

## **AUDITING A MONITORING PROGRAM: CAN CITIZEN SCIENCE REPRESENT WILDLIFE ACTIVITY ALONG HIGHWAYS?**

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Mitigating wildlife barriers caused by transportation corridors requires data on wildlife activity to effectively locate sites for mitigation measures. *Road Watch in the Pass* (RW) is a pioneering citizen science monitoring program that engages citizens in documenting wildlife activity along a highway in Crowsnest Pass, Alberta, Canada. There are plans to upgrade Highway 3 to four lanes, with resulting increased traffic volume and speed. The information RW collects is intended to assist mitigation efforts. This study evaluates the ability of RW to represent visible wildlife activity along Highway 3. A systematic driving survey was

created to accurately document visible wildlife within 100 m of the highway. This was used to compare its spatial, temporal, and species composition wildlife observation distributions to the information gathered by RW using various analyses. Due to its unsystematic nature and lack of sampling effort documentation, RW is limited in its ability to make some statistical conclusions, limiting some analyses and conclusions of this study. Despite these problems, the spatial distribution of RW wildlife observations corresponded with the systematic dataset. Differences in observation rates by time of day and season were displayed by the systematic dataset, while RW cannot provide unbiased temporal information. Both datasets documented high levels of deer observations and low levels of non-deer observations, indicating they are effective at documenting deer but not effective at observing non-deer species. Several modifications are recommended to enhance the scientific rigor of RW and provide guidance for groups aiming to use a similar volunteer highway wildlife monitoring program.