

Final Independent Evaluator Annual Report
on Compliance

Bureau Veritas North America, Inc.
Horizon West Transmission, LLC



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**Bureau Veritas North America, Inc.
C2 Group**

June 29, 2021

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Disclaimer

This report is compiled through observation and review of documents provided by the electric service provider named herein. The California Public Utilities Commission ("CPUC") Wildfire Safety Division ("WSD") instituted the requirement for an independent evaluation of electric utility providers Wildfire Mitigation Practices ("WMP"). Bureau Veritas is not the designer, implementer, or owner of the WMP and is not responsible for its content, implementation, and any liabilities, obligations, or responsibilities arising therein.

The report reflects only those conditions and practices that could be ascertained through observation at the evaluation time. Therefore, this report is limited to those items specifically identified herein. The information is not intended to validate that dangers, hazards, and 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.

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

1 Executive Summary

Background

Per PU Section §8386.3(c)(2)(B)(i), Bureau Veritas North America, Inc. (BVNA) has been selected as an Independent Evaluator (IE) to review and assess Horizon West Transmission, LLC's (HWT) 2020 Wildfire Mitigation Plan. In carrying out the stipulations of Resolution WSD-012 and the April 6th Guidance Document, BVNA has evaluated HWT's compliance with its 2020 WMP, validated HWT's quality assurance and quality control (QA/QC) programs outlined for support of WMP initiatives, and reviewed its WMP funding activities.

Scope

Under the WSD's Final IE Scope of Work (SOW) for the Review of Compliance with 2020 WMP issued on April 21, 2021, Bureau Veritas North America, Inc., in partnership with C2 Group, have reviewed HWT's 2020 WMP and supplemental documents (see Appendix A) for verification of compliance, validation of quality assurance (QA)/quality control (QC) programs and assessment of the utility funding activities related to WMP.

Horizon West Transmission (HWT)

As described within HWT's Annual Report on Compliance (ARC) for 2020 dated March 2021, Horizon West Transmission is a new, transmission-only utility with no distribution customers. HWT is the owner and operator of the Suncrest Dynamic Reactive Power Support Facility (Suncrest Facility) 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 lines were installed underground per the Suncrest Facility's planned design. Only an approximately 115-foot segment of the HWT-owned 230 kV transmission line was installed overhead. That 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, 115 feet of overhead span, and approximately 185 feet of overhead line that connects to the SDG&E owned Suncrest Substation.

The Suncrest SVC Facility is located in an area designated as Tier 3 Extreme Fire-Threat District (HFTD) in San Diego County. HWT is actively managing construction where the SOW is the undergrounding of their overhead transmission line. HWT noted that the Facility is de-energized until October 2021 to allow for the completion of HWT's facility and transmission line improvements.

Key Findings

As described in further detail within Section 3, IE compliance review has found that the 2020 WMP and data found in supplemental documents (see Appendix A), along with confirmation of verifiable field goals, HWT is substantially in compliance with the 2020 WMP:

1. 2020 WMP activities are considerably completed, except the undergrounding of the 115 feet segment of the HWT owned 230 kV transmission line currently under construction. The delay of this outlined fire hardening, and risk mitigation measure was approved via submitted Change Order by HWT and approved by the WSD Action Statement dated February 8, 2021.
2. WMP Activities were 100 percent funded and were overspent as verified with HWT ARC for 2020 dated March 2021 and confirmed with reported actuals from the HWT Q1 2021 Quarterly Data Report dated April 28, 2021.
3. Through the Subject Matter Expert (SME) interview with HWT's Senior Director of Operations, Jennifer Chaney, and 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 2020 WMP.

2 Introduction

A review of all documents supporting the implementation of the 2020 WMP strategic initiatives has been conducted. BVNA has provided the following IE evaluation report (Report) describing the technical review and findings. HWT is a new, transmission-only utility and did not have any facilities operating in 2019. 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's construction began in 2019 and consisted of the SVC substation, 230 kV underground transmission line, 115 feet of overhead span, and approximately 185 feet of overhead line that connects to the SDG&E owned Suncrest Substation.

Primary access is from the Bell Bluff Truck Trail. The Project site lies within a portion of the northwest quarter of Section 3 of Township 16 South, Range 3 East, on the US 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 wildland-urban interface (WUI) locations.

The Facility is located on privately owned lands within the administrative boundary of the United States Forest Service-Cleveland National Forest. HWT's surrounding area consists of semi-rural residential developed lands and open space in private and federal land holdings. 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, private ownerships occur to the east and south of the Project site.

HWT is actively managing construction where the SOW is the undergrounding of their overhead transmission line. HWT noted that the Facility is de-energized until October 2021 to allow for the completion of HWT's facility and transmission line improvements.

After filing the 2019 WMP, HWT participated in the CPUC's efforts to develop metrics in Docket No. R.18-10-007. This 2020 WMP has adopted the applicable standard metrics set by the CPUC. HWT's fire prevention performance metrics are focused on reducing the potential for onsite ignitions that may spread to off-site vegetation. This philosophy of fire prevention has proven to be successful to date. The established performance metrics outlined in the 2020 WMP demonstrate an approach of preventing an ignition event by identifying, documenting, tracking, and monitoring possible ignition sources that create the highest risk for flame, sparks, arcs, and uncontrolled loss 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 does include:

- Approach and methodology in evaluating the Plan's comprehensiveness
- HWT's Plan elements and their fulfillment of initiatives and metrics which are included in the Quality Assessment and Quality Control provisions outlined within 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 of 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. **and include the 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 that lie 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** including communications and mustering plans under varying degrees of wildfire risk. Plans to deactivate automatic reclosers, de-energizing "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. In addition, programs such as online feeds and websites such as the National Fire Danger Rating System are utilized. Situational awareness should help achieve a shared understanding of actual conditions and improve collaborative planning and decision-making.
6. **De-Energization actions** triggered and prioritized by forecasted extreme fire weather conditions: imminent extreme fire weather conditions; validated extreme fire weather conditions; and plans for re-energization when weather subsides to safe levels. Manual or automatic capabilities exist for implementation.
7. **Advanced Technologies** include Distribution Fault Anticipation technology, tree growth regulators, pulse control fault interrupters, oblique and hyperspectral imagery, advanced transformer fluids, advanced LiDAR, and advanced Supervisory Control and Data Acquisition (SCADA) to reduce electrical ignition while also helping to mitigate power outages and equipment damage.
8. **Emergency Preparedness, Outreach, and Response communications** before, during, and after emergencies, including but not limited to engaging with key stakeholders that include critical facilities and served customers, local governments, necessary agencies such as the California Department of Forestry and Fire Protection (CAL FIRE), local law enforcement agencies and other first responders, hospitals, local emergency planning committees, other utility providers, California Independent System Operators, and the utility's respective board. Coordination agreements such as Mutual Aid or Mutual Assistance should be leveraged. A community outreach plan should inform and engage first responders, local leaders, land managers, business owners, and others.

3 Independent Evaluator Review of Compliance

With an accelerated timeframe for the evaluation of HWT's compliance with the 2020 WMP, the overall approach to verify compliance included the review and assessment of the multiple WMP activities through data requests, SME interviews, review of publicly available documents, and conducting an onsite facility assessment that documented and validated those items outlined in HWT's 2020 WMP.

At the commencement of the evaluation, the IE initiated the assessment through a review of HWT's 2020 WMP and all publicly available documents as listed in Appendix A to identify HWT's stated 2020 WMP goals. For 2020 WMP activities described in the WMP, but not provided within the publicly available records, the IE submitted data requests and conducted SME interviews to verify activities stated within the 2020 WMP (See Appendix D for Data Requests Submitted and Responses). Along with the document analysis, data requests, and SME interviews, the IE conducted a site visit to the single HWT facility known as the Suncrest Facility to collect images and evaluate compliance with the 2020 WMP activities or initiatives identified during the IE initial review. The analysis and critical 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 2020 WMP with specific quantifiable or qualitative performance goals/targets included the following items:

Table 1 – 2020 WMP Initiatives

Large Volume Quantifiable Goal/Target – Not Field Verifiable	
2020 WMP Initiative	
N/A	N/A
Tiny (less than 100 items) Volume Quantifiable Goal/Target	
2020 WMP Initiative	
5.3.4	System Hardening Inspections
5.3.5	Asset Management Inspections
5.3.2	Underground of 115 feet of Overhead Line
5.3.2	SVC Site Hardening
5.3.3	Advanced Weather Monitoring
5.3.3	Weather Stations and Cameras
Qualitative Goal/Target	
2020 WMP Initiative	
5.3.6	Vegetation Management Inspections
Qualitative goal/target WMP activities	
2020 WMP Initiative	
5.3.12 - D	Asset management and inspections establishment and function of the audit process
5.3.12 - E	Vegetation Management and inspection establishment and function of the audit process

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

HWT's dynamic reactive power support facility was de-energized during our independent evaluations, including our field visit to the Facility. Our goal was to observe, assess, and quantify all Large Volume/Field Verifiable items referenced within the year 2020 WMP. Things that do not field verifiable were verified through available public information, data requests, or SME interviews.

Sampling percentages do not apply for this Facility as we observed the Facility in its entirety and the nearby 115 foot overhead span of transmission line in the process of being underground. Onsite information was captured during the onsite field visit, which included an SME interview with facility personnel. Pictures of all pre-identified items were arrested, and a summary field report was produced, providing all IE's findings.

3.1.2 Small Volume Quantifiable Goal/Target – Field Verifiable

3.1.2.1 Review of Initiatives

For Small Volume Quantifiable Goal/Target – Field Verifiable 2020 WMP activities, the IE conducted an onsite assessment of the HWT's Suncrest Facility to confirm HWT's compliance with their 2020 WMP target activities and initiatives described below.

HWT Suncrest Facility - IE Field Visit on May 20, 2021, 8:00 AM to 9:30 AM

Field Visit Attendees

- Alona Sias, NextEra Energy
- Alexandre Veilleux, NextEra Energy
- Molly Amendt, PE, C2 Group
- Luis Alarcon, C2 Group

Introduction

C2 Group (C2) was greeted at the facility entrance gate by NextEra Energy's Alona Sias and Alexandre Veilleux of HWT and led by vehicle down a paved road known as Bell Bluff Truck Trail to HWT's Suncrest Facility. C2 parked outside the facility fence adjacent to the temporary construction trailer and participated in a general safety and fire briefing.

HWT's onsite fire safety, led by Capstone Fire & Safety Management, reviewed onsite fire safety compliance, including emergency evacuation routes, how to call for medical help, smoking rules, and truck fire safety tool requirements. HWT's onsite environmental monitor lead from SWCA Environmental Consultants reviewed site environmental compliance, including vehicle speed, parking rules, and wildlife awareness.

Ms. Sias and C2 personnel agreed to start the field audit inside the fenced Facility, then moved outside the Facility. Lastly, to the east of the site, where HWT is actively managing the construction of the undergrounding of their transmission line. HWT noted that the Facility is de-energized until October 2021 to allow for the completion of HWT's facility and transmission line improvements.

The following graphic represents the significant components currently being installed, or which are in the process of installation, at the Facility as relevant to 2020 WMP upgrades to be assessed for further evaluation:

Figure 1. HWT Suncrest Facility Major Components



Facility Audit, Inside Fence

NextEra Energy's personnel first lead C2 on tour inside the fenced Suncrest Facility, pointing out specific wildfire mitigation attributes. C2 confirmed the existence of the following wildfire mitigation assets reported as "implemented" in HWT's ARC for 2020:

At the existing HWT facility, within the perimeter walls:

1. **Weather station and eight perimeter high-definition (HD) cameras:** The weather station is integrated with SDG&E's network of weather stations across their service territory. Two HD zoomable cameras were installed at each corner of the Facility's perimeter wall for a total of eight cameras. The cameras extend beyond the ten-foot wall height, and at two locations, two additional 360-degree security awareness cameras were also installed.
2. **Transformer real-time oil gas monitoring systems and seismic pads:** C2 observed each transformer's oil gas monitoring system (two total, one for facility operation and one backup). However, during the site visit, HWT was retrofitting the transformer foundations to improve reliability for seismic loads by installing vibration absorbing pads, and the oil gas monitoring system was disconnected.
3. **Ten-foot-tall concrete perimeter wall around the Facility:** The concrete perimeter wall is installed, with work remaining to complete the installation of permanent gates at two site access locations.

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

Figure 2. North Wall, Weather Station



Figure 3. Denbeste Trailer, Spare Tx, View West



Facility Audit, Outside Fence

At the existing HWT facility, outside the perimeter walls:

As outlined in HWT's WMP, the Facility's perimeter includes the following:

- Vegetation-free fire breaks approximately 30 feet in width with a crushed rock surface along the Facility's perimeter.
- There is a 12,278-gallon steel fire water storage tank with fire department access and draft connection. The tank is secured to a concrete foundation near the southwest entrance of the Facility.

Adjacent to the fenced Facility is a dirt parking lot with a small temporary construction trailer, equipment associated with the current construction of the Facility, and storage of minor non-combustible materials for construction activities.

Figure 4. Fire Dept. Water Tank, NW Corner



Figure 5. West Wall, Exterior, View Northwest



230 kV Transmission Line (Overhead/Undergrounding) Audit

At the point of interconnection to SDG&E's Suncrest Substation, the 115 foot-segment of HWT owned overhead transmission line is in the process of being underground. As noted in HWT's ARC for 2020, construction completion of the undergrounding span is scheduled for August 2021.

At the time of the field visit, the new 230 kV cable pole, immediately adjacent to the substation fence, was installed, and the trench and conduit work to the new cable pole. The original cable pole has been removed, and its foundation is intact, as well as the mast-mounted camera and ground-mounted solar panel and control box. A construction crew was onsite performing tasks to prepare for cable installation for the new underground section.

The onsite SME noted distributed temperature and partial discharge monitoring on the existing and new segment of 230 kV underground cable.

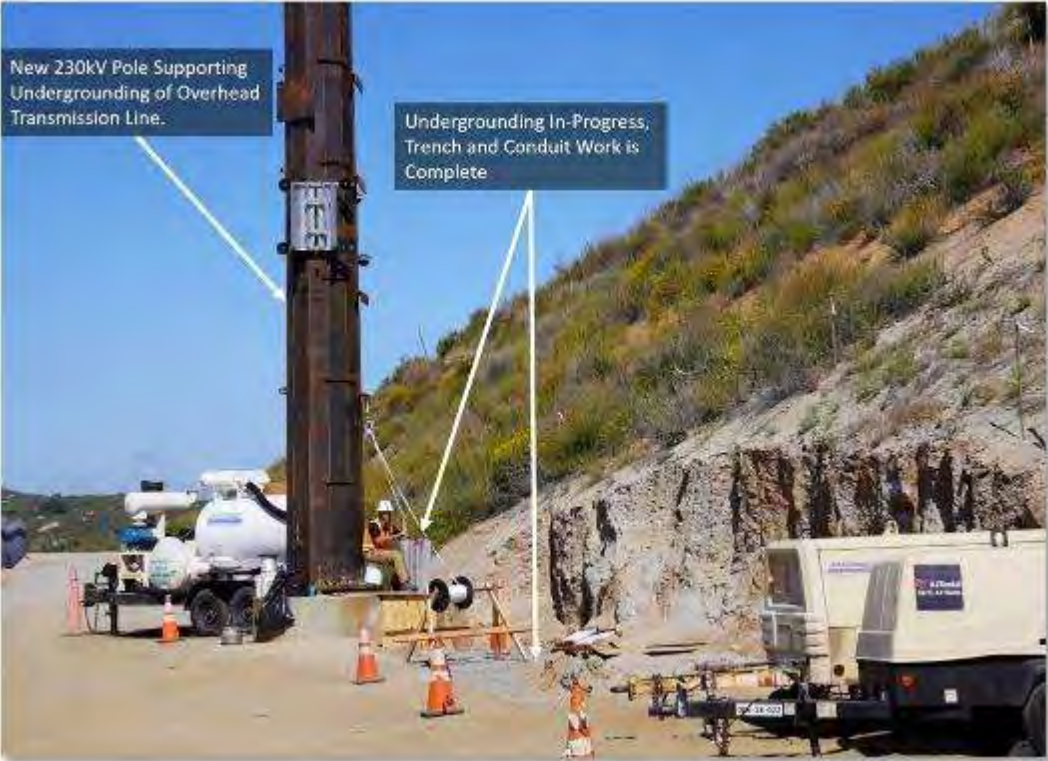
Figure 6. Overhead Transmission



Figure 7. Foundation for Single Steel Pole, Security Camera



Figure 8. 500/230kV substation, One Steel Riser Pole (empty), View South



3.1.2.2 Trends and Themes

Per the field visit described in Section 3.1.2.1, HWT is trending towards completing the undergrounding of the 115 feet overhead span of the transmission line observed and was under construction at the time of the field visit. Therefore, with the 115 feet currently in the building to be undergrounded and transformer seismic upgrades being implemented, HWT remains on target to complete outstanding 2020 WMP activities as approved within the 2020 Change Order Report dated February 8, 2021, and the 2020 ARC report dated March 2021.

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 2020 WMP activities. Therefore, this subject is not applicable or covered in this report.

3.1.3.2 Trends and Themes

These activities are not present in the 2020 WMP activities. Therefore, this subject is not applicable or covered in this report.

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

3.1.4.1 Review of Initiatives

Described within the 2020 WMP, HWT referenced Monthly Equipment and Vegetation Inspection Reports conducted at the facilities for compliance with the Asset and Vegetation Management and Inspections. Since monthly inspection reports are not included within publicly available records, the IE submitted Data Request 001 (See Appendix D) and received copies of the monthly inspection reports that detailed equipment and vegetation inspections. With the receipt of the monthly inspection reports, the IE confirmed that HWT remains in compliance with the indicated inspection activities described in the 2020 WMP by completing monthly inspection reports at the Suncrest Facility since commencing operation on February 29, 2020.

3.1.4.2 Trends and Themes

It is demonstrated in the obtained data requests that HWT is consistent in conducting and maintaining equipment and vegetation management inspections since the startup of the Suncrest Facility on February 29, 2020. In addition, HWT remains consistent in documenting completed monthly inspection reports of facility equipment and vegetation management at the Facility.

3.1.5 Qualitative Goal/Target

3.1.5.1 Review of Initiatives

As delineated within Appendix C, qualitative goals include HWT's third-party wildfire mitigation assessment and engagement of a private fire brigade providing fire suppression services to the Suncrest

Facility. Although described within the 2020 WMP and within supplemental documents, the IE submitted Data Request 001 and 002 (See Appendix D) and received evidence of the fire brigade contracted to support the Suncrest Facility and copies of the Jenson Hughes third-party wildfire assessment that were not publicly available. The IE confirmed that HWT remains compliant with the indicated Risk Assessment and Mapping and Grid Operations activities with the receipt of these documents as outlined within the 2020 WMP.

3.1.5.2 Trends and Themes

With confirmed third-party assessments completed and the fire brigade on contract, HWT remains compliant with stated activities outlined in the 2020 WMP.

3.2 Verification of Funding

Table 2 2020 WMP Funding Verification Summary

Initiative Category	2020 Initiative Number	Initiative Name	2020 WMP Page Number	Funding discrepancy amount	Detail on funding discrepancy
N/A	N/A	N/A	N/A	N/A	N/A

A comparative financial analysis was completed between HWT's 2020 ARC Report Dated March 2021 and the Quarter 1, 2021 Quarterly Data Report Dated April 28, 2021, as summarized within Appendix E, HWT Financial Analysis document.

Although grid design and system hardening and asset management and inspection actuals varied the ARC Report and the Q1 2021 Quarterly Report by \$35k and \$30k, respectively (See Appendix E), HWT still exceeded or entirely spent the allocated budget for these WMP activities. Through this comparative analysis of available information reported by HWT, HWT has shown to fund all 2020 WMP activities fully.

Therefore, Table 1 2020 WMP Funding Verification Summary is shown as Not Applicable (N/A) for 2020 WMP activities since no activities were found to be less than 100 percent funded.

3.3 Verification of QA/QC Programs

As stated within the 2020 WMP, the HWT's Senior Director of Operations is "tasked with confirming that the fire prevention measures, inspections, monitoring and quality assurance/quality control (QA/QC) processes described in this WMP are successfully implemented at the HWT facilities." For verification of the QA/QC programs, the IE conducted an SME interview with HWT's Director of Operations on June 4, 2021, to discuss the procedures and protocols followed at the Suncrest Facilities that verified HWT's compliance with the implementation and maintenance of the QA/QC oversight of their Facility. Through this SME interview, the director described the following QA/QC procedures and protocols:

- Scheduled monthly meetings to review each line item in the monthly inspection report
- Identify and immediately implement corrective measures noted
- Provide and document fire safety training to all personnel and contractors
- Conduct daily safety tailboards

Along with the confidential monthly inspection records provided by HWT for review and the SME interview description of QA/QC methodology and implementation, the IE has verified that HWT complies with HWT's QA/QC programs as indicated in the 2020 WMP.

3.4 Vegetation Management Assessment

With BVNA's Vegetation Management Division acting as IE, the evaluation of HWT's 2020 WMP includes a review of HWT's risk mitigation plan and a site assessment conducted by a certified forester with a background in fuel mitigation completed.

Process – IE approach to the validation of HWT's vegetation management plan included reviewing the Suncrest Facility via remote imagery to confirm the status of vegetation management and fuel mitigation at and around the Facility.

Findings – IE confirmed that internal to the Facility, no ground vegetation was observed. The interior of the Facility is made up of crushed rock and decomposed granite. A 10-foot concrete perimeter wall surrounds the Facility, which acts as a fire break between the Facility and the wildland surrounding it. Outside the perimeter wall, it was observed that approximately 20 feet of clear ground are provided by crushed rock and dirt. No vegetation or combustible materials was observed inside or directly outside the perimeter fence.

Exterior to the Facility, it was observed that a small ground photovoltaic array that supports an exterior camera has approximately 3 feet of dry vegetation directly below the array as demonstrated in Figure 7 and requires fuel mitigation.

Since the commissioning of the Facility, no activities associated with fuel mitigation were planned nor carried out in 2020 by HWT. Observations conclude that only minor vegetation management is necessary and would be expected for this Facility due to the limited nature of vegetation impact, per the service territory fire threat evaluation in 4.2.1 of the WMP.

Figure 9. North Exterior Wall and Yard



3.5 Electrical Engineering Assessment

The Suncrest Facility is a +300/-100 MegaVolt-Ampere reactive (MVAR) SVC facility with a rated real power output of 0-MegaWatt (MW), and the nominal terminal voltage of 230-kV, and a 230-kV single-circuit transmission line (with approximately one mile constructed underground and roughly 115 feet overhead), that collectively provides dynamic reactive power support at the existing SDG&E Suncrest Substation, a 500/230-kV substation near Alpine, San Diego County, California.

HWT has implemented all approved WMP initiatives from its 2020 WMP to date, summarized below:

- HWT is currently undergrounding the 115 feet overhead span of the transmission line at the Suncrest Facility. HWT originally proposed in its 2020 WMP that it planned to underground this 115 feet of the overhead line during 2020. However, HWT identified the likelihood of a delay due to obtaining a modification to the construction easement and changes to the necessary regulatory agreements. As a result, no other changes took effect other than extending the scheduled completion date and changes to the planned budget spend from 2020 to 2021.
- Inspections are conducted monthly, and additional proactive asset inspections are performed ahead of extreme weather events, such as Red Flag Warning (RFW) alerts, to proactively minimize and address any situations that could result in ignitions.
- A 10-foot tall concrete perimeter wall has been constructed around the SVC facility to reduce the potential for onsite ignitions to spread to off-site vegetation or reduce the probability of non-HWT-related wildfire in the surrounding area to impact operations of the Suncrest Facility directly. The only remaining construction required is the completion of the permanent gates to the Facility.

- A transformer oil gas monitoring system has been installed to aid in real-time monitoring of transformer health.

Item not identified in the WMP:

HWT provided a Fire Protection Plan accepted and approved by San Diego County Fire Authority (SDCFA). An item that was not identified as installing a 12,278-gallon water storage tank with a concrete foundation is installed at the substation's northwest corner. The local Fire Authority Having Jurisdiction has reviewed the installation of the tank - see Photo 3 of this assessment.

Figure 10. Fire Dept. Water Tank, NW Corner, Exterior, 12,278 gal



4 Conclusion

Per the IE Findings Summary in Table 2, HWT has either completed or is completing all the Wildfire Mitigation Programs outlined in HWT approved 2020 WMP. Activities/initiatives and outcomes are demonstrated in table 2 below:

Table 3 IE Findings Summary

SOW Category	2020 Initiative Number	Initiative Name	Finding	Detail on finding
WMP Activity Completion	5.3.1.	Third-Party Wildfire Mitigation Assessment	Activity Completed	Compliant with 2020 WMP
WMP Activity Completion	5.3.2.	One (1) installed weather Station	Activity Completed	Compliant with 2020 WMP
WMP Activity Completion	5.3.2.	Four (4) locations, a total of (8) installed HD Cameras	Activity Completed	Compliant with 2020 WMP
WMP Activity Completion	5.3.2.	Transformer Oil Gas Monitoring	Activity Completed	Compliant with 2020 WMP
WMP Activity Completion	5.3.2.	Undergrounding Cable Monitoring	In Progress	Compliant with 2020 WMP
WMP Activity Completion	5.3.2.	Fire Risk Index Development	Activity Completed	Compliant with 2020 WMP
WMP Activity Completion	5.3.2.	Fixed Foam Deluge System or Portable Foam System	Activity Completed	Compliant with 2020 WMP
WMP Activity Completion	5.3.3.	10 foot Tall Concrete Perimeter Wall	Activity Completed	Compliant with 2020 WMP
WMP Activity Completion	5.3.3.	Transformer Seismic	In Progress	Compliant with 2020 WMP
WMP Activity Completion	5.3.3.	Flame-Suppressing Containment Stone under Transformers	In Progress	Compliant with 2020 WMP
WMP Activity Completion	5.3.3.	Undergrounding Electric Lines	In Progress	Compliant with 2020 WMP
WMP Activity Completion	5.3.4.	Monthly Equipment Inspections	Activity Completed	Compliant with 2020 WMP
WMP Activity Completion	5.3.5.	Monthly Vegetation Inspections Around Equipment	Activity Completed	Compliant with 2020 WMP
WMP Activity Completion	5.3.6.	Private Fire Brigade for Fire Suppression Services	Activity Completed	Compliant with 2020 WMP
Verification of QA/QC Programs	N/A	Senior Director of Operations Review of Monthly Inspections	Activity Completed	Compliant with 2020 WMP
Verification of Funding	N/A	2020 WMP Funds	Activities spent all designated funds.	No underspend was identified.

5 Appendix

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Appendix A List of Supplemental Documents Reviewed

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Documents Reviewed	Document Date
HWT 2020 Wildfire Mitigation Plan R-1810007	Feb-20
WSD 2020 Data Request Horizon	Feb-20
HWT Informational Workshops & WMP Presentations	Feb-21
HWT Response WSD 2020 Request Horizon	Feb-20
HWT 2020 Wildfire Mitigation Plan Revised R-1810007	Mar-20
HWT 2020 Wildfire Mitigation Plan Revised (Redline) R-1810007	Mar-20
WSD 2020 WMP Data Request Horizon	Mar-20
HWT Response WSD 2020 Request Horizon	Mar-20
HWT Environmental Findings Summary for the Suncrest (2020-2021) Wildfire Mitigation Implementation Project	Jul-21
HWT 2020 Wildfire Mitigation Plan Change Order	Dec-20
California Public Advocate's Office Second Request to HWT	Jan-21
HWT Response California Advocate's Office Second Request	Jan-21
WSD Action Statement Approving HWT Change Order	Feb-21
HWT 2020 Wildfire Mitigation Quarterly Report	Mar-21
HWT 2021 Wildfire Mitigation Plan R-1810007	Mar-21
HWT Annual Report on Compliance for 2020	Mar-21
WSD 2021 WMP Data Request	Apr-21
HWT Q1 2021 Quarterly Data Report	Apr-21
HWT Response WSD 2021 Request	Apr-21
HWT Q1 2021 Quarterly Initiative Update	May-21

Appendix B Field Photos and Descriptions from Field Visit May 20, 2021

Appendix B Field Descriptions from Field Visit May 20, 2021

Photo Image No.	Photo Description
264	West wall, Interior, View South
265	North Wall, Interior, Weather Station, View East
266	Cable Riser, View South
267	North Wall, Interior, Weather Station, View East
268	Weather Station, Exterior, View North
269	Weather Station, Exterior, View North, Close up
270	Capacitor banks, View Northwest
271	Transformer and Capacitors banks, View Northwest
272	Spare Tx under netting (500-kV) View Southwest
273	Spare Tx under netting (500-kV) View Southwest, close up
274	Capacitor bank reactors, View North
275	Capacitor banks, View North
276	Cameras, reactors, View South, close up
277	Capacitors Reactors, View South, Wide view
278	Denbeste Water Solutions trailer, View Southwest
279	Denbeste trailer, Spare Tx, View West, Wide view
280	Denbeste trailer, Spare Tx, Reactors, View Northeast, Wide view
281	Capacitor bank reactors, View North
282	Cameras, reactors, View South, close up
283	Tx, Reactors, Resistors, View Northwest
284	Reactors, Control Building, View North
285	Tx, Reactors, Resistors, View West, Wide view
286	Denbeste trailer, Spare Tx, View West
287	Interior East wall, View North
288	Capacitor banks & Reactors, Reactors
289	Reactors, Control House, View Southwest
290	East Wall, Interior, View South
291	Cameras, Interior Northeast corner
292	North Wall, Interior, Gate, View North
293	North Wall, Control House, View Southwest
294	500-kV Cable risers, Interior North Wall, View West

295	North Wall, Exterior, Station service transformers, View West
296	East Wall, Exterior, View South
297	Reactors, Capacitor banks, Elevated view West
298	North Wall, Interior, Control building, "Thermo Fins" cooling banks, Elevated view West
299	Capacitor banks, Reactors, Elevated view South
300	North Wall, Interior, Control building, "Thermo Fins" cooling banks (Duplicate Removed)
301	North Wall, Interior, Control building, "Thermo Fins" cooling banks (Duplicate Removed)
302	West Wall, Exterior, View East
303	Fire Department Water Tank, West wall, Exterior, View South
304	Fire Department Water Tank, Northwest corner, Exterior, View Southeast
305	Fire Department Water Tank, Northwest corner, Exterior, View Southeast (Duplicate Removed)
306	Fire Department Water Tank, Northwest corner, Exterior, View Southeast, Close up 12,278 gal
307	Access road, View Northwest
308	Fire Department Water Tank, Northwest corner, Exterior, Wide View Southeast
309	West Wall, Exterior, View Southeast
310	West Wall, Exterior, View Southeast (Duplicate Removed)
311	West Wall, Exterior, Catch basin, Wide angle View Southeast
312	West Wall, Exterior, View North
313	West Wall, Exterior, View North (Duplicate Removed)
314	West Wall, Exterior, View Northwest
315	West Wall, Exterior, View Northwest (Duplicate Removed)
316	Foundation for single steel pole
317	Overhead Transmission Line (OHTL) beyond foundation for single pole
318	OHTL beyond foundation for single pole, security camera, View West
319	Foundation for single steel pole (Duplicate Removed)
320	500/230-kV substation, 1 steel riser pole (empty), View South
321	500/230-kV substation, 1 steel riser pole (empty), View South (Duplicate Removed)
322	Access Road
323	Access Road (Duplicate Removed)
324	Foundation for single steel pole (Duplicate Removed)
325	Foundation for single steel pole, security camera
326	Foundation for single steel pole (Duplicate Removed)
327	500/230-kV substation, 1 steel riser pole (empty), View South
328	Foundation for single steel pole (Duplicate Removed)
329	Foundation for single steel pole (Duplicate Removed)
330	OHTL beyond foundation for single pole, View West
331	1 steel riser pole (empty), View South
332	1 steel riser pole (empty), View South (Duplicate Removed)
333	1 steel riser pole (empty), View South (Duplicate Removed)
334	OHTL beyond foundation for single pole, View West
335	OHTL View Northwest
336	500/230-kV substation, View Southwest
337	OHTL, material covering washout on hill, View Northwest
338	material covering washout on hill, View North

339	500/230-kV substation, 1 steel riser pole (empty), View South
340	1 steel riser pole (empty), View South (Duplicate Removed)
341	1 steel riser pole (empty), View South (Duplicate Removed)
342	1 steel riser pole (empty), View South (Duplicate Removed)
343	Hole in ground, top of concrete encased duct bank
344	Steel riser pole base with worker installing pull cord in conduit, concrete covered trench
345	material covering washout on hill, View Northeast
346	material covering washout on hill, View Northwest
347	1 steel riser pole (empty), OHTL, material covering washout on hill, View Northwest

Photos



Photos – Continued



268 **Weather Station, Exterior, View North**



269 **Weather Station, Exterior, View North, Close up**



270 **Capacitor banks, View Northwest**



271 **Transformer and Capacitors banks, View Northwest**



272 **Spare Tx under netting (500-kV) View Southwest**



273 **Spare Tx under netting (500-kV) View Southwest, close up**

Photos – Continued



274 **Capacitor bank reactors, View North**



275 **Capacitor banks, View North**



276 **Cameras, reactors, View South, close up**



277 **Capacitors Reactors, View South, Wide view**

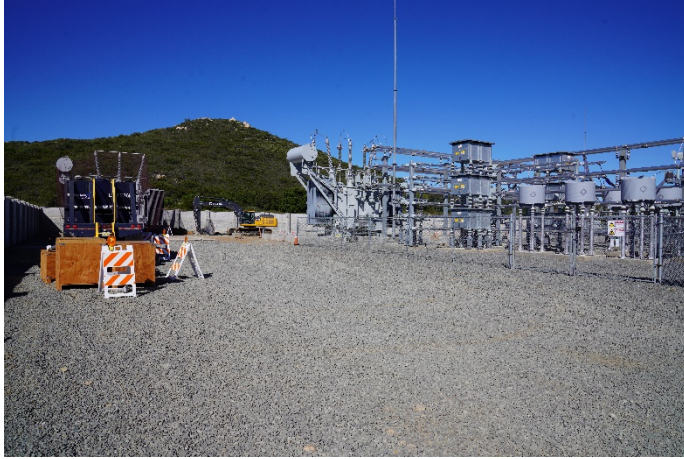


278 **Denbeste Water Solutions trailer, View Southwest**



279 **Denbeste trailer, Spare Tx, View West, Wide view**

Photos – Continued



280 Denbeste trailer, Spare Tx, Reactors, View NE, Wide view



281 Capacitor bank reactors, View North



282 Cameras, reactors, View South, close up



283 Tx, Reactors, Resistors, View Northwest



284 Reactors, Control Building, View North



285 Tx, Reactors, Resistors, View West, Wide view

Photos – Continued



286 Denbeste trailer, Spare Tx, View West



287 Interior East wall, View North



288 Capacitor banks & Reactors, Reactors



289 Reactors, Control House, View Southwest



290 East Wall, Interior, View South



291 Cameras, Interior Northeast corner

Photos – Continued



292 North Wall, Interior, Gate, View North



293 North Wall, Control House, View Southwest



294 500-kV Cable risers, Interior North Wall, View West



295 North Wall, Exterior, Station transformers, View West

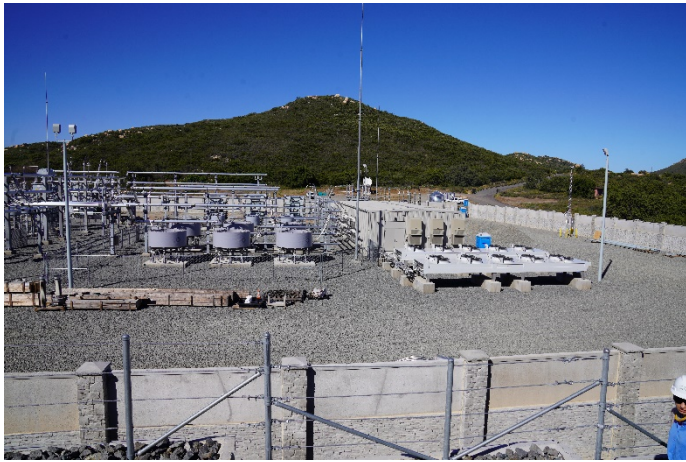


296 East Wall, Exterior, View South



297 Reactors, Capacitor banks, Elevated view West

Photos – Continued



298 North Wall, Interior, Control building, "Thermo Fins" cooling banks, Elevated view West



299 Capacitor banks, Reactors, Elevated view South



302 West Wall, Exterior, View East



303 Fire Department Water Tank, West, Exterior, View South



304 Fire Dept. Water Tank, NW corner, Exterior, View SE



306 Fire Dept. Water Tank, NW corner, Exterior, 12,278 gal

Photos – Continued



307 **Access road, View Northwest**



308 **Fire Dept. Water Tank, NE corner, Exterior, Wide View SE**



309 **West Wall, Exterior, View Southeast**



311 **West Wall, Exterior, Catch basin, Wide angle View SE**



312 **West Wall, Exterior, View North**



314 **West Wall, Exterior, View Northwest**

Photos – Continued



316 Foundation for single steel pole



317 Overhead Transmission Line (OHTL) beyond foundation



318 OHTL beyond foundation, security camera, View West



320 500/230-kV substation, 1 steel riser pole (empty), View S



322 Access Road



325 Foundation for single steel pole, security camera

Photos – Continued



327 **500/230-kV substation, 1 steel riser pole (empty), View S**



330 **OHTL beyond foundation for single pole, View West**



331 **1 steel riser pole (empty), View South**



334 **OHTL beyond foundation for single pole, View West**

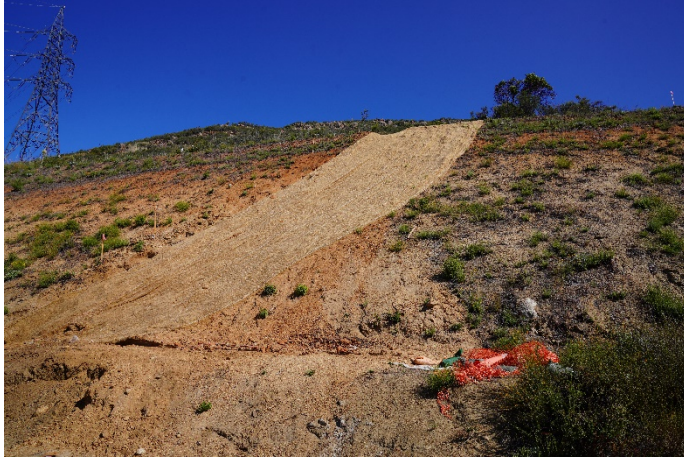


335 **OHTL View Northwest**



336 **500/230-kV substation, View Southwest**

Photos – Continued



337 OHTL, material covering washout on hill, View NW



338 material covering washout on hill, View North



339 500/230-kV substation, 1 steel riser pole (empty), View S



343 Hole in ground, top of concrete encased duct bank

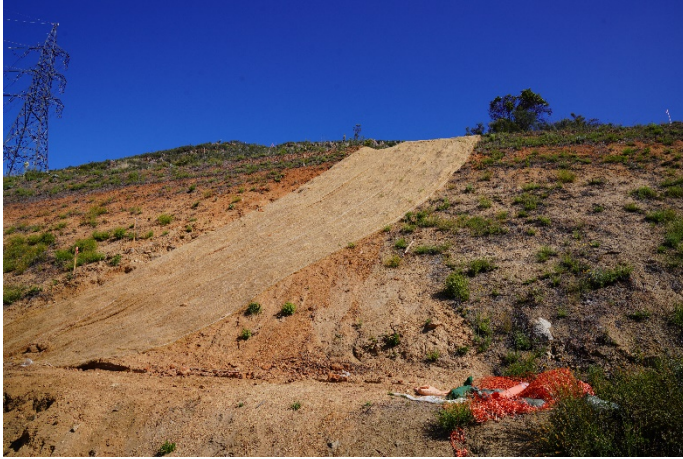


344 Steel riser pole base with worker installing pull cord in conduit, concrete covered trench



345 material covering washout on hill, View Northeast

Photos – Continued



346

material covering washout on hill, View Northwest



347

1 steel riser pole (empty), OHTL, material covering washout on hill, View Northwest

Appendix C List of 2020 WMP Activities

Appendix C List of 2020 WMP Activities

SOW Category	2020 WMP Activities	WMP Table # / Category	2020 Initiative No.	Initiative Activity
WMP Activity Completion	1. Large Volume/Field Verifiable	Situation Awareness and Forecasting	5.3.2.	One (1) installed Weather Station
WMP Activity Completion	1. Large Volume/Field Verifiable	Situation Awareness and Forecasting	5.3.2.	Four (4) locations, a total of (8) installed HD Cameras
WMP Activity Completion	1. Large Volume/Field Verifiable	Situation Awareness and Forecasting	5.3.2.	Transformer Oil Gas Monitoring
WMP Activity Completion	1. Large Volume/Field Verifiable	Situation Awareness and Forecasting	5.3.2.	Undergrounding Cable Monitoring
WMP Activity Completion	1. Large Volume/Field Verifiable	Situation Awareness and Forecasting	5.3.2.	Fire Risk Index Development
WMP Activity Completion	1. Large Volume/Field Verifiable	Situation Awareness and Forecasting	5.3.2.	Fixed Foam Deluge System or Portable Foam System
WMP Activity Completion	1. Large Volume/Field Verifiable	Grid Design and System Hardening	5.3.3.	Flame-Suppressing Containment Stone under Transformers
WMP Activity Completion	1. Large Volume/Field Verifiable	Grid Design and System Hardening	5.3.3.	Undergrounding Electric Lines
WMP Activity Completion	2. Large Volume Quantifiable Goal/Target - Not Field Verifiable	N/A	N/A	N/A
WMP Activity Completion	3. Small Volume/Quantifiable	Asset Management and Inspections	5.3.4.	Monthly Equipment Inspections
WMP Activity Completion	3. Small Volume/Quantifiable	Vegetation Management & Inspections	5.3.5.	Monthly Vegetation Inspections Around Equipment
WMP Activity Completion	4. Qualitative Goal	Risk Assessment & Mapping	5.3.1.	Third-Party Wildfire Mitigation Assessment
WMP Activity Completion	4. Qualitative Goal	Grid Operations	5.3.6.	Private Fire Brigade for Fire Suppression Services
Verification of QA/QC Programs	QA/QC Programs	QA/QC of WMP Activities	N/A	Senior Director of Operations Review of Monthly Inspections

Appendix D Data and Interview Requests



DATA REQUEST

Data Request Number: 001

Name: Omneya B. Salem

Title: Financial Audit Lead

Company: C2 Group

Data Request Date: 05.27.2021

Email: omneya.salem@conekt2.biz

Phone #: 858-449-8118

Preferred Point of Contact: Email or Phone

Program Target	Units	Sections	Target	Actual	Method	Data Request
Routine Maintenance and Inspection	N/A	Section 5.3.	N/A	N/A	N/A	Copy of Facility Maintenance and Inspection Guidelines (monthly, annual, and pre extreme weather events), and documentation of the routine maintenance and inspection completions in 2020, post site energization
Emergency Planning and Preparedness	N/A	Section 5.3.9.	N/A	N/A	N/A	Copy of the Facility's Emergency Management Plan.
Additional Emergency Preparedness Measures	N/A	Section 5.3.9.	N/A	N/A	N/A	Evidence of contracting with a local private fire brigade, purchasing Type III fire engineer, and purchasing a foam deluge trailer.



DATA REQUEST

Data Request Number: 002

Name: Omneya B. Salem
 Title: Financial Audit Lead
 Company: C2 Group

Data Request Date: 06.01.2021

Email: omneya.salem@conekt2.biz
 Phone #: 858-449-8118
 Preferred Point of Contact: Email or Phone

Program Target	Units	Sections	Target	Actual	Method	Data Request
Risk and Mapping	N/A	California Advocate's Office Second Request Response Dated January 26, 2021	N/A	N/A	N/A	Copy of the Jenson Hughes third-party assessment of wildfire risk and resiliency of the operation Suncrest SVC the Facility in 2020.
QAQC Programs	N/A	2020 WMP Page 9 Section 1. Persons Responsible for Executing the WMP	N/A	N/A	SME Interview	SME Interview with HWT's Senior Director of Operations for QA/QC Process implementation/verification.

Appendix E Financial Analysis

Appendix E HWT Financial Audit Analysis (Spend in thousand \$)

From ARC Report Dated March 2021					From Q1 2021 Quarterly Data Report Dated April 28, 2021					IE ARC Financial Audit Analysis		
#	WMP Category	2020 WMP Planned	2020 Actual	Difference	Actual CAPEX	Actual OPEX	Total Actual	Difference from 2020 WMP Planned	HWT Comments	2020 WMP Activities	Failed to Fund WMP Activity?	IE Findings
1	Risk and Mapping	\$ -	\$ 200	\$ (200)	\$ 200	\$ -	\$ 200	\$ (200)	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.	4. Qualitative Goal	No	Per HWT Response California Advocate's Office Second Request Response Dated January 26, 2021, HWT engaged Jensen Hughes, an independent third-party consultant to assess the Wildfire Risk and Resiliency of the Suncrest SVC Facility in 2020. Per Data Request 002, IE has confirmed third-party Wildfire Risk and Resiliency Report has been completed.
2	Situational Awareness	\$ 150	\$ 347	\$ (197)	\$ 305	\$ 42	\$ 347	\$ (197)	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.) HWT has installed a weather station at the Suncrest facility in compliance with its CPUC-Approved 2020 WMP 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.	1. Large Volume/ Field Verifiable	No	Field verified per IE Field Visit on May 20, 2021.
3	Grid Design and System Hardening	\$ 3,900	\$ 3,935	\$ (35)	\$ 3,900	\$ -	\$ 3,900	\$ -	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, and 3) installation of flame- suppressant containment stone under the transformers	1. Large Volume/ Field Verifiable	No	Although there is a (\$35) difference between the 2020 ARC Report and 2021 Q1 Report, HWT was not found to be deficient in spending for this initiative. Field verified per IE Field Visit on May 20, 2021.
4	Asset Management and Inspections	\$ 35	\$ 80	\$ (45)	\$ 30	\$ 80	\$ 110	\$ (75)	HWT performs infrared inspections of transmission line and equipment at its Suncrest facility as part of its monthly detailed inspections described above HWT conducts monthly detailed inspections of transmission line and equipment at its Suncrest facility in compliance with its CPUC-approved 2020 WMP	3. Small Volume/ Quantifiable	No	Although there is a (\$30) difference between the 2020 ARC Report and 2021 Q1 Report, HWT was not found to be deficient in spending for this initiative. Per Data Request 001 Response, IE has confirmed monthly inspections reports have been completed and include Vegetation management inspections.
5	Vegetation Management	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	HWT conducts monthly detailed inspections of transmission line and equipment at its Suncrest facility, including inspections of vegetation around the Facility, in compliance with its CPUC-approved 2020 WMP	3. Small Volume/ Quantifiable	No	Included as a part of the Monthly Facility inspection reports found within the Asset Management and Inspections Section.
6	Grid Operations	\$ -	\$ 70	\$ (70)	\$ -	\$ 70	\$ 70	\$ (70)	** NOTE: Taken from HWT Response WSD 2021 Request Dated April 29, 2021: Finally, HWT has engaged a private fire brigade trained on electrical fires to be on-call for fire suppression service in case of an on-site ignition. This arrangement ensures that HWT has dedicated access to qualified fire suppression services that enable timely response in the field to avoid uncontrollable propagation of wildfire. The annual spend on this initiative is ~\$70 K and is reported under initiative 7.3.6.6. "Stationed and on-call ignition prevention and suppression resources and services" in Table 12 of HWT's quarterly data report submitted along with HWT's 2021 WMP update.	4. Qualitative Goal	No	Per Data Request 001 Response, IE has confirmed HWT has engaged a private fire brigade for on-call fire suppression services.
7	Data Governance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	N/A	N/A	N/A	N/A
8	Resource Allocation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	N/A	N/A	N/A	N/A
9	Emergency Planning	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	N/A	N/A	N/A	N/A
10	Stakeholder Cooperation and Community Engagement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	N/A	N/A	N/A	N/A
Total		\$ 4,085	\$ 4,632	\$ (547)	\$ 4,435	\$ 192	\$ 4,627	\$ (542)				