

Nature  
NATURE  
PEI

Planning for a Sustainable Future  
A Time for Questions

Nature  
Nature  
Nature  
Nature  
Foundation Document



**Cover Photo:**

The Hillsborough River at Scotchfort, PEI. One of two designated Canadian Heritage Rivers in Prince Edward Island  
Brian Simpson, Provincial Photographer, Communications PEI.

## Foreword from Premier Robert Ghiz

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*O*ur environment is important to all of us. As Islanders, we cannot understate the fact that our survival is completely dependent on our natural environment and the delicately balanced biological and chemical systems that give us the clean air we breathe, the fresh water we drink and the variety of foods that we eat.

Many citizens, groups and businesses have contributed over the years to enhancing and protecting our environment. Planning for a Sustainable Future is a call to encourage all Islanders to help develop newer and better ways to protect nature, set development policies and secure the best possible future for all of us.

While this government will play a critical role, it is important that the whole Island community takes up this challenge. I ask for your help in developing a sustainable future by thinking about and contributing your ideas.

Robert Ghiz

A handwritten signature in black ink, appearing to read 'R Ghiz', written in a cursive style.

Premier, Prince Edward Island

## Message from the Minister

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*O*ur natural environment is constantly changing and adapting to the challenge of human activity and environmental pressures such as climate change. Key to surviving all this change is the safety net provided by the natural systems that support all life on this planet. Protecting these natural systems is a critical part of safeguarding the biological life support systems on which we all depend.

This discussion document offers all of us a unique opportunity to examine why we should care. It identifies certain problems that we face, and will hopefully help us to come to terms with the choices that will have to be made. I want to hear how, together, you think we can meet our current and future environmental challenges.

Thank you for taking part.

A handwritten signature in black ink that reads "Janice A. Sherry". The signature is fluid and cursive, with a long, sweeping underline.

Janice Sherry  
Minister, Environment, Labour and Justice

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# 1

## 1.0 Background Summary

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As Islanders, we all share responsibility for stewardship of our environment. Collaborative approaches, such as those proposed by the Commission on Land and Local Governance and demonstrated by watershed management groups, help to build agreement on goals, approaches, and shared efforts to best manage our ‘natural capital’ – the natural resources, physical environments, biological systems, mineral and nutrient cycles that sustain life. Over the long-term, these choices will result in better protection and enhancement of our natural resources and reduce adverse impacts on our environment.

The Honourable Janice Sherry, Minister of Environment, Labour and Justice, directed the Environmental Advisory Council to assist in the review of all available information on the present status of our Island environment, with a view to developing a sustainable future for our province. As our province’s land base is 90 per cent privately owned, the development of any plan for long-term environmental sustainability depends upon establishing a working partnership between the public sector, citizens and governments.

**As you read through this foundation document, please give some thought to the following broad questions:**

- Why should we protect nature?
- What are the threats to nature as you see them?
- Do you have the information, desire or time to do more to protect our Island environment?
- What can the private sector, Islanders and governments do to better protect nature?
- Which legislation, policies and government programs are working or not working?
- What do you see as the solution to engaging more Islanders in the protection of our natural resources?



## 2.0 Introduction

Simple choices made every day about home energy and water use, transportation, consumption, recreation and recycling; choices about production techniques; choices about sewer and water infrastructure, land use planning and energy use, when added together, exert a powerful force on our environment.

An informed, interested public and private sector is key to making the best possible choices. Awareness and education are being advanced through a variety of training programs, community partnerships and voluntary covenants. However, to achieve significant progress, good environmental stewardship and sustainable practices are needed.

### 2.1 Environmental Advisory Council

As a result of the report of the Commission on Land and Local Governance – New Foundations, the Environmental Advisory Council has been asked to promote a dialogue for a new sustainable development strategy<sup>1</sup> for Prince Edward Island. This initiative will build on and advance the progress that Prince Edward Island has made in fostering environmental stewardship and sustainable practices among all sectors of society and in all regions of the province.

### 2.2 Some Key Questions

This Foundation Document is meant to be an interim step in the creation of a sustainable development strategy – ‘a reality check’ to support discussion of what is working and what needs to be done better. It provides both historical background and current context, and it presents some of the critical issues facing Islanders.

At the end of each Critical Issues section are a series of questions. Their intent is to stimulate discussion – not to be sequentially answered. The Environmental Advisory Council encourages Islanders to consider these and other questions and to provide their views on what would be required in a new sustainable development strategy for the province.

You can provide your views in the following ways:

- at public meetings to be held across Prince Edward Island in the coming months
- through an on-line discussion forum at [www.gov.pe.ca/sustainablefuture](http://www.gov.pe.ca/sustainablefuture)
- via email to [sustainablefuture@gov.pe.ca](mailto:sustainablefuture@gov.pe.ca)
- in writing to the Sustainable Future Secretariat, Department of Environment, Labour and Justice, PO Box 2000, Charlottetown, PE C1A 7N8

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<sup>1</sup> Sustainable development is defined as meeting the demands of the present without compromising the ability of future generations to meet their own needs.

## 3.0 Critical Issues

One of the primary purposes of this Foundation Document is to foster public discussion on a new sustainable development strategy for Prince Edward Island. A key reference document for this discussion is the Prince Edward Island 2010 State of the Environment report. The major themes for the present foundation document have been organized into six critical issue sections which are presented in no particular order. This list is intended to be both flexible and open ended. Islanders are encouraged to examine this list and decide whether these are indeed the key issues and whether other issues exist that should also be addressed. We ask for solutions as well as the identification of problem areas.

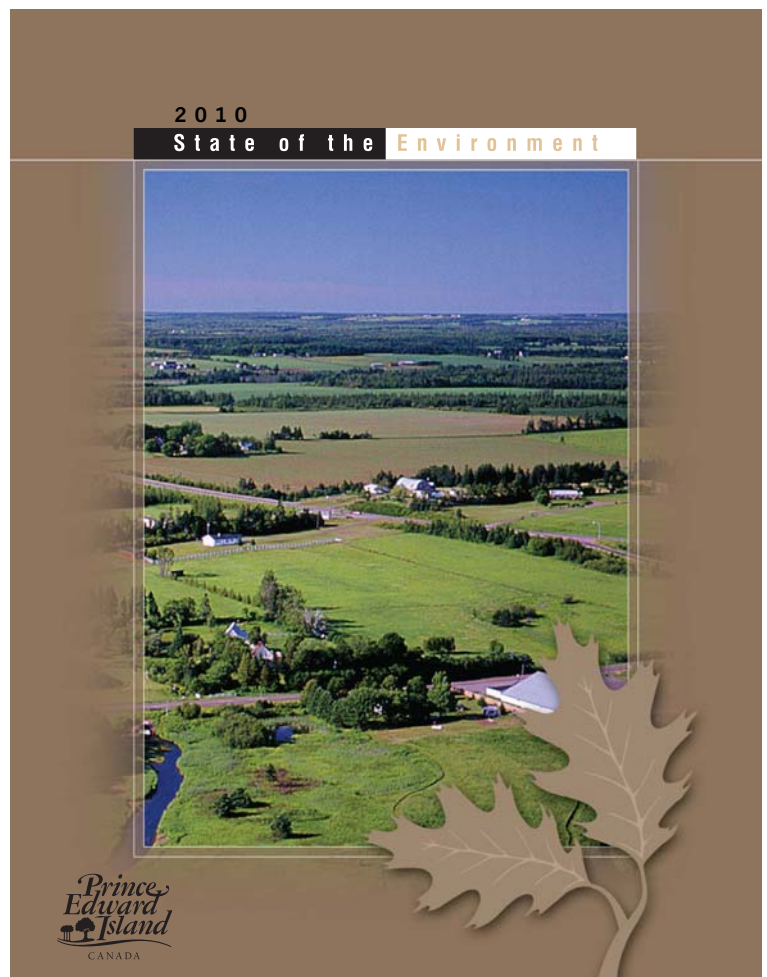
A critical issue should meet the following criteria:

- be meaningful to the general public;
- be appropriate for action at a local and provincial level; and
- be long-term rather than transient in nature.

The following six major critical issue headings are suggested:

Environmental Stewardship  
Safe Water and Clean Air  
Climate Change  
Land Use and Soil Management  
Energy Use\*  
Waste and Toxic Materials

\* Electrical energy use is the topic of a separate public discussion process. PEI Energy Commission Discussion Paper: Charting our Electricity Future [www.peiec.ca](http://www.peiec.ca)



[www.gov.pe.ca/soe](http://www.gov.pe.ca/soe)



# 3

## 3.1

## Environmental Stewardship

### A. Environmental Stewardship

Key Issues: ***Engaging Islanders In Environmental Stewardship; Changing Community Demographics ...***

Islanders continue to become more involved in the protection of their natural environment, for example through watershed groups and the Women's Institute. Public transit is gaining in public acceptance and support.

Legislation has been developed to better protect people and the environment, including the *Environmental Protection Act, Pesticides Control Act, Agricultural Crop Rotation Act, Wildlife Conservation Act, Off-Highway Vehicle Act* and the *Natural Areas Protection Act*. All Island homes have complied with legislated requirements to have home heating oil tanks inspected for safety. It is anticipated that Islanders will continue to increase their commitment to environmental stewardship through a range of responsible behaviours and attitudes.

#### Some Key Questions to Consider

- What are the best examples of environmental stewardship which we can use to model our efforts?
- What role do the public school system, colleges and universities have in improving awareness and stewardship skills in children and adults?



- What needs to be done to better recognize the values of good stewardship?
- How can the media be more engaged in promoting stewardship?
- What would help and encourage the public to participate in conservation?
- What are the primary factors that motivate conservation?
- How can people become more connected to nature?

# 3

## 3.1

# Environmental Stewardship

## B. Diversity of Life

Key Issues: ***Biodiversity in Forest Communities; Habitat Loss; Invasive Species ...***

Biodiversity (natural variability) is more than just a count of species. It encompasses the genetic diversity within species, their relative abundance, as well as the diversity of habitats in the landscape. ‘Healthy’ habitats can have many species (like older forests) or few species (like sand dunes). The health of a habitat is defined by its ability to resist and recover from natural disasters such as fire or disease, not by the number of species present. Biodiversity serves as the base of our Island’s natural capital.

The province’s long history of settlement and land clearing has contributed to the loss of natural biodiversity at all levels. Habitat loss and invasive alien species<sup>2</sup> are the two greatest threats to biodiversity.

By 2010, just over 7,141 hectares of land had been set aside as protected land under the *Natural Areas Protection Act* (NAPA). The total area protected is below the seven per cent committed to by the Province. The goal is to eventually protect 12,479 hectares of our Island land mass. The area protected under the *Natural Areas Protection Act* includes wetlands (bogs, fresh water marshes, salt marshes and ponds), sand dunes, forests, offshore islands and coastal cliffs. Although the majority of these protected areas are held in public trust, important ecological sites are also owned by the Island Nature Trust, Nature Conservancy Canada (PEI) and by a number of private landowners.



### Some Key Questions to Consider

- How important is it to you to maintain the biodiversity of the Province’s plant and animal life?
- Invasive alien species already threaten some of our ecosystems. How much effort should be directed to eradicating these invaders and preventing new introductions into our gardens, estuaries, freshwater ponds, marshes and forests?
- What is the importance of preserving such habitats as our Acadian Forests?

<sup>2</sup> Species that have become established in areas outside their natural range are known as “alien species”. Generally, alien species do not pose a significant risk and many are even beneficial. However, when alien species are capable of causing significant harm to our environment, the economy or to society, they are referred to as “invasive alien species”.  
[www.ec.gc.ca/eee-ias](http://www.ec.gc.ca/eee-ias)

# 3

## 3.1

## Environmental Stewardship

### B. Diversity of Life – continued

- Is the seven per cent protected land goal adequate?
- What are the biodiversity protection roles for the province's public lands?
- What management practices are needed to improve biodiversity in forests, wetlands, soils, agricultural landscapes, urban environments and other areas?
- Is there a need to catalogue all the species of animal and plant life on Prince Edward Island?
- Should the amount of land under public ownership be increased?
- Are the provisions for environmental assessment and 'species at risk' adequate to prevent further loss of rare or endangered species?





# 3

## 3.1

## Environmental Stewardship

### C. Natural Capital and the Valuation of Ecosystem Goods and Services

Key Issues: ***Protecting Natural Capital; Valuing Ecological Goods and Services; Other Stewardship Tools ...***

**Natural capital** is a term that has attracted the attention of non-government organizations, the scientific community and government because it describes the sum of all the essentials for life that nature provides for humankind. These essentials are regulated by a series of complex natural systems and cycles (water, carbon and nitrogen cycle, etc.) which provide clean air and water; the ability to produce and gather food, fuel and raw materials from the land and sea; the regulation of our climate; flood protection; the prevention of soil erosion; the recycling of wastes and the filtration of pollutants.

The value of these natural ecosystems and cycles to society is largely hidden and consequently its importance is often overlooked in decision making. This leaves the natural environment extremely vulnerable to loss and degradation. When we damage these 'systems' through poor decisions, we reduce the natural environment's ability to give us the goods and services that we depend upon.

The '**No Net Loss**' approach represents a compromise between development and conservation and can be defined as a principle by which government agencies strive to balance habitat, resource and environmental losses in one area by their replacement in another area, on a project-by-project basis.

#### **Payments for Ecosystem Services**

The concept of natural capital is a tool used to reconcile economic and environmental interests by allowing us to develop a comparative value for natural capital in decision-making. It makes it possible, for example, to develop a cost-benefit analysis for the construction of a multi-million dollar water treatment plant and its operating costs versus paying land owners to restore or preserve sensitive forest or wetland so that water can filter naturally.



#### **Direct Payments for Ecosystem Services**

(PES) are one way in which a value for ecosystem services can be established. An example is Alternate Land Use Services (ALUS)\*, a cost-shared Government of Prince Edward Island program providing partial payment to land owners for their provision of ecosystem services that benefit all of society.

\* [www.gov.pe.ca/growingforward/ALUS](http://www.gov.pe.ca/growingforward/ALUS)


# 3

## 3.1

## Environmental Stewardship

### C. Natural Capital and the Valuation of Ecosystem Goods and Services – continued

#### Some Key Questions to Consider

- What are the best ways to conserve and protect our environment?
  - Are there insufficient regulations to protect our natural capital or is there already too much red tape?
  - What are the threats to natural capital as you see them?
  - What do the private sector, individuals and governments need to do to protect our natural capital?
  - How could the Ecological Gifts (EcoGifts)<sup>3</sup> program be used to improve natural capital?
  - What measures are required to recognize the value of ecological goods and services of private landowners for other individuals living in or visiting the community?
  - Should ALUS and similar programs be retained, reduced, expanded or modified?
  - What ethical considerations are involved in establishing values for natural capital?
- 
- Is the concept of 'no net loss' of natural capital useful?
  - Is the term 'natural capital' useful or confusing?

<sup>3</sup> The Ecological Gifts Program (EGP) was established in 1995 through changes to the *Income Tax Act*. EcoGifts can be donations of outright title or certain interests in land, including conservation covenants, easements and servitudes that are made to conserve biological diversity on private lands. It is donor-driven and completely voluntary. <http://www.ec.gc.ca/default.asp?lang=En&xml=19CAC237-1339-42FF-B80A-605AE1A930A5>

# 3

## 3.2

## Safe Water and Clean Air

### A. Drinking Water and Its Sustainable Management

Key Issues: ***Rising Nitrate Levels in Private Well Water; Incidence of Escherichia coli (E. coli) in Private Wells; Pesticide Occurrence in Groundwater; Marine Salt Water Intrusion ...***

Prince Edward Island is dependent on groundwater for its drinking water. The water supply is generally good. Human activity can influence groundwater quality. Problems that have arisen in the past include bacterial contamination from septic systems and farm runoff, fuel oil spills, elevated nitrate levels and high salt levels from road salt sources or marine salt water intrusion. It has been predicted that climate change will reduce water quality further, impacting water availability. Initial modelling conducted on a province-wide basis suggests that the amount of groundwater recharge may decline as a consequence of climate change. This has implications for the management of groundwater withdrawals and salt-water intrusion into our Island aquifers in some coastal areas.

#### Some Key Questions to Consider

- The quality of Prince Edward Island drinking water is measured by the concentration of nitrate and the presence of *E. coli* bacteria in private water wells, as well as the number of homes serviced by central water and wastewater systems and pesticides occurrence in groundwater<sup>4</sup>. Are these indicators sufficient?
- Should Government be more proactive in its attempts to stop drinking water contamination? If so, what more might be done by private citizens and governments?
- How do we ensure that we have high quality ground and surface water for generations to come?
- How can we ensure that we have an adequate water supply for our communities while maintaining biodiversity in our streams?
- What should Prince Edward Island's position be on limiting the potential environmental impact from oil, gas or other types of energy exploration?
- What do you see as the likely impact of rising ocean level on our fresh water resources?



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<sup>4</sup>2010 State of the Environment Report (2011) pp. 16-20. [www.gov.pe.ca/soe](http://www.gov.pe.ca/soe)



# 3

## 3.2

## Safe Water and Clean Air

### B. Surface Water

Key Issues: ***Anoxic Events in Estuaries; Rising Nitrate Concentration in Surface Water; Shellfish Closures; Water Flow in Rivers; Siltation of Watercourses and Wetlands ...***

Streams, ponds and estuaries on the Island continue to be adversely impacted by land use practices. The effects on aquatic life have been significant; negative impacts from siltation continue. Nitrate concentrations continue to rise above the safe guidelines for aquatic life and have more than doubled in the last 30 years. Bacterial contamination in estuaries is also of concern, and leads to the closure of shellfish beds and restrictions on the timing of shellfish harvest.

#### Some Key Questions to Consider

- The quality of our surface waters is measured as the number of anoxic events in estuaries, the amount of nitrate in four test rivers, the pH of surface water, the percentage of total classified shellfish growing areas that are not open for harvest and siltation in surface waters<sup>5</sup>. Is this adequate?
- How do we improve the natural capacity of nature to clean and filter our surface waters?
- What types of field expertise are required to assist watershed groups?
- How can the vegetation in riparian zones and forested lands be restructured into forest lands with all their elements?
- What steps should be taken to ensure that raw sewage is not released into our estuaries during storm events?



- What measures are required to ensure fish safe passage past obstacles in streams?
- How do we ensure there is enough water retained in our springs and streams to sustain current or higher fish populations?

<sup>5</sup> 2010 State of the Environment Report (2011) pp. 22-30. [www.gov.pe.ca/soe](http://www.gov.pe.ca/soe)

# 3

## 3.2

# Safe Water and Clean Air

## C. Air Quality

Key Issues: **Acid Rain; Air Particulate Matter Levels; Ground Level Ozone ...**

The air quality in Prince Edward Island is affected by the long-range transport of pollutants from the northeastern United States and eastern Canada (southern Ontario and Quebec), as well as by emissions generated locally. Local emitters include incinerators, large heavy oil-burning facilities, asphalt plants, motor vehicles, residential oil furnaces/boilers and wood burning appliances.

Air quality in Prince Edward Island is generally considered very good and consistently better than the Canada-wide standards. Sulphur dioxide, fine particulate matter and ground level ozone levels are all better than national standards require.

Increasing industrial development and energy demands have the potential to adversely affect the province's air quality. It is expected that air quality across the country will improve as jurisdictions implement the requirements of the Canada-wide Standards. The availability of lower emission vehicles and cleaner fuels will also help to reduce emissions in the transportation sector.

### Some Key Questions to Consider

- Do the air quality monitoring stations reflect the actual levels or concentrations of air pollution in your neighbourhood?
- What could be done to further improve local air quality?
- As more biomass is used for heat energy, should incentives and/or regulations be put in place to encourage the use of heating units with lower emissions?



# 3

## 3.3

## Climate Change

Key Issues: ***Greenhouse Gas Emissions; Coastal Erosion; Sea Level Rise ...***

Prince Edward Island is particularly sensitive to climate change as it has vulnerable coastlines and a significant economic reliance on weather-sensitive natural resources. Rising sea levels and increased incidence of storm surge activity have affected shoreline stability, damaging property and disrupting sensitive ecosystems. The frequency and severity of hurricanes and storm surges have increased in recent years, with eight notable events in the last ten years. Coastal communities, their infrastructure and industries, will become more vulnerable as the number of storm events increases. Impacts on coastal infrastructure, such as bridges, roads and waste water systems are predicted.

Ice cover will become a less dominant feature of our winters, altering local climate patterns, increasing coastal erosion and affecting wildlife. Extreme precipitation, flash floods and storm events will increase in frequency and intensity. Warmer and wetter conditions may result in more crop losses resulting from extreme heat conditions, insect and weed infestation, disease outbreaks, forest fires, storm activity and soil erosion. Our forests will face unique challenges if the viability of traditional native species declines.



# 3

## 3.3

## Climate Change – continued

### Some Key Questions to Consider

- How much more, if anything, should Islanders be expected to do/pay to reduce greenhouse gas emissions?
- How will we manage new development in coastal areas?
- Is it reasonable to pass legislation to prevent construction in vulnerable coastal areas?
- What factors need to be taken into consideration when planning and building infrastructure in coastal and inland areas to lessen the risk to human health?
- What agricultural, forestry, fisheries and wetland management practices and supporting research are required to address the challenges resulting from climate change?
- Should we be encouraging the planting of more forest cover on Prince Edward Island?
- Should the types of trees species selected for planting be chosen on the basis of their ability to tolerate changing climatic conditions?





# 3

## 3.4

## Land Use and Soil Management

### A. Land Management

Key Issues: ***Land Under Stress; Preservation of Agricultural Land; Land Abandonment; Deforestation and Forest Conversions ...***

Prince Edward Island's current land use patterns reflect a history of European settlement and the constant adaptation responses of land managers to changing social, economic and environmental circumstances. In 2000, roughly 45 per cent of the province was forested. Agriculture accounted for about 42 per cent of the land (crop lands as well as hedgerows and farmsteads). Urban, recreational, residential and transportation development takes up a further seven per cent of the land. The remaining six per cent is sand dune and wetlands. From 1990 to 2000, the most common reason for deforestation was the conversion of land to agricultural (10,547 hectares), residential (1,369 hectares) and industrial (652 hectares) use.

The environment (including soil type and drainage, climate, topography and biological factors) limits how land should be used. Land use and land cover may change as property rights change. The amount of land used for any specific purpose is constantly changing<sup>6</sup> and, in some cases, stress on the land resource can develop when that land is not 'fit for a particular purpose'.

Making the right choice for land use is critical. In certain circumstances, land may be better kept out of residential development because we are best served by the ecological goods or services that land provides.

#### Some Key Questions to Consider

- How do you retain the ecological goods and service values within a landscape where development is probable?
- How can we participate in the development and implementation of new land management practices?
- Are you aware of any current legislation that encourages a land use practice which may result in negative consequences?
- Should a formula based on a 'no net loss' be used to evaluate any land-use development on Prince Edward Island?

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<sup>6</sup> See Report of the Commission on Land and Local Governance (December 2009)  
<http://www.gov.pe.ca/photos/original/ReportEng.pdf>

# 3

## 3.4

## Land Use and Soil Management

### B. Soil Quality

Key Issue: **Soil Quality Degradation ...**

Soil is a fundamental resource and a critical component for all the key natural, mineral, water and gaseous cycles upon which life depends. Despite its importance, it is a highly fragile resource and very susceptible to human mismanagement. Prince Edward Island soils are not inherently fertile. However, they possess some characteristics, which under skillful management, allow them to be productive and to support a variety of valuable crops.

Soil erosion is a major environmental issue in Prince Edward Island. Healthy, resilient soils rely on good land stewardship to keep them that way. When they are overworked, they become less able to accommodate the demands of modern agricultural farm practices, can lose their structure and simply be washed or blown away.

#### Some Key Questions to Consider

- The quality of soil is being measured using the frequency of row crops, the area of row crops under engineered soil conservation structures, the organic matter in soil and the area of land in certified organic production<sup>7</sup>. Are there any other soil quality measures that could be used to better evaluate soil quality?
- What are the impacts of not having livestock on the land? For example, the issue of the loss of soil nutrients, organic matter and decrease in soil biodiversity where animal livestock manure is not applied?
- What on-farm research is needed to better manage soil quality and new crops?
- Are crop rotation, crop diversification and land management practice important in promoting good soil quality and sustainability in agriculture?
- What measures are required to ensure soil fertility is maintained in forest lands that are harvested on a regular basis over short time periods?
- What practices should be used to ensure wetland soil quality is maintained?
- How should soil quality be maintained in parks and golf courses?



<sup>7</sup> 2010 State of the Environment Report (2011) pp. 66-70. [www.gov.pe.ca/soe](http://www.gov.pe.ca/soe)



# 3

## 3.4

# Land Use and Soil Management

## C. Urban Built Environment

Key Issue: **Urban Green Spaces ...**

In the past century, the population within certain towns and cities has increased dramatically. Some water sources and wetlands have been covered over or in-filled. Streets once flanked by shade trees are now largely devoid of trees. The amount of asphalt and concrete that has been laid down has increased and green spaces within downtown and city centres have diminished. Farmland and woodland areas have been replaced by residential or industrial buildings, further reducing our countryside. These changes have accelerated surface run-off and discharge patterns into receiving waters and have scoured streams.

### Some Key Questions to Consider

- How can soil erosion be reduced in urban and built environments?
- How much green space should be retained or created in Prince Edward Island cities and towns?
- How can green space within rural subdivisions be improved?
- Should more trees and shrubs be planted along the streets of our towns and cities?
- How can opportunities to enjoy nature's attributes be improved in urban centers?
- Should visual pollution be considered in planning?
- Do we need urban green space goals?



# 3

## 3.5

## Energy Use

Key Issues: ***Rise In The Cost of Petroleum; Energy Supply Security; Increase in Wood Burned for Residential Heating ...***

Prince Edward Island is reliant on imported petroleum products for transportation, fuels and heating. In 2008, imported oil accounted for 76 per cent of Prince Edward Island's total energy supply, made up of 46 per cent for transportation fuels and 30 per cent for petroleum-based heating fuels.

A doubling in the price of home heating oil has resulted in increased usage of wood and wood pellets for domestic heating. Approximately 120,000 cords of round wood were used for home heating in the 2009-2010 heating season. Biomass, which includes wood fuel, represents almost 10 per cent of the province's energy mix.

At present, renewable energy constitutes 11 to 13 per cent of the province's energy supply. Most of this energy is derived from biomass and wind farms.<sup>8</sup> The province will continue to develop renewable fuel supplies to help meet its energy needs. It is envisioned that, by 2013, biomass will provide 15 per cent of the province's energy mix. Development of a liquid biofuels industry is expected to contribute five per cent to the Island's energy mix within the same time frame. The Provincial Government has established an Inter-Departmental Biofuels Committee to evaluate and advise Government on these initiatives.



### Some of the Key Questions to Consider

- The province's reliance on imported energy is significant with over \$400 million being spent on off-Island energy resources annually. This cost will continue to climb if energy consumption and energy prices increase. Is enough being done to ensure energy security for Islanders?
- Are alternative sources of energy for non-electrical generation resulting in damage to our local environment?
- What other changes could be introduced to encourage the development and use of green energy?
- How do we engage Islanders in non-electrical energy conservation programs?
- What methods could be put in place to allow full credit to farmers, other businesses and citizens who produce and utilize green energy?

<sup>8</sup> Electrical energy use is the topic of a separate public discussion process. PEI Energy Commission Discussion Paper: Charting our Electricity Future [www.peiecc.ca](http://www.peiecc.ca)

# 3

## 3.6

# Waste and Toxic Materials

## A. Solid Waste

Key Issues: ***Solid Waste Disposal; Illegal Dumping; Littering; Hazardous Waste ...***

Since 2002, Prince Edward Island has become a Canadian leader in the diversion of solid waste from landfill burial and incineration. Islanders currently divert over 60 per cent of household and business refuse into the Waste Watch separation, composting and recycling system. Future goals for waste handling include the separation and processing of paint and household hazardous materials. Further work is needed to improve recovery systems for product items such as paint, plastic bags and used oil, oil filters and oil containers.

### Some Key Questions to Consider

- How could we improve recycling and re-use of construction and demolition materials?
- What other environmentally sound methods could be used to dispose of solid waste?
- Should construction and demolition sites be managed privately or publicly?
- How should illegal dumps on private and public lands be cleaned up and new ones prevented?
- How do we encourage better stewardship choices respecting product packaging and other solid waste issues?
- How can an annual, systematic, Island-wide cleanup be encouraged?





# 3

## 3.6

## Waste and Toxic Materials

### B. Pesticides

Key Issues: ***Fish Kills In Island River Systems; Pesticide Usage; Dangerous Household Products ...***

Public concern over pesticide use continues. Major amendments made to the *Pesticides Control Act* Regulations (2005) introduced tighter controls on the sale and use of non-domestic pesticide products. To further reduce public exposure to pesticides and to decrease the impact of pesticide products on the natural environment, changes were made to the *Pesticides Control Act* in 2010 to ban the sale and use of many lawn-care products. New pesticide regulations for farmers, greenhouse owners, commercial applicators, domestic vendors, and golf course owners also mean that Prince Edward Island has some of the strictest pesticide use legislation in Canada.

Lower input farm practices including integrated pest management, sustainable agriculture, use of precision agricultural practices (e.g. geographic positioning systems) and organic farming methods are being actively promoted by the Department of Agriculture and Forestry. Stronger emphasis on the training and education of pesticide vendors and applicators should result in improved pesticide use practices, including a move to less toxic products and a general reduction in product use.

#### Some Key Questions to Consider

- What other measures are required to better manage pesticide use in homes, businesses, communities and agricultural settings?
- Is there enough information available about the potentially dangerous chemicals found in products used in our homes, such as furniture and personal care products?
- Is there enough research being done to develop less toxic pesticides?
- How can the public be better informed about alternatives to conventional pesticides?



# 3

## 3.7

## Other Issues

Key Issues: *Red Tape; Human – Wildlife Conflict ...*



Many challenges remain to be identified. The opportunity exists to identify and expand upon the various critical issues listed in the previous sections. While homes and property can be damaged by wildlife, natural areas can be damaged by increasing urban sprawl. A balance needs to be struck between the needs of local communities and that of wildlife.

### Some Key Questions to Consider

- What measures are required to address human and wildlife conflicts?
- What types of environmental data are required and at what frequency should it be collected to provide an accurate picture of the state of our environment?
- What is needed to improve tree quality in our forests and riparian zones (the banks flanking a body of water)?
- What type of monitoring and research is required to encourage progress in sustaining nature?
- What methods can be used to encourage greater environmental stewardship?

# 4

4.0

## Planning for a Sustainable Future: Sharing Responsibility

Key Issues: ***Communication Among Stakeholders; Volunteer Recruitment; Levels of Public Engagement ...***

Many community groups have identified the challenge of recruiting enough volunteers and/or raising sufficient funds to maintain their programs. Those wishing to alter land use practices are often concerned at the cost of protecting nature in the process. Concerns continue to be expressed about the lack of communication between stakeholders.

### Some of the Key Questions to Consider

- How can the sharing of responsibility for our environment be improved?
- How can communications be improved among stakeholders?
- How can more volunteers and funding be mobilized for stewardship?
- How could government better address environmental issues across all government departments?
- How do we best address the issue of habitual environmental offenders?





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- Page 4 Rock riffles, a form of fish ladder, constructed to improve fish passage at Leard's Pond in Pisquid East, PEI. *Photo by Clarence Ryan of the Pisquid River Project.*
- Page 5 Tiger Swallowtail butterfly on hawkweed at Monticello, PEI. *Photo by Peter Sheppard, PEI Department of Agriculture and Forestry.*
- Page 6 Baltimore Oriole feeding on blossoms at Mount Stewart. *Photo by Peter Sheppard, PEI Department of Agriculture and Forestry.*
- Page 7 A wetland at Clearspring, PEI, one of 51 created through the Wetland Conservation Policy. *Photo by Randy Dibblee.*
- Page 8 Two row windbreak planting of maple and Austrian Pine at Albany, PEI. *Photo by Mike Butler, PEI Department of Agriculture and Forestry.*
- Page 9 One of the many values of clean water. *thinkstockphotos.ca*
- Page 10 Stream siltation below Carragher's Pond at Emyvale, PEI. *Photo by Daryl Guignon.*
- Page 11 Back yard burner. *Toledo cast iron chimena, made in China.*
- Page 12 Erosion at Cape Wolfe Lighthouse, PEI. *Photo by Don Jardine.*
- Page 13 Flooding caused by torrential rains on September 7, 2008 on the Lower Malpeque Road, Charlottetown, PEI. *Photo by Don Jardine.*
- Page 15 Construction of diversion terrace to control erosion near Breadalbane, PEI. *Photo by Gwen Vessey, PEI Department of Agriculture and Forestry.*
- Page 16 Streetscape near City Hall, Summerside PEI. *thinkstockphotos.ca*
- Page 17 Fuelwood, one of a variety of locally produced energy sources. *thinkstockphotos.ca*
- Page 18 A couch, illegally deposited roadside on PEI rather than being dropped off at an Island Waste Management Corporation's site. *Photo courtesy of PEI Department of Agriculture and Forestry.*
- Page 19 Agriculture Development Officer Will Proctor training a farmer on sprayer calibration to ensure the correct amount of pesticide is applied. *Photo by Brian Simpson, Provincial Photographer, Communications PEI.*
- Page 20 Since the range expansion of the Eastern Coyote, the Red Fox has become more visible in PEI. *Photo: Tourism PEI/Ann MacNeill © 2009 Tourism PEI.*
- Page 21 Recreational fishing meeting held at Access PEI in Souris. *Photo courtesy of Souris and Area Branch of PEI Wildlife Federation.*



Printed by the Government of Prince Edward Island  
July 2012