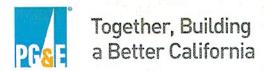
Community Pipeline Safety Initiative City of Lafayette

November 13, 2018



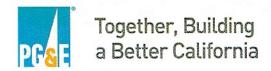
Introductions

Christine Cowsert

Senior Director, Asset Management and System Operations

Joe Echols

Program Manager, Community Pipeline Safety Initiative





TREE-BY-TREE REVIEW IN LAFAYETTE

- In 2015, we initially identified more than 1,000 trees located up to 14 feet from the gas transmission pipelines in Lafayette
- Working together with the city arborist, we conducted a tree-bytree review and found that most trees could remain in place with ongoing monitoring; 272 trees were identified as posing a safety concern
- In 2017, we completed an additional review and confirmed that 207 trees are located too close to the pipeline and need to be replaced for safety reasons





TREE-BY-TREE REVIEW CRITERIA

What does the tree-by-tree review involve?

Our pipeline integrity and risk management experts review a number of factors, including:

Tree Characteristics	Pipeline Information	Site Conditions
Tree species and size at full maturity	Pipeline depth	Ability to access pipeline in an emergency
Distance from tree to pipeline	Pipeline installation date	 Ability to access pipeline for critical maintenance work and patrols
Potential for root interaction with pipeline	Pipeline coating type	Lightning and wind exposure
Tree hazard	Pipeline size (diameter)	Seismic activity and soil instability



UNACCEPTABLE RISK TREE EXAMPLE

Pipeline Information

• Name: Line 191-1

Diameter: 12.75"

• MAOP: 497 psig

Vegetation Information

· Location: Lafayette, Calif.

· Tree Species: Cottonwood

 Approx. Diameter at Breast Height: 42" (multistem)

• Approx. Distance to Pipe: 1'

· Approx. Depth of Cover: 32"

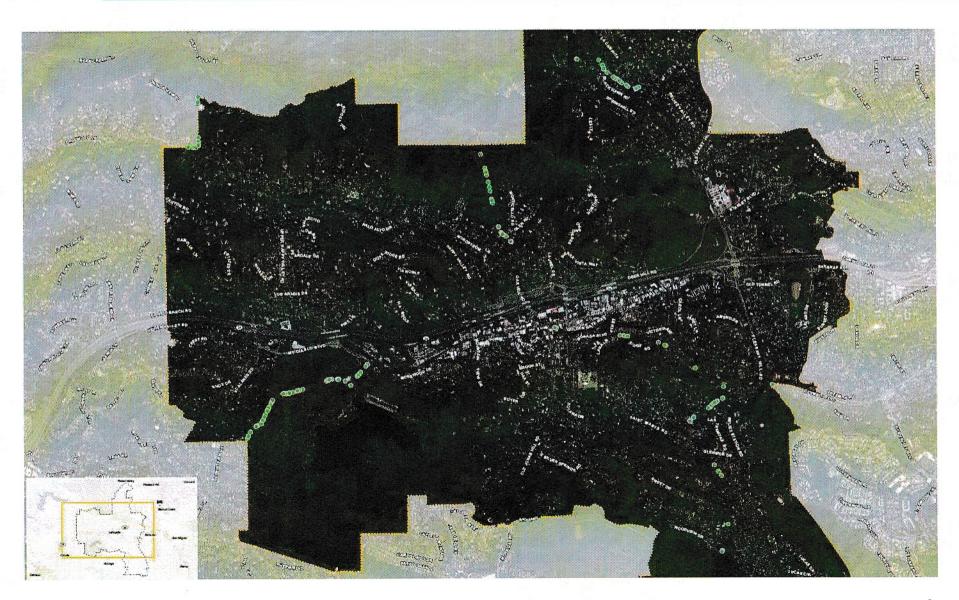
Unacceptable Risk Determination

- · Distance to pipe
- · Depth of pipe
- · Lightning and wind exposure
- Ability to access the pipeline for maintenance work





VEGETATION OVERVIEW MAP



Thank You

