

Final Report 2012 - 2013 – Main Bayfield River Watershed Plan

Summary of Project Activities and Accomplishments

Ecological Accomplishments

The watershed plan advisory committee set a goal of completing a minimum of 25 landowner surveys with members of the Main Bayfield watershed community by the end of March 2012. This goal has been attained and Ausable Bayfield staff members are continuing to complete surveys with landowners on an ongoing basis. To date, 42 surveys have been completed. These surveys account for 58 different landowners (due to land rental agreements). There are 171 different agricultural and rural landowners within the Main Bayfield watershed, which means 34 per cent have been surveyed. The landowner survey provides valuable information about agricultural practices within the watershed, and helps identify areas where best management practices (BMPs) can be implemented.

A number of BMPs have been implemented in the Main Bayfield watershed as a result of working with landowners on the watershed plan:

- Three wells have been decommissioned.
- Three erosion control projects have been completed. This includes two multiple berm projects, and one water diversion project.
- One manure storage facility has been decommissioned.
- Ten tree planting projects have been completed. These include windbreaks, fragile land retirement, and other tree orders (over 1250 trees planted).

Landowners in the area are also planning BMPs for the coming year(s):

- Six erosion control projects have been identified.
- Approximately 10 tree planting projects have been identified.
- One fencing project has been identified.
- One natural channel design project has been identified.
- One clean water diversion project has been identified.
- Five possible wetland projects have been identified.

Several community-based stewardship actions have also taken place within the Main Bayfield watershed since the watershed planning process was initiated (Table 1).

Table 1: Stewardship actions taken as a result of the Main Bayfield Watershed Plan.

Action Taken	Date	Description
Restoration Event	May 2011	<ul style="list-style-type: none">○ The ABCA partnered with the Bayfield Anglers Association, Friends of the Bayfield River, the 1st Order Exeter Scouts, and the 1st Order Zurich Scouts for a restoration event on the Bayfield River.○ More than 500 shrubs and 20 trees were planted to help stabilize the banks of the river between Brucefield and Egmondville.
Earth Day Event	Apr 26, 2012	<ul style="list-style-type: none">○ 60 large stock hardwoods were planted at the Clinton Conservation Area with students from Clinton Public School
<i>Tree Planting</i>	Oct 15, 2012	<ul style="list-style-type: none">○ The Zurich Scouts group helped ABCA staff

<i>Event</i>	plant 40 trees around the Clinton Stormwater Management Pond
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An Earth Day tree planting event has been planned for April 23, 2013. This event will be held with students from the five Clinton schools at the wetland behind St. Joseph Catholic School.

Since 2008 the Bayfield Ratepayers Association (BRA) has collaborated with the Ausable Bayfield Conservation Authority (ABCA) to monitor surface water quality within the Main Bayfield watershed. Ten sites in the Main Bayfield watershed were monitored every other week in 2011 and 2012 from June to November. Samples were analyzed concentrations of *Escherichia coli* (E. coli) (Table 2). Water quality data are being used to determine the current environmental conditions of the Main Bayfield River watershed. Two sites are located on the main branch of the Bayfield River and the remaining eight sites are located on tributaries flowing into the Bayfield River. Funding from the Erb Family Foundation helped to cover sampling costs at one of the sites in 2011.

Table 2: Water quantity and quality indicators monitored at each station within the Main Bayfield River watershed.

Site Name	Water Level	Water Flow	Physico-chemical Indicators (e.g., pH)	Nutrients, Suspended Sediment	<i>E. coli</i>	Benthic Invertebrates
HBWILT			X		X	
HBTR8			X		X	
HBWISE			X		X	
HBMIDD			X		X	
HBBRAN			X		X	
MBWILD			X		X	
HBGOSH			X		X	
HBJOHN	X	X	X	X	X	
MBVAR1	X	X	X	X	X	X
B8-1	X	X	X	X	X	

The surface water quality program has been re-evaluated in the past few months to account for a new project called the Rural Stormwater Management Model. As part of this project, two established monitoring sites within the Main Bayfield watershed are being monitored more extensively (HBJOHN and MBVA1) (Table 2). Grab samples for nutrients, suspended sediment, and bacteria are taken monthly. The sites are also being monitored for water flow and levels. In addition, one of these sites also has an automatic sampler (ISCO), which is triggered by a specific water level. Once triggered, samples are collected every two hours for a 24 hour period, and are analyzed for nutrients and suspended sediment. This method is ideal for capturing water quality data during a high flow event.

Crop windshield surveys have been completed for the Main Bayfield River watershed for the 2011 and 2012 growing seasons. The information gathered as part of these surveys will be added to the ABCA's mapping system, and will be used in the analysis of water quality data. This exercise is scheduled to continue in 2013.

Community Engagement Accomplishments

Numerous community outreach initiatives have occurred since the Main Bayfield watershed planning process was introduced to the community (Table 3). This initiation of the project took place at the 40th Anniversary of the Bayfield River Watershed Stewardship celebration where over 60 people attended.. There were also news releases in several local papers (Clinton News Record, Bayfield Breeze, Exeter Times-Advocate, Lakeshore Advance), and a media clip on a local radio station (The Beach).

A newsletter, which was created to establish interest in developing an advisory committee and to engage the community, was mailed out to all of the 199 Main Bayfield watershed landowners in August of 2011. Since that time, seven advisory committee meetings have been held.

Table 3: Community engagement activities in the Main Bayfield watershed since the introduction of the watershed planning process.

Event/Activity	Date	Description
40 th Anniversary of Bayfield River Watershed Stewardship	Jul 21, 2011	<ul style="list-style-type: none"> ○ Launch of the project to the Main Bayfield community ○ Over 60 community residents attended ○ Had several news releases in the Clinton News Record, Bayfield Breeze, Exeter Times-Advocate, Lakeshore Advance, and the Beach Radio (media clip)
Newsletter to the Community	Aug 2011	<ul style="list-style-type: none"> ○ Newsletter created to establish interest in developing an advisory committee ○ Mailed to 199 landowners in the Main Bayfield watershed
Bannockburn Fall Hike	Oct 2, 2011	<ul style="list-style-type: none"> ○ Staff from the ABCA provided information and generated interest regarding the Main Bayfield Watershed Plan to the local community ○ Provided an opportunity to engage in discussions with community members about their individual concerns regarding the current environmental conditions of the area ○ 120 hikers participated in this event
Sail & Canvas Weekend, Bayfield	Jun 16, 2012	<ul style="list-style-type: none"> ○ Had a display regarding the Main Bayfield Watershed Plan ○ Exact number to view the display is unknown, but had a good turn out from the community ○ A more interactive display is planned for 2013
Brief Watershed Plan Developed	Aug 10, 2012	<ul style="list-style-type: none"> ○ A brochure to briefly explain the project and inform community members on how they can be involved was developed and printed to be used at all future events and meetings
Watershed Bus Tour	Aug 17, 2012	<ul style="list-style-type: none"> ○ The tour made stops at several sites and projects throughout the Main Bayfield watershed

		<ul style="list-style-type: none"> ○ Approximately 30 people attended
Letters to Organizations	Aug , 2012	<ul style="list-style-type: none"> ○ Letters were mailed to 45 organizations within the watershed to encourage local actions for environmental improvement ○ Another 26 letters were sent via email
Library Display	Sep 17, 2012	<ul style="list-style-type: none"> ○ A display was set up at the Bayfield Library to promote the project and to promote the Bannockburn Fall Hike
Huron East Council Meeting	Sep 25, 2012	<ul style="list-style-type: none"> ○ ABCA staff attended the Huron East Council Meeting to explain the project and encourage the municipality to commit to several actions for environmental improvement
Town Meeting and Film	Sep 26, 2012	<ul style="list-style-type: none"> ○ A meeting was held at the Bayfield Town Hall to explain the project to the local organizations and the community of Bayfield ○ The film “Green Fire” was shown to the 60 community members who attended
Bannockburn Fall Hike	Sep 30, 2012	<ul style="list-style-type: none"> ○ Staff from ABCA provided information and generated interest regarding the Main Bayfield Watershed Plant to the local community ○ Provided an opportunity to engage in discussions with community members about their individual concerns regarding the current environmental conditions of the area ○ 260 hikers participated in this annual event
Watershed Education	Oct 2012	<ul style="list-style-type: none"> ○ Throughout October, ABCA staff provided a watershed education program to students in Grades 5-7 at five elementary schools in the Clinton area including: Holmesville, St. Joseph, Huron Christian, Clinton Public and Huron Centennial ○ Students visited the Clinton Conservation Area to learn about the Bayfield River ecosystem, water quality indicators, and how humans can impact the health of a river system ○ 132 students participated in the program
Meeting with Member of Provincial Parliament	Nov 2, 2012	<ul style="list-style-type: none"> ○ Advisory Committee members met with Lisa Thompson, MPP for Huron-Bruce to discuss the project and ask for commitment to actions for environmental improvement
Youth Retreat	Nov 2, 2012	<ul style="list-style-type: none"> ○ ABCA staff led a Youth Retreat in Brucefield with approximately 30 elementary school children ○ The children participated in “The Story of a Lake”, and a water quality quiz/limbo game.
Central Huron Council Meeting	Nov 5, 2012	<ul style="list-style-type: none"> ○ ABCA staff attended the Central Huron Council Meeting to explain the project and

		encourage the municipality to commit to several actions for environmental improvement
Healthy Watersheds Education	Nov 16, 2012	<ul style="list-style-type: none"> ○ ABCA staff provided an education program regarding healthy watersheds, with emphasis on the Main Bayfield watershed, to two Clinton Secondary Schools: Central Huron Secondary, and St. Anne's Secondary ○ The program incorporated the use of GIS in healthy watersheds work, to tie in with the curriculum ○ The topic of how to become involved in the project and how to protect the watershed was a main focus ○ 72 students participated in the program
Follow-Up Action Meeting	Nov 20, 2012	<ul style="list-style-type: none"> ○ This meeting was with the Bayfield organizations to follow-up with their progress on committing to actions for environmental improvements ○ 8 community members representing numerous organizations attended this meeting
Meeting at Reformed Church	Nov 26, 2012	<ul style="list-style-type: none"> ○ ABCA staff attended a general meeting of the Clinton Christian Reformed Church to promote the Main Bayfield Project
Letter to Contractors	Dec 5, 2012	<ul style="list-style-type: none"> ○ A letter was sent to five contractors within the Main Bayfield watershed to request commitment to actions for environmental improvements
<i>Meetings at United Church</i>	Jan/Feb 2012	<ul style="list-style-type: none"> ○ ABCA staff were invited to speak at three church services in the Main Bayfield ○ The presentation was given to approximately 150 members

Several other events and meetings are planned for April 2013 that will promote the Main Bayfield Watershed Plan within the area, including presentations to the Huron-Perth Woodlot Association, a horticultural society and several hundred students at the Huron-Perth Ag and Water Festival.

Project Outcomes

Various outcomes have occurred since the initiation of the Main Bayfield Watershed Plan. Some of the more significant outcomes are listed below, while details regarding other activities are found in Table 4.

- An Advisory Committee of community members, stakeholders and government agencies has been developed with seven meetings held to date.

- Detailed minutes from the Advisory Committee meetings have been kept and the information will be incorporated into the recommended actions within the Main Bayfield River Watershed Management Plan.
- We have completed and continue to complete one-on-one landowner surveys which would help to identify areas where Best Management Plans could be implemented.
- From the landowner surveys and site visits completed to date there have been at least ten properties which have strong potential for implementation of BMPs, and five with potential for the creation of inland wetlands. Approximately 20 properties have been identified for tree planting projects; about half have already been implemented.
- Through the Advisory Committee meetings, landowner surveys and direct newsletter mail outs we anticipate holding at minimum one additional restoration event with the community. Three restoration events have already been held.
- The Bayfield Ratepayers Association (BRA) collaborated with the Ausable Bayfield Conservation Authority (ABCA) to monitor water quality at ten sites in the Main Bayfield watershed every other week for 2011 and 2012 from June to November.
- A brief watershed plan was developed which summarizes watershed planning, the goals of the watershed plan and actions that can be taken to help enhance the watershed.
- A draft of the larger watershed plan for the Main Bayfield watershed is currently in the final stages.

Table 4: Outcomes and completed deliverables for the Main Bayfield Watershed Plan.

Activity Date (quarter or monthly)	Anticipated Outcome	Completed Deliverable
March 2011 – June 2011	<ul style="list-style-type: none"> - Project initiation - Review and compilation of background information - Identification of broad issues - Community Involvement – ABCA partnered with the Bayfield Anglers Association, Friends of the Bayfield River, 1st Order Exeter Scouts, and 1st Order Zurich Scouts to complete a rehabilitation project along the Bayfield River. More than 500 shrubs and 20 trees were planted to stabilize the banks of the river between Brucefield and Egmondville - Monitoring – Bayfield Ratepayers Association (BRA) collaborated with the ABCA to monitor water quality at 10 sites in the Main Bayfield 	<ul style="list-style-type: none"> - Review and compilation of background information completed in draft form on January 31 - Thirty-eight volunteers from four community groups planted 500 shrubs and 20 trees along 250 m of the banks on each side of the Bayfield River on May 14 - From June to November 2011 there were 62 water quality samples collected at 10 sites in the Main Bayfield watershed

watershed every other week for June to November 2011		
July 2011 – September 2011	<ul style="list-style-type: none"> - Outreach – Introduced the project to the community at the 40th Anniversary of Bayfield River Watershed Stewardship celebration - Outreach – Mailed out 199 letters to Main Bayfield watershed landowners to establish interest in developing an advisory committee and provide interest in wetland projects - Contacted landowners within the watershed, individuals in government agencies and other stakeholders to ask if they would sit on an advisory committee in order to help guide the watershed planning process 	<ul style="list-style-type: none"> - Over 50 people attended the 40th Anniversary Event - Letters mailed to 199 landowners on August 16 - The Advisory Committee is comprised of twelve members of the community who have volunteered their time
October 2011 – December 2011	<ul style="list-style-type: none"> - Outreach – ABCA staff were present at the Bannockburn Fall Hike on October 2, 2011 to provide information and generate interest regarding the Main Bayfield River Watershed Plan. - Community Involvement - Formation of Advisory Committee and subsequent meeting to create a landowner survey to identify environmental issues and potential solutions to make water quality improvements. 	<ul style="list-style-type: none"> - provided information to 120 hikers who attended the Bannockburn Fall Hike on October 2 - Advisory Committee of 12 member have met for three meetings
January 2012 – March 2012	<ul style="list-style-type: none"> - Continuation of landowner surveys by members of the Advisory Committee and ABCA staff - Advisory Committee and the community identify issues and management options - Completion of background study and the identification of issues 	<ul style="list-style-type: none"> - 14 landowners within the Main Bayfield watershed have been surveyed by ABCA staff - During the third advisory committee meeting a list of goals have been identified - Background information and issue identification has been completed in draft form on March 5
April 2012 –	<ul style="list-style-type: none"> - Partner with local schools to 	<ul style="list-style-type: none"> - In April 2012 the ABCA

June 2012	<p>complete a rehabilitation project</p> <ul style="list-style-type: none"> - Complete windshield surveys for agricultural land - Continue with Advisory Committee to move forward on the plan - Continue landowner surveys with local residents - Continue community outreach through local events - Continue with the BRA monitoring program in the Main Bayfield River 	<p>partnered with grade one and grade eight students from Clinton Public School to complete a rehabilitation project along the Bayfield River. 60 large stock hardwoods were planted at the Clinton Conservation Area</p> <ul style="list-style-type: none"> - Initial windshield surveys were completed in Spring 2012 - The Advisory Committee met on June 20. An approach was developed to approach local organizations and community groups and the Brief Watershed Plan was finalized. - Landowner surveys continued with visits to three more landowners - A Main Bayfield Watershed Plan display was set up as part of Bayfield's Sail & Canvas weekend in June. ABCA staff were present during the busiest part of the weekend. - The BRA monitoring program started again in June, with ten sites being monitored in the Main Bayfield watershed - Two committee members began collecting turbidity data at the Bayfield Harbour and near the outlet of Trick's creek
July 2012 – September 2012	<ul style="list-style-type: none"> - Continue Advisory Committee meetings to move forward with the watershed plan - Continue water quality monitoring program - Continue outreach to local organizations and community groups - Continue landowner surveys with local residents 	<ul style="list-style-type: none"> - Local advisory committee met on July 18. The Brief Watershed Plan was finalized for printing and committee members continued planning to visit local organizations. Organizations are to commit to three actions to improve water quality. - Brief Watershed Plan was

		<ul style="list-style-type: none"> - completed and printed. - A watershed tour was held August 17 for local stakeholders and landowners. Unique projects within the watershed were highlighted. - BRA monitoring program continued with monitoring every two weeks. Two water quality monitoring sites began more intensive monitoring as part of the Rural Stormwater Management Model - Two more landowner surveys were completed (this low number is not unusual as farmers are busy at this time of the year)
<p>October 2012 – December 2012</p>	<ul style="list-style-type: none"> - Continue outreach in the Main Bayfield watershed by participating in the Bannockburn fall hike - Continue landowner surveys - Complete crop windshield surveys for fall tillage 	<ul style="list-style-type: none"> - Provided information to 260 hikers who attended the Bannockburn Fall Hike on September 30 - Completed four landowner surveys - Completed windshield surveys for fall tillage in early November - A final committee meeting was held on November 21
<p>January 2013 – March 2013</p>	<ul style="list-style-type: none"> - Continue landowner surveys - Complete watershed plan for release in spring 2013 	<ul style="list-style-type: none"> - 17 landowner surveys completed with four more planned for April - Draft of watershed plan is underway - Release of watershed plan is slated for spring 2013
