

2010 Summer Work Report

Winter River-Tracadie Bay Watershed Association



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On the Winter River in the Summer of 2010

The summer of 2010 was an excellent one in terms of making improvements to the riparian zone and in-stream habitat of the Winter River. In his role as watershed coordinator, Bruce Smith provided overall direction to the summer work activities. Chris Mutch began as summer project supervisor in early June, while students Danielle Lacey, Luke Peters and Nicolle Murtagh began as field workers in late June.

General Activities

During the month of June, Bruce and Chris began their preparations for the summer work season by contacting landowners to obtain permission to access properties and to carry out enhancement work. They also conducted an inventory of most of the watershed using a hand held computer which combined a Global Positioning System (GPS) with orthophoto/aerial maps and allowed information to be entered on site. This was done throughout the watercourse. This information could later be printed off on maps. John Hughes and Cathy Corrigan (having both grown up in the area) were particularly helpful in this exercise by walking the river and identifying points of interest, landowners and providing a historical perspective.

With the help of three students from the province's Environmental Futures Program who were loaned to the project for short periods of time, almost eight hundred trees were planted in the upper reaches of the south tributary of the Winter River which runs between the Brackley Point Road and the Union Road. The planting took place mainly between farm fields and the river. Because the areas were moist, most of the planted trees were white ash, eastern cedar, and larch (juniper). On the areas with steeper slopes, red oak and sugar maple were planted.

As well, in late June and early July, with the support of three wood cutter trainees from the Abeqweit Band, major blockages were removed from the stretch of river between Officer's Pond and the head of tide. Several of the blockages, which were probably a partial barrier to fish, appeared to have been in place for many years. Some of the log jams consisted of trees that spanned the river banks and had diameters in excess of thirty inches. In turn, these trees caught other large trees and logs floating down the river thereby creating an almost impenetrable wall. Some gaspereau were observed below the culvert at the Suffolk Road crossing, so some fish were able to get through these blockages, but there is doubt that passage was difficult.

When the three student field workers joined Chris, the in-stream portion of the summer work agenda began in earnest. Chris had considerable experience working with a chainsaw, and, for most of the next six weeks, he cut alders and trees blocking the stream while the students (with some assistance from Bruce) hauled the branches far enough up onto the bank so they would not be washed back into the river in the spring.

Alders were a problem throughout most of the watershed. The alder stems had been forced into the water by the snow load over past winters and in this position they caught silt and rooted across the stream thereby slowing the flow of the water. In some cases, cat-tails rooted in this slow moving water and the resulting situation was almost like a series of dams. The alders were so thick that if Chris moved more than thirty feet into the alders, he could not be seen.



In general, the stream was about four times as wide and four times as shallow as it should have been. There were almost no holes or undercuts where fish could find cover in the upper regions. The work crew removed alders and blockages on about two-thirds of the river, not counting the ponds. This aspect of the project was very effective.

In the last days of the summer, when the hottest weather had passed, another two hundred trees were planted, this time in the wet areas between fields and Hardy's Pond. These trees, most of which were ash, were excellent stock, some measuring over three feet high, which is high enough so they should be able to out-compete the surrounding grass.

Silt Traps

In removing blockages in the stream, some silt is exposed and some is actually dislodged and moves downstream. It is hoped that in the spring, the high water will flush much of the silt downstream thereby making the stream deeper and narrower. However, it is necessary to capture the silt. To accomplish this, two silt traps were built on the two major branches of the Winter River.



Each trap was essentially a deep hole excavated in the stream bed (measuring thirty meters long, two and a half meters wide, and two meters deep). The silt traps will provide an area where the water will slow down and the silt will settle out. When the silt trap fills in with silt, it will be re-excavated. This cycle will hopefully take place many times.

River Temperatures

There was some concern about the quantity and quality of water in the river. The quantity was especially important as there needed to be enough water flowing through the dams to allow fish passage to occur. This was not a problem this summer. Water quality was a different matter. The most important parameters to fish, and especially to salmonoids, are water temperature and oxygen content. Oxygen content is usually not a problem except where nutrient over-enrichment is a factor. This usually occurs in the estuaries. The tell-tale white colour resulting from the anaerobic breakdown of seaweeds was noted a couple of days near the Corran Ban Bridge but it was not as much of a problem as in previous years – likely due to the work completed by the P.E.I. Department of Transportation when they improved the tidal flushing action immediately upstream of the Bridge.

Temperature recorders were placed in the streams leading into Officer's Pond and the pond at Hardy's Dam as well as the outlet of each pond. Also, temperature recordings were made at the water surface and bottom of Officer's Pond on some hot days. Brook trout do not like temperatures much above 20 °C while salmon can only tolerate temperatures a couple of degrees higher. Gasperaux and smelt are not affected by the high temperatures because they move back to the sea after spawning in the ponds. The stream temperatures seemed to be satisfactory, but the temperature in the ponds climbed to over 27 °C. No fish were observed and algae was noted in most of the water column over much of each pond. Surprisingly, neither pond was observed to go anaerobic.



The lack of fish at Officer's Pond was supported by records kept by members of the Officer's Pond Club. The daily temperatures recorded by members were consistent with our temperature data. The data collected by them in past years, both of pond temperatures and fish catches will be important in developing management plans.

National Trails Day

On June 5, about fifteen people participated in a walk on the Winter River Trail on National Trails Day. The walk began and ended at the trail head on the East Suffolk Road and included a nice feed of mussels (provided by Bruce Smith) under the towering white pine beside the Hughes' log cabin.



Volunteer day

On September 11, our Association hosted a volunteer day to allow residents to participate in alder removal, beaver dam removal and brush mat construction. Although the weather could not have been much worse (windy and rainy), six people still showed up. Because of the low turnout, it was decided to concentrate on building two brush-mats and do other work at a later date. The two brush-mats are just upstream from the York Road-Hardy Mill Pond Road intersection.

Beach Cleanup

On September 25, our Association participated in the Great Canadian Shoreline Cleanup. This event, which was carried out on beaches across Canada, was delivered in conjunction with the Tracadie Area Residents for Resource Protection (TARRP). Seventeen people, armed with gloves and large plastic bags (and even rope to string abandoned mussel buoys together to drag them off the shore) cleared over nine kilometers of shoreline of Tracadie Bay. There was surprisingly little general garbage but a good deal of mussel buoy and sock remnants. In all, 19 bags of garbage, 311 buoys, 108 rope pieces, and 82 fishing net fragments were collected. Four quarter-ton truck loads of waste were taken to Island Waste Management facility (including a damaged 13 foot long by 2 foot diameter Coast Guard marker buoy). As well, a large number of buoys in good shape were returned to mussel fishers. Maybe next year we will try to get more support from the fishers.

Current Activities

The underlying and most important task for the Association is the development of a watershed management plan. As part of this initiative a meeting is planned with farmers on November 30. A public meeting will also be held on November 25. Both of these meetings will review our summer activities and develop actions which will be included in the management plan.

Other Activities Currently Underway

- “Redd” surveys are being conducted to identify if and where fish are spawning.
- Blockages will continue to be identified as they can prevent fish from accessing spawning sites. Several abandoned beaver dams had been removed earlier in the year however one new dam has since been found.
- Funding applications are being prepared to obtain financial support from a variety of funding sources.
- Our Association is a member of the Watershed Alliance which represents all of the watershed groups in the province and facilitates communications and watershed planning with government.

Activities for 2011

Activities for 2011 will be determined by direction provided from public meetings, the level of funding that will be available, and by the consensus of the Board of Directors. Notwithstanding these determinants, it is hoped that the following activities can be undertaken.

- A major planting initiative (especially on properties owned by the City of Charlottetown. Much of the wet riparian zone of this land is covered by alders, so it is hoped that a forest consisting of cedar, ash and larch (juniper) will be planted.)
- Silt trap clean out.
- Continued removal of alders, debris and blockages on the portion of the river not covered this year.
- Establishment of brush-mats.
- Cleaning out of natural springs to get them flowing again. (This may be combined with modifications to make them more available and conducive for trout spawning.)