Use of GPS and Open-GIS Technology for Management of Natural Preserves in Urban Environments

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Abstract. Municipalities in most areas of the country have increasingly recognized the aesthetic and economic benefits of ecotourism and have incorporated or accommodated the preservation of natural areas (both public and private) in their urban management plans. Geospatial technology has been used for many years in land management efforts, and its potential for use in management of small natural preserves in urban environments has increased substantially. Recent developments in Geographic Information System (GIS) technology, improvements in accuracy and coverage by radionavigation systems (e.g., Global Positioning System), the the increasing availability of effective Open-GIS software (e.g., GRASS and QGIS) has made the use of GIS technology for the management of small natural preserves owned or managed by societies or organizations with limited resources a feasible concept. Recent developments in Open-GIS technology and their potential applications in resource management in urban environments is discussed.