



CITY OF ST. ALBERT
ADMINISTRATIVE BACKGROUNDER

TITLE: Wildlife Corridor along the Sturgeon River Valley

On April 4, 2017 Councillor Russell provided notice in accordance with Section 23 of Procedure Bylaw 35/2009 that he intended to bring forward the following motion:

That Administration review steps that are required to create a Wildlife Corridor along the Sturgeon River Valley through the City of St. Albert that would protect wild animals transiting from the mouth of the Sturgeon River to the Eastern boundary of the City.

BACKGROUND:

Wildlife corridors are defined as linear landscape features composed of native vegetation or waterbodies that connect two or more areas of wildlife habitat. Wildlife corridors provide connectivity and diversity for local wildlife to move, forage and breed. In highly developed areas such as agricultural areas or urban cities, wildlife corridors are particularly important as they typically connect areas of previously contiguous habitat.

In the St. Albert area, natural features such as Big Lake and the Sturgeon River Valley act as natural corridors for wildlife movement due to the diversity of vegetation, food sources and access to water. To create a wildlife corridor that would protect wild animals moving through the Sturgeon River Valley from Big Lake to the eastern boundary of St. Albert the following steps would need to occur:

1. Identify existing wildlife corridor information
2. Identify existing urban land use / infrastructure
3. Identify wildlife species of concern
4. Determine wildlife barriers or high risk human-wildlife conflict areas
5. Identify projects to improve the wildlife corridor and minimize conflict areas
6. Bring forward projects as part of a future capital budget
7. Construct/implement projects

A reasonable way to initiate this process would be to undertake a wildlife corridor assessment of the area in question. Administration would hire a consultant with technical experts in the areas of plant and wildlife biology as well as physical geography and engineering to complete this task. This type of assessment would likely take 1-2 years to complete and cost between \$50,000 – \$250,000 depending on the scope of the study. This would not include the cost of potential mitigation

measures which can range from signs (\$1000 - \$10,000) to construction of large mammal under or overpasses (\$1 – \$25 million).

Existing Relevant Studies

The City has completed several studies and plans that would aid in supporting the steps to create a wildlife corridor that would protect wild animals.

The **West Regional Road Environmental Impact Assessment** (2003) was completed for the construction of Ray Gibbon Drive and included assessing potential impacts to wildlife. This work was conducted between 2003 – 2013 and included the assessment of wildlife corridor impacts from the road and bridge development and implementation and monitoring of mitigation measures.

The study included the collection of data on the existing wildlife habitat and corridor movements for birds, large and small mammals and amphibians and reptiles. This information was used to recommend mitigation measures including design changes to the road and bridge structures to facilitate wildlife movement such as:

- Wildlife passage trail under the north side of the bridge for large mammals such as deer, moose and coyotes.
- Reduction of speed limit on the road to 70 kph.
- Wildlife crossing signage.
- Six culvert underpasses and use of native vegetation along the road for wildlife passage of small mammals, amphibians and reptiles.

Long term monitoring studies were conducted from 2007 – 2013 to assess the effectiveness of the mitigation measures and to provide data to locate permanent wildlife signs at the most effective locations. The studies found that the preferred wildlife corridor is on the north side of the Sturgeon River between Ray Gibbon Drive bridge and McKenney Drive.

The **Integrated Pest Management Plan** (2011) includes an appendix on Human-Wildlife Conflict which outlines the legislated framework and recommended guidelines for management of wildlife within St. Albert. Specific animal species mentioned include: crows, magpies, Canada geese, skunks, ground squirrels, porcupine, beaver, coyotes, foxes, deer and moose. It is important to note that municipalities have limited powers when dealing with wildlife and must defer to provincial or federal agencies in most cases.

The **St. Albert Natural Areas Assessment** (2015) report provided an inventory of natural areas within and surrounding St. Albert, as well as an ecological connectivity analysis for the area surrounding and connecting to St. Albert. The analysis identified an ecological network with regional and local core areas, corridors and stepping stones as well as 21 possible restoration areas to improve habitat health and strengthen ecological connectivity. Ecological networks are closely linked with habitat connectivity and wildlife movement.

The St. Albert ecological network included:

- Big Lake
- Sturgeon River Valley
- Carrot Creek Greenway
- Ravines (Grandin, Forest Lawn, Braeside, Erin Ridge)
- Grey Nuns White Spruce Forest
- Riverlot 56
- Shelterbelts, abandoned railway lines
- Parks, stormwater management facilities, manmade lakes/ponds

The accompanying **St. Albert Natural Area Conservation and Management Plan** (2015) also included five management objectives and 15 recommended actions related to Wildlife. The five management objectives are to:

1. Maintain Wildlife Habitat Value of Natural Areas
2. Maintain Documented Populations of Special Status Species
3. Minimize Wildlife Mortality and Disturbance
4. Reduce Wildlife Mortality in the vicinity of Natural Areas
5. Reduce Wildlife Property Conflict in the vicinity of Natural Areas

The City of Edmonton has developed **Wildlife Passage Engineering Design Guidelines** (2010) that provide a comprehensive review of the impact of transportation impacts on wildlife movement and corridors. These guidelines are used as part of the City of Edmonton planning and development process and were used recently in the new developments adjacent to Big Lake near St. Albert (Hawks Ridge, Starling and Trumpeter). This resulted in the construction of a \$4 million moose underpass on 215 Street by Walton Developments and is the only structure of its kind in Alberta outside the national parks.

Report Date: May 18, 2017
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