

# ASU helps in land planning

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Finding a suitable location for a park within a community can be a difficult task. Conserving land within a quickly growing city can be even more difficult.

It may seem easy for a parks or planning department to look at a map and subjectively assess where a park needs to go or where land can be preserved for conservation. However, decisions regarding land use can easily be scrutinized by the public. One way to strengthen decision-making is to make judgments supported by scientific research. When science is incorporated into city planning, it provides city administrators with greater confidence in decisions.

An example of science-strengthened planning was seen when the City of Jonesboro created an inventory of land for conservation and recreation.

In November 2007 the City of Jonesboro was awarded an Arkansas Urban Forestry Grant that used GIS data layers and aerial photography to prioritize parcels of land within the planning area of Jonesboro for conservation. The project was a collaborative effort between the Arkansas Forestry Commission, the City of Jonesboro, The Nature Conservancy and Arkansas State University Department of Biological Sciences.

Ethan Inlander, a GIS specialist with The Nature Conservancy, utilized aerial photography and GIS data layers of Craighead County to identify 39,984 land parcels within the study area. Initial screening of these land parcels produced 2,816 suitable for further review. Most unsuitable parcels were eliminated.

Parcels were then identified and ranked by a Science Advisory Committee. Desirable characteristics included the presence and quality of riparian and wetland areas, large continuous forested areas, the diversity of land features which enhance(d) the habitat aesthetically and wildlife and recreation potential. Aerial photographs were overlaid with the Jonesboro city limits, the anticipated city growth planning area, the 5-mile city perimeter and the outline of the surrounding watershed drainage.

Using the described ecological characteristics, 40 parcels of land were selected for further assessment.

ASU graduate students Jaimie Conrad and Wes Klasky, undergraduate student Josh Bednarz and Dr. Buldin performed habitat assessments to "ground truth" the data provided by GIS data layers. Land owner permission was sought prior to entering land

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## CONSERVATION: Gathered data can be used by Jonesboro in various ways, according to researchers

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parcels for assessments. Change in ownership, land cover changes and unwillingness of land owners to allow access decreased the top-ranking 40 parcels to an avail-

able 15 for site evaluation. A Site Conservation Worksheet was developed by the Science Advisory Committee and completed on-site for each property by the ASU investigators. Eleven of the 15 parcels were confirmed

to have conservation and recreation value. The need for conservation was emphasized when it was discovered that the highest ranking parcel assessed was slated for sale to a gravel mining company.

Jonesboro can encourage land owners of high-ranking parcels to consider conserving land that possess valuable natural resources to Jonesboro. The data can be used to identify and rank future park land, and the data

can be used by city planning to modify zoning requirements for development of highly ranked parcels. For more information, contact the Arkansas State University Department of Biological Sciences at

biology@astate.edu.

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