

The Wheatley River Improvement Group

Summer 2011 Supervisor's Report

Beverly Brooks-Ward

Summer Field Crew Supervisor

The Crew:

The crew this year consisted of myself, Beverly Ward (middle), as the summer crew field supervisor, as well as Eric Sylvester (right) and Denver Parkman (left). I am a fourth year psychology major with a biology minor at the University of Prince Edward Island. Eric Sylvester just graduated from Bluefield High School and is going on to study biology at University of New Brunswick. Denver Parkman is entering grade 12 at Bluefield High School.

**Summer Objectives:**

This year the field crew aims to complete at least 2 km of stream work, plant over 100 trees and improve the Rackham's Pond trail that the summer crew of 2010 started. In addition to these direct improvements to the watershed we also hope to indirectly improve the watershed by enhancing relations with home and land owners in the watershed and participate in community events that may help to build such a connection. Such events will include Canada Day at North Rustico and Rendezvous Rustico.

Preparation:

In preparation for the summer work Eric, Denver and I spent 2 days in Emerald attending a training class provided by the Watershed Alliance Organization. These days taught

us information on fish habitats, water patterns and movement, proper methods and placement of brushmats, tree planting and reviewing the best trees for each ecological niche. We also attended a first aid training course a week later so if an emergency were to occur we would be able to respond efficiently and knowledgably.

As supervisor I had two weeks before the field crew started working. This allowed me time to contact land owners to get the required permission forms signed that would allow us to cross and work on their land where water ways flow. All land owners that I was in contact with were helpful and seemed interested in the work that we would be completing in the summer months. This two week period also allowed me to become more familiar with the watershed and review the sites that we would be working in to plan the best restorative actions.

Tree Planting:

The first week of the work term with Eric and Denver, we managed to plant 420 trees. 186 of these trees were planted along Melvin Ling's property at the Wheatley River end of the Miliboro Road. Another 66 were planted at the bottom of a hay field owned by Jeremy Stead, where the hay field bordered along the Wheatley River. 150 trees were also planted at the bottom of a field belonging to the Doucette family, where their property borders a small stream. The remaining 18 trees were planted at Rackham's Pond. Throughout the summer we continued to plant 87 more trees along the Wheatley River in the areas that we were doing stream restoration work.

The trees that we plant come from the government owned and operated tree nursery in Charlottetown. This year they gave us a mix of Eastern Larch, Black Spruce, Maple and Ash. These are all native species to Prince Edward Island and we tried to ensure that each site had a mix of species, but also that the trees were planted in their specified niche.

Stream Work:

The majority of the summer was spent near the Art Ford Cross Road. Starting at the Art Ford Cross Road, where the rock pool was built last year, we cleared large patches of alders, tree falls, logs, garbage, debris, etc from the water. We continued down the river about 1 ½ km

to an old river crossing that has been washed out (fixing this crossing may be a job worthy of another summer crew). After completion of the main drag of the river we worked on a stream that connected into the Wheatley River. This stream was completely spring fed and had many blockages in it. After clearing these blockages, we were able to see many fish trying to swim up to the springs where they may spend the winter.

Both the river and stream were completed before the last week of the summer term. This meant that we had finished our goal of 2 km of stream restoration work ahead of schedule! This meant that we were able to start working above the Art Ford Cross road and get a start on some of the trouble areas in that section of the river. The area above the Art Ford Cross can still use some improvement as there are areas after we finished work at the end of the term that are choked with alders and there are probably plenty of blockages ahead as well.



Before

After

Brushmats:

Part of the stream restoration goal is to prevent and filter out the silt in the river, to do this we make brushmats. Throughout the summer we built a total of 13 brushmats. Each brushmat was placed in an area that naturally gathered silt, usually on the shallow side of a bend in the river. The placement of a brushmat is extremely important as an improperly placed brushmat may actually force water patterns to change and deteriorate the banks of the river. A proper brushmat however will collect the silt from the river and as the silt collects in the brush and becomes covered until what was once a brushmat is now a natural looking addition to the banks of the river.

The brushmats are made with evergreens that grow beside the river. All bows from the evergreens are carefully taken off the tree using proper pruning techniques and we ensure that we never take more from the tree than what the tree will be able to withstand. These bows are then stuck into the mud along the river bank, where some of the bows run perpendicular and some facing upstream of the river. The brushmat is then staked down using either thick alders that were cut from the stream or from dead standing trees outside the buffer zone. Finally the brushmat is tied down using biodegradable twine.



Community Aquatic Monitoring Program (CAMP):

Throughout the summer, a summer student working with the Department of Fisheries and Oceans came out to monitor three sites in the Wheatley River area. Variables of interest that were monitored included: dissolved oxygen, salinity and water temperature. During the monitoring session a beach seine was also carried out. This is completed with a large net that is dragged out from the beach and walked in a circle and then hauled into shallow waters. From here we emptied the net and counted the various fish and invertebrate species present. The beach seine allows us to measure the diversity within the watershed, health of the species and numbers of the species. From the 2 seines completed over the summer months we found species such as: three spined sickle-backs, four spined sickle-backs, mummy chugs, flounders, silver sides, sand shrimp and grass shrimp.

One of the huge benefits to the CAMP site monitoring is that WRIG now has a fundamental baseline comparison for future years. We will be able to look back at our data and see how the health of the watershed changes.



Denver, Christine (Riparian Assessments), Beverly, Stephanie (DFO)

Bird Boxes

On days when the weather was treacherous we went to Dr Jim Kemp's to build nest boxes for tree swallows. These boxes are made such that there is a removable nail that allows the side the bird box to swing open so that old nests may be cleaned out. This is crucial as many swallows will have two batches of young in a summer. The nest boxes should be cleaned between young since parasites from the first nest will remain in the nest after the birds leave and will prey on the young and vulnerable second crop of young. These bird boxes were placed along two fields that border the Wheatley River.



Community Events:

The Wheatley River Improvement, in participation with the Hunter Clyde Watershed Group were present at both North Rustico Canada Day as well as Rendezvous Rustico. Both of these events are important for WRIG to be able to communicate with the watershed so that interest can be sparked about watershed improvement, as well as answering many questions of the concerned members of the watershed. At both of these events WRIG gave away trees and gathered memberships.

Working with Other Watersheds:

As previously mentioned WRIG works closely with the Hunter-Clyde Watershed group. Unfortunately throughout the summer the two groups were not able to combine forces to work on stream work, but we did have one shared employee who did riparian assessments. These assessments are used to help determine problem areas within the watershed which help to narrow the focus of summer work crews to the problem areas.

This year WRIG also had a close association with the Trout River Environmental Committee (TREC). The first week of stream restoration work, Mike McDonald (the TREC supervisor) showed us how and where to build brushmats. TREC also helped build our skills in stream cleaning by advising us what should be removed from the river, what should stay, where to plant trees along the river, etc. In return for working with TREC in Trout River, TREC also spent a couple days in Wheatley River. A huge advantage to working with TREC was that Mike

has his chain saw license and therefore was able to handle many of the larger blockages that we were unable to tackle with our hand tools.



Evan, Denver, Eric, Mike

Next Year:

Next summer it may be possible to work in Teo Herweyer's Brookfield property where he had beaver problems. The beavers chopped down quite a few of the trees he had on his land and would like to have some replanting done here. Errol Jenkins should also be contacted since he has requested that the 2012 field crew plant white spruce along his property to fill in some hedgerow areas where trees that he had planted had died.

It is also advised that the next year's crew buy a hand winch that will help to remove the larger logs out of the river. A hand winch requires less force and strain from the human body and is therefore safer to use. There will also be an opportunity to work with TREC again next summer to exchange work days if a chainsaw would be helpful in some sections of the watershed.

Next year would also be a good opportunity to try to have a board member day again. We tried this year but unfortunately most of the members were unable to attend due to personal reasons. The day may include things such as how to clean the river, what areas you have cleaned already, what areas need to be cleaned, and how to build a brush mat. Try to get firm commitments from board members so that the day is successful.