



## Losses due to animal strikes

Animal strike claims typically rise dramatically in the fall, peaking in November. This analysis of claims from 2006 through 2011 shows claim frequency in November was more than twice the average for the study period and nearly four times the average for August, when such claims are least likely to be made. Although information on the type of animal involved is not available, most of these crashes are believed to involve deer, and the peak in claim frequency coincides with their mating season. West Virginia, Iowa, and Pennsylvania have the highest November claim frequency for animal strikes of all the states.

### ▶ Introduction

Damage caused to vehicles in collisions with animals is insured under comprehensive coverage. This Highway Loss Data Institute (HLDI) bulletin presents results of an analysis of comprehensive claims to determine whether losses from vehicle-animal collisions vary significantly by calendar month and whether these variations differ among states and counties. HLDI first reported on losses due to animal strikes in December 2008 (Vol. 25, No. 8) and more recently in September 2009 (Vol. 26, No. 5). This bulletin updates the prior results and shows consistent trends.

### ▶ Methods

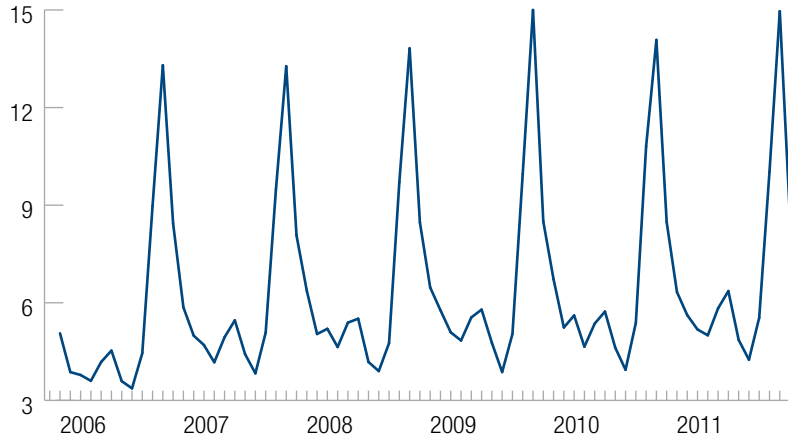
Results were based on more than 165 million insured vehicle years and more than 1 million claims. The study period was from January 2006 through December 2011, and study vehicles included 1998-2012 model year passenger vehicles. Motorcycles were not included.

Of the 33 companies that currently report comprehensive coverage to HLDI, only 18 provide information on animal strikes covered under comprehensive insurance. This is three more than reported animal strike losses for the 2009 report. This addition increased the amount of data for certain states, especially Iowa. Vehicle exposure from the 18 companies represents slightly more than 45 percent of the HLDI database.

### ▶ Results

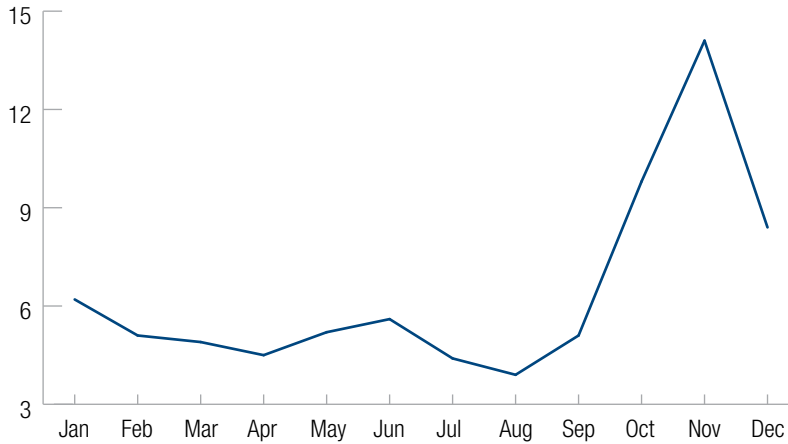
**Figure 1** shows comprehensive claim frequencies for animal strikes during the 72-month study period per 1,000 insured vehicle years. Claim frequencies followed a consistent pattern — rising dramatically in October, peaking in November, and then dropping off in December and January. Claim frequencies during the study period averaged 6.5 claims per 1,000 insured vehicle years.

**Figure 1: National comprehensive claim frequencies for animal strikes, January 2006 — December 2011**



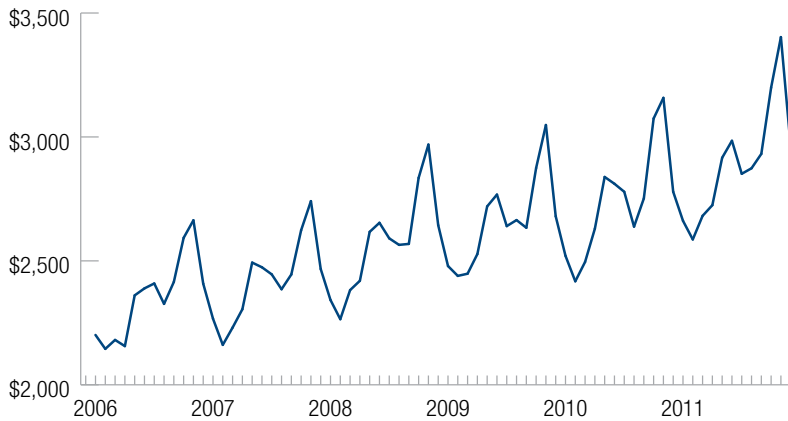
**Figure 2** summarizes the comprehensive claim frequencies during the 72-month study period into 12 months. Claim frequencies were lowest in August (3.9 claims per 1,000 insured vehicle years) and highest in November (14.1). The increase between August and November was almost fourfold.

**Figure 2: National comprehensive claim frequencies for animal strikes during study period summarized for 12 months**



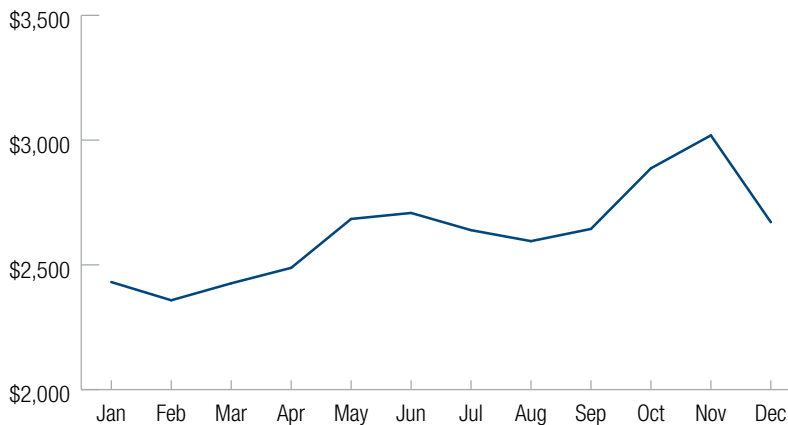
**Figure 3** shows comprehensive claim severities for animal strikes during the 72-month study period. Claim severity, or average loss payment per claim, is a measure of the size of a claim in dollars. Monthly variations in claim severities followed a pattern similar to that for claim frequencies. In general, over time there has been an increasing trend in claim severity. This increase is believed to be associated with the increase in vehicle prices. Claim severities during the study period averaged \$2,697 per claim. In 2011, the most recent year, the average claim severity was \$2,898.

**Figure 3: National comprehensive claim severities for animal strikes, January 2006 — December 2011**



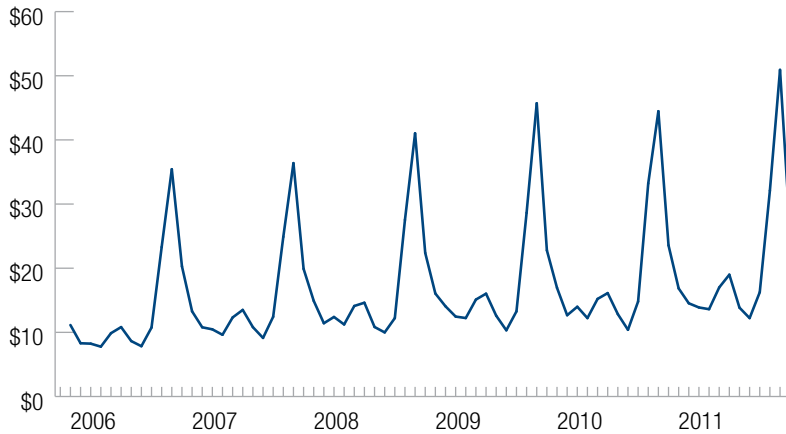
**Figure 4** summarizes the comprehensive claim severities during the 72-month study period into 12 months. Like claim frequencies, claim severities were highest in November (\$3,019 per claim). However, unlike claim frequencies, claim severities were lowest in February (\$2,358). The variation between minimum and maximum monthly claim severities (28 percent) was not nearly as pronounced as the corresponding variation for claim frequencies.

**Figure 4: National comprehensive claim severities for animal strikes during study period summarized for 12 months**



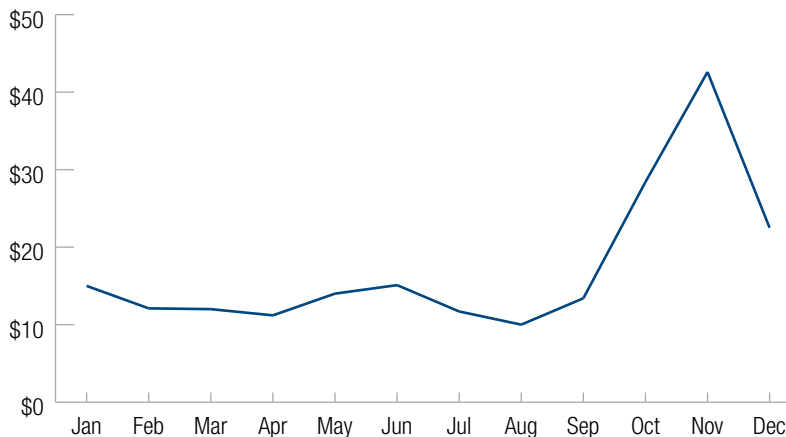
**Figure 5** shows comprehensive overall losses for animal strikes during the 72-month study period. Overall loss, or average loss payment per insured vehicle year, is a combination of claim frequency and severity. The monthly variation in overall losses followed the same pattern as that for claim frequencies. Overall losses during the study period averaged \$17.50 per insured vehicle year.

**Figure 5: National comprehensive overall losses for animal strikes, January 2006 — December 2011**



**Figure 6** summarizes the comprehensive overall losses during the 72-month study period into 12 months. Overall losses were lowest in August (\$10 per insured vehicle year) and highest in November (\$42.60). Overall losses in November were 3.2 times as high as those in August.

**Figure 6: National comprehensive overall losses for animal strikes during study period summarized for 12 months**

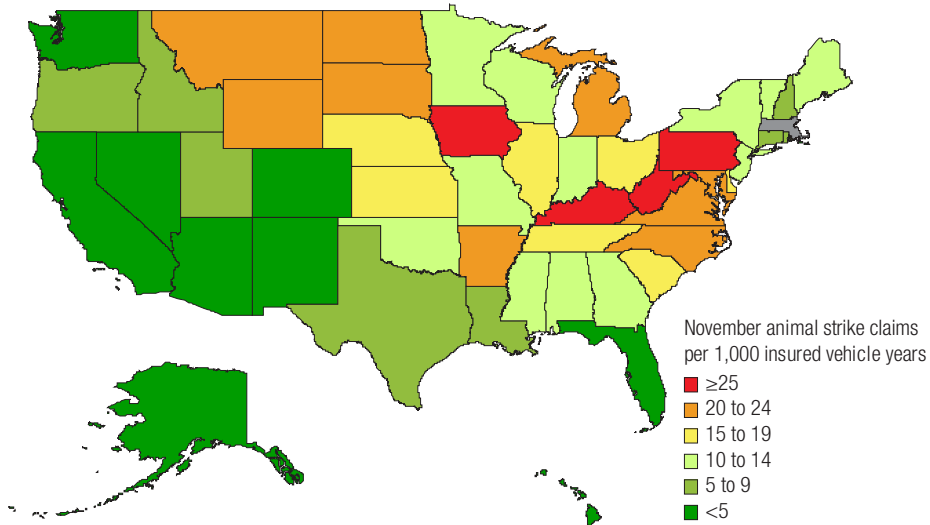


**Table 1** lists comprehensive coverage losses for the 10 states with the highest claim frequencies for animal strikes in November. National data have been included for comparative purposes. To be included in the top 10, states were required to have a minimum of 100 claims in November for each year. West Virginia tops the list with a November claim frequency of 51.2 — about 3.5 times the national average for November and 68 percent higher than the state’s August claim frequency. Although last on the list, Tennessee had a November claim frequency that was 38 percent higher than the national average for November. Among the 10 states, there was not as much variation in claim severity as there was in claim frequency. November claim severities were no more than 21 percent higher than August claim severities. Differences between August and November overall losses among the states followed a pattern similar to that for claim frequencies. **Map 1** illustrates the November animal strike frequencies by state. A lower exposure threshold was applied to the map because results are expressed in ranges.

**Table 1: Comprehensive coverage losses for 10 states with highest claim frequencies for animal strikes in November during study period**

|                 | Claim frequency |             |                    | Claim severity |                |                    | Overall loss |             |                    |
|-----------------|-----------------|-------------|--------------------|----------------|----------------|--------------------|--------------|-------------|--------------------|
|                 | August          | November    | Percent difference | August         | November       | Percent difference | August       | November    | Percent difference |
| West Virginia   | 16.4            | 51.2        | 68%                | \$2,418        | \$2,681        | 10%                | \$40         | \$137       | 71%                |
| Iowa            | 6.8             | 30.6        | 78%                | \$3,001        | \$3,428        | 12%                | \$20         | \$105       | 81%                |
| Pennsylvania    | 5.9             | 28.9        | 80%                | \$2,337        | \$2,824        | 17%                | \$14         | \$82        | 83%                |
| Kentucky        | 7.3             | 26.4        | 73%                | \$3,099        | \$3,792        | 18%                | \$22         | \$100       | 78%                |
| Michigan        | 6.7             | 24.8        | 73%                | \$2,503        | \$3,034        | 17%                | \$17         | \$75        | 78%                |
| North Carolina  | 6.1             | 24.3        | 75%                | \$2,038        | \$2,588        | 21%                | \$12         | \$63        | 80%                |
| Virginia        | 5.0             | 20.6        | 76%                | \$2,328        | \$2,774        | 16%                | \$12         | \$57        | 80%                |
| Arkansas        | 6.0             | 20.4        | 70%                | \$2,479        | \$2,839        | 13%                | \$15         | \$58        | 74%                |
| Maryland        | 3.9             | 20.3        | 81%                | \$2,617        | \$3,175        | 18%                | \$10         | \$64        | 84%                |
| Tennessee       | 6.8             | 19.8        | 66%                | \$2,505        | \$2,968        | 16%                | \$17         | \$59        | 71%                |
| <b>National</b> | <b>3.9</b>      | <b>14.4</b> | <b>73%</b>         | <b>\$2,573</b> | <b>\$3,011</b> | <b>15%</b>         | <b>\$10</b>  | <b>\$43</b> | <b>77%</b>         |

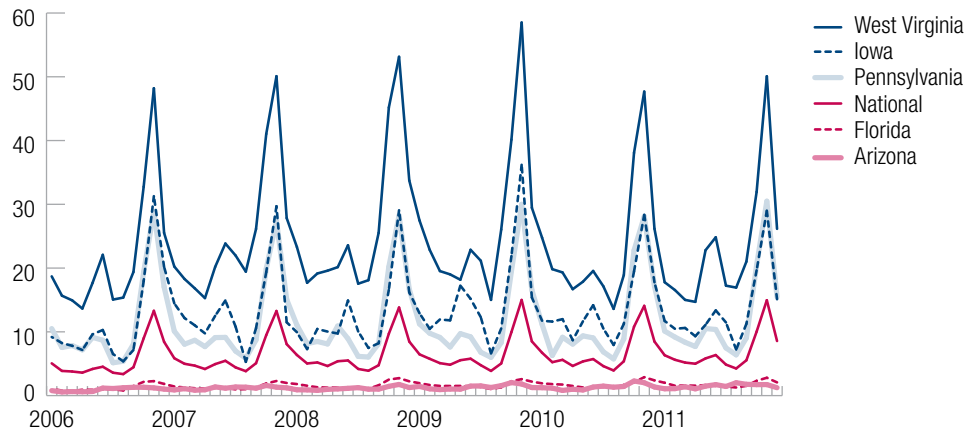
**Map 1: November animal strike frequency by state**



■ Note: All Massachusetts data is supplied to HLDI by the Automobile Insurance Bureau of Massachusetts. They do not provide data on animal strikes and therefore Massachusetts has been excluded.

**Figure 7** shows comprehensive claim frequencies for animal strikes during the 72-month study period for the three states with the highest November claim frequencies (West Virginia, Iowa, and Pennsylvania) and two states with very low November claim frequencies (Arizona and Florida). Claim frequencies for West Virginia, Iowa, and Pennsylvania followed the national trend but were consistently higher than the national average. There was little variation in claim frequencies for Arizona and Florida.

**Figure 7: Comprehensive claim frequencies for animal strikes in selected states compared with national average, January 2006 — December 2011**

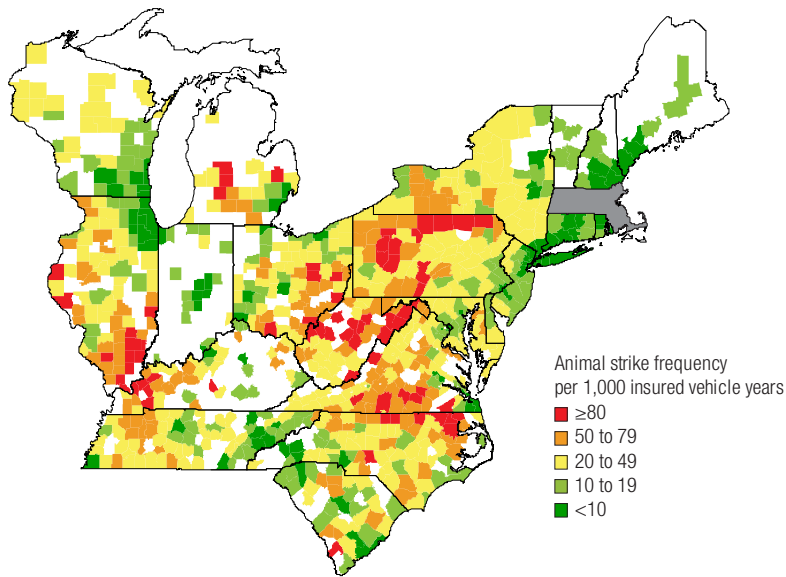


**Table 2** lists comprehensive coverage losses for the 20 counties with the highest claim frequencies for animal strikes in November. National data have been included for comparative purposes. To be included in the top 20, counties were required to have a minimum of 100 claims in November for each calendar year. Butler County, Pennsylvania, tops the list with a November claim frequency of 52.5 – more than 3.5 times the national average for November and 84 percent higher than the county’s August claim frequency. Six of the 20 counties had November claim frequencies that were more than twice the national average. Among the 20 counties, there was not as much variation in claim severity as there was for claim frequency. November claim severities were no more than 28 percent higher than August claim severities. Differences between August and November overall losses among the states followed a similar pattern to that for claim frequencies. **Map 2** illustrates the November animal strike claim frequencies by county for the Northeastern region of the country. A lower exposure threshold was applied to the map because results are expressed in ranges.

**Table 2: Comprehensive coverage losses for 20 counties with highest claim frequencies for animal strikes in November during study period**

|                     | Claim frequency |             |                    | Claim severity |                |                    | Overall loss |             |                    |
|---------------------|-----------------|-------------|--------------------|----------------|----------------|--------------------|--------------|-------------|--------------------|
|                     | August          | November    | Percent difference | August         | November       | Percent difference | August       | November    | Percent difference |
| Butler, PA          | 8.6             | 52.5        | 84%                | \$2,164        | \$2,907        | 26%                | \$19         | \$152       | 88%                |
| Washington, PA      | 7.1             | 38.6        | 82%                | \$2,689        | \$2,756        | 2%                 | \$19         | \$107       | 82%                |
| Westmoreland, PA    | 7.3             | 38.5        | 81%                | \$2,512        | \$2,703        | 7%                 | \$18         | \$104       | 82%                |
| Frederick, MD       | 6.8             | 33.4        | 80%                | \$2,304        | \$2,984        | 23%                | \$16         | \$100       | 84%                |
| Orange, NY          | 6.9             | 33.1        | 79%                | \$3,000        | \$3,425        | 12%                | \$21         | \$113       | 82%                |
| Erie, PA            | 5.4             | 32.2        | 83%                | \$2,386        | \$2,993        | 20%                | \$13         | \$96        | 87%                |
| Loudoun, VA         | 5.9             | 26.5        | 78%                | \$2,529        | \$3,183        | 21%                | \$15         | \$84        | 82%                |
| Chester, PA         | 3.9             | 24.8        | 84%                | \$2,374        | \$3,300        | 28%                | \$9          | \$82        | 89%                |
| Howard, MD          | 3.5             | 20.4        | 83%                | \$3,191        | \$3,075        | -4%                | \$11         | \$63        | 82%                |
| Wake, NC            | 3.5             | 19.0        | 82%                | \$2,189        | \$2,879        | 24%                | \$8          | \$55        | 86%                |
| Allegheny, PA       | 3.4             | 18.3        | 81%                | \$2,160        | \$2,744        | 21%                | \$7          | \$50        | 85%                |
| Prince William, VA  | 3.2             | 17.8        | 82%                | \$2,724        | \$2,969        | 8%                 | \$9          | \$53        | 84%                |
| Bucks, PA           | 3.6             | 17.0        | 79%                | \$2,906        | \$3,296        | 12%                | \$10         | \$56        | 82%                |
| Erie, NY            | 3.0             | 14.9        | 80%                | \$2,391        | \$3,077        | 22%                | \$7          | \$46        | 84%                |
| Montgomery, MD      | 3.1             | 14.8        | 79%                | \$2,626        | \$3,044        | 14%                | \$8          | \$45        | 82%                |
| Montgomery, PA      | 2.5             | 14.6        | 83%                | \$2,285        | \$3,167        | 28%                | \$6          | \$46        | 87%                |
| Monroe, NY          | 2.5             | 14.5        | 83%                | \$2,176        | \$3,018        | 28%                | \$5          | \$44        | 88%                |
| Prince George's, MD | 2.2             | 14.1        | 84%                | \$2,552        | \$3,392        | 25%                | \$6          | \$48        | 88%                |
| Anne Arundel, MD    | 2.1             | 13.6        | 84%                | \$2,622        | \$3,633        | 28%                | \$6          | \$50        | 89%                |
| Baltimore, MD       | 2.0             | 12.5        | 84%                | \$2,651        | \$3,263        | 19%                | \$5          | \$41        | 87%                |
| <b>National</b>     | <b>3.9</b>      | <b>14.4</b> | <b>73%</b>         | <b>\$2,573</b> | <b>\$3,011</b> | <b>15%</b>         | <b>\$10</b>  | <b>\$43</b> | <b>77%</b>         |

**Map 2: Animal strike November frequency by county**



■ Note: All Massachusetts data is supplied to HLDI by the Automobile Insurance Bureau of Massachusetts. They do not provide data on animal strikes and therefore Massachusetts has been excluded.

## ► Discussion

November is the peak month for animal strikes. Insurance claims for animal collisions are nearly three times as high during November than a typical month earlier in the year. The insurance claims data available to HLDI do not specify the animals involved, but deer are likely the main ones. The November peak in animal strike claims coincides with the deer mating season, when bucks are likely to be roaming. That may also help explain the rise in severity at this time. A greater proportion of the struck animals in October and November are likely to be deer, which cause more severe damage than smaller animals.

## References

Highway Loss Data Institute. 2008. Losses due to animal strikes. Loss bulletin Vol. 25, No. 8. Arlington, VA.

Highway Loss Data Institute. 2009. Losses due to animal strikes. Loss bulletin Vol. 26, No. 5. Arlington, VA.

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