

2023 EL DORADO FORESTRY CHALLENGE

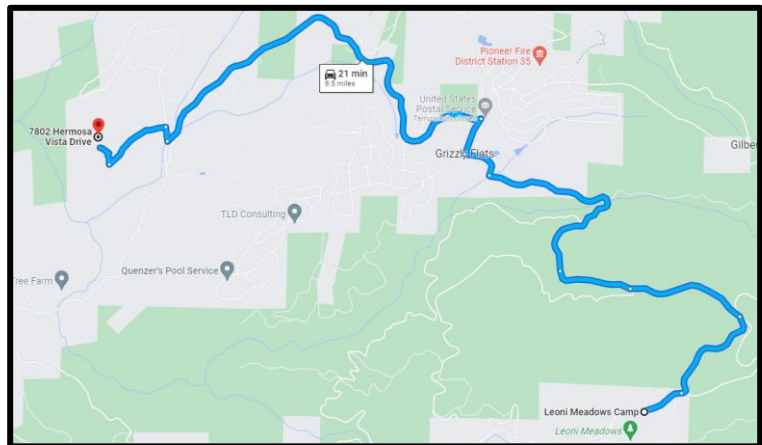
FOCUS TOPIC QUESTION

Introduction:

The focus topic is ***Forest Management Planning on Private Non-Industrial Forestland***. Students will consider the steps involved with forest management planning which include identifying management objectives and collecting information on the forest that currently exists on the property. Students will use available information to assess the current forest conditions, identify threats, and recommend treatments.

Location:

Dr. John Taylor and his wife Maria own and live on their property near Grizzly Flats. It is a ponderosa pine dominant stand with a significant hardwood component. It is on the edge of the Caldor Fire footprint but none of this property was burned in the Caldor Fire. It is a 21-minute drive from Leoni Meadows.



Background Information:

Property History

This 154-acre parcel of private property is currently being managed as a non-industrial forest/homesite and was purchased by the Taylors in 1999. There is evidence of mining activity that most likely occurred in the mid to late 1800's, with uneven ground, ravines, and some steep drop-offs that are remnants of placer mining. This activity had a significant impact on the landscape.

The forest has been harvested 4 times, once around 1900, again several decades later, again in 1998 just before the Taylors purchased the property, and most recently in 2008. The first two harvests were done before the advent of the current Forest Practices Act when the rules were different. The 1998 harvest, although done legally, removed the largest and most valuable

trees with the objective of maximizing profit. The Taylors did a limited-scale harvest in 2008 to generate income to improve infrastructure on the property, including gravelling some of the roads. Dr. Taylor purchased a masticator, a machine that grinds up small trees and brush, and has been working to reduce ladder fuels on the property. He has accomplished a lot but there is still a large portion of the property that has not been treated and poses a fire hazard. The trees remaining on the property are relatively small diameter conifers and hardwoods of varying sizes. Dr. Taylor does not anticipate enough conifer volume to do another commercial harvest for 40 to 50 years.

Forest Management Plans

The California Cooperative Forest Management Plan is a template that can be customized for a private landowner that allows them to be eligible for grant funding from CalFire, NRCS, USFS, and the American Tree Farm Association. This universally accepted plan helps eliminate duplication and streamlines the process of applying for and receiving grant funding from these sources. As Dr. Taylor works to reduce fuel on the property but understands the massive scale of needed work, he has expressed interest in putting a Forest Management Plan in place so he is eligible for these sources of financial assistance.

The plan helps the landowner determine what management action(s) are appropriate for the land, how to obtain technical and financial support, and what, if any, permits may be necessary. Developing and executing an effective Forest Management Plan may seem like a large and complex task, but with guidance from a Registered Professional Forester (RPF), it is attainable.

Forest Evaluation Process

A new publication called *The Forest Management Handbook for Small Parcel Landowners in the Sierra Nevada and Southern Cascades* was written to help landowners build their Forest Management Plan. The Handbook organizes the forest evaluation process in a stepwise manner to assist the landowner in making decisions. The process is structured in 4-steps as follows:

Step 1 – Define Management Objectives: Establishing objectives could be the single most important decision to make for many years to come. Defining objectives will set the landowner on a path toward recognizing concerns and selecting different management actions needed to achieve the objectives. Dr. Taylor has established these objectives in descending order of importance: Fire Safety, Forest Health, and Economics.

Step 2 – Assess Forest Conditions: Quantifying the stand is essential, as it can be compared to historic and/or ideal conditions to determine what specific actions need to be taken to return the stand to a healthy and resilient condition. Your data collection process will be used to develop a stand table, determine species composition, and quantify how many acres need treatment.

Step 3 – Recognize Threats: Four examples of threats are wildfire, insects, drought, and pathogens. At low levels, these stressors/disturbances are normal, and the forest can remain healthy. However, when forests become too dense, these stressors can become threats. You will be asked to evaluate these threats according to their presence or absence and their relative importance for this property.

Step 4 – Evaluate Treatments: After completing steps 1 through 3, you can determine what treatments are most appropriate to meet the landowner goals. A “treatment” is an action or series of actions intended to support reaching the desired condition of your forest. The main options to modify the vegetation at this location fall into three categories: 1) mechanical and manual treatments of various kinds, 2) burning piles or using prescribed fire, and 3) planting desired species.

California Forest Improvement Plan (CFIP)

The purpose of the California Forest Improvement Program (CFIP) is to encourage private and public investment in, and improve management of, California forest lands and resources. CFIP was created to help ensure adequate high quality timber supplies, related employment and other economic benefits, and the protection, maintenance, and enhancement of a productive and stable forest resource system for the benefit of present and future generations.

Cost-share assistance is provided to private and public ownerships of 20 to 5,000 acres of forest land. Cost-shared activities include the preparation of a Forest Management Plan, reforestation (tree planting), pre-commercial thinning, release (brush control), pruning, and follow-up treatments such as herbicide application.

Self-labor may be performed by the landowner, their family members, and/or direct employees. When a landowner elects to perform the work themselves, they must track and record their hourly rates for their work.

Fieldtrip: On Thursday afternoon your team will be assigned a 1/10th acre plots for data collection, and you will determine:

- Number of live trees in the plot with a diameter at breast height (DBH) class of 10" or greater, and their species
- Number of dead trees in the plot and their DBH class
- Basal area using an angle gauge, which will be compared to the raw data of each tree's DBH
- Growth over the last 20 years, which is an indicator of tree vigor and can predict future growth
- Presence or absence of ladder fuel and ladder fuel level if present

Items to be Addressed in Your Presentation:

Your presentation should address the following points:

1. The location, size, history, and management objectives of the property
2. Forest Management Plans and steps needed to create one
3. Data collection process and summary of the cruise data
4. Threats to the forest and a ranking of their importance
5. Recommended treatments using CFIP or other assistance programs and a budget for the various treatments

Resources:

On Thursday evening, you will be given resources on a flash drive to load onto your team's computer, including information on the stand. Additionally, you can use photos you take on Thursday and statements from foresters you work with and interview during Ask a Forester.

Final Product:

Your goal is to produce a PowerPoint presentation of up to 15 minutes in length that summarizes the Taylor property, steps to creating a Forest Management Plan, your assessment of current forest conditions and threats, and recommended treatments. You are encouraged to use photos and information collected, interviews with resource professionals, and the maps, tables, and information on the flash drive. Additionally, use the judges' score sheet as a checklist, to make sure you cover the items on which you will be scored.