

2019 SAN BERNARDINO FORESTRY CHALLENGE

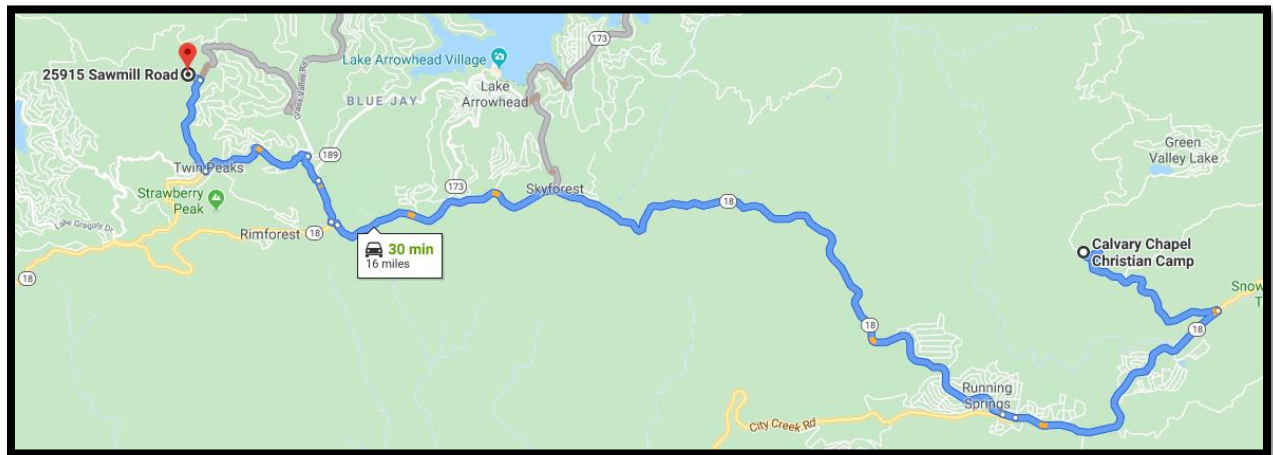
FOCUS TOPIC QUESTION

Introduction:

The focus topic is ***A New State Demonstration Forest in the San Bernardino Mountains***. Students will collect data on Sawmill Tract near Twin Peaks to create a comprehensive data set on the status of the forest and will recommend goals and uses of the state's newest Demonstration State Forest.

Location:

The Sawmill Tract is approximately 1 mile north of the town of Twin Peaks in the San Bernardino Mountains at an elevation of 6,000 feet. It is a mixed conifer forest type. It is about 16 miles from Green Valley Lake Christian Camp and will take about 30 minutes to travel there. A map of the route is below:



Background Information:

Area History

The Twin Peaks/Lake Arrowhead area was originally settled in the 1920's. The primary attraction to the area was the resource of readily available timber close to a population center. Trees were harvested, often with few trees left behind, and without regard to protecting the environment, since the laws regulating timber harvest in place today were not in place back then. The remnants of an old sawmill are still visible on the Sawmill Tract.

As harvesting declined and the Los Angeles metropolitan area grew, the mountain setting with its cool temperatures became popular as an easily accessible retreat from the city. The focus changed from timber production to recreation.

The elevation of the area is between 6,000 and 7,000 feet above sea level. The dominant plant community is the Mixed Conifer Forest, which includes Ponderosa, Jeffrey, Sugar, and Coulter Pine, White Fir, Incense Cedar, California Black Oak, and Canyon Live Oak. The forests in this region are threatened by both abiotic and biological forces such as drought, bark beetles, and the impacts of human use and development.

Demonstration State Forests

CalFire operates eight Demonstration State Forests (DSFs) totaling 71,000 acres. The forests represent the most common forest types in the state. The State Forests grow approximately 75 million board feet yearly and harvest an average of 30 million board feet of timber each year, enough to build 3,000 single-family homes. Revenue from these harvests fund a variety of the Department's Resource Management Programs. In addition, the forests provide research and demonstration projects on forest management, while providing public recreation opportunities, fish and wildlife habitat, and watershed protection.

The Board of Forestry and Fire Protection (Board) policy provides that the State Forests shall be used for experimentation to determine the economic feasibility of artificial reforestation, and to demonstrate the productive and economic possibilities of good forest practices toward maintaining forest crop land in a productive condition. The management objectives and plans developed for each State Forest are subject to periodic review and approval by the Board.

Sawmill Fuel Reduction Project

The goal of the Sawmill Fuel Reduction Project is to reduce wildfire risk to nearby homes on State Responsibility Area (SRA) by reducing vertical and horizontal fuel continuity and road maintenance for emergency vehicle access during wildfires and for project activities. Fuel reduction treatments will consist primarily of thinning saplings and brush that has grown since the last project entry. Four measurable elements of the project are:

1. Thinning of trees under 12 inches (diameter at breast height-DBH) to an average spacing of 20 feet between tree trunks will occur.
2. Residual trees will be pruned to a height of eight feet or no more than $\frac{1}{2}$ their height, whichever is less.

3. Dead/dying trees will be removed regardless of size except to meet wildlife habitat needs.

4. All vegetation within the dripline of residual trees will be removed. Additionally, brush will be thinned to create a mosaic of islands of vegetation of various shapes and sizes. A minimum distance of two and half times the brush height will be cleared between the islands of vegetation. Cut material will be chipped and deposited onsite or piled and burned. Cut material may also be cut into firewood size lengths and stacked next to the side of the road.

Transfer of Sawmill Property to CalFire

On May 18, 2001, the Wildlife Conservation Board approved the purchase of approximately 120 acres at the end of Sawmill Road in San Bernardino County. The purpose of acquiring this property was for the acquisition and preservation of wildlife habitat and corridor lands in the San Bernardino Mountains. The property is undeveloped but is subject to informal day use activities from the surrounding community such as hiking, biking, horseback riding, and wildlife viewing. At the time of acquisition, the California Department of Fish and Wildlife was engaged in informal discussions with the US Fish and Wildlife Service to assume management of the parcel through a Memorandum of Understanding. This partnership did not materialize, leaving CDFW responsible for the operational expenses of managing the property.

CalFire operates five facilities less than 15 miles away from the Sawmill property. This proximity to the property makes it an ideal location for CalFire personnel to utilize the Sawmill property for training exercises, physical fitness, and resource management. Transferring the property to CalFire is an effective way to ensure the property maintains the original intent of preservation of wildlife habitat and corridor lands in the San Bernardino Mountains and continues to be maintained for public access, wildlife habitat, and fire prevention.

Forest Inventory

An inventory is a cornerstone of forest stewardship planning that not only ensures a forest is healthy and productive but meets management objectives for years to come. A forest inventory will help quantify the forest and identify needs and opportunities for forest health, wildlife habitat, timber production, aesthetics, and carbon storage. An inventory will provide insights into species composition, tree density, basal area, and volume, and help document change (growth and mortality) in the forest over time.

Fieldtrip: On the afternoon of Thursday, November 7, your team will be assigned a 1/10 acre plot for data collection, and you will determine:

- The number of trees in the plot with a diameter at breast height (dbh) of 6" or greater, and their species
- Basal area using an angle gauge, which will be compared to the raw data of each tree's dbh
- Percentage canopy cover
- The number of seedlings (trees under 6" dbh) in a 1/100-acre sub plot
- An evaluation of the 4 measurable elements of the project listed above
- Brush cover and woody debris levels

Items to be Addressed in Your Presentation:

Your presentation should address the following topics:

1. The location, size, and history of the Sawmill Tract
2. Recent treatments and desired forest condition
3. A summary of the data collected and determination of progress on the current fuels reduction project
4. Suggestions on goals and uses of the tract as a DSF

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.

Final Product:

Your goal is to produce a 15-minute PowerPoint presentation that describes, in detail, the current forest conditions in the Sawmill Tract and a determination of whether or not the condition meets the fuel reduction project goals, as well as suggested goals for the Tract when it becomes a DSF. 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.