
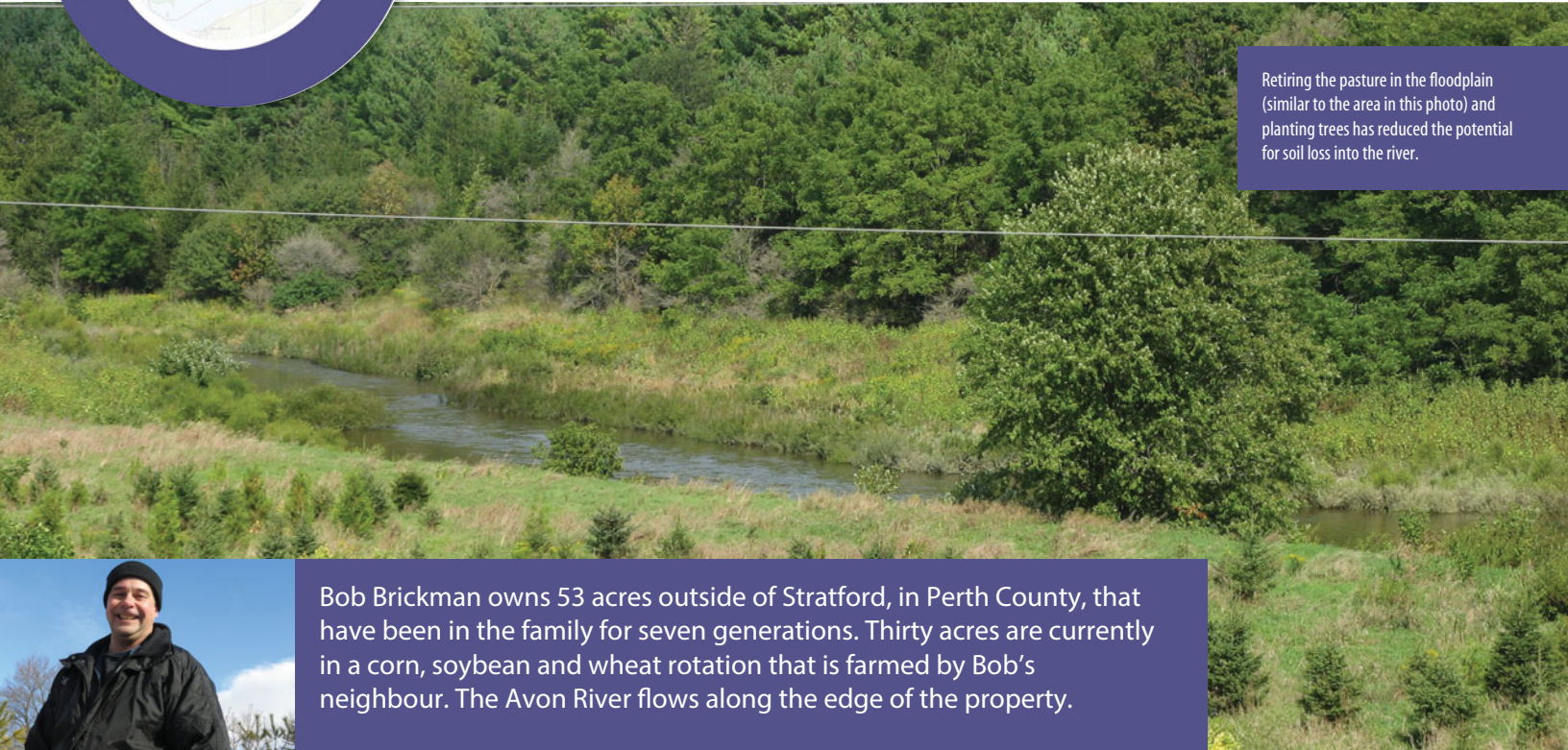




Case Study: Riverside Buffer and Fragile Land Retirement

Retiring the pasture in the floodplain (similar to the area in this photo) and planting trees has reduced the potential for soil loss into the river.



Bob Brickman owns 53 acres outside of Stratford, in Perth County, that have been in the family for seven generations. Thirty acres are currently in a corn, soybean and wheat rotation that is farmed by Bob's neighbour. The Avon River flows along the edge of the property.

Concerns:

Cattle were going into the river and grazing in a floodplain pasture. This livestock access in combination with severe streambank erosion caused high sediment input and poor water quality.

Solution:

After completing an Environmental Farm Plan, Bob decided to extend an existing buffer strip that was planted in the 1960s. Bob worked with the Upper Thames River Conservation Authority (UTRCA) to determine the extent of the buffer zone. In 2002, 150 seedlings were planted in a 200 m long, 20 m wide strip along the river. In 2008, the remaining floodplain pasture was permanently retired by planting 1500 seedlings.

Benefits:

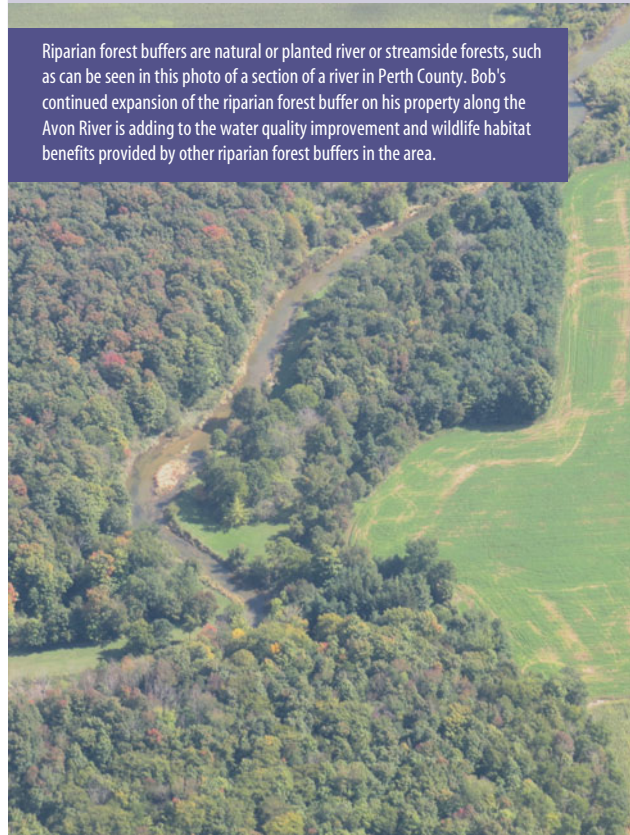
Improved water quality and aquatic health by keeping cattle out of the river

- Livestock exacerbate streambank erosion
- Manure is high in nutrients that fuel algae growth, decreasing the oxygen available for fish

Reduced erosion by planting trees

- Tree roots stabilized the streambank
- Permanently retiring the pasture land further reduces the potential for sediment losses into the river

"Trees are a natural thing for us."



Riparian forest buffers are natural or planted river or streamside forests, such as can be seen in this photo of a section of a river in Perth County. Bob's continued expansion of the riparian forest buffer on his property along the Avon River is adding to the water quality improvement and wildlife habitat benefits provided by other riparian forest buffers in the area.

Project Timeline:

Spring 2002 - Mowed existing vegetation and planted tree seedlings

Fall 2007 - Permanently removed cattle from the old pasture and mowed the vegetation in preparation for tree planting the following spring

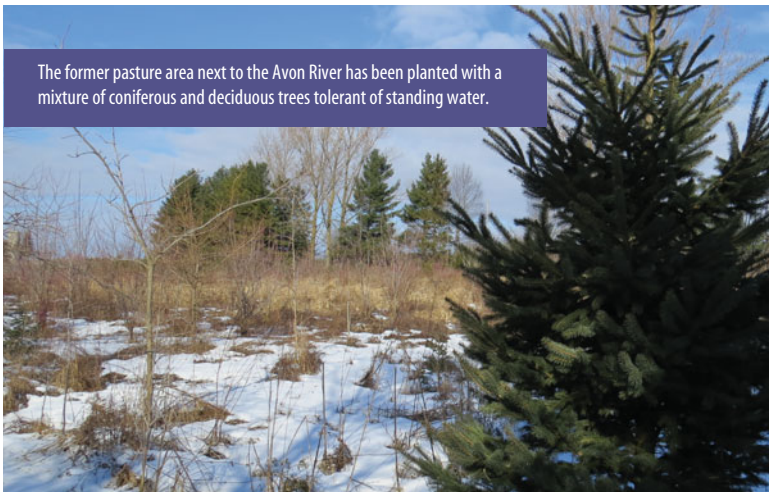
Spring 2008 - UTRCA planted tree seedlings in old pasture

Spring 2002-2015 - Bob continued to plant trees in the buffer and retired land areas

Spring 2016 - Bob is planting 200 more trees

Maintenance:

Limiting competition by weeds and grasses is critical to tree survival. Bob **mowed** between the trees for the first two years after planting. In the spring and fall of 2002 and 2008, UTRCA **sprayed herbicide** around seedlings. Due to continuing competition from grasses, Bob sprayed around the trees for four more years (2009-2012). Over the past couple of years, Bob has spot sprayed for wild cucumber.



By the numbers:

Buffer strip **200 m long x 20 m wide**

2.5 acres of fragile land retired

1,650 seedlings planted by UTRCA

3400 seedlings planted by Bob and family since 2002

- **200** seedling to be planted Spring 2016

\$417.83 cost of trees for buffer (in 2002)

\$2,094.75 cost of land retirement project (in 2008)

Tree species used in Bob's buffer:

White Cedar

Silver Maple

Burr Oak

White Pine

Norway Spruce

White Spruce

Black Walnut