

# Buffer Strips

## Protecting Riparian Areas

### What is a Buffer Strip?

A buffer strip is a stretch of vegetation consisting of a mix of trees, shrubs and grasses, planted alongside bodies of water such as agricultural drains, creeks, rivers, ponds and wetlands to protect them from the impacts of neighbouring land uses.

### What is a Riparian Area?

A riparian area or riparian zone, is the transitional area between the surface of the water and the area of land lying above the level where water flows or where flooding occurs.

Under natural conditions, riparian vegetation is quite diverse and water loving plants are abundant.

### Examples of Buffer Strips in Riparian Areas



Left: Livestock access can degrade riparian areas by adding pollutants and sediment to the water.

Right: A healthy buffer strip filters pollutants and vegetation prevents erosion by stabilizing banks.

### Benefits of Buffer Strips

Properly functioning buffer strips and riparian areas have many benefits including:

- Acting as living filters which trap sediments and other deleterious materials from upland activities.
- Preventing erosion by stabilizing streambanks as the roots of vegetation hold soil in place.
- Increasing the soils water holding capacity, and thus reducing the impacts of drought and flooding.
- Providing habitat for wildlife through greater plant diversity and by creating shade which cools the water and makes a better environment for fish to live and spawn in.



Left: Erosion and sedimentation shown in a stream with no buffer strip. Right: A healthy riparian buffer zone.

## Planning a Buffer Strip Project

1. Assess the existing conditions in your riparian area, such as instream conditions, water quality and vegetation quality. Work with someone familiar with riparian restoration who will consider your land, time and budget constraints.
2. Contact Kawartha Conservation to discuss risk management, permitting requirements and funding opportunities that may be available to you.
3. Decide on the width of the buffer; for bank stabilization, at least 5m is required, for sediment removal; you'll need 10-30 metres of width, and for wildlife habitat; greater than 10m is standard, but up to 100m is preferred.
4. Assess bank slope conditions and soil texture. The steeper the slope, the greater the potential for runoff and erosion. A steep slope or poorly drained soil would require a wider buffer to slow runoff.
5. Choose vegetation that can withstand flooding by water and sediment. Grasses work best for filtering and absorbing nutrients, trees work well for bank stabilization, and stiff stemmed grasses along the field edge of the buffer will slow runoff and reduce concentrated flow in the non-growing season.
6. Once your project is complete, maintain vegetation by watering at critical periods. Watch for washouts and rills cutting across the buffer strip. Assess if additional Best Management Practices would improve the effectiveness of the buffer (e.g. adding a swale).

**Kawartha Conservation may have funding  
for your stewardship project!  
Call our Stewardship Technician at  
705.328.2271 x 242 today to find out more!**

### For More Information

To learn more about buffer benefits, design, and maintenance, please read the Buffer Strip BMP publication, which can be obtained from:

<http://www.omafra.gov.on.ca/english/environment/bmp/buffer.htm>



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