

Wildlife crossings potentially save millions of dollars annually in Washington state

August 30 2022, by Sara Zaske



The state of Washington has 22 wildlife crossings, the majority of which are on I-90 like this overcrossing. Credit: WSDOT.

Crossings over highways intended to preserve biological diversity also appear to reduce wildlife-vehicle collisions in Washington state, saving roughly \$235,000 to \$443,000 every year per structure.

A Washington State University [economic analysis](#) found there were 1 to 3 fewer collisions involving [wildlife](#) per mile, each year in a 10-mile radius around each wildlife crossing in the study.

"Wildlife crossing structures not only benefit the ecosystem but may also improve [road safety](#)," said Wisnu Sugiarto, a WSU economics doctoral student and author of the study published in the *Transportation Research Record: Journal of the Transportation Research Board*.

Wildlife crossings are designed to help animals move in search of food and to escape predators and wildfires, but this is the first known study to look at the reduction in wildlife-vehicle collisions in Washington state. Sugiarto noted that similar evidence has been found by studies in North Carolina, Utah and Wyoming. There soon may be many more structures across the country since \$350 million was allotted in the federal Infrastructure Investment and Jobs Act signed into law in 2021.

Washington state currently has a total of 22 wildlife bridges and underpasses. Half of the state's wildlife crossings are found in Kittitas County where that interstate bisects the Cascades, a major division of habitat for many animals. These types of structures can range in cost from \$500,000 for a tunnel-like underpass to over \$6 million for a broad bridge like the one near the Snoqualmie Pass on Interstate 90.

For this study, Sugiarto analyzed [collision](#) data from the Washington State Department of Transportation from 2011 to 2020 before the pandemic changed travel patterns. Adjusting for construction time and closeness of other structures, Sugiarto examined data related to 13 bridges and underpasses, comparing wildlife-vehicle collisions before and after the structures were built. He also used an area elsewhere in the state with no structures for comparison.

More consistent, significant reductions in collisions were around bridges.

Deer are the animals most likely to be involved in vehicle collisions, which cost on average about \$9,000 per accident. Camera traps also show that deer seem to use bridge crossings more often. Underpasses appear to be more popular with predators like black bears.

This study relied on official reports of wildlife-vehicle collisions, which are only required when damage is \$1,000 or more. Future research might look at [insurance claims](#), which would reveal more data and potentially show greater benefits from these structures, the researcher said.

During the study time-period, there were more than 1,600 wildlife-vehicle crashes every year in the state with about 10% resulting in human injury and even a few deaths. Decreasing these accidents would reduce unnecessary trauma and potentially save lives in addition to saving money, Sugiarto said. Most of the accidents involved "safe drivers," those who were sober and driving without distractions like texting.

"We often talk about things that we can and cannot control," said Sugiarto. "From a driver point of view, they may choose to drive safely, but still, unfortunately, there are animals that cross the road, and they end up hitting them. This shows there's something we can do about these collisions."

More information: Wisnu Sugiarto, Impact of Wildlife Crossing Structures on Wildlife–Vehicle Collisions, *Transportation Research Record: Journal of the Transportation Research Board* (2022). [DOI: 10.1177/03611981221108158](https://doi.org/10.1177/03611981221108158)

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