

From Lived Experience to Actionable Evidence for Health and Risk Reduction

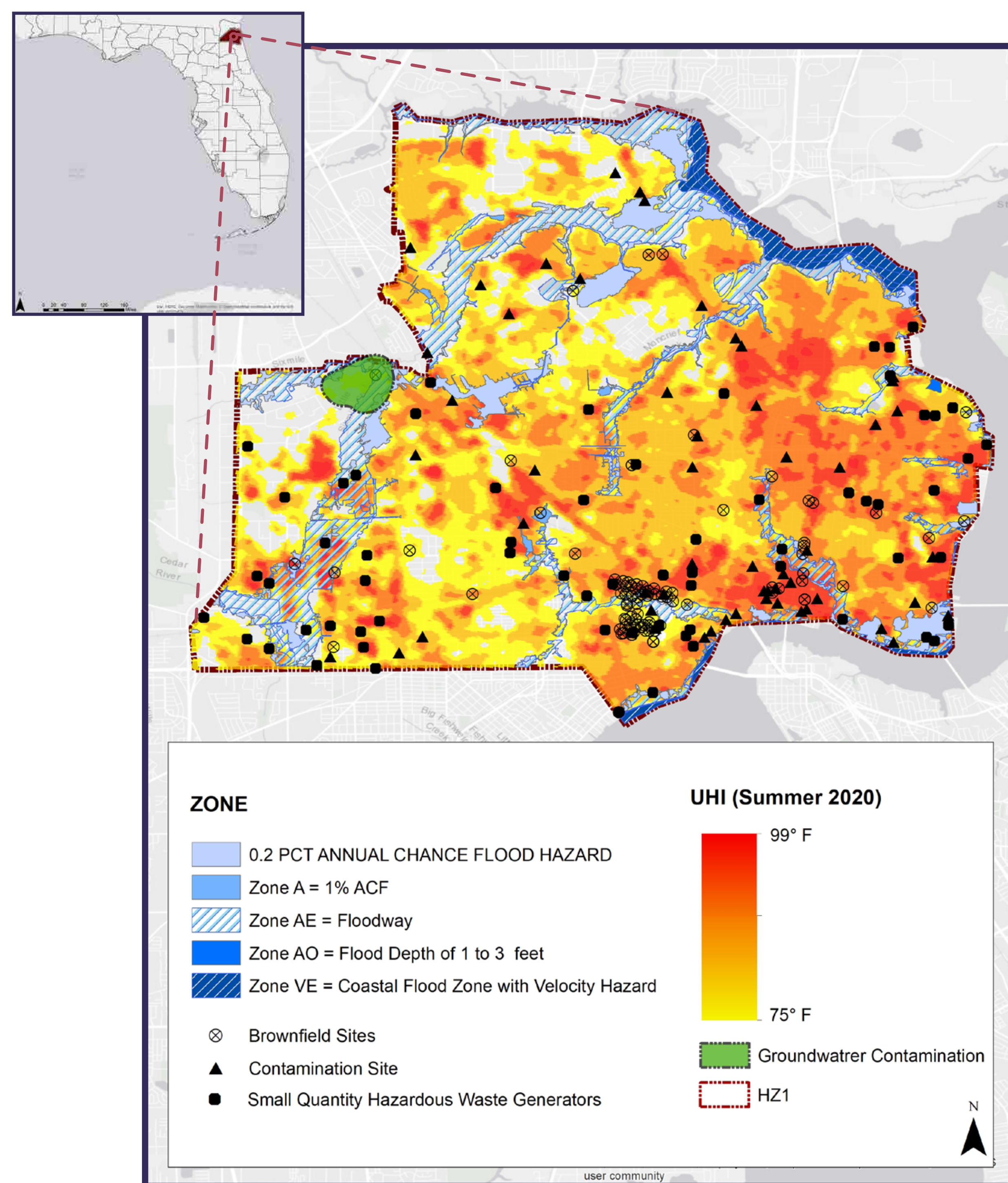
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Historical Roots and Contemporary Realities

Chronic health risks linked to housing and environmental exposure represent a slow-moving disaster in many U.S. cities.

In Jacksonville's urban core, Health Zone 1 has been shaped by enduring systemic disinvestment rooted in segregation, redlining, and industrial siting decisions that disproportionately expose Black and low-income residents to environmental hazards, such as severe respiratory health burdens, alongside aging housing stock and limited public intervention.

Community partners reframed environmental and health inequities as structural, spatial, and policy issues by collaborating with university partners to document, map, and challenge the historical and structural production of the current spatial configuration of risk in Jacksonville.

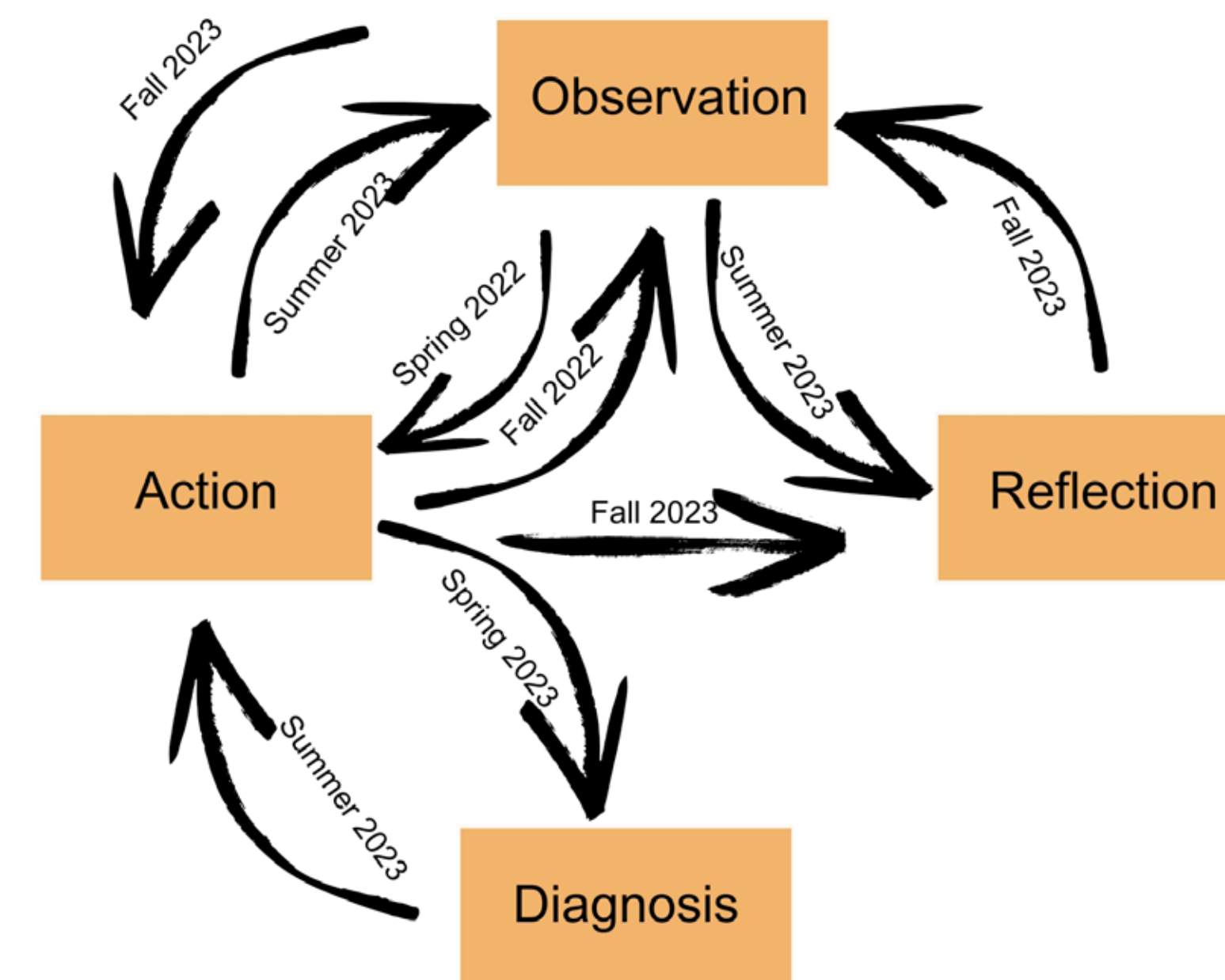


Map of Hazards in Jacksonville's Health Zone 1, documented in collaboration with local grassroots organizations.

Collaborative Methodologies

This work is guided by the Belmont principles of respect for persons, beneficence, and justice, ensuring that Health Zone 1 residents, historically excluded from research decisions, are genuine co-investigators who shape questions, design processes, and lead interventions.

Guided by the NSF Project "Community-Centered Modeling of Housing-Related Health Disparities," this work upholds the principle of justice, that the benefits and burdens of research must be shared equitably. By centering Health Zone 1 residents as co-investigators and co-authors of the community policy brief, the project ensures that those who carried the burden of environmental inequity are the first to benefit from the knowledge they helped produce, closing the loop between participation, evidence, and policy change.



The sequence of Participatory Action Research cycles and partner collaboration.

From Research to Action

Findings from Indoor Air Quality monitoring and community data indicate that indoor air disparities in Health Zone 1 arise not from individual behavior but from structural neglect within the built environment, so addressing them requires systemic change.

With residents as co-researchers, community members articulated both their grievances and their aspirations, reflected on perceptions of air quality, and reframed narratives from individual mitigation to collective advocacy, strengthening community empowerment and belonging, building trust, and leading to new partnerships.

Through collaborative monitoring and analysis, residents and researchers translated findings into a set of policy and community actions that are already reshaping local governance.

Policy and infrastructure improvements, such as the creation of a community-centered policy brief, co-written by residents and researchers, advocated for improved Indoor Air Quality monitoring, filter maintenance programs, funding for DIY air purifier initiatives, and contributed to the formation of Jacksonville's ongoing Indoor Air Quality Subcommittee, which is sustaining continued attention for environmental health equity and shared decision-making.



Preparing to conduct surveys with Jacksonville youth leaders and residents.

Reflections and Takeaways

As cities across the United States grapple with aging infrastructure, climate-related risks, and widening social disparities, Jacksonville's Health Zone 1 serves as a case in which community-led scientific inquiry can evolve into a form of civic infrastructure, one that builds relationships, trust, and knowledge simultaneously.

→ Structural Determinants Drive Indoor Air Quality Disparities & Environmental Inequity is Embedded in Housing Systems.

Poor indoor air quality in Jacksonville's Health Zone 1 is primarily shaped by housing conditions, aging infrastructure, and maintenance gaps, not by individual behavior alone. Residents' inability to make structural changes reflects broader systemic inequities. Policies addressing air quality must therefore tackle the root causes of housing vulnerability rather than treating indoor air quality as an isolated technical problem.

→ Community Participation Enhances Sustainability.

Residents' active involvement in data collection and interpretation increased awareness and commitment to adopting the co-investigated recommendations for individual and collective actions. Participatory frameworks, which foster trust and ownership, are essential for long-term success in hazard response initiatives. Intergenerational collaborations, such as the youth-led component of this project, demonstrated the transformative potential of participatory education and the impact of youth voices in advocacy, community pride, and in disseminating information.

→ Co-Created Data-Driven Advocacy Catalyzes Policy Response.

The community's collaborative work with researchers culminated in a policy brief that directly informed the formation of Jacksonville's Indoor Air Quality Subcommittee. This institutional outcome exemplifies how participatory evidence can translate into governance reform, ensuring that air quality and housing equity remain part of local policy agendas.

Works Cited

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Acknowledgements

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Further Information

Disasters, Trust and Social Change Lab

<https://dcp.ufl.edu/fiber/disasters-trust-and-social-change-lab/>



Spatial Justice Jacksonville Storymap

<https://arcg.is/0zuirr>

