

## Ripple Effect #85

### **Protecting Riverbanks**

Have you ever noticed places along a river where the riverbank has shifted, often sliding in a sheet towards the water?

This process of river banks shifting towards the river is called “slumping.” The process is natural to an extent, as rivers deal with currents, fluctuating water levels, moving ice, surface runoff – even flooding. Here in the Red River Basin we face double the trouble with slumping, for the soils in the Basin are structurally weak. When these soils are exposed in slopes, such as riverbanks, bank slumping can and will occur.

Unfortunately, sometimes we humans have helped accelerate the problem of slumping. We have busily “cleared” land of trees and brush, whose roots hold the banks in place. We have replaced deep-rooted native vegetation with shallow-rooted Kentucky grasses, which creates the double whammy of taking away stabilizing root structures while increasing the velocity of runoff. We have saturated the soil with watering or irrigation systems, weakening it even more. And we have added weight to the banks with buildings and landscaping structures. All together, a recipe for riverbank instability.

It would be great if we could fix all this by adding retaining walls or riprap, for instance, or more soil or fill. These ‘solutions,’ unfortunately, typically add even more weight to the riverbank and thus have not proven very successful in the Basin.

The best solutions, it seems, are to reverse practices in the areas of vegetation, watering and weight:

Vegetation: Keep the native vegetation – trees, bushes, grass – that is in place. Do NOT plant shallow-rooted grasses. DO add trees and bushes – willow, cottonwood or dogwood are good choices.

Watering: Avoid over-watering lawns or adding drain fields (or septic systems) to areas near riverbanks.

Weight:

Avoid adding weight to areas near riverbanks, whatever the form. Remember that surface runoff adds weight!

We depend on our rivers for much – from taking away runoff and flood waters to supplying our daily water. So a problem such as slumping and the excess sedimentation it delivers to our rivers impacts not only land owners and communities but everyone’s ecological and economic health. While following the practices above may not prevent all slumping, they can help protect property, the river nearest you – AND the entire Red River watershed.

Until the next Ripple Effect,

The Red River Basin Commission (RRBC)

The RRBC is a grassroots organization that is a chartered not-for-profit corporation under the provisions of Manitoba, North Dakota, Minnesota, and South Dakota law. Our offices in Moorhead, MN and Winnipeg, MB can be reached at 218-291-0422 and 204-982-7254, or you can check out our website at [www.redriverbasincommission.org](http://www.redriverbasincommission.org).

