a short overhead span that connects to the SDG&E-owned Suncrest Substation.

Primary access is from the [REDACTED]. The Project site lies within a portion of the northwest quarter of Section 3 of Township 16 South, Range 3 East, on the U.S. Geographical Survey (USGS), 7.5 minutes, Viejas Mountain, California quadrangle map.

HWT's Facility includes an access road, onsite fire water storage tank, perimeter concrete wall, and related infrastructure for the SVC facility. The site is located in an area classified as a Tier 3 HFTD in San Diego County. Fire hazard designations are based on topography, vegetation, and weather, amongst other factors, with more hazardous sites including steep terrain, unmaintained fuels/vegetation, and urban-wildland interface (WUI) locations.

HWT's surrounding area consists of semi-rural residential developed lands and open space in private and federal land holdings. The Facility is located on privately owned lands within the administrative boundary of the United States Forest Service-Cleveland National Forest. SDG&E privately owned lands, including the Suncrest Substation, are within one mile of the Facility's west side, and the Cleveland National Forest lands are to the north. In addition, individual and private ownerships occur to the east and south of the Project site.

HWT's fire prevention performance metrics are focused on reducing the potential for onsite ignitions that may spread to offsite vegetation. This philosophy of fire prevention has proven to be successful to date. The established performance metrics outlined in the 2021 WMP demonstrate an approach to preventing an ignition event by identifying, documenting, tracking, and monitoring possible ignition sources that create the highest risk of resulting in flame, sparks, arcs, and uncontrolled fires loss of molten/heated material or similar ignition vulnerabilities. As HWT is a transmission-only utility, HWT does not have distribution customers. Therefore, those items outlined in PUC section §8386 and the WMP Guidelines relevant to customer communication do not apply, and no reference to Public Safety Power Shutoff (PSPS) is made. The report includes the approach and methodology in evaluating the Plan's comprehensiveness, HWT's Plan elements, and their fulfillment of initiatives and metrics in the Quality Assessment

and Quality Control provisions outlined in the Plan Determinations and results.

The BVNA team's review facilitated expertise in these critical elements as the IE to determine the comprehensiveness of HWT's WMP. While not all these strategies were necessary to confirm HWT's fulfillment of their WMP, due to facility size, location, and system or operational characteristics, BVNA's understanding of collected utility strategies demonstrated throughout the state are summarized below:

1. **Inspection and maintenance of distribution transmission and substation assets**, including conducting system patrols and ground inspections using technological inspection tools, managing predictive and electrical preventative maintenance, conducting vegetation inspections and management, vulnerability detection such as Light Detection and Ranging (LiDAR) inspection, and geospatial and topography identification and geographic information system (GIS) mapping data. A key component is identifying collected data elements through each program and understanding how that data is used and shared to improve utility practices.
2. **Vegetation management** includes routine preventative vegetation maintenance; corrective vegetation management and off-cycle tree work; emergency vegetation clearance, prioritized for portions of the service territory in Tier 2 and 3 HFTD; quality control processes; and resource protection plan, including animal and avian mitigation programs.
3. **System hardening** includes pole replacement, non-expulsion equipment, advanced fuses, less flammable transformer oil, covered wire and wire wrap, and undergrounding where cost beneficial.
4. **Operational practices** include communications and mustering plans under varying degrees of wildfire risk. Plans to deactivate automatic reclosers, de-energization of "at risk" area powerlines based on the type of Facility (overhead bare conduction, high voltage, etc.), tree and vegetation density, available dry fuel, and other factors that make specific locations vulnerable to wildfire risk.
5. **Situational awareness** includes obtaining information from devices and sensors on the actual system, weather and other wildfire conductivity conditions, and two-way communication with agencies and key personnel. Programs such as online feeds and websites like the National Fire Danger Rating System are utilized. Situational awareness should help achieve a shared understanding of actual conditions and improve collaborative planning and decision-making.

6. **De-Energization** actions triggered and prioritized by forecasted extreme fire weather conditions: imminent extreme fire weather conditions; validated extreme fire weather conditions; and plans for re-energization when weather subsides to safe levels. Manual or automatic capabilities exist for implementation.
7. **Advanced Technologies** including Distribution Fault Anticipation technology, tree growth regulators, pulse control fault interrupters, oblique and hyperspectral imagery, advanced transformer fluids, advanced LiDAR, and advanced Supervisory Control and Data Acquisition (SCADA) to reduce electrical ignition while also helping to mitigate power outages and equipment damage.
8. **Emergency Preparedness, Outreach, and Response communications** before, during, and after emergencies, including but not limited to engaging with key stakeholders that include critical facilities and served customers, local governments, and critical agencies such as the California Department Forestry and Fire Protection (CAL FIRE), local law enforcement agencies and other first responders, hospitals, local emergency planning committees, other utility providers, California Independent System Operators, and the utility's respective board. Community outreach plans should inform and engage first responders, local leaders, land managers, business owners, etc. Coordination agreements such as Mutual Aid or Mutual Assistance should be leveraged.

**3. INDEPENDENT EVALUATOR REVIEW OF COMPLIANCE**

The overall approach to verifying compliance included reviewing and assessing the multiple WMP activities through data requests, reviewing publicly available documents, and conducting an onsite facility assessment that documented and validated those items outlined in HWT's 2021 WMP.

At the commencement of the evaluation, the IE initiated the assessment through a review of HWT's 2021 WMP, along with all publicly available documents as listed in Appendix A, to identify HWT's stated 2021 WMP goals. In addition, for 2021 WMP activities described in the WMP but not provided within the publicly available records, the IE submitted data requests to verify activities stated within the 2021 WMP (see Appendix C for Data Requests Submitted). Along with the document analysis and data requests, the IE conducted a site visit to the single HWT facility, known as the Suncrest Facility, to collect images and evaluate compliance with the 2021 WMP activities or initiatives identified during the IE initial review. The analysis and key findings for each respective section are detailed further within Section 3, Independent Evaluator Review of Compliance, within this report.

**3.1 WMP ACTIVITY COMPLETION**

WMP activities outlined in HWT’s 2021 WMP with specific quantifiable or qualitative performance goals/targets included the following items:

*Table 1: 2021 WMP Initiatives*

<b>Large Volume (≥ 100 units), Quantifiable Goal/Target – Field Verifiable</b>	
<b>2021 WMP Initiative</b>	
N/A	
<b>Large Volume (≥ 100 units), Quantifiable Goal/Target – Not Field Verifiable</b>	
<b>2021 WMP Initiative</b>	
N/A	
<b>Small (less than 100 items) Volume Quantifiable Goal/Target</b>	
<b>2021 WMP Initiative</b>	
<b>7.3.2.2.5</b>	<i>Situational Awareness and Forecasting:</i> Personnel monitoring areas of electric lines and equipment in elevated fire risk conditions
<b>7.3.2.3.12</b>	<i>Grid Design and System Hardening:</i> Other corrective action
<b>7.3.2.3.16</b>	<i>Grid Design and System Hardening:</i> Undergrounding of electric lines and/or equipment

<b>Qualitative Goal/Target WMP Activities</b>	
<b>2021 WMP Initiative</b>	
<b>7.3.2.1.5</b>	<i>Risk Assessment and Mapping:</i> Match drop simulations showing the potential wildfire consequence of ignitions that occur along the electric lines and equipment
<b>7.3.2.2.1</b>	<i>Situational Awareness and Forecasting:</i> Advanced weather monitoring and weather stations
<b>7.3.2.2.2</b>	<i>Situational Awareness and Forecasting:</i> Continuous monitoring sensors
<b>7.3.2.2.4</b>	<i>Situational Awareness and Forecasting:</i> Forecast of a fire risk index, fire potential index, or similar
<b>7.3.2.4.2</b>	<i>Asset Management and Inspections:</i> Detailed inspections of transmission electric lines and equipment
<b>7.3.2.4.14</b>	<i>Asset Management and Inspections:</i> Quality assurance/quality control of inspections
<b>7.3.2.4.15</b>	<i>Asset Management and Inspections:</i> Substation inspections
<b>7.3.2.5.3</b>	<i>Vegetation Management and Inspections:</i> Detailed inspections of vegetation around transmission electric lines and equipment
<b>7.3.2.5.13</b>	<i>Vegetation Management and Inspections:</i> Quality assurance/quality control of inspections
<b>7.3.2.5.17</b>	<i>Vegetation Management and Inspections:</i> Substation inspections
<b>7.3.2.5.18</b>	<i>Vegetation Management and Inspections:</i> Substation vegetation management
<b>7.3.2.5.20</b>	<i>Vegetation Management and Inspections:</i> Vegetation management to achieve clearances around electric lines and equipment
<b>7.3.2.6.4</b>	<i>Grid Operations and Protocols:</i> Protocols for PSPS re-energization
<b>7.3.2.6.6</b>	<i>Grid Operations and Protocols:</i> Stationed and on-call ignition prevention and suppression resources and services
<b>7.3.2.7.1</b>	<i>Data Governance:</i> Centralized repository for data
<b>7.3.2.9.4</b>	<i>Emergency Planning and Preparedness:</i> Disaster and emergency preparedness
<b>7.3.2.9.6</b>	<i>Emergency Planning and Preparedness:</i> Protocols in place to learn from wildfire events

The performance of the above targets and activities is assessed in the following sections of this report. Completion of initiatives and adherence to applicable protocols and procedures is summarized in Section 4, Conclusion.

## **3.1.1 SAMPLING METHODOLOGY AND DISCUSSION**

During our field visit to HWT's Suncrest Facility, our goal was to observe, assess, and quantify all quantifiable items referenced within the 2021 WMP. Items that are not field verifiable were verified through available public information and data requests.

Sampling percentages do not apply for this Facility as we observed the Facility in its entirety. Onsite information was captured during the onsite field visit, including an SME interview with facility personnel. The IE's field visit findings were captured in photos, and included in this report.

## **3.1.2 LARGE VOLUME QUANTIFIABLE GOAL/TARGET – FIELD VERIFIABLE**

### ***3.1.2.1 Review of Initiatives***

These activities are not present in the 2021 WMP activities. Therefore, this subject is not applicable to or covered in this report.

### ***3.1.2.2 Trends and Themes***

These activities are not present in the 2021 WMP activities. Therefore, this subject is not applicable to or covered in this report.

## **3.1.3 LARGE VOLUME QUANTIFIABLE GOAL/TARGET – NOT FIELD VERIFIABLE**

### ***3.1.3.1 Review of Initiatives***

These activities are not present in the 2021 WMP activities. Therefore, this subject is not applicable to or covered in this report.

### ***3.1.3.2 Trends and Themes***

These activities are not present in the 2021 WMP activities. Therefore, this subject is not applicable to or covered in this report.

## **3.1.4 SMALL (LESS THAN 100 TIMES) VOLUME QUANTIFIABLE GOAL/TARGET**

### ***3.1.4.1 Review of Initiatives***

The IE identified WMP activities listed in HWT's 2021 Wildfire Mitigation Plan classified as Small (Less than 100 times) Volume Quantifiable Goal/Target conducted in 2021. These 2021 WMP activities identified with the Small Volume list were assessed within this section and presented below by each initiative.

### IE Field Visit

The IE team performed a field visit on Friday, April 29, 2022, from 11 a.m. to 1 p.m. Field site visit attendees included:

- Alexandre Veilleux, NextEra Energy
- Luis Alarcon, C2 Group
- Omneya Salem, C2 Group
- Brandon Del Priore, C2 Group

C2 Group was greeted at the facility entrance gate by NextEra Energy's Alexandre Veilleux and led by vehicle down the [REDACTED] to HWT's Suncrest Facility. C2 Group parked within the Facility along the Northwest perimeter wall and participated in a general safety and fire briefing.

Mr. Veilleux and the IE team agreed to start the field audit inside the fenced Facility, then move outside the Facility, and lastly to the west of the site where the 230 kV transmission line connects to SDG&E's Suncrest Substation.

The following graphic represents the significant components assessed for compliance with the WMP.

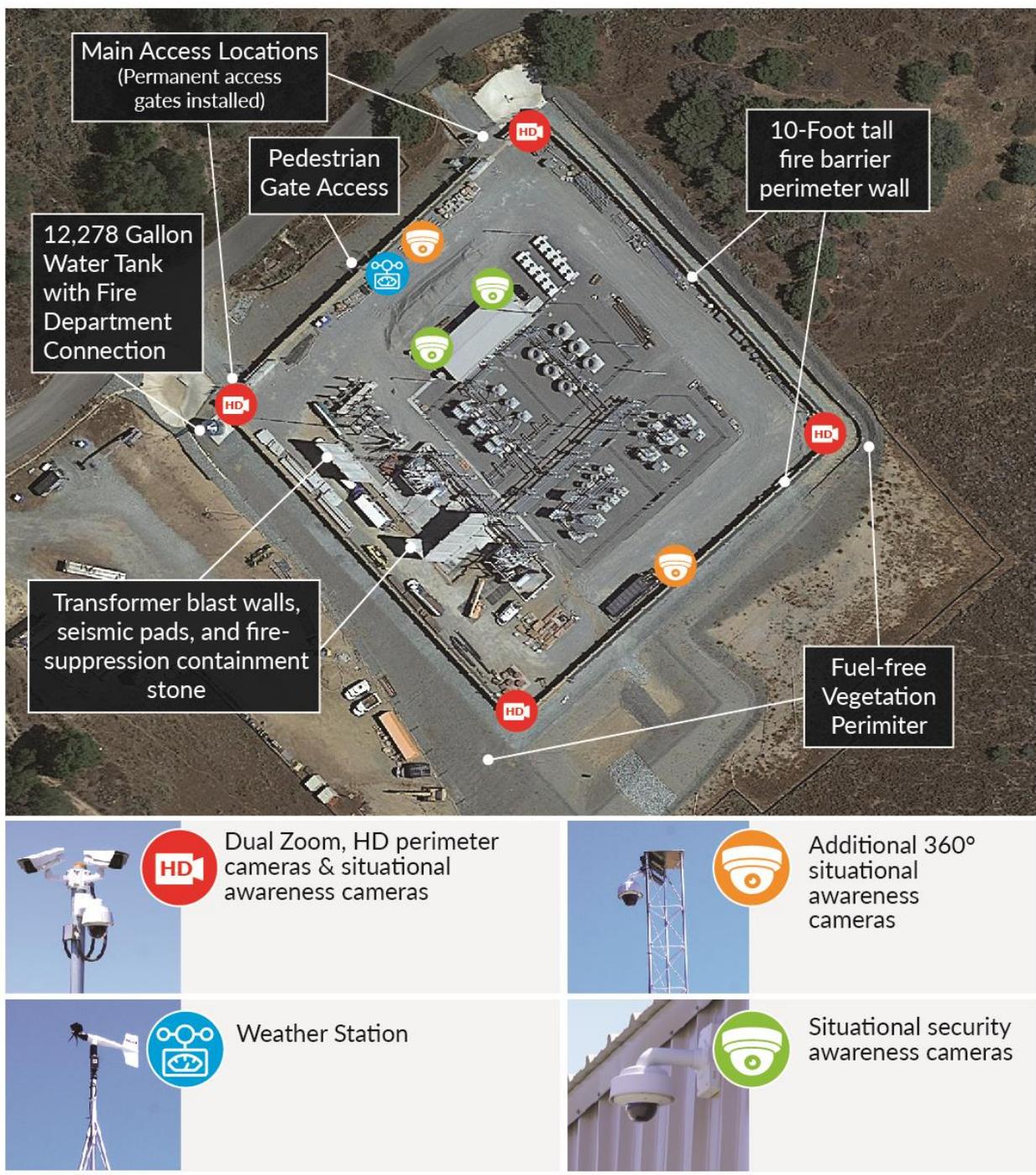


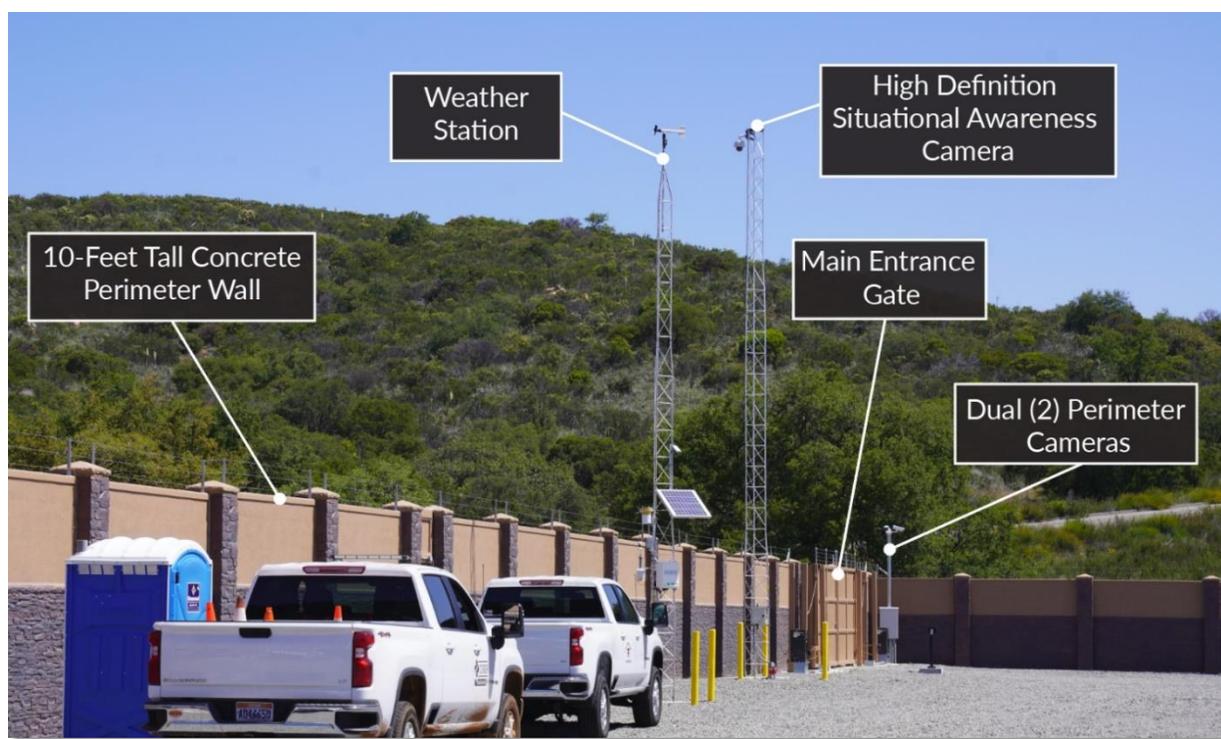
Figure 1: HWT Suncrest Facility Main Components Audited for Compliance

## Facility Audit, Inside Fence

Mr. Veilleux first led the IE team on a tour inside the fenced Suncrest Facility, pointing out specific wildfire mitigation attributes. The IE team confirmed the existence of wildfire mitigation assets reported as implemented in HWT's ARC for 2021.

At the existing HWT Suncrest Facility, within the perimeter walls:

- 1. Weather stations, perimeter high-definition cameras, 360-degree situational awareness cameras:** The weather station is integrated with SDG&E's network of weather stations across the service territory. Two high-definition zoomable cameras are installed at each corner of the Facility's perimeter wall and extend beyond the ten-foot wall height. Three additional 360-degree security awareness cameras exist within the Facility. Two additional situational awareness cameras were installed at a height similar to the weather station along the northerly and southerly perimeter walls.



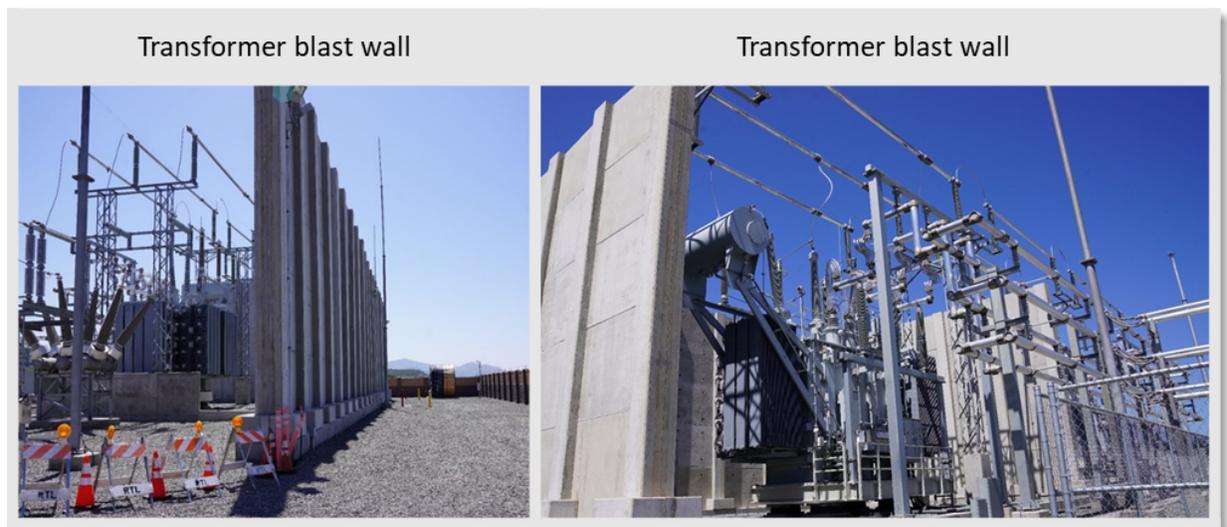
**Figure 2:** HWT Suncrest Facility Weather Stations and Cameras

- 2. Transformer seismic pads, transformer blast walls, and flame-suppressing stone in transformer containment pits:** The following wildfire mitigation measures are identified by HWT as primary goals to be substantially completed prior to the next annual WMP

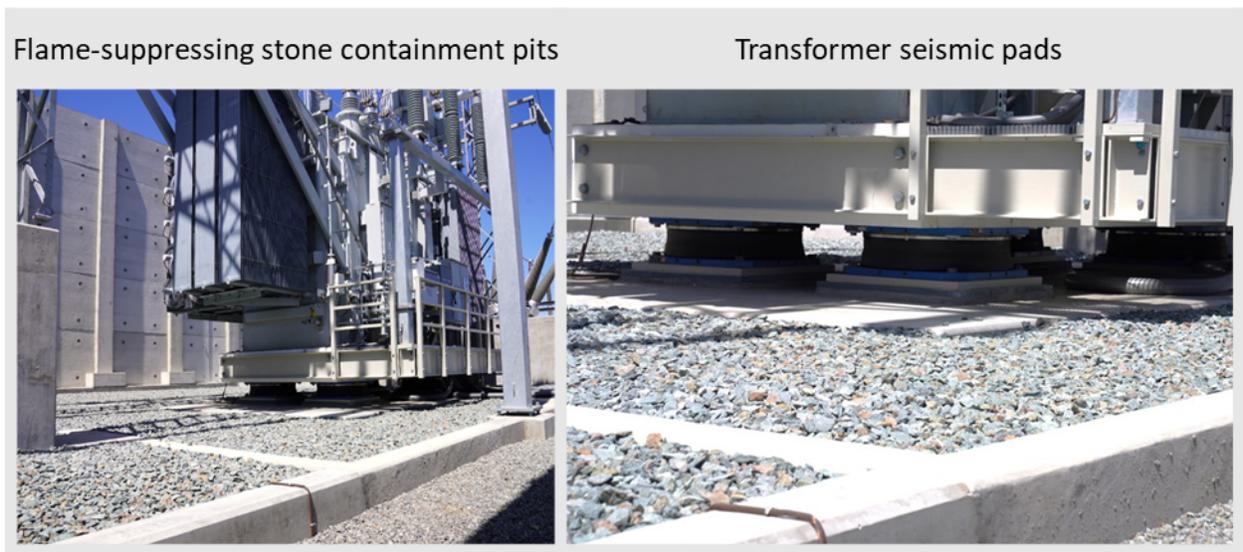
update in 2022 and detailed within Section 7.3 of the WMP. These include the following installed improvements observed during the IE's site visit;

- Transformer blast walls
- Transformer seismic pads
- Flame-suppressing stone in transformer containment pits

**Note:** The inside of the Facility is free of vegetation, with the surface composed of decomposed granite and crushed rock base.



**Figure 3:** HWT Suncrest Facility transformer blast walls

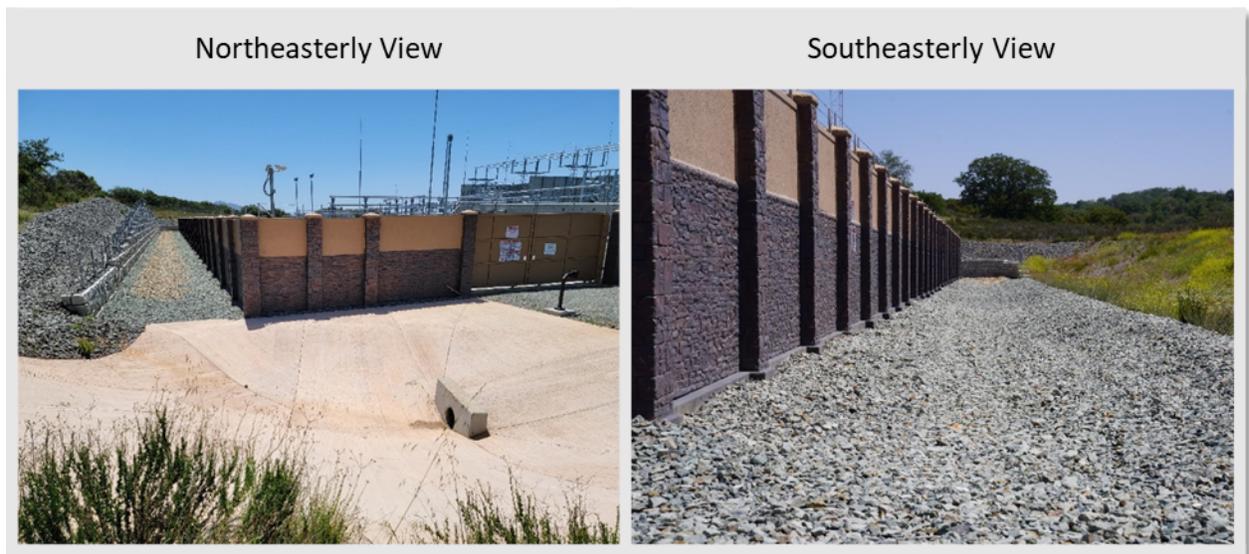


**Figure 4:** HWT Suncrest Facility Transformer seismic pads and flame-suppressing stone containment pits

## Facility Audit, Outside Fence

At the existing HWT Suncrest Facility, outside the perimeter walls:

1. **Ten-foot-tall concrete perimeter wall around the Facility:** The wall minimizes the risk of utility-caused ignition propagating outside the Suncrest Facility and igniting vegetation offsite.
2. **Fire break along the Facility's perimeter:** The 30-foot-wide crushed rock fire break adjacent to the perimeter wall further minimized the risk of utility-caused ignition propagating outside the Suncrest Facility and igniting vegetation offsite.



**Figure 5:** HWT Suncrest Facility Concrete Wall and 30-foot-wide crushed rock fire break

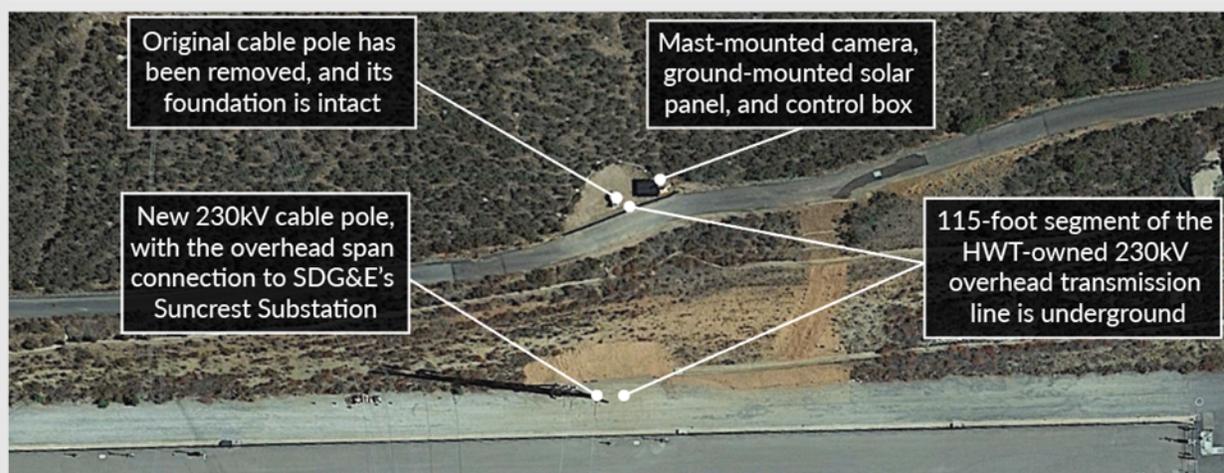
3. **Steel fire water storage tank:** The 12,278-gallon steel fire water storage tank includes fire department access, See Figure 6 below.



**Figure 6:** HWT Suncrest Facility Steel Fire Water Storage Tank

230 kV Transmission Line (Overhead/Undergrounding)

At the point of interconnection to SDG&E's Suncrest Substation, the 115-foot segment of the HWT-owned 230kV overhead transmission line is now underground. The original cable pole has been removed, and its foundation is intact, as well as the mast-mounted camera, ground-mounted solar panel, and control box. The new 230kV cable pole, with the overhead span connection to SDG&E's Suncrest Substation, was completed; see Figure 7 for an overview.



Mast-mounted camera, ground-mounted solar panel, and control box



New 230kV Cable Pole

Figure 7: 230 kV Transmission Line (Overhead/Underground) Visual Overview

7.3.2.2.5 – Personnel monitoring areas of electric lines and equipment in elevated fire risk conditions

Per the 2021 WMP HWT ARC Report, HWT monitors the Suncrest Facility 24/7. Monitoring is increased during high fire threat conditions around the Suncrest Facility. In addition to power flow monitoring through the Facility’s remote sensors and monitors, the site includes high-definition cameras and weather stations that provide site visibility to operators in [REDACTED].

7.3.2.3.12 – Grid Design and System Hardening, Other Corrective Action

HWT utilizes a third party to identify wildfire-related risks at the Suncrest Facility and recommend appropriate wildfire hardening measures. Completed wildfire hardening measures observed at the Facility include transformer seismic pads, transformer blast walls, and flame suppressing stone in transformer containment pits.

7.3.2.3.16 – Undergrounding of electric lines and/or equipment

HWT completed the scope to underground 115 feet of the overhead transmission line. The 230 kV transmission line is energized and connected to the Suncrest Substation via a new cable pole.

**3.1.4.2 Trends and Themes**

As observed during the field visit, HWT completed the wildfire mitigation scope as outlined in this section and described in the ARC report.

**Table 2: Small (Less than 100 Items) Volume Quantifiable Goal/Target Summary Table**

SOW Category	2021 Initiative Number	Initiative Name	Finding	Detail on finding
WMP Activity Completion	7.3.2.2.5	Personnel monitoring areas of electric lines and equipment in elevated fire risk conditions	Activity Completed	Compliant with the 2021 WMP
WMP Activity Completion	7.3.2.3.12	Grid Design and System Hardening, Other Corrective Action	Activity Completed	Compliant with the 2021 WMP
WMP Activity Completion	7.3.2.3.16	Undergrounding of electric lines and/or equipment	Activity Completed	Compliant with the 2021 WMP

**3.1.5 QUALITATIVE GOAL/TARGET**

**3.1.5.1 Review of Initiative**

The IE identified WMP activities listed in HWT’s 2021 Wildfire Mitigation Plan classified as Qualitative Goal/Target conducted in 2021. These 2021 WMP activities identified with the Qualitative Goal/Target list were assessed in this section and presented below in tables grouped by the associated initiative category. The IE findings are defined as follows:

- Activity Validated – Qualitative work on the initiative began and ended in 2021.
- Activity In Progress – Qualitative work on the initiative began in 2021 and continues into 2022.
- Activity Ongoing – Qualitative work on the initiative is incorporated into operations to be repeated annually.

**Table 3: Risk Assessment & Mapping Summary Table**

Initiative Name	Initiative Validation	Finding
7.3.2.1.5 – Match drop simulations showing the potential wildfire consequence of ignitions that occur along the electric lines and equipment	<ul style="list-style-type: none"> <li>• The third-party wildfire assessment of the Suncrest Facility and the Failure Modes and Effects Analysis (FMEA) assessment, provided by HWT in response to Data Request 001 in the documents “Horizon West – Suncrest SVC Wildfire Mitigation Assessment.pdf” and “CONFIDENTIAL - Horizon West – 2021 FMEAs.pdf.”</li> </ul>	Activity Validated

**Table 4: Situational Awareness & Forecasting Summary Table**

Initiative Name	Initiative Validation	Finding
7.3.2.2.1 – Advanced weather monitoring and weather stations	<ul style="list-style-type: none"> <li>• A screen shot of the Suncrest Facility weather station output, with a time and date stamp, and the link to where the weather station output can be viewed externally, <a href="https://weather.sdgeweather.com/station/HWT-SUN">https://weather.sdgeweather.com/station/HWT-SUN</a>, provided by HWT in response to Data Request 001 in the document</li> </ul>	Activity Ongoing

	“Horizon West – Weather Station 2021.pdf”.	
7.3.2.2.2 – Continuous monitoring sensors	<ul style="list-style-type: none"> <li>Datasheets, specifications, and photos of the underground cable monitoring system installed by HWT in response to Data Request 001 in the documents “Horizon West – Underground Cable Monitoring.pdf” and “Horizon West – Underground Monitoring Pictures.pdf.”</li> </ul>	Activity Ongoing
7.3.2.2.4 – Forecast of a fire risk index, fire potential index, or similar	<ul style="list-style-type: none"> <li>Description of the new fire risk index developed, the data sets used, the information it provides, and how it is being used to inform operational decisions, provided by HWT in response to Data Request 001 in the document “Horizon West – Wildfire Risk Index 2021.pdf.”</li> </ul>	Activity in Progress

**Table 5: Asset Management & Inspections Summary Table**

<b>Initiative Name</b>	<b>Initiative Validation</b>	<b>Finding</b>
7.3.2.4.2 – Detailed inspections of transmission electric lines and equipment	<ul style="list-style-type: none"> <li>A copy of the inspection procedure and monthly inspection reports, as well as extra inspections performed ahead of Red Flag Warning conditions, were provided by HWT in response to Data Request 001 in the documents “Horizon West – Wildfire Mitigation Condition Assessment Procedure.pdf” and “Horizon West – 2021 Monthly Inspection.pdf.”</li> </ul>	Activity Ongoing
7.3.2.4.14 – Quality assurance/quality control of inspections	<ul style="list-style-type: none"> <li>Per HWT’s response to Data Request 001 in the document “Horizon West – Data Request 001_C2 Group – Response 05.27.22,” monthly inspection reports are reviewed by the Operations Director. Starting in March 2021 for February 2021 inspections, the Operation Director’s signature and date of file review are provided on the monthly inspection forms provided by HWT in response to Data</li> </ul>	Activity Ongoing

	Request 001 in the document “Horizon West – 2021 Monthly Inspection.pdf.”	
7.3.2.4.15 – Substation inspections	<ul style="list-style-type: none"> <li>A copy of the inspection procedure and monthly inspection reports, as well as extra inspections performed ahead of Red Flag Warning conditions, were provided by HWT in response to Data Request 001 in the documents “Horizon West – Wildfire Mitigation Condition Assessment Procedure.pdf” and “Horizon West – 2021 Monthly Inspection.pdf.”</li> </ul>	Activity Ongoing

**Table 6: Vegetation Management and Inspection Summary Table**

<b>Initiative Name</b>	<b>Initiative Validation</b>	<b>Finding</b>
7.3.2.5.3 – Detailed inspections of vegetation around transmission electric lines and equipment	<ul style="list-style-type: none"> <li>A copy of the vegetation inspection procedure and monthly inspection reports and extra inspections performed ahead of Red Flag Warning conditions were provided by HWT in response to Data Request 001 in the documents “Horizon West – Wildlife_and_Vegetation_Procedure.pdf” and “Horizon West – 2021 Monthly Inspection.pdf.”</li> </ul>	Activity Ongoing
7.3.2.5.13 – Quality assurance/quality control of inspections	<ul style="list-style-type: none"> <li>Per HWT’s response to Data Request 001 in the document “Horizon West – Data Request 001_C2 Group – Response 05.27.22,” monthly vegetation inspection reports are reviewed by the Operations Director. Starting in March 2021 for February 2021 inspections, the Operation Director’s signature and date of file review are provided on the monthly inspection forms provided by HWT in response to Data Request 001 in the document “Horizon West – 2021 Monthly Inspection.pdf.”</li> </ul>	Activity Ongoing
7.3.2.5.17 – Substation inspections	<ul style="list-style-type: none"> <li>A copy of the vegetation inspection procedure, monthly inspection reports, and extra inspections performed ahead of Red Flag Warning conditions, provided by HWT</li> </ul>	Activity Ongoing

	in response to Data Request 001 in the documents “Horizon West – Wildlife_and_Vegetation_Procedure.pdf” and “Horizon West – 2021 Monthly Inspection.pdf.”	
7.3.2.5.18 – Substation vegetation management	<ul style="list-style-type: none"> <li>• A copy of the scope of work and pricing with a third party to implement the Suncrest Facility Restoration and Revegetation Plan provided by HWT in response to Data Request 001 in the document “Horizon West – SWCA – Vegetation Management and Restoration.pdf.”</li> </ul>	Activity Ongoing
7.3.2.5.20 – Vegetation management to achieve clearances around electric lines and equipment	<ul style="list-style-type: none"> <li>• A copy of the scope of work and pricing with a third party to implement the Suncrest Facility Restoration and Revegetation Plan provided by HWT in response to Data Request 001 in the document “Horizon West – SWCA – Vegetation Management and Restoration.pdf.”</li> </ul>	Activity Ongoing

**Table 7: Grid Operations & Operating Protocols Summary Table**

<b>Initiative Name</b>	<b>Initiative Validation</b>	<b>Finding</b>
7.3.2.6.4 – Protocols for PSPS re-energization	<ul style="list-style-type: none"> <li>• HWT’s protocols for PSPS re-energization are provided in response to Data Request 001 in the document “Horizon West – Emergency Operations Plan.pdf.”</li> </ul>	Activity Ongoing
7.3.2.6.6 – Stationed and on-call ignition prevention and suppression resources and services	<ul style="list-style-type: none"> <li>• HWT’s contract with a private fire brigade provided in response to Data Request 001 in the document “Horizon West – Capstone – Fire Brigade Retained Services – 2000331785.pdf.”</li> </ul>	Activity Ongoing

**Table 8: Data Governance Summary Table**

Initiative Name	Initiative Validation	Finding
7.3.2.7.1 – Centralized repository for data	<ul style="list-style-type: none"> <li>Per HWT’s 2021 WMP, HWT maintains a central repository of all wildfire-related data but does not use asset management platforms or solutions for the initiative.</li> </ul>	Activity Ongoing

**Table 9: Emergency Planning & Preparedness Summary Table**

Initiative Name	Initiative Validation	Finding
7.3.2.9.4 – Disaster and emergency preparedness	<ul style="list-style-type: none"> <li>Information for the 2021 annual wildfire simulation at the Suncrest Facility, the date of the event, the participants, and the scope of the simulation, provided by HWT in response to Data Request 001 in the document “Horizon West – Wildfire Simulation 2021.pdf.”</li> </ul>	Activity Ongoing
7.3.2.9.6 – Protocols in place to learn from wildfire events	<ul style="list-style-type: none"> <li>Per HWT’s response to Data Request 001 in the document “Horizon West – Data Request 001_C2 Group – Response 05.27.22” no After-Action Reviews were conducted in 2021.</li> </ul>	N/A

**3.1.5.2 Trends and Themes**

It is demonstrated through the data request responses that HWT consistently conducts equipment and vegetation inspections, continuously monitors the Suncrest Facility for situational awareness, and annually assesses and evaluates facility wildfire risk, looking for areas to further fire harden and proactively reduce wildfire risk.

**3.2 VERIFICATION OF FUNDING**

The IE requested clarification from HWT on the four WMP initiative categories that have shown funding to be less than 100 percent. The following are the 2021 WMP Expenditures by Category as reported in the 2022 WMP issued by HWT on May 6, 2022:

**Table 10: Summary of WMP Expenditures by Category\***  
(Spend in thousand \$)

<b>WMP Category</b>	<b>2021 Planned</b>	<b>2021 Actual</b>	<b>2021 Variance</b>
<b>Risk and Mapping</b>	\$0	\$0	\$0
<b>Situational Awareness</b>	\$3,070	\$973	\$(2,097)
<b>Grid Design and System Hardening</b>	\$6,300	\$19,486	\$13,186
<b>Asset Management and Inspections</b>	\$100	\$43	\$(57)
<b>Vegetation Management</b>	\$35	\$0	\$(35)
<b>Grid Operations</b>	\$70	\$34	\$(36)
<b>Data Governance</b>	\$0	\$0	\$0
<b>Resource Allocation</b>	\$0	\$0	\$0
<b>Emergency Planning</b>	\$0	\$0	\$0
<b>Stakeholder Cooperation and Community Engagement</b>	\$0	\$0	\$0
<b>Total</b>	<b>\$9,575</b>	<b>\$20,536</b>	<b>\$10,961</b>

\*All data is shown in Table 3.1.2: Summary of WMP Expenditures by Category (Spend in thousand \$), page 25, in the 2022 WMP.

**Table 11: 2021 WMP Funding Verification Summary\***  
*(Dollars Shown in Thousands)*

<b>Initiative Category</b>	<b>2021 Initiative Number</b>	<b>Initiative Name</b>	<b>2021 WMP Page Number</b>	<b>Funding Discrepancy Amount</b>	<b>Detail on Funding Discrepancy</b>
Situational Awareness	N/A	N/A	N/A	<p>\$2,097 was reported as an underspend.</p> <p>However, the IE noted a discrepancy between the sum of 7.3.2.2. and 7.3.2.4. which adds up to \$2,157, and the total underspend that is shown above.</p>	<p>HWT developed a proprietary wildfire risk index in 2020 and 2021. The ultimate spend for the initiative came in lower than initially anticipated and was included in the 2021 WMP update.</p> <p>The IE noted a discrepancy between the total underspend of \$2,157 shown in the WMP Quarterly Report - Table 12, Dated April 15, 2022, and the total underspend of \$2,097 shown in the ARC Report, Dated March 2022.</p>
Asset Management and Inspections	N/A	N/A	N/A	\$57 was reported as an underspend.	HWT’s expenditure for Asset Management and Inspections was captured as part of the 2021 Approved Wildfire Hardening work under the Grid Design and System Hardening Initiative Category.
Vegetation Management	N/A	N/A	N/A	\$35 was reported as an underspend.	HWT’s expenditure for Vegetation Management was captured as part of the

					2021 Approved Wildfire Hardening work under the Grid Design and System Hardening Initiative Category.
Grid Operations	N/A	N/A	N/A	\$36 was reported as an underspend.	HWT’s expenditure was misreported due to clerical error. The actual spend amount of \$70k matches the 2021 Planned amount, resulting in a \$0 variance between Planned and Actual costs.

\*See Appendix D - 2021 WMP Funding Verification Summary (Spend in thousand \$) for detailed information and Actuals for CAPEX and OPEX reported by HWT in the WMP Quarterly Report - Table 12, Dated April 15, 2022.

**3.3 VERIFICATION OF QA/QC PROGRAMS**

As stated in the 2021 WMP, HWT’s Director of Operations “works with HWT’s field operations personnel to review monthly inspection results and identify gaps or issues that need to be addressed to mitigate problems and reduce risk of utility-causing ignitions.” To verify the QA/QC programs, the IE reviewed data request responses pertaining to electrical equipment and vegetation management inspections. The IE team verified the QA/QC oversight of the Suncrest Facility. The Director of Operations signed the monthly equipment and vegetation management reports and dated them with the list of meeting attendees.

## 4. CONCLUSION

Per the IE Findings in Table 12, HWT has completed and has ongoing operations for the WMP programs outlined in the HWT-approved 2021 WMP. Activities and initiatives and their findings are detailed below.

**Table 12:** IE Findings Summary

<b>SOW Category</b>	<b>2021 Initiative Number</b>	<b>Initiative Name</b>	<b>Finding</b>	<b>Detail on finding</b>
WMP Activity Completion	7.3.2.1.5	Match drop simulations showing the potential wildfire consequence of ignitions that occur along the electric lines and equipment	Activity Completed	Compliant with 2021 WMP
WMP Activity Completion	7.3.2.2.1	Advanced weather monitoring and weather stations	Activity Completed	Compliant with 2021 WMP
WMP Activity Completion	7.3.2.2.2	Continuous monitoring sensors	Activity Completed	Compliant with 2021 WMP
WMP Activity Completion	7.3.2.2.4	Forecast of a fire risk index, fire potential index, or similar	Activity Completed	Compliant with 2021 WMP
WMP Activity Completion	7.3.2.2.5	Personnel monitoring areas of electric lines and equipment in elevated fire risk conditions	Activity Completed	Compliant with 2021 WMP
WMP Activity Completion	7.3.2.3.12	Other corrective action	Activity Completed	Compliant with 2021 WMP
WMP Activity Completion	7.3.2.3.16	Undergrounding of electric lines and/or equipment	Activity Completed	Compliant with 2021 WMP
WMP Activity Completion	7.3.2.4.2	Detailed inspections of transmission electric lines and equipment	Activity Completed	Compliant with 2021 WMP
WMP Activity Completion	7.3.2.4.14	Quality assurance/quality control of inspections	Activity Completed	Compliant with 2021 WMP
WMP	7.3.2.4.15	Substation inspections	Activity	Compliant with

## FINAL INDEPENDENT EVALUATOR ANNUAL REPORT ON COMPLIANCE

Activity Completion			Completed	2021 WMP
WMP Activity Completion	7.3.2.5.3	Detailed inspections of vegetation around transmission electric lines and equipment	Activity Completed	Compliant with 2021 WMP
WMP Activity Completion	7.3.2.5.13	Quality assurance/quality control of inspections	Activity Completed	Compliant with 2021 WMP
WMP Activity Completion	7.3.2.5.17	Substation inspections	Activity Completed	Compliant with 2021 WMP
WMP Activity Completion	7.3.2.5.18	Substation vegetation management	Activity Completed	Compliant with 2021 WMP
WMP Activity Completion	7.3.2.5.20	Vegetation management to achieve clearances around electric lines and equipment	Activity Completed	Compliant with 2021 WMP
WMP Activity Completion	7.3.2.6.4	Protocols for PSPS re-energization	Activity Completed	Compliant with 2021 WMP
WMP Activity Completion	7.3.2.6.6	Stationed and on-call ignition prevention and suppression resources and services	Activity Completed	Compliant with 2021 WMP
WMP Activity Completion	7.3.2.7.1	Centralized repository for data	Activity Completed	Compliant with 2021 WMP
WMP Activity Completion	7.3.2.9.4	Disaster and emergency preparedness	Activity Completed	Compliant with 2021 WMP
WMP Activity Completion	7.3.2.9.6	Protocols in place to learn from wildfire events	Activity Completed	Compliant with 2021 WMP
Verification of QA/QC Programs	N/A	QA/QC of electrical equipment inspections and vegetation management inspections	Activity Completed	Compliant with 2021 WMP
Verification of Funding	N/A	Situational Awareness	Expense Underspend: Variance Amount is	HWT did not record \$2.09M out of the total amount of \$3.07M initially

			\$2.09M	planned for this initiative category.
Verification of Funding	N/A	Asset Management and Inspections	Expense Underspend: Variance Amount is \$57K	HWT did not record \$57K out of the total amount of \$100K initially planned for this initiative category.  See Appendix D - 2021 WMP Funding Verification Summary (Spend in thousand \$) for more details.
Verification of Funding	N/A	Vegetation Management	Expense Underspend: Variance Amount is \$35K	HWT did not record any allocation of costs for the total amount of \$35K initially planned for this initiative category.  The expenditure for Vegetation Management was captured as part of the 2021 Approved Wildfire Hardening work under the Grid Design and System Hardening Initiative Category.
Verification of Funding	N/A	Grid Operations	Expense Underspend: Variance Amount is \$36K	HWT did not record \$36K out of the total amount of \$70K initially planned for this initiative category.

# APPENDIX



## **5. APPENDICES**

### **APPENDICES**

<b>APPENDIX A – LIST OF SUPPLEMENTAL DOCUMENTS REVIEWED .....</b>	<b>34</b>
<b>APPENDIX B – LIST OF 2021 WMP ACTIVITIES .....</b>	<b>35</b>
<b>APPENDIX C – DATA REQUESTS .....</b>	<b>36</b>
<b>APPENDIX D – 2021 WMP FUNDING VERIFICATION SUMMARY .....</b>	<b>38</b>

**APPENDIX A – LIST OF SUPPLEMENTAL DOCUMENTS REVIEWED**



**Appendix A List of Supplemental Documents Reviewed**

Item No.	Documents Reviewed	Document Date
1	California Public Advocate's Office Second Request to Horizon West	12-Jan-21
2	Horizon West Response - California Public Advocate's Office Second Request	26-Jan-21
3	Wildfire Safety Division Action Statement Approving Horizon West Change Order	8-Feb-21
4	Horizon West 2020 Wildfire Mitigation Quarterly Report	5-Mar-21
5	Horizon West 2021 Wildfire Mitigation Plan - R1810007	5-Mar-21
6	Horizon West Q1 2021 Quarterly Initiative Update	1-May-21
7	Horizon West Q1 2021 Quarterly Data Report	28-Apr-21
8	Wildfire Safety Division 2021 WMP Data Request	27-Apr-21
9	Horizon West Response - Wildfire Safety Division 2021 WMP Data Request	29-Apr-21
10	WSD Draft Action Statement on Horizon West Transmission's 2021 Wildfire Mitigation Plan Update	Jun-21
11	Horizon West Q2 2021 Quarterly Initiative Update	2-Aug-21
12	Horizon West Q2 2021 Quarterly Data Report	2-Aug-21
13	2021 Annual Report on Compliance	31-Mar-21

1 of 1

APPENDIX B – LIST OF 2021 WMP ACTIVITIES



Appendix B List of 2021 WMP Activities

SOW Category	2021 WMP Activities	WMP Table # / Category	2021 Initiative No.	Initiative Activity
WMP Activity Completion	4. Qualitative Goal	Risk Assessment and Mapping	7.3.2.1.5	Match drop simulations showing the potential wildfire consequence of ignitions that occur along the electric lines and equipment
WMP Activity Completion	4. Qualitative Goal	Situation Awareness and Forecasting	7.3.2.2.1	Advanced weather monitoring and weather stations
WMP Activity Completion	4. Qualitative Goal	Situation Awareness and Forecasting	7.3.2.2.2	Continuous monitoring sensors
WMP Activity Completion	4. Qualitative Goal	Situation Awareness and Forecasting	7.3.2.2.4	Forecast of a fire risk index, fire potential index, or similar
WMP Activity Completion	3. Small Volume/Quantifiable	Situation Awareness and Forecasting	7.3.2.2.5	Personnel monitoring areas of electric lines and equipment in elevated fire risk conditions
WMP Activity Completion	3. Small Volume/Quantifiable	Grid Design and System Hardening	7.3.2.3.12	Other corrective action
WMP Activity Completion	3. Small Volume/Quantifiable	Grid Design and System Hardening	7.3.2.3.16	Undergrounding of electric lines and/or equipment
WMP Activity Completion	4. Qualitative Goal	Asset Management and Inspections	7.3.2.4.14	Quality assurance/quality control of inspections
WMP Activity Completion	4. Qualitative Goal	Asset Management and Inspections	7.3.2.4.15	Substation inspections
WMP Activity Completion	4. Qualitative Goal	Asset Management and Inspections	7.3.2.4.2	Detailed inspections of transmission electric lines and equipment
WMP Activity Completion	4. Qualitative Goal	Vegetation Management & Inspections	7.3.2.5.13	Quality assurance/quality control of inspections
WMP Activity Completion	4. Qualitative Goal	Vegetation Management & Inspections	7.3.2.5.17	Substation inspections
WMP Activity Completion	4. Qualitative Goal	Vegetation Management & Inspections	7.3.2.5.18	Substation vegetation management
WMP Activity Completion	4. Qualitative Goal	Vegetation Management & Inspections	7.3.2.5.20	Vegetation management to achieve clearances around electric lines and equipment
WMP Activity Completion	4. Qualitative Goal	Vegetation Management & Inspections	7.3.2.5.3	Detailed inspections of vegetation around transmission electric lines and equipment
WMP Activity Completion	4. Qualitative Goal	Grid Operations and Protocols	7.3.2.6.4	Protocols for PSPS re-energization
WMP Activity Completion	4. Qualitative Goal	Grid Operations and Protocols	7.3.2.6.6	Stationed and on-call ignition prevention and suppression resources and services
WMP Activity Completion	4. Qualitative Goal	Data Governance	7.3.2.7.1	Centralized repository for data
WMP Activity Completion	4. Qualitative Goal	Emergency Planning and Preparedness	7.3.2.9.4	Disaster and emergency preparedness
WMP Activity Completion	4. Qualitative Goal	Emergency Planning and Preparedness	7.3.2.9.6	Protocols in place to learn from wildfire events
WMP Activity Completion	1. Large Volume/Field Verifiable	N/A	N/A	N/A
WMP Activity Completion	2. Large Volume Quantifiable Goal/Target - Not Field Verifiable	N/A	N/A	N/A
Verification of QA/QC Programs	QA/QC Programs	QA/QC of WMP Activities		Director of Operations Review of Monthly Inspections

APPENDIX C – DATA REQUESTS



Appendix C Data Requests

**Data Request Number: 001**  
 Name: Molly Amendt  
 Title: Program Manager  
 Company: C2 Group  
 Phone

**Data Request Date: 5/24/22**  
 Email: mollya@c2group.us  
 Phone #: 805-215-8207  
 Preferred Point of Contact: Email or

Section	2021 Initiative No.	Initiative	Actual	Method	Data Request
Risk Assessment and Mapping	7.3.2.1.5	Match drop simulations showing the potential wildfire consequence of ignitions that occur along the electric lines and equipment	N/A	Document	1. Please provide the third-party wildfire assessment that identified key wildfire-related risks, simulated a propagation of wildfire in the area of the Suncrest facility in case of an ignition during extreme weather events, and identified relevant wildfire hardening measures.
Situational Awareness and Forecasting	7.3.2.2.1	Advanced weather monitoring and weather stations	N/A	Document	1. Please provide a screen shot of a weather station output, with a time and date stamp.
Situational Awareness and Forecasting	7.3.2.2.2	Continuous monitoring sensors	N/A	Document	1. Please provide a data sheet/specification of the underground cable monitoring installed, as well of a photo of the installed system.
Situational Awareness and Forecasting	7.3.2.2.4	Forecast of a fire risk index, fire potential index, or similar	N/A	Document	1. Please provide a detailed description of the new fire risk index developed; what data sets it used, the information it provides, and how it is being used to inform operational decisions.
Asset Management and Inspections	7.3.2.4.14	Quality assurance / quality control of inspections	N/A	Document	1. Please provide evidence of the monthly Director of Operations review of results of monthly inspections.
Asset Management and Inspections	7.3.2.4.15	Substation inspections	N/A	Document	1. Please provide all 2021 monthly inspection reports and all reports from extra inspections performed ahead of Red Flag Warning conditions for the Suncrest Facility.
Vegetation management and inspections	7.3.2.4.15	Substation inspections	N/A	Document	1. Please provide all 2021 monthly vegetation inspection reports and reports from extra inspections performed ahead of Red Flag Warning conditions for the Suncrest Facility.
Asset Management and Inspections	7.3.2.4.2	Detailed inspections of transmission electric lines and equipment	N/A	Document	1. Please provide a copy of the "Wildfire Mitigation Condition Assessment Procedure" document. 2. Please provide the 2021 monthly inspection reports and all reports from extra inspections performed ahead of Red Flag Warning conditions for the transmission line.
Vegetation management and inspections	7.3.2.5.13	Quality assurance / quality control of inspections	N/A	Document	1. Please provide evidence of the monthly Director of Operations review of results of monthly vegetation inspections for the transmission line.
Vegetation management and inspections	7.3.2.5.18	Substation vegetation management	N/A	Document	1. Please provide a copy of the contract with the third party engaged to perform vegetation management inside the Suncrest Facility.

Vegetation management and inspections	7.3.2.5.20	Vegetation management to achieve clearances around electric lines and equipment	N/A	Document	1. Please provide a copy of the contract with the third party engaged to perform vegetation management and remove any vegetation that could come in contact with electric equipment.
Vegetation management and inspections	7.3.2.5.3	Detailed inspections of vegetation around transmission electric lines and equipment	N/A	Document	1. Please provide all 2021 monthly vegetation inspection reports and all reports from extra inspections performed ahead of Red Flag Warning conditions for the transmission line. 2. Please provide a copy of the "Wildlife and Vegetation Procedure" document.
Grid Operations and Operating Protocols	7.3.2.6.4	Protocols for PSPS re-energization	N/A	Document	1. Please provide a copy of the "Emergency Operations Plan" document.
Grid Operations and Operating Protocols	7.3.2.6.6	Stationed and on-call ignition prevention and suppression resources and services	N/A	Document	1. Please provide a copy of the contract with the private fire brigade.
Emergency Planning and Preparedness	7.3.2.9.4	Disaster and emergency preparedness plan	N/A	Document	1. Please provide information regarding the 2021 annual wildfire simulation at the Suncrest Facility; the date of the event, the participants, and scope of the simulation.
Emergency Planning and Preparedness	7.3.2.9.6	Protocols in place to learn from wildfire events	N/A	Document	1. Please provide copies of any 2021 "After Action Reports."
Risk Assessment and Mapping	All	N/A	N/A	Document	1. Please provide a copy of the 2021 version of the Failure Modes and Effects Analysis (FMEA) assessment.
All WMP Sections	All	QA/QC	N/A	Document	1. Please provide a complete list of existing QA and QC programs with detailed descriptions, and assignment of the QA and QC programs with WMP initiatives.
All WMP Sections	All	Funding Verification	N/A	Document	1. Please provide justification for the four WMP categories that were underspent in 2021.

APPENDIX D – 2021 WMP FUNDING VERIFICATION SUMMARY



Appendix D - 2021 WMP Funding Verification Summary (Spend in thousand \$)

From ARC Report Dated March 2022					From WMP Quarterly Report - Table 12, Dated April 15, 2022							IE Funding Verification Summary	
#	WMP Category	2021 Total Planned	2021 Total Actual	Difference	WMP Initiative #	Initiative Activity	Actual CAPEX	Actual OPEX	Total Actual	Difference from 2021 WMP Total Planned	HWT Comments	Funding Discrepancy Amount	Detail on Funding Discrepancy
1	Risk Assessment & Mapping				7.3.1.5.	Match drop simulations showing the potential wildfire consequence of ignitions that occur along the electric lines and equipment	N/A	N/A	N/A		HWT has conducted a third-party wildfire mitigation assessment that includes evaluation of the Suncrest facility and surrounding terrain, vegetative fuels, regional weather patterns, and regional fire history to perform fire behavior modeling around the Suncrest facility.		
1	<b>Risk Assessment &amp; Mapping (Summary)</b>	N/A	N/A	N/A			N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	Situational Awareness & Forecasting				7.3.2.1.	Advanced weather monitoring and weather stations	\$ -	\$ -	\$ -		HWT has installed a weather station at the Suncrest facility in compliance with its CPUC- Approved 2020 WMP		
2	Situational Awareness & Forecasting				7.3.2.2.	Continuous monitoring sensors	\$ 5	\$ 37	\$ 5	37	HWT has installed transformer oil gas monitors and a camera to monitor its overhead transmission line at the Suncrest facility located in Tier 3 Extreme wildfire area in compliance with its CPUC-approved 2020 WMP. HWT will also install cable monitors for its underground transmission line to monitor cable temperature and partial discharge and minimize risk of undetected equipment failure.		
2	Situational Awareness & Forecasting				7.3.2.4.	Forecast of a fire risk index, fire potential index, or similar	\$ 8	\$ 53	\$ 8	53	HWT is starting development of a fire potential index to proactively understand fire risk given weather conditions and take relevant risk mitigation actions (e.g., equipment inspection, increased monitoring, etc.)		
2	<b>Situational Awareness &amp; Forecasting (Summary)</b>	\$ 3,070	\$ 973	\$(2,097)			\$ 3	\$ 91	\$ 3	91	\$(2,157)	\$ 2,097 was reported as an underspend. However, the IE noted a discrepancy between the sum of 7.3.2.2. and 7.3.2.4. which adds up to \$2,157, and the total underspend that is shown above.	Per HWT's response to Data Request 001 in the document "Horizon West – Data Request 001_C2 Group – Response 05.27.22": HWT developed a proprietary wildfire risk index for 2020 and 2021. The ultimate spend for the initiative came in lower than originally anticipated and was included in the 2021 WMP update. The IE noted a discrepancy between the total underspend of \$2,157 shown in the WMP Quarterly Report - Table 12, Dated April 15, 2022, and the total underspend of \$2,097 shown in the ARC Report Dated, March 2022.
3	Grid Design & System Hardening				7.3.3.12.	Other corrective action	\$ 5	\$ 15,77	\$ 5	15,77	HWT is implementing a number of wildfire hardening measures to reduce wildfire risk at its Suncrest Facility in compliance with its CPUC-approved 2020 WMP. In addition to the wildfire hardening measures outlined in the Grid Design & System Hardening category, HWT is implementing the following initiatives: 1) Installation of concrete 10 ft tall perimeter wall around the Suncrest facility, 2) installation of seismic pads under the transformers, 3) installation of transformer blast walls and 4) installation of flame- suppressing containment stone under the transformers		
3	Grid Design & System Hardening				7.3.3.16.	Undergrounding of electric lines and/or equipment	\$ 1	\$ 3,71	\$ 1	3,71	HWT is working to underground a span of overhead transmission line at the Suncrest facility in Tier 3 wildfire zone in compliance with its CPUC-Approved 2020 WMP		
3	<b>Grid Design and System Hardening (Summary)</b>	\$ 6,300	\$ 19,486	\$ 13,186			\$ 6	\$ 19,48	\$ 6	19,48	\$ 13,18	\$ 13,186 was reported as an overspend. See WMP Initiative # 7.3.3.12. for a detailed explanation of the overspending on Grid Design and System Hardening.	
4	Asset Management and Inspections				7.3.4.2.	Detailed inspections of transmission electric lines and equipment	\$ -	\$ 43	\$ 3	4	HWT conducts monthly detailed inspections of transmission line and equipment at its Suncrest facility in compliance with its CPUC-approved 2020 WMP		



9	Emergency Planning & Preparedness				7.3.9.6.	Protocols in place to learn from wildfire events	N/A	N/A	N/A	HWT conducts detailed After Action Reviews after wildfire events in the proximity of HWT's Suncrest Facility to learn from the events and improve HWT's protocols and procedures going forward	N/A	N/A
9	Emergency Planning & Preparedness (Summary)	N/A	N/A	N/A			N/A	N/A	N/A	N/A	N/A	N/A
10	Stakeholder Cooperation & Community Engagement (Summary)	N/A	N/A	N/A			N/A	N/A	N/A	N/A	N/A	N/A
	<b>Total</b>	\$ 5	\$ 9,576	\$ 20,536								

