

Greater Ross Valley Shaded Fuel Break

Risk Reduction Profile

The Marin Wildfire Prevention Authority (MWPA) worked with wildfire experts to calculate the benefits to residents from the Greater Ross Valley Shaded Fuel Break (GRVSFB).

WHAT IS THE GREATER ROSS VALLEY FUEL BREAK?

The Greater Ross Valley Shaded Fuel Break is a 38-mile-long fuel reduction project that will reduce the wildfire threat to communities in Central Marin by creating a reduced-fuel zone extending from Fairfax to Corte Madera. The 200-foot-wide project footprint will promote forest health while reducing ground and canopy fuels that cause fast-moving and intense wildfire behavior.

In forested areas, surface and canopy vegetation will be thinned, and dead and dying shrubs, ladder fuels, and other vegetation trimmed and removed. Maintaining the forest canopy sustains forest health and reduces the growth of weedy understory species.

In grasslands, the existing vegetation will generally remain, but encroaching shrubs and trees may be limbed, thinned, and removed.

PROJECT METRICS

-  38 mile-long shaded fuel break
-  1,847 acre reduced fuel zone
-  ~200' wide fuel reduction zone
-  Targeted removal of invasive species and hazardous ladder fuels.
-  Average of 2.9 tons of dead and down material removed per acre
-  1 ton of live surface fuels removed per acre on average



3.8 FOOT REDUCTION IN FLAME LENGTH

The GRVSFB is projected to reduce the average flame length of wildfires occurring within the project footprint by 75%, with some densely vegetated areas projected to experience flame length reductions of 26 feet or more.

Flame length is a key measure of fire intensity. Lower flame lengths make it easier and safer for firefighters to effectively engage the fire and lower the likelihood of the fire spreading into the canopy. Engaging fires when flame lengths are greater than four feet can compromise firefighter safety and heavy equipment and aircraft may be more effective at controlling fire spread.



613 MORE ACRES DIRECTLY ACCESSIBLE TO FIREFIGHTERS

The GRVSFB will promote more effective firefighting tactics. Modeling indicates that the project will make 613 additional acres available to firefighters to directly engage the fire, a 58.1% increase.



56% REDUCTION IN RATE OF SPREAD

The GRVSFB is projected to slow fire progression within the project footprint by an average of 10 feet per minute, with some portions of the project area slowing by over 115 feet per minute.

Slower fire spread improves community safety by allowing emergency first responders more time to arrive on scene and giving residents more time to evacuate safely. The GRVSFB is projected to give structures adjacent to the project an average of 4 additional minutes of evacuation time, with some parcels projected to gain up to 140 additional minutes.



82% DECREASE IN CANOPY FIRE ACTIVITY

The GRVSFB is projected to reduce the likelihood of fire spreading from the ground to the canopy from 55% to 10% within the project footprint.

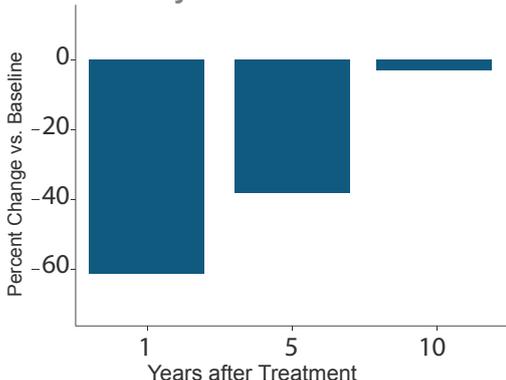
Fire in the canopy poses tactical and safety challenges to firefighters and can launch embers that travel long distances ahead of the fire front into the community.



6.7% ANNUAL DECAY IN TREATMENT BENEFITS

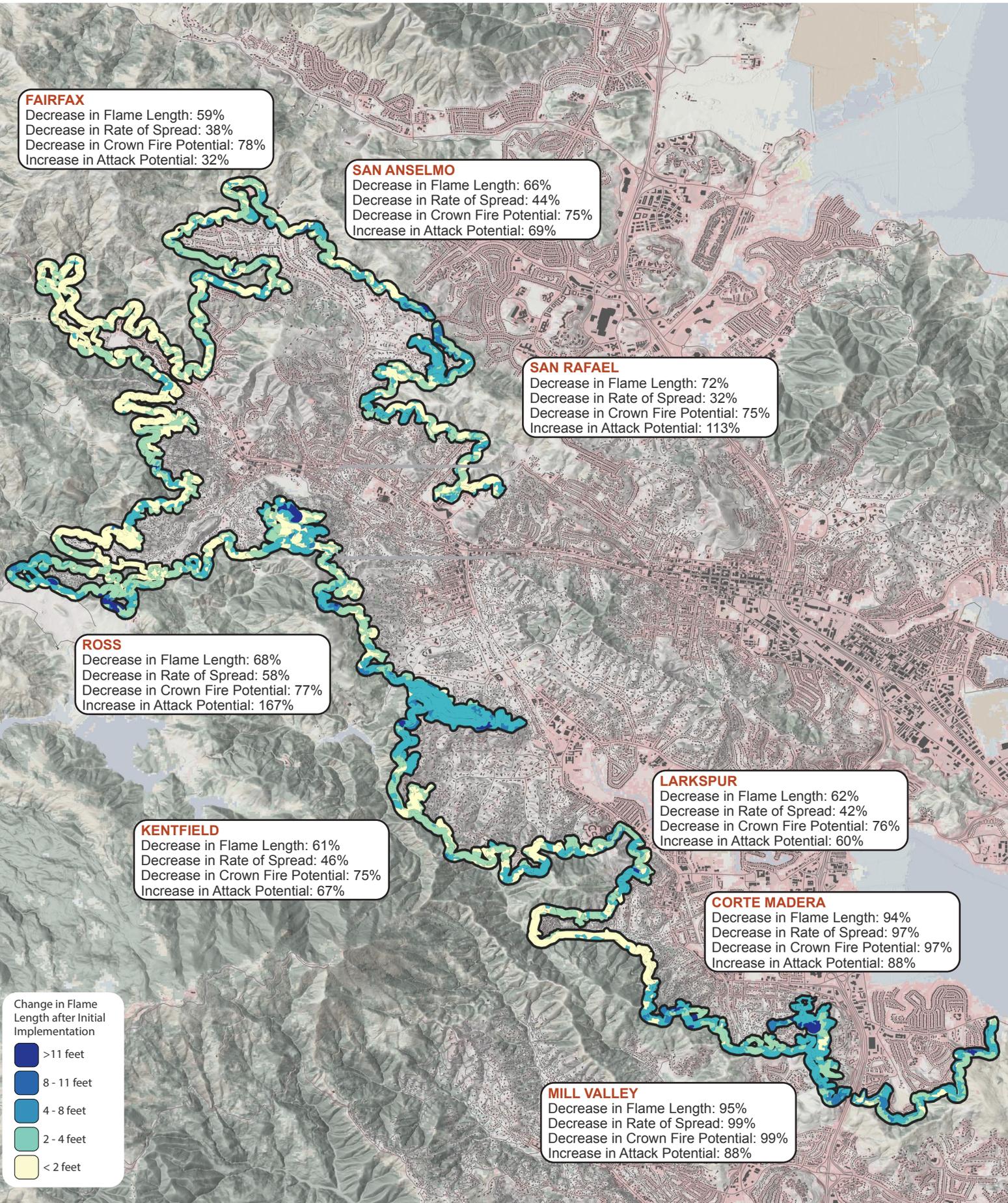
Immediately after completion, the GRVSFB is forecast to reduce fire behavior by over 66% compared to current conditions. However, without regular maintenance, benefits are reduced to 39% below the current baseline after five years and approximately 4% below current conditions after 10 years. Maintenance of the project's benefits is substantially more cost-effective than initial implementation.

Annual Decay in Fire Behavior Benefits



Fire Behavior Changes within the Greater Ross Valley Shaded Fuel Break Reduced-Fuel Zone

Changes Projected after Treatment



Change in Flame Length after Initial Implementation

- >11 feet
- 8 - 11 feet
- 4 - 8 feet
- 2 - 4 feet
- < 2 feet