

# GEOSPATIAL TECHNOLOGY RESEARCH AND APPLICATION FOR FORESTRY AND NATURAL RESOURCE MANAGEMENT

A McIntire-Stennis supported project



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Spatial scientists in the Arthur Temple College of Forestry and Agriculture are examining the most effective applications of the rapidly expanding suite of geospatial technologies and how they can be most efficiently applied in natural and cultural resource conservation and management.

Texas' growing population is projected to place increasing stress on the state's water supply and other natural resources as land is converted to urban use. This also leads to instances of increased flooding. Using Soil and Water Assessment Tool technology, researchers will study land use and land cover impact on peak discharge and runoff to augment flood management in the state. Additionally, accuracy of remotely sensed data from different sensors, GIS platforms for desktop and mobile field data collection, as well as the diverse applications of unmanned aerial vehicles will be utilized to assess damage to natural and cultural resources at state recreation sites with the ultimate goal of improved accuracy of data for natural and cultural heritage resource managers.



## About McIntire-Stennis

The McIntire-Stennis program, a unique federal-state partnership, cultivates and delivers forestry and natural resource innovations for a better future. By advancing research and education that increases the understanding of emerging challenges and fosters the development of relevant solutions, the McIntire-Stennis program has ensured healthy resilient forests and communities and an exceptional natural resources workforce since 1962.



## COLLABORATION



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Graduate students supported through this project.

Collaborative partnerships will be forged with the U.S. Forest Service, the Texas A&M Forest Service, the Natural Resources Conservation Service, U.S. Army Corps of Engineers, the National Park Service, the Texas Water Development Board, Temple-Inland, and International Paper.

## IMPACT



>12 million

Acres of forestland in East Texas alone.

This research will provide key insight into the most effective applications of evolving geospatial technologies, empowering professionals in their mission to best manage and conserve natural and cultural resources.



\$18.3 billion

Of direct forest industry output contributed to the Texas economy in 2015.



>28 million Texans

With an expected population increase in coming years.