



# How to plan and plant a LIVING SNOW FENCE

A living snow fence can direct snow away from an area, provide protection from Wyoming winds

by Liz Harvey and Martin Curry

A correctly placed living snow fence (LSF) will direct snow and give your home protection from the wind, improve the aesthetics of your property, and reduce home energy consumption.

An LSF is a band of shrubs and trees perpendicular to the prevailing winds. Remember a few key points when designing an LSF. First, allow room for snowdrifts to accumulate (Figure 1). Plant the first row that will be hit by the wind 150 to 200 feet away from the area to be protected. Placing it closer could cause drifting on the area to be protected. Second, allow space for plants to mature. Generally, small shrubs should be planted 4 to 6 feet apart; medium shrubs and small evergreens 6 to 8 feet apart; and large trees 12 to 15 feet apart.

## Draw a Rough Sketch

The first step is to draw a rough sketch of your property. Indicate the direction of prevailing winds, property lines, irrigation source, and the area to be protected. Next, determine how many rows to plant. The most common arrangement is three rows: one shrub row for the row that will be hit first by the wind, a medium evergreen row in the middle, and then a large evergreen row closest to the area to be protected. Other configurations work as well. See Figure 1 for an example. The more rows that are planted, the denser the snow fence will become, and, ultimately, the more protection provided.

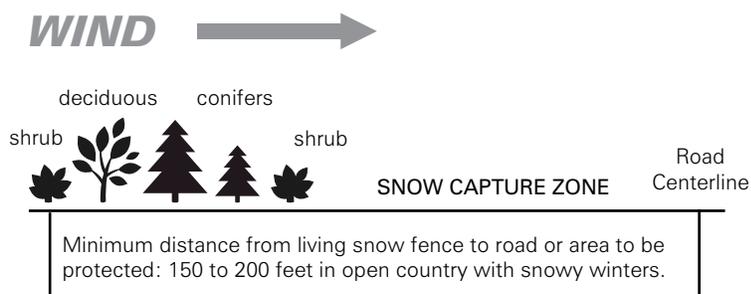


Figure 1

## Select Your Trees

Pick trees that will be the most successful for your region. Several factors should be considered. Soil types (sandy, loamy, and clayey) and soil quality (pH, alkalinity, salinity, and nutrient availability) have a large impact on the success of trees and shrubs. Being aware of your soil characteristics will assist in determining which tree and shrub species is best adapted to the site and will have the best chance for survival. The Natural Resources Conservation Service (NRCS), conservation districts, the University of Wyoming Cooperative Extension Service, and UW Soil Testing Laboratory can assist in determining your soil type. It is also important to choose species that are either native to your area or a hardy non-native that will survive a Wyoming winter. Consider whether or not the species needs to be drought tolerant.

## Preparing the Site

Stakeout the intended rows. Always call before you dig by dialing 811. The people at One Call of Wyoming will let you know if there are underground lines or wires that will need to be avoided. When planting seedling trees, it is best to “rip” the soil about 18 inches deep and 3 to 4 feet wide. For some, this is not possible due to lack of access to equipment. At the very minimum, roto-tilling to a depth of 6 to 8 inches will loosen the soil and make way for tree or shrub roots to establish and grow.

Next, place a fabric weed barrier over the rows; this will help trees survive by conserving moisture and controlling weeds. The weed barrier is pulled taut and then secured by using long staples on the edges and then burying the edges with soil. Start at one end, cut an X in the middle of the fabric (this is where you will dig your planting hole). Then measure from there the distance to the next tree and continue (Photo 1).

When planting seedling trees, dig a hole the depth and width of a shovel head (Photo 2). Dig until the shovel head fits snugly. Place the tree in the hole and, if planting a bare-rooted seedling, make sure roots all point down and spread out. If improperly planted, a tree root can curve back up to the surface (called a J-root, see Photo 3) and can kill your tree. Push the soil into the hole around the roots, firmly packing as you go (see Figure 2 below). Large air pockets around the roots can cause roots to dry out. (Photo 4)



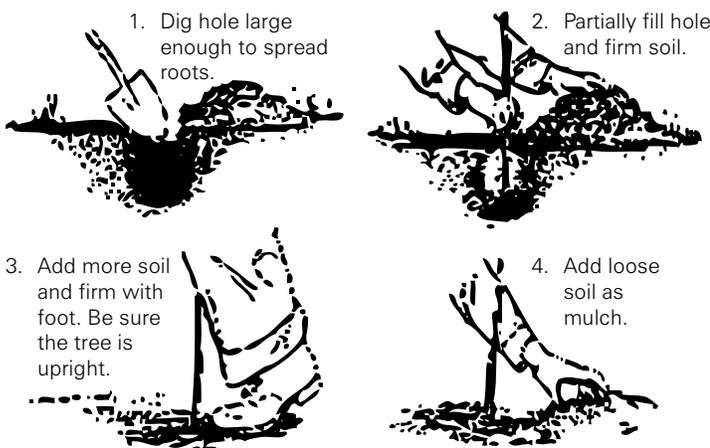
## Amend or Not to Amend

People often ask if the soil should be amended prior to planting seedlings. A soil amendment is any material added to a soil to improve its physical properties, such as water retention, water infiltration, drainage, aeration, and structure. The problem with amending soil for trees is that eventually their roots will grow beyond the organic or inorganic improvements that have been made, and they will have to live in the soil in which they are planted. Once the tree’s roots spread through the good amended soil into the original soil, the tree may be stressed. Trees acclimated to their environment from the beginning do best. High-nitrate fertilizers can burn the roots of the trees and should not be applied the first three years.

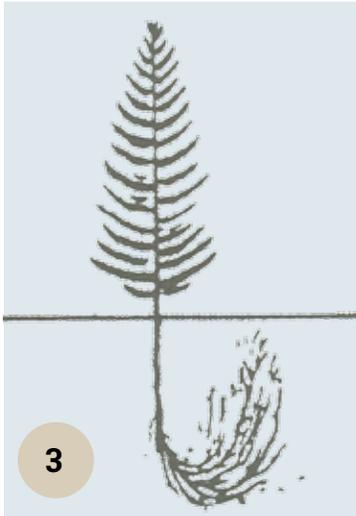
Once planted, trees require careful attention the first few years. Water without overwatering. Irrigation will be discussed further in an upcoming issue. Species such as pine and juniper can easily be overwatered. Irrigation and drip systems can efficiently deliver a measured amount of water to each tree. Drip systems use emitters that deliver 1 to 2 gallons per hour. Your local conservation district is a good resource for helping design a watering system and showing how much to water the trees.

## Protect Against Wildlife

Wildlife can harm seedling trees. Deer, antelope, gophers, rabbits, and even livestock can make a meal of newly planted trees (Photo 5). Some precautions include putting a fence around the tree rows, using tubes, or using a repellent. Tree protectors (Photo 6) and tubes can help protect seedling trees from wind. These can be



**Figure 2:** <http://www.extension.umn.edu/distribution/naturalresources/components/DD0505a.html>



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purchased from Forestry Suppliers, Ben Meadows, or your local conservation district.

To protect conifers and broadleaf evergreens, use an anti-transpirant, available at your local weed and pest control district and some conservation district offices. Anti-transpirants, sprayed over the tree usually in March and November, seal in moisture and create a barrier that will help protect the tree from becoming wind burned.

Growing trees in Wyoming is always a challenge. With a little planning and a lot of care, your living snow fence can be successful. The benefits go far beyond beauty and summer shade.

Good luck and happy planning/planting!

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### For more information

- Wyoming conservation districts – <http://www.conservewy.com/DISTRICTS.htm>
- Natural Resources Conservation Service Wyoming offices – [www.wy.nrcs.usda.gov/wymaps/wycomap.html](http://www.wy.nrcs.usda.gov/wymaps/wycomap.html)
- Wyoming State Forestry Division – <http://slf-web.state.wy.us/forestry.aspx>
- UW Cooperative Extension Service county information – <http://ces.uwyo.edu/Counties.asp>;
- UW Soil Testing Laboratory – [http://ces.uwyo.edu/Soil\\_Main.asp](http://ces.uwyo.edu/Soil_Main.asp)

### Publications

- See “Reducing deer and rabbit damage to woody plants,” Spring 2008 *Barnyards & Backyards* magazine for more info on protecting trees from wildlife <http://www.uwyo.edu/barnbackyard/info.asp?p=10291>
- *Trees for Conservation – a buyer’s guide* is a publication from the Colorado State Forest Service that provides information to select your tree and shrub species for a living snow fence and is available at [csfs.colostate.edu/pdfs/08byrgd-www.pdf](http://csfs.colostate.edu/pdfs/08byrgd-www.pdf)
- *Windbreaks for Snow Management*, EC1770, is a publication from the University of Nebraska at <http://www.ianrpubs.unl.edu/epublic/live/ec1770/build/ec1770.pdf>
- “Getting the straight dirt: How to test the health of your soil” (Spring 2006 *Barnyards & Backyards*). Go to [barnyardsandbackyards.com](http://barnyardsandbackyards.com), click on Resources, then Soils & Fertilization