Over 220,000 large animals have used the crossing structures in Banff National Park

"Do those things really work?" Without fail, this is always the first question posed when I share that some of my work is focused on a wildlife crossing structure research and monitoring project. Many people are now familiar with the iconic wildlife overpasses and underpasses that were first built in Banff National Park, yet there seems to be lingering doubt as to their effectiveness. The very first thing I say in response to this query is, yes, these crossing structures work—and work very well—over 220,000 large animals have used the structures in Banff National Park since monitoring began more than 15 years ago. Everything from elk and moose to grizzly bears and wolves use wildlife overpasses and underpasses to safely cross the bustling Trans-Canada Highway which makes its way through Canada’s first national park. The second thing I mention is that I am pleased to report that wildlife crossing structures are not reserved for parks and protected areas. Within the Crown of the Continent region wildlife crossing structures, including overpasses, underpasses, wildlife fencing, and wildlife guards, have now been built on US 20 North in Montana, and many are now advocating for wildlife crossing structures to be constructed at key sites along Highway 3 in southern Alberta.

Finally, a recent report co-authored by the Western Transportation Institute at Montana State University and the Mistakas Institute has demonstrated that wildlife crossing structures make financial sense. The report focused on a wildlife crossing structure in the Rocky Mountains of Alberta. Using very conservative estimates the report authors demonstrated that following the construction of the wildlife underpass, the overall annual cost to society was reduced from $129,000 to $180,000 per year because there were fewer damaged vehicles, injuries and deaths. The cost also accounts for lost hunting revenues. Most people love wildlife and saving money on wildlife crossing structures are public infrastructure that people can readily support.

In an effort to elevate the conversation on building or expanding highways with both wildlife and people in mind, the Mistakas Institute has been working with its partners to develop several tools. Mistakas created a "Highways & Wildlife" infographic to clearly convey why wildlife crossing structures are important, how they work, and their cost effectiveness. The infographic strives to debunk some of the myths surrounding wildlife crossing structures.

Mistakas has also partnered with award-winning film maker Leanne Allison (Being Caribou, Finding Freedom, Bear 71) to create a documentary film called Highway Wildlife. Build them and they will live—that is the simple message in this documentary that looks at the issue of highways, and some of the pioneering solutions that exist to prevent road kill and reconnect landscapes across highways. In the Crown of the Continent we have one of the last best chance in the world to maintain a fully functioning ecosystem with all the native large carnivores, but roads are a major problem. Everything from grizzly bears to wolves and deer to salamanders need to get across roads safely to breed, find food, adapt to climate change or to migrate. After seeing this film you'll never drive down a highway in the same way again. Highway Wildlife is one of the films selected for the 2012/2013 Banff Mountain Film Festival World Tour. To view a trailer for the film, please click here.

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*See next spread for infographic
1. What is the problem?
All wildlife need to be able to move freely throughout their habitat to access water, food, and mates.

2. What is the solution?
We can make highways safer for both wildlife and people by separating traffic and wildlife with crossing structures — including bridges, tunnels, and highway fencing.

3. Do crossing structures work?
Absolutely! Scientists have now collected over 12 years of data on wildlife using highway crossing structures. While some animals take longer to cross, the majority of crossing structures are effective in reducing wildlife-vehicle collisions.

4. How do we know they work?
Scientists have a variety of ways to measure the use of crossing structures by wildlife. These include direct observation, motion-sensitive cameras, track observation, and DNA analysis (of fur captured from crossing animals).

5. Are they cost effective?
Yes! At sites where there are regular wildlife crossings, the cost of collisions — including property damage, loss of hunting revenue, human injury, and human fatality — far outweighs the cost of building bridges, tunnels, and fencing. By installing crossing structures, the Trans-Canada Highway near Dead Man’s Flats in Alberta has saved over $85,000 per year!