**Observation of urban deer distribution pattern changes in Southwest Calgary**

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Living in southwest Calgary (Woodbine), I am within sight of the newest portion of Calgary’s ring road highway, Southwest Calgary Ring Road (SWCRR) (portion in question is Fish Creek Blvd to Glenmore Trail). Southwest Calgary is frequently visited by various wildlife, from squirrels and rabbits, to deer, moose, and black bears. I have lived in this community since 2013 and regularly saw deer (predominantly mule deer) weekly. Since construction started in 2017 on SWCRR I have observed deer approximately once per month, down from four times per month (2013-2016). I currently still see deer sign (scat and browse).

**Causes**

Wildlife typically avoid habitats within the vicinity (within 200m) of heavily travelled roads (Jalkotzy et al., 1997), and when disturbances cross migration corridors, deer movement can be blocked (Kucera & McCarthy,1988, in Jalkotzy et al., 1997). There could be avoidance, and loss of habitat effectiveness due to human presence and noise (Jalkotzy et al., 1997). The Elbow River and Fish Creek are known wildlife corridors, and the bridges have been designed to allow wildlife passage (SWCRR, n.d.). These wildlife corridors contain contiguous, forested riparian habitats on both sides of SWCRR. Green spaces border this portion of the SWCRR; Wildlife fencing has not been installed, and several collisions have been reported (Dippel, 2020; Krause, 2020; Porto & Nevill, 2021). Wildlife mortality from collisions may affect populations.

The development of a novel disturbance (i.e., the SWCRR) has resulted in alterations into the use of the area by deer. The combination of construction disturbances, removal of habitat, and presence of a linear barrier has seemingly resulted in fewer deer being observed in the neighborhood of Woodbine. This pattern may resolve once the deer are comfortable with and able to use the wildlife underpasses at Fish Creek and the Elbow River.

\*Note, at the time of submission, construction has started on the wildlife fencing at the south end of this Project area.

Consult:

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*The community of Woodbine lies on the southwest outskirts of Calgary, adjacent to both the Tsuu T’ina First Nation and Fish Creek Provincial Park. Due to the community’s location next to natural habitats, deer and other wildlife are commonly encountered in the community. Since the initiation of construction the South West Calgary Ring road (SWCRR), and subsequent use, deer, in particular have been observed less than prior to SWCRR being initiated. The combination of construction disturbances, removal of habitat, and presence of a semi-permeable barrier (the SWCRR) has seemingly resulted in fewer deer being observed currently in the neighborhood of Woodbine. Other factors beyond the ring road, such as predator presence, weather conditions and conditions within the neighborhood (e.g. dogs) could also have a role in deer distribution.*

**Lisa Dahlseide, BSc.,** Conservation Biologist, Weaselhead/ Glenmore Preservation Society

*The Southwest Calgary Ring Road reduced an active wildlife corridor in the Elbow river valley by 90%. In its place a 12-15m high berm with an 8 lane highway on top was built that resulted in the re-routing of the meandering Elbow river through a fixed wildlife corridor under three bridges. This disruption began in 2017 with the ring road opening in October of 2020. Wildlife reports indicate that deer just started using the intended wildlife corridor. Evidence of deer crossing the ring road is apparent with the collisions. Wildlife fencing was planned to be completed for the opening of the road, but 13 months later they still have not even started the construction of the fencing. White-tailed deer populations remain present in the Weaselhead area, but increasing pressure on their movement and distribution is sure to challenge their abundance.*

**References**

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