



Habitat Restoration Project 2014  
- Duffins Creek: Ajax, Ontario -

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### Brock Lands Decommissioned Pond Live Willow Shrub Staking

Habitat Project Lead: *Ontario Federation of Anglers and Hunters*

Habitat Project Funding: *Great Lakes Guardian Community Fund*

Date Completed: *November 27, 2014*

The project is located in Pickering, Ontario on the Greenwood Conservation Lands, Brock North portion. This is the site of a previous pond decommissioning, for this we used a planting technique of inserting live willow shrub stakes (stem cuttings) into a half metre of the bypass channel shoreline. Willow shrubs can be cut down to the base, leaving the roots, in the fall once they have gone dormant and dropped their leaves. The shrub stems are then cut into 30-60cm long stakes, flat at one end and angled at 45 degrees at the other. These stakes are inserted or pounded into the ground before the frost and will start to grow in the spring. Planted vegetation absorbs water at periods of high flow and releases it slowly during dry periods, which maintains a longer period of base flow water conditions needed for fish to function and survive in a stream.



Figure 1: Live willow shrub staking in the drained pond.

A Fleming College volunteer, OFAH co-op student and two staff installed 7,775 live willow shrub stakes at the edge of the creek in 195m<sup>2</sup> of the upstream portion of the new channel. Over the two days (November 26 and 27, 2014), volunteers and staff inserted the stakes into the wet ground that remained after draining the pond. Besides stabilizing the stream bank, we hope that the large quantity of (fast-growing) live willow shrub stakes will also slow the spread of invasive Phragmites Reed. Phragmites is an aggressive plant that spreads quickly and out-competes native species for water and nutrients.



Figure 2: OFAH Atlantic Salmon Habitat Technologist installing willow stakes into the soft ground.



Figure 3: Live willow shrub staking around the stream channel. The tall reed dominating the area behind the volunteers is invasive Phragmites. We are trying to slow the movement of it into the drained pond.



Figure 4: Live willow shrub stakes installed in the ground.