



# Lesley K. McAllister Symposium on Climate and Energy Law

## The Impacts of Wildfires

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# Executive Summary

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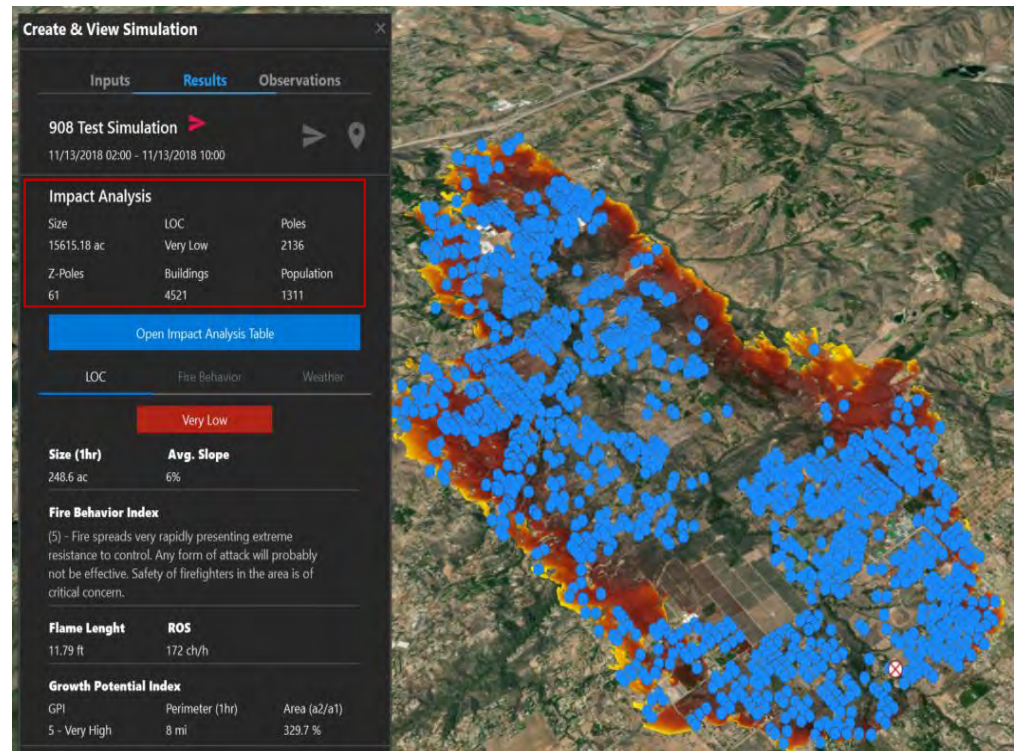
The purpose of this presentation is to provide an overview of SDG&E's enhancements since last fire season that will help provide community resilience and mitigate wildfire risk and improve community and stakeholder awareness

- Significant work has occurred in the implementation of SDG&E's Wildfire Mitigation Plan
- New tools to enhance operational decision making
  - Weather technology enhancements
  - New vegetation risk index
  - New inspection technology
- Additional hardening programs have been implemented
- Enhanced stakeholder awareness events and customer notifications

# Weather Technology Enhancements

*SDG&E continues to integrate big data, artificial intelligence and advanced analytics into meteorological operations through the analysis of additional data including tree trimming records and outage history*

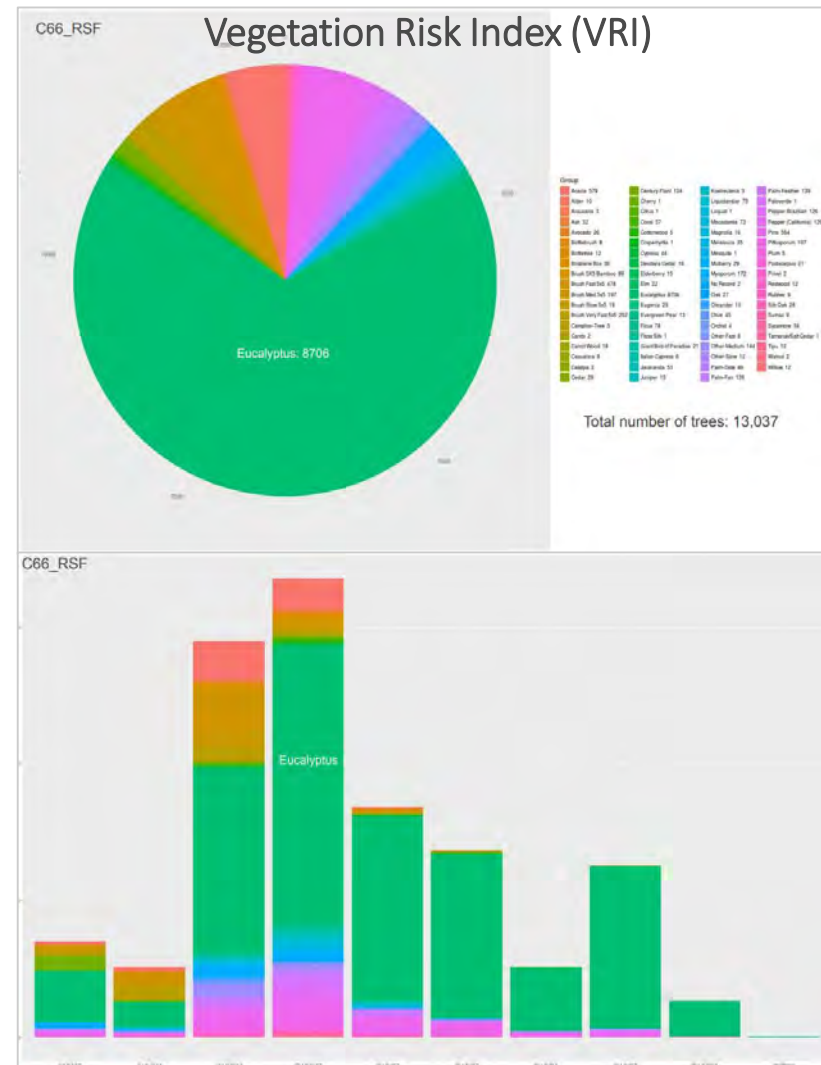
- Weather network is being upgraded to install additional stations in the Wildland Urban Interface (WUI) and enable 30-second data to support emergency operations
- SDG&E's fire behavior models have been synched with census data to further define the highest risk areas with respect to population density and structures
- SDG&E's Fire Potential Index has been upgraded to include more granular weather data from internal super computing program



# Improved Operational Decision Making Tools

*SDG&E's Fire Scientists and Vegetation Managers have developed a new Vegetation Risk Index (VRI) to support decision making and improve operations during periods of high fire danger*

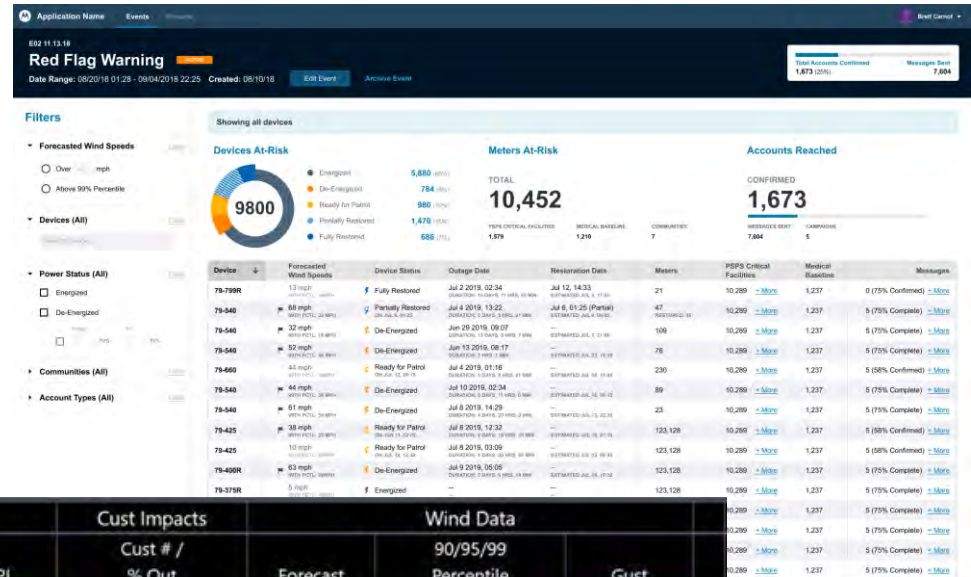
- The new tool quantifies the risk associated with vegetation by analyzing:
  - Total number of trees in the vicinity of a circuit
  - Height of trees
  - Tree species
  - Historical tree related outages
- Key benefits:
  - Assist in operational decisions during fire weather events
  - Prioritize vegetation management efforts
  - Enable more data-driven enhanced vegetation management program



# Improved Operational Decision Making Tools

*Upgraded Situational Awareness Dashboards have been developed to support decision making*

- Situational Awareness Dashboards include:
  - Circuit-level vegetation risk
  - Historical wind information including the identification of the 95th and 99th percentile wind speeds
  - Customer communication analytics



Anemometer	ID Data			Sub/Dist/FPI	Cust Impacts		Wind Data	
	VRI	Circuit	Tie Line		Cust # / % Out	Forecast	90/95/99 Percentile	Gust
Santa Ysabel North	X	220,221,222	625	ST/NE/14	5678 / 3%	78	60/65/70	25
School House Canyon	X	67,68,69	625	ST/NE/14	5678 / 3%	78	60/65/70	25
West Rancho Bernardo	N	220,221,222	625	ST/NE/14	5678 / 3%	78	60/65/70	25
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# New Infrastructure Hardening Programs

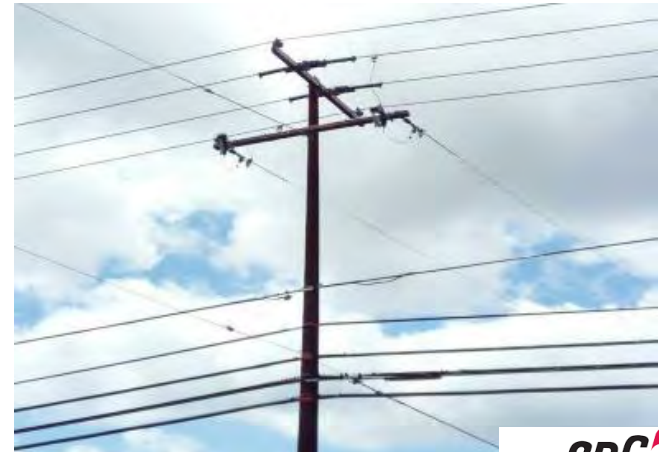
*Infrastructure enhancements will reduce the risk of catastrophic wildfires*

## Pole Risk Mitigation + Engineering (PRiME)

- Documented pole loading calculations for all poles in SDG&E's service territory (starting in HFTD)
- Leverages improved methodologies including LiDAR<sup>(1)</sup> imaging, PLS-CADD<sup>(2)</sup> modeling software, and weather data to perform pole loading assessments of SDG&E's service territory
- Poles requiring construction activities will be remediated as they are identified
- The team replaced over 375 poles in 2019<sup>(3)</sup> and plans to remediate ~700 by year-end
- Additional ~1,700 poles targeted in 2020

## Wire Safety Enhancement (WiSE)

- Targeted replacement of small conductor in the Wildland Urban Interface and coastal canyon areas
- Rebuilding overhead infrastructure to fire hardened construction standards
- 9 circuits targeted in 2019



1) Light Detection and Ranging (LiDAR)

2) Power Line Systems – Computer Aided Design and Drafting (PLS-CADD)

3) As of June 2019

# Increased Stakeholder Awareness

*SDG&E has conducted several community events to promote wildfire preparedness, resiliency and safety*

- **Open Houses** | Six events across high risk fire areas to educate customers and promote community preparedness
- **Wildfire Resiliency Fairs** | Three events with several community partners :
  - Feeding San Diego
  - Fire Safe Councils
  - SD County Animal Services
  - San Diego Food Bank
  - SD Humane Society
  - Sheriff Departments
  - Sunrise Power Link Grant Program (Alpine Fair)
  - 2-1-1 San Diego
  - American Red Cross
  - Cal-Fire
  - California Highway Patrol
  - Community Emergency Response Team
  - Cleveland National Forest
  - County OES<sup>(1)</sup>
- **Operation Fire Safe** | A company and community-wide event to enhance wildfire preparedness will take place August 7



1) San Diego County Office of Emergency Services (County OES)

# Customer Notifications

*New requirements have been incorporated into processes and technologies*

## Notifications for the following audiences:

- Affected Customers
- Access and Functional Needs (AFN) Populations
- Critical Businesses + Utilities
- Public Safety Partners + First Responders
- Cal OES<sup>(1)</sup>, Cal FIRE + CPUC<sup>(2)</sup>

## SDG&E Website

- Public Safety Power Shutoff dedicated web page during events

## Communication Channels in Multiple Languages

- Email
- Text
- Phone

## Joint IOU Message Coordination with Cal OES<sup>(1)</sup>

- Direct GIS feed made available sharing PSPS information with Cal OES<sup>(1)</sup>



Outage notifications delivered in 8 languages

- English
- Vietnamese
- Mandarin
- Tagalog
- Cantonese
- Spanish
- Korean
- Russian



1) California Office of Emergency Services (Cal OES)

2) California Public Utilities Commission (CPUC)