

# Rx burn plans

Rob York, Forestry extension specialist, University of California, Berkeley

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# Why I dislike talking about burn plans

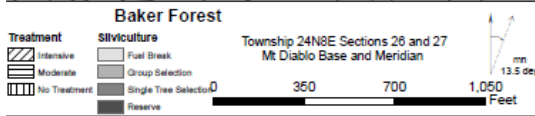
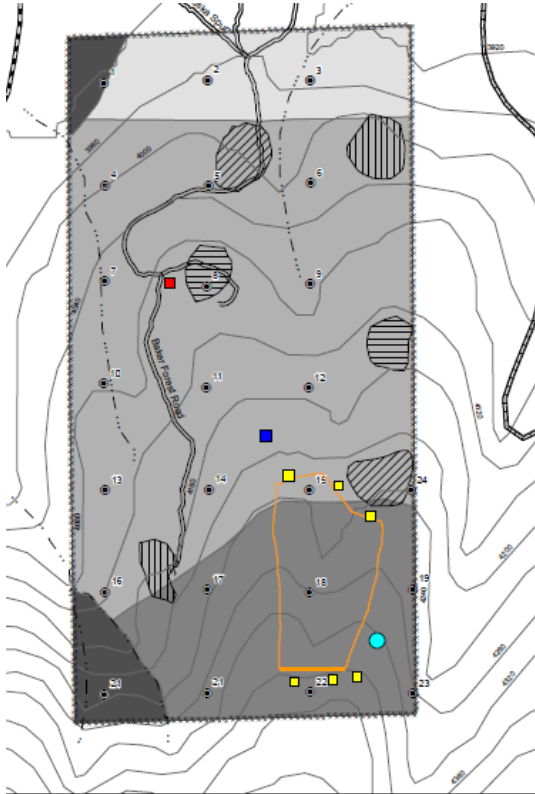
- “Burn plan” is not defined in CA regulations
- On private land, they are not required but may be *expected*
- If one is suggested, there is no standard format to follow
- An “IAP” is Cal Fire’s reference, but is not applicable to private land rx burns
- Agency burn plans are COMPLEX; this standard may be placed on private landowners

The range in burn plan complexity covers orders of magnitude:

Small landowner  
~One page

Private larger burn  
~10 pages

Agency burn (NWCG)  
~100 pages



### Prescribed Fire Plan

Name of Landowner or Land Manager: U.C. Berkeley Forests

Prescribed Fire Supervisor/Burn Boss: Ariel Roughton

Landowner Phone Number: (530) 333-4475, Cell (530) 613-9161

Prescribed Fire Supervisor Phone Number: (530) 334-3386

Burn Plan Developer: Perry Scott

Burn Plan Checked By: Ariel Roughton, Rob York

Location of Prescribed Fire (Legal Description) Section: 26 Township: 24N

Range: 8E Latitude: 39°55'04.6"N Longitude: 121°03'46.1"W County: Plumas

Distance and direction from nearest town/landmark: Meadow Valley is one mile North of the Prescribed Fire

Volunteer Fire District: Meadow Valley Fire Department

Fire Chief Name: Ron Heinbockel Fire Chief Phone Number: \_\_\_\_\_

Air Quality District: Northern Sierra Air Quality Permit Number: \_\_\_\_\_

Air Quality Contact: Northern Field Office Air Quality Phone Number: (530) 832-0102

Cal Fire Battalion: \_\_\_\_\_ Cal Fire Phone Number: \_\_\_\_\_

Forest Service Battalion: \_\_\_\_\_ Forest Service Phone Number: \_\_\_\_\_

Forest Service Dispatch Phone Number: \_\_\_\_\_

Size of Prescribed Fire: 4 acres

#### Prescribed Fire Objectives.

Recognizing that fire was a critical process that maintained Sierra Nevada mixed conifer forests for millennia, the primary objective is to utilize fire at Baker Forest in a way that is consistent with the overall goal of reintroducing and sustaining fire's positive ecological and human benefits, while facilitating present and future educational opportunities. The three prescribed fire compartments have been prepped to burn in conjunction with a private landowners workshop demonstrating the use of various types of prescribed fire and other fuel management treatments. Two of the burn units were prepped as broadcast burns while the third was prepped as a pile burn with multiple hand piles spread throughout it. An additional objective is to reduce fire hazard, primarily via the reduction of surface fuel in strategic locations across the forest without unacceptable tree mortality.

### PRESCRIBED FIRE PLAN

ADMINISTRATIVE UNIT(S): SEQUOIA & KINGS CANYON NATIONAL PARKS

PRESCRIBED FIRE NAME: WHITAKER

PREPARED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Name & Qualification/Currency

TECHNICAL REVIEW BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Name & Qualification/Currency

RECOMMENDED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Parks Fuels Management Specialist

RECOMMENDED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
District Fire Management Officer

RECOMMENDED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Park Fire Management Officer

RECOMMENDED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Chief Ranger

RECOMMENDED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Hume Lake District Ranger

COMPLEXITY RATING: HIGH

MINIMUM RXB REQUIREMENT: RXB1

6/7/12

APPROVED BY: ROBERT YORK DATE: \_\_\_\_\_  
UC Berkeley Center for Forestry Research Stations Manager

APPROVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Agency Administrator

# Why I like talking about burn plans

- Plans are good!
- They organize thoughts
- They can document due-diligence (i.e. non-negligence)
- They provide a check-list
  - Making a complex process easier...



# What are the most important elements of a burn plan?



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Fire Chief Name: Ron Heinbockel Fire Chief Phone Number: \_\_\_\_\_

# Basic Plan Information

Project Title: \_\_\_\_\_

Prescribed Fire Burn Boss (CARX): \_\_\_\_\_

Author of Plan: \_\_\_\_\_

Agency Having Jurisdiction (AHJ): \_\_\_\_\_

Property Owner: \_\_\_\_\_

Date Created: \_\_\_\_\_ Date Re-Evaluated\* (if applicable): \_\_\_\_\_

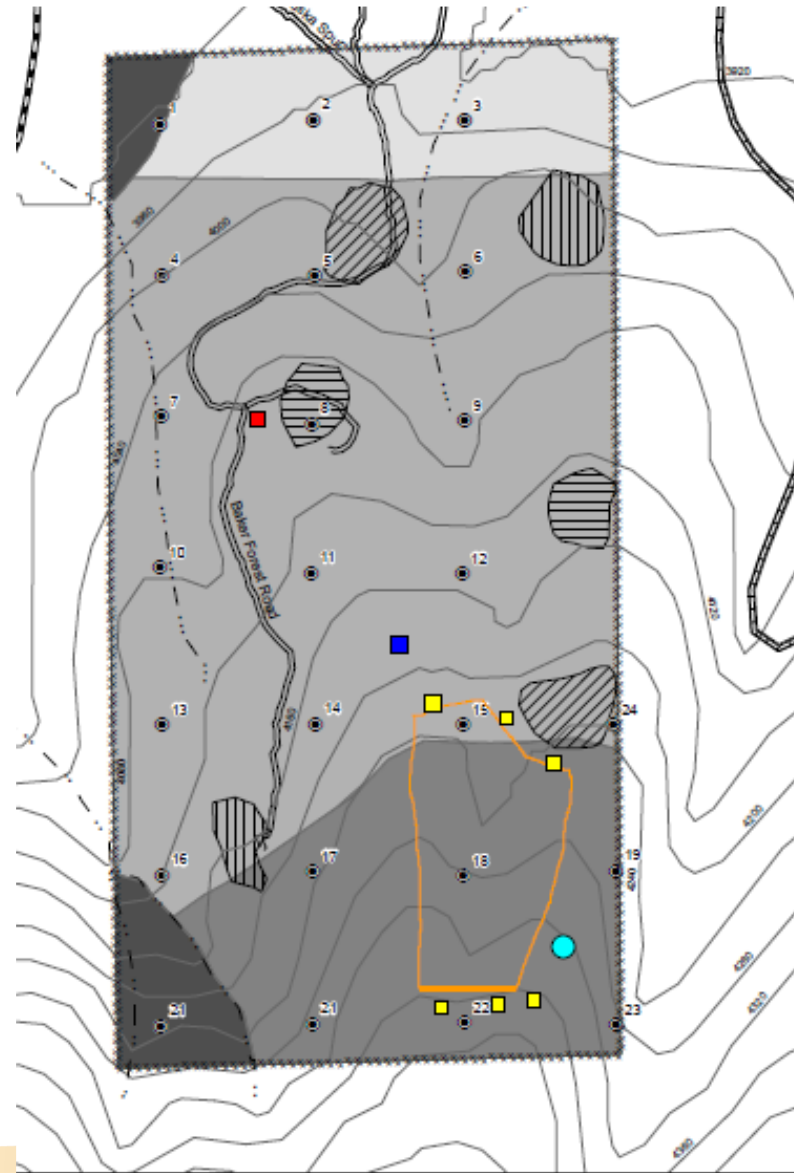
*\*Burn plans should be re-evaluated as needed to account for changes in fuel/site conditions or project objectives.*

# Project Area Description

- General location description
- Lat/long
- Unit description
  - Size
  - Slope/aspect/fuels (w/in unit and adjacent)
- Unit map(s)

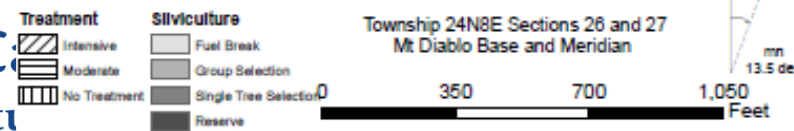


# Map



**Baker Forest**

Township 24N8E Sections 26 and 27  
Mt Diablo Base and Meridian





# Project Goals and Objectives

## ELEMENT 5: GOALS AND OBJECTIVES

**A. Goals:** There are two primary goals: (1) Reduce competition from invasive plant species, particularly Medusahead (*Taeniatherum caput-medusae*), and to promote growth of native plant species and (2) Provide training for private landowners who are interested in learning how to apply fire to landscapes as a land management tool.

**B. Objectives:** Fuel reduction of <1 inch diameter class by 80%-100% with >70% mortality in standing Medusahead plants. Provide training experience for at least five private landowners.



***S.M.A.R.T. Objectives: specific, measurable, attainable, relevant, time-bound***

# Pre-Burn Considerations

- Unit preparation
  - Line type/construction, pre-treatment of fuels, etc.
- Water supply (quantity, location, etc.)
- Unit access (roads, signage needs, etc.)
- Plan for protecting values at risk (structures, water lines, cultural sites, etc.)



# Prescription

## 3. Prescription

| Element                     | Minimum (cool) | Desired | Maximum (hot) |
|-----------------------------|----------------|---------|---------------|
| Temperature (F)             |                |         |               |
| Relative Humidity (%)       |                |         |               |
| Mid-Flame Wind Speed (mph)  |                |         |               |
| Fine Dead Fuel Moisture (%) |                |         |               |
| Probability of Ignition (%) |                |         |               |
|                             |                |         |               |
|                             |                |         |               |
|                             |                |         |               |

*\*Include other prescription elements as appropriate*

**Wind direction** (acceptable range and optimal): \_\_\_\_\_

**Seasonality of burn** (if applicable; in many cases, implementation will be appropriate at any time that prescription parameters are met): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_



# Smoke Management



## **4. Smoke Management Plan**

(to be prepared according to local air district rules; refer to SMP for detailed plan):

- Submitted through PFIRS
- Submitted in hard copy to air district
- Not required by air district based on project size/emissions

# Ignition/Holding Plan

- Firing plan: sequence, patterns, devices, etc.
- Holding plan
  - Anticipated fire behavior within unit and adjacent to the unit: flame length, rate of spread
  - Production rates: how quickly can your crews and resources construct line if needed?
  - Determine resources (people, engines, etc.) needed to safely conduct the burn



# Post-Burn Activities

- Mop-up and patrol plan
  - Activities & timeframes
- Other activities (optional)
  - Fire effects monitoring plan
  - Photo monitoring
  - Project rehabilitation plan





# Notifications



## Pre-Burn Notifications

- Neighbors
- Air quality management district
- Local fire agency
- Others as identified in SMP

## Day-of-burn notifications

- CAL FIRE dispatch
- Air quality management district
- Other fire agencies
- Other: neighbors, law enforcement, etc.

# Other potential elements

- Wildfire conversion plan
- Risk management activities
  - Contingency plan
  - Medical plan
  - Communications plan
  - Briefing checklist
  - Safety plan
- Go-no-go checklist





# GONO-GO checklist

## PRESCRIBED FIRE GO/NO-GO CHECKLIST FOR FOREST MANAGER

|   |     |    |
|---|-----|----|
| A. Has the burn unit experienced unusual drought conditions or does it contain above normal fuel loadings which were not considered in the prescription development? If <u>NO</u> proceed with checklist below, if <u>YES</u> go to item B. | YES | NO |
| B. Has the prescribed fire plan been reviewed and an amendment and technical review been completed; or has it been determined that no amendment is necessary? If YES to any, proceed with checklist below, if <u>NO</u> , STOP.             |     |    |

| YES | NO | QUESTIONS   |
|-----|----|---|
|     |    | Are ALL pre-burn prescription parameters met?   |
|     |    | Are ALL smoke management specifications met?  |
|     |    | Have ALL required current and projected fire weather forecasts been obtained and are they favorable?                          |
|     |    | Are ALL planned operations personnel and equipment on-site, available, and operational?                                       |
|     |    | Has the availability of ALL contingency resources been checked and are they available?  |
|     |    | Have ALL personnel been briefed on the project objectives, their assignment, safety hazards, escape routes, and safety zones? |
|     |    | Have all the pre-burn considerations identified in the Prescribed Fire Plan been completed or addressed?                      |
|     |    | Have ALL the required notifications been made?  |
|     |    | Are ALL permits and clearances obtained?  |
|     |    | In your opinion, can the burn be carried out according to the Prescribed Fire Plan and will it meet the planned objective?    |

If all the questions were answered "YES" proceed with a test fire. Document the current conditions, location, and results

# Inventory of “resources”

- Equipment
  - Backpack pumps, tools, water sources, hose, etc.
- People
  - Number
  - Responsibilities- firing, holding, engine

