Title

Use of a GIS-Based Model of Habitat Cores and Landscape Corridors for VDOT Transportation Project Planning and Environmental Scoping

Authors

Donaldson, Bridget M. Donaldson
Weber, Joseph T.

Publication Date

2007-05-20

Use of a GIS-Based Model of Habitat Cores and Landscape Corridors for VDOT Transportation Project Planning and Environmental Scoping

Bridget M. Donaldson (434-293-1922, bridget.donaldson@vdot.virginia.gov), Research Scientist, Virginia Transportation Research Council, 530 Edgemont Road, Charlottesville, VA 22903 USA
Joseph T. Weber (804-371-2545, joseph.weber@dcr.virginia.gov), GIS Projects Manager/Conservation Biologist, Virginia Department of Conservation and Recreation, Richmond, VA USA

Abstract

Transportation agencies across the United States are under increasing pressure to minimize or avoid impacts of transportation projects to important wildlife habitat. With new road construction and lane additions, habitat fragmentation is becoming more pronounced and its effects are increasingly evident. Transportation projects are often planned, designed, and funded before taking important habitat considerations into account, which can lead to expensive delays and lawsuits.

Wildlife linkage or corridor analyses are being conducted in an increasing number of states, and more transportation agencies are using this information during the planning of proposed road projects. The Virginia Department of Conservation and Recreation's Natural Heritage Program is creating a GIS tool, *the Virginia Natural Landscape Assessment* (VANLA) that identifies large patches of natural landcover (habitat cores) and the habitat linkages connecting these areas (landscape corridors). This mapping project can be integrated into the Virginia Department of Transportation's (VDOT) existing GIS applications for access by staff involved with transportation planning and environmental scoping activities. Analyzing a proposed project in these early stages of project development will allow VDOT to identify important natural resource areas and wildlife corridors to avoid or for which mitigation may be necessary. This can result in fewer project delays, promote collaboration between VDOT and state natural resource and regulatory agencies, and meet the directives of the new habitat conservation provision in the federal transportation legislation. In addition, basing certain project decisions on a project's location relative to a wildlife corridor can decrease the risk of animal-vehicle collisions.