

**Protection of PEI Lands and Water as Sources of Life**  
**Cooper Institute's 2019 Social Justice Symposium**  
**Tuesday, June 4<sup>th</sup>, 2019**

Hosted by Cooper Institute and Souris & Area Branch of the PEI Wildlife Federation

**Objectives:**

- To identify the major threats to land and water in Eastern Kings County
- To discover the root causes of the threats to land and water
- To acknowledge the past and present work that has been done to protect land and water in Eastern Kings and propose ways of building on that work

**1. Protecting PEI Water**

Daryl Guignon spoke about some of the threats to PEI water, basing his presentation on his recent work updating the Atlantic Salmon Conservation Strategy for PEI. This work involved numerous visits and exploration of 26 rivers in all regions of PEI, and consultation with most of the Island watershed groups. Over the course of his studies, Daryl saw the effects of:

- Erosion from agriculture and also from highway construction and clay roads, resulting in sedimentation which impeded spawning of fish
- Eroded grass waterways
- Cutting trees into streams, interfering with the flow of water and fish passage
- Removal of hedgerows and expansion of fields
- Insufficient grassed headlands
- Fields consolidation
- Long lengths of cultivated, sloped land

He also noted that runoff of pesticides from agriculture into streams that causes fishkills on a regular basis, and runoff/seepage of nutrients (Nitrates) which results in anoxia in estuaries.

PEI's waters are affected by climate change, as more frequent and intense storms result in severe erosion and run-off from fields. Higher, more turbulent waters cause more intense coastal erosion and inland erosion of river banks.

Daryl pointed to several ways in which things could be improved:

- Riparian zone conservation and management
- Effective climate change strategies
- Protection of headwaters
- Public engagement and outreach
- Involvement of Indigenous communities
- Research and monitoring

## 2. The Challenge of Biodiversity

Rosemary talked about protection of land in the context of preserving biodiversity. She listed some threats to biodiversity in this province:

- Land conversion
- Deforestation
- Overfishing
- Climate Change
- Pollution
- Invasive Species

She presented evidence for a new age of extinction. Forest Birds species have decreased by 10%; all bird species have declined by 33%. While we can still see and hear birds, they are under threat.

Protected areas are areas legally protected from development. They are important in conserving ecosystem diversity, species and genetic diversity. Rosemary pointed to several ways in which you can protect land that you own, including using the Natural Areas Protection Act to place a covenant to protect it in future (you retain title), or selling land to an NGO or government – if you gift your land you can receive protection from capital gains tax (it counts as an Ecological Gift)

The national target for protected land is 17%. This is considered necessary to preserve biodiversity. The PEI goal is 7%. In addition, it's recommended that 40-50% of each watershed be forested.

Forests preserve biodiversity. They are important contributors to Carbon storage and sequestration and are vital to watershed protection and soil conservation. They are important in terms of controlling siltation and sedimentation, regulating water flow and protecting from storms.

## 3. Threats to PEI Land and Water

After dividing into 5 discussion groups, participants discussed 4 questions, later sharing the highlights from their conversations. Here are the questions and the highlights.

### a) What are the major threats to lands in Eastern Kings?

- Climate change – storm surges, runoff, structural changes, sea level rise, coastal erosion
- Lack of cover in fields over the winter
- Noise pollution caused by increase in number of windmills as well as high voltage corridors
- Deforestation – maturing fallow fields going to conifers
- Forestry practices – harvesting and leaving debris behind
- Forestry regulations are there but not being followed
- Logging in environmentally sensitive wetlands
- Depletion of organic matter in soils, caused by poor crop rotation
- Loss of habitat
- Clay roads, poorly graded, runoff in heavy rains
- Buffer zones not being maintained
- Inadequate hedgerow maintenance – they need both trees and shrubs
- Lack of transferral of institutional memory (environmental leaders sharing their knowledge with the next generation and newcomers)

**b) Are the threats in Eastern Kings different from Island-wide threats?**

- There is more forested area in Eastern Kings than in other areas – a positive difference
- Maybe the threats are less severe than in central PEI
- Urban-Rural dichotomy is a factor
- Land fragmentation threatens biodiversity of species across the Island
- Land use/mismanagement is common across the Island
- Industrial agriculture exists across the province

**c) Major threats to water in Eastern Kings?**

- Erosion & siltation from run-off from fields and clay roads
- Anoxia – caused by high Nitrates levels – in estuaries and in the Gulf
- High population density compared to other places in Canada
- Micro-plastics and plastic waste
- Aquaculture – lobster and crab waste in estuaries
- Seasonal changes in water temperature, trends due to human impacts driving climate change
- Pesticides
- Deep water wells and more shallow wells (holding ponds)
- Clear-cutting
- Littering – garbage being thrown in rivers and lakes
- Saltwater intrusion
- Habitat loss (loss of forests/hedgerows)
- Pesticide and herbicide run-off from agriculture

**d) Are the threats to water different in Eastern Kings than they are Island-wide?**

- We're better off
- Souris & Area Wildlife Federation is the strongest watershed association in PEI
- More forest cover per square km than anywhere else on the Island
- Fewer huge fields
- Better maintenance of wildlife corridors
- Salmon migration/populations strong here

**4. What's been done/What could be done?**

Finally, in an open discussion, participants spoke of the work of which they were most proud, and issues they would like to take action on.

**a) What work for the protection of lands and water in Eastern Kings are you most proud of?**

- We STARTED the watershed group
- The willingness of people in the area to work – the respect, cooperative spirit, awareness, collaboration
- Environmental impact assessment looking at plants as well as animals
- One of the most beautiful natural areas in the province
- 60m buffer zone with the encouragement of community councils
- The breadth of the work - moving to issues beyond the watershed, i.e. Souris Harbour

- Project at Basin Head and ecotourism and public education (we were the 1<sup>st</sup> group to do this)
- Quite a few protected areas. Red Triangle for migratory birds, Fortune, St. Charles Pond, Grace Ryan's property
- National Park in Greenwich
- Basin Head Marine Protected Area. Involving people in the area in the work
- Ability to raise the issues (throughout election cycles) that balance human needs and biosphere.

**b) What are the most urgent matters that we should address to increase protection?**

- Addressing Nitrates in bays
- Taking land out of agricultural production to reduce eutrophication
- Increasing buffer zones.
- Addressing the negative impact of industrial wind farms including effects on migratory birds. Questions: Are we using the electricity generated by wind farms or exporting it? Are these windmills as green as they are touted to be? Context is important to this discussion and we need to assess the effects on ecosystem and environment and the involvement of community.
- Urgency to address plastics, picking it up is not likely the answer – probably have to move to reduction or elimination of their use
- Dealing with trash and litter. Some people dispose irresponsibly – can we do something about educating all of us on this issue.
- Weakness of environmental assessments – we need a better public consultation process
- Soil erosion
- Land does not have time to rest, soil quality is decreasing. But: farmers are aware of the need for organic material and are taking steps to be better stewards of the soil
- Electric charging stations - there is only one in Eastern King's