Hazard Fuel Reduction and Bio-energy Projects
Coexist in the Community of Tok

Division of Forestry
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The Alaska Division of Forestry (DOF) is working to address two concerns simultaneously in the community of Tok:
1) Increasing the safety of the community from the threat of wildland fire and
2) Addressing the unsustainable energy costs of the region through utilization of a renewable energy source (forest biomass) to heat the school.

In the last 10 years, multiple wildland fires have threatened the community of Tok. The vegetation in the area is highly flammable with a mixture of closely spaced white and black spruce. The DOF Tok Area staff, US Fish and Wildlife Service (FWS) Tetlin
National Wildlife Refuge staff, and a local contractor are working to thin dense stands of trees that are not commercially suitable (by conventional merchantability standards) in locations identified in the Community Wildfire Protection Plan. The reduction in spruce tree density will encourage the growth of hardwoods and other vegetation that is less fire-prone. The fuel breaks are strategically placed to provide a point from which firefighting efforts may occur. The defensible zone around the school is a priority because it is used as an Incident Command Post during wildland fires. Most recently, it served as a Command Post during the 2003 Tok River Fire and the 2004 Taylor Complex; it is also a designated evacuation center for the community.

Another project identified in the Community Wildfire Protection Plan is the creation of a fuel break along the northern edge of Tok. The work that began in 2004 along Red Fox Road on the north side of town is being extended westward.

Finally, vegetation around individual homes within the community is being thinned to create defensible space. Thirty homes have been selected by community members for removal of flammable fuels. The homes belong to the elderly and others in the community who are unable to complete the work themselves.

Through an agreement, the Tetlin National Wildlife Refuge is funding the work and DOF is managing/overseeing these projects. In cooperation with the Gateway School District, these projects are being used as an educational opportunity to teach the children about the value and importance of the forest. Both DOF and FWS personnel have taught classes for fieldtrips and in classrooms on good forest management. Lessons emphasize how the forest grows, that trees are an important energy source for our future, the need for defensible space around homes, and the role of fire in the ecosystem.

From left to right: DOF Tok Area Forester Jeff Hermanns, DOF Tok Forestry Operations Foreman Jim Folan, and FWS Tetlin National Wildlife Refuge Technician John Graft at the Tok school biomass project.

The second component of the fire-prone vegetation removal addresses the rising cost of energy and serves to further benefit the residents of Tok. Trees that were removed at the school have been put into log decks which are slated to be chipped over the winter and
then stored. The wood chips will be used to provide fuel for a high efficiency, wood-fired (biomass) boiler system that is being planned to heat the school building. The advanced technology boiler will replace the current oil-fired boiler and should dramatically reduce heating fuel costs for the building. The current thinning project around the school will generate enough biomass to heat the Tok School for at least 1.5 years.

The cooperators hope that this project will serve as a model for other small communities in Interior Alaska that are similarly threatened by wildfire and share the burden of high fuel costs. By converting forest biomass from wildland fuels reduction projects into a carbon-neutral heating fuel, communities can make themselves less vulnerable to wildfires, realize heating cost savings, reduce their dependence on non-renewable petrochemical products, and help to decrease Alaska’s carbon footprint.