



*Environment, Energy  
and Forestry*

*Annual Report  
2004-2005*

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# Ministers' Message

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The Honourable Barbara Hagerman  
Lieutenant Governor  
Province of Prince Edward Island



May It Please Your Honour:

It is my privilege to present the annual report of the  
Department of Environment, Energy and Forestry  
for the fiscal year ended March 31, 2005.

Respectfully submitted,

A handwritten signature in cursive script that reads "Jamie Ballem".

Jamie Ballem  
*Minister during the Reporting Period*

## Deputy Minister's Message

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To the Honourable Jamie Ballem  
*Minister of Environment, Energy and Forestry*

Sir:

I am pleased to submit the 2004/05 Annual Report for the Department of Environment, Energy and Forestry. This report will focus on the results achieved by the department during the period of April 1, 2004 to March 31, 2005.

Working in co-operation with Islanders, the department moved forward on a number of initiatives to help protect our environment in 2004/05. At this time, I would like to thank all the employees of the Department of Environment, Energy and Forestry for displaying outstanding teamwork and dedication in serving the residents of Prince Edward Island.

Respectfully submitted,

A handwritten signature in black ink, which appears to read "John MacQuarrie". The signature is fluid and cursive.

John MacQuarrie  
*Deputy Minister*

# Department Overview

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## ***Mandate***

The mandate of the Department of Environment, Energy and Forestry is to contribute to economic and community development throughout Prince Edward Island by:

- promoting the protection and responsible stewardship of our environment and natural resources;
- developing and implementing energy policies and programs, and administering mineral resources development; and
- promoting sustainable forest management.

The department is organized into six divisions: Administrative Services, Conservation and Management, Energy and Minerals, Forestry, Pollution Prevention and Water Management.

## ***Vision***

The Department of Environment, Energy and Forestry is committed to the development of policies and legislation and the delivery of programs and services which contribute to the social well-being, protection of the environment and economic development of communities throughout the province.

Department staff are dedicated, and sought after by our clients for our knowledge and expertise. We engage our clients and work in close co-operation with them to achieve objectives and to make Prince Edward Island a model of sustainability.

# Legislative and Other Responsibilities Assigned to the Minister of Environment, Energy and Forestry

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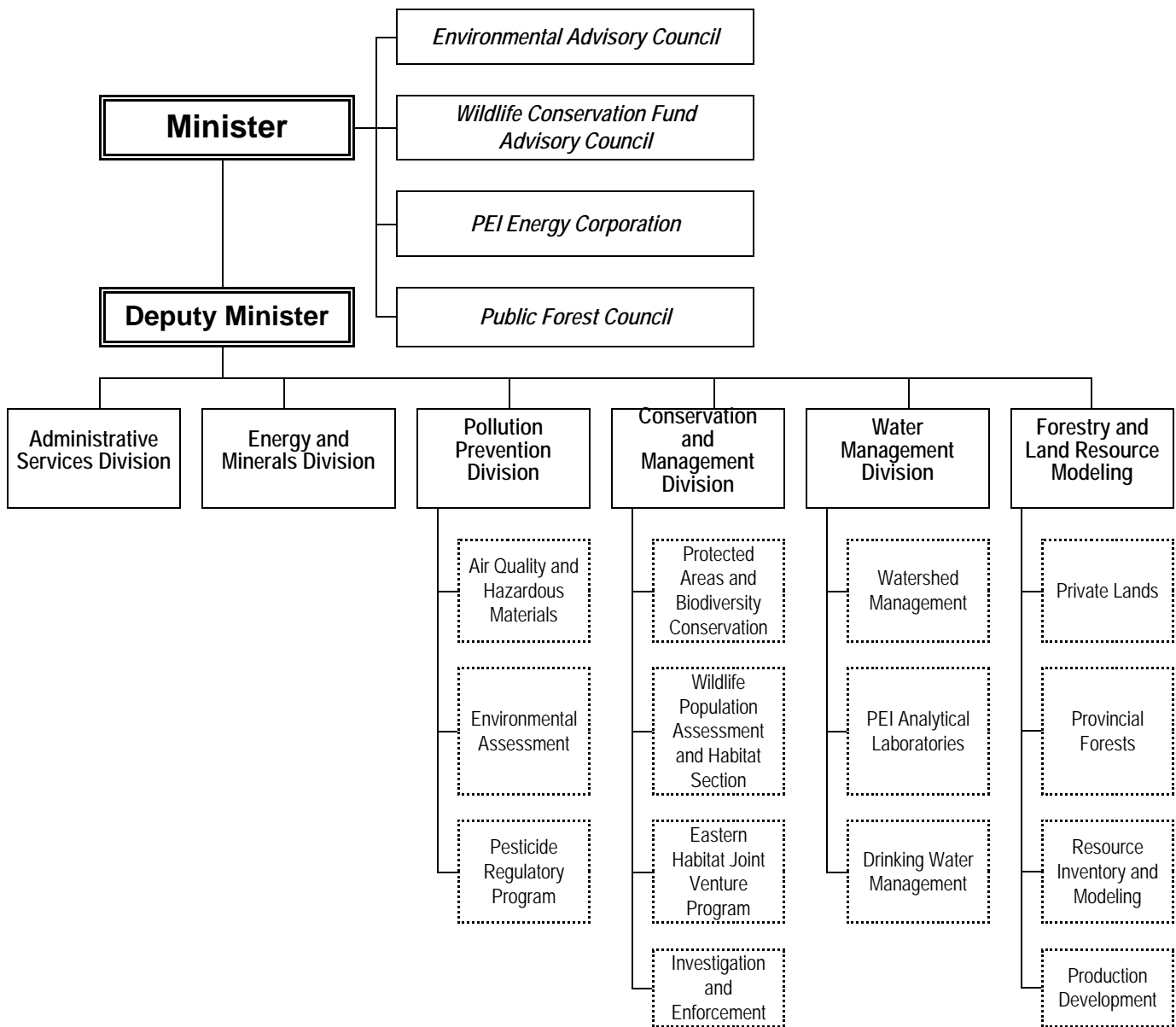
## **Acts/Statutes**

*Agricultural Crop Rotation Act*  
*Automobile Junk Yards Act*  
*Energy Corporation Act*  
*Environmental Protection Act*  
*Fire Prevention Act (Part VII)*  
*Forest Management Act*  
*Institute of Man and Resources Act*  
*Mineral Resources Act*  
*Natural Areas Protection Act*  
*Natural Gas Distribution Act (when proclaimed)*  
*Oil and Natural Gas Act*  
*Pesticides Control Act*  
*Public Forest Council Act*  
*Unightly Property Act*  
*Wildlife Conservation Act*

## **Board/Agencies/Commissions**

Atlantic Wind Test Site Inc.  
Energy Corporation  
Environmental Advisory Council  
Environmental Co-ordinating Committee  
*Natural Areas Protection Act* Technical Advisory Committee  
Natural Gas Distribution Board (upon proclamation of the *Natural Gas Distribution Act*)  
Pesticides Advisory Committee  
Public Forest Council  
Sewage Disposal Regulations Board of Examiners  
Species at Risk Advisory Committee  
Wildlife Conservation Fund Advisory Committee

# Organizational Chart



# Year in Review

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The year 2004/05 saw the Forestry and Land Resource Modeling Division of the Department of Agriculture, Fisheries, Aquaculture and Forestry transferred so that effective October 5, 2004, the new departmental name became Environment, Energy and Forestry.

Following are highlights of department activities in 2004/05:

- The *Prince Edward Island Energy Framework and Renewable Energy Strategy* was released in June. The strategy is designed to reduce Prince Edward Island's reliance on fossil fuels which pollute the environment and, at the same time, achieve a measure of energy self-sufficiency.
- The *Renewable Energy Act* was passed in the 2004 Fall Sitting of the PEI Legislature. It gives statutory force to several components of the *PEI Energy Framework and Renewable Energy Strategy*.
- The department provided support to the Special Legislative Committee on Climate Change which held public consultations on a climate change strategy for Prince Edward Island.
- Major improvements were made to the province's air quality monitoring network.
- The department released a *Forest Policy Discussion Paper* and the Public Forest Council was asked to carry out extensive consultations on a new forest policy for Prince Edward Island.
- The Environmental Advisory Council report on the regulation of pesticides was released and a working group was established to develop an implementation plan.
- The Public Forest Council released a report with recommendations on how to address concerns related to the unsustainable harvest of ground hemlock.
- The Environmental Advisory Council was asked to carry out public consultations on the requirements for construction and demolition disposal sites in Prince Edward Island.
- The *Atlantic Canada Guidelines for the Supply, Treatment, Storage, Distribution and Operation of Drinking Water Supply Systems* was released to municipalities, industry, consultants, developers and regulators.
- The department co-operated with the Prince County Chapter of Trout Unlimited to bring together recreational fishing enthusiasts to work on a long-term plan to enhance fish habitat and encourage more Islanders to participate in the recreational fishery.
- New regulations governing the operation of central water supply and wastewater treatment systems were adopted in January 2005.



# Bilan de l'année

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Au cours de l'année 2004/2005, la Division de modélisation des ressources du ministère de l'Agriculture, des Pêches, de l'Aquaculture et des Forêts a fait l'objet d'un transfert. Ainsi, à partir du 5 octobre 2004, le ministère a pris le nouveau nom de ministère de l'Environnement, de l'Énergie et des Forêts.

Voici les points saillants des activités du ministère en 2004/2005 :

- Le *Cadre de travail sur l'énergie et Stratégie en matière d'énergie renouvelable de l'Île-du-Prince-Édouard* a été publié en juin. La stratégie vise à réduire la dépendance de l'Île-du-Prince-Édouard par rapport aux combustibles fossiles qui polluent l'environnement et, en même temps, à parvenir à une certaine indépendance énergétique.
- La loi intitulée *Renewable Energy Act* (Loi sur l'énergie renouvelable) a été adoptée lors de la séance d'automne de l'Assemblée législative de l'Î.-P.-É. Elle a conféré force de loi aux nombreuses composantes du *Cadre de travail sur l'énergie et Stratégie en matière d'énergie renouvelable de l'Île-du-Prince-Édouard*.
- Le ministère a appuyé le Comité spécial sur le changement climatique qui a tenu des consultations publiques sur la stratégie en matière de changement climatique de l'Île-du-Prince-Édouard.
- On a apporté des améliorations importantes au réseau de contrôle de la qualité de l'air de la province.
- Le ministère a publié le *Document de travail portant sur la politique forestière* et on a demandé au Conseil sur les forêts publiques de procéder à de vastes consultations sur une nouvelle politique forestière pour l'Île-du-Prince-Édouard.
- Le rapport du Conseil consultatif sur l'environnement portant sur la réglementation des pesticides a été publié et on a établi un groupe de travail pour concevoir un plan de mise en application.
- Le Conseil des forêts publiques a publié un rapport avec recommandations sur la façon d'aborder les préoccupations liées à la récolte non durable de l'if du Canada.
- On a demandé au Conseil consultatif sur l'environnement de mener des consultations publiques sur les exigences pour les sites de dépôts de construction et de démolition à l'Île-du-Prince-Édouard.
- Les lignes directrices intitulées *Atlantic Canada Guidelines for the Supply, Treatment, Storage, Distribution and Operation of Drinking Water Supply Systems* ont été données aux municipalités, aux industries, aux experts-conseils, aux promoteurs de projets et aux organismes de réglementation.
- Le ministère a travaillé en coopération avec le Prince County Chapter of Trout Unlimited pour permettre aux passionnés de pêche récréative de travailler ensemble à créer un plan à long terme visant à améliorer l'habitat des poissons et à encourager davantage d'Insulaires à pratiquer la pêche récréative.
- De nouveaux règlements gouvernant l'exploitation de l'approvisionnement central en eau et des systèmes de traitement des eaux usées ont été adoptés en janvier 2005.

# Administrative Services Division

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## **Mandate**

The Administrative Services Division provides financial, human resource and administrative services to department personnel. The division has the overall responsibility of preparing and monitoring the department budget and providing financial analysis and advice to department management. Human resource management support for the department is provided in areas such as recruitment and selection, position management, orientation, training and planning. The division processes all financial and payroll transactions; and is responsible for various administrative services such as reception, vehicle management, telecommunications system administration, accommodation requirements, records management activities, information technology services, risk management, freedom of information and protection of privacy co-ordination, and occupational health and safety program planning.

## **Department Staff Summary**

On April 1, 2004, the Corporate Services Division was eliminated; the Assistant Deputy Minister and Administrative Support to the Assistant Deputy positions were terminated; and Communications moved under the direction of the Deputy Minister. As well, the Pesticide Control Division was transferred to the Pollution Prevention Division. On October 5, 2005, the following permanent positions were established:

|                             | <b>Full Time</b> | <b>Part Time</b> |
|-----------------------------|------------------|------------------|
| Pollution Prevention        | 15               | 1                |
| Water Management            | 32               | 5                |
| Conservation and Management | 19               | 0                |
| Administrative Services     | 11               | 0                |
| Energy and Minerals         | 3                | 0                |
| Forestry                    | 28               | 26               |
| <b>Total</b>                | <b>108</b>       | <b>32</b>        |

In addition to the above established positions, the department employed 14 casual employees and 51 students in all divisions except Forestry. Forestry numbers were reflected in the Department of Agriculture, Fisheries and Aquaculture Annual Report for the 2004/05 fiscal year.

## **Freedom of Information and Protection of Privacy**

The department received 16 new Access to Information requests under the *Freedom of Information and Protection of Privacy Act* between April 1, 2004 and March 31, 2005. In addition, there were 10 open requests as of April 1, 2004 (including requests under appeal), and three previously closed requests were reopened during the same period; thus, there were a total of 29 active Access to Information requests between April 1, 2004 and March 31, 2005. Of these 29 requests, 22 were closed during the 2004/05 fiscal year, and seven were still open as of March 31, 2004 (including requests under appeal).

## Access to Information Request Summary

|  |    |
|--|----|
| Open requests as of April 1, 2004 (including requests under appeal)          | 10 |
| New requests received between April 1, 2004 and March 31, 2005               | 16 |
| Closed requests that were re-opened between April 1, 2004 and March 31, 2005 | 3  |
| Total active requests between April 1, 2004 and March 31, 2005               | 29 |
| Number of requests that were closed between April 1, 2004 and March 31, 2005 | 22 |
| Open requests as of March 31, 2005 (including requests under appeal)         | 7  |

# Department Financial Summary

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## *2004/2005 Actual Expenditures and Revenue\**

| Division                    | Original Budget     | Revised Budget      | Actual<br>Expenditure/Revenue |
|-----------------------------|---------------------|---------------------|-------------------------------|
| <b>Expenditure Budget</b>   |                     |                     |                               |
| Department Management       | \$302,700           | \$290,200           | \$280,626                     |
| Pollution Prevention        | \$1,471,700         | \$1,567,100         | \$1,545,846                   |
| Water Management            | \$2,408,800         | \$2,212,400         | \$2,155,386                   |
| Conservation and Management | \$1,685,600         | \$1,821,500         | \$1,787,351                   |
| Administration              | \$477,800           | \$644,400           | \$471,897                     |
| Forestry                    | \$5,565,000         | \$5,607,300         | \$5,476,574                   |
| <b>Total Expenditures</b>   | <b>\$11,911,600</b> | <b>\$12,142,900</b> | <b>\$11,717,680</b>           |
| <b>Revenue Budget</b>       |                     |                     |                               |
| Pollution Prevention        | \$119,500           | \$119,500           | \$141,332                     |
| Water Management            | \$568,700           | \$568,700           | \$554,624                     |
| Conservation and Management | \$502,000           | \$597,100           | \$539,092                     |
| Administration              | 500                 | 500                 | \$842                         |
| Forestry                    | \$1,308,100         | \$1,308,100         | \$687,714                     |
| <b>Total Revenue</b>        | <b>\$1,308,100</b>  | <b>\$1,308,100</b>  | <b>\$687,714</b>              |
| <b>Total Net</b>            | <b>\$9,412,800</b>  | <b>\$9,549,000</b>  | <b>\$9,794,076</b>            |

*\*Based upon financial report dated October 24, 2005.*

The department's expenditure budget was increased by \$231,300; the salary budget was increased by \$136,200 due to a two per cent salary increase negotiated in the Collective Agreement between the Government of PEI and the PEI Union of Public Sector Employees; and there was one special warrant in the amount of \$95,100 for a stream delineation project which was 100 per cent funded by Agriculture Canada under the National Water Program.

# Conservation and Management Division

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## ***Mandate***

The Conservation and Management Division is responsible for the conservation of the province's environment, its wildlife and the habitats on which they depend. It is also responsible for enforcement of the provincial *Environmental Protection Act*, *Wildlife Conservation Act* and *Natural Areas Protection Act*, as well as the federal *Fisheries Act* and *Migratory Bird Convention Act*.

Achieving conservation and protection of the environment depends on the co-operation and involvement of interested individuals, landowners, community-based organizations, Government and non-Government agencies and compliance with provincial and federal legislations.

## ***Division Overview***

The division manages approximately 11,735 hectares (29,000 acres) of provincially owned land for the benefit of wildlife, natural area protection and public use and enjoyment of wildlife-related activities. Many of these lands are contained within designated Wildlife Management Areas or protected under the *Natural Areas Protection Act*. Within these lands are 90 impoundments which serve as areas for activities such as angling, hunting, trapping, canoeing, and birdwatching, as well as habitat for wetland-dependent wildlife.

This past fiscal year licences were issued to over 9,000 anglers, 3,500 hunters and 100 trappers. As well, 500 watercourse alteration permits were issued so that approximately \$158,000 in revenue was generated in 2004/05.

## **Freshwater Fisheries**

The division hired a Freshwater Fisheries Biologist in September 2003 to provide assessments of habitat and stock responses in community-led habitat restoration initiatives, which included the identification of opportunities and assessment of benefits associated with fish stocking, and assessing the effects of land use on fish habitat and stocks, including the ecological implications of fish kill events due to pesticides and other causes.

In 2004, the division was involved in investigating seven reported incidents of fish mortalities. The most extensive of these incidents was reported by an angler on September 3, 2004, in Southwest Brook, a tributary to the Dunk River, near Kinkora. Investigation of this fish kill was made difficult by the delay between actual fish mortality and the date of reporting. All indicators suggest that the mortality was related to a toxic event. Although 400 fish were retrieved during clean-up, including brook trout and rainbow trout, the actual mortality was considerably greater. The area was electrofished following the clean-up and will be resurveyed in 2005.

Three of the reported incidents in 2004 involved smelts, a species which commonly experiences considerable natural mortality when entering fresh water to spawn. Dead eels and tommycod discovered in Southwest River in Margate are believed to have died during anoxic conditions on the river. The remaining reported fish mortality was related to angling stress.

The division continued to collect fish in selected areas for analysis of mercury as part of a joint initiative with the New England Governors and Eastern Canadian Premiers Mercury Task Force. Fish were sampled from the Trout River

in Tyne Valley, Dunk River and O'Keefe Lake in Avondale, with testing completed at Environment Canada's Environmental Quality Section Laboratory in Moncton, New Brunswick. Highest mercury levels were found in fish from O'Keefe Lake, with an average concentration of 0.42 ppm. Two of the fish exceeded the 0.5 ppm limit established by federal health authorities.

Mill River, Little Trout River (Richmond), Wilmot River, West River, Morell River and Souris River were established as index rivers to enable long term data collection on fish populations and habitat. Two electrofishing sites were identified at each of the six rivers and nine were electrofished. These sites will be resurveyed in 2005, and subsequent years.

In November 2004, salmonid redd surveys were completed on 10 rivers: North Lake Creek, Cross River, Naufrage River, Morell River, Midgell River, Bristol Creek, Pisquid River, North River, West River and Little Trout River. When carried out annually, redd surveys provide a useful index of salmon populations and spawning activity.

Semi-natural rearing of Atlantic salmon has been used successfully on PEI since the late 1980s. The O'Leary Branch of the PEI Wildlife Federation has switched to raising brook trout at Profitt's Pond in Rosebank. To monitor the success of stocking semi-naturally reared trout, 243 brook trout were tagged with "Floy" tags and released at two locations on Foxley River in October 2004. Twenty tagged fish were held at the hatchery over winter. A reward will be offered to anglers for each returned tag. It is hoped that such stocking will enhance angling opportunities in an estuary with limited natural inputs of fish.

The Family Fishing Weekend was once again held during the long weekend in May. In support of this venture, no angling licence was required to fish from May 21 to 24, 2004. The

department co-operated with the Atlantic Salmon Federation and PEI Wildlife Federation to promote and encourage participation in angling. Eight community groups sponsored events at ponds in various locales, many of them hosting barbecues and providing prizes. The Cardigan Fish Hatchery stocked a number of brook trout into these ponds prior to the long weekend.

On February 28, 2005, the Conservation and Management Division co-operated with the Prince County Chapter of Trout Unlimited in hosting a workshop entitled The Recreational Fishery on Prince Edward Island: Challenges and Opportunities. Jack Imhof, national biologist for Trout Unlimited Canada, was a featured speaker at this well attended workshop. A steering committee was assembled to begin the process of forming a Recreational Fisheries Advisory Committee.

### **Wildlife Conservation Fund**

The Prince Edward Island Wildlife Conservation Fund was created in 1998 to support conservation initiatives led by community-based groups. Money for the fund comes from a \$13 contribution made once per year by each licensed angler, hunter and trapper. An Advisory Committee composed of representatives of a number of organizations reviews all applications received and recommends funding.

In 2004/05, the Wildlife Conservation Fund provided \$60,000 to the Cardigan Fish Hatchery for the production of trout and salmon for public fisheries, and approximately \$55,000 was distributed to community groups and organizations for projects including wildlife habitat restoration and enhancement, research and education.

## **Public Awareness and Education**

In March 2004, the division participated in the Home Show held at the Charlottetown Civic Centre. A number of mounts and pelts were popular with the public, and information booklets and brochures were available. Staff from the division are regularly called upon to make presentations to various schools and community organizations. Staff members in the division participated in the 2004 Envirothon. This involved making presentations to school teams, preparing exam questions and conducting exams.

## **Protected Areas and Biodiversity Conservation**

In 2004, seven privately owned properties totalling 151.4 ha and one provincially owned property of 4.1 ha were designated as Natural Areas under the *Natural Areas Protection Act*. These properties included lands at Point Prim, Tryon, Iona, Culloden, Wood Islands and Seaview. Most significant was the designation of the 100.4 hectare Bird Island in Malpeque Bay.

The province continued to work with input from the Boughton River Watershed Enhancement Committee to implement a management plan for the Forest Hill Wildlife Management Area. The Community of Mount Stewart and the Hillsborough River Association continued to provide input on management of the Mount Stewart Wildlife Management Area, and several adjacent properties were acquired for future inclusion with funding from the Eastern Habitat Joint Venture Program. Signs were erected at Southampton Wildlife Management Areas to identify the boundaries and facilitate public use.

The department continued its representation on the Basin Head Lagoon Ecosystem Conservation Committee which is exploring the opportunity for designation of Basin Head Lagoon as the province's first Marine Conservation Area.

## **Accord for Protection of Species at Risk**

The Conservation and Management Division continued to participate in national processes under the Accord for the Protection of Species at Risk. The publication *Wild Species 2000: The General Status of Species in Canada* ([www.wildspecies.ca](http://www.wildspecies.ca)) is the first work by knowledgeable experts and volunteers in PEI and across Canada to assign status ranks to species in the country. This effort is being repeated in 2004, leading to an updated publication in 2006. New field studies greatly inform the assignment of status ranks. In 2004, the Conservation and Management Division participated in the second year of a botanical survey to collect information leading to the publication of a revised Flora of Prince Edward Island. This major initiative is being led by Island Nature Trust and the Atlantic Canada Conservation Data Centre.

The Province continued to support conservation programs for the endangered piping plover on Island beaches and to participate in the National Piping Plover Recovery Team. An 11-member Species at Risk Advisory Committee advised the Minister about nationally rare species that may exist in the province, provincially rare species and ways to encourage private landowners and the public to participate in the conservation of these species. As agreed in the National Accord for the Protection of Species at Risk in Canada, the committee met several times in 2004, and began a process leading to complementary listing of species within PEI that are listed federally as being at risk.

As endangered species legislation is implemented in Canada, the division participated in one of two meetings of the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), and reviewed the degree of endangerment of 44 species of wildlife in Canada.

## **Wood Harvest on Provincially Owned Land**

In March 2005, 11.4 hectares in six wood blocks in Dromore, Forest Hill, Corraville, Basin Head, Red House and Kingsboro were tendered for harvest, with winning bids forecast to bring in \$34,440 in revenue. These cuts salvage dying wood – especially larch, harvest green wood, contribute to enhancement of local wildlife populations by providing young wood stands on a rotational basis for early successional species, and help maintain an uneven aged healthy forest into the future. Some lumber harvested from provincial wildlife management areas was also used to repair fishways and boardwalks on provincial land.

## ***Wildlife Population Assessment and Habitat Section***

### **Status of Wildlife**

Waterfowl breeding pair and brood surveys were conducted again in 2004. The surveys provide an annual index of waterfowl production for wetlands across the province and supply essential data for regulatory management decisions. Annual spring breeding pair counts have shown an increasing to stable population trend from 1995 through 2004.

Weekly surveys of wintering waterfowl are also conducted on 33 sites in January and February. Results provide an index to changes in numbers, species composition and distribution of wintering waterfowl. Survey results can be found in Figure 1 (on the following page).

Efforts were again directed at banding locally produced ducks with the assistance and co-operation of the Canadian Wildlife Service. Waterfowl banded in the summer of 2004 include black ducks, blue-winged teal, green-winged teal, American widgeon and mallard. Three hundred black ducks and mallards were banded during the winter of 2004. The spring

Canada goose banding program continued in 2004, using rocket nets to capture the birds. Bald eagles were banded in 2004, in a continuing effort to gain information on migration patterns and mortality factors for eagles raised at Island nest sites.

The November Canada goose aerial survey program continued in 2004 in co-operation with the Canadian Wildlife Service. The count in 2004 was the second highest ever. During the survey, 38,101 Canada geese and 7,900 black ducks were observed. This represents a 40 per cent increase over the previous 10-year average.

Other wildlife surveys conducted during 2004 included the cormorant nest counts, woodcock singing ground survey, and the annual monitoring of the wild fur industry.

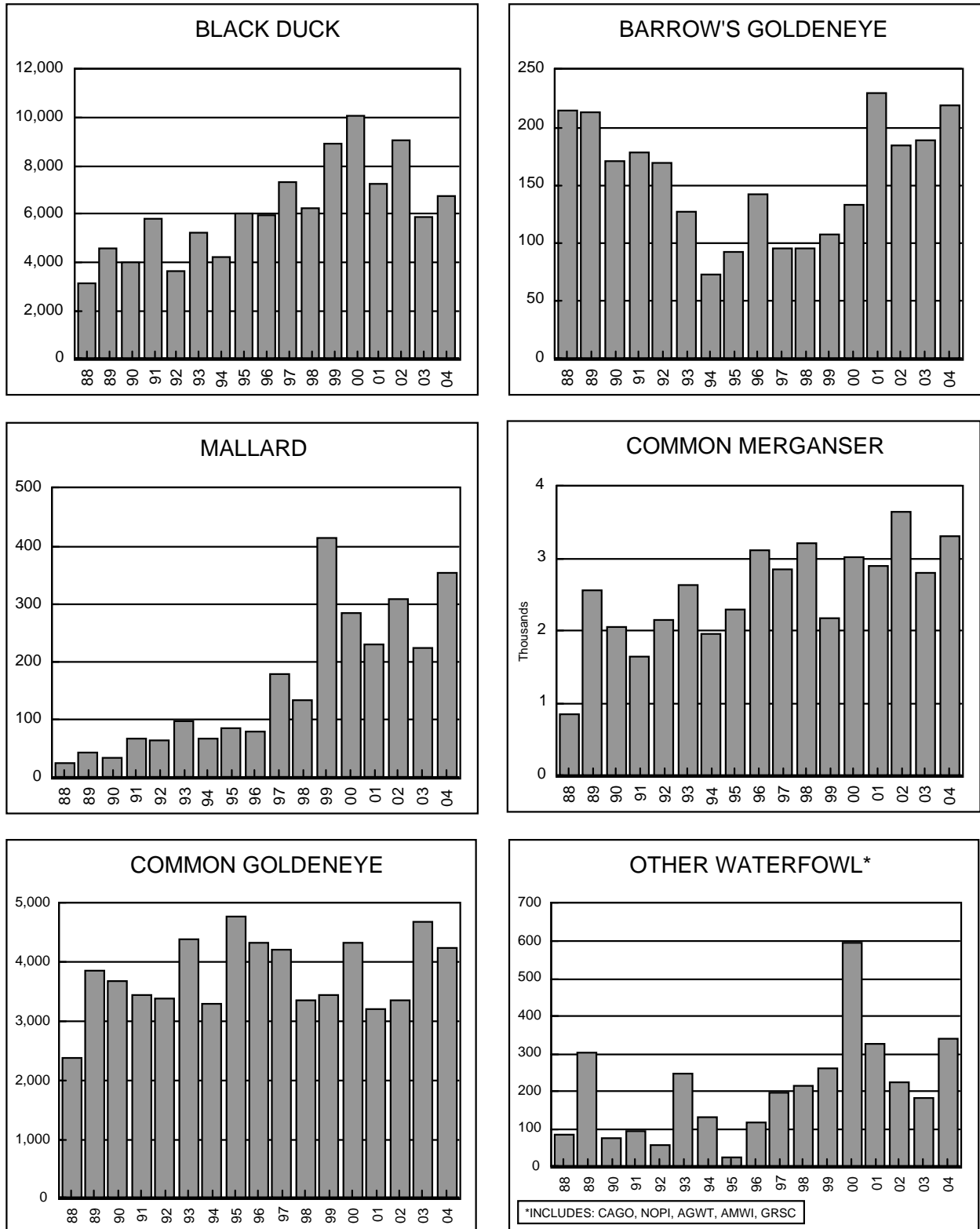
### **Wildlife Management**

Two trappers were again hired from April to October to mitigate highway beaver problems across the Island. This reduced beaver problems, saved the Department of Transportation and Public Works valuable machine time and resulted in improved beaver management.

The division continued to work with the Department of Agriculture, Fisheries, Aquaculture and Forestry, the Sheep Breeders Association, and the Federation of Agriculture in dealing with problems associated with the coyote. The division continues to monitor the range expansion, reproduction, food habits and annual harvest. As well, a program to educate the general public in dealing with coyotes continues.



Figure 1. Total maximum counts of waterfowl at 33 winter surveys sites by species



## **Geographic Information System**

As part of the Corporate Land Cover and Land Use Inventory (2000), the Wildlife Section continues to update the Wetland Inventory, one of the department's major layers in the Government Geographic Information System (GIS). The section continues to maintain and improve other resource layers and develop more effective means of delivering GIS products within the department, inter-departmentally and externally.

The need to improve the accuracy of both the watershed and hydrographic (watercourse) layers is a priority. Most Government resource agencies, as well as numerous community groups concerned with watershed management, use the watershed and hydrographic layers to develop watershed management plans, calculate soil erosion risk indices, develop groundwater models, produce buffer zone calculations, etc. More precise layers are needed to meet these objectives. Both the watershed and watercourse layers are being updated.

The Wildlife Section is represented on both the GIS Co-ordinating Committee and the GIS Technical Committee which serve to develop and implement a policy framework for creating and distributing Government GIS data.

## **Firearm Safety/Hunter and Trapper Education**

In October of 2003, the Conservation and Management Division subcontracted the delivery of the Canadian Firearms Safety Course to the PEI Wildlife Federation. The five-year contract will have the PEI Wildlife Federation deliver both the non-restricted and restricted firearms safety courses. The Federation opened an office at the Farm Centre on University Avenue to provide service to the public seeking firearms training.

In 2004, there were 25 volunteer Canadian Firearms Safety Course instructors providing training to 474 students, with 267 taking the non-restricted firearms training and 207 taking the restricted firearms safety course. The Forests, Conservation and Management Division is responsible for monitoring the delivery of the training, maintaining a file system for clients who have completed the Canadian Firearms Safety Course Training, maintaining an inventory of firearms used for training, and co-operating with the Provincial Firearms Office and the Atlantic Police Academy.

The PEI Wildlife Federation is also responsible for the delivery of the provincial Hunter Education training. The Forests, Fish and Wildlife Division maintains the legislative requirements to issue Firearms Safety Certificates required by all hunters.

In 2004, the Hunter Education Program was delivered to 251 students, most being youth (ages 12 to 17) and first-time hunters. There were 20 qualified Hunter Education volunteer instructors. One Bow Hunter course was held for two bow hunters. Bow hunters require this special course if they wish to hunt using a bow. The department worked co-operatively with the PEI Traditional Archery Association to encourage more hunters to try bow hunting.

Trapper education is required for all first-time trappers. Training is conducted jointly by the department and the PEI Trappers Association. Eleven students received training in 2004. Courses were held in Southampton, Kings County and Wellington, Prince County.

## **Environment Futures Program**

In the winter of 2003, the department undertook a comprehensive review of what was formerly known as the Young Environmentalist Program. In 2004, the program was renamed as the Environment Futures Program and the mandate was updated. Two program co-ordinators were hired to oversee 10 crews located across PEI. The department hired 40 summer students through the Employment Development Agency's Jobs for Youth Program to carry out environmental projects for communities, watershed organizations and Government departments. The supervisors of each crew were enrolled in either Biology or Natural Sciences programs and each underwent an intensive interview process. Students completed 68 environmental projects across the province and cleaned 52 public beaches on a bi-weekly schedule. Over half of the projects involved stream enhancement and wetland restoration (37 projects). Other projects carried out in 2004 included: four illegal dumping cleanups, seven tree nursery projects, 10 trail projects, and 10 education/promotion projects.

## **Eastern Habitat Joint Venture**

This program is directed at protecting, restoring and enhancing wetland habitat within the province. Under the Stewardship Program of Eastern Habitat Joint Venture, 30.6 hectares of wetland habitat were enhanced at 14 sites in the province in 2004. As well, two farm ponds comprising eight hectares of marsh were constructed to contain manure storage milk house wastewater. A total of 14 beaver bafflers were installed throughout the province conserving a further 68.2 hectares of existing wetland habitat.

For the first year since 1991, no financial assistance was provided to the agricultural community in support of the program to fence livestock from streams or to support the two Agri-Conservation Clubs of 30 member farms each. The purpose of these clubs is to promote

Best Management Practices such as nutrient management planning and soil conservation measures on agriculture land that provides protection of adjacent watercourse and wetlands. Support was provided through participation at the Steering Committee level and it is expected that these programs will continue to be supported with funding from the agricultural community.

## ***Investigation and Enforcement Section***

Investigation and Enforcement consists of six Conservation Officers and one Section Head. These positions are located in Charlottetown and also at the Access PEI centres in Alberton, Wellington, Montague, Kensington and Souris.

The Conservation Officers enforce the following pieces of legislation assigned to the Department of Environment Energy and Forestry by Executive Council:

- *Environmental Protection Act*
- *Wildlife Conservation Act*
- *Natural Areas Protection Act*
- *Unsightly Property Act*
- *Automobile Junk Yards Act*

Through formal and informal agreements with Environment Canada, Fisheries and Oceans and the Royal Canadian Mounted Police, the Province enforces several federal acts and regulations related to pollution prevention and wildlife protection. The following are other pieces of legislation enforced by the Investigation and Enforcement Section:

### **Provincial**

- *Trespass to Property Act*, related to hunting and fishing
- *Pesticides Control Act*, related to release of contaminants into the environment and potential for destruction of wildlife habitat

- *Planning Act*, related to conservation zones, destruction of sand dunes and coastal habitats
- *Highway Traffic Act*, related to litter, unsecured loads and other environmentally related sections
- *Off Highway Vehicle Act*, related to chasing wildlife and firearms
- *Recreation Development Act*, related to hunting, fishing and trapping in parks

### **Federal**

- *Fisheries Act (CANADA)*, related to sport fishing and habitat destruction
- *Migratory Birds Convention Act (CANADA)*, related to the protection of migratory birds
- *Wild Animal/Plant Protection and Regulation of International and Interprovincial Trade Act*, related to the illegal trade and harvesting of wildlife
- *Small Vessel Regulations*, related to boat safety
- *Criminal Code (CANADA)*, related to firearms and other criminal offences that an officer may come across in the field.

The table on the following page illustrates the number and nature of violations and warnings between the period of January 1 and December 31, 2004. There were a total of 142 violations across the province.

The Investigation and Enforcement Section continues to focus on consistency and fairness in enforcement. Issues the section faced in 2004 include the continued investigation of many illegal dump sites, although few resulted in charges as it is extremely difficult to prove the person responsible for depositing the waste.

There were far fewer violations of the buffer zone legislation in 2004. This is a direct result of the greater effort put forth by the Water Management Division in co-operation with the conservation officers to educate the farming community before the planting began in 2004.

There was one fish kill on the Southwest Brook of the Dunk River in late August. This was believed to be caused by a heavy rainfall event causing pesticide run-off from the adjacent agricultural fields.

The conservation officers were involved in banding bald eagles between May 28 and June 17, across the province. In total, 27 eaglets were banded on 15 different nests.

Approximately 200 school children from eight different schools were involved. There was also an adult eagle banded and released in Georgetown on September 15. Grades three and four from Georgetown Elementary School participated in this event.

The Investigation and Enforcement Section continued to provide technical support to other divisions in 2004. Following are highlights of assistance provided.

### *Conservation and Management Division*

- Survey of birds (waterfowl, cormorants, woodcock)
- Band waterfowl/eagles
- Collect specimens (coyote, beaver, fox)
- Deliver and collect licences (hunting and fishing)
- Deliver nuisance animal program
- Provide public with information on wildlife
- Assist in the Firearm/Hunter Safety and Trapper Education programs
- Collect crows and blue jays for West Nile virus testing
- Conduct site inspections for watercourse crossings
- Check compliance of irrigation sites, water crossing, buffer zones, etc.

*Pollution Prevention Division*

- Conduct site inspections on pits
- Conduct site inspections on automobile junkyards
- Conduct compliance audits on storage facilities for batteries, oil, bottles
- Check land disposal sites

*Water Management Division*

- Collect water samples

| <b>Violations and Warnings January 1 to December 31, 2004</b> |                |                 |
|---|----------------|-----------------|
| <b>Statute</b>  | <b>Charges</b> | <b>Warnings</b> |
| <i>Environmental Protection Act</i>                           | 21             | 43              |
| <i>Federal Fisheries Act</i>                                  | 0              | 10              |
| <i>Highway Traffic Act</i>                                    | 0              | 1               |
| <i>Migratory Bird Convention Act</i>                          | 0              | 1               |
| <i>Off - Highway Vehicle Act</i>                              | 3              | 4               |
| <i>Trails Act</i>   | 1              | 0               |
| <i>Wildlife Conservation Act</i>                              | 14             | 36              |
| <i>Highway Traffic Act</i>                                    | 0              | 2               |
| <i>Trespass to Property Act</i>                               | 2              | 0               |
| Protected Areas Regulations                                   | 1              | 0               |
| Maritime Provinces Fisheries Regulations                      | 0              | 3               |

# Energy and Minerals Division

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## **Mandate**

The Energy and Minerals Division is responsible for the development, implementation and administration of energy policies and programs and the administration of mineral resources development.

## **Highlights**

### **Oil and Natural Gas Exploration**

Interest in the search for commercial hydrocarbon resources on PEI continues to remain at a high level as approximately 1.1 million acres (445,000 hectares) of provincial lands is being actively explored. Four private companies hold a total of 12 oil and natural gas permits.

During 2004/05, the Minister released two Calls for Bids that affected over 750,000 acres (304,500 hectares). In July, a Call for Bids was released that resulted in the issuance of four permits totalling 572,466 acres (232,000 hectares) in the central region of the province. Rally Energy Corporation Inc. of Calgary, Alberta, secured two of these permits with Corridor Resources Inc. of Halifax, Nova Scotia, being the successful bidder for the other two. Recently, Shannon Resources International purchased Rally's PEI interests and are the sole rights holder to Permits #04-01 and #04-04. Shannon also holds a permit on 66,000 acres, located just west of Summerside, that was included in their transaction with Rally.

The second Call for Bids was completed in November 2004. As a result of this Call, four permits encompassing almost 185,000 acres (75,000 hectares) were issued to PetroWorth Resources Inc. of Calgary, Alberta. These properties are located in eastern Kings County.

Completion of a 3-D seismic program by PetroWorth Resources Inc. was the most significant exploration activity during this period. The survey encompassed approximately 38 square miles (100 square kilometers) in the Souris area and presently ranks as the largest on-land 3-D seismic program to be conducted in Atlantic Canada. The company continues to evaluate their data to identify drilling sites for their permits.

### **Energy Database**

Maintaining a current database of energy statistics is crucial for the preparation of policy documents and other various reports that deal with energy and the environment. The Energy and Minerals Division tabulates supply, demand and costs of energy fuels used in Prince Edward Island. In addition to acquiring data from a variety of agencies, the division commissions a biannual wood fuel survey to track the volume and pricing of this energy source. This information is not otherwise available from other data providers. Wood biomass represents a significant energy supply for the residential sector and is the province's largest source of renewable energy.

In November 2003, the Canadian Energy Research Institute released a report of provincial and sectorial impacts on Atlantic Canada that may be expected from complying with greenhouse gas emission reductions under the Kyoto Protocol. Commissioned by all four Atlantic provinces, the report is an update of federal information but provides a more regional focus of the economic implications of meeting the Kyoto Protocol's reductions. A key finding in this report was that greenhouse gas emissions in the region have been understated to date, which means increased effort and expense will be required to achieve compliance.

### ***Renewable Energy Act***

The *Renewable Energy Act* was passed in the 2004 Fall Sitting of the PEI Legislature. It will give statutory force to several components of the *PEI Energy Framework and Renewable Energy Strategy* that was released in June 2004.

Under the act, provisions for net-metering have been introduced for small producers of electricity that generate this energy from renewable means. Under net-metering, a producer receives the same value for any energy that they supply to the utility's system as is charged for electricity received from the grid. This significantly improves the economic feasibility of installing small renewable energy systems. It is expected that residential customers, small businesses, farms and other enterprises will install wind power equipment or other renewable energy generating equipment to capitalize on this opportunity.

Ensuring that large-scale wind developments are situated in areas of the province that have wind profiles to provide economic viability to these projects was also addressed in the act. Through regulation, renewable energy generators with a capacity of greater than 100 kilowatts must be located in an approved zone.

Instituting a mandatory Renewable Portfolio Standard (RPS) for electricity was a key objective of the *PEI Energy Framework and Renewable Energy*. The *Renewable Energy Act* requires electrical utilities to access at least 15 per cent of their electricity from renewable means by 2010. By 2015, electrical utilities on PEI must have the capability of acquiring all their electricity from renewable energy. It is expected that a mandated RPS will result in a considerable development of wind power capacity in the province over the next 10 years. Presently, about five per cent of PEI's electricity is acquired from wind power.

Another incentive to the development of wind power in the province is a regulated feed-in tariff for this energy. The *Renewable Energy Act* requires public utilities to pay a minimum rate or price for electricity created from renewable energy that is supplied by either municipal systems, medium capacity generators (between 100 kilowatts and one megawatt) and large capacity generators (greater than one megawatt).

Demand side management (DSM), the practice of reducing peak demand through a variety of energy efficiency and conservation measures, is often cited as one of the most cost effective means to reduce electrical costs. The act requires electrical utilities on PEI to file a DSM plan with the Island Regulatory and Appeals Commission that results in a five per cent reduction in peak demand under a business-as-usual scenario by 2010. A further five per cent reduction is required by 2015.

### **PEI Energy Corporation Activities**

The Energy and Minerals Division was involved with several Energy Corporation initiatives during the past year. Expansion of the Corporation's North Cape Wind Farm from 5.28 megawatts to 10.56 megawatts required the assistance of division staff to develop the infrastructure and environmental compliance for the eight V-47 wind turbines. Because five of

these turbines were located on private property, staff were also required to negotiate lease agreements with landowners.

Satisfying the requirements of a proposed Renewable Portfolio Standard (RPS) for electricity production generation will require a greater understanding of the wind profiles on the Island. The PEI Energy Corporation embarked on its first phase of monitoring by establishing 50-metre anemometer towers at selected sites in eastern Kings County. Division staff have been assigned to this project and it is expected that many other sites in the province will be monitored to determine the feasibility of wind power development. It is expected that this ongoing work will result in a comprehensive wind map for PEI.

### **Intergovernmental Committees**

Division staff represent the province on a number of intergovernmental committees pertaining to energy and the environment as part of PEI's responsibility as participants in the Council of Energy Ministers and the Joint Ministers of Energy and Environment Ministers. Staff sit on a number of Federal/Provincial/Territorial committees that deal with various energy issues including electrical reliability and pipeline regulation; and represent PEI internationally on energy issues through the Northeast International Committee on Energy which is a subcommittee of the Conference of New England Governors and Eastern Canadian Premiers.

The Atlantic Energy Ministers' Forum, in which Prince Edward Island continues to be the lead, has served as a useful body for energy officials to discuss and take action on a variety of issues through a co-operative and collaborative approach with their regional counterparts. Utilizing a format of both formal face-to-face meetings and informal conference calls, the forum has dealt with such issues as harmonizing the regulation of oil and gas exploration, sharing energy efficiency information, and preparing the

groundwork for greater co-ordination and co-operation by the region's electrical utilities.

The Atlantic Energy Ministers' Forum has been active over the past several years with ministers meeting four times over the past 18 months, including a meeting with federal ministers in Ottawa. Work to date has included the completion of an Electricity Sector Assessment and the formation of the Atlantic Electricity Working Group. This group comprises representatives from the four provincial energy departments and the major electrical utilities in the Atlantic Provinces.

Prince Edward Island is the co-chair, with Natural Resources Canada, of the Federal/Provincial/Territorial Renewable Energy Working Group. Promoting the advancement of renewable energy in Canada and examining possible standards or quotas for renewable energy in Canada are among the responsibilities of this working group.

The division also provides provincial representation to the Ethanol and Biofuels Working Group. As Prince Edward Island is presently exploring the feasibility of developing biofuel facilities, this working group provides a conduit to expertise from other jurisdictions that have proceeded with establishing ethanol facilities.

### **Regulatory Matters**

The Energy and Minerals Division has been monitoring recent developments with respect to natural gas exploration and production in the Atlantic Offshore. Recently exploration results have been disappointing and the Sable Offshore Project has downgraded its resource estimate several times over the last number of years. The Energy and Minerals Division also represents provincial interests on the Tolls and Tariffs Working Group regarding the Maritimes & Northeast Pipeline. This group provides input into the toll-making process for the natural gas delivery system in the Maritime provinces.



In January 2004, the *Electric Power Act* was enacted. This act supersedes the *Maritime Electric Company Limited Act*, which was repealed, and gives broad powers to the Island Regulatory and Appeals Commission to regulate the activities of electric utilities in the province. It also allows for electric utilities to be regulated under a “Cost of Service” regime. This forces electric utilities operating within the province to file with the commission an accounting of all costs incurred, and ensures that these costs were incurred in a prudent fashion, and limits the profits of electric utilities. This will ensure that the Island’s electricity consumers are only charged what is fair and reasonable, as determined by the commission, and allows electric utilities to earn a reasonable rate of return.

In February of 2004, MECL applied to IRAC to construct and operate a 50 MW diesel-fired generating unit located at its Charlottetown plant. This plant would be constructed at a cost of \$35 million and Island ratepayers would pay for this unit through a 3.9 per cent increase in their bills for the next 30 years. At that time, the Province began a series of discussions with MECL to try to find other alternatives. The Province was unable to come to an agreement with MECL and intervened in the IRAC proceeding, arguing that with decisions that are expected in the next few months with regards to generation and supply options in the region, that to proceed with the planned 50 MW generator at this time was premature.

IRAC concluded that MECL was being prudent in its application and approved the 50MW generation project. Since that decision, the Province has continued to explore other options including the purchase or lease of portable generators, the construction of a third cable from the mainland and sourcing capacity from somewhere in the Maritimes or New England, and Government financing the MECL proposal, reducing its costs to Island ratepayers by \$1.7 million per year.

### **PEI EnerPool Program**

The EnerPool Program, initiated in 1978, continues to demonstrate the effectiveness of ride-sharing transportation in optimizing energy consumption and reducing traffic congestion. Routes from Souris and Summerside provide weekday transportation to and from Charlottetown.

# Forestry and Land Resource Modeling Division

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## **Mandate**

The Forestry and Land Resource Modeling Division promotes sustainable forest management practices on public and private lands. To achieve this, the division manages some 18,900 hectares of public land through the Provincial Forest section; provides advice and assistance to landowners through the Private Land section; collects and maintains forest inventory and land use information through the Resource Inventory and Modeling section; and produces tree seedlings for a variety of public and private land planting and tree improvement programs through the Production Development section. Forest fire suppression on private and public lands is also provided. Forest information programs engage the public in forest-related issues and policy work contributes to all the division's programs.

Through the production of tree seedlings, support is offered to reforestation programs for private and Provincial Forest lands, riparian zones, hedgerows, nurseries, schools and communities, Christmas tree growers and tree improvement programs.

## **Division Overview**

In May 2004, the division launched a unique program in partnership with the Canadian Breast Cancer Network (CBCN) called *Giving Trees ... Giving Hope*. This program provides Islanders an opportunity to visit a Provincial Forest property near St. Teresa and learn about forests and the wildlife that live there. For a donation to the CBCN's awareness efforts, participants are able to transplant native trees and shrubs from the site to their homes and properties. The success of the inaugural

program is expected to lead to the creation of an annual event.

In June, the division helped students at 75 Island schools plant bicentennial red oak trees as part of the 200 Years of Learning and Innovation celebrations. The 10-foot-tall trees were supplied by the Greening Spaces Program and planted with the professional and co-operative support of forestry staff.

Also in June, Government asked the Public Forest Council to consult with landowners and the ground hemlock industry about allegations of theft, trespass and unsustainable harvest. As a result of these consultations, the Public Forest Council issued a report which recommended that Government implement a licensing and record-keeping system for buyers; training and identification of ground hemlock for harvesters; bag tagging procedures; improved trespassing legislation; increased efforts on education and research; and PEI standards for ground hemlock harvest. In response, Government drafted ground hemlock harvest regulations which are expected to come into effect by autumn 2005.

In June, Government announced there would be a review of Prince Edward Island's forest policy. Over the summer and autumn, existing documents and preliminary public comments were reviewed and organized into a discussion paper. The paper highlighted six critical issues: public lands, forests on unploughed land, quality of life, education and training, plantations and planting, and forest products.

In early December, the *Forest Policy Discussion Paper* was released to stimulate public thought and discussion. At the same time, it was announced that the private sector members of the Public Forest Council would lead the public consultations.

From December 2004 to March 2005, the Public Forest Council held 14 public sector meetings across the Island. In all, 87 individuals and groups made presentations and an estimated 500 people attended the sessions. The final report is expected by the end of April 2005.

In February 2005, Government announced its plans to enter into a pilot project to look at new ways to manage public lands. The division negotiated an agreement with the Environmental Coalition of PEI to allow the group to manage approximately 800 hectares of public land in the Orwell/Caledonia area. As part of the announcement, Minister Jamie Ballem noted that the department has responsibility for about 30,400 hectares across the province but does not have enough resources to manage it all. Under this project, the department is to set the standards and monitor for compliance. The Environmental Coalition of PEI is to implement work such as forest management, education, eco-tourism and research. If the pilot project is successful, agreements will be negotiated with other not-for-profit community groups in the future.

## ***Highlights***

### ***Private Lands Section***

Almost 88 per cent of Prince Edward Island's forest lands are in the hands of private landowners including woodlot owners, farmers and conservation groups. The department offers the following programs and projects, along with advice and financial services.

#### **Forest Enhancement Program**

The Forest Enhancement Program (FEP) focuses on providing forest management advice and partial financing to those interested in enhancing wildlife, recreation, biodiversity and/or timber value. Private sector consultants

are hired to carry out services. FEP grants totaled \$91,000 in 2004/05.

#### **Forest Renewal Program**

The Forest Renewal Program (FRP) continues to attract landowners interested in planting their lands with commercial softwood tree species. It is supported by the harvest and processing industry. In 2004/05, 2,347,600 seedlings were shipped from the J. Frank Gaudet Tree Nursery to private lands across the province and maintenance was completed on 615 hectares of private land plantations. FRP expenditures and grants totaled \$884,000.

#### **Model Forest Outreach Project**

In 2004, the Prince Edward Island Forestry Partnership Cooperative Ltd., changed its name to the Prince Edward Island Model Forest Network Partnership (PEIMFNP). Since its inception in 2002, the PEIMFNP Outreach Project has grown to 23 partners including industry, Government, forest owners and non-Governmental agencies. These partners are involved in building consensus for sustainable forest management.

The division is a full partner in the PEIMFNP and funds a half-time co-ordinator position. With funding from the Canadian Forest Service, the project was able to support a wide range of projects from groups including Government, industry and non-Governmental agencies. In 2004/05, these projects included tree planting for agricultural watercourses buffers, monitoring migrating bird populations, forested riparian zone management demonstrations and information workshops on forest certification.

The PEIMFNP's total work plan value for 2004/05 was \$245,000. This included the \$100,000 provided by the Canadian Forest Service, \$75,000 in cash from the partners and \$70,000 worth of in-kind services.

In 2004/05, 165 forest management plans were prepared by private sector consultants. Once

these plans were registered with the department, landowners were able to access grants for silvicultural treatments such as pre-commercial thinning, commercial thinning, riparian zone enhancement and crop tree selection.

## ***Provincial Forest Section***

Provincial Forest staff continued to implement and demonstrate sustainable forest management on the 19,000 hectares of land managed by the program. The Provincial Forest section manages large forest blocks allowing for public access, sustainable wood supplies, wildlife conservation, biodiversity, recreational opportunities, training facilities, job creation, forest education and other societal benefits.

The section co-ordinates tree planting on Provincial Forests in the three forest districts. In 2004, 262,900 tree seedlings of 12 species were planted on 146.1 hectares and manual plantation maintenance was implemented on 10.5 hectares. Chemical plantation maintenance on Provincial Forest plantations was discontinued in 2004. Three forest access bridges were upgraded or replaced and 48.1 kilometres of roads were maintained or upgraded. The program continued to work with several schools on development and planting of nursery beds, and planted large red oaks at schools throughout the province. Planting sites were prepared on Provincial Forest lands and technical and silvicultural support was provided for the Scouts' Canada *Trees for Canada* program, the Batesville Memorial plantings, and the inaugural *Giving Trees ... Giving Hope* campaign of the CBCN.

Under the supervision of Provincial Forest staff, seasonal forest workers thinned 34.4 hectares and conducted 9.4 hectares of site reclamation on declining softwood stands. Using a mixture of partial and full harvesting techniques, 74.2 hectares of softwood and mixed wood were tendered for harvest by local sawmills. Provincial Forest tenders were offered for site

preparation, fuelwood, harvested softwood and poplar, standing timber and balsam fir tips. Along with tendered sales of harvested wood, this brought in revenues of \$219,900 in 2004/05.

The green diamond-shaped Provincial Forest identification signs erected where forest roads join the public highway system on properties across the Island were publicized in newspapers, on the web and on the highway map. These signs are designed to inform Islanders about the location and management of this public resource, and to encourage Islanders to visit and use these properties for outdoor recreation. Signage on the demonstration woodlot trail system was upgraded and replaced and staff assisted and co-ordinated tours with school and community groups, the Public Forest Council, and other groups.

Large signs identifying the silvicultural work being implemented on the Nordic Ski Trails site in Brookvale were installed to increase the awareness of the integrated forest management work being undertaken to enhance public recreation for skiing, biking and hiking.

The Provincial Forest staff in the Eastern and Central Districts cleaned up trees felled in Hurricane Juan that were blocking Provincial Forest roads. The fifth and sixth annual Provincial Forest Fall Frolics were held on the New Harmony Demonstration Woodlot in October 2004 and 2005. Some 96 participants came to walk the 4.5 kilometre trail or run the 13.2 kilometre trail and enjoy the natural beauty of the Provincial Forest in fall. Participants raised \$650 for MacIntyre House at the New Harmony Demonstration Woodlot northeast of Souris.

The Provincial Forest Envirothon, a voluntary forest learning competition for teams of high school students, was held in October 2004. Five teams from Bluefield, Colonel Gray and Three Oaks high schools competed for the 2005

Provincial Forest Envirothon. The team from Three Oaks won the overall competition and has been invited to the International Canon Envirothon competition in Missouri.

A series of silviculture worker chainsaw safety courses was offered to various agencies across the Island in 2004. Negotiations were completed for a horse trail in the Brookvale Provincial Forest with the PEI Horse Council and an access dock on the Boughton River Water Trail System with the Community of Central Kings. Provincial Forest staff provided technical support to the Public Forest Council's public meetings on a new forest policy. Other special initiatives included the provision of forestry displays at the Northumberland Fisheries Festival, Dover Open House, Agriculture Fun Day, J. Frank Gaudet Nursery Open House and the Garden Show at Crapaud, as well as the provision of forestry technical advice to minimize the potential impacts of projects such as the New Harmony 3-D seismic surveys and public recreation development.

### **General Fire Situation and Statistics for 2004/05**

It was a very quiet fire season thanks in part to favourable weather and higher levels of individual responsibility in the use of controlled burns. During the forest fire season, 20 forest fires were reported in Prince Edward Island. In total, these fires burned 15.4 hectares. Efforts to mobilize a forest fire fighting mutual aid resource sharing mission were halted when weather brought this emergency mutual aid request to an end.

Pre-suppression costs for the year were \$210,000, suppression costs were \$20,000 and forest resource losses totaled \$300.

### **Fire Prevention Activities**

The forest fire weather index (FWI) components is calculated by the Department of Environment, Energy and Forestry from the meteorological data collected at three sites. The numerical

ratings for fine fuel moisture content, duff moisture code, drought code, initial spread index, build-up index, and the fire weather index, which are indicators of fire behaviour, are then conveyed to the district offices, headquarters, and co-operating agencies for posting.

The wildfire danger rating is provided to the local media and other departments through Island Information Service and is made available during the fire season via telephone or the internet at [www.gov.pe.ca/](http://www.gov.pe.ca/).

Staff participated in the Western Mutual Aid group as well as consultations with air quality staff on fire permits. The 942 burning permits issued to encourage controlled burning practices which minimize the probability of escape fires were analyzed.

### **Equipment Development**

Tenders were awarded for engineering on the design and fabrication of the tank and pumping system for a new Muskeg Bombardier to replace the J-5 Bombardier. Fabrication of the new unit was commenced in early 2005 in co-operation with the Department of Transportation and Public Works. A new QuattroPro-based equipment inventory system was tested in 2004.

Resource Inventory and Modeling staff and Provincial Forest staff are testing the conversion of the forest inventory information base into a Canadian Fire Danger Rating System fuels map. Staff from PEI National Park and the PEI Department of Environment, Energy and Forestry are co-operating on a project to ground truth these electronic conversions. Provincial Forest staff continued participation with the Canada Wildland Fire Strategy initiative and provided input into the business planning initiatives of the Canadian Interagency Forest Fire Centre.

## Training

Basic forest fire suppression training was provided to volunteer firefighters at several locations using a CD-ROM version of our Basic Forest Fire Suppression course. One staff member was enrolled in, and passed, the Advanced Fire Behaviour course and one staff member with Fire Specialist certification participated as a mentor/support person for training.

In September, staff participated in the Atlantic Forest Fire Co-ordinating Committee meeting in Fredericton, New Brunswick.

## Public Forest Council

The Public Forest Council initiatives in 2004/05 centred on a review of public forest management by the various managing agencies that manage the Island's 33,200 hectares of public forests, public concern over ground hemlock harvesting practices, requests for access to public lands, and consultations on a new forest policy for Prince Edward Island.

Council membership consists of six private sector representatives, two Forestry and Land Resource Modeling Division members, and one member from the Conservation and Management Division. The council's representation includes broad-based expertise relevant to the forest resource and the types of proposals which would likely be brought forward. Forest biology, business economics, community development expertise, forest management and/or tourism industry expertise are also skill sets sought on the council. One member resigned from the council.

A series of public and industry consultations on ground hemlock harvesting were hosted by the Public Forest Council. After consideration of the sustainability issues for all forest landowners, the council submitted the paper *Ground Hemlock Recommendations* to the Minister of Environment, Energy and Forestry in July. This paper provided recommendations

to improve the sustainable harvest of ground hemlock through a licensing system, harvester identification, product tagging, record keeping and site inspection; publication of the merits and restraints and possible modifications to the present *Trespass Act*; and agricultural education.

Efforts to stimulate the non-timber wealth potential of the Island's public forest land continued with a review of the principles to promote and protect various public recreation proposals including a horse riding trail, a competitive mountain bike event and forest hiking trails. In addition, the Public Forest Council reviewed a seismic testing proposal for over 40,000 hectares in northeastern Prince Edward Island. A representative also participated in the PEI Model Forest Network Partnership planning and project evaluations.

In November, the private sector members of the Public Forest Council were asked to lead public consultations on the discussion paper *Prince Edward Island Forest Policy, Creating a Vision for the Future*. The council engaged the services of Jean-Paul Arsenault as a facilitator for the consultation process and used a variety of techniques to elicit public involvement including print and electronic media, public, stakeholder and Government consultations, and a website. Hundreds of people participated and described their vision and concerns for the management of the Island's forests. Interest was so high that three public consultations were added in March. At fiscal year's end, the Public Forest Council was preparing to draft its recommendations to the Minister.

Representatives of the Public Forest Council and the Town of Kensington began discussions on the management objectives for the Kensington Public Forest and toured the nine hectares of woodlands and fields. The Town of Kensington identified volunteers and staff to participate in a joint management committee.

## Harvest Trends

The 2004 lumber market continued in line with 2003 figures. Some 274,147 cubic metres of softwood sawlogs were harvested for domestic use and export. Most Island softwood is processed at Georgetown Timber, the largest producer and miller on the Island. Overall, softwood log production was down from the previous five-year average of 317,358 cubic metres.

Veneer and Oriented Strand Board markets were small components of the overall market with 49,167 cubic metres exported to New Brunswick and 7,073 cubic metres to Nova Scotia.

Pulpwood exports were up from 2003 levels. Some 144,822 cubic metres of pulpwood and 87,077 cubic metres of sawlogs were exported to mills in New Brunswick, Nova Scotia, Newfoundland and Maine.

The value of the delivered primary products is estimated to be about \$37.9 million, with an additional \$8.4 million of value added from sawmilling.

Mixed wood harvests are increasing as pure softwood stands become harder to find. This has resulted in more hardwood being available for market. Fuelwood harvests which are predominantly hardwood grew in 2004 to an estimated 137,500 cubic metres up from 125,000 cubic metres in 2003. Part of this increase was due to public concern about high oil prices.

## Canada/United States Softwood Lumber Dispute

The United States countervailing duties (CVD) and anti-dumping (AD) duties imposed in 2001, following termination of the five-year Softwood Lumber Agreement, were still in place in 2004/05. Although the Atlantic Provinces are excluded from the 19 per cent CVD charges, Maritime lumber exporters do pay an 8.43 per

cent AD duty which has placed a roughly \$100 million burden on the regional industry over the past two years. World Trade Organization (WTO) and North American Free Trade Agreement (NAFTA) panel rulings over the last few years have found in Canada's favour but to date this has not resulted in a reduction or elimination of the duties.

The Atlantic position with respect to either of the two-track approaches (litigated or negotiated settlement) is that there should be no quota on lumber exports from this region to the United States and no duties nor export taxes – essentially free trade. A long-term, negotiated settlement is favoured by some provinces, while others prefer to continue efforts through the WTO and NAFTA. Despite several favourable decisions for Canada, the United States continues to pursue trade penalties so there is no immediate end in sight.

## Forest Information Program

The Forest Information program co-ordinates general awareness and youth education programs related to Island forests, and provides communications support and planning services to the director, managers and staff, as well as day-to-day maintenance of the division's website.

The very successful *Island Focus* cable access program ended in May 2004 with the completion of several forestry segments and 52 *Agriculture Today* radio shows. Work continued to upgrade and improve the division's website and online services. The third in the Woodland Notes series – *Ground Hemlock: A Land Owners Guide to Selling Taxus Canadensis* – was released in April 2004 to help landowners understand this new and exciting forest product. Forest Information produced 10 feature articles for Island news media through *ForestNet*. This new information vehicle was developed to promote forest stewardship by focusing on web-based forest resources for

landowners, industry, public land users, students and the general public.

In 2004, Forest Information, in co-operation with the Provincial Forests program, developed and hosted Prince Edward Island's fourth Envirothon which focused on urban environments. Envirothon is a voluntary science education program for senior high school students which emphasizes basic science skills in forestry, soils, aquatics and wildlife, as well as communication skills. A team from Three Oaks Senior High in Summerside won the right to represent the Island at the international Envirothon in West Virginia in July 2004.

Through Forest Information the department also worked with Canadian Woodlands Forum and other forest sector partners from across the region to develop the 2004 Atlantic Teachers Tour program. Five Island teachers attended the 2004 event in southern Nova Scotia to learn about the science used to manage Maritime forests, explore the economic role of the forest industry, and examine the range of employment opportunities their students could find in the forest sector.

In 2002, several forestry organizations from New Brunswick, Nova Scotia, Prince Edward Island and the eastern US met to form a mechanism for sharing resources and ideas for woodlot owner education and awareness. Since its foundation, the Networking Across Borders (NAB) group has met twice a year to share existing resources, and work to jointly develop and cost share the production of new landowner education materials.

The Forest Information Officer continued to provide logistical and communications support to the Public Forest Council. In 2004/05, this role expanded to include organization and logistical support for Ground Hemlock consultations and for the Island-wide forest policy consultations. This included the

development and operation of the Forest Policy website, email and other web-based services.

## ***Resource Inventory and Modeling Section***

Resource Inventory and Modeling conducts ongoing research into the location, development, and use of agricultural and forest lands on Prince Edward Island. Information from satellite technology, aerial photography and forest research plots is analyzed using a state-of-the-art Geographic Information System (GIS), used by landowners, land use planners, resource based companies and many others.

## **Climate Change Initiatives**

Climate change models predict significant changes for the Island's climate which may have implications for the Acadian Forest over the next 75 to 100 years. In 2004/05, Resource Inventory and Modeling staff gave a number of public presentations, including presentations to the Legislative Committee on Climate Change and the Public Forest Council, outlining the issues and making recommendations on climate change options and approaches for forests.

## **Management Notes**

A new Management Note, *Plant Species Found in the 2000/02 Forest Inventory Plots in Prince Edward Island*, was released to the public. The Management Note series may be found at [www.gov.pe.ca/go/forestlibrary](http://www.gov.pe.ca/go/forestlibrary).

## **Prince Edward Island Public Land Atlas**

A new atlas was completed to update the enormously successful 1990 Prince Edward Island Atlas. The new atlas includes updated forest outlines, road names, cemeteries, wetlands, golf courses and much more. The new atlas will be available in the summer of 2005.



## **Agriculture Land Use Information**

The section continued to provide GIS support to the Department of Agriculture, Fisheries and Aquaculture. More than 1,200 maps were produced for Environmental Farm Plans as well as customized maps for the farm and forest industries. Data management support also continued for ongoing projects related to soil quality monitoring, slope map production, livestock monitoring, sustainable agriculture mapping and other initiatives.

The website PEI Land On-Line, ([www.peilandonline.com](http://www.peilandonline.com)), which provides the public access to information on the land resources of the province, was updated to include information on wetlands and watershed boundaries. The website averaged 20 hits per day.

## **Government Internet Mapping**

Resource Inventory and Modeling continued to provide mapping support to other Government departments through the enhancement of the internal intranet mapping system. A customized site is being built for the Department of Transportation and Public Works to map the new National Road Network, designated snow plow routes, sanding routes and other information related to the maintenance of the Island's road and highway systems.

## **Other Mapping Support**

Custom mapping projects have been done for the Department of Agriculture, Fisheries and Aquaculture, the Department of Environment, Energy and Forestry, the Department of Transportation and Public Works, the Island Regulatory and Appeals Commission and a number of private organizations. Projects included maps for soil quality monitoring, nutrient management, greenhouse gases, hybrid canola buffers, satellite crop monitoring cells, pesticide permits, shellfish sampling stations, wind energy, petroleum exploration and many more.

## **Special Projects**

Resource Inventory and Modeling provided updated information on Island forests to the National Forest Information System. The National Forest Information System website ([www.nfis.org](http://www.nfis.org)) continued to provide forest information on a national scale to the public.

In co-operation with the Canadian Forest Service, Resource Inventory and Modeling initiated a study to identify potential deforestation sites which may have occurred in Prince Edward Island between 1990 and 2000. This study will be used to compare findings from detailed land use inventories (such as those of PEI) to ascertain if the area of deforestation can be determined accurately enough to track progress on the Kyoto Protocol. This is expected to be a model for Canada.

The 1958 forest outline has been mapped and converted to digital form. These data are available for use in the GIS and a report detailing the process and findings will be released in 2005. The information will be one of the data sources used to determine afforestation or deforestation as defined under the Kyoto Protocol.

## **Growth and Yield**

Staff continued to measure forest growth and change through plantation assessment and the ongoing analysis of permanent sample plots (PSP). There are more than 350 PSP located in a variety of forest types across the province and these plots are remeasured on a three-year cycle. A number of PSP are being measured for a sixth time, providing valuable detail on growth and change over several decades. As the use of biomass for energy has again become a possibility, data from the PSP are also being used to revise the Island's biomass yield curves.

Plantation assessments continue to ensure planting quality by monitoring the early success and growth of plantations. Assessments are

done on a random selection basis at years five, 10 and 15.

## **Plantation Mapping**

As they are established, plantations continue to be mapped through a combination of GPS and GIS technology. This enables staff to track the growth and development of all forest plantations.

## ***Production Development Section***

The J. Frank Gaudet Tree Nursery produces quality tree seedlings for reforestation projects and wholesales ornamental trees and shrubs to the retail landscape trade. In 2004, some 2.9 million seedlings, representing 13 softwood species and 10 hardwood species were planted on cutovers, riparian zones, hedgerows and special areas across the province.

Staff from the nursery offered tours to 589 people to show them PEI's largest seedling production facility. The nursery also offered advice and assistance on insect and disease problems for ornamental plants, trees and shrubs, as well as advice on landscape problems to property owners. Staff provided insect and disease analysis for nearly 300 samples and made 26 site visits with landscapers and Island communities to provide detailed information on landscaping and plant health issues.

Nursery staff delivered a 60-hour ornamental horticulture course for golf course technicians through the Atlantic Tourism and Hospitality Institute of Holland College. This course will help golf course staff establish and maintain plant materials which enhance and promote the value of golf courses.

In May 2005, Production Development and the PEI Agriculture Awareness Committee joined forces to hold the first annual *Agriculture and Forestry Fun Day* at the J. Frank Gaudet Tree

Nursery. Some 425 students from kindergartens and elementary schools came to learn more about how farm and forest products are grown and produced.

In June, the division helped students at 69 Island schools plant commemorative red oak trees as part of the *200 Years of Learning* celebrations. The 10-foot tall trees were supplied by the Greening Spaces Program and planted with the help of division staff.

A new Hedgerow and Buffer Zone Planting Initiative was also implemented. This program provided landowners with seedlings and planting assistance for projects such as soil conservation, stream bank stabilization, plantings on high sloped lands and windbreaks. In 2004, the program serviced 45 clients and 22,000 seedlings were planted.

## **Tree Improvement**

The Tree Improvement program conducts research into the improvement of several Acadian forest tree species, establishes gene banks for the conservation of rare native trees and studies the performance of non-native trees grown under Island forest conditions.

Tree Improvement staff hosted an open house at the Dover Tree Seed Orchard in July 2004 and invited the public to visit and learn more about Island forests and the role of tree improvement programs.

Measurements of 12 test sites were carried out in 2004, making special note of growth and survival. Maintenance was also given to the plantations.

Some 307 bushels of cones were collected and the Dover Tree Seed Orchard provided 91 kilograms of improved seed.

A report was prepared on the 1998 white pine provenance tests and on the 1998 corsican pine tests. The department co-operated with

Canadian Forest Service to produce willow seedlings to see how they perform under Island conditions.

### **Greening Spaces Program**

The Greening Spaces Program was a new initiative of the department developed to encourage tree planting projects among communities, schools and volunteer interest groups. It provides seedlings and planting assistance for projects that diversify public properties, buffer prevailing winds, provide shade, reduce noise, protect waterways and provide habitat for wildlife.

In 2004/05, the Greening Spaces Program provided 69 red oaks, PEI's provincial tree, for Island schools to plant as part of the *200 Years of Learning* celebrations.

Planting programs were conducted at 10 schools including Cardigan Consolidated, West Kent Elementary and Athena Consolidated. Students and teachers worked together to plant trees and shrubs around the school property to beautify it and make their schools healthier places to work and learn.

Assistance was also provided to 13 watershed groups across PEI. These groups aim to protect Island streams and rivers by planting trees and shrubs that shade the water, stabilize stream banks, and prevent soil and other contaminants from entering the water system.

Abram's Village, Elmira Railway, Montague Housing Authority and St. Francis of Assisi Church were among 18 communities and community groups that participated in the Greening Spaces Program in 2004/05. These groups planted trees to create shelterbelts and beautify public properties in their communities.

# Pollution Prevention Division

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## ***Mandate***

The Pollution Prevention Division has a mandate to promote the protection and responsible stewardship of our environment and natural resources. This includes responsibility for quality of our air, water, soil and natural habitat; assessing the impact of undertakings on human health, animal health and the environment; and the management of pesticide use in the province. Activities which help promote public acceptance of responsibility for the environment and sustainability of our natural resources are included in this mandate.

## ***Division Overview***

The Pollution Prevention Division administers a wide range of programs, legislation and activities which are designed to protect the quality of water, soil, air and landscape in the province. The activities include measures to preserve, control or enhance: outdoor air quality, the ozone layer, climate change factors, solid waste management, management of hazardous waste, litter, beverage containers, pesticide use, petroleum storage tanks, used motor oil, tires, environment industries and special projects. Promoting pollution prevention and environmental stewardship, and educating all Islanders on responsible environmental practices are key initiatives of the division. Staff participate on a number of provincial, regional, national and international committees regarding pollution prevention, air quality, pesticide use and management of waste and toxic substances.

The Pollution Prevention Division is responsible for the following legislation and regulations.

- *Environmental Protection Act*, particularly Sections 9, 20 and 24
  - Air Quality Regulations
  - Ozone Depleting Substances Regulations
  - Excavation Pits Regulations
  - Lead Acid Battery Regulations
  - Litter Control Regulations
  - Used Oil Handling Regulations
  - Petroleum Storage Tanks Regulations
  - Waste Resource Management Regulations
- *Pesticides Control Act*
  - Pesticide Control Regulations
- *Automobile Junk Yards Act*
- *Unightly Property Act*
  - Unightly Property Regulations

## ***Climate Change***

Prince Edward Island is particularly sensitive to climate change, both as an island province with vulnerable coastlines and due to the important role of natural resources in our economy. The Pollution Prevention Division has played a key role in the Provincial Government's initiatives related to climate change.

In April 2004, a full-time climate change coordinator, Erin Swansburg was hired. The coordinator's main duties are to:

- Liaise with the Federal Government on climate change issues (funding, national program development and implementation, etc.),

- Coordinate and facilitate climate change activities within the province (strategy, public education and outreach) and
- Direct climate change activities within Government operations, ensuring that our practices are sustainable and consistent with our commitment to address climate change.

In May 2004, the Legislative Assembly approved the formation of a Special Committee on Climate Change and eight members were appointed to the committee in September 2004.

The Climate Change Coordinator was seconded to the committee to research and provide assistance in preparing the final report. The committee consulted with Islanders and stakeholders and developed recommendations on a new Climate Change Strategy for Prince Edward Island. The committee is scheduled to release its report in the legislature in April 2005.

The Director of Pollution Prevention Division and the Climate Change Coordinator have worked with a departmental Green Committee to advise Government departments on incorporating sustainability in Government practices and leading by example. Some of the initiatives resulting from this committee in this fiscal year included the inclusion of energy efficiency requirements into specifications for Government electronic equipment tenders and minimum fuel efficiency standards for fleet vehicles. A Green Fleet Policy has been developed to reduce transportation-related emissions from fleet vehicles.

Government operations are being assessed on an ongoing basis in order to reduce our greenhouse gas emissions and incorporate more environmentally sustainable practices. Energy efficiency is an ongoing initiative spearheaded by Transportation and Public Works; however, the Climate Change Coordinator has been involved by providing information on funding opportunities and providing a climate change context to their efforts. Measures taken place

this fiscal year have reduced unnecessary lighting at the public administration buildings in Charlottetown and are expected to save \$10,000 per year or 2.3 per cent of the annual electricity costs for the building complex.

## ***Air Quality and Hazardous Materials Section***

### **Petroleum Storage Tank Program**

The Petroleum Storage Tank Program was focused on the handling and storage of petroleum products according to the provisions and regulations of the *Environmental Protection Act*. In 2004, there were 17 underground storage tank spills compared to 167 in 1992; and 179 aboveground home heat tank spills compared to 293, 162 and 191 spills in 2001, 2002 and 2003, with 59 of five litres or less.

In 2001, regulations were amended to include the replacement age for installation of aboveground home heat tank systems. Since then, 445 installers and inspectors have been certified and licensed; and 15,622 home heat tanks have been inspected, tagged and registered.

An extensive public awareness campaign respecting environmental risks associated with aging or improperly installed home heat tank systems continued with emphasis given to having home heat tank system inspections completed before the 2006 mandatory date.

### **Atlantic Risk Based Corrective Action Program**

The division continued its participation with representatives from the petroleum industry, environmental consultant companies and other Government divisions in the Atlantic Risk Based Corrective Action (RBCA) Program to determine consistent, cost-effective and appropriate risk management techniques for the remediation of petroleum contaminated sites.

In 2004, 93 reported spill files were closed using limited risk management techniques. At sites where it was necessary to obtain more technical information to plan appropriate remedial action, professionals were hired to conduct an Environmental Site Assessment (ESA). In 2004, 23 spill files were closed where ESAs were completed.

In 2004, 94 petroleum contaminated sites were monitored with departmental staff either supervising the on-site cleanup procedures or monitoring a consultant's remedial actions to ensure that the cleanup took place in a timely manner and to a level that protected both human health and the environment.

Phase I, Environmental Site Assessments (ESA) are commonly required by purchasers or the purchaser's lending institution although they are not required by the department. The division has been involved since April 1997, in searching records for past activities on a property that could be interpreted as contributing to existing contamination and monitoring remediation. In 2004, 721 Environmental Records Review Requests were completed.

The department has been collecting fees for Environmental Records Review Requests since April 1997. Effective November 13, 2004, the Environmental Records Review regulations under the *Environmental Protection Act* came into force.

The division continued its participation in the following provincial, regional, national and international programs.

- National Air Pollutant Surveillance (NAPS) (federal/provincial)
- Emissions and Projections Working Group (federal/provincial)
- Air Management Committee (federal/provincial)
- Air Quality Index Management Committee (federal/provincial)
- Atlantic Region Air Issues Team (regional – federal/provincial)

- Acid Rain Steering Committee (regional – Atlantic Canada/New England States)
- Real-time Monitoring Work Group (regional – Atlantic Canada/New England States)

## **National Air Pollutant Surveillance Program**

Ambient air samples collected at Charlottetown, Wellington and Southampton NAPS stations provide information to the province and Environment Canada on sulphur dioxide, ground level ozone, nitrogen oxides, mercury, particulate matter and acid rain levels found in the local air. Eighty per cent of the installed equipment operates continuously and sends data hourly to a central computer in Charlottetown for processing and distribution to our partners.

In 2004, a ground-level ozone monitor for Southampton and two real-time fine particulate monitors, one for Southampton and one for Charlottetown, were installed. A fine particulate monitor is presently awaiting installation at Wellington.

The table on the following page exemplifies current equipment distribution.

The Air Quality and Hazardous Materials Section continued to provide data for the Air Quality Forecast Program (formerly the Smog Forecast Program launched in June 2000) in partnership with Environment Canada, the PEI Department of Health and Social Services, and the PEI Lung Association. Environment Canada issues the forecast twice a day, at 5 a.m. and 4 p.m., from May 1 until the end of October, and can be accessed by telephone in each of the three counties, at the Environment Canada website, and from a link at the PEI Department of Environment, Energy and Forestry website. It is a two-day prediction of expected levels of ground-level ozone, the key component of smog. Currently, work is underway to incorporate fine particulate matter into the development of the air quality forecast.

## Current Air Quality Monitoring Equipment Distribution

| Location      | Equipment  | Sample Frequency   |
|---------------|--|--|
| Charlottetown | Sulphur dioxide<br>Ground level ozone<br>Nitrogen Oxides<br>Fine particulate (PM <sub>2.5</sub> )  | Continuous<br>Continuous<br>Continuous<br>Continuous   |
| Southampton   | Mercury<br>Acid rain<br>Ground level ozone<br>Fine particulate (PM <sub>2.5</sub> ) – continuous<br>Fine particulate (PM <sub>2.5</sub> ) – 6 day sample, reference standard | Continuous<br>Triggered by precipitation events<br>Continuous<br>Continuous<br>Every 6 <sup>th</sup> day |
| Wellington    | Ground level ozone*  | Continuous   |

\* Operated in conjunction with Environment Canada

Stack emissions testing was conducted at a number of asphalt plants. Where unsatisfactory results were obtained, plant owners were asked to upgrade in preparation for further testing in 2005. The PEI Energy Systems incinerator was also tested, to provide a final baseline prior to the installation of additional air pollution control equipment later in the year, designed to reduce mercury and dioxin and furan levels.

### Mercury and Fish

Fish were collected at O'Keefe's Lake, the Dunk River and the Trout River (six at each site) for tissue analysis. One mercury value from an O'Keefe's Lake fish was found to be at the Health Canada maximum allowable limit of 0.50 mg/kg; however, it was not statistically significant enough to warrant an advisory as all other values were at or below 0.34 mg/kg. Particular attention will be paid to this location in future sampling programs.

The following table illustrates key statistics for air quality and hazardous materials.

| Type of Review  | 2004 Key Statistics               |
|---|-----------------------------------|
| Inspections of refrigeration/air-conditioning equipment at landfills              | 2,514                             |
| Recovery of ozone depleting substances from landfills                             | 2,362 units for a total of 418 kg |
| Investigation of petroleum spills   | 342                               |
| Removal of underground petroleum storage tanks                                    | 58                                |
| Recorded home heat tank/storage tank spills                                       | 179                               |
| Records Review Requests   | 102                               |
| Registered generators of hazardous waste*   | 432                               |
| Shipping manifests processed  | 877                               |
| Import of lead-acid batteries to the province                                     | 18,515                            |
| Recovery of lead-acid batteries for recycling out-of-province**                   | 14,390                            |
| Number of after-hours calls received by the Environmental Emergency Response Team | 120                               |

\*The *Transportation of Dangerous Goods Act* requires that generators of hazardous waste register with the department and provide information about the types and quantities of wastes generated.

\*\*Lead-acid batteries can represent a threat to groundwater as their components have the potential to leach into soil. With the development of the lead-acid battery recovery program, attempts to reduce the risk have been highly successful.

## ***Environmental Assessment Section***

The Environmental Assessment Section deals with proposed developments which may qualify as “undertakings” as defined in the *Environmental Protection Act*. In addition, the section coordinates the subdivision environmental review process for provincial and municipal authorities, and administers the Waste Resource Management Regulations, the Excavation Pits Regulations, the *Unsanitary Property Act* and the *Automobile Junkyard Act*.

The Environmental Assessment Section becomes aware of potential undertakings either through referrals from other Government departments or through direct application by a proponent. On receipt, potential undertakings are screened to determine if approval under Section 9(1) of the *Environmental Protection Act* is required. If the project meets the definition of an undertaking, it is registered and the approval of the Minister is ultimately required before it may proceed. If the project is not considered an undertaking but there are environmental issues that may need to be addressed by the proponent, it is considered a referral and conditions for mitigation are typically applied to a Building Permit or other required Government approval process.

## **Registered Undertakings**

In 2004 a total of 15 undertakings were reviewed by the EA Section. The variety of projects included:

- Compost Storage Facility
- Wind Farm Developments
- 50 MW Combustion Turbine
- Fish and Shellfish Processing Facilities
- Natural Gas Seismic Exploration
- Agricultural Buildings and Facilities
- Equipment Fabrication Facilities

The following table illustrates registered undertakings of the Environmental Assessment Section.

| <b>Type of Review</b>       | <b>Key Statistics</b>   | <b>2004</b> |
|-----------------------------|---|-------------|
| Registered Undertakings     | Development applications reviewed   | 15          |
| Interdepartmental Referrals | Development application approved*<br>Section 9, <i>Environmental Protection Act</i>   | 140         |
| Subdivision Applications*   | Agricultural developments approved*<br>Section 9, <i>Environmental Protection Act</i> | 177         |

\* Advice was given to permitting authorities on how these subdivisions could be best serviced with regard to water and sewer servicing, as well as the protection of significant natural features.



## **Excavation Pits, Automobile Junk Yards and Unsightly Properties**

The inspection and permitting of waste management facilities, excavation pits and automobile junk yards are other important functions of the Environmental Assessment Section. Ensuring that these types of facilities are operating in compliance with their respective legislation is particularly important for the protection of groundwater and surface water resources. In 2004, a total of two composting facilities, 40 recycling facilities, six disposal facilities, 239 licensed pits and 47 automobile junk yards were on file with the department; and over the course of the year, most of these were inspected by section staff.

Finally, numerous inspections of properties were carried out under the *Unsightly Property Act* in 2004. Many of these properties required repeated visits and/or follow-up inspections to attempt to have problem areas addressed with co-operation of the property owner.

## **Pesticide Regulatory Program**

The Pesticide Regulatory Program maintains responsibility for the administration and enforcement of the *Pesticides Control Act* and regulations. This includes the training and licensing of commercial pesticide applicators and vendors, training and certification of private pesticide applicators, the issue of Restricted-use (Schedule 1) Pesticide Use Permits, and inspection audits. Pesticide inspectors were based in western, central and eastern PEI locations.

## **Training**

At present, over 2,000 people have received private pesticide applicator certification, including some 200 who renewed their certification during 2004/05. The numbers of licensed commercial applicators include: Aerial (3), Agricultural (4), Forestry (3), Landscape (20), Structural (21), Biting Fly Control (5), Structural Fumigation (4) and Soil Fumigation

(3). Introduced in 2003, the PEI Pesticide Re-certification Continuing Education Credit (CEC) program allows certified, private agricultural pesticide applicators to renew their certification by participating in approved, continuing education events. Twelve CEC training events were offered in 2004, and over 360 individuals participated in one or more of these sessions.

## **Restricted-use (Schedule 1) Pesticide Use Permits**

The number of permits issued for biting fly control (38) remained constant from 2003. No aerial pesticide application permits were issued in 2004. Nineteen Schedule 1 Pesticide Use Permits (covering 235 ha) for the application of azinphos-methyl, and six Schedule 1 Pesticide Use Permits (covering 31 ha) for the application of a soil fumigant, were issued.

## **Inspection Audits and Enforcement**

To support the program mandate, over 800 unscheduled visits were carried out on private and/or commercial premises to check for compliance under the *Pesticides Control Act* and regulations. Of those operations inspected, 87 per cent were in compliance.

While the levels of vendor/applicator compliance remain high, the number of written warnings issued in 2004 increased by 93 per cent (84 vs 44 in 2003). Many of these warnings related to the improper sale and purchase of regulated pest control products. The issue of Summary Offence Tickets was up slightly (14 in 2004 vs 11 in 2003). Only two Suspension (stop) Orders, pertaining to the application of a pesticide under improper conditions, were delivered.

Continued operation of the department's 1-800 Pesticide Regulatory Line facilitated the investigation of 31 pesticide-related inquiries and 77 public complaints during the year. While the number of pesticide-related inquiries decreased significantly from 2003, the number of pesticide-related complaints was up by some

16 per cent. As in previous years, the major public complaints related to agricultural applications were off-target spray drift, potential health concerns and inadequate buffer zones. Principal concerns regarding landscape and structural applications were personal health and improper notification and property posting.

The following table shows the number and nature of violations recorded between April 1, 2004 and March 31, 2005. Violations include both charges and warnings.

| Offence   | Violations |
|---|------------|
| Improper posting of a treated area/failure to provide notification of a pesticide application | 7          |
| Application of a pesticide under excessive wind conditions                                    | 1          |
| Application of a regulated pesticide without a pesticide use certificate or licence           | 7          |
| Improper sale of a regulated pesticide  | 51         |
| Improper transport of a pesticide   | 21         |
| Failure to keep complete pesticide application records  | 5          |
| Excessive off-target drift  | 1          |
| Faulty application equipment  | 4          |
| Other ( <i>Environmental Protection Act</i> violation)  | 1          |
| <b>Total</b>  | <b>98</b>  |

## Program Highlights

Following a series of stakeholder and public meetings hosted by the PEI Environmental Advisory Committee (EAC) to gather input regarding needed amendments to the *Pesticides Control Act* and Regulations, the Minister released in early 2004, a report entitled *Recommendations for Regulation of Pesticides in Prince Edward Island*. This report outlined 44 direct and nine supporting recommendations to safeguard human health and protect the natural environment of the province. An intra-governmental committee, representing the departments of Environment, Agriculture and Health was established to assess and develop a plan to implement the EAC recommendations. Completion of this report is anticipated by early 2005.

# Water Management Division

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## ***Mandate***

The Water Management Division is responsible for the sustainable management, protection and enhancement of the province's drinking water, groundwater, inland surface water and coastal estuaries. The division regulates water and sewer infrastructure and assists in the administration of funding that supports this infrastructure. It also provides water testing services (microbiological and chemical) and engineering advisory services to the general public, other provincial departments and agencies, industry and municipalities; and is responsible for conducting baseline monitoring and assessment of the province's water resources.

## ***Division Overview***

The Water Management Division in 2004/05 consisted of three sections: Drinking Water Management, Watershed Management and Prince Edward Island Analytical Laboratories.

The main responsibility of the Drinking Water Management Section is to ensure sustainable management, protection and enhancement of drinking water. The key program areas include:

- PEI Drinking Water Strategy
- Drinking water quality monitoring programs
- Pesticide monitoring program
- Water and wastewater servicing
- Licensing programs for contractors
- PEI Sludge Management Strategy

The Watershed Management Section is responsible for the management of groundwater, inland surface waters and coastal estuaries. The section recognizes the watershed as a principal

unit of assessment, and that the quality and quantity of ground and surface waters are intrinsically related. The specific program areas for the section include:

- Groundwater quantity assessments
- Watershed management
- Water quality and quantity programs
- Publication of groundwater and surface water quality and quantity information
- Development of educational materials
- Public education and information sessions

The Prince Edward Island Analytical Laboratories is responsible for the management of the province's water microbiological and water chemistry laboratories. As a result of the co-operative arrangement between the Department of Agriculture, Fisheries and Aquaculture and the Department of Environment, Energy and Forestry, a single lab manager is responsible for the day-to-day activities of the labs under the PEI Analytical Laboratories. The program areas include:

- Drinking water quality analyses
- General water quality analyses for ground and surface waters to determine the health of water for interests including aquatic habitat, the fishery, recreation and aesthetics
- Wastewater programs
- Accreditation initiative with the Standards Council of Canada

## ***Drinking Water Management Section***

The most significant occurrence for the Drinking Water Management Section was the adoption in January 2005 of regulations governing the operation of central water supply and wastewater treatment systems in the

Province. The regulations prescribe requirements for system classification, operator certification, monitoring and public reporting requirements, and the development of wellfield protection plans for municipal water supply systems. The regulations apply only to municipal systems until January 2006, at which time they will also apply to privately owned or operated central water and wastewater systems. Implementation of the requirement for certified operators by municipal systems was delayed to April 1, 2005, to allow utilities sufficient time to achieve compliance. Preliminary delineation of wellfield protection zones and initial assessment of land use issues has been completed in support of these regulations and consultation with a number of municipalities conducted.

The Drinking Water Management Section continued to investigate water quality problems in 2004/05. The majority of problems related to private wells, although some problems with small privately owned central water supplies were addressed as well. The section continued to implement new procedures for the investigation of cases of E. coli contamination, and the notification of local residents. During 2004/05, approximately 36 such investigations were undertaken. Some of the more notable water quality investigations included resolving problems in Breadalbane (bacteria, on-site sewage disposal systems), Crapaud (bacteria, central sewage disposal), Kensington (bacteria, municipal water supply) and Alberton (barium/E. coli), as well as a number of cases of elevated nitrate levels and road salt contamination.

The Drinking Water Management Section also continued to supply resources to develop expertise in on-site sewage disposal. Three workshops were held for licensed contractors, providing information for the assessment of soils and construction of on-site sewage disposal systems. In addition, collaboration continued on the development of an Atlantic Canada standards and guideline document for

the design and construction of water supply systems.

The Water Management Division is responsible for administration of Section 13 of the *Environmental Protection Act* which requires ministerial approval for design, construction, operation and maintenance of all water supply and wastewater treatment and collection systems. In 2004/05, a total of 53 Certificates of Approval were issued, with a value of work estimated to be \$42.6 million. This represents an increase in construction value of 170 per cent. The section continued to be involved in development and certification of treatment operators (required by regulation as of April 1, 2004). To date, there have been four examination sessions held.

The division provides technical support/project management, representing both provincial/Federal Government interests in four major projects announced under the Strategic Infrastructure Program: Upgrade of the Charlottetown and Summerside wastewater and treatment plants, Stratford water and sewer expansions and the Sludge Management Strategy.

Only 15 Groundwater Exploration Permits were issued in 2004/05, representing a slight increase over 2003/04, but still down significantly from previous years. This trend is due in large part to the moratorium established on the construction of new irrigation wells. In addition, Groundwater Extraction Permits were re-issued for 32 existing irrigation wells in the province, with additional conditions regarding metering and reporting of water consumption.

As an important part of its activities, the Drinking Water Management Section conducts research on various topics of importance related to drinking water. The section continued work on an expanded pesticide monitoring program. Results to date have been similar to previous surveys, with detections being rare. Where there

have been detections, concentrations have been low compared to health guidance values.

Section staff, along with staff of the Watershed Management Section, continued collaborative research on nitrogen species in groundwater as part of a multi-disciplinary project led by the Geological Survey of Canada, and involving Agriculture and Agri-food Canada. Work on the project, centred in the Wilmot watershed, has involved sampling of a network of domestic wells and the construction and sampling of a transect of dedicated monitoring wells.

## **Watershed Management Section**

The Watershed Management section administers the Watershed Management Fund and the Wildlife Conservation Fund. Also, applications for funding from the Employment Development Agency and the Jobs for Youth Program related to watershed restoration projects are processed here. The Watershed Management Fund provides technical and financial assistance to community watershed organizations that are working on watershed restoration and/or watershed planning.

In 2004, 38 projects were approved through this watershed management initiative, resulting in expenditures of more than \$800,000 from various funding sources. Priority funding areas included building capacity of watershed organizations, facilitation and strategic planning and watershed plan preparation.

Two pilot watershed projects were funded with assistance from the Canada-PEI National Water Program. The Trout River Environmental Committee and the Souris Wildlife Federation are currently working on developing holistic, community-led watershed plans with a focus on protecting water quantity and water quality.

As a result of funding, traditional watershed restoration activities including stream enhancement, fish passage restoration, riparian and upland tree planting, wetland enhancement,

watershed group newsletters and fish rearing were carried out by many watershed organizations.

Long-term water quality monitoring was continued on groundwater, fresh water and estuary sites as part of the Canada-PEI Water Quality Agreement and on estuary sites as part of the PEI Estuaries Program. Intensive monitoring was also carried out in Boughton River, Morell River, Hillsborough River in Mount Stewart and Pinette River. Staff worked with the Trout River Environmental Committee to design a sampling program for freshwater sites in the New London Bay watershed and assist with data interpretation.

Interpretive data reports from previous intensive monitoring conducted between 1998 and 2003 were also finalized and included studies in Hope River, Anderson's Creek, Souris River/Colville Bay, Covehead Bay, Brackley Bay and Trout (Stanley) River.

Long-term groundwater level monitoring was continued at 13 groundwater wells throughout the province. These observation wells are instrumented and monitor fluctuations in the water table on a daily basis. Plots of both current and long-term water table levels are updated at the Government website approximately every two months. This data acts as one of the ambient quantitative indicators for the province's water resources.

Short-term stream flow monitoring was completed at eight sites to assess the impact of irrigation from streams. Three to four times of discharge measurements were performed during irrigation season to calibrate the relationship of stage-discharge at each site. These curves were used to monitor the stream flow and assist the decision-making of issuing irrigation permits.

## ***Prince Edward Island Analytical Laboratories***

The PEI Analytical Laboratories, an amalgamation of the Department of Environment, Energy and Forestry Water Chemistry Laboratory and Water Microbiology Laboratory, and the Soil and Feed Laboratory operated by the Department of Agriculture, Fisheries and Aquaculture continue to offer a wide range of analytical services.

An external audit of the laboratory was conducted jointly by the Standards Council of Canada and the Canadian Association of Environmental Analytical Laboratories in October. As part of accreditation, the lab must participate in an external audit or conformity assessment conducted by the Standards Council of Canada (SCC) to verify that the lab has the competence necessary to carry out specific testing in compliance with international standards. The lab was given formal notification in March that SCC Accreditation had been extended.

The past year was another busy one for water analysis with over 18,500 samples analyzed for various parameters. Following are the 2004/05 statistics for the lab.

To improve service to Islanders, the PEI Analytical Laboratories extended its water sample pick-up schedule at the Access PEI sites to 3:30 p.m. Monday through Thursday. Friday samples must be dropped off by 12 noon.

| <b>Water Sample Analysis Activity 2004/05</b> |               |
|---|---------------|
| <b>Category</b>                               | <b>Total</b>  |
| Mortgage certificates                         | 3,561         |
| Private water samples                         | 7,174         |
| Municipal water samples                       | 3,543         |
| Tourism water samples                         | 1,787         |
| Environmental Health water samples            | 918           |
| Non-drinking water samples                    | 1,781         |
| <b>Total samples analyzed</b>                 | <b>18,764</b> |