

Anthony F. Pappas, CF

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PROFESSIONAL PROFILE

Strategic natural resources manager and Certified Forester with over a decade of experience across several dozen US states and ecoregions. Expert in "Data-to-Ground" solutions, integrating advanced geospatial technology and forest carbon strategy with on-the-ground ecological restoration to maximize timber value, secure long-term sustainability, and optimize financial returns for private and industrial landowners.

CORE COMPETENCIES

- **Biomass & Yield Forecasting:** Quantifying future Aboveground Biomass (AGB) and carbon stocks to optimize financial returns and timber value.
- **Carbon Registry Standards:** Navigating stringent verification frameworks (ACR, CAR, VCS) and conducting detailed feasibility studies to ensure project viability and compliance.
- **Data Collection:** Integrating mobile tools (e.g., ArcGIS Field Maps) and high-accuracy GPS/GNSS equipment to ensure exacting QA/QC standards for carbon verification and timber cruising.
- **Field Measurements:** Directing comprehensive field operations including rigorous forest inventory, fixed-radius plot installation, and longitudinal monitoring.
- **Forest Carbon Markets:** Deep expertise in Improved Forest Management (IFM) and Afforestation, Reforestation, and Revegetation (ARR) project development, sales, and administration.
- **Geographic Information Systems (GIS):** Utilizing ArcGIS Pro for complex spatial analysis, DEM manipulation, sub-watershed delineation, and land cover change detection.
- **Modeling:** Various competencies, including;
 - **AI Modeling:** Establishing technology integrations and AI-enabled workflows to predict carbon storage by modeling soil characteristics, elevation, and slope.
 - **Bayesian Modeling:** Applying probabilistic statistical methods to evaluate ecological impacts and carbon sequestration under diverse land-management scenarios.
 - **Growth & Yield Modeling:** Employing the U.S. Forest Service's Forest Vegetation Simulator (FVS) to project forest growth dynamics (DBH, height, species composition) over multiple time scales.
 - **Random Forest Modeling:** Training machine learning models with massive, complex datasets (e.g., GBIF, FIA) to spatially analyze species distribution and environmental variables.
- **Remote Sensing:** Conducting drone surveys (NDVI), hyperspectral imaging, and LiDAR mapping to assess high-resolution terrain and vegetation metrics.

EDUCATION

- **M.S. in Forestry;** Expected Dec. 2026, West Virginia University
- **Graduate Certificate in GIS and Spatial Analysis;** Expected Dec. 2026, West Virginia University
- **B.S. in Forestry, Magna Cum Laude;** May 2016, West Virginia University

CERTIFICATIONS/LICENSURE

- **Accredited Lead Verifier, Verifier, Senior Internal Reviewer**
 - California Air Resources Board (EO: H2-26-288)
 - General Course
 - U.S. Forest Specialist
 - Climate Action Reserve
 - General Course
 - U.S. Forest Specialist*
 - **Through ARB, for v2.1 – v3.3 CAR projects*
- **Federal Aviation Administration, Licensed Commercial Drone Pilot (#5293380)**
 - *Part 107-Licensed*
- **Forest Stewardship Plan Writer**
 - Ohio
 - Pennsylvania
 - West Virginia
- **Registered Professional Forester**
 - Arkansas (#1536)
 - West Virginia (#805)
- **Society of American Foresters, Certified Forester (#35802)**
- **U.S. Dept. of Agriculture NRCS, EQIP Forest Management Plan Writer, Technical Service Provider (#20-23162)**
 - Kentucky
 - Ohio
 - Pennsylvania
 - West Virginia

WORK EXPERIENCE

- **Heritage Habitat & Forestry, LLC, Heritage Ecosystem Partners, HH&F Geospatial & Data Solutions**
Centerburg, OH; August 2020 – present
 - Owner, Lead Consultant
 - As the founder and Lead Consultant of an integrated environmental services group, I direct a "Data-to-Ground" platform that harmonizes the high-level strategy of **Heritage Ecosystem Partners**, the advanced analytical power of **HH&F Geospatial & Data Solutions**, and the technical implementation of **Heritage Habitat & Forestry, LLC**.
 - Leading this multi-divisional organization, I oversee carbon project development and advisement for over 300 landowners, providing critical validation and verification services for top global carbon developers through precise plot installation and longitudinal monitoring. To drive these efforts, I established our specialized technology arm to leverage LiDAR mapping, hyperspectral imaging, and AI-enabled machine learning, delivering high-resolution terrain and vegetation assessments that maximize timber value and ecological health. This sophisticated data is then translated into action by our implementation team, where I have managed sustainable timber operations and forest management planning for more than 500 private landowners across 20+ states, resulting in massive tax reductions and securing long-term forest sustainability.
 - **Carbon Project Development & Verification:** Oversee carbon project development and advisement for over 300 landowners. Provide critical validation and verification services for top global carbon developers through precise sampling scheme development, plot installation, and longitudinal monitoring in alignment with stringent ACR/CAR standards.
 - **Field Operations Management:** Direct field teams and oversee rigorous data collection protocols, ensuring seamless translation of high-level geospatial data into actionable, on-the-ground ecological restoration and silvicultural operations.
 - **Geospatial & Technology Innovation:** Established and direct a specialized technology arm leveraging LiDAR mapping, hyperspectral imaging, ArcGIS Pro spatial analysis, and AI-enabled machine learning. Deliver high-resolution terrain, sub-watershed delineation, and vegetation assessments that maximize both timber value and ecological health.

- **Strategic Leadership & Integrated Solutions:** Lead a multi-divisional organization, synergizing ecological consulting, geospatial data analysis, and forestry implementation to deliver comprehensive land management solutions.
- **Sustainable Forest Management:** Manage sustainable timber operations and formulate comprehensive forest management plans for more than 500 private landowners across 20+ states, securing massive tax reductions and long-term forest sustainability.