2017 EL DORADO FORESTRY CHALLENGE
FOCUS TOPIC QUESTION

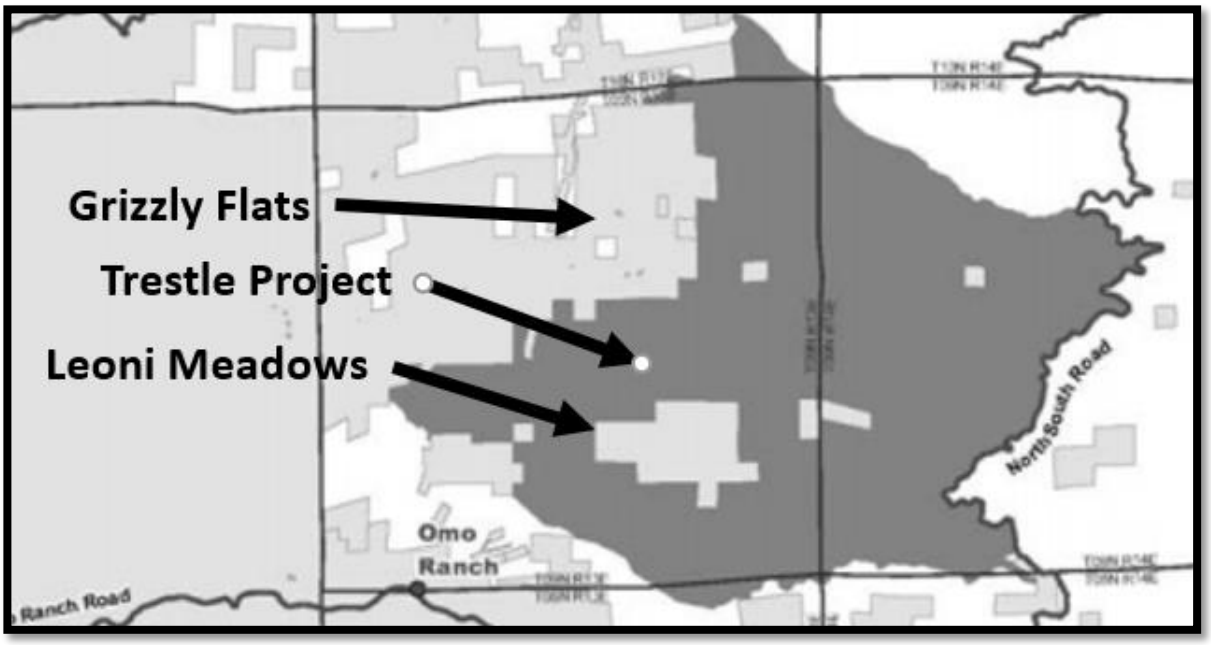
Introduction:

The focus topic is ***The Trestle Forest Health Project – Revisited***. The Trestle Project was the focus topic of the 2013 El Dorado Forestry Challenge, when it was in its initial planning stages. Now that the environmental review is complete and there is a plan of action, it is time to collect new data to see if the plan accomplishes what it set out to do. Each team will locate an assigned plot center, establish its boundaries, and collect data. The collected and shared data will be compared to data collected in 2013 to see if the 2013 measurements are still valid. In order to make that determination, you will need to be familiar with:

- the Trestle Project's location, size, proposed treatments, and purpose
- the use of forestry tools and knowledge of tree species to successfully collect data
- historic condition of the Sierra Nevada and recent changes due to fire suppression and tree mortality

Location:

The 19,128 acre project is located south-east of the community of Grizzly Flats, including the area surrounding Leoni Meadows. The project is in El Dorado County, and in the Placerville Ranger District of the El Dorado National Forest.



Background Information:

Resilient Landscapes

Before European settlers stopped natural fire from burning the forest at frequent intervals, fire moved through the forest with mostly low intensity, killing small trees, shrubs, and brush, and occasionally climbing to the tree tops and killing very small patches of large trees. Low intensity fire did not often harm or kill the larger trees, since the bark on the trees protected the delicate cambium layer from being damaged.

Because natural, low intensity fire has been excluded for over 100 years, and because often nothing is done to remove highly flammable ladder fuels, when a wildfire does burn through an untreated "stand" (group of trees), the flames climb to the tree tops and burn the needles, killing large areas of trees, often hundreds or thousands of acres in a single fire.

By using a combination of mechanical treatments, and sometimes even prescribed fire, the forest can be returned to a more natural state that is "resilient" - that is - it can withstand a low to moderate intensity wildfire and background levels of pests with minimal damage.

National Environmental Policy Act (NEPA)

When a project is proposed on federal land, an environmental analysis must be done to state the proposed action and its impact on the environment. The type of project and amount of public concern determines how detailed the analysis will be. There are three levels of analysis:

- *Categorical Exclusion*. A CE, or "Cat Ex" is the most streamlined regulatory method for getting work done. Cat Ex criteria can be automatically applied to situations that are pre-defined, such as salvage logging on 250 acres or less, hazard tree removal near public roads or trails, or hazard fuel reduction within 1.5 miles of urban areas. Using a Cat Ex gets the work done quickly in situations where immediate action is necessary.

- *Environmental Assessment (EA).* An EA discloses one or a few action alternatives as well as a "no action" alternative. The proposed action(s), benefits, and possible negative impacts are described. The process is less time consuming than for an EIS.

- *Environmental Impact Statement (EIS).* An EIS is often used when there are substantial controversial issues that need to be addressed. A

multidisciplinary team writes a draft that describes the potential benefits and negative impacts of several alternatives for action, including no action. The draft is released to the public for a 45 day comment period. A "Record of Decision" names the preferred alternative. The process of writing an EIS and getting it approved can take several months to years.

The Trestle Project began as an Environmental Assessment, but after considering the concerns raised during its early stages, it was determined to have controversial issues, so it became an EIS. Alternative 5 was chosen to balance fuel treatments that would effectively modify fire behavior with concerns that thinning could negatively impact California Spotted Owl populations in the project area.

Historic Forest Condition and Site Class on the Trestle Project

Researchers estimate that, historically, there were about 50-100 trees per acre in much of the Sierra Nevada. Early California explorers wrote in their journals that they could ride a horse at a full gallop through the forest, and rarely have to change their direction or slow down to avoid trees.

2013 data shows, for the area we will sample, that there were 147 trees per acre with a basal area of 345 square feet per acre. The site class in the Trestle Project area is Class A, which means it is extremely good land for growing trees. This forest grows at the rate of 2-3 thousand board feet per acre per year. Therefore, you can expect trees left on the landscape following a thinning operation to respond with vigorous growth.

Forest Inventory Methodology

To get an exact inventory of a forest, every single tree would need to be measured and recorded, which is not practical and not necessary in order to get a general assessment of the forest condition. To get information that is as accurate as possible without evaluating every tree, sample points are established by identifying plot centers on paper and on the ground. For these plots, the points will mark the center of a 1/5 acre circular plot, with a radius of 52.7 feet. A map of Unit 623417, with the plot centers, as well as a data collection sheet, will be given to you at the beginning of the fieldtrip. A flag on a wire has been stuck into the ground at each plot center, numbered to match the numbers on the gridded map.

Once your team locates its plot center, you will collect data using the worksheet provided. The data sheets will be collected, and the information will be entered into a master spreadsheet and returned to you on the flash drive you will receive at 6:30 on Thursday evening.

Fieldtrip: On the afternoon of Thursday, October 26, your team will be assigned a plot for data collection, and you will determine:

- The number of trees in the plot with a diameter at breast height (dbh) of 7" or greater, and categorize them into 2 inch diameter classes
- The species of the trees recorded
- Each tree will be categorized as live with a mark for removal, live without a mark for removal, recently dead, or long dead
- The basal area of the stand that will remain after thinning can be determined from the data collected

Items to be Addressed in Your Presentation:

Your presentation should address the following topics:

1. The location, size, and purpose of the Trestle Forest Health Project
2. Forest inventory methodology and summary of the 2017 data for unit 623417
3. The accuracy of the live tree removal estimates made in 2013, in the aftermath of recent tree mortality
4. The accuracy of the 2013 predictions of post-treatment stand conditions, and your opinion on whether or not the forest will be resilient once the project is complete

Resources:

On Thursday evening, you will be given resources on a flash drive to load onto your team's computer. During preparation time, you will have internet access to do independent research. Additionally, you can use photos you take during the fieldtrip and statements from foresters you work with and interview during Ask a Forester.

Final Product:

Your goal is to produce a 15-minute PowerPoint presentation that describes, in detail, the current stand condition of unit 623417 and changes in the forest since it was marked in 2013, and how that impacts the effectiveness of the Trestle Project. 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. Remember, there is no "right" answer!