



Is woody vegetation present and maintaining itself?

Most, but not all, riparian areas can support woody vegetation (trees and shrubs). Trees and shrubs have an important and key role in riparian condition. Their root systems generally are excellent bank and shoreline stabilizers and play a key role in the uptake of nutrients that could otherwise degrade water quality. The canopies formed by trees and shrubs protect soil from erosion, provide shelter to wildlife and livestock, and modify the riparian environment. Even when dead the trunks provide erosion protection and structural complexity which plays a role in modifying stream valleys. A good indicator of the ecological stability of a riparian reach is the presence of woody plants in all age classes, especially young age classes. Without signs of regeneration of preferred woody plants (those species that contribute most to riparian condition and stability) the long-term stability of the reach is compromised.

Some trees and shrubs just aren't the right stuff. They don't do as good a job of gluing banks and shores together, they reflect a history of disturbance (e.g. rose, snowberry) and some are exotic, aggressive species (e.g. Russian Olive, Tamarisk) we don't need or want in riparian areas.



These poplar seedlings and saplings represent new age classes of trees that will replace the older individuals in the background.



What will replace these trees in the next few years?

Examples of preferred Trees & Shrubs

Trees:
cottonwood, aspen, poplars, birches, conifers

Shrubs:
willows, dogwood, saskatoon, chokecherry, alders, hazelnut, pin cherry, cranberry, honeysuckle, raspberry



Is woody vegetation being used?



Beaver activity, for food and dam building, is an example of utilization of woody species.



Many animals browse woody plants, including domestic livestock.

Because woody species have such an important role to play in riparian health, measuring use helps us understand whether they will persist in the reach. Livestock will often browse woody plants, especially in late summer, fall and winter. Wildlife, including beaver, make use of woody plants year-round. Mowing, trimming and logging remove woody species. Woody plants can sustain low levels of use, but heavier browsing or removal can:

- ◆ deplete root reserves;
- ◆ inhibit establishment and regeneration;
- ◆ cause the loss of preferred woody species;
- ◆ lead to replacement by less desirable woody species; and
- ◆ lead to invasion by disturbance or weed species.

There is an old stockman's saying: "If you keep down the shoot, you'll kill the root". Grazing or browsing too much of the leafy material, the collectors of solar energy, will wear the plant down and reduce it's ability to store energy in it's roots for the next season. Long-term, heavy use eliminates the best woody plants.