

Kensington North Watersheds Association

# Watershed Management Plan 2015

Looking to the Future

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## Introduction

The intention of this document is to provide a general description of the Kensington North Watersheds Association (Kensington North) area as a whole, together with a history of the organisation and the goals and objectives of the Watershed Management Plan that is intended to take us into the future. A second document entitled *Background Information to the Watershed Management Plan* contains the detailed descriptions of each watershed within the Kensington North area together with the appendices referenced by this document. The background document will be updated periodically as new statistical data becomes available.

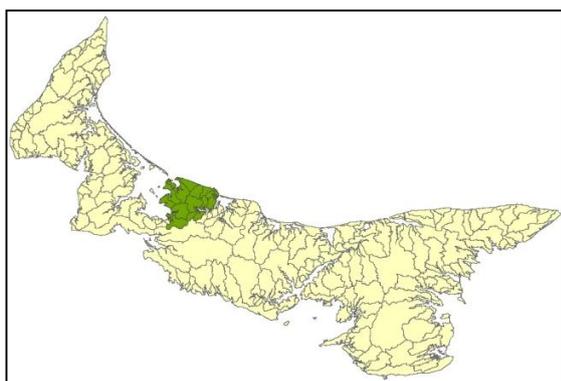
## Description

Kensington North is comprised of eighteen watersheds that empty into the Gulf of St. Lawrence. The Barbara Weit River, Indian River, Oyster Cove and Shipyard River watersheds drain into Malpeque Bay. The Darnley Basin, Sea View, Cousins Pond and Campbells Pond watersheds along the North Shore drain directly into the Gulf of St. Lawrence. Paynters Creek, Long River, Eel Creek, Spring Valley Brook, Tuplin Creek, Durant Creek, Harding Creek, Sutherland Creek and MacIntyres Creek all drain into the Southwest River system which, along with the French River watershed, drains into New London Bay.

## Location

The Kensington North area is situated on the north shore of Prince Edward Island between Malpeque Bay on the west and New London Bay on the east as shown in Figure 1. On the south side Route 107 roughly describes the southern limit of the area.

**Figure 1 – Kensington North Watersheds on PEI**



The Kensington North area straddles the boundary between Prince County and Queens County covering all of Lot 18 and part of Lots 19, 20 and 21.

The Kensington North area wholly covers fifteen old school districts and the major portion of three other districts and moderate to small portions of five additional districts.

Two municipalities are situated within the Kensington North area: the Town of Kensington and the Community of Malpeque Bay and together they

cover for nearly 49% of the total area, 218 and 9,695 hectares respectively. The remaining 10,476 hectares is unincorporated. It is important to note that only the Town of Kensington has an Official Plan in place at this time. The Community of Malpeque Bay is currently in the process of preparing a draft Official Plan to bring to the residents in 2013. The unincorporated portion within the Kensington North area falls under the Provincial Planning Regulations.

## Population

In the Kensington North area, Statistics Canada population data is collected for the four Lots as well as the Town of Kensington. There is no direct correlation between the Lots / Census Subdivisions and the watershed boundaries so it is difficult to provide exact population for the area. The population data in Table 1 includes areas outside of the Kensington North area.

**Table 1 – Population for Kensington North Census Subdivisions (1991-2011)**

Year	Lot 18	Lot 19	Lot 20	Lot 21	Town*	Total
1991	996	1,637	749	842	1,332	5,556
1996 <sup>1</sup>	1,014	1,759	785	865	1,383	5,806
2001 <sup>2</sup>	1,016	1,775	806	908	1,385	5,890
2006 <sup>3</sup>	1,055	1,888	798	920	1,485	6,146
2011 <sup>4</sup>	1,054	1,903	847	855	1,496	6,155

\* Town of Kensington

The total population of the area is growing at an average rate of 0.5% per year with the largest growth occurring in Lot 19.

## Physical Description

Kensington North covers an area of 22,182 hectares. Over 14,000 hectares is agricultural land and about 3,365 hectares is forested. It is bounded by 170 kilometres of shoreline and it has nearly 140 kilometres of rivers and streams within its watersheds.

The land in the west half of the Kensington North area covering six watersheds can best be described as rolling countryside although there are some areas with relatively high slopes. There are only a few locations along the east side of this area that exceed 60 metres above sea level. The remaining twelve watersheds in the east are much more steeply sloped than the west. And while elevations do not exceed 60 metres in the southern portion of this area, the land in the northern part of this area does rise to 100 metres near the centre. The Background document contains a more detailed description of the topography of each watershed.

Together the six western watersheds have over 96 percent of their area in the 0 < 4% slope class and 3 percent in the 4 < 8% slope. On the other hand, only 74 percent of the eastern twelve watersheds is in

<sup>1</sup> Adapted from Statistics Canada. 1997. 1996 Community Profiles. 1996 Census. Statistics Canada Catalogue no. 93-357-X. Ottawa. Released April 15, 1997. <http://www12.statcan.ca/english/profil/placesearchform1.cfm> (accessed April 20, 2011).

<sup>2</sup> Adapted from Statistics Canada. 2002. 2001 Community Profiles. 2001 Census. Statistics Canada Catalogue no. 93F0053-XIE. Ottawa. Released June 27, 2002. <http://www12.statcan.ca/english/profil01/CP01/index.cfm?Lang=E> (accessed April 20, 2011).

<sup>3</sup> Adapted from Statistics Canada. 2007. 2006 Community Profiles. 2006 Census. Statistics Canada Catalogue no. 92-591-XWE. Ottawa. Released March 13, 2007. <http://www12.statcan.ca/census-recensement/2006/dp-pd/prof/92-591/index.cfm?Lang=E> (accessed April 20, 2011).

<sup>4</sup> Adapted from Statistics Canada. 2012. 2011 Community Profiles. 2011 Census. Statistics Canada Catalogue no. 98-310-XWE2011002. Ottawa. Released February 08, 2012. <http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/hlt-fst/pd-pl/Table-Tableau.cfm?LANG=Eng&T=302&PR=11&S=51&O=A&RPP=25> (accessed March 27, 2012).

the 0 < 4% slope class and 22.6 percent in the 4 < 8% slope class with 3.5 percent in the higher slope classes.

## Climate

The climate of Prince Edward Island is moderated by the waters of the Gulf of St Lawrence. Winters are moderately cold and spring temperatures stay cool until the sea ice has melted. Summers are moderately warm and fall temperatures comfortable. Mean temperatures for February range from a low of -11.7°C to a high of -3.4°C while mean temperatures for July range from a low of 14.4°C to a high of 23.1°C.

## Precipitation

On average the province receives over 850 mm of rain and 280 cm of snow each year. December receives the highest total precipitation (59.8 mm of rain and 60.5 cm of snow) while July has the lowest (78.5 mm of rain and no snow).

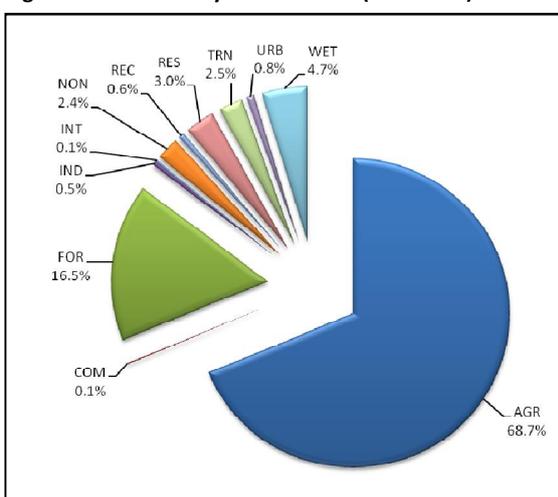
## Land Use

The Department of Environment, Energy & Forestry (DEEF) maintains an inventory of land use across the province. The use, sub-use and its related information has been identified for every hectare on the Island. The PEI Corporate Land Use Inventory (CLUI) was last updated in 2000 and it is currently being updated from aerial photography that was flown in 2010 and should be available by the fall of 2013.

**Table 2 – Land Use by Classification (CLUI 2000)**

Land Use	Area (ha)	Area (%)
Agricultural	14,021.0	68.7%
Commercial	27.7	0.1%
Forest	3,365.9	16.5%
Industrial	105.3	0.5%
Institutional	19.0	0.1%
Non-evident	486.5	2.4%
Recreational	132.3	0.6%
Residential	618.2	3.0%
Transportation	512.3	2.5%
Urban	168.5	0.8%
Wetlands	874.9	4.7%
<b>Total</b>	<b>20,331.6</b>	<b>100.0%</b>

**Figure 2 – Land Use by Classification (CLUI 2000)**



Agricultural (AGR) is by far the dominant land use in the Kensington North area followed by forest (FOR) and wetlands (WET) according to the CLUI 2000. The top three land uses account for nearly ninety percent of the total, 69.0%, 16.6% and 4.3% respectively. Residential (RES), Urban (URB) and Recreational (REC) count for 4.5%, Transportation (TRN) 2.5% and Non-evident (NON) 2.4%. Commercial (COM), Industrial (IND) and Institutional (INT) account for the remaining 0.7%. The Non-evident class is

predominately abandoned land. The Table and Figure on the previous page show the total area covered by each land use classification in Kensington North for the year 2000.

## Agriculture

Agricultural land use in Kensington North for the year 2000 was dominated by hay, potato and grain production which accounted for nearly 94 percent of the total. Pasture and other crops accounted for 3.1% while the remaining 3.1% was tied up in non-production uses such as hedgerows, buildings, grass, access roads, trees and shrubs as shown in the following table.

Even though less than thirty percent of the agricultural land in Kensington North is in potato production in any one year, the fact remains that up to ninety percent of this land is in the potato crop rotation. This represents over sixty percent of the total area of Kensington North. And while the total number of hectares planted provincially has fallen from the historic highs of the late 1990's (45,700 ha) to around 35,000 ha in 2011, it is unlikely that the reduction has been distributed equally across the province. Increasing transportation costs tied to the rising price of oil, and borne by the processor, will quite likely mean increased pressure on farmland located in closer proximity to the potato processing facility within Kensington North owned by Cavendish Farms.

Another indicator of the pressure placed on land in the potato rotation is the increase in crop yield. Since 1986, the five-year running average has increased from about 29 T/ha to 33 T/ha with an overall average of equal to 30 T/ha. During the same period the running average price for potatoes has ranged from \$140/T to \$213/T with a single year high of \$240/T in 2010. See related Appendix in Background Information document.

## Forest

The forests of Kensington North are dominated by Red Maple, White Spruce, White Birch and Sugar Maple accounting for nearly sixty-five percent of the total forest cover. Balsam Fir, Poplar and Alder account for nearly sixteen percent of the forest cover. Yellow Birch, Black Spruce, Eastern Larch, White Pine, Red Spruce, Red Pine, Norway Spruce and Beech account for an additional ten percent. See the following table for the 2000 forest inventory summary. It should be noted that only one-half of all the species listed in the CLUI codes are found in Kensington North and only one-third of the species listed involves total areas greater than ten hectares. See the complete list in the Background Information document.

There is also significant pressure on forested land in the area. This is reflected in the amount that has been clear cut compared to the amount that has been replanted in trees – 7.9% versus 0.2%. Most of the clear cut land has been converted to farmland. It should also be noted there is also a relatively significant amount of dead trees within the area's forests. Despite the pressure, some land has been declared a nature trust or preserved as public forest such as the John A. Hogg Kensington Public Forest off Route 2 near the Confederation Trail.

**Table 3 – Forest Classification by Type (CLUI 2000)**

Land Use	Scientific Name	Area (ha)	Area (%)
Red Maple	<i>Acer rubrum</i>	789.0	23.4%
White Spruce	<i>Picea glauca</i>	728.0	21.6%
White Birch	<i>Betula papyrifera</i>	356.2	10.6%
Sugar Maple	<i>Acer saccharum</i>	312.4	9.3%
Clear Cut	n/a	265.0	7.9%
Balsam Fir	<i>Abies balsamea</i>	194.4	5.8%
Poplar	<i>Populus sp.</i>	185.4	5.5%
Alder	<i>Alnus glutinosa</i>	151.0	4.5%
Yellow Birch	<i>Betula alleghaniensis</i>	80.6	2.4%
Black Spruce	<i>Picea mariana</i>	71.1	2.1%
Eastern Larch	<i>Larix laricina</i>	64.0	1.9%
White Pine	<i>Pinus strobus</i>	32.3	1.0%
Red Spruce	<i>Picea rubens</i>	31.5	0.9%
Red Pine	<i>Pinus resinosa</i>	29.0	0.9%
Remainder		76.0	2.2%
Total		3,365.9	100.00%

## Shrubs

This type of woody plant is usually less than eight metres high and usually often has many stems. For the most part shrubs have no commercial value but act as windbreaks and provide habitat for birds and small mammals. They are often found in abandoned farmland, hedgerows, riparian zones and along forest edges. See the Background Information document for a list of shrubs commonly found in PEI.

## Wetlands

Wetlands perform a variety of important functions including:

- providing habitats to a wide variety of fish and wildlife species;
- acting as groundwater recharge, discharge and storage reservoirs;
- treating potentially harmful products in runoff by removing bacteria, excess nutrients and accumulating and retaining silt;
- producing and exporting organic material and nutrients vital to nursery, growth and survival of fish and wildlife species;
- recycling of carbon, nitrogen and sulfur through anaerobic reduction which occurs in the wetland bottoms; and
- acting as “carbon sinks” which aid in reducing the “greenhouse effect”.

Wetlands also help stabilize shorelines of rivers and coast line and provide areas for recreation, food production and other commercial opportunities.

“When wetlands are lost or their functions diminished, the natural capacity to filter and purify agricultural and domestic runoff is decreased. The impacts of high nutrient loads, over-enrichment

(eutrophication), and oxygen depletion on rivers and estuaries are increased. Loss of in-stream wetlands increases the potential for coliform bacterial contamination of shellfish beds.”<sup>5</sup>

“Wetland loss results in a loss of wildlife habitat and reduced productivity. Loss of wetland also decreases the ecosystem’s capacity to contribute to the recycling of carbon, nitrogen and sulfur as well as carbon sequestration.”<sup>6</sup>

Wetlands account for less than 4.5% of the total land use in Kensington North. Over one-third (35.5%) of the wetland total is Salt or Brackish Marsh with the highest proportion found along the east side of Malpeque Bay. In 1988 the bay was recognized as a Wetland of International Importance under the Ramsar Convention. Other significant areas of Salt or Brackish Marsh are found in the Baltic and Southwest River watersheds.

Deep and Shallow Marsh account for about 10% while Shrub and Wooded Swamp account for about 10.6%. The marshy areas are generally found the watersheds along the east side of Malpeque Bay and the North Shore area. The swampy areas are generally found along the Barbara Weit River, Indian River, Tuplins Creek and the North Shore watersheds.

Sand Dunes account for about 9.4% of the wetland classification in Kensington North. The largest area of sand dunes is found at the mouth of Darnley Basin in the Baltic River watershed. Other significant areas of sand dunes are found along the North Shore watersheds and along the east side of Malpeque Bay. See the Background Information document for a breakdown of the wetland types found in Kensington North.

## Wildlife

There is a broad range of flora and fauna found in the Kensington North area. The general descriptions that follow are by no means intended to be exhaustive but merely highlight some of the wide diversity of species that might be encountered in the forests, fields and streams of the area. Tables found in the Appendices of the Background Information document contain a variety of lists of different species that may be found in the area.

Brook (Speckled) Trout, Rainbow Trout, White Perch, Rainbow Smelt, Gaspereau and Eels are some of the species commonly found in Island waters. Atlantic Salmon have not been found in Kensington North streams for many years. A variety of sticklebacks and flatfish are found the waters of Malpeque Bay, New London Bay and along the north shore.

Only nine species of amphibians have been identified on PEI. These species involve six Families in two Orders. Two of these species are widely distributed across Canada while the remainder are generally distributed across southern Ontario and Quebec and throughout the Maritimes.

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<sup>5</sup> Fisheries, Aquaculture and Environment, *Wetland Conservation Policy For Prince Edward Island*, Charlottetown, 1993, p.2.

<sup>6</sup> Ibid.

Amphibians can occupy a wide variety of habitats. Newts prefer ponds while salamanders generally prefer mixed woods; toads can range from gardens to forests while tree frogs thrive in second growth woodlands. True frogs are generally found near permanent water in ponds, brooks and marshes but some are associated with moist woodlands.

Only three reptile species have been identified on PEI and they are all members of the snake order. See Appendix in Background Information document. These species are also found in the other Maritime provinces. There are no members of the turtle order found on PEI.

Snakes occupy a wide variety of generally moist habitats including marsh borders, meadows, fields, farm land, forests and urban areas.

Over three hundred thirty bird species have been identified on Prince Edward Island. The table in Appendix of Background Information document lists sixty-three species deemed to be very common (over 50 birds / day) in one or more seasons during the year. About three-quarters of the species listed in the Appendix are known or believed to nest on the island and a dozen of the listed species are very commonly found over the winter season. No attempt has been made to identify which bird species are actually be found in Kensington North.

A small number of mammal species have been identified on PEI. About half the species belong to the rodent family, a quarter are carnivores and the remainder are spread across three other families – hares, shrews and bats. None of the species is unique to PEI.

Invertebrates may represent 95% of all animal species found in the world. It includes, among others, insects, spiders, crustaceans, mollusks and many types of worms. While many species, including their larva, where applicable, are considered pests in the agricultural, fishing, forest and horticultural industries, there are, likewise, a great number of beneficial species that perform many natural functions and support a broad range of human activities such as farming and fishing.

## Organisation

### **Kensington North Formation**

The reason for forming a new group made up of several local watersheds became obvious as the work in Sea View and Indian River was fairly well completed, and the opportunity to expand into neighbouring watersheds was becoming possible.

In December 2007, the Sea View Board of Directors met with Ministers Wes Sheridan and George Webster to present and discuss our idea of amalgamation and were encouraged to proceed. In January 2008, the organizing group met with Department of Environment, Energy and Forestry officials and were presented with the Department's point of view, that they would rather deal with a set number of groups, in the range of 25-30 for the Island, rather than dealing with each of the 268 watersheds individually.

Following direction from the floor from a public meeting held in April 2008, a steering committee of citizens from the proposed Kensington North area was formed to direct the process of amalgamating the communities of the different watersheds. Sea View and Indian River Watershed Associations, the only

two active watershed groups in the proposed area, combined to become Kensington North. The 2008 operating budget for both groups was performed under Sea View's books. There was no budget for Kensington North for the summer of 2008.

The steering committee accumulated the support from communities / watersheds in the following ways: public meetings, canvassing door-to-door and Letters of Support. With these demonstrations of support in-hand, the Kensington North Watershed Association was formed. A four person Executive was established to oversee the organization.

At a public meeting in September 2008, the Steering Committee was formally instituted as the Board of Directors of the Association. In addition, four Honorary Lifetime Memberships were handed out to individuals who laid the groundwork for watershed groups in the area. The recipients were Sally Hooff, Bruce Gillespie, Don MacEachern, and Lee Sudsbury, from the Sea View, Indian River, Spring Valley (Southwest River) and Margate (Tuplins Creek) watersheds respectively.



In February 2009, the Association became incorporated under the name Kensington North Watersheds Association Ltd. Becoming a legal entity permits Kensington North to obtain tax breaks and exemptions, provides stronger structure by having bylaws, and helps in matters of liability. In March 2009, a logo was obtained to identify and help promote the organization in the community.

In early 2011, Kensington North expanded eastward to include Harding Creek. In October 2011, the Association was officially registered as a charitable organisation with Canada Revenue Agency. In March 2012, Kensington North expanded further eastward to include Sutherland Creek and MacIntyres Creek. The addition means that the Association will be providing support to all of the watersheds that drain into the Southwest River.

### **Mission statement**

*“To preserve and protect the watersheds of Kensington North in a healthy, natural state; to develop projects and activities that will maintain or restore the rivers to such a state; and to promote an appreciation and respect through public awareness and education for the beauty, importance and environmental diversity of the watershed.”*

## Watershed Planning

### **Watershed Planning 2010**

The early watershed activities that took place in Kensington North were generally in response to a local issue in the area of the individuals involved. The first groups focused on very specific target areas, e.g. stream cleaning or tree planting. There was no overarching plan for the whole area. Even after the formation of Kensington North Watershed Association in 2008, planning has generally proceeded on an ad hoc basis in response to specific issues brought to the attention of the Executive Director.

The first steps forward in the planning process took place in March 2010. A brainstorming session facilitated by Jennifer Roma set out to identify what made Kensington North unique to local residents. Small groups then reviewed Vision Statements from other watershed organizations in an attempt to find ideas that resonated with them. The groups were asked to identify the positive actions happening in the watershed and the issues that still needed attention. Groups were then asked to come up with some general goals to address the previously identified issues. Together the participants came up with a draft Vision Statement that read:

*“The Kensington North Watersheds Area is a healthy, sustainable rural community that values clean water, biodiversity, quality of life, and smart land use and development. Community members act in cooperation with each other as stewards of the watershed supporting environmental, social, economic, and educational values.”*

From the session notes, the facilitator later produced a draft set of Goals:

1. *Develop and improve educational and awareness activities within the watershed;*
2. *Restore and improve surface and groundwater quality;*
3. *Improve wildlife habitat and increase biodiversity;*
4. *Increase the amount of forested cover in the watershed;*
5. *Recognize good environmental stewardship among watershed residents.*

### **Positive Actions**

On the list of positive actions happening in the watershed were stream enhancement activities, such as general cleaning, constructing brush mats and silt traps, improving fish passage, tree planting in riparian zones and hedgerows. Changes to buffer zone regulations and programs such like Alternative Land Use Services (ALUS) and Environmental Farm Plans have helped change farming practices through the construction of soil conservation structures, nutrient management planning and longer crop rotations. The provincial Department of Transportation has created diversion ditches keep silt out of the streams and other wildlife organizations have undertaken conservation activities in the area.

### **Issues to be Addressed**

Chief among the issues and concerns that still need to be addressed are stream siltation; sea lettuce resulting from enrichment due to inadequate nutrient management practices and poor or substandard

sewage systems; poor water quality (low oxygen); road maintenance issues specifically related to dirt roads; hanging culverts interfering with fish passage; an overall lack of forest cover; inadequate funding for watershed groups and activities; the lack of public awareness and the need for more public education on watershed issues.

### **Watershed Planning 2011**

In mid February 2011, another general planning meeting was held to review the draft Vision and Goals statements and begin to formulate Objectives and Strategies that could be used to reach the Goals and realize the overall Vision for Kensington North. At this meeting the draft Vision Statement was revised to read:

*“The Kensington North Watersheds Area is a healthy, sustainable rural community that values clean water, biodiversity, quality of life, and responsible land use and development where Community members act in cooperation with each other as stewards of the watershed supporting environmental, social, economic, and educational values.”*

Five smaller district meeting were held over the weeks that followed in a further attempt to engage the community and garner additional ideas regarding Objectives and Strategies. This general feedback formed the starting point for the first draft of this document. A draft of this document was presented to the Board of Directors in September, 2011. Several gaps in the document were identified for further review.

### **Watershed Planning 2012**

In February 2012, an additional six district meeting were held to engage the community and garner additional ideas regarding Objectives and Strategies with specific attention to future timelines, i.e. identifying short, medium and long term goals.

Throughout the meetings, it was reiterated many times that the creation of this watershed management plan is an iterative process, insofar as additions or changes at any level would force a review of the whole plan to ensure that it fit together in a cohesive fashion. Each goal can have one or more objectives and each objective can have one or more actions or strategies over a variety of relative or specific timeframes. An action that does not fit with the existing plan objectives will require a new objective. Likewise, a new objective that does not fit with the existing plan goals will require a new goal. This in turn may require a review of the Vision Statement.

Since the original draft document, the goals have been reordered to better fit with the Association’s Mission Statement.

### **Watershed Planning 2015**

In March 2015, the Board expanded the list of goals was to include issues around climate change. Several projects (actions) dealing with climate change issues had already been undertaken in the last two years but there was no clear Objective or Goal to which they could be applied. The addition of Goal 5 allows those projects to fit into our Watershed Management Plan.

## Goals, Objectives and Actions

### Goal 1: Improve and protect the quality of groundwater and surface water

**Objective 1.1:** *Identify areas of concern*

- Action 1.1.1: Perform a visual inspection of all streams annually to identify high risk areas for erosion, siltation and/or contamination and establish priorities;
- Action 1.1.2: Perform a visual inspection of all silt traps annually to determine the need for maintenance and establish priorities;
- Action 1.1.3: Work with landowners identified above to try to minimize runoff and siltation;
- Action 1.1.4: Utilise other sources of information on stream conditions – members, river monitors, stakeholders, aerial photos, government officials, other watershed groups;
- Action 1.1.5:

**Objective 1.2:** *Continue stream enhancement projects*

- Action 1.2. 1: Perform maintenance on silt traps based on priorities;
- Action 1.2. 2: Perform maintenance on previously restored streams and structures;
- Action 1.2. 3: Perform an initial restoration any remaining streams;
- Action 1.2. 4: Construct new silt traps, as required, based on priorities and opportunities;
- Action 1.2. 5: Construct brush mats and rock dams on streams as required;
- Action 1.2. 6:

**Objective 1.3:** *Protect barrier ponds*

- Action 1.3.1: Collect baseline physical, biological and chemical parameters in collaboration with partner(s) in order to begin to work to restore or rehabilitate the barrier ponds;
- Action 1.3.2: Work with the Provincial Government regarding silt runoff from clay roads and stream crossings;
- Action 1.3.3:

**Objective 1.4:** *Advocate solutions to excess nutrients*

- Action 1.4.1: Work with landowners, government and academia to determine sources of excess nutrient enrichment and encourage their reduction;
- Action 1.4.2: Work with landowners, government and academia to establish pilot projects to mitigate excessive growth of sea lettuce (*ulva sp.*);
- Action 1.4.3:

**Goal 2: Improve wildlife habitat and increase biodiversity**

**Objective 2.1: *Restore stream and riparian habitat***

- Action 2.1.1: Perform a riparian assessment to establish baseline measurements for all streams and watercourses;
- Action 2.1.2: Perform a visual inspection of all streams annually to monitor status of previous efforts and establish priorities for the next field work season;
- Action 2.1.3: Identify hanging culverts that are an impediment to fish passage and work with landowner, private or government to mitigate the situation;
- Action 2.1.4: Gather and record information on riparian zones as required or when opportunity permits;
- Action 2.1.5:

**Objective 2.2: *Increase amount of forest cover***

- Action 2.2.1: Plant site-suitable native trees and shrubs, inasmuch as possible, wherever it is possible to do so;
- Action 2.2.2: Actively seek partnerships with landowners to identify any land that might be planted or replanted in trees and/or shrubs in buffer zones, hedgerows, abandoned farms fields, marginal land and high sloped land;
- Action 2.2.3: Follow up on the tree planting efforts of previous watershed groups in the area to determine if further action is required;
- Action 2.2.4:

**Objective 2.3: *Increase amount of wetland***

- Action 2.3.1: Actively seek partnerships with landowners to identify any land that might be suitable for the establishment of wetland habitat;
- Action 2.3.2:

**Goal 3: Develop & improve educational and awareness activities within the watershed**

**Objective 3.1: *Increase Association membership by 10% per year***

- Action 3.1.1: Actively seek new Regular and Corporate members;
- Action 3.1.2: Attend local trade shows to promote work of the organization;
- Action 3.1.3: Create multi-year and family memberships;
- Action 3.1.4: Send out annual renewal notices in a timely fashion;
- Action 3.1.5:

**Objective 3.2: *Enhance communication***

- Action 3.2.1: Regularly maintain / update web site;
- Action 3.2.2: Publish Association newsletter as often as finances permit;
- Action 3.2.3: Publish watershed stories in County Line Courier;
- Action 3.2.4:

**Objective 3.3: Enhance educational opportunities for youth**

- Action 3.3.1: Actively seek partnerships with school teachers to involve students in watershed activities;
- Action 3.3.2: Actively seek partnerships with youth groups to involve youth in watershed activities;
- Action 3.3.3:

**Objective 3.4: Provide a forum for interchange of information**

- Action 3.4.1: Hold regular information meetings;
- Action 3.4.2: Organize tours of watershed;
- Action 3.4.3: Host events in association with the PEI Watershed Alliance and/or other watershed groups;
- Action 3.4.4:

**Objective 3.5: Increase visibility of watershed features in the community**

- Action 3.5.1: Actively work with Department of Transportation to post names of streams and wetlands at road crossings;
- Action 3.5.2: Post signage (KNWSA and partners) in strategic areas to raise awareness of local field work;
- Action 3.5.3:

**Goal 4: Recognize good environmental stewardship**

**Objective 4.1: Recognize good agricultural stewardship**

- Action 4.1.1: Recognize farmers and landowners who have done things on and with their land that benefits the watershed including those who have participated in the *Alternative Land Use Services (ALUS)* program to take land out of production;
- Action 4.1.2: Recognize good stewardship via media, web pages and award nominations
- Action 4.1.3: Encourage / facilitate additional landowner participation in ALUS;
- Action 4.1.4:

**Objective 4.2: Recognize good individual stewardship**

- Action 4.2.1: Identify individuals who have taken the initiative to make buffer zone improvements; re-introduce native trees and shrubs, etc.;
- Action 4.2.2: Recognize local land trusts;
- Action 4.2.3:

**Goal 5: Carry out monitoring, mitigation and adaptation projects concerning Climate Change**

**Objective 5.1: Establish coastal erosion monitoring sites along the north shore of Kensington North to record and monitor changes in coastal erosion rates**

- Action 5.1.1: Establish monitoring sites using best practices for shoreline monitoring;

Action 5.1.2: Annually or more often where necessary, measure and record the amount of erosion at each monitoring site;

Action 5.1.3: Share the information with appropriate government and academics, such as the UPEI Climate Lab;

Action 5.1.4:

**Objective 5.2: *Seek mitigation opportunities – assist in developing options and actions to reduce the threats that are associated with Climate Change***

Action 5.2.1: Identify shorelines, stream banks, and other watershed features that are at risk from extreme weather events associated with Climate Change;

Action 5.2.2: Work with residents, government and academics, such as the UPEI Climate Lab to create strategies to minimize the impact of climate change on shorelines and other watershed features;

Action 5.2.3:

**Objective 5.3: *Foster adaptation, encouraging behavior so that our watershed community will be better suited to our changing climate***

Action 5.3.1: Encourage management practices that protect soil and surface water from extreme weather events associated with Climate Change models

Action 5.3.2

## Time Frames

Planning for the future can and should be done over a variety of time frames. It is unrealistic to expect that all issues identified in the Kensington North area can be fixed immediately. In some cases, like stream restoration, there is an immediate, tangible result that can be seen and measured. In many other cases, such as reforestation and nutrient reduction, it will take many years to see the results and reap the benefits of this work.

Short term planning usually comes in the form of a work plan to layout the path for the current year or so. These work plans must be revised annually to take current issues and available resources into account.

Midterm planning is used to lay out the direction for the next three to five years. These plans should be reviewed and revised every few years to take any current and long standing issues, previous successes and failures, current and potential resources into account.

Long term planning is used to lay out the general direction for the next five to ten years or more. This initial version of the Watershed Management Plan could be considered as the initial long term plan for the Association. It should be reviewed and revised every five years or so. This is especially important when new land use data becomes available so that comparisons can be made with older data.