

Wildlife Exclusion Systems



Wildlife Overpass



Wildlife Exclusion Fence and Moose



Wildlife Overpass and Deer



Wildlife Exclusion Fence and Lynx

BACKGROUND

On new high speed and limited access freeways and expressways where large species of wildlife, such as deer, elk and moose, pose a potential hazard for drivers, the Ministry designs and constructs wildlife exclusion systems. These systems are intended to protect both drivers and wildlife. The systems allow freeways and expressways to operate safely and efficiently. Healthy wildlife populations are supported when natural ecosystem connectivity is maintained.

The Ministry has constructed the largest network of wildlife exclusion systems on highways in North America. The first system was designed and installed in the late 1980s on the Coquihalla Highway. The systems are typically integrated into the safety infrastructure of new, high speed, limited access freeways and expressways. The Ministry currently has wildlife exclusion systems installed on:

1. Highway 1 – Kicking Horse Canyon
2. Highway 5 – Coquihalla Highway
3. Highway 19 – Island Inland Highway
4. Highway 97 – Summerland to Peachland
5. Highway 97C – Okanagan Connector

WILDLIFE EXCLUSION SYSTEM EFFECTIVENESS

The Ministry's systems have proven to be very effective in reducing the potential for wildlife collisions for drivers in the province. It is estimated a well designed, well constructed and well maintained wildlife exclusion system can reduce the potential for wildlife collisions by more than 90%.

WILDLIFE EXCLUSION SYSTEM COMPONENTS

Wildlife exclusion systems are designed using a number of components:

1. Wildlife exclusion fencing,
2. One-way gates and jumpouts,
3. Ungulate guards, and
4. Overpasses and underpasses.

These components are integrated to produce an encapsulated environment for highways. Wildlife exclusion fencing is intended to keep wildlife from entering the roadway. One-way gates and jumpouts allow animals within the highway right-of-way to leave. Ungulate guards enable vehicles to pass into wildlife exclusion systems while keeping animals out. Overpasses and underpasses maintain natural ecosystem connectivity.

Wildlife Exclusion Systems (Continued)

WILDLIFE EXCLUSION SYSTEM COSTS

Wildlife exclusion systems are expensive to build and maintain. Construction costs for wildlife exclusion fencing ranges between \$40,000 and \$80,000 per kilometre, depending on topography, geotechnical constraints and location. Ungulate guards are engineered structures costing between \$30,000 and \$50,000 each, depending on the type of vehicles they are designed to carry. Overpasses and underpasses, required to provide wildlife access to critical habitat for food, water and shelter, can cost upwards of \$1 million.

Wildlife exclusion systems must be maintained to retain their effectiveness for protecting drivers and wildlife. Annual maintenance costs are about \$5,000 per kilometre to repair seasonal damage and vandalism, and to control vegetation.



Ungulate Guard



Wildlife Exclusion Fence

WILDLIFE EXCLUSION SYSTEM LIMITATIONS

Wildlife exclusion systems are easiest and cheapest to construct when associated with new highway projects or major highway upgrades. Pre-construction environmental assessments can identify wildlife movement corridors so wildlife exclusion systems can be designed to be most effective. When associated with new highway projects or major highway upgrades, these systems can be completely integrated into new highway designs.

The Ministry has never retrofitted a full wildlife exclusion system into an existing highway. It would be difficult if multiple accesses are required for private properties. Each access could cost upwards of \$50,000. Installing ungulate guards in rock requires blasting and highway closures. Where highway rights-of-way are narrow and inadequate for safely locating wildlife exclusion fencing and other system components, acquiring private land could be very challenging. Many landowners do not want their properties constrained by wildlife fencing and ungulate guards. Geotechnical constraints can make constructing overpasses and underpasses extremely difficult and costly.

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