

**STRATEGIES FOR URBAN WILDLIFE
MANAGEMENT
IN MANITOBA: A CASE STUDY
OF
THE CITY OF WINNIPEG**

By

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In Partial Fulfilment of the
Requirements for the Degree,
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Formation des enseignants	0530
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Lecture	0535
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Sciences sociales	0534
Sociologie de l'éducation	0340
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Pathologie végétale	0480
Physiologie végétale	0817
Sylviculture et faune	0478
Technologie du bois	0746
Biologie	
Généralités	0306
Anatomie	0287
Biologie (Statistiques)	0308
Biologie moléculaire	0307
Botanique	0309
Cellule	0379
Ecologie	0329
Entomologie	0353
Génétique	0369
Limnologie	0793
Microbiologie	0410
Neurologie	0317
Océanographie	0416
Physiologie	0433
Radiation	0821
Science vétérinaire	0778
Zoologie	0472
Biophysique	
Généralités	0786
Médicale	0760

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Audiologie	0300
Chimiothérapie	0992
Dentisterie	0567
Développement humain	0758
Enseignement	0350
Immunologie	0982
Loisirs	0575
Médecine du travail et thérapie	0354
Médecine et chirurgie	0564
Obstétrique et gynécologie	0380
Ophthalmologie	0381
Orthophonie	0460
Pathologie	0571
Pharmacie	0572
Pharmacologie	0419
Physiothérapie	0382
Radiologie	0574
Santé mentale	0347
Santé publique	0573
Soins infirmiers	0569
Toxicologie	0383

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Chimie	
Généralités	0485
Biochimie	487
Chimie agricole	0749
Chimie analytique	0486
Chimie minérale	0488
Chimie nucléaire	0738
Chimie organique	0490
Chimie pharmaceutique	0491
Physique	0494
Polymères	0495
Radiation	0754
Mathématiques	0405
Physique	
Généralités	0605
Acoustique	0986
Astronomie et astrophysique	0606
Électronique et électricité	0607
Fluides et plasma	0759
Météorologie	0608
Optique	0752
Particules (Physique nucléaire)	0798
Physique atomique	0748
Physique de l'état solide	0611
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Physique nucléaire	0610
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*"STRATEGIES FOR URBAN WILDLIFE MANAGEMENT IN
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*A practicum submitted to the Faculty of Graduate Studies of the University
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By

IAN K. SEUNARINE

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ABSTRACT

In the City of Winnipeg, urban wildlife matters have become an issue for the provincial government as well as for city residents. Urban wildlife issues are diverse and have become more important for residents as wildlife find habitat in the city. In order to manage urban wildlife and help the residents of Winnipeg (as well as the wildlife), the provincial government must clarify the confusion in regard to which level of government is responsible for managing urban wildlife, and in what situations does this responsibility change.

The following practicum established where the jurisdictions and responsibilities are for managing urban wildlife for each level of government, the private sector, and the public sector. An analysis of urban wildlife issues, legislation pertaining to urban wildlife management, and the government departments and private agencies which are involved with urban wildlife is presented. Urban wildlife programs from Canada and the United States are also reviewed.

Based on the conclusions, strategies are presented to assist the provincial government in managing urban wildlife in the City of Winnipeg. These strategies are:

- Develop framework for urban wildlife jurisdictions and responsibilities.
- Review and revise existing legislation.
- Develop a "Problem Wildlife" hotline.
- Establish an urban wildlife monitoring program.
- Create a Task Force to investigate safety issues.
- Survey public attitudes toward urban wildlife.
- Develop a policy on urban wildlife information and education.

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Table of Contents

Title	Page
Abstract	i
Acknowledgements	ii
Table of Contents	iii
List of Figures	v
List of Tables	vi
Chapter 1: Introduction	1-12
1.1 Issue Statement	1
1.2 Goal	2
1.3 Objectives	2-3
1.4 Urbanization	3-4
1.5 Urbanization and Wildlife	4-6
1.6 Wildlife Impacts on Human Populations	6-9
1.7 Wildlife Management	9-12
Chapter 2: Methodology	13-20
2.1 Objective 1	13-14
2.2 Objective 2	14-17
2.3 Objective 3	17
2.4 Objective 4	19-20
2.5 Objective 5	20
Chapter 3: Urban Wildlife Issues in the City of Winnipeg	21-25
3.1 Jurisdictional Issues	21-22
3.2 Nuisance Animals	22-23
3.3 Public Health and Safety	23
3.4 Non-Consumptive Resource Use	24
3.5 Public Information and Education	25
Chapter 4: Legislation	26-46
4.1 Federal Legislation	26-30
4.2 Provincial Legislation	30-41
4.3 Municipal Legislation	41-46

Chapter 5: Agencies Involved with Urban Wildlife Management in the City of Winnipeg	47-67
5.1 Federal Agencies	47-51
5.2 Provincial Agencies	51-58
5.3 Municipal Agencies	58-62
5.4 Private Agencies	62-67
 Chapter 6: Urban Wildlife Management in Other Areas	 68-75
6.1 Urban Wildlife Programs in Canada	68-70
6.2 Urban Wildlife Programs in the Unites States	70-75
6.3 Summary	75
 Chapter 7: Summary, Conclusions and Recommendations	 76-91
7.1 Summary	76
7.2 Conclusions	76-80
7.3 Recommendations	80-91
 References	 92-95
 Personal Communications List	 96-97
 Appendix I	 98-99
 Appendix II	 100
 Appendix III	 101-102
 Appendix IV	 103-105

LIST OF FIGURES

Title	Page
Figure 1: Canada Geese at Retention Pond in the City of Winnipeg.....	7
Figure 2: Winnipeg Deer - Vehicle Collisions (1973-1992).....	57

LIST OF TABLES

Title	Page
Table 1: Federal, Provincial, and Municipal Legislation in Regard to Urban Wildlife.....	15
Table 2: Agencies Involved with Urban Wildlife Management in the City of Winnipeg.....	18
Table 3: Legal Jurisdictions for Urban Wildlife Management in Winnipeg.....	78
Table 4: Actual Management of Urban Wildlife in Winnipeg.....	79
Table 5: Strategies for Urban Wildlife Management in the City of Winnipeg.....	81

CHAPTER 1

INTRODUCTION

Urban wildlife issues are a concern in many cities throughout North America. In Canada, the federal, provincial, and municipal governments have some involvement in managing and conserving urban wildlife. In the City of Winnipeg, wildlife have become an important issue for the government, private organizations and the public. Wildlife species affect Winnipeg in various ways including wildlife-human interactions, nuisance animals, animal welfare concerns, public health and safety, property damage, endangered species protection, wildlife habitat loss/ acquisition, and public appreciation. The concern expressed by city residents for these issues and an increase in the numbers of wildlife demonstrates the importance of establishing management initiatives for urban wildlife in Winnipeg.

Presently, there is no formal agency or document outlining the responsibilities for managing wildlife in the City of Winnipeg. As a result, the provincial government has been traditionally held responsible for trying to manage many of the urban wildlife issues facing Winnipeg. However, the provincial government is unclear of their jurisdiction over urban wildlife, and how the responsibilities of the other levels of government (federal and municipal) and private agencies are involved with managing wildlife in the city. This confusion has led to an improper resolution of wildlife issues in Winnipeg. In this report the City of Winnipeg is examined as a case study in order to define clearly the role of each level of government in addressing urban wildlife issues.

1.1 Issue Statement

The jurisdictional boundaries of the federal, provincial, and municipal governments are

unclear for the control and regulation of wildlife in the City of Winnipeg. This situation has resulted in confusion for the provincial government as well as for private agencies and the public when attempting to address responsibilities for urban wildlife issues.

1.2 Goal

The goal of this practicum is to clearly define the present roles of the federal, provincial, and municipal governments in managing Winnipeg's wildlife, and to develop strategies necessary to assist the three levels of government, as well as the private and public sectors, when addressing urban wildlife issues.

1.3 Objectives

1. Identify urban wildlife issues in the City of Winnipeg.
 - Identify various issues (nuisance species, animals welfare, property damage, health threat, education, etc.).

2. Collect information regarding the jurisdictional powers for each level of government relative to urban wildlife issues in the City of Winnipeg.
 - Examine legislation relating to urban wildlife for each level of government (federal, provincial, municipal).
 - Define legal jurisdictions and responsibilities for each level of government pertaining to urban wildlife issues.
 - Identify the sections of legislation which are unclear regarding urban wildlife.

3. Identify the agencies involved with urban wildlife management in the City of Winnipeg.
 - Examine how each agency is involved with managing urban wildlife

(agency jurisdiction over urban wildlife and issues which affect them).

4. Examine how urban wildlife issues in other areas of Canada and the United States are managed.
 - Examine existing urban wildlife programs in Canada.
 - Examine the diversity of urban wildlife programs in the United States.
5. Develop strategies to address wildlife issues in the City of Winnipeg.

BACKGROUND

1.4 Urbanization

Definition of Urbanization

Urbanization is a process where human development encroaches upon natural land areas in response to population and economic growth (Howell & Pollak, 1991). Although some portions of the natural land areas are untouched by development, most of the land is altered with concrete and asphalt to construct buildings, roads, and parking lots (Blanchard, 1991).

The process of urbanization can cause significant changes to the structure of an ecosystem, as Blanchard (1991) states:

“Urbanization results in increased temperatures, a decline in air and water quality, industrial contamination, and an increasing trend away from the natural world. In addition, urban development affects biodiversity, succession, energy and nutrient flow, and population dynamics and territoriality of species” (p.16).

Current Trends

In North America, urbanization results from continued population expansion of urban centres. In Canada it is projected that the emigration from rural communities to urban areas will continue to increase in the future (Wildlife Habitat Canada, 1991-92).

1.5 Urbanization and Wildlife

Impacts on Wildlife from Urbanization

Urbanization creates habitat for some species and encroaches on the habitats of others. As a result, there is a loss of natural habitat for some wildlife species (Jones, 1991). Those species that cannot adapt must leave developed areas in order to seek appropriate habitat (Leedy & Adams, 1984). Urban areas have created new niches and have become important habitats for some species (Leedy & Adams, 1984; Wildlife Habitat Canada, 1991-92).

Many animals can efficiently adapt to urban areas because they find all the resources there that they need to survive. The basic wildlife needs are food, water, cover, and a place to live and reproduce (Leedy & Adams, 1984). Urban centres provide food via vegetation, garbage dumps, and gardens. Water is provided by lakes, rivers, ponds, creeks, and streams. Some species of wildlife find appropriate habitat along riparian land corridors accompanying a watershed. Wildlife which adapt to urban centres find cover in parks, forests, property, homes, and buildings.

Wildlife in Urban Environments

Various species of wildlife including mammals, birds, amphibians and reptiles are adapting to urban areas in North America (see Appendix I for the scientific names of all species listed in this practicum). In addition to native species several European species, most notably the Norway rat, the house mouse, the European starling, and the house sparrow have been successful in adapting to the environment. The City of Winnipeg is especially attractive because it has four main rivers flowing through it, as well as several corridors.

There are large mammals, small mammals, perching birds, raptors, and waterfowl living in Winnipeg.

Large Mammals

The primary large mammal residing in Winnipeg is the white-tailed deer. The deer population in Winnipeg has increased from approximately 101 in 1971, to near 500 at present. The deer primarily reside in four city areas, Charleswood-Ft. Whyte, St. James, the St. Charles Rifle Range, and the Assiniboine River West (Koonz, 1985). Deer adapt easily to urban settings because they have year-round food sources, cover, and an absence of predators. The primary mortality factor facing deer in Winnipeg is collisions with automobiles.

In addition to deer, other large mammals such as red foxes, raccoons, and beavers live within the city. Moose, lynx, bobcat, coyote, and black bear are not considered permanent city residents, but are occasionally sighted in the city.

Small Mammals

There are approximately 29 small mammal species which have adapted to Winnipeg's urban ecosystem. They include the skunk, hare, rabbit, muskrat, mink, woodchuck, weasel, tree and ground squirrel, chipmunk, lemming, vole, shrew, rat and mice all of which reside in the city on a permanent basis.

Perching Birds and Doves

Approximately 225 bird species live permanently or temporarily in Winnipeg. This includes native and introduced species. Perching birds such as house sparrows, blue jays, nuthatches, starlings, downy and hairy woodpeckers, and ravens can survive all year round in the city. Rock doves have also been successful in adapting to Winnipeg on a year round basis. A study by Johnsen & VanDruff (1987), concluded that house sparrows, rock doves (pigeons), and European starlings are excellent at exploiting urban

environments in North America. Other perching birds such as robins, swallows, goldfinches, warblers, flycatchers, and grosbeaks migrate to Winnipeg to breed each spring.

Raptors

Winnipeg hosts more than 12 breeding raptor species, representing species of hawks, falcons, and owls. The endangered peregrine falcon migrates annually to nest on the top of tall buildings. Research and conservation measures are initiated each year in response to the presence of peregrine falcons.

Waterfowl

Canada geese have adapted extremely well to many urban environments in North America including those found in the City of Winnipeg. They are attracted to urban water impoundments and the supplemental food supplied by the public. Their success is enhanced by a lack of predators (Adams, Rhodehamel & McKegg, 1987). Goose populations have become so dense that many urban centres have initiated management plans to control their numbers (Adams et al., 1987; Cooper, 1987; Cooper, 1991; Cooper & Smaby, 1987).

In Winnipeg, Canada goose migrations have become an annual attraction for residents. As the geese settle around various water impoundments throughout the city, many residents come out to view and feed them (Figure 1). Many pairs of Canada geese now nest in Winnipeg.

1.6 Wildlife Impacts on Human Populations

Values Associated with Urban Wildlife

Wildlife existing in an urban centre can impact on the public in different ways. In general, people associate negative or positive values to wildlife. Personal values toward wildlife are



Figure 1: Canada geese at retention pond in the City of Winnipeg.

the result of many different variables such as people's past encounters, personal philosophies toward wildlife, attractiveness of the animal, and behaviour of the animal. As a result, appreciation for a particular wildlife species may be quite different between neighbours.

Kay & Patterson (1991) found that some people perceive species, such as raccoons, squirrels and skunks, as nuisance or problem wildlife due to the property damage they can cause. However, other studies suggest that wildlife is valued as personally important to people living in urban areas (Leuschner, Ritchie & Stauffer, 1989; O'Donnell & VanDruff, 1987). One study conducted in Syracuse, New York found that urban residents tolerated considerable damage from squirrels and rabbits because they were the most-liked animals (in addition to songbirds) (O'Donnell & VanDruff, 1987).

When the density of a species increases dramatically, people may change their attitude toward the animal. This is common with populations of white-tailed deer, for example. At low and moderate densities, the deer are enjoyed by many people for their high aesthetic value (Decker & Gavin, 1987). When populations increase, vegetation is reduced, land structures are affected, deer-vehicle accidents increase, and damage to private property is common (Bryant & Ishmael, 1991; Jones & Witham, 1990).

Waterfowl pose the same problem. Although urban residents generally enjoy viewing flocks of Canada geese; when populations become dense they can become a public nuisance (Adams et al., 1987; Cooper, 1987). Complaints are usually related to goose droppings on golf courses, docks, swimming beaches, and lawns (Cooper, 1987). Canada Geese which nest near the Minneapolis-St. Paul International Airport area pose a serious aircraft hazard (Cooper, 1987; Cooper & Smaby, 1987) and that problem is not unique to the City of Minneapolis.

In general, as animal populations increase in urban areas, it is not only resident's attitudes

which are affected. There are issues such as wildlife-vehicle collisions, property damage, health threats, and public safety which must be addressed. As a result, there should be an agency responsible for monitoring animal populations, predicting population trends, controlling animal populations, and assisting the public.

1.7 Wildlife Management

Urban wildlife management is an innovative approach to traditional wildlife management. It recognizes the importance of non-consumptive wildlife use by focusing on education and conservation in its program. Several urban wildlife programs have been initiated throughout the United States. In Canada one such program is being developed in Lethbridge, Alberta.

Non-Consumptive Wildlife Use

There has been an increase in non-consumptive wildlife use throughout North America in the past decade. Non-consumptive wildlife use refers to an activity which does not involve wildlife harvesting. Such uses include photography, observation or feeding (Filion, et al., 1990). A study conducted in Canada in 1981 found that 67% of Canadians engaged in non-consumptive wildlife use, and over 70% of these people were urban residents (Filion et al., 1983). A different study found that Canadians spent \$4 billion in non-consumptive wildlife activities in 1987 (Filion et al., 1990).

A recent study of The Federal-Provincial Task Force on the Importance of Wildlife to Canadians (Filion et al., 1993) found that 69.5% of Canadian residents enjoyed wildlife in their backyard. These studies illustrate the importance of urban wildlife for people across the country.

Education

Education is an important component for any urban wildlife program (Blanchard, 1991;

Matthews & Lewandowski, 1987). In order to help the public and private sectors, and the governments manage and conserve urban wildlife, there should be an understanding of why some animals adapt to urban centres, why some do not, and why urban wildlife are important for maintaining an ecological balance (Adams, Thomas, Lin & Weiser, 1987). The importance of education in urban wildlife management is reflected in *A Wildlife Policy For Canada* (1990). That policy, states that "Effective conservation of wildlife relies upon a well-informed and involved public" (p.9).

Education can be achieved through a variety of ways. Nature centres can provide excellent environmental education for schools, special groups, and the general public (Kay & Patterson, 1991). Urban parks and zoological gardens can also provide education to the public. In addition to learning about urban wildlife, the public can actively help through establishing volunteer networks (Kent, Buerger & Litwin, 1987; Tankersley, 1987).

In the City of Winnipeg, environmental education programs are provided through the Province of Manitoba's Department of Natural Resources (e.g. Project Wild), the City of Winnipeg's Parks and Recreation Department (e.g. Assiniboine Park Zoo, Living Prairie Museum), the public school curriculum, and various nature centres (e.g. Fort Whyte Centre) throughout the city. These programs encourage volunteer participation.

Education is necessary to help all residents begin to understand urban wildlife issues. For example, through education, people will understand that they have created much of the habitat that wildlife find attractive. In addition, people will learn why some animals adapt to urban conditions and others do not, or how urban wildlife affects an urban centre. This kind of information will assist people in dealing with their own urban wildlife issues, such as property damage.

Urban Wildlife Management in the City of Winnipeg

The Provincial Department of Natural Resources (DNR) has commonly dealt with urban

wildlife issues. In general the Wildlife Branch (DNR) is responsible for creating policies or legislation, and the Operations Division (DNR) is responsible for carrying out that legislation. Recently, the provincial government has created a position for an urban wildlife specialist (February, 1994). The provincial government is currently in the process of developing a job description for the position.

In addition to the Wildlife Branch, several other government agencies have responded to urban wildlife issues. These include the federal government's Canadian Wildlife Service, Agriculture Canada, and Transport Canada. The provincial government's Manitoba Agriculture, Manitoba Environment, and Manitoba Public Insurance Corporation respond to urban wildlife issues. The City of Winnipeg's Animal Services Branch, Parks and Recreation Department, and the Assiniboine Park Zoo also are contacted with regard to urban wildlife issues. Private organizations such as the Humane Society, the Manitoba Wildlife Rehabilitation Organization (MWRO), the Manitoba Wildlife Federation, the Manitoba Naturalists Society, the Fort Whyte Centre, the Zoological Society of Manitoba, and exterminators are also involved with urban wildlife matters.

There is no formal program or policy for urban wildlife management in Winnipeg. The issue of managing urban wildlife is confusing for governments for two main reasons:

1) Absence of Legislation

The first is because many of the species which reside in Winnipeg are not listed in any of the legislation. Therefore no jurisdiction is willing to be responsible for managing species not officially given status under legislation.

2) Jurisdictional Overlaps

The second reason is that urban wildlife occur in areas which overlap government jurisdictions. For example, if the provincial government is responsible for managing white-tailed deer but the deer are attracted to habitat managed by the city (e.g. city parks)

which government level should be responsible? As a result, it is a confusing process to establish who is responsible for managing a certain species and in what circumstances does responsibility shift to a different department or jurisdiction.

The public is also helpless in finding answers for urban wildlife inquiries. In general, there are a variety of organizations that people can contact when seeking information regarding wildlife. However, not all of these organizations have the answers, resources, or authority to help the public. Therefore, it can be a confusing process for an individual to obtain help or information on Winnipeg's urban wildlife.

CHAPTER 2

METHODOLOGY

In order to understand how urban wildlife affects the City of Winnipeg three main components were analyzed. First, the general urban wildlife issues which affect Winnipeg were identified (chapter three). Second, the legislation pertaining to urban wildlife was analyzed (chapter four) and third, the agencies which are involved with urban wildlife issues were reviewed (chapter five).

To understand urban wildlife management from a broader perspective, several programs were reviewed from Canada and the United States (chapter six). The final chapter presents strategies to assist the provincial government in dealing with the urban wildlife issues in the City of Winnipeg (chapter seven).

This chapter outlines the methodological process used to address each objective.

OBJECTIVES

2.1 Objective 1

Identify urban wildlife issues in the City of Winnipeg.

In order to identify the main urban wildlife issues facing Winnipeg, an examination of the federal, provincial, and municipal governments, and private agencies was conducted. Government departments from each level were contacted through federal, provincial, and municipal directories. Each department representative was interviewed over the phone or in person and questioned about their involvement with urban wildlife. In order to identify which private agencies should be contacted, lists were obtained from directories and

through the Manitoba Eco-Network. Representatives from the private agencies were also questioned about their involvement with urban wildlife through personal interviews or by telephone interviews.

Each government department and private agency which has an involvement with urban wildlife issues is represented in this practicum. Although each department and agency has different involvements with urban wildlife, five main issues were identified as a concern for the City of Winnipeg. These issues are introduced and described in chapter 3.

2.2 Objective 2

Collect information regarding the jurisdictional powers for each level of government relative to urban wildlife issues in the City of Winnipeg.

To obtain information on jurisdictions, legislation from the federal, provincial, and municipal government were reviewed. Federal legislation pertaining to urban wildlife was identified from the list of Revised Statutes of Canada (1985), and from the list of Canadian Environmental Law (1991). Provincial legislation was chosen from the Table of the Statutes of Manitoba (1992). Municipal legislation was chosen through examining the bound stacks of the City of Winnipeg By-Laws (1874-1991). The legislation was obtained from the Law Library at the University of Manitoba (Table 1).

Legislation Analysis

In order to analyze the legislation in a sound methodological fashion various legal texts were consulted (Bell & Engle, 1987; Driedger, 1983; Langan, 1969; Twining & Miers, 1991). Personnel from the faculty of law (University of Manitoba) also provided assistance with the legislation examination.

**Federal, Provincial, and Municipal
Legislation in Regard to
Urban Wildlife**

FEDERAL	PROVINCIAL	CITY OF WINNIPEG
<i>Canada Wildlife Act</i> R.S.C. 1985	<i>Natural Resources Tran. Act</i> R.S.M. 1987	<i>Pigeon Control By-Law</i> #978/75
<i>Migratory Birds Conv. Act</i> R.S.C. 1985	<i>Wildlife Act</i> R.S.M. 1987	<i>Pound By-Law</i> #2443/79
<i>Health of Animals Act</i> 1990	<i>Endangered Species Act</i> S.M. 1989-90	<i>Keeping Animals By-Law</i> #3389/83
	<i>Ecological Reserves Act</i> R.S.M. 1987	<i>Parks & Rec. By-Law</i> #33219/82
	<i>Public Health Act</i> R.S.M. 1987	<i>Public Health By-Law</i> #4274
	<i>Environment Act</i> S.M. 1987-88	
	<i>Animal Diseases Act</i> R.S.M. 1987	
	<i>City of Winnipeg Act</i> S.M. 1989-90	

In general, most of the material on legislation interpretation pertains to how a judge should assess the meaning of an act (Bell & Engle, 1987; Driedger, 1983; Twining & Miers, 1991). For example, should the judge interpret the legislation based on the text alone, or should he/she also try to establish parliament's intention of the legislation (Bell & Engle, 1987)? This type of judicial interpretation does not apply to the analysis in this practicum. Twining & Miers (1991) state that "there are usually very few explicit references to what are or what ought to be the methodological principles guiding interpretation" (p. 366).

As a result, the legislation reviewed in this practicum was analyzed according to an informal process based on criteria stated in Bell & Engle (1987) and Twining & Miers (1991). Bell & Engle (1987) state that interpretation includes identifying the meaning of the legislation. The meaning refers to the purpose or intent of legislation and how the legislation affects situations.

Twining & Miers (1991) add that the "conditions of doubt" should be determined in legislation. That is, any words, phrases, or construction of the legislation which cause difficulties for interpretation should be identified. They also suggest that the individual interpreting the legislation should clarify their standpoint (Twining & Miers, 1991). This means the interpreter should clarify what he/she is trying to discover from the legislation. For this practicum the standpoint was, how does the legislation affect urban wildlife management in the City of Winnipeg?

Therefore, the legislation in chapter 3 was analyzed by the following criteria:

- What is the intent of the legislation?
- Are there sections of the legislation which are unclear and confusing?
- How does the legislation affect urban wildlife management in the City of Winnipeg?

In order to help the legal analysis, representatives from each level of government were

consulted. The Canadian Wildlife Service was contacted to explain the role of the federal government in urban wildlife issues. A Regulatory Specialist from the Manitoba Wildlife Branch explained the provincial role, and the Animal Services Branch helped in explaining the role of the municipal government in urban wildlife management.

In general, legislation is the act which establishes the legal mandate for the government to follow. The regulations of an act define its scope and restrictions. Government policies and procedures describe how to implement the regulations of an act.

2.3 Objective 3

Identify the agencies involved with urban wildlife management in the City of Winnipeg.

The agencies reviewed in this practicum were selected from the federal, provincial, and municipal governments, and from the private sector. The government departments were identified through listings in federal, provincial, and municipal directories. The private agencies were identified through directories and from the Manitoba Eco-Network.

The agencies were contacted by telephone or through a personal interview. In general, each agency involved or concerned with urban wildlife issues was reviewed in this practicum (Table 2). The review process consisted of two parts:

- What are the jurisdictions for the agency in regard to urban wildlife?
- What are the urban wildlife issues concerning the agency?

Agencies Involved
with
Urban Wildlife Management
in the City of Winnipeg

FEDERAL	PROVINCIAL	MUNICIPAL	PRIVATE
Canadian Wildlife Service (CWS)	Department of Natural Resources (DNR)	Animal Services Branch	Exterminators
Agriculture Canada	Manitoba Agriculture	Parks & Recreation (Zoo & Living Prairie Museum)	Humane Society
Transport Canada	Manitoba Environment	City Health Department	Fort Whyte Centre
	Manitoba Public Insurance Corporation (MPIC)		Manitoba Wildlife Rehabilitation Organization (MWRO)
			Manitoba Wildlife Federation
			Manitoba Naturalists Society

2.4 Objective 4

Examine how urban wildlife issues in other areas of Canada and the United States are managed.

To understand the range and diversity of urban wildlife management, other areas of Canada and the United States were contacted. Each provincial government in Canada was contacted by telephone to inquire about urban wildlife issues. General questions were asked:

- How is urban wildlife managed in your province?
- Are there any wildlife issues which are a concern for urban areas in your province?

Most of the information from the provinces was obtained through telephone conversations, however some information was also received through faxes and the mail. The information pertaining to Lethbridge's Urban Wildlife Program was obtained at an urban wildlife discussion at the First National Wildlife Habitat Workshop (Winnipeg, 1993).

Several U.S. state agencies were contacted to determine if they had any involvement in urban wildlife issues. The state's programs were identified through directories such as the National Wildlife Federation's Conservation Directory (1988), as well as through personal communication with state biologists. Most of the information from each state was obtained through telephone conversations. General questions were asked:

- How is urban wildlife managed in your state?
- Are there any wildlife issues which are a concern for urban areas in your state?

Additional literature was received from organizations such as the National Institute for Urban Wildlife (Columbia, MD), and departments such as Maryland Forest Park and Wildlife Services (Annapolis, MD), and the New York State Department of Environmental

Conservation (Delmar, NY; Avon, NY).

Although there are several urban wildlife programs in the United States, five programs were reviewed based on their diversity and progress in managing urban wildlife. These programs are from Maryland, Missouri, New York, Illinois, and Minnesota. The National Institute of Urban Wildlife was also reviewed since it is the only national centre for both Canada and the United States devoted to researching and promoting urban wildlife.

2.5 Objective 5

Develop strategies to address urban wildlife issues in the City of Winnipeg.

Strategies were developed based on the conclusions reached from the information on urban wildlife issues (chapter three), legislation (chapter four), and agencies involved with urban wildlife (chapter five). Each strategy addresses an issue presented in chapter three. Therefore, there are five main strategies focusing on each particular issue. In addition, two strategies have been recommended for future consideration of urban wildlife management for the City of Winnipeg.

CHAPTER 3

URBAN WILDLIFE ISSUES IN THE CITY OF WINNIPEG

The acknowledged presence of wildlife in urban centres has created new challenges for the government and public to address. Urban wildlife can affect a city and its residents in many ways. As a result, managing wildlife resources and assisting the public in urban centres should not be mutually exclusive (Jones, 1991). Several government jurisdictions are affected by wildlife in the City of Winnipeg. The management of nuisance animals, public health and safety issues, non-consumptive resource use, and public information and education are areas involving wildlife but which fall under various governmental jurisdictions.

3.1 Jurisdictional Issues

The primary problem in managing Winnipeg's urban wildlife is the unclear jurisdictional boundaries of each government level, the private sector and the public. In general there are two main jurisdictional concerns, 1) what are the legal regulations for each group when dealing with urban wildlife, and 2) under what circumstances do these regulations change?

Legal Regulations

Each level of government, the private sector, and the public have legal regulations limiting their control over managing urban wildlife. The problem is that each group is unaware of their regulations because they are not directly mentioned in any policy or legislation. As a result, there are many examples of confusion over who should be responsible for managing particular urban wildlife concerns. For example, should the public be responsible for dealing with urban wildlife on their own property or should a government department be responsible?

Change of Regulations

An additional jurisdictional concern in Winnipeg is; when does responsibility shift to another department or agency? In certain situations, one government department will take the responsibility from another. For example, although the provincial government manages wildlife in the province, the federal Department of Agriculture takes over responsibility if there is an outbreak of a specific disease such as rabies. However, it is not entirely clear when a department should take over responsibility from another department because there is no policy or legislation on specific urban wildlife issues.

3.2 Nuisance Animals

Nuisance animals are individual animals, wildlife species, or populations which are causing property damage, a concern for human health and safety, or are public nuisances (Leedy & Adams, 1984). However, nuisance animals are also defined by the value people place on the species. For example some people enjoy the sight of white-tailed deer, and do not mind if their garden is sometimes invaded by them, whereas others may find the deer a nuisance because of the damage (real or potential) they cause. Dealing with "nuisance animals" is a sensitive issue; one landowners may consider an animals a nuisance, his/her neighbour may consider that same animal an important asset.

In the City of Winnipeg there are certain species which can cause problems for residents. These include white-tailed deer, raccoons, beavers, skunks, rabbits, squirrels, mice, rats, pigeons, grackles, crows, starlings, and sparrows. The most common problem these animals cause is damage to property.

In general, effective urban wildlife management in Winnipeg must address the issues pertaining to nuisance animals. That is, what can be done to prevent animals from damaging property, should populations be controlled, and who is responsible for managing nuisance animals (i.e. are land owners responsible for wildlife problems resulting from

their land management or are governments responsible for wildlife?).

3.3 Public Health and Safety

The issue of public health and safety is important for people to address as wildlife continues to adapt to urban centres throughout North America. In general, health concerns pertain to wildlife diseases which could affect human and domestic pet populations. Safety issues are primarily in regard to wildlife-vehicle collisions.

Although the City of Winnipeg does not have a problem with infectious diseases in animals at this time, outbreaks of rabies, newcastle disease, distemper, and mange have occurred. Therefore, there is always the potential for an outbreak in the city. In Ontario, over 35,000 cases of rabies have been reported in the last 25 years and 2,000 humans were treated for rabies in 1986 alone (Rosatte et al., 1987). Currently there is a trap and release program in Toronto which is designed to help prevent the spread of rabies. In the City of Winnipeg there were no reported cases of rabies for the year 1993 (Agriculture Canada, personal communication, March 28, 1994).

If rabid animals such as skunks, raccoons, or foxes from other regions infect animals which migrate or reside in Winnipeg it could cause problems for humans and their domestic pets. Additional diseases which could cause problems for city residents are lyme disease carried by deer ticks, and distemper carried by raccoons and foxes.

The problem of wildlife-vehicle collisions is common in the City of Winnipeg. Although various types of wildlife have been involved in collisions the most serious problem is with white-tailed deer. In Manitoba there were 4, 541 insurance claims for wildlife collisions during 1992 (T. Arnason, personal communication, May 3, 1993). These collisions can cause serious injury to the people in the car, as well as to the deer. As more wildlife continue to adapt to the city there will be a potential for more collisions to occur.

3.4 Non-Consumptive Resource Use

The non-consumptive use of wildlife is important for many city residents in Canada (Filion et al., 1983). In Manitoba, \$63.4 million was spent on non-consumptive trips or outings during the year 1991 (Filion et al., 1993). Winnipeg residents can enjoy wildlife in several ways, including direct enjoyment and through existence values (Ehrlich & Ehrlich, 1992).

Direct enjoyment refers to activities where individuals receive pleasure from directly viewing an animal, such as by bird watching or photography. Existence values represent the enjoyment individuals receive from knowing that animals can adapt to the city and live free (Ehrlich & Ehrlich, 1992). For example, a person from Winnipeg may never see an endangered species such as a peregrine falcon, but he/she may derive enjoyment from just knowing that they live in the city.

Rolston (1988) indicates that nature can carry several different types of values which are important for human life. These include life support values, economic values, recreational values, scientific values, aesthetic values, genetic-diversity values, cultural values, and religious values.

Non-consumptive use of urban wildlife also raises the issue of conservation. That is, should there be responsibility on the part of the government or an organization to conserve natural lands in urban areas for the sake of wildlife? Endangered species such as the peregrine falcon have their habitat protected by law. Should this apply to other animal habitats, such as forests for white-tailed deer?

In general, non-consumptive wildlife use and conservation are two important issues affecting both city residents and wildlife populations. These issues should be addressed when attempting to manage wildlife in Winnipeg.

3.5 Public Information and Education

The public is continually affected by urban wildlife. For some people it can be enjoyable, watching songbirds in their backyard; for others it can be traumatic, such as raccoons scavenging their garbage or hitting a deer on the street. Regardless of how the public is affected, wildlife will continue to adapt to urban environments. As a result, the issue of providing public information and education on urban wildlife is important for urban centres.

In the City of Winnipeg it is a confusing and frustrating process for the public to seek help for urban wildlife inquiries. Many government departments and private agencies are not always able to answer the public's questions or refer them to a proper authority for help. This results in dissatisfaction among the public and a waste of time by the government, private sector, and the public. The need for public information is important to create awareness and foster appreciation for urban wildlife, help bridge the gap between wildlife managers and the public, and help provide useful information about urban wildlife (Young, 1991). Public information and education could also help residents manage their own urban wildlife encounters and rely less on governments and private agencies.

CHAPTER 4

LEGISLATION

Legislation affecting urban wildlife must be clarified prior to the development of any strategies for management purposes. Presently, the regulation and management of urban wildlife falls within the “grey area” of legislation. This means that it has not been clearly defined as to who has responsibility for managing urban wildlife species and in which circumstances. As a result, the legislation affecting urban wildlife from the federal, provincial, and municipal governments has been reviewed and interpreted. The pertinent statutes were outlined in Table 1 (page 15).

4.1 Federal Legislation

Three federal statutes, the *Canada Wildlife Act*, the *Migratory Birds Convention Act*, and the *Health of Animals Act*. address urban wildlife.

1) Canada Wildlife Act (R.S.C. 1985)

Intent of the Legislation

The intent of this act is to give the federal government a mandate to become involved with wildlife related issues. In sections 5 and 7, the act allows the Minister of the Environment to work with any province or municipality in regards to wildlife, including research, conservation, and interpretive programs. The Act also enables the Minister to recommend measures for encouraging public cooperation in conservation, initiation of conferences and meetings, the establishment of committees, and the development of policies and programs (section 3).

In general, this act ensures that the federal government can work with the provinces on any wildlife related issue that they feel is important. The act also gives the federal government the power to voice their concerns over wildlife issues by establishing committees, conferences or policies. One example of this is COSEWIC (Committee on the Status of Endangered Wildlife in Canada), developed by the Federal government.

How the Legislation Affects Urban Wildlife Management

The *Canada Wildlife Act* is important to urban wildlife because it promotes cooperation between the federal and provincial governments, as well as with the federal and municipal governments. The act can be used to encourage public awareness, create policies and committees, and initiate research to address urban wildlife issues.

2) Migratory Birds Convention Act (between Canada, the U.S.A., and Mexico) (R.S.C. 1985)

Intent of the Legislation

The intent of this act is to protect migratory game birds, migratory insectivorous birds, and migratory nongame birds by the federal government (definitions in Appendix II). In section 4, the act enables the Governor in Council to establish regulations concerning length of hunting seasons, bag limits, exporting, control and management of prescribed areas, and the capturing or taking of birds. Section 4 also allows the Governor in Council to establish regulations for any purpose that is deemed necessary for carrying out the intentions of the act.

In section 5, the act stipulates that no person shall buy, sell, or be in possession of any migratory game bird, migratory insectivorous bird, or migratory nongame bird, or the nest, or egg, or any part of the bird during a time when capturing or killing is prohibited by the act.

In general, this statute gives the federal government a mandate for the complete management of migratory game birds, migratory insectivorous birds, and migratory nongame birds. All regulations concerning sport hunting, management, conservation, and enforcement are established by the federal government.

Migratory Bird Regulations

In addition to the act, there is also a set of *Migratory Bird Regulations*. Migratory birds refers to all migratory game birds, migratory insectivorous birds, and migratory nongame birds. Section 24 of these regulations enable people to protect their property by scaring migratory birds that may cause damage. However, people cannot use firearms or an aircraft to frighten birds. In addition, no birds are allowed to be wounded, captured or killed during the scare. Section 25 allows the Director of the Canadian Wildlife Service to issue a permit to kill migratory birds if the scaring method is not reducing damage.

Unclear Sections of the Legislation

This act and its regulations reveal the avian species and the situations in which the federal government is responsible for management within the City of Winnipeg. However, the act is not complete because it does not include all avian species such as all hawks and owls, crows, feral pigeons, grackles, house sparrows, and European starlings. These birds are not listed as “migratory birds” by the federal government. Therefore, the federal government has no jurisdiction or responsibility for these species. As a result, the control of these species resides with the landowner. The federal government will provide advice to the private landowner on managing these species, however the landowner can only manage them within the confines of the provincial and municipal legislation.

How the Legislation Affects Urban Wildlife Management

The *Migratory Birds Convention Act* is relevant to the management of urban wildlife because many of the species protected under this act are birds which reside in the City of Winnipeg. For example, the act protects all waterfowl species, including Canada geese,

which have become common residents in the city during spring and fall migrations and the breeding season. Other species such as song birds, which are common in Winnipeg, are also protected under this act. The act also provides a flexible definition for migratory insectivorous birds by including the clause "and all other perching birds that feed entirely or chiefly on insects". This enables exotic or introduced bird species to fall within federal jurisdiction.

The *Migratory Bird Regulations* are pertinent to urban wildlife management because they directly address the issue of property damage by birds in urban areas. Under section 26.1, the Minister of the Environment can issue permits to destroy eggs of a species if there is a threat to health, safety, agriculture, or other interests in a particular community. This clause is important because it links the values that residents of a community place on birds to the existing legislation.

3) Health of Animals Act (1990)

Intent of the Legislation

The intent of the *Health of Animals Act* is to allow the federal government to become involved with matters concerning animal diseases. Section 1 of the act defines "Minister" as the Minister of Agriculture, therefore Agriculture Canada has the mandate for carrying out all the regulations. This includes the control of diseases and toxic substances, managing infected places and control areas, and dealing with disposal and treatment issues.

The act allows the Minister a great deal of control in order to deal with animal disease issues. For instance the Minister can provide financial assistance to any person(s) or governments outside of Canada to control or eradicate a disease (section 21), take measures to mitigate any danger to life, health, property or the environment as a result of a disease (section 27.2), and make regulations to control or eliminate diseases and toxic substances (section 27.3).

Regulations in the act list the specific animal diseases which Agriculture Canada is responsible for managing, such as newcastle disease and rabies. As a result, the federal government will only become involved with matters concerning the listed diseases. The provincial government has responsibility to manage all other animal diseases which are not listed in federal statutes.

How the Legislation Affects Urban Wildlife Management

In general, the *Health of Animals Act* only applies to urban wildlife management when a listed disease occurs in an urban area. For example, Agriculture Canada is involved with all cases of rabies in the city. Their officers have the authority to inspect areas suspect of disease (section 38), and seize or detain animals with respect to the regulations of the act (section 40). Therefore, the jurisdiction of the federal government covers urban areas though their narrow mandate only enables them to become involved in selected cases.

4.2 Provincial Legislation

There are eight provincial acts significant to urban wildlife management in the City of Winnipeg. These are *The Manitoba Natural Resources Transfer Act*, *The Wildlife Act*, *The Endangered Species Act*, *The Ecological Reserves Act*, *The Public Health Act*, *The Environment Act*, *The Animal Diseases Act*, and *The City of Winnipeg Act*.

1) The Manitoba Natural Resources Transfer Act (R.S.M. 1987)

Intent of the Legislation

On December 14th, 1929, the Dominion of Canada transferred its authority to control and manage natural resources in Manitoba to the provincial government through the signing of *The Manitoba Natural Resources Transfer Act*. In section 1 of this act the province of Manitoba is given authority over all Crown lands in the province. As a result, the provincial government has proprietary rights over all the wildlife which inhabit Crown

lands in Manitoba.

In general, this act provides the government of Manitoba with the jurisdiction to regulate and manage all wildlife species in the province. However, this act is subject to the *Migratory Birds Convention Act*, which allows the federal government jurisdiction over all "migratory birds" which are listed. In order to avoid confusion between the role of the provincial and federal government in wildlife management, the province created the *Wildlife Act*.

How the Legislation Affects Urban Wildlife Management

The *Manitoba Natural Resources Transfer Act* has two important implications for urban wildlife. First, it provided the provincial government with legal jurisdiction over wildlife in the province, and second, it initiated the development of the *Wildlife Act*.

2) The Wildlife Act (R.S.M. 1987)

Intent of the Legislation

The *Wildlife Act* is the principle document for regulating and managing wildlife in Manitoba. It provides the provincial government with a mandate for designating areas important for wildlife, determining hunting and trapping regulations, determining offences, issuing licences, and enforcing all regulations.

In Schedule A of the *Wildlife Act*, animals are classified into six divisions; Big Game Animals, Fur Bearing Animals, Game Birds, Small Game Animals, Amphibians and Reptiles, and Protected Species. A list of species in each category is in Appendix III. There are no animals listed in the Small Game Animal division.

In general, the act describes the law as it pertains to wildlife in Manitoba. The act also ensures that the Minister is provided with authority to create regulations in regard to

wildlife issues. In section 90 (a-rr), it states that in order to carry out the provisions of the act according to their intent, regulations may be created by the Minister. In addition, section 64(1) states that the Minister may authorize the killing or capturing of wildlife for certain purposes, such as research or protection of property.

Unclear Sections of the Legislation

The *Wildlife Act* is confusing because animals are divided into two categories, and each category has different rules which apply to it. Every species which is listed in Schedule A of the act is considered a “**Wild Animal**”, and any vertebrate species which is not listed in the act is considered “**Wildlife**” (not including fish). This distinction is important because several references in the act refer to either “Wildlife”, “Wild Animals” or both.

For example, in section 19, it states that no person is allowed to possess any wildlife or wildlife part from capture, killing, or illegal obtainment. This means any species not listed in Schedule A is protected from illegal possession by law. Therefore, a person cannot capture a grey squirrel (not listed on Schedule A) and legally keep it as a pet. Similarly in section 45, it states that no person shall capture alive or have possession of any live wild animal (unless authorized by the act). Therefore, it is illegal to capture any species listed in Schedule A for the purpose of ownership, unless authorized by a licence.

Section 46(1) of the act, allows residents to take or kill any wildlife, except for moose, caribou, deer, antelope, cougar, elk, or game birds, on their own land in defence of their property. Section 46(1), specifically refers to wildlife, not wild animals. However, in section 46(2) it states that if a wild animal is taken or killed in defence of an individual’s property it must be reported to an officer of the crown within ten days. Therefore, it appears that if a species of wildlife (i.e. grey squirrel) is taken or killed by an individual as a result of defending their property they do not have to report the incident.

In general, the distinction between “wild animals” and “wildlife” creates confusion because

the majority of rules and regulations of the *Wildlife Act* pertain only to wild animals. With no regulations for species designated as wildlife, it is confusing to determine who is responsible for their management, and how they should be managed. Therefore the provincial government is unsure of how they legally are entitled to act when situations arise with wildlife issues.

Another unclear section of the *Wildlife Act* is its definition of habitat. The act defines habitat as “soil, water, food and cover components of the natural environment that are necessary to sustain wildlife” (p. 4). Therefore, if urban areas provide components of the natural environment necessary to sustain wildlife, they also should be protected. The problem with this interpretation is that the protection of urban lands falls within the jurisdiction of the municipal government. That is, if this act is extended to protect urban habitat areas (e.g. riparian land, corridors) then there must be co-operation between the provincial and municipal governments.

How the Legislation Affects Urban Wildlife Management

The *Wildlife Act* affects urban wildlife management by stating which animals are protected, and in what situations this changes. According to the act, wild animals and wildlife are protected from illegal capture or killing, regardless of whether it is in a rural or urban setting. However, if a wild animal or wildlife is threatening a resident's property, the individual may take or kill the animal.

For example, if a raccoon is damaging an individual's property it may be legally captured or killed by that person (section 46). Not all animals can be taken or killed by a property owner, even if their property is threatened, however section 46(1) states that moose, caribou, deer, elk, and game birds are protected. Therefore if residents have problems with white-tailed deer eating their shrubs they cannot take or kill the animals. Similarly, if a property owner has problems with any game bird (which includes migratory game birds protected under the federal government), for example, waterfowl, they cannot capture or

kill the birds to protect their land. Section 46 does not specifically refer to the animals listed as protected species, therefore it is implied that these animals cannot be taken or killed in regard to property damage.

In general, property owners in the City of Winnipeg have two options if animals are damaging their land, 1) take or kill the animal if it is allowed by the Act, or 2) contact the proper authorities to manage the animals which the property owner is not allowed to interfere with. However, each of these options has additional problems associated with them.

Option 1: Remove the Animal

The problem with this option pertains to how a resident can legally take or kill an animal within the city. That is, the individual must adhere to the regulations set out in the *Wildlife Act*, as well as by the city by-laws. For example, according to the *Wildlife Act*, no person can use poison to trap, take, or kill a wild animal (section 24). No person can trap, hunt or kill a fur bearing animal unless it is in a registered trapline district, and in the right season (section 38). However, there is an open area for trapping where only a licence is required. In addition, the habitats of all fur bearing animals are protected from any destruction or disturbance by the act (section 40). In section 49 of the Act, the nests and eggs of all game birds as well as the birds listed in Division Six (Protected Species) are protected. The municipal governments city by-law # 2890/81, prevents any person from discharging any type of gun or firearm within the city limits.

In general, city residents may be entitled to protect their property from some animals; however, they are prevented from using certain methods. This means a resident must try to manage the animal without using poison, traps, firearms, or destroying habitat. For many people this process can become difficult, especially if they do not understand why or how certain animal species behave. As a result, people respond by attempting to contact the proper authorities to manage the animal, or to obtain information on how they can deal with

the issue.

Option 2: Contact Proper Authorities

In the City of Winnipeg, there is no single place a person can contact to discover who is the proper authority for managing a wildlife species or to be advised as to how the resident can take care of the problem themselves. Several government departments and private agencies are frequently contacted by the public for information regarding urban wildlife issues (Table 2). This process can be confusing and frustrating for members of the public because different agencies may; 1) provide different advice, 2) not be able to help, or 3) not know where help is available.

In general, the majority of city residents and governmental employees do not know the specific regulations of the *Wildlife Act*. Therefore, when trying to find information about urban wildlife regulations they must endure a process which is tedious for them, and the agencies involved.

3) The Endangered Species Act (S.M. 1989-90)

Intent of the Legislation

This act ensures the protection of threatened and endangered species and their habitat in Manitoba. In section 2(1), it states that the purpose of the act is to protect, reintroduce, and designate threatened or endangered species in the province. In order to achieve this goal, the act allows the province to enter into agreements for the protection of endangered species (section 5), and for the establishment of an Endangered Species Advisory Committee (section 6). This act is applicable to the entire province of Manitoba, including all Crown and private lands (section 3).

The act provides for the protection of threatened and endangered species by explicitly stating offences and fines. In section 10(1), it states that no person can kill, injure,

possess, disturb or interfere with an endangered species, its habitat, or any of the natural resources it requires for survival (unless authorized by the Minister). If an offence is committed the guilty party may face imprisonment or a maximum fine of \$5,000, depending on the status of the species and the situation (section 13).

How the Legislation Affects Urban Wildlife Management

The *Endangered Species Act* is important because it is applicable in all urban areas throughout Manitoba. If a species is designated as threatened or endangered and occurs in an urban area, the species, its habitat, and any of the natural resources it requires for survival are all protected by law. This is the situation for the peregrine falcon which is designated as an endangered species in Manitoba. As a result no individual can disturb the birds or their habitat.

One pair of peregrine falcons has been returning to Winnipeg to breed for the last four years, and an additional pair of peregrine falcons has returned to Winnipeg to nest for the last two years. A continuing research and monitoring project has been established by biologists to study the progress of the falcons in the city. In addition, the breeding habitat of the falcons is protected from any type of unnatural interference or disturbance by the *Endangered Species Act*. In Winnipeg, the falcons have selected their breeding habitat upon the roof of two tall buildings, the Delta Inn in downtown Winnipeg, and Mary Speechly Hall on the University of Manitoba campus. Therefore the owners of these buildings are liable if they intentionally interfere with the falcons or their habitat.

4) The Ecological Reserves Act (R.S.M. 1987)

Intent of the Legislation

The intent of the act is to protect significant ecological areas in Manitoba. In section 3, it states that ecological reserves should encourage research, facilitate enjoyment and educational opportunities for the public, and preserve representative examples of natural

and modified ecosystems in the province. To effectively achieve the purpose and intent of the act, the province may enter into agreements (section 4) and may establish an Ecological Reserves Advisory Committee (section 9).

According to the act, if a reserve is established, people are prohibited from entering, participating in activities, removing anything from the reserve, and using any product within the reserve (section 8). However, the Minister can allow certain regulations for the reserves, if deemed necessary (section 4).

How the Legislation Affects Urban Wildlife Management

Although there are no ecological reserves in the City of Winnipeg, the act is important because it recognizes that nature which is modified by people, or structures built by people are all a part of the ecosystem. For example, in section 1, the environment is defined as “natural or man-made surroundings, or natural surroundings modified by man” (p. 1). In addition, an ecosystem is defined as “an ecological system consisting of living things, including humans and plants, together with their respective environments” (p. 1).

5) The Public Health Act (R.S.M. 1987)

Intent of the Legislation

The *Public Health Act* addresses the issues of health preservation for the people of Manitoba, as well as the prevention of injury and disease. The act establishes the duties and responsibilities for Medical Officers of Health (section 5), Public Health Inspectors (section 9), and Public Health Nurses (section 11). This act allows the provincial government to create regulations in regard to the destruction of rodent pests and vermin of all kinds (section 28), and for the confinement and disposition of diseased or injured animals (section 28).

How the Legislation Affects Urban Wildlife Management

Wildlife which adapt to urban areas may be capable of spreading disease to other animals, people's pets, or to humans. In order to prevent an outbreak of disease the *Public Health Act* permits the Medical Officer of Health to inspect occupied or unoccupied dwellings, to order an insanitary condition cleaned up, and to order any premise which constitutes an insanitary condition to be vacated (section 12).

In the act, an insanitary condition refers to a condition or circumstance which is "offensive, dangerous to health, hinders the suppression of disease, contaminates food, air or water, or a nuisance of any type which is declared as an insanitary condition under the regulations" (p. 1). This general definition of an "insanitary condition" could apply to animals in urban areas. For example, some citizens may regard wildlife in the city as offensive or dangerous to health.

In general, the *Public Health Act* is linked to the management of urban wildlife as a result of the definitions in the act, and the powers vested in the health officials. However, the act is only in response to matters concerning the health of individuals in the province.

6) The Environment Act (S.M. 1987-88)

Intent of the Legislation

The purpose of the *Environment Act* is to "ensure that the environment is maintained in such a manner as to sustain a high quality of life" (p. 1, section 1.1). In order to achieve this, the act provides a mechanism for all proposed developments to follow (section 10; section 11; section 12). That is, proposed developments will go through a process to determine the potential environmental impact that could occur. This process allows the public to participate and voice their concern over any new developments which they feel may threaten the environment (section 10.7; section 11.10; section 12.6).

The *Environment Act* is important because it recognizes animal life as a part of the environment (section 1.2). The act enables many regulations to be made in regard to the environment (section 41). For instance regulations “setting out the policies for environmental management as they relate to economic development, conflicting land or resource use, and industry development” can be created (p. 34, section 41 c).

How the Legislation Affects Urban Wildlife Management

The *Environment Act* allows for environmental protection throughout the entire province. As a result, it can be used to protect natural areas in the city from development. That is, the regulations of this act could allow for the preservation of habitat for some urban wildlife species.

In general, this act pertains to cases of proposed developments and their impacts on the environment. Since the definition of “environment” includes animal life (section. 1.2) the act can pertain to issues affecting wildlife in the city. However, in the act “environmental health” is defined as “those aspects of human health that are or can be affected by pollutants or changes in the environment” (p. 4, section 1.2). As a result, the act is primarily concerned with quality of life in regard to people and not to wildlife.

7) The Animal Diseases Act (R.S.M. 1987)

Intent of the Legislation

The intent of the *Animal Diseases Act* is to prevent diseases affecting animals from being transmitted to humans, and to ensure that animals are treated in a humane manner. The act enables the provincial director of veterinary services the authority to examine, quarantine, treat or dispose of animals suspected of having a disease or being treated inhumanely (section 3). The act also allows inspectors to enter premises without warrants, inspect vehicles, obtain documents, and detain any animals in situations pertaining to animal diseases or inhumane treatment (section 6.2).

Section 13 of the act states that it is illegal to keep animals without providing adequate food, water, shelter, or to treat them in a cruel or inhumane manner. This also applies when animals are being transported (section 13.2). The act enables the development of several regulations pertaining to animal diseases and humane treatment (section 19).

How the Legislation Affects Urban Wildlife Management

The *Animal Diseases Act* affects urban wildlife in two ways, 1) through the control, diagnosis and management of animal diseases in urban areas, and 2) by ensuring that animals in urban centres are treated humanely. The act does not list specific diseases, therefore the provincial veterinary services is responsible for investigating all animal diseases which are not listed in the federal *Health of Animals Act*. For example, if a domestic dog has a distemper virus it could affect the urban pet population, therefore the province is responsible since distemper is not listed in the federal act.

In section 1 of the act, animal is defined as “any creature not human” (p. 1). As a result, wildlife species in the city are protected from inhumane or cruel treatment (section 13). That is, no individual can subject an animal to harm without a lawful purpose (i.e. defence of property). This legislation is important because it reflects the value of wildlife in society.

8) The City of Winnipeg Act (S.M. 1989-90)

Intent of the Legislation

The *City of Winnipeg Act* provides the framework for the regulations and jurisdictional boundaries of the Municipal government. In part 17 of the act (Licensing), animals are defined as “a domestic or other animal or fowl” (p.313). Section 535 and 536 of part 17, allows the city to establish pounds (section 536), and control the regulation and licensing of animals (section 535). In addition, in section 424(1), of part 11 (Public Convenience and Welfare), the city may pass by-laws pertaining to the prevention of cruelty to animals and the destruction of birds.

This act provides the city government with the authority to establish regulations for people who own animals in Winnipeg. This includes determining which animals may or may not be kept by city residents. The act also allows the city to create an Animal Services Branch to accommodate animals that may have to be impounded.

Implications for Urban Wildlife Management

The *City of Winnipeg Act* is important for understanding the role of the city government in managing urban wildlife. Traditionally, the city government has been concerned with managing animals which are owned by city residents, such as dogs or cats. However, the legislation enables the city to expand its role in urban wildlife management. For example, the vague definition of “animal” can apply to more species than dogs or cats. In addition, section 535(1) of the act allows the city to impound or dispose of an animal causing damage or running at large.

4.3 Municipal Legislation

The Winnipeg Municipal Government has passed five by-laws which are of special significance to urban wildlife issues. These by-laws are the *Pigeon Control By-Law*, the *Pound By-Law*, *A By-Law Respecting the Keeping and Harboursing of Certain Animals*, the *Parks & Recreation By-Law*, and the *Public Health By-Law*.

1) The Pigeon Control By-Law (#978/75)

Intent of the Legislation

This by-law sets out the regulations for people who own pigeons. Section 3 of the by-law states that no person can keep pigeons, racing pigeons, or show pigeons in the City of Winnipeg without a permit. A pigeon refers to any bird of this species excluding racing and show pigeons. Racing and show pigeons are birds which have been bred for the purpose of these activities and have bands identifying them in either racing or show

organizations.

Section 5 of the by-law requires that every pigeon owner (including racing and show) must annually apply for a permit to the Medical Officer of Health. In addition, section 7 of the by-law enables the Medical Officer of Health to inspect the loft where the pigeons are kept. The by-law states that the pigeons must not be let out of the loft or aviary, unless for racing or show (section 11).

How the Legislation Affects Urban Wildlife Management

The *Pigeon Control By-Law* was implemented to regulate and control the management of owned pigeons within the city. However, the control and management of wild feral pigeons is not addressed by the by-law. Therefore, the only legal document of significance for feral pigeons is the *Wildlife Act* where pigeon falls within the category of “wildlife”.

2) The Pound By-Law (#2443/79)

Intent of the Legislation

This by-law addresses the regulation and control of owned animals within the city. The by-law defines an animal as “any animal of husbandry but does not include dog or cat” (p. 508). In addition, a fowl is defined as “a domesticated fowl but does not include pigeon” (p. 508). In general, the by-law prohibits any animal to run at large within the city limits (section 6). The owners of animals which are found to be running at large will be issued a fine and the animal may be impounded (section 7).

The *Pound By-Law* has a separate section for the licensing and regulation of dogs (section 16). In general this section addresses the owner’s responsibility (section 20). For example, no owner shall permit their dog to; run at large, disturb a neighbourhood by barking or howling, defecate on public or private property, or disturb or annoy anyone. The by-law also states the charges an owner can face if these regulations are contravened.

A recent amendment to the *Pound By-Law* (#4791/88), redefined the section on dangerous dogs. The amendment changed the procedure for managing dangerous dogs. For example, if a dog is believed to be likely to cause serious damage or injury, a hearing will determine if the dog should be designated as dangerous. The amendment also states specific regulations for the owner of a dangerous dog.

The *Pound By-Law* has a small section addressing the licensing of cats within the city. However, this section only states the procedure which occurs if a cat bites an individual. At the present time, the Animal Services Branch of the City of Winnipeg is developing a complete section for licensing and managing cats.

How the Legislation Affects Urban Wildlife Management

This by-law is important for the management of owned animals within the City of Winnipeg. From the definitions of animal and fowl, it is evident that the by-law does not affect many species of urban wildlife. That is, the by-law only applies to animals of husbandry, dogs, cats, and domestic fowls (section 4). This implies that all other animals which may be running at large are not the responsibility of the pound. However, the pound may intervene in a situation where a dog and another animal are involved. In section 20(1/j), it states that an owner shall not permit his/her dog to “pursue or wound any human or animal” (p. 513).

In general, the *Pound By-Law* may affect urban wildlife through the regulation and control of domestic pets. For example, animals which are not allowed to run at large in the city may result in more wildlife immigrating to urban areas.

3) A By-Law Respecting the Keeping or Harboring of Certain Animals (#3389/83)

Intent of the Legislation

This by-law prohibits any person from keeping certain animal species within the city (subject to section 20 of the *Wildlife Act*). In section 1, it states that all venomous reptiles, certain snakes and lizards (listed in the by-law), members of the order Crocodilia, all non-human primates, and all members of the order Carnivora (excluding domestic dogs, cats, and ferrets) are prohibited in the city. The by-law lists several organizations which may keep these species, such as the Assiniboine Park Zoo (section 2).

How the Legislation Affects Urban Wildlife Management

This by-law is important for urban wildlife management because it prohibits exotic species from being kept within the city. If an exotic species is accidentally introduced into the city it may disrupt the ecology of the area. In addition, an exotic species could be dangerous to the public.

4) The City of Winnipeg Parks & Recreation By-Law (#3219/82)

Intent of the Legislation

This by-law regulates the control of animals inside city parks. The by-law defines an “animal” as any creature which is not human (section 2.1). In general, animals are completely protected from people. In section 10.1, it states that people cannot tease, annoy, disturb, interfere, strike, maim or kill any animal in the park. People are also prevented from disturbing, robbing, injuring or destroying an animals habitat in the park (section 10).

Section 11 of the by-law prohibits certain species such as snakes, spiders, insects, lions and tigers from being allowed into the park. Domestic pets (e.g. cats & dogs) are allowed

in certain areas of the parks and they must be kept under control. If a domestic pet is not under control, possibly causing damage to park property or people it can be removed by park staff (section 11.3).

How the Legislation Affects Urban Wildlife Management

Urban parks provide habitat for many wildlife species in Winnipeg. The *Parks & Recreation By-Law* reflects the importance of parks for wildlife by protecting all animals within parks. Therefore any animal which resides in a park is legally safe from human intervention. In addition, the by-law ensures the safety of urban wildlife by protecting habitat, and prohibiting exotic species from entering urban parks.

Through this by-law, animals in urban parks are safe from any disturbance from the public. As a result, urban parks provide a place for the public to watch and appreciate animals in their habitat. In fact, many residents in Winnipeg want more nature parks along creeks and rivers in the future (Winnipeg Leisure Study, 1992).

5) A By-Law Relating to Public Health (# 4274)

Intent of the Legislation

This by-law sets out the mandate for the Municipal Health Department. In general, it covers issues such as the duties of health officers (section 13), duties of health inspectors (section 15), infectious diseases (section 30-40), nuisances (section 71-91), insanitary buildings (section 92-102), food inspection (section 147-159), penalties (section 160-162), and other matters concerning public health. The by-law allows health officers to remove, destroy, or prevent all nuisances, sources of filth, and causes of sickness which may affect public health (section 12c).

This by-law develops the procedure for the public to follow with respect to disposing of dead animals. In section 75 it states that people cannot dispose of dead animals on public

grounds, street, lane, alley, or private lot in the city. When an animal dies the public must dispose of it at the appropriate place set out by the city (section 76). However, this only applies to animals which are in possession or owned by an individual (section 76). In section 85 it states that people cannot own or be in control of any animal which is unsound or in the process of decay.

How the Legislation Affects Urban Wildlife Management

This by-law relates to urban wildlife with respect to disease and public health. That is, health officers and health inspectors have the authority to deal with animal issues which may potentially affect the health of the public. For instance health officers and inspectors must ensure buildings are kept in a sanitary state. If an area is considered insanitary due to animals (e.g. rodents), the department official can take measures to prevent, remove or destroy them (section 12c).

The by-law also pertains to urban wildlife with respect to the disposing of animals carcasses. In general, if a domestic pet dies it must be disposed of according to the procedure set out in the by-law (section 76). The by-law does not specify about animals which are not owned (e.g. grey squirrel). However, it is implied that the public should assist the city when any animal dies (e.g. report a road kill) because the carcass could be a health threat for all residents.

CHAPTER 5

AGENCIES INVOLVED WITH URBAN WILDLIFE MANAGEMENT IN THE CITY OF WINNIPEG

Several different agencies were consulted in order to clearly understand how the legislation affects urban wildlife management in Winnipeg (Table 2). Each agency has an involvement with urban wildlife in different ways. For example, some agencies work with wildlife directly, whereas others may deal with issues that indirectly pertain to urban wildlife. The agencies consulted represent the federal, provincial, and municipal governments as well as the private sector.

5.1 Federal Agencies

Three federal agencies were consulted in regard to urban wildlife. These included: Environment Canada's Canadian Wildlife Service, Agriculture Canada, and Transport Canada.

1) Canadian Wildlife Service (of Environment Canada)

Jurisdiction

The Canadian Wildlife Service (CWS) of Environment Canada is the agency responsible for the management of all species listed in the *Migratory Birds Convention Act*. That is, the CWS is only involved in matters pertaining to the birds which are protected by the federal government. However, many of the birds protected under the *Migratory Birds Convention Act* reside within the City of Winnipeg during spring and summer.

Issues

The CWS receives many inquiries from citizens regarding urban wildlife issues. For many of the inquiries, the CWS staff can provide assistance with advice or by referring the residents to the proper agency (R. Labossiere, personal communication, April 27, 1993). For example, if a citizen is concerned about a bird, such as a mallard duck which appears to have injured its wing, the CWS staff would refer the citizen to the Manitoba Wildlife Rehabilitation Organization. In other instances the CWS may provide advice for people who are having problems with birds which are not protected by the federal government. That is, they will give advice, but will not get involved in dealing with birds which are not in their jurisdiction. They are also involved with providing educational programs and materials for the public.

One of the urban wildlife issues facing the CWS is the large number of Canada geese which migrate through and nest in Winnipeg each year. At the present time, the CWS feels that the geese are not a cause for concern. Some of the geese will stay in the city during the fall only if there is open water, or if people feed them. For some situations, such as a problem with the geese near the Winnipeg International Airport, the CWS could issue kill permits to Airport managers to put down the geese.

Due to the limited CWS staff in Winnipeg, they sometimes work in co-operation with the provincial government. In many instances Natural Resources Officers will handle inquiries about migratory birds and then relate the information to the CWS (R. Labossiere, personal communication, April 27, 1993).

2) Agriculture Canada

Jurisdiction

Agriculture Canada is involved with the prevention of wildlife diseases throughout the province. Although many of their cases are reported in rural areas of Manitoba, the

department is also involved with disease prevention in the city. Some of the diseases which are a concern for wildlife in Manitoba are rabies, newcastle disease, tuberculosis, and psittacosis.

The district veterinarian for Agriculture Canada is responsible for responding to all reports of animal disease outbreaks in Manitoba. The legislation which regulates the activities of the department is the federal *Health of Animals Act*. The act specifically lists the wildlife diseases that Agriculture Canada should be involved with.

Issues

In Winnipeg, Agriculture Canada's primary concern is a rabies outbreak. This disease can be transmitted to domestic pets, such as dogs and even humans. The district veterinarian is responsible for investigating situations where people or other animals have had contact with a skunk or dog which they think might have contracted the disease. In some instances domestic pets may have to be quarantined or destroyed. Although an outbreak of rabies within the city is considered rare, it occurred during 1982-83 particularly in the skunk population. In order to control the outbreak Agriculture Canada worked with the municipal and provincial governments to adopt a trapping program to reduce the skunk population (B. Richards, personal communication, June 17, 1993).

According to the district veterinarian, some of the other diseases which may cause problems for residents in Winnipeg and their domestic pets are the distemper virus, carried by foxes and raccoons, newcastle disease, carried by pigeons and waterfowl, and psittacosis which can be carried by pigeons (B. Richards, personal communication, June 17, 1993).

3) Transport Canada

Jurisdiction

Transport Canada is responsible for operating and maintaining the Winnipeg International Airport. The airport's Environmental Specialist deals with all matters pertaining to wildlife and safety. Specifically, the airport has problems with deer, migratory birds, and rodents.

Issues

Approximately ten years ago white-tailed deer started to become a frequent problem for the airport. The problem related to deer wandering on to the airport runways causing a hazard for incoming and outgoing aeroplanes. To manage the deer problem, the airport constructed a fence around its perimeter and removed all the deer inside. Presently, the fence keeps most of the deer out, however some still get onto the grounds occasionally. The airport now has a permit from the provincial government to have deer shot if they are on airport property.

Migratory birds are also a problem at the Winnipeg International Airport. For example, flocks of gulls and waterfowl can cause damage to planes in the air, on landing or during takeoffs. Therefore, the pilot and the control tower relay information on the status of birds in the area. One particular problem for the Winnipeg International Airport during the summer 1993 was the large number of gulls present. Due to the above average rainfall many of the airport fields were saturated with water and therefore attracted the gulls. To prevent the birds from causing a hazard, propane bangers were set up to scare them away from the fields. In addition, airport staff were constantly monitoring the area (M. Ahl, personal communication, 1993)

Aside from deer and birds, ground squirrels can also be a problem because they eat through wires on the airport grounds. Foxes are not considered a problem because they keep the rodent population down. The Winnipeg International Airport has also tried to reduce the

attractiveness of the area for wildlife by allowing the land surrounding the airport to be farmed.

5.2 Provincial Agencies

There are four provincial agencies in Winnipeg which have some involvement with urban wildlife issues. These are; the Department of Natural Resources (DNR), Manitoba Agriculture, Manitoba Environment, and the Manitoba Public Insurance Corporation (MPIC).

1) Department of Natural Resources (DNR)

Jurisdiction

In Winnipeg, the DNR's Operations Division and the Wildlife Branch respond to many calls pertaining to wildlife issues. The DNR is responsible for managing wildlife according to the regulations set out in the *Wildlife Act*. In general, the Operations Division is involved with all matters concerning the animals listed in Schedule A of the Act (Appendix III). However, the Wildlife Branch also assists and advises the public with issues concerning animals which are not protected by the *Wildlife Act*.

According to Wildlife Branch staff, Winnipeg has become habitat for many species because it has certain features attractive for wildlife. For example, four major rivers and two creeks flow through the city, creating riparian lands and movement corridors. Winnipeg has many natural areas and several corridors which wildlife can use for habitat and movement. Another feature wildlife find favourable are the 68 retention ponds located throughout the city. Since these ponds are not designed to drain well, wildlife are attracted to them. Wildlife are also attracted to Winnipeg because vegetation is in various stages of succession (e.g. River Heights - old trees; Whyte Ridge - young trees). Different species prefer different aged trees, therefore over time different wildlife species may find suitable habitat

in an area (B. Koonz, personal communication, July, 10, 1992).

The DNR only has jurisdiction over the species listed in the *Wildlife Act*, therefore they can only assist the public in certain situations. The Operations Division proceeds according to the regulations of the *Wildlife Act*. However, these regulations do not include all urban animals. As a result, even though animals not listed in the *Wildlife Act* (i.e. "wildlife") are protected by the law, their management is unclear because there are no regulations which pertain to them.

The public is not aware of, nor can they identify which species the government is responsible for managing and which species must be handled on their own. As a result, the Wildlife Branch staff spends a large portion of time answering questions and advising people on how to manage wildlife issues. The government is trying to increase the public's knowledge of urban wildlife issues so that they can solve problems on their own property, especially when the problem involves species not listed in the *Wildlife Act*.

The DNR is only now developing an urban wildlife program, therefore they have created policy directives which assist them in dealing with urban wildlife issues. For example, their *General Wildlife Policy* states that "The Province will assist in preventing wildlife from endangering human life or damaging property" (section 2x) (General Wildlife Policy, 1979). This statement allows the DNR to help residents with any urban wildlife issue despite the species. Another policy directive for controlling problem beaver was established to clearly define who is responsible for damages. In general this policy holds the landowner accountable for managing the animal. The policy does state that DNR staff will cooperate and assist private citizens, municipalities, or other organizations to control the animal (Problem Beaver Control, 1984). In addition to policy directives, the DNR has recently organized a task force to investigate the white-tailed deer, and beavers in Winnipeg.

Despite the government's commitment to assisting the public, they have been affected by a cutback in staff. As a result, they have had to reduce some of their responsibilities, such as urban wildlife management. In 1990 the DNR's Operations Division sent a letter to all agencies involved with urban wildlife, indicating they will only provide assistance with the following animals; big game (i.e. deer, moose, elk), fox, coyotes, raccoons, beaver, and waterfowl. If the public has problems with other animals (i.e. wildlife; skunks, squirrels, rabbits, crows, etc.) they should contact a private exterminator. In addition, the Operations Division would only respond to deer problems if it was an emergency. As a result the Wildlife Branch became responsible for trying to attend to all matters concerning animals which are not designated as wild animals by the act.

The DNR's new wildlife responsibilities have resulted in confusion among government departments, private organizations, and the public in regard to who has the jurisdiction and responsibility for addressing urban wildlife issues.

Issues

As wildlife continue to adapt and increase in the city, the Wildlife Branch is more frequently confronted with urban wildlife issues. Many of these issues concern animals which are not listed in the *Wildlife Act* or animals which have no regulations pertaining to their management. One issue is the increase in the number of beavers. An increase in the beaver population has caused problems for the government and for many residents in Winnipeg. Beavers cause damage along the banks of many rivers and creeks. The animals destroy trees through girdling, cutting them down, and damaging ornamental plants. In addition, their dams on tributaries may flood property. The damage from beavers occurs on private as well as municipal lands throughout the city.

Another wildlife issue which is a concern to the Wildlife Branch is the white-tailed deer population in the city. As the deer population increases, the number of human-deer interactions increase. Although many residents appreciate deer in the city, there are many

who dislike the damage they inflict. White-tailed deer primarily cause property damage by feeding on shrubs and cause over one hundred vehicle collisions each year.

In general, urban wildlife issues focus around property damage. For example, many residents call the Wildlife Branch because raccoons, skunks or rabbits are living in their yard and are damaging property. Another common problem for residents are red squirrels on their property or living in their house. Some people want to know if the Wildlife Branch can help stop raptors (e.g. merlins) from eating the songbirds in their yard. Other individuals want to know how to remove all the grackles from their yard. Many citizens also have problems with small rodents such as ground squirrels or voles. In addition to these issues the Wildlife Branch is also concerned about the increase in waterfowl, pigeons, and gulls in the city, and the problems which could occur in the future.

2) Manitoba Agriculture

Jurisdiction

The Veterinarian Services Branch of Manitoba Agriculture is responsible for examining all cases of wildlife disease that do not fall under federal authority. That is, the branch has jurisdiction over all diseases which are not listed in the federal *Health of Animals Act*. The legislation that regulates the Veterinarian Services Branch is the provincial *Animal Diseases Act*.

The Veterinarian Services Branch headquartered at Pathology Diagnostic Lab in Winnipeg has jurisdiction throughout Manitoba, both in rural and urban areas. The branch's primary function is to examine animals which are suspected to be dying because of a disease. If the Lab discovers that an animal died from a disease that is listed in the federal act (i.e. Newcastle) they turn the case over to Agriculture Canada. However, Agriculture Canada frequently requests the province to continue diagnosis at their lab. If a disease is found that is not listed in the federal act, the Veterinarian Services Branch is responsible for making

decisions based upon the severity of the disease (J. Neufeld, personal communication, June 26, 1993).

A second role of the Veterinarian Services Branch is to assist other government departments and organizations in regard to wildlife health and management. In addition to the federal government, the branch works with the provincial DNR and Manitoba Environment, the city's Animal Services Branch, Assiniboine Park Zoo, and private agencies such as the MWRO and the Humane Society. In fact, the Humane Society works directly with the Veterinarian Services Branch, and acts on their behalf.

Issues

According to the provincial veterinarian, rabies is the primary wildlife disease which could affect the human population. However, he notes that distemper in raccoons may affect the domestic pet population. One of the issues he is concerned about is the number of stray cats in Winnipeg. If the population continues to increase it may become a public health concern (J. Neufeld, personal communication, June 26, 1993).

3) Manitoba Environment

Jurisdiction

Manitoba Environment has a limited role with urban wildlife issues in Winnipeg. The legislation regulating the department, the *Environment Act*, does not address urban wildlife. However, in the act "animal life" is defined as a part of the environment (section 1). The department could address some of the urban wildlife issues facing the city, such as residential developments affecting wildlife, wildlife in waste disposal areas and wildlife concerns related to human well being.

Manitoba Environment is directly involved with urban wildlife issues in regard to health inspection for the province. This includes inspecting buildings or homes for rodents (e.g.

rats, mice) which are a health threat to the occupants. The jurisdiction for health inspectors from Manitoba Environment is the entire province excluding the inner city area of Winnipeg. Therefore, in Winnipeg health inspectors from Manitoba Environment only operate in the suburbs. The City of Winnipeg's Municipal Health Department is responsible for health inspections in the inner city area. As a result, Manitoba Environment is regulated by sections of the *Public Health Act* in addition to the *Environment Act*. (D. Wotton, personal communication, 1993).

Issues

Manitoba Environment receives calls from the public in regard to urban wildlife. The department responds to these calls by either referring individuals to the DNR, or investigating the concern. In the past, Manitoba Environment staff have responded to calls about dead animals in the city. The staff will retrieve the animal(s) and take them to the Veterinarian Services Branch for analysis (V. Henderson, personal communication, April 23, 1993).

4) Manitoba Public Insurance Corporation (MPIC)

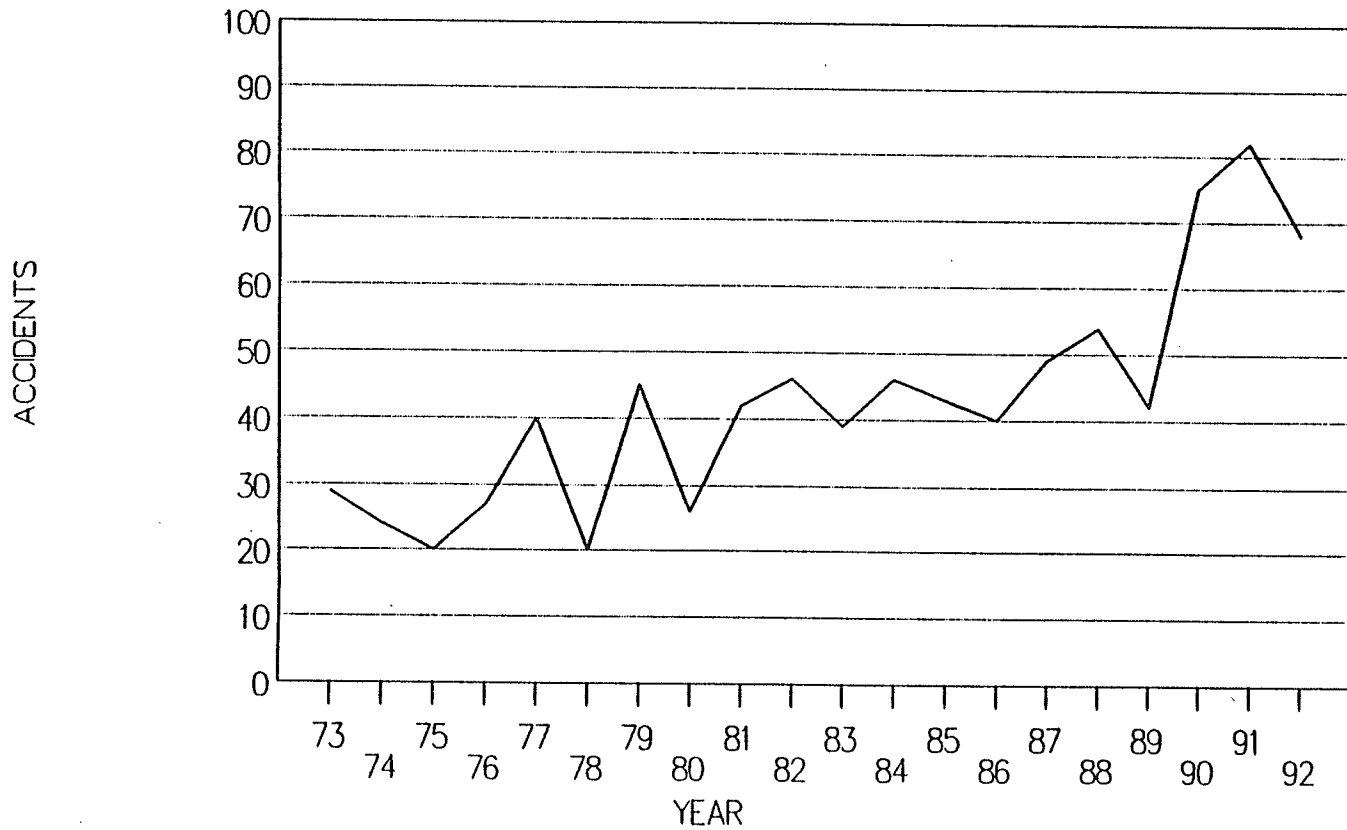
Jurisdiction

The MPIC is solely involved with damage to vehicles caused by wildlife. White-tailed deer are the frequent cause of accidents throughout the city. However, other animals including birds, and small mammals also have caused damage. During the 1992 fiscal year the MPIC received 4,541 claims for wildlife collisions, at a cost of \$5,291,860.00. According to the MPIC, damage was caused primarily by deer (T. Arnason, personal communication, May 3, 1993).

Research from the Manitoba Department of Natural Resources concluded that approximately 200 white-tailed deer have been killed annually by automobiles during 1990-1992, and at least 100 deer were killed annually throughout the 1980's (Figure 2) (Issue

WINNIPEG DEER-VEHICLE COLLISIONS 1973 - 1992

Figure 2: Winnipeg Deer - Vehicle Collisions (1973 - 1992).



Analysis and Risk Management Pilot Project, 1993).

Issues

The statistics on wildlife collisions reveal two important features, 1) wildlife collisions are a concern for human and wildlife safety , and 2) the government is spending a large sum of money on insurance claims. In order to increase safety for drivers and wildlife, and to save money, the province should investigate methods to reduce wildlife collisions.

5.3 Municipal Agencies

In the City of Winnipeg, three municipal agencies are involved with urban wildlife management, Animal Services Branch, Parks & Recreation Department, and the Health Department. The jurisdiction for both Animal Services, and Parks & Recreation is the entire City of Winnipeg.

1) Animal Services Branch

Jurisdiction and Issues

The Animal Services Branch is mainly responsible for enforcing the *Pound By-Law*, to regulate domestic pets in Winnipeg. The department frequently receives calls from the public in regard to urban wildlife issues. Some of the common problems the public has are with squirrels, skunks, and raccoons. As a result, the department assists the public by providing livetraps for small mammals. They also work in cooperation with the DNR, through trapping "nuisance animals" and handling public requests for assistance (L. Anonychuk, personal communication, January 28, 1993).

2) Parks & Recreation Department

Jurisdiction

The Parks & Recreation department is responsible for maintaining the city's parks and natural areas. The department is composed of several branches including the Assiniboine Park Zoo and the Living Prairie Museum. In general, the philosophy of the Parks & Recreation department is to examine all issues holistically. That is, the department views the parks area as an ecosystem where one event (e.g. conservation) may affect another event (e.g. wildlife). Presently, the Parks and Recreation Department is involved with the development of an inventory for natural areas which are in the city.

Parks & Recreation receives a number of phonecalls from the public in regard to urban wildlife issues. Calls are frequently about white-tailed deer, raccoons, skunks, and squirrels. The Parks Department has no jurisdiction to deal with urban wildlife, therefore they may give the public some advice or tell them to contact Animal Services or the DNR (C. Nielson, personal communication, June 23, 1992). Inside parks or natural areas the department still must contact Animal Services or the DNR if they have a problem with urban wildlife.

Issues

Typical urban wildlife problems in parks are caused by white-tailed deer, raccoons, owls, beavers, foxes, rabbits and rodents (squirrels, ground squirrels, rats, mice, voles). Deer are a problem in the city parks because they browse on cedars and rosebuds in late fall. Although the deer have become habituated to humans, bucks can be dangerous when they are rutting. White-tailed deer are also a concern because they can be involved in vehicle collisions. Raccoons can cause problems in parks by scavenging garbage and burrowing under buildings. Owls nesting in parks cause delays because the staff will stop all maintenance near the nest so that the pair are not disturbed. Beavers can cause problems along creeks and rivers in parks by damaging banks, and ornamental vegetation. Foxes are

a minor problem, because they enter parks only for food and cover. In the parks, squirrels can be a nuisance because they destroy marigold flowers and can enter buildings. Gophers and ground squirrels are a nuisance because they undermine the landscape of the park. Finally, rodents such as rats, mice and voles usually cause problems in parks by girdling young trees (A. Langridge, personal communication, February 3, 1993).

The Parks & Recreation department maintains parks and natural areas in the city for the benefit of the public. However, this natural environment attracts many species of wildlife to the city. As a result, the public may become more aware of the issues concerning urban wildlife. The Assiniboine Park Zoo and the Living Prairie Museum are two centres where the public can inquire about wildlife issues.

Assiniboine Park Zoo

The Assiniboine Park Zoo receives a number of calls from the public concerning urban wildlife issues. According to the staff, most of the calls pertain to how people can help wildlife (C. Roots, personal communication, June 15, 1992). For example, people have called because they are concerned when they see a fawn without a doe around, or when they think a bird is injured or harmed in their nest.

The zoo has no jurisdiction in urban wildlife issues, therefore they can only provide advice for the public and refer them to other agencies (i.e. DNR). In order to help educate the public about wildlife issues, the zoo has established several children's educational programs at the "Zoo Classroom". These programs are geared for children in kindergarten to grade four (ages 5-10) and teaches them environmental concepts such as endangered species, habitats, and classification. The programs provide the children with wildlife awareness through films, exhibits, and a tour of the zoo. Although the programs are focused on wildlife issues, they do not include urban wildlife as a study topic.

Living Prairie Museum

The Living Prairie Museum is an environmental education centre located within the city of Winnipeg. The Museum receives a number of phonecalls from the public in regard to animals. Many of these are for information about certain wildlife species in the city. As a result, the naturalist at the museum feels that urban wildlife awareness is important for the public and should be promoted (R. Hester, personal communication, June 14, 1993).

The museum provides guided tours for school children in kindergarten to grade 12, although the average is grade three. The tour consists of a slide show followed by a nature hike. The student programs focus on the prairie ecosystem, such as prairie evolution, predation, and grassland ecology. Although urban wildlife is not a specific topic, many of the programs refer to grassland animals which live in the city.

The museum is important because it shows students the relationship between urban and natural areas. That is, in urban areas prairie grasslands can persist and are important for several wildlife species. The students are allowed a first hand opportunity to view prairie ecology through a nature hike behind the museum. The hike is through a small patch of prairie grasslands, and an aspen / oak forest.

In addition to prairie ecology, the museum offers several other programs to schools, one of which is "Winnipeg's White-Tail Deer". This program allows students to examine many of the issues concerning urban wildlife. The museum also provides information on nature areas throughout the city. For example, there is an activity booklet for the Assiniboine Forest, and a pamphlet for self guided tours at the Living Prairie Museum.

3) Health Department

Jurisdiction and Issues

The municipal health department is involved with urban wildlife through health inspections.

Health inspectors for the city have jurisdiction only in the inner city area. Although the department only deals with health concerns from rodents and insects, they receive other calls from the public in regard to urban wildlife issues. The department will refer these calls to Animal Services or DNR (G. Solkoski, personal communication, 1993).

5.4 Private Agencies

In Winnipeg, there are at least six private sector agencies which deal with various types of urban wildlife issues. These agencies include private exterminators, The Fort Whyte Centre, The Humane Society, Manitoba Wildlife Rehabilitation Organization (MWRO), Manitoba Wildlife Federation, and the Manitoba Naturalists Society.

1) Exterminators

In Winnipeg there are several exterminator businesses which deal with animal "pests". Only three of these businesses specifically refer to "wildlife pests" in their advertisements; these are Low-Cost Exterminators, Poulin's Exterminators, and SWAT. Each of these businesses receives many calls from the public for help with wildlife problems.

Issues

Common wildlife problems are raccoons, skunks, rabbits, mice, and squirrels on private property, damaging landscaping, or buildings. Squirrels are considered a large problem since they have few natural predators in the city. Other species which cause some problems for city residents are crows, starlings, sparrows, grackles, voles, ground squirrels, and groundhogs. In addition to the city residents, the management of many large office buildings in Winnipeg (e.g. Grain Exchange Building), has problems with pigeons roosting on or in buildings. An increasing problem for residents in the city are the numbers of feral domestic cats. These cats can cause damage to property as well as to other wildlife species.

Several of the species that cause problems for the public are considered "wildlife" according to the *Wildlife Act* and thus are not protected. These species include grackles, crows, skunks, woodchucks, rabbits, grey squirrels, mice, starlings, sparrows, gophers, and pigeons. As a result, citizens are legally entitled to deal with these species as long as they do not trap, shoot, or use poison to remove them. The public can call private exterminators in order to have the animal trapped or poisoned.

When a species designated as a "wild animal" by the *Wildlife Act*, such as a raccoon or beaver, is causing a problem for the public, the province is responsible for providing assistance. However, the DNR has informally indicated that private exterminators may take care of raccoon problems. If the exterminators get calls from the public pertaining to species such as beavers, foxes, waterfowl or deer they will provide verbal assistance to the public and refer them to the DNR. Private exterminator agencies are also responsible for picking up dead animals in the city. This results from contracts which last for two years provided by the City of Winnipeg's Works and Operations Division. Currently Poulin's Exterminators has the contract from the city.

Private exterminators receive their licence to use poisons from Manitoba Agriculture, however some companies are trying to eliminate using poisons to control wildlife. SWAT exterminators work with the Humane Society and approach urban wildlife management with an ethical philosophy (J. Gosselin, personal communication, June 21, 1993). They try to solve wildlife problems by humane methods. For example, to control pigeons in the city they use a non-toxic product called "Buzz Off", instead of poisons. In general this product produces an uncomfortable surface for the birds and they leave. They work with the habitat not the animals. One of the reasons SWAT is trying to eliminate the use of poisons is because they are concerned about endangering the peregrine falcon pairs which nest in the city.

2) Fort Whyte Centre

The Fort Whyte Centre is an environmental education facility located within the municipality of Winnipeg. The centre provides indoor programs such as a waterfowl wintering room, touch museum, soil conservation exhibit, prairie aquarium, and energy exhibit, as well as outdoor tours through the waterfowl gardens, birdfeeding stations, and various self-guiding trails for school groups and the general public. In general, school programs examine organisms, habitats, adaptations, succession, and limiting factors. Urban wildlife is not a topic specifically covered by these programs. However, deer are fed nearby and numerous nest boxes produce broods of Canada geese each spring.

Issues

The Fort Whyte Centre covers approximately 200 acres with a main building, a parking lot, waterfowl gardens, wetlands, and four ponds. This area provides suitable habitat for many species such as waterfowl, muskrat, mink, raccoon, fox, and white-tailed deer. The centre has observed a dramatic increase in the number of Canada geese and white-tailed deer that have adapted to the area over the years. Although there is no problem with the number of animals at the centre, the site manager feels that they could cause a problem for the city in the future (K. Cudmore, personal communication, June 17, 1993). For example, residential areas which continue to expand toward the centre may create new niches for geese and deer. This could cause problems for residents in those areas.

An additional problem observed by the centre's site manager is in regard to domestic dog and white-tailed deer interactions (K. Cudmore, personal communication, June 17, 1993). Each winter several deer are killed by domestic dogs. At least 80 deer were killed from dog attacks during 1992-1993 (Issue Analysis and Risk Management Pilot Project, 1993). This results because owners let their dogs run at large. This could become a serious problem for residential communities if the behaviour of domestic pets starts to change in response to the presence of urban wildlife.

3) Humane Society

Jurisdiction and Issues

The humane society is primarily concerned with the welfare of animals throughout the province. They work closely with the Provincial Veterinary Services Branch to investigate cases of cruelty to animals. In regard to urban wildlife concerns, the Humane Society is not involved unless the welfare of an animal is at stake. However, in most cases where the welfare of a wild animal is involved the Humane Society will also contact the city's Animal Services Branch or the provincial DNR. The Humane Society will not become involved with urban wildlife issues which do not directly concern the welfare of the animal (e.g. squirrels in an attic). In these instances they refer the public to other sources such as the DNR or Animal Services for assistance.

4) Manitoba Wildlife Rehabilitation Organization (MWRO)

Jurisdiction

The Manitoba Wildlife Rehabilitation Organization (MWRO) is a centre dedicated to providing assistance to orphaned and injured animals throughout the city and province. The MWRO receives licences from both the federal and provincial governments in order to accept all wildlife species (J. Britton, personal communication, February 28, 1993). However, if an animal they receive is endangered they must contact the DNR. The only wildlife the MWRO will not except are skunks and large animals such as a full grown deer. In 1991, the MWRO reported handling a total of 618 city animals; 392 birds, 225 mammals, and 1 reptile.

Issues

In addition to helping animals, the MWRO also provides the public with information and assistance in regard to urban wildlife issues. The MWRO receives over 4000 calls pertaining to injured animals, problem wildlife, and general wildlife information from the

public per year. All the calls are received by volunteer operators who either provide assistance to the caller or refer them to another agency (i.e. DNR). As a result, the MWRO is directly involved with urban wildlife issues.

The MWRO also tries to educate the public on how to prevent animal injuries and how to landscape for wildlife. For example, they recommend that people should put silhouettes on their windows to prevent birds from flying in to them. In addition, they provide lectures for groups, set up displays at events, and also have some unreleasable animals which they use for educational purposes.

5) Manitoba Wildlife Federation

The Manitoba Wildlife Federation is an organization concerned with habitat conservation for species in both rural and urban areas. The federation has many active volunteers who address wildlife issues. For example, members of the Manitoba Wildlife Federation assisted the provincial government with the removal of over 200 white-tailed deer from Winnipeg. Members also helped chase deer from the airport area. Presently the organization is involved in a project to improve the spawning potential for fish in Sturgeon Creek in Winnipeg.

In addition to providing volunteer support, the federation has become important by receiving funding for numerous projects. Some of these projects include an elk study, and an aerial survey. In the future, the Manitoba Wildlife Federation is planning to work more closely with the municipal government and may therefore become involved in more urban wildlife projects.

Issues

The Manitoba Wildlife Federation receives numerous calls from the public pertaining to urban wildlife issues (P. Joyce, personal communication, June 25, 1993). The staff

provide answers and information for the callers or refer them to another agency (i.e. DNR). Many of the calls from the public are about attracting birds to yards, or identifying species. The federation also provides educational material to the public. The Manitoba Wildlife Federation feels there should be more communication to the public about wildlife issues, and information should be more accessible to the public to obtain.

6) **Manitoba Naturalists Society**

The Manitoba Naturalists Society is an organization focused on the conservation and preservation of natural areas in the province. The society is indirectly involved with urban wildlife as a result of their Urban Environment Committee. This committee is responsible for trying to protect the natural areas within Winnipeg. If the natural areas in the city are protected, the habitat for urban wildlife is secure. Some of the projects the committee has been involved with were the proposed Richardson property development and the proposed St. Norbert golf course development.

The Naturalists Society is also involved with promoting environmental awareness through education and information. They provide information to the public and will speak to groups on a variety of wildlife issues such as migratory waterfowl, neotropical birds, raptors, and endangered species.

CHAPTER 6

URBAN WILDLIFE MANAGEMENT IN OTHER AREAS

Wildlife management in urban areas is becoming an important part of natural resource conservation throughout much of Canada and the United States (Bolen, 1991). In response to increasing wildlife interest in urban areas and public awareness, many wildlife agencies have developed urban wildlife programs. These programs range from extensive public education to harvesting and trapping methods. They all address the issue of managing wildlife resources in urban areas.

No urban wildlife management programs exist in Canada. However, an urban wildlife management program is currently being developed in Lethbridge, Alberta. In Manitoba, the provincial government has recently (February, 1994) created an urban wildlife specialist position and is presently developing the job description. In the United States, there is an organization called the *National Institute for Urban Wildlife* which serves as a national centre for urban wildlife information and research. There are several urban wildlife programs in the United States which have been in operation for a number of years. Five such programs are in Maryland, Missouri, New York, Illinois, and Minnesota. Each state program shows the local management initiative in dealing with urban wildlife.

6.1 Urban Wildlife Programs in Canada

Canada

Each Canadian province has been approaching urban wildlife management differently. In Ontario, a committee has been established to examine urban wildlife issues. In addition, the Toronto Wildlife Centre is promoting the importance of wildlife in urban areas to the public. In British Columbia, a Problem Wildlife Control Officer deals with big game

problems in urban areas. In New Brunswick, the province has a Nuisance Wildlife Policy, and in Prince Edward Island, information on animal control is mailed to residents.

Lethbridge, Alberta

The City of Lethbridge is located along the Oldman river, a natural corridor for many wildlife species. In response to the wildlife that have adapted to the city, the Nature Centre Coordinator is developing a framework for wildlife management guidelines for the City of Lethbridge (E. Savoy, personal communication, 1993).

The first step for developing the guidelines was to form a steering committee. The committee consisted of representatives from different organizations in order to receive a complete understanding of urban wildlife issues. These representatives are from Alberta Fish and Wildlife, City Parks, the Nature Centre, the Fish and Game Association, and the business community. The steering committee is responsible for determining the terms of reference and operating principles for the project.

The steering committee developed four goals:

- 1) To develop and recommend to City Council, guidelines for dealing with wildlife issues for the City of Lethbridge.
- 2) To involve the public in the development of the Wildlife Management Plan.
- 3) To develop and recommend to City Council a review and updating process for the Wildlife Management Guidelines.
- 4) To identify opportunities for enhancing and protecting wildlife and wildlife habitat.

The steering committee developed a list of key challenges and goals pertaining to urban wildlife issues in Lethbridge. For example, one challenge is "Communications need to be improved between wildlife-related agencies, the public and landowners regarding wildlife

management issues” (Wildlife Management Guidelines, 1993). For each challenge the steering committee develops goals and options. Other challenges relate to habitat protection, research, nuisance wildlife issues, and minimizing conflicts between wildlife and the public or property (Wildlife Management Guidelines, 1993).

The City of Lethbridge is similar to Winnipeg in that it is located on a river where wildlife corridors exist. As a result, the project in Lethbridge may help the development of urban wildlife strategies for Winnipeg. In general, the Lethbridge project focuses on addressing all urban wildlife issues, increasing public support and awareness for urban wildlife, and includes many organizations in the decision making process.

6.2 Urban Wildlife Programs in the United States

The National Institute for Urban Wildlife (NIUW)

NIUW is a non-profit organization dedicated to the conservation of wildlife and habitat for the benefit of urban residents (Jones, 1987). The organization uses scientific research and education to promote the values of wildlife existing in urban environments. In general, NIUW provides a source of information on all urban wildlife issues for the United States as well as for other countries such as Canada and England. The organization is involved in many endeavours to enhance urban wildlife such as the development of the “Urban Wildlife Sanctuary Program” (Jones, 1987).

NIUW promotes urban wildlife issues through national symposiums every four years. These symposiums cover all urban wildlife issues such as management, public awareness and education, research, landscape planning, ecology, and urban wildlife programs and policies (Adams & Leedy, 1987; Adams & Leedy, 1991). In addition, NIUW publishes many documents on urban wildlife management, as well as a quarterly newsletter entitled *Urban Wildlife News*.

Maryland

Four million people live in the state of Maryland. The potential for human-wildlife interaction is very high. As a result, the Maryland Forest, Park and Wildlife Service initiated an Urban Wildlife Program in 1988 (Thompson, 1992). The program has two major goals, 1) public education and awareness, and 2) preservation, conservation, and creation of wildlife habitat.

The program in Maryland is committed to reach the public, through education and involvement with urban wildlife management. The program aims to “increase the awareness of the general public to the need for and value of wildlife resource management...and implement programs to provide the landowner with technical information for encouraging wildlife use of their property” (p. 3) (Thompson, 1992).

To generate public awareness and appreciation for urban wildlife, a program called Wild Acres was developed. This program provides information on wildlife habitat enhancement for people’s yards, parks or other property. At the present time, over 3000 people have received Wild Acres information and it will soon be incorporated into the public education curriculum (Thompson, 1992). In addition, a wildlife hotline number was established to assist people in dealing with urban wildlife questions and problems.

To preserve, conserve, and create wildlife habitat, the program addresses the land planning and development community through workshops. The Maryland program has recognized that there is a communication problem between biologists, foresters, land planners, developers, landscapers, engineers, and other professionals. They developed a program called Natural Design and Development, which increases interaction between these professionals through regional conferences and workshops (Thompson, 1992).

The program in Maryland is clearly concerned with public involvement in a multidisciplinary approach to land-use planning. Resident inventories and surveys are

conducted to assess the demand for wildlife in the city. The state uses tax check offs to help fund the program.

Missouri

The state of Missouri first made a commitment to address urban wildlife issues in 1979. The Missouri program is similar to Maryland's in that it is oriented toward public awareness and working with land-use planners (D. Tylka, personal communication, August 28, 1992). For example, it provides urban wildlife information to the public through videos, publications, and magazines. The program also has trained telephone staff who answer many questions dealing with urban wildlife.

The program in Missouri is constantly evolving by providing more staff to meet the challenges of urban wildlife management. Currently it is planning to include an Urban Forester, an Urban Fisheries Biologist, an Urban Public Affairs and Information Specialist, and an Urban Wildlife Specialist, as well as an Urban Wildlife Biologist.

The general philosophy of the program in Missouri is to manage urban wildlife in a positive way. That is, focus on the positive aspects of urban wildlife instead of the negative and promote those attributes to the community (D. Tylka, personal communication, August 28, 1992).

New York

The New York Department of Environmental Conservation (DEC) developed an Urban Wildlife Program in 1974 in response to 80% of the population residing in urban areas, and recognizing that wildlife can significantly contribute to the enhancement of human life (Matthews, O'Connor & Cole, 1988). The purpose of this program was to benefit the citizens living in urban areas and to enhance and preserve wildlife habitat within urban areas (Miller & Matthews, 1979).

The New York Urban Wildlife Program has completed several projects since its development. The program completed an attitude and interest survey of urban residents in regard to urban wildlife; compiled an inventory of urban wildlife habitat; established urban wildlife parks; and provided information and educational programs to the public (Matthews & Lewandowski, 1987). Much like the Maryland and Missouri programs, the New York plan also assists land-use planners by providing guidelines for enhancing urban wildlife in cities throughout the state (Miller & Matthews, 1979).

New York - Urban Deer Management

In the towns of Irondequoit and Durand Eastman (Greater Rochester Area) the increase in white-tailed deer population became severe enough to cause ecological damage to the town environment during the late 1980's and early 1990's (Hauber, 1993). The deer population had become extremely dense due to hunting restrictions in these areas. After several failed attempts to resolve the deer problem (due to finances and political entities) a Citizens Task Force was formed by the Department of Environmental Conservation (DEC) in 1992.

In general, this Task Force was designed to encourage action by all the players involved with the deer issue (Hauber, 1993). The DEC provided technical assistance and had the final authority on any management program. The Task Force recommended that selective culling (bait and shoot) should be initiated for the short term (five years), and reproduction control should be examined for the future. Although the program was opposed by some organizations, the selective culling procedure was implemented in spring 1993, putting down 80 deer (Hauber, 1993).

The DEC feels that this type of team management approach is effective for managing urban wildlife because it encourages all resource users to participate, increases their knowledge of wildlife resources, and may help to reduce future conflicts.

Illinois - Urban Deer Management

In response to an increasing white-tailed deer population in the Chicago metropolitan area, the Illinois Department of Conservation initiated an Urban Deer Study in 1983 (Witham & Jones, 1987). The objectives of the study were to collect baseline data on herd and habitat, assess deer-human interactions, develop interagency cooperation, increase public awareness and participation, and develop pilot studies.

Presently, the state of Illinois employs an Urban Deer Biologist to manage deer issues. The management strategy which is emphasized by the biologist is public education and awareness. In the past, the state tried many types of traditional management techniques to control the deer. These included translocation, drive netting and darting. Rocket netting was not tried because it was opposed by some of the public. The state has determined that selective culling is the best option for management.

Although selective culling is a legitimate form of management, it can evoke negative public feelings. Therefore, the best approach to managing urban deer populations is through a combination of selective culling and public education. That is, the public must understand why this management technique is the best approach to control deer populations. In addition, the Urban Deer Biologist also recommends that more agencies be involved with urban wildlife management (M. Jones, personal communication, August 6, 1992).

Minnesota

Minnesota has recently started to address urban wildlife issues, although the state does not possess a formal urban wildlife program. Several types of wildlife species have adapted to urban areas in Minnesota. They include Canada geese, deer, bats, raccoons, beavers, and bald eagles. When dealing with wildlife issues in urban areas, the Minnesota Department of Natural Resources (DNR) is guided by a philosophy based on harvesting.

One of the Wildlife Supervisors for the DNR explains that Minnesota is progressive in its

approach to urban wildlife management because the state uses harvesting as the primary method of control (R. Johnson, personal communication, July 27, 1992). Harvesting refers to taking an animal when it is of some value, such as in sport hunting. As a result, the DNR is targeting the legislation in order to increase hunting or lengthen seasons to reduce animal populations. For example, the state is attempting to convince the federal government to legislate early goose hunting. The Minnesota DNR feels that other types of urban wildlife management will be very expensive.

In addition to harvesting, the state encourages all user groups to participate in urban wildlife management. Public education is also provided by the DNR through videos. Finally, the DNR emphasizes that before an urban wildlife program is developed, the jurisdictions and regulations of all the agencies involved with urban wildlife must be defined.

6.3 Summary

From the programs reviewed in Canada and the United States, it is clear that public awareness and education are important for urban wildlife management. City residents share their land with wildlife, therefore they must be able to understand and participate in managing urban wildlife. In addition, many of the programs address the need for more communication and cooperation between agencies. The management of urban areas requires many different disciplines; therefore, in order to manage urban wildlife, an integrated team approach is required.

In general, urban wildlife management programs are concerned with outreach programs to the public and with the coordination of different agencies. The programs help to clarify to the public and different agencies the importance of urban wildlife as well as by whom and how they should be managed. The programs rarely incorporate the responsibility of physically dealing with urban wildlife.

CHAPTER 7

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

7.1 Summary

Wildlife in the City of Winnipeg has become an issue for each level of government as well as with the private and public sectors. As wildlife continue to find habitat in the city there will be an increase in human-wildlife interactions. As a result, the public will need direction on how to deal with urban wildlife issues which affect them. Each level of government must be able to respond to the public's inquiries by providing accurate information on all types of urban wildlife issues. That is, each government department should be able to help the public receive guidance or information on all issues including jurisdictional concerns, nuisance animal problems, health and safety concerns, animal welfare concerns, and educational information.

7.2 Conclusions

After identifying the issues, analyzing the legislation, and reviewing the agencies involved with urban wildlife concerns some conclusions can be made. These conclusions are:

1) Urban Wildlife Awareness

There is a definite awareness about urban wildlife in the City of Winnipeg on the part of the government, the private sector, and the public. Both the provincial and municipal government have initiated new positions and programs which reflect the importance of urban wildlife in Winnipeg. The provincial government has recently created the position of an Urban Wildlife Specialist (February, 1994) which will help with providing information

to the public and identifying further research for urban wildlife management. The municipal government has been involved with a natural areas inventory program in the City of Winnipeg.

The private sector has revealed it's awareness of urban wildlife through several initiatives. For example, SWAT exterminators try to work with the habitat instead of removing animals to help people with nuisance animal problems. The Delta Winnipeg Hotel has also tried to raise the public's awareness to the endangered peregrine falcon pair which nest on the rooftop, by showing live videotapes of the birds in their lobby. It is evident the residents of Winnipeg are aware about urban wildlife by the number of people who contact agencies and departments to inquire about urban wildlife each year.

2) Urban Wildlife Issues

There are several issues which affect the residents of Winnipeg and the wildlife which exist in the city. The major issues facing the city were identified as jurisdictional issues, nuisance animal issues, public health and safety issues, non-consumptive resource use issues, and public information and education issues. These issues are very important because they concern the relationship between people and wildlife which co-exist in the city. If these issues are not addressed problems between people and animals are likely increase in the future.

3) Confusion in Managing Urban Wildlife

Each level of government, the private sector, and the public find it confusing and frustrating to determine who is responsible for managing urban wildlife and when does this responsibility change. In order to determine why the confusion exists a comparison of agencies **legal jurisdictions** for urban wildlife management and their **actual management** of urban wildlife were compared (Tables 3; Table 4).

Legal Jurisdictions for Urban Wildlife Management in Winnipeg

Agencies	Legislation	Jurisdiction of Wildlife Species
FEDERAL		
Environment Canada (CWS)	<i>Migr. Birds Con. Act</i>	All migratory game birds, insectivorous birds, and nongame birds (Appendix II)
Agriculture Canada	<i>Health of Animals Act</i>	Any wildlife species which has diseases listed in the act (i.e. Rabies).
Transport Canada		Any wildlife species within the property of the Winnipeg International Airport.
PROVINCIAL		
DNR (Operations Division & the Wildlife Branch).	<i>Wildlife Act/ Endangered Species Act</i>	All species designated as <u>wild animals</u> by the <i>Wildlife Act</i> (Appendix III) and other species categorized as <u>wildlife</u> . Management of endangered species according to the <i>Endangered Species Act</i> .
Manitoba Agriculture	<i>Animal Diseases Act</i>	Any wildlife species that has a disease which is not listed in the federal act.
Manitoba Environment	<i>Environment Act/ Public Health Act</i>	Inspection of any wildlife species or area which may be a health threat (in Winnipeg suburbs and rural areas).
MPIC		Investigate claims from wildlife/ vehicle collisions.
MUNICIPAL		
Animal Services	<i>Pound By-Law/ Keeping Animals By-Law</i>	Regulation of <u>Owned animals</u> , such as domestic dogs, cats, or animals of husbandry. Authority to prevent certain <u>exotic species</u> from being kept in the city.
Parks & Rec. Dept.	<i>Parks By-Law</i>	Protection of all species within parks boundaries.
City Health Dept.	<i>Public Health By-Law</i>	Inspection of any wildlife species or area which may be a health threat only in the inner city of Winnipeg.
PRIVATE		
Exterminator		Any species which is not listed as a <u>wild animal</u> in the <i>Wildlife Act</i> (i.e. skunk). Contract out to pick up dead animals in the city.
MWRO	<i>Fed/ Prov. licence</i>	Any species which is orphaned or injured.
Humane Society		Investigating all cases of inhumane treatment to any animal, and shelter for domestic pets.

Actual Management of Urban Wildlife in Winnipeg

Agencies	Management of Species
FEDERAL Environment Canada (CWS)	Due to a shortage in staff the CWS can only deal with a limited amount of wildlife concerns, as a result NRO's assist them.
Agriculture Canada	Only concerned with animal diseases listed in the act, therefore many of their cases occur outside the city.
Transport Canada	Any wildlife species within the property of the Winnipeg International Airport.
PROVINCIAL DNR (Operations Division)	Will only provide assistance with big game animals, foxes, coyotes, raccoons, beaver, and waterfowl. Management of other species should be taken care of by the city or private sector.
DNR (Wildlife Branch)	Provides advice and help for the public in regard to all urban wildlife issues.
Manitoba Agriculture	Provides services for both animals with named diseases (listed in federal act), and animals with diseases which are not listed.
Manitoba Environment	Inspection of animal health threat concerns only in suburbs, and provides assistance with picking up dead animals in the city.
MPIC	Investigate claims from wildlife/ vehicle collisions.
MUNICIPAL Animal Services	Provides assistance to the public through loaning out traps, etc., and helping with urban wildlife concerns which the province cannot manage (i.e. skunks, squirrels).
Parks & Recreation Dept.	Manages urban wildlife in parks property, except for species such as white-tailed deer, or beavers.
City Health Department	Only concerned with urban wildlife which may be a health problem in the inner city.
PRIVATE Exterminators	Provides assistance to the public by managing the urban species which the government will not deal with including some furbearers, such as raccoons.
MWRO	Any species which is orphaned or injured.
Humane Society	Works in cooperation with Manitoba Agriculture to investigate all cases of inhumane treatment to animals, and provides shelter for domestic pets.

Table 3 shows that each government department and private agency has a clear mandate for the species for which they are responsible to manage. For example, the Canadian Wildlife Service is only responsible for the birds listed in the *Migratory Birds Convention Act*. Therefore if an individual has a problem with waterfowl the Canadian Wildlife Service should be responsible for assisting them. However, as Table 4 indicates, this is not always the case.

Table 4 shows the actual management situation for each agency respecting urban wildlife. For several agencies the real-world situation in Table 4 is inconsistent with their mandate in Table 3. For example, Table 4 reveals that the Canadian Wildlife Service cannot assist with all situations pertaining to waterfowl. Therefore, Natural Resource Officers from the provincial government often assist them. In addition, the city's Animal Services Branch which only has jurisdiction to regulate owned animals (Table 3), often ends up assisting the public with urban wildlife issues (Table 4).

As a result of the many informal agreements which exist between agencies it is a confusing process for each level of government, private agencies, and the public to determine who is responsible for dealing with urban wildlife issues.

7.3 Recommendations

Although each level of government has a role in managing urban wildlife, the provincial government is usually held responsible for many of the wildlife concerns in the City of Winnipeg. As a result, the provincial government should be the first to produce new initiatives to manage urban wildlife or to coordinate policies, programs or strategies. The following strategies have been recommended to assist the provincial government in managing urban wildlife in Winnipeg. Each strategy focuses on an urban wildlife issue which is a concern in the city (Table 5).

Strategies for Urban Wildlife Management in the City of Winnipeg

Jurisd. Issues	Nuisance Animal Issues	Public Health & Safety Issues	Non-Cons. Resource Use Issues	Public Info. & Education Issues	Strategies to Address Future Issues
Develop a Framework Indicating: <ul style="list-style-type: none"> ● Species ● Jurisd. ● Respon. ● Respon. Deferred 	Develop a "Problem Wildlife Hotline"	Initiate an Urban Wildlife Monitoring Program	Develop a Public Survey to Assess Peoples' Attitudes Toward Urban Wildlife	Create an Urban Wildlife Information and Education Policy Focus: <ul style="list-style-type: none"> ● Info. ● Educat. ● Promo. 	Develop Urban Wildlife Committee
Review & Revise Existing Legislation		Create a Task Force on Safety Issues			Develop a Formal Urban Wildlife Policy

Table 5 lists each urban wildlife issue affecting the City of Winnipeg horizontally at the top of the table (in bold text). The strategies which are recommended are listed vertically below the corresponding issues.

- **Strategies Addressing Jurisdictional Issues**

In order for the provincial government to deal effectively with urban wildlife issues they must first identify all the gaps and “grey areas” of government jurisdictions and responsibilities. This will give the provincial government a clear understanding of where problems exist and how they can be solved.

Tables 3 and 4 clearly show the breakdown of jurisdictions for each level of government and the private sector as well as where the gaps exist. The following two strategies will assist the provincial government in dealing with jurisdictional issues.

- 1) **Develop Framework for Urban Wildlife Jurisdictions & Responsibilities**

The provincial government should develop a framework consisting of three general areas; jurisdiction, responsibility, and a species or animal list pertaining to urban wildlife management. This framework should be able to tell the reader who has what jurisdictions, when does responsibility shift, and who should be contacted in regard to a certain species of animal. The framework should be developed with consultation and cooperation between all players involved with urban wildlife management in Winnipeg.

The framework should be based on the informal procedures that already exist for managing wildlife in the city. For example, the framework should indicate that the Canadian Wildlife Service does not have the staff to respond to waterfowl issues in the city and consequently the provincial government’s Natural Resource Officers will deal with those concerns.

The framework would also provide the provincial government with information on the responsibility for urban wildlife and a list of species. The information on responsibility would indicate when jurisdiction may shift from one department to another. For example, if raccoons in the city carried rabies, responsibility would shift from the provincial government to the federal Department of Agriculture. The species list would enable any person to look up a species and find out who is responsible for its protection or management.

This type of framework would reflect the actual informal procedures which are presently occurring in the city. It would benefit the provincial government because it would provide them with an accurate breakdown of all government departments' and private agencies' roles in managing urban wildlife. In addition, this framework could be distributed to each government level and private agencies to enhance communication between them and avoid future confusion over urban wildlife issues. A draft of an Urban Wildlife Framework is presented in Appendix IV.

2) Review and Revise Existing Legislation

In order to create a legal mandate for managing urban wildlife and clear up confusion over jurisdictions and responsibilities, a review and revision of existing legislation is necessary. This would transform the informal procedures for managing urban wildlife into binding legal practices. The main act which needs to be revised is the *Wildlife Act*. The act is confusing because it separates species into two categories, wild animals and wildlife. All the species designated as wild animals are listed in the act, however the species which are designated as wildlife are not listed. As a result, most of the regulations of the act only pertain to the listed species, and it can become confusing to understand how the law affects the urban species which are considered wildlife.

In addition to the urban species which are considered wildlife, there are several urban

species which are listed in the act and designated as wild animals (e.g. raccoons, beavers, white-tailed deer). The management of these species adds to the confusion because they have different regulations that apply to them. The *Wildlife Act* should also be revised to reflect the current situation with urban wildlife management. That is, if the Department of Natural Resources is only managing certain species in urban areas (e.g. beavers) then it should be reflected in the act. To avoid future problems, the act should clearly specify which other departments or private organizations can manage which species.

In addition to the *Wildlife Act*, other legislation that could be reviewed and revised are the federal *Canada Wildlife Act*, *Migratory Birds Convention Act*, and the municipal *Pigeon Control By-Law*, and *Pound By-Law*. These bodies of legislation could be amended to include their role in managing urban wildlife. For example, the *Pound By-Law* could reflect the municipal government's actual management of urban wildlife. However, the *Wildlife Act* must be changed first before any additional legislation can be amended.

- **A Strategy to Address Nuisance Animal Issues**

In Winnipeg, the provincial government must deal with nuisance animal issues. Although many people may like the sight of wildlife in their backyards, there will always be residents who feel urban animals are a nuisance around their property. The following strategy will assist the provincial government in addressing the issue of nuisance animals.

- 1) **Develop a "Problem Wildlife Hotline"**

Many city residents who have problems with insects or weeds can contact hotlines which provide them with helpful information. The development of a "Problem Wildlife Hotline" would also allow residents to receive information on nuisance animal problems. The term "problem wildlife" would indicate to residents that they should only call this number if they have an actual wildlife problem. Therefore, the hotline would not be used by people

who just want general information on urban wildlife.

The hotline could be operated by trained volunteers or by paid staff. Information provided by the hotline should be able to answer all questions pertaining to nuisance animals. The hotline staff should be able to inform residents that the habitat created by people is what attracts animals and the animals will leave the area if the habitat is modified. However, since some people will not want to deal with modifying their property the staff should be able to provide alternative information such as listings of private exterminators.

- **Strategies Addressing Public Health and Safety Issues**

Public health and safety needs should be addressed by the provincial government to efficiently manage urban wildlife in Winnipeg. As animals continue to adapt to the city there will always be a risk of a disease outbreak. In order to maintain the health of Winnipeg's population the government must be able to provide protection for people as well as the wildlife species which exist in the city. In addition, the government should also meet the safety concerns of residents for the welfare of people and the animals which co-exist in the city. The following strategies have been developed to assist the provincial government in addressing the issues of public health and safety.

- 1) **Develop an Urban Wildlife Monitoring Program**

There are several wildlife diseases which could affect urban wildlife populations including Newcastle disease, distemper, and mange. In addition, diseases such as rabies and Lyme disease could be transmitted from animals to residents. Consequently, the provincial government should establish a program to monitor urban wildlife for diseases.

The program would help to establish a baseline of information concerning the health of animals in the city. This information would be vital to help predict and control the outbreak

of diseases in the city. The program should occur annually and entail a random sample of animals from various parts of the city. The program should also be conducted with the cooperation of Agriculture Canada or the provincial Veterinary Services Branch. In addition, students could be recruited to assist in the handling of wildlife species.

2) Develop a Task Force to Investigate Safety Issues

The main safety issue facing city residents is wildlife collisions with automobiles. In many areas of the city where white-tailed deer densities are high, collisions with deer are not uncommon. An additional problem is that many natural areas in the city where the deer occur are slowly becoming urbanized with roads or other developments. This encroachment of the deer's habitat increases the probability of cars colliding with animals trying to cross roads.

In order to prevent collisions from occurring, the provincial government should create a task force to examine the issue in detail and develop practical recommendations. This task force should be composed of all departments involved in dealing with the safety needs of people and wildlife such as the Department of Natural Resources, the Department of Highways and Transportation, the Manitoba Public Insurance Corporation, and the city's Parks and Recreation Department. In addition, private sector representatives from land development agencies and landscape architect firms should be involved.

The task force should examine issues such as the cost of wildlife collisions to taxpayers, the affects on deer populations from road mortality, and preventative measures to mitigate collisions in the future. These measures should be practical and should not cause undue stress to the public or the deer populations in the city. In addition, the task force should also work with private agencies and the public to investigate the issue.

- **A Strategy to Address Non-Consumptive Resource Use**

The importance of non-consumptive wildlife use in Manitoba is evident by the amount of people who engage in these activities. In 1991, 72.2% of urban residents participated in indirect wildlife-related activities and 69.4% participated in residential wildlife-related activities (Filion et al., 1993). The Federal-Provincial Task Force on the Importance of Wildlife to Canadians (Filion et al., 1993) defines indirect wildlife-related activities as watching films or television programs about wildlife, reading literature, visiting zoos, game farms, aquariums, museums, purchasing crafts, art, posters, or contributing to wildlife organizations. Residential wildlife-related activities refer to activities such as watching, photographing, studying, or feeding wildlife, or maintaining vegetation or birdhouses to provide shelter for wildlife (Filion et al., 1993).

In order to understand the value Winnipeg residents place on urban wildlife, the provincial government should address the issue of non-consumptive wildlife use. The following strategy will assist the government in accomplishing this task.

- 1) **Develop an "Attitudes about Urban Wildlife" Survey**

An effective method to evaluate the values people place on urban wildlife would be to conduct an annual survey. This survey would provide the provincial government with information pertaining to how much residents appreciate wildlife in the city, what wildlife they value, and how involved they are with wildlife issues in the city. The survey would provide different information than the Federal-Provincial Task Force on the Importance of Wildlife to Canadians, because it would focus on Winnipeg as opposed to Manitoba.

This survey should be a joint-venture between the provincial and municipal governments since they are both involved with responding to the needs of Winnipeg citizens. An annual survey would provide useful information which would help the province and the municipal

government manage urban wildlife in the future. For example, if a survey revealed that residents placed a high value on urban wildlife and wanted to know how to attract certain species, the government could assist them by producing documents on different types of vegetation which attract different species.

- **A Strategy to Address Public Information and Education Issues**

As the population of Winnipeg increases and wildlife continue to adapt to the city, problems will increase for both people and wildlife if there is no public awareness. People must understand why wildlife are adapting to the city and how problems can be managed. This will ease the confusion among the public and may promote appreciation toward urban wildlife. As a result, providing information to the public is one of the most important methods the provincial government can use in dealing with urban wildlife issues. The following strategy will assist the provincial government in addressing the issue of public information and education.

- 1) **Develop a Policy on Urban Wildlife Information and Education**

The task of providing information and education to the public is extensive. Therefore the provincial government should develop a policy outlining the specific methods it will use to educate the people of Winnipeg. This policy should be developed in cooperation with each level of government and with the private agencies. In general, the policy should consist of three areas; information, education, and promotion.

Information

One of the main problems for residents is trying to find out what to do, or who to contact in regard to urban wildlife issues. As a result, the provincial government should ensure that people have access to the information requested. In order to accomplish this, the provincial government should develop methods for communicating information on urban wildlife

issues to the public in the policy. For example, a chart could be printed in the local phonebook outlining who to call in regard to urban wildlife issues.

Education

Education is important to help people understand how and why animals adapt to the city. However, it has been overlooked by the schools in Winnipeg and is not a focus of the private sector wildlife organizations. In the policy, the provincial government should encourage the development of a unit on urban wildlife for all grades. This unit could then be introduced in the school curriculum. In addition, the policy should develop methods to assist the private sector wildlife organizations on providing educational programs about urban wildlife for the public.

Promotion

In order to increase awareness and provide additional information and education to the public, the provincial government should develop an extensive outreach program to promote urban wildlife. To achieve this, information must be provided to the public in areas where they frequent or where it can be easily obtained such as shopping malls or restaurants. In addition, pamphlets and brochures could be developed and distributed to people through the mail. Urban wildlife displays should accompany events such as "National Wildlife Week" and Earth Day celebrations.

The media could also help to promote urban wildlife issues to the public through television, radio, newspapers, and magazines. People involved with urban wildlife issues could go on local talk shows or news programs, write articles for newspapers or magazines, develop commercials, or conduct interviews with the media. This has already been initiated in Winnipeg with the *Real Estate News* publishing articles pertaining to urban wildlife.

- **Future Strategies for Addressing Urban Wildlife Issues**

The province may consider other strategies which could also assist them in dealing with a variety of urban wildlife issues, such as establishing committees to deal with specific issues or developing an urban wildlife policy.

- 1) **Urban Wildlife Committees**

The provincial government may wish to establish committees to investigate specific urban wildlife concerns. These committees could be important for understanding how to manage wildlife species. This has been initiated by the establishment of an experimental committee on problem beaver and white-tailed deer in Winnipeg developed by the Department of Natural Resources. Although this is a good start, more urban wildlife issues and representatives should be involved with future committees.

Some important issues that should be addressed by committees are emergency responses to urban wildlife problems. For example, what is the procedure for managing a moose or black bear that enters a municipal park? Who is responsible, and who should be involved with the management? A committee should be formed to examine the issue and develop contingency measures. Other important issues that could be examined by committees include wildlife/ vehicle collisions, the role of the private sector in managing urban wildlife, problem waterfowl, urban development, and species/ habitat issues.

Urban wildlife committees can be beneficial if they are properly developed. They should identify all urban wildlife issues, allow for equal representation by all interested parties (government, private, public), develop practical recommendations or strategies, and communicate effectively to all government departments. For example each government department should know their role in managing a black bear which enters a municipal park. In addition, committees would help identify new issues and foster communication between

each sector in society.

2) Urban Wildlife Policy

In general, the development of an urban wildlife policy would benefit the provincial government because it would create a formal document which could eventually become the basis for legislation. This would create a guideline for managing wildlife in the city. An urban wildlife policy should produce methods to address all the issues pertaining to wildlife in the city. That is, it should reflect jurisdictional concerns, nuisance animal concerns, public health and safety issues, non-consumptive wildlife use, and information and education issues.

An urban wildlife policy would be important for each level of government, the private sector and the public because it would remove all the informal procedures which occur between agencies and create a new formal process for managing urban wildlife. This would reduce the confusion of managing urban wildlife in Winnipeg. The provincial government should work towards developing this policy in order to efficiently deal with present urban wildlife concerns and to provide a procedure for addressing future issues.

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APPENDIX I

Scientific names of animals listed in the practicum:

Mammals

Norway rat	<i>Rattus norvegicus</i>
House mouse	<i>Mus musculus</i>
White-tailed deer	<i>Odocoileus virginianus</i>
Red fox	<i>Vulpes vulpes</i>
Raccoon	<i>Gulo gulo</i>
Beaver	<i>Castor canadensis</i>
Moose	<i>Alces alces</i>
Lynx	<i>Lynx lynx</i>
Bobcat	<i>Lynx rufus</i>
Coyote	<i>Canis latrans</i>
Black bear	<i>Ursus americanus</i>
Skunk	<i>Mephitis mephitis</i>
Hare	<i>Lepus americanus</i>
Rabbit	<i>Sylvilagus floridanus</i>
Muskrat	<i>Ondatra zibethica</i>
Mink	<i>Mustela vison</i>
Woodchuck	<i>Marmota monax</i>
Weasel	<i>Mustela frenata</i>
Tree (Red) squirrel	<i>Tamiasciurus hudsonicus</i>
Ground squirrel (1 species listed)	<i>Spermophilus tridecemlineatus</i>
Chipmunk (1 species listed)	<i>Eutamias minimus</i>
Lemming	<i>Synaptomys cooperi</i>
Vole	<i>Microtus pennsylvanicus</i>
Shrew	<i>Sorex cinereus</i>

Birds

European starling	<i>Sturnus vulgaris</i>
House sparrow	<i>Passer domesticus</i>
Blue jay	<i>Cyanocitta cristata</i>
Nuthatches (2 species listed)	<i>Sitta carolinensis; Sitta canadensis</i>
Downy woodpecker	<i>Picoides pubescens</i>
Hairy woodpecker	<i>Picoides villosus</i>
Raven	<i>Corvus corax</i>
Rock dove	<i>Columba livia</i>
Robin	<i>Turdus migratorius</i>
Swallows (family name listed)	<i>Hirundinidae</i>
Goldfinches	<i>Carduelis tristis</i>
Warblers (family name listed)	<i>Emberizidae</i>

Flycatchers (family name listed)	<i>Tyrannidae</i>
Grosbeaks (subfamily name listed)	<i>Cardinalinae</i>
Hawks (family name listed)	<i>Accipitridae</i>
Falcons (family name listed)	<i>Falconidae</i>
Owls (2 family names listed)	<i>Tytonidae; Strigidae</i>
Peregrine falcon	<i>Falco peregrinus</i>
Canada geese	<i>Branta canadensis</i>
Crow	<i>Corvus brachyrhynchos</i>
Grackle	<i>Quiscalus quiscula</i>
Gulls (family name listed)	<i>Laridae</i>
Bald eagle	<i>Haliaeetus leucocephalus</i>

APPENDIX II

Definitions of birds listed in the *Migratory Birds Convention Act*:

1) Migratory game bird means

- a) Anatidae or waterfowl, including brant, wild ducks, geese and swans.
- b) Gruidae or cranes, including little brown, sandhill and whooping cranes.
- c) Rallidae or rails, including coots, gallinules and sora and other rails.
- d) Limicolae or shorebirds, including avocets, curlews, dowitchers, godwits, knots, oyster catchers, phalaropes, plovers, sandpipers, snipe, stilts, surf birds, turnstones, willet, woodcock, and yellowlegs.
- e) Columbidae or pigeons, including doves and wild pigeons.

2) Migratory insectivorous birds means:

bobolinks, catbirds, chickadees, cuckoos, flickers, fly-catchers, grosbeaks, hummingbirds, kinglets, martins, meadow larks, nighthawks or bull bats, nuthatches, orioles, robins, shrikes, swallows, swifts, tanagers, titmice, thrushes, vireos, warblers, waxwings, whippoorwills, woodpeckers and wrens, and all other perching birds that feed entirely or chiefly on insects

3) Migratory nongame birds means:

auks, auklets, bitterns, fulmars, gannets, grebes, guillemots, gulls, herons, jaegers, loons, murre, petrels, puffins, shearwaters and terns.

APPENDIX III

Animal divisions listed in Schedule A of the *Wildlife Act*:

Schedule A - WILD ANIMALS

Division 1 - Big Game:

Moose	<i>Alces alces</i>
Elk	<i>Cervus elaphus</i>
Barren-ground Caribou	<i>Rangifer tarandus groenlandicus</i>
Woodland Caribou	<i>Rangifer tarandus caribou</i>
White-tailed Deer	<i>Odocoileus virginianus</i>
Mule Deer	<i>Odocoileus hemionus</i>
Polar Bear	<i>Ursus maritimus</i>
Black Bear	<i>Ursus americanus</i>
Gray (Timber) Wolf	<i>Canis lupus</i>

Division 2 - Fur Bearing Animals:

Beaver	<i>Castor canadensis</i>
Short-tailed Weasel	<i>Mustela erminea</i>
Long-tailed Weasel	<i>Mustela frenata</i>
Coyote	<i>Canis latrans</i>
Fisher	<i>Martes pennanti</i>
Arctic Fox	<i>Canis lagopus</i>
Red Fox	<i>Canis vulpes</i>
River Otter	<i>Lutra canadensis</i>
Badger	<i>Taxidea taxus</i>
Bobcat	<i>Felis rufus</i>
Marten	<i>Martes americana</i>
Mink	<i>Mustela vison</i>
Muskrat	<i>Ondatra zibethica</i>
Red Squirrel	<i>Tamiasciurus hudsonicus</i>
Wolverine	<i>Gulo gulo</i>
Raccoon	<i>Procyon lotor</i>
Lynx	<i>Felis canadensis</i>

Division 3 - Game Birds:

Ruffed Grouse	<i>Bonasa umbellus</i>
Gray (Hungarian) Partridge	<i>Perdix perdix</i>
(Wild) Turkey	<i>Meleagris gallopava</i>
Rock Ptarmigan	<i>Lagopus mutus</i>
Willow Ptarmigan	<i>Lagopus lagopus</i>

Spruce Grouse	<i>Canachites canadensis</i>
Sharp-tailed Grouse	<i>Pedioecetes phasianellus</i>
Ring-necked Pheasant	<i>Phasianus colchicus</i>

Plus the migratory game birds protected in Canada under the *Migratory Birds Convention Act*.

Division 4 - Small Game Animals:

There are no animals listed in this division at the present time.

Division 5 - Amphibians and Reptiles:

Northern Leopard Frog (includes tadpoles)	<i>Rana pipiens</i>
Tiger Salamander	<i>Ambystoma tigrinum</i>
Red-Sided Garter Snake	<i>Thamnophis sirtalis</i>
Western Plains Garter Snake	<i>Thamnophis radix</i>
Snapping Turtle	<i>Chelydra serpentina</i>
Painted Turtle	<i>Chrysemys picta</i>

Division 6 - Protected Species:

Pronghorn (Antelope)	<i>Antilocapra americana</i>
Cougar	<i>Felis concolor</i>
White Pelican	<i>Pelecanus erythrorhynchos</i>
Double-crested Cormorant	<i>Phalacrocorax auritus</i>
Greater Prairie Chicken	<i>Tympanuchus cupido</i>
All vulture, eagles, hawks, osprey and falcons	<i>Falconiformes</i>
All owls	<i>Strigiformes</i>
Kingfisher	<i>Megaceryle alcyon</i>
Blue Jay	<i>Cyanocitta cristata</i>
Gray (Canada) Jay	<i>Perisoreus canadensis</i>
Common Raven	<i>Corvus corax</i>
Western Hognose Snake	<i>Heterodon nasicus</i>
Northern Prairie Skink	<i>Eumeces septentrionalis</i>
Plains Spadefoot Toad	<i>Scaphiopus bombifrons</i>

Plus the migratory non-game birds and migratory insectivorous birds protected in Canada under the *Migratory Birds Convention Act*.

APPENDIX IV

Draft of Urban Wildlife Framework

Agencies	Phone #	Legal Jurisdiction of Wildlife Species	Actual Management and Deferred Responsibility
<p>Federal</p> <p>The Canadian Wildlife Service</p>	983-5259	<p>Jurisdiction over birds listed in the federal <i>Migratory Birds Convention Act</i>.</p> <p><u>Migratory Game Birds:</u> Waterfowl, Cranes, Rails, Shorebirds, & Pigeons.</p> <p><u>Migratory Insectivorous Birds:</u> Bobolinks, Catbirds, Chickadees, Cuckoos, Flickers, Fly-Catchers, Grosbeaks, Hummingbirds, Kinglets, Martins, Meadow Larks, Nighthawks, Bull Bats, Nuthatches, Orioles, Robins, Shrikes, Swallows, Swifts, Tanagers, Titmice, Thrushes, Vireos, Warblers, Waxwings, Whippoorwills, Woodpeckers & Wrens.</p> <p><u>Migratory Nongame Birds:</u> Auks, Auklets, Bitterns, Fulmars, Gannets, Grebes, Guillemots, Gulls, Herons, Jaegers, Loons, Murres, Petrels, Puffins, Shearwaters, & Terns.</p>	<p>Responsibility for waterfowl issues in the city has been deferred to provincial Natural Resource Officers from the Operations Division (DNR).</p>
<p>Agriculture Canada</p>	983-2219 (Veterinary Services)	<p>Jurisdiction over <u>any wildlife species</u> which become infected with a disease <u>listed</u> in the federal <i>Health of Animals Act</i> (i.e. Rabies; Newcastles).</p>	<p>Frequently obtain assistance from the provincial department of agriculture because there is no federal veterinary pathology lab in Manitoba.</p>
<p>Transport Canada</p>	984-5383 (Envir. Specialist)	<p>Jurisdiction over any wildlife species which is within the property of the Winnipeg International Airport.</p>	<p>Assistance from the provincial DNR (operations division) for managing big game animals such as white-tailed deer.</p>

<p>The Dept. of Natural Resources:</p> <p>The Wildlife Branch</p>	<p>945 6784</p>	<p>Responsible for creating the policies and procedures for the Operations Division.</p>	<p>Has become responsible for trying to help manage the animals <u>listed</u> in the <i>Wildlife Act</i>, which the operations division cannot manage.</p> <p>Has also become responsible for trying to manage and provide information to the public for all urban species which are <u>not listed</u> in the <i>Wildlife Act</i>. This includes:</p> <p>Skunks, Rabbits, Grey Squirrels, Ground Squirrels, Chipmunks, Shrews, Rats, Mice, Voles, Lemmings, Woodchucks, Crows, Sparrows, Starlings, Blackbirds & Grackles.</p>
<p>Manitoba Agriculture</p>	<p>945-7652 (Veterinary Services)</p>	<p>Jurisdiction over <u>any wildlife species</u> which becomes infected with a disease <u>not listed</u> in the federal <i>Health of Animals Act</i> (i.e Distemper).</p>	<p>Works in cooperation with the MWRO and the Humane Society. Also assist the federal department of agriculture with animal disease cases.</p>
<p>Municipal</p> <p>Animal Services Branch</p>	<p>986-2155 (Found Animals & After Hours Message Line)</p>	<p>Jurisdiction over owned animals, such as dogs or cats.</p>	<p>Provides assistance for the public with urban wildlife problems through advice as well as loaning out live traps.</p>
<p>Private</p> <p>Private Exter.</p>	<p>SWAT 233-3182</p> <p>Poulin's 233-2500</p> <p>Low-Cost 774-4911</p>	<p>Can only manage animals which are <u>not listed</u> in the provincial <i>Wildlife Act</i>. This includes: rats, mice, shrews, voles, lemmings, ground squirrels, chipmunks, grey squirrels, crows, sparrows, starlings & feral pigeons.</p>	<p>Has become responsible for managing the animals which the provincial government (DNR - Operations Division) can no longer manage. This includes several animals <u>listed</u> in the <i>Wildlife Act</i> such as red squirrels, or raccoons.</p>
<p>MWRO</p>	<p>897-1589</p>	<p>Jurisdiction for treating any animal which is orphaned or injured.</p>	

<p>Provincial</p> <p>The Dept. of Natural Resources:</p> <p>Operations Division</p>	<p>945-7257 (Natural Resource Officer)</p>	<p>Jurisdiction over animals listed as <u>Wild Animals</u> in the provincial <i>Wildlife Act</i>.</p> <p><u>Big Game:</u> Moose, Elk, Barren-ground Caribou, Woodland Caribou, White-tailed Deer, Mule Deer, Polar Bear, Black Bear & Gray (Timber) Wolf.</p> <p><u>Fur Bearing Animals:</u> Beaver, Short-tailed Weasel, Long-tailed Weasel, Coyote, Fisher, Arctic Fox, Red Fox, River Otter, Badger, Bobcat, Marten, Mink, Muskrat, Red Squirrel, Wolverine, Raccoon & Lynx.</p> <p><u>Game Birds:</u> Ruffed Grouse, Gray (Hungarian) Partridge, (Wild) Turkey, Rock Ptarmigan, Spruce Grouse, Sharp-tailed Grouse & Ring-necked Pheasant.</p> <p><u>Amphibians & Reptiles:</u> Northern Leopard Frog, Tiger Salamander, Red-sided Garter Snake, Western Plains Garter Snake, Snapping Turtle & Painted Turtle.</p> <p><u>Protected Species:</u> Pronghorn (Antelope), Cougar, White Pelican, Double-crested Cormorant, Greater Prairie Chicken, Vultures, Hawks, Eagles, Osprey, Falcons, Owls, Kingfisher, Blue Jay, Gray Jay, Common Raven, Western Hognose Snake, Northern Prairie Skink & Plains Spadefoot Toad.</p>	<p>Will only respond to issues pertaining to big game animals, coyotes, foxes, raccoons, beavers & waterfowl.</p> <p>Responsibility for other animals has been deferred to the provincial Wildlife Branch, the City of Winnipeg's Animal Services Branch & private exterminators.</p>
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