## WMP Activities Summary

### Evaluation of HFRA
- **EVAL-1:** Complete evaluation of non-CPUC HFRA for retention or exclusion
- **EVAL-1.1:** Pilot installation of 50 CALFIRE-exempt fire retardant barrier for wood poles

### PSPS
- **PSPS-1:** De-Energization Notifications
  - Present notification to public safety agencies and local government

### Operation Practices
- **OP-1:** Review and update Annual System Operating Bulletin 322
- **OP-2:** Hire additional staff for Wildfire Infrastructure Protection Team

### Risk Analysis
- **RA-1:** Conduct risk analysis based on new expanded scope

### Vegetation Management
- **VM-1:** Hazard Tree Management Program (HTMP)
  - **VM-1.1:** Perform tree specific threat assessments
  - **VM-1.2:** Perform risk-based tree removals
- **VM-2:** Inspect and clear brush around poles

### Emergency Preparedness
- **DEP-1:** Customer Education and Engagement
  - **DEP-1.1:** Conduct a direct mail campaign for HFRA
  - **DEP-1.2:** Develop local government’s engagement and meeting plan
  - **DEP-1.3:** Execute local government’s engagement and meeting plan
- **DEP-2:** Emergency Responder Training
  - **DEP-2.1:** Wildfire response training for new or existing responders
  - **DEP-2.2:** Conduct Internal IMT Training around WF response and de-energization protocols
- **DEP-3:** Bolster Incident Mgmt. & Support
  - **DEP-3.1:** Customer Education and Engagement
    - **DEP-3.1.1:** Develop local government education and engagement protocols
    - **DEP-3.1.2:** Conduct a local government education and engagement exercise, and de-energization protocols
  - **DEP-3.2:** Train, exercise, and qualify new staff to meet identified need

### System Hardening
- **SH-1:** Install 96 circuit miles of Covered Conductor
- **SH-2:** Conduct evaluation of Undergrounding in HFRA
- **SH-3:** Install at least 1,100 composite poles
- **SH-4:** Install 7,500 Current Limiting Fuses (CLFs)
- **SH-5:** Install 50 Remote Controlled Automatic Reclosers (RARs)
- **SH-6:** Update at least 150 existing RAR Settings
- **SH-7:** Circuit Breaker Fast Curve
- **SH-7.1:** Develop Engineering plan to upgrade Circuit Breaker relays and settings
- **SH-7.2:** Conduct Circuit breaker upgrades and setting updates according to plan

### Situation Awareness
- **SA-1:** Install new additional weather units
- **SA-2:** Fire Potential Index Phase II - Enhance capabilities of FPI
- **SA-3:** Install additional HD Cameras
- **SA-4:** Procure and Install high performance computing cluster weather and fuels modeling system
- **SA-5:** Develop Asset Reliability & Risk Analytics Capability

### Situation Awareness
- **SA-6:** Develop a visualization system for transmission and distribution facilities and equipment

### Alternative Technologies
- **AT-1:** Alternative Technology Pilots
- **AT-1.1:** Pilot installation of 50 CALFIRE-exempt surge arrestor units
- **AT-2:** GSRP Wildfire Mitigation
  - **AT-2.1:** Evaluate Distribution Fault Anticipation devices
  - **AT-2.2:** Evaluate Beyond Visual Line of Sight Unmanned Aerial System
- **AT-3:** Alternative Technology Evaluations
  - **AT-3.1:** Evaluate Rapid Earth Fault Current Limiters/Arc Suppression Coils
  - **AT-3.2:** Evaluate alternate fault detection technology
  - **AT-3.3:** Evaluate fire retardant barrier for wood poles
  - **AT-3.4:** Evaluate substation-class electronic fuses
  - **AT-3.5:** Evaluate branch line protection to include single phase reclosing

### Inspections
- **IN-1:** Distribution Enhanced Overhead Inspections and Remediation in HFRA
  - **IN-1.1:** Complete visual inspection for all distribution circuits in HFRA
  - **IN-1.2:** Remediate all conditions that create fire risk under distribution
- **IN-2:** Transmission Enhanced Overhead Inspections and Remediation in HFRA
  - **IN-2.1:** Complete visual inspection for all transmission circuits in HFRA
  - **IN-2.2:** Remediate all conditions that create fire risk under transmission
- **IN-3:** Infrared Inspection, Corona Scanning, and High Definition Imaging of overhead transmission facilities and equipment
- **IN-4:** Infrared Inspection of hot spots on overhead distribution facilities and equipment
  - **IN-4.1:** Inspect 50% of overhead lines in HFRA
  - **IN-4.2:** Remediate condition’s as required based on inspection results
  - **IN-4.3:** Update distribution overhead requirements for connector selection in HFRA
- **IN-5:** Infrared Inspection, Corona Scanning, and High Definition Imaging of overhead transmission facilities and equipment

### Vegetation Management
- **VM-3:** Achieve tree-to-line clearance distance of 12 feet in HFRA
- **VM-4:** DRI quarterly inspections and removals
  - **VM-4.1:** Perform all quarterly DRI inspections
  - **VM-4.2:** Remove trees in accordance with Veg Mgmt program
- **VM-5:** Lidar inspections of transmission (220kV and above)
- **VM-6:** Inspect vegetation adjacent to Transmission Circuit Miles
  - **VM-6.1:** Inspect vegetation adjacent to Distribution Circuit Miles
  - **VM-6.2:** Inspect vegetation adjacent to Transmission Circuit Miles

### Emergency Preparedness
- **PSPS-1:** De-Energization Notifications
  - **PSPS-1.1:** Notifications to public safety agencies and local government
  - **PSPS-1.2:** Notifications to CalOES via State warning system
  - **PSPS-1.3:** Notifications to the CPUC

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  - **IN-2.1:** Complete visual inspection for all transmission circuits in HFRA
  - **IN-2.2:** Remediate all conditions that create fire risk under transmission
- **IN-3:** Perform quality review on transmission and distribution structures
- **IN-4:** Infrared Inspection of hot spots on overhead distribution facilities and equipment
  - **IN-4.1:** Inspect 50% of overhead lines in HFRA
  - **IN-4.2:** Remediate condition’s as required based on inspection results
  - **IN-4.3:** Update distribution overhead requirements for connector selection in HFRA
- **IN-5:** Infrared Inspection, Corona Scanning, and High Definition Imaging of overhead transmission facilities and equipment
  - **IN-5.1:** Complete IR, Corona and HD image scanning of all overhead transmission lines in HFRA
  - **IN-5.2:** Integrate remediation with EOI activities

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  - **IN-5.1:** Complete IR, Corona and HD image scanning of all overhead transmission lines in HFRA
  - **IN-5.2:** Integrate remediation with EOI activities
## WMP Activities Status vs. WMP Activity Goals

### Operational-related Activities

<table>
<thead>
<tr>
<th>Activity Description</th>
<th>Volume vs 2019 Goal</th>
<th>Key Actions</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PSPS: De-Energization Notifications (PSPS-1):</strong></td>
<td></td>
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<tr>
<td>Notifications to Public Safety Agencies and Local Government (PSPS-1.1)</td>
<td>Sent notifications for each of the 7 events to date in 2019</td>
<td>This Activity is triggered by a PSPS event where SCE is required to submit ESRB-8 documentation to confirm it met the requirements outlined by the CPUC.</td>
<td><strong>On Track</strong></td>
</tr>
<tr>
<td>Notifications to CalOES via State Warning System (PSPS-1.2)</td>
<td>Sent notifications for each of the 7 events to date in 2019</td>
<td>This Activity is triggered by a PSPS event where SCE is required to submit ESRB-8 documentation to confirm it met the requirements outlined by the CPUC.</td>
<td><strong>On Track</strong></td>
</tr>
<tr>
<td>Notifications to the CPUC (PSPS-1.3)</td>
<td>Sent notifications for each of the 7 events to date in 2019</td>
<td>This Activity is triggered by a PSPS event where SCE is required to submit ESRB-8 documentation to confirm it met the requirements outlined by the CPUC.</td>
<td><strong>On Track</strong></td>
</tr>
<tr>
<td>Enhance Emergency Outage Notification System (PSPS-1.4)</td>
<td>PSPS messaging will be delivered in English plus the 5 primary additional languages within SCE’s service area</td>
<td>All work tracks for this goal have begun. SCE.com Team is in process of creating landing pages for In Language PSPS notifications. Translation vendor is in process of voice and text translations into the 5 additional languages. PSPS notification vendor ready to begin work to integrate voice messaging into their platform as soon as translation recordings delivered.</td>
<td><strong>On Track</strong></td>
</tr>
<tr>
<td><strong>HFRA Boundary Evaluation (EVAL-1)</strong></td>
<td>Evaluation complete; PFM filed on 8/19/2019</td>
<td>The technical review of non-CPUC HFRA evaluation results was completed and the non-CPUC HFRA boundary Petition for Modification (PFM) was submitted.</td>
<td><strong>Complete</strong></td>
</tr>
<tr>
<td><strong>Wildfire Risk Analysis (RA-1)</strong></td>
<td>On track to conduct risk analysis incorporating 2018 fire ignition data, additional system information, and consequence modeling to evaluate wildfire risk at a circuit segment level.</td>
<td>SCE is developing and testing revisions to its wildfire risk modeling methodology that include segment-level probability of ignition calculations that incorporate system characteristics, fault / fire history, and local conditions, as well as localized ignition consequence risk.</td>
<td><strong>On Track</strong></td>
</tr>
<tr>
<td><strong>Review and Update Annual System Operating Bulletin 322 (OP-1)</strong></td>
<td>Review and update to non-CPUC HFRA complete</td>
<td>System Operating Bulletin (SOB) 322 was revised to include additional details on operating restrictions during elevated fire weather threats, blocking subtransmission reclosers, fast curve settings, and operations during PSPS events.</td>
<td><strong>Complete</strong></td>
</tr>
<tr>
<td><strong>Hire Additional Staff for Wildfire Infrastructure Protection Team (OP-2)</strong></td>
<td>Hired one additional meteorologist</td>
<td>Completed hiring of one additional meteorologist for the Wildfire Infrastructure Protection Team.</td>
<td><strong>Complete</strong></td>
</tr>
</tbody>
</table>
Enhanced Overhead Inspections (IN-1 & IN-2)

Volume vs 2019 Goal:
- Distr. 100% of structures inspected
- Distr. 80% of notifications remediated
- Trans. 100% of structures inspected
- Trans. 40% of notifications remediated

Key Actions: All EOI P1 notifications have been remediated within compliance dates and the top 2% of REAX scored P2's have also been remediated. Remaining P2 notifications are being remediated based on required compliance dates.

QC HFRA Inspections (IN-3)

Volume vs 2019 Goal: 17,080 of 7,500 structures inspected

Key Actions: Performed quality reviews on transmission and distribution structures in HFRA based on EOI inspections, more than doubled the goal amount, no further actions expected.

Infrared Inspection of Hot Spots on Overhead Distribution Facilities and Equipment (IN-4)

Volume vs 2019 Goal: Approximately 15% completed of goal

Key Actions: Distribution IR Scanning encountered a slow start due to GIS system data discrepancies; however, data issues have been resolved and production will increase significantly in September. The program has identified several severe hotspot conditions in Redlands District (switches, splices, connectors) and several hot connectors in Arrowhead district.

Enhanced Overhead Inspections & HD Imagery

On Track

Infrared Inspection, Corona Scanning, and High Definition Imagery of Overhead Transmission Facilities and Equipment: Complete IR, Corona and HD Image Scanning of All Overhead Transmission Lines in HFRA (IN-5.1)

Volume vs 2019 Goal: 5,716 of 6,513 miles planned of overhead transmission lines have been flown utilizing IR and Corona scanning. 452 miles were loaded above 40% of rated capacity.

Key Actions: Data collection was temporarily restarted in June to collect IR/Corona data on generation ties coming out of Big Creek and Bishop. That data has been provided to Transmission Engineering for analysis and has since been received back. All data collection is currently on hold until ground temperatures decrease.

Infrared Inspection, Corona Scanning, and High Definition Imagery of Overhead Transmission Facilities and Equipment: Integrate Remediation with EOI Activities (IN-5.2)

Volume vs 2019 Goal: Collaborating with Transmission Engineering to integrate remediation with their EOI work.

Key Actions: Any Priority 1 conditions or notification items are immediately provided to Transmission for evaluation and remediation. Priority 2 and 3 notifications will go through gate keeping and are entered into SAP with a completion date based on fire tier compliance timelines.
**WMP Activities Status vs. WMP Activity Goals**

### System Hardening Activities

#### WCCP (SH-1)
**Volume vs 2019 Goal:** 81 of 96 (84%) circuit miles installed  
**Key Actions:** 324 circuit miles of non-Grid Resiliency overhead conductor work has been redesigned for covered conductor in HFRA. Some of this work will be executed in 2019. Advancing a portion of work scheduled to begin construction in 2020 to 2019.

#### Composite Pole Installation (SH-3)
**Volume vs 2019 Goal:** 145 of 1,100 (13%) poles installed  
**Key Actions:** The current plan to meet the 1,100 composite pole installations is more heavily weighted with installations in Q4 2019 as compared to the original goal plan created in 2018. Work orders including approximately 900 composite poles are in construction and are expected to be complete by year-end. In addition, construction of two circuits have been advanced from 2020 to 2019. Current outlook is Activity is expected to meet goal by year-end.

#### Evaluation of Undergrounding in HFRA (SH-2)
**Volume vs 2019 Goal:** On track to conduct assessment of undergrounding for HFRA  
**Key Actions:** SCE has identified high risk circuit segments in HFRA for internal evaluation and consideration as a potential wildfire risk mitigation. SCE has assembled cross-functional teams including engineering, risk, and local district personnel to further evaluate potential underground scope at a local level for mitigation effectiveness, construction feasibility, and conditions/attributes that support undergrounding of overhead lines to mitigate wildfire risk.

#### Current Limiting Fuses (SH-4)
**Volume vs 2019 Goal:** 7,441 of 7,500 (99%) fuse locations completed  
**Key Actions:** Contractors on track to meet targets.
System Hardening Activities

**Install 50 Remote Controlled Automatic Reclosers (RARs) (SH-5)**
Volume vs 2019 Goal: 4 of 50 (8%) RARs installed. Although the goal plan assumed 10 installations per month from August through December, the current plan accelerates RAR installations and will result in being ahead of plan each month until the goal is met. **Key Actions:** Additional RARs are being accelerated from 2020 to help ensure the successful 2019 outcome for RAR installations.

**RAR Settings (SH-6)**
Volume vs 2019 Goal: 139 of 150 (93%) existing RAR settings Key Actions: Install remaining 11 RAR settings in substations by year end to meet 2019 goal.

**Circuit Breaker Fast Curve: Develop Engineering Plan to Upgrade Remaining Circuit Breaker Relays and Update Settings (SH-7.1)**
Volume vs 2019 Goal: CB relays and update settings SH-7.1.A: 60 Substations with 300 circuits scoped SH-7.1.B: 45 Substations with 68 circuits being scoped **Key Actions:** 7.1.A Projects scoped and handed off for design. 7.1.B Job walks scheduled for scoping activities to be completed by year-end.

**Circuit Breaker Fast Curve: Execute Circuit Breaker Relay and Settings Upgrades according to plan (SH-7.2)**
Volume vs 2019 Goal: All projects have commenced engineering design, engineering contracts have been issued to the regional engineering vendors who are currently working on the design. Construction dates are being scheduled. **Key Actions:** SH-7.2.A Engineering Milestone - Complete engineering for 22 stations by 3/25/2020, SH-7.2.B Major Materials – Complete procurement of major material for 22 stations by 9/7/2020, SH-7.2.C Construction Complete – In-Service 22 stations by 12/31/2020
WMP Activities Status vs. WMP Activity Goals

**Situational Awareness Activities**

**Weather Stations (SA-1)**
*Volume vs 2019 Goal:* 277 of 315 (88%) Weather stations complete
*Key Actions:* Preparing crews for more rural areas; install pace will slow due to accessibility challenges with remote locations of remaining sites

**Fire Potential Index Phase 2: Enhance Capabilities of FPI (SA-2)**
*Volume vs 2019 Goal:* Enhanced capabilities of FPI by increasing granularity, adding historical climatology data, and expanding to cover all of SCE’s service territory.
*Key Actions:* Fire Potential Index (FPI) Phase 2 consisted of the FPI being calculated at the circuit level across its HFRA below 6,000 feet.

**HD Cameras (SA-3)**
*Volume vs 2019 Goal:* 56 of 62 (90%) HD cameras installed
*Key Actions:* SCE and UCSD working in close coordination with local fire agencies for new camera locations. SCE working closely with local fire agencies and SCE fire management team to site the remaining locations.

**Procure and Install High Performance Computing Cluster Weather and Fuels Modeling System (SA-4)**
*Volume vs 2019 Goal:* 0 out of 2 HPCCs operational
*Key Actions:* Continue to support vendor in operationalizing HPCC at primary site, expected Q3. Backup site expected to be operational in Q4. Expecting to meet goal by year end.

**Develop Asset Reliability & Risk Analytics Capability (SA-5)**
*Volume vs 2019 Goal:* Complete implementation of advanced analytics platform and tools.
*Key Actions:* SCE has completed an initial prototype of its in-house analytics capabilities to assess the structures/poles and associated conductor with the highest probability for wildfire ignition. SCE will continue to develop and mature its ignition modeling and the ability of wildfire mitigations to reduce risk at a structure/pole/conductor level.
## WMP Activities Status vs. WMP Activity Goals

### Vegetation Management Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Volume vs 2019 Goal</th>
<th>Key Actions</th>
<th>Volume vs 2021 YTD</th>
<th>Key Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Perform Tree Specific Threat Assessments (VM-1.1)</strong></td>
<td>50,845 of 125,000 trees (83% of YTD target)</td>
<td>Continue weekly discussions with Assessment contractors regarding status of resource commitments for certified arborists.</td>
<td>49% of target</td>
<td>Continue removal of dead, diseased, or dying trees.</td>
</tr>
<tr>
<td><strong>Perform Risk-based Tree Removals (VM-1.2)</strong></td>
<td>1,006 of 7,500 trees (44% of YTD target)</td>
<td>Address roadblocks for 9,400+ removal prescriptions in inventory. Streamline process for obtaining environmental clearance and permission from private and public property owners. Continue to strategize locations for assessment based on risk posed by tree density and patrol frequency in addition to wildfire potential. Likely will not meet goal due to lack of agency approvals.</td>
<td>13% of target</td>
<td>Continue historic removal of dead, diseased, and dying trees.</td>
</tr>
<tr>
<td><strong>Inspect and Clear Brush Around Poles (VM-2)</strong></td>
<td>49,265 of 100,000 poles (99% of YTD target)</td>
<td>Contractor continues to add resources needed to complete work on increased pole population.</td>
<td>13% of target</td>
<td>Continue to clear brush around poles as needed.</td>
</tr>
<tr>
<td><strong>Achieve Tree-to-line Clearance Distance of 12 Feet in HFRA (VM-3)</strong></td>
<td>Obtain clearance distance of 12’ as achievable</td>
<td>New standard (12’ at time of trim) for distribution voltages piloted in Q1 and Q2. Implemented across HFRA for pruning taking place in June and beyond. Tree-specific exceptions evaluated to ensure regulatory clearance distance maintained. Hired “notification consultants” to provide direct customer interaction and address local opposition to deeper pruning. Working with local governments that have imposed additional restrictions/approvals to deeper cuts.</td>
<td>128% of target</td>
<td>Independent QC of annual pruning implemented across territory. Evaluates clearance distance obtained and prioritizes higher QC volume in HFRA. Work is ongoing in accordance with annual cycle.</td>
</tr>
<tr>
<td><strong>Perform All Quarterly DRI Inspections (VM-4.1)</strong></td>
<td>&gt;96% of active inventory removed less than 180 days old</td>
<td>Continue historic continuous inspections (repeating approximately every 3 months) of areas identified by the CA Tree Mortality Task Force to identify trees that are dead, diseased, or dying.</td>
<td>7,793 of 7,793 trees identified for removal in 2019 YTD</td>
<td>Continue historic quarterly DRI inspections.</td>
</tr>
<tr>
<td><strong>DRI Tree Inspections &amp; Removals (VM-4.2)</strong></td>
<td>7,793 of 7,793 trees identified for removal in 2019 YTD</td>
<td>6,970 trees removed in 2019 YTD</td>
<td>Year-end outlook tracking to ~50% of ~30,000 WMP metric forecast</td>
<td>Continue historic tree removals.</td>
</tr>
<tr>
<td><strong>LiDAR Inspections of Transmission (220kV and above) (VM-5)</strong></td>
<td>290 of 1,000 circuit miles flown (174% of YTD target)</td>
<td>Executed four contracts to obtain LiDAR data on all bulk transmission lines and select sub-transmission lines. Vegetation data received in Q2 is being used to identify trimming locations in Big Creek area to ensure sufficient clearance under maximum conductor sag and sway conditions.</td>
<td>29% of target</td>
<td>Continue to use LiDAR data for transmission line inspections.</td>
</tr>
<tr>
<td><strong>Inspect Vegetation Adjacent to T&amp;D Circuit Miles (VM-6.1 &amp; VM-6.2)</strong></td>
<td>Inspected vegetation adjacent to 476 of 450 distribution circuit miles and 511 of 400 transmission circuit miles</td>
<td>Independent QC of annual pruning implemented across territory. Evaluates clearance distance obtained and prioritizes higher QC volume in HFRA. Work is ongoing in accordance with annual cycle.</td>
<td>106% of target</td>
<td>Continue to inspect vegetation adjacent to circuit miles.</td>
</tr>
</tbody>
</table>

*Note: All percentages are based on the target set for each activity.*
## Alternative Technology Activities

<table>
<thead>
<tr>
<th>Surge Arrestor Units</th>
<th>50% Units Installed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alternative Technology Pilots: Pilot Installation of 50 CAL FIREF-exempt Surge Arrestor Units (AT-1.1)</strong></td>
<td></td>
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<tr>
<td><strong>Volume vs 2019 Goal:</strong> 25 of 50 pilot units installed</td>
<td></td>
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<tr>
<td><strong>Key Actions:</strong> Pilot units being installed in Victorville District and plan to have all pilot units installed by end of year.</td>
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<thead>
<tr>
<th>Meter Alarming</th>
<th>Complete</th>
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</thead>
<tbody>
<tr>
<td><strong>Alternative Technology Pilots: Pilot Meter Alarming for Downed Energized Conductor (AT-1.2)</strong></td>
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</tr>
<tr>
<td><strong>Volume vs 2019 Goal:</strong> Completed pilot meter alarming for downed energized conductor</td>
<td></td>
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<tr>
<td><strong>Key Actions:</strong> Pilot is now operational system wide</td>
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<thead>
<tr>
<th>Fault Devices</th>
<th>On Track</th>
</tr>
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<tbody>
<tr>
<td><strong>GSRP Wildfire Mitigation: Evaluate Distribution Fault Anticipation Devices (AT-2.1)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Volume vs 2019 Goal:</strong> Evaluate fault technology and complete pilot installation of at least 10 DFA devices. Engineering design is complete for 60 DFA devices to be installed at 7 substations. 0 installations have been completed as of August 2019.</td>
<td></td>
</tr>
<tr>
<td><strong>Key Actions:</strong> Install all devices per plan prior to year-end. First device will be installed October 2019.</td>
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<tr>
<th>Unmanned Aerial Systems</th>
<th>On Track</th>
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</thead>
<tbody>
<tr>
<td><strong>GSRP Wildfire Mitigation: Evaluate Beyond Visual Line of Sight Unmanned Aerial System (AT-2.2)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Volume vs 2019 Goal:</strong> Develop statement of work, issue RFP, select vendor, and perform demonstration flights</td>
<td></td>
</tr>
<tr>
<td><strong>Key Actions:</strong> Next steps include issuing the purchase order, conducting UAV patrol flights, and drafting a final report on successes, lesson-learned, and suggestions for operationalization</td>
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</tbody>
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<tr>
<th>Fault Current Limiters/ Arc Suppression Coils</th>
<th>On Track</th>
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<tbody>
<tr>
<td><strong>Alternative Technology Evaluations: Evaluate Rapid Earth Fault Current Limiters/Arc Suppression Coils (AT-3.1)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Volume vs 2019 Goal:</strong> Conduct assessment by end of 2019</td>
<td></td>
</tr>
<tr>
<td><strong>Key Actions:</strong> Candidate substations/circuits identified and engineering models for pilot substation built. Simulation testing targeted for late September.</td>
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<thead>
<tr>
<th>Fault Detection</th>
<th>On Track</th>
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<tbody>
<tr>
<td><strong>Alternative Technology Evaluations: Evaluate Alternate Fault Detection Technology (AT-3.2)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Volume vs 2019 Goal:</strong> Conduct technology assessment by end of 2019</td>
<td></td>
</tr>
<tr>
<td><strong>Key Actions:</strong> Open Phase Protection - 12 units installed in alarming mode for monitoring. Pilot radio deployment targeted for October. Lab testing of isolation banks targeted for late September.</td>
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<thead>
<tr>
<th>Fire Retardant Pole Wraps</th>
<th>Complete</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alternative Technology Evaluations: Evaluate Fire Retardant Barrier for Wood Poles (AT-3.3)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Volume vs 2019 Goal:</strong> Evaluate use of wood pole with protective barrier</td>
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<tr>
<td><strong>Key Actions:</strong> Completed evaluation of new fire-retardant wrap for wood poles as an alternative to fire-resistant composite poles; published associated design standards. Implementing fire-retardant wrap based on positive testing.</td>
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<table>
<thead>
<tr>
<th>Fuses</th>
<th>On Track</th>
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</thead>
<tbody>
<tr>
<td><strong>Alternative Technology Evaluations: Evaluate Substation-class Electronic Fuses (AT-3.4)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Volume vs 2019 Goal:</strong> Conduct technology assessment by end of 2019</td>
<td></td>
</tr>
<tr>
<td><strong>Key Actions:</strong> In process of hiring vendor to complete assessment. Anticipate completing assessment by year-end.</td>
<td></td>
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</tbody>
</table>
## Alternative Technology Activities (Cont.)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Status</th>
<th>Details</th>
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</table>
| **Branch Line Protection**                                               | On Track                      | **Alternative Technology Evaluations: Evaluate Branch Line Protection to Include Single Phase Reclosing (AT-3.5)**  
**Volume vs 2019 Goal:** Complete evaluation  
**Key Actions:** Published pilot FuseSaver standards. Material being finalized for pilot unit installs. Targeting 4th quarter installation of 8 pilot units in Menifee. Evaluation expected to be completed by year end. |
| **Vibration Dampers**                                                    | On Track                      | **Alternative Technology Implementation: Develop Standard Installation Practices for Aeolian Vibration Dampers (AT-4.1)**  
**Volume vs 2019 Goal:** Evaluate need for aeolian vibration dampers publish standards for use. Standards published for use of aeolian dampers with existing conductor.  
**Key Actions:** SCE is working with vendors on product evaluation for need and use of aeolian dampers with covered conductor. |
|                                                                          |                               | **Conductor Rebuild Standards**  
**Complete**  
**Dist. Overhead Requirements**  
**Complete**  
**Volume vs 2019 Goal:** Standards published and operational  
**Key Actions:** Installation practices updated for inclusion of ridge pin construction in high wind areas and is operational. |
|                                                                          |                               | **Alternative Technology Implementation: Update Distribution Overhead Requirements for Connector Selection in HFRA (AT-4.3)**  
**Volume vs 2019 Goal:** Design and Construction standards published for connector selection for use in HFRA  
**Key Actions:** The connector selection standards updated to require the use of CAL FIRE exempt bolted wedge connectors when working in HFRA. |
WMP Activities Status vs. WMP Activity Goals

### Emergency Preparedness Activities

#### Direct Mail Campaign
- **Status:** On Track
- **Volume vs 2019 Goal:** On track to reach approximately 1.5 million customers in HFRA through 2019 direct mailer
- **Key Actions:** SCE’s Dear Neighbor letter to be sent to each customer in HFRA commenced on 9/5. Dear Neighbor Letter for customers in non-HFRA is under review and the target mail date by early October.

#### Develop Local Meeting Plans
- **Status:** Complete

#### Execute Local Meeting Plans
- **Status:** 72% Cities Engaged
- **Volume vs 2019 Goal:** 105 of 145 (72%) community meetings
  - **Key Actions:** On track. Of the 145 cities in HFRA, SCE has met with 105 cities as of 9/5/2019

#### WF Response Training
- **Status:** On Track

### Customer Education and Engagement: Conduct a Direct Mail Campaign for HFRA (DEP-1.1)
- **Volume vs 2019 Goal:** On track to reach approximately 1.5 million customers in HFRA through 2019 direct mailer
- **Key Actions:** SCE’s Dear Neighbor letter to be sent to each customer in HFRA commenced on 9/5. Dear Neighbor Letter for customers in non-HFRA is under review and the target mail date by early October.

### Customer Education and Engagement: Develop Local Government Education and Engagement Meeting Plan (DEP-1.2)
- **Volume vs 2019 Goal:** Develop meeting plan
- **Key Actions:** Local Government Education and Engagement Community Meeting Plan has been developed and is the framework for SCE’s execution.

### Customer Education and Engagement: Execute Local Government Education and Engagement Meetings According to Plan (DEP-1.3)
- **Volume vs 2019 Goal:** 105 of 145 (72%) community meetings
- **Key Actions:** On track. Of the 145 cities in HFRA, SCE has met with 105 cities as of 9/5/2019

### Emergency Responder Training: Wildfire Response Training for New or Existing Responders (DEP-2.1)
- **Volume vs 2019 Goal:** Wildfire response training for new or existing responders
- **Key Actions:** Currently conducting training sessions for PSPS Incident Management Teams; On track to meet year-end goal

### Emergency Responder Training: Conduct Internal IMT Training Around Wildfire Response and De-energization Protocols (DEP-2.2)
- **Volume vs 2019 Goal:** Conduct internal IMT Training around wildfire response and de-energization protocol
- **Key Actions:** Conducted initial training of 175 persons on PSPS Incident Management Teams; Have continued to train additional persons as needed and identified and will continue trainings as needed.

### Bolster Incident Mgmt. & Support: Determine Positions That Need Enhanced Staffing (DEP-3.1)
- **Volume vs 2019 Goal:** Currently expanding teams to enable additional scalability and additional training sessions will be held for new personnel being added to the teams; On track to meet year-end goal
- **Key Actions:** Stood up dedicated PSPS IMT and Task Force effective June, 2019. Provided specialized training and exercises for all PSPS IMT and Task for members.

### Bolster Incident Mgmt. & Support: Train, Exercise, and Qualify New Staff to Meet Identified Need (DEP-3.2)
- **Volume vs 2019 Goal:** Currently expanding teams to enable additional scalability and additional training sessions will be held for new personnel being added to the teams; On track to meet year-end goal
- **Key Actions:** Stood up dedicated PSPS IMT and Task Force effective June, 2019. Provided specialized training and exercises for all PSPS IMT and Task for members.