STATE OF WEST VIRGINIA
Offices of the Insurance Commissioner

EARL RAY TOMBLIN
Governor

MICHAEL D. RILEY
Acting Insurance Commissioner

October 20, 2011

The Honorable Bob Williams
Agriculture and Agri-business Committee
Co-Chair, West Virginia Senate
Room 209W, Building 1
State Capitol Complex
Charleston, WV 25305

The Honorable Greg Butcher
Agriculture and Agri-business Committee
Co-Chair, West Virginia House
Room 219E, Building 1
State Capitol Complex
Charleston, WV 25305

Dear Senator Williams and Delegate Butcher:

The Offices of the West Virginia Insurance Commissioner ("OIC") has completed its 2010 calendar year study quantifying the economic impact of deer-vehicle crashes (DVC's) within our State. This is the ninth consecutive year that the study has been performed and we hope it continues to be of value.

To complete this study, we requested relevant information from automobile insurers doing business in our State whose market shares by premium volume comprise 69% of the West Virginia private passenger automobile physical damage insurance market as of 2010. We then aggregated those responses and used the combined result to project figures that should be representative of the entire personal auto physical damage insurance market our State.[1] Accordingly, we feel comfortable making the following estimates based upon the information received.

	2002	2003	2004	2005
Number of deer-vehicle claims	28,037	21,624	18,890	20,097
Average amount per claim	$1,626	$1,681	$1,757	$1,838
Statewide losses in dollars	$44.8M	$36.3M	$33.2M	$36.9M

	2006	2007	2008	2009	2010
Number of deer-vehicle claims	21,144	24,590	26,265	25,602	21,417
Average amount per claim	$1,899	$1,927	$2,140	$2,236	$2,432
Statewide losses in dollars	$40.2M	$47.4M	$56.2M	$57.2M	$52.1M

It is of utmost importance to also understand that these costs, while substantial and averaging over $44M per year during the past 9 years only represent a portion of the total cost incurred by West Virginians every year due to DVC's. Specifically, the Statewide loss estimates only consider amounts which are actually paid by insurance companies, and are further limited to only those amounts that are paid under the "Comprehensive" (*i.e. 'other than collision'*) portion of auto physical damage insurance coverage.

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(1) The methodology used to extrapolate the survey data is premised on an assumption that we believe has led to overestimation of the number of claims in prior years. We continue to use the earlier methodology, however, because it accurately depicts the trends. Under our refined methodology, the estimated market data is adjusted for:

- ✓ *Differences in automobile physical damage market penetration rates between different types of insurers (Standard ~74%, Hybrid ~49%, Non-standard ~35%).*
- ✓ *The relative presence of different types of insurers in our physical damage insurance marketplace (In 2010:87.8% Standard, 6.0% Standard/Hybrid, & 5.7% Non-standard)*
- ✓ *A fit of the estimated market data to the actual number of class A vehicles registered in West Virginia during 2010 (1,305,036) according to data available from the West Virginia Department of Motor Vehicles, and a further adjustment to estimate only those vehicles which were insured for physical damage coverage (924,439).*
- ✓ *An adjustment to remove the estimated number of vehicles that were uninsured during 2010 (~11%).*

Due to reporting differences over the years, however, this new methodology cannot be applied to all prior years.

Accordingly, myriad other associated costs <u>are not included</u> in the figures that are provided above.

For example:

- The cost of Deductibles paid by insureds as part of the covered claims above.
- Any costs paid under Collision coverages (*missed the deer, but hit the guardrail instead, etc.*)
- Any costs paid under Auto Med Pay coverages due to injuries associated with the DVC.
- Any costs which were paid by Health or Accident insurers due to DVC injuries.
- Any costs paid by Workers Compensation insurers (*if driving for work*) due to DVCs.
- Any cost for lost wages or missed work, etc. due to deer crash injuries.
- Any cost of a DVC where the auto was not insured for physical damage coverage.

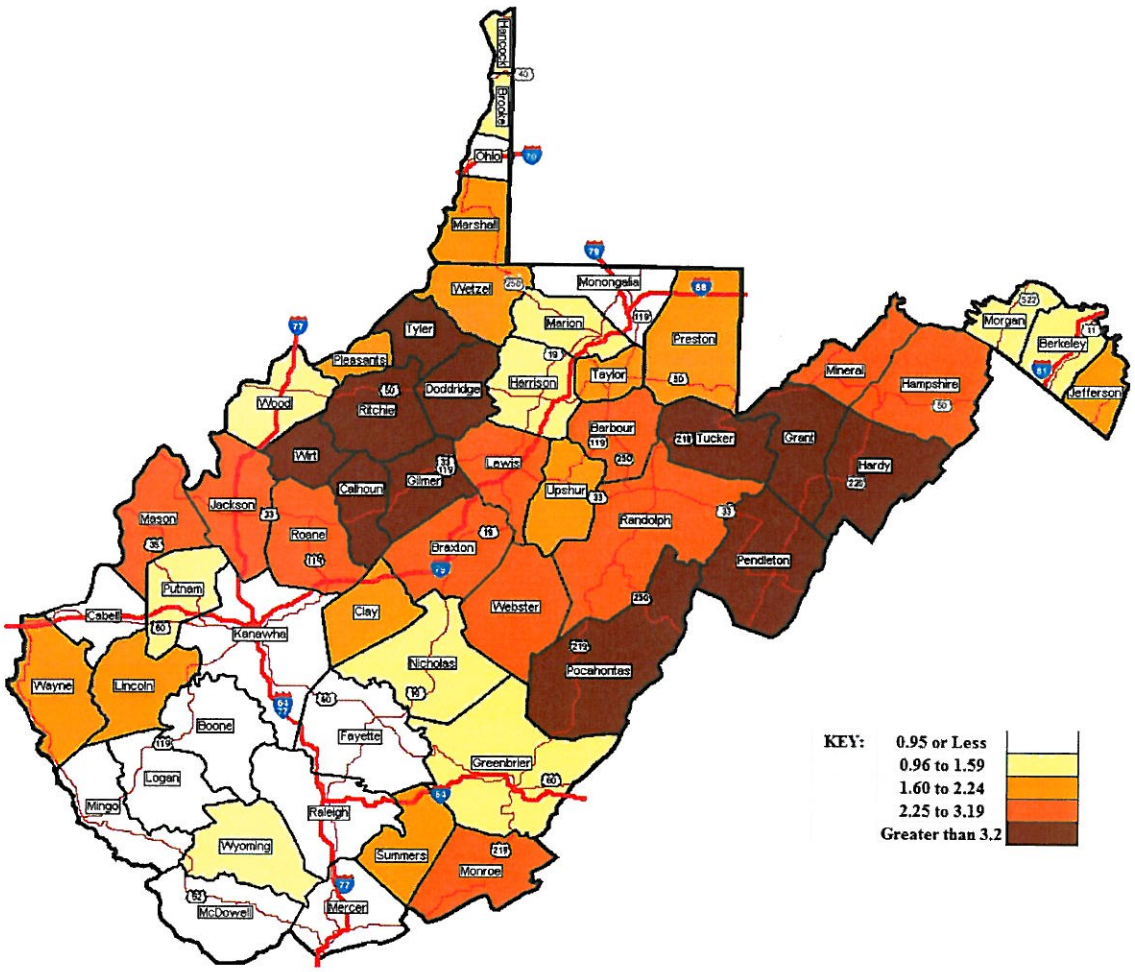
Other estimates achieved from the results of the latest study:

- 2010 Rate of licensed drivers in WV to estimated total DVC **1 in 63**
- Worst months for DVC: October, November, and December (*Hunting/Mating seasons*)*
  Worst times of day to travel: From 5AM to 7AM and from 6PM to 11PM[2]
- DVC's accounted for nearly 19% of the all personal auto physical damage insurance loss in 2010 in West Virginia. (*Comprehensive, Collision, Towing, and Rental coverages combined*)
- DVC's accounted for over 7.4% of all personal auto insurance cost in 2010 in West Virginia.
- 2010 <u>annual cost per auto</u> insured for physical damage in WV which was solely attributable to DVC: **$50.16.** (*Cost per insured car per day 14¢*)

** Source: **Highway Loss Data Institute**, Losses Due to Animal Strikes, September 2009*
(2) Source of DVC information for various statewide statistics is the Mid-West Deer Crash Coalition, 2005

Utilizing the 2010 deer survey data (*which also provides results on a per county basis*), and again data available from the West Virginia ***Department of Motor Vehicles,*** we are also able to develop the following representation:

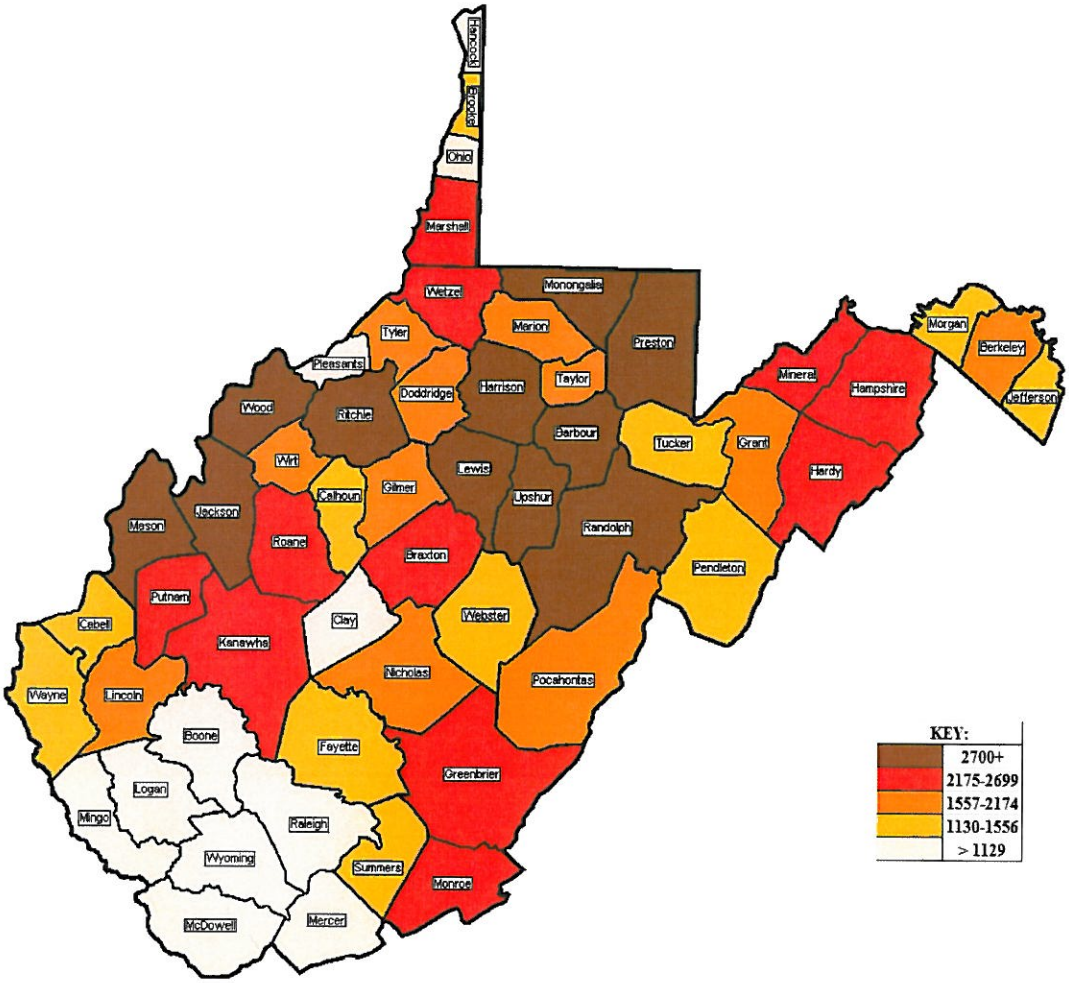
2010 Number of Deer Accident Insurance Claims per 100 Registered Private Passenger Autos
(By County)



From the graphic above, note that an inverse relationship appears to be present between the number of interstates and major roadways in a given county relative to the number of DVC per registration occurring in 2010 for that same county. In other words, the lower the relative number of interstates and roadways in a county, *generally* the higher the likelihood of a DVC occurring appears to be. This could also be quantified as the likelihood of a DVC occurring being much greater in those counties with lower overall populations (*more rural, and therefore having fewer roadways*), as those five counties with the highest populations (*Kanawha, Berkeley, Cabell, Monongalia, & Wood respectively*) all have lower than average DVC rates, and the five counties with the lowest populations (*Wirt, Tucker, Gilmer, Pleasants, and Calhoun respectively*) all can be observed to have experienced higher than average DVC rates.

Other differences in observed DVC rates by county are likely to be mainly explained through the additional consideration of the relative deer population in our counties as can be reasoned by considering the results of the 2010 cull.

2010 Deer Harvest By County



While the information presented in the initial map demonstrates how the costs of DVC are spread throughout the state relative to population size (*or in this case on a per registered auto basis*), estimating total DVC costs on a per county basis with no relative adjustment reveals that counties with higher populations (*and therefore more registered autos*) also have higher aggregate claim costs as one might expect.

This is demonstrated by the table that follows.[3]

By County	2010 DVC Cost (est)*
Barbour	$ 717,995.83
Berkeley	$ 1,998,842.66
Boone	$ 342,761.83
Braxton	$ 681,915.64
Brooke	$ 357,193.90
Cabell	$ 1,479,287.89
Calhoun	$ 642,227.42
Clay	$ 277,817.48
Doddridge	$ 389,666.08
Fayette	$ 663,875.54
Gilmer	$ 440,178.35
Grant	$ 833,452.44
Greenbrier	$ 984,989.25
Hampshire	$ 1,039,109.54
Hancock	$ 840,668.48
Hardy	$ 883,964.71
Harrison	$ 1,569,488.37
Jackson	$ 1,598,352.52
Jefferson	$ 1,771,537.45
Kanawha	$ 2,258,620.04
Lewis	$ 840,668.48
Lincoln	$ 613,363.27
Logan	$ 454,610.42
Marion	$ 1,049,933.60
Marshall	$ 956,125.10
Mason	$ 1,360,223.25
Mcdowell	$ 151,536.81
Mercer	$ 635,011.39
Mineral	$ 1,255,590.70
Mingo	$ 292,249.56
Monongalia	$ 1,165,390.21
Monroe	$ 645,835.44
Morgan	$ 476,258.54
Nicholas	$ 768,508.10
Ohio	$ 602,539.21
Pendleton	$ 930,868.96
Pleasants	$ 263,385.40
Pocahontas	$ 552,026.94
Preston	$ 1,053,541.62
Putnam	$ 1,233,942.58
Raleigh	$ 714,387.81
Randolph	$ 1,233,942.58
Ritchie	$ 804,588.29
Roane	$ 732,427.91
Summers	$ 324,721.73
Taylor	$ 508,730.71
Tucker	$ 544,810.91
Tyler	$ 515,946.75
Upshur	$ 768,508.10
Wayne	$ 920,044.91
Webster	$ 371,625.98
Wetzel	$ 786,548.19
Wirt	$ 627,795.35
Wood	$ 2,052,962.95
Wyoming	$ 386,058.06
Grand Total	**$ 46,366,655.26**

By Cost	2010 DVC Cost (est)*
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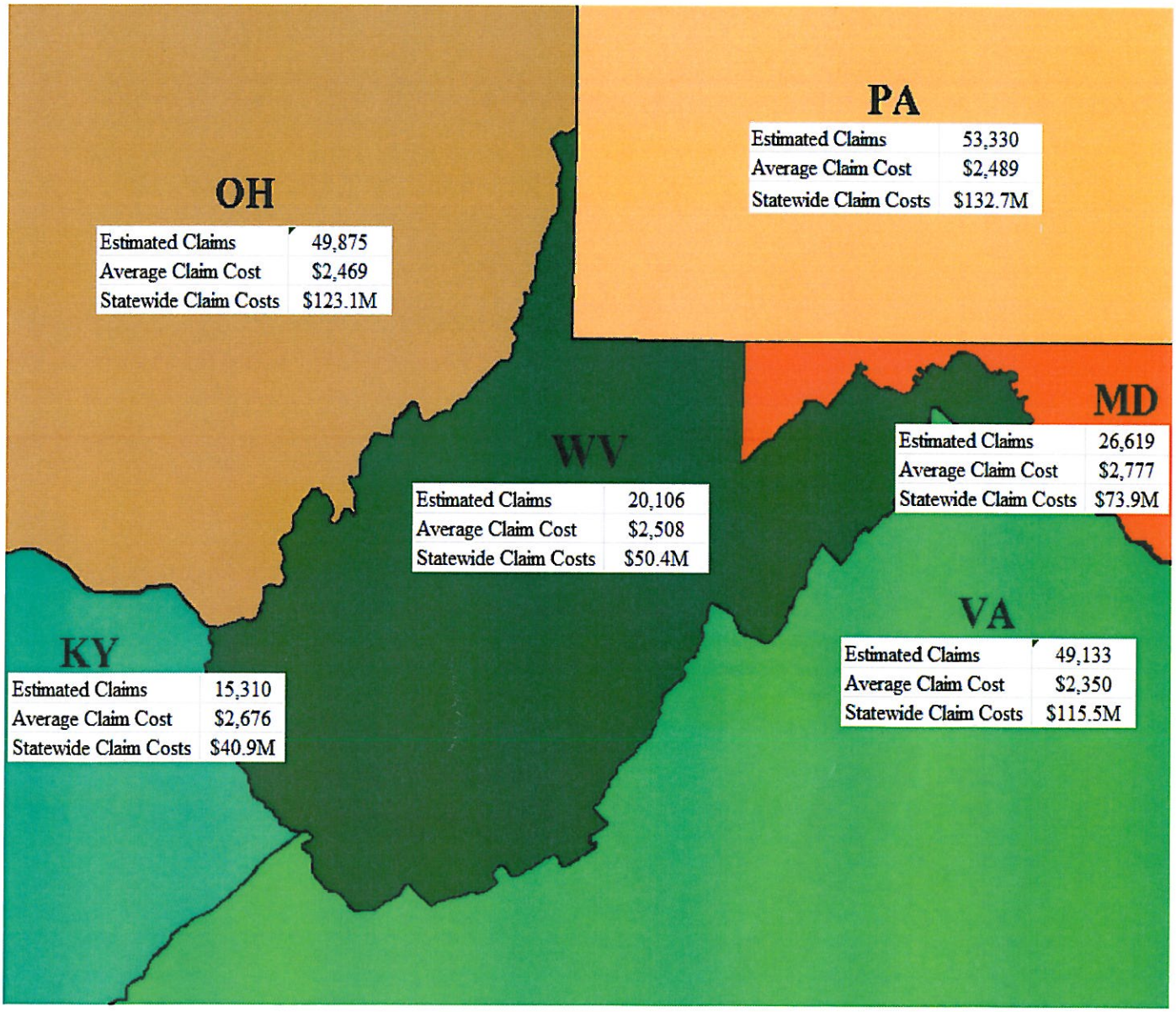
Grand Total	**$ 46,366,655.26**

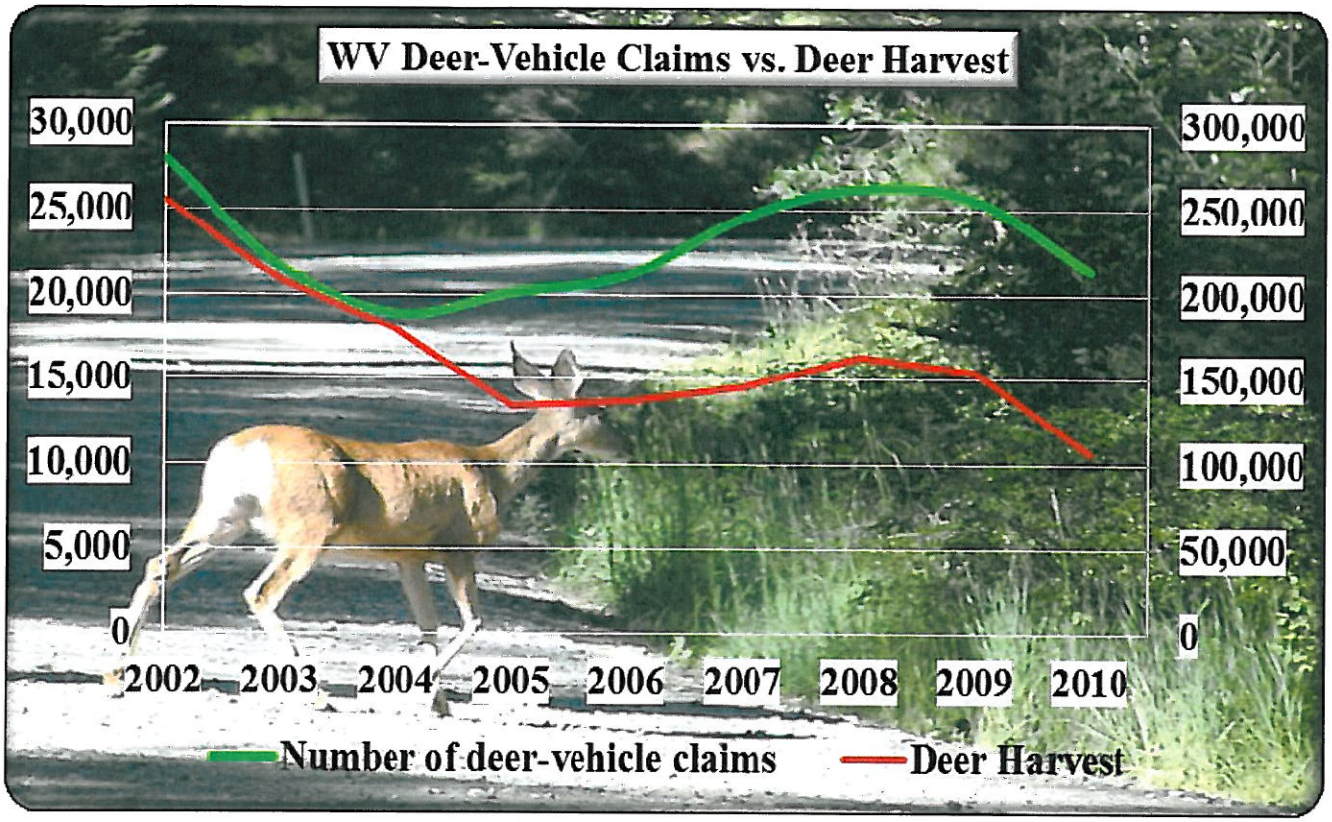
(3) These figures, including the $46M total, result from the application of the refined methodology referred to in footnote 1.

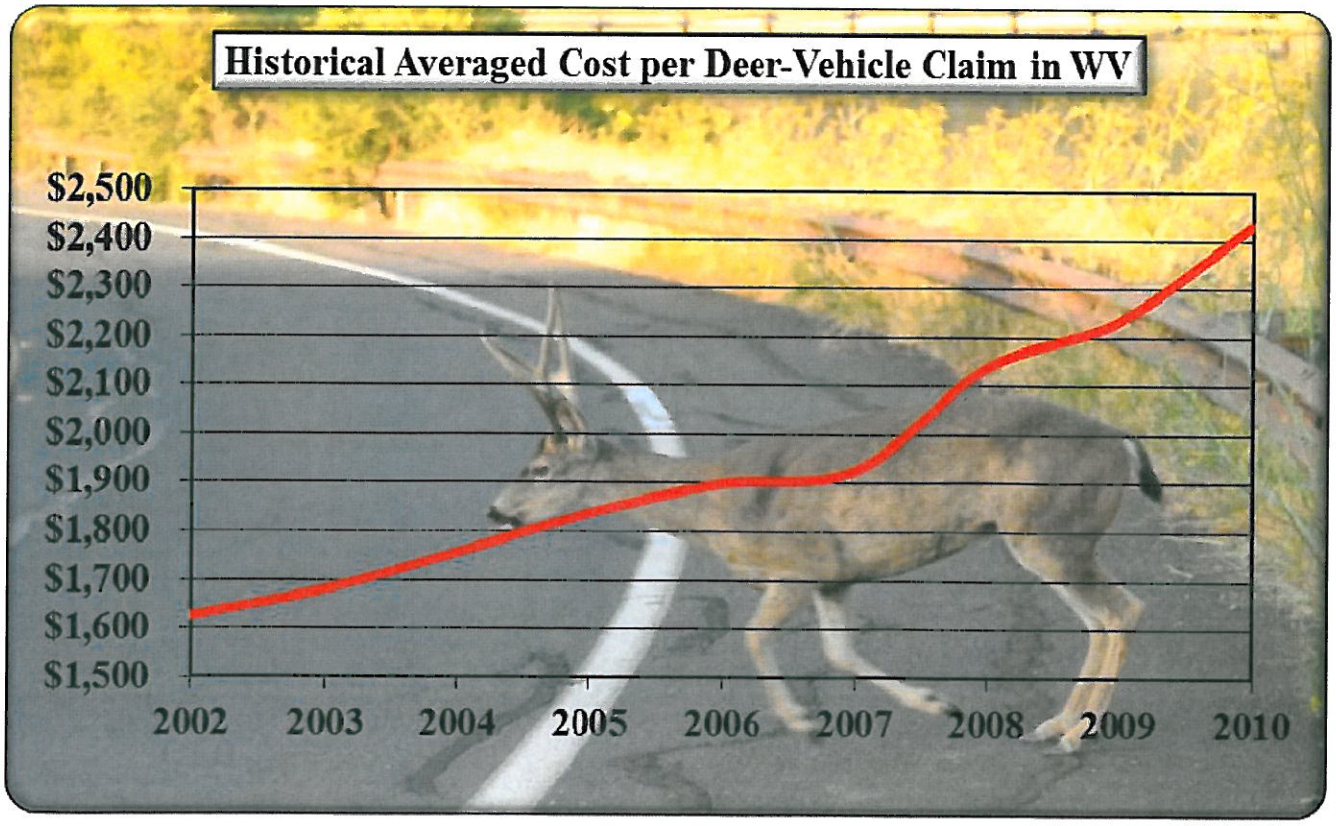
Survey responses included DVC counts by county. These counts by county were extrapolated to approximate the number of claims for each county in the entire insured market, then individually multiplied by the single average claim cost for 2010 to reach the estimated total cost per county provided above. Accordingly, these estimates may only be accurate on a relative basis, and a given county may likely have experienced a total claim dollar amount unequal to the figures provided above during 2010.

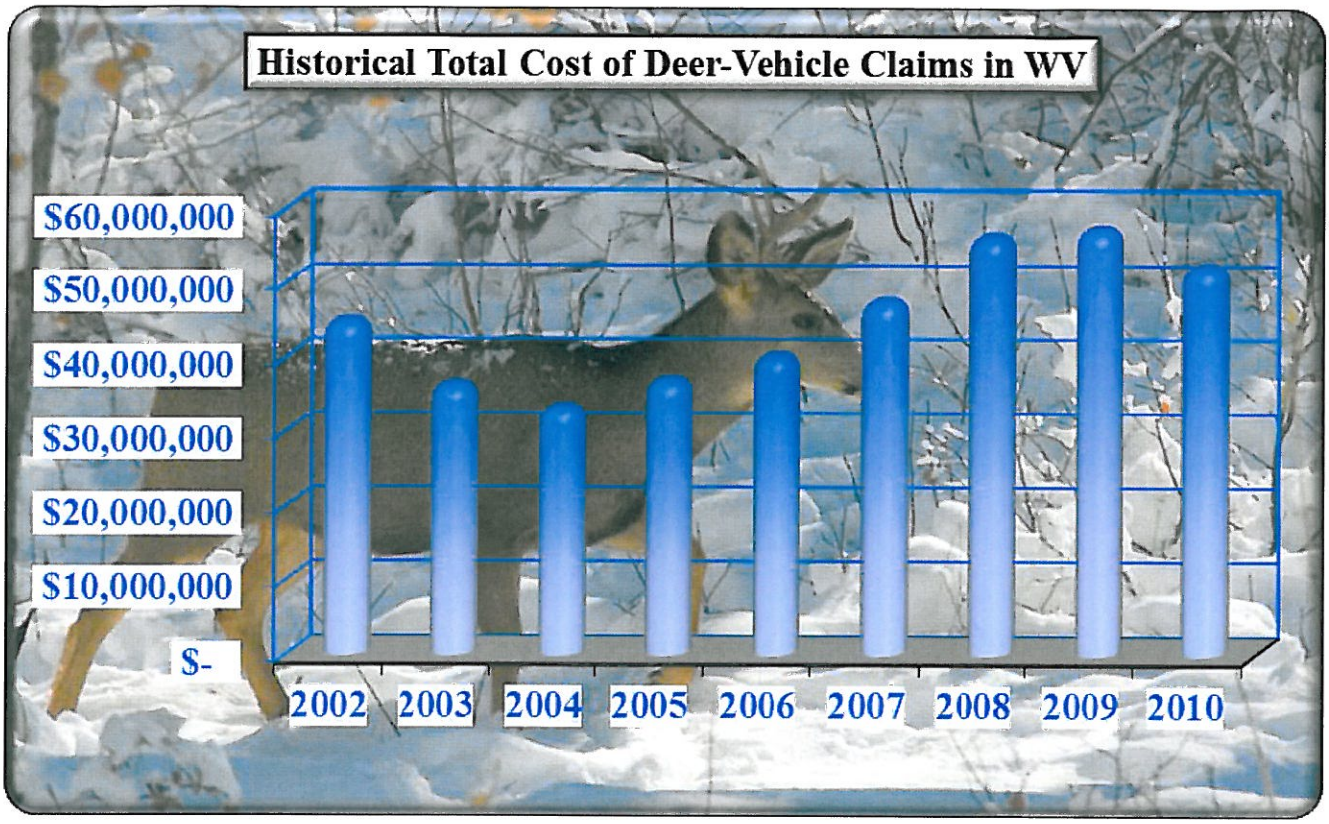
Estimates comparing DVC in West Virginia to surrounding states were also requested as part of our 2010 survey. While the outcome of this portion of the survey is unlikely to yield credible findings due to limited responses being provided *(an average market share response of only 26% for the surrounding states)*, those results are given here for consideration only. Note that while our average cost per claim is similar to that in surrounding states, both the total estimated number of claims and the estimated overall insured claim costs in West Virginia are actually lower than those estimated for all surrounding states excepting Kentucky (*where the sample size was only 14.7% of the entire physical damage market.*)



Finally, we provide some graphical representations of the historical (*old method*) data here:







I hope that the preceding information answers many of your questions relevant to the economic impact of the deer population in West Virginia. Should you have any questions, please feel free to contact me.

Sincerely,

Michael D. Riley
Acting Insurance Commissioner