

Riparian buffer: A vegetative area near a stream, usually forested, which helps shade and partially protect the stream from the impact of the adjacent land uses. It plays a key role in providing environmental benefits to associated streams, rivers and lakes. With the decline of many aquatic systems due to agriculture and development, riparian buffers have become a common conservation practice aimed at increasing water quality and reducing pollution.

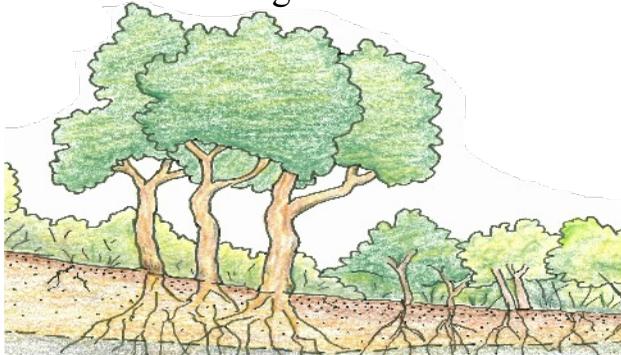
Riparian Buffer Benefits

Traps pollutants up to 80%

- Removes pesticides and fertilizers
- Breaks down animal waste from farms, geese and pets
- Prevents oxygen depletion in lakes and rivers
- Decreases algae and aquatic weeds

Recharges groundwater

- Slows storm water runoff
- Filters rainwater
- Allows absorption of rainwater
- Increases groundwater levels
- Controls flooding



Captures sediment and prevents erosion

- Traps runoff from fields, lawns and roads
- Shrubs, trees and their roots prevent erosion
- Prevents contaminants in sediment from reaching the river
- Improves water quality

Improves wildlife habitat

- Provides food
- Provides shelter and breeding sites
- Benefits birds, pollinators, mammals and reptiles
- Provides organic material for aquatic invertebrates

Reduces cost of landscape maintenance

- Saves fuel, machine maintenance, and labor costs of mowing
- Decreases air and noise pollution caused by mowing and watercraft
- Provides flood control

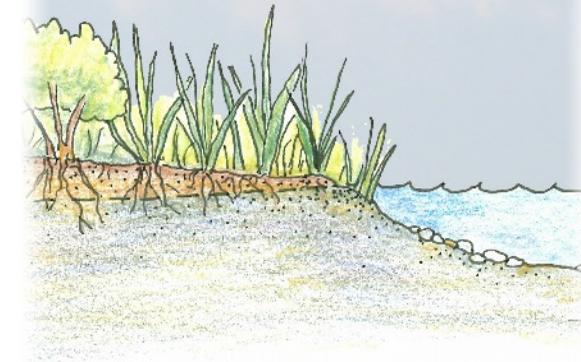
Native plants

- Require no watering, fertilizer or pesticides
- Save time and money
- Evolved with native wildlife
- Enhance environment of wildlife
- Protect biodiversity
- Connect people with their natural heritage and nature

Resources: *Native trees, shrubs and plants available from the Alpena or Otsego Soil Conservation Districts. Plants, seeds, and instructions available from members of the Michigan Native Plant Producers Association, www.mnppa.org*



Down by the River's Edge



UPLAND ZONE

RIPARIAN ZONE

RIVER'S EDGE

Rainfall

Evaporation and nutrient uptake

Wildlife, Food and Shelter

Insects, migratory and nesting birds, waterfowl
Pollinators, reptiles, frogs, small mammals

Berries, nuts, seeds, wildflowers, grasses
Native trees and shrubs

Impervious Surfaces

Grass Filter Strip

Pollutants

Animal waste – geese, cats and dogs
Chemicals – fertilizer, herbicides,
vehicle fluids
mud, sand, trash

Roots stabilize bank

Erosion Prevention

Shoreline resistant to
wave action from boats
Flood control
No Loss of property
Water safe and clean.

Storm runoff slowed, absorbed, filtered
before entering groundwater

The Alpena Wildlife Sanctuary Board has developed a demonstration riparian buffer in Duck Park on the Thunder Bay River across from the hospital. Find it near the "Departure of the Great Blue Herons" sculpture.