4-3-2014

# Report on Animal Vehicle Crash Reduction Strategies

Maine Department of Transportation

# Memorandum

To: Senator Ed Mazurek
Representative Ken Theriault
Members of the Joint Standing Committee
on Transportation

From: Richard Bostwick, MaineDOT
Nina A. Fisher, Legislative Liaison

Date: April 3, 2014

**Re: Animal Vehicle Crash Reduction Strategies**

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The MaineDOT Environmental Office monitors animal vehicle crashes for moose, deer, bear and turkey using the statewide crash records database. This database contains reported crashes. Crashes are reported when there is $1,000 property damage, personal injury, or a fatality. This is a statewide, uniform database.

As a follow up to a request from the First Regular Session of the 126th Legislature, reported crash data was reviewed for highway segments where some treatment was undertaken to reduce animal vehicle crashes. Reported crashes along these segments were reviewed, and crashes before and after the treatment was installed were compared.

Table 1 illustrates before and after crash information for moose in seven road segments, four in Aroostook County and three in Western Maine. Table 2 shows deer crashes in three road segments in Aroostook County and three in road segments in Western Maine.

The data is from the segments of highway that are within the area where strategies were deployed.

**Table 1 Reported Moose crashes 2003 to 2013**

| Area | Mileage | Treatment | Year installed | Crashes before | Before yearly ave. | Crashes after | After yearly ave. |
|---|---|---|---|---|---|---|---|
| Connor/ Cyr | 1.5 miles | Reflectors | 2009 | 37 | **5.3** | 35 | **7** |
| Phillips | 3.8 miles | Riprap surface | 2007 | 9 | **2** | 9 | **1.5** |
| Sandy River | 3.6 miles | Riprap surface | 2008 | 14 | **2.3** | 10 | **3.3** |
| Caribou to Cross Lake | 22 mile segment | Signage | 2009 | 111 | **18.5** | 62 | **12.4** |
| Jim Pond to Chain of Ponds | About 9.5 miles | Log fencing | 2006 | 0* | **0** | 6 | **0.9** |
| Van Buren | 0.75 mile | reflectors | 2011 | 0* | **0** | 0* | **0** |
| T14 R 6 Route 11 Soucy Hill | 2.4 miles | Signage | 2013 | 9 | **0.9** | 0* | **0** |

*No Moose Crashes reported

**Table 2 Reported Deer Crashes 2003 to 2013**

| Area | Mileage | Treatment | Year installed | Crashes before | Before yearly average | Crashes after | After yearly Ave. |
|---|---|---|---|---|---|---|---|
| Connor/ Cyr | 1.5 miles | Reflectors | 2009 | 1 | **2** | 7 | **1.4** |
| Phillips | 3.8 miles | Rip Rap surface | 2007 | 5 | **1** | 4 | **.6** |
| Madrid/ Sandy River- | 3.6 miles | Rip Rap surface | 2008 | 3 | **0.5** | 1 | **0.3** |
| Caribou to Cross Lake | 22 mile segment | Signage- | 2009 | 22 | **3.6** | 12 | **2.4** |
| Jim Pond to Chain of Ponds | About 9.5 miles | Log Barriers | 2006 | 0# | **0** | 0# | **0** |
| T14 R 6 Route 11 Soucy Hill | 2.4 miles | Signage | 2013 | 3 | **0.3** | 0# | **0** |

# No Deer crashes were reported

While the difference in moose crashes on the signage project between Caribou and Cross Lake looks promising, *the data in the tables does not show any trend that can be meaningfully interpreted without some statistical analysis to determine what true trends are*. While in some cases it appears that crash rates have stayed the same or worsened, the effect of contributing factors is not known. For example, if crash rates are the same but the moose population is increasing in an area, then it may be that the strategies are providing some crash relief because opportunities to encounter a large animal may be increased. To further analyze, MaineDOT will need to compare crash rates in the areas with reduction strategies to other nearby road segments with similar habitat and moose populations but no strategy. MaineDOT will need to do further analysis to determine if the strategies are effective.

MaineDOT is currently reviewing strategies for reducing crashes on a 5.5 mile project on Route 11 north of Portage in T14 R6 and T15 R6. This is an area where moose are common and wallows are found along the side of the road. MaineDOT is working with MDIFW to develop strategies to reduce crashes. Currently, strategies being considered include updated signage, reflectors, and placing rip rap in roadside wallows to discourage moose from using them. University of Maine engineering students enrolled in the honors program are looking at vehicle activated street lights that would turn on and light up the road side at night when vehicles are passing through a high animal crash location. This is a concept that MaineDOT has been looking at developing since 2011.

When new highways are built, there is an opportunity to include separate animal passage strategies. In Gorham and on the new Caribou Connector, wildlife underpasses have been installed to keep animals off the highway. These crossings are primarily utilized by small animals: fox, fisher, coyote, weasel, raccoon and porcupine. Last spring a small bear was observed using an underpass. MaineDOT monitors these crossings with wildlife cameras.

As our work continues, we will continue to provide updates.

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