Measuring the Effects of I-90 on Wildlife.
By Erika Teschke

With the increase in population comes an increase in road traffic in the United States. Washington State is not exempt from this statistic. It is estimated that in the year 2000, 24,400 cars drove over Snoqualmie Pass. This is an average daily peak volume of 3,920 cars an hour. By 2018, it is estimated 41,400 vehicles per day will drive the route with peak volumes reaching 6,190 vehicles per hour.[1] As more vehicles travel I-90, it becomes more and more difficult for wildlife to transverse this major east-west transportation route over the Cascades.

In the I-90 Wildlife Bridges project area, mile posts 55-70 Hyak to Easton, the road is becoming ever more treacherous for animals. With the current traffic volume at its current level, combined with the concrete Jersey barriers down the middle of many portions of the highway, it is almost impossible for any animal to cross I-90 safely.[2] If the animal manages to make it across the first half, they are then forced to jump blind over the Jersey Barrier into the oncoming traffic on the other side.

So what animals are at risk for becoming road kill on I-90? With I-90 built over the top of close to 50 wetlands, amphibians and invertebrates are especially at risk. If moving from one wetland to another means crossing I-90, which frequently it does, they most likely will not survive the crossing. Snakes can meet an untimely death as they seek the heat of the concrete. Mammals of all varying shapes and sizes are ending up at the side of the road in alarming numbers. The list goes on. The Human Society estimates that about 1 million animals a day are being killed on America's highways.

How do we determine what is happening in Washington State? There has been no statewide study done on road kill. However, there has been winter snow tracking surveys conducted that helps us to understand the types of animals that are coming to the shoulders of I-90. In 1999, in about a 2-month period, 235 animals larger than a snowshoe hare were detected in the snow by the side of the highway. In 2000, in about a 3 month period, 283 animals left their tracks. They included, to name a few, coyote, bobcat, deer, elk, porcupine, striped skunk, red fox and raccoon.[3]

Another method for studying the impact that I-90 is having on our wildlife populations is to count road kill. By counting road kill, we can begin to gain an understand of how many animals have the need and try to cross the highway unsuccessfully. However, in this state, as in most states in the nation, statistics are only kept for deer and elk road kills.

Data for any other types of road kill would be recorded only if an individual study on a particular species had been conducted.

Since 1978, the Washington State Department of Transportation (WSDOT) has maintained a database of the deer and elk carcasses their road maintenance crews pick up off of I-90. Much of the earlier data is spotty, but it still allows us to take a tiny step towards understanding just how many animals are getting killed on I-90. A recent study of the WSDOT Deerkill database showed in the 8 year period between 1990-1998, 490 deer and 194 elk were killed on I-90 just between mile posts 35 at Snoqualmie Pass and at mile post 89 on the eastern edge of Cle Elum.[4] More recent data covering the years 1998-2002 shows the problem hasn't improved. In the I-90 Wildlife Bridges project area (mile post 55 at Hyak to 70 at Easton) 77 deer/elk were killed in only 5 years. On average, in just the 15 miles that encompass the project area, the WSDOT had to pick up 15 deer or elk carcasses every year.

It is important to note these numbers only represent those deer and elk carcasses picked up by the DOT crews. Many deer and/or elk manage to get off the road and expire in the nearby woods or down in the ditch and are not picked up, and therefore not included in these numbers. There are also animals that are picked up by individuals. These too are not counted. So at best, the numbers in the DOT database are minimums when it comes to counting the deer and elk that die from collisions with vehicles on I-90.

When deer road kill statistics are looked at on a national basis, the data is staggering. In 1991 it was estimated that 726,000 deer were killed on the nation's highways.[5] In 1995, the number of deer-vehicle collisions was estimated to be over 1 million and that 92% of the time, being hit by a car is fatal to the deer.[6] But because there are no national summaries available, we cannot determine what this number has risen to in the nine years since.

And what about the numerous possum, raccoon, cougar, lynx, toad, salamander, fox, and other wildlife? Everyone who has driven I-90 has seen the road kill. The deer and elk statistics represent just a minute fraction of the wildlife that is getting killed on the highways in Washington State. There are techniques to help solve these problems, and the I-90 Snoqualmie Pass East project can be the beginning of implementing them.

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[1] Singleton , PH & JF Lehmkuhl. 2000. I-90 Snoqualmie Pass Wildlife Habitat Linkage Assessment, March 1, 2000, Revised May 16, 2000 – Final Report, USDA Forestry Sciences Lab Cooperative Agreement PNW-98-0513-CC, 3.
[2] Patty Garvey-Darda, biologist, USFS Cle Elum, pers. communication, Oct 2004.
[3] Singleton report, 46.
[4] Singleton report, 31-32.
[5] Conover, , MR, et al. 1995. "Review of Human Injuries, Illnesses and Economic Losses Caused by Wildlife in the US," *Wildlife Society Bulletin* 23, 409.

[6] Conover, “Review of Human Illnesses,” 409.