

**WHEATLEY RIVER IMPROVEMENT GROUP  
SUMMER 2007 FINAL REPORT**

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**WORK CREW:** ADAM VESSEY, SAM ARNOLD

**Basic Objectives:** Enhanced stewardship plan, increased community engagement, stream restoration, nursery maintenance, increased public awareness

The summer began with a general survey of work completed the year previous to gauge what was effective. Our situation in regards to the strength of our crew was uncertain at that time, so planning was difficult.

**Newsletters**

Adam and I had the first newsletter prepared for the beginning of July. It was a collaboration of articles written by WRIG board members and myself covering a variety of topics. (See Annex 1) Preparation for a second newsletter has begun. Adam and Sam will be working on it during the last week of August.

**Learning, Public Awareness and Community Involvement**

We made an effort to learn about different aspects of the watershed. We spent a day at MacPhail Woods learning about their environmental strategy and nursery techniques. A morning was spent at the compost facility in Brookvale to find out what kind of system they used and the environmental safeguards they had in place. Chris Snively, the manager, also donated a pickup load of mulch to our cause. Shelley Cole, officer with the Environment Management Section of the Department of Transportation and Public Works met with Sam and myself one morning to discuss what measures were taking to prevent erosion on the highway project on Route 2.

The next day we had the torrential style rain that was featured in the radio interview between Pat Martell and myself the following week. Sam and I had decided to peruse the watershed in search of problem areas; we wanted to learn where silt and soil that we deal with every day in the streams was originating. Route 2 was a mess; a quick phone call to Shelley Cole ascertained that she was aware of the situation. Dirt roads and driveways like the Little Bungay Rd and the driveway up to Rackham's pond were rivers of red. One of our objectives for the morning was to obtain photo documentation, which we did. We even captured a short video on my digital camera of a stream of water overcoming the stone check dams in a ditch on the Millboro Rd leading to a tributary of the Wheatley River. This was during the height of the downpour. The CBC interview was an opportunity to express a stream crew's frustration and disappointment with the current setup and to draw attention to the broader issues such as anoxia, siltation, and climate change that affect the watershed.

One of the ways we tried to involve more members of the community was a photography contest. Submissions have to be photos of the river or a tributary or of wildlife in the watershed. Prizes are offered, and John Sylvester is the judge. To advertise, a small article was placed in the Northern Star and our first newsletter, and posters (Annex 2) were placed in strategic locations in Wheatley River and surrounding communities. So far we have received several photos from individuals in the community with whom we never had ties before. We pushed the deadline back two weeks to September 3<sup>rd</sup> in the hopes of gathering more submissions. The plan is to make a display of the submissions.

Members of Otesha, an environmental and social justice organization that runs bike tours around different regions of the country, spent a day with us in the watershed. We organized a hay wagon ride down to the path along the Crooked Creek on Don Matheson's land. Some of the participants tried on the chest waders and walked in the stream. Then they biked to my house for a vegan barbecue lunch. After lunch was a wonderful

canoe/kayak in the estuary, from my house up to the Wheatley River bridge. This was a great experience for WRIG. We were able to show them the work we do, and talk to them about the problems we face. The members of Otesha are from all over Canada and even other countries, so they had little background on issues on a watershed basis. During the lunch, WRIG board members came to socialize and talk with the Otesha group. Michel Daoust, the supervisor from the neighboring watershed, was there to lend a hand and share his experiences. Mark Douglas, from Atlantic Agritech, was present with some visual aids to explain what the deal on nitrates is. Adam, Sam and I redid our display in time for the lunch as well, updating the photos and literature. The canoeing and kayaking aspect was also very important because all of the equipment was borrowed from members of the community who were kind and generous and who may now feel like they have been included a bit more. It is essential to make volunteers feel needed and wanted if we wish them to continue being active in our organization. This is a type of event that I feel should be repeated.

### **Interviews**

One of the new tenets of our philosophy as an organization is the continued improvement and update of the Watershed Stewardship Plan began by Heather Anderson MacEwen in 2006. Collecting historical information through interviewing older members of the community was set as one of the goals of the summer. Early on, I compiled an interview guide (Annex 3). I was reluctant to leave the crew alone in the stream without a car for safety reasons, so stream work dominated the first half of the summer. Once Adam had his license and was able to have access to his car once in a while, or when the Environment Futures students were with us, I was able to contact some members of the community. There are now few older people around that grew up in the area. I was able to complete around eight interviews (around two hour sessions, either with one person or a couple). Listening to what people have to say is incredibly interesting and enlightening. It is hard to make any conclusions from such varying viewpoints, but one thing that continually came up was how much change there has been in the last 20 years. Written accounts of their interviews are included in Annex 4.

### **Tree Planting**

This summer, we planted or gave to landowners over 600 trees or shrubs with the aims of enhancing riparian zone and creating wildlife habitat. All of the trees were from the J. Frank Gaudet Tree Nursery on the Upton Rd. A comprehensive list of trees at the nursery (subject to availability under the first come first serve principle) is included in Annex 5. We began by returning to Ralph Cruwys's land off of Route 2 where we had done significant work last summer. Many of the trees we had previously planted seemed to be doing quite well. We then planted at Stewart MacRae's new duck ponds. Cecil Hurry allotted us a significant riparian zone to plant in around his game pond. We planted on Murray Macpherson's old family farm, along the buffer zone on the estuary. We returned to Lloyd Ross's land where we had planted last year and found that the ones we had planted last year were perhaps too small, so we planted a few more there. In order to be able to assess the success of our tree planting operations in the future, we purchased trail tape to mark the trees we planted, to identify them and the year they were planted in the future. This year's color is pink, and we marked some of last year's with blue. We also gave small numbers of trees to landowners in the watershed along the estuary or tributaries in order to promote wildlife habitat and good relationships.

### **Stream Restoration**

We did stream enhancement work along several stretches (Annex 6). We continued putting brushmats into the stream on Norma Waye's land; the ones last year proved to be very effective. There are large amounts of silt flowing through that stream. We alternated the brushmat building with stream clearing in the Crooked Creek, accessed via the Glasgow Rd in Ebenezer. We worked through Stewart MacRae's, Walter Andrews', the

Theberge's, Jan Van Bemel's; currently, we are finishing up around the Lank's. It is a nice stream that has a lot of brush in it in some areas. There are a lot of fish and good fish habitat along its length. We covered around a kilometer of stream. We obtained permission from Cecil Hurry to work on his land along the Church and Glasgow Rd for about 500 metres. We did not follow that stream any farther; that is something that could be done in later years. Upstream Donald Stead sold lots off his land, and he wasn't able to tell me the names of the new owners. It may be necessary to make home visits.

We also walked through the inlet next to the Oysterbed Bridge on the Stead Rd, through the Campbell's, the Peters' etc. It is a very small stream of about 500 metres that runs dry at the end of the summer. There are springs, but not necessarily large enough to keep a steady flow. It opens into a tidal marsh with bulrushes and other grasses.

The WRIG board wished us to adopt the Chapel/ Winter Creek in South Rustico which empties into the Rustico Bay. At first we were hampered by the lack of a landowner map, but Shawn Hill was able to procure one for us after a few requests. Permission has been obtained by several of the landowners, however it is unlikely the crew will have time to finish it. We have done around half a kilometer of work there. It is a small stream that is quite clean and clear in most areas. The rest can be completed next year; as well as tackling Horne Creek to the east. It was suggested to work along the stream that passes through the Route 2 construction zone, farther upstream than Norma Waye's. I obtained permission from the Wolters who own a fair chunk of the land there. On initial observation, it does not appear that damaged. It is relatively narrow and quick at that point, preventing the silt from depositing. Adam and Sam continue to work there now.

#### **WRIG Nursery**

The WRIG nursery on Don Matheson's land was kept up. We weeded, root pruned and mulched the beds with trees that are still small enough to be moved. Many of the trees there are probably too large to be transplanted at this time. A tree give away of the rest of the trees is planned for this fall, date as of yet uncertain. Adam and Sam will both be present to help.

### Water Testing

We began to do water testing for nitrates this summer, thanks to Atlantic Agritech. We have eight sample sites that represent most of the sub-basins in the watershed. The sampling is completed approximately every two weeks. Only two data sets are available at present time.

Sample	Nitrate NO <sub>3</sub> (ppm ) 2007				Location
	26/07	07/08	23/08	16/09	
1	3.8	3.9	3.6	2.6	Crooked Creek, immediately downstream of concrete bridge on Walter Andrews/ Stewart MacRae's land
2	3.5	3.5	3.1	2.8	Rackham's Pond next to blown out gabian at the mouth of bypass stream
3	3.2	3.1	3.7	3.8	Church Road Trib. Immediately upstream of culvert underneath Church Rd on Cecil Hurry's land
4	0.5	0.3	<0.2	<0.2	Allan Ling Trib. Immediately upstream of final culvert before entering river downhill from Wheatley River Community Hall
5	2.9	2.7	2.8	2.5	Millboro Road Trib. Immediately upstream of culvert at old fish ponds
6	3.6	3.3	3.5	3.1	Art Ford Cross Rd. immediately upstream of road crossing
7	3.4	3.3	3.4	3.3	Route 2 (Brookfield) immediately upstream of road crossing on Ralph Cruwys's land
8	4.1	4.2	3.8	3.4	Little Bungay (South) downstream of road crossing on Norma Waye's land

The suggested maximum in surface water for nitrates is 2.9. Of all of the sample sites except one, the nitrate levels are near or above the 2.9 threshold. This suggests a serious nitrate problem in our watershed; however, conclusions should only be made following the collection of many more data sets.

### Collaboration with other crews

The crew spent a day working with Michel Daoust in the Hunter-Clyde watershed, close to where Sam lives. Michel and his crew also came to work with us one day. This is valuable because we have the opportunity to share our expertise and discuss the problems we face.

We had the help of an Environmental Futures crew for approximately 10 days in total. Shelley Cole's crew spent two days working in the stream with us as well. Having another crew join your own makes for a nice working environment. They also made accomplishing our goal for stream work completed much more achievable.

### Recommendations

Stream work, including installing brushmats, clearing brush and even planting trees, will not in itself solve the serious environmental degradation in our watershed. If we are to actually make a difference, we must tackle the source of our problems. These sources include erosion from dirt roads, construction sites and some farmers'

fields, chemicals - hormones, detergents, nitrates and pesticides - that find their way into our groundwater and surface water from almost every area “touched” by a human hand.

We need to try to work with farmers and with the Department of Transportation and Public Works to reduce negative impacts on the environment, and to encourage a greater awareness of the environment and the problems it is facing among the general populace of the watershed. Our conventional approach of stream enhancement, although effective in localized areas, does little to reach out to people.

I think it is important for WRIG to evolve, while still engaging a work crew in the traditional stream enhancement methods. Already there has been a slight shift this summer, with more focus going into new areas. Another benefit of the broader approach is that it also offers the summer students a more varied experience that challenges them on different levels.

*Specific Recommendations:*

1. One method we could use to try to heighten our visibility in the watershed would be to adopt a flagship project (as suggested in the draft watershed plan developed in the winter of 2007). This would be something that would bring members of the community together and that would be beneficial to everyone or with results that are obvious. Suggestions for this could include restoring Rackham’s pond, opening the Robinson’s Island causeway or expanding Oyster Bed Bridge. Rackham’s pond was brought up by several of my interview subjects as well.
2. Water testing should definitely continue in the following years. We can demand action much more effectively from a platform based on solid data. It is also useful in order to illustrate the health of our watershed to visitors or newcomers. The numbers can also be used to examine land use planning in the watershed on a sub-watershed basis.
3. I think we should encourage board members, members of the community and summer students to write letters to the editor bringing up issues about water quality, enforcement of agricultural regulations, watershed group funding etc. It is important that all Islanders realize that all is not well in our water, and something must be done. That way, as a whole, we can apply pressure to government to ensure action is taken.
4. Repeating our day long introduction to the watershed that we had done for the Otesha group with other groups I think would be very successful and worthwhile. If we are dealing with younger children, we would need more adult supervision. Having a designated photographer for the day would be a good idea as well.
5. One issue that I feel has been put to the side in general here on PEI is water consumption, particularly in municipalities like Charlottetown. Declining winter snows could play havoc with our groundwater supplies. Keeping tabs on our groundwater could become very important in future years.
6. While working in the streams, one is surrounded with life. Being able to name it and know its position in the ecosystem, what services it provides, would be valuable. By promoting knowledge and understanding, the watershed gains. If the crew learns more, they are able to share that with others. I think having a biologist come out and walking the stream with the summer students and talking to them would be incredibly worthwhile. Being able to recognize what kind of larvae is in the water so we know what fish are living where is beneficial to our understanding of the watershed. Having a pair of binoculars for the field crew to use to watch wildlife and identify waterfowl would also be nice.

7. There is no doubt that farming affects the work we do. We should spend more time with farmers, learning about what they do and why, so we are able to engage in meaningful dialogue with them. There is far too much disconnect between farmers and the rest of the population. We should try to address that, perhaps by having farmers do tours of their farms, or having officials from the Department of Agriculture or the Federation of Agriculture do presentations. If we familiarize ourselves with farming practices, if a situation ever arose, we would be much better prepared to handle it.

8. Continuing work on the Watershed Stewardship Plan is crucial at this stage of our organization, as I see it. We need community input as to the direction we should take, and we need community involvement to achieve those ends. Facilitating a community consultation with all levels of stakeholders involved, completing surveys of inhabitants, and doing presentations to other community groups, youth groups or classrooms are all important steps. We have tools to reach out to people, like the slideshow and the display, with a website in the works, and we should be using them.

9. Future areas for stream work include finishing Chapel Creek and beginning at Matheson/Horne Creek. Going farther up the Crooked Creek would also be a possibility, along with the brook behind Cecil Hurry's game pond.

#### **Conclusion**

Thank you very much for everything. This summer was great. I really appreciated how supportive the WRIG board was in all of our endeavors. I hope to be able to work with you all again in the future!

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