

ANCHORAGE WILDFIRE

Introduction

The potential for wildfire to spread in the Municipality of Anchorage is real. Many residential neighborhoods are located within forested tracts. Human-caused fires have the potential to spread out of control and expose our community to a catastrophic wildfire event. Through preparedness and mitigation strategies, we can have a wildfire without having an associated residential disaster: if homes don't ignite, they won't burn.

The wildland urban interface fire problem is associated with building homes near vegetation that can carry fire. This problem can be solved by homeowners assuming the responsibility of living with fire. Through human-caused ignitions, brush fires can occur in almost all of our neighborhoods. Whether a fire travels through the dry grasses in spring, through the black spruce bogs in mid summer, or through spruce bark beetle affected stands of white spruce, fire may ignite homes if the conditions for combustion are met. Heat, fuel, and oxygen are required for fire to occur; the materials surrounding a home (building materials, stored equipment under decking, accumulations of organic debris adjacent to exterior walls) have a significant impact on whether homes ignite during a wildfire.

In addition to the fundamental issue of living in forested areas, the spread of the spruce bark beetle (*Dendroctonus rufipennis*) has infested over 3.2 million acres in Alaska. This includes 85,000 acres within the Municipality of Anchorage where 260,000 residents live in the wake of this epidemic. Although the beetle population is waning, the dead and dying spruce trees combined with the natural stand structure of boreal forests increase the potential for wildfire to spread through this community. As documented by the Alaska Region of the USDA Forest Service's State & Private Forestry, Alaska's spruce bark beetle epidemic has been on-going for over a decade, but reached unprecedented levels in the 1990's. State and federal agencies have partnered to study the beetle outbreak and document its progress. During its peak in 1996, researchers estimated that 30,000,000 spruce trees in Southcentral Alaska died from the infestation in that year alone. Through a series of annual aerial mapping surveys, researchers have determined that the acres affected per year are decreasing. Continued monitoring suggests that over 3 million acres have been heavily impacted in the last 15 years by the bark beetle. Long term ecological effects vary by region. In the Anchorage area, the forested acres affected by the bark beetle are experiencing a considerable influx of regenerating spruce along with birch and patches of blue joint grass. As the mature, dead trees fall to the ground, the resulting fuel loading leads to increased fire hazard.

The combination of fuels, topography, and weather places the community in a high risk category for experiencing a wildfire event. Fuels in the MOA refer to both vegetation and structures. The boreal forest cover type consists of white spruce, black spruce, paper birch, and a variety of understory plants. Stand structure in these forests varies considerably between the dominant overstory tree species and density of tree growth. Some forests will support surface fires while others will also support crown fires.

The risk of wildfire characterizes the potential to ignite: human-caused fires are the most likely source of a fire that escapes control. Hazard is the potential to burn: forests, other vegetation, and the construction materials of structures in the interface contribute to fire fuels. Environmental conditions such as temperature, relative humidity, moisture content and wind contribute to the intensity and spread of fire. Potential for loss is characterized by the economic and aesthetic value of structures, public infrastructure, and natural resources.

Since the early 1990s, staff members from the USDA Forest Service State & Private Forestry, UAF Cooperative Extension Service, Alaska DNR Division of Forestry, and the Anchorage Fire Department have been teaching homeowners and local leaders about the risk of wildfire to the Municipality of Anchorage.

The Municipality of Anchorage has partnered with local, state, and federal agencies to implement strategies to address the threat of wildfire. Through education and preparedness, citizens and emergency responders can act effectively to save life, property, and natural resources during a wildfire event. With funding assistance appropriated through Congress, the Municipality has received the resources to confront this challenge directly. Since 1999, the MOA has received \$400,000 from FEMA, been a partner to \$710,000 from a State Fire Assistance Grant to the Anchorage Soil & Water Conservation District, and received \$1.75 million from Congress. In June 2002, Congress appropriated \$5 million to the Municipality for wildfire mitigation through the United States Department of Interior Appropriations bill. Subsequently, an additional \$4.1 million in 2003 and a scheduled \$2 million for 2004 have been appropriated to continue mitigation work.

In 1999, FEMA designated \$400,000 of Project Impact funds to help Anchorage initiate a wildfire mitigation program through hazard fuel reduction and education. The Anchorage Fire Department contracted the Tazlina Hotshots, a Type I wildland firefighting crew, to remove dead trees from area parks and subdivisions. This crew cut dead trees and began building a shaded fuel break on the north side of Prospect Heights. Their work continued along several miles of park trails in Anchorage and Eagle River including Forsythe Park, Ruth Arcand Park & Equestrian Center, Hilltop Ski Area, Huffman Park, and Spirit Park. A residential chipping

program provided roadside brush removal for homeowners and Firewise packets were distributed throughout the community.

In September 2000, the Anchorage Soil & Water Conservation District (ASWCD) began development of a mitigation effort. Through partnership with the Municipality of Anchorage and several other agencies, organizations, and businesses, the ASWCD initiated the Anchorage Wildfire mitigation program. The Municipality of Anchorage sought cooperation in this effort and program administration was adopted by the Anchorage Fire Department. Support from many Municipal departments, as well as state and federal agencies continues today as the Anchorage Wildfire program expands to all communities within the Municipality of Anchorage.

Funding for the Anchorage Wildfire program has been directed toward many mitigation projects encompassing education, planning, fuel reduction, and emergency preparedness:

- *Public education through television, radio, public displays, brochures*
- *Direct homeowner education with SCA Fire Education Corps*
- *Remove hazardous fuels on public and private lands*
- *Brush disposal at public wood lots and limited pick up service*
- *Train fire fighters at the Anchorage Fire Department and police officers at the Anchorage Police Department with wildfire suppression and response tactics*
- *Improve AFD suppression capabilities with brush trucks, portable pumps to draft water from streams, contract helicopter with State Forestry, and maintain mutual aid agreements with state and federal agencies*
- *Assess wildfire threat through risk mapping and fuel type modeling*
- *Draft community-based wildfire mitigation plans*
- *Support forest health through management and reforestation*