

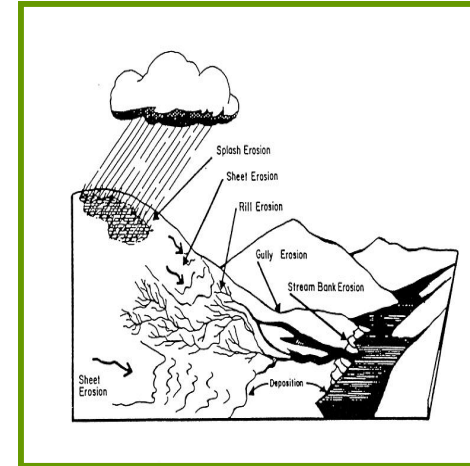
TIPS TO CONSIDER AFTER CONSTRUCTION

- When earthmoving is completed, replant the area. **Don't automatically plant the area with grass—consider replacing with native trees, shrubs or native grasses.** These species are generally better at taking up pollutants and nutrients from stormwater runoff. However, native grasses take longer to establish and should be planted with an annual nurse crop consisting of annual rye, oats or wheat.
- **Always mulch newly seeded areas. Apply mulch to achieve 90% ground coverage, which will require approximately 2 bales per 1000 square feet.** In areas subject to wind exposure, the mulch and seed may need to be held in place with biodegradable netting. On long or steep slopes, you may need to install an erosion control blanket. If the mulch or the erosion control blanket isn't anchored properly, the soil and seed will wash away. Always follow the manufacturer's instructions for installation of erosion control blankets. This is not a place to cut corners as loss of soil, seed and mulch will cost you more in the end.
- Check your erosion control measures before storms to see that your silt fencing and hay bales are in good condition and ready for action. Check and repair after storms.
- **The best time to seed in Minnesota is late summer (mid-August to mid-September) due to favorable conditions for germination and growth.** Seeding can be done in the spring from mid-May to mid-June; however, weeds and high summer temperatures often reduce the chance of success.
- Call Carlton County Planning and Zoning for lists of native vegetation, erosion control supplies and any other questions at 218-384-9178.



Erosion Control Blanket

EROSION CONTROL FOR HOMEOWNERS



WHY CONTROL EROSION?

- To protect water quality in our lakes, rivers and streams.
- To protect soil
- To save money

Soil eroding from construction sites is the leading cause of water quality impairment in Minnesota. Soil erosion costs Minnesota homeowners millions of dollars a year. Soil loss not only causes damage to roads and property but eventually finds its way to lakes, streams and rivers. It contributes to the phosphorus load and can result in algae blooms. In addition, silt removal from roadside ditches, sidewalks, curbsides and storm drains is required, costing taxpayers money.

REMEMBER!

Your property may be only one small part of the big picture but collectively, with other homes, it can represent a significant source of nutrient pollution and soil erosion. Regardless of whether you use fertilizer or not, soil naturally contains phosphorus. Nature slowly wears away land, but human activities, such as construction, can significantly increase the rate of erosion.

TIPS TO CONSIDER BEFORE CONSTRUCTION

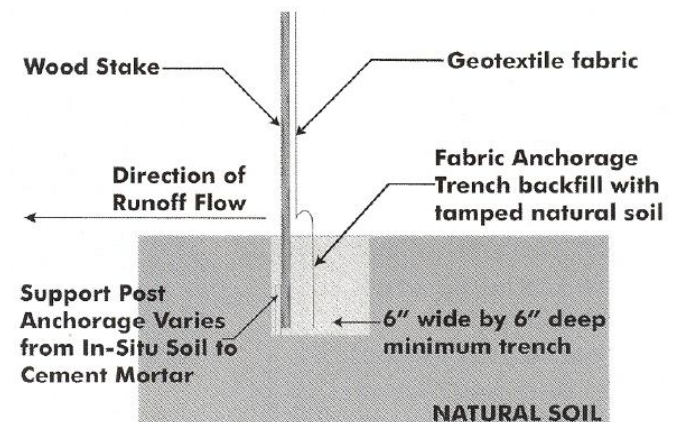
- Determine if the soils on your selected site are really suited for the proposed use. Consult your local soil survey (call Carlton County Planning and Zoning at 218-384-9178) to find out what kind of soil you have and its limitations. Avoid disturbing steep slopes, drainageways, unstable soils, areas subject to flooding, stream banks or edges, and lakeshores.
- **Verify with the contactor or the Carlton County Planning and Zoning Office that you are not disturbing a wetland.**
- Become familiar with the natural drainage patterns of the property and try to avoid altering them. Proper site design will help you avoid expensive erosion control measures.
- **Contact the Carlton County Planning and Zoning Office for projects within the building setback of lakes, rivers and streams to obtain the necessary permits.**
- Plan to preserve existing vegetation as much as possible. Vegetation will naturally curb erosion, improve the appearance and value of your property, and reduce the cost of landscaping later. **As a reminder, removal of any vegetation within the building setback of lakes, rivers and streams is regulated under Carlton County Ordinance #27.** Please call Carlton County Planning and Zoning before removing any vegetation.
- Discuss clearing limits with your contractor in advance. Field mark these limits with ribbons or flagging. Flag particular trees and shrubs that you want protected. Remember to keep heavy machinery away from trees to avoid compacting their roots, otherwise they will die a few years later.
- Discuss with your contractor exactly which erosion control measures will be used, who is responsible for the purchase of the erosion control supplies (seed, mulch, etc.), and who is responsible for implementation. Timely stabilization with the appropriate materials will save you time and money and help minimize the impact of your activity on surface waters.
- Plan earth moving activities early enough in the year so that you can revegetate the site by September 15th. Plan to mulch disturbed areas over the winter if construction is delayed past September 15th. This will protect bare soil from spring runoff.

TIPS TO CONSIDER DURING CONSTRUCTION

- Before doing anything else, install a filter barrier on the downslope side of the construction area. **This barrier should include a silt fence at a minimum and when working in a critical area, (next to lakes, rivers and streams) use both a silt fence and embedded hay bales. Trench silt fencing in about 6 inches. Trench and stake hay bales (4 inch trench, 2 stakes per bale).**
- When earth moving, separate topsoil so it can be spread back on top of the site. You'll have greater success in establishing a new lawn or buffer strip area, and you won't have the added expense of buying topsoil. Ring the downslope edge of topsoil stockpiles with silt fencing and/or embedded hay bales.
- Machinery must not be allowed to cross streams. Major damage to streambanks occurs when heavy equipment is carelessly run in stream channels.



Silt Fence



Silt Fence Installation