

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 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. (Please subscribe using the link above).

This "Wildfire Mitigation Matrix" (referred to as Matrix from here) 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.

Please refer to [Utility Standard TD-1464S](#) for more detailed information on the General Requirements and other mitigations listed in this document.

NOTE: When Red Flag Warnings are in effect, personnel must take **R5** Fire Index Rating mitigations.

The mitigations for all R1, R2, and R3 Fire Index Ratings are described in more detail in [Utility Standard TD-1464S, Section 2, "General Requirements."](#)



Denotes a work activity that require general requirements (**R1**, **R2**, and **R3** Fire Index Ratings mitigations).



Denotes a work activity that requires ALL general requirements (**R1**, **R2**, and **R3** Fire Index Ratings mitigations) AND the mitigations from **R4**.



Denotes a work activity that requires ALL general requirements (**R1**, **R2**, and **R3** Fire Index Ratings mitigations), mitigations required for **R4** Fire Index ratings, AND mitigations required for **R5** and **R5-Plus**.






Denotes the work activity is **not** allowed.

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



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 <p>a. General Requirements for R1, R2, and R3</p> <ol style="list-style-type: none"> 1. Prepare for work being performed (review Standard) 2. Review the Fire Index rating each morning during tailboard. 3. Evaluate weather conditions throughout day to ensure work safety, update mitigations, or stop work, when necessary. <p>TOOLS</p> <ol style="list-style-type: none"> 4. Jobsite must have enough tools to outfit all crew members at the operation. 5. Major work operation must have a sealed box of tools as described in Standard Section 2.2.5, including one serviceable chainsaw. 6. Tools should be readily available on the jobsite. 7. Ensure the proper tools are available on the vehicles as describes in Standard Section 2.3.2. <p>Passenger vehicles must carry</p> <ul style="list-style-type: none"> • one shovel • one fire extinguisher <p>Trucks/4-wheel drive vehicles or ATVs (1/2 ton or larger) must carry</p> <ul style="list-style-type: none"> • one shovel • one 5-gallon backpack pump <p>Heavy machinery must carry</p> <ul style="list-style-type: none"> • one shovel or McLeod • one Pulaski • one 5-gallon backpack pump <p>TRAVEL and VEHICLES</p> <ol style="list-style-type: none"> 8. Maintain situational awareness when driving off designated roadways. 9. Unoccupied vehicles should not be parked on any vegetation. <p>Work and ignitions while working</p> <ol style="list-style-type: none"> 10. **When performing stationary work that can produce a spark, or when using machinery with an internal combustible engine, personnel must either <ul style="list-style-type: none"> • clear a 10-foot radius down to mineral soil OR • must have a 120-gallon water-delivery method with a manned hose during work <p><i>**These rules do not pertain to vehicle travel.</i></p> 11. If there is an ignition, jobsite personnel must call emergency services (9-1-1) to report it, even if the fire is extinguished. <ul style="list-style-type: none"> • Then, phone the Wildfire Safety Operations Center WSOC (800-255-7596) with the location, source, and impacted assets. 12. 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>R4 ratings must meet all the requirements listed below in addition to the requirements for R1, R2, and R3 ratings:</p> <ol style="list-style-type: none"> a. 120 gallons of water at the jobsite with 200 feet of hose. c. Evaluate weather conditions to ensure it remains safe to work. d. Working Fire Watch assigned to the jobsite. 	 <p>R5 ratings must meet all the requirements listed below in addition to the requirements for R1, R2, R3, and R4 ratings:</p> <ol style="list-style-type: none"> e. Dedicated Fire Watch. f. Must have a trailer-mounted water tank or alternative water delivery method at the jobsite. g. Consider additional modification to the fuel sources surrounding the jobsite. h. Suspend all planned work during an R5-Plus fire rating. i. During all emergency work being performed during an R5-Plus fire rating, personnel must have SIP-T on standby or a 300-gallon water tender available.
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Activity Number	Work Activity	Description	R1 / R2 / R3	R4	R5 OR Red Flag Warning	R5-Plus
Vehicle, Roads, Inspections						
1	Vehicle Travel On Unpaved/ Off Designated Roadways	Anything that propels, moves, or draw on unpaved surfaces	✓	✓	✓	✓
2	Unmanned Aerial Vehicle (UAV) Inspections/ Surveys (Take-off and landing)		✓	 Pilot and Sensor Operator must be within 50 ft of the base of the structure being flown Crew must have 5-gallon backpack pump (in place of the 120 gallon requirement) and a round point shovel at the base of the structure being flown Crew must use a 5'-0" minimum LZ Mat for take-off/landing	✗	✗
3	Using Heavy Equipment	General construction, water, bars, culvert cleaning/repair grading/excavation, digging For example, blades, dozers, skid steers, excavators, back hoes	✓		✓	✗

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Electrical Equipment/Maintenance						
4	Electrical Equipment Repair and Replacement	Including tasks related to conductors, pole, and OH equipment from which a spark, fire, or flames may originate	✓	✓	✓	✗
5	Restoring and Testing Electric	Replacing blown fuses	✓	✓ Must patrol and clear the hazard Ensure conditions at the base of the pole do not support ignition or the rapid spread of fire	✓ Must patrol and clear the hazard Ensure conditions at the base of the pole do not support ignition or the rapid spread of fire	✓ Must patrol and clear the hazard Ensure conditions at the base of the pole do not support ignition or the rapid spread of fire
6	Switching		✓	✓ When performing switching, ensure that personnel have a 5-gallon backpack-style pump and a round point shovel within 25 feet of the work location The vehicle used for travel should also be equipped as described in TD-1464S, Section 2	✓ Analysis of the work (e.g., switching operation type, time of day, need for a dedicated fire patrol) must be performed Consultation with an electric Public Safety Specialist (PSS) is highly recommended	✓ Analysis of the work must be performed The Task Force Leader (TFL) ¹ MUST consult an electric PSS

¹ Task Force Leader (TFL) leads a group of Electric Operations employees in restoration during a Public Safety Power Shutoff (PSPS) event.

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Vegetation Management							
7	Mowing Hot Saw or Masticating Equipment			 **In lieu of the 120 gallons, you MUST have a 5-gallon backpack-style pump and a round point shovel within 25 feet of the work location.			
8	Pole/Tower Ground Clearance	10 feet of clearance around poles and tower structure (power tools)			 **In lieu of the 120 gallons you MUST have a 5-gallon backpack-style pump and a round point shovel within 25 feet of the work location.		
9	Conductor Vegetation Clearance	Trim and occasionally remove trees to maintain required, mandated clearances			Extreme	Red Flag Warning	
					 **	 2	
10	Harvesting Timber on PG&E Lands		Follow conditions and standards in the Timber Harvest Plan (THP). Ensure the mitigations in this matrix are followed based on work performed (e.g., using chainsaws).				

² May perform work only after consulting with Meteorology and ensuring there is a 5-gallon backpack pump onsite in lieu of the 120 gallons of water. Jobsite personnel understand how to access the information they need to determine it is too dangerous to start working or, if a job is in progress, when it is too dangerous to continue working, **stop all work**.

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Other Activities						
11	Construction Hot Work	Any temporary operation involving open flames or that produces heat and/or sparks This includes, but is not limited to, brazing, cutting, grinding, soldering, torch-applied materials, and welding	✓	✓	✓	✗
12	Using Equipment with an Internal Combustion Engine Requires Spark Arrestor (Excluding Vehicles)	Frequently used for hand-held leaf blowers, chainsaws, and weed whackers Portable and stationary equipment includes compressors, generators, etc.	✓	✓	✓ Unmanned generators may be used to ensure: 1. Public safety 2. Safety of Company assets and asset maintenance Ensure a clearance of 10 feet down to mineral soil and onsite water is NOT required	✗ Unmanned generators may be used to ensure: 1. Public Safety 2. Safety of company assets and maintain assets Ensure a clearance of 10 feet down to mineral soil and onsite water is NOT required

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13	Using Portable Tools Powered by an Internal Combustion, Power Cord	Leaf blowers, chainsaws, weed whackers, drills, saws, lawn mowers, and similar tools with engine or motor	✓	✓	✓	✗
14	Battery-Powered Equipment	Such as lawn mowers, weed whackers, leaf blowers, drills, survey equipment	✓	✓	✓	✗
15	Blasting (Explosives)		Must follow the mitigations identified in the State Fire Marshall's Use Permit.		✗	✗

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

Preventing and Mitigating Fires While Performing PG&E Work**Attachment 1, Wildfire Mitigation Matrix****REVISION NOTES**

Where?	What Changed?
Rev. 1 Table 1	Updated language for general requirements to be more specific and match minor updates to Utility Standard TD-1464S.
Rev. 2 Item 2	Updated to allow for UAV use during R4.