



LPRO: LEGISLATIVE POLICY AND RESEARCH OFFICE

WILDLIFE CORRIDORS

BACKGROUND BRIEF

Oregon's natural environment is home to several large-bodied animals such as elk, mule deer, and pronghorn antelope. These animals, along with many other species, rely on migration routes for access to food, water, and shelter across the seasons. Landscapes surrounding migration routes often experience change due to human population growth and associated residential, commercial, and transportation development. Changes in land use create obstacles in existing migration corridors, leaving animals isolated and vulnerable. Wildlife corridors, which are pathways of undeveloped land connecting one area of habitat to another, provide safe passage for animals needing to navigate a fragmented ecosystem.

This brief serves as a broad overview of the current state of wildlife corridors, both state-based and nationwide. The next section provides a general economic overview of wildlife corridors, including a look at Oregon's road network and wildlife-vehicle collision numbers, and is followed by a review of existing federal and state action on wildlife corridors. The brief concludes with a summary of Oregon's current initiatives on wildlife corridors.

TABLE OF CONTENTS

ECONOMIC OVERVIEW OF WILDLIFE CORRIDORS	1
FEDERAL & STATE ACTION ON WILDLIFE CORRIDORS	4
OREGON WILDLIFE CORRIDOR INITIATIVES	6

ECONOMIC OVERVIEW OF WILDLIFE CORRIDORS

The National Wildlife Federation recognizes that one of the best ways to protect animal habitats and boost biodiversity is to keep landscapes connected.¹ Similarly, the Oregon Department of Fish and Wildlife (ODFW) finds that habitat connectivity is key to managing not only terrestrial animals but aquatic and avian species, as well. States are recognizing the value of wildlife corridors as a cost-effective solution to maintaining resilient ecosystems while also protecting public safety. The following section outlines several economic factors connected to wildlife corridors.

Benefits of Wildlife Corridors

Facilitating Wildlife Movement. Landscape connectivity enables wildlife to move freely through areas that they normally travel and engage in routine activities. Connectivity can be re-established in a fragmented landscape through the development of wildlife corridors to support migration and other needs that rely on movement.

¹ National Wildlife Federation. *Wildlife Corridors*, 2019. https://www.nwf.org/-/media/Documents/PDFs/Habitats/NWF-Fast-Facts_wildlife-corridors.ashx?la=en&hash=C8EC5CA50AEEA3EA4C50E47FB41A0BDA28AAA32, visited July 13, 2021.

Conserving Biodiversity. Species are at risk of genetic isolation when habitats and migration routes encounter obstacles to movement. Wildlife corridors can help prevent this by connecting areas of habitat, thus increasing habitat size and enhancing biological diversity within an ecosystem.

Avoiding Quantifiable Losses. Implementation of wildlife corridors and associated infrastructure can reduce quantifiable losses from wildlife-vehicle collisions (WVCs), such as insurance and medical costs. In some cases, wildlife corridors also reduce proximate vehicle speeds and increase driver awareness. Furthermore, properly sited wildlife corridors pay for themselves in areas where the costs associated with collisions exceed the expense of building a structure for safe passage.

Reducing Safety Risk. One of the most significant obstacles to migration routes is the development of new roads, especially roads that become heavily travelled. WVCs pose a health and safety risk to both people and animals. More than 1.5 million vehicle collisions occur with deer in the U.S. each year, resulting in 150-200 human deaths annually. Additionally, over 90 percent of all deer hit by a vehicle die from the injuries they sustain.² Establishing areas of safe passage for wildlife reduces the likelihood that drivers encounter animals on the road.

Minimizing Monetary Impact. For drivers, the most common direct cost incurred from a collision is vehicle damage. The NW Insurance Council reports an average WVC automobile claim of \$4,135, and the Federal Highway Administration estimates WVCs cost Americans more than \$8 billion each year when accounting for emergency response, towing, repairs, medical bills, and the value of the animal.³ Developing wildlife corridors in high-traffic areas minimizes the possibility for a WVC to occur.

More information on the benefits of wildlife corridors can be found in the [Oregon Conservation Strategy](#) and the [Conservation Corridor Planning Handbook](#).

Wildlife-Vehicle Collisions

In 2020, the total reported WVC count was 5,997 for all species tracked by the Oregon Department of Transportation (ODOT). The highest collision counts in the state occurred with deer and elk. See Table 1 for detailed WVC counts occurring between 2016 and 2020.⁴

Table 1. ODOT Wildlife Collision Data

Animal Type	WVC Count, 2020	Total Count, 2016-2020
Antelope	5	47
Bald Eagle	2	12
Bear	31	233
Big Horn Sheep	2	4
Cougar	11	63
Deer	5,573	29,885
Elk	263	1,455
Golden Eagle	1	5
Hawk	12	42
Mountain Goat	2	8
Owl	22	95
Wild Game - Small	73	511
Total Count	5,997	32,360

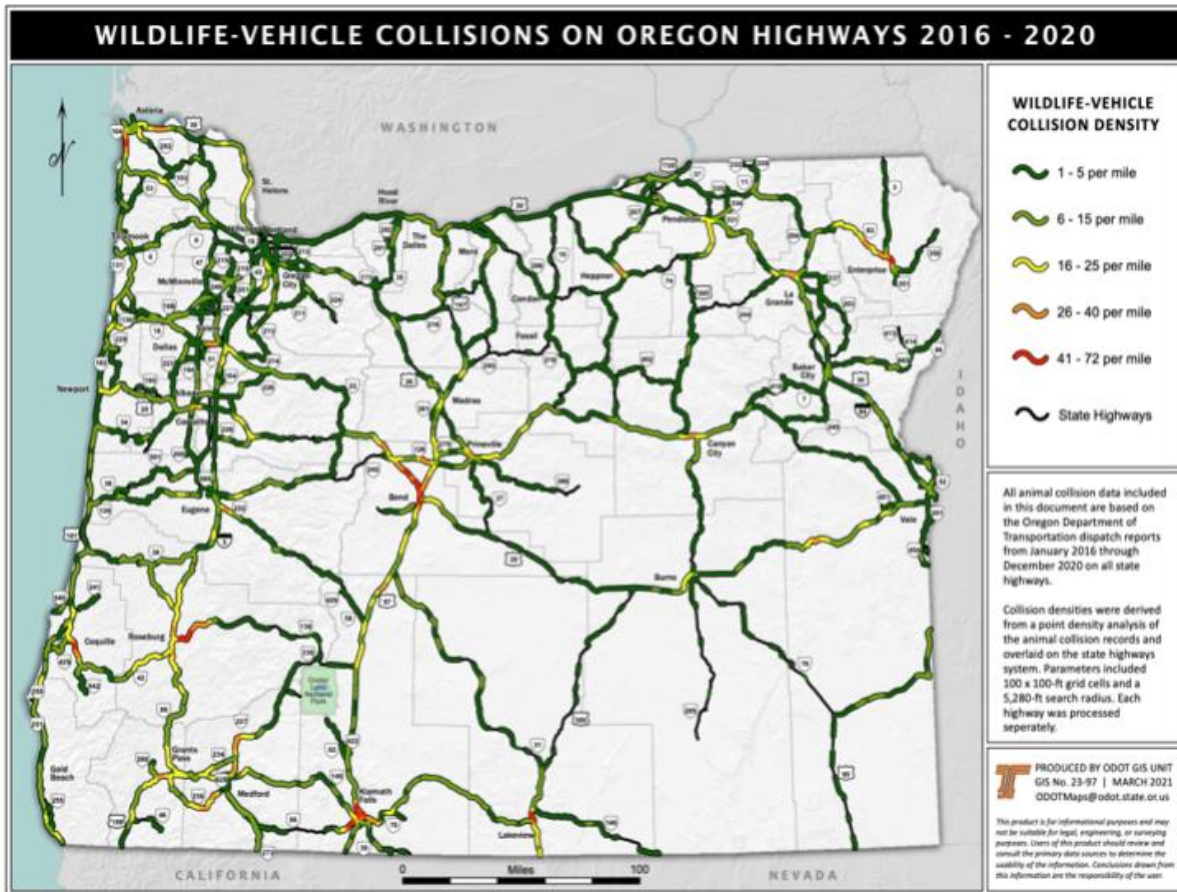
² Oregon Department of Fish and Wildlife. *To the Other Side*.

<<https://www.arcgis.com/apps/Cascade/index.html?appid=28482c80c9cc49a1aa2310adb3289e89>>, visited June 22, 2021.

³ NW Insurance Council. *Wildlife Collisions*. <<https://www.nwinsurance.org/wildlife-collisions>>, visited June 22, 2021.

⁴ Data provided by Oregon Department of Transportation. April 2, 2021. Virtual meeting.

Figure 1. Map of WVCs involving antelope, bear, deer, and elk as of March 2021



Source: Oregon Department of Transportation

Oregon's Road Network

Oregon has 79,045 miles of roadways across the state, including 4,295 miles of national highways.⁵ Drivers travel over 35.8 billion miles on these roads each year.⁶ A 2019-2020 report on Animal Collision Likelihood listed Oregon in the “medium risk” category nationwide, with an overall collision rate of 1 in 180, although it has the highest rate of WVCs when compared to other West Coast states.⁷

Figure 1 above is one example of ODOT's ongoing efforts in data collection to illustrate WVC concentrations across the state. Notable intersections include:

- U.S. Highway 20 and U.S. Highway 97 (junction between Bend, Redmond, and Sisters in northern Deschutes County);
- Oregon Highway 138 and Interstate 5 (City of Roseburg in central Douglas County); and
- U.S. Highway 97, Oregon Highway 39, and Oregon Highway 66 (City of Klamath Falls in southern Klamath County).

⁵ U.S. Department of Transportation Federal Highway Administration. *Highway Statistics 2019, Public Road Length*. <<https://www.fhwa.dot.gov/policyinformation/statistics/2019/hm10.cfm>>, visited April 28, 2021.

⁶ U.S. Department of Transportation, Federal Highway Administration. *Highway Statistics 2019, Annual Vehicle Miles*. <<https://www.fhwa.dot.gov/policyinformation/statistics/2019/vm2.cfm>>, visited April 28, 2021.

⁷ State Farm. *Simple Insights: How likely are you to have an animal collision?* <<https://www.statefarm.com/simple-insights/auto-and-vehicles/how-likely-are-you-to-have-an-animal-collision>>, visited April 28, 2021.

FEDERAL AND STATE ACTION ON WILDLIFE CORRIDORS

Federal Legislation and Executive Agency Orders

Over the past decade, several pieces of bipartisan legislation have been introduced to Congress and at least one executive branch order has been issued to advance efforts around wildlife conservation. Key pieces include:

- The [FAST Act of 2015](#), which provides \$30 million in dedicated funding for programs such as the Wildlife Restoration Act;
- [Secretarial Order 3362](#), implemented through executive agency action in 2018, which allocates \$3.5 million through competitive grants for efforts made by western states to improve the quality of big-game winter range; and
- The [2019-2020 Moving Forward Act](#), encompassing the Wildlife Corridors Conservation Act and the INVEST in America Act, that would have dedicated \$300 million for collaborative projects that reduce highway fatalities and safeguard wildlife.

State Legislation

In 2020, a total of 14 bills addressing wildlife corridors were introduced to legislative bodies in eight states and four were adopted. In 2021, 12 bills were introduced in 10 states and three have been adopted to date. In total, more than 20 bills have been adopted in nine states, with either a direct or tangential connection to wildlife habitat conservation efforts. Figure 2 shows the geographic origin of these bills. The initial step for most states is establishing a wildlife corridor action plan, followed by implementing a funding mechanism to generate revenue to carry out the action plan. See Table 2 for recently enacted legislation.

Figure 2. Map of states with enacted wildlife corridor legislation



Source: National Caucus of Environmental Legislators

Table 2. Wildlife corridor legislation recently enacted in western states

State	Date Enacted	Bill Number	Summary
CA	2017	Senate Bill 5	Appropriates \$18 million to Wildlife Conservation Board for wildlife corridors, habitat protection, habitat connectivity, and public access.
NM	2019	Senate Bill 228	Appropriates funding to wildlife corridors and creates wildlife corridor action plan for use by state agencies.
UT	2020	House Concurrent Resolution 13	Urges continued state investment in wildlife connectivity; encourages state and local governments to adopt policies to protect wildlife and improve motorist safety.
CO	2021	Senate Joint Resolution 21-021	Recommends development of a work group to support the governor’s executive order on conserving big game winter range and migration corridors across the state.
WY	2021	House Bill 66	Provides funding for large wildlife corridors from conservation funding.

State Funding Options

While several states have legislation in place to require or encourage state agencies to mitigate for WVCs and restore wildlife habitat, many more states have dedicated funding to support habitat conservation and connectivity. The funding mechanisms in use vary by state and can be grouped into the following categories:

- Vehicle Related Fees
- Natural Resource Related Fees, Licenses, and Fines
- State and Local Taxes
- Lottery Revenue
- Bond Issuance

Historically, many states have relied on charitable contributions to conservation funds that support projects such as wildlife corridors. One example is the sale of state conservation-themed license plates that generate revenue for specific wildlife programs, although revenue generated is often limited.

Title registration and speeding zone fees are documented as having the most success to date, due to their ability to provide a consistent stream of revenue while minimizing the financial impact placed on individual drivers and registered vehicle owners in the state. ODOT estimates that a \$1 increase in vehicle registration fees could generate more than \$5 million a year.⁸ After applying state and local cost-sharing, this would allocate at least \$2.5 million to ODOT, \$1.5 million to counties, and \$1 million to cities to help fund state and local projects. Additional funding mechanisms considered for meeting the needs of Oregon's landscape include licensing fees, auto insurance surcharges, general taxes, transient lodging taxes, and conservation license plates.

Table 3. Common funding mechanisms used for wildlife corridor initiatives

Funding Mechanism	Description
Vehicle Title Registration Fee	Fee charged to individuals when registering vehicle with the state.
Auto Collision Insurance Surcharge	Fee added to automobile insurance cost.
Speeding Zone Fee	Fee added to speeding fine in high-collision corridors.
Natural Resource Extraction Fee	Fee places on individuals or businesses that extract natural resources on state owned land.
Outdoor Recreation License Fee	Fee added to cost of outdoor recreation permit.
General Sales Tax	Tax placed on specified categories of purchases within a jurisdiction.
Sporting/Outdoor Equipment Sales Tax	Tax placed on purchases of sporting or outdoor recreation equipment.
Transient Lodging Tax	Tax placed on cost or charge for tourist home, hotel, motel, or trailer regularly rented for less than 30 days.
Documents & Recording Tax	Tax placed on certain documents executed, delivered, or recorded, or added to conservation stamp fee.
Conservation License Plate	Sale of themed vehicle license plates.

⁸ Estimates provided by Oregon Department of Transportation. May 27, 2021. Virtual meeting.

OREGON WILDLIFE CORRIDOR INITIATIVES

Oregon began its wildlife corridor efforts in 2012, when ODOT built two underpasses for large-bodied animals along Highway 97 between Bend and Sunriver. Highway 97 is a critical part of Oregon's transportation system and is the main north-south transportation corridor east of the Cascade Mountains. Wildlife passage was monitored along the stretch of affected highway from 2012 to 2017, and studies reported a decrease in WVCs by as much as 95 percent.⁹ In 2020, an additional wildlife corridor was constructed under Highway 97, north of Gilchrist, as part of ODOT's U.S. 97 Passing Lanes Project.¹⁰ Oregon's wildlife corridor projects have historically been locally funded and led, including through state agency or non-governmental organization grant programs and community contributions.

The Oregon Legislative Assembly adopted [House Bill 2834](#) in 2019, directing the Oregon Department of Fish and Wildlife (ODFW), in cooperation with ODOT, to develop a Wildlife Corridor Action Plan (plan) for use by state agencies.¹¹ The bill requires ODOT to use the plan as criteria for establishing a program to achieve long-term habitat connectivity by September 15, 2022. The Oregon legislature also adopted [House Bill 2829](#) in 2019, establishing the Oregon Conservation and Recreation Fund, dedicated to activities that protect, maintain, or enhance fish and wildlife resources throughout the state.

Additional legislation introduced in 2021 initiated a work group for legislators to meet with stakeholders from conservation groups, automobile insurance organizations, and state agencies. The objective of this group is to identify and recommend one or more funding mechanism(s) to support wildlife corridor infrastructure in Oregon. This work is currently underway.

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⁹ Oregon Department of Transportation. *Lava Butte Wildlife Crossing Effectiveness*, 2018. <https://www.oregon.gov/odot/GeoEnvironmental/Documents/Wildlife-Crossing-Report_Lava-Butte.pdf>, visited April 28, 2021.

¹⁰ Oregon Department of Transportation. *U.S. 97 Passing Lanes Project*. <<https://www.oregon.gov/odot/projects/pages/project-details.aspx?project=19784>>, visited April 28, 2021.

¹¹ [ORS 496.272 \(2019\)](#)