

Environment and Economy Along Houston's Bayous

In the winter of 1827, the Clopper family arrived on Galveston Island aboard the tiny schooner *Little Zoe*. The Cloppers had come to what would become Houston to establish a farmstead in the Mexican province of Texas. Joseph Clopper became fascinated by the small stream named Buffalo Bayou which they followed as they made their way inland:

“the water being of navigable depth close up to each bank giving this most enchanting little stream the appearance of an artificial canal in the design and course of which Nature has lent her masterly hand; for its meanderings and beautiful curvatures seem to have been directed for a taste far too exquisite for human attainment -- most of its course is bound in by timber and flowering shrubbery which overhang its grassy banks and dip and reflect their variegated hues in its unruffled waters”¹

Almost two hundred years later, Buffalo Bayou would be unrecognizable to Clopper. The trees and grasses lining the bayou banks have been replaced by subdivisions, warehouses, highways, and refineries. Clopper's observation of the bayou's “appearance of an artificial canal” would prove to be oddly prescient, although not in the way he intended.

The bayous' connection to the Gulf of Mexico was crucial in Houston's success as an export hub. Shaped by the hand of man rather than the hand of nature, Buffalo Bayou has been transformed from a waterway into a commercial artery, now dubbed the Houston Ship Channel. To early city planners, the bayous were not environmental features but infrastructural resources to be exploited. Some few individuals and groups attempted to preserve the bayou's natural state,

¹ Clopper, Joseph. “JC Clopper's Journal and Book of Memoranda for 1828”. Published in *The Quarterly of the Texas State Historical Association*. Vol 13. June 1909.

as they saw it, but these attempts were almost always ignored and marginalized. The physical form of the bayous have been fundamentally transformed: dredged, expanded, and channelized, the natural courses of Houston's many streams have been overlaid by an increasing complex built environment oriented towards human travel and commerce. But the story of the bayous, and Houstonians' relationship with them, is a complicated and sometimes conflicting pursuit of profit and environmental health. In response to the perceived alteration and destruction of the 1960s, environmental groups began to lobby for preservation of bayou habitats. Boosters, resurrecting the decades-old vision of a City Beautiful landscape architect, imagined the bayous as environmental resources which would reinvigorate Houston's ailing quality of life. In 2012, Houston voters approved the \$200 million dollar Bayou Greenways Initiative, which will reconstruct the bayous as urban green space in cooperation with private donors. Nonetheless, this revitalization is being justified by the economic benefits it will bring to the city through reduced health costs and increased property values. No matter how Houstonians define and construct their natural environment, it has always been in the service of economic profit.

The bayous have played a decisive role in Houston's economy since 1836, when John and Augustus Allen founded the city at the confluence of White and Buffalo bayous. At the time, steamboat travel was transforming American commerce, and would-be millionaires eyed every river and stream for its transportation potential. Even Joseph Clopper, a newcomer to the area, noted the importance of the bayous in determining human activity: "Harrisburg is laid out on the west side of [Buffalo] bayou just below its junction with Bray's bayou [...] being situated at the head of navigation [...] there is only wanted a population a little more dense and a few capitalists of enterprise and industry to render it one of the most important towns in the colony."² The

² Ibid.

capitalists did come, but they found that the bayous required a significant amount of “enterprise and industry” to make the transformation from muddy streams into avenues of international commerce. The Allen brothers claimed in advertisements that “vessels from New Orleans and New York can sail without obstacle to” Houston,³ but reality was an entirely different story. Fifty miles of sluggish, shallow bayou separated Houston from the open sea. Galveston, Texas’s largest port city, dominated ocean going trade through its strategic location on the Gulf of Mexico. For much of the 1800s, Houston and Galveston remained locked in an existential battle for ocean-going trade and federal dollars for harbor improvements.

Houston’s boosters understood that without alterations to the bayous, the new city was doomed. In 1842, only a year after the Port of Houston was formally established, the Republic of Texas gave the city government the right to “remove obstructions from the bayou and otherwise improve navigation.”⁴ But Houston’s ineffective local government was not up to the massive challenge that the bayous presented: more than fifty miles of waterway had to be dredged, expanded, and improved. Houston began lobbying for federal waterway improvements as early as the 1870s. In 1881, the federal government formally adopted responsibility for the maintenance and improvement of the bayous from the Buffalo Bayou Ship Channel Company, and began work on a \$25,000 dredging project.⁵ The impetus for this massive environmental alteration came most directly from those who would reap the greatest benefits of infrastructure improvements: Houston’s powerful export industries, helmed by cotton, sugar, and oil merchants. Houston’s business class, led by tycoon Jesse Jones and in cooperation with US Representative Tom Ball, wrangled an impressive \$2.5 million improvement plan from the

³ Fisher, James E. “Deep Water Houston: From the Laura to the Deep Water Jubilee.” *Houston History* 12, no. 1 (Fall 2014): 2–7.

⁴ Ibid.

⁵ Barr, Alwyn. “Federal Aid for Texas Rivers and Harbors, 1867-1900.” *Southern Studies: An Interdisciplinary Journal of the South* 16, no. 2 (April 1977): 233–44.

federal Rivers and Harbors Board in 1909 by promising to cover half of the cost themselves.⁶

This plan would lead in 1914 to the official opening of the Houston Ship Channel, a fully dredged and expanded artificial waterway stretching from the mouth of Galveston Bay to the turning basin in Houston's East End. The opening of the Ship Channel, just a few years after the devastating hurricane of 1900, confirmed Houston's dominance over Galveston and put an end to the two cities' intermittent skirmishes. Houston, and its wealthy elite, had won.

The powerful actors who created, expanded, and maintained the Houston Ship Channel showed little concern for the indigenous bayou which they were repurposing. Advertisements put out by the Port Authority in the 1930s and 40s boasted that more than \$200,000,000 had been invested in "industrial building" along the port's shores.⁷ They also highlighted future improvement projects, displaying pictures of state-of-the-art dredging equipment and promising an expansion to a 36-foot deep channel.⁸ These illustrations and figures present not only an image of bustling industry and enterprise, but also a constant and insatiable hunger for growth and expansion. One picture of an unnamed, tree-lined bayou is captioned: "Houston's wealth of stream offers unlimited development possibilities."⁹ The image of the natural bayou is not one of pristine wilderness, but of economic potential. In this narrative, promoted by the port operators and directed at wealthy merchants, the bayous serve Houston only to the extent that they facilitate commerce. In 1937, the Port Authority proposed a massive readjustment of Buffalo Bayou's course in the Turkey Bend area. Although never implemented, this plan reveals the

⁶ Beretto, Holly, and Gregory D. L. Morris. "Capitalism and the Common Good." *Financial History*, no. 111 (Fall 2014): 14–17.

⁷ "Advertising for Port of Houston". 1936 - 1943. Box 3, Folders 2-3. J Russell Wait Port of Houston Papers. Woodson Research Center, Rice University Fondren Library.

⁸ Ibid

⁹ Ibid

extent to which Houston's policy makers were willing to go to alter and overcome the economic limitations of the existing bayou system.

The irony in selling Houston's "strategic natural location"¹⁰ while simultaneously boasting of the incredible energy and capital invested in overcoming Houston's poor native infrastructure seems lost on the advertisements' authors. The Ship Channel's public relations campaign extended beyond the printed word and into the streets with the annual 'Deep Water Jubilee'. Starting in 1899, the Houston Cotton Exchange crowned a prominent local businessman 'King Nottoc', the ruler of 'No-tsu-oh' in the realm of 'Tekram' (cotton, Houston, and market spelled backwards) in order to celebrate the city's ports and commerce.¹¹ These ritual celebrations cemented the symbolic power of capitalists and capitalism within the city, revealing just how thoroughly the profit imperative had insinuated itself into Houstonians' perception of their environment. Houston's economic boosterism continued throughout the 20th century. A 1967 economic study praising the employment and investment benefits of the Houston Ship Channel dubbed it the "Catalyst of an Economy."¹² Even today, reporters tout the "promotion, ingenuity, and decades of dedicated effort by civic leaders" and the "dredged excellence" involved in the creation of the Ship Channel.¹³ There is little or no acknowledgement that the Ship Channel has come to replace existing natural features. Indeed, the dredged and channelized banks of the Ship Channel have come to be seen as inevitable by Port Authority planners. Concrete walls, not grass and mud, are the new logical state of the bayou. The Ship Channel itself has become an integral part of Houston's "natural" geographic advantage. This narrative of

¹⁰ Advertising for Port of Houston, J Russell Wait Papers.

¹¹ Fisher, "Deep Water Houston"

¹² Rose, Warren. "Catalyst of an Economy: The Houston Ship Channel". *Land Economics* 43, no. 1 (February 1967): 32.

¹³ Fisher, "Deep Water Houston"

economic power and growth leaves little room for the bayous themselves, or the indigenous nature which they represent.

But commerce and industry are not the only modes Houstonians have used to relate with their bayou environment. The City Beautiful movement of the late 19th century argued for the provision of parks and green spaces in order to relieve city dwellers from the oppression of industrialization, perhaps best exemplified in Houston by the Ship Channel. In 1913, Arthur Comey, a young East Coast landscape architect and City Beautiful proponent, developed a plan for Houston's fledgling park system. Comey's philosophy rested on the belief that "the intense activity of city life and the increasingly artificial conditions under which its citizens live make more and more essential [...] the complete change and relaxation for tired nerves afforded by play and the appeal to nature."¹⁴ The people, in other words, needed a relief from the industrial development being celebrated in the Deep Water Jubilee. In his 1913 plan, Comey lays out an entirely vision of the city's bayous:

"The backbone of a park system for Houston will naturally be its bayou or creek valleys, which lend themselves readily to parking and cannot be so advantageously be used for any other purpose [...] The bayous are natural parks already. Tree-growth and grass are good even within populous sections; the valleys include the only scenery with slopes, while occasional narrow bends furnish play fields. [...] The long, narrow strips along the bayous will serve many communities; continuous walks can be laid out in naturalistic landscape; parkway drives along the banks of the bayou are capable of unusually park-like treatment; and long park frontages for pleasant homes will be provided."¹⁵

¹⁴ Comey, Arthur. *Houston: Tentative Plans for its Development*. 1913. Accessed via Google Books, 8

¹⁵ Ibid 10

Comey wished to put the bayous to a recreational and quasi-environmentalist purpose which the Houston Port Authority would never have dreamed of. Comey was by no means an environmentalist; he believed that the bayou parks had to be “laid out” and “treated” in order to best serve users, and at one point he suggests damming the bayous to create small lakes.¹⁶ Yet he was the first to propose alternative, non-industrial uses of Houston’s bayous. Comey acknowledged the necessity of bayou-bound trade, and even devoted a section of his book to the development of docks and warehouses along commercial waterways.¹⁷ But he was also insistent that the city’s first priority should be acquiring land along Buffalo Bayou as it passed through downtown “where private development threatens” to pave over the bayou’s natural beauty.¹⁸ Comey’s commitment to protection of the bayous as natural green spaces was unprecedented in the city’s history, and would go on to inspire future conservation efforts. Ironically, the people who were likely to derive the greatest benefit from Comey’s plans were the same elites who profited the most off of the physical alteration of the bayou. The Houston Yacht Club, founded in 1898, organized exclusive outings along the bayou for the city’s wealthiest members and published postcards documenting the area’s natural beauty.¹⁹ The HYC was also an ardent supporter of the Houston Ship Channel, apparently never seeing any contradiction in its dual uses of bayou space. Although never alluded to by Comey himself, parks were largely planned for the enjoyment of middle and upper class professionals.²⁰ Comey’s plan includes only three playgrounds for “colored children”, although he himself acknowledged that almost one third of

¹⁶ Ibid 35

¹⁷ Ibid 54

¹⁸ Ibid 34

¹⁹ Photographer Unknown. “Panoramic View of Brays Bayou with Yachts of the Houston Launch Club.” *Houston Yacht Club Archives, LaPorte, Texas*, 1912.

²⁰ Cranz, Galen. *The Politics of Park Design*. 1982. MIT Press: Cambridge.

the city was non-white at the time.²¹ Regardless of these problematic aspects, Comey's work nonetheless represents a unique approach towards Houston's bayous.

Unfortunately for Comey, his plan was published just months before the final completion of the Ship Channel and the simultaneous oil boom in Houston. Environmental and quality of life concerns were sidelined by the explosive growth the city experienced in the mid 20th century and the variety of problems caused by this development. As more and more of the city landscape was paved over with impervious concrete and asphalt to accommodate Houston's driving public, flooding became a serious hazard. The Harris County Flood Control District, founded in 1937, repurposed the bayous in an attempt to solve the city's flooding problem. Working with the Army Corps of Engineers, HCFCD laid more than 2,500 miles of concrete-lined channels on top of Houston's bayous.²² At the same time, the slow expansion of city waste services could not keep up with rapid industrial and residential growth, encouraging the direct dumping of both sewage and chemical pollution into the bayous.²³ The results, aside from exacerbating the city's flooding problems and contributing to a polio outbreak in the late 1940s, also devastated the bayou ecosystems. The bayous were once again being utilized as a piece of urban infrastructure. Although the bayou served different functions as artery of commerce, receptacle of waste, and diverter of floodwaters, the ultimate impact of all of these uses has been physical alteration and ecological damage.

Beginning in the 1960s, some Houstonians began to resist this radical reshaping of the city's natural environment. Homeowners in the Memorial neighborhood formed the Bayou Preservation Association to fight HCFCD's highly impactful practices. The group met initial

²¹ Comey, *Houston: Tentative Plans for its Development*, 34

²² Melosi, Martin. "Houston's Public Sinks". 135. In *Energy Metropolis*, edited by Martin Melosi and Joseph Pratt. 2007. University of Pittsburgh Press: Pittsburgh. 135

²³ Ibid 154

success when Congressman George H. W. Bush intervened and ordered a study of Buffalo Bayou, halting the ongoing channelization project.²⁴ Although Houston had been home to an environmental organization called the Outdoor Nature Club since the 1920s, this was the first major victory environmentalists had won in the fight for determining urban use of Houston's bayous. The BPA followed in the steps of Comey by envisioning a managed natural-ness for the bayous. BPA's longtime leader, Terry Hershey, advocated for an "environmental ethic based on the land - and Mother Nature."²⁵ The bayou was not simply a waterway; it had "esthetic and habitat features" which made it an important ecological resource.²⁶ Yet at the same time, the BPA espoused "the economic aspects of a free flowing somewhat natural river through our city", and claimed "it was never the intention of the BPA to abandon Buffalo Bayou to the vagueries [sic] of nature."²⁷ To the BPA, the bayou was not necessarily a natural feature, but rather an urban amenity which could best be utilized in a "somewhat natural" state. Government and business had failed to properly steward the bayous, but this did not mean that humans had no right to alter and utilize them. As Hershey put it in a 1974 speech, "the river belongs to the people."²⁸ New environmental groups like the Bayou Preservation Association successfully reframed the bayous as indigenous, albeit tightly regulated, green spaces. Their image of the bayou as an ecological habitat challenged the dominant narrative of infrastructure improvement.

²⁴ Tomkins-Walsh, Teresa. "To Combine Many and Varied Forces: The Hope of Houston's Environmental Activism". 250. In *Energy Metropolis*, edited by Martin Melosi and Joseph Pratt. 2007. University of Pittsburgh Press: Pittsburgh. 255.

²⁵ Hershey, Terry. Speech, delivered to Junior League of Houston 3 March 1983. Box 1, Folder 1. Bayou Preservation Association. Courtesy of Special Collection, University of Houston Libraries.

²⁶ "History of BPA". Box 1, Folder 2. Bayou Preservation Association. Courtesy of Special Collection, University of Houston Libraries.

²⁷ Ibid

²⁸ Hershey, Terry. "Recycling Our Bayous". Speech, delivered 23 November 1974. Box 1, Folder 1. Bayou Preservation Association. Courtesy of Special Collection, University of Houston Libraries.

The introduction of environmentalism as a genuine platform for city planning and urban space configuration reframed the ways in which Houstonians interacted with their bayous.

The environmental approach to the bayous triumphed in 2010 when Houston voters overwhelmingly approved the \$200 million Bayou Greenways Initiative. In partnership with private and nonprofit groups, the city has committed itself to constructing hike and bike trails along the bayous to implement Arthur Comey's vision on a grand scale. It would appear that a century long competition between two ideologies -- one of economic development and infrastructure utilization, the other of health, green space, and environment -- had finally been resolved in Houston. Yet perhaps these two narratives are not as distinct as they seem. In order to justify this massive public project, the Houston Parks Board commissioned a study to evaluate the potential benefits of the Bayou Greenways Initiative. The study found that the project would offer up a stunning \$117 million in benefits annually, in such diverse areas as increased property values, decreased health services costs, and an improved business climate.²⁹ As just one example of the myriad touted benefits, the study found that improved green spaces would improve filtration of stormwater runoff, saving the city money on water treatment costs. At an average annual rainfall of two billion gallons and an estimated \$.00065 of reduced costs per gallon, the Bayou Greenways Initiative will save \$1.3 million a year in water quality alone.³⁰ Although the bayous are ostensibly being preserved as environmental habitat, this preservation is primarily being motivated by monetary interests. The fact that the initiative's sponsors felt the need to put a dollar value on a recreation and conservation project shows just how thoroughly the profit incentive has seeped into Houston's decision making process.

²⁹ Crompton, John. "Bayou Greenways Benefits". August 2011.

³⁰ Ibid

This economic tendency isn't just limited to the present day. Comey argued that parks "serve the economic purpose of redeeming land values, thereby paying for their cost in increased taxes."³¹ And Teresa Tomkins-Walsh argues that Houston's environmental groups pursued an agenda which did not challenge the status quo: "Houston environmentalists engaged in reform activism that employed only moderate tactics and contested government practices within an established governmental framework. From its beginning, environmental activism in Houston supported private enterprise and a pro-growth economy."³² Indeed, many of the leaders of Houston's environmental movement, including Terry Hershey, were intimately connected with Houston's real estate and industrial communities, which had exploited the bayous in the first half of the century. One of BPA's founders, George Mitchell, was heavily invested in real estate and oil; petroleum giant Texaco was a frequent contributor to BPA;³³ and Hershey herself was married to a prominent Houston businessman. These environmental groups were overwhelming white and wealthy, and they made very little effort to incorporate the views of residents in Houston's segregated African American and Latino neighborhoods.³⁴ Although they were advocating very different outcomes, it turns out that the industrialists and the environmentalists were speaking the same language.

In writing an environmental history of Houston, it is impossible to leave out the role the city's residents have played in framing, shaping, and stewarding the bayous. Whether it was merchants who wished to dredge the bayous, bureaucrats who wished to channel them, or environmentalists who wished to park them, all parties saw their vision as the reasonable,

³¹ Comey, *Houston: Tentative Plans for its Development*, 9

³² Tomkins-Walsh, "To Combine Many and Varied Forces" 250

³³ Bradshaw, Bill. Letter to Frank Miller. Box 26, Folder 8. 20 December, 1994. Bayou Preservation Association. Courtesy of Special Collection, University of Houston Libraries.

³⁴ Tomkins-Walsh, "To Combine Many and Varied Forces", 255

logical, and 'natural' purpose of the bayous. But regardless of the way it has been formulated, nature along the bayous has always been tied to economic activity. In the bustle of Houston's voracious entrepreneurial spirit, even the city's physical landscape must be utilized in some way, either to facilitate commerce, divert floodwaters, or increase property values. Perhaps this is the true nature of Houston: not the marshy, treelined bayous, but the intent with which the city's human inhabitants view them.

Illustrations



Figure 1: Although never adopted, this 1937 plan reveals the extent to which port officials were willing to go to achieve the infrastructural results they desired, even at the expense of the bayous.³⁵

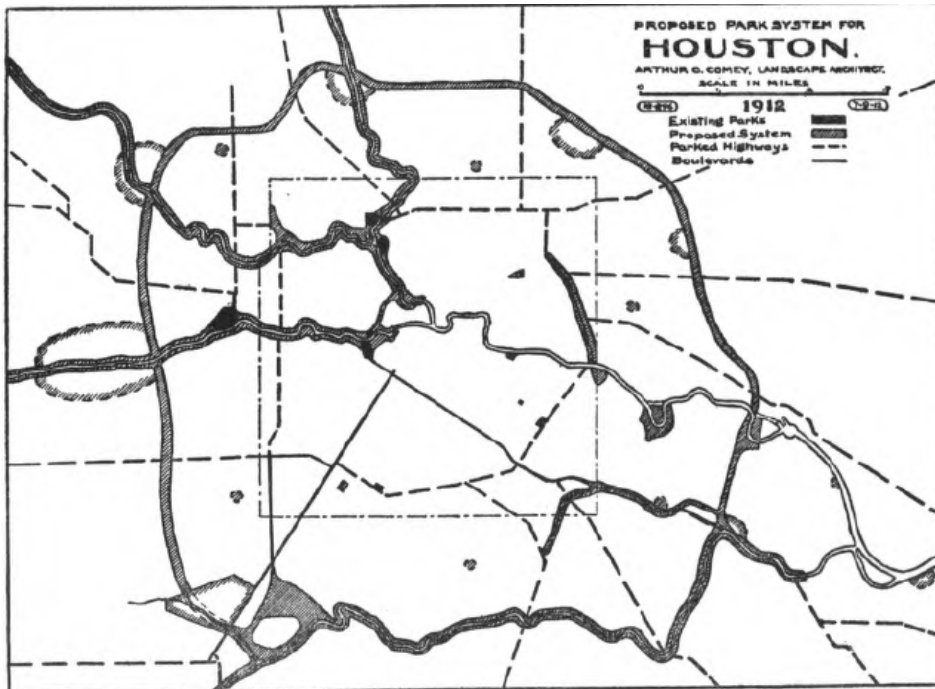


Figure 2: In contrast to the Port Authority's plans (Figure 1), Comey's vision of the bayous saw them as existing natural features to be incorporated into a city-wide network of greenspaces.³⁶

³⁵ "Here is How Proposed Wharf Would Block Channel Extension", *The Houston Post*. May 19 1937.

³⁶ *Comey, Houston: Tentative Plans for its Development, 29*