

# 2018 SAN BERNARDINO FORESTRY CHALLENGE

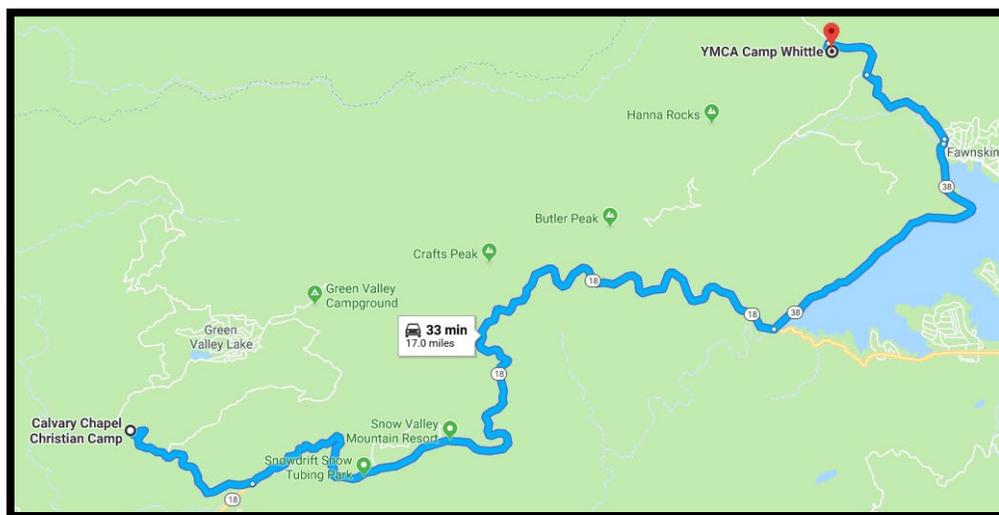
## FOCUS TOPIC QUESTION

### Introduction:

The focus topic for 2018 is ***Vegetation Management at YMCA Camp Whittle***. Students will collect data on the forested portion of a parcel of privately-owned land where an upcoming fuel reduction project will result in reduced fuel loads with the primary goal of reducing wildfire severity.

### Focus Topic Fieldtrip Location:

We will use one bus and school vehicles to travel 17 miles to the YMCA Camp Whittle, where we will assess the property and collect data. Below is a map of the route to Camp Whittle. Detailed directions will be provided before going there, and a map with plot locations will be provided upon arrival at Camp Whittle.



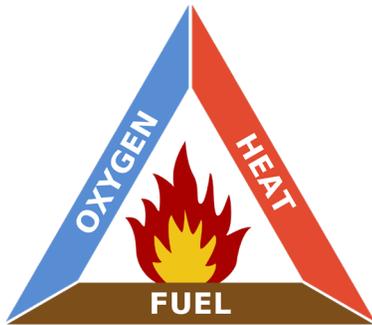
### Background Information:

#### History of the Property

Camp Whittle is a forested facility resting in a unique alpine meadow north of Fawnskin, CA. Camp Whittle has unique facilities and locations to support high-altitude sports training, corporate retreats, teambuilding, family reunions, weddings, and church groups. Camp Whittle is in a mixed conifer forest and chaparral community in the San Bernardino mountains. Jeffrey pine, white fir, sugar pine and black oak are the main tree species. The dominant shrub species include manzanita, white thorn and rabbit brush. Elevation is around 7,000 feet and the topography is relatively flat (<10% slope).

On Sept. 14, 2007, the Butler 2 fire consumed over 14,000 acres of the San Bernardino National Forest, including a portion of Camp Whittle. The unburned portion of the property is a pine dominant, mixed conifer forest of even-aged trees.

### Fire Behavior



Here is a diagram of the Fire Triangle. You will notice that the one element that humans are most able to control is fuel.

When fuels (small trees & brush) are present and connected, such as from the ground to the tree tops or crowns, a fuel ladder exists that can carry a surface fire up into the crowns, where the fire becomes far more dangerous and difficult to control. A crown fire can sustain itself when trees are close enough to each other such that their crowns (branches), once ignited, can spread fire from crown to crown. Therefore, to reduce the chances of a crown fire, it is necessary to disconnect both vertical and horizontal fuels.

### California Cooperative Forest Management Plan

In early 2012, CalFire and The Natural Resource Conservation Service (NRCS), in partnership with the USDA Forest Service (USFS), released the California Cooperative Forest Management Plan. This template meets the "management plan" requirements to obtain grant funding through CalFire, NRCS, USFS, and the American Tree Farm Association. The Plan is required when landowners are applying for various state or federal forest improvement grants. The coordinated effort between these state and federal agencies and Non-Governmental Organizations helps eliminate duplication and streamlines the process for developing one plan to meet the landowner's personal and financial goals.

### Regulations Controlling Forest Health Projects

Forest practices in California are highly regulated. Rules for standard harvest have been evolving since the Z'Berg – Nejedly Forest Practice Act was passed into law in 1973. All projects must comply with the California Environmental Quality Act, or CEQA. One way to comply with CEQA and get a project done without full environmental analysis is for the state to declare a project has no possible significant impacts to environmental resources. In such a case, a Notice of Exemption, or NOE can be filed, allowing the project to proceed in a relatively short time period.

## Recent Work Conducted at Camp Whittle

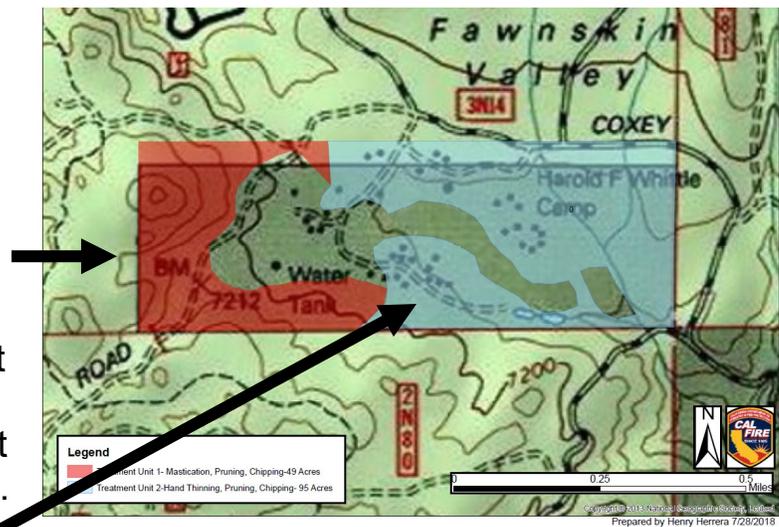
Entry #1: After the 2007 Butler 2 Fire, the Mojave Desert Resource Conservation District conducted a brush removal and seedling planting project, which also thinned brush and limbed up the unburned areas of the property.

Entry #2: A few years later, a California Cooperative Forest Management Plan was written by Registered Professional Forester Tim Morin in 2015. This plan helped Camp Whittle receive funding for another fuels reduction project on the property that further treated excess fuels.

Entry #3: A third project is now planned at Camp Whittle on approximately 144 acres and is set to begin in the winter of 2018 or the spring of 2019. This project will help reduce wildfire risk to the camp and nearby homes by reducing the hazardous fuels and improving forest health. In addition, the project will help reduce shrubs that have grown after the 2007 Butler Fires.

There are two treatment areas, as seen on the map below. Our data collection will occur in Unit 2.

Unit 1, on the western portion of the property, is 49 acres. The treatment in this unit is mastication of up to 85% of brush ground cover to create islands of vegetation of various natural appearing shapes and sizes. Dead or dying trees within the unit will be felled. Follow-up tree planting will occur in Unit 1 as part of a separate reforestation project.



Unit 2 is 95 acres and consists of thinning trees under 12 inches in diameter at breast height (DBH) to an average spacing of 20 feet between tree trunks. Residual trees will be pruned to a height of eight feet or half their height, whichever is less. All vegetation within the drip-line of residual trees will be removed using chainsaws. Dead or dying trees will be felled. Bark beetle infested wood will either be chipped or covered onsite with six mil clear plastic. Brush will be reduced to 15% ground cover using chainsaws, and will be chipped onsite, to create islands of vegetation of various natural appearing shapes and sizes. Distance between islands of vegetation will be a minimum of two and a half times the vegetation height.

**Your Task:** You will visit YMCA Camp Whittle and will collect data on a 1/10th acre circular plot to determine the current forest condition and the projected forest condition after the upcoming project. You will use the data to determine if the upcoming project will meet the landowner objectives.

**Landowner Objectives and Project Phases:** As stated in Camp Whittle's Forest Management Plan (page 14), the primary landowner management objectives are:

1. Fire Protection – to reduce fuel load in the forested areas so that when a fire does occur on the property, a stand replacing uncontrollable fire can be avoided
2. Forest Health - the long-term goal of the landowner is to eventually bring the forest back to represent a more historical stand composition. Brush species will require repeated control. An additional goal of the landowner is to have several age classes (an uneven-aged stand), thereby creating improved wildlife habitat and recreation potential.
3. Invasive plants - the growth of various shrub species is a concern for the landowner. The change in vegetative community due to these species dominating sites previously occupied for forested land could potentially cause a change in the type of wildlife species inhabiting the area.

**Resources:** You will be given resources on a flash drive to load onto your team's computer. Additionally, you can use photos you take during the fieldtrip and statements from foresters you work with and interview during Ask a Forester.

### **Items to be Addressed in Your Presentation:**

1. The wildfire and post fire project history of Camp Whittle
2. The purpose of a Forest Management Plan, including landowner objectives
3. Treatment specifications of the upcoming project
4. Data collection methods
5. Summary of the current and anticipated post-project stand condition
6. Determination of the effectiveness of the project in meeting landowner goals
7. Treatment specifications for future projects

### **Final Product:**

Your goal is to produce a 15 minute PowerPoint presentation that **describes, in detail, the current stand condition of Camp Whittle, the projected condition after the upcoming project, and whether the project will achieve the landowner's objectives for fire safety and forest health.** You are encouraged to use photos and information collected on the fieldtrip, interviews with resource professionals during the Challenge, and the maps, tables, and information in the resources provided. Additionally, use the judges' score sheet as a checklist, to make sure you cover the items on which you will be scored.