

VEGETATION INSPECTION PROGRAMS FOR DISTRIBUTION CIRCUITS

PG&E	SCE	SDG&E
<ol style="list-style-type: none">1. Routine – Annual compliance inspections and trimming. Identify dead, dying, and declining trees that may fail.2. Second Patrol – Patrols six months offset from routine patrol to maintain clearances and to identify dead, dying, and declining trees in the HFTD.3. Focused Tree Inspections – Focused inspections in Areas of Concern to address areas that have experienced higher volumes of vegetation damage.4. Vegetation Management for Operational Mitigations – Reduce outages and ignitions based on historic outage information.5. Tree Removal Inventory – Work down trees identified by the legacy EVM program.	<ol style="list-style-type: none">1. Routine – Annual compliance inspections and trimming2. Cycle Buster – Patrol that occurs on a 6-month cycle to identify vegetation that will not remain in compliance until the next annual inspection and identify hazard trees in the HFRA.3. Dead and Dying Tree Program – Patrol and identify dead and dying trees for removal.4. Hazard Tree Mitigation Program – Assess live trees posing a fall-in risk.	<ol style="list-style-type: none">1. Detailed Inspections - Annual compliance inspections and trimming.2. Off-Cycle Patrol - Second annual inspection activity in the HFTD. Similar to Detailed Inspection Program but focused on the HFTD. Additional off-cycle patrols are also performed for Century plant and bamboo.

ENVIRONMENTAL LAWS + REGS CITED IN 2023 -2025 WMPS

PG&E	SCE	SDG&E	PacifiCorp	Liberty	Bear Valley
-Clean Water Act	-CEQA	-ESA	-National Forest Permit	-NEPA	-ESA
-Coastal Act	-AB 52	-NEPA	-National Park Service	-FLPMA	-CEQA
-Endanger Species Act	-CESA	-NHPA	Permit	-NFMA	-SWPPP
-Streambed Alternation	-FGC	-ARPA	-USACE Permit	-Rivers and Harbors	-NEPA
	-Native Plant Protection Act	-NAGRPA	-404 Wetland Permit	-Clean Water Act	-Highway Encroachment
	-Streambed Alteration	-Clean Water Act	-FAA Permit	-ESA	
	-CARB Regs	-Porter Cologne	-CEQA	-Tahoe Regional Compact/ Codes	
	-Porter-Cologne	-FGC	-Encroachment	-FAA Permit	
	-Coastal Act	-Natural Community Conservation Planning Act	-Right of Entry	-BIA Code	
	-Encroachment Permits	-CA PRC § 5097 et seq	-401 Water Quality	-NHPA	
	-NEPA	-Health and Safety Code		-Union Pacific regs	
	-ESA	-Native Plant Protection Act		-CPUC GO 131-D	
	-MBTA	-Desert Native Plants Act		-CA State Lands Regs	
	-BGEPA	-CEQA		-Highways Code	
	-MMPA	-AB 52		-CESA	
	-NHPA	-Traffic Control		-FGC	
	-ARPA	-Encroachment		-NPDES	
	-NAGRPA			-Discharge Permits	
	-Antiquities Act			-Parks and Rec Code	
	-PRPA			- Forest Practice Act	
	-Clean Water Act			-Health and Safety	
	-Federal Coastal Zone Management Act			-Various Local Codes and Regs	



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916.902.6000



OFFICE OF ENERGY
INFRASTRUCTURE SAFETY

BOF Workshop
Utility and Public Agency
ROW Exemption Amendments
March 19, 2024

California Geological Survey

Bill Short, PG, CHg, CEG
Supervising Engineering Geologist
Forest and Watershed Geology Program Manager
California Geological Survey
Department of Conservation
Sacramento, CA



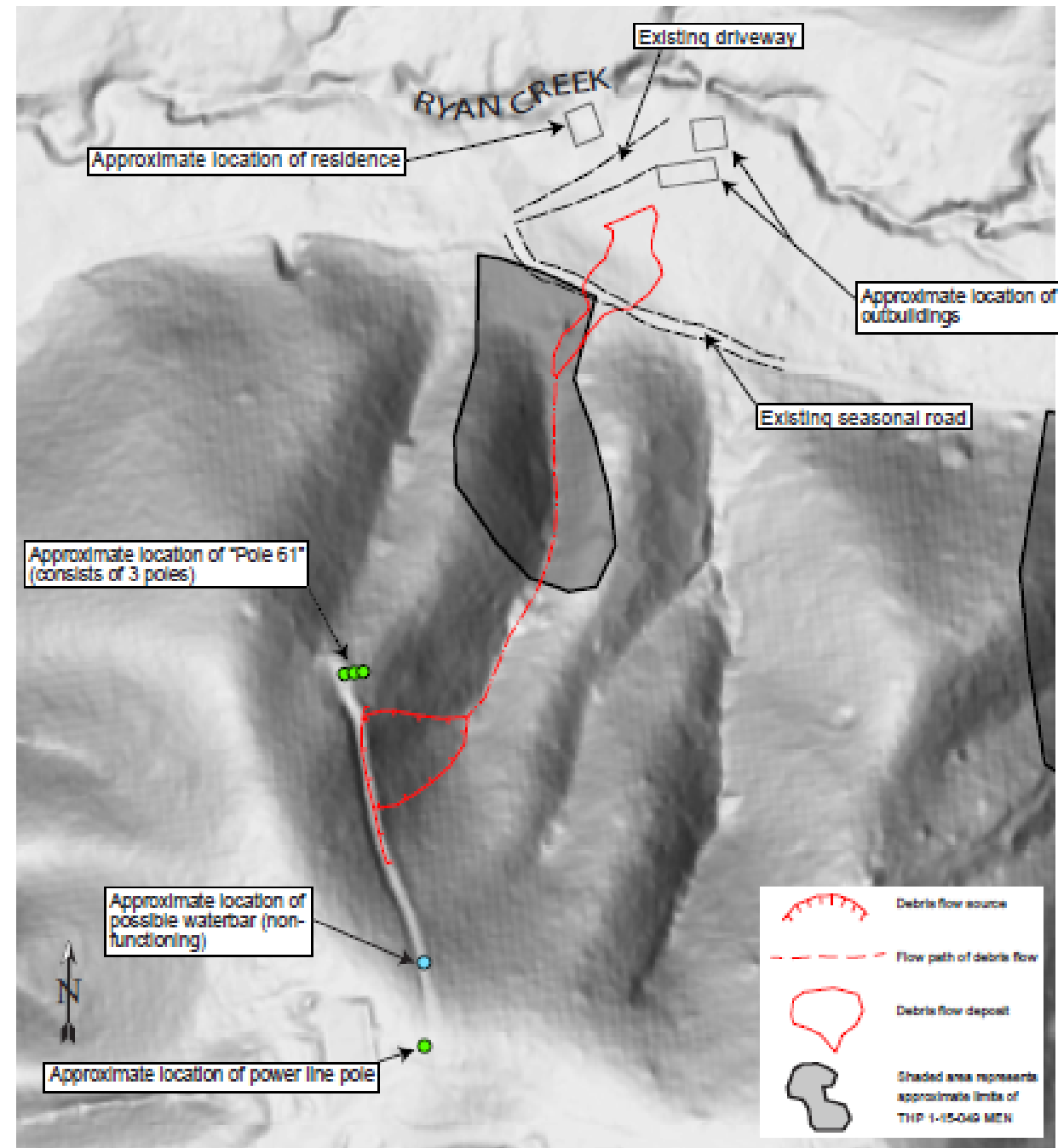
MEMORANDUM

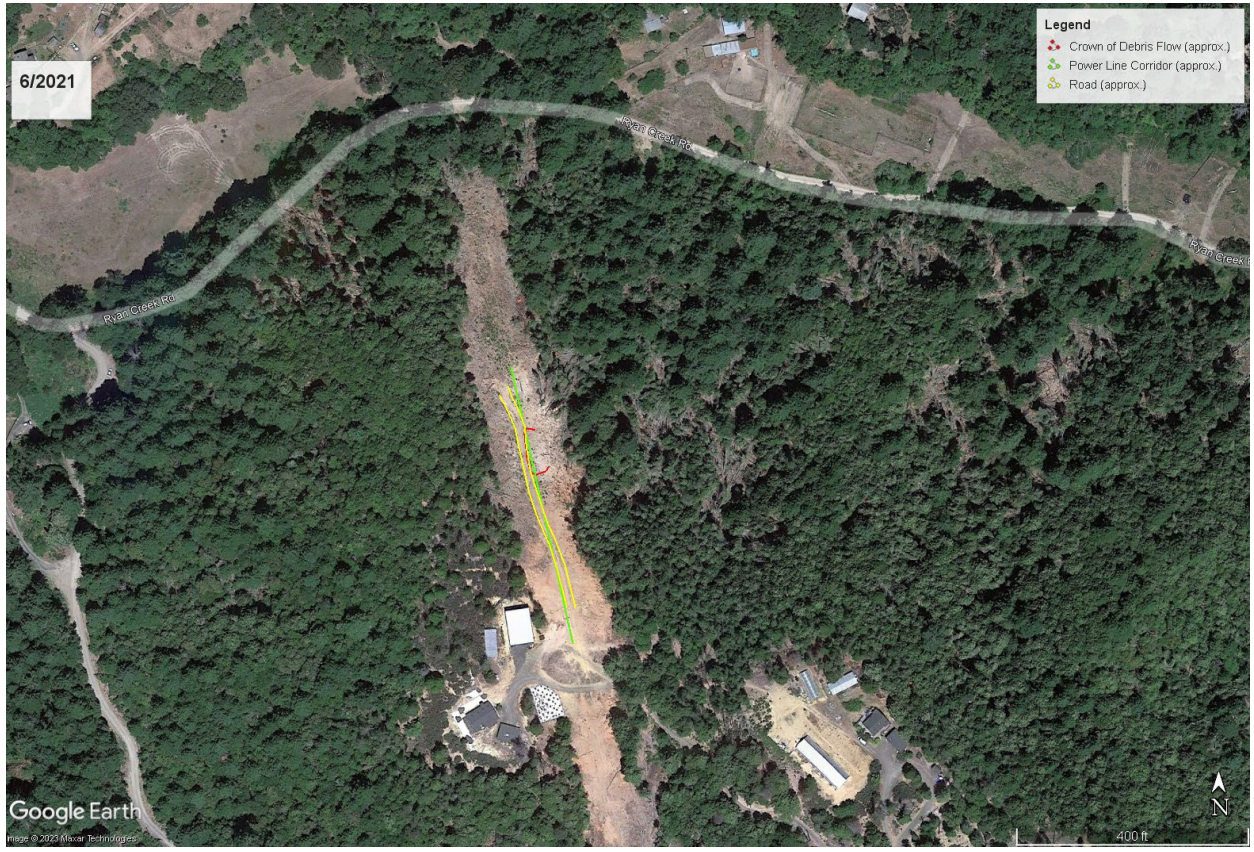
DATE: February 3, 2023 (revised February 7, 2023)

To: Colby Forrester
 Resource Manager
 California Department of Forestry and Fire Protection
 17501 N Hwy 101
 Willits, California 95490

SUBJECT: Engineering Geologic Evaluation of Debris Flow
 Non-Documented Timber Harvesting 1-23NON-00001-MEN
 Cinek Property, Mendocino County, California

**Debris Flow
 December 30, 2022**





5/2023 5/2023 2023



Image © 2024 Airbus

Public







Public



MEMORANDUM

DATE: April 12, 2023

To: Derek Bays, PG
 Engineering Geologist
 Governor's Office of Emergency Service
 3650 Schriever Ave.
 Mather, CA 95655

SUBJECT: CalOES Mission Task No. 2023-SOC-97875 - Engineering Geologic Reconnaissance of Landslide activity at 24650 Ben Taylor Road, Colfax, CA.

Debris Flow
 March 14, 2023

Public

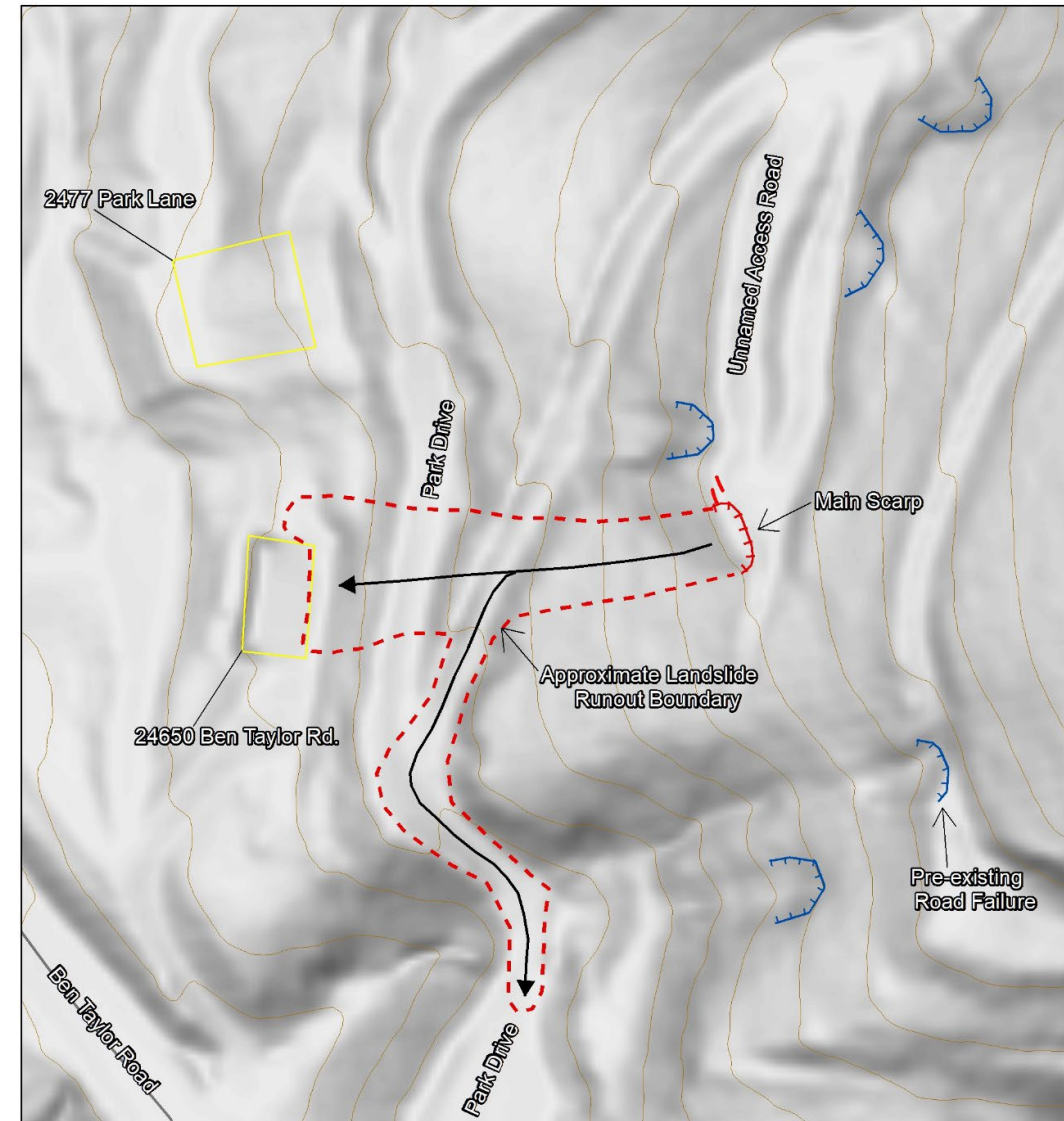
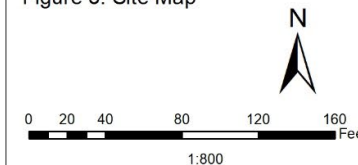


Figure 3: Site Map



Symbol Explanation	
Structure Boundaries	Approximate Landslide Runout Boundary
Roads	Arrow indicates direction of movement
5 meter Contours	Active Landslide Scarp
1 meter Lidar Shaded Relief	Pre-existing landslide feature
	Active Extension Fracture







Public

References

- California Geological Survey, 2023, Engineering Geologic Evaluation of Debris Flow Non-Documented Timber Harvesting 1-23NON-00001-MEN, Cinek Property, Mendocino County, California, February 3, 2023 (revised February 7, 2023) Memorandum from Patrick K. Brand, CEG #2542 and David Longstreth, CEG #2068, to Colby Forrester, Resource Manager, California Department of Forestry and Fire Protection, 17501 N Hwy 101, Willits, CA 95490.
- California Geological Survey, 2023, CalOES Mission Task No. 2023-SOC-97875 - Engineering Geologic Reconnaissance of Landslide activity at 24650 Ben Taylor Road, Colfax, CA, April 12, 2023 Memorandum from Margaret Parks, CEG #2767, and Matt O'Neal PG #10131, to Derek Bays, PG, Engineering Geologist, Governor's Office of Emergency Services, 3650 Schriever Ave., Mather, CA 95655.

Vegetation Management & Utility ROW Maintenance

California Board of Forestry Workshop #1
March 19, 2024





Agenda

Topic	Speakers
1. Introductions	Mark Krausse, Director – State Agency Relations
2. PG&E’s Vegetation Management Program <ul data-bbox="410 501 774 686" style="list-style-type: none">• Compliance Activities• Wildfire Mitigation• Hazard Trees• Customer Outreach• Code Conflicts	Ryan Willis, RPF, Sr. Manager – VM Distribution Execution, Sierra Region
3. PG&E’s Environmental Management Program <ul data-bbox="410 772 1531 951" style="list-style-type: none">• PG&E VM Best Management Practices (BMPs)• PG&E Environmental Review/ERTC Process for Site Specific BMPs• PG&E Internal VM Programmatic ERTCs & BMPs• PG&E Programmatic Agreement BMPs• PG&E Habitat Conservation Plans (HCPs) & Incidental Take Permits (ITPs)	Jon Wilcox, Sr. Manager – Environmental Resources & Mitigation
4. Q&A	Mark Krausse, Ryan Willis, Jon Wilcox; John Breazeal, RPF – VM Transmission; Jason Thompson, RPF – VM Wood Management

PG&E's vegetation management work occurs annually across ~100,000 miles of overhead distribution lines and equipment and is centered around the following programs:

- **Routine**
- **Second Patrol**
- **Tree Removal Inventory (TRI)***
- **Vegetation Management for Operational Mitigation (VMOM)***
- **Focused Tree Inspection (FTI)***

**These programs were rolled out in 2023 after the end of Enhanced Vegetation Management (EVM) in December 2022.*



PG&E's vegetation management work occurs annually across ~18,000 miles of overhead transmission powerlines and is performed under the following programs:

- **Annual/Routine, including Orchard**
- **Right-of-Way (ROW)**
- **Integrated Vegetation Management**
- **Second Patrol – HFTD/HFRA**



Vegetation Management Programs & Compliance Requirements

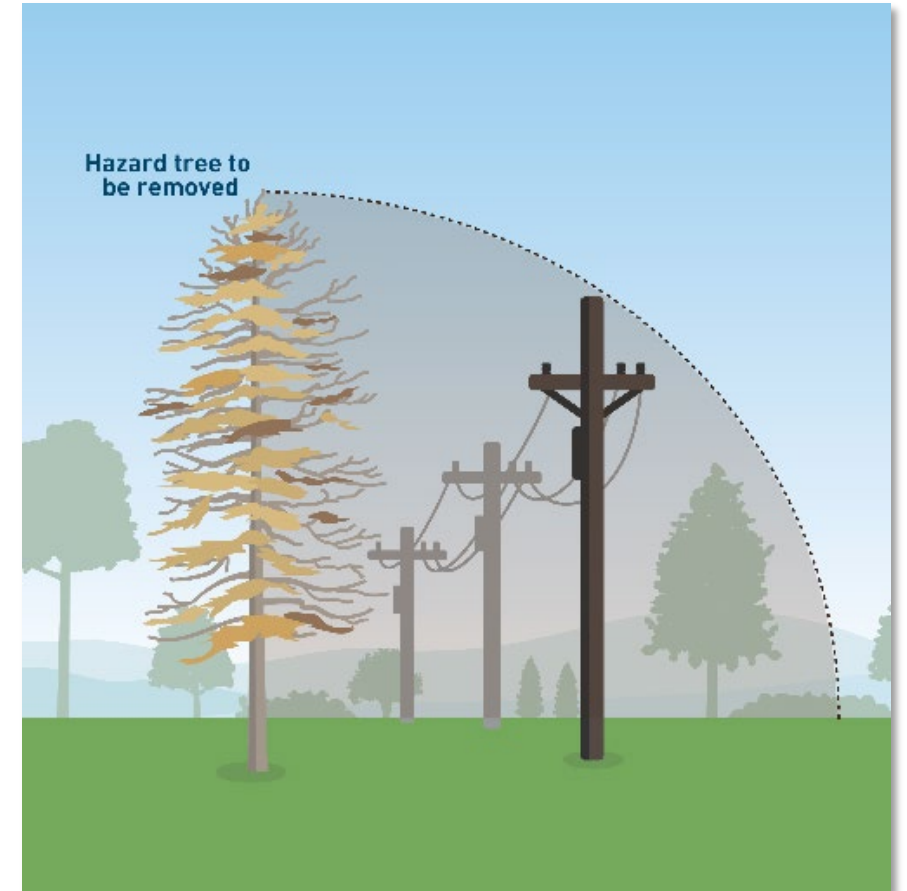
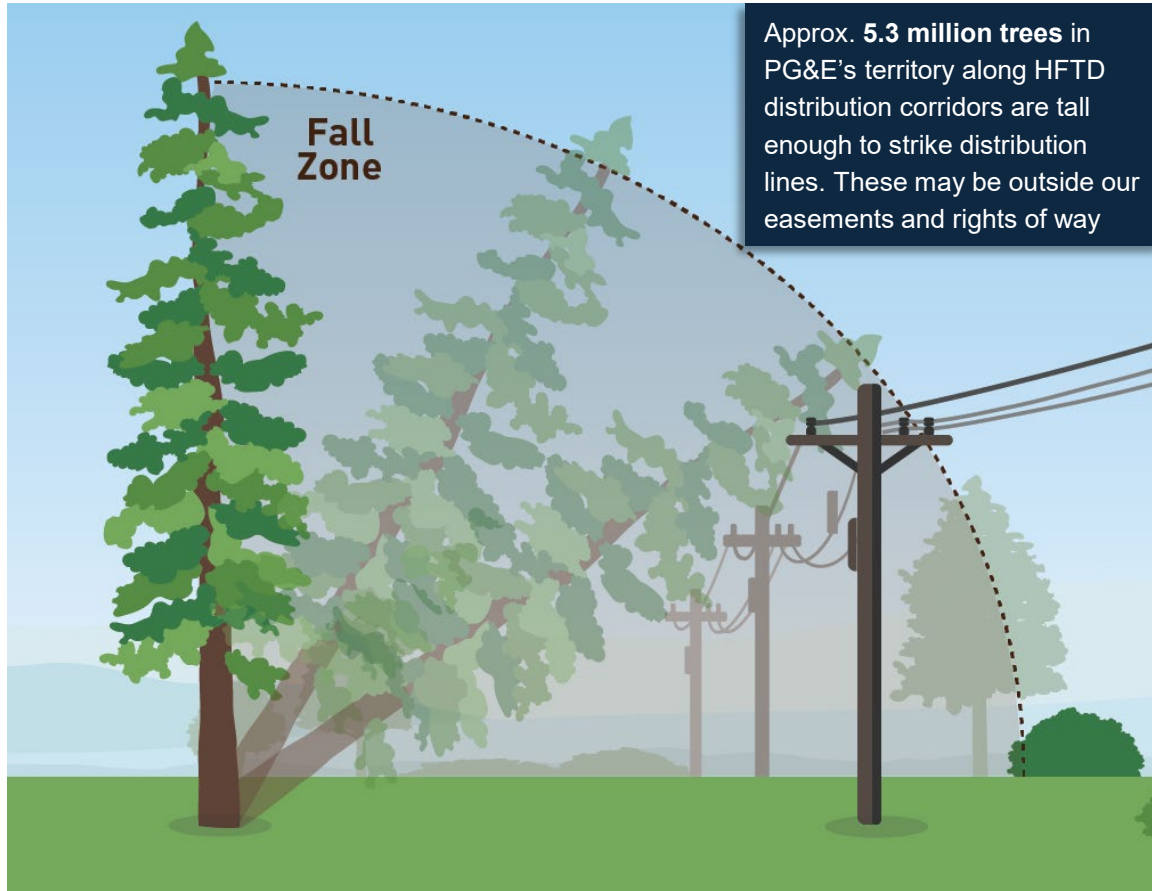
Requirement:	CPUC General Order 95, Rule 35	Public Resource Code (PRC) 4293	CPUC Resolution ESRB-4	NERC Standard FAC 003-4 (Transmission Lines Only)
Brief Summary of Requirement	<ul style="list-style-type: none"> • Non-HFTD: Maintain clearances of 18-inches. Recommends clearing at least 4-ft at time of trim to ensure year-round compliance. • HFTDs: Maintain clearances of 4-ft. Recommends clearing at least 12-ft at time of trim to ensure year-round compliance • Mitigate “Hazard Trees” such as dead, defective or dying trees that pose a potential risk to powerlines or equipment 	<ul style="list-style-type: none"> • Applicable in the State Responsibility Area during designated fire season • Requires a 4-ft. minimum clearance for powerlines between 2.4kV–72kV, and a 10-ft. clearance for conductors 110kV+ • Also requires mitigation of “dead, diseased, defective and dying trees that could fall into lines” (aka “Hazard Trees”) 	<ul style="list-style-type: none"> • Additional inspections in areas with increased wildfire risk • Shares resources with CALFIRE to staff lookouts adjacent to the utilities’ properties • Clearing access roads under powerlines for fire truck access 	<ul style="list-style-type: none"> • A Federal Energy Regulatory Commission (FERC)-approved standard that applies to all utilities across the U.S. • The Standard directs utilities to manage vegetation clearances to ensure reliable operation of the transmission system. • Requires vegetation clearance around overhead transmission lines based on voltage, direct or alternating currents, and line sag/sway
PG&E VM Programs	<ul style="list-style-type: none"> • Routine Vegetation Management • Second Patrol Vegetation Management 		Second Patrol Vegetation Management	Routine Vegetation Management (Transmission)
PG&E VM 2024 Targets	Targets inspecting ~81,000 miles of overhead distribution powerlines		Targets inspecting ~25,000 miles of overhead distribution powerlines in HFRAs and HFTDs	Annual inspections – ~18,000 miles, including LiDAR scanning



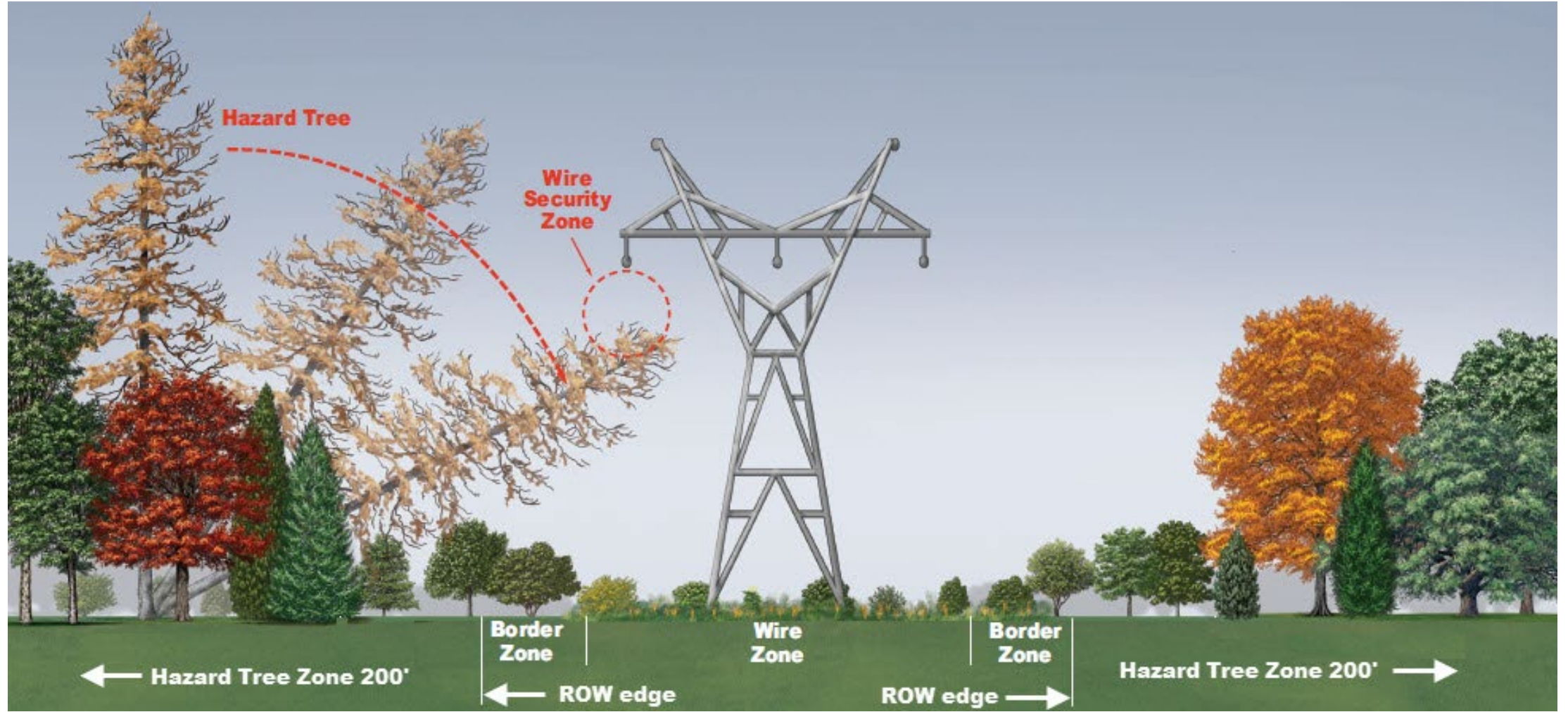
Hazard Trees & Fall-In Risk

Hazard Trees and Fall-In Risk

Trees identified as potential hazard trees or of significant fall-in risk are targeted for potential vegetation management.



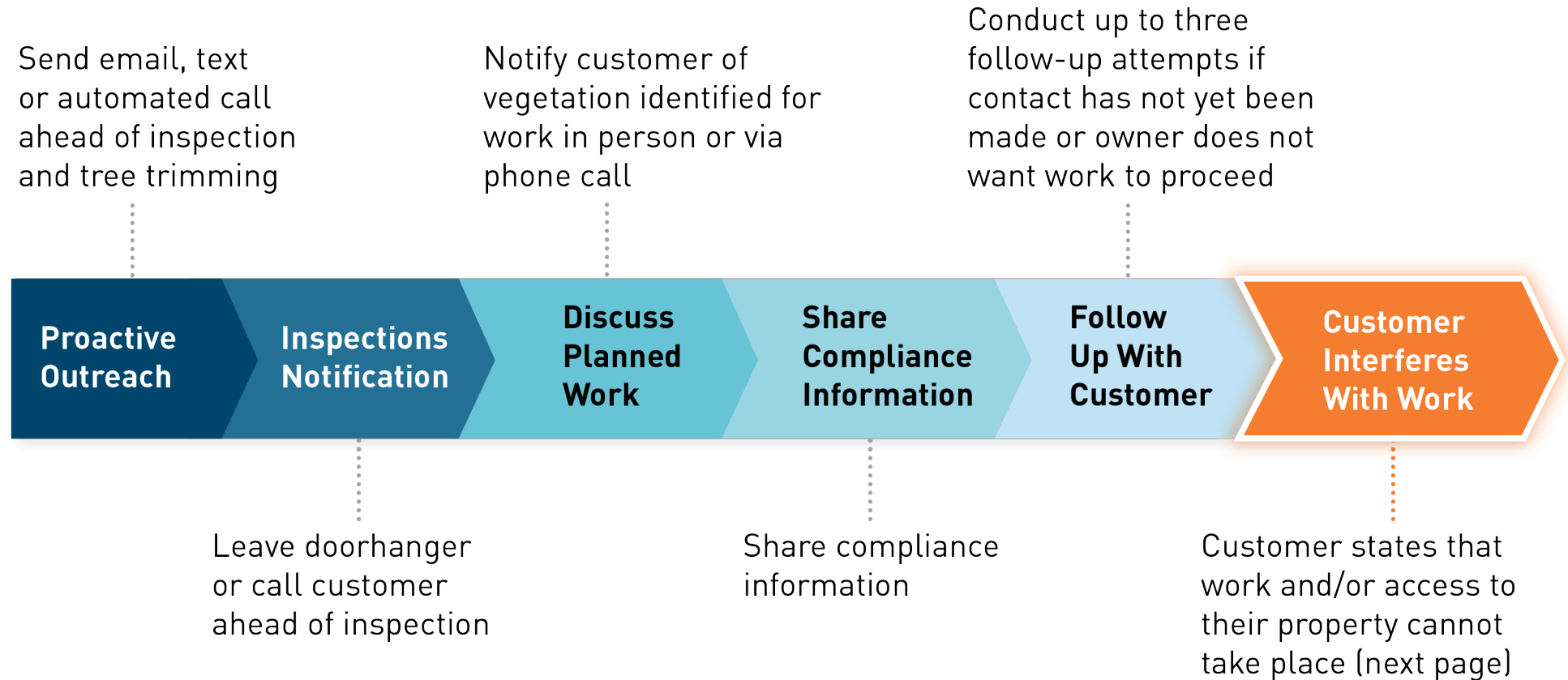
Hazard Trees & Fall-In Risk – Transmission Lines





Initial Customer Outreach Process

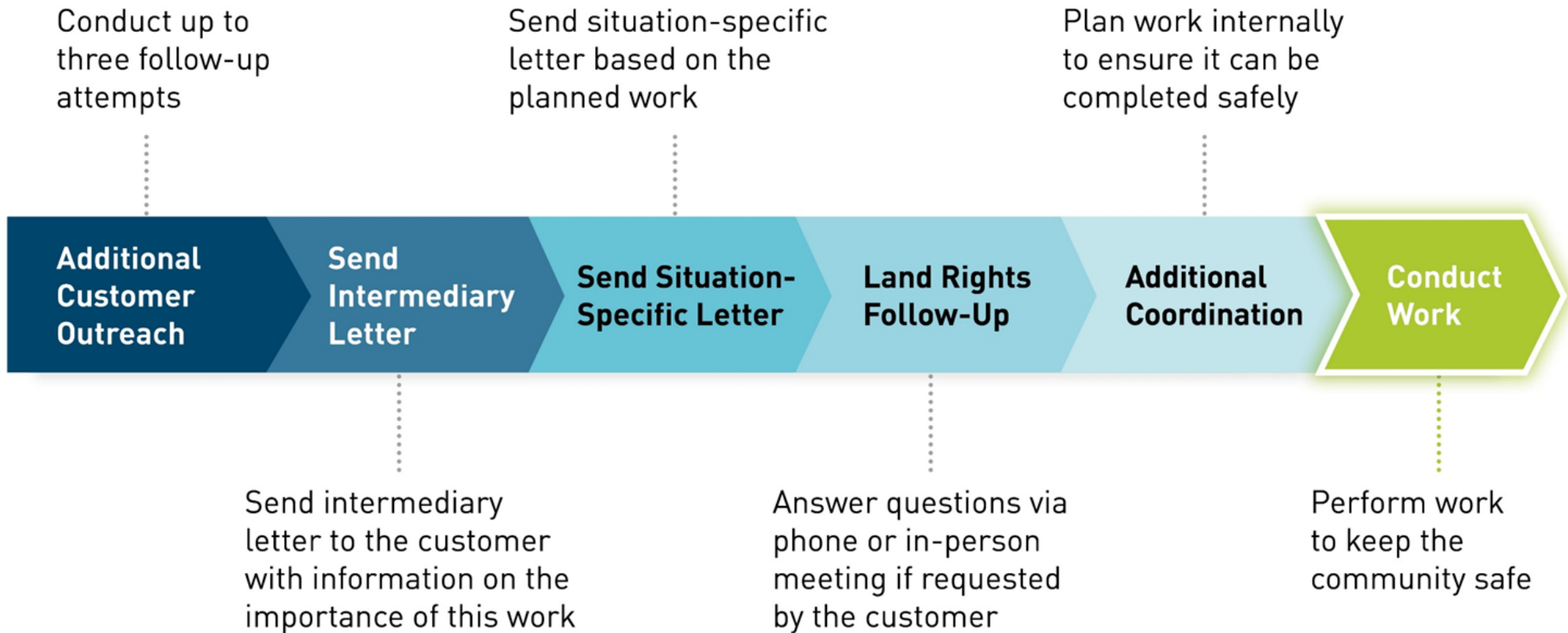
We make three attempts to contact a customer before an issue is escalated



NOTE: Customers may interfere with work at any point and be moved the constraints process

Customer Constraints Process

If a customer interferes with work, we then initiate the constraints process



If we are able to safely conduct work, we will proceed with work and the other steps are not needed.



Conflicts with Required Vegetation Management Work

Some Forest Practice Rules and other regulations are in **direct conflict with PG&E’s ability to complete required vegetation management work.**

Specific examples of these conflicts are outlined in the table below and on the following slide.

	Forest Practice Rule or Regulation	Description	Conflict with Vegetation Management Work	Example
1	In Lieu Practices <i>916.1, 936.1, 956.1</i>	Pursuant to 1104.1(h), in-lieu practices for watercourse and lake protection zones, exceptions to the rules, and alternative practices are not allowed as specified under Article 6 of Subchapters 4, 5, and 6 of Chapter 4, Title 14 CCR.	This restriction limits any practices that are in conflict with 916.3, 936.3, 956.3, where RPF could provide justification for doing the work within protection zones listed under a THP. This can’t happen under UE.	While working under UEs, the permit does not allow certain operations to occur as listed in following examples.
2	General Limitations Near Watercourses, Lakes, Marshes, Meadows and Other Wet Areas <i>916.3, 936.3, 956.3(c)</i>	The Timber Operator shall not construct or use tractor roads in Class I, II, III or IV Watercourses, in the Watercourse Lake Protection Zone (WLPZ), marshes, wet meadows, and other wet areas.	Utility Infrastructure parallels and crosses thousands of watercourses and needs to use available access points to safely conduct work.	PG&E identifies compliance related work in a WLPZ and, after careful evaluation, the only way to safely work the tree is with heavy equipment. Though the hillside access is too steep, there is an old skid trail in the WLPZ that could be used above that tree. This rule would prevent that access.
3	General Limitations Near Watercourses, Lakes, Marshes, Meadows and Other Wet Areas <i>916.3, 936.3, 956.3(d)</i>	Vegetation, other than commercial species, bordering and covering meadows and wet areas shall be retained and protected during Timber Operations.	Utility Infrastructure parallels and crosses thousands of meadows and wet areas, many of which have trees that need to be worked to keep lines safe and within compliance.	PG&E identifies a large quantity of cottonwoods (not a commercial species) on the edge of a meadow that are out of compliance and need to be mitigated. This rule precludes removing those trees, and the “protect” clause would prevent pruning too.
4	General Limitations Near Watercourses, Lakes, Marshes, Meadows and Other Wet Areas <i>916.3, 936.3, 956.3(f)</i>	Where less than 50% canopy exists in the WLPZs of Class I and II waters before Timber Operations, only sanitation salvage...shall be allowed.	Utility Infrastructure parallels and crosses thousands of Class I and II watercourses where less than 50% of the canopy exists.	In relatively developed areas that have less than 50% canopy in a Class II WLPZ due to roads and other past clearing, if there is one healthy (not salvage) tree that is out of compliance, PG&E would be prohibited from removing that tree.
5	Watercourse and Lake Protection <i>916.4, 936.4, 956.4(d)</i>	Heavy equipment shall not be used in timber falling, Yarding, or Site Preparation within the WLPZ.	Utility Infrastructure parallels thousands of watercourses for hundreds of miles systemwide. Vegetation Management operations are required to use a wide array of heavy equipment such a bucket trucks and cranes to safely complete work in these areas.	A crane or bucket truck is needed for a WLPZ tree removal. The only access point is off an existing road within WLPZ that parallels the creek. This rule prohibits that use. 936.4(f) gives some latitude at dry class III crossings and existing road crossings, but not for roads running parallel to creeks.



Conflicts with Required Vegetation Management Work

	Forest Practice Rule or Regulation	Description	Conflict with Vegetation Management Work	Example
6	Procedure for Determining Watercourse and Lake Protection Zone (WLPZ) Widths and Protective Measures 916.5, 936.5, 956.5(e)(“g”)(“i”)	To protect water temperature, filter strip properties, upslope stability, and fish and wildlife values, at least 50% of the overstory and 50% of the understory canopy covering the ground and adjacent waters shall be left in a well distributed multi-storied stand composed of a diversity of species similar to that found before the start of operations. The residual overstory canopy shall be composed of at least 25% of the existing overstory conifers.	Utility Infrastructure parallels thousands of watercourses for hundreds of miles systemwide.	PG&E is working in a relatively developed area that already has low percentage of overstory canopy in WLPZ due to roads, forest stand dynamic, and other past work. All remaining trees in the area need to be mitigated for compliance. This rule would prohibit work.
7	Timber Operations, Winter Period 914.7, 934.7, 954.7	When saturated soil conditions exist during the winter period (Nov. 15 to April 1, except under Special County Rules) limitation of the uses of heavy equipment exist such as tractor yarding or use of tractors. Erosion control structures shall be installed on all constructed skid trails and tractor roads prior to the end of the day if the U.S. Weather Service forecast is a "chance" (30% or more) of rain before the next day, and prior to weekend or other shutdown periods.	PRC 4293 now requires 4' clearance year-round, including during the winter period.	PG&E is working fire-damaged trees adjacent to powerlines in the FPR's winter period. This rule limits the ability to operate during this time period if there is saturated soil or a "chance" of rain before the next day, even with a winter operations plan. Additionally, majority of vegetation management work occurs on properties owned by PG&E customers, not controlled by PG&E. Under this rule erosion control structures should be in place, but many times the landowner does not want them in place or drives through them defeating the purpose of the erosion control structure.
8	Application for conversion; procedure, form, fees and content to be prescribed. PRC 4621(a)	PRC 4527(a)(2) states “the cutting or removal of trees or other forest products during the conversion of Timberlands to land uses other than the growing of timber that are subject to the provisions of Section 4621” 4621(a) states “A person who owns Timberlands that are to be devoted to uses other than the growing of timber shall file an application for conversion with the board.”	Almost all vegetation management work is occurring on properties where PG&E is neither the land nor timber owner.	If PG&E’s vegetation management work under existing powerlines is considered or treated as a conversion, there is a conflict in which PG&E does not own the timberland.
9	Timber Operations on significant historical or archeological sites per CAL FIRE Utility Exemption Permits	No Timber Operations are allowed on significant historical or archeological sites per utility exemption permits.	Utility Infrastructure parallels and crosses many archaeological locations.	Vegetation management has compliance-related work identified on a line that parallels an historic mining ditch. This clause means the tree cannot be cut or the hazard cannot be abated.



PG&E VM Best Management Practices (BMPs)

When conducting Vegetation Management activities, all personnel must adhere to PG&E's Best Management Practices (BMPs) where practicable. BMPs are considered practicable where physically possible and not conflicting with other regulatory obligations or safety considerations or emergency response situations.

These BMPs are some of several of VM's controls to ensure adherence with environmental compliance requirements.

- PG&E's BMPs can be found on Page 135 of its Wildfire Mitigation Plan in Appendix E per Utility Job Aid TD-7102P-01-JA01.



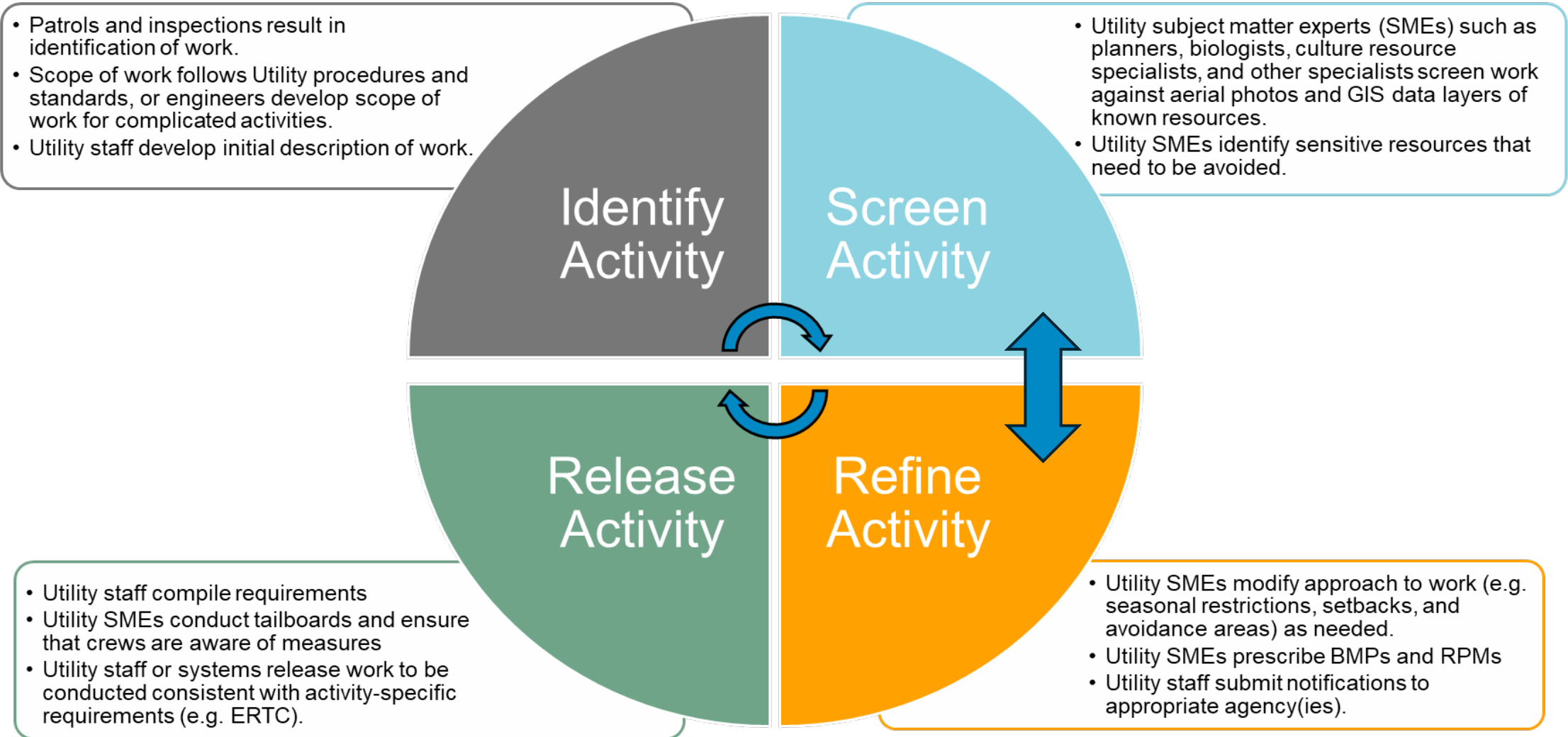
Best Management Practices
Mejores Prácticas de Gestión

TD-7102P-01-JA01
Publication: 01/06/2022, Effective: 03/07/2022, Rev: 1
Manejo de la vegetación cercana a líneas eléctricas
Fecha de entrada en vigencia: 03/07/2022, Rev: 1

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Programmatic Process Overview





Implementing Programmatic Solutions

- **Standard trainings required for crews**
- **Rating system for tracking crew noncompliance**
- **Crews have GIS handhelds and/or maps to identify areas of concern**
- **Riparian Review process for work within riparian areas**
 - Inspectors trained to identify riparian areas
 - Step-by-Step flowchart and guidance for necessary level of environmental review and requirements
 - Programmatic riparian measures applied

Implementing Programmatic Solutions

- **Environmental Release to Construction (ERTC)**
 - Conveys standard BMPs and site-specific RPMs to crews conducting work
 - Includes agency-specific requirements spelled out in programmatic agreements
 - Riparian Programmatic ERTC where appropriate
- **ERTC Includes:**
 - Field coordination Requirements
 - Project Contacts
 - Scope of Work
 - Conditions of agency, Environmental Field Specialist, Biology, Cultural Resources (bulk of ERTC review)
 - Permits, Maps, Tailboards

PG&E's Environmental Release to Construction Evaluations Standard (ENV-10002S) can be found in its WMP as referenced on page 134 and attached in Appendix E.

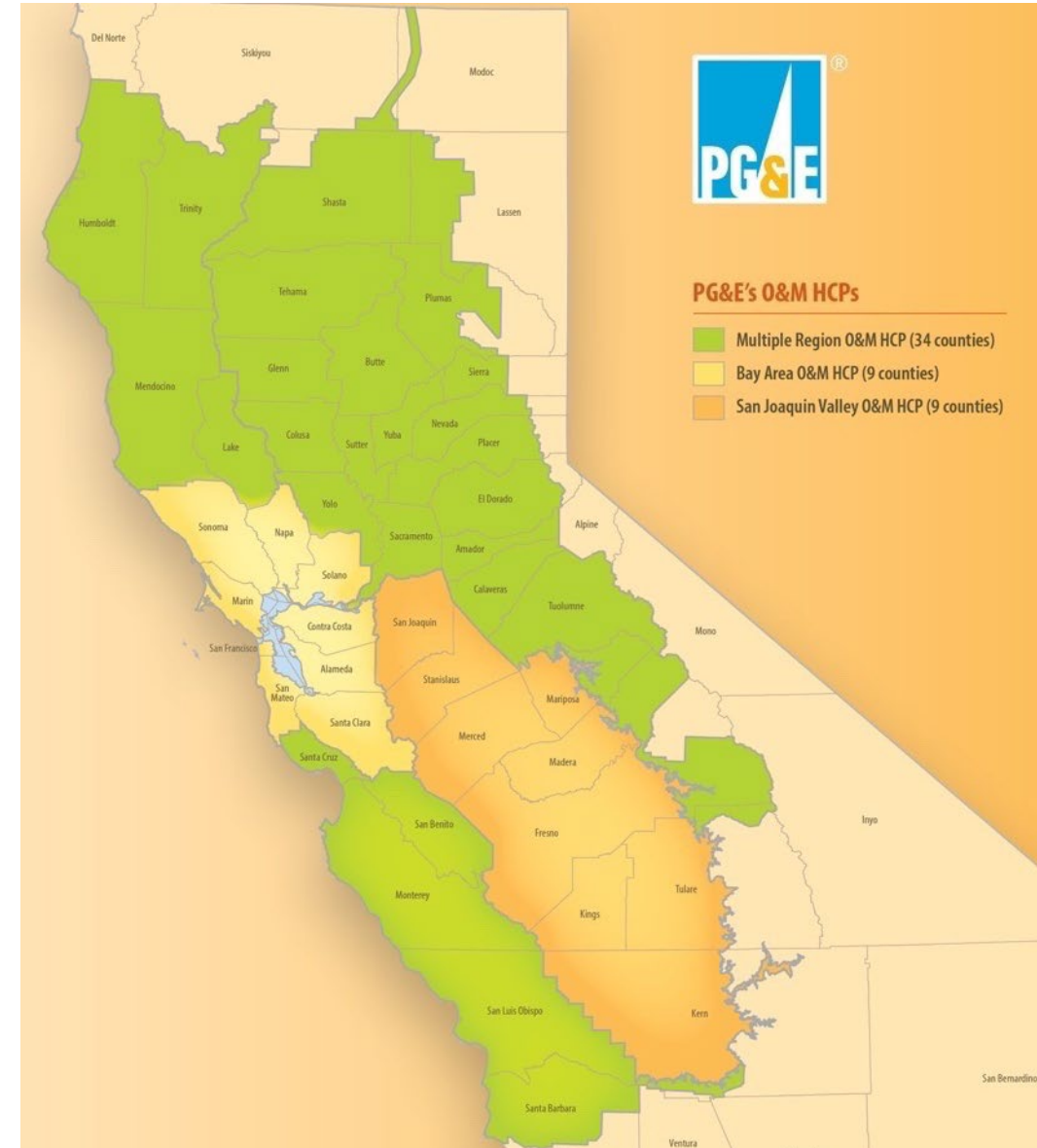


PG&E Habitat Conservation Plans (HCPs) & Incidental Take Permits (ITPs)

HCPs and ITPs help PG&E comply with federal and state endangered species acts while providing a path to complete maintenance activities in a timely manner.

PG&E holds three HCPs and one Bay Area ITP

- San Joaquin Valley (SJVHCP)
- Bay Area HCP (BAHCP) and Bay Area ITP
- Multiple Region (MRHCP)



Questions?

