

Living Snow Fences Are Life Savers

By Jim Schroeder

The past couple of winters have represented a return to the colder and snowier conditions of years past. With record breaking snow fall throughout the northwest highway crews and ranchers have been struggling to keep up. Of particular concern are drifting highways, county roads, farmsteads, and wintering areas for livestock. Providing protection for these areas of travel and inhabitation can make a big difference during one of winters' big blows. Planning ahead by planting and nurturing densely growing trees around farmsteads, feedlots, and roads can provide big benefits for the future. Living Snow Fences have been used by state and local road departments throughout the Plains and Midwestern states for many years. Road departments have partnered with State wildlife agencies, Conservation Districts, and private landowners to plant miles of trees where snow drifting has been a winter time nuisance. Back in 2005 such an effort was made above Anatone on a section of WA Highway 129. Four rows of trees and shrubs approximately 1400 feet in length were planted there to reduce drifting on that piece of highway just north of the intersection with Montgomery Ridge Road. Dense growing Rocky Mountain Junipers comprise the majority of the planting. These trees planted at 6' and 8' spacing will soon grow together forming a barrier to the prevailing westerly winds dropping snow between the windbreak and the highway. As the trees grow larger so will the drifts between the tree rows and lee side. The trees will provide protection out to 10-15 times their mature height. In 2008 the majority of planted Juniper and Ponderosa Pine were between 3' and 4' in height. The soils above Anatone are heavy in clay and present some challenges for tree/shrub establishment. Proper species selection is important. Rocky Mountain Juniper is extremely hardy, adapting to a wide variety of soil types and being one of the more drought tolerant species available. Junipers also provide great cover and a source of food for upland game birds like Pheasant and Partridge. Once the trees provide a little more cover they will be choice locations for spring time nesting for all species of birds.



5 year old Juniper Living Snow Fence near Davenport WA on HWY 25 winter 2008. Depending on soil and climate, the objective in Living Snow Fence design is to have an effective snow break in 5-7 years of growth.

Snow control and removal from highways can be costly. Ken Thornton of Washington DOT estimated that snow removal on HWY 129 above Anatone costs the state approximately \$40,000 during a good winter. “On really bad winters we will bring in the big snow blower from Spokane. We haven’t had to do that the past couple winters” said Thornton. Ken estimated they had 250 hours of time invested in snow removal on that section of highway during the winter of 07-08. That is only one stretch of bad road. Eastern Washington has several areas where snow control could be better managed. In Wyoming where trees are difficult to establish and very slow growing, wooden snow fences are constructed to minimize snow drifting hazards on highways. These fences are constructed out of 2” X 8” or larger lumber and are extremely expensive. A 40 mile stretch of Interstate 80 snow fence cost \$2.3 million back in 2001. That same section of snow fence now costs over \$200,000 annually to maintain. Once Living Snow Fences are established there is little maintenance involved. A little weed control and replanting during the first few years, then mother nature assumes the maintenance role. Wildlife prefer it that way. All types of wildlife will utilize the Living Snow Fence all winter long, searching out the protection of its dense cover during winter storms.



Snow removed from WA HWY 129 January 25, 2008. Snow bank > 10’ height. Tops of planted trees on right side of picture buried by drifting snow. Soon they will capture more snow and decrease drifting onto the highway.

Cattlemen are very aware of the effects of winter time on livestock. The colder and windier the winter the more feed it takes to keep animals healthy. Winter winds accelerate heat loss in livestock by parting hair and reducing the insulation properties of their hide. The University of Wyoming studied the effect of wind protection on fed livestock through the winter of 90-91. Cattle fed behind a protection area that reduced wind velocities by 70% required less feed and maintenance than those that weren’t. Cattle left in the open required additional rations on 37 days to maintain weight while those behind the shelter only 6 days. This resulted in additional feed costs of \$3.49/head back in 1990. If you have ever worked in a 30-40 mph winter wind you understand why livestock need protection. When the temperatures get cold, down to zero or below, even lighter breezes can be a problem for livestock especially young calves.

Living Snow Fences and Windbreaks easily meet the definition of today's "Green Project" focus. Planting trees for highway and road protection will reduce the amount of heavy equipment time required in the future for snow removal. That will help conserve fuel and road chemical usage throughout the winter. With propane, electricity, and fuel oil on the rise trees will also help conserve domestic energy usage while acting as a carbon sink in the soil. NRCS and the Conservation Districts can assist you with Snow Fence and Windbreaks Plans for your property. Plant trees and stimulate the environment this spring.