Forest slash burning effects to be studied

A new Oregon State University research project is aimed at developing a system for predicting the effect of residual smoke from forest slash burning on air quality.

The system will provide guidelines for scheduling and regulating prescribed slash burning in mountanious areas of the Northwest.

"It will enable forest slash — residue from logging operations — to be burned in such a manner as to minimize the air pollution impacts on smoke sensitive areas," says M.A. (Mike) Wolf, associate professor in the department of atmospheric sciences and principal investigator for this Air Resources Center research program.

The study is funded by the U.S. Forest Service's Pacific Northwest Forest and Range Experiment Station. This year's grant is for $80,313.

The OSU scientists will look particularly at how smoke from smoldering forest slash fires is transported onto valley floors in the nighttime drainage winds.

"As the mountain slopes cool, following the loss of solar heating, the air in contact with the ground is cooled. It becomes more dense and sinks down the slope to produce a part of the nighttime air circulation. As the cold air drifts into the lower levels, it may carry along the residual smoke from the forest slash burns," Wolf explained.

"Residual smoke is the special problem," Wolf pointed out. "This is the smoke given off during low-intensity burning. Instead of rising well above the forest as in the case of high-intensity burning, the smoke from the smoldering residue stays close to the ground where it often is entrained by the drainage winds," the atmospheric scientist said.

Wolf helped spearhead the studies that OSU conducted from 1978 to 1980 on grass seed field burning and ways to burn maximum acreage while minimizing pollution problems.

That work was done for the Department of Environmental Quality, which regulates field burning.

Regulation of forest slash burning is a responsibility of the Oregon Department of Forestry.

Problems of field burning and slash are dramatically different, Wolf observed. "The burning of forest slash at a selected site takes far longer than burning residue from a grass seed field because the fuel elements are large and more dense.

"A slash burn may continue generating smoke for a day or two," Wolf explained, "virtually assuring the emission of residual smoke during drainage wind conditions."

Residual smoke from field burning in the Willamette Valley also can be a problem during stable nighttime conditions, according to Wolf. However, the problem can be more severe in slash burning when the smoke is unable to disperse horizontally during its transport because of containment by the walls of the narrow valleys typical of mountainous terrain.

The OSU program will be directed toward a mathematical prediction model, but much of the initial effort will emphasize field studies to develop information on the occurrence and behavior of drainage flows and on the entrainment and subsequent transport and dispersion of residual smoke.

Field studies will be conducted in logging areas in the upper McKenzie River region and along the McKenzie River toward Eugene. Most of the work will be done at night.

"While there has been an increasing effort toward understanding mountain meterology, relatively little research has been done on the transport of residual smoke in drainage flow," Wolf noted. "The combined complexities of slash burn operations and mountain meterology provide a substantial research challenge."

Working with Wolf in the program will be Paul C. Katen, research associate in the department of atmospheric sciences, and graduate and undergraduate students at OSU.

Key to producing more '10s' may be with cloning process

Cloning may help the Northwest's $40-million-a-year Christmas tree industry produce more 10s.

Prospects are good for improving and steadying the quality of Douglas Fir Christmas trees by growing them from cuttings taken from high-quality trees instead of from seeds, according to Oregon State University horticulturist Bill Proebsting.

"We're hoping this will substantially raise average tree quality although the odds of every tree becoming a 10 are small," Proebsting said.

The researcher is involved in a seven-year-old cloning study initiated by retired OSU horticulturist Al Roberts and funded by OSU's horticulture department and the Northwest Christmas Tree Association.

Proebsting reported on the project in the November-December issue of Ornamentals Northwest, a publication of the Cooperative Extension Services of OSU, the University of Idaho and Washington State University and British Columbia's Ministry of Agriculture.

All methods of growing plants without using seeds, such as rooting and growing cuttings, buds and tissue cultures, are cloning techniques, the researcher explained.

Cloning Christmas trees produces genetically identical trees and would help growers avoid the variations in quality that appear in stands of Christmas trees grown from seeds, he said.

By cloning superior trees in seedling trials, Christmas tree growers may be able to produce trees that grow faster and look better, Proebsting added, noting that characteristics such as a tree's ability to retain its needles and resist pests are also important.

An evaluation committee participating in the study recently gave eight-year-old Christmas trees cloned from cuttings an overall quality rating of 7 or better on a scale of 1 to 10. With the same rating system, high-quality commercial Christmas trees average about 6, Proebsting said.

There are obstacles, the researcher pointed out. Cloning is more expensive than growing trees from seeds and may narrow the genetic base of Northwest Christmas tree stocks, making them more vulnerable to environmental changes. To avoid that, scientists will encourage growers to clone several trees.

A limited number of cuttings from the project's stocks are being distributed to commercial Christmas tree producers in Oregon and Washington for tests under commercial conditions and OSU researchers will continue studying the best methods of cloning Christmas trees, according to Proebsting.

"OSU is making the material widely available to Christmas tree growers and nurserymen so that the industry can determine the role the trees will play in Northwest Christmas tree production," he said.

Boring Grade School honor roll announced

Officials at Boring Upper Grade School this week announced the honor roll for the second nine weeks of school.

Students must maintain a grade point average of 3.2 or better in order to qualify for the honor roll.

Fifth grade students named to the honor roll were Renae Aschoff, Lori Bennett, Lana Broeren, Kelly Bundy, Travis Cannon, David Copher, Stefanie Danielson, Doug Greene, Derick Hager and Rochelle Hale.

Other fifth-graders on the honor roll included Julie Hensel, Jill Jackson, Stacey Reasor, Moira Richardson, Shannon Stearns, Wesley Stevens, Jenni Stotts, Cheng Tang, Sok Hiang Tang, Denise Toyooka and Laurel Trotter.

Sixth grade students named to the honor roll were Bill Cate, Billy Fisher, Michael Ford, Mary Houston, Colette Linton, Pixie Meier, Trixie Meier, Blair O'Halloran, Barry Back and Roger Robinson.

Other sixth-graders honored were Stephanie Trammell, Lydia Yungeberg, Leslie Barker, Kristy Kruger, Suzanne McKenzie, Chris Moody, Ricky Nakvasil, Craig Reasor, Leng Tang, Nancy Trotter and Billy Waugh.

Seventh grade students named to the honor roll were Hobie Anderson, Lori Aschoff, Tim Bailey, Rod Carroll, Roanne Cate, Kristin Fadness, Corey Fox, Brad Fraser, Jayna Fry, Colleen Greene, Mike Heckard and Robert Kruger.

Other seventh-graders included Bryce Linton, Danielle Phillips, Martha Richardson, Chris Rockwood, Andy Shaw, Scott Shields, John Strickland, Chuang Tang, Cory Taylor, Craig Woodall and Tammy Wright.

Eighth-graders named to the honor roll were Jim Dwyre, Darren Ford, Mike Houston, Coral Howell, Steve Lee, Rusty Moss, Lynn Nakvasil, Kerry Ann O'Halloran, Heidi Perry, Kathy Raymond, Ernest Roberts, Anthony Stewart, Terri Trotter, Jeff Wilson, Monica Wyss and Dan Young.

Citizenship Award winners named by the school were Kelly Bundy, Paul Gunderson, Rochelle Hale, Randy Young, Bill Cate, Beth McIntire,, Pixie Meier, Barry Pack, Teng Leng Tang, Lori Aschoff, Roanne Cate, Corey Fox, Brad Fraser, Colleen Greene, Kim Gustafson, John Strickland, Kristina Whitmore.

Other Citizenship Award winners were Marnia Benfield, Tammey Camp, Alicia Green, Mike Houston, Steve Lee, Brian McGee, Lynn Nakvasil, Jerry New, Joe Smelser, Jeff Wilson and Monica Wyss.

Mobile home appeal set

The group trying to establish a 192-lot mobile home development in the Brightwood area will take their appeal to the Clackamas County Board of Commissioners Feb. 22.

The group, headed by Paul Rice and Lowell Njust, want to develop a 192-lot mobile home planned unit development subdivision on the south side of Mt. Hood Loop Highway approximately 2,000 feet east of its intersection with Truman Road.

They have requested a waiver of the County ordinance requiring roads within the subdivision which connect to the adjacent County road to be County roads.

The Clackamas County hearings officer has already recommended denial of the subdivision.

The hearing before the commissioners will be at 9 a.m. at the County Courthouse, 906 Main St., Oregon City.

Also on Feb. 22, Duwaine Harmel, Boring, will seek a temporary permit from the County to use a trailer house as a temporary residence and office until such time as a permanent facility can be established.

That project would be on the south side of SE Wally Road, approximately 75 feet east of its intersection with SE 278th Avenue in the Boring area.

The hearing, before the Clackamas County hearings officer, is scheduled for 10:30 a.m. at the Department of Environmental Services, 902 Abernethy Road, Oregon City.