## WHY PLANT A WILLOW RIPARIAN BUFFER



#### **BENEFITS**



Creates a highly visible sign of good stewardship

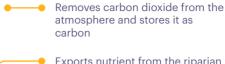
Provides opportunities for income from harvestable biomass



Provides habitat for important pollinator species



Provides a barrier against dust, odours, and pesticide pollution



Exports nutrient from the riparian zone by storage in the stem, leaf, and root tissue

Reduces the amount of sediment, excess nutrients, pesticides, and other pollutants entering watercourses

### THE RESULTS ARE IN

#### Willow buffers intercept nutrient runoff.

Research has shown that properly established riparian zone vegetation removes up to 90% of the unused nitrogen leaving the field. Recent trials reported a 1 km willow buffer (approximately 1 hectare of total area) removes about 100 kg of nitrogen in the first harvest and 120 kg in each subsequent harvest. Seven harvest cycles are possible before the buffer needs to be replanted. This means that over the life of a willow buffer (21- 28 years), almost a tonne of nitrogen can be removed.

## 2 Willow buffers mitigate greenhouse gas emissions.

For every km of willow buffer planted in PEI approximately 29 tonnes of carbon dioxide ( $CO_2$ ) are absorbed annually! One tonne of stored carbon is equivalent to 3.67 tonnes of  $CO_2$ . Storing or capturing carbon in trees helps reduce the amount of carbon dioxide in the atmosphere.

### 3 Willow buffers provide a local, renewable fuel source in the form of harvestable biomass.

In PEI, willow yields about 10 dry tonnes of biomass per hectare per year! On high yielding sites, harvesting biomass from a one-hectare buffer could provide up to 45 dry tonnes of harvested wood chips for home heating this is equivalent to the annual home energy use of 5 households.

### WHO ARE WE

The East Prince Agri- Environment Association (EPAA) represents 15 family farms in central Prince Edward Island who are working together to improve their agricultural practices to protect the environment.

# INTERESTED IN MORE INFORMATION?

**Contact EPAA today!** 



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