

Greens Bayou watershed imposed on rendering of Harris County.

Photo courtesy of Bayou Preservation Association.

By Teresa Tomkins-Walsh

efore human habitation, water flowed through bayous, earthen conduits designed by nature to drain, filter, and replenish watersheds. As nomadic humans populated Southeast Texas (beginning around 11,000-10,000 B.C.E.), cycles of weather and flooding governed human flows. Rains, floods, and droughts came to Southeast Texas and human inhabitants artfully navigated and accommodated their environment. European contact began in the early sixteenth century with the Narváez expedition, described and published in Cabeza de Vaca's anthropological notes. Early Anglo immigrants settled in Harris County during the 1820s, slowly at first and then more densely as opportunity attracted new arrivals and inhabitants multiplied.1

Greens Bayou watershed is contained wholly within Harris County, in contrast to some regional watersheds that tap into adjoining counties. Comprising 212 square miles of drainage and including 308 miles of open streams, Greens Bayou watershed sprawls like the lopped off, gnawed ear of an ogre felled in northern Harris County. Its headwaters rise north of Jersey Village close to the Jones and Mills roads intersection

(29°58' N, 95°35' W), then flow forty-three miles east and then south, and finally dip into the Houston Ship Channel.²

Houston is a city of flows. Geographer, Maria Kaika, posits that cities or built environment are social constructions designed to detach or insulate humans from nature. Water's crucial relationship to city and home, its fundamental importance to city building, and its fluid quality reveal that nature and city are not separate; they are hybrid. Modernization promotes the myth that nature can be tamed. Disaster reveals nature is an intruder and a threat to development. Water flows within channels and overflows through natural processes meant to cleanse, refresh, and sometimes redesign. People, goods, and capital flow, sometimes in concert with water and sometimes in contraflows that can enhance, overwhelm, or distort sustaining flows of water.³

Twenty-two watersheds thread through Harris and contiguous counties.4 Greens Bayou watershed, including its Hall's Bayou tributary, is topographically the largest, yet the Greens Bayou is less entrenched in public imagination or civic priorities than Houston's iconic Buffalo Bayou. Buffalo Bayou is central to Houston's origin lore. In 1836, real estate developers established Houston on the banks of Buffalo



Green lines highlight Greens Bayou and tributaries within the watershed. Photo courtesy of Greens Bayou Coalition.

Bayou for all the reasons humans are drawn to water: convenience, strategic location, waste disposal, navigation, and, most vividly perhaps, dreams of a golden future of affluence.

Buffalo Bayou dominates Houston's collective memory of civic achievement, catastrophic flooding, and watershed enhancement. Houston presides as county seat of Harris County, with many county buildings supported on cement knees immersed in the urban segment of the bayou. Flowing from west to east along Harris County's horizontal axis, Buffalo Bayou extends fifty-five miles from its rural headwaters in Ft. Bend County through the core of the city, dissects Houston's central business district, and meets terminally with the Houston Ship Channel. Overall, Buffalo watershed drains 102 square miles along 106 miles of open streams.⁵

Houston's 1935 flood intensified civic boosterism directed at reducing flood damages on Buffalo Bayou, largely because downtown Houston and the Ship Channel suffered catastrophic flood damages. As a result of such activism, the 1936 Flood Control Act addressed Buffalo Bayou, leading to the formation of the Harris County Flood Control District (HCFCD) in 1937. Working with the U.S. Army Corps of Engineers (USACE), HCFCD developed a flood control plan for Buffalo, White Oak, and Brays Bayous, a plan interrupted by the Second World War and then worked and reworked into the mid-twentieth century. By the 1960s, affluent citizens disrupted HCFCD work and appealed for appropriate flood management coupled with preservation of urban wilds along Buffalo Bayou west of Shepherd Drive.

Harris County's initial flood plan concentrated on bayous that crossed the city central, but none of Harris County's waterways were immune from flooding. As human activity and built environment expanded in Southeast Texas, the natural flows of flooding engaged humans and habitat. Harris County Flood Control District reports that "Harris County suffered through 16 major floods from 1836 to 1936, some of which crested at more

than 40 feet." Since 1900, Harris County has had 33 major flood events.⁸

While Buffalo Bayou's course is a quarter longer in miles than Greens Bayou, the Greens Bayou watershed covers twice the breadth and features a third more miles of open streams. Well into the twentieth century, attention to Greens Bayou was more sporadic and less dynamic while flooding recurred. Between July 1953 and February 1969, ten floods along Greens Bayou reached discharge rates ranging from 3,000 to 7,000 cubic feet per second. Viewed historically as less significant, perhaps, to Houston/Harris County fortunes with its centralized interests, the Greens Bayou watershed nonetheless represented identifiable potential for natural stewardship and community development.

Critics of mid-twentieth century growth and development patterns decry Houston's sprawling, chaotic outward expansion, citing the loss of a sense of community as one of the casualties. Urban historian, Martin Melosi, suggests that there are different ways of viewing "community" and the competing forces of community cohesion and diffusion more accurately describe the tensions of urban/suburban expansion. In global terms, centrifugal forces divide communities when suburbs acquire distinct identities and compete for resources. Countering centripetal forces unify and strengthen newer communities. Melosi employs the Houston example to describe how new forms of community arise around "business activity centers" that grow neighborhoods connected with freeways. 10 In this instance, freeway flows are centrifugal by supporting suburban expansion but are also centripetal by galvanizing the life of a suburb.

Building what became the Greater Greenspoint Area exemplifies the complexity of centrifugal and centripetal forces. Splintered in two by Greens Bayou, Greenspoint expanded dramatically in the 1970s and 1980s. A strategically located transportation nexus, Greenspoint sits with Hardy Toll Road to the east and is split east-west by I-45 and north-south by Beltway 8. Located in the westerly stretch of the Greens Bayou watershed and bordered along a northern



Navigation along lower Greens Bayou, 1925.

Photo courtesy of Harris County Flood Control District.

segment of the Halls Bayou watershed, Greenspoint became an active business center in Houston after completion of the Intercontinental Airport in 1969 and construction of the eponymous Greenspoint Mall in 1976.¹¹

Greenspoint Mall became Houston's largest enclosed mall. Hotels, business complexes, and multi-family dwellings flourished in the area. In 1978 Exxon subsidiary, Friendswood Development Company, purchased hundreds of acres of greenfield land, planning 5,000 apartments and eight office complexes. Greenspoint flourished while Houston lived on oil, as the oil industry blazed in a "golden era." At the beginning of a national recession, workers flocked to a seemingly immune Texas. Then oil prices floundered, banks collapsed, and real estate cratered.12

Starting in the 1980s and through the 1990s, Greenspoint stumbled downhill from the shining metropolitan node its planners had envisioned. Prioritizing business and buildings over amenities, Greenspoint designers kneaded development codes, tax breaks, and floodplain maps. In 1995, Exxon divested its residential properties and targeted its fundamental energy business.¹³ Narrow economic priorities, compacted built environment, and dwindling economic capacity coalesced to disrupt and defer the suburban vision that had impelled the creation of the Greenspoint area during the 1970s. Related to these conditions was the concomitant demographic transition that transformed the Greenspoint area over three decades.14

Houston's Greenspoint's story is a cautionary tale and parable of potential. In 1981, as visions for Greenspoint's prospects mushroomed, centripetal/centrifugal forces mingled when Woodlands Development Corporation and Friendswood Development Company began exploring options for a north Harris-south Montgomery County improvement association. North Houston Association (NHA) formed in 1982 with twenty-two initial members backing a mission to "advancing issues associated with transportation, the environment, and monitoring development trends to improve and enhance the business climate and quality of life within the region."15

Bayou flows from upper to lower reaches link consequences. Historically, Upper Greens Bayou in particular suffered the stresses of extensive urbanization and exclusion from central city/county priorities: "In Harris County one bayou [Greens Bayou] stands out as an area that has not received much attention or flood mitigation analysis over the years." Yet, flooding along Greens and its major tributary, Halls Bayou, continues into the twenty-first century. According to National Weather Service data collected from the flood gauge on



Greens Bayou, as seen here in 1994, from the home of Dee Owens, coordinator of the Greens Bayou Project.

Photo courtesy of Dee Owens Maner.

I-45 (just north of West Greens Road and Greenspoint Mall), Greens Bayou reached or exceeded major flood stage (87.7 feet) four times between 1969 and 2017. The same gauge measured moderate flood stage (86.6 feet) three times and flood stage (84.8 feet) four times during the same period, for a total of thirteen flood stage crests within a listing of twenty-five historic crests.¹⁶

Further downstream, on Greens Bayou (just past Green River Drive, slightly southeast from the Halls Bayou's swing around Brock Park and the Halls Bayou intersection with Greens Bayou), another gauge measured nineteen major flood stage crests (33 feet and above) between 1973 and 2019 within a total of forty-two historic crests. Tropical Storm Allison in 2001 and Hurricane Harvey in 2017 brought devastating flood levels throughout the watershed. Hurricane Harvey flooded more homes in the Greens Bayou watershed than any other watershed except Brays Bayou.¹⁷

As powerful commercial forces urbanized upper Greens Bayou watershed, private citizens demonstrated the clout of personal action during the 1990s with activism directed toward not only flood mitigation but also toward water

> quality and refuse accumulation along the lower reaches of Greens Bayou. David High, a retired Union Carbide manager, lived along Greens Bayou, where he enjoyed the bayou view, nature walks, forest ambience, and wildlife sightings. After flooding in 1989 invaded residential structures along the lower reaches of Greens Bayou, High became an outspoken advocate for watershed management with the Bayou Preservation Association (BPA). By High's time, BPA was a pillar in Houston's environmental community.18



Jack Drake Park is the trailhead for the Greens Bayou Trail, a Statewide Transportation Enhancement Program (STEP) that links other parks in the North Houston District. A collaboration between Greens Bayou Coalition and North Houston District, the park opened in 2018.

Photo courtesy of Greens Bayou Coalition.

High implored city, county, and state officials to work toward flood management and water quality on Greens Bayou. High wrote in 1990, "There are two crucial elements to a bayou, pollution and flooding. This must employ policing and enforcement of pollution control and design and implementation of responsible flood control measures. Both of these elements affect the quality of life on the bayou."

High, a visible and vocal advocate for ecologically sensitive improvements to reduce property damages in the Greens Bayou watershed, campaigned and coordinated the acquisition of property to create the Coolgreen Corridor. Backed by BPA, High encouraged residents to sell or donate property and promoted conservation easements. ²⁰ David High's efforts benefitted the lower reaches of Greens Bayou by removing built environment from flood pathways, and his Coolgreen Corridor is now part of a park managed by the Houston Parks Board.

Equally visible and ceaselessly energetic, Dee Owens had managed swimming pools and taught gymnastics. Her family grew around Greens Bayou for four generations, but she and her family purchased residential property right on Greens Bayou in April 1994, so she could view the bayou from her home. After a heavy rainfall, floating and grounded debris blemished Owens's view. Futile efforts to identify a responsible agency for cleanup led her to a responsive Jim Fonteno, Precinct 2's Harris County Commissioner, who requested a written proposal. Owens proposed a cooperative team that included fifteen entities, including Harris County Supervision and Corrections, the Harris County Attorneys Office, City of Houston, American Red Cross, U.S. Coast Guard, Houston Zoo, University of Houston, and San Jacinto College.²¹

Owens's plan tapped into the labor of Harris County probationers who needed to work off community service hours. Probationers learned CPR, first aid, water safety, boatmanship, wildlife management, as well as vegetation control and resilience. Owens anticipated that training experience would benefit probationers upon their release.²²

Citing the success of her efforts, Owens unveiled her



Under the watchful eye of Dr. Bloom at the University of Houston,
Bayou Crew #6 learns to survive in the water fully clothed, circa 1995.

Photo courtesy of Dee Owens Maner.



David High from BPA, far right, Dee Owens, and representatives of Precinct 3 look on as the "Bayou Posse" demonstrates water testing, CPR, and canoeing maneuvers, circa 1995.

Photo courtesy of Dee Owens Maner.

Greens Bayou Project prototype as a systemic solution to monitor, clean, and maintain all Houston waterways.²³ During 1995, the Greens Bayou Project, renamed the Bayou Posse by the probationers themselves, cleaned miles of bayou and tackled debris in the Houston Ship Channel.²⁴ At startup, Owens's project received funding from county, state, and non-profit sources, but funding needed to maintain and expand the project evaporated with administrative and legal complications. Herculean fundraising efforts proved unsuccessful, and the Bayou Posse retired sometime during 1996.²⁵

Both David High and Dee Owens Maner began as "not in my back yard" (NIMBY) activists, but like so many NIMBYists, including Houston's renowned Terry Hershey, their concerns expanded as they studied the breadth of the problem. Citizen activists bring personal zeal to community improvement, but they struggle to succeed alone. Histories of environmental champions are often the histories of nascent organizations. David High and Dee Owens Maner achieved measured success as liaising forces within Harris County.

While David High addressed residential property losses, influential property owners in North Houston appealed to the State Legislature for a special purpose district to complement government services in the Greenspoint area. The North Houston District née Greater Greenspoint Management District emerged from this effort in 1991. The District's mission "advocates for projects and services that attract the best in commercial and residential life to our appealing, safe, accessible and green activity center." Jack Drake headed up the initial District management team. Damages in the Greenspoint area of \$50 million from Tropical Storm Allison prompted his team's interest in an initiative to address damages and improvements. As the team brainstormed ideas, they realized that collaborating with the well-established NHA (1982) would reap optimum results. ²⁶

Together NHA and the District created Greens Bayou Coalition (GBC) née Greens Bayou Corridor Coalition (GBCC) in late 2005. Participants in GBCC included school districts,

City of Houston departments, chambers of commerce, Harris County Flood Control District and other Harris County entities, Harris County Toll Road Authority, Houston-Galveston Area Council, state agencies, Texas legislators, and U.S.

Congress members representing districts with the Greens

Bayou Corridor. Joe Turner, Houston Parks and Recreation Department's director, urged that the entire length of bayou receive planning and project attention.27 GBCC's "corridor" concept was an innovation directed initially toward developing the Greens Bayou Corridor as an essential, attractive, and well-planned multi-use waterway, linear park and trail system, utility corridor, and high capacity cross-county transit/ highway link to foster economic development, minimize flooding, and preserve desirable greenspace.

Through NHA's executive director, Paula Lenz, leadership and administrative support sustained GBCC's vision concepts, stakeholder participation, and Master Plan. By March 2009, NHA had relinquished its facilitator role and worked with the district to hire GBCC's own executive director.²⁸

GBCC's Master Plan became a significant vision concept. GBCC set up committees according to four reaches within the Greens Bayou corridor.²⁹ Working with the National Park Service's Rivers and Trails Conservation Assistance Program, GBCC conducted a community-based study to determine constituent priorities. Participants included government agencies and officials, community-based organizations, and area businesses. Master Plan goals included conservation of natural resources, parks and recreation venues, interconnected trail systems, landscaping to enhance aesthetics and wildlife habitat, and

project sustainability within each of the four reaches.³⁰

Corridor-wide projects included clean-up and restoration, a trail system on both sides of the bayou, and "trail wayfinding," signage, including warnings of terrain change and maps for directions and points of interest. Corridorwide priorities selected as most popular were connectivity, followed by construction of parks and recreation facilities. Third was the addition of natural areas along the Greens

Bayou corridor. Neither sustainability/cleanup nor landscaping/habitat restoration evoked much excitement.31

Discarding "Corridor" in the organization name, GBC proceeded with aspects of the Master Plan. GBC's volunteer projects include tree planting, trash cleanup, trail building, and invasive

> plant removal. Kayaking for Kids began in 2014 to take inner city youth on kayaking trips.32 An annual gala and regatta promote the organization and raise funds. A significant GBC accomplishment is the renovation and creation of parks along the bayou.

After a six-year advocacy campaign involving multiple trips to Washington, DC, GBC's former executive director Jill Bouillon announced in 2015 a \$55 million federal award for the Antoine Basin.³³ Although GBC's initial mission included flood mitigation efforts, HCFCD now assumes the local role in identifying and managing flood projects, as always with cooperation from GBC, whose mission "promotes resilience, economic development and quality of life in the Greens Bayou watershed."34 Hurricane Harvey intensified national and federal attention on Houston flooding. As funded projects progress, local entities look toward flood resilience as an approach to co-habitation with floodways.

Instances of activism over time and across the breadth of the Greens Bayou watershed illustrate centrifugal and centripetal forces inherent in community building. Coalitions develop a distinctive character to address problems or opportunities, in the process attracting cooperative elements. Individuals, like David High and Dee Owens Maner, not only stand up and apart to address a problem but also develop strength and reinforcement by inspiring others and forming coalitions.

Greens Bayou is a sweeping, diverse

watershed. Over time, those who tackle the challenges along the bayou pull apart and flow together in a reciprocal flow of energy that is the foundation of community. H

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Twenty-six drums of hazardous waste located by the "Bayou Posse" work crews were retrieved and disposed of by the Environmental Protection Agency and TxDOT, Photo courtesy of Dee Owens Maner.



Coca-Cola volunteers joining Greens Bayou Coalition on a clean-up Saturday, circa 2021.

Courtesy of Greens Bayou Coalition.