

Preventing and Mitigating Fires While Performing PG&E Work

Attachment 1, Wildfire Mitigation Matrix

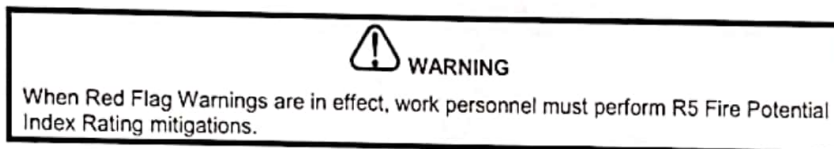
*****READ BEFORE STARTING WORK*****





BEFORE starting work on or near any forest, brush, or grass-covered lands, all work personnel must review this attachment and assess the required mitigations based on the Utility Fire Potential Index Rating produced by PG&E's Meteorology team (use this [link](#) to subscribe).

This "Wildfire Mitigation Matrix" (referred to as "Matrix" from here on) is set up with work activities and activity descriptions listed down the left, and generic mitigations based on the Utility Fire Potential Index Ratings across the top.

Activities requiring additional mitigations are referenced in the corresponding box in blue text.

Refer to Utility Standard TD-1464S, "Preventing and Mitigating Fires While Performing PG&E Work," for detailed information on the general requirements and other mitigations listed in this document.



-  Denotes a work activity that requires general mitigations (R1, R2, and R3 Fire Potential Index Ratings mitigations).
-  Denotes a work activity that requires ALL general mitigations (R1, R2, and R3 Fire Potential Index Ratings mitigations) AND the mitigations from R4.
-  Denotes a work activity that requires ALL general mitigations (R1, R2, and R3 Fire Potential Index Ratings mitigations), mitigations required for R4 Fire Potential Index Ratings, AND mitigations required for R5 and R5-Plus.
-  Denotes the work activity that is **not** allowed.

Blue Text – Denotes mitigations required in **addition** to the respective mitigations listed at the beginning of the matrix.

IF there is a need for an exemption of work being performed during an R5-Plus Fire Potential Index Rating,

THEN contact the Hazard Awareness & Warning Center (HAWC) at WildfireSOC@pge.com or 1-800-255-7593.



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<p style="text-align: center;">✓</p> <p>General Mitigations for R1, R2, and R3</p> <ol style="list-style-type: none"> 1. Prepare for work (review standard, matrix, and checklist). 2. Review the Fire Potential Index Rating each morning during tailboard. 3. Evaluate weather conditions throughout the day to ensure work can be done safely. If weather conditions warrant, THEN stop work or update mitigations, when necessary (e.g., wet down work area). <p>TOOLS</p> <ol style="list-style-type: none"> 4. Jobsite must have enough tools to outfit all crew members at the operation. 5. Tools and equipment must be readily available on the jobsite. 6. Major work operations must have a sealed box of tools as described in Section 2.8, including one serviceable chainsaw. 7. Ensure that the proper tools are available on the vehicles listed below, as described in Section 2.6: <ul style="list-style-type: none"> • Passenger vehicles: One dry chemical fire extinguisher and one shovel • Trucks/4-wheel drive vehicles (1/2 ton or larger): One dry chemical fire extinguisher, one shovel, one 5-gallon backpack pump • Heavy machinery: One dry chemical fire extinguisher, one shovel, and one 5-gallon backpack pump <p>TRAVEL and VEHICLES</p> <ol style="list-style-type: none"> 8. Maintain situational awareness when driving on unimproved roadways. 9. Stationary vehicles (when parked or idling) must be parked safely as outlined in Section 2.6 of the standard. <p>JOBSITE AND REPORTING</p> <ol style="list-style-type: none"> 10. While performing stationary ground-level jobs or activities from which a spark, fire, or flame may originate (e.g., welding, cutting, grinding), all flammable material (e.g., grass, leaf litter, including snags) must be removed down to mineral soil for a minimum of 10 feet around the job site. <ul style="list-style-type: none"> • IF the work is not stationary OR IF the work is being performed above ground, THEN follow the requirements in Section 2.9.4.a, Steps (1)-(6) of <u>Utility Standard ID-1464S</u>. 11. If there is an ignition, THEN work personnel must call emergency services (9-1-1) to report it, even if the fire is extinguished. <ul style="list-style-type: none"> • Call the Hazard Awareness Warning Center (HAWC) at 1-800-255-7596 with the location, source, and impacted assets. • Do not smoke, unless there is a 3-foot cleared area (down to mineral soil), an extinguishing agent, and butt receptacle with water in the smoking area. 	<p style="text-align: center;">✓</p> <p>R4 ratings require all mitigations below, in addition to the mitigations for R1, R2, and R3 ratings:</p> <ol style="list-style-type: none"> a. 120 gallons of water with not less than 200 feet of hose, not less than 1 inch in diameter, and a minimum of 40 pounds per square inch (psi) at the nozzle. b. Evaluate weather conditions to ensure it remains safe to work. c. Working Fire Watch assigned to the jobsite. 	<p style="text-align: center;">✓</p> <p>For R5 ratings require all mitigations below, in addition to the mitigations for R1, R2, R3, and R4 ratings:</p> <ol style="list-style-type: none"> a. Dedicated Fire Watch. b. Must have a trailer-mounted water tank or alternative water delivery method with a hose long enough to reach the jobsite. c. Consider additional modification to the fuel sources surrounding jobsite. d. Suspend all planned work during an R5-Plus fire rating. e. During all emergency work being performed during an R5-Plus fire rating, work personnel must have SIPT on standby or a 300-gallon water tender available.
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Vehicle, Roads						
1	Vehicle travel on unimproved roadways	Anything that propels, moves, or is drawn on unpaved surfaces. This includes the transportation of materials.	✓	✓	✓	✓
2	Using heavy equipment	General construction, water, bars, culvert cleaning/repair grading /excavation, digging E.g., blades, dozers, skid steers, excavators, back hoes.	✓	✓	✓	✗
Unmanned Aerial Vehicle (UAV)						
3	Unmanned Aerial Vehicle (UAV) Line of Sight (LOS)	Comprehensive data collection within line of sight of UAV.	✓	✓	✓	✗

In addition to R4 restrictions:
Flying between parallel conductors is prohibited when less than 60 feet apart (plus drone diameter).

Crew must have 5-gallon back-pack pump (in place of the 120-gallon mitigation), and round-point shovel readily available during all flight operations.

When performing flight operations that require flight below the conductor level or operations within a congested area (i.e., crossing lines, guy wires, dense vegetation), UAV being flown must be immediately accessible by a working fire watch in the event of a downed UAV.



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			Electrical and Telecommunications Equipment/Maintenance								
4	Equipment repair and replacement (Electric operations, IT / Telecom)	This includes tasks related to conductors, pole OH equipment, fiber splicing, and tower work from which a spark, fire, or flames may originate.	✓	<p>De-Energized</p> <p>✓</p> <p>Energized:</p> <ul style="list-style-type: none"> Dedicated Fire Watch. Fuels cleared to bare mineral soil in a 15-foot radius below the facility. Wet down a 50-foot radius around work area. 	<p>✓</p> <p>Energized:</p> <ul style="list-style-type: none"> Fuels cleared to bare mineral soil in a 15-foot radius below the facility. Wet down a 50-foot radius around work area. 	✓	✓	✓	✓	✓	✗
5	Routine work for lone worker or 2-person crews (t-man, comm tech)	This includes installing new services, disconnect and reconnect services, power connections, etc.	✓	<p>✓</p> <p>Crews should have a 5-gallon backpack pump within 25 feet of the work being performed.</p>	<p>✓</p> <p>Crews should have a 5-gallon backpack pump within 25 feet of the work being performed.</p>	✓	✓	✓	✓	✓	✗
6	Restoring and testing, Electric operations	Replacing blown fuses.	✓	<p>✓</p> <p>Must patrol and clear the hazard. Ensure conditions at the base of the pole do not support ignition or the rapid spread of fire.</p>	<p>✓</p> <p>Must patrol and clear the hazard. Ensure conditions at the base of the pole do not support ignition or the rapid spread of fire.</p>	✓	✓	✓	✓	✓	✓

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Electrical and Telecommunications Equipment/Maintenance						
7	Switching		✓	✓ When performing switching, ensure that work personnel have a 5-gallon backpack-style pump and a round-point shovel within 25 feet of the work location.	✓ Analysis of the work (i.e., switching operation type, time of day, need for a dedicated fire patrol) must be performed. Consultation with a Public Safety Specialist is recommended.	✓ Analysis of the work must be performed. The Task Force Leader (TFL) MUST consult a Public Safety Specialist.

Activity Number	Work Activity	Description	R1 / R2 / R3	R4	R5 OR Red Flag Warning	R5-Plus
Vegetation Management						
8	Mowing, hot saw, feller buncher, stump grinding, and masticating equipment	This includes gas- and electric-powered equipment, but does NOT pertain to portable tools noted in Work Activities #14 and #15.	✓	✓	✗	✗
9	Pole/tower ground clearance	10 feet of clearance around poles and tower structure (power tools).	✓	✓	✓	✗
10	Conductor vegetation clearance	Trim and, occasionally, remove trees to maintain required, mandated clearances. This includes the associated use of equipment such as chainsaws or woodchippers.	✓	✓	Extreme Red Flag Warning	✓
11	Harvesting timber on PG&E lands					
Follow conditions and standards outlined in the Timber Harvest Plan. Ensure the mitigations in this matrix are followed based on work performed (e.g., using chainsaws).						

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Other Activities						
12	Construction hot work	Any temporary operation that involves open flames or produces heat and/or sparks. This includes, but is not limited to, brazing, cutting, grinding, soldering, torch-applied materials, and welding.	✓	✓ Wet down a 50-foot radius around work area.	✓ Wet down a 50-foot radius around work area.	✗
13	Using equipment with an internal combustion engine requiring spark arrester (excluding vehicles)	This includes hand-held leaf blowers, chainsaws, weed whackers, woodchippers, etc. Portable and stationary equipment includes compressors, generators, etc.	✓	✓	✓ Unstaffed generators may be used to ensure: 1. Public Safety. 2. Safety and maintenance of company assets. Ensure a clearance of 10-feet down to mineral soil. Onsite water is NOT required.	✗ Exception: Unstaffed generators used to ensure: 1. Public Safety. 2. Safety and maintenance of company assets. Ensure a clearance of 10 feet down to mineral soil. Onsite water is NOT required.

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Other Activities						
14	Using portable tools powered by an internal combustion engine, power cord	Using leaf blowers, chainsaws, weed whackers, drills, saws, mowers, and similar tools with engine or motor.	✓	✓	✓	✗
15	Using battery-powered equipment	Using mowers, weed whackers, leaf blowers, drills, survey equipment.	✓	✓	✓	✗
16	Blasting (explosives)		Must follow the mitigations identified in the State Fire Marshall's Use Permit.		✗	✗

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Burning						
17	Open burning	Burning of any brush, stumps, logs, fallen timber, fallows, slash, grass-covered lands, brush-covered lands, or other flammable materials.	Zone A – Always requires a burn permit and compliance with the permit's terms. Zone A: Includes the following counties: • Mono • Inyo • San Bernardino • Santa Barbara • Ventura • Los Angeles • Orange • Riverside • San Diego • Imperial Zone B – Permit, when required. Zone B: Includes any county and portion of any county that is not included in Zone A.	X	X	X
Substation						
NOTE: Activities listed below only pertain to situations where there is vegetation near the work being performed.						
18	Activities that can produce arcing, sparks, or fire ≤ 15 feet from inside the substation fence.	Any substation activities.	✓	✓	X	X
19	Activities that can produce arcing, sparks, or fire > 15 feet from inside the substation fence.	Any substation activities.	✓	✓	✓	X