

2022 SANTA CRUZ FORESTRY CHALLENGE

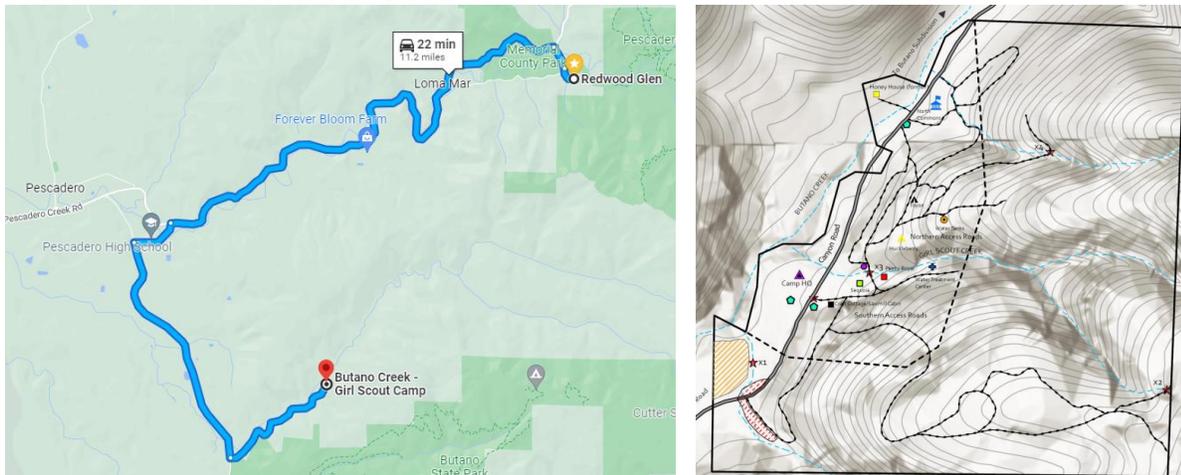
FOCUS TOPIC QUESTION

Introduction:

The focus topic is ***Post Treatment Monitoring of the Camp Butano Forest Health Project***. Students will collect data on a large portion of the project area that had mechanical treatment and will determine if the treatment meets the Project objectives.

Location:

Camp Butano is a recreational property owned by the Girl Scouts of Northern California located 2 miles southeast of the town of Pescadero, in western San Mateo County. Within the 143.5 acre property, approximately 41 acres have been or will be treated with this grant, including a large area of mechanical treatment on the southeast portion of the property, which is the site of our data collection.



Background Information:

Butano Camp

The property is almost entirely forested. Redwood dominates the better sites and Douglas-fir thrives on drier slopes. The significant old growth component differentiates these woods from the typical second-growth forest of the Santa Cruz Mountains. 80% of the forest is comprised of redwood; 20% is Douglas-fir. The timber stand consists of three age groups with sprouts and poles growing throughout the three forest components:

1. Unharvested old growth
2. 130 to 150 year old second growth
3. 60 to 70 year old second growth

The Parcel is zoned “Planned Agriculture District” where forest management is considered a compatible use; however, the property has a conservation easement agreement with The Sempervirens Fund, which restricts additional building development and commercial timber harvesting. The conservation easement does allow for forest management to occur in the form of restoration forestry and practices associated with fuels reduction to reduce the risk of wildfire.

Butano Camp Project – a Forest Health Grant Project

In 2019, San Mateo Resource Conservation District applied for a CalFire Forest Health Grant that was awarded in March of 2020. Forest Health Grants fund active restoration and reforestation activities aimed at providing more resilient and sustained forests to ensure their longevity in California. Activities funded by this program may include:

- Forest fuels reduction
- Prescribed fire
- Pest management
- Reforestation
- Biomass utilization
- Conservation easements and/or land acquisition
- Research

Resource Conservation Districts across California serve as local hubs for conservation, connecting people with the technical, financial, and educational assistance they need to conserve and manage natural resources. RCDs provide non-regulatory, confidential, free assistance. They work in close partnership with local agencies, organizations, and communities to accomplish this goal.

CZU Fire

After the grant was awarded but before work began, the CZU Fire burned through a majority of the treatment area at low intensity, affecting much of the vulnerable understory vegetation. Residual vegetation was masticated, and some evidence of the fire remains as charred tree trunks.

Project Treatments

There are two main treatment activities in this project:

1. Mechanical – Masticators will be used to remove dense stands of understory vegetation and ladder fuels and maintain a healthy overstory. Understory vegetation, brush, and shrubs under the drip lines of trees shall be cut and masticated leaving root systems intact for resprouting.
2. Handwork - Manual treatments will occur over approximately 5.4 acres predominately near sensitive resources and important camp infrastructure such as the water treatment facility and water tanks. Some manual treatment areas are on steep slopes where machinery cannot operate.

Measurable Specifications

The stated project treatment goals that you will evaluate through your data collection include:

- All trees with a diameter at breast height (DBH) of 8 inches or less will be removed, except when they are not under a canopy of larger trees.
- All standing dead trees (snags) with a DBH of 12 inches or less will be removed.
- Snags over 12 inches in DBH will be left standing at a density of 1 to 2 per acre.
- Conifer trees over 8 inches DBH will be pruned up to a minimum height of 8 feet. No pruning will be done to a height greater than 50% of total tree height.
- A minimum of 35% relative cover of existing brush, shrubs, and understory vegetation will be retained in a mosaic pattern across treatment areas. (This may not be attainable because of the CZU Fire.)
- The residual masticated material will remain uniformly spread to the extent feasible within the project area, shall not exceed a depth of six inches (6") and should average approximately three inches (3").
- Damage to residual trees and brush will be minimized to the greatest extent feasible.

Other specifications you will not measure for the cruise but are welcome to make notes about are:

- Trees under 8 inches in dbh will have 15 to 20 feet of spacing to the nearest adjacent crown.
- Trunks from the trees taken out will either be masticated or, if too large, left on the ground, but each one must be at least 10 feet from other logs.
- All stump heights will be cut no higher than 6 inches above the ground.

Field Trip: On the afternoon of Thursday, October 13, your team will be assigned one or two 1/10th acre plots for data collection, and you will determine:

- Number of trees (alive and dead) in the plot with a diameter at breast height (dbh) of 2” or greater, and their species
- Number of seedlings in a smaller, nested, 1/100th acre plot
- Basal area using an angle gauge, which will be compared to the raw data of each tree’s dbh
- Canopy cover using a densitometer
- Growth over the last 20 years, which can predict future growth
- Depth of masticated material
- Presence or absence of herbaceous vegetation

Items to be Addressed in Your Presentation:

Your presentation should address the following topics:

1. The location, size, and purpose of the Camp Butano Project
2. Treatments completed, focusing on the mechanical treatment in the unit surveyed
3. A summary of the data collection techniques and data collected
4. A comparison of those results to the Project objectives
5. Your determination of whether the treatment met the project objectives

Resources:

On Thursday evening, you will be given resources on a flash drive to load onto your team’s computer, including the results of the data collection. Additionally, you can use photos you take during the data collection 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, post-treatment conditions in the masticated unit at Camp Butano and a determination of whether or not the treatment meets the project objectives. 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.