

INTRODUCTION TO THE NORTH CAROLINA GEOGRAPHER, VOLUME 21

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This special issue, titled "North Carolina Crossroads: Culture, Community, and the Environment," marks a highly anticipated return for *The North Carolina Geographer* after a brief publishing hiatus. This special issue, an endeavor of significant scholarly commitment, proudly aligns with our mission as the official journal of the North Carolina Geographical Society to foster geographic education, research, and professional practice across the state.

Production of this volume is a testament to the robust and collaborative academic network within North Carolina. We are particularly pleased to acknowledge the substantial contributions from our partners in higher education, whose dedication has been instrumental in bringing this work to fruition. A special note of sincere gratitude is extended to the esteemed faculty members and their institutions—Appalachian State University, East Carolina University, North Carolina Central University, the University of North Carolina at Chapel Hill, UNC Charlotte, UNC Greensboro, UNC Pembroke, UNC Wilmington, Western Carolina University, and Winston-Salem State University—for their tireless efforts in advancing the vital discipline of geography throughout our diverse state. Their collective engagement underscores the importance of this journal as a platform for rigorous, place-based scholarship.

This issue presents a diverse collection of articles that collectively illuminate the critical intersection of infrastructure, public health, and spatial justice within North Carolina. The first study evaluates the connectivity of public transportation at the state's five busiest airports, revealing a significant misalignment between bus schedules and airport operating hours. The authors find that current bus schedules do not cover the full duration of working hours at any primary airport, a gap that disproportionately affects "captive riders"—employees and low-income travelers who cannot afford expensive ride-share options and rely on affordable mass transit for economic access. Shifting from transportation to environmental resilience, a second article offers a harrowing geographic account of Hurricane Helene's impact on Asheville, specifically the catastrophic failure of the city's water infrastructure following a "1000-year weather event". This narrative details how torrential rains and landslides compromised the North Fork reservoir and treatment plant, leaving the city without potable water for nearly two months and forcing a reevaluation of floodplain development and green infrastructure to mitigate future climate risks.

Complementing these infrastructure analyses, two studies utilize advanced data visualization to address deep-seated social disparities. One paper employs

Geographic Information Systems (GIS) to analyze the relationship between cancer mortality rates and socioeconomic factors across North Carolina, identifying high-mortality clusters in rural western and eastern counties. This research validates the socio-ecological model of health by demonstrating statistically significant associations between higher cancer death rates and lower household incomes, higher diabetes prevalence, and limited access to healthy food sources, often termed food deserts. Similarly focused on data-driven equity, the final paper details the development of the Forsyth County Neighborhood Opportunity Atlas (FCNOA), a digital dashboard designed to benchmark spatial justice. By aggregating over 50 variables—ranging from economic well-being to justice and social capital—this tool allows stakeholders to visualize neighborhood-level disparities, thereby moving beyond anecdotal evidence to inform more equitable budgeting, programming, and policy decisions.

Together, these studies are vitally important as they demonstrate the power of geographic inquiry to expose structural inequalities and guide resilient community planning. The research on airport accessibility and the Forsyth County Atlas underscores the necessity of aligning public services with the actual needs of underserved populations to promote economic mobility and spatial justice. Simultaneously, the analyses of Asheville's water crisis and statewide cancer mortality highlight the urgency of addressing environmental vulnerabilities and the social determinants of health. By leveraging spatial data to make these invisible disparities visible, these papers provide essential baselines and methodological frameworks that policymakers and planners can use to target interventions, improve infrastructure resilience, and ultimately reduce the inequitable burdens placed on marginalized communities across North Carolina.