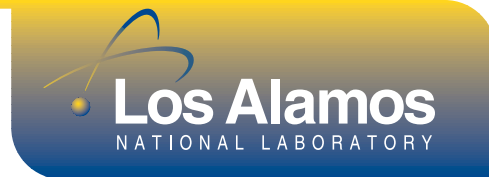


Fuel Reduction Program



Cerro Grande Rehabilitation Project

In the wake of the Cerro Grande Fire, the Laboratory's Facilities and Waste Operations Division began the Cerro Grande Rehabilitation Project to apply a variety of techniques and technologies to the problem of protecting Laboratory facilities and property from the hazards of wildland fire. A cornerstone of the project is the Fuel Reduction Program, designed to clear Laboratory property of excess ground cover and woodland, create a healthier forest and make many of the heavily treed areas less vulnerable to the devastation of forest fire.

The overall budget of the Fuel Reduction Program is \$15 million. There are five contractors currently working in fuel reduction of Laboratory property: Jemez Pueblo and Santa Clara pueblos, and Hurd Brothers, T.C. Company and Allied, all northern New Mexico firms.

While thinning the existing forest on Laboratory property is the focus of the Fuel Reduction Program, it was important to the program's planners that the products of the thinning program not go to waste. The solution for Laboratory management was a program that combines the techniques of forestry and land management and uses discount logging sales, firewood giveaways, mulching and its resultant habitat creation, and — as a last resort — burning excess wood products.

Fuel Reduction

Since November of 2001, more than 2,300 acres have been thinned; the plan is to thin approximately 10,000 acres by September 2003. The program's goal is to do general thinning, create fuel breaks and defensible space around the structures.

The general thinning is based on forestry's best business practices, leaving 50 to 150 trees per acre — a preferred forest density.

Fuel breaks are created by thinning the forest to 200 feet on either side of

roadways and leaving 50 to 75 trees per acre. By thinning trees and brush around structures, leaving a 100- to 500-foot clear space and by clearing all areas around power lines, the program creates defensible space that meets fire mitigation standards.

Many trees are removed with standard logging techniques, and the logs that result are sold to small lumber mills in Northern New Mexico at a greatly reduced rate from typical logging costs.

Wood products that are either too small or otherwise unsuitable for lumber sales are cut, split and stacked for a public firewood giveaway. Other trees are mulched in place to the below-ground root structure, leaving a healthy forest floor and habitat. Stumps, limbs or other products unsuitable for sales, giveaways or mulching are destined for burning in the Lab's Air Curtain Destructor.

Lumber Sales and Firewood Giveaway

To date, nearly 240,000 board-feet of sawmill logs (those greater than 8 inches in diameter) have been sold to area mills. The wood is sold for \$100 per 1,000 board feet, the equivalent of approximately two cords. Smaller sawmill logs are sold for \$100 per load, or about six cords. The mills buying from this program include Jemez Pueblo, W.H. Moore Cash Lumber of Española, Olguin's, Inc. of Taos, and Conley Log Homes of Española.

More than 1,300 cords of split firewood, taken from logs smaller than 8 inches in diameter, have been given away to the public since the project began. The firewood is distributed every Friday, and on average, the program loads about 100 pickup trucks each week. Anyone who wants to sign up for the giveaway can send an E-mail to firewood@lanl.gov to provide his or her name, telephone number and address. The Laboratory will respond with information about when and where to pick up the firewood.

Air Curtain Destructor

The Air Curtain Destructor is a wood-burning system that utilizes a unique ceramic-lined burn box, roughly the size of a tractor-trailer, and a special configuration of blowers to create a 100-mile-per-hour curtain of air that facilitates rapid burning that nearly



A by-product of the fire mitigation project — piles of firewood. The wood is made available to area residents free of charge.

eliminates the release of smoke and other particulates into the atmosphere. The system consumes from 5 to 20 tons per hour and can be operated 24 hours per day. The process reduces the overall volume of wood by 99.4 percent. For example, 1,200-cubic yards of wood is reduced to 7-cubic yards of ash.

Air Curtain Destructor operations resumed the week of July 8, following a period of moderate rainfall in the Los Alamos area. Before July 8 the Air Curtain Destructor was not operational because of the low moisture content of the surrounding forest.

While the risk of fire spreading from operations is extremely low, as a safety measure the Air Curtain Destructor is staffed continually by Laboratory personnel and a Los Alamos Fire Department crew while in operation. As an added precaution, water tankers and a compressed air foam application unit are always present while the device is operating.



Giant tree trunks become pick-up sticks in the jaws of a huge loader.



Some of the wood that is unsuitable for giveaway or mulching in place is burned in the Air Curtain Destructor.