

Gulf Scholars Program – Wild About Equity? A Student Project

Faculty Advisor: Dr. Weston Twardowski Program Manager, Diluvial Houston Initiative

Community Partner: Jaime González of The Nature Conservancy along with the Houston Parks & Recreation Department's (HPARD) Natural Resources Management Team

Attention around nature equity, who has nature and who does not, is growing quickly. This has several causes. The first is that climate change is threatening to greatly widen (and has already done so in Houston) equity gaps and the presence or absence of high functioning natural infrastructure will help to determine who gets hit the hardest by heat, flooding, etc.. Secondly, Houston, as you know, has acute environmental justice issues around air quality, water quality, and soil quality. These challenges can be ameliorated with the strategic use of nature – including trees, pocket prairies, and stormwater wetlands – as well as remediating soil with plants. Lastly, equitable access to nature is critical to the mental, physical, cultural, and spiritual well-being of all people. Yet, access to greenspaces is heavily inequitable– including in Houston.

The latest Trust for Public Land lists Houston 70 out of the largest 100 American Cities. So, more equitable park space is critical. As conversations around providing more equitable access to park/greenspaces are conducted, one element is often left out – access to greenspaces with rich biodiversity. Science is building a robust body of literature around what it means to be surrounded by bird calls, natural sounds, wildlife, etc. In many of our cities most disinvested neighborhoods, though, parks are often managed in ways that greatly limit opportunities for community members to experience the stress-reducing and awe of seeing monarch butterflies, migratory birds, wildflowers, etc. Currently, there is no way of visualizing proximity of populations to biodiversity-rich spaces. This project would work with partners to develop a 'Wild Index' that could be used in conjunction with the ParkScore visualization. These visualizations could help build further support for habitat restoration in disinvested neighborhoods, as well as draw attention to these inequities.

The deliverables for this project can potentially be included or used to complement the Trust for Public Land's ParkScore, advocating for more funding in neighborhood parks for biodiversity, and lead to communications support for habitat restoration.

Photos



Photos from The Nature Conservancy (left) and Trust for Public Land (right)

During the Summer of 2023, this GSP@Rice group will:

- Work with stakeholders to gain understanding and create visualization tools for a 'Wild Index'
- Participate in weekly check-ins with Jaime González of The Nature Conservancy and working with the Houston Parks & Recreation Department's (HPARD) Natural Resources Management Team
- Engage with numerous community organizations including but not limited to: The Nature Conservancy (project sponsor); Houston Parks & Recreation Department; Trust for Public Land; Texas Master Naturalists; Community-based Groups; and Texas Children in Nature Network
- Utilize various data sets on park space, social vulnerability, and iNaturalist, to visualize biodiversity, along with resources such as a variety of land use data layers; eBird and iNaturalist data; Social Vulnerability and other sociological data
- Engage with the community through conversations with community leaders and/or by going into communities to make iNaturalist observations
- Complete a written report and oral presentation to relevant community partners and organizations

Relevant student skills and experience to be practiced/acquired: environmental justice, community engagement, data analysis, data visualization, storytelling, professional writing, public presentations