

Investigation Report  
Springwater Provincial Park  
Wildlife Compound

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Michèle Hamers obtained her Bachelor Degree in animal husbandry and welfare in the Netherlands and a Masters Degree in animal biology and welfare at Essex University. During her Masters course she became interested in animal behaviour and political issues regarding animal welfare and the exotic animal trade. The object of her thesis was chimpanzee behaviour. After her studies she volunteered at the policy department of AAP, a sanctuary for exotic animals in the Netherlands, which eventually led to a contract to organize an international congress for animal sanctuaries and rescue centers in Europe. After leaving Europe, she traveled extensively throughout South America and eventually settled in Canada. At the moment Michèle is living in Toronto, pursuing her career in the non-profit animal welfare field.

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## 1. Introduction

Springwater Provincial Park, located in Midhurst, is managed by the Ontario Ministry of Natural Resources. The park has a wildlife compound and houses at the moment 17 indigenous wildlife species. The animals housed at the park were injured, orphaned or were imprinted by humans and deemed not able to be released back into the wild.

Though the intentions of the park are presumably honourable, the captive circumstances of the animals are questionable. In past years, animal welfare organisations were concerned and went several times to the park to assess the housing conditions. The first visit was in 1995 and the latest one in 2010. These visits resulted in reports that evaluated the wildlife compound and provided recommendations to improve welfare and public safety. There were some recommendations that returned in each report, these were the following:

- Enclosures should be upgraded, meaning providing the animals with a more complex and challenging environment.
- Animals should have more privacy, meaning that shelters should be provided that allow animals to remove themselves from public view.
- Provide the animals with enrichment, meaning implementation of a diverse enrichment schedule.

The park management was informed of the concerns. The overall response of the management was defensive. Some enclosure adjustments were made over the years, but other prominent animal welfare issues remained unresolved.

This report is a continuation of the work that has already been done. The current state of the wildlife compound in Springwater Provincial Park is described and recommendations are given for further improvements. These recommendations are based on scientific literature, existing legislation, and the writer's experience.

The aim of this research is to establish the level of animal welfare and provide solutions for existing animal welfare issues. There are five chapters. Chapter two is a short literature justification to substantiate the inquiry at the wildlife compound. The methodology is explained in chapter three, followed by chapter four that discusses the results. Recommendations for improvements of the wildlife display are outlined in the last chapter.

## 2. Literature justification

This chapter will briefly discuss literature about behaviour, environmental enrichment and current legislation to justify the investigation of the wildlife compound.

### 2.1 Animal welfare and behaviour

The scientific field of animal research is progressing. Consequently, the management of captive animals should be progressing as well. Failing to keep up with new studies, are opportunities missed to offer the animals the best possible care. Improving enclosures and husbandry routines should be a returning topic on the agenda.

Dawkins (2012) describes animal welfare as the state of an animal that is both healthy and has what it wants. Wanting is also known as the animal's proximate need (Brosnan and de Waal, 2001). A good example of a proximate need is the migration instinct of some captive birds. Migrating to survive the winter is not necessary for captive birds because they receive food and are protected by humans. Nevertheless the birds still want to migrate because of an inner mechanism that has evolved over decades. Behavioural responses like these of the migrating birds are the result of an accumulation of internal stimuli, external stimuli and experiences in the past (Garner, 2006). Many generations have to pass before these needs will change, probably as long as it took for evolution to provide the birds with these needs.

Forgetting about the proximate needs will result in psychological and physical unhealthy animals. Behaviours like pacing, self-mutilation and regurgitation are examples of coping behaviours caused by an unsatisfying captive environment (Howell *et al.*, 1997; Reinhardt and Rossell, 2001; McPhee, 2002). These behaviours are better known as abnormal behaviours. Abnormal behaviours are unnatural to the species and evidence of impaired welfare (Bloomsmith *et al.*, 2007). Not all abnormal behaviours are as visible as the examples mentioned above. Manteca (2006) notes that apathetic behaviour can also be classified as abnormal behaviour. Behaviours on the other hand that indicate excellent animal welfare are species specific behaviours, like playing, foraging, climbing and flying (Swaigood and Sheperdson, 2005).

Much more can be written about animal behaviour and the abnormalities often displayed in captivity. The bottom line is that abnormal behaviours are a serious sign of impaired welfare. The goal, of any organization that is responsible for the welfare of captive animals, should be to keep the animals physically and psychologically healthy. This can be achieved by giving animals the opportunity to use species specific behaviours in captive environments.

### 2.2 Enriching captive environments

Providing captive animals the opportunity to display species specific behaviour can be achieved with different types of enrichment. Swaigood and Sheperdson (2006) created six groups of enrichment possibilities to stimulate natural behaviour.

1. Mimicking the natural environment: creating a captive environment similar to the natural habitat.
2. Increasing physical complexity: e.g. adding climbing structures or letting the animal work for its food.
3. Increasing sensory stimulation: using scents or scented material which an animal would encounter in the wild. For example prey scents or scents of congeners.
4. Providing enrichment that gives the animal control: e.g. letting animals choose between two different environments or providing animals with items which can be manipulated.
5. Providing coping options: e.g. giving animals the opportunity to hide from the public when feeling stressed.

6. Meeting specific frustrated motivations: e.g. changing feeding schedules to prevent pre-feeding pacing behaviour or offering cognitive challenges by training animals.

A great many more enrichment ideas are available. EAZA, EEP and zoos (like North Carolina and Columbus) put their enrichment suggestions on the internet. However picking one, two or a few enrichment items will not permanently change animal behaviour. Developing an enrichment plan will increase the chances of enrichment success. Swaisgood and Sheperdson (2006) and Tarou and Bashaw (2007) both describe the steps for a successful enrichment program.

Step 1. Establish the goal of the program for each individual animal.

There are different goals that can be achieved with enrichment. For example decreasing abnormal behavior, prolonging species specific behavior or achieving animal cooperation. The enrichment that will be selected is depending on the goal formulated in this step. Note that animals are individuals, with individual preferences and needs. A one size fits all program is bound to fail and is not recommended.

Step 2. Choose the type of enrichment.

Enrichment ideas can be found on the internet. Enrichment items can be purchased or self-constructed. A tight budget does not have to be a problem; challenging people to be inventive can result in cheap and well working enrichment items. Knowledge about the motive of animal behaviours will increase the chances of enrichment success (Tarou and Bashaw, 2006).

Step 3. Making an enrichment schedule.

This is probably the most difficult part of the enrichment plan. The goal is to prevent rapid habituation. Keeping in mind that too many daily enrichment changes will elevate stress levels in a way which can be harmful for the animals (Swaisgood and Sheperdson, 2005). Permanent enrichment on the other hand will result in boredom which can trigger abnormal behaviours (Bassett and Buchanan-Smith, 2007). Both situations are not desirable. Enrichment should elevate "stress" levels (which is necessary to elicit behaviour) but at the same time give the animal the opportunity to cope with the enrichment (Bassett and Buchanan-Smith, 2007). It is all about providing a captive environment in which animals can cope and control external and internal stimuli by using species specific behaviours. Trial and error will have to be used to change and improve enrichment plans because each individual animal is different and each environment in which the enrichment is presented is different.

Step 4. Presenting the enrichment.

Put the previous steps into action.

Step 5. Documentation.

Documenting the effect of enrichment should be part of the daily caretaking regime. The frequency and intensity of the usage of enrichment items shows how it is valued by the animals (Ross *et al.*, 2009). Each step in the enrichment plan should be assessed.

Step 6. Evaluation and adjustments.

The results of the enrichment plan should be evaluated after a certain period of time (preferably daily). When enrichment is not working it should be adjusted. This can be done by changing the item(s) or the presentation schedule. The documentation phase will start again after repeating step 2, 3 and 4.

To conclude enrichment does work. It decreases abnormal behaviours (Swaisgood and Sheperdson, 2006). It has a higher educational value and visitors will stay longer when animals perform a wider

range of natural behaviours (Animal Behaviour Net, 2009). Enrichment makes the animals healthier, visitors happier and can even increase profits.

### **2.3 Legislation in Ontario**

Being aware of captive wildlife legislation is necessary to be able to give a thorough review of the wildlife display at Springwater Provincial Park. The development and implementation of animal welfare laws are in Canada the responsibility of the provincial and territorial governments. The federal government is responsible for the penalties regarding cruelty to animals (i.e., Criminal Code of Canada) and for enforcement of international agreements, such as CITES.

A key piece of legislation concerning wild animals in Ontario is the Fish and Wildlife Conservation Act (1997). This Act is not focused on protection of animals in captivity but simply regulates which animals may and may not be kept in captivity and under the conditions this may occur. All the species that are listed under this Act are “Scheduled wildlife species”. It is allowed to keep scheduled wildlife species in captivity when:

- A facility has an authorization to keep wildlife for scientific or educational purposes.
- A licensed zoo keeps scheduled wildlife for educational and public display purposes.
- A licensed falconer, that has a specified number of falconry birds on the licence.
- Being an authorized wildlife custodian (a person who provides care or rehabilitation for sick, injured or orphaned wildlife that may be released back to the wild).

Any licenses in this law have to be approved by the Ministry of Natural Resources (MNR). The requirements to obtain a licence to keep wildlife are poorly defined. There are no minimum qualifications, which results in people owning wildlife without the proper knowledge or skills. Keeping indigenous animals is “in principle” forbidden, however there is no legislation in Ontario regulating the keeping of non-native exotic animals.

In 2009, Ontario Regulation 60/09, under the Ontario Society for the Prevention of Cruelty to Animals Act, came into being. This regulation outlines basic standards of care for all animals and has additional regulations for dogs living outdoors, captive wildlife and captive primates. The Ontario SPCA supervises the Act. The Act’s standards however are open to interpretation and many provisions are therefore difficult, if not impossible, to enforce. This is admitted by the officials of the OSPCA that have to enforce the regulations (Conradi, 2012). Even the current Premier of Ontario, Dalton McGuinty, stated this September that animal laws should become tougher (Casey and Ferguson, 2012). He said this after allegations of animal mistreatment at Marineland, which became public this summer.

These sentiments are in line with evolving animal welfare science and changing public attitudes. Today, if people want to keep wildlife in captivity, they should be expected to do everything in their power to keep the animals physically and psychologically healthy. If they do not, then their right to keep animals should be reevaluated.

### **3. Methodology**

This report is based on two visits to Springwater Provincial Park and the previous recommendation reports. The first visit was a general exploration of the wildlife display with the following goals:

1. Listing the kind and amount of species that were present.
2. Making an assessment of the enclosures in which the animals were housed, this included assessing:
  - Complexity of the enclosures (presence of vegetation, enrichment).

- Presence of shelters.
  - Presence of food and water.
3. Animal safety
  4. Public safety

Photos were taken of the enclosures and all the findings were recorded on paper. The detailed observations can be found in appendix 1.

After the first visit, the animals were prioritised based on the housing conditions and observed behaviours. The welfare of the following animals is seriously deprived:

1. American black bear
2. Gray wolf
3. Canadian lynx
4. Bobcat

The welfare of the following animals should be improved:

1. Raccoons
2. Red foxes
3. Bald eagles
4. Peregrine falcon
5. Rough legged hawk
6. Great horned owl
7. Turkey vulture

The welfare of the following animals was assessed as good to excellent:

1. White tailed deer
2. Canadian geese
3. Wood ducks
4. Eurasian swans
5. Trumpeter swan

The classification of the animals was used to re-assess the housing circumstances during the second visit. More time was spent at the enclosures of these animals to have the opportunity to observe a bigger range of behaviours (at least 15 minutes per enclosure). The housing circumstances of the animals were collated with scientific literature and the Ontario Regulation 60/09, under the Ontario Society for the Prevention of Cruelty to Animals Act.



#### 4. Presentation and discussion of the results

This chapter compares the housing circumstances of the animals with the Ontario Regulation 60/09. Within the law there are some similar regulations, these regulations are dealt with as one to prevent repetition of answers. It will be explained when circumstances are found to be in conflict with the law. The enclosures of the black bear and the wolf are discussed individually. Paragraph 4.3 will outline the housing situation of the bobcat and lynx together, because the enclosures and husbandry routines are identical. The raptors are discussed as one group for similar reasons. The housing conditions of the other animals are reviewed in the last paragraph.

##### 4.1 American Black Bear

###### **2. (1) Every animal must be provided with adequate and appropriate food and water.**

Water is no issue. The food that was observed resembled dog food pellets. The same pellets were described in previous reports and according to an animal caretaker it is dog chow (Cole, 1999). Appropriate food is a vague definition that can be interpreted in different ways. According to scientific literature, a diet in captivity should be similar to a natural diet because it is more likely to meet an animal's nutritional requirements, it is more interesting for the animals and it will keep the animals physically healthy (Parry-Jones and Ferguson, 2003; Swaisgood and Sheperdson, 2005; Hedberg *et al.*, 2007).

Black bears are omnivorous; their diet consists of insects (particularly ants), nuts, berries, acorns, grasses, roots, other vegetation and sometimes small mammals (Fair and Roger, 1994; International Association for Bear Research and Management, 2007). According to Beeman and Pelton (1980) the diet is divided up into 63% fruit and seeds, 12% herbaceous/leaves, 11% animal matters, 6% grass, 6% artificial food (e.g. chocolate) and 2% debris. The consistency of the diet is influenced by the seasons. In the spring and summer the diet mainly consists of herbaceous which is low in protein but high in fibres and crude fat. In the fall and winter the diet of the bear is high in carbohydrates and crude fat (Maehr *et al.*, 2001). A diet that is mainly based on plant material is low in protein and high in fibre. Dog food on the other hand is low in fibre and high in protein which is inappropriate for black bears. A structural unbalanced diet with a deficiency or excess in nutrients can lead to serious health problems like obesity, lesions, intoxication and deterioration of for example eye sight.

Another factor to consider is the amount of time an animal spends on feeding. Black bears forage around 18 hours per day (Rogers, 1987). Providing dog food pellets in bowl is inappropriate because it decreases natural foraging behaviour. A decrease in natural behaviour is often replaced with undesirable abnormal behaviours (Clubb and Vickery, 2006).

###### **2. (2) Every animal must be provided with adequate and appropriate medical attention.**

Not determined.

###### **2. (3) Every animal must be provided with the care necessary for its general welfare.**

Animal welfare is described as the state of an animal that is both healthy and has what it wants (Dawkins, 2012). Therefore the necessary care should include both physical and psychological health. The care provided for the black bear is very basic. The bear receives food in a bowl and has unlimited access to drinking water. It looks like the enclosure is cleaned daily. The condition of the inside enclosure is unknown. Enrichment is not provided. There is a wooden structure in the enclosure, a small bath and one ball. It is established that general care means more than keeping an animal alive but keeping the bear alive seems to be the only goal of the keepers and the park management.

**2. (4) Every animal must be transported in a manner that ensures its physical safety and general welfare.**

Not determined.

**2. (5) + 5. (2e) + 5. (2b) Every animal must be provided with an adequate and appropriate resting, sleeping and shelter area, with one or more areas that is accessible and can accommodate all animals.**

The black bear has three possibilities for resting and sleeping: the inside den, the elevated wooden plateau and the plain sandy ground. Wild black bears prefer habitats with thick understory vegetation like in old-growth forests (Pelton *et al.*, 1999). The black bear enclosure offers no privacy because there is no vegetation and no outdoor hiding areas. The enclosure does not have any features that a wild bear prefers or that are recommended by animal welfare institutions like the EEP (EEP Ursid Husbandry Guidelines, 1998). For example bears like to create resting dens (Maehr *et al.*, 2001). However no nesting material is provided. Giving the bear the opportunity to create its own resting place would result in species specific behaviour and has a higher educational value for the visitors.

**2. (6a) + 5. (1a) + 5. (2a) + 5. (2c) Every animal must be provided with adequate and appropriate space, features and furnishing to enable the animal to move naturally and to exercise/show natural behaviour.**

The dimensions of the enclosure were estimated at 50m<sup>2</sup>. The vertical space is underutilized. The enclosure is very small compared to the natural habitat of the black bear which covers 3 to 40 km<sup>2</sup> (International Association for Bear Research and Management, 2007). The behavioural repertoire of the American black bear includes running, climbing and swimming (Rogers, 1987). None of the behaviours can be performed in this enclosure. The bear is not able to run at full speed due to the enclosure size. When the bear would run it would reach the other side of the enclosure within a couple of steps. Climbing is not stimulated because the elevated plateau can be reached by a wooden plank. Swimming is not possible because the pool is not big enough. Size is not beatific as long as an animal can compensate the lack of space with other natural behaviours. In captivity animals have to be stimulated to perform species specific behaviour because the captive environment does not have the same stimuli as a wild habitat (McPhee, 2002). There is no evidence that enrichment is used to stimulate natural behaviours. The enclosure seems to have been constructed and maintained with a lack of inspiration.

**2. (6b) Every animal must be provided with adequate and appropriate sanitary conditions.**

No issue for the outside enclosure. Not determined for the inside enclosure.

**2. (6c) Every animal must be provided with adequate and appropriate ventilation.**

No issue for the outside enclosure. Not determined for the inside enclosure.

**2. (6d) Every animal must be provided with adequate and appropriate light, and.**

No issue for the outside enclosure. Not determined for the inside enclosure.

**2. (6e) Every animal must be provided with adequate and appropriate protection from the elements, including harmful temperatures.**

No issue.

**2. (7a) If an animal is confined to a pen or other enclosed structure or area the pen or other enclosed structure or area, and any structures or material in it, must be in a state of good repair.**

No issue.

**2. (7b) + 5. (3a+b) If an animal is confined to a pen or other enclosed structure or area the pen or other enclosed structure or area, and any surfaces, structures and materials in it, must be made of and contain only materials that are (i) safe and non-toxic for the animal, and (ii) of a texture and design that will not bruise, cut or otherwise injure the animal.**

Hard wooden floors can cause skin damage.

**2. (7c) If an animal is confined to a pen or other enclosed structure or area the pen or other enclosed structure or area must not contain one or more other animals that may pose a danger to the animal.**

No issue.

**2. (8) Every animal that is to be killed must be killed by a method that is humane and minimizes the pain and distress to the animal; an animal's pain and distress are deemed to be minimized if it is killed by a method that produces rapid, irreversible unconsciousness and prompt subsequent death.**

Not determined.

**4. (2) Wildlife kept in captivity must be provided with a daily routine that facilitates and stimulates natural movement and behaviour.**

The daily "routine" is very basic. The routine in the morning is cleaning and feeding. It is not clear if the food is provided once or twice a day. There is no sign that the daily routine facilitates and stimulates natural movement and behaviour. Providing food in a bowl is not stimulating, having one ball in the enclosure is not enrichment.

The black bear was observed eating the pellets while lying on the floor with its front paws on both sides of the bowl. At another moment the bear was performing pacing behaviour which is an indicator of impaired welfare (Mason *et al.*, 2007). A clear worn out path was observed alongside the edge of the enclosure fence, which is a strong indicator for consistent pacing behaviour. Nothing is undertaken to decrease stereotype behaviour, to make the enclosure more challenging or to actively work with enrichment schedules to increase natural behaviours.

**4. (3) Wildlife kept in captivity must be kept in compatible social groups to ensure the general welfare of the individual animals and of the group and to ensure that each animal in the group is not at risk of injury or undue stress from dominant animals of the same or a different species.**

The bear is kept solitary. Bears in zoos are normally kept in pairs of the same sex (EEP Ursid Husbandry Guidelines, 1998). Social contact is an enrichment even when the animals are normally solitary in the wild (Montaudouin and Le Pape, 2005).

**5. (1b) + 5(2d) A pen or other enclosed structure or area for wildlife kept in captivity must be of an adequate and appropriate size, to enable each animal in the pen or other enclosed structure or area to keep an adequate and appropriate distance from the other animals and people so that it is not psychologically stressed and one or more areas that are out of view of spectators.**

The only place where the bear can go to get out of the view of the public is the inside den. The outside enclosure does not provide any possibility to hide. This has two reasons. First, there is no appropriate vegetation or enclosure feature that provides protection. Second, the public can look into the enclosure from a higher viewpoint.

**5. (1c) A pen or other enclosed structure or area for wildlife kept in captivity must be of an adequate and appropriate size, to ensure that the natural growth of each animal in the pen or other enclosed structure or area is not restricted.**

Not applicable.

**5. (4a) A pen or other enclosed structure or area for wildlife kept in captivity and any gates or other barriers to it, including moats, must be designed, constructed and locked or otherwise secured to prevent, interaction with people that may be unsafe or inappropriate for the wildlife.**

No issue.

**5. (4b) A pen or other enclosed structure or area for wildlife kept in captivity and any gates or other barriers to it, including moats, must be designed, constructed and locked or otherwise secured to prevent, animals escaping from the pen or other enclosed structure or area by climbing, jumping, digging, burrowing or any other means.**

Not determined.

**5. (4c) A pen or other enclosed structure or area for wildlife kept in captivity and any gates or other barriers to it, including moats, must be designed, constructed and locked or otherwise secured to prevent, animals or people (other than people who are required to enter the enclosure as part of their duties) from entering the pen or other enclosed structure or area by climbing, jumping, digging, burrowing or any other means.**

No issue.

**5. (5) A pen or other enclosed structure or area for wildlife kept in captivity and any gates or other barriers to it, including moats, must be designed, constructed and maintained in a manner that presents no harm to the wildlife.**

Doors should ideally move horizontally instead of vertically. This is to prevent accidents with doors falling onto animals or employees. It would also be preferable to have a perimeter fence surrounding the entire wildlife compound. A fence discourages unwanted intruders from coming too close to the animals and discourages escaped animals from leaving the compound.

**Summarize: from the 30 points mentioned in the law:**

- **17 points are in conflict with the law.**
- **8 points are in agreement with the law.**
- **1 point is not applicable in the case.**
- **7 points are not determined.**

**\* 3 points could be assessed in the outside enclosure but not in the inside enclosure, these points were scored twice as in agreement with the law and not determined.**

#### **4.2 Gray Wolf**

**2. (1) Every animal must be provided with adequate and appropriate food and water.**

Water is not an issue. The food that was observed was the similar to the pellets that were fed to the bear. The diet of the wolf should be changed when it only consists of dog chow. Not because the diet is nutritionally inadequate (which is unknown) but because wolves are used to eating different types of prey (Darimont et al, 2003). As mentioned before, a versatile diet that resembles the natural diet is desirable for the health of captive wildlife. Whole prey is good for the dental health of the wolf and will give the animal the opportunity to “work” with the food, crushing bones and tearing meat. This type of food will also increase feeding time, which is always desirable for captive animals.

**2. (2) Every animal must be provided with adequate and appropriate medical attention.**

Not determined.

**2. (3) Every animal must be provided with the care necessary for its general welfare.**

The care provided for the gray wolf is very basic. The wolf receives food in a bowl and has unlimited access to drinking water. It looks like the enclosure is cleaned daily. The conditions of the two small

pens are unknown. There are some features in the enclosure like stones, high bare trees, car tire, a big pipe and a small ball (that was buried in the ground). It is established that general care means more than keeping an animal alive but keeping the wolf alive seems to be the only goal of the keepers and the park management.

**2. (4) Every animal must be transported in a manner that ensures its physical safety and general welfare.**

Not determined.

**2. (5) + 5. (2e) + 5. (2b) Every animal must be provided with an adequate and appropriate resting, sleeping and shelter area, with one or more areas that is accessible and can accommodate all animals.**

Wild wolves prefer densely vegetated areas (Geffen *et al.*, 2004). Wolves are elusive and like to be invisible to humans (Darimont *et al.*, 2003). The enclosure of the captive wolf does not resemble the wild habitat at all. The wolf has two pens that can be used for resting, hiding or sleeping purpose. There are no appropriate resting or hiding areas outdoors. This is due to the bare outside enclosure which does not offer any privacy. Not offering proper resting places can result in stress. This seems to be in agreement with the behaviour that was observed.

The wolf was each time observed lying in the back left corner. As soon as the wolf noticed visitors it would get up, and walk from one side of the enclosure (as far away from the visitors as possible) to the other side, with its head always turned towards the visitors. The wolf would sometimes stop, with its head towards the visitors but with its body posture turning away from the visitors. When the viewers would leave or sit down quietly the wolf would return to its resting place at the back left corner. The restless and nervous behaviour would not appear as much when the wolf would feel more secure in its enclosure. A safer environment would be an enclosure with outside hiding possibilities.

**2. (6a) + 5. (1a) + 5. (2a) + 5. (2c) Every animal must be provided with adequate and appropriate space, features and furnishing to enable the animal to move naturally and to exercise/show natural behaviour.**

The dimensions of the enclosure were estimated at 100m<sup>2</sup>. The vertical space is underutilized. The territory in the wild of a pack of wolves is at least 35 km<sup>2</sup> (Packard, 2003). Wolves are mainly active in hunting and roaming through their territory. These behaviours cannot be performed in this enclosure. The wolf is not able to run at full speed or roam because the enclosure is too small. Hunting is not possible because the animal has a diet that consists of pellets. There is no evidence that enrichment is used to stimulate natural behaviour.

**2. (6b) Every animal must be provided with adequate and appropriate sanitary conditions.**

No issue for the outside enclosure. Not determined for the inside enclosure.

**2. (6c) Every animal must be provided with adequate and appropriate ventilation.**

No issue for the outside enclosure. Not determined for the inside enclosure.

**2. (6d) Every animal must be provided with adequate and appropriate light, and.**

No issue for the outside enclosure. Not determined for the inside enclosure.

**2. (6e) Every animal must be provided with adequate and appropriate protection from the elements, including harmful temperatures.**

No issue.

**2. (7a) If an animal is confined to a pen or other enclosed structure or area the pen or other enclosed structure or area, and any structures or material in it, must be in a state of good repair.**

No issue.

**2. (7b) + 5. (3a+b) If an animal is confined to a pen or other enclosed structure or area the pen or other enclosed structure or area, and any surfaces, structures and materials in it, must be made of and contain only materials that are (i) safe and non-toxic for the animal, and (ii) of a texture and design that will not bruise, cut or otherwise injure the animal.**

Hard wooden floors (in the pens) can cause skin damage.

**2. (7c) If an animal is confined to a pen or other enclosed structure or area the pen or other enclosed structure or area must not contain one or more other animals that may pose a danger to the animal.**

No issue.

**2. (8) Every animal that is to be killed must be killed by a method that is humane and minimizes the pain and distress to the animal; an animal's pain and distress are deemed to be minimized if it is killed by a method that produces rapid, irreversible unconsciousness and prompt subsequent death.**

Not determined.

**4. (2) Wildlife kept in captivity must be provided with a daily routine that facilitates and stimulates natural movement and behaviour.**

The daily "routine" is very basic. In the morning the enclosure is cleaned and the wolf is fed. It is not clear if the food is provided once or twice a day. There is no sign that the daily routine facilitates and stimulates natural movement or behaviour. Providing food in a bowl is not stimulating, having one care tire in the enclosure is not enrichment. Worn out pathways were observed in the substrate close to the fence of the enclosure. No pacing behaviour was observed but the pathways may be an indication of excessive pacing behaviour. In a previous report the wolf was pacing (Laidlaw, 2010). Nothing is undertaken to increase species specific behaviour, to make the enclosure more challenging or to actively work with enrichment schedules.

**4. (3) Wildlife kept in captivity must be kept in compatible social groups to ensure the general welfare of the individual animals and of the group and to ensure that each animal in the group is not at risk of injury or undue stress from dominant animals of the same or a different species.**

Wolves should be housed in compatible groups because they are social animals. This wolf used to have a one social companion but that animal died some time ago. Wolves are social animals and live in packs (Mech and Boitani, 2003). Housing a social animal in solitary is not recommended and efforts should be made to introduce the animal to another captive wolf pack in another facility.

**5. (1b) + 5(2d) A pen or other enclosed structure or area for wildlife kept in captivity must be of an adequate and appropriate size, to enable each animal in the pen or other enclosed structure or area to keep an adequate and appropriate distance from the other animals and people so that it is not psychologically stressed and one or more areas that are out of view of spectators.**

The wolf does not seem comfortable with public viewers, as the animal stayed at the back of the enclosure at all times. Furthermore the wolf showed signs of nervousness by walking along the back fence, looking at the visitors, sometimes interrupting the walk to watch the movements of the visitors. It is clear that the animal does not feel comfortable. The posture of the animal gives the impression that the wolf would prefer to move away even farther away from the visitors.

**5. (1c) A pen or other enclosed structure or area for wildlife kept in captivity must be of an adequate and appropriate size, to ensure that the natural growth of each animal in the pen or other enclosed structure or area is not restricted.**

Not applicable.

**5. (4a) A pen or other enclosed structure or area for wildlife kept in captivity and any gates or other barriers to it, including moats, must be designed, constructed and locked or otherwise secured to prevent, interaction with people that may be unsafe or inappropriate for the wildlife.**

No issue.

**5. (4b) A pen or other enclosed structure or area for wildlife kept in captivity and any gates or other barriers to it, including moats, must be designed, constructed and locked or otherwise secured to prevent, animals escaping from the pen or other enclosed structure or area by climbing, jumping, digging, burrowing or any other means.**

No issue.

**5. (4c) A pen or other enclosed structure or area for wildlife kept in captivity and any gates or other barriers to it, including moats, must be designed, constructed and locked or otherwise secured to prevent, animals or people (other than people who are required to enter the enclosure as part of their duties) from entering the pen or other enclosed structure or area by climbing, jumping, digging, burrowing or any other means.**

No issue.

**5. (5) A pen or other enclosed structure or area for wildlife kept in captivity and any gates or other barriers to it, including moats, must be designed, constructed and maintained in a manner that presents no harm to the wildlife.**

Doors should ideally move horizontally instead of vertically. This is to prevent accidents with doors falling onto animals or employees. It would also be preferable to have a perimeter fence surrounding the entire wildlife compound. A fence discourages unwanted intruders from coming too close to the animals and discourages escaped animals from leaving the compound.

**Summarize: from the 30 points mentioned in the law:**

- **17 points are in conflict with the law.**
- **9 points are in agreement with the law.**
- **1 point is not applicable in the case.**
- **6 points are not determined.**

**\* 3 points could be assessed in the outside enclosure but not in the inside enclosure, these points were scored twice as in agreement with the law and not determined.**

#### **4.3 Bobcat and Canadian lynx**

**2. (1) Every animal must be provided with adequate and appropriate food and water.**

Water is no issue. Only feathers were observed in the enclosures suggest that some kind of bird or waterfowl is being fed to both species. When the diet of the bobcat and lynxes only consists of one food type it should be changed. Not because the diet does not meet all the necessary nutritional requirements (which is unknown at this time) but because both species are used to eat different types of food like mice, rabbits, birds, small ungulates, and fish (Fergus, 2003; Vargas *et al.*, 2006). As mentioned before, a versatile diet that resembles the natural diet is desirable for the health of captive wildlife. Offering other types of whole prey will challenge the animal to use different techniques to manipulate the food and extend the feeding time.

**2. (2) Every animal must be provided with adequate and appropriate medical attention.**

Not determined.

**2. (3) Every animal must be provided with the care necessary for its general welfare.**

The care provided for the bobcat and lynx is very basic. They receive food and have an unlimited access to drinking water. It looks like the enclosures are cleaned each morning. The condition of the small pen present in both enclosures is unknown. Both enclosures have a wooden roof, which is different from all the other enclosures in the wildlife compound. There are some wooden logs in the enclosures, one hammock and an elevated plateau which can be reached by a wooden plank. It is established that general care means more than keeping an animal alive. However this seems to be the only goal of the keepers and the park management. The enclosure of both species resembles a big rabbit or chicken cage. Both enclosures are unchallenging, uninteresting and do not provide any features that resembles the natural habitat. Both species prefer deep forests and mountain areas (Fergus, 2003; Mellen, 2003).

**2. (4) Every animal must be transported in a manner that ensures its physical safety and general welfare.**

Not determined.

**2. (5) + 5. (2e) + 5. (2b) Every animal must be provided with an adequate and appropriate resting, sleeping and shelter area, with one or more areas that is accessible and can accommodate all animals.**

Each enclosure contains one small pen. The lynx should have two pens because all animals should have access to shelter at the same time, if necessary. Conflicts can prevent animals from sharing a shelter.

Felids like to rest at a place where they can oversee the area. According to Mellen (2003) 75% of the vertical space of the enclosure should be used. The enclosures at the wildlife compound do not use any vertical space except for the small pen that is in a corner of each enclosure. There are no suitable hiding places. Both enclosures do not have any vegetation or features that give the animals the possibility to hide from spectators or each other. A wooden screen was constructed near the shelter of the bobcat to give the animal some privacy. However this screen is of no purpose because visitors can walk around the enclosures.

**2. (6a) + 5. (1a) + 5. (2a) + 5. (2c) Every animal must be provided with adequate and appropriate space, features and furnishing to enable the animal to move naturally and to exercise/show natural behaviour.**

The dimensions of the enclosures were estimated at 36m<sup>2</sup>. The height was estimated on 2,50 meter, the roof is a limited factor to utilize the vertical space. However the vertical space that is available is underutilized.

The behavioural repertoire of small felids includes running, climbing, swimming and hunting (Fergus, 2003). These behaviours cannot be performed in either enclosure, because of the size, the enclosure design and the lack of enrichment. The most remarkable about these two enclosures is that they are both brand new but that they are absolutely not suitable for these animals. The enclosures are small, without privacy, without any vegetation, without enrichment. What the underlying thought was when building these enclosures is not clear. Even with enrichment, these enclosures would be inappropriate because of their size.

**2. (6b) Every animal must be provided with adequate and appropriate sanitary conditions.**

No issue. Not determined for the pen.

**2. (6c) Every animal must be provided with adequate and appropriate ventilation.**

No issue. Not determined for the pen.

**2. (6d) Every animal must be provided with adequate and appropriate light, and.**



No issue. Not determined for the pen.

**2. (6e) Every animal must be provided with adequate and appropriate protection from the elements, including harmful temperatures.**

No issue.

**2. (7a) If an animal is confined to a pen or other enclosed structure or area the pen or other enclosed structure or area, and any structures or material in it, must be in a state of good repair.**

No issue.

**2. (7b) + 5. (3a+b) If an animal is confined to a pen or other enclosed structure or area the pen or other enclosed structure or area, and any surfaces, structures and materials in it, must be made of and contain only materials that are (i) safe and non-toxic for the animal, and (ii) of a texture and design that will not bruise, cut or otherwise injure the animal.**

Hard wooden shelves (used as plateau and as pen material) can cause skin damage.

**2. (7c) If an animal is confined to a pen or other enclosed structure or area the pen or other enclosed structure or area must not contain one or more other animals that may pose a danger to the animal.**

No issue.

**2. (8) Every animal that is to be killed must be killed by a method that is humane and minimizes the pain and distress to the animal; an animal's pain and distress are deemed to be minimized if it is killed by a method that produces rapid, irreversible unconsciousness and prompt subsequent death.**

Not determined.

**4. (2) Wildlife kept in captivity must be provided with a daily routine that facilitates and stimulates natural movement and behaviour.**

The daily "routine" is very basic. In the morning the enclosures are cleaned and the animals are fed. It is not clear if the food is provided once or twice a day. There is no sign that the daily routine facilitates and stimulates natural movement and behaviour.

Worn out pathways were observed in both enclosures near the side of the fence. This is in agreement with the pacing behaviour that was performed by both species. The animals were pacing especially on the left side of the enclosures. One of the lynx also vocalized during pacing.

There are some wooden logs in the enclosures, which seem to be used by the animals to scratch their claws and might even be used to bite on. There is no sign of any enrichment programs to stimulate natural behaviour in any way. Nothing is undertaken to decrease abnormal behaviour, to make the enclosure more challenging or to actively work with enrichment.

**4. (3) Wildlife kept in captivity must be kept in compatible social groups to ensure the general welfare of the individual animals and of the group and to ensure that each animal in the group is not at risk of injury or undue stress from dominant animals of the same or a different species.**

Both species are solitary animals in the wild. However a social companion in captivity can be a great asset in situations (Montaudouin and Le Pape, 2005). The lynx are housed in a pair but the bobcat is housed alone. It is laudable that the lynx have each other's company; however the enclosure is not suitable to house two normal solitary animals. The lynx have to share a small interior pen and a small enclosure. There are no features that can be used as hiding places, to get out of each other's sight.

An issue with both enclosures is that they are built next to each other. Due to this construction and the lack of enclosure features it is not possible to get out of each other's sight. This can result in stressful situations (e.g. during feeding time, seasonal stress) in which the animals will try to cope by

redirecting their behaviour resulting in abnormal or overly aggressive behaviour (Clubb and Vickery, 2006; Manteca, 2006).

**5. (1b) + 5(2d) A pen or other enclosed structure or area for wildlife kept in captivity must be of an adequate and appropriate size, to enable each animal in the pen or other enclosed structure or area to keep an adequate and appropriate distance from the other animals and people so that it is not psychologically stressed and one or more areas that are out of view of spectators.**

As mentioned before this is not the case. The species are housed very near to each other, the visitors can walk around the enclosures, the enclosures are too small and no features or vegetation allows the animals to hide from each other or the public.

**5. (1c) A pen or other enclosed structure or area for wildlife kept in captivity must be of an adequate and appropriate size, to ensure that the natural growth of each animal in the pen or other enclosed structure or area is not restricted.**

Not applicable.

**5. (4a) A pen or other enclosed structure or area for wildlife kept in captivity and any gates or other barriers to it, including moats, must be designed, constructed and locked or otherwise secured to prevent, interaction with people that may be unsafe or inappropriate for the wildlife.**

No issue.

**5. (4b) A pen or other enclosed structure or area for wildlife kept in captivity and any gates or other barriers to it, including moats, must be designed, constructed and locked or otherwise secured to prevent, animals escaping from the pen or other enclosed structure or area by climbing, jumping, digging, burrowing or any other means.**

No issue.

**5. (4c) A pen or other enclosed structure or area for wildlife kept in captivity and any gates or other barriers to it, including moats, must be designed, constructed and locked or otherwise secured to prevent, animals or people (other than people who are required to enter the enclosure as part of their duties) from entering the pen or other enclosed structure or area by climbing, jumping, digging, burrowing or any other means.**

No issue.

**5. (5) A pen or other enclosed structure or area for wildlife kept in captivity and any gates or other barriers to it, including moats, must be designed, constructed and maintained in a manner that presents no harm to the wildlife.**

It would also be preferable to have a perimeter fence surrounding the entire wildlife compound. A fence discourages unwanted intruders from coming too close to the animals and discourages escaped animals from leaving the compound.

**Summarize: from the 30 points mentioned in the law:**

- **17 points are in conflict with the law.**
- **11 points are in agreement with the law.**
- **1 point is not applicable.**
- **6 points are not determined.**

**\* 3 points could be assessed in the outside enclosure but not in the inside enclosure, these points were scored twice as in agreement with the law and not determined.**

#### **4.4 Raptors**

There are 5 raptors present at Springwater Provincial Park, 1 falcon, 1 hawk, 1 vulture and 2 eagles.

**2. (1) Every animal must be provided with adequate and appropriate food and water.**

Water is not an issue. Food was observed in the enclosure of the owl (a chick) and eagles (kind of bird or waterfowl). It is not clear if the animals get any other types of food. In the wild raptors eat different types of food like mice, rats, rabbits, fish, carrion, etc (Parry-Jones and Ferguson, 2003). A variation in food will be more interesting for the raptors and is more likely to meet all the nutritional requirements.

**2. (2) Every animal must be provided with adequate and appropriate medical attention.**

Not determined.

**2. (3) Every animal must be provided with the care necessary for its general welfare.**

The care provided for the raptors is in all cases very basic. The birds receive food and water. They have access to an inside enclosure. Water baths should be provided to all animals, however only the hawk and the eagles had a water bath available. The raptor's enclosures exist of mesh. There is a roof made out of mesh to prevent the birds from escaping. The falcon has some cardboard on the roof to provide shade. The other enclosures do not have this.

It looks like the enclosures are cleaned daily, however the walls that connect the outside enclosures with the inside enclosures are very dirty. The enclosures have wooden logs and some elevated plateaus that can be used as resting places. There is hardly any vegetation, except for the small trees that are planted in boxes. None of the vegetation offers the birds adequate privacy.

**2. (4) Every animal must be transported in a manner that ensures its physical safety and general welfare.**

Not determined.

**2. (5) + 5. (2e) + 5. (2b) Every animal must be provided with an adequate and appropriate resting, sleeping and shelter area, with one or more areas that is accessible and can accommodate all animals.**

All the raptors have plenty of wooden logs to rest on. The only issue is that the outside enclosure does not provide any privacy; the enclosures are open due to the mesh and the lack of vegetation. The great horned owl has a small outdoor nest box; however the opening is towards the public so it has no use in terms of hiding. The other enclosures do not have any boxes in the outside enclosure. The eagles share one inside enclosure; this is not preferable because conflicts can cause to keep one animal out of the secure inside enclosure.

**2. (6a) + 5. (1a) + 5. (2a) + 5. (2c) Every animal must be provided with adequate and appropriate space, features and furnishing to enable the animal to move naturally and to exercise/show natural behaviour.**

In case of raptors it is tricky to provide them with a suitable enclosure. Raptors are active for only a small part of the day (Parry-Jones and Ferguson, 2003). The birds rest during the largest part of the day. This is the reason why falconers keep the birds on tethers. The birds obtain physical activity during their training. This system is considered cruel and is not encouraged by animal welfare groups because the animals are severely restricted in their movement and behaviour for the bulk of their time.

The enclosures of the raptors were estimated between 16m<sup>2</sup> and 50m<sup>2</sup> and a height of 2,50m. The two main behaviours of a bird are flying/hunting and resting. The enclosures do not allow the animals to fly at full speed, to turn during flight or to fly up to a certain height. Flight cages would be the only suitable captive option for raptors.

**2. (6b) Every animal must be provided with adequate and appropriate sanitary conditions.**

No issue for the outside enclosure, not determined for the inside enclosure.

**2. (6c) Every animal must be provided with adequate and appropriate ventilation.**

No issue for the outside enclosure, not determined for the inside enclosure.

**2. (6d) Every animal must be provided with adequate and appropriate light, and.**

No issue for the outside enclosure, not determined for the inside enclosure.

**2. (6e) Every animal must be provided with adequate and appropriate protection from the elements, including harmful temperatures.**

No issue for the outside enclosure, not determined for the inside enclosure.

**2. (7a) If an animal is confined to a pen or other enclosed structure or area the pen or other enclosed structure or area, and any structures or material in it, must be in a state of good repair.**

No issue.

**2. (7b) + 5. (3a+b) If an animal is confined to a pen or other enclosed structure or area the pen or other enclosed structure or area, and any surfaces, structures and materials in it, must be made of and contain only materials that are (i) safe and non-toxic for the animal, and (ii) of a texture and design that will not bruise, cut or otherwise injure the animal.**

No issue.

**2. (7c) If an animal is confined to a pen or other enclosed structure or area the pen or other enclosed structure or area must not contain one or more other animals that may pose a danger to the animal.**

No issue.

**2. (8) Every animal that is to be killed must be killed by a method that is humane and minimizes the pain and distress to the animal; an animal's pain and distress are deemed to be minimized if it is killed by a method that produces rapid, irreversible unconsciousness and prompt subsequent death.**

No issue.

**4. (2) Wildlife kept in captivity must be provided with a daily routine that facilitates and stimulates natural movement and behaviour.**

The daily "routine" is very basic. The morning routine exists of cleaning the enclosures and feeding the birds. It is not clear if food is provided once or twice a day. There is no sign that the daily routine facilitates and stimulates natural movement and behaviours. Nothing is undertaken to increase species specific behaviour, to make the enclosure more challenging or to actively work with enrichment.

**4. (3) Wildlife kept in captivity must be kept in compatible social groups to ensure the general welfare of the individual animals and of the group and to ensure that each animal in the group is not at risk of injury or undue stress from dominant animals of the same or a different species.**

Raptors are solitary animals until they find a mate for life (Jones, 2006). The eagles are the only birds housed in a pair. The other birds are kept alone. Social companionship is desirable in captivity even for solitary animals (Montaudouin and Le Pape, 2005).

**5. (1b) + 5(2d) A pen or other enclosed structure or area for wildlife kept in captivity must be of an adequate and appropriate size, to enable each animal in the pen or other enclosed structure or area to keep an adequate and appropriate distance from the other animals and people so that it is not psychologically stressed and one or more areas that are out of view of spectators.**

The birds can chose to go inside when they feel threatened by spectators. Hiding from the public in the outside enclosure is not possible. Another issue is that the enclosures are located next to each

other. Some parts of the mesh are covered by wooden slats and screens. This is probably done to reduce stress and to give the birds the opportunity to hide from their neighbours. Most raptors are territorial (Parry-Jones and Ferguson, 2003). Housing the animals so close to each other can cause stress because the birds may try to defend their territory.

**5. (1c) A pen or other enclosed structure or area for wildlife kept in captivity must be of an adequate and appropriate size, to ensure that the natural growth of each animal in the pen or other enclosed structure or area is not restricted.**

Not applicable.

**5. (4a) A pen or other enclosed structure or area for wildlife kept in captivity and any gates or other barriers to it, including moats, must be designed, constructed and locked or otherwise secured to prevent, interaction with people that may be unsafe or inappropriate for the wildlife.**

No issue.

**5. (4b) A pen or other enclosed structure or area for wildlife kept in captivity and any gates or other barriers to it, including moats, must be designed, constructed and locked or otherwise secured to prevent, animals escaping from the pen or other enclosed structure or area by climbing, jumping, digging, burrowing or any other means.**

No issue.

**5. (4c) A pen or other enclosed structure or area for wildlife kept in captivity and any gates or other barriers to it, including moats, must be designed, constructed and locked or otherwise secured to prevent, animals or people (other than people who are required to enter the enclosure as part of their duties) from entering the pen or other enclosed structure or area by climbing, jumping, digging, burrowing or any other means.**

No issue.

**5. (5) A pen or other enclosed structure or area for wildlife kept in captivity and any gates or other barriers to it, including moats, must be designed, constructed and maintained in a manner that presents no harm to the wildlife.**

It would also be preferable to have a perimeter fence surrounding the entire wildlife compound. A fence discourages unwanted intruders from coming too close to the animals.

**Summarize: from the 30 points mentioned in the law:**

- **14 points are in conflict with the law.**
- **11 points are in agreement with the law.**
- **1 point is not applicable in the case.**
- **6 points are not determined.**

**\* 3 points could be assessed in the outside enclosure but not in the inside enclosure, these points were scored twice as in agreement with the law and not determined.**

#### **4.5 Other species**

The other species are: raccoons, red foxes, white tailed deer, wild turkeys, black squirrel, wood ducks, Eurasian swans and a trumpeter swan. The enclosures of the white tailed deer, wild turkey, squirrel and the trumpeter swan are all excellent.

**2. (1) Every animal must be provided with adequate and appropriate food and water.**

Water is not an issue. Food is not an issue for the waterfowl, turkeys, squirrel and deer. The food observed in the enclosure of the raccoons and foxes were similar to the dog chow pellets in the enclosure of the bear and the wolf.

Raccoons are omnivorous, their diet consist of invertebrates, plant material and vertebrates (Bartoszewicz *et al.*, 2008). The foxes also get the same dog pellets. Foxes are mainly carnivorous, with a diet consisting of rodents, leporine, small birds and carrion (Baltrūnaitė, 2002). It would be more appropriate for the foxes to receive whole prey food like the other carnivores in the wildlife compound.

The nutritional content of the pellets is unknown, however it is desirable to offer animals a range of food items. It will increase feeding time and it is more likely to meet the nutritional requirements.

**2. (2) Every animal must be provided with adequate and appropriate medical attention.**

Not determined.

**2. (3) Every animal must be provided with the care necessary for its general welfare.**

The care provided to all the animals is very basic. The waterfowl, squirrel, turkey and deer have natural enclosures. The result is that these species can spent their time similar as their wild congeners.

The enclosures of the foxes and raccoons are not natural at all and the care of the animals is therefore assessed as inappropriate. The animals receive food in a bowl and have unlimited access to drinking water. It looks like the enclosures are cleaned daily. The condition of the inside pens are unknown. Enrichment is not provided. Both species do not have any privacy in their enclosures. The enclosure of the raccoons is small, consists entirely of mesh. A piece of overhead material provides shade, while the remainder of the roof is mesh. One resting plateau is protected by a wooden screen but as soon as the visitors walk around the enclosure the wooden screen does not have any use. There are some features (wooden logs, car tire) in the enclosure but the animals seem to ignore them and the staff does not seem to stimulate the usage of the features.

The foxes have a bigger enclosure with one shed to protect themselves from weather conditions. There is no enrichment present in the enclosure. A lack of environmental stimulation seems to have resulted in hyperactive digging behaviour of the foxes. No digging behaviour was observed but the many holes remained as evidence. There is no vegetation in the enclosure.

It is established that general care means more than keeping an animal alive. Again this seems to be the only goal of the keepers and the park management.

**2. (4) Every animal must be transported in a manner that ensures its physical safety and general welfare.**

Not determined.

**2. (5) + 5. (2e) + 5. (2b) Every animal must be provided with an adequate and appropriate resting, sleeping and shelter area, with one or more areas that is accessible and can accommodate all animals.**

The waterfowl do not have a shed but their enclosures have appropriate resting, sleeping and shelter areas, provided by the large trees and dense vegetation. The deer, turkey and squirrel have acceptable rest areas.

This is an issue for the raccoons and foxes. The raccoons have some elevated wooden shelves which they use to rest on. There is one pen that has to be shared between the two animals. The main issue is that neither the resting area outside nor the pen, gives the animals the privacy they would seek in the wild. This is due to the design of the enclosure, which allows visitors to walk around the entire enclosure.

The foxes have one big shed which they share. It would be desirable to have another shed in the enclosure so the animals are not obligated to share when they do not feel like it. The outside enclosure does not provide any appropriate resting/sleeping/hiding places. There is no vegetation in the enclosure and the substrate is bare earth.

**2. (6a) + 5. (1a) + 5. (2a) + 5. (2c) Every animal must be provided with adequate and appropriate space, features and furnishing to enable the animal to move naturally and to exercise/show natural behaviour.**

This is not an issue for the trumpeter swan, squirrel, turkeys and deer. The other waterfowl should have a bigger enclosure. According to the European Zoo Nutrition Centre (2012), the ideal measurements for a waterfowl enclosure is 50m<sup>2</sup> for the pond and 150m<sup>2</sup> for the vegetation field surrounding the pond. The enclosures for the Eurasian swan and the geese are smaller, estimated at 65m<sup>2</sup> and 130m<sup>2</sup>, which includes the pond.

The enclosure of the raccoons is estimated at 24m<sup>2</sup>. This is too small for an animal that enjoys roaming around. The behavioural repertoire of raccoons includes digging, climbing and foraging. These behaviours cannot be performed in the current enclosure due to a lack of space and inappropriate enclosure furnishing.

The enclosure of the foxes is larger, estimated on 64m<sup>2</sup>. Foxes like to dig, forage, swim and run. Digging is discouraged by the mesh that is placed under the enclosure to prevent the foxes from escaping. Swimming is not possible because no pool is provided. Roaming and running is prevented due to the non-stimulating environment.

Size is not beatific as long as an animal can compensate the lack of space with other natural behaviours. In captivity animals have to be stimulated to perform species specific behaviour because the captive environment does not have the same stimuli as a wild habitat (McPhee, 2002). There is no evidence that enrichment is used to stimulate natural behaviour. The enclosures of the raccoons and foxes were built and are maintained with a lack of inspiration.

**2. (6b) Every animal must be provided with adequate and appropriate sanitary conditions.**

No issue.

**2. (6c) Every animal must be provided with adequate and appropriate ventilation.**

No issue.

**2. (6d) Every animal must be provided with adequate and appropriate light, and.**

No issue.

**2. (6e) Every animal must be provided with adequate and appropriate protection from the elements, including harmful temperatures.**

No issue.

**2. (7a) If an animal is confined to a pen or other enclosed structure or area the pen or other enclosed structure or area, and any structures or material in it, must be in a state of good repair.**

No issue.

**2. (7b) + 5. (3a+b) If an animal is confined to a pen or other enclosed structure or area the pen or other enclosed structure or area, and any surfaces, structures and materials in it, must be made of and contain only materials that are (i) safe and non-toxic for the animal, and (ii) of a texture and design that will not bruise, cut or otherwise injure the animal.**

Hard wooden shelves can cause skin damage.

**2. (7c) If an animal is confined to a pen or other enclosed structure or area the pen or other enclosed structure or area must not contain one or more other animals that may pose a danger to the animal.**

No issue.

**2. (8) Every animal that is to be killed must be killed by a method that is humane and minimizes the pain and distress to the animal; an animal's pain and distress are deemed to be minimized if it is killed by a method that produces rapid, irreversible unconsciousness and prompt subsequent death.**

No issue.

**4. (2) Wildlife kept in captivity must be provided with a daily routine that facilitates and stimulates natural movement and behaviour.**

The daily "routine" is very basic. The enclosures are cleaned and the animals are fed during the morning. It is not clear if the food is provided once or twice a day. There is no sign that the daily routine facilitates and stimulates natural movement and behaviour. The circumstances of the foxes and raccoons are the most concerning.

The raccoons seem to be inactive for the greater part of the day. The animals were inactive during all four observations. The raccoons looked obese and the fur of one raccoon had rough fur patches that showed discolouration.

The foxes were more active during the observations. They would come up to the fence, probably looking for food. The enclosure of the foxes should be changed by adding vegetation and complex furnishing.

Nothing is undertaken to decrease stereotype behaviour, to make the enclosure more challenging or to actively work with enrichment schedules to increase natural behaviours.

**4. (3) Wildlife kept in captivity must be kept in compatible social groups to ensure the general welfare of the individual animals and of the group and to ensure that each animal in the group is not at risk of injury or undue stress from dominant animals of the same or a different species.**

Not an issue.

**5. (1b) + 5(2d) A pen or other enclosed structure or area for wildlife kept in captivity must be of an adequate and appropriate size, to enable each animal in the pen or other enclosed structure or area to keep an adequate and appropriate distance from the other animals and people so that it is not psychologically stressed and one or more areas that are out of view of spectators.**

This is an issue for the raccoons and foxes. The raccoons cannot get out of the sight from the spectators or from each other. This is caused by the size of the enclosure and inadequate furnishing. The foxes can hide behind the shed. However there are no other opportunities to get away from spectators or each other. This is caused by the inadequate furnishing and a lack of vegetation.

**5. (1c) A pen or other enclosed structure or area for wildlife kept in captivity must be of an adequate and appropriate size, to ensure that the natural growth of each animal in the pen or other enclosed structure or area is not restricted.**

Not applicable.

**5. (4a) A pen or other enclosed structure or area for wildlife kept in captivity and any gates or other barriers to it, including moats, must be designed, constructed and locked or otherwise secured to prevent, interaction with people that may be unsafe or inappropriate for the wildlife.**

No issue.

**5. (4b) A pen or other enclosed structure or area for wildlife kept in captivity and any gates or other barriers to it, including moats, must be designed, constructed and locked or otherwise secured to prevent, animals escaping from the pen or other enclosed structure or area by climbing, jumping, digging, burrowing or any other means.**

Not determined.



**5. (4c) A pen or other enclosed structure or area for wildlife kept in captivity and any gates or other barriers to it, including moats, must be designed, constructed and locked or otherwise secured to prevent, animals or people (other than people who are required to enter the enclosure as part of their duties) from entering the pen or other enclosed structure or area by climbing, jumping, digging, burrowing or any other means.**

No issue.

**5. (5) A pen or other enclosed structure or area for wildlife kept in captivity and any gates or other barriers to it, including moats, must be designed, constructed and maintained in a manner that presents no harm to the wildlife.**

It would also be preferable to have a perimeter fence surrounding the entire wildlife compound. A fence discourages unwanted intruders from coming too close to the animals and discourages escaped animals from leaving the compound.

**Summarize: the enclosure of the trumpeter swan, turkeys, squirrel and deer are excellent. The only issue is the size of the enclosures for the other waterfowls. The enclosures of the raccoon and foxes are can be summarized as follow: from the 30 points mentioned in the law:**

- **16 points are in conflict with the law.**
- **10 points are in agreement with the law.**
- **1 point is not applicable in the case.**
- **3 points are not determined.**

## 5. Conclusions and recommendations

Wild animals in captivity still have the wants and needs of a wild animal in its natural habitat. The desire to perform behaviours like reproduction, hibernation, foraging, hunting and swimming do not disappear because they are not necessary anymore to survive. People tend to forget that animals still have their wild instincts even when born or raised in captivity. It is clear that the animals at Springwater Provincial Park do not receive appropriate housing and care. Species specific behaviours were hardly observed in contrary to abnormal behaviours and inactivity. Diets do not appear to meet the animal's nutritional requirements nor do they stimulate species specific behaviour. Continuation of this animal caretaker regime is not desirable.

It was clear that aspects of Springwater's animal housing and care are in conflict with existing law. There is no sign of natural behaviour, stimulation of natural behaviour or any effort to make the life of the animals a little bit more interesting. This has to change and there are two options:

- Option 1: close the wildlife display and relocate all the animals to other wildlife compounds with higher animal welfare standards.
- Option 2: relocate the black bear, the gray wolf, the Canadian lynx and the bobcat. Invest in a new enclosure for the raptors or start training the raptors and change the enclosures for the foxes and raccoons. Invest in people to improve the caretaking routine.

Closing the wildlife display is, under these circumstances, the best option. Not because the park does not have potential to become a suitable wildlife compound but because park management have failed to recognize and rectify the deficiencies, many that have been present for the past 15 years or more, in the wildlife compound. Housing and management have remained rudimentary and no substantive improvements have occurred. For this reason, the wildlife compound should be closed and the animals relocated, in coordination with animal welfare organizations like Zoocheck Canada. This is necessary to ensure that the animals will be relocated to enhanced captive environments. This option is also the cheapest.

Option 2 includes relocating the animals that need the most complex environments to remain physically and psychologically healthy. Besides the relocation, improvements should be made for the animals that remain. The raptors should be offered flight opportunities. This can be achieved by building large flight cages. The other enclosures should be enriched with appropriate vegetation, features and furnishings. The raccoons should be kept in a much bigger, more natural enclosure. Proper enrichment programs should be implemented for all animals and diets should be changed. Probably the most important change that has to be achieved is the culture within the park staff itself. It has to become proactive and enthusiastic. A substantial investment of time, energy and resources will be required to bring the wildlife compound up to an acceptable standard.

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## Appendices

### Appendix 1: The visits in detail

- American Black Bear

**Visit 1:** I observed the bear which was showing abnormal behaviour - inactivity (inactivity can be indicated as abnormal behaviour, however it is premature after only one observation to characterize the bear as being primarily inactive). The bear was also observed pacing. I saw the following: it was pacing at one side of the enclosure (left from where I was standing), a couple of steps, looking over the concrete wall and then pacing back, repeating the behaviour. I also saw the bear using the little pool that was available (the water was really dirty, greenish). The bear used its front paw to splash some water on its body. Afterwards it continued pacing. During the second observation I saw the bear close to the front of the enclosure (there is a stand-off barrier for the public) for a short while and then repeated pacing in the area where I observed it pacing before.

The enclosure consists of three parts, the indoor enclosure, the part where the bear can eat and be locked and the rest of the outside enclosure. The bear has a den with straw. Visitors can see the entrance and a little bit of the inside. The bear had access to clean drinking water all the time (self regulated drinking system which you can also find in stables for horses). No food was observed. I observed a green ball in the right corner, closest to the public. The bear also had a little structure it could climb on, which also had a car tire hanging on the side of it (there was a gangway available so the bear could walk to the first level). This structure also provided shade as well as the trees surrounding the enclosure. The enclosure could be visited on every site. At the back of the enclosure the terrain slopes upward providing an elevated station at which visitors can look down into the enclosure. The enclosure was surrounded by mesh, with electrical wires on the upper portions of the barrier. The top of the mesh was also bent inward into the enclosure. The enclosure is small, as well is the little pool and the climbing structure. The only enrichment that was observed was the ball and the climbing structure. The substrate consists of some grass, stones and sand.

**Visit 2:** The bear was eating when I arrived at the enclosure. One bowl full with pellets was observed. The bear was lying on the concrete floor while eating.

- Gray Wolf

**Visit 1:** I observed the wolf lying in the left back corner of the enclosure. When I came back after a couple of hours it was still lying in the same spot. The wolf has two sheds (sleeping boxes) available and both had straw in them. The openings of both the sheds are located towards the enclosure of the coyotes (now empty). The wolf had access to clean and flowing water at all time. No food was observed. However there was an eating bowl visible which indicates that the wolf gets pelleted food. The enclosure consists of two parts. In one part the wolf can eat and be locked, the floor is of concrete. The other part is where the wolf can walk around and has its two sheds. There is a stand-off barrier in front of the enclosure. But it is possible to walk on the right side of the enclosure as well (there was a small path) and the back of the enclosure is near the paved roadway that visitors use to exit the park. The top of the fence had electrical wires and the fence was folded inwards to the enclosure. The substrate was some grass and sand (in the center of the enclosure grass and especially close to the fence very sandy). There were four big stones in the enclosure and seven tall trees. I observed one car tire and what seemed to be a big pipe tube (which is normally used for protect wires under the surface).

**Visit 2:** The wolf was lying in the back left corner. When I arrived the wolf got up and walked from the left side to the right side. Its face was constantly focused toward me, while its body posture was pointed away from me. The wolf kept moving until I sat down on the bench in front of the enclosure. Once I sat down the wolf returned to its spot in the left back corner. The wolf seemed really nervous, each time I would get up, he/she would get up as well.

- Canadian Lynx

**Visit 1:** I observed stereotypical behaviour (pacing of one animal, the other was flying on the plateau of their shed) in the front part of the enclosure at the left side, I also saw some social contact (greeting). The enclosure appears new. However it doesn't provide a lot of space for the animals. It has 1 shed for both animals and 2 areas where the cats can walk. Those areas are separated with a fence and a door. The building has a wooden closed roof. There is a stand-off barrier for the public surrounding the entire enclosure. There are two large wooden logs in the back site of the enclosure and a gangway to the shed. Drinking water was clean and available, no food was observed. There were some feathers/fur fragments visible on the substrate. Their neighbour is the bobcat which they can see. Physical contact is not possible because there is a strip of grass between both enclosures.

**Visit 2:** Both lynx were pacing when I arrived at the enclosure. One continued pacing for about 8 minutes and went afterwards into the pen. The animal did not come out for the rest of the observation. The other animal continued pacing and vocalizing for 15 minutes. The vocalization and pacing behaviour seemed to get more intense when the bobcat walked along the right site of its enclosure (close to the lynx enclosure) Afterward the animal lay down in the corner under the pen. A piece of bird carcass was observed indicating that they had recently eaten. I observed at one point that the bobcat and one of the lynx made eye contact. It was similar to a stare-down, similar to the stare-down between to unknown domestic cats.

- Bobcat

**Visit 1:** The enclosure of the Bobcat is identical to the one of the lynx. Here I also observed stereotypical behaviour (pacing) in the front part of the enclosure. The enclosure appears new. However it doesn't provide a lot of space for the animals. It has 1 shed for and 2 areas where the cat can walk. Those areas are separated with a fence and a door. The building has a wooden closed roof. There is a stand-off barrier for the public surrounding the entire enclosure. There is a hammock available with wooden logs on it and an elevated plateau. At the other side of the enclosure there are 3 wooden logs which also provide the way to get to the shed. Drinking water was clean and available, no food was observed. The substrate is plain sand. The neighbours are the lynxes which the bobcat can see. Physical contact is not possible because there is a strip of grass between both enclosures.

**Visit 2:** The bobcat was pacing when I arrived at the enclosure. It continued pacing for about 10 minutes. Afterward the bobcat lay down at the enclosure and groomed himself. Feathers were observed in the enclosure indicating that the bobcat had recently eaten. I observed at one point that the bobcat had eye contact with one of the lynx. It was similar to a stare-down, similar to the stare-down between to unknown domestic cats.

- Raccoons

**Visit 1:** The enclosure of the raccoons looked really old. The mesh was very rusty. The entire enclosure existed of mesh (also the roof). There was a piece of carbon on top of the enclosure probably to protect the animals from the sun. There was 1 shed which the animals had to share. The shed that was available had the opened toward the public. When I was observing the animals, they were both lying (opposite sides of the cage) on a plateau above the ground. When I came back after a couple of hours they were still sleeping/resting at the same spot. I observed a place to drink with clean water. I also observed pallets in a bowl, which was attached to the mesh. This was a kind of structure to prevent the pallets from getting wet. There was a barrier for the visitors, which looked new. The enclosure could be visited on all sides and was located in the center of a field. There was one small plant which was potted in a wooden frame. There were two plateaus on which the animal could rest. Furthermore there were three wooden logs/planks to climb on and one log lying on the ground. I also observed what I believe to be a sandbag and one car tire.

**Visit 2:** Both raccoons were inactive when I arrived at the enclosure. I observed one bowl full of pellets. The bowl has to be shared between the animals. The albino raccoon never moved during the observation time. A little bit of grooming behaviour was observed with the other raccoon (about 2 minutes). I never saw the raccoons on the ground, walking or interacting with each other. Both

animals appeared obese to me. The traditionally coloured raccoon had rough patches of fur on the back of its body which was also had a brownish colour.

- Red Foxes

**Visit 1:** The first things what I noticed was that there was a strong smell coming from the enclosure. I couldn't find the direct cause (it could be that one of the animals had been sick that very day or that the enclosure wasn't cleaned properly). Both animals were observed lying down (one on top of their shed and the other (after first coming to the mesh for inspection, or begging for food) at the back of the enclosure). There was a shed with straw, the opening towards the public. There was a stand-off barrier for the public surrounding the entire enclosure. There were many holes especially in front of the shed. The foxes had different kinds of wooden logs in their enclosure (five) as well as a bundle of branches. I observed one pipe that went under the ground. However I didn't see an exit, so I don't know how deep this pipe is and if there is an underground resting area. The entire surface consisted of sand. The mesh surrounding the enclosure had plates of I don't know what kind of material pointing inwards to the enclosure. The enclosure was also separated in two parts, one part where the animals can eat, drink or be confined and the other part where the shed is. The animals had access to water (similar to the wolf and bear). There was no food observed.

**Visit 2:** A fence was placed in the back left corner of the enclosure. This time the dark coloured fox came up to the fence. It probably wanted food. When I ignored the animal it returned to the shed to lie down on the roof. The reddish fox lay under the roof of the shed and did not move at all. One food bowl was observed, which would not be desirable because the animals have to compete for the food.

- Rough-legged Hawk

**Visit 1:** I observed the hawk sitting on a wooden bar at the backside of the enclosure near the wall of the indoor enclosure. When I came back for my second observation the hawk was still sitting there. The indoor enclosure was assessable to the hawk. The enclosure had some wooden fence which was constructed on the mesh. This fence created a closed barrier between the hawk and the enclosure of the eagles (they are neighbours). The hawk had a bigger enclosure than the owl and the turkey/squirrel. There were 3 little trees in the enclosure. The bird had choice between 8 elevated logs to rest on. The substrate consisted of some grass, small stones, sand and hard soil. There was a water bath available which looked clean. The mesh had some small feathers in it (probably also caused by moulting, however could also be a sign of a lack of space because the bird will fly against the mesh).

**Visit 2:** The hawk was more active than the first time. This might be because the animals just ate. It was hopping from one wooden log to another. The bird tried to spread its wings but as soon as the wings came in contact with the mesh, the wings would be pulled back.

- Bald eagles

**Visit 1:** The eagles were perched on elevated wooden bars. One of them in the middle of the enclosure and the second one behind the wooden fence (you only could see its claws and legs), which was constructed at different parts of the mesh, close to the visitors. When I came back for my second observation the eagles were still sitting there. I observed a small water bath, the water seemed clean. However the bath looked dirty (maybe algae or dirt that got stuck because of the frequent usage). In this enclosure I saw some food, a dead kind of bird, lying on a concrete block (they may use that block to feed the animals, because it is easy to clean). The indoor enclosure was open and accessible. The enclosure is about the same size of that from the hawk. The enclosure had 2 small trees in it. There were plenty of elevated resting places on different heights. The substrate was bits of grass and hard soil. The mesh had quite some small feathers in it (probably also caused by moulting, however could also be a sign of a lack of space because the bird will fly against the mesh). The eagles have 2 neighbours namely the hawk and on the other side a vulture. In both cases it is possible for the birds to see each other. Some wooden fencing (overlying the mesh) made sure that



there were opportunities for the birds to remove themselves from the sight of their neighbours. This enclosure didn't have a sign on which the species was mentioned.

**Visit 2:** The eagles were also more active than the previous time. I suspect because they just ate. A piece of bird was observed on the concrete plateau which is used to present the food to the animals. Because the birds were moving I could see that they were not in good shape, they looked overweight. One of the birds hopped from the back of the fence to the front and sat down behind the wooden screen. The other bird remained visible to the public.

- Peregrine Falcon

**Visit 1:** I observed a falcon sitting at the darkest part of the outside enclosure (at the side of the enclosure which is located next to the enclosure of the owl). That part of the enclosure had a closed roof which provided shade for the falcon (that was the only closed roofed I observed at the raptor enclosures). When I walked by the falcon made itself big, spreading its wings and putting its neck and head towards me (which is a sign that it felt threatened). The falcon was still perched there when I came back for the second observation. The raptor had access to the indoor enclosure. I observed one water bath. I couldn't see if the water was clear because the bath had quite some deposit of algae. The enclosure was mesh, however there were wooden slats constructed on the mesh at the site where the visitors could walk. There were also two wooden fences constructed on the mesh to make sure that the bird could get off out of side of its neighbours. There were six elevated resting opportunities for the falcon. The enclosure had 3 little trees in it. The ground had bits of grass but was mostly plain soil with little stones, there were also one wooden log on the ground. This enclosure didn't have a sign on which the species was mentioned. The size of the enclosure was comparable to the size of the enclosure of the vulture.

**Visit 2:** The falcon showed the similar behaviour as during the first visit. When I was walking past the enclosure it would make itself big, spreading its wings. This behaviour is displayed when a falcon tries to intimidate an intruder. The bird was also more active than during the first observation. It tried to fly from one side of the enclosure to the other side. This is almost impossible because of the size. The falcon had trouble with landing smoothly. I think this is because the enclosure is too small and the bird does not have enough room to land properly.

- Turkey Vulture

**Visit 1:** I observed the Vulture to be grooming at the back of its enclosure. The second time I observed the vulture it was just sitting at the back of its enclosure, where it also did the grooming. The enclosure had 2 small trees in it and 5 elevated resting places (some strengthened with concrete). I did not see any food available, neither did I see any available water. The ground was well covered with grass and small plants. In the corners of the enclosure and surrounding the plateaus there was less grass. Around the plateaus you could see lots of faeces. The inside enclosure was open to the vulture. Compared to the eagles and the hawk, no feathers were observed in the mesh. The vulture had as 'neighbours' the eagles and a falcon. At both sides the mesh was partial covered with a wooden fence, so the birds could escape from each other views. The size of the enclosure was comparable to the enclosure of the eagles and the hawk.

**Visit 2:** The vulture sat on the exact same spot as the first time and showed the same inactive behaviour.

- Great Horned Owl

**Visit 1:** I observed the bird sitting against the backside of the enclosure, in the corner with the biggest distance to the inside enclosure. It was sitting on a wooden bar, facing the public. It remained sitting there during the first and second observation. I observed one small wooden bird shed on the ground (with sawdust in it), with the opening towards the public. An indoor enclosure is available although it was shut when I was observing (so the owl could not get out of sight). There was one little tree in the corner opposite where the bird was seated. There were some logs of wood on the ground. The owl had 4 other sitting opportunities. The substrate was a combination of hard soil, little stones,

old leaves and little pieces of wood. I observed 1 drinking bowl which was clean and had sufficient water in it. I didn't observe any food. The 'neighbour' of the owl was a falcon. The two enclosures were separated with a strip of tall vegetation. It was possible for the animals to see each other.

**Visit 2:** The owl sat was resting on an elevated log close to the back fence. It was inactive during the entire observation.

- Wild Turkey and Black squirrel

**Visit 1:** This enclosure is identical in size to the enclosure of the great horned owl. The enclosure was inhabited by a wild turkey and a black squirrel. The black squirrel looked roughed up, it was quite hairless. I first observed the squirrel sitting near the turkey (on the balustrade at the long side of the enclosure closest to the public). Afterwards I saw the squirrel foraging (although I didn't observe any feed in the enclosure, there could have been feed between the stones and sand on the ground). The turkey came to me right away, making a soft sound.

The indoor enclosure was open, however only accessible to the squirrel. There was a wooden bar in the way which made it impossible for the turkey to enter. There was one water bowl which was clean and filled with water. There were two small trees in the enclosure, some wooden logs on the ground, one elevated wooden bar and one gangway located in the outdoor enclosure against the wall of the indoor enclosure. The substrate of the enclosure was little stones and sand and hard soil. The 'neighbour' of the turkey and squirrel is a hawk. The two enclosures were separated with a strip of tall vegetation. It was possible for the animals to see each other. This enclosure didn't have a sign on which the species was mentioned.

**Visit 2:** The squirrel was relocated to the other turkey enclosure. It looked like the turkeys had also been switched. The Turkey was inside when I arrived and remained inside during the entire observation (15 minutes). The enclosure looked dirty, with droppings all over the wooden logs.

- Wild Turkey

**Visit 1:** This enclosure was a little away from the raptors compound. I observed the turkey foraging. The enclosure of the Wild Turkey looked really nice. The substrate consisted of wooden litter. The bird had a shed, covered with straw. The opening of the shed was visible to the public. I observed enough clean water to drink. I didn't see any food (probably there was some between the wooden litter). The Turkey had also the possibility to rest on a place above the ground, underneath a tree. This big tree provided plenty of shade and a possibility to hide a little bit from the public. It was not possible to walk entirely around the enclosure, which ensured that the bird would get some privacy at the back of its enclosure. There was no barrier for the public.

**Visit 2:** The enclosure was inhabited by the squirrel and the wild turkey that were previously in the enclosure of the raptor compound. Both animals were foraging when I arrived. The turkey came to the fence and made goggling sounds. Presumably, the bird was hoping to be fed. The turkey remained interested in me during the observation period. The squirrel was hardly observed due to the thick vegetation.

- White-tailed Deer

**Visit 1:** The deer had the biggest enclosure of all the animals. They had fresh grass, shadow, and the possibility to eat hay. In the front part of the enclosures it is a forest environment, in the back part the deer have a possibility to graze. The hay is located under a roof. The deer did not appear to have an interior shelter/enclosure to retreat to during bad weather. Visitors could almost walk around the entire enclosure to observe the animals (only the right part is not accessible). One of the animals was standing in the shade at the pasture far away from the visitors. However the other deer came close to the fence (there is no stand-off barrier) and would even follow visitors who were walking around the enclosure. I didn't observe any drinking water opportunities, although there was one blue object that may have been a water container. The fence of the deer is weak and the deer can stick their snouts through it.

**Visit 2:** This time three deer were observed. I think I missed one of the animals in my previous observation. This is a good sign because the animal was able to hide from the public. When I arrived at the enclosure all the deer were lying under the trees. One deer came up to me, I think it was the same one who also seeks attention the last time I was there. I tried to find a water source but I could not find any.

- Canadian Geese and Wood Ducks

**Visit 1:** The Geese came directly to the fence which is a clear indication that they get fed by visitors. The 5 ducks that were present were swimming in the little pond in the enclosure and didn't pay any attention to the visitors. The water in the pond was hardly flowing but it was clear enough to look into the water. There was a lot of vegetation in the enclosure, however the animals weren't able to get out of the visitor view. Furthermore the animals didn't have an inside enclosure. It is possible for them to hide under the vegetation during severe weather conditions. I observed 1 feeding station which could be used by 2 animals at once. I was not able to see if the feeding station were full or empty. The enclosure didn't have a roof. This can be an indication that the animals cannot fly. I was unable to determine if the bird's wings were clipped or pinioned.

**Visit 2:** When I arrived at the enclosure the ducks and geese were actively swimming and foraging. One of the ducks came up to me, probably hoping for some food. The other animals ignored me completely.

- Eurasian Mute Swans

**Visit 1:** The swans were together in the little pond when I was observing them. The enclosure of the swans is connected to the enclosure of the geese and ducks. A simple mesh fence was in between them. They weren't able to get in physical contact with the geese. There was from the bottom to 1 meter up double mesh which was too small for the animals to put there beak through. Visible contact was possible. The enclosure was a copy of the enclosure of the geese. I observed 1 feeding station with 2 feeding opportunities. I was not able to see if the feeding stations were full or empty. The water of the pond was connected with the water of the pond in the enclosure of the geese. The water was clear and floating more in this enclosure. Inside the enclosure was one big tree, the animals could hide there from adverse weather conditions. Similar to the geese and the ducks they don't have an inside enclosure and the animals weren't able to get out of the view of the public.

**Visit 2:** When I arrived at the enclosure the swans were grooming themselves. The enclosure was full of feathers and the water looked very dirty, with a lot of feathers in it. It might be that the keepers did not clean the enclosure yet. The swans had some company of a couple of wild ducks I think.

- Trumpeter Swan

**Visit 1:** In this enclosure I observed one swan resting in the shadow of a tree. It reacted when I came close to the fence (even though I was on the other side of the enclosure, there wasn't a barrier for the public) by trumpeting and making itself big and spreading its wings (how it would react to a threat in the wild). According to the information there should have been 2 species of ducks, however I didn't see them. This enclosure was appropriate. It was big, with lots of vegetation. Clear, floating water. The pond was of descend swimming size. I observed one feeding station in one of the corners of the enclosure. The station had 2 feeding possibilities. I observed small pallets and corn/grains. Similar to the other waterfowl's enclosures, there wasn't an indoor enclosure available. The size of the enclosure gave the swan a lot more privacy than the other ducks, geese and swans had. It was not possible to walk around the enclosure, so the swan could get far away of the visiting public. The enclosure didn't have a roof. The fence of the enclosure was more robust than the other waterfowl's enclosures and it was higher as well.

**Visit 2:** The swan vocalized a lot. I could even hear it when I was at the enclosures of the raccoons, which is almost at the other side of the wildlife compound. It seemed to me that the bird was stressed because of the amount and intensity of the vocalizations. It might be that some wild birds flew over or that it tries to seek company. No other animals were observed in the enclosure.