UC Davis
Recent Work

Title
Software for Pocket PC to collect road-kill data

Permalink
https://escholarship.org/uc/item/45n8z3nz

Authors
Huijser, Marcel P.
Hardy, Amanda R.

Publication Date
2005-08-29

Software for Pocket PC to Collect Road-Kill Data

Marcel P. Huijser (Phone: 406-543-2377, Email: mhuijser@coe.montana.edu), **Douglas E. Galarus** and **Amanda Hardy** (Phone: 406-994-2322, Email: ahardy@coe.montana.edu), Western Transportation Institute, Montana State University, P.O. Box 174250, Bozeman, MT 59717-4250

Abstract

Animal-vehicle collisions are an important issue in North America. Accidents are numerous and result in human injuries and fatalities, property damage, and the death or injury of the animals concerned. Some animal species may be affected at the population level and face increased risk of local or regional extinction due to the high number of road-kills and other negative effects of roads and traffic. Systematically collected road-kill data can help quantify the magnitude of this problem and potential changes in road-kill occurrences and "hot spots" over time. Such data allows for prioritization and focusing of mitigation efforts to avoid or reduce collisions.

However, not all DOT's or DOT districts record animal-vehicle collisions and the DOT's that do record road-kill data often use different methods. A national standard and tool for the recording of animal-vehicle collisions would not only stimulate DOT's and other organizations to collect animal-vehicle collision data, but would also allow for more effective analyses and use of the data.

The Western Transportation Institute at Montana State University (WTI-MSU) has developed software that allows for easy, standardized, and spatially precise collection of animal-vehicle collision data. The software runs on a Pocket PC that is linked to a Global Positioning System (GPS). The software distinguishes between "monitoring" and "incidental observation" modes and tracks the route of the observer. Road-kill data, including species name as well as optional parameters such as the sex of the animal, are stored in a separate file that can be uploaded to a PC and imported into standard spreadsheet or mapping software. Recording road-kill observations with this tool eliminates manual data entry and transcription.

Beyond the basic data-collection software, we anticipate developing data-management and analysis software that will allow for easy merging and analyses of data from numerous sources, including cluster analyses, and linking to other spatial data in a Geographic Information System (GIS). This has the potential to allow for much faster and better feedback to plan and prioritize for mitigation to address human-safety or conservation concerns.

Once mitigation measures have been put in place, the tools and procedures described above allow for proper evaluation of these measures. We expect that the tools and procedures will ultimately result in fewer animal-vehicle collisions, less work for road maintenance crews, and a reduction in the transportation and disposal costs of the carcasses. A CD-ROM that demonstrates the software is available on request. Please contact WTI-MSU if you have further questions or if your organization is interested in helping us with the testing and further development of this tool and procedures.