



# Impacts of Roadways on Wildlife in Wyoming

**LONG-TERM AND RECENT TRENDS**

By Corinna Riginos



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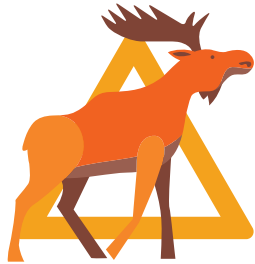
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# Executive Summary



Here in Wyoming, we pride ourselves on our great herds of mule deer, pronghorn, elk, and other big game. These animals are part of the livelihood, culture, and economy of the state. When these herds interact with our roads, however, the result is often dangerous for the animals and the traveling public. The annual number of wildlife–vehicle collisions (WVCs) continues to rise over time, with a current five-year average of 7,656 animals per year. The vast majority of these collisions (approximately 5,500) involve mule deer, whose numbers are already in decline. Collisions often result in costly vehicle damage and can lead to human injuries and death. They are almost always fatal for the animals. At the current rate, there are 21 big-game collisions every day in Wyoming, eight of which involve significant damage to vehicles and/or human injury. The total cost of WVCs in Wyoming averages about \$55 million per year. These numbers have doubled over the last 15 years, and we can expect them to double again by 2035 if we do not address the problem. Further, the actual number of collisions and dead animals is likely at least twice the number that gets counted, due to undetected mortalities away from the roadside.

Rising traffic volumes also mean that roads are becoming more difficult for animals to cross, potentially cutting animals off from their historic seasonal ranges. Collisions tend to cluster in distinct “hotspots.” Wildlife underpasses, overpasses, fence modifications, and other actions to reduce collisions have been highly effective and have nearly eliminated some of the long-term hotspots in the state. Efforts over the last few years have led to new successes, including fence and vegetation modifications at several locations and a significant federal grant to build nine new wildlife underpasses near Big Piney. Several additional high-priority projects are in the planning and funding phases. Although roads and vehicles continue to pose a challenge to the well-being of Wyoming’s big-game populations, we have a great opportunity ahead to reduce these problems and make Wyoming’s roads safer for wildlife and people alike.

# Purpose of this Report



In 2016, the Wyoming Department of Transportation (WYDOT) and the Federal Highway Administration (FHWA) report entitled “Planning-support for mitigation of wildlife–vehicle collisions and highway impacts on migration routes in Wyoming”<sup>1</sup> provided numbers and maps showing spatial and temporal patterns of wildlife–vehicle collisions in the state between 2008 and 2013. The maps, numbers, and recommendations from that report have since been used widely to guide strategic decision making, to garner public and legislative support for wildlife crossing initiatives, and to communicate to a variety of audiences about the wildlife–road conflicts in Wyoming.

Since that report was written, the number of wildlife–vehicle collisions per year has gone up. Meantime, there has been increased interest in the topic and much social and political support and momentum for enacting solutions. This report is an effort to bring partners and stakeholders up to date

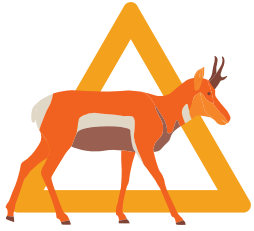
on the current numbers, trends, and maps to assist in communication, fundraising, and efforts to raise public awareness about the topic of roads and wildlife. Copies of all maps, or customized versions of them, including local-scale maps, are available from the author upon request.

This report focuses on big game, primarily deer, pronghorn, elk, and moose, both because of the ecological importance of these species in Wyoming and because we lack data on the impacts of roads on most other groups of animals. This is not to diminish the fact that roads often have a profound impact on a wider array of wildlife, including large and small carnivores, fish and fish passage, raptors, sage-grouse, reptiles and amphibians, small mammals, insects, and more. Addressing the effects of roads on these other species is, however, beyond the scope of this report. Any decisions about roads and wildlife should take into consideration potential impacts not just for big game, but also for other groups of animals.



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# Background: Roads and Wildlife in Wyoming



Wyoming supports some of the largest populations of ungulates in North America. These animals are important economic and cultural players

in the state and are of worldwide ecological importance. Maintaining these herds and their long-distance migrations is a high priority for the state. Wyoming also has a transportation network that supports interstate commerce along I-80, I-90 and I-25, as well as millions of tourists and the transportation needs of the state's residents.

There are two main ways in which roads and wildlife conflict. First, vehicles can collide with animals. This is almost always lethal to the animal and, as a consequence, wildlife-vehicle collisions collectively pose a threat to wildlife populations. Wildlife-vehicle collisions are also harmful to human safety and property. In Wyoming, 35% of wildlife-vehicle collisions result in significant damage to vehicles—that is several thousand vehicles a year<sup>2</sup>. A much smaller number, about 60 per year, result in significant human injury, and occasionally a human fatality occurs. Although small, these numbers represent human lives that are substantially impacted. On average, one in five of all reported crashes in Wyoming involves wildlife<sup>3</sup> and the state ranks among the top 10 in the nation for per-capita risk of wildlife-vehicle collision<sup>4</sup>, making these collisions a major traffic safety concern.

A second major conflict between roads and wildlife is that roads, especially the traffic on them and fences around them, make roads difficult for wildlife to cross. Roads and traffic are usually at least a partial obstruction to big-game movements. In some cases, they form a nearly complete barrier. It is difficult to measure the impact of the barrier effect and resulting habitat fragmentation on wildlife (and in most cases, we only have wildlife movement data from after the roads were already built), but it is likely larger than the direct impacts of wildlife-vehicle collisions. The ability to move freely over long distances is key to sustaining big-game migrations, and these migrations, in turn, are important to sustaining healthy and abundant wildlife populations.

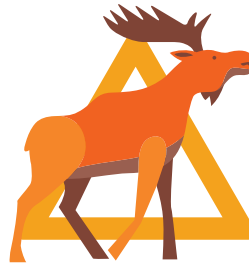
Roads almost certainly act as barriers for all major species of ungulates, but the effects may be most pronounced for pronghorn. Pronghorn do not readily jump fences, and most roadside right-of-ways in Wyoming are fenced. Although the number of pronghorn collisions with vehicles is modest, roads and associated fences have a significant barrier effect for this species.

Mule deer, on the other hand, suffer large numbers of mortalities in collisions with vehicles while also being impacted by fences and traffic on roads. Mule deer populations are of special concern in Wyoming because they are in decline, here and across most of the West. Roads have been identified as posing a significant threat to mule deer populations and their seasonal migrations in Wyoming and across their range<sup>5</sup>.

# Wildlife–Vehicle Collisions: Statewide Patterns

## Across Wyoming’s network of WYDOT-maintained roads:

- Total big-game (wild ungulate) collisions averaged 7,656 over five years (2016–2020), with a peak of 8,346 in 2018. On average, 35% of collisions involved substantial damages to vehicles.
  - Deer–vehicle collisions averaged 6,651 per year (87% of total), with approximately 5,500 of these involving mule deer
  - Pronghorn collisions averaged 593 per year (7% of total)
  - Elk collisions averaged 253 per year (3% of total)
  - Moose collisions averaged 69 per year (1% of total)
- Currently, an average of 21 big-game animals are killed by vehicles per day in Wyoming, with eight collisions per day involving significant damages to vehicles and/or human injuries.
- At this rate, we are losing about 1.5% of Wyoming’s mule deer population per year in wildlife–vehicle collisions. Since the reported numbers are a substantial under-count, we may really be losing 3% or more of Wyoming’s mule deer population per year in these collisions.
- Reported crashes—those collisions involving significant injury or damage—averaged 2,923 per year and currently make up 19–22% of all reported collisions per year (up from about 15% in 2009–2013)<sup>3</sup>. In other words, about one in five significant collisions in Wyoming involves wildlife.



The total number of reported collisions is almost certainly far below the true total in terms of vehicle-caused animal mortalities for several reasons. First, these numbers do not

reflect all the collisions that occur on county or local roads. Second, even on state roads, not all crashes get reported to law enforcement. Third, many animals are hit and leave the road right-of-way before dying or are damaged beyond recognition, so that their carcasses are never counted. Studies have shown that actual dead animals are two to four times more numerous than what gets counted<sup>6-7</sup>.

If we conservatively estimate that the true number of animals hit by vehicles is two times the number counted, then we may be losing 15,000 big-game animals, mostly mule deer, to wildlife–vehicle collisions per year.



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## DATA NOTES

Wildlife-vehicle collision (WVC) data come from two databases maintained by WYDOT. WYDOT's animal-vehicle crash data are collected when an animal collision is reported to highway patrol because there was significant damage to the vehicle (typically reported if in excess of \$1,000) and/or human injury. WYDOT's roadside carcass count data are collected by highway maintenance crews. While crash data are more precise in terms of recording the time and location of the collision, there are many collisions that do not involve damages and do not get counted in the crash database but nevertheless result in an ungulate mortality and are counted in the carcass data.

The analyses in this report use both crash data and carcass data, sometimes treating them separately and in some cases reporting total numbers across both data sources. While there is potential for overlap or double accounting between these two databases, a best effort has been made to remove this duplication by removing records that share the same location data, involve the same type of animal (species, sex, age group), and were reported on the same date. Statewide average numbers presented here reflect merged totals across both data sources. The carcass data set does distinguish between mule deer and white-tailed deer, but the crash data do not. Mule deer, on average, make up 82% of the deer in the carcass data. To estimate total mule deer collisions, this same percentage was used to divide "deer" in the crash data into an estimate of mule deer vs. white-tailed deer numbers.

The numbers presented in this section represent five-year averages from 2016-2020.



# Wildlife–Vehicle Collisions: Trends Over Time



The total number of WVCs involving big game has gone up over time (see Figure 1). The pattern of increase is generally a steady, linear increase.

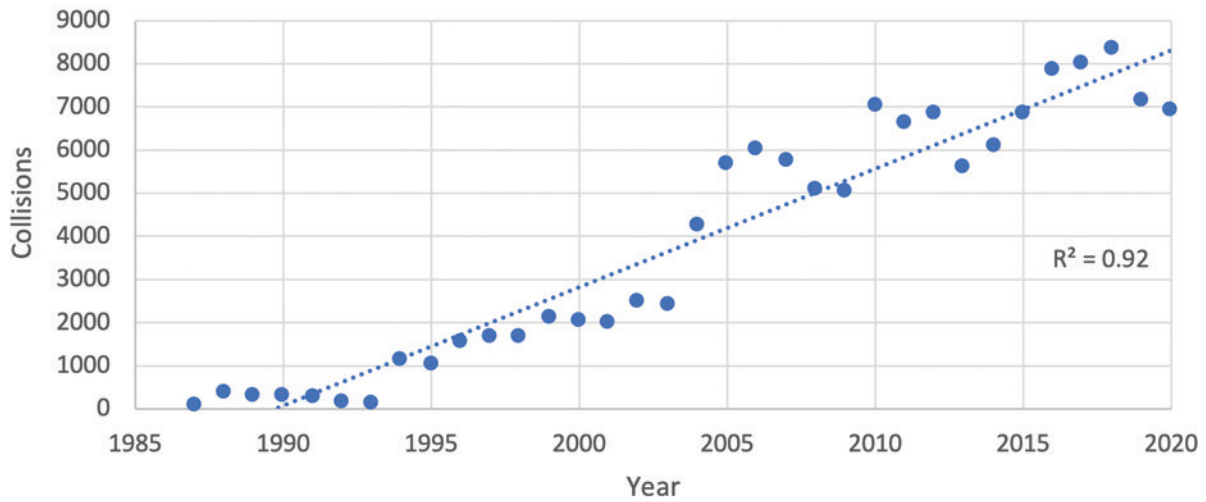
- Wildlife–vehicle collisions per year have doubled over the past 15 years.
- This increase occurred despite WYDOT installing several new, major wildlife crossings projects, for example crossing structures and fencing at Trapper’s Point and Baggs. These projects have each been highly successful at reducing WVCs locally, but the statewide total numbers continue to rise.
- In the meantime, mule deer herd numbers have shown a downward trend over the same time period (down from 520,000 in 2006–07 to 320,000 in 2019 statewide). So, effectively, WVCs are removing a growing proportion of the total mule deer herd over time (Figure 2).
- If this trajectory continues, we could see another doubling (to approximately 15,000 WVCs recorded) by 2035. Since the true number may be more than twice the number recorded, WVCs may total 30,000 by 2035. However, additional measures to reduce WVCs at new locations should offset some of these increases. Also, WVCs might not continue to rise, depending on traffic patterns (see below).
- The increase we have seen over the past 15 years is also very apparent for deer, elk, and pronghorn, but not moose.
- On average, we are seeing an increase of:
  - 191 additional total big-game–vehicle collisions per year
  - 173 additional deer–vehicle collisions per year
  - 16 additional pronghorn–vehicle collisions per year
  - 6 additional elk–vehicle collisions per year
  - Moose collisions fluctuate but with no trend over time

## DATA NOTES

The number of WVCs per year represents combined crash and carcass data. It is possible that some of the increase in WVCs over time is due to better and more consistent reporting, especially for carcasses. It has been reported that starting around 2005 there was a concerted effort between WYDOT and the Wyoming Game and Fish Department (WGFD) to collect more consistent records. However, the trend and slope of the increase are not much affected by whether pre-2005 data are included or excluded, and the biggest increases have occurred since 2005. Mule deer total population estimates over time were obtained from WGFD.

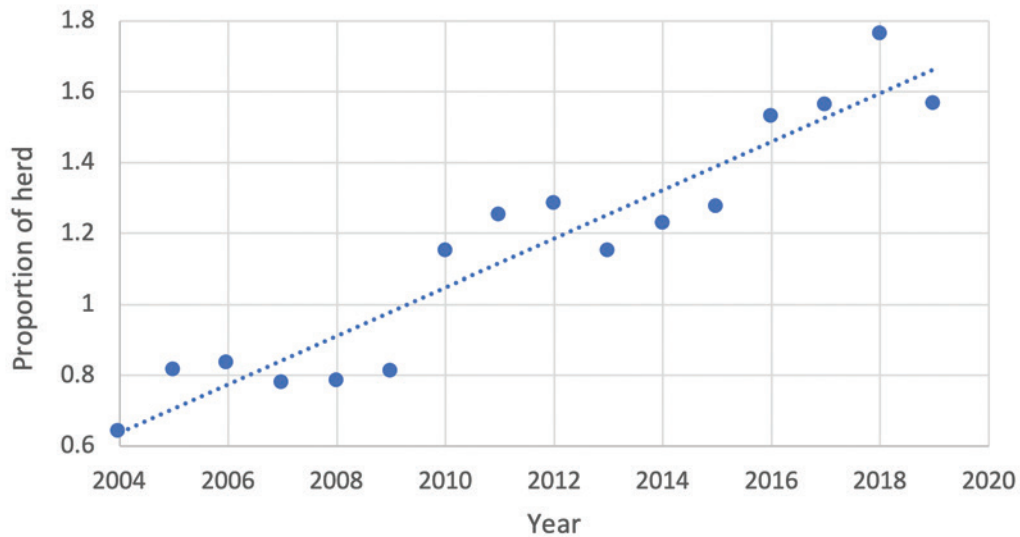


### Big-game-vehicle collisions over time



**FIGURE 1.** The number of total wildlife-vehicle collisions (all species of big-game ungulates) per year in Wyoming has risen over time. Total collisions doubled between 2005 and 2020.

### Percent of Wyoming's mule deer herd killed by vehicles over time



**FIGURE 2.** As wildlife-vehicle collisions have risen, the mule deer herd population has decreased from an estimated 520,000 to an estimated 320,000 between 2004 and 2019. This means that the percent of the herd killed by vehicles each year has risen substantially. In other words, collisions may be impacting mule deer herd numbers more now than in the early 2000s.

# Wildlife–Vehicle Collisions: Costs



- A conservative estimate is that wildlife–vehicle collisions currently cost \$54–\$56 million per year. This number includes the costs due to human injuries, vehicle damages, and lost wildlife value (Table 1, Table 2).

- If current trends continue in terms of rising WVCs per year, this total could exceed \$100 million per year by 2035.
- There are a variety of different ways to estimate an economic cost to wildlife–vehicle collisions, and each method will yield different numbers. Here, two very different methods yielded a similar total, illustrating the key point: these collisions are very costly.



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**TABLE 1.** Estimated costs per year of wildlife–vehicle collisions in Wyoming using the Huijser-Ament approach to calculating costs per crash.

ANIMAL	INJURY & DAMAGE	LOST WILDLIFE VALUE	TOTAL COSTS
Deer	\$18,698,126	\$26,913,600	\$45,611,726
Elk	\$2,480,766	\$1,519,200	\$3,999,966
Pronghorn	\$1,060,800	\$1,780,200	\$2,841,000
Moose	\$1,505,985	\$517,500	\$2,023,485
<b>Total</b>			<b>\$54,476,177</b>

**TABLE 2.** Estimated costs per year of wildlife–vehicle collisions in Wyoming using WYDOT’s adapted Federal Highway Administration approach to calculating costs per crash.

	INJURY & DAMAGE	LOST WILDLIFE VALUE	TOTAL COSTS
<b>Total</b>	\$24,945,916	\$31,215,801	\$56,161,717

## DATA NOTES

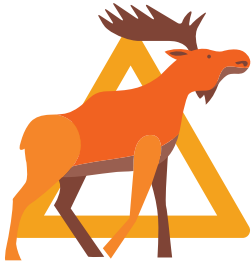
Injury and damage costs are calculated as: (number of crashes) x (cost per crash). This excludes carcass data, which are presumed to represent collisions without vehicle damage or human injury. Crash costs were calculated using two methods. The first method uses the framework of Huijser et al.<sup>8</sup> which was updated using the U.S. Department of Labor's Consumer Price Index calculator<sup>9</sup> to reflect 2019 values. The Huijser-Ament approach uses empirical data from across the country, such as average damage costs calculated using insurance data and other available data sources. The 2021-adjusted estimated total costs for injuries and damages are \$8,264 per deer collision, \$21,723 per elk collision, and \$38,615 per moose collision (this excludes the value of the animal). Costs are higher for larger animals because collisions with larger animals are more likely to cause severe damages, human injuries or human fatalities. Huijser and Ament do not include a cost for pronghorn. Pronghorn have smaller body mass than deer; therefore, an estimated cost of \$6,000 per pronghorn collision was used here.

The second method uses the crash costs used by WYDOT which follow FHWA guidance<sup>10</sup>. These costs are assigned independent of the animal involved in the crash and have the following costs: property damage only = \$5,500; human injury = \$111,321; human fatality = \$2,542,076.

Lost wildlife value costs are calculated as: (number of crashes + number of carcasses) x (cost per animal). Animal values are derived from the WGFD restitution values<sup>11</sup>. These are \$4,000 per deer, \$6,000 per elk, \$3,000 per pronghorn, and \$7,500 per moose.



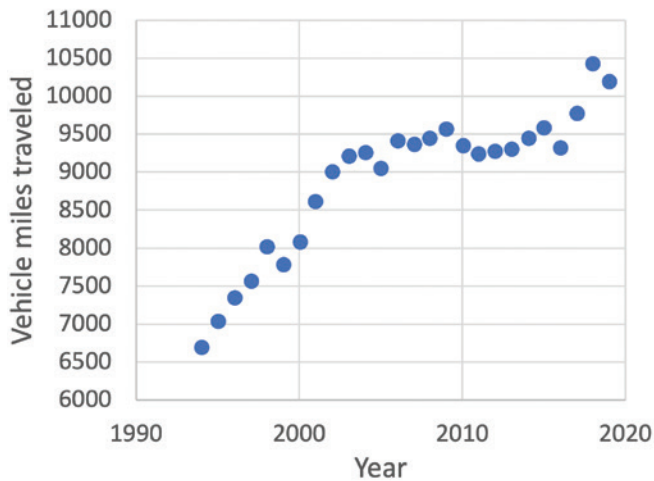
# Traffic Volume, WVCs, and the Barrier Effect



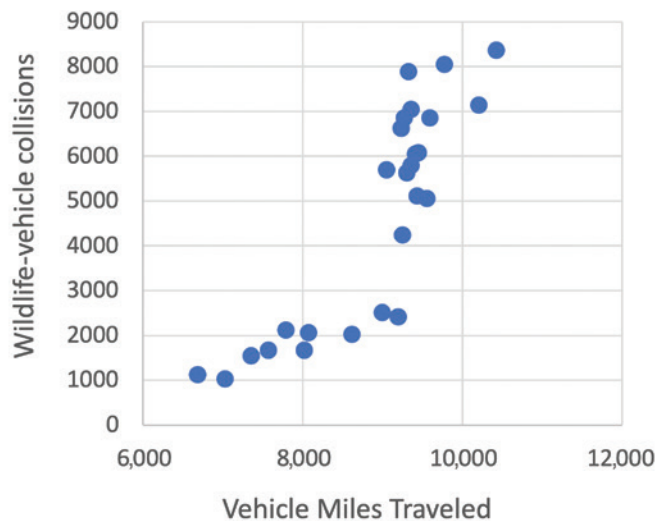
Traffic volume is often related to WVC rates. In fact, traffic volume was the factor most strongly associated with hotspots of collisions in an

analysis of the road and landscape features associated with high WVC rates<sup>1</sup>. Over the last several decades, the total vehicle miles traveled in Wyoming has risen—albeit not always linearly and with some variation, especially over the last 15 years, when it dipped and then picked up again (Figure 3). Wildlife–vehicle collision numbers (statewide totals) are strongly related to vehicle miles traveled (Figure 4) and show a notable threshold effect.

Below about nine billion vehicle miles traveled, WVCs rise slowly with increasing vehicle miles traveled. Above nine billion vehicle miles traveled, WVCs rise very sharply. Put another way, the years with the highest statewide wildlife–vehicle collision counts have all had some of the highest vehicle miles traveled. This indicates that if total vehicle miles traveled in Wyoming rises beyond levels seen in the past, we can expect a substantial increase in WVCs. We can also expect an increase in WVCs in local areas that experience an increase in traffic volume, for example due to installation of a major new utility project or a general increase in tourism.



**FIGURE 3.** Total vehicle miles traveled in Wyoming by year.



**FIGURE 4.** Wildlife–vehicle collisions in relation to the total vehicle miles traveled in Wyoming. Each data point represents a yearly total.



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However, this pattern of increased vehicle traffic leading to increased WVCs is not a uniform pattern. As a general trend, WVC rates are expected to increase with increasing traffic volume up to a point, above which WVC rates should go down with increasing traffic. This is because above some threshold of traffic volume, the road starts becoming a barrier and animals stop trying to cross—and thus get hit less. In Wyoming, WVC numbers tend to drop off above 15,000 total vehicles on a given section of road per day.<sup>1</sup> Notably, WVC rates are low on most parts of I-80, which has very high vehicle traffic volume and the additional crossing challenges of a four-lane highway (as well as many miles of woven-wire fence). Animal movement paths, collected using GPS collars, show clearly that most collared mule deer and pronghorn do not cross I-80, and in fact their movement paths cluster up against the highway. Collectively, these

observations show that I-80 is a near complete barrier to big-game movement in Wyoming except in places with some form of highway underpass (whether designed for wildlife or a machinery or livestock passage). The patterns above use broad-scale averages, such as total vehicle miles traveled and annual average traffic against total WVCs in a year. Another approach is to look at instantaneous traffic as deer attempt to cross two-lane highways. This was done using thermal video footage to see how deer and vehicles interact at a very fine-grained scale in space and time. The results showed that deer need a long gap between consecutive vehicles—at least 30 seconds, ideally 60 seconds—to safely cross highways<sup>12</sup>. This is another piece of the story showing that traffic volume is a critical factor in determining not just collision rates, but also whether a road poses a barrier to wildlife movements.

## DATA NOTES

Vehicle miles traveled data were obtained from the Bureau of Transportation Statistics<sup>13</sup>. Wildlife-vehicle collisions for each year include both crash and carcass data.

# Hotspots of Collisions and Spatial Patterns



Wildlife–vehicle collisions tend to be clustered into hotspots. Knowing where the hotspots are located helps to plan where to prioritize measures to reduce collisions. From earlier work, we know that deer–vehicle collisions, which make up the vast majority of WVCs, are associated primarily with mule deer winter range and migration areas, as well as places with relatively high traffic volume (outside major towns) and agricultural fields<sup>1</sup>. As a result, the locations of hotspots are generally stable from one year to the next. Over the past two decades, however, some places that used to be less “hot” have become hotter. Meantime, as WYDOT has constructed highway under- and overpasses in several locations, WVCs have dropped dramatically in those places.

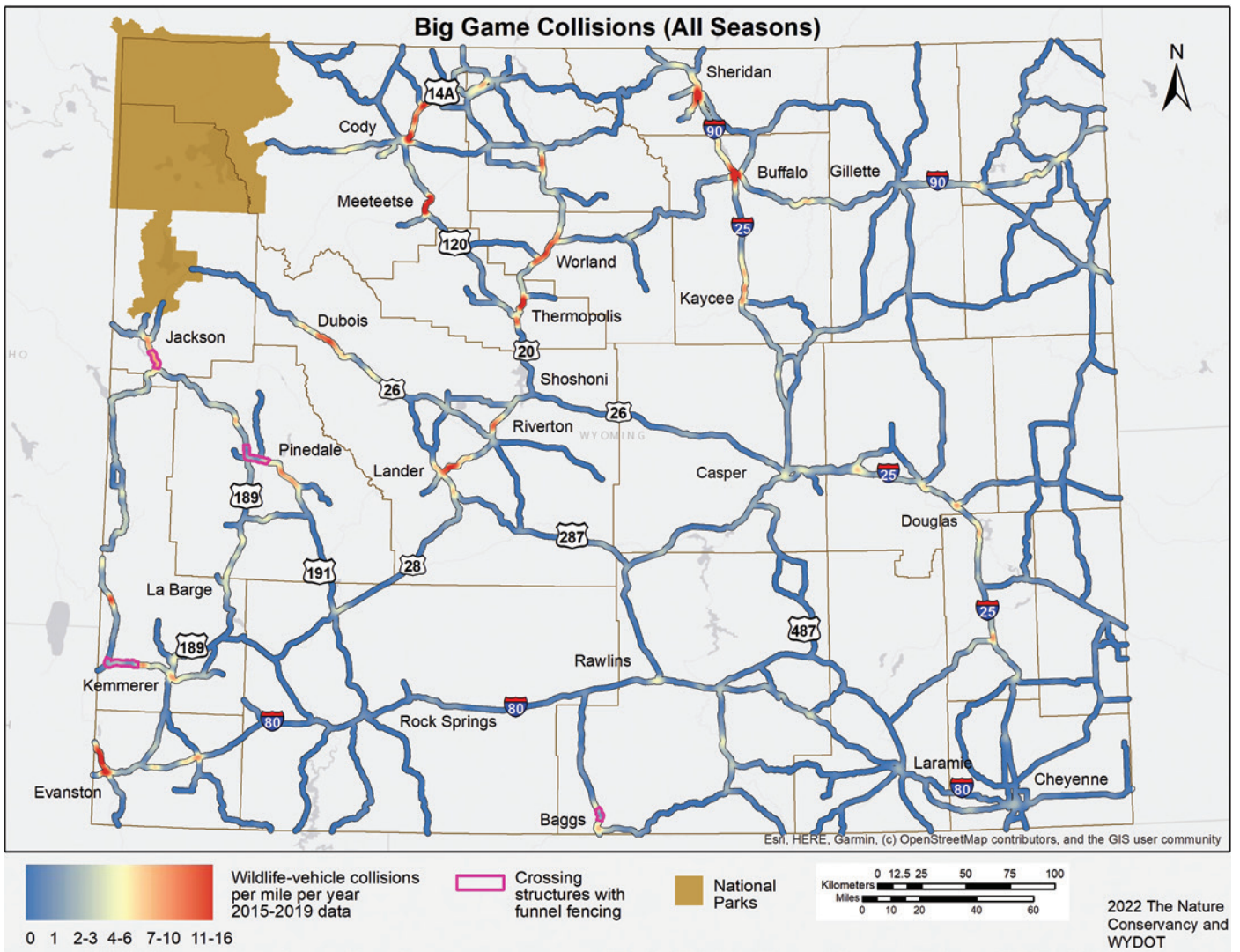
A current heat map, using five years of data (2015–2019) to smooth over the minor year-to-year differences,

shows many distinct hotspots (Figure 5). These are generally the same hotspots as in the prior (2008–2013) analysis, though as noted, total numbers have gone up. Wildlife–vehicle collisions per year have noticeably jumped around Dubois, Meeteetse, Kaycee, and (Figure 6).

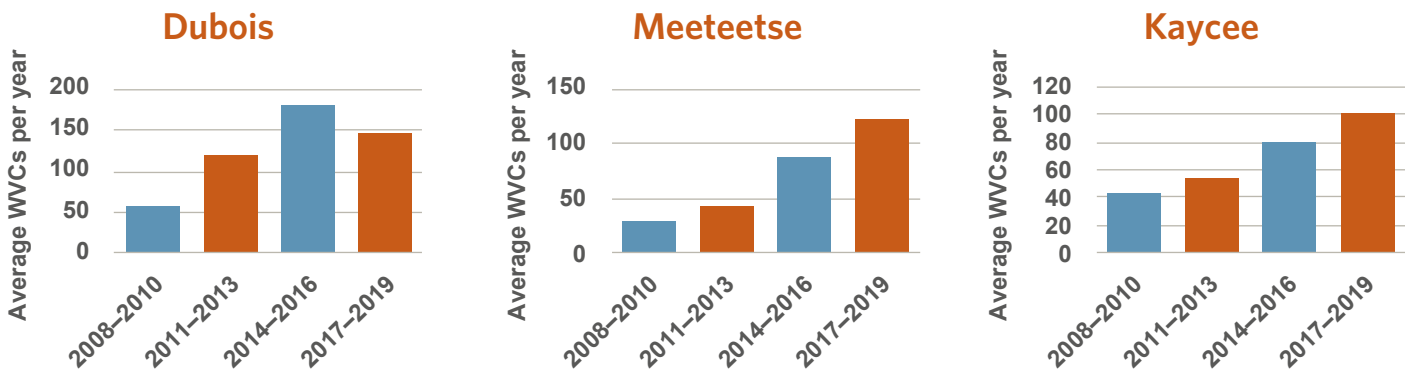
The spatial patterns of wildlife–vehicle collisions vary somewhat by season. The greatest overall number of collisions occurs in the fall months (October–December) as animals migrate to their winter grounds and are more active due to the rut and hunting seasons, and in winter (January–March) since roads bisect many winter grounds. The patterns of collisions in the fall (Figure 7) and winter (Figure 8) are very similar to the patterns across the whole year because fall and winter patterns dominate the year-round patterns. However, in fall, winter, and spring (Figure 9) the majority of collisions occur in western Wyoming, whereas in the summer (Figure 10) the hotspots are more pronounced in eastern Wyoming.



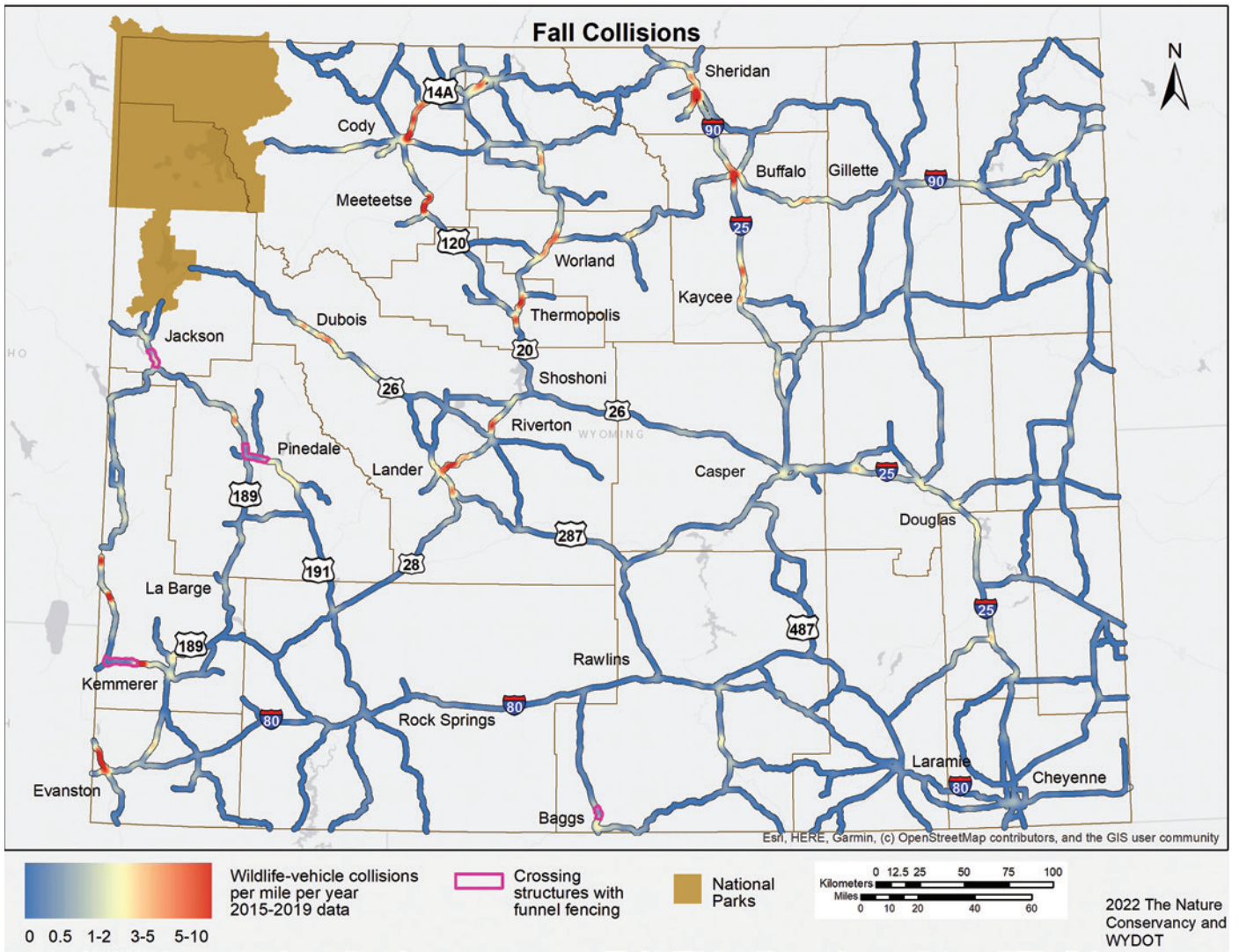
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**FIGURE 5.** Heat map of wildlife-vehicle collisions in Wyoming, using 2015–2019 data across all months of the year.



**FIGURE 6.** Three hotspots that have seen a rapid increase in wildlife-vehicle collisions over the last 15 years.

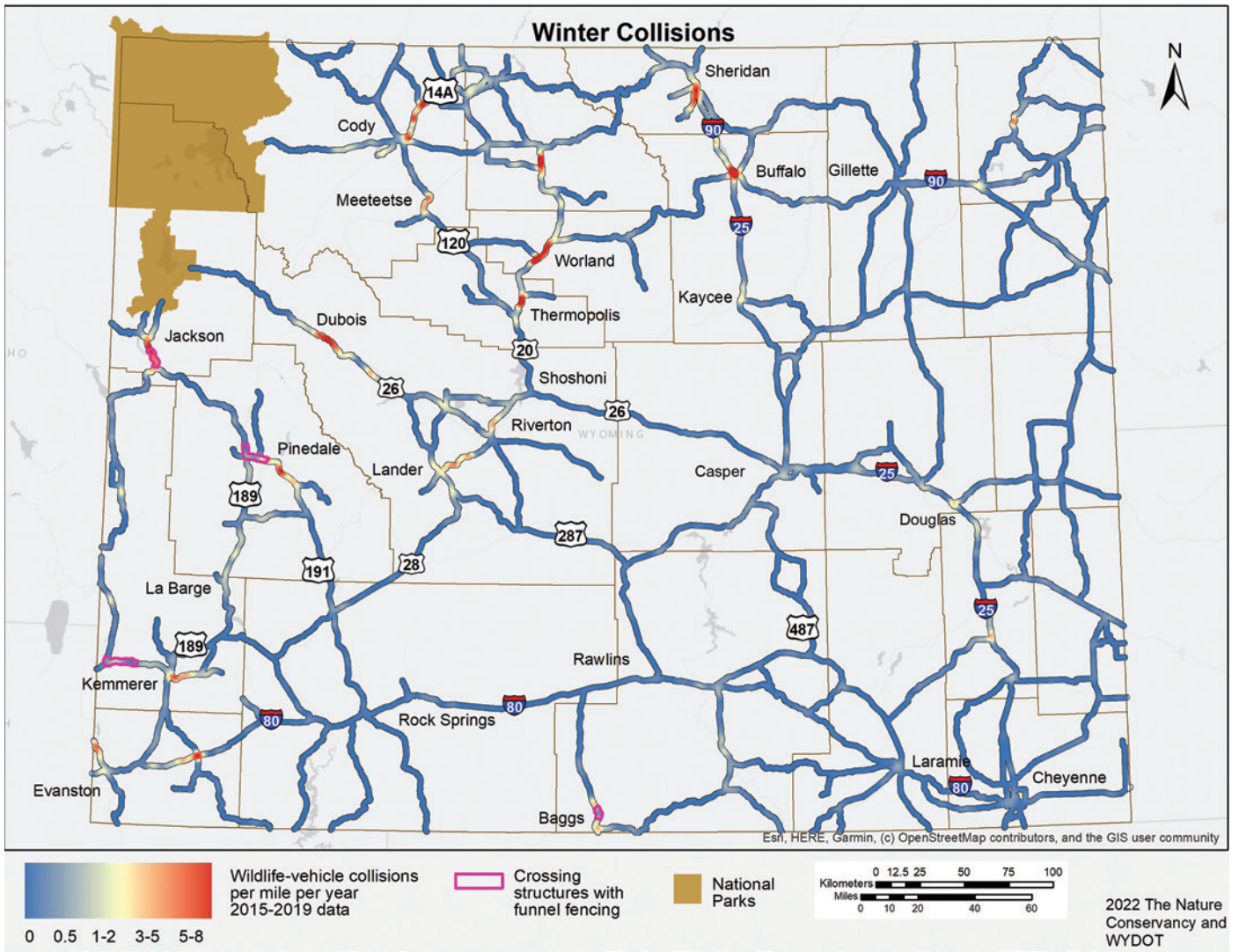


**FIGURE 7.** Heat map of collisions in fall months (October, November, December).



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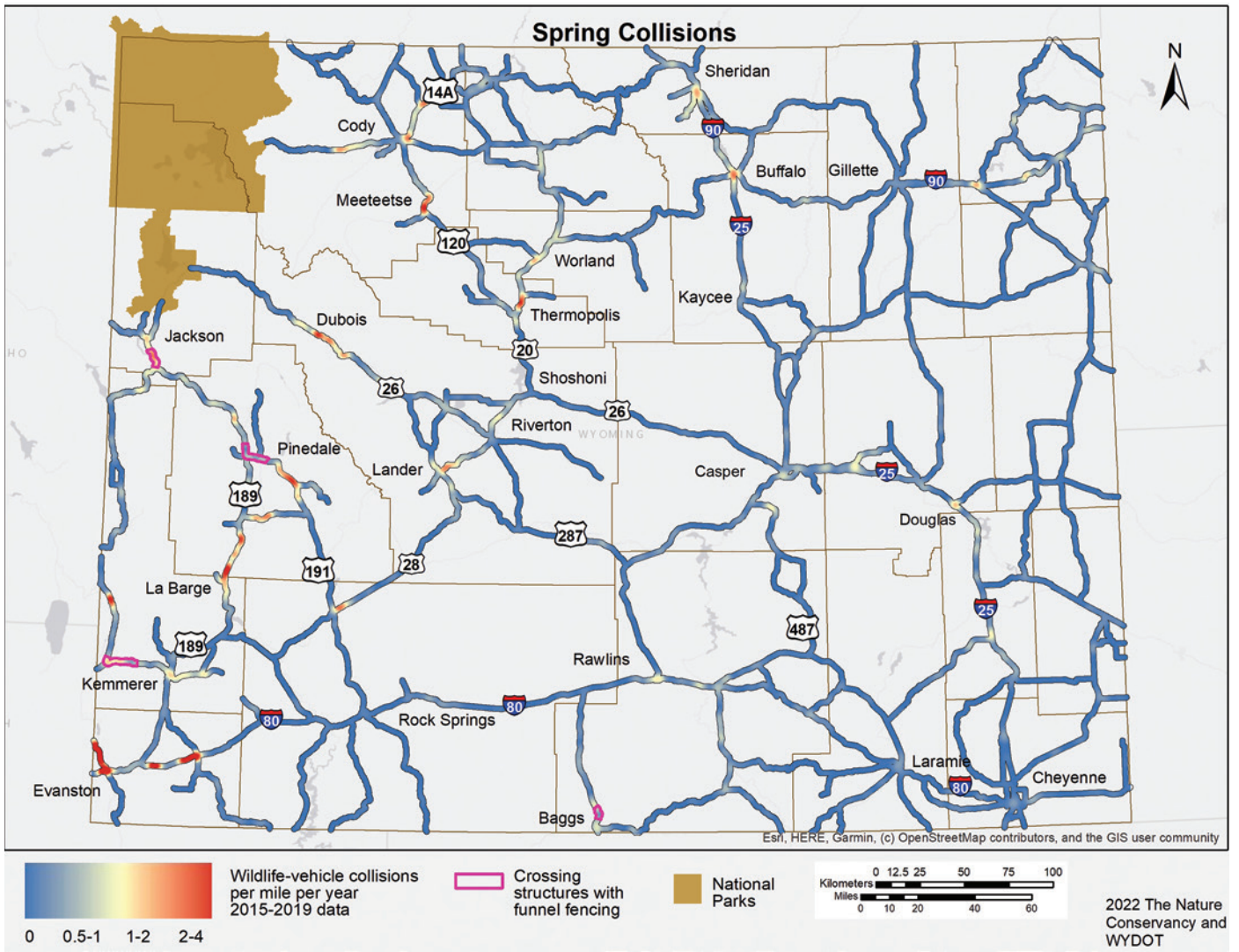


**FIGURE 8.** Heat map of collisions in winter months (January, February, March)



LEFT TO RIGHT © Mark Gocke





**FIGURE 9.** Heat map of collisions in spring months (April, May, June).



LEFT TO RIGHT © Hall Sawyer; © Hall Sawyer

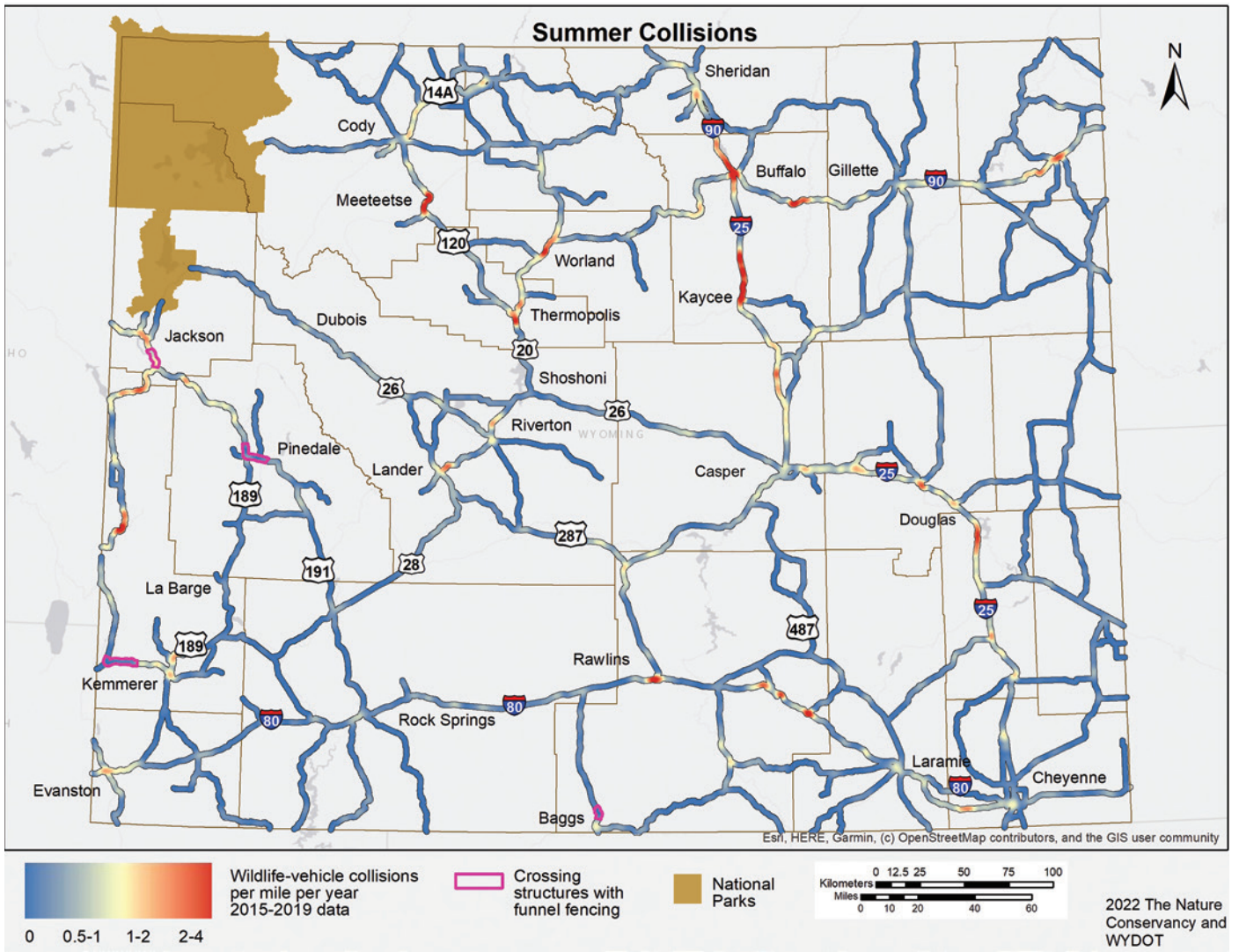
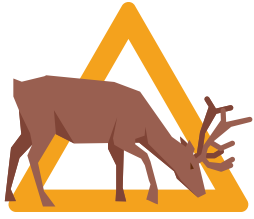


FIGURE 10. Heat map of collisions in summer months (July, August, September).



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# Successes and Projects in Progress



Addressing the problem of WVCs requires a variety of approaches—and fortunately, there are effective solutions.

For some locations, modifying fences or roadside vegetation is enough, especially if WVC rates and traffic volumes are not too high. In other places, especially those with many collisions and high traffic volume, crossing structures are the best solution. In still other locations, crossing structures would be the best option but they are not feasible due to the geology or amount of human infrastructure in the area.

To date, several major crossing structure projects have been installed in Wyoming, and these have been highly successful in reducing wildlife–vehicle collisions. Former wildlife–vehicle collision hotspots have been nearly eliminated using crossing structures at sites west of Kemmerer (Nugget Canyon), north of Pinedale (Trappers’ Point), on Togwotee Pass, north of Baggs, and most recently, south of Jackson. At Trappers’ Point, there are also two highway overpasses specifically designed to enable pronghorn to cross safely, since pronghorn are less likely to use underpasses. At these sites, wildlife–vehicle collision numbers have plummeted since the installation of the crossing structures by as much as 91%.

In 2017, WYDOT, WGFD, several nonprofits and the public identified a list of locations in need of attention to reduce wildlife–vehicle collisions at the first Wyoming Wildlife and Roadways Summit. Some were best suited to local or smaller-scale initiatives and some were more

appropriate for large crossing structure planning efforts. Since then, much progress has been made. Some highlights include:

- On Highway 28 east of Farson, 18 miles of right-of-way fence have been modified to be wildlife-friendly fence, and seven pairs of 32-foot-wide gates have been installed throughout the project area to facilitate pronghorn movement. These gates, located on opposite sides of the highway in pronghorn movement paths, can be left open during peak pronghorn migration seasons.
- On Highway 487 south of Casper, shrubs were mechanically and chemically treated along 10 miles of right-of-way to reduce the woody cover that used to make it hard for oncoming drivers to see mule deer.
- On Highway 26 near Dubois, variable message signs warning drivers were deployed in 2019–2020. A detailed set of recommendations, developed through expert advice and a public planning process, was also completed to plan for longer-term solutions for this site.
- North of Kaycee, wildlife exclusion funnel fencing along 15 miles of I-25 is planned for construction. Deer are already using several existing underpass structures, and the additional fencing should increase this use by directing animals to use these structures rather than crossing the highway surface.
- Major federal, state, and nonprofit funding was secured to install nine underpasses and 16 miles of funnel fencing at the Dry Piney site between La Barge and Big Piney. Construction on this project broke ground in early May 2022.

# We Can Do More



Funding is essential to support all of these projects. In most cases, funding comes from diverse sources, and every contribution helps leverage more dollars. For example, funding for the Dry Piney project has been contributed by the WGFD and WYDOT Commissioners, organizations and foundations (Greater Yellowstone Coalition, Knobloch Family Foundation, Muley Fanatic Foundation, and the WYldlife Fund), and Sublette County (in-kind contribution)—all of which were essential leverage to secure a \$14.5-million federal BUILD grant. Similar diverse partnerships will be key to

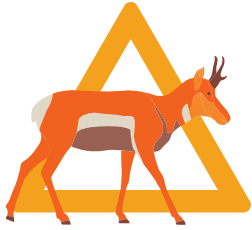
securing more funding in the upcoming years. The Bipartisan Infrastructure Law that was signed by President Biden in fall 2021 will offer opportunities to fund new projects to make roads safer for wildlife, and Wyoming is poised to show excellent planning, prioritization, and partnerships to compete well for this funding.

Capitalizing on large (usually federal) funding opportunities often requires having detailed engineering plans or even “shovel-ready” projects in place. One of the key funding needs is non-federal funding to support the development of these detailed plans.



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# Actions You Can Take



- Let state and federal legislators know that you support funding for wildlife crossings and fully funding the Wyoming Wildlife and Natural Resource Trust.
- Purchase, and encourage others to purchase, a Wyoming conservation license plate; the funding generated from these plates specifically funds efforts to reduce wildlife–vehicle collisions.
- There are many more local projects in need of fence modifications, vegetation removal and signage. Talk to your WGFD regional personnel or WYDOT district to find out what might need support in your area and consider forming or being part of a local working group to promote planning and support. These working groups have been strong forces of action on projects like the Highway 28 Farson fence modification project.
- Document roadkill using the Wyoming 511 app’s Report Roadkill function to improve our data on WVCs. This app can be used to report any roadkill, not just carcasses you intend to collect.
- Help ensure that right-of-way gates and rangeland gates are left open during migration seasons to enable big game to move more freely.

Several projects with a high need for support in the next few years include:

## HALLECK RIDGE

This project would involve constructing an overpass structure over I-80 near Halleck Ridge along with several miles of funnel fence. This project’s objective is to eliminate the considerable barrier that I-80 poses

in this area and to increase habitat connectivity for mule deer and elk so they can access their historic seasonal ranges.

## HIGHWAY 189 SOUTH OF KEMMERER

This plan is to modify several existing below-grade structures to be more suitable for wildlife, construct up to six new underpasses and one overpass, and build funnel fencing along this stretch to ensure safe winter and migration passage for mule deer and pronghorn. The nuclear power plant that has been approved for construction starting in 2024 near Kemmerer will drastically increase vehicle use on this road and exacerbate what is already a long-term WVC hotspot.

## HIGHWAY 26 NEAR DUBOIS

This plan would address one of the worst WVC hotspots in the state—with an annual average of over 150 WVCs costing nearly \$800,000—using a combination of replacing impermeable right-of-way fencing with more wildlife-friendly fencing, installing three underpasses and one overpass along with funnel fencing, and modifying existing bridges and culverts.

Roads and vehicles continue to pose a threat to the well-being of Wyoming’s big game populations, and wildlife collisions are a rising human safety concern. There are, however, real solutions to these challenges, and we have made great progress in advancing these solutions over the last few years. We have a unique opportunity ahead of us to make an even greater difference in the coming years, by leveraging federal funding. With motivation and collaboration, we can make Wyoming’s roads safer for wildlife and people alike.

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