



*Shasta Cascade  
Timberlands  
Asset Protection  
& Wildfire Plan*

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AUGUST 4, 2020



# Overview/Background

A key focus of risk management for Shasta Cascade Timberlands (SCT), is the management of wildfire within SCT ownership. SCT has engaged LandVest as the property manager, including responsibility for ensuring asset protection is implemented on the estate. A primary objective of the asset protection plan is to minimize risks associated with wildfire, particularly through prevention and early detection.

SCT ensures its timberland management employs the best practices to mitigate fire risk throughout the SCT estate. Regular review of the fire risk strategy is undertaken by LandVest and SCT to ensure continual improvement and that management objectives are met.

## *Current priorities of the SCT asset protection plan include:*

- Monitoring of all lightning strikes within and near the SCT estate and follow up inspections.
- Implementing fires patrols during the fire season by LandVest and contracted patrol teams.
- Maintaining strong and regular contact with the California Department of Forestry and Fire (CAL FIRE), the United States Forest Service (USFS), and adjacent industrial landowners to coordinate efforts to fight wildfires.
- Requiring SCT's contractors to follow strict operating protocols and daily post-operation fire safety protocols to mitigate the risk of fire on the timberlands.
- Ensuring adequacy of training, resources, and tools, including pre-fire-season preparations and training and maintenance of onsite tools and protocols to fight wildfire.

# Pre-Fire Season Preparation

The fire season generally runs from May 1 through October 31 — although it can begin earlier or end later. SCT and LandVest prepare for the fire season in a number of specific ways.

## **PLANNING AND TRAINING**

- Before the fire season, LandVest meets with CAL FIRE at fire stations to review fire season plans, ensure that response to wildfire is well-coordinated, and that CAL FIRE has access to important areas of the SCT estate.
- All employees review fire preparedness, including that they have appropriate fire equipment such as a shovel, axe, flame-resistant Nomex clothing, fire shelter, fire extinguishers, eye protection, and a hard-hat. Some employees also carry water pumps in their vehicles. Pre-season fire shelter certification is conducted for all LandVest employees.

## **EQUIPMENT AND READINESS**

- LandVest personnel conduct an inventory of all fire equipment stored at strategic locations throughout the SCT estate.
- The SCT's fast-attack fire trucks are serviced, filled, and stationed in preparation for fire.
- All water tanks are filled in preparation for fire season.

## ACCESSIBILITY AND SAFETY

- Before the fire season, commence inspection of all arterial roads and remove debris and impediments to transportation to ensure roads are accessible for fire equipment.
- The road-brushing and road-grading program ensures safe passage for fire equipment; over 170 miles are treated annually.
- The SCT estate is currently closed to public access; all gates are inspected to ensure they are locked. Unfortunately, uncontrolled public access can significantly increase fire risks.

## PHYSICAL RISK REDUCTION

- Inspection and maintenance of fire breaks with appropriate vegetation treatments to ensure integrity of breaks.
- Conduct fuels-reduction on the property during winter months, including burning of slash piles on landings.

## COLLABORATION AND COORDINATION

- A pre-season fire cooperative meeting is held with state and federal agencies and all local large landowners.
- LandVest ensures CAL FIRE has up-to-date GIS spatial data of the SCT.
- LandVest personnel consult with USFS meteorologists, who provide a seasonal fire forecast.
- LandVest personnel consult with CAL FIRE and USFS officials regarding fire-suppression staffing and fire-asset allocation. That allocation includes bulldozers, helicopters, hand crews, fixed-wing tankers, fire engines, water tenders and other resource allocation.

## IMPROVEMENTS TO ASSET PROTECTION

Since SCT purchased the property in 2018, several undertakings have been implemented to improve fire protection. SCT has invested in projects and analysis that will be invaluable in fire suppression efforts.

- Enhanced support for aerial fire suppression through installation of eight 10,000-gallon helicopter dip tanks, with plans for additional tanks.
- Ongoing work with state and federal governmental agencies and adjacent timberland owners to collaborate on fire suppression.
- Development of a computerized fire risk-assessment model for the SCT to determine long-term fire mitigation strategy.
- Installation and maintenance of approximately 20 miles of fuel breaks on critical ridges of the SCT estate.
- Installation and maintenance of 4 green fire breaks
- Increase thinning program to reduce fuel loads and to enable improved fire suppression.

*Highlights of some of these projects are summarized in the following sections.*

### **Enhanced aerial suppression support - Helicopter Dip Tanks**

SCT has recently enhanced aerial fire suppression capabilities by installing eight 10,000-gallon helicopter dip tanks on critical ridges of the timberlands. The dip tanks are strategically located where helicopters can quickly access the water and reduce cycle times to the fire. During a fire, this would be backed up with water trucks ready to re-fill the tanks.

### **Collaboration with partners on fire protection**

SCT has entered a formal memorandum of understanding among state and federal agencies and adjacent industrial timberland owners to work together on fire suppression. Groups that are part of the agreement include the United States Forest Service (USFS), the U.S. Bureau of Land Management, the California Department of Forestry and Fire (CAL FIRE) and adjacent industrial timberland owners.

The agreement includes details on how the groups will collaborate on overall fire protection, on establishing fuel breaks and on how they will share information to minimize catastrophic fire losses. The agreement encourages information sharing among landowners and agencies regarding fuels reduction, fuel break locations, and coordination on wildland fire. With the help of CAL FIRE and volunteers, a geospatial database is being established to archive information from timberland owners that will assist in fight wildland fire.

### **Fire Risk Modeling**

SCT commissioned a fire risk analysis in 2019 to better understand and evaluate the potential for fire growth, spread, and burn probabilities across the estate. The analysis used a program called FlamMap<sup>1</sup> that simulates potential fires and incorporates environmental characteristics and forest-specific characteristics to compute wildfire growth and behavior. The analysis included a “suppression difficulty index” that considers both aviation and ground firefighting resources.<sup>2</sup> This resulted in a spatially explicit fire risk analysis that informed and supported prioritization of fire risk mitigation efforts and improved forward-looking natural disturbance impacts in long-term forest resource models. This supports spatial optimization that can aid decision-making regarding where to reduce forest inventory – to lower inherent fire risk and also risk of losses – as well as where to focus mitigation efforts and suppression resource.

### ***Examples of fire risk mitigations undertaken in 2019 and planned improvements include:***

- Installation of dip tanks, which provide water supply for fire suppression – siting of the dip tanks took into account the suppression difficulty index.
- Mapping of areas prioritized for “green thinning” where forest volume is reduced in high-risk boundaries where fire may cross from a neighboring property or identified high ignition risk areas - thinning activities have now been undertaken.
- Installing new permanent bare earth fire breaks in areas where elevated risk has been identified.

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**1** See <https://www.firelab.org/project/flammap>.

**2** Rodriguez et al (2014).