ANALYSIS OF LANDSCAPE CHARACTERISTICS
SURROUNDING DEER VEHICLE ACCIDENTS
IN ST. LOUIS COUNTY, MISSOURI

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ABSTRACT

Increased suburbanization of rural landscapes is leading to a greater number of human animal interactions. One of the most dangerous and costly of these interactions is collisions between vehicles and white-tailed deer (Odocoileus virginianus). This study quantifies landscape factors that contribute to deer vehicle accidents in St. Louis County, Missouri, and provides a predictive model of areas in which DVA's would likely be found.

Geographic Information Systems (GIS) was used to plot deer collisions and perform clustering analyses, in conjunction with ancillary data, to identify the surrounding landscape characteristics of DVA's. DVA's are spatially clustered within the road network more than random chance would allow. They are found in regions with average road density relative to other roads in St. Louis County, and close to grasslands. The analysis and model can be used as predictive tools during road planning and assessment stages. They will also be useful for identifying areas in which mitigation strategies can be implemented in regions prone to high deer vehicle accidents.