



# GEORGIA DEPARTMENT OF NATURAL RESOURCES – DIVISION OF WILDLIFE

The Georgia Department of Natural Resources - Wildlife Resources Division (GADNR) owns 73 fee-simple Wildlife Management Areas (WMAs) throughout the State totaling approximately 464,000 acres. Sustainable management is fundamental to GADNR practices particularly as it relates to wildlife habitat, wildlife populations, and timber-based revenue. Additional data and information on current habitat conditions is an Agency need that is helping inform resource allocations, the siting of habitat restoration projects, and overall management precision.



Since 2017, F4 has worked with GADNR on natural resources management projects focused on data collection, analysis, and modeling that directly support strategic planning, operational planning, decision making, and the Department's overall mission. To date, F4 has mapped and typed forest stands in 63 WMAs, and developed and deployed a plot-based forest/vegetation inventory system across 50 WMAs mainly in planted pine, natural pine, and pine-hardwood stands. We have also assessed and summarized forest inventory data and modeled potential future conditions.

Resource targets are a key driver in establishing sustainable management goals and objectives. To accomplish this, F4 collaborated with GADNR staff to define and assign management regimes to individual stands that considered forest type, current condition, and desired future condition related to its management trajectory. Each management regime addressed wildlife benefits (game, non-game, protected species) and favored certain outcomes, i.e., production forest, general wildlife management, protected species (longleaf pine), and bobwhite quail/red-cockaded woodpecker habitat. These classifications were integral to conducting statewide timber revenue projections across portions of 50 WMAs. For each forest type and management regime, we used inventory data and calculated current timber volumes and values, identified harvest windows based on species-specific stand dynamics, site productivity, and financial thresholds. Timber harvesting schedules were staggered to achieve an even-flow of revenue over the 30-year modeling window. In addition, individual stand and management regime contributions to the overall goal of sustainably generating a targeted amount of timber-based revenue were tracked.

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## PROJECT HIGHLIGHTS

Client since 2017

- Mapped and typed forest stands in 63 WMAs totaling approximately 311,451 acres.
- Developed a forest inventory system and installed 16,691 inventory plots on 50 WMAs.
- Directly supported timber revenue budget planning for multiple upcoming fiscal years.
- Utilized F4 Tech's SilvAssist Suite of programs: Mobile (field data collector), Inventory Manager, Growth and Yield, and Events Manager.
- Used Esri ArcPro, R statistical package, the U.S. Forest Services' Forest Vegetation Simulator (FVS), and the Woodstock harvest



**F4**

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