Living Snow Fence Training in Buffalo, NY (May 13, 2010)

On May 13, 2010, Tim Volk, a researcher from the State University of New York’s College of Environmental Science and Forestry (ESF) presented the second of two sessions for NYSDOT staff in western New York on how to install living snow fence. The class was a “train the trainer” session; one objective was to provide attendees with enough information so they could provide living snow fence training when they returned to their Region.

This session started in the classroom at NYSDOT’s Buffalo Regional Office with an overview of information on successfully installing a living snow fence. After the overview, the class went to two locations on Route 219 and installed much of the living snow fence to that is planned to replace an engineered snow fence.

The left picture shows a location on Route 219, in the Town of Boston, about a mile south of Rice Hill Road interchange, where a snow fence will be replaced by a living snow fence using willows.

The right picture shows a location on Route 219, south of Brown Hill Road in the Town of Concord, where snow blows across the highway and causes significant road icing and crashes. At this location, willows will augment an existing snow fence which is 10 feet tall.

Living snow fence with willows is typically planted in two parallel rows, with the plants in each row slightly offset. The offset allows grown plants to overlap, so the snow has no openings to blow through and reach the highway.

Installation begins with site preparation. A planting area is created by removing weeds, and then by tilling the soil. Weeds can be removed with herbicides or mechanical means. The typical herbicide in this situation has glyphosate for an active ingredient and it will take seven to 14 days for the glyphosate to kill the vegetation.

Next, landscape cloth is set down over the tilled area and secured on the edge with dirt. Tractor attachments are available to roll out the landscape cloth and plow a line of earth along each edge to hold down the cloth, but the securing process can also be done manually if equipment is not available.
After landscape cloth is placed, installation proceeds in an assembly-line manner. Two people set the lines for each row of plants. Then, usually in a procession, one or two people use a paint stick to mark the planting spots, people following behind cut an “x” in the fabric for the willow shoots and then people behind them place the willow shoots in the ground.

Cutting an “x” in the landscape cloth is required. A cut in any other shape will result in the cloth constricting the willow trunk and girdling the plant.

After the site is prepared and the willows are planted, workers come along behind and place wood chips. The wood chips are essential to suppress weeds and to provide moisture if the summer is hot and dry.

Tim Volk presents information on living snow fence installation at a pre-job meeting.
The left picture shows the willow shoots, which are about 24 inches in length. They are kept in cold storage until ready to be used, to prevent sprouting before planting.

The right picture shows researcher Eric Fabio distributing willows along the installation area, in advance, to speed planting.

A large amount of wood chips is needed to mulch the willow planting.
Left picture: Philip Castellano, one of ESF’s researchers, helping set the line for planting.

Right picture: Landscape cloth marked with paint dots for planting. Also, note how tractor attachment has anchored cloth with dirt.

Barb Balcerzak, from Erie South Residency, Jr. is cutting the landscape cloth with an “x” pattern in advance of planting the willows.
Left picture and bottom pictures: depending on the soil, willows may be placed with a mallet or by hand. In the left picture, Tim Volk installs with a mallet; in the right, John Harvey and an unidentified NYSDOT employee install willows by hand. Upper right: Keith Espinosa installs willows by hand.

Left picture: Equipment bringing mulch to snow fence from roadside. Right picture: Erie South Residency staff placing mulch, to suppress weeds and to protect plants during summer.
Note: Thanks also to Erie South Residency staff: Jason Bond, Chris Deci, Ron Donhauser, Dan Perlinger, Frank Pinker, Michael Saldana and Gerry Koch for their assistance with site preparation, planting, work zone traffic control, mulch delivery and operation of equipment.