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WA1: Research Paper

The Impact of Roadkill

How much are we affecting the ecosystem by roadkill in the state of Utah?

Scientists say the estimated roadkill is one million vertebrates per day in the United States, seven million birds in Bulgaria and five million frogs/reptiles in Australia (Forman & Alexander, 1998). Roadkill is something that occurs constantly even if we don't see it firsthand. According to Webster Dictionary roadkill is defined as, "Animals that are killed on roads by cars or other vehicles"(n.d.). Roadkill effect in Utah can be examined through the data about moose in Utah and the testimonies and data of deer/ elk in Utah. Roadkill has been becoming more and more common in the state of Utah and greatly affected the ecosystem in Utah.

Often we have thought that hunting would be the only effect that humans have on big game but researchers say otherwise. In the last 30 years, roadkill has surpassed hunting in its effect on vertebrate mortality (Forman & Alexander, 1998). This evidence proves that roadkill is killing more animals than hunting itself. To show this, the Utah Moose Statewide Management Plan has done a study with Moose because it's easier to track larger animals than smaller ones. They have confirmed that, "since 2010, Utah has averaged 27 moose roadkill reported during road surveys by state agencies annually" (9). Conversely, this shows the amount of dead moose every year in Utah. They also have confirmed that, "between 1958 and 2016, 7,552 (6,287 bulls and 1,265 antler-less) moose were legally harvested in Utah" (3). Indicating how larger animals are being killed for game.

The statistic shows that over 58 years, about 130 moose were hunted and killed for sport on average every year. If we compare the amount of roadkill moose to the amount of moose killed for sport, we see that 20% of all moose killed in a year is from roadkill. This shows us that roadkill truly affects the population of moose that may be preventable. Which means that moose are deeply affected by roadkill.

Bachelor of Science of Wildlife, Fish and Wildlands Science & Management 'Anis Aoude' in a meeting conference said, "Q: John Bair – Do you know what your roadkill counts are this year for deer? A: Anis Aoude – No. We don't get very good data on roadkill. We have started this year using a database to collect that information. Any roadkill data

would not be comparable except in the central region where we have data further back" (3, 26 March 2008, Northern RAC Meeting). As Mr. Aoude explained, the information in the state of Utah is difficult to receive accurately about roadkill. Nevertheless, if we look at Figure 1; this shows the sample of the population of deer and elk in the state of

Figure 1	Figure 2
2004 SAMPLE TYPE Hunter harvest 2851 DWR kill 156 Roadkill 37 Suspect 14 Found dead 16 3074	Hunter harvest 2370 DWR kill 65 Roadkill 18 Suspect 22 Found dead 19 TOTAL 2494
Figure 1 shows a sample of Deer and Elk in the state of Utah in the year of 2004. shows every deer that was tested for CWD. This data can be found in https://wildlife.utah.gov/diseases/cwd/update2004.pdf	Figure 2 shows a sample of Deer and Elk in the state of Utah in the year of 2005. shows every deer that was tested for CWD. This data can be found in https://wildlife.utah.gov/diseases/cwd/update2005.pdf

Utah. This demonstrates that only 37 of 3,074 deer/elk were considered Roadkill. Then if you look at Figure 2, this will show similar results as Figure 1 shows that 18 of 2,494 deer/elk roadkill in this sample. We can see that the amount of roadkill is only a small quantity compared to those hunted. Allen Larsen, a local, in Northern Rac Meeting 2008 stated he knows that this year there ought to be more roadkill. He's already seen twelve dead deer by where he lives off State Street. That doesn't sum up all the roadkill on State Street, at least in my area there is a lot more roadkill (4). Moreover, this witness tells us another story about

how the data may not show every death or roadkill in the state of Utah. Other scientists say the estimated roadkill is one million vertebrates per day in the United States, seven million birds in Bulgaria and five million frogs/reptiles in Australia (Forman & Alexander, 1998). Furthermore, this suggests that roadkill may not seem like what is shown in Figure 1 and Figure 2 and, consequently, a lot more nation-wide. "Monthly means ranged from 0.75 to 33.2 vertebrates killed per 24-h period" (Dodd et al., 2004, 623). This shows a different perspective on how roadkill effects are detrimental to killing animals.

In conclusion, Based on the testimonies and statistics , Roadkill is increasingly affect the ecosystem in utah. The evidence shows us that in monthly reports the data of roadkill may be underestimated. Where personal witnesses tell us a different story, that roadkill is truly not recorded. What we do know is that the moose population is affected by roads and, consequently, the record survey doesn't list accurately and that roadkill does highly affect ecosystems in the state of Utah.

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Samples from the Chronic wasting disease from Utah Government

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