



**Cleveland National Forest  
Power Line Replacement Projects**

**Construction Fire Prevention/Protection Plan**

## Table of Contents

- 1. Construction Fire Prevention Plan Definitions**
- 2. Project Description**
- 3. Project Fire Risks and Fire Prevention Measures**
- 4. Major Operation Worksites**
- 5. Additional Project Tools and Equipment**
- 6. Agency Specific Requirements**
- 7. Red Flag Warnings (RFW) and Other Critical Fire Danger Declarations**
- 8. Training Requirements for SDG&E & Contract Personnel**
- 9. Tailboards, Inspections, Review & Compliance**
- 10. Communications Plan**
- 11. Helicopter Fire Prevention**
- 12. References**
- 13. Review & Approval**
- 14. Attachments:**
  1. Project Fire Prevention Matrix off CNF Land
  2. Project Fire Prevention Matrix on CNF Land
  3. District Map
  4. SDG&E Wildland Fire Prevention & Fire Safety Plan (SDG&E ESP 113.1)
  5. Worker Education Materials

## 1. CONSTRUCTION FIRE PREVENTION PLAN DEFINITIONS

1. **ESP 113.1 SDG&E Wildland Fire Prevention & Fire Safety Plan (SDG&E ESP 113.1):** This is an internal San Diego Gas & Electric (SDG&E) standard practice or procedure outlining fire suppression tools and equipment required for its employees and contractors, fire prevention requirements, and fire related training. This stand-alone project-specific fire plan incorporates all areas covered by ESP 113.1 and includes additional requirements as identified in Mitigation Measure FF-1 of the Mitigation Monitoring, Compliance, and Report Program for the Cleveland National Forest Power Line Replacement Projects (Project). SDG&E's ESP 113.1 is included as an attachment to this Plan for reference.
2. **Fire Coordinator (FC):** An SDG&E employee who serves as liaison or agency representative to the fire agencies and other emergency services during an emergency and with other fire related activities in non-emergency situations. Dennis Baldrige has been designated as the SDG&E Fire Coordinator for the Project.
3. **Fire Patrol:** Fire patrol(s) are personnel who are assigned the responsibility and accountability for fire prevention, risk management, early detection of fires, and rapid extinguishment (The Fire Patrol shall be documented daily)

A “**designated**” Fire Patrol is a member of a work crew assigned 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 but must be ready to respond with appropriate fire equipment.

A “**dedicated**” Fire Patrol is a person(s) assigned duties associated with fire prevention and fire safety. The Fire Patrol will be assigned 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, and are typically assigned to a fire engine or water tender, but not necessarily.

4. **Fire Tools:** References to “fire tools” pertains to firefighting tools which include; shovel, Pulaski, 5 gallon backpack pump and fire extinguisher. These tools are commonly required on project vehicles and work sites. Additional requirements may be identified which increase that number of fire tools above what is found on the vehicles.
5. **Fire Threat Zone (FTZ):** An area within the SDG&E service territory which identifies the wildland fire threat on a scale of low to extreme. This is a rating based on a combination of potential fire behavior (wildland fuel) and expected fire frequency. SDG&E has established practices within the FTZ on how it will construct facilities and identifies certain wildland fire safety practices.
6. **At Risk Activity:** Project activities that present a risk of igniting a wildfire.

- 7. Fire Potential Index (FPI):** This index applies to non-CNF land and is a comprehensive assessment of fire risk, used as a tool for making operation & 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 also used for work activities. The FPI is used to determine the operating condition for each day (Normal, Elevated, or Extreme), definitions of each to follow.

**Normal Operating Condition:** It is considered “Normal” operating condition when the FPI is in any shade of green (*very low, low, or moderate*). All O&M activities can take place in the wildland areas of the service territory without additional fire risk management, 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, & federal requirements for working in the wildland areas

**Elevated Operating Condition:** It is considered “Elevated” operating level when the FPI is either yellow or orange (high or very high). Certain “at risk” O&M activities (as identified in the matrix, attachment 2) will require additional risk management (as prescribed in the matrix, see attachment 2) to perform those work activities.

**Extreme Operating Condition:** It is considered “Extreme” operating level when the FPI is red (extreme). No “at risk” activities shall be conducted except for those activities which if, left undone present a greater risk than that involved with their accomplishment. These conditions will be considered an emergency and would be mitigated as such. Consultation with the On-duty Fire Coordinator is required to help make that determination and identify additional fire prevention measures required to reduce risk.

- 8. Project Activity Level (PAL): (Applies to CNF Land under the MSUP Only).** PALs are used by the US Forest Service to regulate activities on Forest Service land. This term applies to work within the boundaries of the Cleveland National Forest. Any work being conducted within the boundaries of the CNF must be in compliance with the PAL restrictions and mitigations.
- 9. Red Flag Warning (RFW):** A Red Flag Warning is issued for a stated period of time by the National Weather Service (NWS) using pre-determined criteria to identify particularly critical danger in a particular geographic area.
- 10. Major Operation Worksite (MOW):** These work sites are typically large in size and include but are not limited to construction yards, tower construction sites, stringing site, substation pads and any other area where construction work will be concentrated. The criteria for identifying MOW is the number of people, type of work, and duration occupied.
- 11. Construction Fire Prevention Plan (CFPP):** Sometimes referred to as the Fire Plan. The plan will be developed and implemented by SDG&E to provide fire prevention guidance for a specific

construction project.

- 12. Project:** “Project” may be used interchangeably in place of the formal name of the project in the construction fire prevention plan.
- 13. Hot Work:** Metal cutting, welding, grinding, activities that require open flame and/or have a high a probability of producing sparks. These activities require a hot work permit and may have different requirements depending on land ownership or the fire agency having jurisdiction.
- 14. Incidental Landing Areas:** Temporary helicopter landing sites used infrequently requiring minimal maintenance or upkeep.
- 15. Emergency Work:** Work required to resolve situations that present immediate threats to human life or to property regardless of ownership (36CFR251.50b)
- 16. Contract Administrator (CA)-** serves as the SDG&E Point of Contact (POC) with construction personnel and the project management team. Ensure construction work is in compliance with project requirements.

## 2. PROJECT DESCRIPTION

### General location:

The Project includes the replacement of wood poles with steel poles and the partial undergrounding, relocation, or removal of power lines to increase fire safety and improve system reliability. The following sections discuss these activities in further detail.

**Table 1: Fire Jurisdiction & Land Ownership**

<b>Ownership</b>	<b>Fire Suppression Responsibility</b>	<b>Emergency Contact</b>
LRA	San Diego County Fire Authority	911 or (XXX) XXX-XXXX MVICC
FRA	U.S. Forest Service	911 or (XXX) XXX-XXXX
FRA	U.S. Bureau of Land Management	911 or (XXX) XXX-XXXX FICC
FRA	Bureau of Indian Affairs, Southern Ca. Agency	(XXX) XXX-XXXX FICC
	Campo Reservation Fire	911 or (XXX) XXX-XXXX Heartland Dispatch
	Rincon Fire	911 or (XXX) XXX-XXXX North Com Fire Dispatch
SRA	CAL FIRE-Monte Vista Ranger Unit	911 or (XXX) XXX-XXXX MVICC

*(DPA, Direct Protection Area, SRA, State Responsibility Area; FRA, Federal Responsibility Area; LRA, Local Responsibility Area)*

### Scope and Intent of Proposed Project:

The project entails replacing and modifying electrical transmission and distribution infrastructure. The tie lines and circuits will include, TL6923, TL625, TL626, TL629, TL6931, TL682, C78, C79, C157, C440, C442 and C449. The northern most line is TL682 which extends between the Rincon and Warners Substations. The southern most line is TL6923 which extends between the Barrett and Cameron Substations.

The pole-replacement component of the project will include replacing wooden transmission and distribution poles with new steel poles. The new steel poles will be direct bury, supported by concrete pier foundations, or micropile foundations, depending on design parameters for the specific pole sites. There will be wire stringing sites and

guard structures used for installing new wire. Several staging/laydown yards will be utilized along the existing alignment, in the project area for equipment, material staging and project employee parking. The project may require helicopter work for pole removal, pole installation, and/or restringing due to the steep terrain and difficult to access locations featured in several work areas.

### **Project Timeframes:**

This project is scheduled to begin in the 2<sup>nd</sup> quarter of 2016 and will involve working with energized lines. These lines may be re-energized nightly to ensure a high level of service and reliability to the SDG&E service territory. The last line is scheduled to be completed in 2020. Project timeframes may change and are dependent on multiple factors.

### **3. PROJECT FIRE RISKS AND FIRE PREVENTION MEASURES:**

During the construction phase of the Project, SDG&E and its contractors will implement the fire prevention measures listed in the *Project Fire Prevention Matrices (Attachment 1&2)* which describes activities with potential fire risks. Those activities may take place both inside and outside the FTZ (Defined in ESP113.1) where areas of wildland fuels exist. The Project Fire Prevention Matrices are based on the Fire Risk & Fire Prevention Matrix (ESP113.1) and may contain additional fire prevention measures based on project specific risks.

During the construction phase of the project, the applicant shall implement ongoing fire patrols. The applicant shall maintain fire patrols during construction hours and for 1 hour after end of daily construction and hot work.

Project Activity Level (PAL) is a decision support tool designed to help fire and timber managers establish the level of industrial precaution for the following day. This tool utilizes outputs from the National Fire Danger Rating System (NFDRS). The PAL will be used when construction activities occur on lands owned by the USFS. A PAL for the following day can be obtained after 4:00pm by calling (XXX) XXX-XXXX and asking the Dispatcher for the PAL for the Fire Danger Rating Area where work will occur.

The Fire Potential Index (FPI) is a comprehensive assessment of fire risk, used by SDG&E as a tool for making operation & 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 FPI will be used when construction activities occur off USFS owned land. The FPI is generated for a seven day forecast period for an assortment of geographic areas within the service territory. The official FPI for each SDG&E service district is posted at 6:00am (Refer to Attached Map for Service Districts).

Once construction begins, interpretations of fire risks and/or fire prevention measures shall be directed to the Project Fire Coordinator. New fire risks identified after Project initiation shall be added to the Project Fire Prevention Matrix with appropriate prevention measures determined by the Project Fire Coordinator.

#### **4. MAJOR OPERATION WORKSITES (MOW):**

The following precautions will take place at each major operations work area:

- MOW will be assessed by the contract administrator (CA) in consultation with an SDG&E Fire Coordinator for wildland fire risk prior to beginning operations at the site.
- Hazard reduction inside and around the perimeter of the MOW will be performed according to environmental specifications prior to activating the MOW.
  - Cut vegetation would either be chipped on site or removed and disposed of at an approved facility
- Other fire prevention measures may include regular watering to reduce fire potential danger.
- Smoking, welding and fueling of equipment will be done only in designated areas with appropriate fire protection measures in place.
- When additional fire tools (aside from fire tools in construction vehicles) are recommended by the SDG&E Fire Coordinator, a fire box or equivalent, shall be located on site and be accessible to all personnel. There shall be enough tools to outfit the average number of workers at that site. Fire tools are to be a combination of shovels, Pulaskis, McLeods and backpack pumps.
- Additional tools, equipment, and requirements identified during inspections will be documented in this fire plan and posted at the project field office.

#### **5. ADDITIONAL PROJECT TOOLS & EQUIPMENT:**

The following equipment *may* be required to be staged as proximate as possible to on-going Project activities as determined by the CA. These items shall be strategically placed to afford the best opportunity to help to prevent ignitions and expeditiously extinguish any fire resulting from Project activities.

- Fire Patrol Vehicle with minimum of 150 gallons water and a firefighter.
- Water tender (any size), with at least 50' hose, and nozzle.
- Water tank (water buffalo) with at least 50 gallons of water.
- 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 1-1/2 inch National Standard Fire Hose thread.
  - 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.



## **6. AGENCY SPECIFIC REQUIREMENTS:**

**USFS & CPUC:** The Project activities must comply with Title 14 of the California Code of Regulations; California Forest Practice Rules, Article 8, section 958 “Fire Protection”, for the duration of the Project with particular attention to Chapter 4, Subchapter 4, 5, & 6. In addition the Project must comply with Public Resource Codes (PRC) 4427, PRC 4428, PRC 4431, and PRC 4442.

**USFS:** Requires a permit be issued for hot work (Cutting, Welding, Grinding,...) and notification be made to USFS Dispatch prior to the initiation of hot work on the day the hot work occurs

## **7. RED FLAG WARNINGS (RFW) AND OTHER CRITICAL FIRE DANGER DECLARATIONS (CFDD):**

When there is a notice of a Red Flag Warning, the FPI will usually be “Extreme” (If the FPI does not display extreme for the event then the SDG&E Fire Coordinator will be consulted and at risk activities will follow the more restrictive measures). The RFW will be for a specific geographic area and time period. The SDG&E project manager, CA’s, supervisors, and contractors will be responsible for insuring project personnel are notified of these events. It is also the responsibility of all supervisors to know and communicate the details of a RFW to their crews. At the end of the RFW, confirmation will be obtained from the Project Fire Coordinator or his designee who can be reached 24-hours at (XXX) XXX-XXXX that work can begin again and if any restrictions are imposed.

At times, critical fire danger declarations may be made by any jurisdictional fire department for a specific time period. As soon as these declarations are shared with the SDG&E Project Manager and CA, they will be communicated to project personnel. Restrictions and fire prevention measures will apply until the declarations are lifted.

During periods of Extreme FPI or when restricted by PALs - Work restrictions may be encountered (see Project Fire Prevention Matrix). Emergency work may be allowed to continue because they pose a greater fire risk if left in their current state. The CA will consult with the SDG&E Project Manager to get authorization to work in these situations and consult with Fire Coordination to identify additional fire prevention requirements. SDG&E will inform the CNF Utility Coordinator during work hours and CNF Dispatch after hours of emergency work.

## **8. TRAINING REQUIREMENTS FOR SDG&E & CONTRACT PERSONNEL**

Prior to the performing construction activities on the project all project construction personnel (*SDG&E & Contractors*) will receive training on Wildland Fire Prevention and Safety (*ref. SDG&E ESP113.1*). This training will be provided by a qualified instructor.

Training will include:

- Fire safety and prevention
- Fire detection & reporting
- Small fire suppression
- Contents and requirements of the fire prevention plan

Project personnel shall carry at all times a laminated card listing pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. Information on contact cards shall be updated and redistributed as needed, and outdated cards destroyed, prior to the initiation of construction activities on the day the information change goes into effect.

Additionally, construction personnel shall receive an annual refresher as necessary.

## **9. TAILBOARDS, INSPECTIONS, REVIEW & COMPLIANCE**

Construction supervisors will be responsible for reviewing the contents of the Fire Prevention Plan with construction personnel throughout the duration of the project. Daily safety tailboard sessions will include an assessment of the day's FPI level/PAL and discussion of the fire risk for the day.

The CA or designee shall perform periodic inspection of equipment and worksites to verify compliance with this plan. Compliance with the Fire Prevention Plan is mandatory. Monitoring compliance with this Plan is everyone's responsibility. The SDG&E Project management team including SDG&E Fire Coordinator, SDG&E CA's, and the contractor's construction management team may have the authority to shut down any operation that presents an inappropriate amount of fire risk or hazard until it can be properly addressed.

All noncompliance will be reported and documented immediately. Corrective actions may include temporary shutdown of some or all of the individual operations, additional tailboard trainings, additional oversight and management resources.

All fires shall be reported by the SDG&E Fire Coordinator, or designee, to the fire agencies with jurisdiction in the project area as soon as the fire is identified/discovered. The SDG&E Project Manager, CA, and fire coordinator shall also be immediately notified. The SDG&E Fire Coordinator or his designee can be reached at XXX-XXX-XXXX.

Fire Suppression Resource Inventory – In addition to 14 CCR (California Code of Regulations) 958.1(a), (b), and (c), SDG&E and its contractors will update in writing the 24-hour contact information and on-site fire suppression equipment, tools, and personnel list on a quarterly basis during proposed project construction and provide it to the Forest Service, BLM, BIA, SDCFA, and CAL FIRE.

## **10. COMMUNICATIONS PLAN**

All construction crews and inspectors shall be provided with radio and/or cellular telephone access that is operational throughout the project area to allow for immediate reporting of fires. Communication pathways and equipment shall be tested and confirmed operational each day prior to initiating construction activities at each construction site. All fires shall be reported to the fire agencies with jurisdiction in the project area immediately upon discovery.

## **11. Helicopter Fire Prevention**

When the Project requires the use of helicopters and involves landing or taking off in areas within or adjacent to wildland fuels special fire mitigations may be recommended by the SDG&E Fire Coordinator.

The additional fire mitigations may be recommended for helicopter operations are as follows:

- 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) adequate firefighting equipment shall be carried on the helicopter for the number of personnel working on the ground at those sites.
- Fueling safety plan- fueling will be done in an area clear of combustible material and follow the safety procedures outlined in the CNF Project Aviation Safety Plan.
- Identification of special tool and/or equipment requirements for each landing site where applicable.

For safety and other procedural information on SDG&E helicopter operations please refer to the CNF Project Aviation Safety Plan..

## **12. REFERENCES:**

- SDG&E ESP 113.1
- SDG&E Aviation Operations Manual
- Project Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS)
  - Volume 1: D.8 Fire and Fuels Management,
    - Mitigation Measure FF-1
- Spark Arrestor Guide:  
<http://www.fs.fed.us/t-d/programs/fire/spark/sag-index.html>
- California Forest Practice Rules:

[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)

### **13. ATTACHMENTS:**

- **Attachment 1:** Project Fire Prevention Matrix **off** CNF Land
- **Attachment 2:** Project Fire Prevention Matrix **on** CNF Land
- **Attachment 3:** District Map
- **Attachment 4:** SDG&E Wildland Fire Prevention & Fire Safety Plan (SDG&E ESP 113.1)
- **Attachment 5:** Worker Education Materials

**Attachment 1 – Project Fire Prevention Matrix off CNF Land**

# CNF MSUP-PLR Project Fire Prevention Matrix (OFF CNF Land)

PROJECT ACTIVITIES		FPI (Sites <i>not</i> on CNF land)		
ACTIVITY	ACTIVITY TOOLS AND EQUIP	MODERATE	ELEVATED	EXTREME and RFW
If your activity does not fall into a specific category consult the fire prevention plan, ask your CA, or call SDGE fire personnel. It is your responsibility to know what mitigation tools are required for your activity	Expected tools for activity: If you use multiple tools or are doing multiple activities you must consult multiple boxes in the matrix. If a vehicle containing the appropriate tools for the activity is parked within the required distance for the activity, those tools meet the requirements of the fire prevention mitigation measure	FPI Range of 1-11	FPI Range of 12-14	FPI Range of 15-17
Privately Owned Vehicle (POV)	A privately owned vehicle used as transportation to a yard and parking in a POV area. (Parking areas must have adequate clearance from combustible material)	No tools required (If the vehicle is brought out to sites it must have the same tools as other project vehicles)	No tools required (If the vehicle is brought out to sites it must have the same tools as other project vehicles)	No tools required (If the vehicle is brought out to sites it must have the same tools as other project vehicles)
Project Vehicles	Company owned vehicles. Vehicles with company markings, and equipment (not POV's) (Parking areas must have adequate clearance from combustible material)	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher
Fire Box	When/Where required the minimum contents of a fire box shall be 3 shovels, 2 Pulaski's, 2 McLeods and 1 full 5 gallon backpack pump.	When/Where required the minimum contents of a fire box shall be 3 shovels, 2 Pulaski's, 2 McLeods and 1 full 5 gallon backpack pump.	When/Where required the minimum contents of a fire box shall be 3 shovels, 2 Pulaski's, 2 McLeods and 1 full 5 gallon backpack pump.	When/Where required the minimum contents of a fire box shall be 3 shovels, 2 Pulaski's, 2 McLeods and 1 full 5 gallon backpack pump.
Helicopter Operations	Helicopter	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 (ILAs) adequate firefighting equipment shall be carried on the helicopter for the number of personnel working on the ground at those sites.	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 (ILAs) adequate firefighting equipment shall be carried on the helicopter for the number of personnel working on the ground at those sites.	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 (ILAs) adequate firefighting equipment shall be carried on the helicopter for the number of personnel working on the ground at those sites.
Chain saw use	Chain saw (Spark Arrestor Required)	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. There must be one shovel or a fire extinguisher within 25'. Assign a spotter/swamper during operations	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. There must be one shovel or a fire extinguisher within 25'. Assign a spotter/swamper during operations	Activity Not Permitted
Gasoline Powered Tool Fueling (Chain saw, Weed Eater, chipper, generator...)	Gas can/truck	Equipment may be refueled after cooling and in an area with a minimum of 10' of clearance. Shovel and Fire extinguisher within 25'.	Equipment may be refueled after cooling and in an area with a minimum of 10' of clearance. Shovel and Fire extinguisher within 25'.	Activity may take place only in a cleared MOW. Equipment may be refueled after cooling and in an area with a minimum of 10' of clearance. Shovel and Fire extinguisher within 25'.
Combustion engines	Generators, Compressors, any piece of equipment with a combustion engine	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. A fully charged 2A:10B:C Fire Extinguisher. While operating equipment must have 5' of clearance on all sides and no combustible material underneath; ensure equipment that requires a spark arrestor has it installed properly	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. A fully charged 2A:10B:C Fire Extinguisher. While operating equipment must have 5' of clearance on all sides and no combustible material underneath; ensure equipment that requires a spark arrestor has it installed properly	Activity may take place only in a cleared MOW. 1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. equipment must have 5' of clearance on all sides and no combustible material underneath; ensure equipment that requires a spark arrestor has it installed properly
Chipping	Chippers, Grinders	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet. 100 gallons of water with pump and hose on site. Area is wet down sufficiently to prevent ignitions	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet. 100 gallons of water with pump and hose on site. Area is wet down sufficiently to prevent ignitions	Activity Not Permitted
Hot Work: Welding or Grinding	Generators, Welder, Grinder, CAD Weld equipment	All welding, cutting and other hot work will follow a hot work program that will at minimum meet the standards set in NFPA 51B, CFC Chapter 35 and have 1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. 10' of clearance, wet down surrounding area. A designated "Fire Patrol" must be present during work and 1 hour after hot work is complete	All welding, cutting and other hot work will follow a hot work program that will at minimum meet the standards set in NFPA 51B, CFC Chapter 35 and have 1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. 10' of clearance, wet down surrounding area. A dedicated "Fire Patrol" must be present during work and 1 hour after hot work is complete	Activity Not Permitted
Aerial Hot work	Any hot work that occurs with the welder's feet above ground level. Hot work should not be performed with a tool over a crew members head.	A site specific plan will be discussed and implemented when hot work is required to be performed higher than 6 feet off the ground. To the best of the ability of the project personnel, hot work should be accomplished at ground level.	A site specific plan will be discussed and implemented when hot work is required to be performed higher than 6 feet off the ground. To the best of the ability of the project personnel, hot work should be accomplished at ground level.	Activity Not Permitted
Removal and/or installation of fencing and/or berms	Hand tools, Loader with fence post installer/remover	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'	Activity Not Permitted
Removal and/or installation of fencing and/or berms	Tractor, Ditch Witch	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'	Activity Not Permitted
Grading, Road Pioneering, Road Maintenance, Scraping and Trenching	Bulldozer, Excavator, Scraper, Heavy equipment	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet. 100 gallons of water with pump and hose on site. Area is wet down sufficiently to prevent ignitions	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet. 150 gallons of water with pump and hose on site. Area is wet down sufficiently to prevent ignitions	Activity Not Permitted
Movement of Equipment with Steel Tracks (This applies to equipment that is traveling on an access road, driveway and/or a paved road. This does not apply to equipment operating within a site/pad or MOW)	Steel Track Equipment	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. 50 gallons of water with pump and hose; Escort in a different vehicle following the equipment	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. 50 gallons of water with pump and hose; Escort in a different vehicle following the equipment	Activity Not Permitted
Foundation Drilling	Drill, Forklift, Excavator	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	Activity Not Permitted
Structure Erection/Pole Setting	Crane, Excavator, Forklift	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	Activity Not Permitted
Foundation Pouring	Concrete Trucks, Generators, Hand tools, etc.	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump	Activity Not Permitted
Erosion Control (BMP)	Hand tools only	1 round point shovel, 1 Pulaski and 1 (5) gallon backpack pump within 50 feet	1 round point shovel, 1 Pulaski and 1 (5) gallon backpack pump within 50 feet	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet. 100 gallons of water with pump and hose on site. Area is wet down sufficiently to prevent ignitions. Dedicated Fire Patrol Required
Erosion Control	Heavy equipment	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet. 100 gallons of water with pump and hose on site. Area is wet down sufficiently to prevent ignitions	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet. 150 gallons of water with pump and hose.	Activity Not Permitted
Pad Clearing	Bulldozer, Excavator, hand tools, Steel Track equipment	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. 100 gallons of water with pump and hose on site. Area is wet down sufficiently to prevent ignitions	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet. 150 gallons of water with pump and hose.	Activity Not Permitted
Vegetation Clearing	Hand tools (If a chain saw is used, see chain saw section)	1 round point shovel, 1 Pulaski and 1 (5) gallon backpack pump within 50 feet	1 round point shovel, 1 Pulaski and 1 (5) gallon backpack pump within 50 feet	Activity Not Permitted
General Construction activities	Hand tools only	1 round point shovel, 1 Pulaski and 1 (5) gallon backpack pump within 50 feet	1 round point shovel, 1 Pulaski and 1 (5) gallon backpack pump within 50 feet	See Specific activity for required mitigation measures
Monitoring and Assessment of: Vegetation, Wildlife, Cultural, etc.	Recording data and taking pictures	No tools required (Reminder: Project vehicles still require tools at all times). Communications must be maintained at all times	No tools required (Reminder: Project vehicles still require tools at all times). Communications must be maintained at all times	No tools required (Reminder: Project vehicles still require tools at all times). Communications must be maintained at all times
Dust abatement: Wetting the sites, roads or any other area on the ROW	Water Trucks	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher backpump assigned to truck	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher backpump assigned to truck	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher backpump assigned to truck
Smoking	Cigarettes, Cgars (Note: Electronic Cigarettes can be used anywhere)	Smokers may only smoke in designated smoking areas with an ash can, 10' diameter circle of bare mineral soil and a designating sign	Smokers may only smoke in designated smoking areas with an ash can, 10' diameter circle of bare mineral soil and a designating sign	Activity Not Permitted
<b>OTHER ACTIVITY/EQUIPMENT REQUIREMENTS:</b>				
<b>Spark Arresters:</b> All internal combustion engines shall have approved spark arresters. Engines used to provide mobile power for trucks, tractors, buses, and passenger vehicles, except motorcycles, are exempt if the exhaust system is equipped with a muffler. Turbocharged engines are exempt.				
<b>Other vehicles:</b> All internal combustion engines shall meet the requirements. If the work site is more than 100' from the vehicle the tools will need to be removed from the vehicle to the site.				
<b>Delivery Vehicles:</b> Defined as vehicles that will drop off equipment or material and leave (i.e. Water tankers, postal vehicles, etc.) These vehicles do not need to be equipped with fire tools but drivers need to follow all SWAP mandated procedures while accessing the site. If vehicle is just moving from one area of the project to another area of the project it is a project vehicle and will have the standard fire tools.				
<b>Blasting:</b> (or any use of explosives) requires a separate fire plan that may require additional mitigations				
<b>IMPORTANT CONTACT NUMBERS</b>				
Major Projects Base: 0000 XXX-XXXX		Project Fire Marshal: 0000 XXX-XXXX		

**Attachment 2: Project Fire Prevention Matrix on CNF Land**

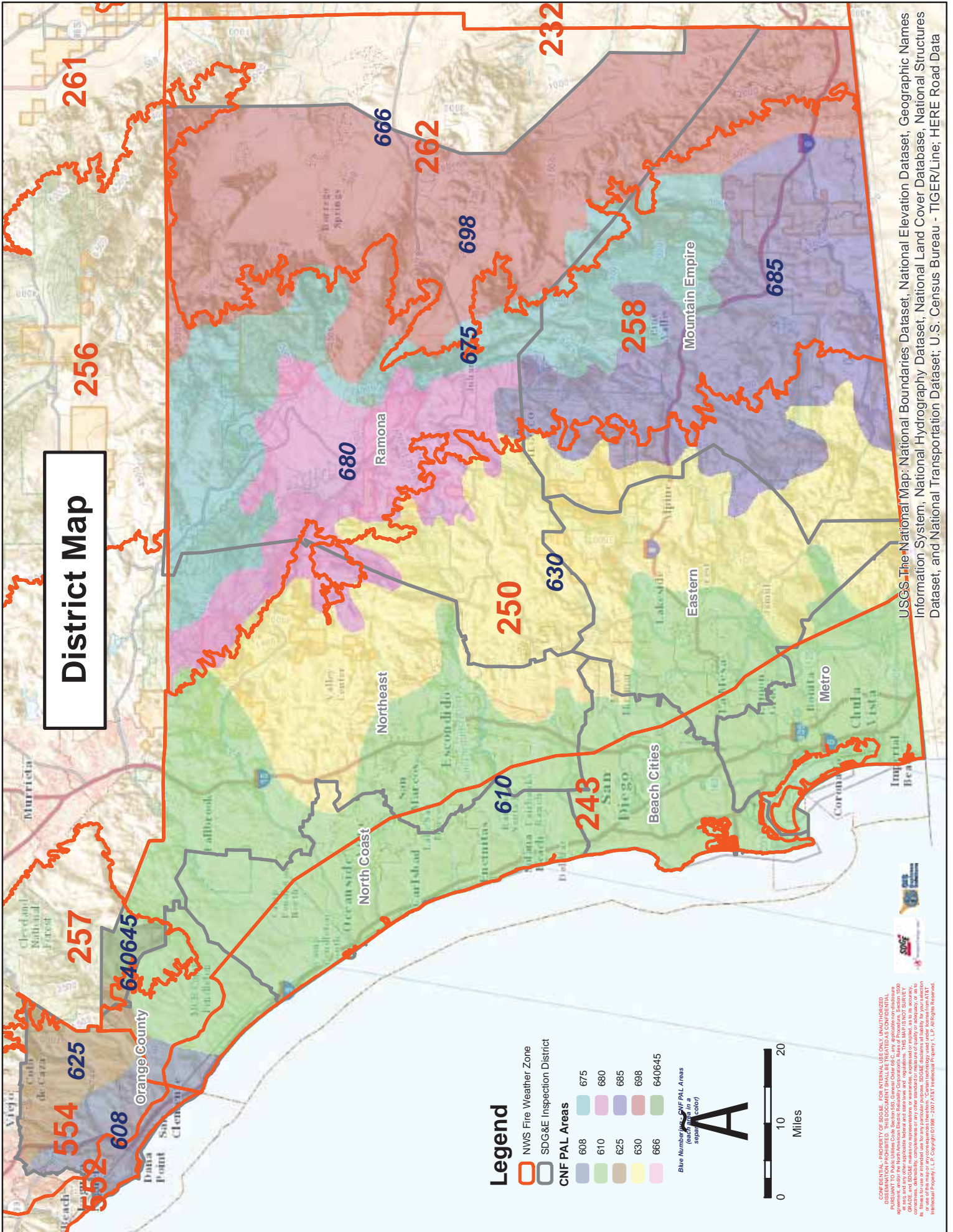
# CNF MSUP-PLR Project Fire Prevention Matrix (on CNF Land)

Project Activities		PAL Level (Sites on CNF Land)					
ACTIVITY	ACTIVITY TOOLS AND EQUIPMENT	A	B	C	D	Ev	E and R/W
<p>If your activity does not fall into a specific category consult the fire prevention plan, ask your CA, or call SDCG fire personnel. It is your responsibility to know what mitigation tools are required for your activity</p> <p>Expected tools for activity. If you use multiple tools or are doing multiple activities you must consult multiple boxes in the matrix. If a vehicle containing the appropriate tools for the activity is parked within the required distance for the activity, those tools meet the requirements of the fire prevention mitigation measure</p>		<p>The PAL for the following day can be obtained after 4:00pm by calling (xxx) xxx-xxxx and asking the Dispatcher for the PAL for the Fire Danger Rating Area where work will occur</p>					
Privately Owned Vehicle (POV)	A privately owned vehicle used as transportation to a yard and parking in a POV area. (Parking areas must have adequate clearance from combustible material)	No tools required (if the vehicle is brought out to sites it must have the same tools as other project vehicles)	No tools required (if the vehicle is brought out to sites it must have the same tools as other project vehicles)	No tools required (if the vehicle is brought out to sites it must have the same tools as other project vehicles)	No tools required (if the vehicle is brought out to sites it must have the same tools as other project vehicles)	No tools required (if the vehicle is brought out to sites it must have the same tools as other project vehicles)	No tools required (if the vehicle is brought out to sites it must have the same tools as other project vehicles)
Project Vehicles	Company owned vehicles, Vehicles with company markings, and equipment (not POVs) (Parking areas must have adequate clearance from combustible material)	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher
Fire Box	When/Where required the minimum contents of a fire box shall be 3 shovels, 2 Pulaski's, 2 McLeods and 1 full 5 gallon backpack pump.	When/Where required the minimum contents of a fire box shall be 3 shovels, 2 McLeods and 1 full 5 gallon backpack pump.	When/Where required the minimum contents of a fire box shall be 3 shovels, 2 McLeods and 1 full 5 gallon backpack pump.	When/Where required the minimum contents of a fire box shall be 3 shovels, 2 McLeods and 1 full 5 gallon backpack pump.	When/Where required the minimum contents of a fire box shall be 3 shovels, 2 Pulaski's, 2 McLeods and 1 full 5 gallon backpack pump.	When/Where required the minimum contents of a fire box shall be 3 shovels, 2 Pulaski's, 2 McLeods and 1 full 5 gallon backpack pump.	When/Where required the minimum contents of a fire box shall be 3 shovels, 2 Pulaski's, 2 McLeods and 1 full 5 gallon backpack pump.
Helicopter Operations	Helicopter	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.	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.	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.	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.	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.	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.
Chain saw use	Chain saw (Spark Arrestor Required)	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. There must be one shovel within 25' or a fire extinguisher in the operators immediate possession. Assign a spotter/swamper during operations	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. There must be one shovel within 25' or a fire extinguisher in the operators immediate possession. Assign a spotter/swamper during operations	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. There must be one shovel within 25' or a fire extinguisher in the operators immediate possession. Assign a spotter/swamper during operations	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. There must be one shovel within 25' or a fire extinguisher in the operators immediate possession. Assign a spotter/swamper during operations	Activity Not Permitted	Activity Not Permitted
Gasoline Powered Tool Fueling (Chain saw, Weed Eater, chopper, generator...)	Gas can/truck	Equipment may be refueled after cooling and in an area with a minimum of 10' of clearance. Shovel and Fire extinguisher within 25'	Equipment may be refueled after cooling and in an area with a minimum of 10' of clearance. Shovel and Fire extinguisher within 25'	Equipment may be refueled after cooling and in an area with a minimum of 10' of clearance. Shovel and Fire extinguisher within 25'	Equipment may be refueled after cooling and in an area with a minimum of 10' of clearance. Shovel and Fire extinguisher within 25'	Equipment may be refueled after cooling and in an area with a minimum of 10' of clearance. Shovel and Fire extinguisher within 25'	Equipment may be refueled after cooling and in an area with a minimum of 10' of clearance. Shovel and Fire extinguisher within 25'
Combustion engines	Generators, Compressors, any piece of equipment with a combustion engine	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. A fully charged 2A:10B:C Fire Extinguisher. While operating equipment must have 5' of clearance on all sides and no combustible material underneath; ensure equipment that requires a spark arrestor has it installed properly	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. A fully charged 2A:10B:C Fire Extinguisher. While operating equipment must have 5' of clearance on all sides and no combustible material underneath; ensure equipment that requires a spark arrestor has it installed properly	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. A fully charged 2A:10B:C Fire Extinguisher. While operating equipment must have 5' of clearance on all sides and no combustible material underneath; ensure equipment that requires a spark arrestor has it installed properly	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. A fully charged 2A:10B:C Fire Extinguisher. While operating equipment must have 5' of clearance on all sides and no combustible material underneath; ensure equipment that requires a spark arrestor has it installed properly	Activity may take place only in a cleared MOW. 1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50' while operating equipment must have 10' of clearance on all sides and no combustible material underneath; ensure equipment that requires a spark arrestor has it installed properly	Activity may take place only in a cleared MOW. 1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50' while operating equipment must have 10' of clearance on all sides and no combustible material underneath; ensure equipment that requires a spark arrestor has it installed properly
Chipping	Chippers, Grinders...	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet, 100 gallons of water with pump and hose on site. Area is wet down sufficiently to prevent ignitions	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet, 100 gallons of water with pump and hose on site. Area is wet down sufficiently to prevent ignitions	Activity Not Permitted	Activity Not Permitted
Hot Work: Welding or Grinding	Generators, Welder, Grinder, CAD Weld equipment	All welding, cutting and other hot work will follow a hot work program that will at minimum meet the standards set in NFPA 51B, CFC Chapter 35 and have 1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. 10' of clearance, wet down surrounding area. A designated "Fire Patrol" must be present during work and 1 hour after hot work is complete	All welding, cutting and other hot work will follow a hot work program that will at minimum meet the standards set in NFPA 51B, CFC Chapter 35 and have 1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. 10' of clearance, wet down surrounding area. A designated "Fire Patrol" must be present during work and 1 hour after hot work is complete	All welding, cutting and other hot work will follow a hot work program that will at minimum meet the standards set in NFPA 51B, CFC Chapter 35 and have 1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. 10' of clearance, wet down surrounding area. A designated "Fire Patrol" must be present during work and 1 hour after hot work is complete	All welding, cutting and other hot work will follow a hot work program that will at minimum meet the standards set in NFPA 51B, CFC Chapter 35 and have 1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. 10' of clearance, wet down surrounding area. A designated "Fire Patrol" must be present during work and 1 hour after hot work is complete	Activity Not Permitted	Activity Not Permitted
Aerial Hot work	Any hot work that occurs with the welder's feet above ground level. Hot work should not be performed with a tool over a crew members head.	A site specific plan will be discussed and implemented when hot work is required to be performed higher than 6 feet off the ground. To the best of the ability of the project personnel, hot work should be accomplished at ground level.	A site specific plan will be discussed and implemented when hot work is required to be performed higher than 6 feet off the ground. To the best of the ability of the project personnel, hot work should be accomplished at ground level.	A site specific plan will be discussed and implemented when hot work is required to be performed higher than 6 feet off the ground. To the best of the ability of the project personnel, hot work should be accomplished at ground level.	A site specific plan will be discussed and implemented when hot work is required to be performed higher than 6 feet off the ground. To the best of the ability of the project personnel, hot work should be accomplished at ground level.	Activity Not Permitted	Activity Not Permitted
Removal and/or installation of fencing and/or berms	Hand tools, Loader with fence post installer/remover	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	Activity Not Permitted
Removal and/or installation of fencing and/or berms	Tractor, Ditch Witch	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	Activity Not Permitted
Grading, Road Pioneering, Road Maintenance, Scraping and Trenching	Buildozer, Excavator, Scraper, Heavy equipment...	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet, 100 gallons of water with pump and hose on site. Area is wet down sufficiently to prevent ignitions	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet, 100 gallons of water with pump and hose on site. Area is wet down sufficiently to prevent ignitions	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet, 150 gallons of water with pump and hose on site. Area is wet down sufficiently to prevent ignitions	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet, 150 gallons of water with pump and hose on site. Area is wet down sufficiently to prevent ignitions	Activity Not Permitted	Activity Not Permitted
Movement of Equipment with Steel tracks	Steel Track Equipment	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. 50 gallons of water with pump and hose. Escort in a different vehicle following the equipment	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. 50 gallons of water with pump and hose. Escort in a different vehicle following the equipment	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. 50 gallons of water with pump and hose. Escort in a different vehicle following the equipment	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. 50 gallons of water with pump and hose. Escort in a different vehicle following the equipment	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump within 50'. 50 gallons of water with pump and hose. Escort in a different vehicle following the equipment	Activity Not Permitted
Foundation Drilling	Drill, Forklift, Excavator	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet, 50 gallons of water with pump and hose on site. Area is wet down sufficiently to prevent ignitions. Dedicated Fire Patrol Required	Activity Not Permitted
Structure Erection/Pole Setting	Crane, Excavator, Forklift	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	Activity Not Permitted
Foundation Pouring	Concrete Trucks, Generators, Hand tools, etc.	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet	1 round point shovel, 1 Pulaski, 1 (5) gallon backpack pump, A fully charged 2A:10B:C Fire Extinguisher within 50 feet, 50 gallons of water with pump and hose on site. Area is wet down sufficiently to prevent ignitions. Dedicated Fire Patrol Required	Activity Not Permitted





**Attachment 3: District Map**



USGS: The National Map; National Boundaries Dataset, National Elevation Dataset, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; U.S. Census Bureau - TIGER/Line; HERE Road Data

CONFIDENTIAL - PROPERTY OF SOGIE. FOR INTERNAL USE ONLY. UNAUTHORIZED DISSEMINATION PROHIBITED. THIS DOCUMENT SHALL BE TREATED AS CONFIDENTIAL INFORMATION. THE INFORMATION CONTAINED HEREIN IS UNCLASSIFIED UNDER EXECUTIVE ORDER 13526, AND IS NOT TO BE RELEASED OUTSIDE THE BUREAU OF LAND MANAGEMENT (BLM) WITHOUT THE EXPRESS WRITTEN PERMISSION OF THE BLM. SOGIE and SOGIE's information is provided as a service to the public and is not intended to be a warranty or any other standard or measure of quality or adequacy, or as a representation or endorsement of any product or service. Certain technology used under license from AT&T Intellectual Property, L.P. Copyright © 1998 - 2007 AT&T Intellectual Property, L.P. All rights reserved.

**Attachment 4: SDG&E Wildland Fire Prevention & Fire Safety Plan (SDG&E ESP 113.1)**

# ***ESP – 113.1 (Revised)***

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

Electric Distribution Engineering has revised this standard under the direction of the Fire Program Manager

- ☞ Check marks instead of x's in the FPI Matrix
- ☞ Replaced the HRFA map with the current version.
- ☞ No other changes made

☞

**If you have any questions regarding this Standard Practice, please contact:** ♦ Hal Mortier at (XXX) XXX-XXXX or XXXX

**PROJECT CHECKLIST**

Use 'Tab Key' to navigate form

Date: 8 June 2015

Originator: Mal Mortier

**Project Title:**

**SDG&E Operations & Maintenance Wildland Fire Prevention 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** (Select one of the following from the drop-down menu)

**If Other, Describe: Fire Coordination Services**

---

**Individuals Involved in Development and/or Revision:**

Hal Mortier

---

**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:**

**Approved By:**



A Sempra Energy utility

# Electric Distribution Engineering Document Management

---

---

DEPARTMENT <b>TRANS. &amp; DISTRIB. ENGINEERING</b>	DIVISION <b>DISTRIBUTION ENGINEERING</b>	EFFECTIVE DATE <b>08 JUNE 2015</b>
SECTION <b>GENERAL PRACTICES</b>		
SUBJECT TITLE <b>SDG&amp;E OPERATIONS &amp; 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 certain tools and equipment to be present in our vehicles and on our work sites, when performing identified high risk work activities. 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 our 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 Establish communication requirements when working in the wildland areas. Insure that our employees and contractors have positive communication for reporting fires and initiating assistance.</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>		
ISSUED BY <b>HAL MORTIER</b>	APPROVED BY <b>MAURIZIO DE JULIO</b>	



DEPARTMENT TRANS. & DISTRIB. ENGINEERING	DIVISION DISTRIBUTION ENGINEERING	EFFECTIVE DATE 08 JUNE 2015
SECTION GENERAL PRACTICES		
SUBJECT TITLE SDG&E OPERATIONS & MAINTENANCE WILDLAND FIRE PREVENTION PLAN		
<p><b>2.0 APPLICABILITY</b></p> <p>2.1 This applies to SDG&amp;E field personnel who will work in the wildland areas of the service territory during the periods described that are conducive to wildland fire occurrence. 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> <p><b>3.0 DEFINITIONS</b></p> <p>3.1 <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>3.2 <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>3.3 <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>3.4 <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>3.5 <b>Fire Potential Index (FPI):</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 <b>Normal Fire Potential:</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>		
ISSUED BY <i>HAL MORTIER</i>	APPROVED BY <i>MAURIZIO DE JULIO</i>	

DEPARTMENT <b>TRANS. &amp; DISTRIB. ENGINEERING</b>	DIVISION <b>DISTRIBUTION ENGINEERING</b>	EFFECTIVE DATE <b>08 JUNE 2015</b>
SECTION <b>GENERAL PRACTICES</b>		
SUBJECT TITLE <b>SDG&amp;E OPERATIONS &amp; MAINTENANCE WILDLAND FIRE PREVENTION PLAN</b>		
<p>3.7 <b>Elevated Fire Potential:</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>3.8 <b>Extreme Fire Potential:</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> <p>3.9 <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>3.9.1 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>3.9.2 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>3.10 <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>3.11 <b>Fire Tools:</b></p> <p>3.11.1 <b>Shovel:</b> standard round point shovel with overall length of at least 46”.</p> <p>3.11.2 <b>Pulaski:</b> an axe-like fire hand tool used for cutting, chopping or grubbing.</p> <p>3.11.3 <b>McLeod:</b> a fire hand tool used for raking and scraping.</p> <p>3.11.4 <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>3.11.5 <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>		
ISSUED BY <b>HAL MORTIER</b>	APPROVED BY <b>MAURIZIO DE JULIO</b>	

DEPARTMENT <b>TRANS. &amp; DISTRIB. ENGINEERING</b>	DIVISION <b>DISTRIBUTION ENGINEERING</b>	EFFECTIVE DATE <b>08 JUNE 2015</b>
SECTION <b>GENERAL PRACTICES</b>		
SUBJECT TITLE <b>SDG&amp;E OPERATIONS &amp; MAINTENANCE WILDLAND FIRE PREVENTION PLAN</b>		
<p>3.12 <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>3.13 <b>Fire Patrol:</b></p> <p>3.13.1 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>3.13.2 A <i>dedicated</i> "Fire Patrol" is a person assigned the duties associated with fire prevention and fire safety for a specific job or location, with appropriate training and equipment equivalent to the risk presented. This would be their sole duty while serving as a dedicated Fire Patrol.</p> <p>3.14 <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>3.15 <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>3.16 <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>		
ISSUED BY <b>HAL MORTIER</b>	APPROVED BY <b>MAURIZIO DE JULIO</b>	

DEPARTMENT TRANS. & DISTRIB. ENGINEERING	DIVISION DISTRIBUTION ENGINEERING	EFFECTIVE DATE 08 JUNE 2015
SECTION GENERAL PRACTICES		
SUBJECT TITLE SDG&E OPERATIONS & MAINTENANCE WILDLAND FIRE PREVENTION PLAN		
<p>4.1.1 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>4.1.2 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 your work project 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> <p>4.2.1 <b>Passenger Vehicles</b> (performing work in the wildland areas):</p> <p>4.2.1.1 1 round point shovel with overall length of at least 46”</p> <p>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)</p> <p>4.2.2 <b>Trucks &amp; 4 Wheel Drive Vehicles;</b></p> <p>4.2.2.1 1 round point shovel with overall length of at least 46”</p> <p>4.2.2.2 1 Pulaski</p> <p>4.2.2.3 1 (5) gallon backpack pump</p> <p>4.2.3 <b>Heavy Machinery or Equipment</b> (including tub grinders, whole tree chippers, drilling rigs, tractors, etc.);</p> <p>4.2.3.1 1 round point shovel with overall length of at least 46”</p> <p>4.2.3.2 1 Pulaski</p> <p>4.2.3.3 1 (5) gallon backpack pump</p>		
ISSUED BY <b>HAL MORTIER</b>	APPROVED BY <b>MAURIZIO DE JULIO</b>	

DEPARTMENT <b>TRANS. &amp; DISTRIB. ENGINEERING</b>	DIVISION <b>DISTRIBUTION ENGINEERING</b>	EFFECTIVE DATE <b>08 JUNE 2015</b>
--	---	---------------------------------------

SECTION <b>GENERAL PRACTICES</b>
-------------------------------------

SUBJECT TITLE <b>SDG&amp;E OPERATIONS &amp; MAINTENANCE WILDLAND FIRE PREVENTION PLAN</b>
--

**4.2.1 Chain Saw Use;**

4.2.1.1 1 shovel within 25 feet of the chainsaw operation with unrestricted access to the tool.

4.2.1.2 1 serviceable UL rated 2BC fire extinguisher in their immediate possession.

**4.2.2 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);

4.2.2.1 1 (5) gallon backpack pump

4.2.2.2 2 Pulaskis








4.2.2.3 2 McLeod fire tools

4.2.2.4 Round point shovels 46" (enough to outfit remaining personnel)







**4.3 Fire Risk & Mitigation Matrix:** 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 **Normal Fire Potential**. Under **Normal** the baseline tool & equipment requirements from section 4.2 suffice, except for specifically noted exceptions. **Elevated Fire Potential** 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. **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 and check matrix to see if additional mitigation is required.

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

ISSUED BY <b>HAL MORTIER</b>	APPROVED BY <b>MAURIZIO DE JULIO</b>
---------------------------------	---

DEPARTMENT <b>TRANS. &amp; DISTRIB. ENGINEERING</b>		DIVISION <b>DISTRIBUTION ENGINEERING</b>		EFFECTIVE DATE <b>08 JUNE 2015</b>
SECTION <b>GENERAL PRACTICES</b>				
SUBJECT TITLE <b>SDG&amp;E OPERATIONS &amp; MAINTENANCE WILDLAND FIRE PREVENTION PLAN</b>				
<b>FIRE RISK &amp; MITIGATION MATRIX</b>				
<p>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. <i>Note; a "designated" Fire Patrol can have co-lateral duties, whereas a "dedicated" Fire Patrol is committed to fire prevention duties and responsibilities.</i> 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.</p>				
Work Activity	Work Activity Description	NORMAL Operating Conditions	ELEVATED Operating Conditions	EXTREME 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
ISSUED BY <b>HAL MORTIER</b>		APPROVED BY <b>MAURIZIO DE JULIO</b>		

DEPARTMENT <b>TRANS. &amp; DISTRIB. ENGINEERING</b>		DIVISION <b>DISTRIBUTION ENGINEERING</b>		EFFECTIVE DATE <b>08 JUNE 2015</b>
SECTION <b>GENERAL PRACTICES</b>				
SUBJECT TITLE <b>SDG&amp;E OPERATIONS &amp; MAINTENANCE WILDLAND FIRE PREVENTION PLAN</b>				
<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
Pole Replacement	Replacement of existing power pole ON paved roads or improved roads with no vegetation on roadbed		Must designate a Fire Patrol (Document)	Not Permitted
Pole Replacement	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
ISSUED BY <b>HAL MORTIER</b>		APPROVED BY <b>MAURIZIO DE JULIO</b>		

DEPARTMENT		DIVISION		EFFECTIVE DATE
TRANS. & DISTRIB. ENGINEERING		DISTRIBUTION ENGINEERING		08 JUNE 2015
SECTION				
GENERAL PRACTICES				
SUBJECT TITLE				
SDG&E OPERATIONS & MAINTENANCE WILDLAND FIRE PREVENTION PLAN				
<i>Vegetation Management</i>				
Pole/Tower Ground Clearance (PRC 4292)	10' clearance around poles and tower structures weed eaters/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
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	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 <i>Matrix</i> that do not fit with an identified work activity require consultation with the On-duty Fire Coordinator for approval and/or additional mitigation requirements.				
ISSUED BY		APPROVED BY		
HAL MORTIER		MAURIZIO DE JULIO		



DEPARTMENT <b>TRANS. &amp; DISTRIB. ENGINEERING</b>	DIVISION <b>DISTRIBUTION ENGINEERING</b>	EFFECTIVE DATE <b>08 JUNE 2015</b>
SECTION <b>GENERAL PRACTICES</b>		
SUBJECT TITLE <b>SDG&amp;E OPERATIONS &amp; MAINTENANCE WILDLAND FIRE PREVENTION PLAN</b>		
<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 and document in the formal “tailboard” safety sessions all fire concerns, identify designated or dedicated fire patrol, mitigation, 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 a designated Fire Patrol during elevated and extreme conditions.</p>		
ISSUED BY <b>HAL MORTIER</b>	APPROVED BY <b>MAURIZIO DE JULIO</b>	

DEPARTMENT <b>TRANS. &amp; DISTRIB. ENGINEERING</b>	DIVISION <b>DISTRIBUTION ENGINEERING</b>	EFFECTIVE DATE <b>08 JUNE 2015</b>
SECTION <b>GENERAL PRACTICES</b>		
SUBJECT TITLE <b>SDG&amp;E OPERATIONS &amp; MAINTENANCE WILDLAND FIRE PREVENTION PLAN</b>		
<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>4.4.7.3 .</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> <p>4.4.10 Use available stand-by engines and/or patrols when performing at risk work in the wildland areas during elevated and extreme conditions as available.</p> <p><b>CAUTION: DO NOT UNDER ESTIMATE THE ABILITY OF A WILDFIRE TO QUICKLY SPREAD TO AN UNMANAGEABLE SIZE...</b></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. Respiratory protection (painter's mask or bandana) is recommended.</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>		
ISSUED BY <b>HAL MORTIER</b>	APPROVED BY <b>MAURIZIO DE JULIO</b>	

DEPARTMENT TRANS. & DISTRIB. ENGINEERING	DIVISION DISTRIBUTION ENGINEERING	EFFECTIVE DATE 08 JUNE 2015
SECTION GENERAL PRACTICES		
SUBJECT TITLE SDG&E OPERATIONS & MAINTENANCE WILDLAND FIRE PREVENTION PLAN		
<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> <p>4.6 <b>Red Flag Warnings:</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. Additionally SDG&amp;E can declare an Elevated Wind Condition (EWC). Essentially this is a condition just short of an RFW declared to alert the field and raise concern for fire prevention due to elevated winds. Management at these times may limit work activities and/or add additional mitigation.</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 (<i>PALS</i>). 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.</p>		
ISSUED BY <i>HAL MORTIER</i>	APPROVED BY <i>MAURIZIO DE JULIO</i>	

DEPARTMENT <b>TRANS. &amp; DISTRIB. ENGINEERING</b>	DIVISION <b>DISTRIBUTION ENGINEERING</b>	EFFECTIVE DATE <b>08 JUNE 2015</b>
SECTION <b>GENERAL PRACTICES</b>		
SUBJECT TITLE <b>SDG&amp;E OPERATIONS &amp; MAINTENANCE WILDLAND FIRE PREVENTION PLAN</b>		
<p>4.1 <b>SDG&amp;E Project Specific Fire Plans:</b> This O&amp;M 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 O&amp;M work activities or for an O&amp;M activity that seems to be especially hazardous the Fire Coordination group should be consulted. The FC will make a determination whether this O&amp;M 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. The Fire Plan template (attachment #2) will be used to assist in development of the project specific Fire Plan. 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>4.2 <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> <p>4.3 <b>Recommended Fire Related Training:</b> It is recommended that all field employees have basic fire prevention and fire safety training on an annual basis. Managers should assess individually whether an employee's work activities would cause this training to be mandatory using the existing ESCMP training tracking system to monitor compliance. This can be accomplished in one hour at a routine safety meeting just prior to fire season. 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>		
ISSUED BY <b>HAL MORTIER</b>	APPROVED BY <b>MAURIZIO DE JULIO</b>	

**ELECTRIC STANDARD PRACTICE**

DEPARTMENT <b>TRANS. &amp; DISTRIB. ENGINEERING</b>	DIVISION <b>DISTRIBUTION ENGINEERING</b>	EFFECTIVE DATE <b>08 JUNE 2015</b>
SECTION <b>GENERAL PRACTICES</b>		
SUBJECT TITLE <b>SDG&amp;E OPERATIONS &amp; MAINTENANCE WILDLAND FIRE PREVENTION PLAN</b>		

**4.1 EOC and Control Centers:**

- 4.1.1 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, 4.1.2 & ESP109 must be complied with.
- 4.1.3 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.

**4.2 Fire Coordination:** SDG&E has (4) 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.

**5.0 REFERENCES**

- 5.1 State Forest Standard Practice Act:  
[http://www.fire.ca.gov/resource\\_mgt/downloads/2009\\_Forest\\_Practice\\_Rules\\_and\\_Act.pdf](http://www.fire.ca.gov/resource_mgt/downloads/2009_Forest_Practice_Rules_and_Act.pdf)
- 5.2 TMC 1320 (aka DOP3013, ESP109 – SDG&E Fire Conditions)
- 5.3 ESP 113 – FIRE COORDINATION
- 5.4 Power Line Fire Prevention Field Guide – 2008 edition:  
<http://cdfdata.fire.ca.gov/pub/fireplan/fpupload/fppguidepdf126.pdf>

**6.0 ATTACHMENTS**

- 6.1 Attachment 1: Service Territory with SDG&E 2012 Highest Fire Risk Areas & FTZ
- 6.2 Attachment 2: Project Specific FIRE PLAN template

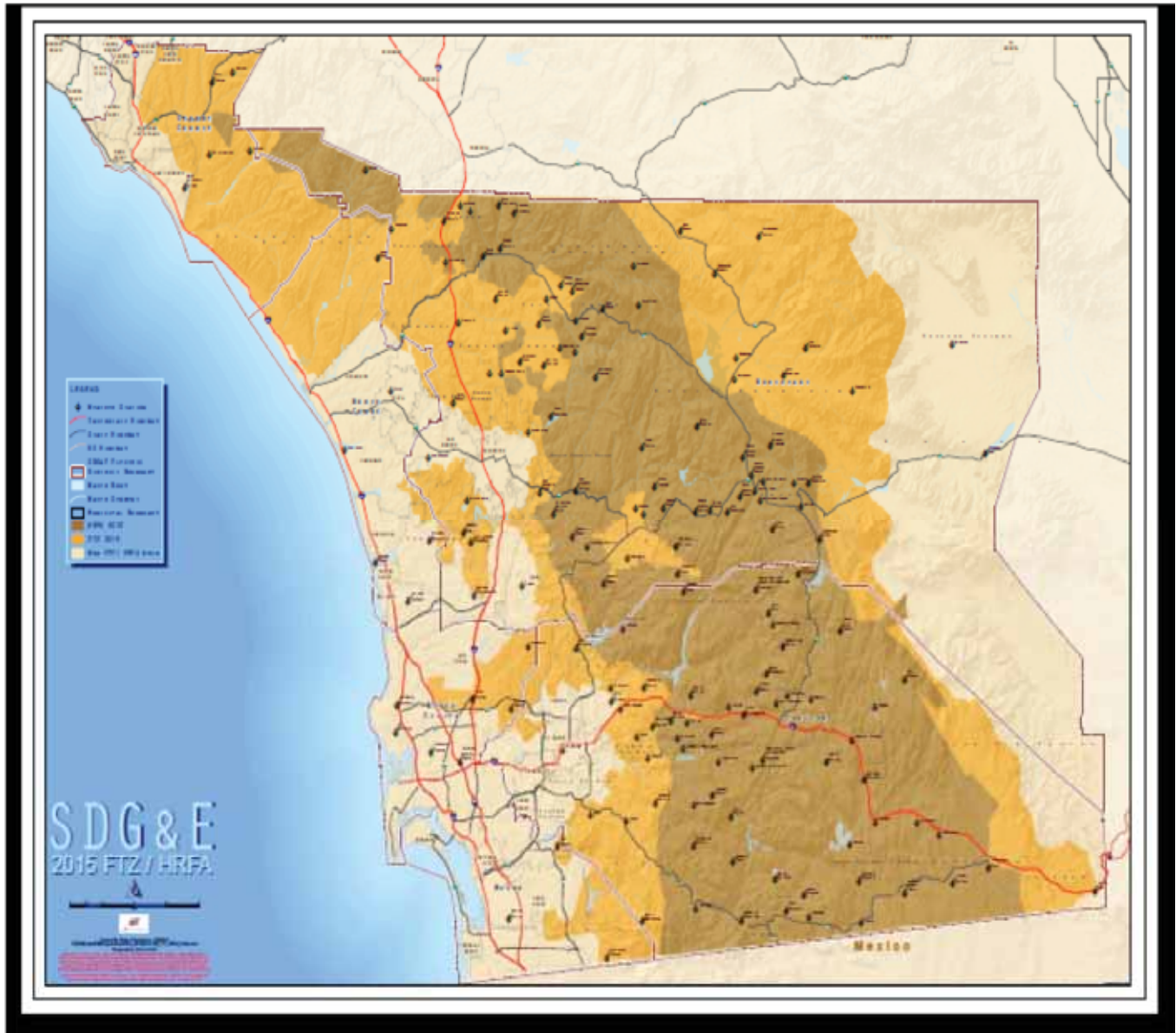
**7.0 REVISION HISTORY**

Effective Date:	Type Of Change	Brief Description of Change
05 Jun 2015	Revised	Yearly review update of maps
25 Jun 2015	Revised	Yearly update of maps

ISSUED BY <b>HAL MORTIER</b>	APPROVED BY <b>MAURIZIO DE JULIO</b>
---------------------------------	---

DEPARTMENT <b>TRANS. &amp; DISTRIB. ENGINEERING</b>	DIVISION <b>DISTRIBUTION ENGINEERING</b>	EFFECTIVE DATE <b>08 JUNE 2015</b>
SECTION <b>GENERAL PRACTICES</b>		
SUBJECT TITLE <b>SDG&amp;E OPERATIONS &amp; MAINTENANCE WILDLAND FIRE PREVENTION PLAN</b>		

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



ISSUED BY

**HAL MORTIER**

APPROVED BY

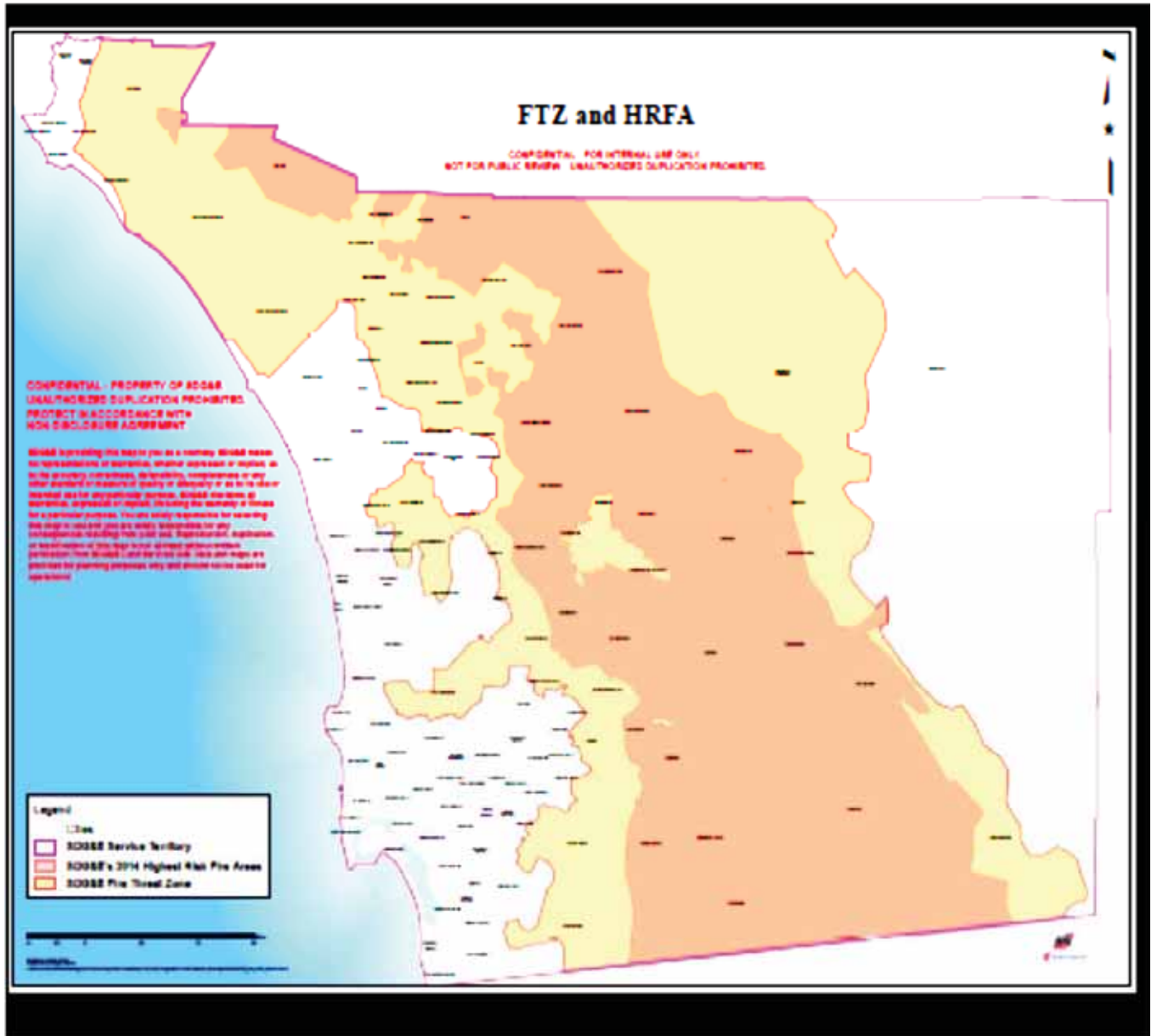
**MAURIZIO DE JULIO**

DEPARTMENT	DIVISION	EFFECTIVE DATE
TRANS. & DISTRIB. ENGINEERING	DISTRIBUTION ENGINEERING	08 JUNE 2015
SECTION		
GENERAL PRACTICES		
SUBJECT TITLE		
SDG&E OPERATIONS & MAINTENANCE WILDLAND FIRE PREVENTION PLAN		
Attachment 2: Project Specific FIRE PLAN template		
<p><b><u>Instructions:</u></b></p> <p>ESP-113.1 is intended to cover normal day to day operations and O&amp;M activities. Some projects may have additional fire risks and/or activities not anticipated in ESP-113.1. Utilize ESP-113.1 and the following outline to review your project for fire risks and mitigations. This outline is to help you with the development of a project specific fire prevention plan and not all of the sections will apply to every project. Before writing a project specific fire prevention plan please contact a member of the SDGE Fire Coordination Team. They will be able to provide guidance and lead you through the process.</p> <p><b><u>POSSIBLE SECTIONS OF A PROJECT FIRE PREVENTION PLAN</u></b></p> <ol style="list-style-type: none"> <li>1. <b><u>CONSTRUCTION FIRE PREVENTION PLAN DEFINITIONS</u></b> <ol style="list-style-type: none"> <li>a. List any project specific definitions not listed in ESP 113.1. Also define the project name.</li> </ol> </li> <li>2. <b><u>PROJECT DESCRIPTION:</u></b> <ol style="list-style-type: none"> <li>a. <b>General location:</b> Identify the right of way, work sites, and major operation work site</li> <li>b. <b>Scope and Intent of Proposed Project:</b> A general description of activities</li> <li>c. <b>Project Timeframes:</b> General estimate of start date and completion time</li> <li>d. <b>Description of work activities that will take place in or adjacent to wildland areas.</b></li> </ol> </li> <li>3. <b><u>PROJECT FIRE RISKS AND MITIGATION MEASURES:</u></b> <ol style="list-style-type: none"> <li>a. Use ESP 113.1 as a baseline to determine fire risk activities and mitigation requirements with project specific mitigation requirements.</li> <li>b. List all activities associated with the project that may pose a fire risk.</li> <li>c. List fire prevention measures you propose to mitigate these risks.</li> </ol> </li> <li>4. <b><u>MAJOR OPERATION WORKSITES</u></b> <ol style="list-style-type: none"> <li>a. List all major operations work sites within Project right of way</li> <li>b. List fire prevention measures that will be used at each major operations work area.</li> </ol> </li> <li>5. <b><u>OTHER PROJECT TOOLS &amp; EQUIPMENT REQUIREMENTS</u></b> <ol style="list-style-type: none"> <li>a. Describe any special tool and/or equipment requirements that may be needed when weather, dry vegetation or other factors increase fire risk</li> </ol> </li> <li>6. <b><u>AGENCY SPECIFIC REQUIREMENTS: (EXAMPLES)</u></b> <ol style="list-style-type: none"> <li>a. CALFIRE: Title 14 of California Code of Regulations, etc.</li> <li>b. USFS: Project Activity Levels (PAL), etc.</li> </ol> </li> </ol>		
ISSUED BY	APPROVED BY	
HAL MORTIER	MAURIZIO DE JULIO	

DEPARTMENT TRANS. & DISTRIB. ENGINEERING	DIVISION DISTRIBUTION ENGINEERING	EFFECTIVE DATE 08 JUNE 2015
SECTION GENERAL PRACTICES		
SUBJECT TITLE SDG&E OPERATIONS & MAINTENANCE WILDLAND FIRE PREVENTION PLAN		
<p><b>7. <u>RED FLAG WARNINGS (RFW) AND OTHER CRITICAL FIRE DECLARATIONS:</u></b></p> <ul style="list-style-type: none"> <li>a. Describe what activities can still be done during a RFW</li> <li>b. Describe what activities can be done during other critical fire declarations. <ul style="list-style-type: none"> <li>i. What mitigations will be in place?</li> </ul> </li> <li>c. What authority do the local fire jurisdictions have to restrict or stop work?</li> </ul> <p><b>8. <u>HELICOPTER OPERATIONS FIRE PREVENTION PLAN:</u></b></p> <ul style="list-style-type: none"> <li>a. A plan specific to fire prevention related to helicopter operations will be completed and serve as a supplement to this document. <ul style="list-style-type: none"> <li>i. Consult Aviation Services for their standard operating procedures</li> </ul> </li> <li>b. List helicopter activities associated with the project</li> <li>c. Identify the mitigation measure to minimize the fire risks</li> </ul> <p><b>9. <u>FIRE PREVENTION TRAINING REQUIREMENTS</u></b></p> <ul style="list-style-type: none"> <li>a. Indicate project specific training requirements including timeframes, content and target audience</li> </ul> <p><b>10. <u>TAILBOARDS, INSPECTIONS &amp; COMPLIANCE</u></b></p> <ul style="list-style-type: none"> <li>c. List fire prevention tailboard topics, inspection criteria, compliance expectations, and documentation</li> </ul> <p><b>11. <u>COMMUNICATIONS PLAN</u></b></p> <ul style="list-style-type: none"> <li>a. List methods of establishing communication with appropriate local fire authority for all personnel working on the project</li> <li>b. Establish a protocol for a means of notification during an emergency for the efficient evacuation of project personnel</li> </ul> <p><b>12. <u>REFERENCES:</u></b></p> <ul style="list-style-type: none"> <li>a. List references applicable to the project <ul style="list-style-type: none"> <li>i. Example: ESP 113.1, State Forest Standard Practice Act...</li> </ul> </li> </ul> <p><b>13. <u>ATTACHMENTS:</u> (Optional Examples)</b></p> <ul style="list-style-type: none"> <li>a. Some projects will have specific requirements <ul style="list-style-type: none"> <li>i. Fire Prevention Matrix</li> <li>ii. Maps</li> <li>iii. Diagrams</li> </ul> </li> </ul> <p><b>14. <u>PLAN REVIEW AND APPROVAL:</u></b></p> <ul style="list-style-type: none"> <li>a. Build a signature page <ul style="list-style-type: none"> <li>i. Reviewed by: CALFIRE CHIEF; SDCFA; CPUC...</li> <li>ii. Approved by: SDGE Fire Marshal; SDGE Project manager..</li> </ul> </li> </ul>		
ISSUED BY <b>HAL MORTIER</b>	APPROVED BY <b>MAURIZIO DE JULIO</b>	



DEPARTMENT <b>TRANS. &amp; DISTRIB. ENGINEERING</b>	DIVISION <b>DISTRIBUTION ENGINEERING</b>	EFFECTIVE DATE <b>08 JUNE 2015</b>
SECTION <b>GENERAL PRACTICES</b>		
SUBJECT TITLE <b>SDG&amp;E OPERATIONS &amp; MAINTENANCE WILDLAND FIRE PREVENTION PLAN</b>		



ISSUED BY <b>HAL MORTIER</b>	APPROVED BY <b>MAURIZIO DE JULIO</b>
---------------------------------	---

**Attachment 5: Worker Education Materials**



**Cleveland National Forest  
Power Line  
Replacement Projects  
Construction Fire  
Prevention/Protection  
Training**

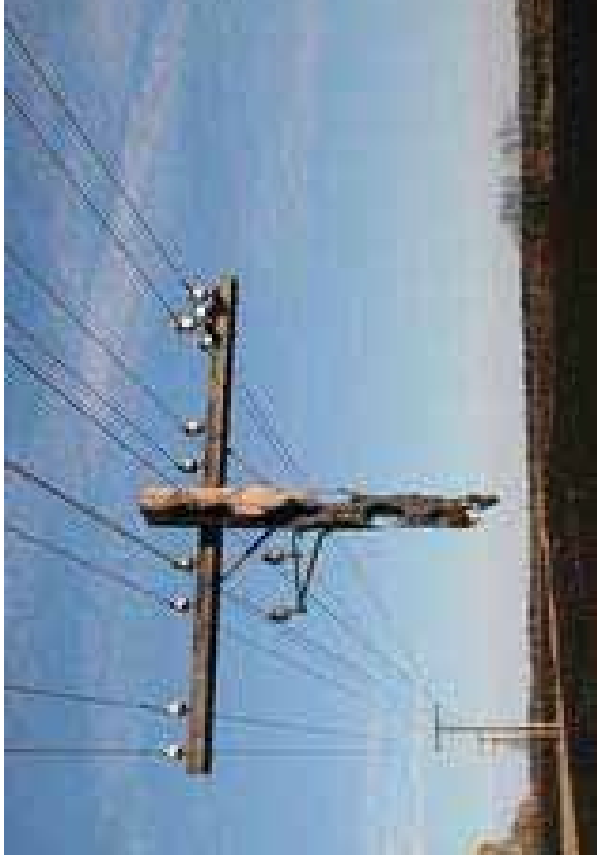
DRAFT Updated 7/12/2016

## COURSE OBJECTIVES

- FIRE PREVENTION AND FIRE SAFETY
- FIRE DETECTION AND REPORTING
- SMALL FIRE SUPPRESSION ACTIONS
- MEET THE TRAINING REQUIREMENTS OF THE PROJECT CONSTRUCTION FIRE PREVENTION PLAN
- KEEP THE PROJECT IN COMPLIANCE

# Who Needs This Training?

- ALL Project Construction Personnel (SDG&E and Contractors)
- Project Resource Monitors and Inspectors





# Overview

- Safety is SDG&E's priority during construction of this Project.
  - The Construction Fire Prevention/Protection Plan (CFPP) provides an overview of the strategies SDG&E will employ to reduce the potential of starting fires and appropriately respond to fires during construction. These measures support SDG&E's goal of keeping project personnel safe.
- The Project area has a high risk of wildland fires.
  - By implementing the strategies discussed in the CFPP and this training, we can prevent project fires and respond to offsite fires that may present risks to personnel.



# Overview

- The 3 main principles used to keep personnel safe from fire dangers include:
  - **Fire Prevention**- Eliminating or mitigating conditions that may cause fires
  - **Early Detection**- Immediate or early detection
  - **Rapid Extinguishment**- Utilize required fire equipment and training to put it out quickly



# Communication

- All construction crews and inspectors shall be provided with radio and/or cellular telephone access that is operative throughout the project area to allow for immediate reporting of fires.
- Communication pathways and equipment shall be tested and confirmed operation each day prior to initiating construction activities at each construction site



# Fire Patrols

- Project fire patrols will be responsible and accountable for fire prevention, risk management, early detection, and rapid extinguishment of fires.
  - During the construction phase of the project, fire patrols will be present.
  - Fire patrols will be maintained during construction hours and for 1 hour after the end of daily construction and/or hot work (e.g. welding, cutting, and grinding)

# Red Flag Warning

- Declared and determined by the National Weather Service
- Declared within areas defined by Fire Weather Zones
- All non-essential, non-emergency construction and maintenance activities shall cease in the affected zone



# Other Critical Fire Danger Declarations

- **Project Activity Level (PAL) E on CNF lands.**
  - PALs are available each day at 1600 hours through CNF dispatch at (XXXX) XXXX-XXXX
- **Fire Potential Index (FPI) Extreme on non-CNF lands**
  - SDG&E provides FPI each morning at 0600
- **All non-essential, non-emergency construction and maintenance activities shall cease during the above declarations**

# Understanding your Activity and Risk Level

- It is your responsibility to know what mitigation requirements are applicable to your activity
- *Work restrictions change based on the SDG&E risk level (FPI), the PAL for CNF land or if a RFW is issued*
- *Refer to the Project Fire Prevention Matrices in the CFPP for CNF land and non-CNF land*
- If you aren't sure **ASK**



# FIRE RISK MITIGATION EQUIPMENT

# Fire Risk Mitigation Equipment

- 1- Round Point Shovel (46" handle)
- 1- Pulaski
- 1- 5 gallon Backpack Pump
- 1- Fire Extinguisher at least size 2A:10BC

**Tools must be within 50' of work areas**



# Fire Risk Mitigation Equipment



Water may gradually leave the back pump for a number of reasons, so the back pump will need to be checked and refilled regularly

# Fire Risk Mitigation Equipment

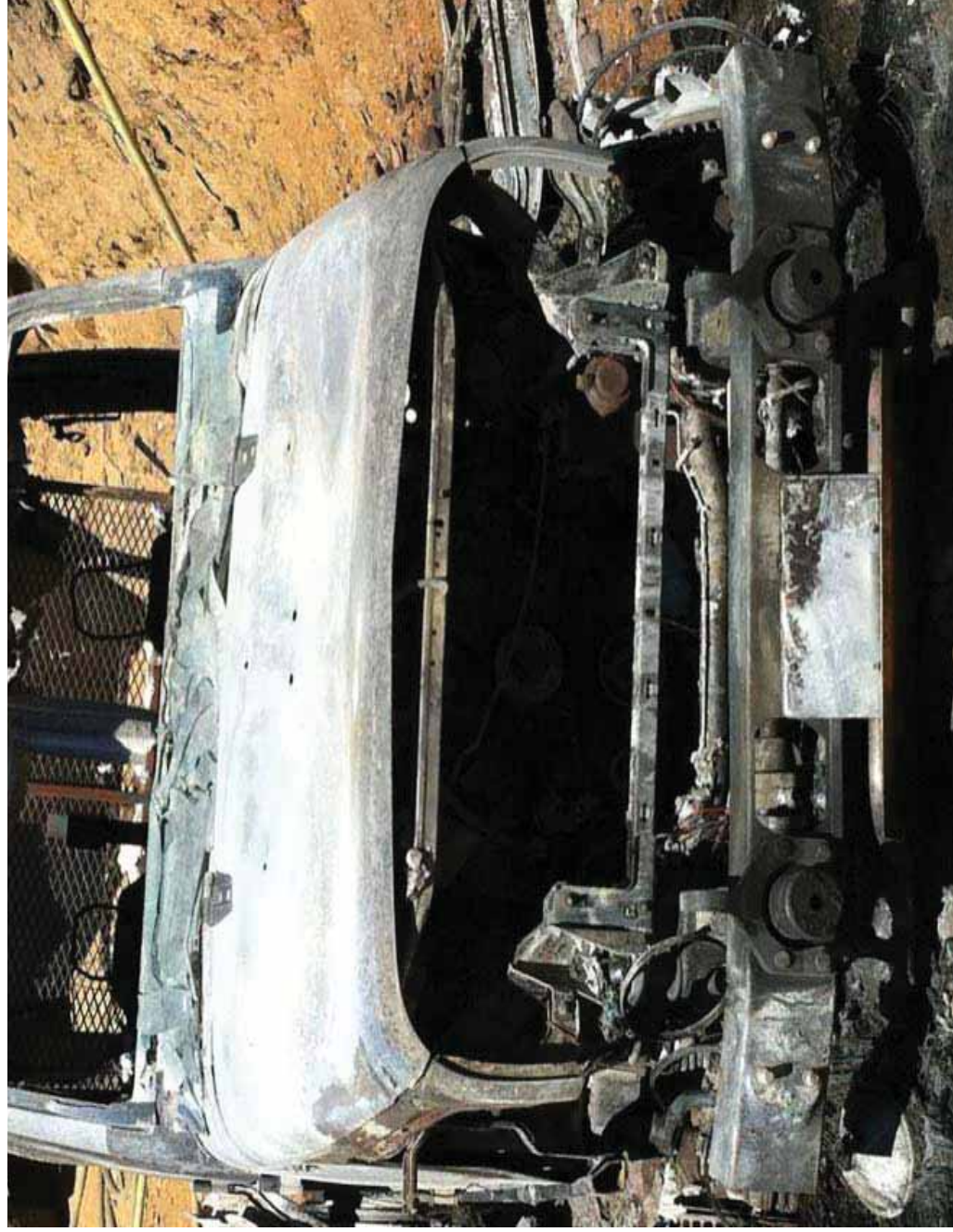




# Parking Requirements



# Parking Requirements



# Generators and Pumps



# Generators, Pumps, and Augers

➤ Standard Fire tool Package  
within 50 feet

**OR**

➤ Vehicles with standard fire  
tool package within 50' of  
work site



# Keep 5 feet of Clearance from Heat Sources



Dead/Cut Vegetation will be removed from sites prior to work beginning



# SPARK ARRESTORS



# Spark Arrestors







# FIRE BOX

- Used in emergencies only
- Required only in Major Operation Work Areas (e.g. construction yards)

**FIRE**



A Sempra Energy utility

# Fire Box

- 3 Round Point Shovels
- 2 Pulaskis
- 2 McLeods
- 1 Five gallon Backpack Pump





# Emergency Contact Card

- Each crew member **MUST** carry a laminated card listing pertinent phone numbers for reporting fires and defining immediate steps to take if a fire starts.



## Incident Reporting

- Call 911 **FIRST** in the event of a fire, then call the Project Fire Coordinator
- For any incident call Base at (XXX) XXX-XXXX
- For questions relating to Construction Fire Prevention Plan compliance, and/or anything related to fire contact the Project Fire Coordinator at (XXX) XXX-XXXX

# Wildland Fire Risk Activities

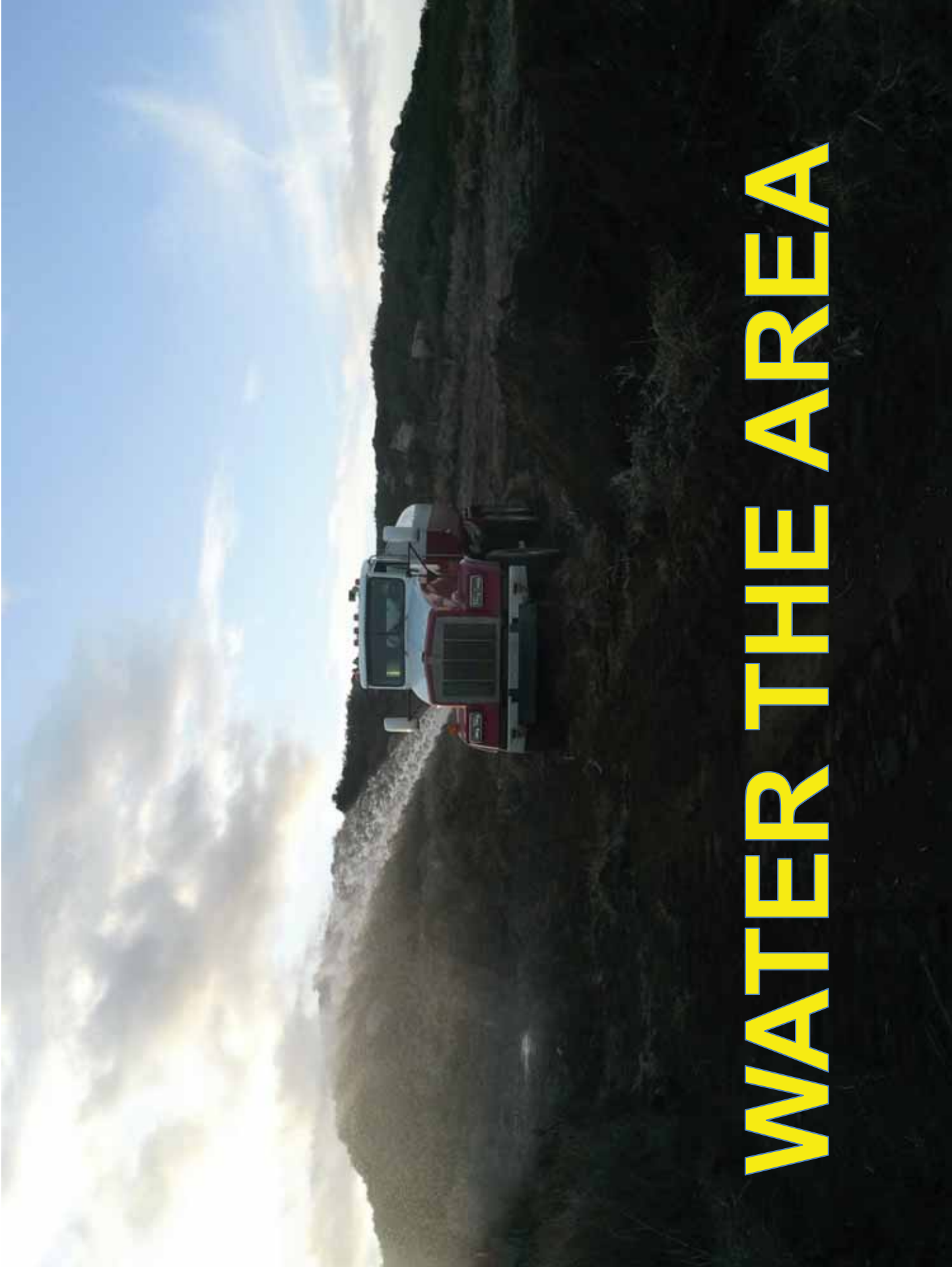


# Heavy Equipment Use

- Trenching
- Grading
- Excavating



Any activity that uses a piece of heavy equipment that may come into contact with rock and create a spark



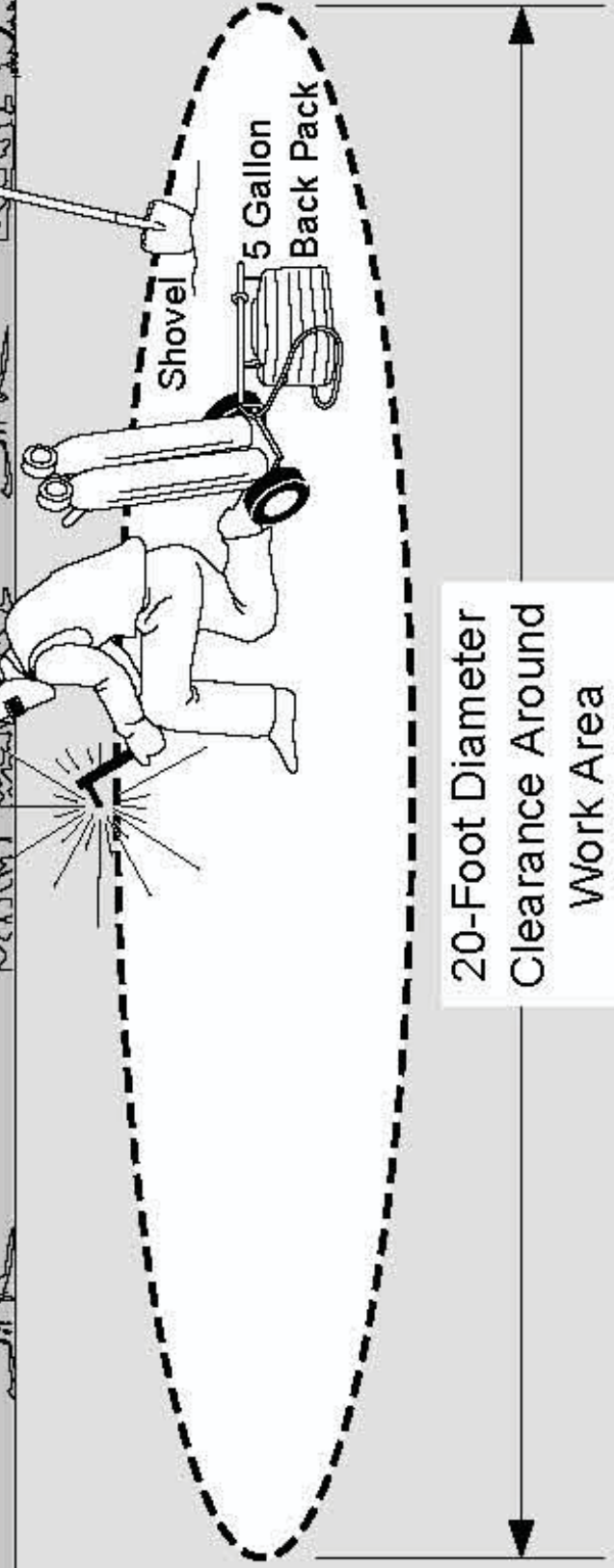
# WATER THE AREA



# WELDING/GRINDING

Hot Work Permit

Keep proper clearance



20-Foot Diameter  
Clearance Around  
Work Area

# Portable Gasoline Powered Equipment

(Chainsaws, Weed Eaters, Cutoff Saws)

- Standard Fire Package within 50' of operations and
- 1 Round point shovel within 25' of operation or a BC fire extinguisher in the operators immediate possession
- Fueling requires 10 feet of clearance, a shovel and a fire extinguisher within 25'



# SMOKING

DESIGNATED  
SMOKING  
AREA

➤ When permitted,  
smoking will be in  
designated locations  
only, in a 10' cleared  
area



# Electronic Cigarettes



# ***Fire Triangle***

***For a fire to exist, 3  
elements must be  
present. Removing any  
one of these elements  
will put out the fire.***

**Oxygen**

**Heat**

**Fuel**

# Three Principal Environmental Elements Affecting Wildland Fire Behavior

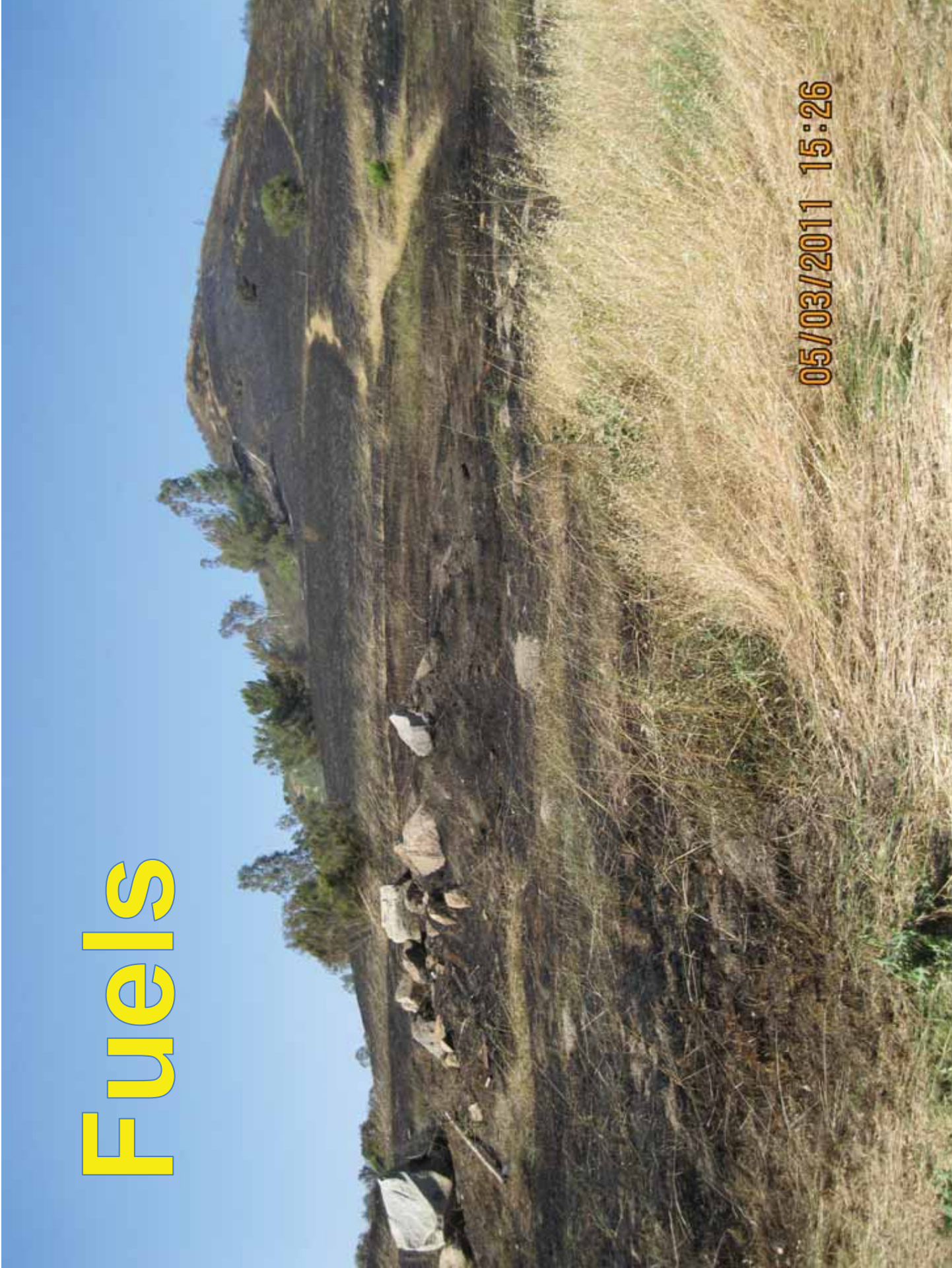
Fuels

Weather

Topography



# Fuels



05/03/2011 15:26

# Weather

➤ Wind

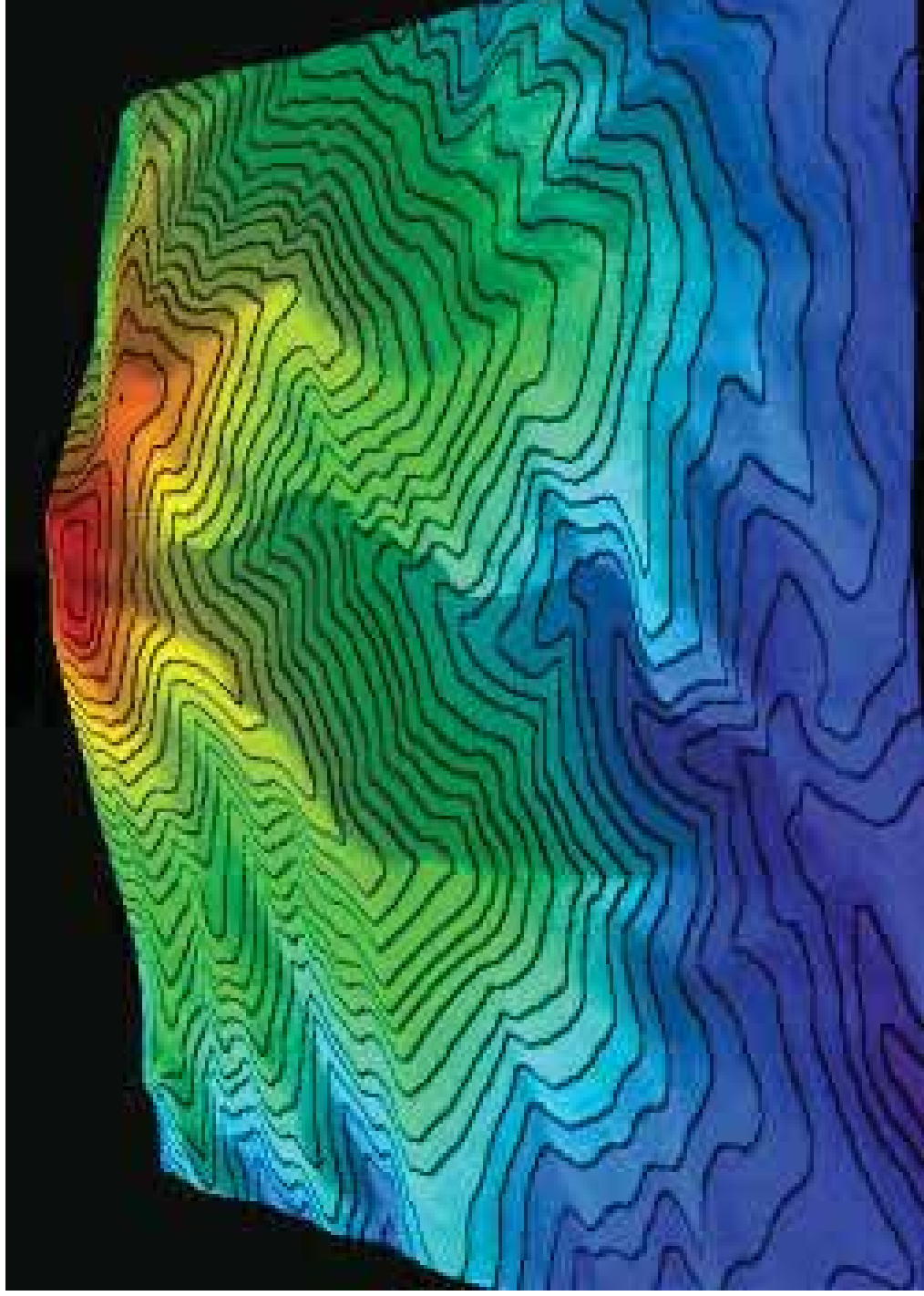
➤ Temperature

➤ Humidity





# Topography

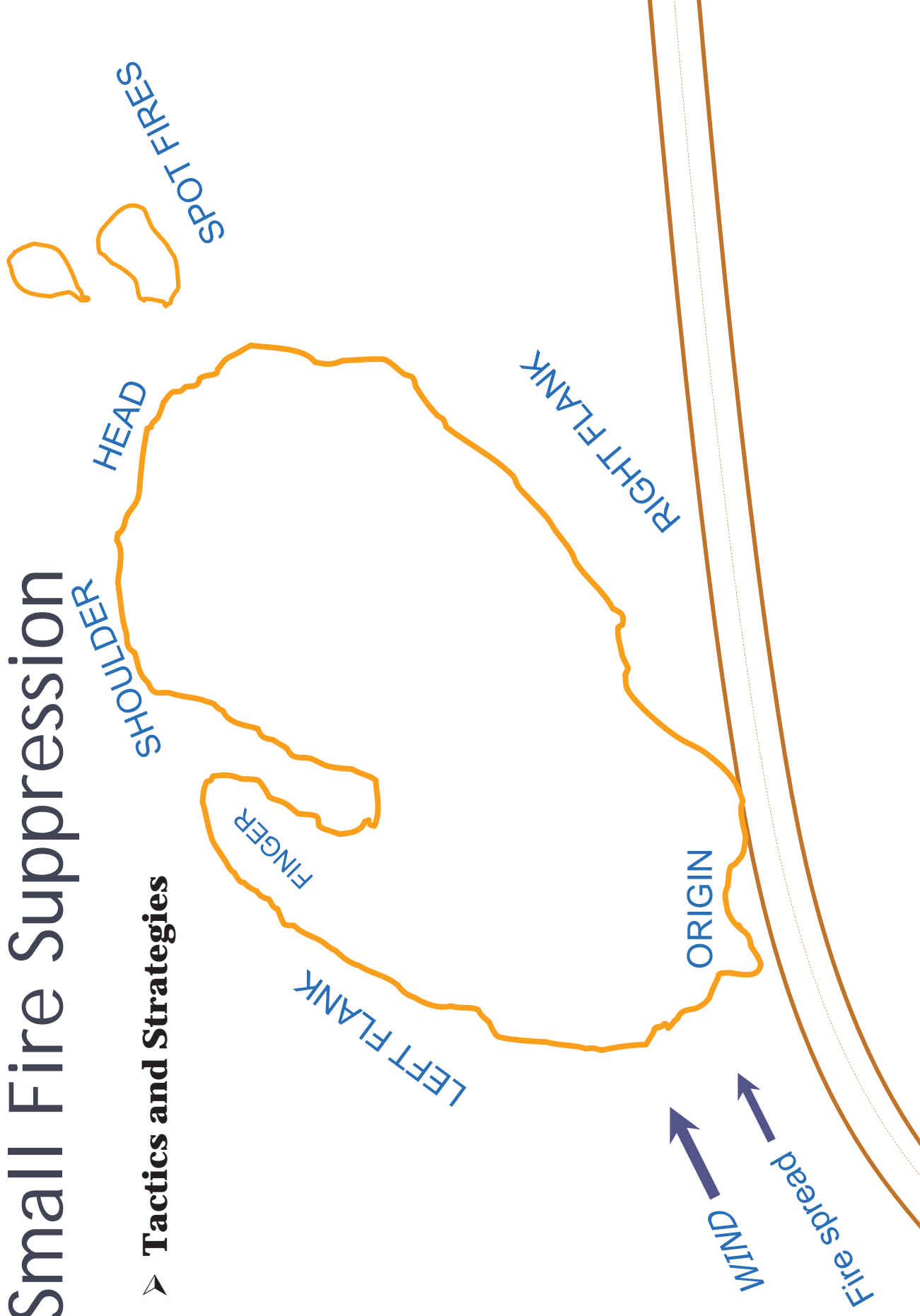


# Small Fire Suppression



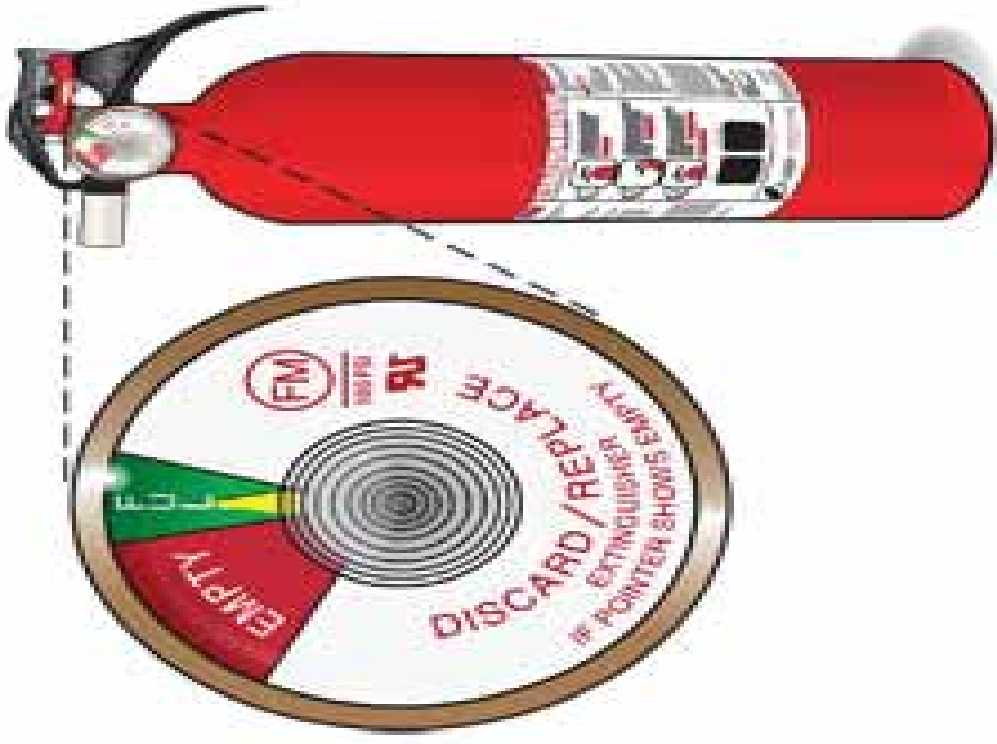
# Small Fire Suppression

## ➤ Tactics and Strategies





# Fire Extinguishers



# What are the risks of being out of compliance?

- Starting fires
- Endangering crews and the public
  - Potential damage to private property and other entities along the right of way
- Work stoppage and delays
  - Non-compliance can lead to mandatory shut downs, delays and/or additional training (all of these end up costing \$\$\$)
- Fines
  - CPUC can directly fine the Project for non-compliance

# Fires Impact Everyone

