

Public Abstract

First Name:Jacqueline

Middle Name:Dova

Last Name:Schneiderman

Adviser's First Name:David R.

Adviser's Last Name:Larsen

Co-Adviser's First Name:

Co-Adviser's Last Name:

Graduation Term:SP 2008

Department:Forestry

Degree:MS

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

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 focuses on a landscape analysis of deer vehicle accidents (DVA's) in St. Louis County, Missouri. A Geographic Information System (GIS) was used to identify the surrounding landscape characteristics of DVA's, and to create a predictive model that could identify areas in which they were most likely to occur. DVA's are spatially clustered within the road network more than random chance would allow, are found closer to grassland, and in areas with intermediate road densities relative to rural and urbanized areas. The predictive model was able to successfully categorize DVA's in St. Louis County. This analysis can be used as a predictive tool during road planning and assessment stages. It will also be useful for identifying areas in which mitigation strategies can be implemented in regions prone to high deer vehicle accidents.