Riparian Buffers

Buffers are areas of vegetation next to bodies of water such as agricultural drains, creeks, rivers, ponds and wetlands. They protect these waterbodies from the impacts of adjacent land uses and can consist of trees, shrubs, grasses, wildflowers or a combination of each.

Thick grass cover helps reduce sediment and nutrients carried in run off before entering the creek.

Benefits of Buffers

Water Quality Control

Surface runoff from agricultural fields and rural properties can carry sediment, nutrients, pesticides, and bacteria into our waterbodies which eventually lead to Lake Erie and Lake St. Clair-sources of drinking water for our community and million of individuals downstream. Excess run-off combined with a warming climate contributes to toxic algae-blooms, a reoccurring issue in our lakes.

Erosion Control

Roots from grasses, shrubs and trees help protect vulnerable soils, and strengthen and stabilize stream banks. Erosion is a growing concern within the Lower Thames Valley watershed and establishing more buffers along our waterways will assist in keeping our shores intact and waters clean.

Habitat Creation

Overhanging vegetation provides shade which helps to cool and regulate water temperature allowing native aquatic species to thrive. Buffers can also provide food sources such as berries, seeds, plant litter and organisms which are important food sources for aquatic and terrestrial wildlife. Buffers also make good wildlife corridors and provide shelter and nesting sites.

Impact of Soil Erosion

Loss of topsoil on farms:

- decreases crop yields
- increases costs of production
- degrades topsoil
- increases run-off and reduces water storage which helps during droughts

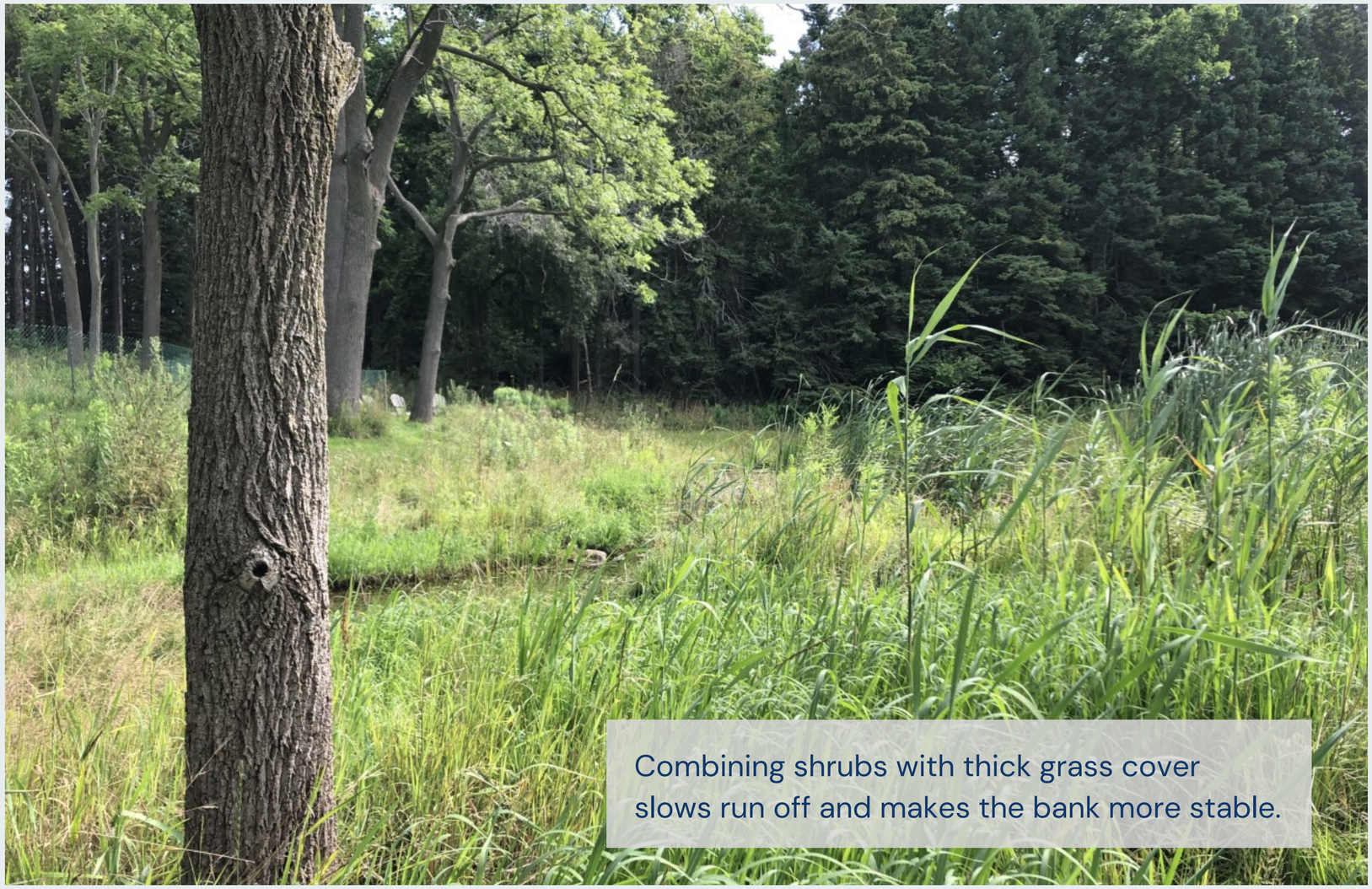
Off the farm, sediment and eroded soil can:

- increase maintenance costs of drains
- degrades fish habitat and recreational waters
- contaminates surface water through run-off which contains pollutants

Planning for a Buffer

It is important to work with someone who is familiar with riparian restoration, such as your local Conservation Authority. In many cases, costs associated with the establishment of buffers can be covered by funding that supports the establishment of these valuable projects.

- Buffer Width
  - 5m for bank stabilization
  - 10-30m for sediment control
  - >10m for wildlife habitat
- Bank Slope
  - Steeper slopes will allow for greater run-off and more erosion, requiring a wider buffer
- Soil Texture
  - Sandy soils allow for more infiltration. Poorly drained soils will require a wider buffer
- Vegetation Type
  - Grass are better adapted for filtering and absorbing nutrients, while shrubs help stabilize the bank



Combining shrubs with thick grass cover slows run off and makes the bank more stable.

Buffer Maintanence

- Newly planted trees and shrubs may need watering in the first year
- Weed control is critical until the buffer becomes established
- Buffers should be inspected periodically to ensure form and function
- Fertilizers, pesticides and animal waste should not be applied to the buffer

Contact

- 100 Thames St. Chatham, On
- 519-354-7310
- ltvca.ca

Lower Thames Conservation

Do unto those downstream as you would have those upstream do unto you.
-Wendell Berry, Writer, Environmental Activist, and Farmer