CENTER FOR TRANSPORTATION RESEARCH

Background

- Each year an average of 7,585 crashes are reported to TxDOT that involve either wild or domestic animals. From 2010 to 2017, 160 people lost their lives in these crashes and thousands more sustained injuries.
- The crash data are limited, however, in that they only represent crashes where a police report is cre-
- ated. The number of large mammals killed could be five to ten times higher. These collisions diminish human safety and cost Texas citizens millions of dollars every year in vehicle damage, medical costs, carcass pickup and disposal, and other associated time and monetary costs.
- To reduce these collisions, and make Texas roads safer for the traveling public, it is important to provide opportunities for wildlife to cross beneath or above the roadway via wildlife crossing structures.
- The Texas endangered ocelot population has dwindled to less than 50. Each animal death due to vehicle collisions decreases the species' chance of surviving into the future.
- TxDOT is required to develop mitigation options for animals with threatened and endangered status as designated by the U.S.

Fish and Wildlife Service (USFWS), such as the ocelot.

Acknowledgement

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Incorporating Wildlife Crossings into TxDOT's Project Development, Design and Operations Processes Presenters: Nan Jiang, Lisa Loftus-Otway, Patricia Cramer, Devin Wilkins, Noah Oaks, Kara Kockelman and Mike Murphy

What We Did



TxDOT Research Project 0-6971 studied ways to Incorporate wildlife crossings into TxDOT's project development, design and operations processes through:

- Summarizing national and statewide efforts to reduce animal-vehicle conflict.
- Act through the lens of case law.
- developing certain wildlife crossing structures.
- dure, and
- moting wildlife connectivity.







Conducting a comprehensive review of state laws pertinent to wildlife crossings and analyzing the responsibilities of TxDOT under National Environmental Policy

Analyzing the animal-involved crash data in Texas, developing methodology to identify animal-vehicle crash hot spots, and evaluating the benefits and costs of

Recommending language modifications to 18 TxDOT manuals to make consideration of wildlife crossings a routine part of the TxDOT project development proce-

Developing a guidelines document on reducing wildlife-vehicle-conflict and pro-



- mal-vehicle conflict issues.



What We Found

If mitigation strategies are developed based on solid data analysis, careful study of the environmental conditions, and coordination among different divisions within TxDOT, the strategies can be cost-effective and deliver results.

Mitigation strategies can significantly improve traveler safety, foster wildlife connectivity, alert TxDOT staff to the value in preserving the state's wildlife, and ensure that Texas will demonstrate leadership on this issue for other state DOTs.

The project showed high benefit-cost ratios for implementing different types of mitigation, especially when underpasses/overpasses are combined with fencing.

The benefits include reduced crash costs over time and wild animal lives saved.

Creating a highly efficient standardized process across TxDOT divisions to meet USFW requirement presents another cost savings for the agency.

• Several TxDOT districts have already initiated programs to minimize animal-vehicle collisions, have seen successful results, and can provide guidance on planning, designing, construction and maintenance.

What This Means

Developing wildlife crossing structures or other mitigation strategies is a complicated process. It needs to be supported by detailed data analysis and its success is highly dependent on the collaboration within and among different divisions within TxDOT and also other relevant wildlife and resource agencies.

The findings and final products of project 0-6971 are expected to help make wildlife crossing structure consideration and creation a regular part of TxDOT's project development procedure and contribute to TxDOT's role as a leading state in reducing ani-

collaborate. innovate. educate.