

# Kennebecasis Watershed Restoration Committee Year End Report – 2010



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# TABLE OF CONTENTS

Table of Contents.....	i
1.0 INTRODUCTION.....	1
2.0 FUNDING.....	2
3.0 HUMAN RESOURCES.....	3
4.0 ACTIVITIES.....	3
4.1 Water Classification.....	3
4.2 Restoration Efforts.....	4
4.2.1 Riparian Zone Planting.....	4
4.2.2 Riparian Fencing Effort.....	5
4.2.3 Bank Stabilization.....	5
4.2.4 Stream Clean-up.....	6
4.3 Juvenile Population Study.....	7
4.4 Riparian Zone Assessment.....	7
4.5 Lower Kennebecasis Watershed Habitat Assessment.....	7
4.6 Public Engagement.....	8
5.0 EXPENSES OVERVIEW.....	8
6.0 LANDOWNERS.....	9
7.0 CONCLUSIONS.....	9
APPENDIX A - KWRC Committee Members.....	ii
APPENDIX B - 2009 Complete Ledger.....	iv
APPENDIX C - 2009 Water Quality Monitoring Report.....	v
APPENDIX D - Lower Kennebecasis Tributaries Habitat Assessment Report 2009.....	vi
APPENDIX E - Brook Trout in the Upper Kennebecasis River: 10 years after implementation of the “no kill zone”.....	vii

## 1.0 INTRODUCTION

The Kennebecasis Watershed Restoration Committee (KWRC) is composed of various provincial and federal departments, local municipalities and local interest groups. Beginning in 1994, the committee has worked on enhancing the general health of the Kennebecasis Watershed, focusing on water quality and fish habitat within the greater Kennebecasis Watershed (Figure 1). Surveys were completed to identify the type and

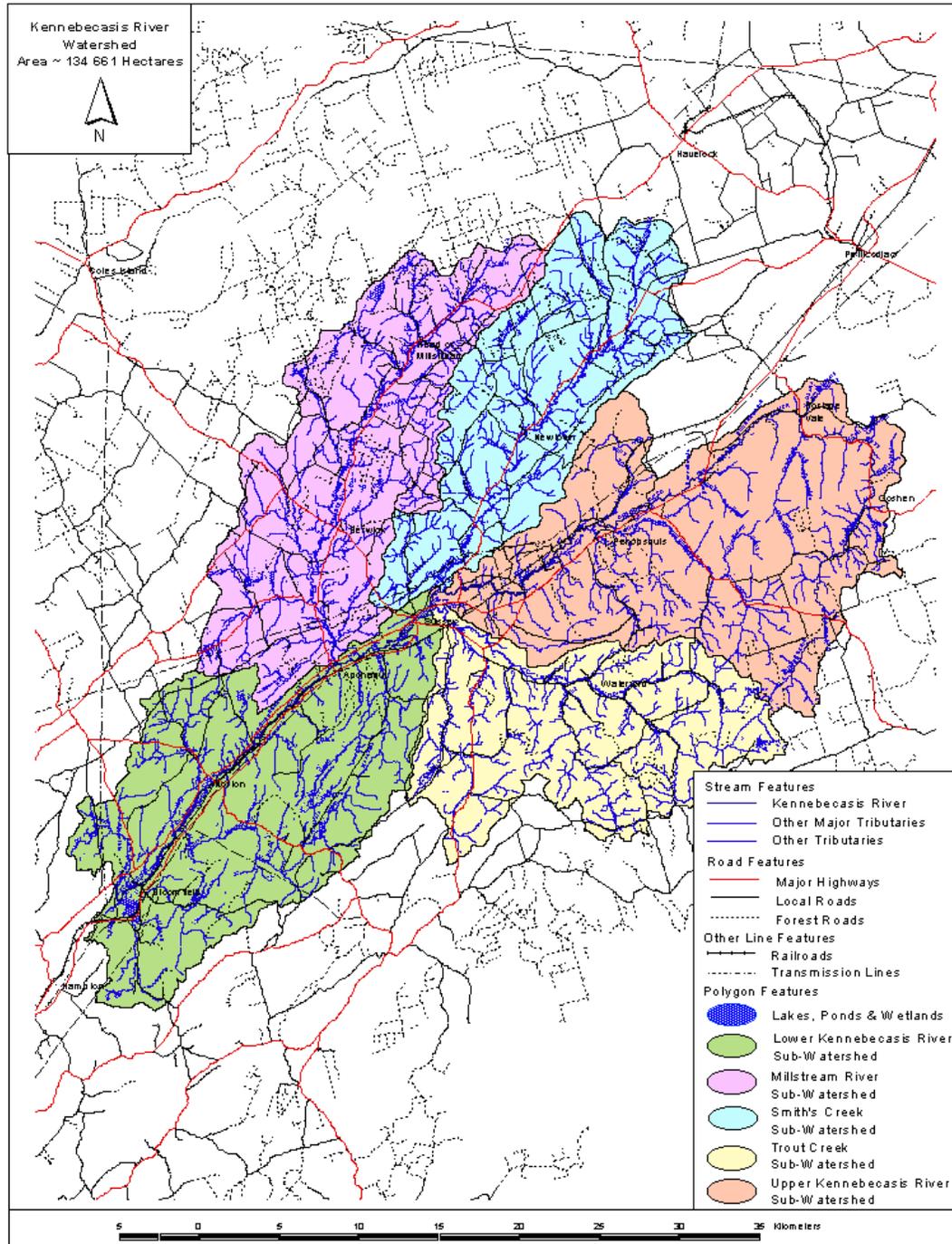


Figure 1: Map of the Kennebecasis Watershed showing the sub-watersheds.

location of major stream habitat problems, and guide in-stream work focused at addressing these problems and improving the aquatic conditions of the watershed. Work has been carried out to decrease erosion, enhance fish habitat, improve the riparian zone habitat and educate the public on environmental issues.

Since 1994, over 512 stream enhancement structures have been installed, 51km of fencing has been erected, 3.1km of banks have been stabilized, fish populations have been monitored and water quality assessments have been completed. The ultimate goal of the committee is to re-establish the natural habitat of the Kennebecasis Watershed in order to maintain clean, healthy waterways and proper aquatic habitat.

This report will outline the projects that the KWRC completed in 2010 as well as provide a brief overview of the financial status of the KWRC. This document is intended as an overview, further detail on each project can be found with the project reports which can be found in the appendix.

## 2.0 FUNDING

Part of the reason for the great success experienced by the KWRC is our ability to continually attain funding. This in part is due to our great effort in applying to various sources for funding and by searching for new partnerships and project ideas. Our total revenue generated for 2010 was approximately \$281,374 with some of this being committed to multi-year projects.

*Table 1: Revenue by funding source*

<b>Funding Source</b>	<b>Amt Requested</b>	<b>Amt Granted</b>
NBWTF McNair Brook Restoration Project	\$ 45,545.42	\$ -
NBWTF Kennebecasis Riparian Rest. Prj	\$ 23,348.72	\$ 10,800.00
ETF Parson's & Windgap Bk Rest Proj	\$ 18,559.65	\$ -
ETF Water Sampling and Culvert Assessment	\$ 61,602.70	\$ 40,000.00
EcoAction EFP Participation	\$ 27,248.16	\$ 18,000.00
Gulf Of Maine Council*	\$3,698.86	\$ 3,698.86
Growing Forward	\$9,758.27	\$ 7,780.14
Canada Summer Jobs (KWRC)	\$ 5,664.00	\$ 6,058.00
Canada Summer Jobs (SFG)	\$ 3,029.00	\$ 3,011.00
SEED	\$ 5,664.00	\$ 3,011.00
PCS HADD*	\$ 182,703.36	\$182,703.36
Tree Canada/Majesta	\$ 2,200.00	\$ 2,200.00
Royal Bank (Sussex)	\$ 311.68	\$ 311.68
Bayview Credit Union	\$ 50.00	\$ 50.00
Royal District Planning Commission	\$ 200.00	\$ 200.00
Bob's Kitchen Works	\$ 50.00	\$ 50.00
ASCF Culvert and water quality Assessment	\$50,000	\$ -
Village of Sussex Corner	\$1,000	\$1,000
Sussex Fish and Game	\$ 2,500.00	\$ 2,500.00
<b>*multiyear project</b>	<b>\$ 443,133.82</b>	<b>\$281,374.04</b>

A breakdown of our funding is provided in Table 1 which also illustrates the number of funding requests sent out by staff and the success of those applications. It is recommended that in the future a greater effort be made to attract corporate funding in an effort to diversify our sources. The complete 2010 ledger can be found in Appendix B.

### 3.0 HUMAN RESOURCES

With a large restoration project and a culvert assessment program being carried out in 2010, there was a need to have a number of staff in place. A total of eight students were hired and a Restoration Coordinator was put in place to supervise the restoration crew. The Project Manager organized the projects, performed various tasks as required, and maintained budgets. Two labor positions were filled in late fall, for 2 weeks each, to help with some additional planting. Overall the KWRC provided approximately 6880 man hours of employment through 2010.

In addition to the paid labor the KWRC was fortunate to receive a number of volunteer hours. Our “Water and Willows” event received 200 hours of volunteer time while our shoreline cleanup efforts had approximately 210 hours. Volunteers also provided the KWRC with approximately 460 hours of tree planting. Overall there was approximately 1100 hours volunteered in 2010.



*Volunteers from the 6<sup>th</sup> Hampton Scouts helped plant trees along a degraded riparian area along Shannon Brook.*

### 4.0 ACTIVITIES

The year was full of a number of large projects and successful events. Some projects were completed, while others will be completed in subsequent years. The focus of our work, as is our custom, was restoration efforts, but water sampling, culvert assessments, monitoring, and public education efforts all took up significant staff time as well.

#### 4.1 *Monitoring Efforts:*

This has become an important activity within our watershed with the broadening scope of industrial activities taking place in the Upper Kennebecasis sub-watershed. Monitoring of our watershed has taken various forms. Getting out and talking to those who use the river and hearing about what they see is important. Monitoring policies and activities of other watershed groups and discussing the effectiveness of the various policies and management tools is also important. More directly is the water sampling, habitat assessments, and site evaluations we conduct.

- 4.1.1 Water Sampling - In 2010 the KWRC was able to grab monthly samples from 20 sites across the watershed. Most of these sites added to the historical data of previously established monitoring locations while two were created to provide a baseline for previously unmonitored tributaries. In all, 98 samples were collected and analyzed. A Water Quality Report was created and can be found in the appendix.



- 4.1.2 Culvert Assessments – A flooding incident in the fall of 2009 resulted in a number of issues with culverts in our system. It was decided to perform a culvert assessment that would evaluate their conditions for habitat and infrastructure components within each system. Over 400 culverts were located and assessed with a report being produced. This report can be found in the appendix.

- 4.1.3 River Watch Activities - Late in 2010 the KWRC was approached by the New Brunswick Department of Environment to act as the local River Watch. The resulted in KWRC staff working through the winter monitoring snow depths and as the thaw started taking weekly drives up and down the watershed to monitor ice breakup conditions. This activity is a great way to provide a more sustainable source of funding to the Committee.

#### 4.2 *Restoration Efforts:*

The KWRC has become very confident in installing many different habitat restoration structures over the 15 years they have been active. Whether planting trees, erecting agricultural fences, back sloping eroding banks, or installing rock sills,

KWRC staff has developed tested methods and partnerships to get the needed work done. In 2010 we had two major project sites; McNair Brook and Ward's Creek. These sites resulted in some impressive additions to our restoration numbers.

#### 4.2.1 Riparian Zone Planting

Table 2: 2010 Tree planting numbers

Landowner	Date	# of trees planted
Paul Walker	Summer 2010	8925
John Malone	June 29/10	505
Ken Lisson	June 19/10	1086
Ken Lisson	June 21/10	576
Ken Lisson	June 23/10	316
Ken Lisson	Oct 27/10	318
Hampton Bible Camp	June 24/10	1283
Sara and Jason Daynes	Oct 29/10	292
Don Bettle	Oct 8/10	46
Don Bettle	Oct 28/10	151
Lloyd Secord	Nov 1/10	486
Jerald & Stephanie Coburn	Oct 28/10	34
Greg McLeod	Oct 19/10	25
Greg McLeod	Oct 25/10	55
Greg McLeod	Oct 22/10	73
Millstream at Berwick	Oct 26/10	68
Sean Moffett	Sept 10/10	20
Sean Moffett	Sept 13/10	160
Marshall Fanjoy	May 8/10	200
<b>Riparian Planting Field Days</b>		
Norton Elementary	Oct 5/10	38
Sussex Ele (gr. 4)	Oct 12/10	81
Sussex Ele (gr. 4 immer)	Oct 12/10	68
Sussex Ele (gr. 5)	Oct 19/10	78
Sussex Corner (gr. 4)	Oct 14/10	73
Apohaqui Ele (gr.4)	Nov 3/10	122
<b>TOTAL # OF TREES PLANTED 2010</b>		<b>15079</b>

In 2010 KWRC staff planted over 15000 trees restoring approximately 40000m<sup>2</sup> of riparian zone. Fourteen different species were planted at various locations across the watershed. A good portion of the trees planted were willow seedlings that staff and volunteers worked at growing. Cuttings, from willows previously planted by the KWRC, were attained using volunteers and staff whom then struck these in jiffy pots. The seedlings were grown through the spring at a local nursery that provided space for us in-kind. These trees were also supplemented by surplus trees from the Canadian Forestry Service Greenhouse in Fredericton as well as from the local JDI Woodlands Greenhouse. The trees will increase biodiversity, soil stability, and habitat cover while decreasing carbon emissions, erosion, and stream water temperatures. Table 2 provides the details of our planting efforts in 2009.

#### 4.2.2 Riparian Fencing Effort

Riparian zone planting in our watershed would often be futile without landowners agreeing to allow KWRC staff to erect riparian zone fencing in many of our sites. Cattle would quickly graze freshly planted willows if permitted, so therefore riparian zone fencing is important. The riparian fencing restricts livestock access to the fragile stream banks and thus protects the banks against erosion and vegetation degradation.

In 2010 the KWRC worked with Paul and Jim Walker of Walkerville Farms. This farm decided to aid the KWRC in erecting 2km of fence along Ward's Creek and two of its tributaries. By the fall of 2010 a visible difference could be seen in the state of the riparian zone.

With restricted access to various points on this system, it was necessary to stabilize five fording sites as part of this project.

At the Hampton Bible Camp, a tributary to Groom's Brook was fenced off and planted. The pictures of this site, shown below, easily illustrate why vegetated riparian zones are so important.



*These photos show the impacts of riparian fencing and planting at the Hampton Bible Camp site. The picture on the left was taken in the spring after fencing was installed and site planting was started; the photo on the right was later that same summer.*

#### 4.2.3 Bank Stabilization

Our habitat assessment report in 1994 revealed that a large percentage of the stream banks in the Kennebecasis Watershed were heavily eroded. Since that time we have been working at stabilizing as many of these banks as possible. With various techniques to stabilize these banks staff consult with DFO to ensure that the best method for each site is being utilized. In 2010 the KWRC worked with contractors and a cooperative landowner (Sean and Deanna Moffett) to stabilize approximately 125m of stream bank along McNair Brook. This restoration project built upon restoration efforts that were undertaken almost a decade ago. Located near the mouth of McNair Brook this work should allow salmonids to more easily access the upper reaches of this large tributary of the Millstream sub-watershed.

#### 4.2.4 Stream Clean-up

Stream clean-ups are a great way to engage the public in the restoration of the local streams. This engagement is in direct cooperation with our mission and often has very positive results. In 2010 many volunteers removed a great deal of litter from our stream banks. The largest effort was through our "3<sup>rd</sup> Annual Great Canadian Shoreline Cleanup" where nearly 50 volunteers removed 630kgs of garbage from Trout Creek and the Kennebecasis River. Earlier in the year the Sussex Middle School (SMS) hosted the 2<sup>nd</sup> edition of their "Stinger's Shine" with assistance from KWRC staff. This event saw the Environmental Science Class from SMS clean up litter from along the walking trail and banks of Trout Creek.

The Town of Sussex looked after tipping the waste for this event and unfortunately there is no weight available.

#### 4.3 Public Engagement

Public involvement in the restoration of the Kennebecasis Watershed is a key component in our Mission statement. Staff have been active in numerous ways within the watershed; either through education, policy, or consultation. The biggest benefit that the KWRC receives from these efforts is the opportunity to share our success with others and garner further government support for future funding applications.



*Attendees of the “Farmers Helping Fish” tour discuss stream bank restoration along a site on McNair Brook.*

In 2010 the KWRC was busy developing and completing a number of educational tools, tours, and workshops. The largest of these events was our “Farmers Helping Fish Workshop.” This event was aimed towards farmers in hopes that we could help the Agriculture Alliance of New Brunswick increase

the uptake and participation in the Environmental Farm Plan program. While the attendance at these three events was lower than anticipated, the response back was positive and suggested that more work in this area is needed.

Another successful effort was generated through our Elementary School Planting Days. These were organized to provide grade 3-5 students with a chance to get



*Students from Norton Elementary enjoyed a morning out tree planting along the Kennebecasis River.*

outside and connect with riparian zones near their schools. Students walked to the sites and planted various native trees along the rivers to help enhance degraded riparian zones while becoming educated on riparian ecosystems.

Overall there were approximately 730 people who took part in a volunteer day or listened to a presentation by the KWRC in

2010. Further to this there were 780 volunteer hours provided to the KWRC through the education and outreach projects. More details regarding our outreach efforts can be found in the appendix of this report.

## 5.0 EXPENSES OVERVIEW

The daily operation of the KWRC is not a large financial burden with only salaries and phone/internet, and some vehicle operation and rental charges occurring daily. The largest expense we have had historically is for human resources and this continues to be the case.

Source	Amount	Percentage
Human Resources	\$103,730.16	52%
Office and Administration	\$ 4,305.59	2%
Education and Outreach Materials	\$ 6,368.39	3%
Vehicle Rentals and travel expenses	\$ 15,797.21	8%
Monitoring and Restoration Materials	\$ 67,622.66	34%
	\$197,824.01	100%

Table 3: Spending breakdown for 2010

## 6.0 LANDOWNERS

The restoration work completed by the KWRC often depends on being able to find cooperative landowners to work with. In 2010 the committee had numerous discussions, communication, and partnerships with various landowners. Some of this effort resulted in the completion of restoration work while some of it will provide preliminary ground work for future projects. Table 4 provides a list of landowners who were contacted in 2010.

## 7.0 CONCLUSION

This year has been a very successful year for the KWRC however there is still much work to be done throughout the watershed. The restoration activities completed this season will provide improved aquatic habitat as well as additional terrestrial habitat within the enhanced riparian zones. We hope that through our meetings and presentations we can spark the interest of many more community members who will be willing to share their time and efforts in the restoration of our beautiful watershed. The community has greatly benefited from our restoration work, whether it is in the prevention of erosion, the creation of habitat, the improvement in water quality, the increased recreational opportunities, or simply a greater sense of community, our work has provided a great deal to the Kennebecasis Watershed.

Table 4: Cooperative Landowners for 2010

#	Name	Sub-watershed	Activity	On File (y/n)
1	Sean and Deanna Moffett	Millstream River	Bank stabilization, riparian planting	Y
2	Hampton Bible Camp	Kennebecasis Bay	Riparian planting and fencing	Y
3	Ken Lisson	Lower Kennebecasis	Riparian planting	Y
4	Jim and Paul Walker	Trout Creek	Fencing, planting, fords, and stabilization	Y
5	John Malone	Upper Kennebecasis	Planting	N
6	Sara and Jason Daynes	Smith's Creek	Planting	Y
7	Don Bettle	Lower Kennebecasis	Planting	Y
8	Lloyd Secord	Lower Kennebecasis	Planting	N
9	Jerald & Stephanie Coburn	Millstream River	Planting	N
10	Greg McLeod	Upper Kennebecasis	Planting	Y
11	Marshall Fanjoy	Trout Creek	Planting	Y

Over previous years we have developed improved tracking tools that will allow us to better calculate volunteer hours and presentation/volunteer events. This will aid greatly in future funding applications and in determining our rate of success. We have also improved communication lines with our municipal partners, however more effort and consistency is needed in this area.

Funding for 2011 is already being developed and the projects being planned will continue to improve community awareness in regards to watershed management, restore degraded waterways and riparian areas, and monitor overall watershed health and changes.

*APPENDIX A*

**Kennebecasis Watershed Restoration Committee  
Members**

**Kennebecasis Watershed Restoration Committee**

MLA Kings East

Town of Sussex

Village of Sussex Corner

Royal District Planning Commission

Potash Corporation of Saskatchewan

Department of Fisheries and Oceans

Kings County Soil and Crop Improvement Association

N.B. Soil and Crop Improvement Association

N.B. Department of Natural Resources

N.B. Department of Agriculture and Aquaculture

N.B. Department of the Environment

N.B. Department of Transportation

Sussex Fish and Game Association

Canadian Forest Service

Town of Hampton

***APPENDIX B***

**2010 Complete Ledger**

*APPENDIX C*

**2010 Water Quality Monitoring Report**

*APPENDIX D*

**Kennebecasis Watershed Restoration Committee  
Culvert Assessment Report  
2010**

*APPENDIX E*

**Kennebecasis Watershed Restoration Committee**

**Volunteer and Presentation Events  
Tabular Report  
2010**

**Presentation and Consultation Dates April 2010-  
March 2011**

<b>Date</b>	<b>Topic</b>	<b>Location</b>	<b>Audience</b>	<b>#ofppl/vo lunteer hrs</b>	<b>materials handed out</b>
10/06/ 2010	Project update and funding request	Sussex Lions Club	Sussex Fish and Game Members	25/0	none
17/06/ 2010	Discussion on watershed planning	RDPC office	Royal District Planning Commission staff	3/0	none
19/06/ 2010	riparian tree planting day	Shannon Brook	6th Hampton Scouts	32/128	This...not this pamphlet
09/07/ 2010	Culvert assessment sheets	Moncton	Department of Fisheries and Oceans	1/0	culvert assessment template
15/07/ 2010	Watershed Governance survey (Elaine vanTol)	KWRC office	Elaine vanTol (University of Waterloo)	1/0	ATV pamphlet, Ag service pamphlet, This not this pamphlet
17/09/ 2010	Habitat Assessment and Field Skills Development	SRHS	Environmental Science Students	115/0	ATV pamphlet, Ag service pamphlet, This not this pamphlet
18/09/ 2010	Great Canadian Shoreline Cleanup	Burton Park	general public	50/200	ATV pamphlet, Ag service pamphlet, This not this pamphlet, prizes
28/09/ 2010	Atlantic Riparian Health Workshop presentation	Moncton	stakeholders and colleagues	40/0	BMP manuals (digital copies) BMP manuals, Ag service pamphlet, This not This, stickers, pencils
04/10/ 2010	Farmers Helping Fish Workshop	DAA Building, Sussex	stakeholders	4/0	
12/10/ 2010	SES Planting Day	Trout Creek	elementary school, grade 3-4 students	27/54	none
14/10/ 2010	SCES Planting Day	Trout Creek	elementary school, grade 3 students	25/50	none
18/10/ 2010	Farmers Helping Fish Workshop	DAA Building, Sussex	stakeholders	7/0	BMP manuals, Ag service pamphlet, This not This, stickers, pencils
19/10/ 2010	SES Planting Day	Trout Creek	elementary school, grade 3-4 students	70/140	none
20/10/ 2010	Wetland Presentation	SRHS	biology students	25/0	ATV pamphlet, Ag Service pamphlet, This not this pamphlet
25/10/ 2010	Farmers Helping Fish Workshop	DAA Building, Sussex	stakeholders	5/0	BMP manuals, Ag service pamphlet, This not This, stickers, pencils

<b>Date</b>	<b>Topic</b>	<b>Location</b>	<b>Audience</b>	<b>#ofppl/ volunteer hrs</b>	<b>materials handed out</b>
27/10/ 2010	IBoF Workshop with display booth	All Season's Inn Hampton	professionals	25/0	BMP manuals, Ag service pamphlet, This not This, stickers, pencils Proposal for potential partnership
29/10/ 2010	Hampton Town Council	Town office	Councilors	4/0	
15/11/ 2010	Environmental careers	SMS	middle school students	150/0	none Ag Service pamphlet, This not This, ATV Pamphlet
23/02/ 2011	Biodiversity Workshop, self guided booth	Fredericton	stakeholders/profes sionals	40/0	
28/02/ 2011	Helping to maintain our watershed	St. Pauls Church Sussex	Kennebecasis Naturalist Society	15/0	none Ag Service pamphlet, This not This, ATV Pamphlet
14/03/ 2011	Helping to maintain our watershed	DAA Building, Sussex	4-H Club members	12/0	ATV pamphlet, Ag service pamphlet, This not this pamphlet, prizes
19/03/ 2011	Water and Willows Harvest day	Millstream	general public	52/208	
<b>Total (volunteers/ hours)</b>				<b>730/780</b>	

**NOTE** If we assume a volunteer hour is worth \$12.50 then the KWRC received \$9750 (780hrs X \$12.50/hr) in in-kind labor.