



PronghornXing



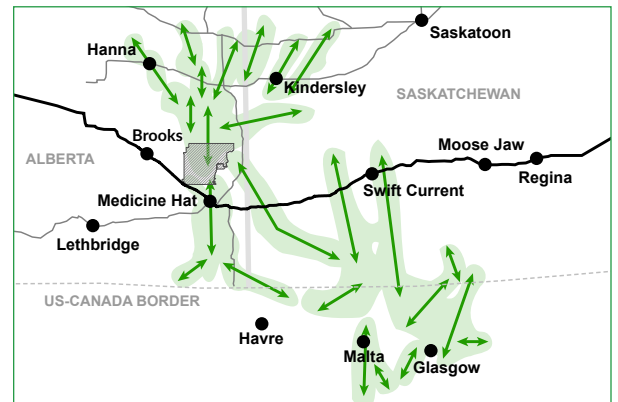
Pronghorn Xing: Improving pronghorn conservation through road improvements

In the Canadian Northern Sagebrush Steppe (NSS), pronghorn move both daily, to find food and local habitats, and annually, migrating to meet their seasonal needs. Roads crisscross the NSS, causing two key issues for pronghorn:

1. Direct mortality from vehicle collisions
2. Avoidance of roads reducing pronghorn health and dividing populations

We developed Pronghorn Xing (PX), a citizen science program to help identify locations along the Trans Canada Highway (TCH) from Brooks, AB to Swift Current, SK where road mitigation such as wildlife underpasses, overpasses, and associated fencing could improve pronghorn conservation by reducing collisions and improving their ability to move across the landscape.

Pronghorn Migration Corridors



What we did

We considered three data sources to look for alignment to identify areas important for pronghorn to move across the highway (see right).

A number of sites indicate good alignment between PX observations and pronghorn connectivity modeling, however AVC clusters (mostly deer) did not align well. This means deer are crossing the TCH in different areas than pronghorn.

With these data and local expertise, we identified 16 potential pronghorn road mitigation sites along the TCH.

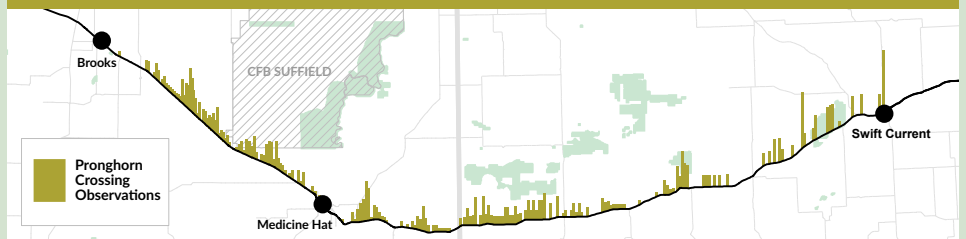
To prioritize sites we scored each site based on five criteria:

- pronghorn road crossing alignment between datasets;
- animal vehicle collision hotspots;
- multi-species benefits;
- pronghorn habitat (native prairie); and
- amount of human disturbance.

We prioritized four potential pronghorn mitigation sites where road mitigation could help pronghorn safely cross the highway.

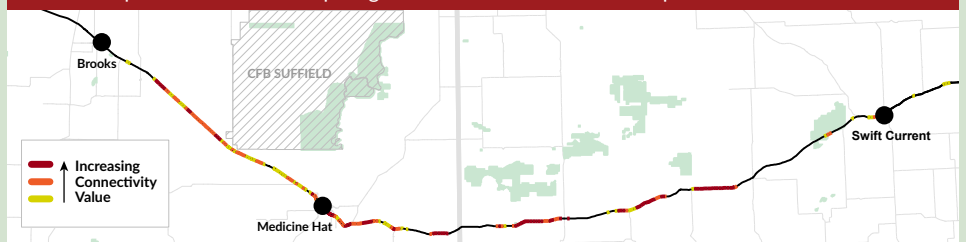
1 PRONGHORN XING

Observations of pronghorn adjacent to or crossing roads reported by citizen scientists



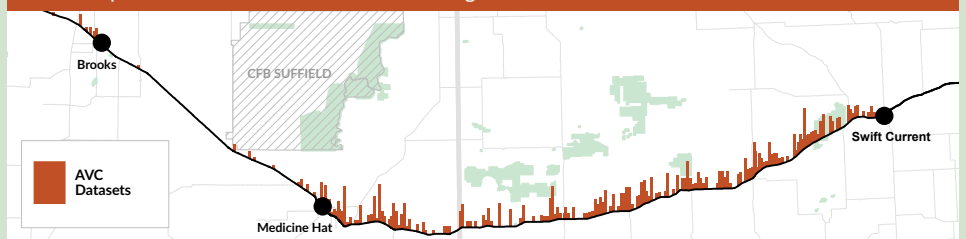
2 PRONGHORN CONNECTIVITY MODEL

A representation of how pronghorn move across the landscape



3 ANIMAL VEHICLE COLLISION (AVC)

Reported to Alberta Wildlife Watch Program in Alberta and RCMP in Saskatchewan

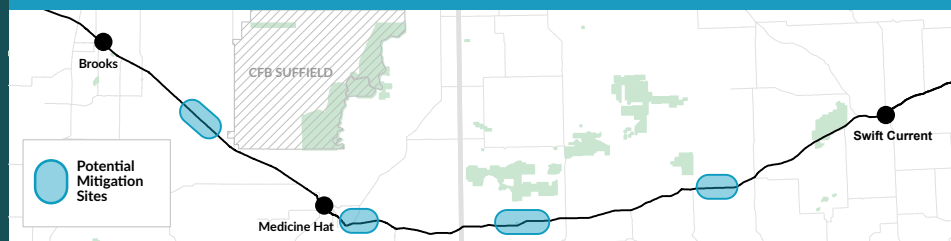




Where pronghorn need help crossing the TCH

We identified four potential pronghorn priority highway mitigation sites for further consideration along the TCH.

POTENTIAL PRONGHORN MITIGATION SITES



Transportation departments are investing in infrastructure, including underpasses, overpasses and wing fencing to both improve motorist safety and movement opportunities for wildlife. To help pronghorn move safely across roads, research from the state of Wyoming indicates pronghorn strongly prefer to use overpasses.



Who was involved

Pronghorn Xing is a joint project between the Miistakis Institute, Alberta Conservation Association, and National Wildlife Federation. The pronghorn connectivity model was developed by Dr. A. Jakes. A working team provided support and included representation from Alberta Environment and Parks, Alberta Transportation, Nature Conservancy of Canada, Saskatchewan Environment, Saskatchewan Government Insurance, Saskatchewan Highways and Infrastructure.

Thank you!

We would like to thank the citizen scientists who contributed data to PX. Funding was generously provided by the National Fish and Wildlife Foundation, Alberta Conservation Association, National Wildlife Federation, Telus Go Wild, and Nature Conservancy of Canada.

Photos by Paul Jones, ACA.

To learn more, view the full report or contact tracy@rockies.ca

Next steps

- Site visits with transportation engineers to determine if existing infrastructure can be integrated into a crossing network (i.e., existing bridges over rivers, railway underpass) and if not, to identify best location for mitigation infrastructure to help pronghorn cross at each of the four sites.
- Build support for investment in road mitigation infrastructure to advance pronghorn conservation and survival. Please share information and your support for pronghorn conservation with community leaders.

