



Anchorage Wildfire 2005 Program Report

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Anchorage Wildfire Program • Executive Summary

In its sixth year of wildfire mitigation, the Anchorage Fire Department (AFD) has taken definitive steps to prepare for a wildfire event. Many partnering agencies along with several Municipal departments have contributed to specific projects that reduce the risks and hazards exposing local residents to wildfires. These same efforts also improve the response capability of all emergency responders. Since 2001...

- Firewise education delivered directly to 6,690 residents throughout the MOA *and* televised to over 100,000 households every day during wildfire season.
- Treatment of 1,800 acres of forested land within both public and private ownerships to slow the spread and reduce the intensity of fire.
- Increased AFD response capability to brush fires with a tender, brush trucks, and a pre-positioned contract helicopter all staffed by firefighters who have received extensive wildfire training.
- Wildfire Mitigation Office staffed by three full-time employees with administrative support and special projects facilitated by other AFD personnel.

The local boreal forest type with its black and white spruce trees amid grassy openings would sustain fire in the Municipality just as it does across the rest of the State. A primary strategy in reducing the incidence of fire is to **educate residents** about fire awareness, structural protection methods and safe fire use. The key to preventing home ignitions is to create and maintain a Firewise landscape that includes the structure itself. In providing Firewise home assessments, AFD can communicate directly and effectively with home owners. Residents are responsible for maintaining their homes and vegetation; AFD empower residents with technical and financial assistance.

Treating forested lands within and around neighborhoods reduces an area's exposure to wildfire. AFD partners with public land managers throughout the Municipality to treat large tracts of forests. By thinning dense trees and removing the dead trees, the spread of fire is greatly reduced.

AFDs tactical response training within the department has provided our firefighters with the necessary skills to protect structures from fires in the forest. New equipment and apparatus along with the pre-positioned helicopter gives firefighters the tools they need for **effective fire suppression**. AFD is the first responder for such an incident; residents are dependent upon AFD to suppress wildfires before homes ignite and people are trapped.

The Anchorage Fire Department's **Wildfire Mitigation Office** is housed within the Public Affairs Division supervised by Deputy Chief Tom Kempton. Program delivery is extended through all divisions of the Department. The following report describes specific projects and actions that were completed in 2005. Congressional funding has supported the Anchorage Wildfire Program with over \$13 Million since 2001. Program activities continue to focus on "mitigation" of wildfire. During the next two years, the program will transition into the "maintenance" phase as the Municipality works to make critical program components sustainable.

*Anchorage Wildfire Program • Funding & Expense Summary
2001 - 2005*

Wildfire funding received through Federal appropriations

2001	\$1,750,000	fire fighting equipment and response to wildfires
2002	\$5,000,000	reduce fire danger: fire mitigation & hazardous tree removal
2003	\$4,173,000	hazardous fuel reduction
2004	\$1,975,000	remove dead and dying trees
2005	\$493,000	remove dead and dying trees
and	\$1,000,000	to Anchorage Soil & Water Conservation District

In Fall 2005, House Bill 2361 passed which allocated \$1,182,060 to the MOA to “reduce the danger of catastrophic wildfires” per guidelines in the National Fire Plan. AFD is working with the US Forest Service State & Private Forestry staff to follow these instructions.

Of the \$13.3 Million received, \$4.2 Million remains. Those funds and future funds will be directed toward 1) forest treatment of private residential and Municipal lands; 2) Firewise education to empower local residents; 3) continued helicopter support in summer and wildfire training for AFD firefighters; and 4) program administration.

Expense summary per wildfire program category, to date since 2001

Firewise Education	10%	903,512
Forest Treatment	43%	4,001,089
Fire Science		262,550
Homeowner Assistance Programs		1,460,943
Neighborhood Forest Treatment		1,977,596
Danger Tree Removal		300,000
Wildfire Suppression	40%	3,629,116
Apparatus & Equipment		1,158,654
Infrastructure Improvements		141,994
Wildfire Training & Response		1,563,694
Pre-positioned Helicopter		764,774
Administration	7%	650,464
Total funding spent		\$9,184,181

Anchorage Wildfire Program • 2005 Accomplishments

FIREWISE EDUCATION

- Anchorage Wildfire website at www.muni.org/fire
- Firewise program delivered to over 100,000 households every day through MOA Cable Channel 10. During the wildfire season, 6 hours per day is dedicated to wildfire prevention and information. Special alerts keep residents informed on red flag warnings and dangerous wildfire weather events.
- Advertisements in local news papers: Anchorage Daily News, Alaska Star, Anchorage Press, Coast Magazine including the April 2005 Anchorage Wildfire insert distributed to 70,000 residents
- Feature article in Alaska Magazine, May 2005: "Will Anchorage Burn?"
- Presentations to homeowner associations, community councils and corporate safety meetings
- Firewise vegetation stickers and posters displayed at area greenhouses
- Anchorage Wildfire displays at public events and conferences
- Invasive plant management information through US Forest Service
- Firewise public service announcements produced by the AFD Video Center staff and aired on local radio and television stations. The air time was jointly funded by AFD and the Anchorage Soil & Water Conservation District.
- Dedicated news stories on local television channels to emphasize high fire danger and fire safety

FOREST TREATMENT

- In 2005, \$1,398,138 was spent on tree removal through three fuel reduction programs over 594 acres and 79 miles of overhead power lines. The three programs are 1) cost sharing at 70% on private land, 2) large tracts for neighborhood area protection, and 3) tree removal adjacent to overhead power lines.

Fire Science

- AFD contracted for mapping of vegetation throughout areas exposed to wildfire. Satellite imagery and aerial photography was used to delineate vegetation types within a "mapping layer" on a Geographic Information System (GIS). Each type was then checked on the ground to increase the accuracy of the mapping effort.
- "Forest Fuels" were also mapped on a GIS layer. This field work assessed how much of the forest vegetation was available for combustion. The result provided a database for modeling potential fire behavior.
- Fire behavior models help firefighters plan suppression strategies for various parts of the Municipality. Tactical responses are practiced during annual wildfire simulation

exercises. Both AFD and State firefighters review operational procedures during these planned incidents.

- A map of wildfire exposure shows the level of fire risk and hazard for most of the MOA. AFD uses this map along with field review to prioritize fire mitigation project work. This model can be adapted to reflect the potential value loss through an addition of the structures and homes to the database.

Homeowner Assistance Programs

- 2001 – 2005 Area wood lots have provided free brush disposal for residential clearing of defensible space. Lots were set up in South Anchorage and Eagle River. Curbside brush pick up service was provided to Turnagain Arm residents in lieu of a wood lot.
- Firewise home assessments have been conducted on 668 local homes since 2003. In 2005, 343 assessments were completed by AFD Wildfire staff.
- Cost sharing for tree removal of dead and densely growing spruce trees at a rate of 70% on private residential property.
 - Since 2003, \$508,138 has been reimbursed to 290 homeowners treating 318 acres. Average cost per acre since 2003 was \$1,597.
 - Just in 2005, 194 acres were completed with reimbursements totaling \$217,709 to 178 home owners. Average cost per acre in 2005 was \$1,122.

Neighborhood Forest Treatment

- Since 2001, AFD has completed forest fuel reduction projects on over 1,500 acres in neighborhoods throughout the MOA. This land base is mixed between private parcels, Municipal lands and Chugach State Park. Associated project work has been completed through other funding sources by partnering agencies: Bureau of Land Management, Anchorage Soil & Water Conservation District, additional Chugach State Park projects, and with authorities for military land adjacent to developments.
- In 2005, large tract projects were completed on private property, MOA Park land and Chugach State Park land.
 - The work was delegated to five crews, four of which were private: State of Alaska Pioneer Peak Crew and Fire Technicians; Tazlina Interagency Hotshot Crew; Fuels Reduction of Alaska; Skookum Construction & Tree Service; and Beaver Wood Chipping.
 - 400 acres treated in 2005
 - Total cost of \$590,000
 - Average per acre cost of \$1,475
- Positive working relationships with local tree service companies to promote Firewise principles.
- Comparative rates for forest treatment per acre with other similar wildfire programs:
 - Kenai Peninsula Borough \$1,200 (no timber market)
 - Chugach National Forest \$1,000 to \$1,100 (no timber market)
 - Bend, Oregon \$1,000 (limited timber market)
 - Helena, Montana \$1,000 (limited timber market)

Danger Tree Removal

- Danger tree removal operation conducted on 79 miles of overhead power lines across 49 grids throughout the South Anchorage Hillside.
- Objectives: 1) to remove the fire ignition source of trees falling on the power lines, and 2) maintain power supply to private well systems, especially during emergencies.
- Federal law requires the power utility to only remove vegetation within 10 feet of both sides of the line; this does not account for the volume of spruce trees that can grow upwards of 80 to 100 feet tall and are within falling distance of the lines.
- Removed dead and densely growing spruce trees within falling distance of overhead power lines on private land. This work requires journeymen line clearance tree trimmers to work near power lines.
 - Partner project with Chugach Electric Association & Carlos Tree Service
 - Total cost of \$300,000
 - Total number of spruce trees removed was 2,822
 - Cost per tree of \$108, including slash removal
- Most of the Hillside was completed as of December 2005, plan to finish remaining areas in 2006

WILDFIRE SUPPRESSION

Apparatus & Equipment

- Since 2001, AFD has used a portion of wildfire funds to augment the suppression fleet. These additional apparatus support the primary role of AFDs structural suppression force by adding smaller vehicles to accommodate those neighborhoods with limited road widths and small-radius turn around areas. Two critical items were added since 2004.
- KME Mini Pumper (Brush 10) is a Type III wildland engine that is more maneuverable than AFDs structural engines and includes a foam system that can help protect structures from an approaching wildfire.
- Tender 14 carries 2,500 gallons on board to supply water for suppression. It is housed at the base of the Campbell Airstrip Road that accesses Stuckagain Heights. Many similar residential neighborhoods in high fire hazard areas do not have a Municipal water supply (South Anchorage Hillside, Eagle River Road, Hiland Road).

Infrastructure Improvements

- Continued maintenance of natural water supply sites throughout the MOA. Each year, the sites are inspected and improvements are made to ensure these sites are available for refilling fire trucks during an incident. Guide books are distributed to all AFD and State Forestry engines. This resource list is critical for areas without hydrant coverage.

Wildfire Training & Response

- Staffing for AFD Brush Rigs during high fire danger days for increased staffing response to brush fires
- Training for Helitack crew and Brush Rig staff
- Training for all AFD Firefighters in basic wildland fire fighting tactics and fire behavior
- Training AFD command staff for advanced wildland fire operations, incident management and policy guidelines for Municipal response to wildland urban interface fire issues
- Improving road maps with aerial imagery supplied to all AFD apparatus and mutual aid responders
- Wildfire simulation drill in Bear Valley on June 3rd, 2005
 - Practiced incident response for AFD Firefighters and Command Staff
 - Involved State of Alaska Division of Forestry
 - Practiced bucket drops with AFD contract helicopter
 - Practiced retardant drop (with water only) with Division of Forestry Air Tanker
 - Conducted “mock” homeowner evacuations with Anchorage Police Department
- Coordinated with the Emergency Operations Center to hold a “table top” wildfire simulation to test administrative response capability, to practice fire behavior predictions for ordering supplemental suppression resources, care for evacuated residents and aid in the recovery of the incident
- WebEOC Software installation at the Emergency Operations Center to allow faster response to emergencies through an internet based communication system for all EOC staff, resource ordering, tracking of operational activities, improving patient care, and expediting recovery after the incident

Pre-positioned Helicopter

- A contract helicopter was pre-positioned at Merrill Field again in 2005. It was available for immediate fire response and outfitted with a 324-gallon bucket for water drops
- This proven, effective method is needed to contain brush fires within minutes of being reported
- The US Forest Service requested AFD bucket assistance on the Hope Fire in July. This response opportunity provided much needed training to AFD helicopter crew members.
- Flights also used for aerial reconnaissance to view fuel types, changes in forest stand structure, planning for evacuation & mitigation projects, and assessing fire response strategies

ADMINISTRATION

- The Wildfire Mitigation Office added one full-time employee in 2005 for a total of three. Additionally, a summer technician assisted with Firewise home assessments for a six-month term.

- Staff members attend training throughout the year for AFD operations, wildfire management and professional development to promote excellence in program delivery and application of the latest scientific research.
- Direct program support by numerous AFD Operations and Administrative personnel
- Interagency coordination for project planning and implementation
- Operational expenses for the program include Information Technology support; office supplies and equipment; Municipal indirect charges for departments that support employees, management & budget, finance and related operational costs

OUTLOOK

- Residential burn permit program to be expanded within the existing parameters of the open burn code. Improved support of the AFD Burn Hotline. Greater distribution of safe burning practices.
- Area wood lots and brush collection services to be developed into sustainable operations for three primary areas of the MOA: Girdwood & Turnagain Arm communities, Eagle River / Chugiak & neighboring communities, and the Anchorage Bowl.
- 2006 operations include continuation of the Firewise home assessment program with associated cost share tree removal; partnerships with Chugach State Park, Anchorage School District, MOA Parks, and Heritage Land Bank to fulfill the MOAs responsibility to limit fire spread and intensity on public property; and to focus program efforts on neighborhoods with high and extreme exposure to wildfire according to the Anchorage Fire Exposure Model.
- Sustainability and maintenance will be the focus of program planning for the 2006-2008 period.