

SDG&E OPERATIONS & MAINTENANCE FIRE  
PREVENTION PLAN FOR THE CLEVELAND  
NATIONAL FOREST



Approvals

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*(CNF to provide name/title of signatory since applies to entire forest)*



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## PURPOSE OF THE PLAN

This SDG&E Operations & Maintenance Fire Prevention Plan for the Cleveland National Forest (Plan) is in support of the Cleveland National Forest (CNF) Master Special Use Permit and is established strictly for operations & maintenance (O&M) work activities on the CNF by SDG&E personnel and/or contractors. This Plan is designed to assist in safe work practices to prevent, report, control, and extinguish fires when engaged in permitted O&M activities which are subject to Project Activity Level (PAL) requirements. The permitted activities that are subjected to PAL include:

- **Vegetation management**
  - Vegetation management within the SDG&E right-of-way will meet all pertinent fire prevention requirements as found in the appropriate Code of Federal Regulations (CFR), California Public Resources Code (CPRC), California Public Utilities Commission (CPUC) General Orders (GO), and Federal Energy Regulatory Commission (FERC). SDG&E will adhere to all applicable federal and state laws governing vegetation management including:
    - California Public Resource Code Sections
      - 4293: Power Line Clearance Required
      - 4292: Power Line Hazard Reduction
      - 4291: Reduction of Fire Hazards Around Buildings
      - 4171: Public Nuisances
    - California Code of Regulations, Title 14: Minimum Clearance Provisions, Sections 1250 - 1258
    - General Industry Safety Orders, Title 8: Group 3: Articles 12, 13, 36, 37,38
    - California Penal Code Section 385
    - California Public Utilities Commission, General Order 95: Rule 35

Some of these requirements are summarized in the Fire Risk & Mitigation Matrix found in ESP 113.1 under vegetation management.

  - As stated in Attachment #3 to this Plan and in the Fire Risk & Mitigation Matrix found in ESP 113.1, prior to performing hot work activities it is recommended that a minimum 10-foot area is cleared to bare soil from work site of dead grass, brush, and other combustibles.
  - Specifically pole brushing, subject tree trimming, and other vegetation management activities which pose a risk of wildland fire include:
    - **Chain saw use in or immediately adjacent to wildland vegetation**
    - **Steel blade weed eaters**
    - **Brush chippers used off of improved road beds**
- **Welding, cutting, grinding**
  - **Both PAL and, *Metal Cutting, Welding & Grinding Safety (Attachment 3)* apply to these activities.**

- **Road maintenance**
  - **Applies when road grading and/or excavating equipment are working immediately adjacent to wildland vegetation (*within 30' of road work*)**

All O&M activities on CNF land must comply with the minimum standards in this Plan. All O&M activities on non-CNF land must comply with the requirements of the SDG&E Electric Standard Practice 113.1 Operations & Maintenance Wildland Fire Prevention Plan (Appendix #1).

### ACRONYMS AND ABBREVIATIONS

<b>CNF</b>	<b>Cleveland National Forest</b>
<b>FMO</b>	<b>Fire Management Officer</b>
<b>FS</b>	<b>Forest Service</b>
<b>MVICC</b>	<b>Monte Vista Interagency Coordination Center</b>
<b>NFDRS</b>	<b>National Fire Danger Rating Systems</b>
<b>O&amp;M</b>	<b>Operation &amp; Maintenance</b>
<b>PAL</b>	<b>Project Activity Level</b>
<b>SDG&amp;E</b>	<b>San Diego Gas &amp; Electric Company</b>
<b>SUP</b>	<b>Special Use Permit</b>
<b>USDA</b>	<b>United States Department of Agriculture</b>

### DEFINITIONS

**“Dedicated” Fire Patrol:** A person assigned the duties associated with fire prevention and fire safety for a specific job or geographic location, with appropriate fire training and equipment equivalent to the risk presented. The “Dedicated Fire Patrol” person **shall not** perform other duties during O&M activities (Sole Duty).

**“Designated” Fire Patrol:** A member of the work crew assigned the responsibilities for fire prevention and fire risk mitigation on job site (Collateral Duty).

**Fire Precautionary Period:** For the purpose of this plan, the Fire Precautionary Period will be considered year-long.

**Fire Safety Coordinator:** A designated SDG&E employee who serves as a liaison or agency representative to the fire agencies for the prevention and protection procedures for O&M activities.

**Operations and Maintenance (O&M) Work:** The inspection, repair, replacement and general maintenance of permitted SDG&E electric facilities. This includes permitted access roads, structure pad areas, maintenance pads and Incidental Landing Areas (ILA).

**Emergency Work:** Emergency work is defined as work required to resolve situations that represent immediate threats to human life or to property regardless of ownership. This definition is based on

36 CFR §251.50b.

**Incidental Landing Areas (ILA):** Temporary landing sites used infrequently and requiring minimal maintenance or upkeep.

**Project Activity Level (PAL):** The PAL is a scientifically based system to regulate all industrial and contractual activities on National Forest lands in California. The PAL is designed to reduce the risk of large damaging wildfires and legal vulnerability of the Forest Service, contractors, or permittees. The system is fire danger and climatology based, using Energy Release Comonnetns (ERC and Ignition Components to determine ratings. Each day at 4:00 p.m. the PAL is announced for the following day for the different geographical areas on Forest Service lands.

## 1. SCOPE

The provisions set forth below outline the Permittee/Permittee's Agents required actions for fire prevention and suppression activities and establish a suppression plan for fires within the permit area. The provisions set forth below also specify conditions under which permit activities will be curtailed or shut down.

## 2. PERMITTEE/PERMITTEE'S AGENTS REQUIRED ACTIONS

- (1) Shall abide by the requirements of this Fire Plan for the entire duration of the Special Use Permits to which it applies. Ensure that a copy of this Fire Plan and any special permits are known and accessible to project foreman/supervisor on work site daily.
- (2) Shall take reasonable steps necessary to prevent his/her employees, subcontractors and their employees from setting fires not required in completion of the work, shall be responsible for preventing the escape of fires set directly or indirectly as a result of project operations, and shall take reasonable steps to extinguish all such fires which may escape.
- (3) Shall take reasonable steps necessary to ensure that project employees, subcontractors and their employees are knowledgeable and comply with the requirements of the Fire Plan.
- (4) Shall permit and assist in periodic testing and inspection of required fire equipment. Permittee shall certify compliance with the specific fire precautionary measures of this plan, before beginning work activities.
- (5) The Fire Plan shall be reviewed and revised with the Forest Service at intervals of not more than (3) years.

## 3. TOOLS AND EQUIPMENT

- (1) The Permittee/Permittee's Agents shall comply with the following requirements during the fire precautionary period, as defined by the Forest Service, unless waived in writing.
- (2) The Permittee/Permittee's Agents shall equip all diesel and/or gasoline-operated engines, both stationary and mobile, with spark arrestors that meet Forest Service standards set forth in the National Wildfire Coordinating Group publication for General Purpose and Locomotive Arrestors or Multi-position Small Engine Arrestors. A Spark Arrestor Guide for approved arrestors is available online at <http://www.fs.fed.us/t-d/programs/fire/spark/sag-index.html>. Spark arrestors are not required on equipment powered by exhaust-driven turbo-charged engines or motor vehicles equipped with a maintained muffler as defined in CPRC Sections 4442 and 4443.
- (3) The Permittee/Permittee's Agents shall furnish and have available for emergency use on each vehicle or piece of equipment used in conjunction with performance of the work as listed below, hand tools and/or equipment as follows (CPRC 4427, 4428 and 4431):
  - a) One shovel, one Pulaski , and a fully charged fire extinguisher (U.L. rated at 2A:10BC or larger) (or 5 gallon backpack pump) on each truck, personnel vehicle, tractor, grader and other heavy equipment.
  - b) One shovel and one 5-gallon backpack pump-type fire extinguisher filled with water for each welder.
  - c) One shovel and one serviceable fire extinguisher, U.L. rated 2BC (or 5 gallon backpack pump), for each gasoline-powered tool being operated, including but not restricted to

chain saws, weed eaters, chippers, etc. Shovel must be kept within 25 feet from each chain saw when in use.

- d) The Permittee/Permittee's Agents **May** be required to furnish a box of firefighting tools, to be located in the operating area, at a point accessible in the event of fire for larger, more complex O&M activities when determined by the Forest Service. Unless specified for a specific activity, the O&M Standard Fire Box shall contain:

- o One 5-gallon, backpack pump-type fire extinguisher filled with water;
- o Two Pulaski fire tools;
- o Two McLeod fire tools;
- o Three shovels so each employee at the operation can be equipped to fight fire.

**Note:** All tools and equipment required above shall be in good workable condition and shall meet the following Forest Service requirements for fire tools:

- i. Shovel shall be size "0" or larger and not be less than 46 inches in overall length.
- ii. Pulaski shall have 2.5-pound or larger heads and not be less than 28 inches in overall length.

- e) When required, the Permittee or Permittee's Agents *may* be required to furnish a water tank truck (Water Truck), trailer or portable tank on or immediately adjacent to the project area and meet the following minimum specifications. The Water Truck and operator must be ready to put out fire at all times. The Water Truck, trailer or portable tank shall contain a minimum of **150** gallons of water at the start of each work period; a combination straight stream-fog nozzle, and a minimum 300 feet of one-inch fire hose; fire hose with nozzle closed shall be capable of withstanding 200 psi pump pressure without leaking, slipping of couplings, distortions, or other failures; nozzle discharge rating of six to 20 gallons per minute; a pump capable of delivering 23 gallons per minute at 175 pounds psi at sea level; power unit for pump shall have fuel for at least two hours operation, with ample transport available for immediate and safe movement of tank over roads serving the contract area; and shall be in good working order; pump outlet shall be equipped with 1.5-inch National Standard Fire Hose thread.

- o When required, the Water Truck, Trailer or Portable Tank may be used for other work on the project.
- o When Water Truck, Trailer or Portable Tank is used for other operations, water level must not drop below **50** gallons or activity will stop until water source is replenished to **150** gallons.
- o A charged hose lay will be installed capable of reaching 100' beyond the work activity whenever a Water Truck, Trailer or Portable Tank is required.

- f) The Permittee/Permittee's Agents *may* be required to furnish a Fire Patrol. When required, the responsibility of the Fire Patrol shall be to patrol the operation for prevention and detection of fires, to make sure all State, County and Federal Fire regulations and Fire Plan conditions are met, and to take suppression action where necessary. By agreement, one Fire Patrol person may patrol on this and adjacent work sites.

- o A "Dedicated" Fire Patrol is to have a minimum of two (2) filled 5 gallon backpack pumps, 1 Pulaski and 1 shovel.
- o The "Dedicated" Fire Patrol person *Shall Not* perform other duties during O&M activity.
- o If a "Designated" Fire Patrol person is used, they must be knowledgeable of and make sure all Regulations and O&M Fire Plan conditions are met for that activity, and able to take suppression action where necessary.
- o The Fire Patrol shall remain on duty as specified in the Fire Prevention Mitigation Table (Attachment #2).

- g) The Permittee/Permittee's Agents will be required to furnish communications equipment as specified in Section 4 (9).

#### 4. GENERAL

(1) State Law. The Permittee/Permittee's Agents shall comply with *all* applicable laws of the State of California. In particular, see California Public Resource Codes.

(2) Permits Required. The Permittee/Permittee's Agents must secure a special *written permit* from the District Ranger or designated representative before engaging the activities listed below. For additional information see Attachment 3.

- a) Metal Cutting, Welding and Grinding (Application for Permit to Burn APCD Form 14 April 2009 or most current version)

(3) Regulations for Burning. NO BURNING ALLOWED.

(4) Smoking and Fire Rules. Smoking shall not be permitted during fire season, except in a barren area or in an area cleared to mineral soil at least three feet in diameter (CPRC 4423.4). In areas closed to smoking, the Forest Service representative may approve special areas to be used for smoking. The Permittee/Permittee's Agents shall assign designated smoking areas. Permittee/Permittee's Agents shall post signs regarding smoking and fire rules in conspicuous places for all employees to see. Permittee/Permittee's Agents supervisory personnel shall require compliance with these rules. Under no circumstances shall smoking be permitted while employees are operating light or heavy equipment, or walking or working in grass and woodlands.

(5) Storage and Parking Areas. Equipment service areas, parking areas, and gas and oil storage areas shall be cleared of all flammable material for a radius of at least *10 feet* unless otherwise specified by a local administrative unit. Small mobile or stationary internal combustion engine sites shall be cleared of flammable material for a slope distance of at least a *10 feet* radius from such engine.

(6) Welding. Permittee/Permittee's Agents shall confine welding activity to cleared areas having a minimum radius of *10 feet* measured from the place of welding and utilize a welding tent or metal shield where possible to deflect sparks. (See Metal Cutting, Welding, & Grinding Safety - Attachment 3)

(7) Oil Filter and Glass Jugs. Permittee/Permittee's Agents shall remove from National Forest System land all oily rags and used oil filters. Permittee/Permittee's Agents shall prohibit use of glass bottles and jugs on project operations.

(8) Reporting Fires. Upon discovery, the Permittee/Permittee's Agent shall immediately notify the Forest Service of any fires within the project area (or on National Forest land) by calling the Forest Service Dispatch Center at XXX-XXX-XXXX and/or calling 911.

(9) Communications. Permittee/Permittee's Agents shall furnish an agreed-upon communication system connecting each operation with the designated Forest Service Dispatch Center. The communications system shall be capable of contacting the designated Forest Service Dispatch Center within five (5) minutes of discovery of a fire in the Permittee/Permittee's Agents operating area. The communications system shall be operable during the Permittee's operation in the fire precautionary period.

(10) Roads. Forest Service roads shall remain open and passable for public, administrative, and emergency use.

(11) Personnel (SDG&E & Contractors) will receive fire safety and prevention training prior to

performing operations and maintenance activities on the CNF. Training will be based on the SDG&E Operations & Maintenance Fire Prevention Plan for the CNF.

## 5. PROJECT ACTIVITY LEVELS (PAL) AND OTHER MEASURES

Project activities may be shut down by the Forest Service at any time due to changes in weather conditions, active fire in the area, local Ranger District drawdown conditions, and/or violation of any project requirements. Permission to resume work can only be issued by the Forest Service and shall be in writing.

What is PAL?

The PAL is a scientifically based system to regulate industrial and contractual activities on National Forest lands in California. The PAL is designed to reduce the risk of large damaging wildfires. The system is fire danger and climatology based, using Energy Release Components (ERC) and Ignition Components (IC) to determine ratings.

### Exceptions:

1. For those O&M activities defined as "Emergency" (*see definitions*)
2. Work may continue in order to mitigate the risk associated with an electric circuit in a compromised or abnormal configuration. The CNF may require additional fire prevention/suppression measures during this period.

### Instructions for obtaining the PAL information:

The SDG&E infrastructure and facilities cross Fire Danger Rating Areas (FDRA) 630, 675, 680 and 685. The PAL for the FDRA where the O&M work takes place will apply. Level A represents the lowest fire danger while Level E represents the highest fire danger.

The Permittee/Permittee's Agents shall conform to the limitations or requirements of PAL as it applies to O&M activities in the Special Use Permit Exhibit 9 Addendum 1. PAL may be obtained from the Forest Service before starting work each day. The Forest Service determines the following day's activity level by 4:00 PM each day.

The Permittee/Permittee's Agents can obtain the PAL for the following day by calling XXX-XXX-XXXX (24-hour number) after 4:00 PM and asking the Dispatcher for the PAL in the FDRA where the O&M work will occur.

The PAL may be changed at any time if, in the judgment of the Forest Service, fire danger is higher or lower than predicted and such change is consistent with Forest Service management objectives. The decision when to change the PAL and how to take weather observations for PAL purposes are within the discretion of Forest Service.

*IT IS THE RESPONSIBILITY OF THE PERMITTEE OR PERMITTEE'S AGENTS TO OBTAIN THE FOLLOWING DAY'S PREDICTED PAL FOR THE APPROPRIATE FDRA.*

*SEE ATTACHMENT #2 FIRE PREVENTION MITIGATION TABLE FOR WORK ACTIVITIES AND PAL REQUIREMENTS.*

## 6. RED FLAG WARNINGS



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### RED FLAG WARNING

If a Red Flag is issued (despite the PAL level), all work will cease and be suspended until the warning is cancelled and the Forest Service approves a resumption of the project

**Exception: For those O&M activities defined as “Emergency” (see definitions)**

What is a Red Flag Warning?

Red Flag Warning is a term used by fire weather forecasters and fire agencies to call attention to limited conditions of particular importance that may result in extreme burning conditions. The Warning is issued when there is an ongoing event or the fire weather forecaster has a high degree of confidence that Red Flag criteria will occur within 24 hours of issuance. Red Flag criteria occurs whenever a geographical area has been in a dry spell for a week or two or for a shorter period, if before spring green up or after fall color, and the National Fire Danger Rating System (NFDRS) is high to extreme and the following forecast weather parameters are forecasted to be met:

- o Relative humidity less than or equal to 15 percent with sustained winds=25 mph and/or frequent gusts=35 mph for =6 hrs.
- o Dry lightning (more than isolated coverage)

Further information regarding Red Flag Warning Conditions can be found in the 2012 California Fire Weather Annual Operating Plan at the link below.

[http://gacc.nifc.gov/oscc/predictive/weather/AOP/NWS\\_Red\\_Flag\\_Program.pdf](http://gacc.nifc.gov/oscc/predictive/weather/AOP/NWS_Red_Flag_Program.pdf)

## 7. REPORTING ALL WILD FIRES

(1) Permittee/Permittee's Agents shall report all Fire Emergencies by dialing 911: Additional notification and reporting may be necessary to the following Forest Service Unit Personnel:

<b>POINT OF CONTACT</b>	<b>NAME</b>	<b>TELEPHONE</b>
Monte Vista Interagency Communication Center (MVICC)	Forest Service Dispatcher	XXX-XXX-XXXX (Emergency 911)
Descanso District Fire Management Officer	Talbot Hayes	XXX-XXX-XXXX
Descanso District Ranger	Bob Heiar	XXX-XXX-XXXX
Descanso District Permit Administrator	Vacant	
Descanso District Fire Patrol	Various	XXX-XXX-XXXX
Palomar District Fire Management Officer	TBD	XXX-XXX-XXXX
Palomar District Ranger	Chris Dowling	XXX-XXX-XXXX
Palomar District Permit Administrator	Vacant	
Palomar District Fire Patrol	Various	
Trabuco District Fire Management Officer	Gordon Martin	XXX-XXX-XXXX
Trabuco District Ranger	Darrell Vance	XXX-XXX-XXXX
Trabuco District Permit Administrator	Vacant	
Trabuco District Fire Patrol	Various	

*When reporting a fire, provide the following information;*

- o Your name;
- o Telephone number;
- o Project name;
- o Location (pole number);
- o Descriptive location (Reference point);
- o Fire Information (i.e., size (acres), rate of spread, wind conditions, what's burning/type of fire)

(2) Permittee/Permittee's Agents Key Fire Management Personnel:

(In order of call preference)

<b>POINT OF CONTACT</b>	<b>NAME</b>	<b>TELEPHONE</b>
SDG&E On Duty Fire Coordinator	Various	XXX-XXX-XXXX
SDG&E Acting Fire Program Manager	Randy Lyle	XXX-XXX-XXXX
SDG&E Fire Coordinator	Bill Molumby	XXX-XXX-XXXX
SDG&E Fire Coordinator	Mike Rottenberg	XXX-XXX-XXXX
SDG&E Fire Coordinator	Dennis W. Baldrige	XXX-XXX-XXXX
SDG&E Associate Fire Coordinator	Richie Veihl	XXX-XXX-XXXX

**ATTACHMENT #1**  
**Tool & Equipment Summary from Section 3**

SECTION 3 TOOLS & EQUIPMENT	DESCRIPTION	MINIMUM REQUIREMENTS	PROJECT ACTIVITY LEVEL DISPOSITION
Section 3 (2) Spark Arrestor	Shall equip all diesel and/or gasoline-operated engines, stationary & mobile, with approved NWCG spark arrestors	See Section 3 (2) in front of plan for exceptions and references	Requirement the same at all Project Activity Levels
Section 3 (a) Vehicles	Shall furnish and have available for emergency use on each vehicle or piece of equipment used in conjunction with performance of the work as listed in next box	1 shovel, 1 Pulaski, and a fully charged fire extinguisher, UL rated at 2A10BC per vehicle or 1 5 gallon backpack pump	Requirement the same at all Project Activity Levels
Section 3 (b) Welders	The minimum requirements apply for each welder	1 shovel, and (1) 5 gallon backpack pump-type fire extinguisher filled with water	Welding not permitted after 1:00 p.m. on PAL C and not at all on D, Ev, or E except for emergency work permitted by CNF. 30-minute fire watch required after completion of hot work.
Section 3 (c) Gasoline powered tools (chain saws, weed eaters, chippers, generators, etc.)	The minimum requirements apply for each tool being operated	1 shovel and 1 fire extinguisher, minimum UL rated 2BC or 5 gal. backpack pump within 25' of operation	Requirement the same at all Project Activity Levels providing the activity table permits it and mitigation is followed
Section 3 (d) Fire Box	Fire boxes <b>may be</b> required as determined by the CNF	<b>WHEN REQUIRED:</b> Minimum contents; (1) 5 gal. backpack pump, 2 Pulaski, 2 McLeod, 3 shovels ( <i>additional mix of tools to outfit each employee in operation</i> )	Requirement the same at all Project Activity Levels
Section 3 (e) Water truck, trailer, or portable tank	One or more of these <b>may be</b> required as determined by the CNF	<b>WHEN REQUIRED:</b> Water tank truck, trailer, or portable tank with minimum 150 gal. Pump rating to meet NWCG Type 6 standards.	Requirement the same at all Project Activity Levels
Section 3 (f) Fire Patrol	<b>May be</b> required during certain activities	“Designated” or “Dedicated” ( <i>see definitions</i> )	Requirement will vary with work activity and PAL, see specific Fire Prevention Mitigation Table ( <i>Attachment 2</i> )

**ATTACHMENT #2**  
**Fire Prevention Mitigation Table**

<u>Activity</u>	<u>Description</u>	<u>Equipment Used</u>	<u>PAL A, B, &amp; C</u>	<u>PAL D</u>	<u>PAL D</u> (after 1300)	<u>PAL Ev</u>	<u>PAL E</u>
<b>Incidental landing areas (ILA)</b>	Vegetation clearing and trimming, foot paths where needed	Helicopter, chain saw, weed eater <i>(does not apply to string weed eaters)</i>	No additional requirements above those identified in Section 3	“Designated” Fire Patrol w/ (1) 5 gal. backpack pump, stay 30 min. after work completion	“Dedicated” Fire Patrol w/(2) backpack pumps, stay 30 minutes after work completion	Same as PAL D (after 1330)	<b>NO WORK</b> without special authorization or declared “emergency”
<b>Routine Vegetation Management</b>	Vegetation work to facilitate road use, inspections, facility maint. and removing fire hazards	4 wheel drive vehicles, helicopter, chain saw, chipper, weed eaters <i>(does not apply to string weed eaters)</i>	No additional requirements above those identified in Section 3	“Designated” Fire Patrol w/ (1) 5 gal. backpack pump, stay 30 min. after work completion, no dead tree felling, etc.	“Dedicated” Fire Patrol w/ (2) 5 gal. backpack pump, stay 30 min. after work completion, no dead tree felling, etc.	Same as PAL D (after 1330)	<b>NO WORK</b> without special authorization or declared “emergency”
<b>Tree trimming</b>	Maintaining adequate line clearance between conductors and vegetation	4 wheel drive vehicles, chain saw, chippers	No additional requirements above those identified in Section 3	“Designated” Fire Patrol w/ (1) 5 gal. backpack pump, stay 30 min. after work completion, no dead tree felling, etc.	“Dedicated” Fire Patrol w/ (2) 5 gal. backpack pump, stay 30 min. after work completion, no dead tree felling, etc.	“Dedicated” Fire Patrol w/150 gal. pump and hose, stay 30 min. after work completion, no dead tree felling, etc.	<b>NO WORK</b> without special authorization or declared “emergency”
<b>Noxious weed control</b>	Controlling and abating weeds in the permitted access roads, structure pads, and ILA’s	4 wheel drive vehicles, helicopter, weed eaters <i>(does not apply to string weed eaters)</i>	No additional requirements above those identified in Section 3	“Designated” Fire Patrol w/ (1) 5 gal. backpack pump, stay 30 min. after work completion	“Dedicated” Fire Patrol w/(2) backpack pumps, stay 30 minutes after work completion	Same as PAL D (after 1330)	<b>NO WORK</b> without special authorization or declared “emergency”
<b>Road Maintenance</b>	Road grading, water bars & culverts etc.	4 wheel drive veh., road grader, excavator, dozer, water truck, etc.	No additional requirements above those identified in Section 3	“Dedicated” Fire Patrol w/(2) backpack pumps, stay 30 minutes after work	“Dedicated” Fire Patrol w/150 gal. pump and hose, stay 30 min. after work completion	Same as PAL D (after 1330)	<b>NO WORK</b> without special authorization or declared “emergency”

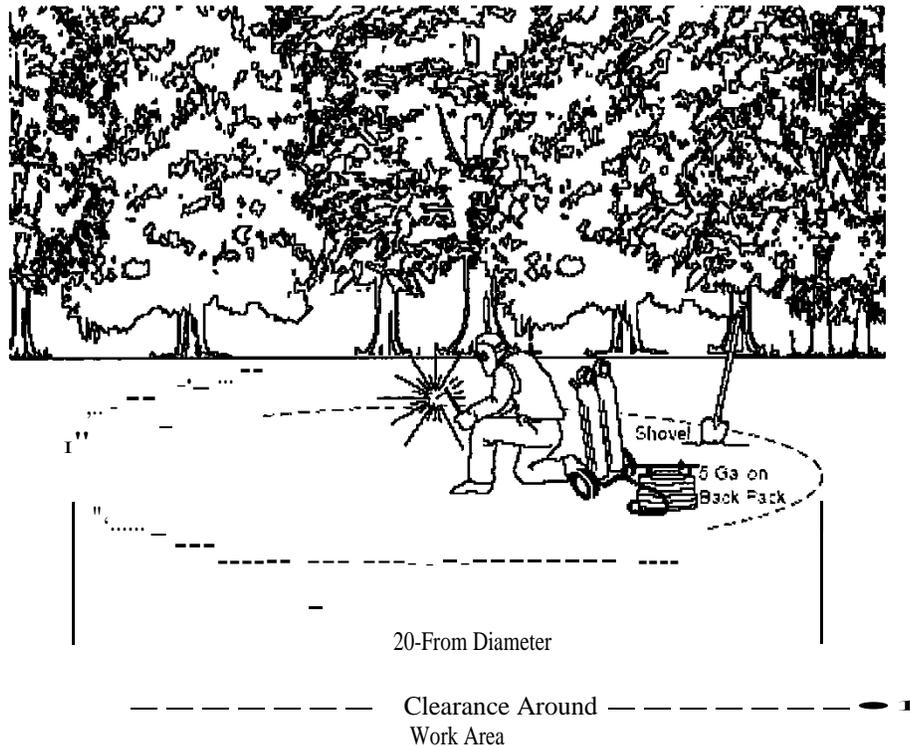
<u>Activity</u>	<u>Description</u>	<u>Equipment Used</u>	<u>PAL A, B, &amp; C</u>	<u>PAL D</u>	<u>PAL D (after 1300)</u>	<u>PAL Ev</u>	<u>PAL E</u>
				completion			
<b>Welding, cutting, grinding, (hot work)</b>	Welding, cutting, grinding to support other work activities	Welder, cutting torch, grinding wheel, etc.	No additional requirements above those identified in Section 3. 30-minute fire watch required after completion of hot work.	<b>NO WORK</b> without special authorization or declared "emergency"	<b>NO WORK</b> without special authorization or declared "emergency"	<b>NO WORK</b> without special authorization or declared "emergency"	<b>NO WORK</b> without special authorization or declared "emergency"
<b>Non-vehicle accessible sites</b>	Any applicable work on walk-in and fly-in sites	Personnel shall be equipped w/hand tools	Minimum 1 shovel, 1 Pulaski	Same as PAL A,B, C	Additional (1) 5 gal. Backpack pump.	Same as PAL D (after 1330)	<b>NO WORK</b> without special authorization or declared "emergency"

### ATTACHMENT #3 Metal Cutting, Welding and Grinding

A California Inter-Agency Burning permit is required for all metal cutting, metal grinding, and welding operations. This permit may be obtained from the Forest Service. Contact District Fire Prevention personnel at XXX-XXX-XXXX to obtain the permit. Permits expire at the end of the calendar year or upon terms of the permit.

Welding and metal grinding have caused numerous wildfires in California. The following graphic and guidelines are designed to help mitigate fire starts caused by sparks, slag, or hot metal falling into dry vegetation fuel beds.

1. Clear and maintain to bare soil a minimum 10-foot area from work site of dead grass, brush, and other combustibles.
2. Have a shovel at the work site.
3. Have a 5-gallon backpack pump-type fire extinguisher filled with water ready for emergency use.
4. Have a dedicated fire patrol on site during work and 30 minutes after completion of work.
5. Where practicable, use a welding tent or shield to contain welding and grinding sparks.



**Proper clearances around welding operation.**

## **ATTACHMENT #4 Spark Arrestor Information**

### **Spark Arrestors:**

USDA Forest Service-approved spark arrestors are required on all internal combustion engines. Heavy equipment that is diesel and turbo charged are exempt from this requirement. All vehicles, such as dump trucks that are licensed and otherwise registered for highway travel, are also exempt from the spark arrestor requirement. (See Fire Plan Section 3: Tools and Equipment and Attachment 2: Exhaust Systems and Spark Arrestors, for additional information on Spark Arrestors).

### **EXHAUST SYSTEMS AND SPARK ARRESTORS**

Vehicle exhaust systems start fires in two ways: (a) an emission of hot carbon particles, and (b) direct contact with flammable materials and vegetation. Contact with flammable materials may occur by a collection of flammables on manifolds and inside heat shields or by parking where flammable vegetation may come in close proximity or contact to exhaust systems and other components. Fire ignition by direct contact most often occurs with a vehicle muffler, catalytic converter, or exhaust pipe. Operating temperatures of any of these components are well above the ignition temperature of dry wildland fuels. Vehicles should always and only be parked on an area cleared of all flammable materials.

All internal combustion engines operating on forest or grass covered lands in California are required to be equipped with an effective spark arrester. Muffler equipped trucks, buses, and passenger vehicles are exempt provided they are licensed and registered for highway travel and the exhaust system has not been modified. Heavy equipment—such as road graders, rubber tired front end loaders, and caterpillar tractors that are diesel powered and are equipped with a turbo charger where 100% of the exhaust is recycled through the turbo charger—are exempt from the spark arrester requirement. All portable gasoline generators, chain saws, and weed eaters are required to have a spark arrester on the exhaust system.

**For further information, the Approved Spark Arrestor Guide List is available online at <http://www.fs.fed.us/t-d/programs/fire/spark/sag-index.html>**

## **APPENDIX #1**

### **SDG&E Electric Standard Practice 113.1 Operations & Maintenance Wildland Fire Prevention Plan**

**PROJECT CHECKLIST**

Use 'Tab Key' to navigate form

Date: 26 July 2016

Originator: Hal Mortier

Project Title:

**SDG&E Operations and Maintenance Wildland Fire Protection Plan**

The attached document pertains to:

**Electric Standard Practice: 113.1**

Synopsis of change (for distribution cover sheet)

See attached 'NEW / REVISED' cover sheet.

Sponsoring Department:

**Other** (Click on title to select one from the drop-down menu)

If Other, Describe: SDG&E Emergency Management

Individuals Involved in Development and/or Revision:

Training Requirements: (Describe how the training will be conducted)

**All C&O Managers and O&E Managers review this revised standard with your personnel at your next Safety Meeting.**

**To be completed within 30 days of "Effective Date".**

Reviewed By: Hal Mortier

Approved By: Maurizio De Julio

# ***ESP – 113.1 (Revised)***

## **Electric Standard Practice – 113.1 SDG&E Operations and Maintenance Wildland Fire Prevention Plan**

Electric Distribution Engineering has published this standard with revisions and additions made by the SDG&E Fire Program Manager.

 Changes and Additions highlighted in **YELLOW**

**If you have any questions regarding this Standard Practice, please contact:**

◆ Hal Mortier at (XXX) XXX-XXXX or xyz@xyz.com

DEPARTMENT <b>TRANS. &amp; DISTRIB. ENGINEERING</b>	DIVISION <b>DISTRIBUTION ENGINEERING</b>	EFFECTIVE DATE <b>JULY 26, 2016</b>
SECTION <b>GENERAL PRACTICES</b>		
SUBJECT TITLE <b>SDG&amp;E OPERATIONS AND MAINTENANCE WILDLAND FIRE PREVENTION PLAN</b>		
<p><b>1.0 PURPOSE</b></p> <p>1.1 Southern California presents a dangerous natural wildland fuel scenario and explosive fire weather potential. The period for active fire conditions can exist all year long depending on rainfall totals and other dynamic weather factors. The fall months and at times extending into early winter historically host the region's largest fires. Extended dry periods can bring us into or back into critical fire conditions essentially any time of the year. SDG&amp;E facilities, equipment, and activities can present a potential wildland fire ignition risk which must be minimized to the extent reasonably possible. In the event a fire occurs, we must also be equipped to suppress small fires, thus potentially preventing a major fire. Most importantly, we must provide the resources and training necessary to keep our employees safe while working in the wildland areas. This plan is for all system Operations &amp; Maintenance work and can be used for low complexity Construction projects when additional mitigation is not required (see 4.7 SDG&amp;E PROJECT SPECIFIC FIRE PLANS). The intent of this document is to formalize procedures and routine practices that will:</p> <p>1.1.1 Assist SDG&amp;E employees in their understanding of fire prevention and to improve their ability to prevent the start of any fire. The emphasis will be on wildland fires, especially during the critical times of the year when the fire risk is high.</p> <p>1.1.2 Set standards for fire tools and equipment to be present in vehicles and at work sites. This will assist with rapid response to small fires in the event one should occur.</p> <p>1.1.3 Incorporate State, Federal, and local requirements into our standard way of doing business to provide compliance with rules and regulations on a daily basis no matter where work is taking place. This would include, but not be limited to: pertinent laws, Forest Standard Practice Regulations, and "Special Use Permit" or "Right of Way" fire related requirements.</p> <p>1.1.4 Define or reference restrictions mandated by "Red Flag Warnings", "Project Activity Levels", or other unique fire danger scenarios. Provide the means for determining when these restrictions are in effect, what activities they prohibit, the precise locations to which they apply; and identify the notification procedures for all affected employees and contractors. (See TMC-1320)</p> <p>1.1.5 Ensure that our employees and contractors have positive communication for reporting fires and initiating assistance. <b>Dialing 911 is the primary means for reporting emergencies.</b></p> <p>1.1.6 Discuss procedure to identify when a Construction project specific "Fire Plan" is required and the process for developing the document.</p> <p>1.1.7 Share some common sense practices, with regards to fire safety, that should be used in all activities to reduce the risk of fires and to prevent injury to employees as a result of fire.</p> <p>1.1.8 Introduce and require the use of the "Fire Potential Index" to determine when additional fire risk mitigation measures are advised or required.</p> <p><b>2.0 APPLICABILITY</b></p> <p>2.1 <b>This applies to SDG&amp;E field personnel who will work in the wildland areas of the service territory.</b> This also includes Distribution and Transmission operating personnel who will be involved with field personnel in regards to safety, system reliability and/or restoration. Contractors performing work for SDG&amp;E will be expected to comply with this Standard Practice as it relates to their activities.</p>		
ISSUED BY <b>HAL MORTIER</b>	APPROVED BY <b>MAURIZIO DE JULIO</b>	

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<p><b>3.0 DEFINITIONS</b></p> <p>3.1 <b>“At Risk” Activities:</b> Activities that present a risk of igniting a wildfire</p> <p>3.2 <b>Wildland Areas:</b> This term refers to any area within the SDG&amp;E service territory that has wildland fuels available for ignition.</p> <p>3.3 <b>Fire Threat Zone (FTZ):</b> This is a CALFIRE developed rating of wildland threat based on a combination of potential fire behavior (fuel rank) and expected fire frequency. SDG&amp;E has established practices within the FTZ on how SDG&amp;E constructs facilities and also determines certain construction practices to be used within the FTZ. See attachment 1.</p> <p>3.4 <b>SDG&amp;E High Risk Fire Areas (HRFA):</b> This area will be an assortment of GIS polygons that represent the zones of greatest concern within the SDG&amp;E service territory, blending fuels, topography, wind, and system information. (The areas can change annually and the map will be labeled with the appropriate year, “SDG&amp;E 20XX Highest Risk Fire Area” and is always a subset of the Fire Threat Zone). The HRFA helps to determine how SDG&amp;E operates the electric system, as a function of weather conditions. See attachment 1.</p> <p>3.5 <b>Fire Season:</b> Fire season is no longer officially designated by the wildland fire agencies. California is considered to be in fire season on a yearlong basis. CAL FIRE adjusts its staffing patterns as fire conditions moderate or escalate and this can be used as an indicator of potential fire activity.</p> <p>3.6 <b>Fire Potential Index (FPI) (1-17):</b> This is a comprehensive assessment of fire risk, used as a tool for making operation &amp; maintenance decisions related to fire prevention. The tool converts environmental, statistical, and scientific data into an easily understood forecast of short-term fire threat. The index is generated for a seven day forecast period for an assortment of geographic areas within the service territory. The 7-day forecast is used for planning purposes while the daily FPI is used for work activities. The FPI is used to determine the fire potential range for each day (Normal, Elevated, or Extreme), definitions of each to follow.</p> <p>3.6.1 <b>Normal Fire Potential (1-11):</b> It is considered “Normal” when the FPI is green. All O&amp;M activities can take place in the wildland areas of the service territory without additional risk mitigation, as long as baseline fire equipment is available as prescribed in this plan. Note: the baseline fire equipment requirements meet or exceed all local, state, &amp; federal requirements for working in the wildland areas.</p> <p>3.6.2 <b>Elevated Fire Potential (12-14):</b> It is considered “Elevated” when the FPI is either yellow or orange. Certain “at risk” O&amp;M activities (as identified in the matrix, attachment 2) will require additional risk mitigation (as prescribed in the matrix, see attachment 2) to perform those work activities.</p> <p>3.6.3 <b>Extreme Fire Potential (15-17):</b> It is considered “Extreme” when the FPI is red. No “at risk” activities should be conducted except for those activities which if, left undone present a greater risk than that involved with their accomplishment. Consultation with the On-duty Fire Coordinator is required to help make that determination and identify additional mitigation required to reduce risk.</p>		
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<p>3.7 <b>Red Flag Warning (RFW):</b> The National Weather Service will declare a RFW when conditions are expected to meet either of the following criteria:</p> <p>3.7.1 Relative humidity is 15% or less with sustained winds equal to or greater than 25 mph, or frequent gusts equal to or greater than 35 mph for a period of 6 hrs or more. This RFW (based on wind/relative humidity) will be considered “Extreme” operating condition regardless of the FPI for that time period and have the same restrictions described for “Extreme”.</p> <p>3.7.2 Dry lightning is for a lightning event that is not accompanied by enough precipitation to significantly wet fuels that have been identified as critically dry. This is common within the inland and mountain zones. This RFW (based only on dry lightning) will be assessed by Meteorology and Fire Coordination to determine the appropriate operating condition related to actual weather conditions, and Grid and Dist. Ops. will notify field personnel.</p> <p>3.8 <b>Project Activity Level (PAL):</b> This term is specific to the Cleveland National Forest (CNF) and only applies to work within the boundaries of the CNF. When conducting work on the CNF it is each crew member’s responsibility to know the PAL level and adhere to any additional work restrictions or mitigation measures.</p> <p>3.9 <b>Fire Tools:</b></p> <p>3.9.1 <b>Shovel:</b> standard round point shovel with overall length of at least 46”.</p> <p>3.9.2 <b>Pulaski:</b> an axe-like fire hand tool used for cutting, chopping or grubbing.</p> <p>3.9.3 <b>McLeod:</b> a fire hand tool used for raking and scraping.</p> <p>3.9.4 <b>Backpack pump:</b> is a portable 5 gallon water pack with hose and nozzle used for extinguishing Class A (common combustibles) fires and primarily wildland fires. They can be rubber collapsible packs or stainless steel canisters.</p> <p>3.9.5 <b>Fire box:</b> can be placed in a staging area or worksite to supplement available fire suppression equipment when necessary due to excessive work activity. It generally contains additional hand tools and/or backpack pumps as deemed appropriate.</p> <p>3.10 <b>Major Operations Work Area:</b> It will be considered a major operations work area when work activities or staging of resources will be concentrated in and out of a staging facility. These work sites are typically large in size and include but are not limited to construction yards, fly yards, substation pads and any other area where construction work will be concentrated.</p> <p>3.11 <b>Fire Patrol:</b></p> <p>3.11.1 A <i>designated</i> “Fire Patrol” is a member of a work crew assigned the responsibility and accountability for fire prevention, risk mitigation, early detection of fires, and rapid extinguishment should one occur. This can be accomplished co-laterally with other work duties.</p> <p>3.11.2 A <i>dedicated</i> “Fire Patrol” is a person(s) assigned the responsibility and accountability for fire prevention, risk mitigation, early detection of fires, and rapid extinguishment should one occur. This will be their sole duty while serving as a dedicated Fire Patrol.</p>		
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<p>3.12 <b>SDG&amp;E Fire Coordinator (FC):</b> The SDG&amp;E Fire Coordinator serves as a conduit or liaison to the emergency service agencies for the utilities for everyday operations as well as emergency incidents. The FC will help the emergency service agencies obtain their needs related to the utility and represent the utility needs to the emergency service agencies.</p> <p>3.13 <b>SDG&amp;E Incident Commander (IC):</b> SDG&amp;E will follow Incident Command System protocols on all emergency incidents. SDG&amp;E will positively identify a single point of contact for all SDG&amp;E resources (people and equipment) on any emergency incident. The appropriate line authority will identify who the SDG&amp;E IC will be on moderate or complex incidents. “First- in” supervisor will generally be the IC on low complexity incidents. The IC will coordinate SDG&amp;E activities with the overall Incident Commander, usually a jurisdictional fire chief.</p> <p>3.14 <b>Operations &amp; Maintenance (O&amp;M):</b> O&amp;M refers to post construction care and maintenance of SDG&amp;E facilities.</p> <p><b>4.0 PROCEDURE</b></p> <p>4.1 <b>General:</b> SDG&amp;E personnel will be committed to the following three step process for reducing the fire risk and exposure involved with potential wildland fires related to our work activities or equipment;</p> <p>4.1.1 Fire Prevention: all work activities taking place in the wildland areas of our service territory will be assessed with regard to fire risk during standard safety tailboard sessions. Those activities that pose risk and can be excluded will be. Those that cannot be eliminated will incorporate appropriate mitigation measures to reduce the risk where possible, and in those cases where all risk cannot be eliminated the following steps will be in place.</p> <p>4.1.2 Immediate or Early Fire Detection: SDG&amp;E enhances the ability of its crews to detect fire at its earliest stages by assigning designated (co-lateral duty) and dedicated Fire Patrols (sole duty) as well as training all personnel to establish good situational awareness during “Normal”, “Elevated”, and “Extreme” operating conditions.</p> <p>4.1.3 Rapid Extinguishment: prescribed fire tools and equipment will be available within 50’ of worksite and immediately available for rapid extinguishment of any ignition.</p> <p>4.2 <b>Tools &amp; Equipment:</b> When working in the FTZ (identified on Attachment 1); the following tools and equipment are required as a minimum and will be carried on the vehicles as described. If work is in a wildland area outside the FTZ it is recommended you use these same standards. This does not apply to transient traffic driving on primary road beds through the wildland areas. These items will meet the California Forest Practice Rules; Public Resource Code Division 4, Chapter 6. Making this equipment available at your work sites will also meet the majority of the requirements mandated by the wildland fire agencies within the company service territory.</p> <p>Some additional project specific or weather specific requirements may be necessary and will be discussed in the following section of this plan. <b>Please note that if your work project is over 50’ from the vehicle location, the mandated equipment should be removed from the vehicle and staged at the work site.</b></p>		
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<p>4.2.1 Passenger Vehicles (performing work in the wildland areas):</p> <ul style="list-style-type: none"> <li>4.2.1.1 1 round point shovel with overall length of at least 46"</li> <li>4.2.1.2 1 serviceable fire extinguisher, minimum U.L. rated "2 BC"; rating found on fire extinguisher label (a "2" rated extinguisher will put out approx. 2 sq. ft. of combustible material and BC indicates it will work on flammable liquids and is non-conductive for electrical fires)</li> </ul> <p>4.2.2 Trucks &amp; 4 Wheel Drive Vehicles;</p> <ul style="list-style-type: none"> <li>4.2.2.1 1 round point shovel with overall length of at least 46"</li> <li>4.2.2.2 1 Pulaski</li> <li>4.2.2.3 1 (5) gallon backpack pump</li> </ul> <p>4.2.3 Heavy Machinery or Equipment (including tub grinders, whole tree chippers, drilling rigs, tractors, etc.);</p> <ul style="list-style-type: none"> <li>4.2.3.1 1 round point shovel with overall length of at least 46"</li> <li>4.2.3.2 1 Pulaski</li> <li>4.2.3.3 1 (5) gallon backpack pump</li> </ul> <p>4.2.4 Chain Saw Use;</p> <ul style="list-style-type: none"> <li>4.2.4.1 1 shovel within 25 feet of the chainsaw operation with unrestricted access to the tool.</li> <li>4.2.4.2 1 serviceable UL rated 2BC fire extinguisher in their immediate possession.</li> </ul> <p>4.2.5 Major Operations Work Area (When vehicle equipment does not meet the needs of the work area a Fire Box or equivalent should be located on site and be accessible to all personnel and there should be enough total tools to outfit number of personnel on scene);</p> <ul style="list-style-type: none"> <li>4.2.5.1 1 (5) gallon backpack pump</li> <li>4.2.5.2 2 Pulaskis</li> <li>4.2.5.3 2 McLeod fire tools</li> <li>4.2.5.4 Round point shovels 46" (enough to outfit remaining personnel)</li> </ul> <p>4.3 <b>Fire Risk &amp; Mitigation Matrix:</b> The following matrix is designed to blend the fire risk associated with a specific work activity with the fire potential index for the day to establish the proper fire prevention measures required in each scenario. Most of the work activities can be done daily simply by having the required equipment from section 4.2 available, serviceable, and proximate to work site. Some activities involve more risk and may require additional mitigation measures. The fire potential is determined by the daily Fire Potential Index. Green on the FPI is considered <b>Normal Fire Potential</b>. Under <b>Normal</b> the baseline tool &amp; equipment requirements from section 4.2 suffice, except for specifically noted exceptions. <b>Elevated Fire Potential</b> is when the FPI is in the yellow/orange range and certain work activities may require additional mitigation measures in order to proceed with the work; again refer to matrix. <i>The supervisor responsible for the work activity will document how the additional mitigation will be met for the day's activities. This can be done in conjunction with normal tailboard documentation or as separate documentation.</i></p>		
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**Extreme Fire Potential** is the red on the FPI and most work activities will cease, except where not performing the work creates a greater risk than doing so. In those cases where work will be done, consult with On-duty Fire Coordinator ((XXX) XXX-XXXX) and check matrix to see if additional mitigation is required. The supervisor responsible for the work activities will document that work has in fact ceased or why it was acceptable to continue. If Fire Coordination is consulted they too will document when a joint decision to continue work is made.

Normal	Elevated	Extreme
<b>&lt; 12</b>	<b>12-14</b>	<b>15-17</b>

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**FIRE RISK & MITIGATION MATRIX**

The work activity described can be performed to the operating level indicated unless specifically noted that it cannot, or by meeting the minimum additional mitigation requirements indicated for that level. This assumes the baseline tool requirements from section 4.2 are available, serviceable, and proximate to work site. *Note; a "designated" Fire Patrol can have co-lateral duties, whereas a "dedicated" Fire Patrol is committed to fire prevention duties and responsibilities.* The criterion for EXTREME is to do only the work where not performing the work creates a greater risk than doing so. Consult Fire Coordination for special mitigation requirements.

Work Activity	Work Activity Description	<b>NORMAL</b> Operating Conditions	<b>ELEVATED</b> Operating Conditions	<b>EXTREME</b> Operating Conditions
<i>Vehicle, Roads, Inspections</i>				
Vehicle travel	On paved roads or improved roads with no vegetation on roadbed			
Vehicle travel	Off road vehicle travel and un-maintained roadbeds		Must designate a Fire Patrol (Document)	Permitted only for work that meets the extreme criteria and must have a dedicated Fire Patrol
Inspections	Ground, aerial, security, climbing, vegetation, and weed control inspections			Must follow vehicle travel rules above.
Access Road Maintenance	Vegetation removal, water bars, culvert cleaning/repair, grading		Must designate a Fire Patrol (Document) and 150 gal. of water and equipment for its use	Not Permitted

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<i>Equipment Maintenance</i>				
Insulator Washing	Conducted on existing access roads with Insulator Wash Rig (1,000 gal.)			Not Permitted
Equipment Replacement	Mechanical replacement of system equipment; i.e. insulators, fuses, etc. ON paved roads or improved roads with no vegetation on roadbed		Must designate a Fire Patrol (Document)	Permitted only for work that meets the extreme criteria and must have a dedicated Fire Patrol
Equipment Replacement	Mechanical replacement of system equipment; i.e. insulators, fuses, etc. Off road vehicle travel and on unmaintained roadbeds		Must designate a Fire Patrol (Document)	Permitted only for work that meets the extreme criteria and must have a dedicated Fire Patrol
Conductor Replacement	Replacement of conductor with all activities conducted ON paved roads or improved roads with no vegetation on roadbed		Must designate a Fire Patrol (Document)	Not Permitted
Conductor Replacement	Replacement of conductor with all activities conducted Off road vehicle travel and on unmaintained roadbeds		Must have dedicated Fire Patrol and 150 gal. of water and equipment for its use	Not Permitted
<b>Pole Replacement / Pole hole digging</b>	Replacement of existing power pole ON paved roads or improved roads with no vegetation on roadbed		Must designate a Fire Patrol (Document)	Not Permitted
<b>Pole Replacement / Pole hole digging</b>	Replacement of existing power pole Off road vehicle travel and on unmaintained roadbeds		Must designate a Fire Patrol (Document) and 150 gal. of water and equipment for its use	Not Permitted
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<i>Vegetation Management</i>				
Pole/Tower Ground Clearance (PRC 4292)	10' clearance around poles and tower structures hand tools only			Not Permitted
Pole/Tower Ground Clearance (PRC 4292)	10' clearance around poles and tower structures weed eaters/hand tools and chain		Must designate a Fire Patrol (Document)	Not Permitted
Conductor Vegetation Clearance (PRC 4293)	Tree trimming and occasional removal to maintain required clearances mandated by code		Must designate a Fire Patrol (Document)	Allowed when trees making contact or intermittent contact. Must have a dedicated Fire Patrol.
Noxious Weed Control	Controlling or abating weeds in permitted access roads & worksites		Must designate a Fire Patrol (Document)	Not Permitted
<i>Other Activities</i>				
Welding or Grinding	Welding or grinding will always require that it be done in an area 10' minimum clearance to mineral soil or equivalent	Must designate a Fire Patrol (Document)	Must have a dedicated Fire Patrol	Not Permitted
Blasting	Any work using explosives must have permit with restrictions identified	Must designate a Fire Patrol (Document)	Must designate a Fire Patrol (document) and 150 gal. of water and equipment for its use	Not Permitted
Combustion Engines	Compressors, generators, etc. must have 10' minimum clearance or equivalent from the heat source		Must designate a Fire Patrol (Document)	Permitted only for work that meets the extreme criteria and must have a dedicated Fire Patrol

Activities not covered by the *Matrix* that do not fit with an identified work activity require consultation with the On-duty Fire Coordinator for approval and/or additional mitigation requirements.

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<p>4.3.1 Optional considerations for particularly hazardous or high risk areas where additional mitigation measures are warranted (<i>discuss with On-duty Fire Coordinator</i>)</p> <p>4.3.1.1 Small fire engine or patrol unit with minimum 150 gallons of water</p> <p>4.3.1.2 Cache of fire hose and related accessories</p> <p>4.3.1.3 Water supply; water tender, truck, or hydrant (1500 gal. recommended)</p> <p>4.3.1.4 Dozer or tractor, capable of producing fire line</p> <p>4.3.2 Helicopter Operations: Helicopter staging areas will be treated similar to other staging areas with enough fire equipment for personnel on site or fire box available on major operations. On Incidental Landing Areas (ILA's) adequate firefighting equipment shall be carried on the helicopter for the number of personnel working on the ground at those sites.</p> <p>4.4 General Fire Prevention Considerations:</p> <p>4.4.1 It is required on projects in the SDG&amp;E FTZ (and recommended in any wildland area) to conduct a formal "tailboard" safety session all fire concerns. All fire concerns will be documented, including designated or dedicated fire patrol, mitigation measures taken, and extinguishment plans for any at risk work for the day.</p> <p>4.4.2 Smoke only in designated smoking areas or in a 10' clearing void of all grass or other vegetation.</p> <p>4.4.3 Idling your vehicle in areas of brush, grass, or other vegetation is prohibited. When parking in these areas; shut off vehicle and check vehicle undercarriage for any threat of fire ignition.</p> <p>4.4.4 When driving over grass meadows or areas of low vegetation, have a designated Fire Patrol follow along with fire tools available to extinguish an inadvertent fire start. If traveling alone, you become the designated fire patrol, frequent observations of the ground behind you should be made with fire tools ready and available and this should not be done in elevated or extreme conditions.</p> <p>4.4.5 At work sites have all required tools available and within 50' of the work activity. Tools should be serviceable and ready for use.</p> <p>4.4.6 When using any piece of equipment capable of producing sparks and/or which has an exposed exhaust system, provide an area with 10' clearance or equivalent from the heat source and at a minimum assign and document a designated Fire Patrol during elevated and extreme conditions.</p> <p>4.4.7 All internal combustion engines shall have approved spark arresters.</p> <p>4.4.7.1 Engines used to provide motive power for trucks, tractors, buses, and passenger vehicles, except motorcycles, are exempt if the exhaust system is equipped with a muffler.</p> <p>4.4.7.2 Turbocharged engines are exempt.</p> <p>4.4.8 When it is possible, wet down adjacent vegetation when performing at risk work in the wildland areas.</p> <p>4.4.9 Consider work hour restrictions in the wildland areas avoiding particularly hazardous work during the hottest portions of the day.</p>		
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<p>4.4.10 When it is possible, wet down adjacent vegetation when performing at risk work in the wildland areas.</p> <p>4.4.11 Consider work hour restrictions in the wildland areas avoiding particularly hazardous work during the hottest portions of the day.</p> <p>4.5 <b>General Fire Safety Considerations:</b> As previously indicated, fire prevention is the primary focus of all of our efforts. We do carry the proper equipment to rapidly extinguish a witnessed ignition or very small fire that is within our capabilities to take action on. If at any time the fire becomes unmanageable or unsafe for you to continue your suppression actions, you should stop and retreat to a safe area. If work activities require personnel to perform utility related work adjacent to or near an uncontrolled wildfire the following considerations become important for your safety (See below).</p> <p>4.5.1 Use proper Personal Protective Equipment (P.P.E.), standard SDG&amp;E requirements apply. When working within or adjacent to uncontrolled fire perimeter company issued fire resistant clothing should be worn.</p> <p>4.5.2 When working on or adjacent to a wildland fire, positive communications must be maintained internally using SDG&amp;E work protocols. It is critical that employees have the ability to communicate with fire agencies for reporting fires and for the exchange of critical information for the duration of an incident. Cross communication with the fire agencies is the responsibility of the SDG&amp;E Incident Commander (single point of contact assigned to manage all SDG&amp;E resources), the Fire Coordinator (FC), or the On- Site (pre-designated work supervisor for affected area) Supervisor in the absence of a Fire Coordinator or SDG&amp;E Incident Commander.</p> <p>4.5.3 Know what the fire is doing at all times, observe personally or be in direct communication with a competent person (IC, FC, or On-Site Supervisor) who is monitoring fire activity.</p> <p>4.5.4 Work within the Incident Command System (ICS) while assigned to a fire incident. Understand the chain of command for the incident and who you are accountable to. Check in and check out when entering an uncontrolled fire perimeter after it is determined to be safe by the IC, FC, or on-site SDG&amp;E Single Point of Contact.</p> <p>4.5.5 Pre-evaluate and designate safety zones (areas large enough to provide a safe retreat) and escape routes (safe access to these safety zones) when working in the wildland areas during high fire danger days.</p> <p>4.5.6 Get proper rest and adequate water during extended fire activity to avoid fatigue and help prevent accidents and/or injuries.</p> <p>4.5.7 Exercise extreme caution when driving within a fire area and/or smoky conditions. Be aware of falling rocks, trees, and other debris as well as road obstructions and other traffic. Keep driving speeds down when visibility is limited.</p>		
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<p>4.6 <b>Red Flag Warnings/Extreme Fire Potential Index:</b> Red Flag Warnings (RFW) are issued by the National Weather Service. Its intent is to pass along critical fire weather information to users and occupants in the wildland areas to bring about more prudent actions in all of their wildland related activities. There are currently two basic criteria (see definitions under RFW) for establishing a RFW. One is wind related, along with extreme dryness, and this RFW will be considered “Extreme” operating condition automatically and all work activity will cease except for such work that without performing it would create a greater risk. The second RFW criterion is lightning related and is issued when areas of “dry” lightning are imminent. During this type of RFW, Fire Coordination and Meteorology will confer to determine the operating condition for the duration of the RFW. RFW are generally issued for various weather zones that transect the SDG&amp;E service territory. The wind/relative humidity RFW will apply to all identified weather zones within SDG&amp;E service territory and can be expanded to exclude weather zones if necessary after consultation between Fire Coordination and Meteorology. Extreme FPI is issued by SDG&amp;E Meteorology group. In either case work restrictions likely apply, see 4.3. Supervisors will retain authority to allow (exempt) work necessary to mitigate an immediate fire risk. The supervisor will be required to document the exemption. If required the On-duty Fire Coordinator can provide assistance with the decision and documentation process. During pre-event conference calls Fire Coordination will remind affected parties of work restrictions as they relate to the particular event.</p> <p>4.7 <b>Project Activity Levels:</b> The United States Forest Service has a program it utilizes to reduce the risk of fire on National Forest land, particularly in the timber or mountain areas. It is referred to as Project Activity Levels (PALS). Each day at 4:00 p.m. the PAL will be announced for the following day. It may be different for different geographical areas in the county. IT ONLY APPLIES TO THE CLEVELAND NATIONAL FOREST. This information is available by calling (XXX) XXX-XXXX. The PAL index will determine what activities can be done on the forest the following day and what risk mitigation can be done to be allowed to do additional work activities. The CNF O&amp;M Fire Prevention plan must be followed when working on USFS lands (contact On-Duty FC for current version: (XXX) XXX-XXXX).</p> <p>4.8 <b>SDG&amp;E Project Specific Fire Plans:</b> This Wildland Fire Prevention plan will be sufficient for most routine day to day work activities performed in the wildland by all SDG&amp;E employees and contractors. For projects outside of normal work activities or for an activity that seems to be especially hazardous the Fire Coordination group should be consulted. The FC will make a determination whether this Wildland Fire Prevention plan is sufficient for the prescribed work, this plan with some minor additional mitigation will suffice, or if a project specific Fire Prevention Plan is required. If required the FC will work with the Project Manager or representative to develop the required plan, follow it through to approval, and monitor compliance with the plan as appropriate. On major projects there may be additional requirements assessed by the CPUC or a jurisdictional fire agency that will be incorporated as required into the project specific Fire Prevention Plan.</p> <p>4.9 <b>Other Critical Fire Danger Proclamations:</b> The Fire Chiefs with jurisdictional responsibility for a given area have the authority to proclaim certain restrictions in extreme fire conditions or when they are experiencing a critical shortage of resources. These cases will be very rare and it will be incumbent on them to insure we are informed of any temporary changes in fire restrictions for a particular area. Upon notification we would be required to comply as appropriate.</p>		
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<p>4.10 <b>Fire Related Training:</b> It is mandatory that all field going employees have basic wildland fire prevention training on an annual basis. If an employee who does not have wildland fire prevention training chooses to go to the field they will be escorted by someone who has had the training and has the required tools for both employees. . Wildland Fire Prevention training (SFUGN103) will be incorporated into annual Compliance Training and documented through using this process. The training can be accomplished in one hour at a routine safety meeting just prior to fire season or schedule sessions specifically for this purpose. For those employees who are likely to be asked to work within or immediately adjacent to an uncontrolled fire area, the following additional training is recommended: Two hours total consisting of Fire Safety, Incident Command System, and basic fire behavior training. For supervisors, managers, and company officers, who could be assigned as the SDG&amp;E Incident Commander or EOC “Officer in Charge” on a major incident, additional advanced ICS training is recommended. The Fire Coordinator group will provide this training or assist with arranging qualified instruction. The FC may bring in additional qualified instructors, or qualify additional SDG&amp;E employees as instructors, using the “train the trainer” approach to assist with this effort. Documentation of this training shall be done by the work supervisors and recorded in the employee’s training records.</p> <p>4.11 <b>EOC and Control Centers:</b></p> <p>4.11.1 Service Dispatch, Electric Distribution Operations, Electric Grid Operations, and the EOC play a vital role in any fire emergency. Communications with these groups, when applicable, is critical. Provide information updates and feedback to each of these groups as their areas of responsibility becomes affected. This should continue through the duration of the incident. As this standard practice governs the fire prevention aspects of an event, Distribution Operations and Grid Operations manage the System Operation and all protocols in TSP-1320, DOP3013, &amp; ESP109 must be complied with.</p> <p>4.11.2 Early notification to the EOC of potential activation is recommended when appropriate. Notification procedures are identified in ESP 113 FIRE COORDINATION and should be followed as prescribed.</p> <p>4.12 <b>Fire Coordination:</b> SDG&amp;E has (6) full-time Fire Coordinators and additional qualified assistance within the company. They are essentially the liaison for the company to the Emergency Response agencies. Questions related to this plan or request assistance on any emergency should be made through the FC group.</p> <p><b>5.0 REFERENCES</b></p> <p>5.1 State Forest Standard Practice Act: <a href="http://www.fire.ca.gov/resource_mgt/downloads/2015%20FP%20Rulebook_with%20TRA%20No%201_Final.pdf">http://www.fire.ca.gov/resource_mgt/downloads/2015%20FP%20Rulebook_with%20TRA%20No%201_Final.pdf</a></p> <p>5.2 TMC 1320 (aka DOP3013, ESP109 – SDG&amp;E Fire Conditions)</p> <p>5.3 ESP 113 – FIRE COORDINATION</p> <p>5.4 Power Line Fire Prevention Field Guide – 2008 edition <a href="http://cdfdata.fire.ca.gov/pub/fireplan/fpupload/fppguidepdf126.pdf">http://cdfdata.fire.ca.gov/pub/fireplan/fpupload/fppguidepdf126.pdf</a></p>		
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**6.0 REVISION HISTORY**

Effective Date:	Type Of Change	Brief Description of Change
26Jul2016	Revised	SDG&E Fire Program Manager has made minor changes to this standard. Revisions or additions highlighted in <b>YELLOW</b> . Removed Attachment 2, Project Specific Fire Plan Template.
8Jun2015	Revised	SDG&E Fire Program Manager updated all maps
25Jul2014	Revised	Revised by SDG&E Fire Program Manager
24Apr2013	Revised	Revised by SDG&E Fire Program Manager
05Jul2012	Revised	Revised by SDG&E Fire Program Manager

**7.0 ATTACHMENTS**

7.1 Attachment 1: Service Territory with SDG&E 2015 Highest Fire Risk Areas & FTZ

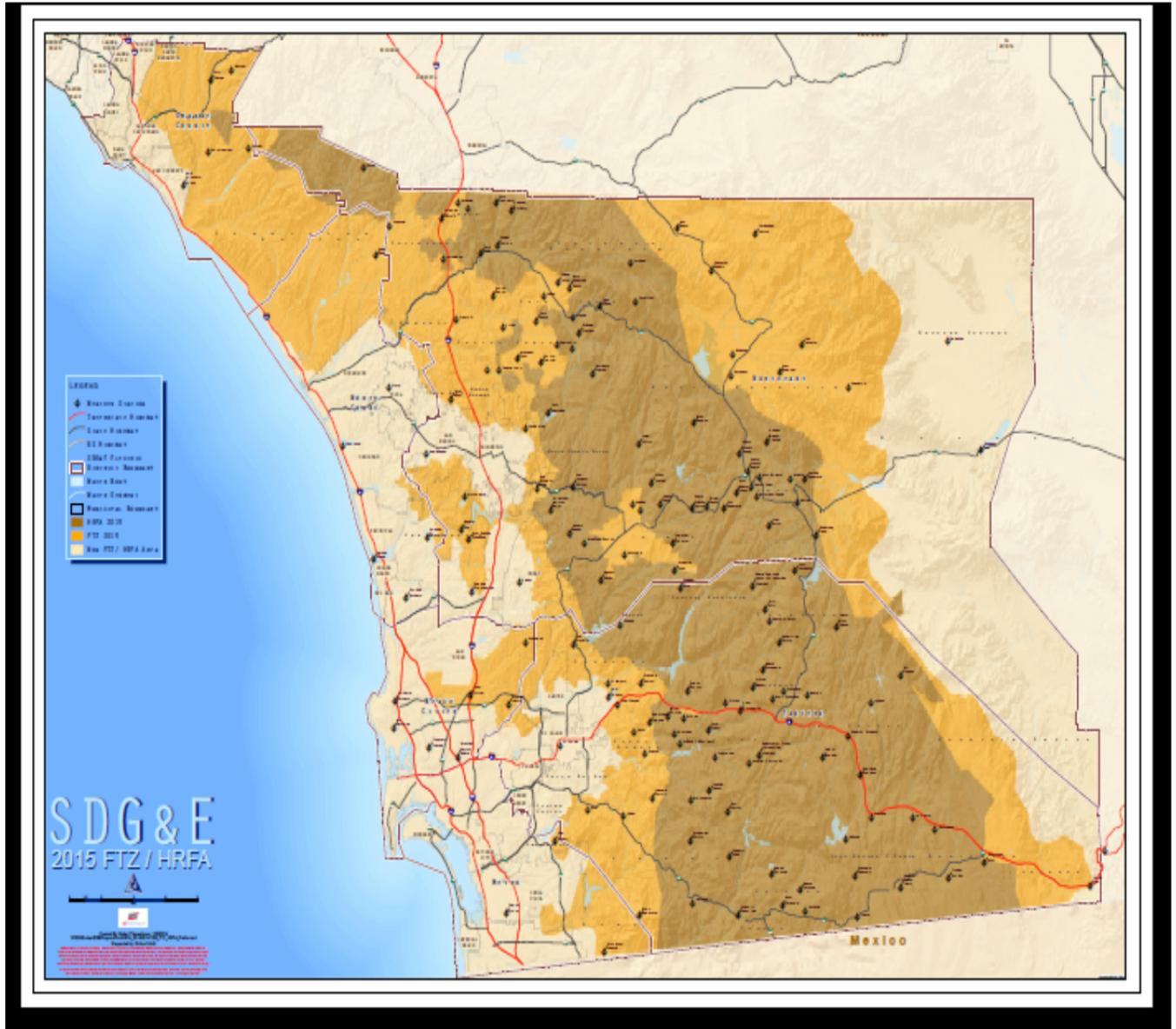
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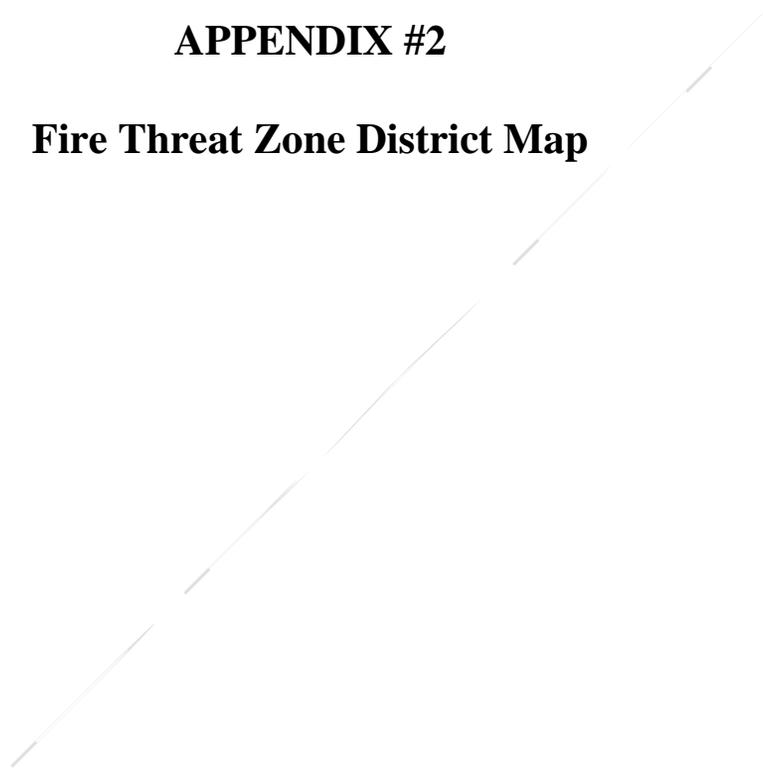
Attachment 1:  
 Service Territory with SDG&E 2016 Highest Fire Risk Areas & FTZ



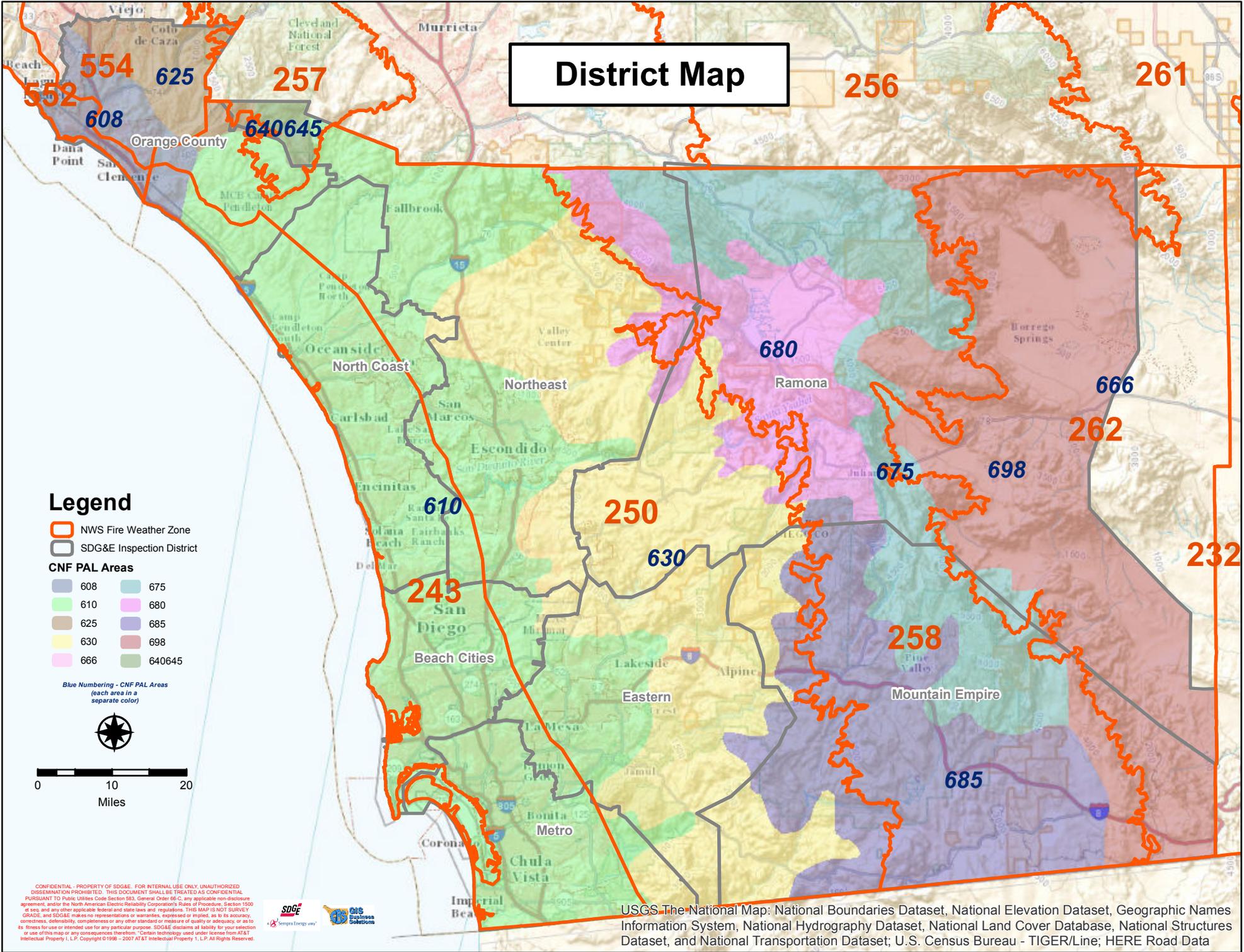
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**APPENDIX #2**  
**Fire Threat Zone District Map**



# District Map



## Legend

- NWS Fire Weather Zone
- SDG&E Inspection District
- CNF PAL Areas**
- 608
- 610
- 625
- 630
- 666
- 675
- 680
- 685
- 698
- 640645

Blue Numbering - CNF PAL Areas  
(each area in a separate color)



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