

## Tactical Harvest Planning on Private Timber Sales in the southern USA

Olivier R.M. Halleux  
Graduate Research Assistant  
Daniel B. Warnell School of Forest Resources  
The University of Georgia  
Athens, GA  
[orh3568@owl.forestry.uga.edu](mailto:orh3568@owl.forestry.uga.edu)

W. Dale Greene  
Professor  
Daniel B. Warnell School of Forest Resources  
The University of Georgia  
Athens, GA  
[greenes@smokey.forestry.uga.edu](mailto:greenes@smokey.forestry.uga.edu)

### **ABSTRACT**

Tactical or operational planning of non-industrial forest harvests in the southern USA has not been widely used in the past due to relatively easy logging conditions, use of non-regulatory BMP-based water quality protection, and a general lack of state forest practices acts. Formal written plans are more commonly used on large ownerships, particularly those of major forest product corporations. Increased government regulation and market pressures to document sustainable forest management on private lands will likely increase the need for tactical planning on private, non-industrial timber sales. The rapid development of computer technology and spatial information presents many opportunities for sales planners. The cost of Global Positioning Systems (GPS), Geographic Information Systems (GIS) and spatial information continues to drop making these tools more affordable. This project is an initial investigation into GIS based

procedures to assist planners of harvesting operations. More specifically, the objective is to develop procedures that allow the comparison of different layouts based on logging costs and site disturbance. GIS procedures will be developed to calculate the average skidding distance (ASD) for different setting configurations. These will include examples where there are required machine paths such as single stream crossings, gates, travel funnel points, and skidding via designated trails. Travel intensity will also be assessed since it is highly correlated to site disturbance and soil compaction. This project emphasizes the use of simple models and readily available information for consultants and wood buyers involved with timber sales on non-industrial private forestlands.