

Save Water, Drink Beer: The hybridity of Texas craft breweries and impacting water stewardship through participatory action research

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Introduction & Background

Texas is faced with depleting underground water reservoirs and an increasingly dryer summer season (Nielsen-Gammon 2020). Additionally, the state is expected to have continued population growth and development (TWDB 2021), changing the physical and cultural landscape. An industry in the state with immense growth (500% in 10 years), popular in municipal (re)development plans (Myles et al.) and has a need for clean sustainable water is the craft beer industry. Therefore, craft breweries can simultaneously be water dependent consumers and stewards for water conservation, illustrating one example of their hybridity. Other states that have a fragile water supply and a burgeoning craft beer culture have leveraged breweries' need for clean sustainable water to create water conservation projects and policy (i.e., Arizona, California, and Oregon).

Modeling after the Oregon Brewshed® Alliance, in 2019, the Texas Brewshed® Alliance (TBA) was created. TBA is a coalition of brewers, conservationists, craft-brewing affiliates, and other conscious businesses and community members committed to protecting the lands and waters that make Texas a great place (WVWA 2021). Initially the Alliance created events to educate the craft beer drinking community about protected watersheds and their essential role in Texas's growing craft brewing industry (WVWA 2021). However, due to COVID, the Texas Brewshed® Alliance lost the level of activity needed to run the program. The pandemic lingers but individuals and businesses are learning to live in the same space with SARS-CoV-2. As such, a renewed interest in the mission of the Alliance emerged in 2021.

Research Goals & Questions

Texas Brewshed® Alliance members asked Delorean Wiley, a member of the Fermented Landscape lab group at Texas State University, to collaborate with them on a research project that would increase the size and reach of the non-profit, as well as provide a way to measure impact. Ultimately, this project provides a framework for standardizing water practices across the Texas craft beer industry.



Figure 1. Texas Brewshed® Alliance goals that must be met by this research project.

Research Questions

Can staged experiences with beer increase knowledge of and participation in water stewardship? What, if any, is the measurable difference in water use or quality among participant breweries? What power dynamics influence a brewery's willingness to adopt a technology?

Methodology

This project is a participatory action research project (PAR). PAR interrogates and challenges the divide between politics on the ground and research as an academic practice through a geography of engagement that taps into the tremendous potential of activism and produces critical analyses based on feminist praxis (Nagar and Ali 2003).

A "brewshed®" is an exemplary illustration of a *hydrosocial territory* - a spatial configuration of people, institutions, water flows, technology, and the biophysical environment that revolve around the control of water (Boelens et al. 2016). Brewshed® implies a connection between social and environmental actors that cannot be separated. Breweries are locations where people, water, and other materials collide to create a new material. In turn, this new material (beer) influences culture, behavior, and water, and thus, yields power. Figure 2 is a semiotic depiction of the unbreakable connection between beer and water with a river inside the bottle cap.



Figure 2. The Texas Brewshed® Alliance Logo.

By invoking a processual theory of value (J. Beckman 2014), Texas Brewshed® Alliance events will be created in collaboration with selected breweries to recruit participants in implementing a water saving technology at each brewery in the study.

Research Design Steps:

1. PAR project planning
2. Focus group recruitment events
3. Pre-project survey
4. Water saving/quality technology implementation
5. Water usage categorization and measurement
6. Post-project survey

The contribution to Geography and Environmental Studies more broadly is to demonstrate experiential knowledge gained through this type of research process can create a more stewarding relationship with water among participants. For example, environmental stakeholder meetings, including those about water, are cited as exclusionary based on the formality of meetings and a lack of confidence or socio-economic variables preventing people from participating (Pradhananga et al. 2019). By bringing the research into less formal settings, we hope to break down barriers that exclude people from water conservation activities.

Results (to Date) & Next Steps

Planning

A steering committee was created in spring 2022. It consists of three women and one man of various ages, ethnicities, backgrounds, incomes, expertise, and organizations. All are pursuing or hold at least a bachelor's degree.

Also, a brewery to (re)launch the new goals of the Texas Brewshed® Alliance and run a pilot focus group recruitment event is secured. The first recruitment event is slated to take place in Austin during the summer of 2022.

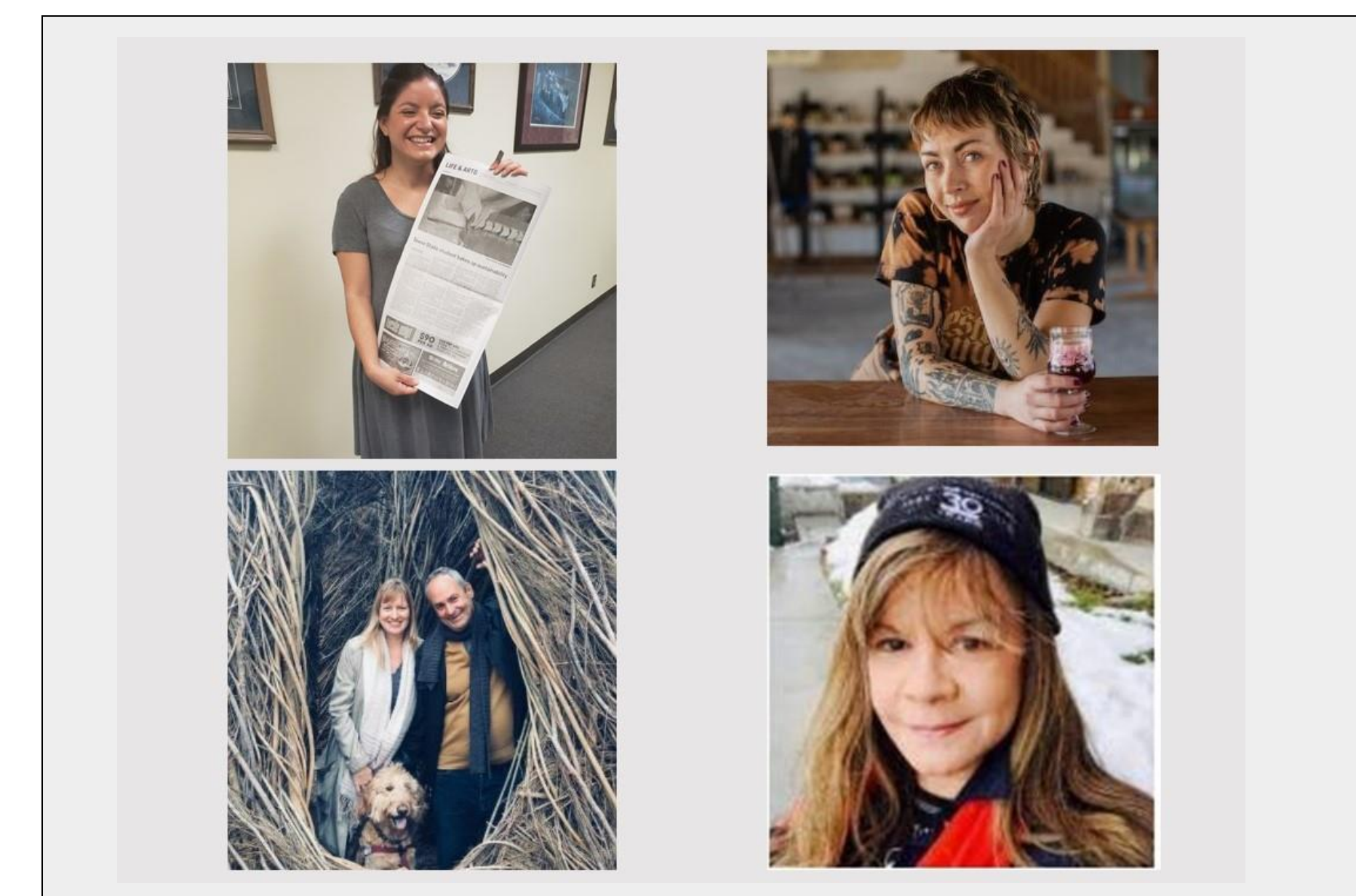
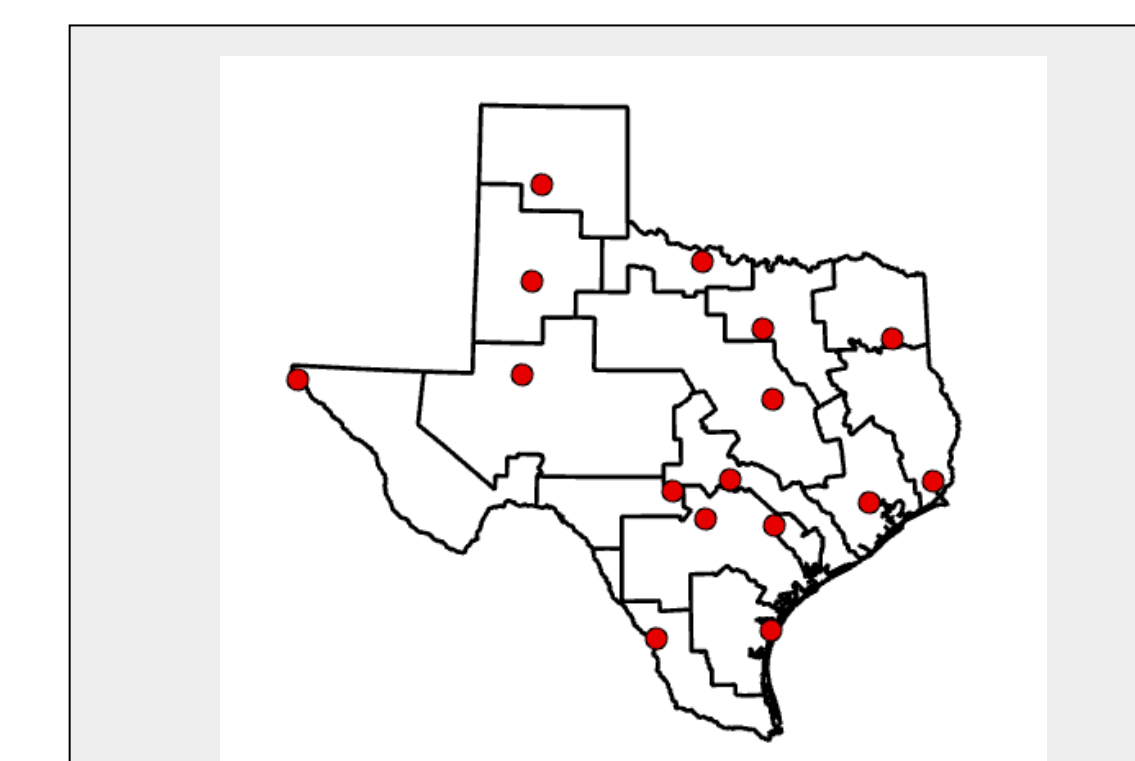


Figure 3. The Texas Brewshed® Alliance steering committee. From top left clockwise, Delorean Wiley, the principal researcher holding the newspaper article about her masters project upcycling spent brewers grain into ready-to-eat baked goods (personal photo), Lindsay Smith, undergraduate research assistant (image from Jester King Brewery Team Member webpage), Debbie Cerda water quality specialist and board member for the Pink Boots Society (image from LinkedIn profile), and David Baker with his wife and dog (image from Friends of Blue Hole).

In addition, a list of breweries to approach in each water planning district was determined and a map created. Figure 4 visually shows where each of those breweries are located.

Figure 4. Map locating the preliminary list of breweries to approach about being in the study for each water planning region.



Next Steps

In April, the steering committee will reach out to the breweries in Figure 4 to see if they will join the study and allow focus group recruitment to occur during a planned event. Once a brewery in each water planning region is secured, a network analysis will be created to find the most efficient travel routes. This will enable the research team to finalize a travel budget. These sub projects will be headed by the undergraduate research assistant, Smith.

Concurrently, a project plan will be sent to the Institutional Review Board (IRB). A dissertation proposal is planned for the first week in May 2022. If approved, field work will begin in June 2022.

Social & Environmental Justice Implications

Choosing feminist methods enables this project to create real change that is useful for businesses, community members, and Texas waterways. This model provides an alternative way of educating and exposing people to their environment, meeting them in everyday places. We believe this is necessary for democratizing power to create policy that has an "ethics-of-care" to the needs of diverse actors. Insights gained from this project could be applied to a myriad of industries dependent on water and state water planning more broadly.

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