

NICHOLAS MANGILI, M.S.

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PROFESSIONAL SUMMARY

Agroforestry-trained land manager and educator with 12 years of designing and implementing resilient, community-based land management systems across forest, farm, and wetland. I combine hands-on forestry and ecological design experience with GIS-based analysis, accredited college teaching, and multi-institutional partnerships to create robust local networks supporting sustainable agriculture and forest stewardship. Currently conducting research on agroforestry as a promising climate adaption practice with NC A&T's Discovery and Advancement of Regenerative and Integrated Soil Systems lab.

AREAS OF FOCUS

Agroforestry & Ecological Design • Forest Management & Silviculture • GIS & Spatial Analysis
Community Partnership Building • Accredited Course Instruction • Carbon & Climate-Resilience Research

PROFESSIONAL EXPERIENCE

Research Assistant, Southern SARE — North Carolina A&T State University, Greensboro, NC *May 2026 – Present*

- Authoring a research perspective on agroforestry as a climate solution for Southeast U.S. farmers, addressing plant water availability under drought and heavy-rainfall extremes
- Supporting on-farm field trial maintenance and data collection for the Discovery and Advancement of Regenerative and Integrated Soil Systems research furthering best management practices for soil restoration and health.

Farm Manager — Guilford College, Greensboro, NC

April 2014 – Jan 2026

- Managed a 22-acre diversified agroecosystem (forest, meadows, gardens, high tunnels, and greenhouses) using regenerative practices; awarded the Guilford College Bruce B. Stewart Award for Community Service (2023).

Agroforestry & Ecological Design

- Designed and implemented an alley cropping system within a 1-acre market garden, combining Southern heirloom apples, Korean pears, peaches, and chestnuts to increase structural diversity while planning a multi-decade transition to a silvopasture system.
- Designed and planted a ½ -acre wildlife food plot/native orchard on a contoured swale system (persimmon, blueberry, blackberry, pawpaw); self-sown hardwoods are now being pruned for future timber and shiitake-log production.
- Stabilized a ½ -acre eroded hillside through grading and planting a native wildflower seed mix; 12 years later, the site shows established pioneer hardwoods and successful natural succession.
- Operated an industrial composting facility converting roughly 36,000 pounds of cafeteria food waste into finished compost for nutrient management on farm, reducing off-farm inputs and demonstrating circular economies for students

Forest Management

- Authored a thesis paper defining a set of core value to build a forest management plan for 155-acre forest for Guilford College through a community-based design process to improve sustainable management of natural resources
- Designed a timber inventory sampling plan for a 14-acre pine stand using either point sampling or fixed radius methodology for monitoring an overmature, planted loblolly pine stand in the Guilford College Woods.
- Produced GIS maps using aerial imagery and incorporating LiDAR data for stand delineation and management-zone planning across the Guilford Woods, supporting long-term natural resource management and monitoring
- Directed invasive species removal for habitat restoration. Recycled biomass was amended into garden pathways for nutrient cycling while also being used to build brush piles for wildlife habitat
- Trained and equipped for milling reclaimed timber, soft and hardwoods, into construction-grade lumber via Wood-Mizer sawmill.

Teaching & Community Partnerships

- Coordinated produce distribution across a 70-share CSA, campus cafeteria, mobile food pantry, cooperative grocery, and local restaurants; led farm tours and volunteer programming for K–12 students and professional groups.
- Taught accredited college courses for 10 years, including a Sustainable Agriculture Practicum, Tree Conservation, Forest, Climate & Farming, and Community Farm Design — two of which trained students to correlate tree-volume measurements with forest carbon storage.
- Built and sustained partnerships with UNCG, NC A&T, the City of Greensboro's Office of Sustainability & Resilience, and County Cooperative extension agents to develop joint research and public-education programming.

Brewing Career (Consulting Brewer, Head Brewer, Cellarman) — Haw River Farmhouse Ales/ Deep Ellum Brewing / Fullsteam Brewery, NC & TX *May 2010 – Mar 2014*

- Directed brewery operations and established a fermentation quality-control lab (Deep Ellum); supported brewery construction and local-ingredient sourcing (Haw River); managed sanitation, inventory, and packaging (Fullsteam).

EDUCATION

M.S., Natural Resources — concentration in Agroforestry, University of Missouri, Dec 2022

Thesis: A Community-Based Approach for Designing a Land Management Plan for Guilford College

B.S., Biological Systems Engineering — Virginia Tech, May 2012 — Passed FE Exam, VA (2012)

Continuing Education in Forest Management Technology — Montgomery Community College, Spring 2026

Forest Botany, Forest Mensuration, GIS Data Models

TECHNICAL SKILLS

- **GIS & Mapping:** ArcGIS Pro, QGIS, Google Earth, and AutoCAD
- **Field & Forestry Tools:** BAF prism sampling, clinometer, Cruz-All angle gauge, logger's tape, Biltmore stick
- **Equipment Operation & Maintenance:** Chainsaws, tractors, skid steers, forklifts, backhoes, Wood-Mizer portable sawmill, power tools
- **Software:** Microsoft Office (Word, Excel, PowerPoint), programming experience with MATLAB
- **Certifications:** Certified Forestry Technician, Society of American Foresters (in progress); Certified Burner training, NC Forest Service (supervised burn, pending); member of the Triangle Prescribed Burn Association
- **Language:** Improving Spanish fluency — bilingual household

VOLUNTEER & LEADERSHIP

- Stewardship of the Land Committee, New Garden Friends Meeting — Nov 2025–present
- Board of Directors (Secretary & Growth Coordinator), Greensboro Youth Hockey Association — 2022–2025; youth hockey instructor, 2021–2024
- The Edible Schoolyard at Greensboro Children's Museum; Sustainable Food Corps at Virginia Tech; WWOOF — 10-farm sustainable agriculture tour across the U.S.

REFERENCES

Stesha Warren, Agroforestry Technical Trainer, Appalachian Sustainable Development — swarren@asdevelop.org, (336) 202-9943

Holly Peterson, Faculty, Guilford College — petersonhe@guilford.edu, (802) 365-0096

Biswantha Dari, Assistant Professor & Natural Resource Specialist, NC A&T SU — bdari@ncat.edu, (352) 222-9565