



Agriculture and  
Fisheries

## ***PEI Domestic Animal Rabies Exposure Guideline***

Department of Agriculture and Fisheries  
Office of the Provincial Veterinarian  
2017

## 1.0 INTRODUCTION

The Provincial Domestic Animal Rabies Exposure Guideline has been developed through consultation with all relevant provincial government agencies, including the Department of Communities, Land, and Environment, and the Department of Health and Wellness. It is meant to be one part in a larger coordinated Provincial response to fit with the human exposure response<sup>1</sup> and the wildlife response.<sup>2</sup> In addition, similar documents from other jurisdictions were consulted, including the Council of Chief Veterinary Officers (CCVO) Rabies Response Recommendations<sup>3</sup>. The objective of this document is to provide guidance in the event of a possible animal rabies exposure to domestic animals.

## 2.0 BACKGROUND

All mammals are thought to be susceptible to rabies which is a fatal viral zoonoses cause by a Lyssavirus.<sup>4</sup> Animals can become exposed to rabies through contact with saliva or central nervous system material from an infected animal, by a bite through skin, mucous membrane, or non-intact skin. Specific rabies information pertaining to the epidemiology of the disease such as reservoir, transmission and risk factors, incubation period, and occurrence of disease are described in the Chief Public Health Office response document.<sup>1</sup> There are various clinical signs associated with rabies in animals including: abnormal behavior, altered vocalization, dysphagia, inappetance, ataxia, paralysis and seizures. The progression to death is rapid.<sup>4</sup>

Rabies occurrence is a rare event in PEI with only two documented positive animals (one cat in 2004 and one bat in 2009) in the past 20 years (Figure 1). Annually between four to eight samples have been submitted to the Canadian Food Inspection Agency (CFIA) for rabies testing since 2014. Prince Edward Island does not have an active animal rabies surveillance program in place, the Division of Forests, Fish and Wildlife conducts passive surveillance (in partnership with the Canadian Wildlife Cooperative (CWHC)) on raccoons, skunks, foxes, and coyotes captured and euthanized following reports of abnormal behaviour.

Human exposure incidents are reported to the Chief Public Health Office and all case information is collated and saved on a shared drive. Analysis of the data occurs annually to summarize the number of incidents, types of animals involved, nature of the event, if prophylaxis was recommended and accepted, and rabies testing results (if applicable).

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<sup>1</sup> Department of Health and Wellness (2015). Prince Edward Island Guidelines for the Management of Possible Rabies Exposure. Chief Public Health Office

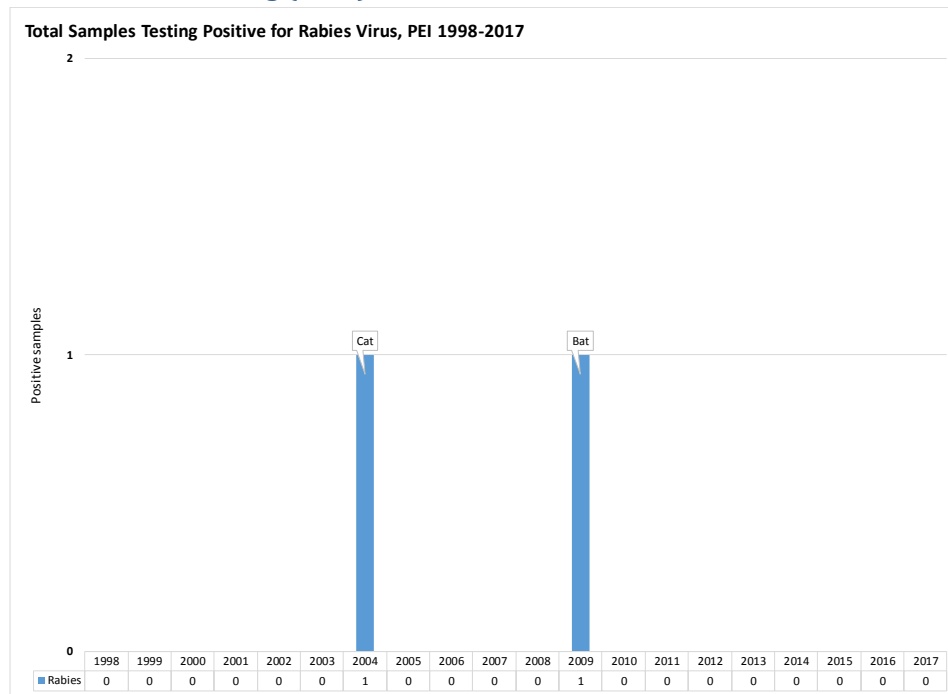
<sup>2</sup> Department of Communities, Land and Environment (2017). PEI Response Strategy for Raccoon Variant Rabies in Wildlife. Forests, Fish, and Wildlife Division

<sup>3</sup> Radke, B., Koeman, J., Keshwani, H., Kostiuk, D. et al. (2015). Recommendations of the Canadian Council of Chief Veterinary Officers Subcommittee for the Management of Potential Domestic Animal Exposures to Rabies.

<sup>4</sup> Brown, C., Slavinski, S., Ettestad, P., Sidwa, T., Sorhage, F. (2016). Compendium of Animal Rabies Prevention and Control, 2016. JAVMA, 248(5):505-517.

Fortunately, at this time, rabies has not become endemic in our wildlife population however disease exposure plans must still be in place in the instance of human, domestic animal and wildlife exposure and potential disease.

**Figure 1. Positive Rabies Testing (CFIA), PE 1998-2017**



## 3.0 DEFINITIONS AND ACRONYM LIST

### 3.1 Definitions

**Companion animal-** dogs, cats and ferrets

**Domestic animal-** animals accustomed to living in a domestic (managed by humans) environment<sup>5</sup>

**Livestock-** horse, cattle, sheep, goats (as per Animal Health Act<sup>6</sup>)

**Owner observation-** a veterinarian controlled tool developed for potential rabies exposure situations involving animals that have documented vaccination status

<sup>5</sup> Blood, D., Studdert, V. (1994) Baillière's Comprehensive Veterinary Dictionary. BaillièreTindall, London.

<sup>6</sup> Province of Prince Edward Island (2017). Animal Health Act.

[https://www.princeedwardisland.ca/sites/default/files/legislation/a-11\\_1.pdf](https://www.princeedwardisland.ca/sites/default/files/legislation/a-11_1.pdf)

**Post-exposure vaccination**- a licensed and approved rabies vaccination that is administered shortly following a possible rabies exposure

**Quarantine**- restrictions placed on entering or leaving a premises where a case of communicable disease exists<sup>7</sup>

**Unvaccinated**- not having received a vaccination to produce immunity against a disease

**Vaccinate**- to inoculate with vaccine to produce immunity<sup>8</sup>

**Wildlife**- wild mammals (as per Wildlife Conservation Act<sup>9</sup>)

### 3.2 Acronym List

**AVC** – Atlantic Veterinary College

**CA** – companion animal

**CFIA** – Canadian Food Inspection Agency

**CCVO** – Council of Chief Veterinary Officers

**CPHO** – Chief Public Health Office

**CWHC** – Canadian Wildlife Health Cooperative

**DAF** – Department of Agriculture and Fisheries

**MOA** – Memorandum of Agreement

**PEIVMA** - Prince Edward Island Veterinary Medical Association

**PEV** – post-exposure vaccination

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<sup>7</sup> Province of Prince Edward Island (2017). Animal Health Act.

[https://www.princeedwardisland.ca/sites/default/files/legislation/a-11\\_1.pdf](https://www.princeedwardisland.ca/sites/default/files/legislation/a-11_1.pdf)

<sup>8</sup> Blood, D., Studdert, V. (1994) Baillière's Comprehensive Veterinary Dictionary. BaillièreTindall, London.

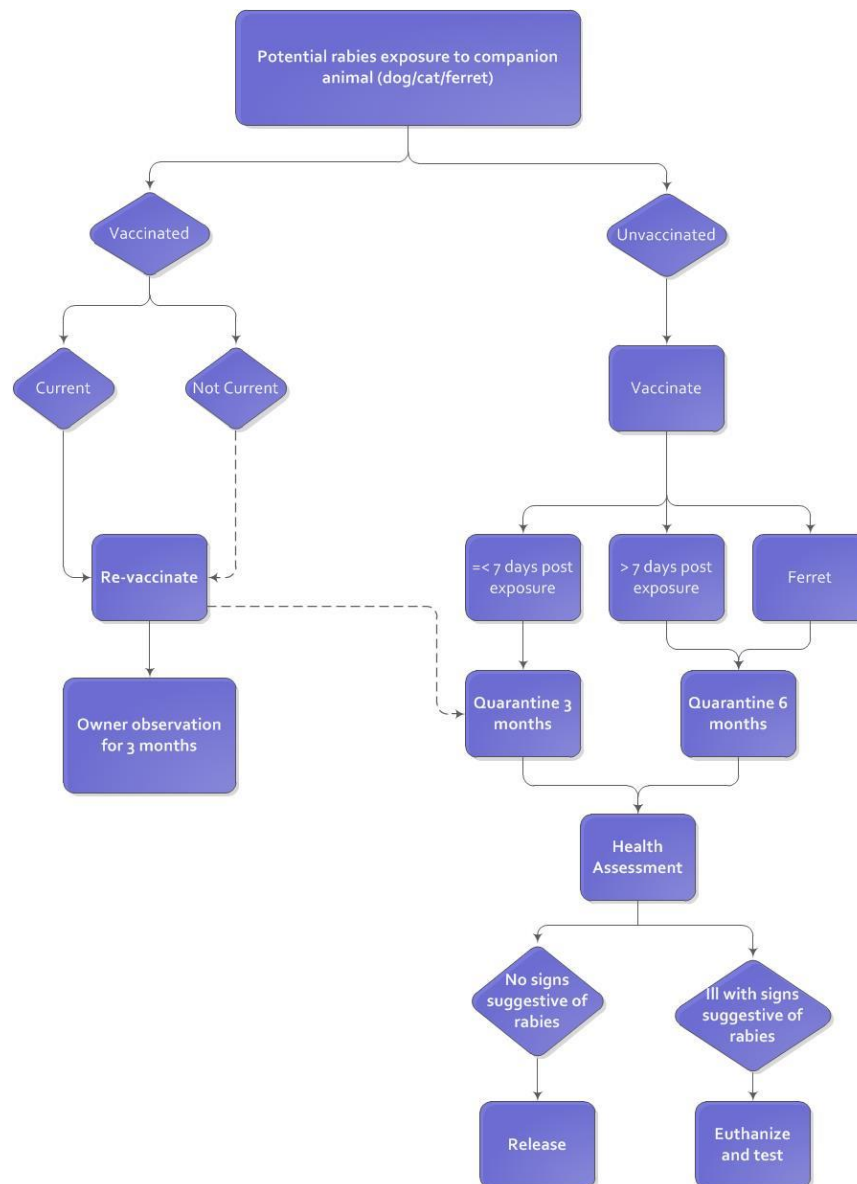
<sup>9</sup> Province of Prince Edward Island (2017). Wildlife Conservation Act.

<https://www.princeedwardisland.ca/sites/default/files/legislation/W-04-1-Wildlife%20Conservation%20Act.pdf>

## 4.0 RESPONSE PLAN DECISION TREE

Wildlife would be the most common way a domestic animal is exposed to rabies. Domestic animal exposure response varies depending on the species of animal(s). The response for companion animals (CA) differs from that of livestock. The following sections describe the outcomes of the decisions made based on animal type. The response protocol decision trees are below (Figure 2 and Figure 4).

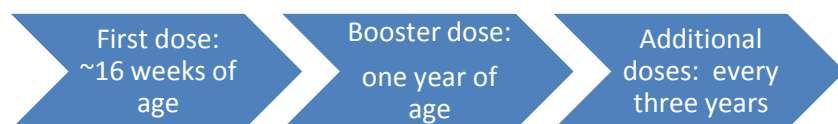
**Figure 2.** Companion Animal Rabies Exposure Decision Tree



## Companion Animals

All CA should be administered an approved rabies vaccine at different time points depending on their age (Figure 3) as recommended by the American Animal Hospital Association<sup>10</sup>. If a CA is exposed to a known rabid or potentially rabid animal, case information will be collected (Appendix 1). The animal's vaccine record will be used to guide decision making. Rabies vaccination status needs to be determined in consultation with the animal's veterinarian to determine if they are previously vaccinated (current or not current) or unvaccinated.

**Figure 3.** Rabies vaccination schedule for Companion Animals



All CA, despite their rabies vaccination status, should be vaccinated or re-vaccinated with a licensed and approved rabies vaccine with seven days

of their exposure as there is a body of evidence that suggests that a PEV can reduce the risk of the development of rabies, particularly for those animals that have been previously vaccinated<sup>11</sup>.

### Companion Animal - Rabies Vaccine is Current

Exposure of a fully vaccinated CA to a potentially rabid animal requires investigation and follow-up. The development of rabies in these situations is rare. Revaccinate the CA as soon as possible after the exposure. The CA will then be placed under "Owner Observation" for three months' post-exposure as they could pose a risk to other animals and humans. Requirements of the "Owner Observation" are found in Appendix 2.

### Companion Animal - Rabies Vaccine is Not Current

The protection offered by a vaccine can deplete with time. A rabies vaccination should be administered every three years<sup>12</sup>. A rabies vaccine is considered not current if it has been more than 3 years since the most recent administration. A vaccination record will provide a history of the vaccinations administered to the CA and help determine whether a vaccine is considered current or not. CAs that are not current for their rabies vaccine must be revaccinated after the exposure. These situations will be reviewed on a case-by-case basis to determine the appropriate follow-up, ie. "Owner Observation" or "Companion Animal - Quarantine<sup>13</sup>" for three months. The overall health status of the animal, number of previous doses of rabies vaccine, time elapsed since last vaccine and minimal delay in exposure and PEV would all be expected to impact the animal's immune status<sup>10</sup>. The goal of a rabies quarantine is to protect the

<sup>10</sup> American Animal Hospital Association (2017).

[https://www.aaha.org/guidelines/canine\\_vaccination\\_guidelines/rabies\\_vaccination.aspx](https://www.aaha.org/guidelines/canine_vaccination_guidelines/rabies_vaccination.aspx)

<sup>11</sup> Radke, B., Koeman, J., Keshwani, H., Kostiuik, D. et al. (2015). Recommendations of the Canadian Council of Chief Veterinary Officers Subcommittee for the Management of Potential Domestic Animal Exposures to Rabies.

<sup>12</sup> American Animal Hospital Association (2017).

[https://www.aaha.org/guidelines/canine\\_vaccination\\_guidelines/rabies\\_vaccination.aspx](https://www.aaha.org/guidelines/canine_vaccination_guidelines/rabies_vaccination.aspx)

<sup>13</sup> Province of Prince Edward Island (2017). Animal Health Act.

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public, including the animal owner at all times; to protect any other susceptible animals from exposure to the quarantined animal and to provide observation of the quarantined animal. Details of the “Companion Animal - Quarantine” are found in Appendix 3.

### Companion Animal - Unvaccinated for Rabies

Companion animals that have not had a documented rabies vaccine must be vaccinated as soon as possible after the exposure. The time to vaccination post-exposure will determine the length of time the CA must be under quarantine. Those CA vaccinated within a week of exposure will be quarantined for a period of three months and those CA vaccinated after one week of exposure will be quarantined for a period of six months. This difference is based on the evidence surrounding early development of clinical disease, if it were to occur, after PEV due to a more vigorous immune response to rabies infection.<sup>14</sup>

### *Ferrets*

Unvaccinated ferrets must be vaccinated after the exposure and will be quarantined for a period of six months. The longer quarantine period is due to a lack of evidence in the ferret species regarding PEV and its impact on the development of disease.

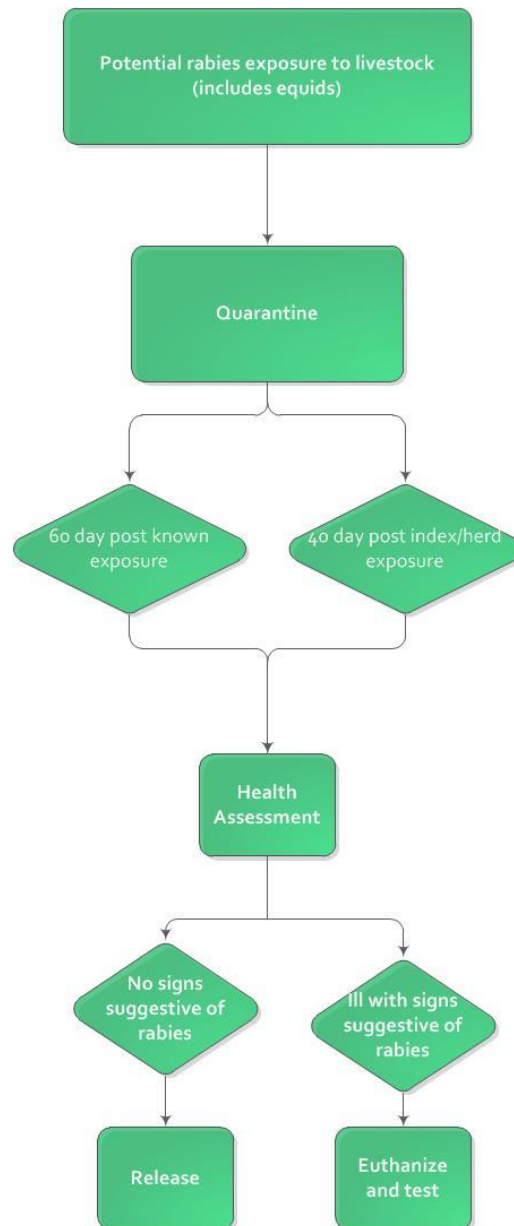
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<sup>14</sup> Prabhakar, B., Nathanson, N. (1981). Acute Rabies Death Mediated by Antibody. *Nature*; 290(5807):590-1.

## Livestock

Livestock may be exposed individually or as a herd and this will be determined based on the investigation. Case information will be collected. The animal and/or herd will be quarantined for 60 days post-known-exposure to the rabid animal or 40 days post-index case/herd. Details of the “Livestock - Quarantine” are found in Appendix 4.

**Figure 4.** Livestock Rabies Exposure Decision Tree





## **5.0 Euthanasia, sample preparation and disposal**

### **5.1 Euthanasia**

Companion animals requiring euthanasia will be euthanized by designated veterinary clinics (Appendix 5) and picked up by the DAF staff and taken to the AVC for sample preparation.

Livestock will be euthanized by AVC-Farm Services on-farm. The animal will be transported back to AVC Diagnostic Services for testing.

### **5.2 Sample preparation**

Samples will be prepared and submitted to the designated rabies testing laboratory (CFIA) by the AVC.

#### **5.2.1 Testing Results**

If the rabies testing results are positive, then appropriate action as per protocol will be taken. This may include public health follow-up in the instance of human exposures and additional animal quarantine as needed.

### **5.3 Disposal**

Companion animal bodies and livestock carcasses will be incinerated at the AVC.

## **6.0 Release from Quarantine**

After the appropriate owner observation/quarantine period has elapsed the domestic animal will be examined by a licensed veterinarian for a health assessment. If the animal is deemed healthy the owner observation/quarantine will be released by the Provincial Veterinarian with no further follow-up required.

## Appendix 1 – Case Report Form Information

Owner Name:

Owner Address:

Owner Contact Number(s):

Animal Name/ID:

Species:

Sex:

Age:

Date of Exposure:

Nature of Exposure:

Physical Location of Exposure on Animal:

Geographic Location of Exposure:

Previous Rabies Vaccine:

Vaccine Records Verified:

Date(s) of Rabies Vaccine(s):

Animal Veterinarian:

Animal Veterinarian Contact Information:

Other Animals Exposed:

Humans Exposed:

CPHO Notified:

Wildlife Notified:

## Appendix 2 – Companion Animal – Owner Observation

Exposure to a potentially rabid animal involving fully vaccinated CA still require some level of control. The development of rabies would be rare. However, these CA could pose a risk to other domestic animals and humans.

An owner observation will be required, and the Provincial Veterinarian will provide information on:

- length of observation (start date and end date)
- animal identification
- owner/caretaker
- designated veterinarian
- clinical signs associated with rabies
- record-keeping and reporting requirements
- visitation requirements
- activities that are allowed
  - leash, harness or muzzles are required when leaving the owner’s property
- activities that are prohibited, ie. free roaming, competitions, obedience, shows

The results of a satisfactory veterinary physical examination are required for the Provincial Veterinarian to terminate an owner observation.

## Appendix 3 – Companion Animal – Quarantine

The goal of a rabies quarantine is to protect the public, including the animal owner at all times; to protect any other susceptible animals from exposure to the quarantined animal; and to provide observation of the quarantined animal.

A quarantine order<sup>15</sup> will be written which includes details such as:

- disease of concern
- length of quarantine (start date and end date)
- location of quarantine premises and location of animal on quarantine premises
- list of affected animals
- animal identification<sup>16</sup> including;
  - type or class of animal and unique markings and description
- owner/caretaker
- feeding and caring requirements
- designated veterinarian
- clinical signs associated with rabies
- visitation requirements
  - If accidental contact occurs between animal and humans that are not permanent household members, that event must be recorded with information such as date and time of exposure and kept for the remainder of the quarantine period.
- reporting requirements
  - Any signs of disease or behavior change must be reported to the provincial veterinarian immediately.
  - Accidental contacts must be reported to the provincial veterinarian.
- contact number for the CPHO for human exposure
  - Any bites to human(s) must be reported to the CPHO immediately

### Additional rules of quarantine:

No direct contact with persons outside the permanent members of the household.

No interaction with other animals. No free-roaming outdoors at any time. No leaving the premises. Animal must not be left unsupervised in a building/room or enclosure from which escape may reasonably be considered possible. Animal may go outside for basic exercise but must be kept muzzled, on-leash and under control at all times.

The results of a satisfactory veterinary physical examination are required for the Provincial Veterinarian to terminate a quarantine.

<sup>15</sup> Province of Prince Edward Island (2017). Animal Health Act.

[https://www.princeedwardisland.ca/sites/default/files/legislation/a-11\\_1.pdf](https://www.princeedwardisland.ca/sites/default/files/legislation/a-11_1.pdf)

<sup>16</sup> Identification must be present in form of microchip or tag (which may not be removed) during the length of the quarantine.

## Appendix 4 – Livestock – Quarantine

The goal of a rabies quarantine is to protect the public by minimizing direct contact with people at all times; to protect any other susceptible animals from exposure outside the quarantined animal/group; to provide observation of the quarantined animal(s); and to ensure handler safety should neurological disease develop in the animal(s).

A quarantine order<sup>17</sup> will be written which includes details such as:

- disease of concern
- length of quarantine (start date and end date)
- location of quarantine premises
- location of animal(s) on quarantine premises
- list of affected animals
- animal identification<sup>18</sup> including:
  - type or class of animal
  - unique markings and description
- owner/caretaker
- feeding and caring requirements
- designated veterinarian
- clinical signs associated with rabies
- reporting requirements
  - Any signs of disease or behavior change must be reported to the provincial veterinarian immediately.
  - Accidental contacts must be reported to the provincial veterinarian.
- contact number for the CPHO for human exposure

### Additional livestock facts concerning quarantine:

**Meat:** Livestock with no clinical signs consistent with rabies can be slaughtered for human consumption within seven days post-exposure. Afterwards, they must complete the appropriate quarantine period prior to slaughter.

**Milk:** Milk from quarantined animal can continue to be used for processing but should not be used in raw milk products.

**Wool:** Wool from quarantined animal can continue to be harvested assuming necessary precautions are taken during the shearing process.

A satisfactory veterinary physical examination is required to terminate quarantine and this will be determined by the Provincial Veterinarian.

<sup>17</sup> Province of Prince Edward Island (2017). Animal Health Act.

[https://www.princeedwardisland.ca/sites/default/files/legislation/a-11\\_1.pdf](https://www.princeedwardisland.ca/sites/default/files/legislation/a-11_1.pdf)

<sup>18</sup> Identification must be present in form of a tag (which may not be removed) during the length of the quarantine.

## **Appendix 5 – Designated Veterinary Clinics**

### **West Prince Veterinary Service**

22 Beechwood Avenue

O’Leary, PE C0B 1V0

(902) 859-2441

### **Abeqweit Animal Hospital**

24 McAulay Court

Charlottetown, PE

(902) 892-3538

### **New Perth Animal Hospital**

3188 Georgetown Rd, Rte #3

New Perth, PE C0A 1G0

(902) 838-1800