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2021 WILDFIRE MITIGATION PLAN UPDATE

Vegetation Management: Inspection, Strategy and Pilots

2021 WMP Update Technical Workshop
February 22, 2021

Agenda

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Topics

1. Vegetation Management Category Overview
2. Vegetation Management Program Key Changes
3. Vegetation Management, Strategy, Inspections, Work Management System

Vegetation Management Category Overview

Category Overview

- Prevent risks to public safety and system reliability by managing vegetation in proximity to our electric facilities
- Continue & expand key vegetation management programs and initiatives such as inspections, enhanced line clearances and quality control
- Specific vegetation wildfire mitigation activities performed in HFRA include:
    - Hazard Tree Management Program (HTMP) to assess 150,000-200,000 trees annually and perform timely mitigations
    - Dead and Dying Tree Removal Program inspections and timely mitigations
    - Plan to pole brush between 200,000 and 300,000 Distribution poles

Vegetation Management Key Program Changes

Key Program Changes from 2020 WMP to the 2021 WMP

- Transition from Reax to SCE's Wildfire Risk Reduction Model (WRRM) for risk-informed decision-making
    - Applies to hazard tree assessments, QC sampling, and supplemental patrols
- SCE will develop an initial Tree Risk Index model by Q4 2021 to adjust inspection cycles and/or trimming distance
- At-risk species: develop approaches to reduce incidences of palms contacting conductors, with an emphasis on removals
- Increase contractor engagement on quality, including treatment of at-risk species
- Explore use of distribution LiDAR to align with trim cycles
- Increase public and agency engagement regarding notification and trimming practices
- Begin implementing a new work management system that can manage all VM activities in a single tool, including emergent work

Vegetation Management Strategy

- Reduce or eliminate risk of vegetation to conductor contact
  - Continue work towards achieving goals for enhanced clearance so clearances are maintained for a full annual cycle
  - Remove trees that cannot maintain clearance for a full annual cycle (intent is to limit visits to customer property)
  - Remove trees that are “fall-in” and "blow in" risks (Hazard Tree Management Plan and Dead and Dying Tree Program)
- SCE will use WRRM outputs based on risk specific to genus and/or location to develop the Tree Risk Index, which will expand risk modeling to incorporate specific tree characteristics
  - Once validated, SCE plans to use this model to initiate discussions on potential modifications to vegetation inspection and/or pruning based on specific vegetation characteristics; and to improve its asset-based probability of ignition (POI) models.
- Improved customer and community engagement includes updating communications for planned work, such as door notifications and targeted e-mails/postcards, increased local agency discussions, and initiating surveys to obtain direct customer feedback and create baseline metrics

Vegetation Management Inspections

- The following inspections are performed as part of SCEs Vegetation Management Program:
  - Routine Line Clearing inspects and mitigates the risk of potential ignitions caused by vegetation encroachments
  - Pole Brushing inspects and removes vegetation at the base of distribution poles to reduce the probability of ignition and/or fire spread due to a spark or contact from failed equipment
  - Hazard Tree Management entails detailed inspection and evaluation of trees that pose risks despite trimming and pruning, and appropriate mitigations up to removal of these trees
  - The Dead and Dying Tree Program inspects and removes dead, dying, or diseased trees affected by drought conditions and/or insect infestation
  - LiDAR is the preferred inspection methodology for determining vegetation encroachments caused by sag and sway/line dynamics on bulk transmission lines
    - The feasibility of performing LiDAR inspections on distribution is being evaluated

Vegetation Management Work Management System

- SCE Vegetation Management Work Management System (Arbora)
  - SCE plans to consolidate various digital tools into an integrated vegetation management platform, Arbora, in order to enhance efficiency, risk modeling, communication, reporting, planning and scheduling
  - The platform's underlying, cloud-based software will include process orchestration, automation, mobile tools, and an integrated repository across all programs to support collaboration with customers, arborists, environmental regulators, and utility regulators
  - SCE plans an incremental phased approach to implement Arbora to all SCE Core Vegetation Management programs continuing through 2021 with full implementation anticipated for 2022
- Dead and Dying Tree Program VM Work Management System Pilot
  - The VM Work Management System is being piloted in the Dead & Dying Tree Program and after demonstrating early success in scheduling functionality, the pilot is now focused on reducing cycle time for inspections and remediations in the field
  - Success factors for determining the efficacy of the VM Work Management Tool for the Dead and Dying Tree Program pilot include an increase in efficiency & visibility of work across various VM programs. These efforts are in line with the overall WMP goal of removing fuel throughout SCE's high-risk areas

Thank You