Ten Steps to Ensure Success

- **Determine planting objectives (control blowing snow, livestock protection, wildlife habitat, landscape aesthetics, water harvest/storage).**
- **Take an inventory of the site factors, including:**
  - **Prevailing wind direction**
  - **Annual snow amount**
  - **Topography, aspect and distance from area to be protected**
  - **Soil Type**
  - **Current and potential land uses, land ownership, easements, location of above and below ground utilities**
- **Determine species type and number to be planted.**
- **Decide what site preparation will be needed.**
- **Determine if fertilizer will be needed in the future.**
- **Determine the type of supplemental water needed to ensure establishment and survival:**
  - **Drip irrigation**
  - **Weed barrier may provide necessary moisture conservation if in areas of 20+" annual precipitation.**
- **Determine fencing or plant guards needed to protect trees/shrubs from livestock and wildlife.**
- **Decide what kind of weed control will be used (cultivation, chemical, weed barrier, mulching.**
- **Include proper maintenance**
  - **Frequent drip irrigation inspection.**
  - **Regular inspection of plants to spot weed/pest problems.**
  - **Prompt replacement of dead plants eliminated gaps in the living snow fence.**
  - **Corrective pruning.**
- **Make a plan that includes a list of decisions made, the date actions will need to take place, and who will carry out the action.**

USDA National Agroforestry Center www.unl.edu/nac

CLEAR CREEK CONSERVATION DISTRICT

Additional Resources:

Clear Creek Conservation District: 500 West Lott Street Unit B, Buffalo, WY 307-620-3021

Wyoming State Forestry : 600 Veteran's Lane, Buffalo WY 307-684-2752

University of Wyoming: Barnyards and Backyards http://www.uwyo.edu/barnbackyard/

Living Snow Fence

Planning & Design

Living Snow Fences

Trees in our landscape provide important benefits to our homes including wind and snow protection, energy conservation, shade, fruit, wildlife habitat, beauty, and potentially increased property values. Using trees and shrubs to create Living Snow Fences (LSF) can be especially beneficial on rural acreages. A LSF is a band of shrubs and trees perpendicular to the prevailing winds and a multi-row LSF can create a microclimate on the leeward side.

Benefits of a Living Snow Fence

- **Wind Protection**– Protection from our Wyoming winds creates more comfortable working conditions throughout the four seasons.
- **Control of drifting and snow collection–** Controlling where snow accumulates on your property can be a major factor in your quality of life!
- **Energy Savings–** By reducing winds that reach buildings LSF can reduce heating costs.
- **Aesthetic Beauty–** Trees and shrubs with ornamental flowers , foliage, bark, and fruit can add beauty to your property and are an investment in your property's long-term value.
- **Wildlife Habitat–** Wildlife utilize LSF for food, habitat, and cover. Many birds that nest in LSF eat insect pests. Fruit trees and shrubs can be incorporated into LSF designs to provide food for wildlife as well as for personal use.

Living Snow Fence Design Considerations

- **LENGTH–** A common mistake in LSF design is failing to make the planting long enough. Wind sweeps around the end of a barrier creating an "end effect". The LSF should extend 100 feet beyond areas you want protected from wind.
- **DENSITY–** The greater the density of the LSF the greater the reduction of wind velocity and area that snow will be accumulated. LSF designed to distribute snow over large areas should be tall and moderately dense (40-50%). Those designed to capture snow in a limited area should be at densities at least 50%.
- **LOCATION–** LSF should be placed perpendicular to prevailing wind direction. Additionally, plant the first row that will be hit by wind 150 feet from the area to be protected.
- **PLANT SELECTION–** See below
- **PLANT PROTECTION–** Wildlife, livestock, and weather can harm newly planted and growing trees. Some precautions include putting a fence around tree rows, using tree tubes, and using a browse repellant can help protect your investment.
- **IRRIGATION-** Irrigation can help establish successful tree plantings and help them become effective LSF at an earlier date than non-irrigated trees. Drip irrigation is one of the most commonly used methods to irrigate LSF. Due to the nature of the LSF orientation (rows of trees), drip irrigating LSF is more feasible than other methods and can help to reduce soil evaporation, requiring less water application.
- **MAINTENANCE-** Practices such as weed control, protection from livestock and wildlife damage, corrective pruning, replanting, insect and disease control, and supplemental watering may be needed on a periodic or continuous basis.

DRAW A ROUGH SKETCH include……

- **Prevailing Wind Direction**
- **Property Lines**
- **Above/Belowground Utilities**
- **Number of Rows**
- **Length of Rows**
- **Location of Water Supply**
- **Location of Hydrant**
- **Structures/roads to be protected**

Potential Tree and Shrub species

SHRUB

Common/French Lilac
Red-osier Dogwood
Silver Buffaloberry
Siberian Pea Shrub (Caragana)
Common Chokecherry
American Plum

EVERGREENS

Rocky Mountain Juniper
Colorado Blue/Green Spruce
Eastern Red Cedar

DECIDUOUS

Canada Red Chokecherry
Prairie Fire Crabapple
Radiant Crabapple
Hawthorn
Semi-dwarf Honeycrisp Apple
Semi-dwarf McIntosh
Semi-dwarf Montmorency Cherry
Semi-dwarf Santa Rosa Plum

SELECT YOUR TREES

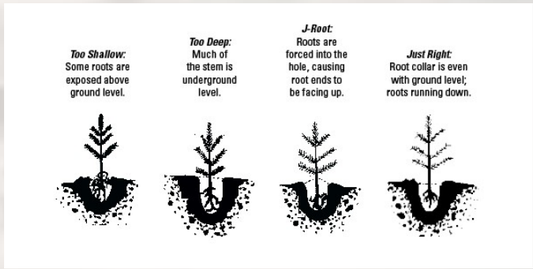
There are two types of products you can use to create your LSF, seedling and large stock.

SEEDLINGS: Include Bare root, large tube, and small pot sizes. Advantages include purchasing large numbers of product for relatively low cost. Disadvantages include higher mortality rate and substantial time before trees/shrubs become mature.

LARGE STOCK: Includes ball/burlapped or container grown stock that are often 4-10 year old trees/shrubs. Advantages to large stock is time to maturity for the product is less than that of seedlings. Disadvantages include higher costs due to the size and age of the product.

SITE PREPARATION and PLANTING

1) Stake the intended rows
2) Call before you dig!! One Call of Wyoming—811
3) When planting seedlings remove competing vegetation and "rip" or loosen soil to a depth of 18 inches but at least 6-8 inches if you don't have the proper equipment to achieve the 18 inch depth. It is preferable to do this in the fall and plant the following spring but not necessary.
4) Use weed barrier for each row and secure using long landscape staples and burying edges with soil.
5) When planting seedlings dig a hole the same depth as the roots, place seedling in hole making sure roots ALL are pointing down. Push soil down around roots packing firmly as you go to make sure there are no air pockets.
6) For mature stock dig hole twice the width of the container and deep enough to cover to the top of the first main root.



IRRIGATION

Supplemental water will be necessary for at least 3-5 years while plants establish. Installing a drip irrigation system is a highly recommended moisture conservation technique to help ensure optimum plant growth and deep root establishment. Some of the benefits of using a drip irrigation system include only a small area of soil near the plant is wetted and very little water is lost to evaporation. Most importantly, plants aren't stressed by the too-wet, too-dry cycle of other methods.